REGIONE CAMPANIA

Acqua Campania S.p.A.

UTILIZZO IDROPOTABILE DELLE ACQUE DELL'INVASO DI CAMPOLATTARO E POTENZIAMENTO DELL'ALIMENTAZIONE POTABILE PER L'AREA BENEVENTANA

PROGETTO DI FATTIBILITA' TECNICA ED ECONOMICA

Stralcio Allegato IV D.L. 31.05.2021 n.77 - L. di conversione 21.07.2021 n.108

Responsabile Unico del Procedimento
Dirigente Ciclo Integrato delle Acque della G.R. della Campania
Ing. Rosario Manzi

Il Concessionario
Acqua Campania S.p.A.
Direttore Generale
Area Tecnica
(Ing. Gianluca Maria SALVIA)

I Progettisti

Coordinatore responsabile della Integrazione delle Prestazioni Specialistiche

Il Geologo

0	Dicembre 2021	EMISSIONE PER VIA	---	---	---
Revisione	Data	Descrizione	Redatto	Controllato	Approvato

TITOLO :

RELAZIONE TECNICA - GEOLOGIA E GEOTECNICA - INDAGINI IN SITO

Progettazione:

VIANINI LAVORI S.p.A.

FINALCA ingegneria Srl

Allegato

ED.02.2.ALL.02

Revisione: 0

Scala: -

GALLERIA DI DERIVAZIONE – PROVE IN SITO

VIANINI LAVORI

SOCIETA' PER AZIONI - CAPITALE SOCIALE Euro 43.797.507
SEDE IN ROMA - 00187 VIA BARBERINI, 68

PROGETTO

ATTIVITÀ DI COLLABORAZIONE ALLE ATTIVITÀ DI PROGETTAZIONE DEFINITIVA, CONCERNENTI L'INTERVENTO DI UTILIZZO IDROPOTABILE DELLE ACQUE DELL'INVASO DI CAMPOLATTARO

COMMESSA

LAV456GDARF

TIPOLOGIA

ESECUZIONE DI SONDAGGI PROFONDI CON RELATIVE ANALISI DI LABORATORIO

DITTA ESECUTRICE

GEOTEC SPA

SOIL INVESTIGATIONS & LAND SURVEYING

ALLEGATO 3

PROVE IN FORO

(LUGEON, DILATOMETRICHE, LOG GEOFISICO)

ALL. 3.1 PROVE IN FORO (LUGEON, DILATOMETRICHE, LOG GEOFISICO) CL1 (70,0 m)
ALL. 3.2 PROVE IN FORO (LUGEON, DILATOMETRICHE) CL2 (155,0 m)
ALL. 3.3 PROVE IN FORO (LUGEON, DILATOMETRICHE, LOG GEOFISICO) CL3 (205,0 m)
ALL. 3.4 PROVE IN FORO (LUGEON, DILATOMETRICHE, LOG GEOFISICO) CL4 (210,0 m)
ALL. 3.5 PROVE IN FORO (LUGEON, DILATOMETRICHE, LOG GEOFISICO) SG1 (30,0 m)

Rev.	Descrizione	Redatto	Data	Verificato	Data	Approvato	Data	Autorizzato Data
A	Emissione	F. Gerbasi	Ottobre 2020	A.Reale	Ottobre 2020	A.Reale	Ottobre 2020	

File:		n. Elab.:

ALLEGATO 3.1
PROVE IN FORO
(LUGEON, DILATOMETRICHE, LOG GEOFISICO)
CL1 (70,0 m)

PROVE IN FORO
LUGEON
CL1

GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE:	VIANINI SPA				
CANTIERE:	INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO				
LOCALITA':	CAMPOLATTARO (BN)				
SONDAGGIO:	CL1	PROVA N°	L1	29/09/2020	

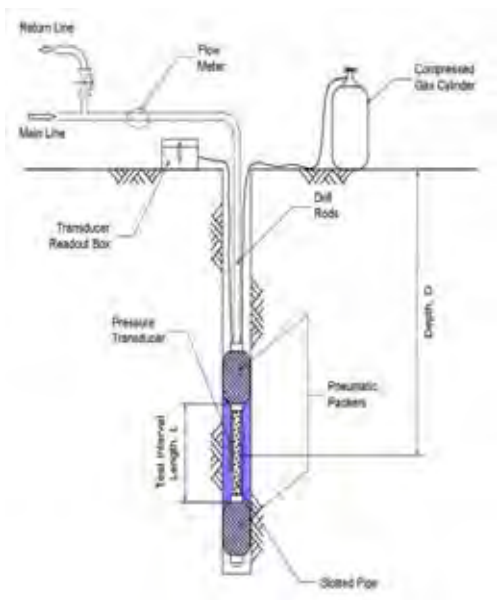
ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE	Carotaggio Continuo
CORONA TIPO	Diamantata Imp.

TEST	avanzamento	Azimuth	degree
	risalita	Inclinazione	degree

PROFONDITA' PROVA	da m.	50,00	m	a m.	53,00	m
ALTEZZA MANOMETRO		1,10	m	QUOTA MANOMETRO		
QUOTA		401	m			
ACQUA IN FORO		9,10	m			

DIAMETRO FORO	Ø	101	mm
TIPO PACKER			
ASTE	Diametro esterno (mm).	88,9	
	Diametro interno	77,8	
	Lunghezza (m)	50,00	



DATI DI CAMPAGNA

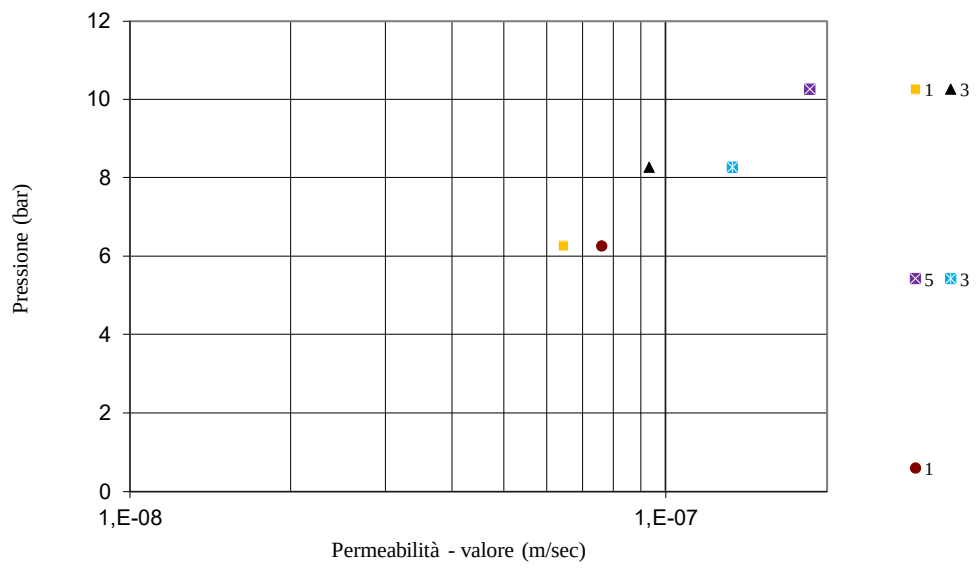
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	1	11,00	1500,00	1502,00	1505,00	1506,00	1509,00	1511,00
	10	3	21,00	1530,00	1533,00	1537,00	1542,00	1546,00	1551,00
	10	5	52,00	1570,00	1580,00	1591,00	1603,00	1613,00	1622,00
CICLO DI SCARICO	10	3	30,00	1640,00	1646,00	1653,00	1658,00	1665,00	1670,00
	10	1	13,00	1670,00	1672,00	1675,00	1679,00	1680,00	1683,00

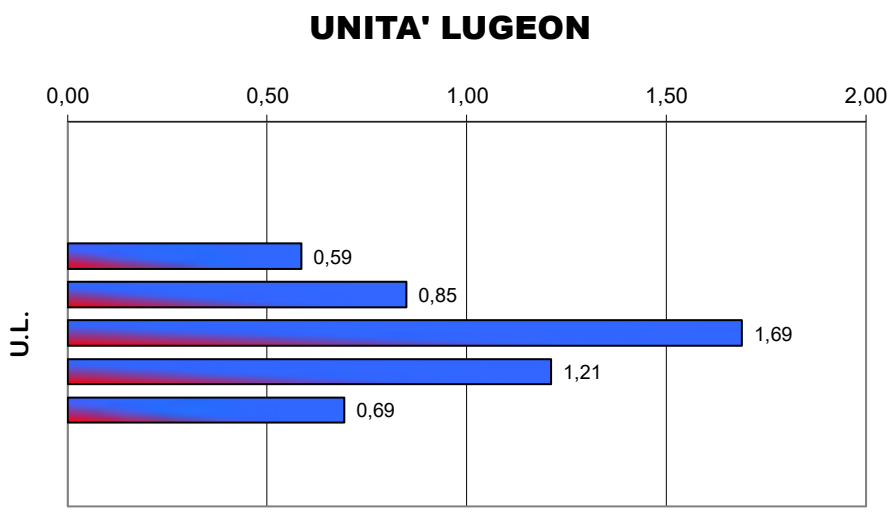
Assorbimento (l)

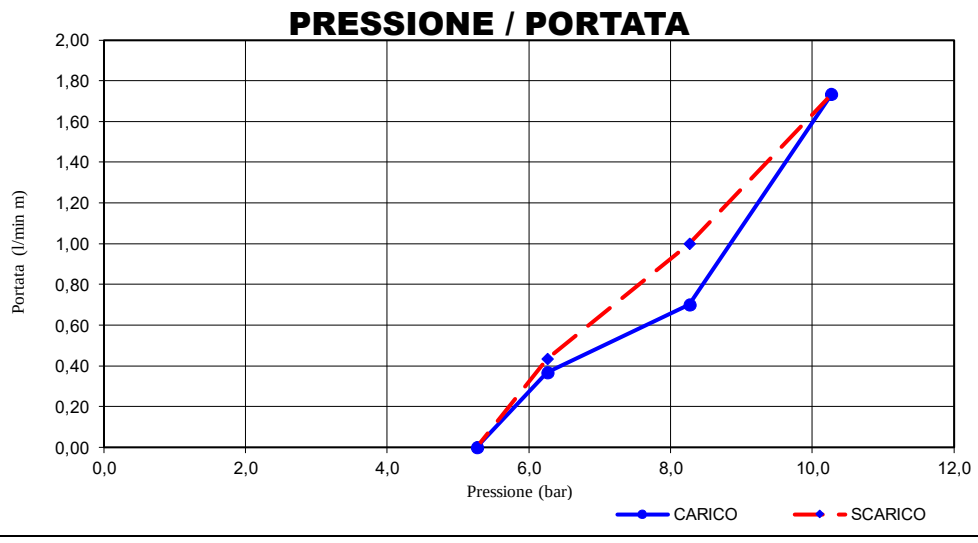
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	1,00	4,186E-06	6,260	11,00	0,59	6,428E-08
	10	3,00	1,249E-05	8,260	21,00	0,85	9,300E-08
da m.:	10	5,00	5,833E-05	10,260	52,00	1,69	1,854E-07
50,00	10	3,00	2,288E-05	8,260	30,00	1,21	1,329E-07
a m.:	10	1,00	5,550E-06	6,260	13,00	0,69	7,596E-08
53,00							
					Valore medio	1,01	1,103E-07







GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE:	VIANINI SPA				
CANTIERE:	INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO				
LOCALITA':	CAMPOLATTARO (BN)				
SONDAGGIO:	CL1	PROVA N°	L2	30/09/2020	

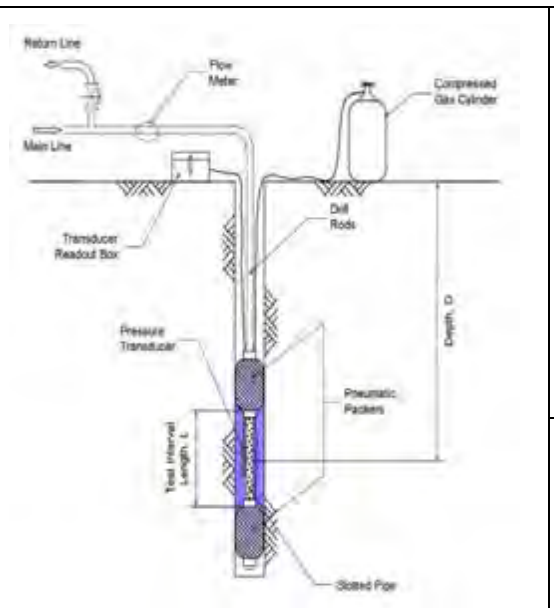
ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE	Carotaggio Continuo
CORONA TIPO	Diamantata Imp.

TEST	avanzamento	Azimuth	degree
	risalita	Inclinazione	

PROFONDITA' PROVA	da m.	67,00	m	a m.	70,00	m
ALTEZZA MANOMETRO		1,10	m	QUOTA MANOMETRO		
QUOTA		401	m			
ACQUA IN FORO		9,10	m			

DIAMETRO FORO	Ø	101	mm
TIPO PACKER			
ASTE	Diametro esterno (mm).	88,9	
	Diametro interno	77,8	
	Lunghezza (m)	67,00	



DATI DI CAMPAGNA

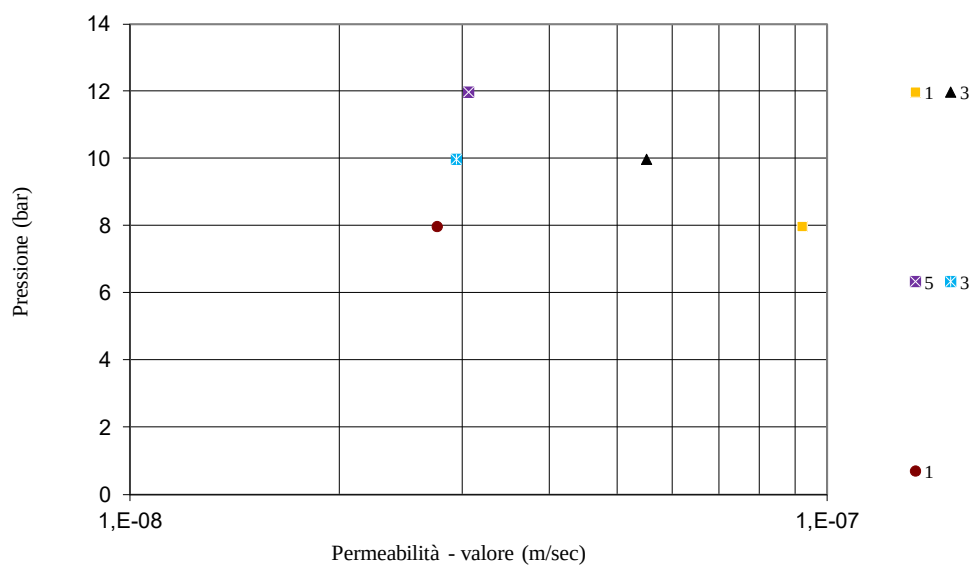
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	1	20,00	2380,00	2384,00	2389,00	2392,00	2396,00	2400,00
	10	3	15,00	2450,00	2454,00	2457,00	2460,00	2462,00	2465,00
	10	5	10,00	2470,00	2472,00	2473,00	2476,00	2478,00	2480,00
CICLO DI SCARICO	10	3	8,00	2500,00	2502,00	2503,00	2505,00	2506,00	2508,00
	10	1	6,00	2520,00	2521,00	2522,00	2523,00	2524,00	2526,00

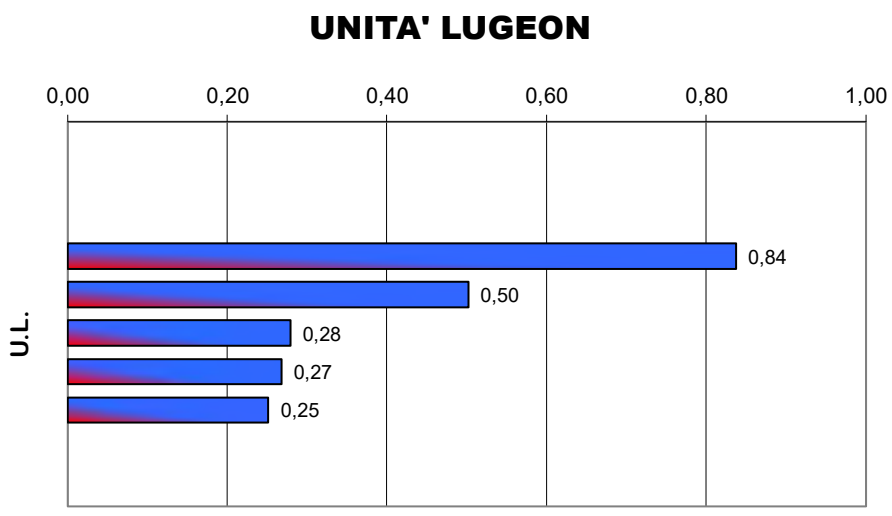
Assorbimento (l)

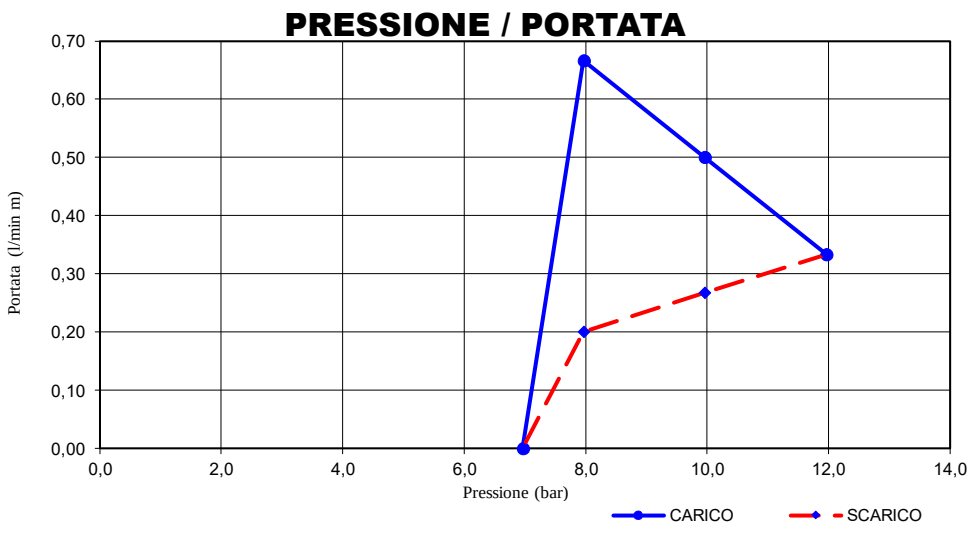
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	1,00	1,541E-05	7,960	20,00	0,84	9,191E-08
	10	3,00	9,473E-06	9,960	15,00	0,50	5,509E-08
da m.:	10	5,00	4,775E-06	11,960	10,00	0,28	3,058E-08
67,00	10	3,00	3,277E-06	9,960	8,00	0,27	2,938E-08
a m.:	10	1,00	2,018E-06	7,960	6,00	0,25	2,757E-08
70,00							
					Valore medio	**0,25**	**2,757E-08**







PROVE IN FORO
DILATOMETRICHE
CL1

GEOTEC SPA	COMMITTENTE:	VIANINI	COORDINATE:	41.296283°
	CANTIERE:	DIGA CAMPOLATTARO		14.730350°
	SONDAGGIO:	CL1	Quota (m.s.l.m.):	401

TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. ARGILLE MARNOSE CON BLOCCHI CALCAREI		
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	S. BAUR
		40-41	101				

Ciclo		Pressione (Bar)		Deformazioni (mm)				Mod. Dilato (MPa)
		Letta	Corretta	Sensore 1	Sensore 2	Sensore 3	Media	
Contatto		0,0	0,0	0,000	0,000	0,000	0,000	
		0,3	0,1	0,026	0,021	0,250	0,099	
		0,5	0,3	0,251	0,253	0,391	0,298	
		0,8	0,5	0,412	0,413	0,798	0,541	
P_0		2,2	1,6	1,225	1,119	1,335	1,226	
$2\ P_0$		4,0	3,3	2,271	1,851	2,068	2,063	E_{D1}
Ciclo 1	Carico	4,3	3,4	2,917	2,278	2,219	2,471	
		4,5	3,6	3,563	2,705	2,370	2,879	3,9
		4,7	3,7	4,208	3,131	2,520	3,287	
	P_1	4,9	3,8	4,954	3,658	2,671	3,761	
	Scarico	4,7	3,7	4,478	3,240	2,528	3,415	E_{E1}
		4,5	3,5	4,002	2,923	2,447	3,124	6,7
		4,3	3,4	3,526	2,605	2,419	2,850	
	$2P_0$	4,0	3,1	3,050	2,287	2,396	2,578	
	Ricarico	4,3	3,4	3,593	2,705	2,477	2,925	E_{DR1}
		4,5	3,5	4,136	3,124	2,508	3,256	6,5
		4,7	3,6	4,679	3,542	2,638	3,620	
	P_1	5,3	4,1	5,222	4,960	2,719	4,300	E_{D2}
Ciclo 2	Carico	6,1	4,8	6,354	6,418	3,000	5,257	
		7,2	5,8	7,486	7,875	3,281	6,214	10,3
		8,0	6,5	8,618	9,333	3,561	7,171	
	$1{,}5.P_1 < P_2 < 2.P_1$	8,9	7,3	9,759	10,790	3,842	8,130	
	Scarico	8,0	6,5	8,735	9,023	3,581	7,113	E_{E2}
		7,0	5,6	7,711	7,257	3,320	6,096	12,7
		6,0	4,7	6,687	5,490	3,058	5,078	
	$2P_0$	4,0	2,9	5,663	3,723	2,797	4,061	
	Ricarico	5,5	4,2	6,893	5,961	3,144	5,333	E_{DR2}
		7,2	5,8	8,124	8,199	3,492	6,605	13,2
		8,7	7,1	9,354	10,436	3,839	7,876	
	P_2	10,0	8,3	10,584	12,674	4,186	9,148	E_{D3}
Ciclo 3	Carico	11,5	9,8	11,326	13,452	4,953	9,910	
		13,0	11,2	12,068	14,229	5,720	10,672	23,7
		14,5	12,7	12,809	15,007	6,487	11,434	
	$1{,}5.P_2 < P_3 < 2.P_2$	16,0	14,1	13,200	15,784	7,254	12,079	
	Scarico	13,0	11,2	12,650	14,521	6,356	11,176	E_{E3}
		10,0	8,3	11,560	13,250	5,236	10,015	
		7,0	5,4	9,890	11,560	4,250	8,567	22,9
	$2P_0$	4,0	2,6	6,990	8,025	3,210	6,075	

Calcolo del modulo dilatometrico (Ed) :

$$Ed = 2 \times G \times (1 + \nu)$$

Modulo di taglio :

$$G = \Delta P \times 0{,}5 \times Ø_{F,0} / \Delta d$$

Risultato :

$$Ed = (1 + \nu) \times Ø_{F,0} \times \Delta P / \Delta d$$

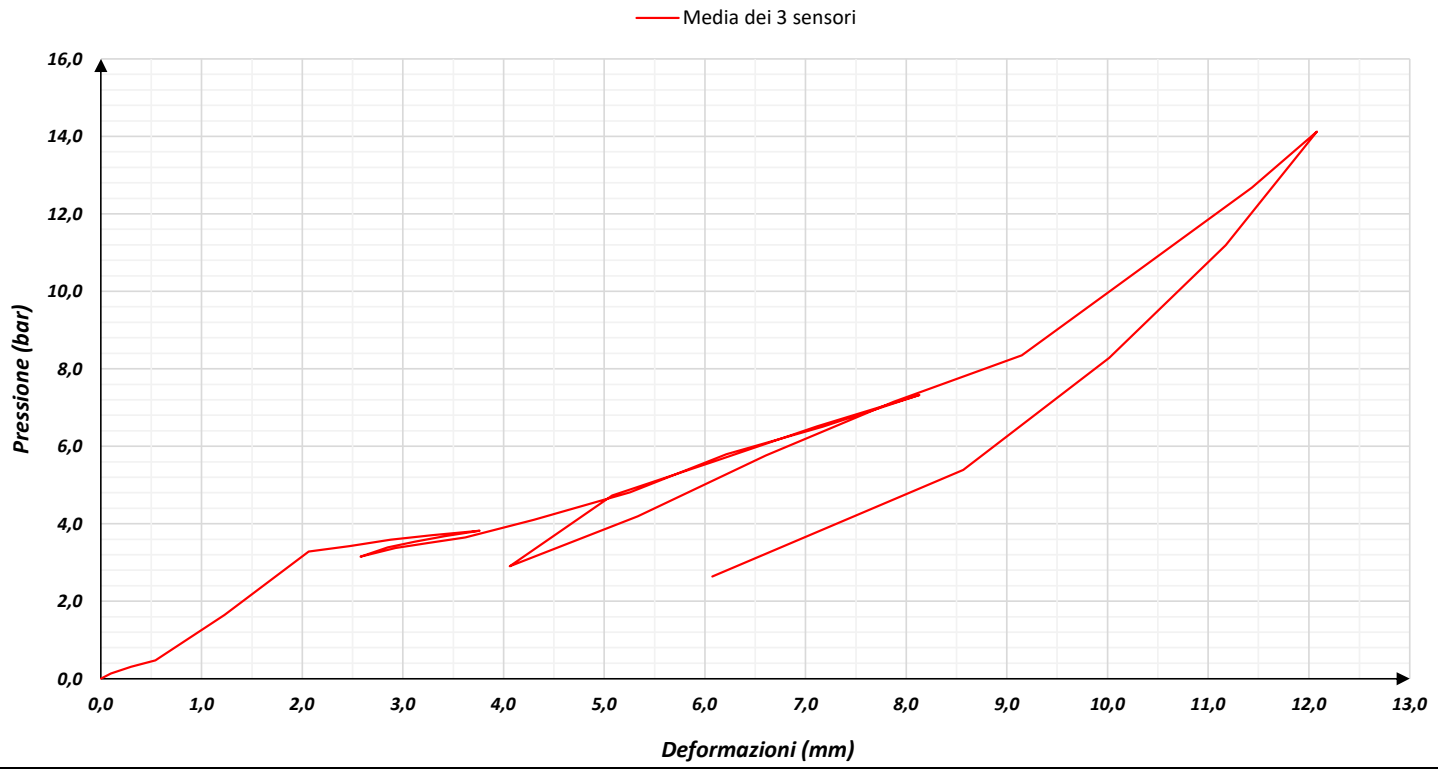
Dati di calcolo :

- ν coefficiente di Poisson : $\nu =$ 0,25
- $Ø_{F,0}$ diametro iniziale di foro (ØF,0 =ØS + Dd0) : $Ø_{F,0} =$ 97,3 (mm)
- $Ø_S$ diametro della sonda dilatometrica : $Ø_S =$ 96,0 (mm)
- Risultato : $(1 + \nu) \times Ø_{F,0} =$ 121,6 (mm)

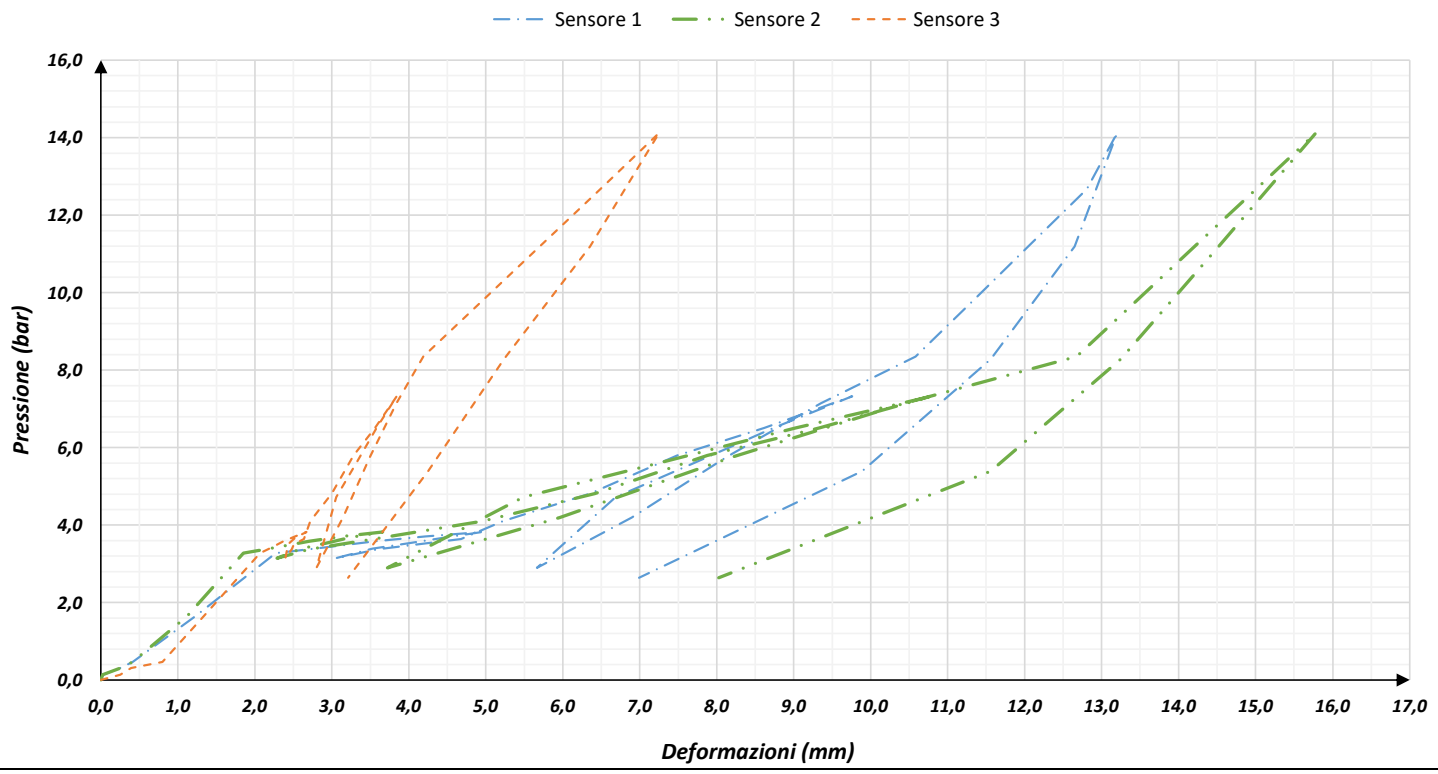
Ed2 =	10,3	(Mpa)	Ee2 =	12,7	(Mpa)	(calcolato sul 2° Ciclo)
EGm =	12,0	(Mpa)	Ee3 =	22,9	(Mpa)	

GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. ARGILLE MARNOSE CON BLOCCHI CALCAREI		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		40-41	101				

RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. ARGILLE MARNOSE CON BLOCCHI CALCAREI		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		40-41	101				

STANDARDIZZAZIONE DELLA SONDA DILATOMETRICA

La standardizzazione permette di determinare la resistenza della membrana :

$$P_{resistenza\ guaina}(D_{misurata}) = P_e(D_{misurata})$$

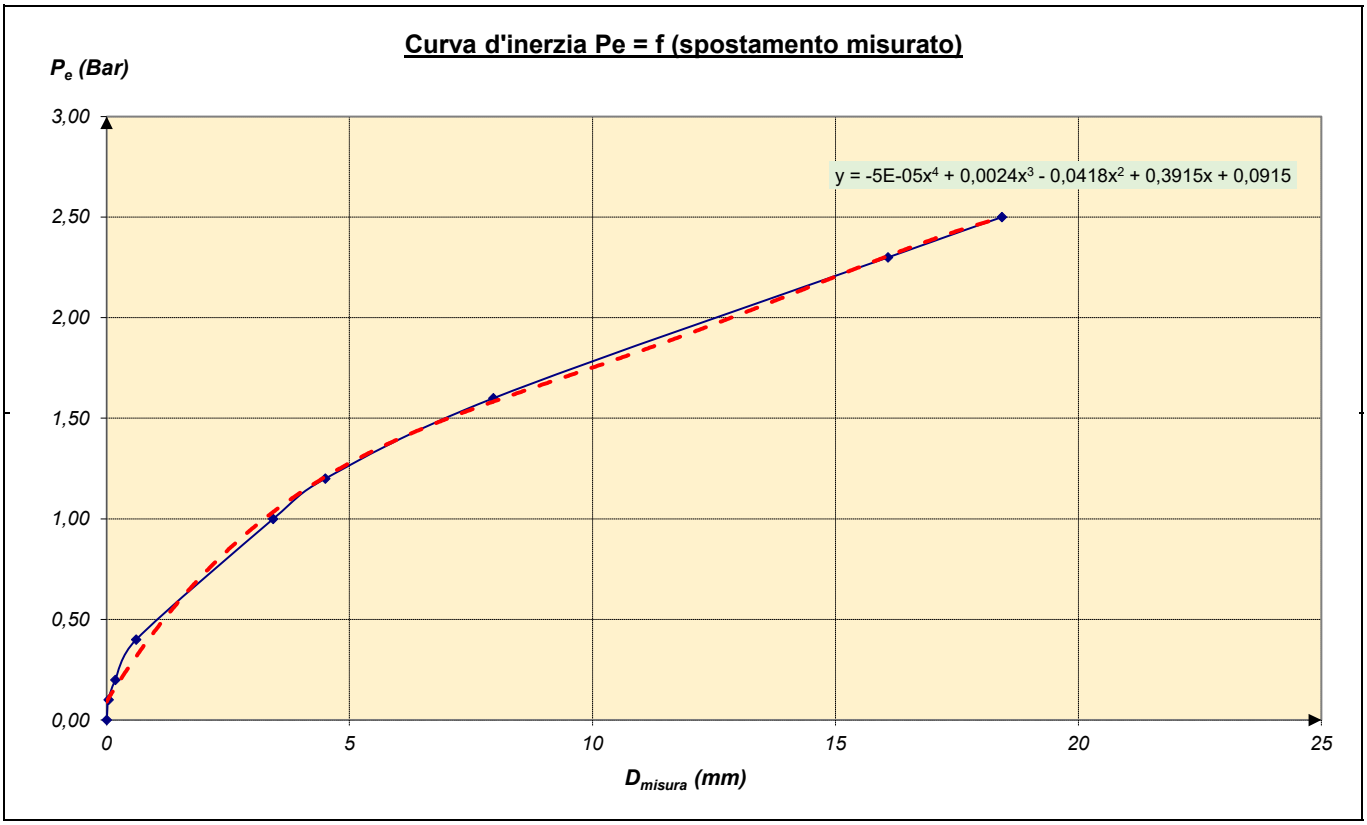
P_e espresso sotto forma di poligono :

$$P_e(D_{misurata}) = a \times D_{misurata}^{\alpha} + b \times D_{misurata}^{\beta} + c \times D_{misurata}^{\gamma} + d \times D_{misurata}^{\delta} + e \times D_{misurata}^{\varepsilon} + f \times D_{misurata}^{\phi}$$

La pressione applicata può essere corretta secondo la relazione :

$$P_{corretta} = P_{misurata}(D_{misurata}) - P_e(D_{misurata})$$

Pressione (bar)	Spostamenti (mm)				Definizioni di coefficienti :	
	C1	C2	C3	Media		
0,0		0,000	0,000	0,000		
0,1		0,014	0,063	0,039		
0,2	0,110	0,126	0,298	0,178	a = -5,00E-05	$\alpha = 4$
0,4	0,605	0,458	0,756	0,606		
1,0	3,522	3,253	3,514	3,430	b = 2,40E-03	$\beta = 3$
1,2	4,597	4,307	4,608	4,504		
1,6	7,965	7,622	8,296	7,961	c = -4,19E-02	$\gamma = 2$
2,3	15,466	15,053	17,729	16,083		
2,5	17,562	17,192	20,540	18,431	d = 3,93E-01	$\delta = 1$
					e = 7,82E-02	$\varepsilon = 0$
					f = 0,00E+00	$\phi = 0$



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350°
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. ARGILLE MARNOSE CON BLOCCHI CALCAREI		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		40-41	101				

CALIBRAZIONE DELLA SONDA DILATOMETRICA

La calibrazione permette di determinare con precisione il diametro della sonda dilatometrica. Ciò corrisponde alla differenza tra il diametro del tubo in cui viene gonfiata la sonda e la media degli spostamenti dei tre sensori:

$$Ø_s = Ø_{tubo} - \Delta d_m$$

Da questi dati è quindi possibile determinare il diametro iniziale del pozzo alla profondità della prova dilatometrica.
Questo è definito dalla relazione (Ddm, P0 è la media degli spostamenti dei sensori alla pressione di contatto - P0):

$$Ø_{F,0} = Ø_s - \Delta d_{m,P0}$$

Pressione (bar)	Spostamenti (mm)			
	C1	C2	C3	Media
0,0	0,000	0,000	0,000	0,000
0,1	0,010	0,010	0,010	0,010
0,6	1,971	1,981	2,120	2,024
1,1	4,102	3,476	3,229	3,602
1,5	4,196	3,911	3,310	3,806
2,0	4,262	4,167	3,324	3,918
4,0	4,324	4,230	3,309	3,954
30,6	4,383	4,279	3,230	3,964
60,8	4,380	4,306	3,229	3,972
89,9	4,374	4,304	3,234	3,971

Determinazione del diametro della sonda dilatometrica

Diametro interno del tubo :

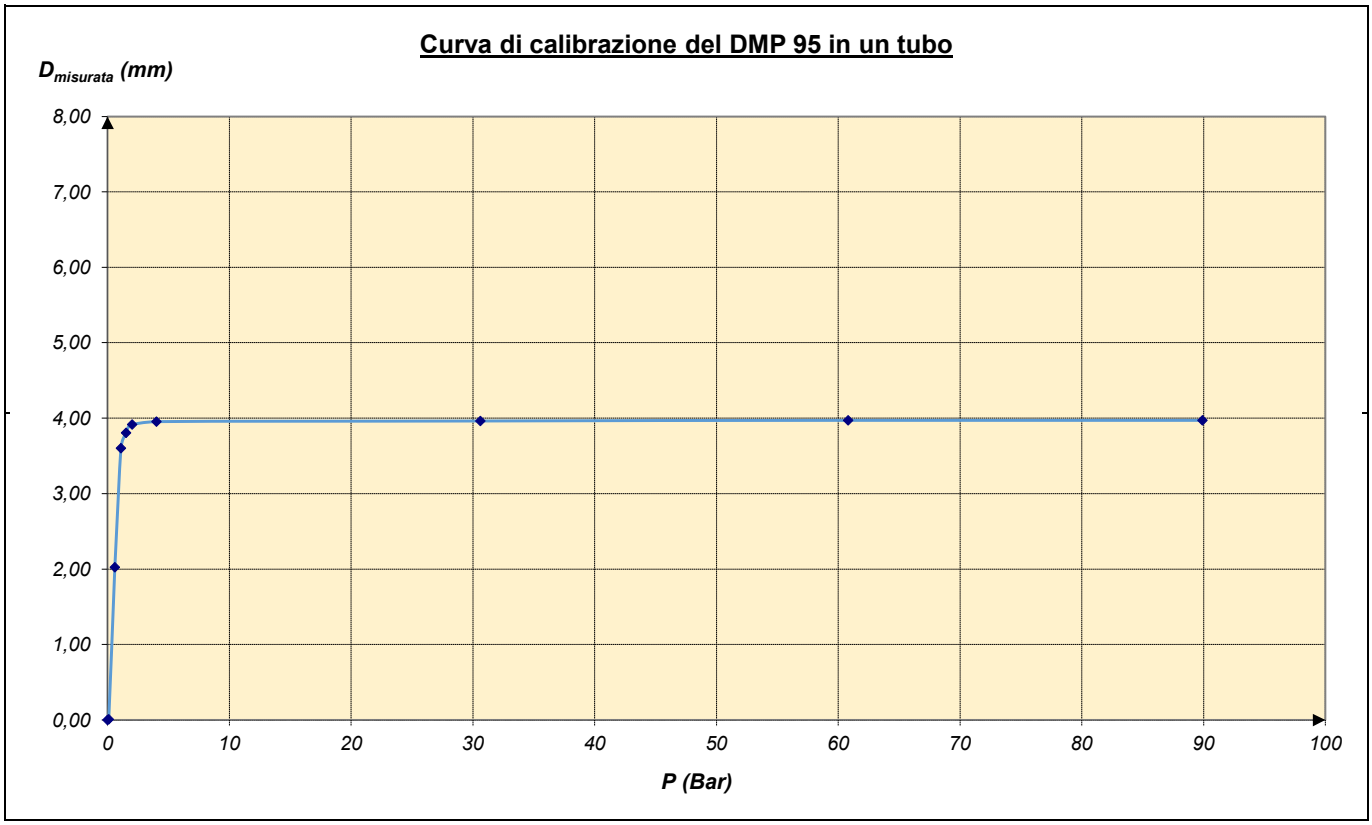
$Ø_{intérieur\ tube}$ = 100,000 mm

Spostamento medio dei sensori diametrali al contatto :

Δd_m = 3,956 mm

Diametro sonda :

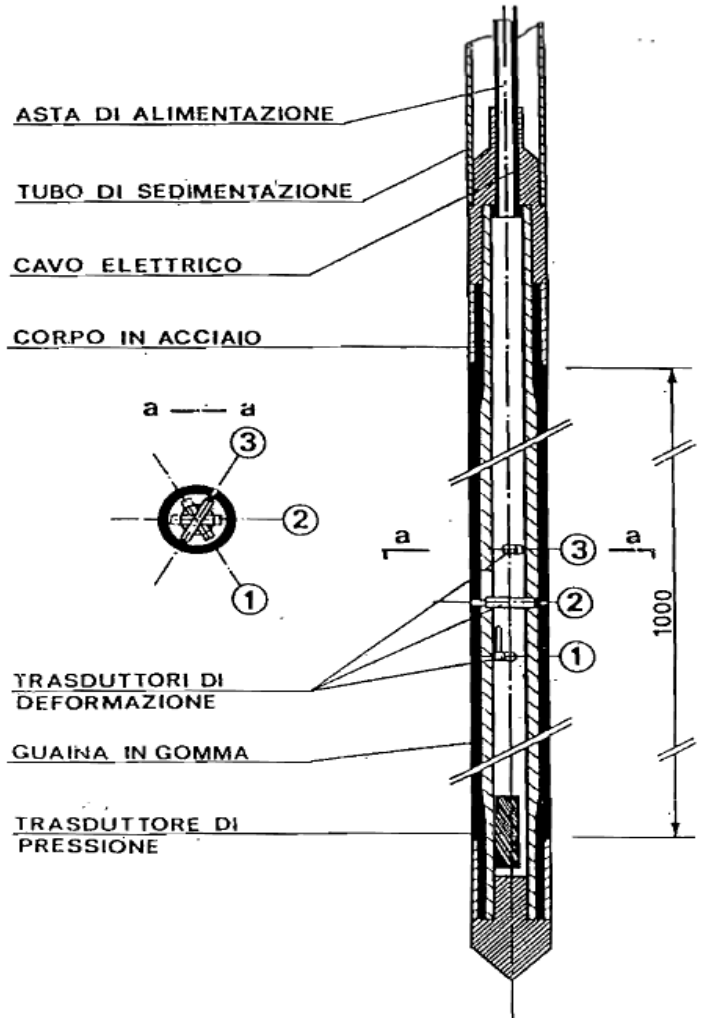
$Ø_{sonda} = Ø_{tubo} - \Delta d_m$ = 96,044 mm



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350°
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95	0	ALT. ARGILLE MARNOSE CON BLOCCHI CALCAREI		
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	S. BAUR
		40-41	101	0			

Lunghezza spezzoni di carota (%) L < 5	5 < L < 10 (L = cm)	L > 10	Indice Spaziatura Fratture
0	0	100	100

SCHEMADILAROC DMP-95



GEOTEC SPA	COMMITTENTE:	VIANINI	COORDINATE:	41.296283°
	CANTIERE:	DIGA CAMPOLATTARO		14.730350°
	SONDAGGIO:	CL1	Quota (m.s.l.m.):	401

TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. MARNE ARGILLOSE CON BLOCCHI CALCAREI		
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	S. BAUR
		62-63	101				

Ciclo		Pressione (Bar)		Deformazioni (mm)				Mod. Dilato (MPa)
		Letta	Corretta	Sensore 1	Sensore 2	Sensore 3	Media	
Contatto		0,0	0,0	0,000	0,000	0,000	0,000	
		0,1	0,0	0,026	0,035	0,050	0,037	
		0,4	0,2	0,059	0,068	0,070	0,066	
		0,5	0,4	0,098	0,099	0,112	0,103	
P_0		3,0	1,8	5,580	4,621	4,037	4,746	
$2\ P_0$		5,9	4,5	7,625	5,580	4,302	5,836	E_{D1}
Ciclo 1	Carico	7,0	5,6	8,272	5,945	4,519	6,245	
		8,1	6,7	8,989	6,319	4,707	6,672	27,9
		9,0	7,5	9,667	6,646	4,952	7,089	
	P_1	10,1	8,6	10,598	7,089	5,290	7,659	
	Scarico	9,0	7,5	10,155	6,894	5,136	7,395	E_{E1}
		8,0	6,5	9,746	6,718	4,974	7,146	44,3
		7,1	5,6	9,356	6,538	4,815	6,903	
	$2P_0$	6,0	4,6	8,724	6,187	4,634	6,515	
	Ricarico	7,0	5,5	9,132	6,376	4,764	6,757	E_{DR1}
		8,1	6,6	9,503	6,576	4,865	6,982	43,5
		9,0	7,5	9,921	6,754	5,030	7,235	
	P_1	10,0	8,5	10,587	7,089	5,302	7,659	E_{D2}
Ciclo 2	Carico	11,2	9,6	11,034	7,386	5,554	7,991	
		12,0	10,4	11,470	7,672	5,750	8,297	35,9
		13,0	11,4	11,896	7,949	5,906	8,583	
	$1{,}5.P_1 < P_2 < 2.P_1$	14,1	12,5	12,479	8,380	6,320	9,060	
	Scarico	12,0	10,4	11,898	7,956	6,028	8,627	E_{E2}
		10,0	8,4	11,381	7,543	5,770	8,231	56,8
		8,0	6,4	10,833	7,141	5,549	7,841	
	$2P_0$	5,9	4,4	10,058	6,625	5,048	7,244	
	Ricarico	7,9	6,4	10,671	7,054	5,350	7,692	E_{DR2}
		10,0	8,4	11,265	7,449	5,603	8,106	55,7
		12,0	10,4	11,835	7,810	5,883	8,509	
	P_2	14,2	12,5	12,614	8,389	6,360	9,121	E_{D3}
Ciclo 3	Carico	16,1	14,4	13,627	8,874	6,522	9,675	
		18,0	16,3	14,619	9,328	6,661	10,203	43,6
		20,0	18,2	15,623	9,748	6,788	10,720	
	$1{,}5.P_2 < P_3 < 2.P_2$	22,3	20,5	16,858	10,389	7,060	11,436	
	Scarico	18,1	16,3	16,080	9,924	6,904	10,969	E_{E3}
		14,1	12,4	15,050	9,348	6,715	10,371	
		9,8	8,1	13,850	8,585	6,406	9,614	75,4
	$2P_0$	5,7	4,1	12,587	7,580	6,050	8,739	

Calcolo del modulo dilatometrico (Ed) :

$$Ed = 2 \times G \times (1 + \nu)$$

Modulo di taglio :

$$G = \Delta P \times 0{,}5 \times Ø_{F,0} / \Delta d$$

Risultato :

$$Ed = (1 + \nu) \times Ø_{F,0} \times \Delta P / \Delta d$$

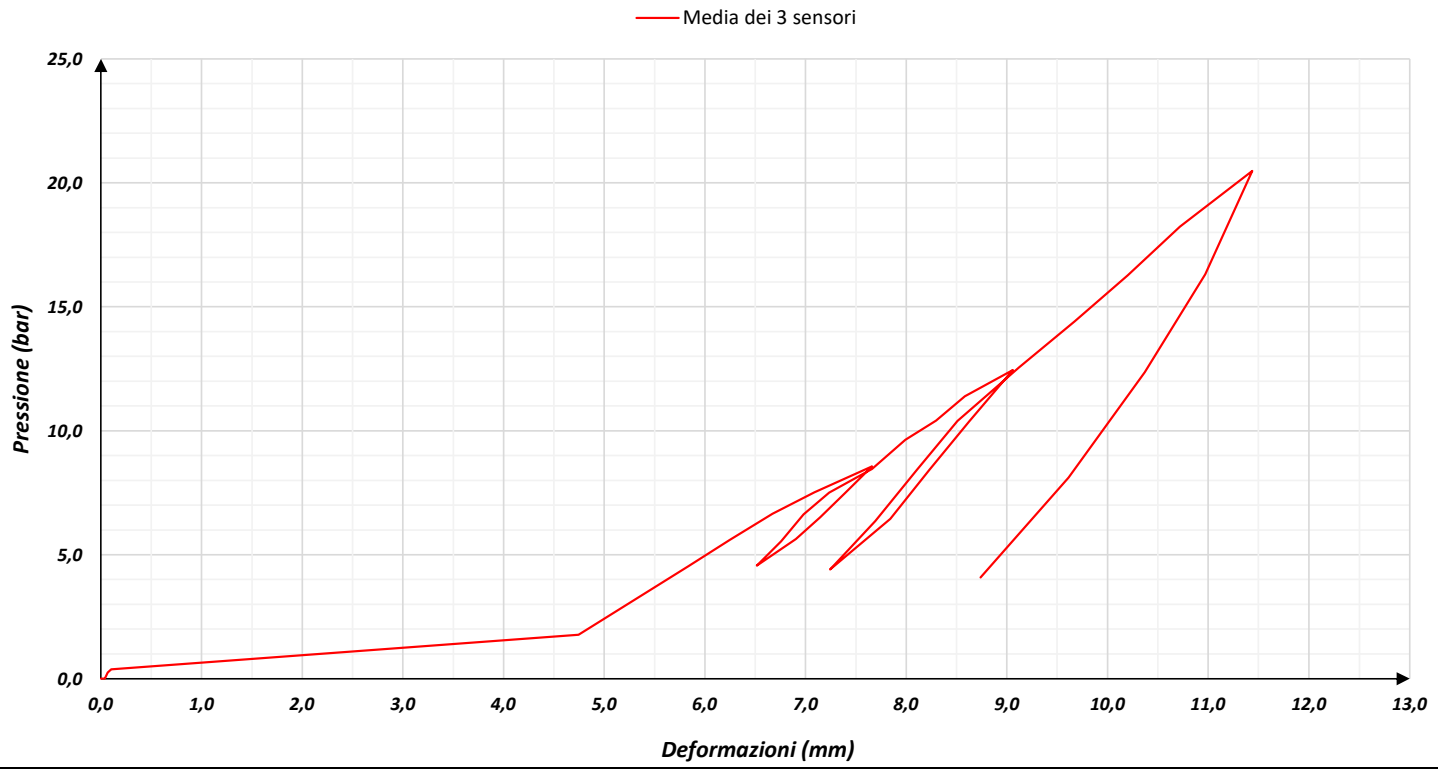
Dati di calcolo :

- ν coefficiente di Poisson : $\nu =$ 0,25
- $Ø_{F,0}$ diametro iniziale di foro (ØF,0 =ØS + Dd0) : $Ø_{F,0} =$ 100,8 (mm)
- $Ø_S$ diametro della sonda dilatometrica : $Ø_S =$ 96,0 (mm)
- Risultato : $(1 + \nu) \times Ø_{F,0} =$ 126,0 (mm)

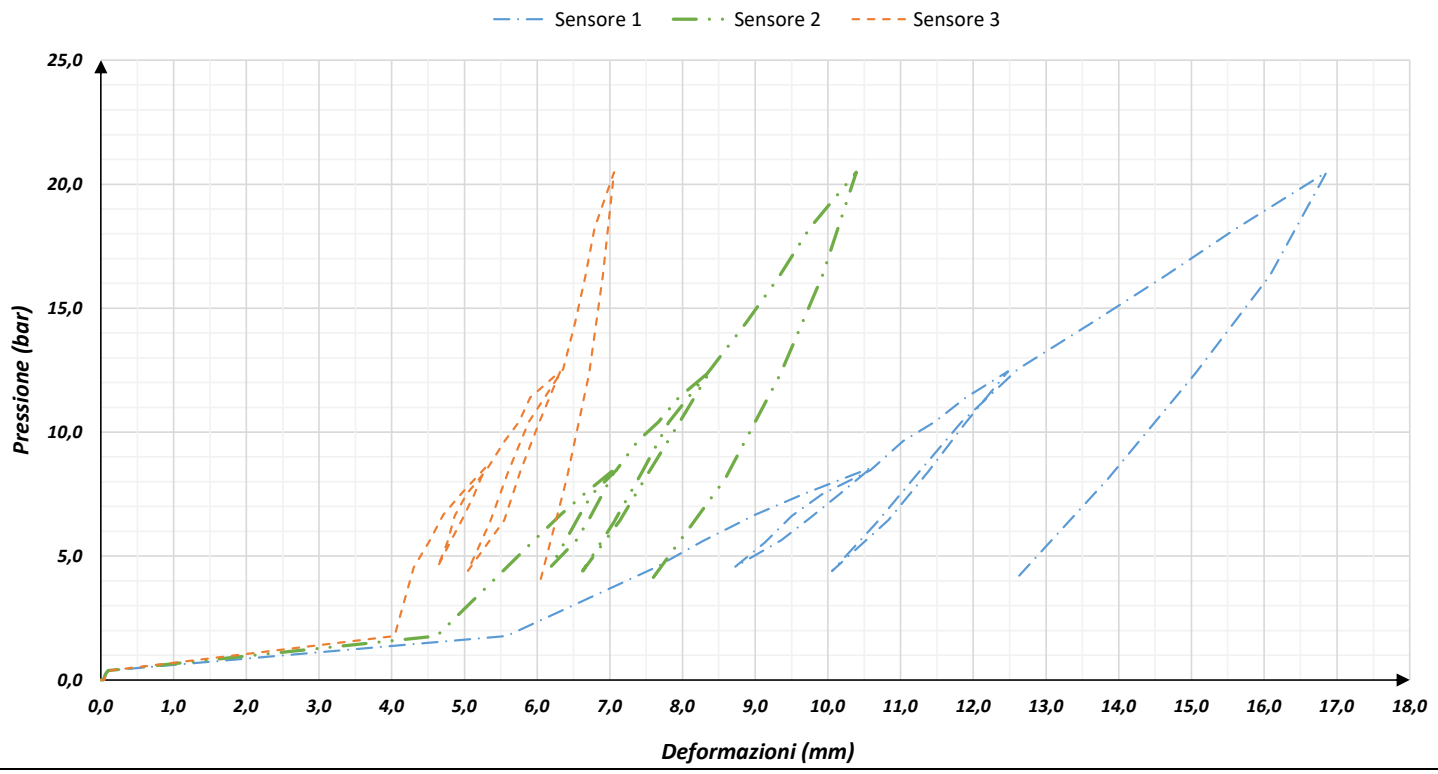
Ed2 =	35,9	(Mpa)	Ee2 =	56,8	(Mpa)	(calcolato sul 2° Ciclo)
EGm =	36,0	(Mpa)	Ee3 =	75,4	(Mpa)	

GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. MARNE ARGILLOSE CON BLOCCHI CALCAREI		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		62-63	101				

RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. MARNE ARGILLOSE CON BLOCCHI CALCAREI		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		62-63	101				

STANDARDIZZAZIONE DELLA SONDA DILATOMETRICA

La standardizzazione permette di determinare la resistenza della membrana :

$$P_{resistenza\ guaina}(D_{misurata}) = P_e(D_{misurata})$$

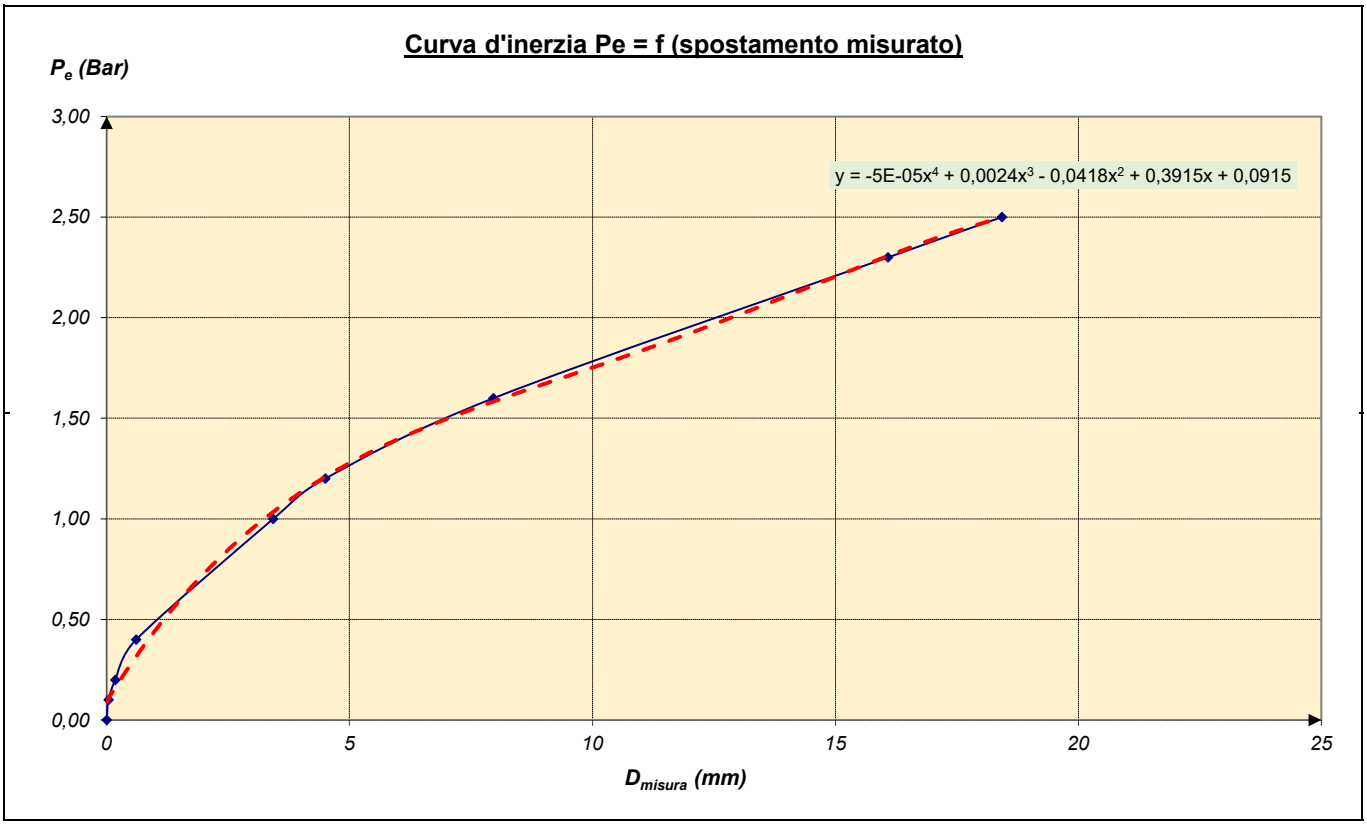
P_e espresso sotto forma di poligono :

$$P_e(D_{misurata}) = a \times D_{misurata}^{\alpha} + b \times D_{misurata}^{\beta} + c \times D_{misurata}^{\gamma} + d \times D_{misurata}^{\delta} + e \times D_{misurata}^{\varepsilon} + f \times D_{misurata}^{\phi}$$

La pressione applicata può essere corretta secondo la relazione :

$$P_{corretta} = P_{misurata}(D_{misurata}) - P_e(D_{misurata})$$

Pressione (bar)	Spostamenti (mm)				Definizioni di coefficienti :	
	C1	C2	C3	Media		
0,0		0,000	0,000	0,000		
0,1		0,014	0,063	0,039		
0,2	0,110	0,126	0,298	0,178	a = -5,00E-05	$\alpha = 4$
0,4	0,605	0,458	0,756	0,606		
1,0	3,522	3,253	3,514	3,430	b = 2,40E-03	$\beta = 3$
1,2	4,597	4,307	4,608	4,504		
1,6	7,965	7,622	8,296	7,961	c = -4,19E-02	$\gamma = 2$
2,3	15,466	15,053	17,729	16,083		
2,5	17,562	17,192	20,540	18,431	d = 3,93E-01	$\delta = 1$
					e = 7,82E-02	$\varepsilon = 0$
					f = 0,00E+00	$\phi = 0$



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350°
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		ALT. MARNE ARGILLOSE CON BLOCCHI CALCAREI		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		62-63	101				

CALIBRAZIONE DELLA SONDA DILATOMETRICA

La calibrazione permette di determinare con precisione il diametro della sonda dilatometrica. Ciò corrisponde alla differenza tra il diametro del tubo in cui viene gonfiata la sonda e la media degli spostamenti dei tre sensori:

$$Ø_s = Ø_{tubo} - \Delta d_m$$

Da questi dati è quindi possibile determinare il diametro iniziale del pozzo alla profondità della prova dilatometrica.
Questo è definito dalla relazione (Ddm, P0 è la media degli spostamenti dei sensori alla pressione di contatto - P0):

$$Ø_{F,0} = Ø_s - \Delta d_{m,P0}$$

Pressione (bar)	Spostamenti (mm)			
	C1	C2	C3	Media
0,0	0,000	0,000	0,000	0,000
0,1	0,010	0,010	0,010	0,010
0,6	1,971	1,981	2,120	2,024
1,1	4,102	3,476	3,229	3,602
1,5	4,196	3,911	3,310	3,806
2,0	4,262	4,167	3,324	3,918
4,0	4,324	4,230	3,309	3,954
30,6	4,383	4,279	3,230	3,964
60,8	4,380	4,306	3,229	3,972
89,9	4,374	4,304	3,234	3,971

Determinazione del diametro della sonda dilatometrica

Diametro interno del tubo :

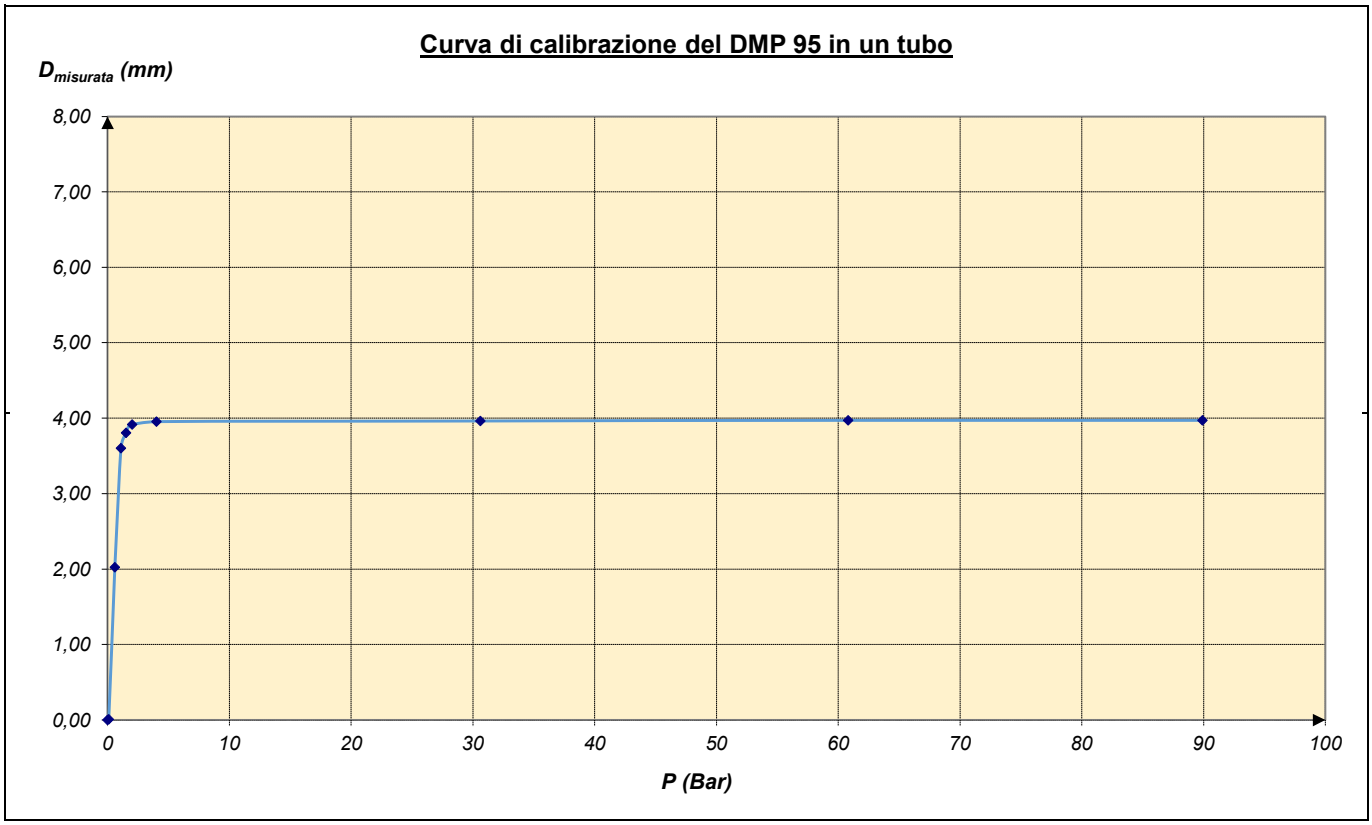
$Ø_{intérieur\ tube}$ = 100,000 mm

Spostamento medio dei sensori diametrali al contatto :

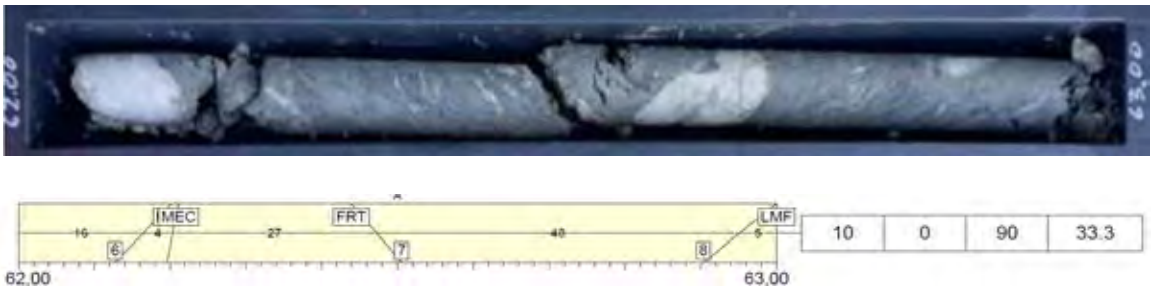
Δd_m = 3,956 mm

Diametro sonda :

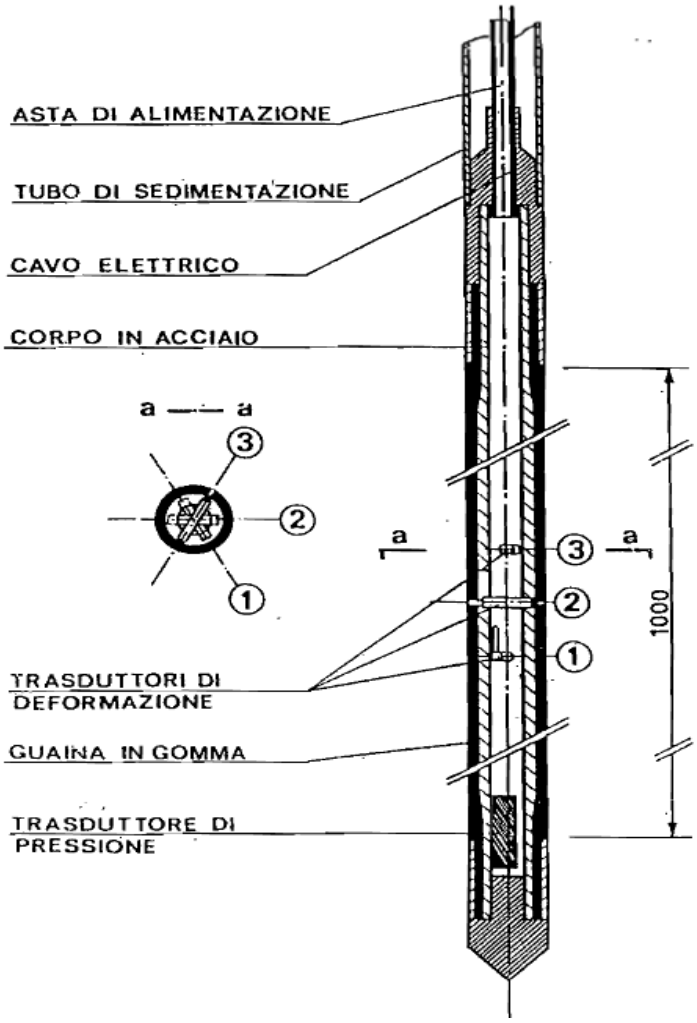
$Ø_{sonda} = Ø_{tubo} - \Delta d_m$ = 96,044 mm



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.296283°
		CANTIERE:		DIGA CAMPOLATTARO			14.730350°
		SONDAGGIO:		CL1		Quota (m.s.l.m.):	401
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95	0	ALT. MARNE ARGILLOSE CON BLOCCHI CALCAREI		
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	S. BAUR
		62-63	101	0			



SCHEMADILAROC DMP-95



PROVE IN FORO
LOG GEOFISICO
CL1

GEOTEC SPA
SOIL INVESTIGATIONS & LAND SURVEYING

Bohrlochmessung / prove in foro

GEOLOGIN
GEOPHYSICAL LOGGING

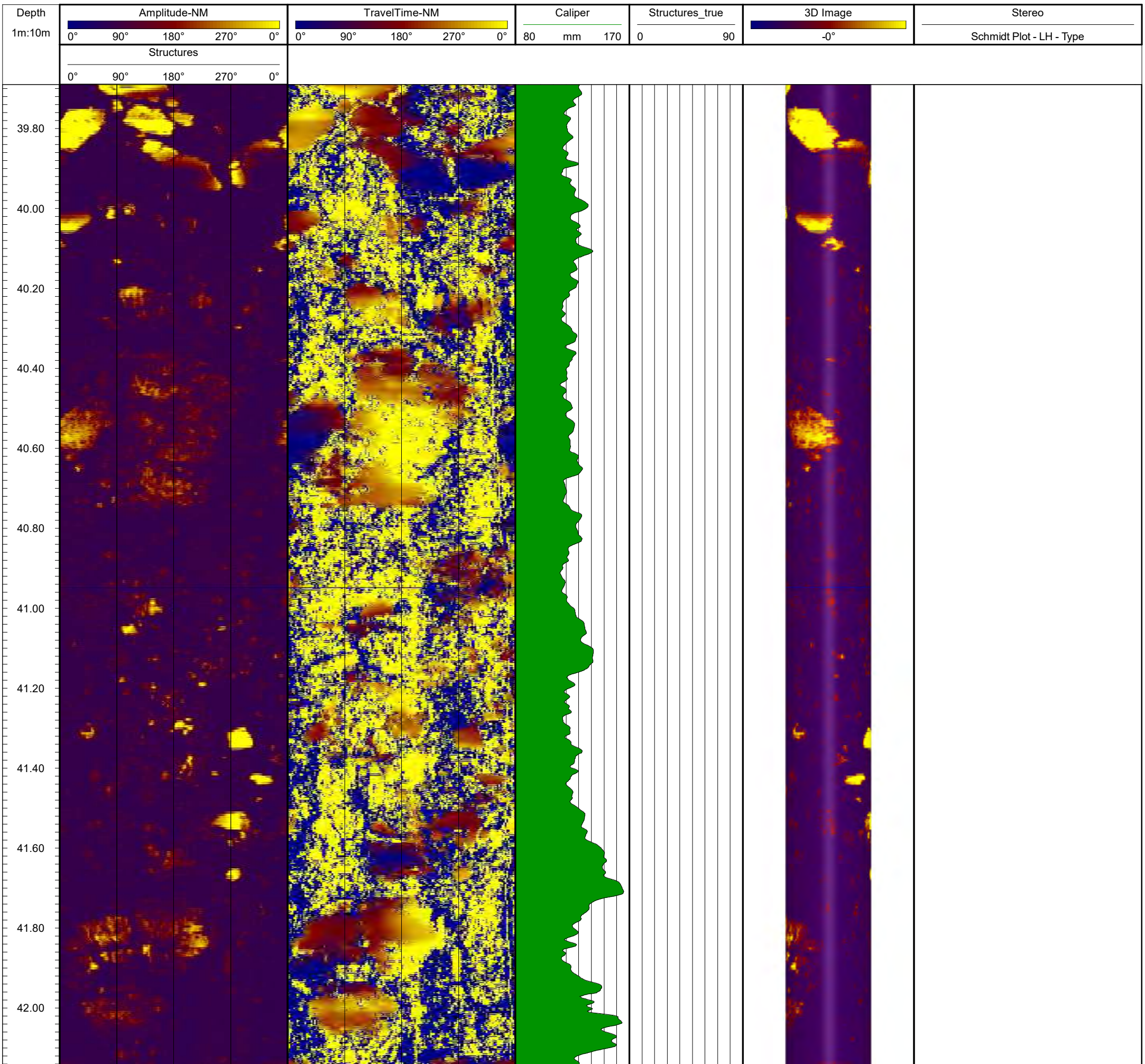
Bohrung / Sondaggio	**CL1**	**Messungen / Misure**			**Koordinaten / Coordinate**	
Gesellschaft / Società	Geotec SpA.	ABI			X	
Projekt / Progetto					Y	
Ort / Località	Campolattaro		von / da [m]	bis / a [m]	Z	
Land / Provincia	Benevento	ABI	39.69	63.95		
Staat / Stato	Italia				**Maßstab / Scala**	1:10

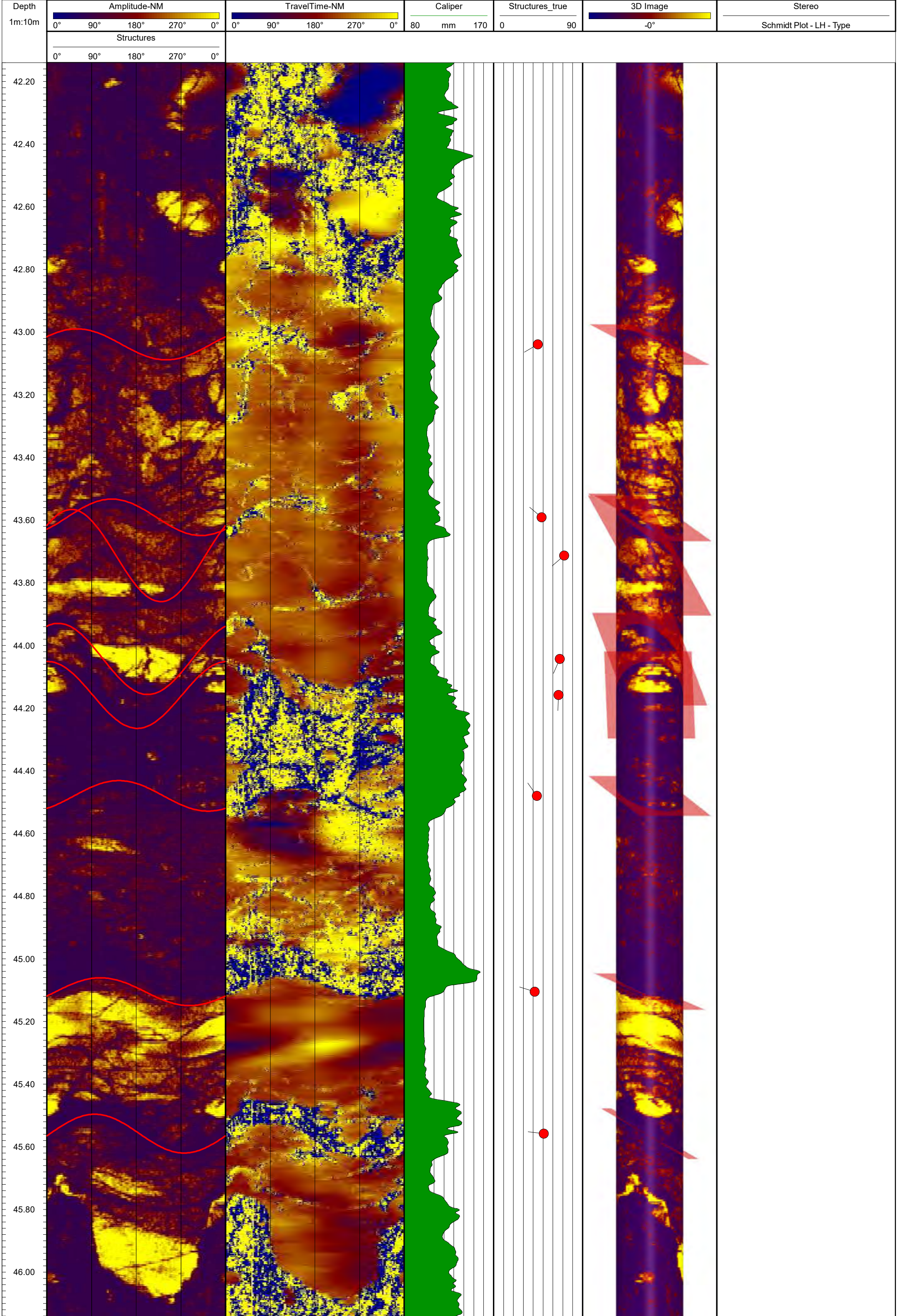
Datum / Data	30.09.2020	Aufgezeichnet von / Registrato da	S.Baur	Beobachtungen / Osservazioni
Messung Nr. / Misura nr.	1	Beobachter / Supervisore	S.Baur	
Bezugspunkt / livello di riferimento	piano campagna			
Endteufe / Profondità finale	63.95 m			
Wasserstand / Livello dell'acqua				
Bohrlochfluid / Tipo di Fluido				

Ø Bohrloch / Foro	von / da [m]	bis / a [m]
101 mm	30.00	63.95

Ø Verrohrung / Tubi di rivestimento	von / da [m]	bis / a [m]
122 mm	0.00	30.00

Major Open Joint / Fracture Bedding / Banding / Foliation

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Amplitude-NM
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TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 170
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
42.20
42.40
42.60
42.80
43.00
43.20
43.40
43.60
43.80
44.00
44.20
44.40
44.60
44.80
45.00
45.20
45.40
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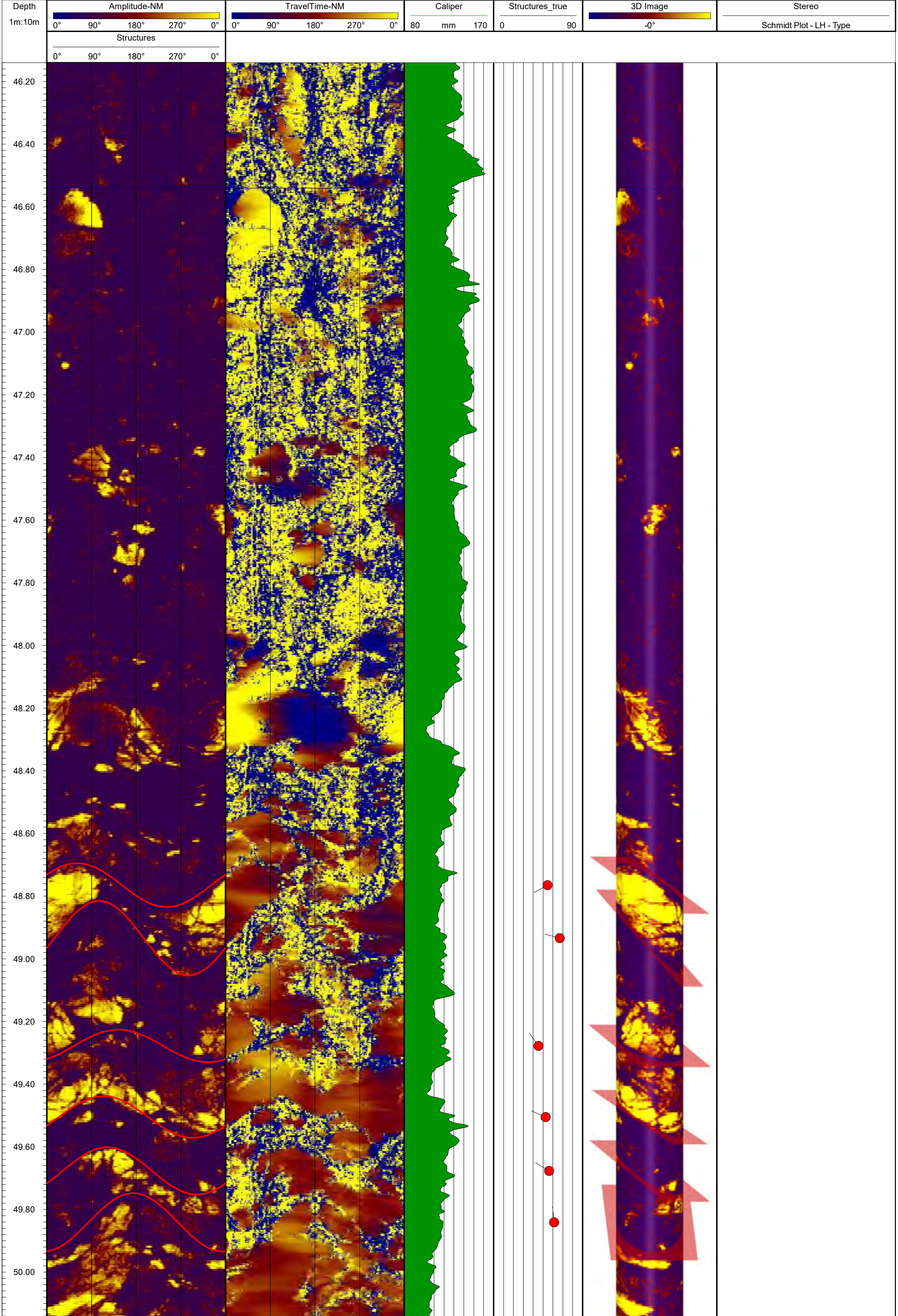
45.80
46.00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Amplitude-NM
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TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 170
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
46.20
46.40
46.60
46.80
47.00
47.20
47.40
47.60
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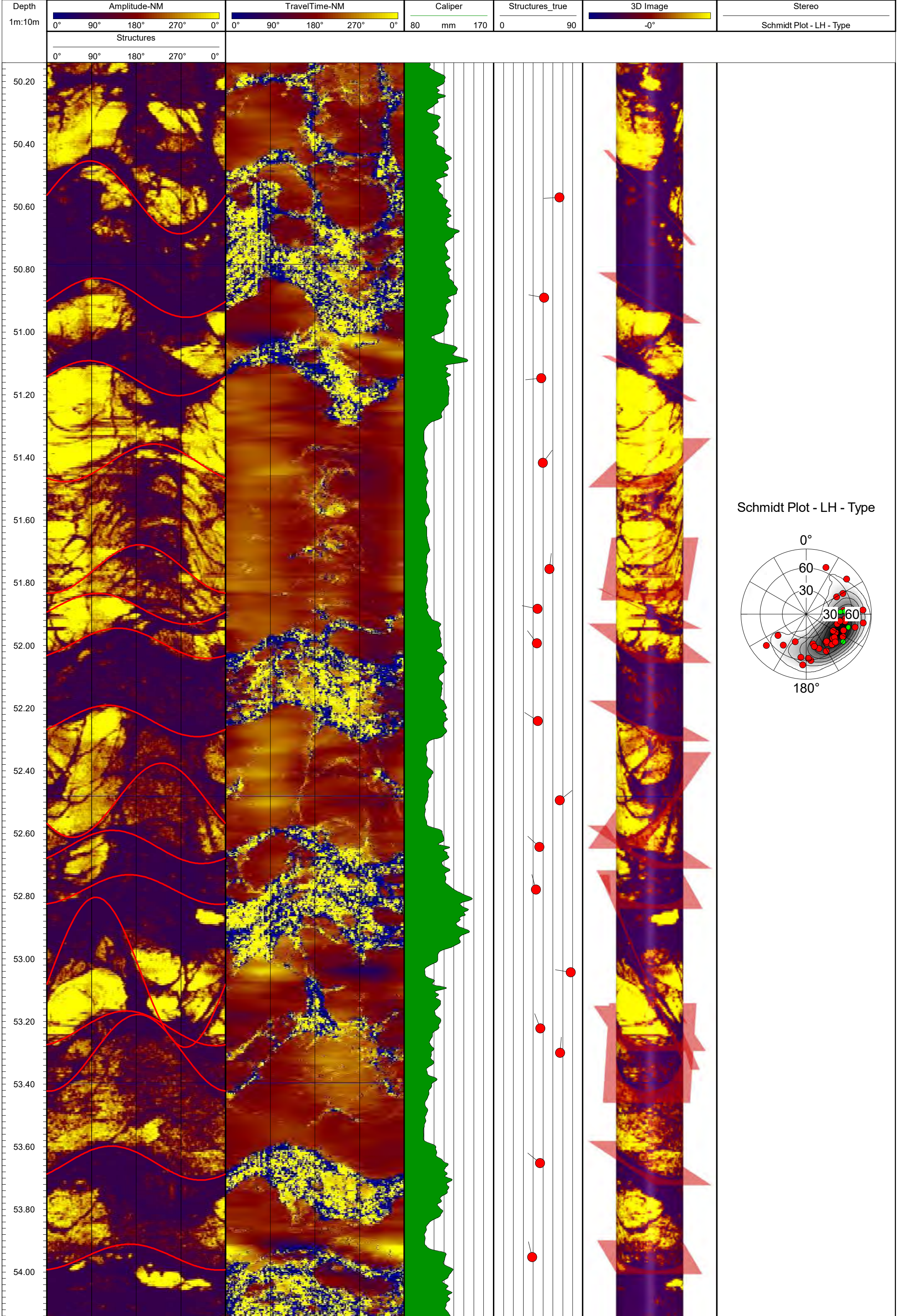
49.60
49.80
50.00


Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 170
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
50.20
50.40
50.60
50.80
51.00
51.20
51.40
51.60
51.80
52.00
52.20
52.40
52.60
52.80
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53.60
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Schmidt Plot - LH - Type
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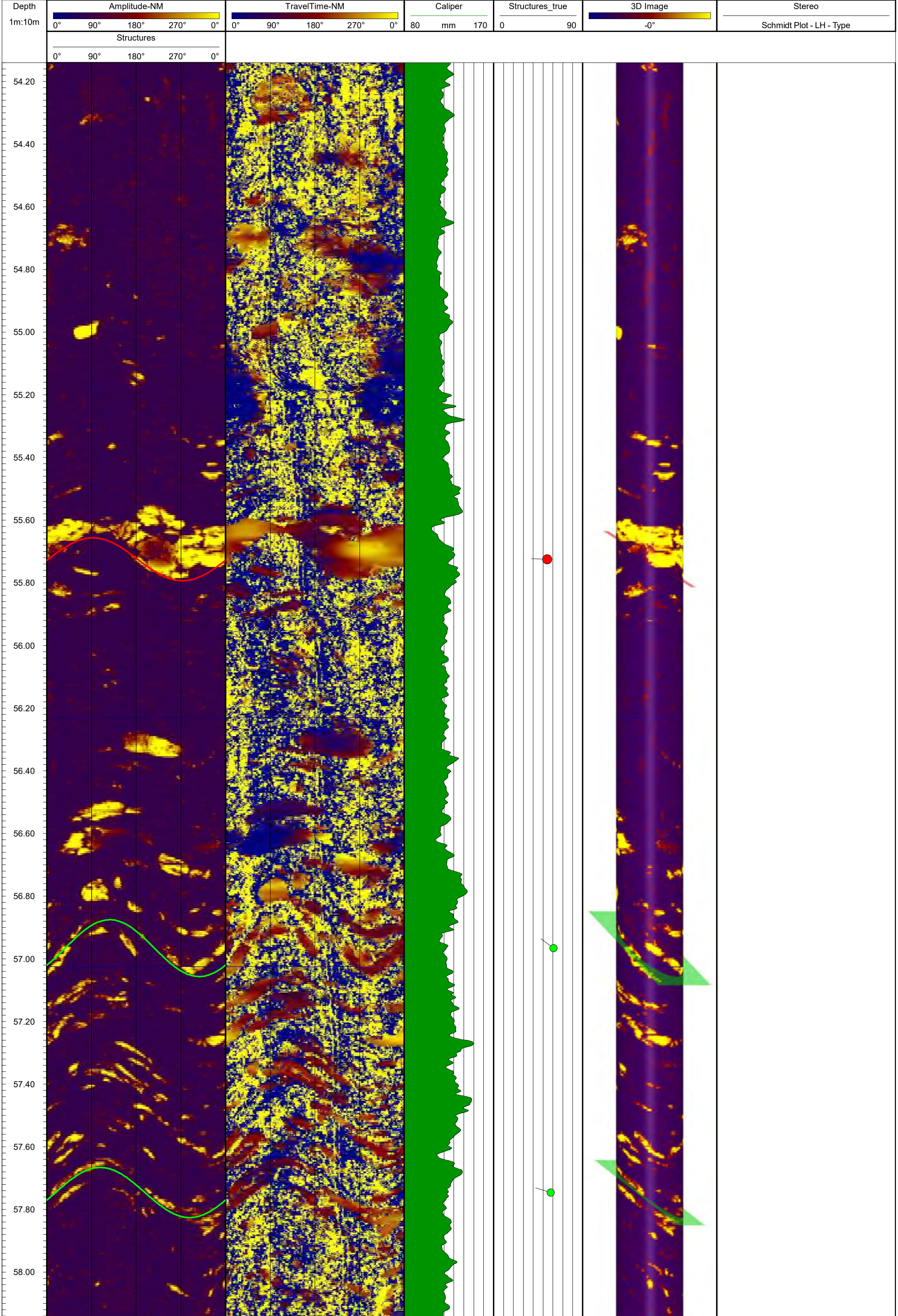
60
30
30
60
180°


Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 170
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
54.20
54.40
54.60
54.80
55.00
55.20
55.40
55.60
55.80
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56.40
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57.20
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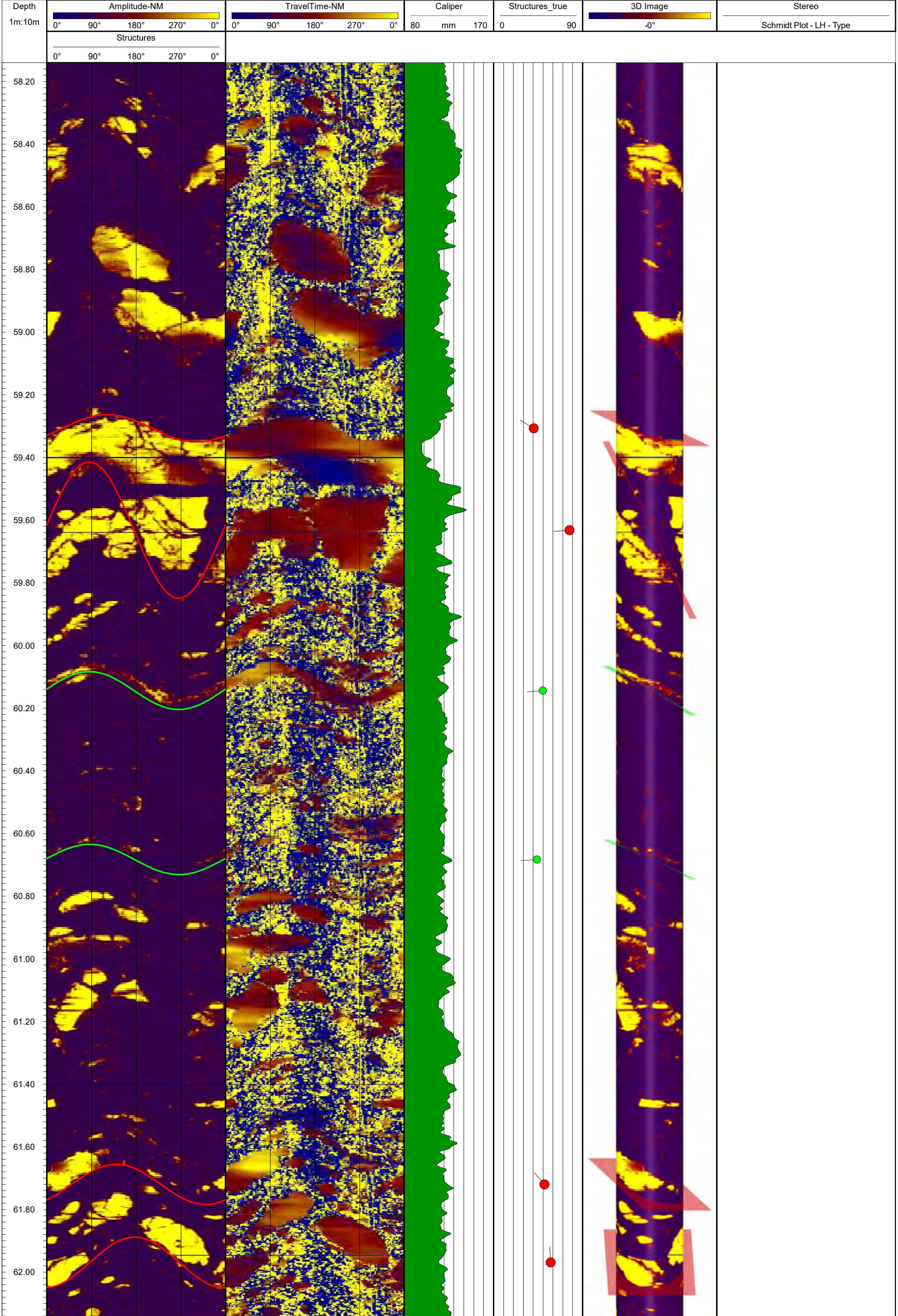
58.00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Amplitude-NM
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Caliper
80 mm 170
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
58.20
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59.40
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60.80
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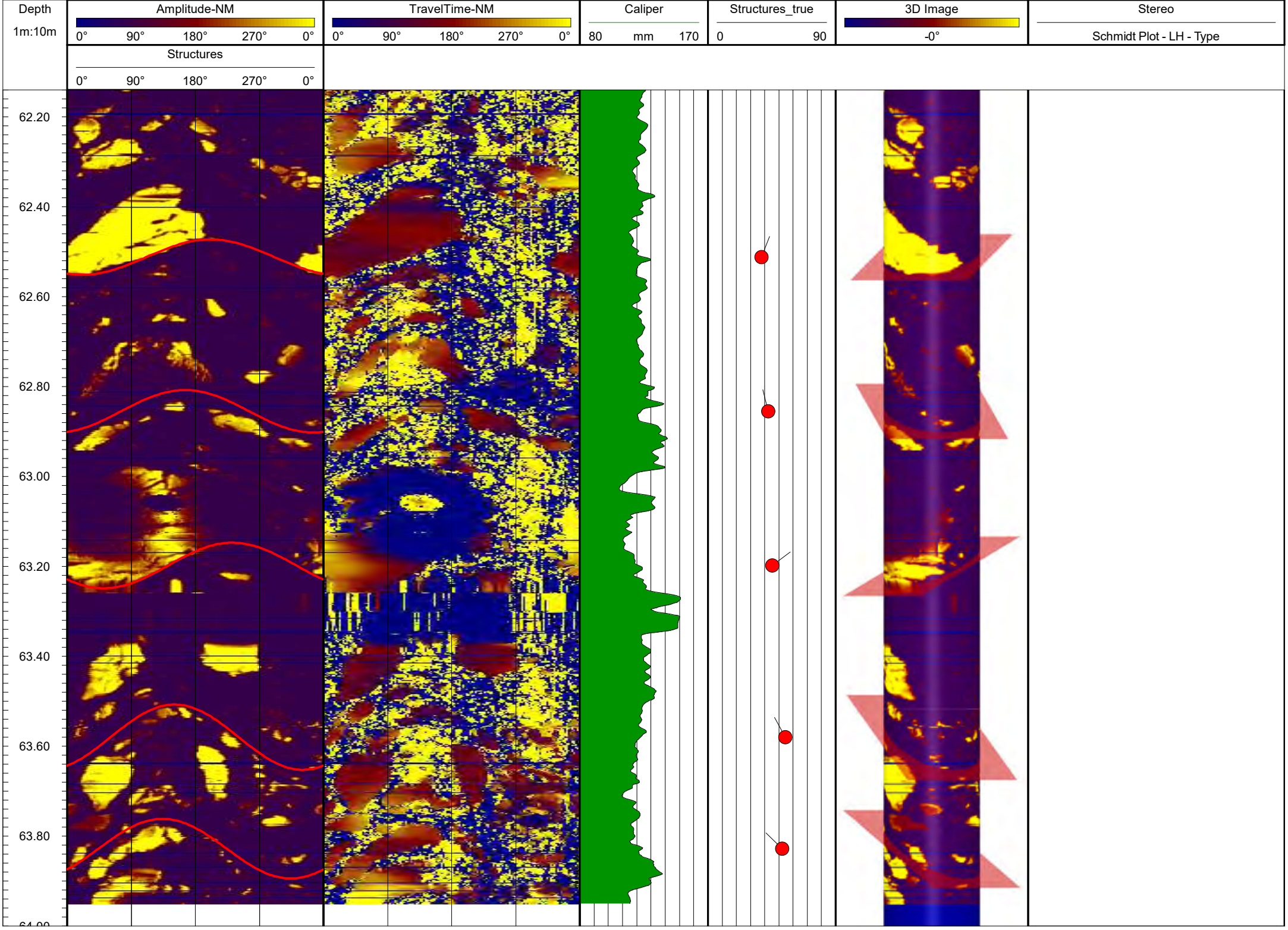
61.60
61.80
62.00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Amplitude-NM
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TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 170
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
62.20
62.40
62.60
62.80
63.00
63.20
63.40
63.60
63.80

ALLEGATO 3.2
PROVE IN FORO
(LUGEON, DILATOMETRICHE)
CL2 (155,0 m)

PROVE IN FORO
LUGEON
CL2

GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE: VIANINI SPA
CANTIERE: INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO
LOCALITA': CAMPOLATTARO (BN)
SONDAGGIO: CL2 **PROVA N°** L1 **14/09/2020**

ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE Carotaggio Continuo
CORONA TIPO Diamantata Imp.

TEST avanzamento XX — Azimuth
risalita — Inclinazione — degree

PROFONDITA' PROVA da m. 137,00 m a m. 140,00 m

ALTEZZA MANOMETRO 1,10 m **QUOTA MANOMETRO**

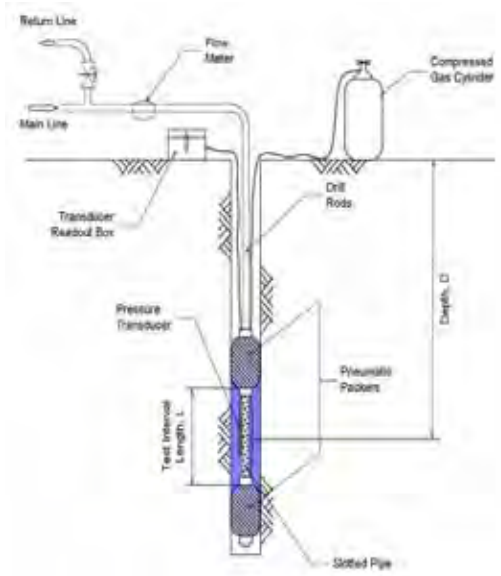
QUOTA 485 m

ACQUA IN FORO 29,70 m

DIAMETRO FORO Ø 101 mm

TIPO PACKER

ASTE
- Diametro esterno (mm). 88,9
- Diametro interno 77,8
- Lunghezza (m) 137,00



DATI DI CAMPAGNA

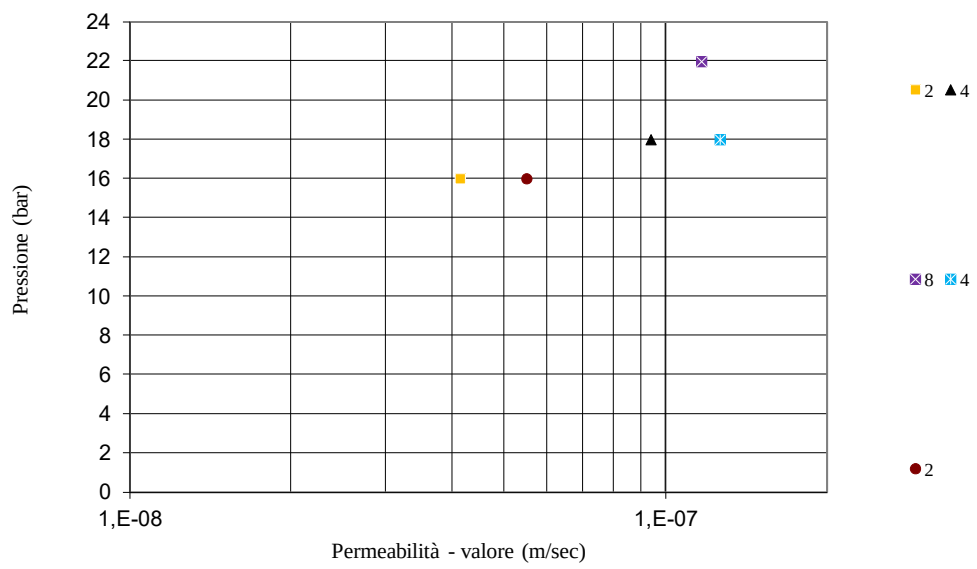
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	2	18,00	830,00	833,00	837,00	842,00	845,00	848,00
	10	4	46,00	860,00	869,00	877,00	887,00	896,00	906,00
	10	8	70,00	920,00	935,00	948,00	962,00	975,00	990,00
CICLO DI SCARICO	10	4	62,00	1005,00	1018,00	1030,00	1042,00	1056,00	1067,00
	10	2	24,00	1080,00	1084,00	1089,00	1095,00	1099,00	1104,00

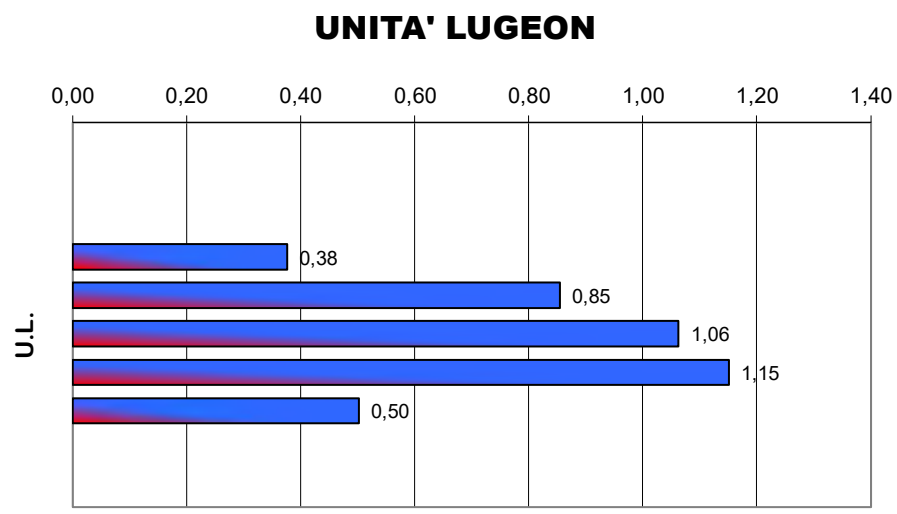
Assorbimento (l)

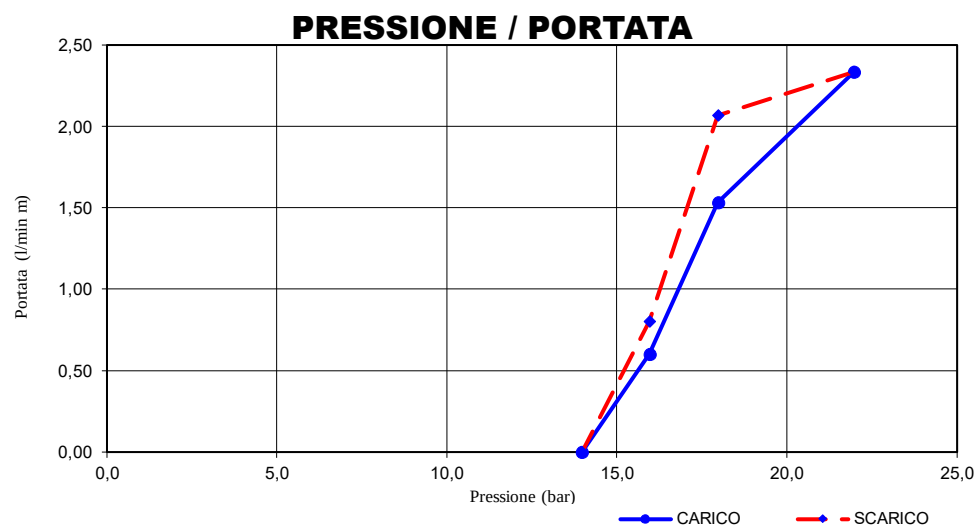
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	2,00	2,637E-05	15,960	18,00	0,38	4,125E-08
	10	4,00	1,297E-04	17,960	46,00	0,85	9,369E-08
da m.:	10	8,00	2,655E-04	21,960	70,00	1,06	1,166E-07
137,00	10	4,00	2,158E-04	17,960	62,00	1,15	1,263E-07
a m.:	10	2,00	4,293E-05	15,960	24,00	0,50	5,501E-08
140,00							
					Valore medio	**0,79**	**8,657E-08**







GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE: VIANINI SPA
CANTIERE: INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO
LOCALITA': CAMPOLATTARO (BN)
SONDAGGIO: CL2 **PROVA N°** L2 **15/09/2020**

ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE Carotaggio Continuo
CORONA TIPO Diamantata Imp.

TEST avanzamento XX — Azimuth
risalita — Inclinazione — degree

PROFONDITA' PROVA da m. 152,00 m a m. 155,00 m

ALTEZZA MANOMETRO 1,10 m **QUOTA MANOMETRO**

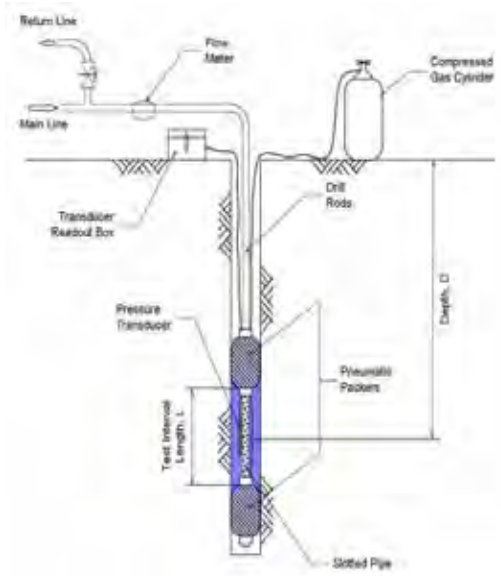
QUOTA 485 m

ACQUA IN FORO 29,70 m

DIAMETRO FORO Ø 101 mm

TIPO PACKER

ASTE
- Diametro esterno (mm). 88,9
- Diametro interno 77,8
- Lunghezza (m) 152,00



DATI DI CAMPAGNA

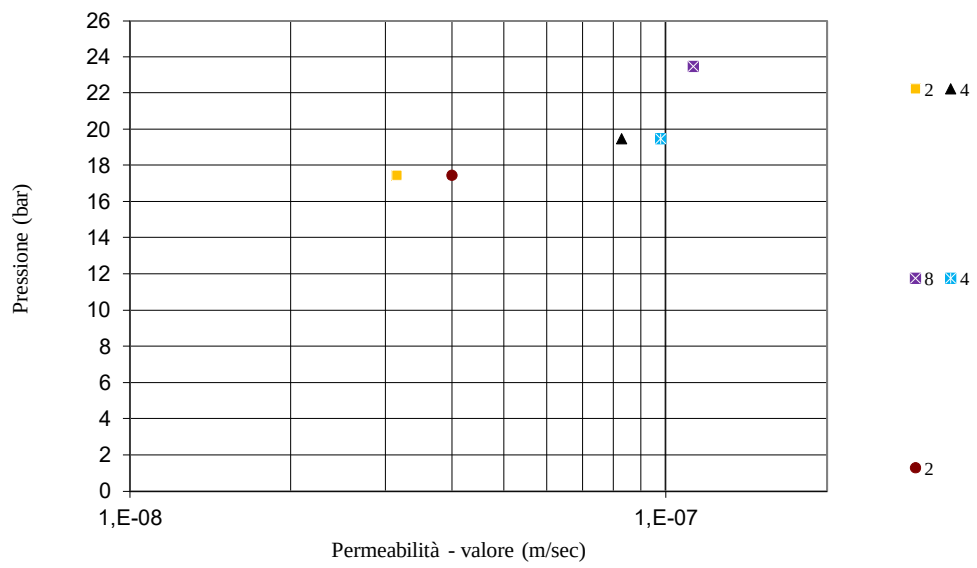
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	2	15,00	1120,00	1123,00	1127,00	1129,00	1133,00	1135,00
	10	4	44,00	1150,00	1160,00	1169,00	1177,00	1186,00	1194,00
	10	8	72,00	1210,00	1225,00	1238,00	1252,00	1268,00	1282,00
CICLO DI SCARICO	10	4	52,00	1300,00	1311,00	1323,00	1333,00	1342,00	1352,00
	10	2	19,00	1380,00	1383,00	1387,00	1390,00	1395,00	1399,00

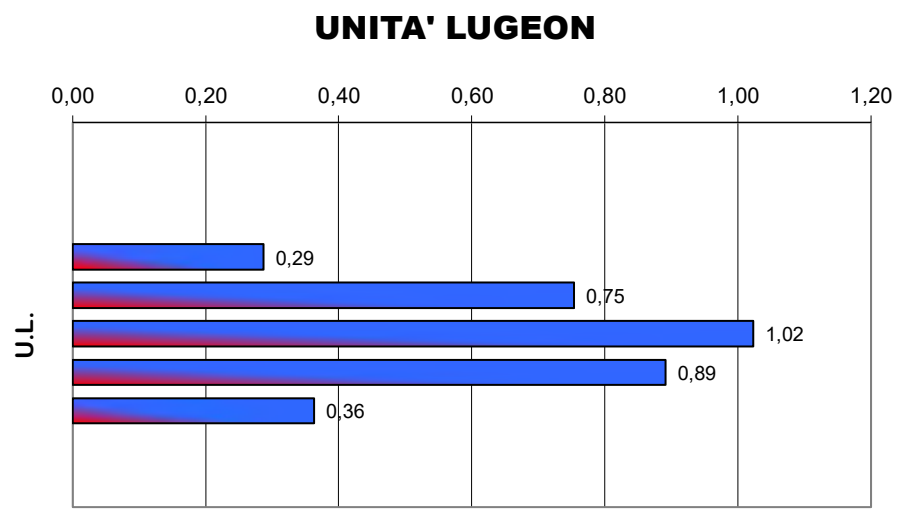
Assorbimento (l)

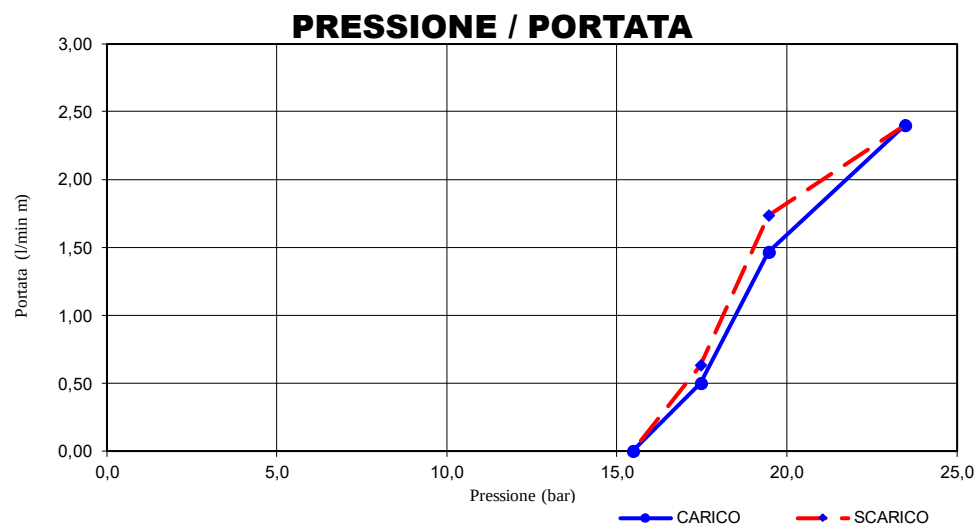
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	2,00	2,149E-05	17,460	15,00	0,29	3,143E-08
	10	4,00	1,334E-04	19,460	44,00	0,75	8,271E-08
da m.:	10	8,00	3,091E-04	23,460	72,00	1,02	1,123E-07
152,00	10	4,00	1,773E-04	19,460	52,00	0,89	9,775E-08
a m.:	10	2,00	3,206E-05	17,460	19,00	0,36	3,981E-08
155,00							
					Valore medio	**0,66**	**7,279E-08**







PROVE IN FORO
DILATOMETRICHE
CL2

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

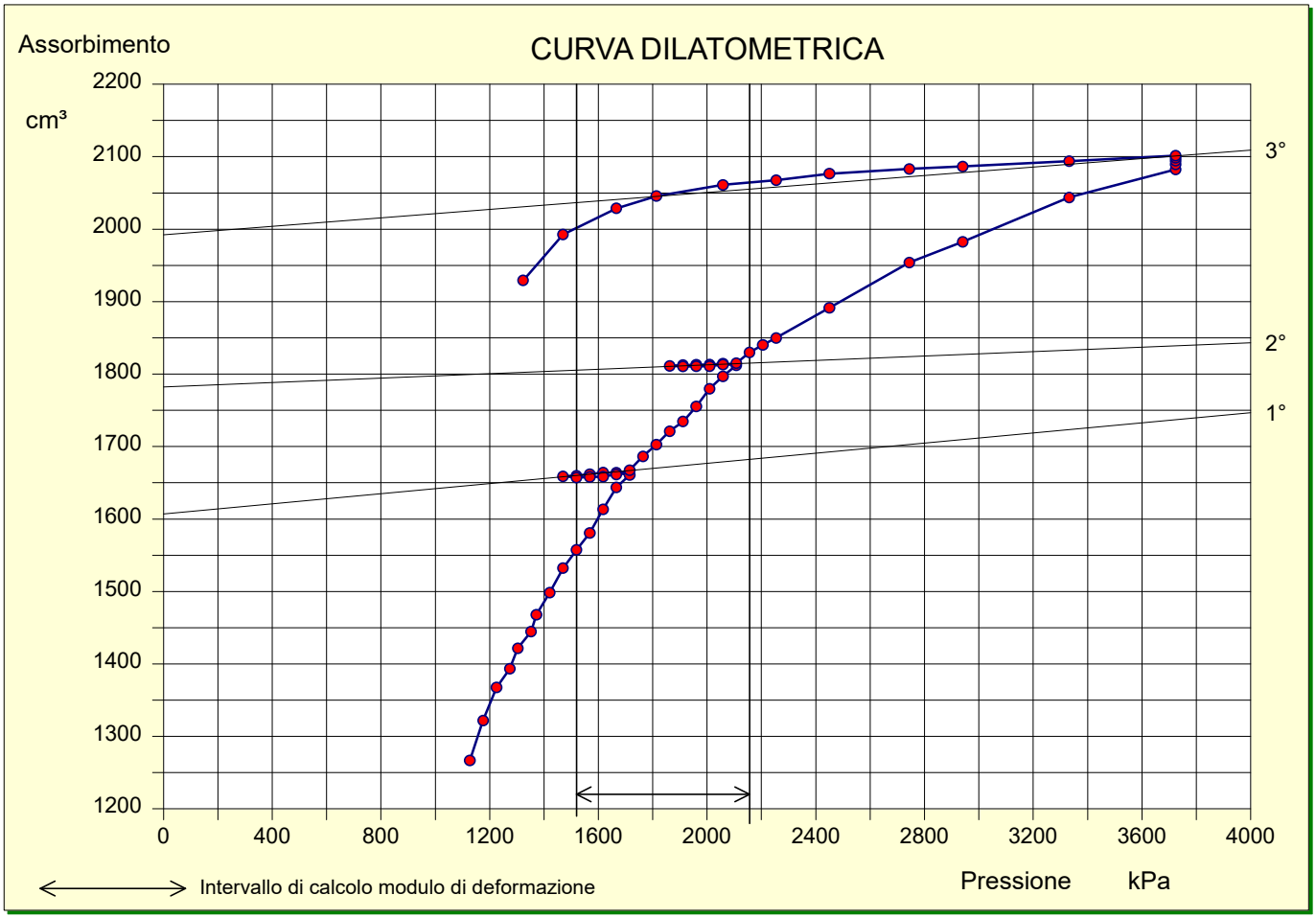
Profondità di prova (centro della cella) (m)	130,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia:			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1127,00	1293,72	27,02	1266,70	17,28	41	2058,00	1853,62	40,46	1813,16	24,74
2	1176,00	1349,87	27,90	1321,97	18,04	42	2107,00	1856,04	41,00	1815,03	24,76
3	1225,00	1396,31	28,76	1367,56	18,66	43	2156,00	1871,57	41,54	1830,03	24,97
4	1274,00	1422,95	29,59	1393,36	19,01	44	2205,00	1882,32	42,06	1840,27	25,11
5	1303,40	1451,65	30,08	1421,57	19,39	45	2254,00	1892,42	42,57	1849,85	25,24
6	1352,40	1475,68	30,88	1444,80	19,71	46	2450,00	1936,09	44,48	1891,61	25,81
7	1372,00	1499,15	31,20	1467,95	20,03	47	2744,00	2001,09	47,04	1954,05	26,66
8	1421,00	1530,32	31,97	1498,34	20,44	48	2940,00	2031,04	48,57	1982,47	27,05
9	1470,00	1564,90	32,73	1532,17	20,90	49	3332,00	2095,10	51,30	2043,80	27,88
10	1519,00	1590,99	33,47	1557,52	21,25	50	3724,00	2136,09	53,71	2082,38	28,41
11	1568,00	1614,91	34,18	1580,73	21,57	51	3724,00	2143,09	53,71	2089,38	28,51
12	1617,00	1648,17	34,88	1613,29	22,01	52	3724,00	2148,09	53,71	2094,38	28,57
13	1666,00	1679,25	35,57	1643,69	22,42	53	3724,00	2152,09	53,71	2098,38	28,63
14	1715,00	1697,10	36,23	1660,86	22,66	54	3724,00	2155,09	53,71	2101,38	28,67
15	1666,00	1699,46	35,57	1663,89	22,70	55	3332,00	2145,09	51,30	2093,79	28,57
16	1617,00	1699,11	34,88	1664,22	22,71	56	2940,00	2135,09	48,57	2086,52	28,47
17	1568,00	1696,09	34,18	1661,91	22,67	57	2744,00	2130,09	47,04	2083,05	28,42
18	1519,00	1693,18	33,47	1659,71	22,64	58	2450,00	2121,09	44,48	2076,61	28,33
19	1470,00	1691,57	32,73	1658,84	22,63	59	2254,00	2110,09	42,57	2067,53	28,21
20	1519,00	1690,81	33,47	1657,35	22,61	60	2058,00	2101,41	40,46	2060,96	28,12
21	1568,00	1692,12	34,18	1657,94	22,62	61	1813,00	2083,27	37,52	2045,75	27,91
22	1617,00	1693,48	34,88	1658,59	22,63	62	1666,00	2064,33	35,57	2028,77	27,68
23	1666,00	1697,10	35,57	1661,53	22,67	63	1470,00	2025,25	32,73	1992,52	27,18
24	1715,00	1703,63	36,23	1667,40	22,75	64	1323,00	1959,61	30,41	1929,20	26,32
25	1764,00	1723,34	36,88	1686,45	23,01						
26	1813,00	1740,12	37,52	1702,61	23,23						
27	1862,00	1759,28	38,14	1721,14	23,48						
28	1911,00	1773,25	38,74	1734,51	23,66						
29	1960,00	1794,66	39,33	1755,34	23,95						
30	2009,00	1819,59	39,90	1779,69	24,28						
31	2058,00	1837,39	40,46	1796,93	24,52						
32	2107,00	1852,92	41,00	1811,91	24,72						
33	2058,00	1854,98	40,46	1814,52	24,76						
34	2009,00	1853,07	39,90	1813,17	24,74						
35	1960,00	1852,12	39,33	1812,79	24,73						
36	1911,00	1851,26	38,74	1812,52	24,73						
37	1862,00	1849,45	38,14	1811,32	24,71						
38	1911,00	1849,35	38,74	1810,61	24,70						
39	1960,00	1850,05	39,33	1810,73	24,70						
40	2009,00	1850,81	39,90	1810,91	24,71						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1519,00
Volume iniziale [Vo] (cm³):	1659,71
Pressione finale [Pf] (kPa):	2156,00
Volume finale [Vf] (cm³):	1830,03

RISULTATI	
Modulo di taglio (kPa):	17129
Modulo di deformazione dilatometrico (kPa):	45563
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4580

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1658	1811	2101
Volume finale [Vf] (cm³):	1667	1815	2045
Pressione iniziale [Po] (kPa):	1470	1862	3724
Pressione finale [Pf] (kPa):	1715	2107	1813
Modulo di deformazione dilatometrico (kPa):	325669	757275	445511
Modulo da linea di tendenza (kPa):	342783	812041	445759

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

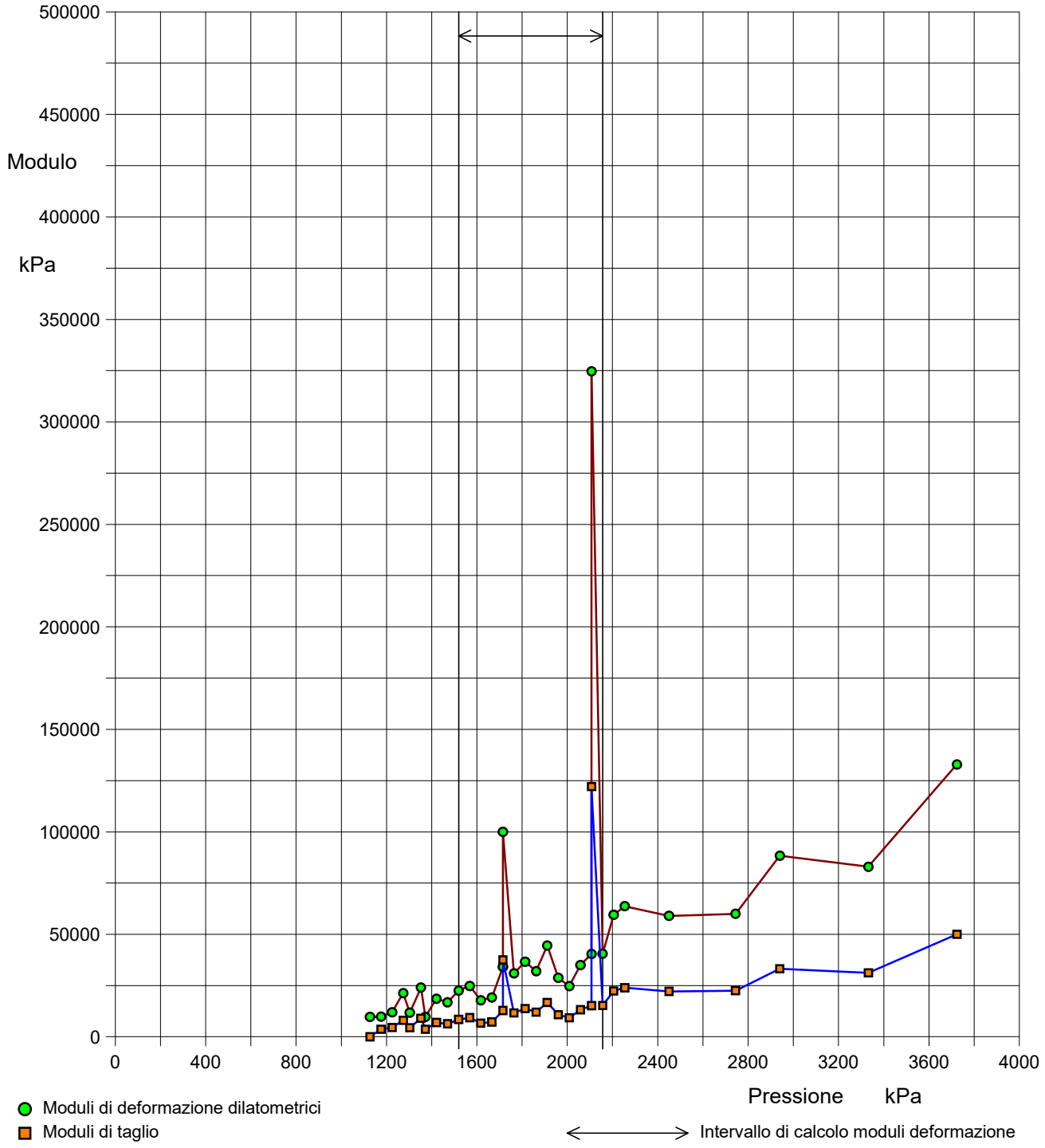
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1176,00	49,00	1321,97	55,27	3685	9802	2107,00	49,00	1815,03	1,87	122061	324682
1225,00	49,00	1367,56	45,59	4517	12015	2156,00	49,00	1830,03	15,00	15240	40538
1274,00	49,00	1393,36	25,81	8029	21357	2205,00	49,00	1840,27	10,24	22379	59528
1303,40	29,40	1421,57	28,21	4436	11800	2254,00	49,00	1849,85	9,59	23949	63704
1352,40	49,00	1444,80	23,22	9030	24020	2450,00	196,00	1891,61	41,76	22184	59009
1372,00	19,60	1467,95	23,16	3642	9688	2744,00	294,00	1954,05	62,44	22549	59980
1421,00	49,00	1498,34	30,39	6987	18585	2940,00	196,00	1982,47	28,42	33225	88379
1470,00	49,00	1532,17	33,83	6326	16827	3332,00	392,00	2043,80	61,33	31184	82949
1519,00	49,00	1557,52	25,35	8490	22583	3724,00	392,00	2082,38	38,58	49961	132896
1568,00	49,00	1580,73	23,21	9323	24799						
1617,00	49,00	1613,29	32,56	6695	17809						
1666,00	49,00	1643,69	30,40	7219	19203						
1715,00	49,00	1660,86	17,18	12824	34112						
1715,00	49,00	1667,40	5,87	37595	100003						
1764,00	49,00	1686,45	19,05	11627	30928						
1813,00	49,00	1702,61	16,15	13763	36610						
1862,00	49,00	1721,14	18,53	12046	32042						
1911,00	49,00	1734,51	13,37	16746	44544						
1960,00	49,00	1755,34	20,83	10801	28731						
2009,00	49,00	1779,69	24,36	9283	24693						
2058,00	49,00	1796,93	17,23	13169	35030						
2107,00	49,00	1811,91	14,99	15194	40416						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

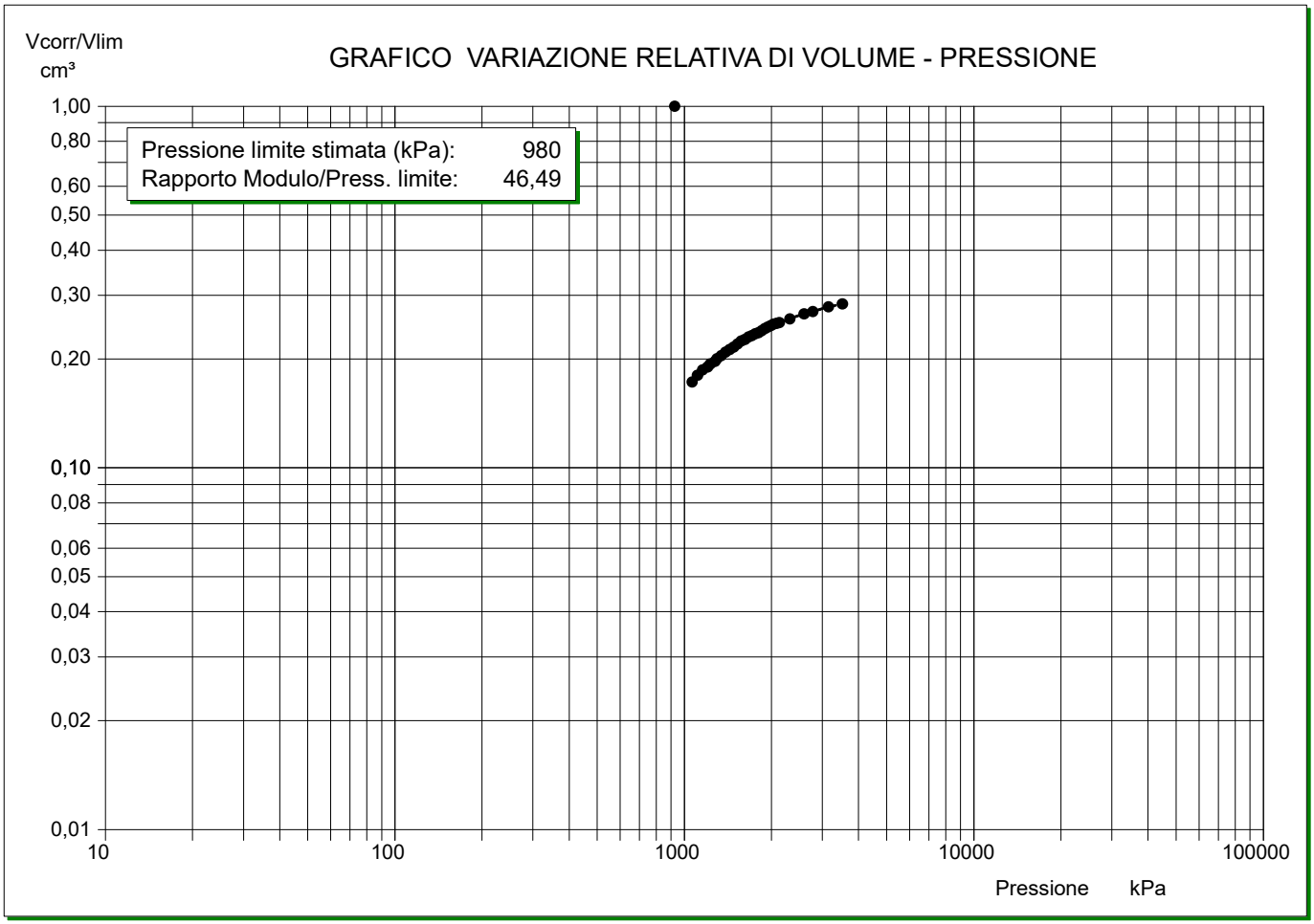
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

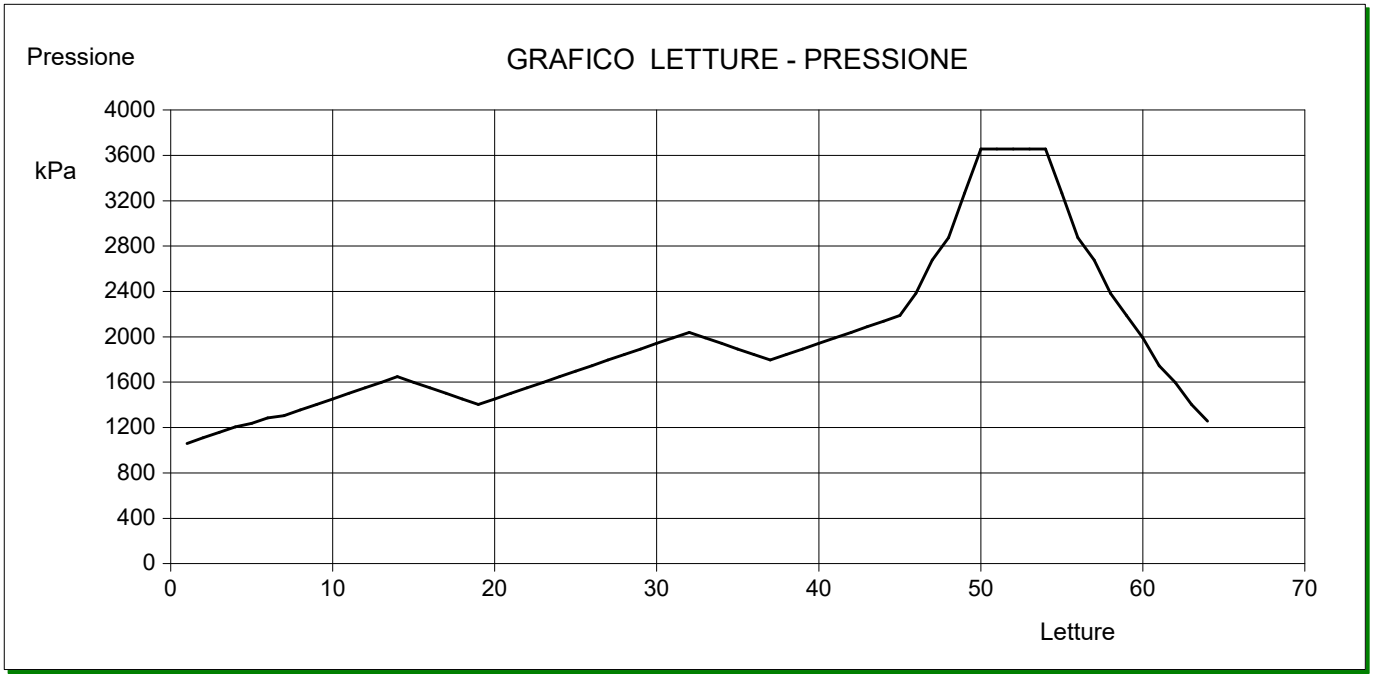
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

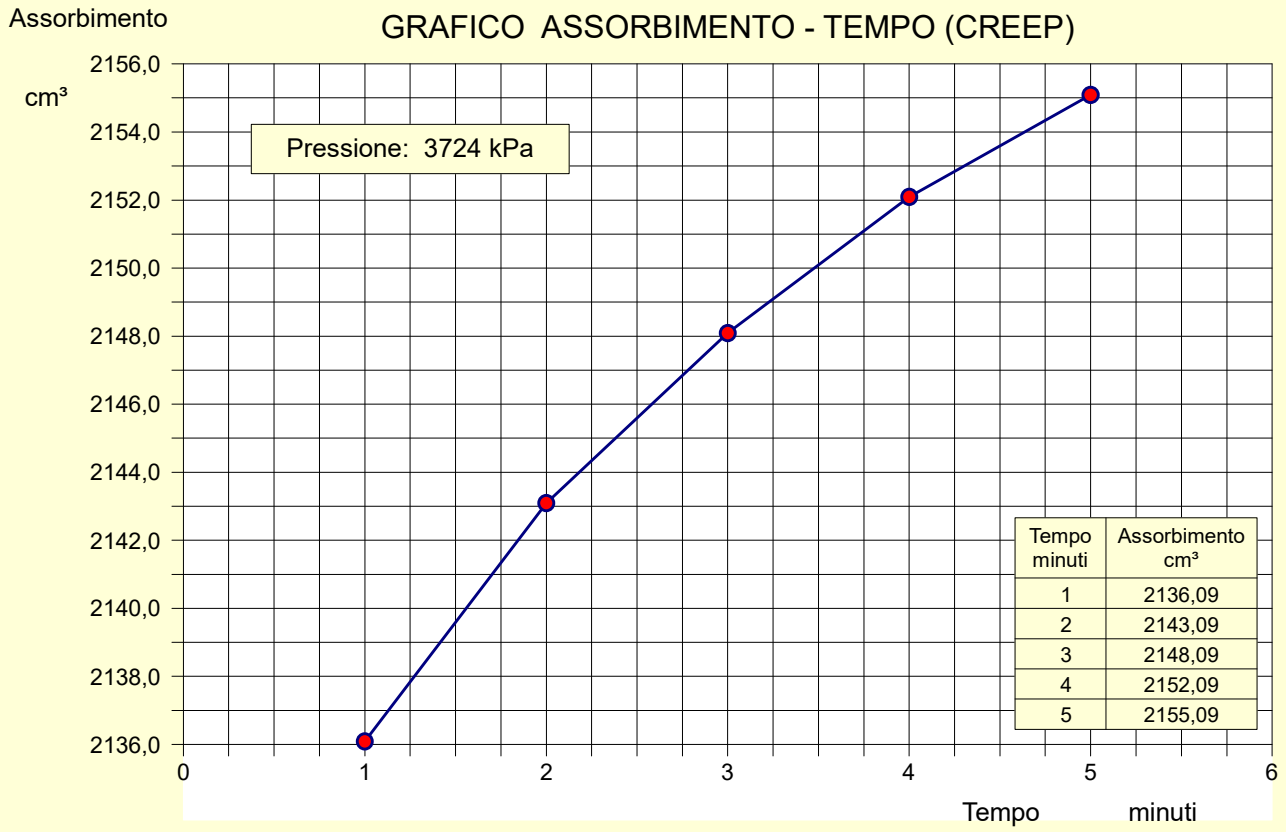
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:



Tempo minuti	Assorbimento cm³
1	2136,09
2	2143,09
3	2148,09
4	2152,09
5	2155,09

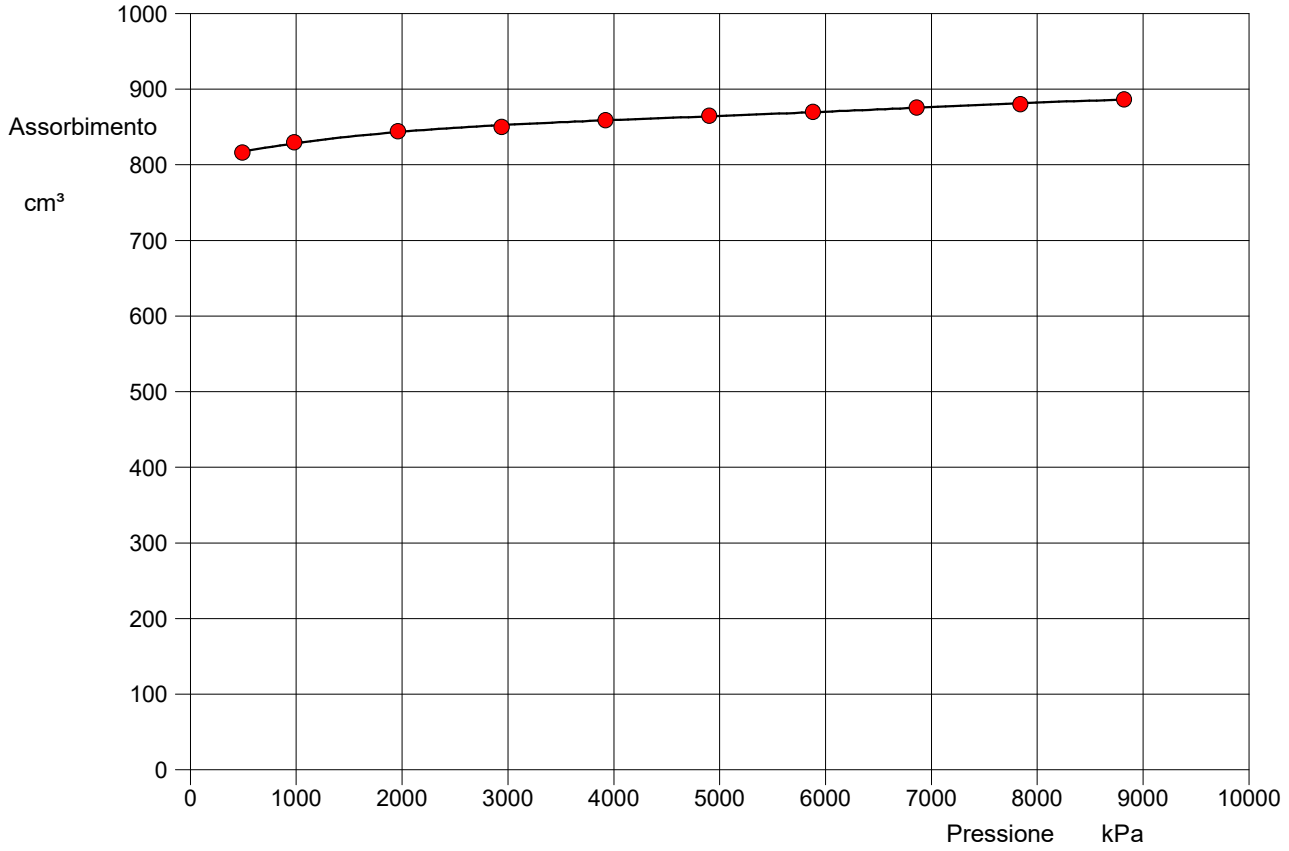
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	816,20	13,42									
980,00	829,88	24,26									
1960,00	844,40	39,33									
2940,00	850,13	48,57									
3920,00	858,88	54,83									
4900,00	864,96	60,11									
5880,00	870,14	65,57									
6860,00	875,67	71,53									
7840,00	880,34	77,47									
8820,00	886,52	82,04									

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

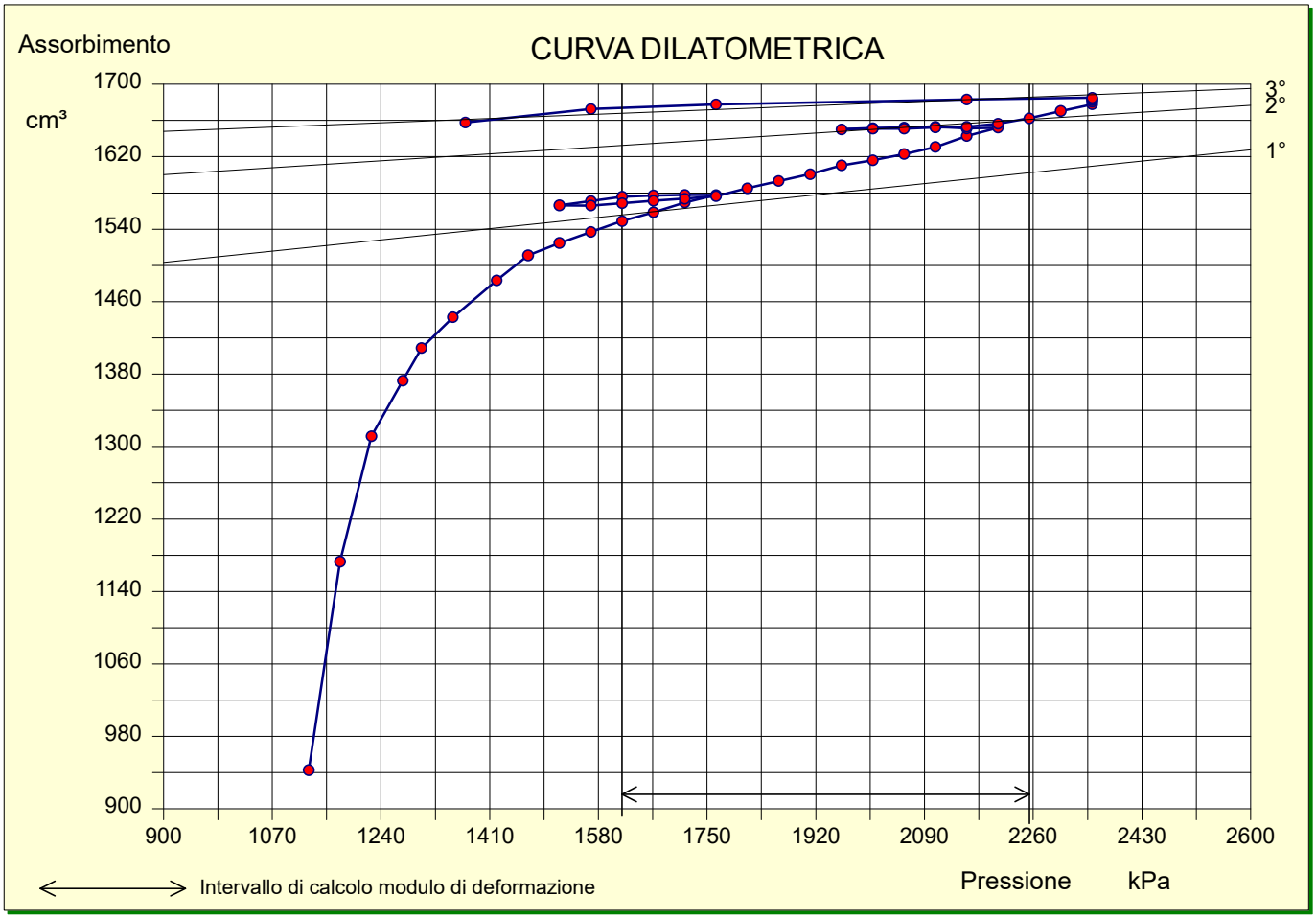
Profondità di prova (centro della cella) (m)	135,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia:			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1127,00	970,42	27,63	942,79	13,02	41	2107,00	1693,93	41,53	1652,40	22,83
2	1176,00	1201,48	28,50	1172,99	16,20	42	2156,00	1695,04	42,06	1652,97	22,84
3	1225,00	1340,82	29,35	1311,47	18,12	43	2205,00	1698,96	42,58	1656,38	22,88
4	1274,00	1402,80	30,18	1372,62	18,96	44	2254,00	1705,39	43,09	1662,31	22,96
5	1303,40	1439,44	30,67	1408,77	19,46	45	2303,00	1713,94	43,58	1670,36	23,08
6	1352,40	1474,27	31,47	1442,81	19,93	46	2352,00	1721,88	44,06	1677,82	23,18
7	1421,00	1516,14	32,55	1483,59	20,50	47	2352,00	1724,79	44,06	1680,73	23,22
8	1470,00	1544,39	33,30	1511,09	20,88	48	2352,00	1726,50	44,06	1682,44	23,24
9	1519,00	1558,87	34,03	1524,83	21,07	49	2352,00	1727,16	44,06	1683,10	23,25
10	1568,00	1571,64	34,75	1536,89	21,23	50	2352,00	1728,31	44,06	1684,25	23,27
11	1617,00	1584,35	35,45	1548,91	21,40	51	2352,00	1729,12	44,06	1685,06	23,28
12	1666,00	1594,81	36,12	1558,68	21,53	52	2156,00	1725,15	42,06	1683,08	23,25
13	1715,00	1606,32	36,79	1569,53	21,68	53	1764,00	1715,14	37,43	1677,71	23,18
14	1764,00	1615,12	37,43	1577,68	21,80	54	1568,00	1707,40	34,75	1672,65	23,11
15	1715,00	1614,61	36,79	1577,83	21,80	55	1372,00	1689,46	31,78	1657,68	22,90
16	1666,00	1613,41	36,12	1577,28	21,79						
17	1617,00	1611,30	35,45	1575,85	21,77						
18	1568,00	1605,77	34,75	1571,02	21,70						
19	1519,00	1600,29	34,03	1566,25	21,64						
20	1568,00	1600,84	34,75	1566,09	21,64						
21	1617,00	1604,11	35,45	1568,66	21,67						
22	1666,00	1607,53	36,12	1571,40	21,71						
23	1715,00	1610,39	36,79	1573,60	21,74						
24	1764,00	1613,81	37,43	1576,37	21,78						
25	1813,00	1623,21	38,06	1585,14	21,90						
26	1862,00	1631,90	38,68	1593,23	22,01						
27	1911,00	1639,95	39,28	1600,67	22,11						
28	1960,00	1650,30	39,86	1610,44	22,25						
29	2009,00	1656,53	40,43	1616,10	22,33						
30	2058,00	1663,97	40,99	1622,98	22,42						
31	2107,00	1672,27	41,53	1630,73	22,53						
32	2156,00	1684,93	42,06	1642,87	22,70						
33	2205,00	1694,58	42,58	1652,00	22,82						
34	2156,00	1693,33	42,06	1651,26	22,81						
35	2107,00	1694,63	41,53	1653,10	22,84						
36	2058,00	1693,23	40,99	1652,24	22,83						
37	2009,00	1691,87	40,43	1651,44	22,81						
38	1960,00	1690,01	39,86	1650,15	22,80						
39	2009,00	1691,42	40,43	1650,98	22,81						
40	2058,00	1691,97	40,99	1650,98	22,81						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1617,00
Volume iniziale [Vo] (cm³):	1568,66
Pressione finale [Pf] (kPa):	2254,00
Volume finale [Vf] (cm³):	1662,31

RISULTATI	
Modulo di taglio (kPa):	30270
Modulo di deformazione dilatometrico (kPa):	80518
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4450

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1566	1650	1685
Volume finale [Vf] (cm³):	1576	1656	1673
Pressione iniziale [Po] (kPa):	1519	1960	2352
Pressione finale [Pf] (kPa):	1764	2205	1568
Modulo di deformazione dilatometrico (kPa):	287139	487472	784473
Modulo da linea di tendenza (kPa):	283324	467966	757679

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

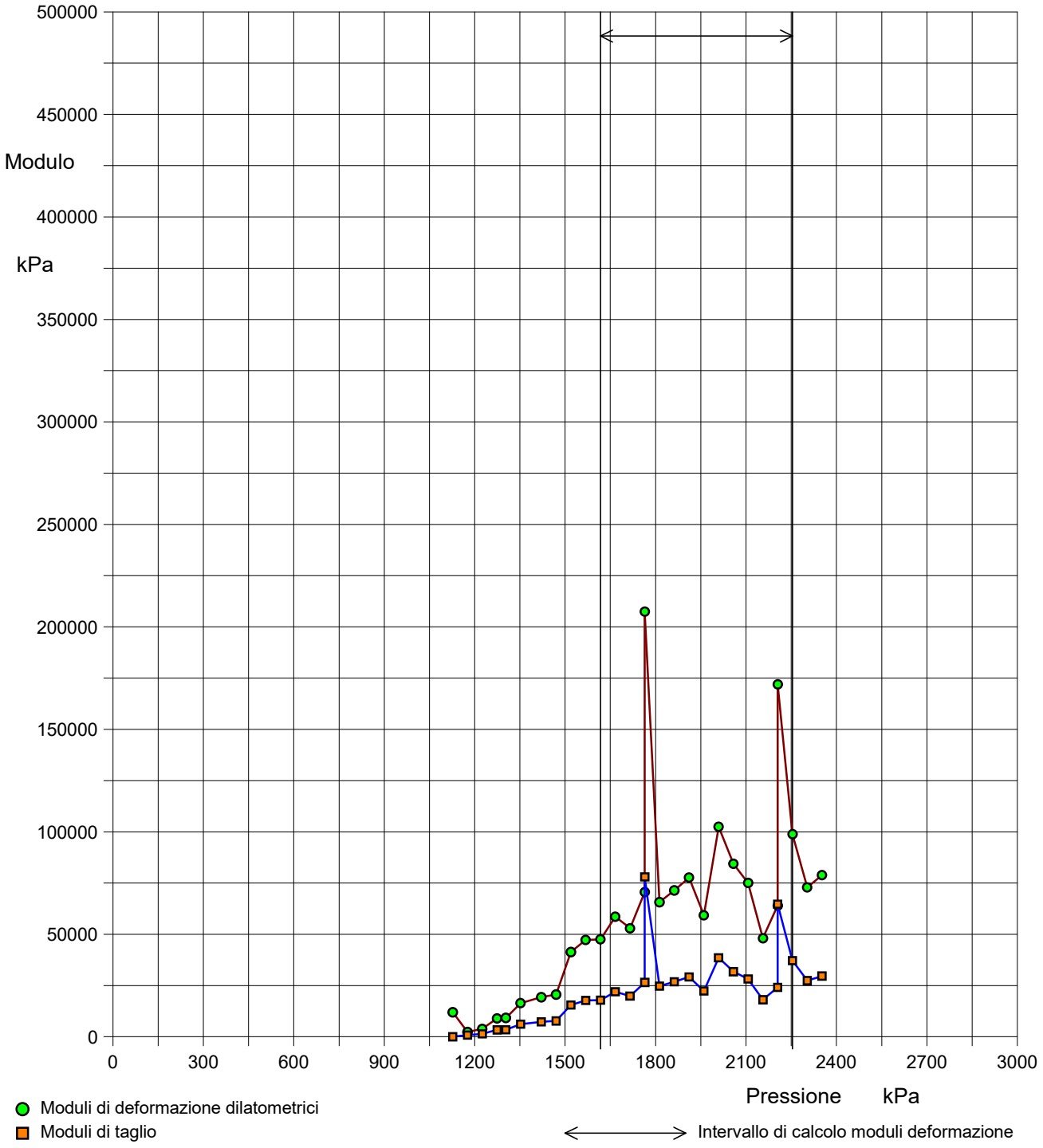
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1176,00	49,00	1172,99	230,20	853	2269						
1225,00	49,00	1311,47	138,48	1467	3902	2205,00	49,00	1656,38	3,40	64663	172004
1274,00	49,00	1372,62	61,15	3372	8970	2254,00	49,00	1662,31	5,93	37167	98864
1303,40	29,40	1408,77	36,15	3451	9180	2303,00	49,00	1670,36	8,05	27416	72927
1352,40	49,00	1442,81	34,04	6159	16383	2352,00	49,00	1677,82	7,46	29640	78842
1421,00	68,60	1483,59	40,79	7263	19320						
1470,00	49,00	1511,09	27,50	7745	20602						
1519,00	49,00	1524,83	13,74	15544	41347						
1568,00	49,00	1536,89	12,05	17773	47276						
1617,00	49,00	1548,91	12,02	17871	47537						
1666,00	49,00	1558,68	9,78	22023	58581						
1715,00	49,00	1569,53	10,85	19895	52921						
1764,00	49,00	1577,68	8,15	26530	70570						
1764,00	49,00	1576,37	2,77	77983	207435						
1813,00	49,00	1585,14	8,77	24698	65697						
1862,00	49,00	1593,23	8,08	26850	71421						
1911,00	49,00	1600,67	7,44	29202	77677						
1960,00	49,00	1610,44	9,77	22296	59307						
2009,00	49,00	1616,10	5,66	38517	102455						
2058,00	49,00	1622,98	6,88	31738	84423						
2107,00	49,00	1630,73	7,75	28233	75100						
2156,00	49,00	1642,87	12,14	18078	48087						
2205,00	49,00	1652,00	9,13	24071	64029						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

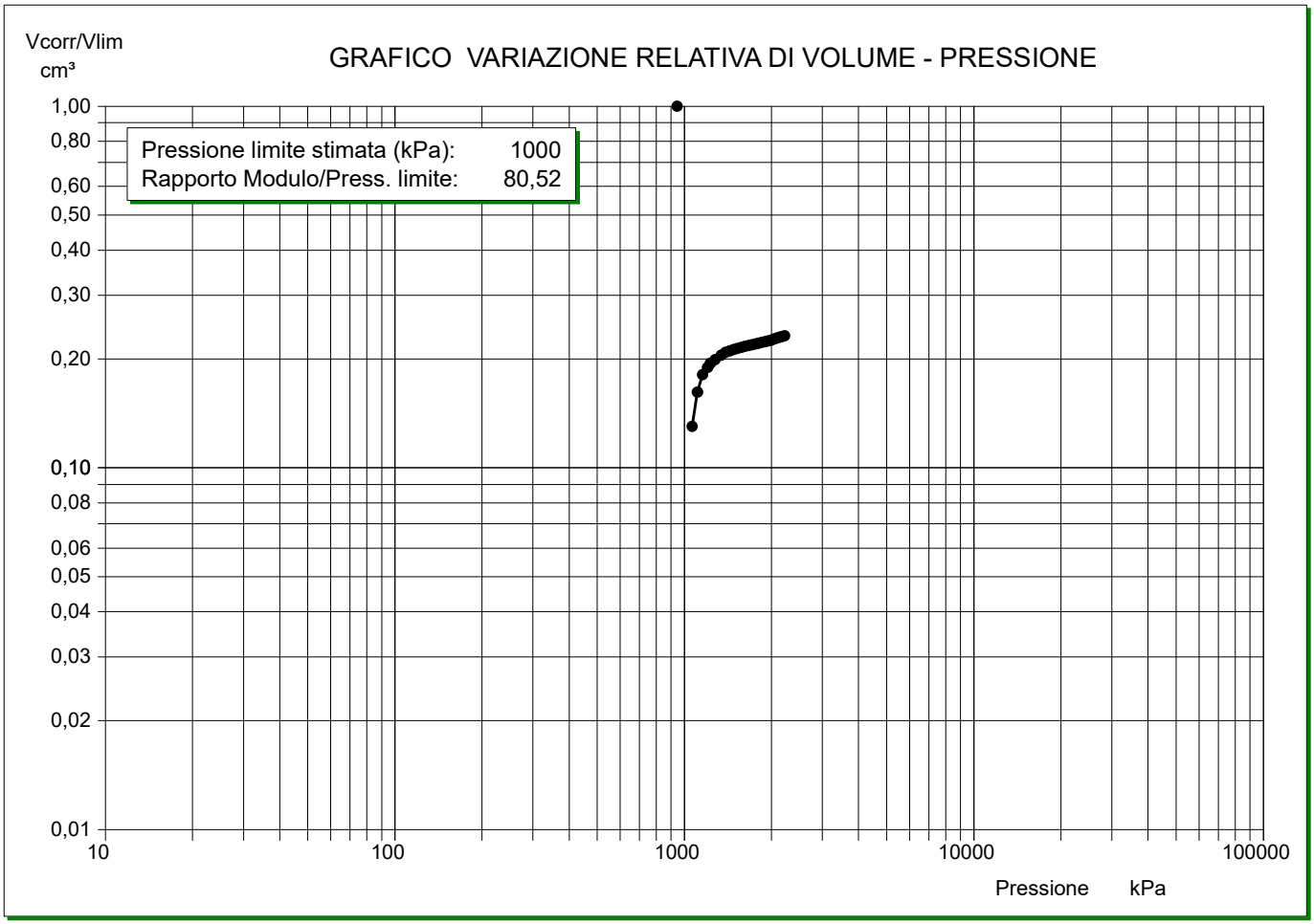
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

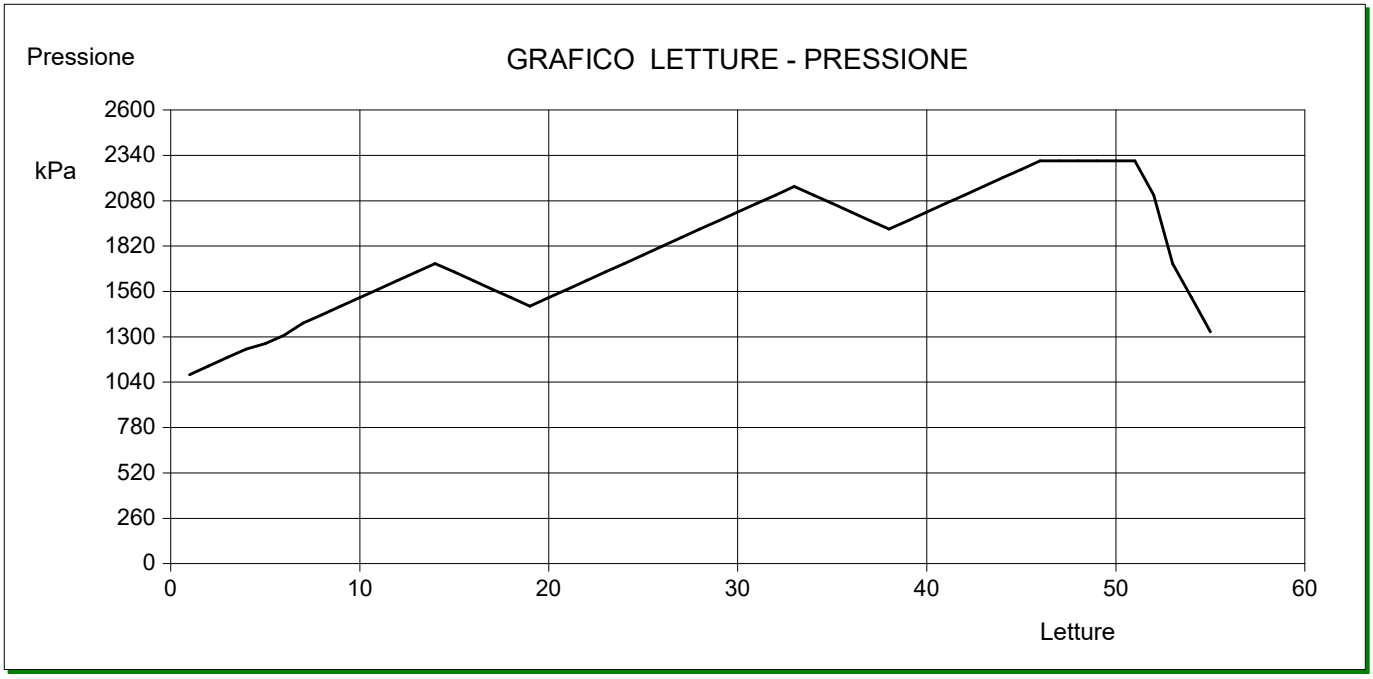
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

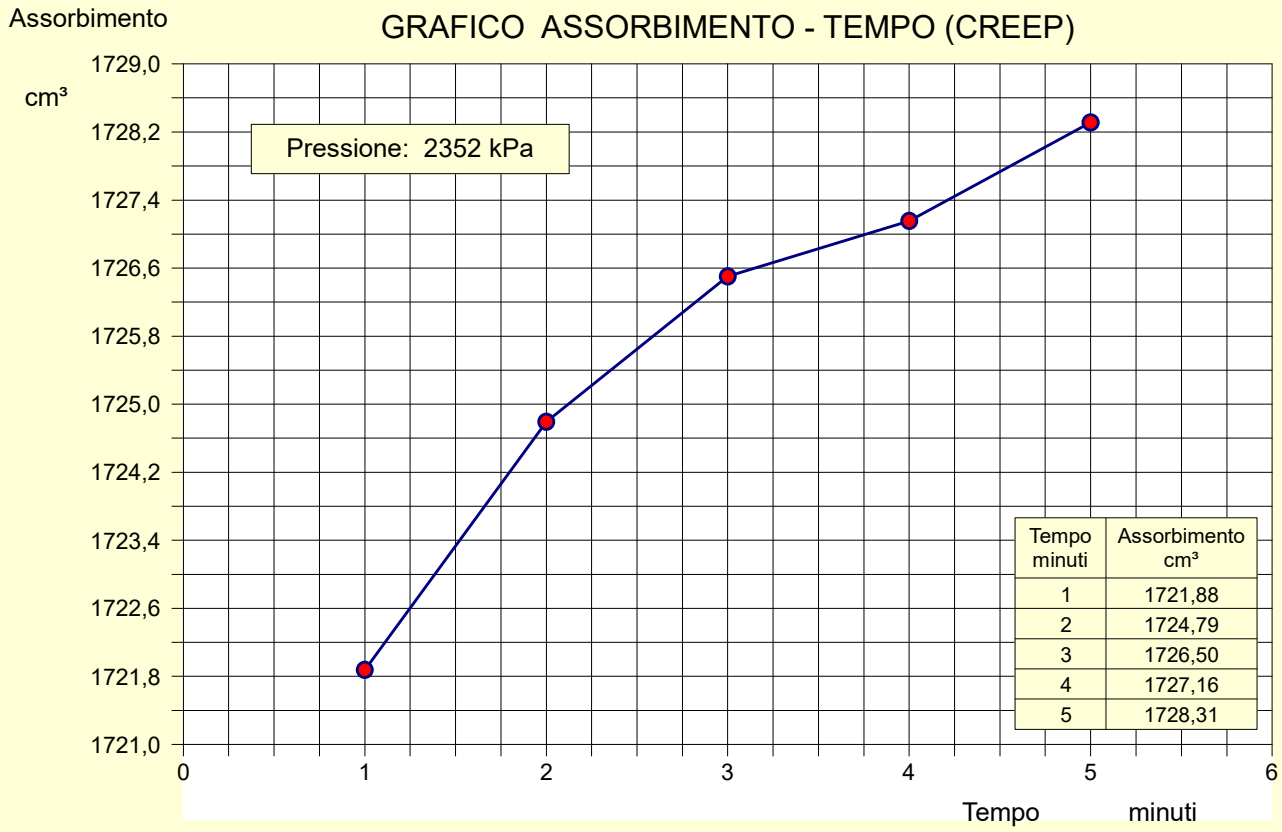
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:



Tempo minuti	Assorbimento cm³
1	1721,88
2	1724,79
3	1726,50
4	1727,16
5	1728,31

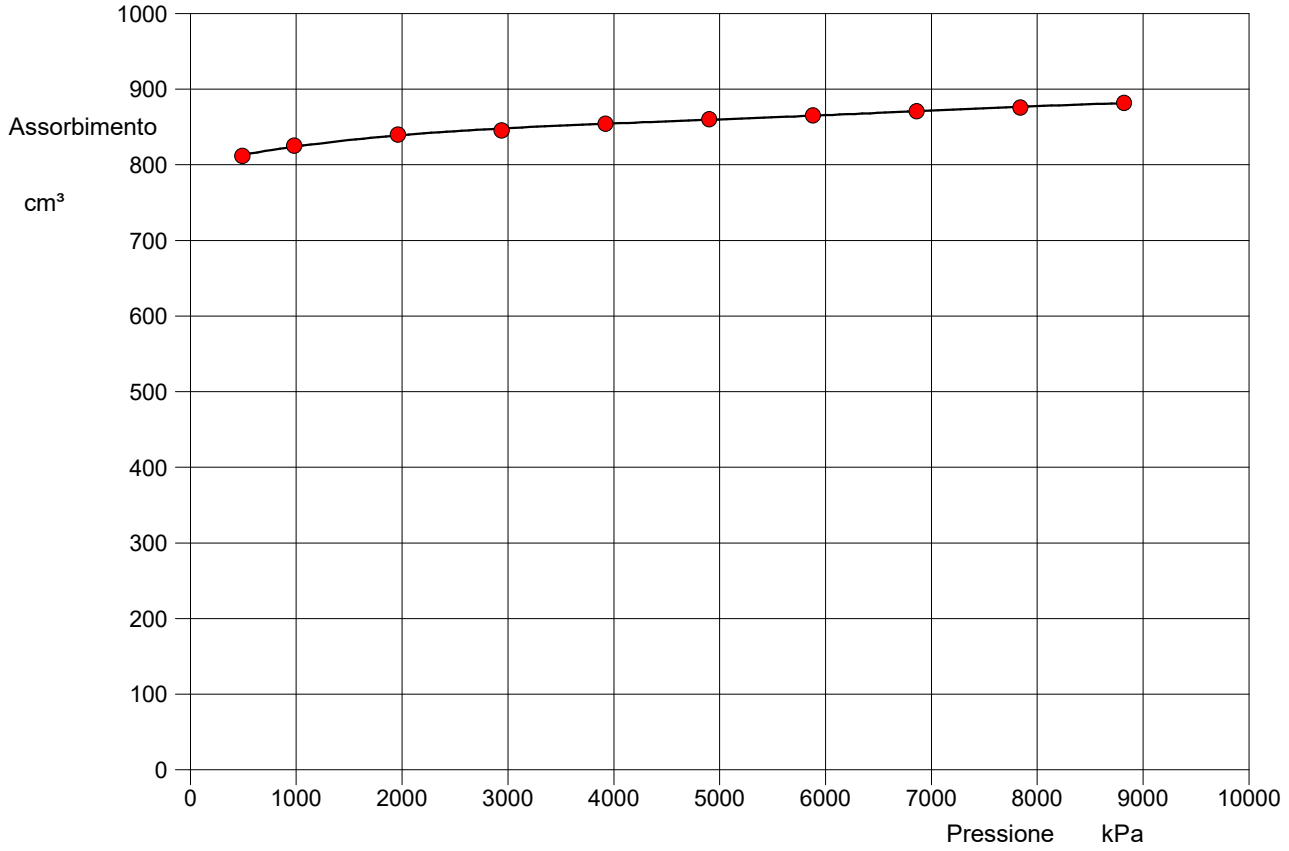
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	811,88	14,09									
980,00	825,48	24,87									
1960,00	839,93	39,86									
2940,00	845,63	49,06									
3920,00	854,33	55,29									
4900,00	860,38	60,54									
5880,00	865,53	65,97									
6860,00	871,03	71,90									
7840,00	875,68	77,81									
8820,00	881,83	82,35									

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

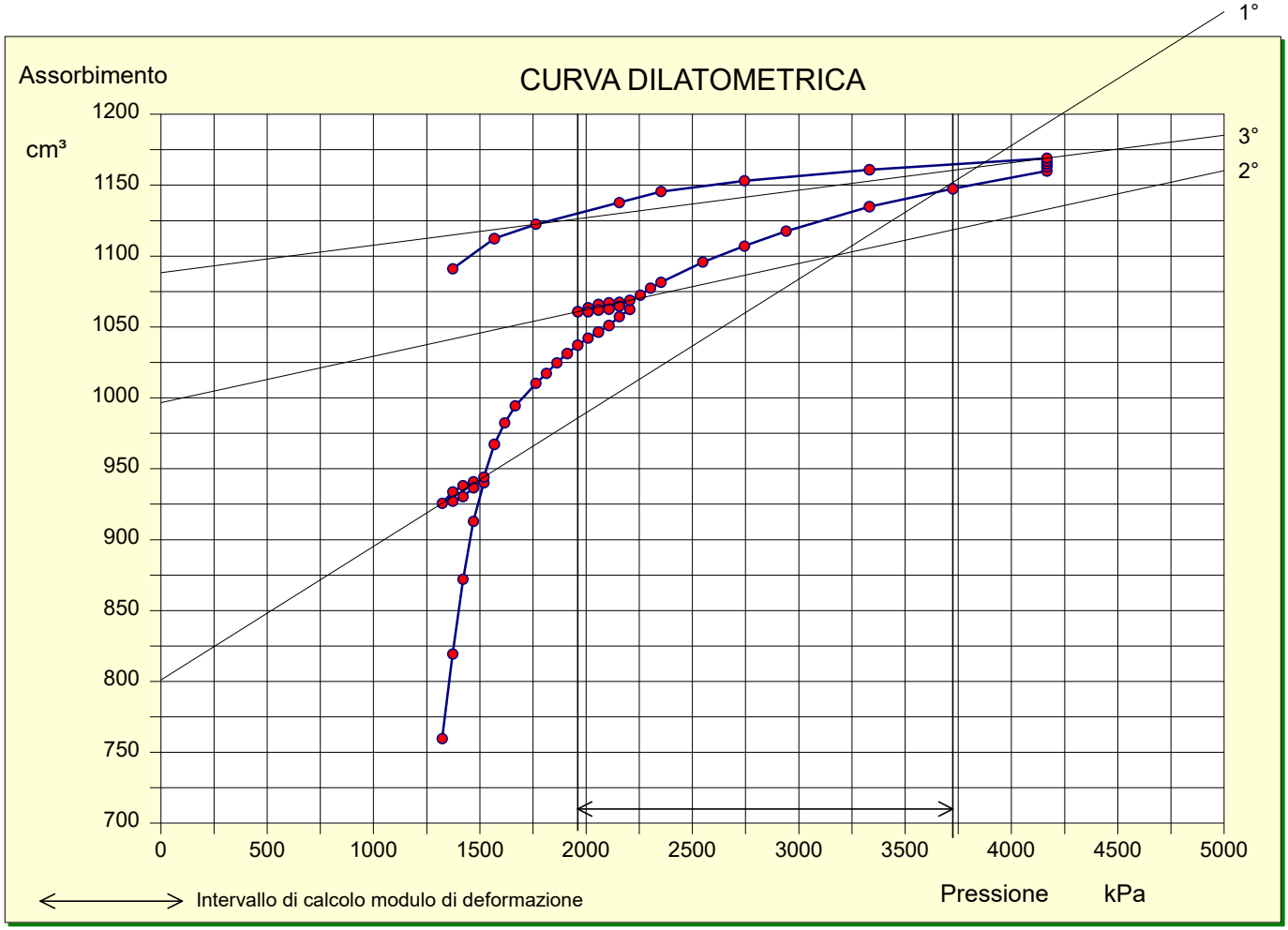
Profondità di prova (centro della cella) (m)	144,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia:			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1323,00	790,68	30,99	759,69	11,33	41	2744,00	1154,62	47,53	1107,08	16,51
2	1372,00	851,18	31,78	819,40	12,22	42	2940,00	1166,62	49,06	1117,56	16,66
3	1421,00	904,58	32,55	872,03	13,00	43	3332,00	1186,62	51,78	1134,84	16,92
4	1470,00	946,28	33,30	912,98	13,61	44	3724,00	1201,62	54,17	1147,45	17,11
5	1519,00	974,18	34,03	940,15	14,02	45	4166,00	1216,62	56,64	1159,98	17,29
6	1470,00	974,18	33,30	940,88	14,03	46	4166,00	1219,62	56,64	1162,98	17,34
7	1421,00	970,63	32,55	938,08	13,99	47	4166,00	1221,62	56,64	1164,98	17,37
8	1372,00	965,45	31,78	933,67	13,92	48	4166,00	1223,62	56,64	1166,98	17,40
9	1323,00	956,65	30,99	925,66	13,80	49	4166,00	1225,62	56,64	1168,98	17,43
10	1372,00	958,94	31,78	927,16	13,82	50	3332,00	1212,62	51,78	1160,84	17,31
11	1421,00	962,85	32,55	930,30	13,87	51	2744,00	1200,62	47,53	1153,08	17,19
12	1470,00	969,78	33,30	936,48	13,96	52	2352,00	1189,61	44,06	1145,55	17,08
13	1519,00	978,16	34,03	944,13	14,08	53	2156,00	1179,78	42,06	1137,72	16,96
14	1568,00	1001,97	34,75	967,22	14,42	54	1764,00	1159,81	37,43	1122,38	16,73
15	1617,00	1017,82	35,45	982,37	14,65	55	1568,00	1147,11	34,75	1112,36	16,58
16	1666,00	1030,47	36,12	994,35	14,83	56	1372,00	1122,79	31,78	1091,01	16,27
17	1764,00	1047,65	37,43	1010,22	15,06						
18	1813,00	1055,32	38,06	1017,26	15,17						
19	1862,00	1063,35	38,68	1024,67	15,28						
20	1911,00	1070,59	39,28	1031,32	15,38						
21	1960,00	1077,01	39,86	1037,15	15,46						
22	2009,00	1082,57	40,43	1042,14	15,54						
23	2058,00	1087,41	40,99	1046,42	15,60						
24	2107,00	1092,56	41,53	1051,03	15,67						
25	2156,00	1099,35	42,06	1057,29	15,76						
26	2205,00	1104,93	42,58	1062,35	15,84						
27	2156,00	1109,42	42,06	1067,35	15,91						
28	2107,00	1108,59	41,53	1067,05	15,91						
29	2058,00	1106,90	40,99	1065,91	15,89						
30	2009,00	1104,07	40,43	1063,64	15,86						
31	1960,00	1100,64	39,86	1060,78	15,82						
32	2009,00	1101,13	40,43	1060,70	15,81						
33	2058,00	1102,99	40,99	1062,00	15,83						
34	2107,00	1104,15	41,53	1062,61	15,84						
35	2156,00	1106,67	42,06	1064,61	15,87						
36	2205,00	1111,37	42,58	1068,79	15,94						
37	2254,00	1115,49	43,09	1072,40	15,99						
38	2303,00	1120,94	43,58	1077,36	16,06						
39	2352,00	1125,56	44,06	1081,50	16,12						
40	2548,00	1141,62	45,88	1095,74	16,34						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1960,00
Volume iniziale [Vo] (cm³):	1037,15
Pressione finale [Pf] (kPa):	3724,00
Volume finale [Vf] (cm³):	1147,45

RISULTATI	
Modulo di taglio (kPa):	62805
Modulo di deformazione dilatometrico (kPa):	167061
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	3927

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	926	1061	1169
Volume finale [Vf] (cm³):	944	1069	1122
Pressione iniziale [Po] (kPa):	1323	1960	4166
Pressione finale [Pf] (kPa):	1519	2205	1764
Modulo di deformazione dilatometrico (kPa):	109196	317704	541121
Modulo da linea di tendenza (kPa):	109281	318407	544492

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

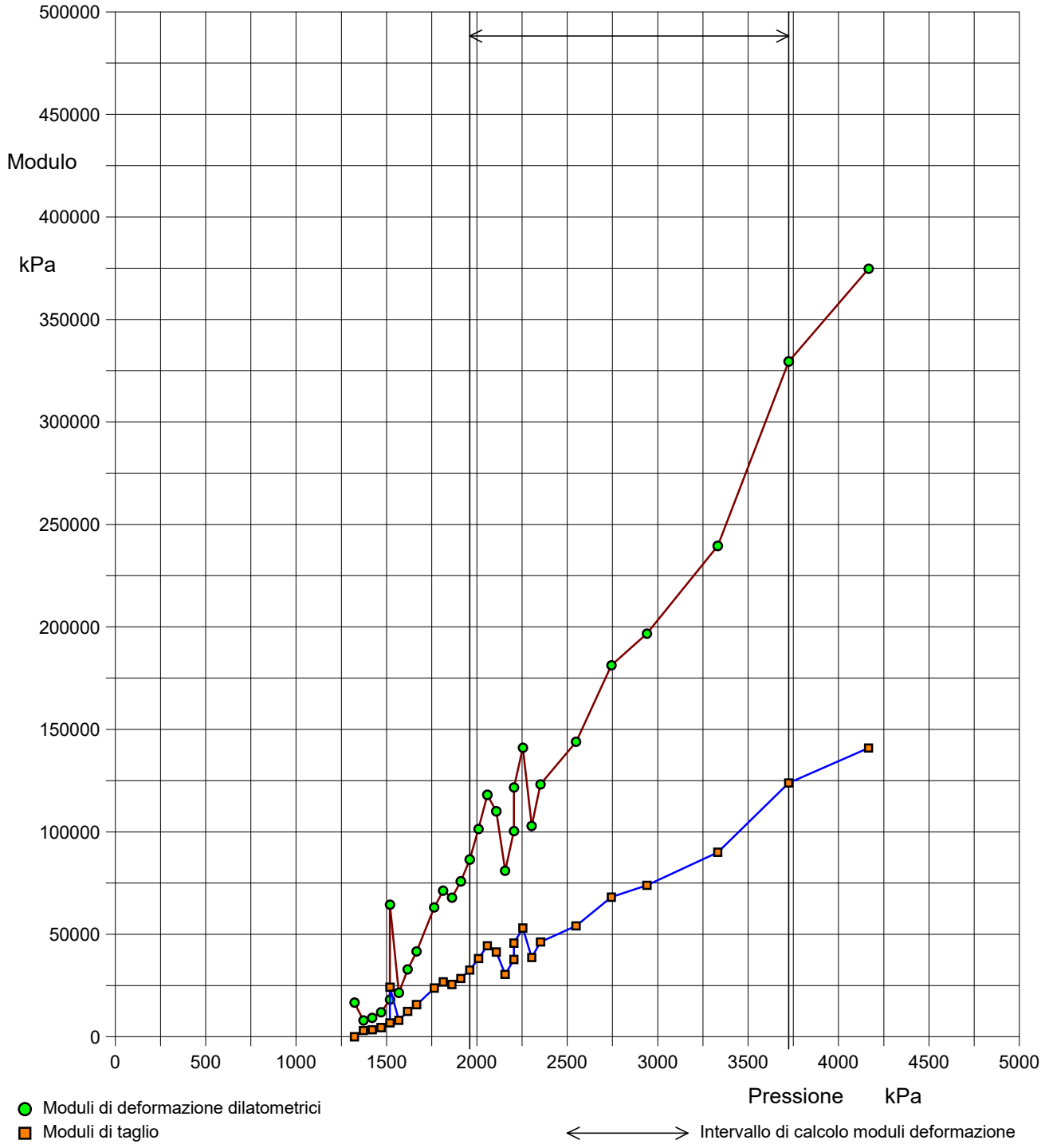
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
						2744,00	196,00	1107,08	11,34	68135	181239
1372,00	49,00	819,40	59,72	2999	7977	2940,00	196,00	1117,56	10,48	73943	196688
1421,00	49,00	872,03	52,62	3452	9182	3332,00	392,00	1134,84	17,28	90036	239496
1470,00	49,00	912,98	40,95	4485	11930	3724,00	392,00	1147,45	12,60	123859	329465
1519,00	49,00	940,15	27,17	6808	18109	4166,00	442,00	1159,98	12,53	140879	374738
1519,00	49,00	944,13	7,64	24225	64439						
1568,00	49,00	967,22	23,09	8069	21464						
1617,00	49,00	982,37	15,15	12344	32835						
1666,00	49,00	994,35	11,98	15667	41674						
1764,00	98,00	1010,22	15,87	23747	63167						
1813,00	49,00	1017,26	7,04	26805	71301						
1862,00	49,00	1024,67	7,41	25512	67862						
1911,00	49,00	1031,32	6,65	28506	75826						
1960,00	49,00	1037,15	5,83	32517	86495						
2009,00	49,00	1042,14	4,98	38118	101394						
2058,00	49,00	1046,42	4,29	44375	118038						
2107,00	49,00	1051,03	4,60	41350	109991						
2156,00	49,00	1057,29	6,26	30447	80989						
2205,00	49,00	1062,35	5,06	37749	100412						
2205,00	49,00	1068,79	4,18	45719	121613						
2254,00	49,00	1072,40	3,61	53008	141001						
2303,00	49,00	1077,36	4,96	38681	102891						
2352,00	49,00	1081,50	4,14	46310	123185						
2548,00	196,00	1095,74	14,24	54103	143914						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

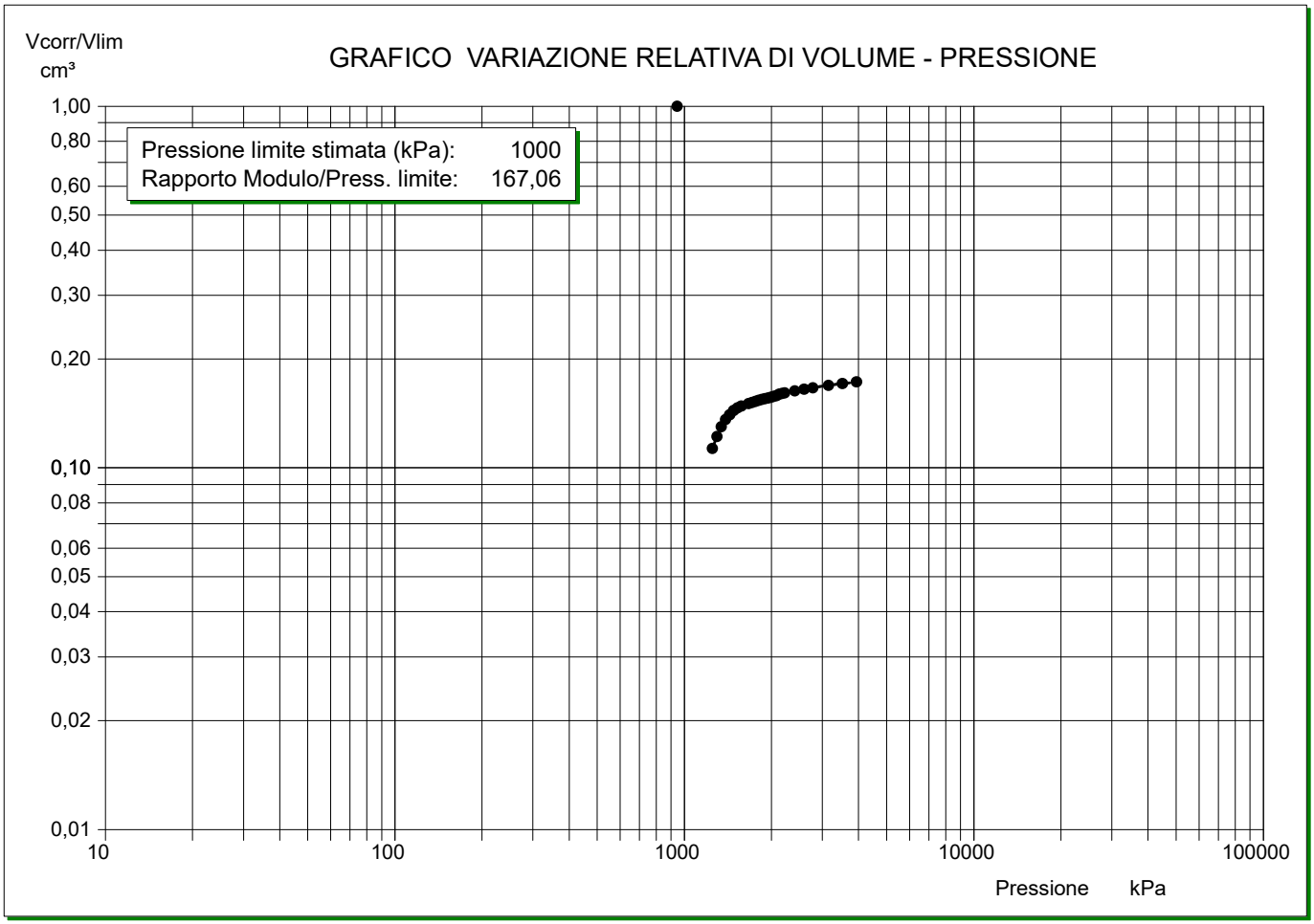
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

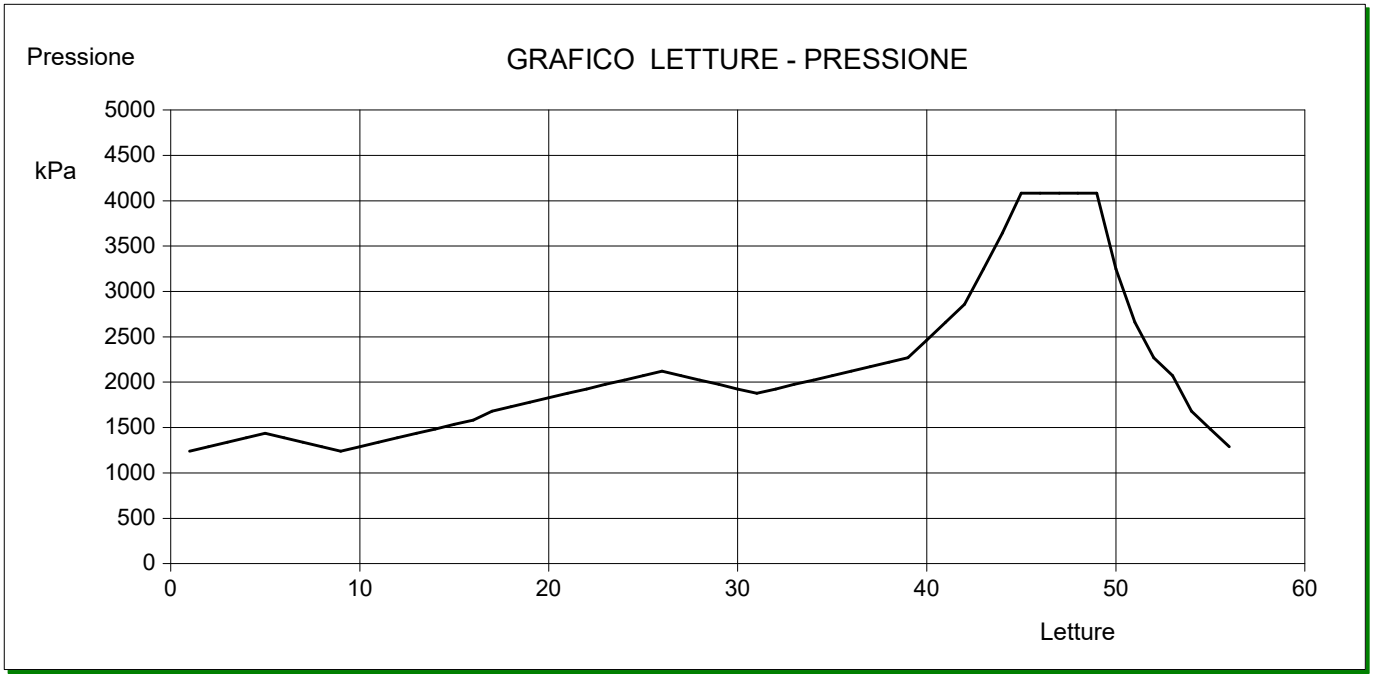
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

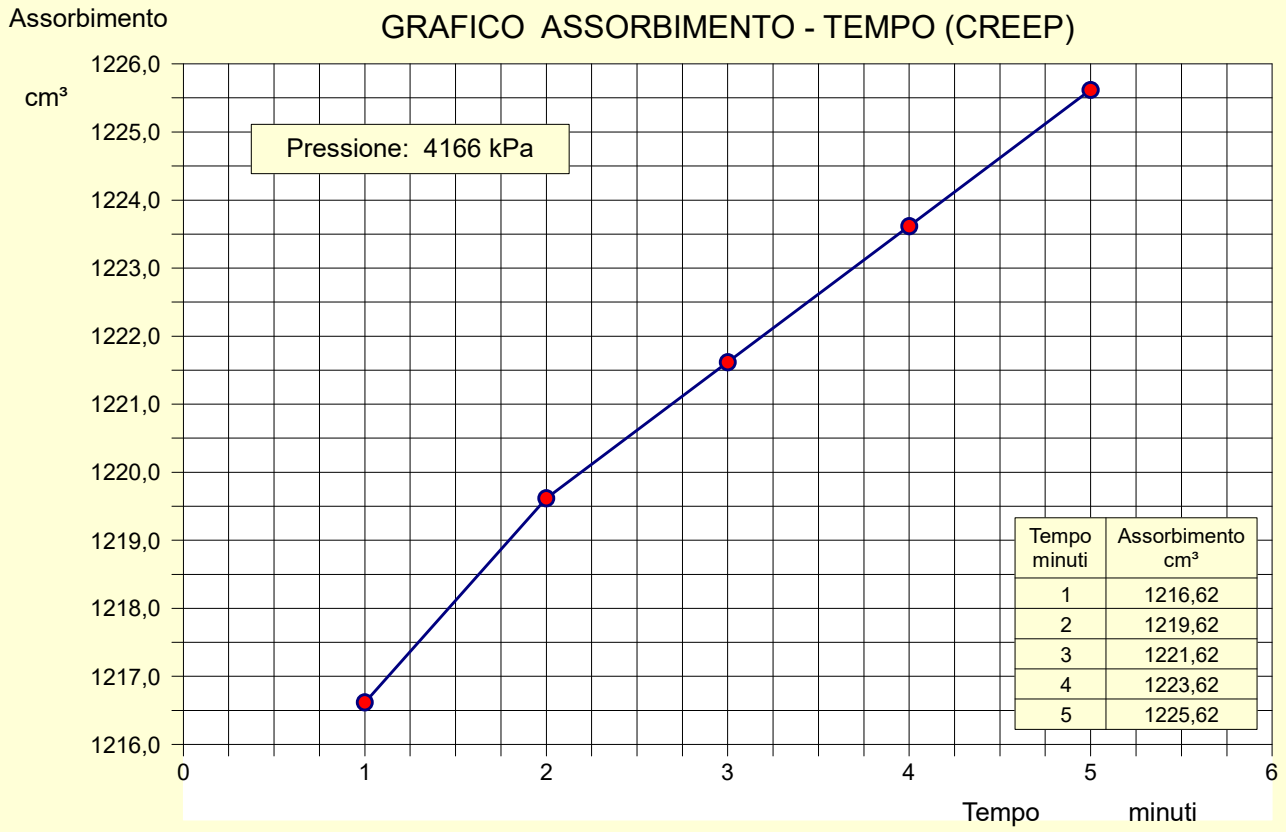
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:



Tempo minuti	Assorbimento cm³
1	1216,62
2	1219,62
3	1221,62
4	1223,62
5	1225,62

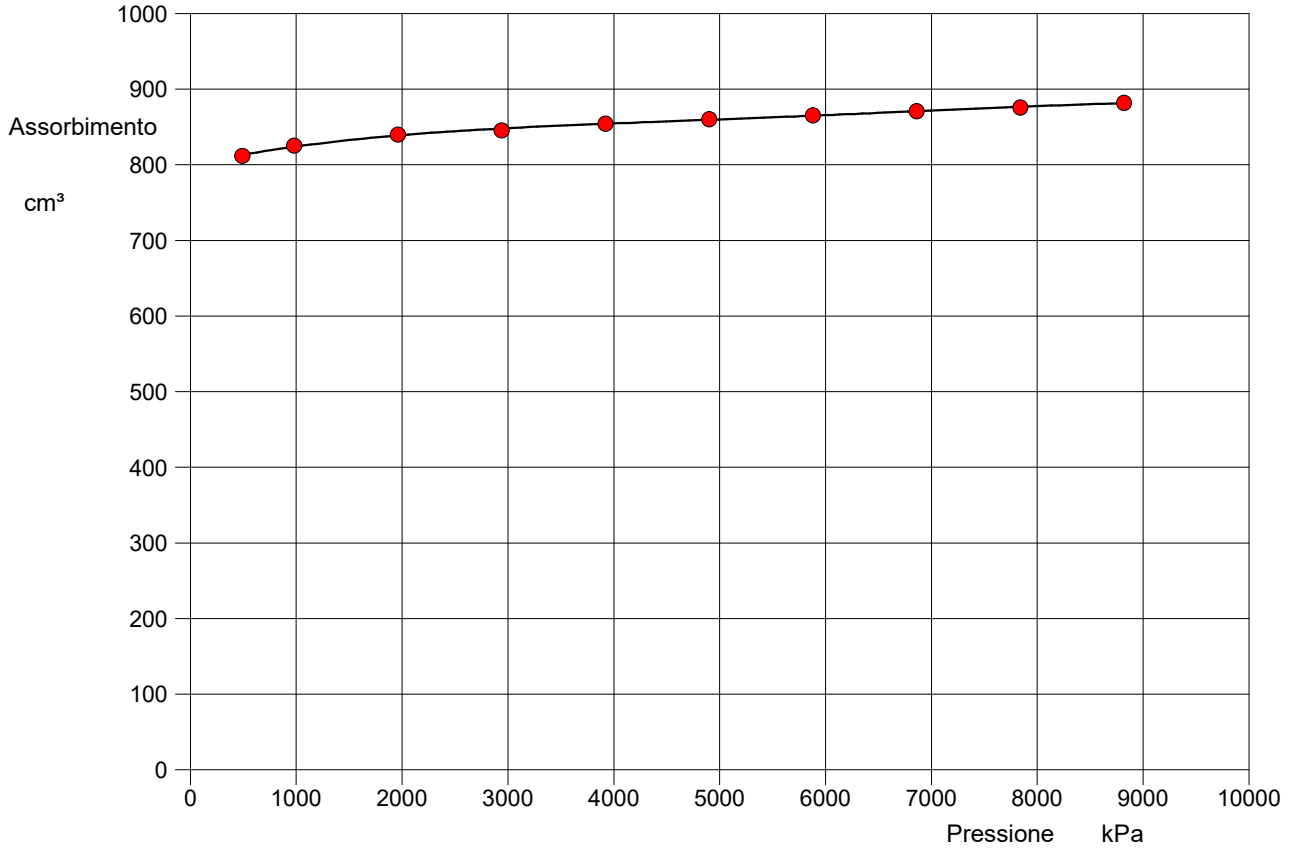
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 16/09/2020
Sondaggio: CL-2	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	811,88	14,09									
980,00	825,48	24,87									
1960,00	839,93	39,86									
2940,00	845,63	49,06									
3920,00	854,33	55,29									
4900,00	860,38	60,54									
5880,00	865,53	65,97									
6860,00	871,03	71,90									
7840,00	875,68	77,81									
8820,00	881,83	82,35									

ALLEGATO 3.3
PROVE IN FORO
(LUGEON, DILATOMETRICHE, LOG GEOFISICO)
CL3 (205,0 m)

PROVE IN FORO
LUGEON
CL3

GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE:	VIANINI SPA				
CANTIERE:	INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO				
LOCALITA':	CAMPOLATTARO (BN)				
SONDAGGIO:	CL3	PROVA N°	L1	29/09/2020	

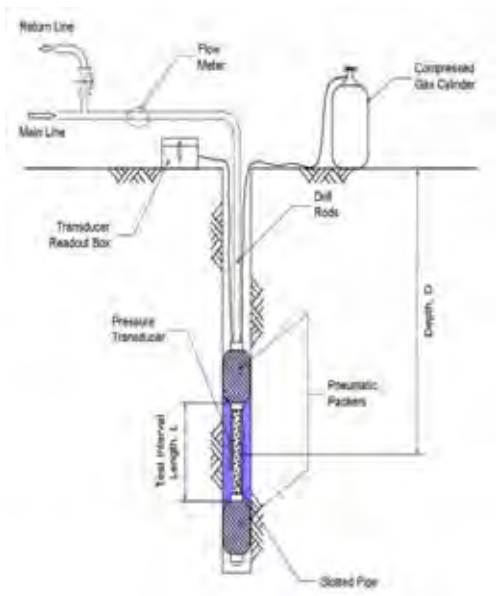
ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE	Carotaggio Continuo
CORONA TIPO	Diamantata Imp.

TEST	avanzamento XX	Azimuth		degree
	risalita	Inclinazione		

PROFONDITA' PROVA	da m.	188,00	m	a m.	191,00	m
ALTEZZA MANOMETRO		1,10	m	QUOTA MANOMETRO	536	
QUOTA		556	m			
ACQUA IN FORO		3,50	m			

DIAMETRO FORO	Ø	101	mm
TIPO PACKER			
ASTE	Diametro esterno (mm).	88,9	
	Diametro interno	77,8	
	Lunghezza (m)	188,00	



DATI DI CAMPAGNA

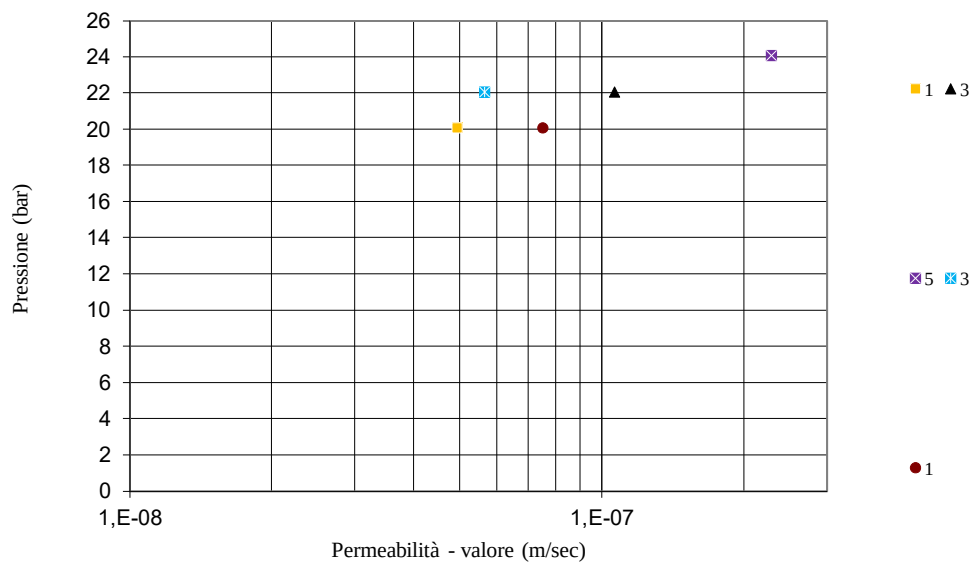
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	1	27,00	1700,00	1706,00	1710,00	1716,00	1721,00	1727,00
	10	3	64,00	1740,00	1754,00	1765,00	1777,00	1790,00	1804,00
	10	5	150,00	1820,00	1850,00	1881,00	1913,00	1942,00	1970,00
CICLO DI SCARICO	10	3	34,00	1990,00	1998,00	2005,00	2011,00	2018,00	2024,00
	10	1	41,00	2030,00	2039,00	2048,00	2056,00	2064,00	2071,00

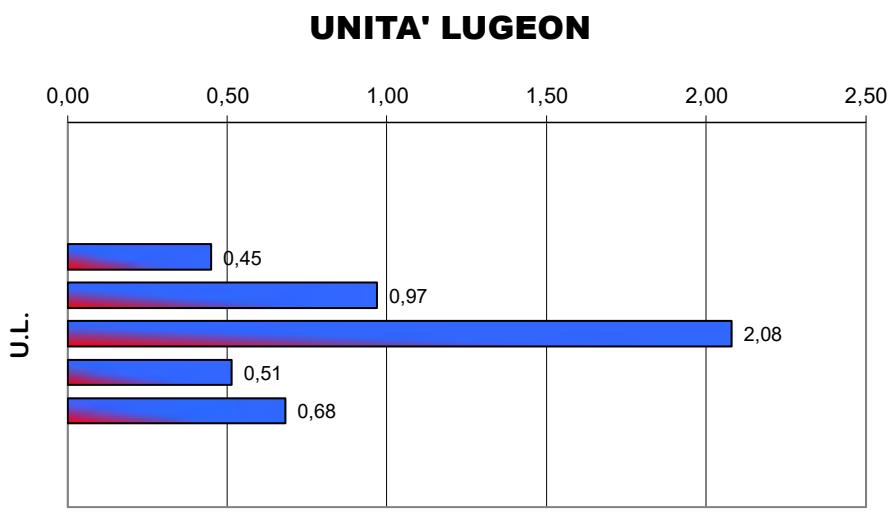
Assorbimento (l)

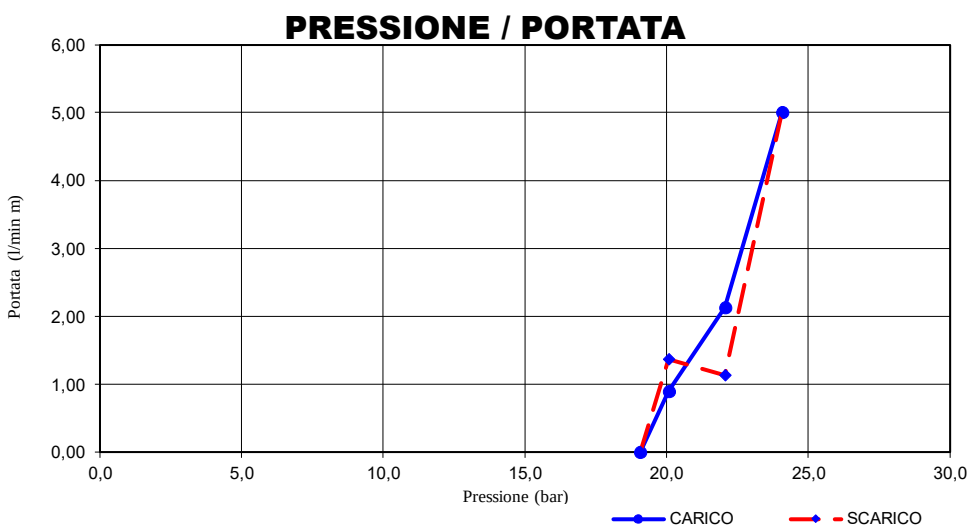
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	1,00	7,194E-05	20,060	27,00	0,45	4,923E-08
	10	3,00	3,126E-04	22,060	64,00	0,97	1,061E-07
da m.:	10	5,00	1,348E-03	24,059	150,00	2,08	2,281E-07
188,00	10	3,00	1,064E-04	22,060	34,00	0,51	5,638E-08
a m.:	10	1,00	1,463E-04	20,060	41,00	0,68	7,476E-08
191,00							
					Valore medio	0,94	1,029E-07







GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE: VIANINI SPA
CANTIERE: INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO
LOCALITA': CAMPOLATTARO (BN)
SONDAGGIO: CL3 **PROVA N°** L2 **30/09/2020**

ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE Carotaggio Continuo
CORONA TIPO Diamantata Imp.

TEST avanzamento XX — Azimuth
risalita — Inclinazione — degree

PROFONDITA' PROVA da m. 202,00 m a m. 205,00 m

ALTEZZA MANOMETRO 1,10 m **QUOTA MANOMETRO** 536,1

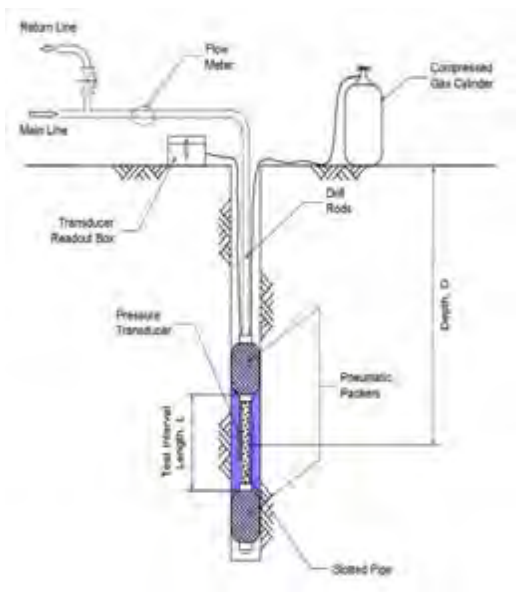
QUOTA 556 m

ACQUA IN FORO 3,50 m

DIAMETRO FORO Ø 101 mm

TIPO PACKER

ASTE
- Diametro esterno (mm). 88,9
- Diametro interno 77,8
- Lunghezza (m) 202,00



DATI DI CAMPAGNA

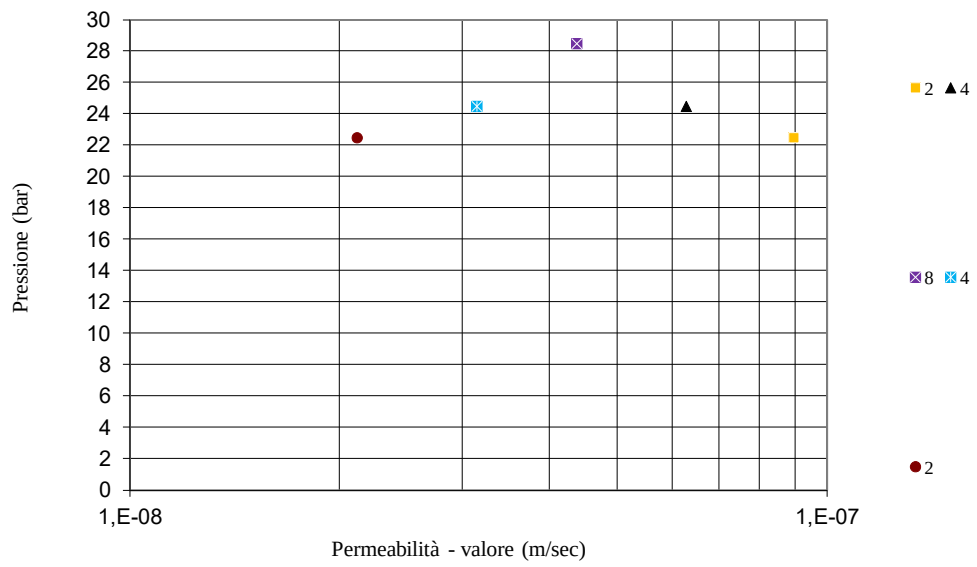
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	2	55,00	2150,00	2162,00	2173,00	2183,00	2194,00	2205,00
	10	4	42,00	2220,00	2229,00	2237,00	2246,00	2254,00	2262,00
	10	8	34,00	2260,00	2267,00	2274,00	2280,00	2287,00	2294,00
CICLO DI SCARICO	10	4	21,00	2300,00	2305,00	2309,00	2314,00	2317,00	2321,00
	10	2	13,00	2340,00	2343,00	2345,00	2348,00	2351,00	2353,00

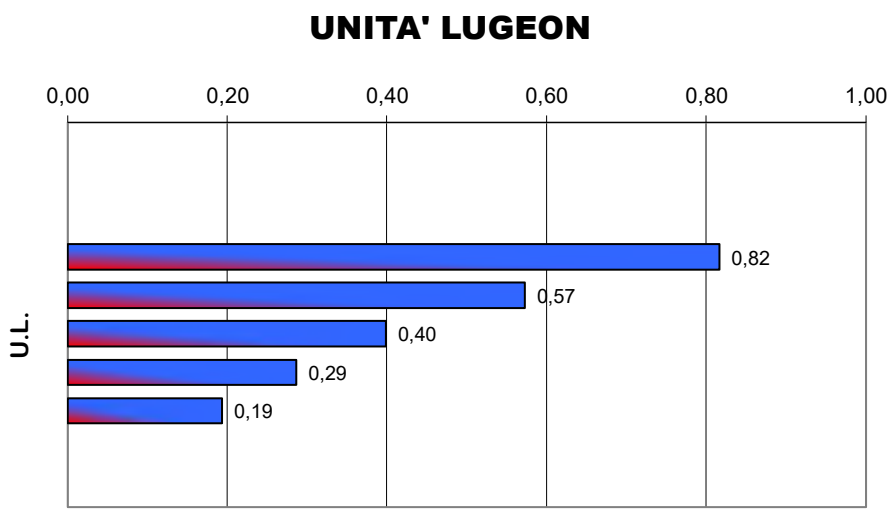
Assorbimento (l)

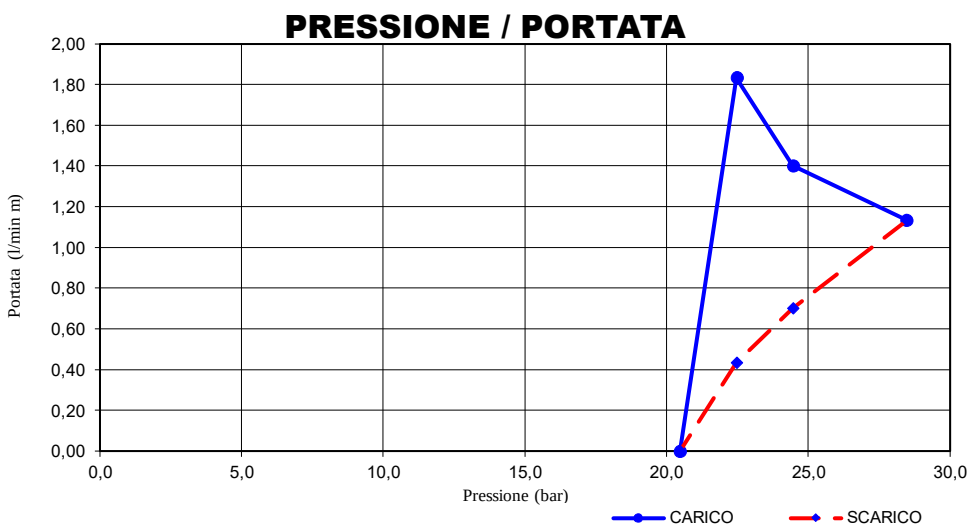
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	2,00	2,593E-04	22,460	55,00	0,82	8,958E-08
	10	4,00	1,638E-04	24,460	42,00	0,57	6,281E-08
da m.:	10	8,00	1,143E-04	28,460	34,00	0,40	4,370E-08
202,00	10	4,00	5,048E-05	24,460	21,00	0,29	3,141E-08
a m.:	10	2,00	2,242E-05	22,460	13,00	0,19	2,117E-08
205,00							
					Valore medio	**0,19**	**2,117E-08**







PROVE IN FORO
DILATOMETRICHE
CL3

GEOTEC SPA	COMMITTENTE:	GEOTEC	COORDINATE:	41.278883°
	CANTIERE:	DIGA CAMPOLATTARO		14.723333°
	SONDAGGIO:	CL3	Quota (m.s.l.m.):	556

TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		MARNA ARGILLOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		175-176	101	58			

Ciclo		Pressione (Bar)		Deformazioni (mm)				Mod. Dilato (MPa)
		Letta	Corretta	Sensore 1	Sensore 2	Sensore 3	Media	
Contatto		0,0	0,0	0,000	0,000	0,000	0,000	
		2,5	2,0	1,011	1,196	1,169	1,125	
		5,0	4,2	2,487	2,490	2,421	2,466	
		7,5	6,4	3,610	3,670	3,710	3,663	
P_0		10,0	8,8	4,510	4,520	4,430	4,487	
$2\ P_0$		20,0	18,5	7,098	7,017	7,183	7,099	E_{D1}
Ciclo 1	Carico	20,5	18,9	7,184	6,811	9,677	7,891	
		21,0	19,4	7,277	6,903	9,686	7,955	
		22,0	20,4	7,478	7,060	10,390	8,309	21,5
	P_1	22,5	20,9	7,602	7,155	10,688	8,482	
	Scarico	22,0	20,4	7,455	7,043	10,333	8,277	E_{E1}
		21,0	19,4	7,224	6,923	10,146	8,098	49,1
		20,5	18,9	7,289	6,921	9,988	8,066	
	$2P_0$	20,0	18,5	7,232	6,927	9,256	7,805	
	Ricarico	20,5	18,9	7,404	7,025	10,180	8,203	E_{DR1}
		21,0	19,4	7,465	7,067	10,351	8,294	42,9
		22,0	20,4	7,563	7,130	10,576	8,423	
	P_1	22,5	20,9	7,602	7,155	10,688	8,482	E_{D2}
Ciclo 2	Carico	26,8	25,2	7,821	7,314	11,187	8,774	
		31,1	29,5	8,016	7,500	11,408	8,975	
		35,1	33,5	8,110	7,591	11,512	9,071	287,7
	$1{,}5.P_1 < P_2 < 2.P_1$	40,0	38,3	8,276	7,748	11,704	9,243	
	Scarico	35,0	33,4	8,110	7,591	11,512	9,071	E_{E2}
		31,0	29,4	8,016	7,500	11,408	8,975	360,1
		26,0	24,4	7,821	7,314	11,187	8,774	
	$2P_0$	20,0	18,4	7,720	7,210	10,710	8,547	
	Ricarico	25,5	23,9	7,950	7,450	11,396	8,932	E_{DR2}
		29,9	28,3	8,012	7,500	11,436	8,983	358,8
		34,8	33,2	8,125	7,608	11,547	9,093	
	P_2	40,0	38,3	8,276	7,748	11,704	9,243	E_{D3}
Ciclo 3	Carico	44,9	43,2	8,530	8,000	12,018	9,516	
		48,9	47,2	8,712	8,184	12,248	9,715	
		51,2	49,5	8,880	8,462	12,984	10,109	158,2
	$1{,}5.P_2 < P_3 < 2.P_2$	55,0	53,3	9,096	8,679	13,287	10,354	
	Scarico	46,0	44,3	9,001	8,611	13,250	10,287	E_{E3}
		37,0	35,3	8,411	8,761	13,092	10,088	
		27,0	25,3	8,443	8,098	12,831	9,791	462,1
	$2P_0$	20,4	18,7	8,146	7,789	12,483	9,473	

Calcolo del modulo dilatometrico (Ed) :

$$Ed = 2 \times G \times (1 + \nu)$$

Modulo di taglio :

$$G = \Delta P \times 0{,}5 \times Ø_{F,0} / \Delta d$$

Risultato :

$$Ed = (1 + \nu) \times Ø_{F,0} \times \Delta P / \Delta d$$

Dati di calcolo :

- ν coefficiente di Poisson :

$\nu =$ 0,25

- $Ø_{F,0}$ diametro iniziale di foro (ØF,0 =ØS + Dd0) :

$Ø_{F,0} =$ 100,5 (mm)

- $Ø_S$ diametro della sonda dilatometrica :

$Ø_S =$ 96,0 (mm)

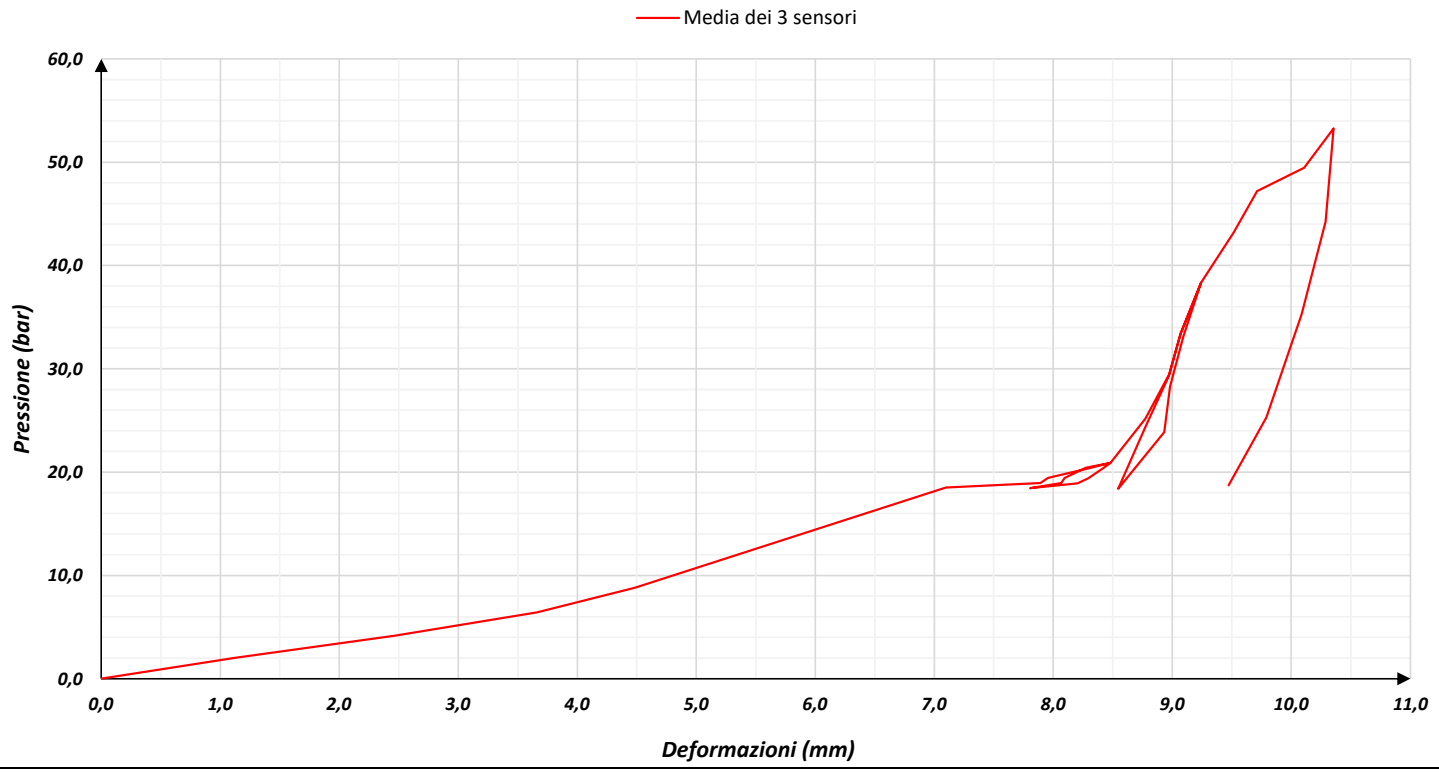
- Risultato :

$(1 + \nu) \times Ø_{F,0} =$ 125,7 (mm)

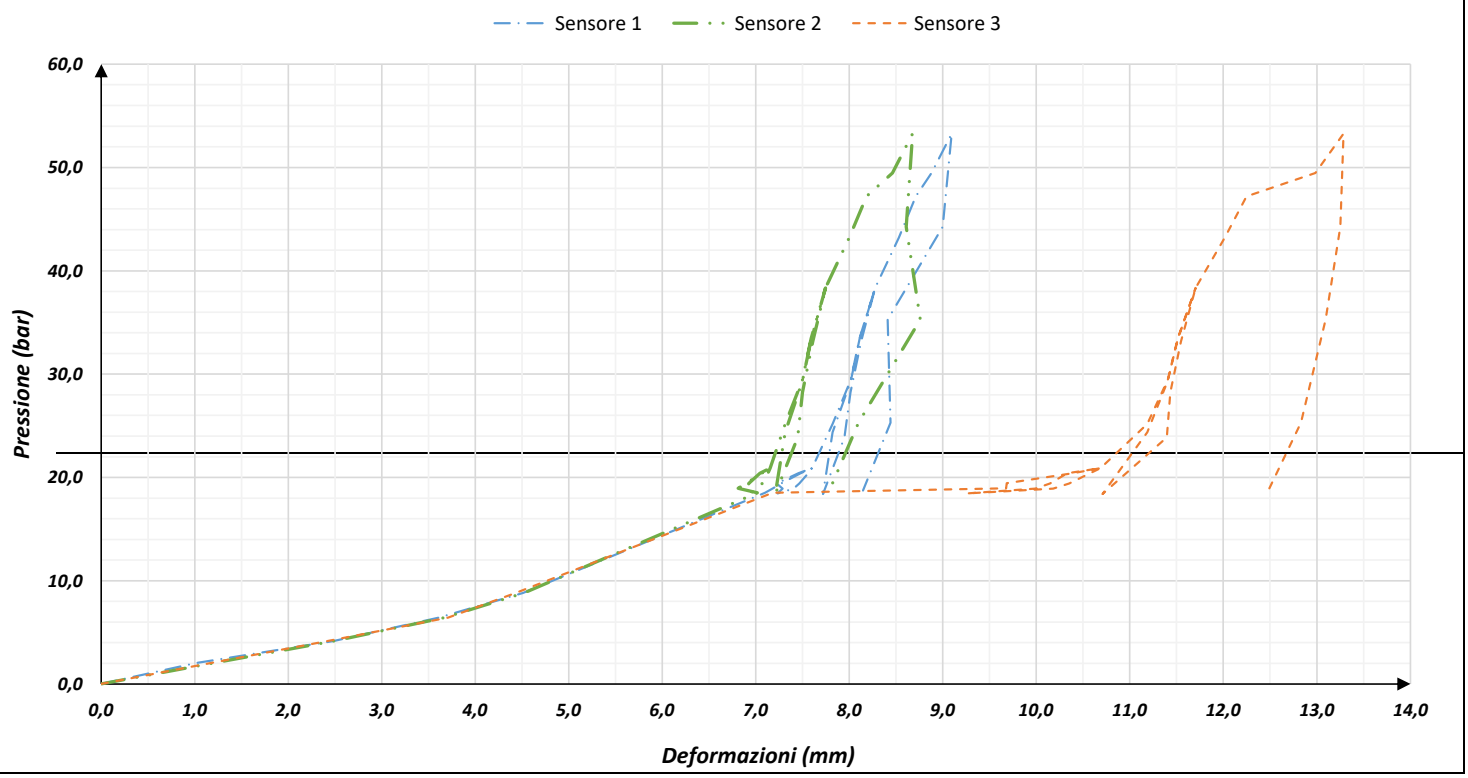
Ed = 287,7 (Mpa) **Ey =** 360,1 (Mpa) (calcolato sul 2° Ciclo)

GEOTEC SPA		COMMITTENTE:		GEOTEC		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		MARNA ARGILLOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		175-176	101	58			

RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



GEOTEC SPA		COMMITTENTE:		GEOTEC		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		MARNA ARGILLOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		175-176	101	58			

STANDARDIZZAZIONE DELLA SONDA DILATOMETRICA

La standardizzazione permette di determinare la resistenza della membrana :

$$P_{resistenza\ guaina}(D_{misurata}) = P_e(D_{misurata})$$

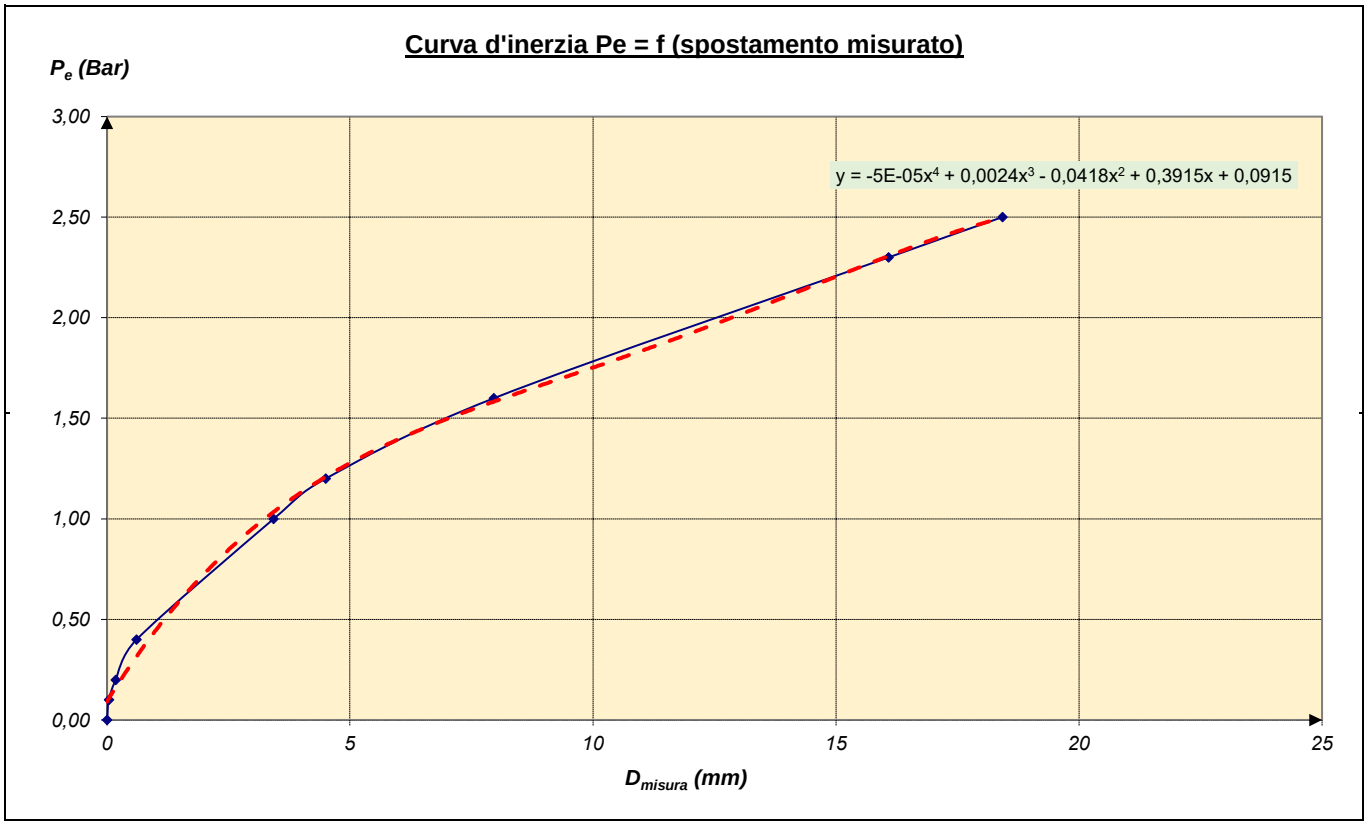
P_e espresso sotto forma di poligono :

$$P_e(D_{misurata}) = a \times D_{misurata}^{\alpha} + b \times D_{misurata}^{\beta} + c \times D_{misurata}^{\gamma} + d \times D_{misurata}^{\delta} + e \times D_{misurata}^{\varepsilon} + f \times D_{misurata}^{\phi}$$

La pressione applicata può essere corretta secondo la relazione :

$$P_{corretta} = P_{misurata}(D_{misurata}) - P_e(D_{misurata})$$

Pressione (bar)	Spostamenti (mm)				Definizioni di coefficienti :	
	C1	C2	C3	Media		
0,0		0,000	0,000	0,000		
0,1		0,014	0,063	0,039		
0,2	0,110	0,126	0,298	0,178	a = -5,00E-05	$\alpha = 4$
0,4	0,605	0,458	0,756	0,606		
1,0	3,522	3,253	3,514	3,430	b = 2,40E-03	$\beta = 3$
1,2	4,597	4,307	4,608	4,504		
1,6	7,965	7,622	8,296	7,961	c = -4,19E-02	$\gamma = 2$
2,3	15,466	15,053	17,729	16,083		
2,5	17,562	17,192	20,540	18,431	d = 3,93E-01	$\delta = 1$
					e = 7,82E-02	$\varepsilon = 0$
					f = 0,00E+00	$\phi = 0$



GEOTEC SPA		COMMITTENTE:		GEOTEC		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333°
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95		MARNA ARGILLOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		175-176	101	58			

CALIBRAZIONE DELLA SONDA DILATOMETRICA

La calibrazione permette di determinare con precisione il diametro della sonda dilatometrica. Ciò corrisponde alla differenza tra il diametro del tubo in cui viene gonfiata la sonda e la media degli spostamenti dei tre sensori:

$$Ø_s = Ø_{tubo} - \Delta d_m$$

Da questi dati è quindi possibile determinare il diametro iniziale del pozzo alla profondità della prova dilatometrica.
Questo è definito dalla relazione (Ddm, P0 è la media degli spostamenti dei sensori alla pressione di contatto - P0):

$$Ø_{F,0} = Ø_s - \Delta d_{m,P0}$$

Pressione (bar)	Spostamenti (mm)			
	C1	C2	C3	Media
0,0	0,000	0,000	0,000	0,000
0,1	0,010	0,010	0,010	0,010
0,6	1,971	1,981	2,120	2,024
1,1	4,102	3,476	3,229	3,602
1,5	4,196	3,911	3,310	3,806
2,0	4,262	4,167	3,324	3,918
4,0	4,324	4,230	3,309	3,954
30,6	4,383	4,279	3,230	3,964
60,8	4,380	4,306	3,229	3,972
89,9	4,374	4,304	3,234	3,971

Determinazione del diametro della sonda dilatometrica

Diametro interno del tubo :

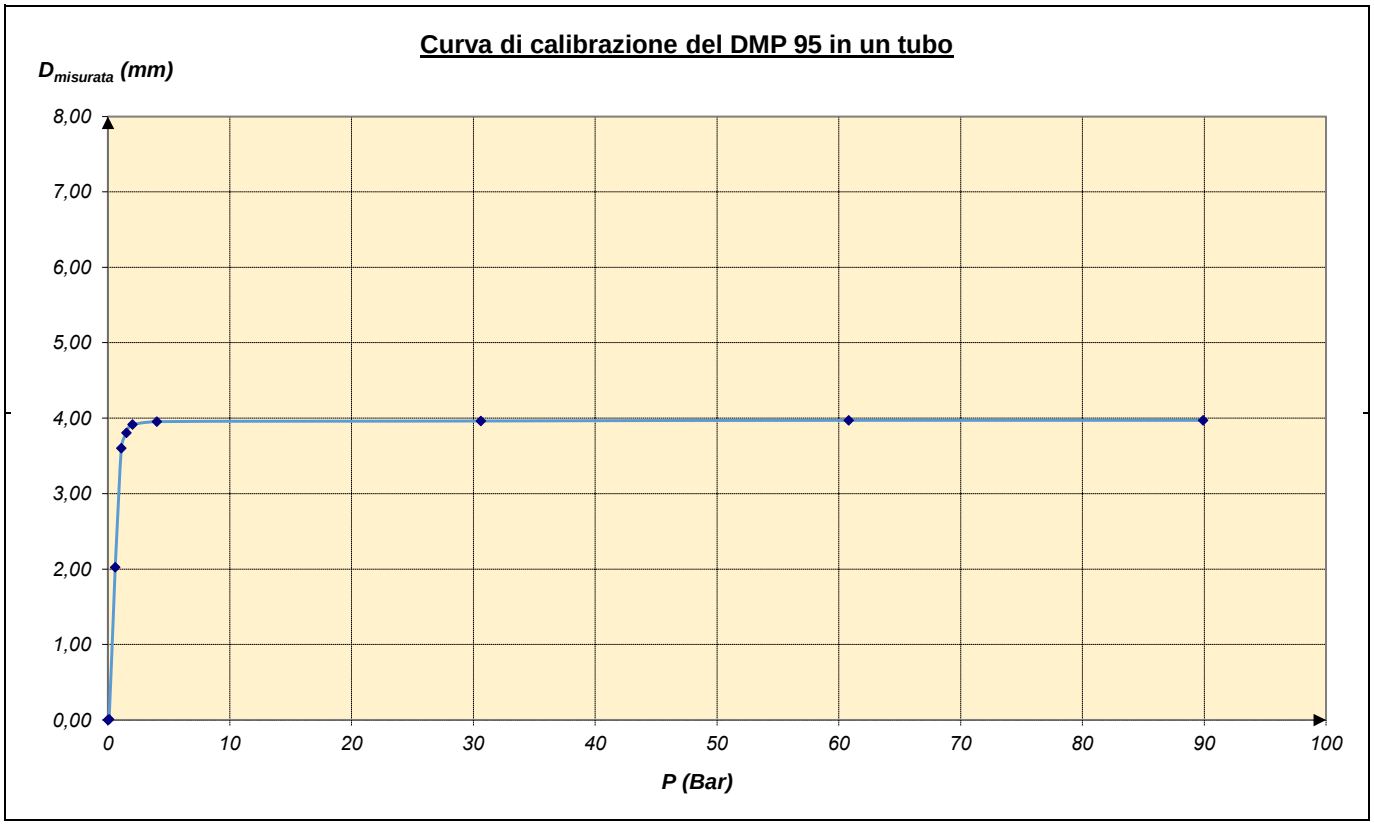
$Ø_{intérieur\ tube}$ = 100,000 mm

Spostamento medio dei sensori diametrali al contatto :

Δd_m = 3,956 mm

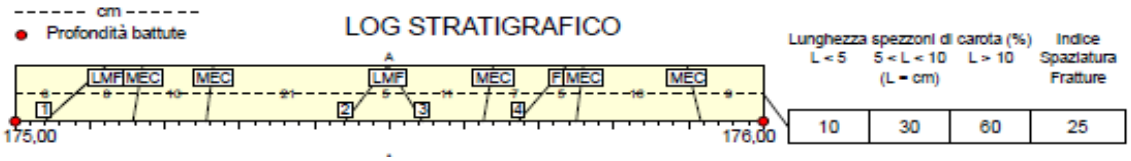
Diametro sonda :

$Ø_{sonda} = Ø_{tubo} - \Delta d_m$ = 96,044 mm



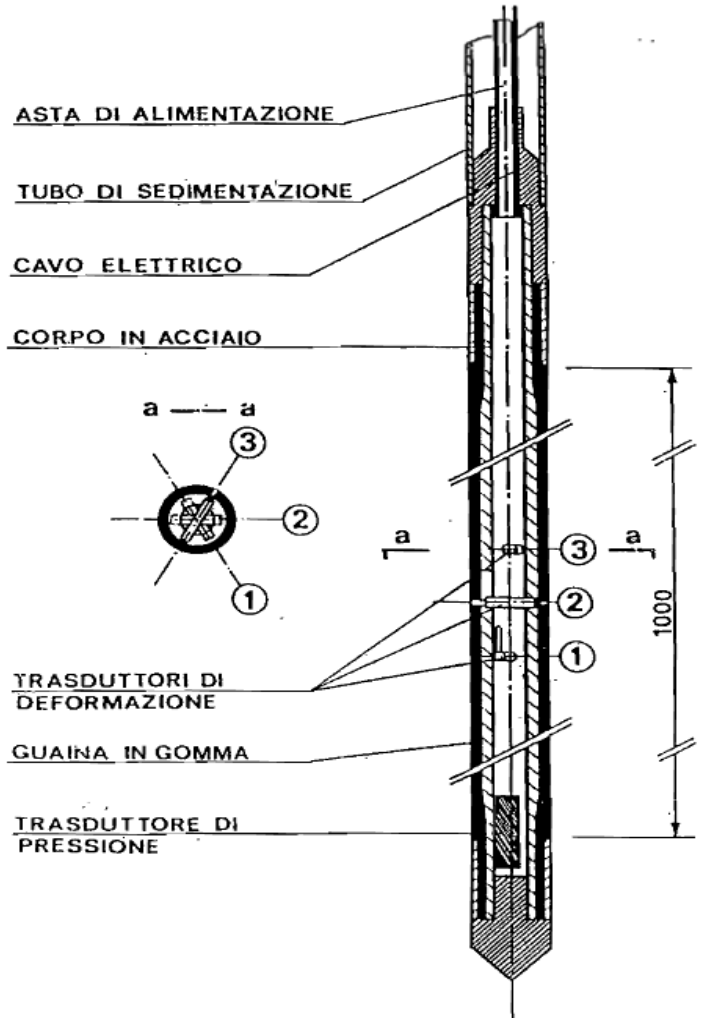
GEOTEC SPA		COMMITTENTE:		GEOTEC		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333°
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT1	95	0	MARNA ARGILLOSA		
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	S. BAUR
		175-176	101	58			

CL3 - DRT 1



Lunghezza spezzoni di carota (%) L < 5	5 < L < 10 (L = cm)	L > 10	Indice Spaziatura Fratture
10	30	60	25

SCHEMADILAROC DMP-95



GEOTEC SPA	COMMITTENTE:	VIANINI	COORDINATE:	41.278883°
	CANTIERE:	DIGA CAMPOLATTARO		14.723333°
	SONDAGGIO:	CL3	Quota (m.s.l.m.):	556

TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT2	95		ALT. MARNOSO ARENACEA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		184-185	101	70			

Ciclo		Pressione (Bar)		Deformazioni (mm)				Mod. Dilato (MPa)
		Letta	Corretta	Sensore 1	Sensore 2	Sensore 3	Media	
Contatto		0,0	0,0	0,000	0,000	0,000	0,000	
		2,1	1,4	1,635	1,834	1,399	1,623	
		4,0	2,9	3,905	3,797	3,451	3,718	
		5,9	4,7	4,535	4,733	4,356	4,541	
P_0		8,0	6,6	6,145	6,340	5,890	6,125	
$2\ P_0$		15,9	14,4	7,395	7,612	7,289	7,432	E_{D1}
Ciclo 1	Carico	17,1	15,6	7,435	7,652	7,308	7,465	
		18,0	16,5	7,474	7,691	7,328	7,498	404,5
		19,1	17,6	7,514	7,731	7,347	7,530	
	P_1	20,1	18,6	7,553	7,770	7,366	7,563	
	Scarico	19,0	17,5	7,517	7,739	7,348	7,535	E_{E1}
		17,9	16,4	7,482	7,708	7,331	7,507	479,5
		17,0	15,5	7,446	7,677	7,313	7,479	
	$2P_0$	15,8	14,3	7,410	7,646	7,295	7,450	
	Ricarico	17,0	15,5	7,456	7,681	7,318	7,485	E_{DR1}
		18,0	16,5	7,494	7,715	7,342	7,517	443,1
		19,2	17,7	7,519	7,750	7,365	7,544	
	P_1	20,1	18,6	7,555	7,784	7,388	7,576	E_{D2}
Ciclo 2	Carico	24,2	22,7	7,788	7,851	7,543	7,727	
		27,8	26,2	8,021	8,106	7,808	7,979	196,3
		32,2	30,6	8,254	8,362	8,074	8,230	
	$1{,}5.P_1 < P_2 < 2.P_1$	35,9	34,3	8,487	8,805	8,451	8,581	
	Scarico	32,0	30,4	8,293	8,615	8,245	8,384	E_{E2}
		27,8	26,2	8,099	8,425	8,039	8,188	310,7
		24,0	22,4	7,905	8,235	7,833	7,991	
	$2P_0$	15,9	14,4	7,711	8,045	7,627	7,794	
	Ricarico	21,0	19,4	7,907	8,336	7,840	8,028	E_{DR2}
		25,9	24,3	8,104	8,446	8,053	8,201	321,9
		31,0	29,4	8,300	8,611	8,265	8,392	
	P_2	35,7	34,1	8,496	8,800	8,478	8,591	E_{D3}
Ciclo 3	Carico	44,3	42,7	8,988	9,300	8,978	9,089	
		52,5	50,8	9,481	9,801	9,478	9,586	221,1
		61,0	59,3	9,973	10,301	9,977	10,084	
	$1{,}5.P_2 < P_3 < 2.P_2$	70,6	68,8	10,465	10,801	10,477	10,581	
	Scarico	55,5	53,8	10,145	10,436	9,990	10,190	E_{E3}
		42,6	40,9	9,605	9,876	9,504	9,662	
		29,5	27,8	9,055	9,356	8,918	9,110	298,6
	$2P_0$	16,0	14,4	8,145	8,554	8,189	8,296	

Calcolo del modulo dilatometrico (Ed) :

$$Ed = 2 \times G \times (1 + \nu)$$

Modulo di taglio :

$$G = \Delta P \times 0{,}5 \times Ø_{F,0} / \Delta d$$

Risultato :

$$Ed = (1 + \nu) \times Ø_{F,0} \times \Delta P / \Delta d$$

Dati di calcolo :

- ν coefficiente di Poisson :

ν =	0,25

- $Ø_{F,0}$ diametro iniziale di foro (ØF,0 =ØS + Dd0) :

$Ø_{F,0}$ =	102,2	(mm)

- $Ø_S$ diametro della sonda dilatometrica :

$Ø_S$ =	96,0	(mm)

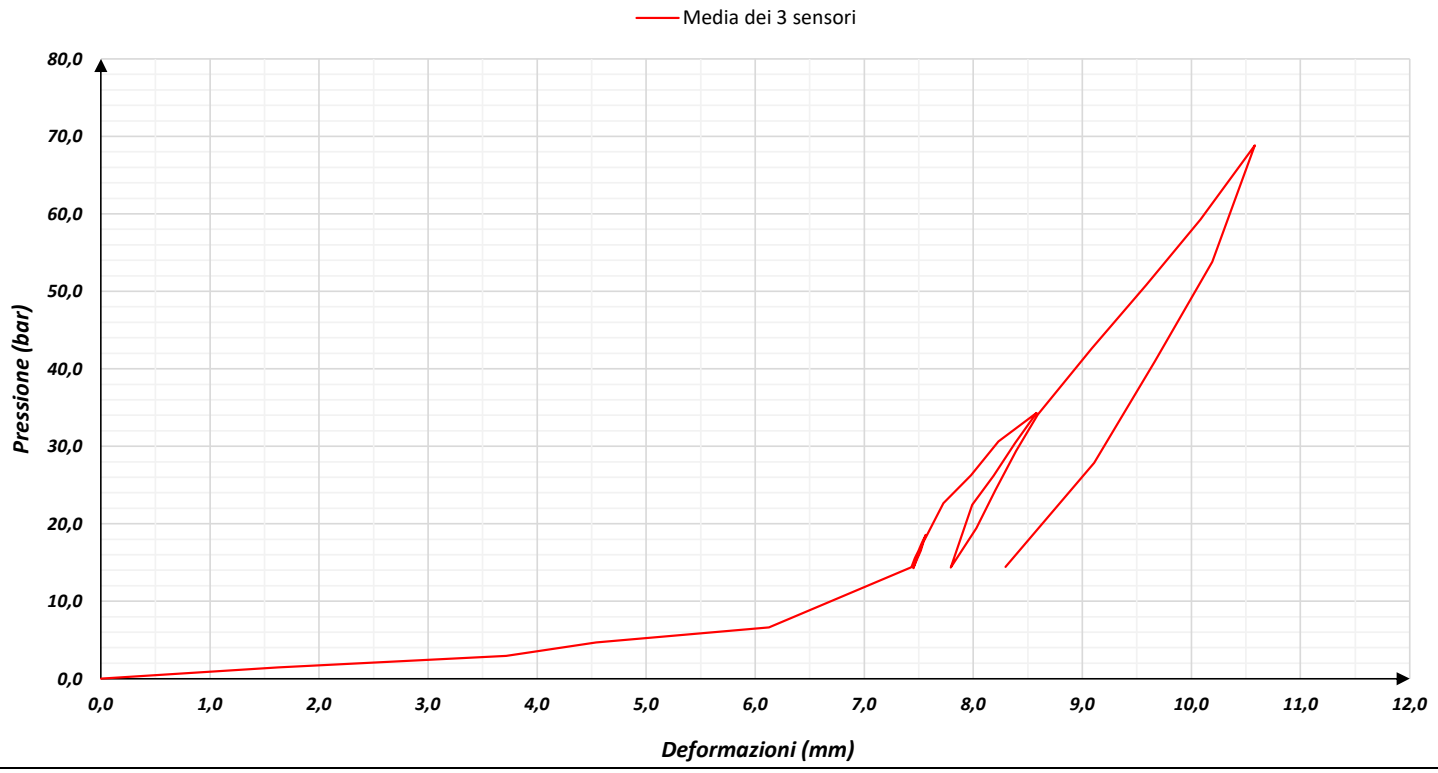
- Risultato :

$(1 + \nu) \times Ø_{F,0}$ =	127,7	(mm)

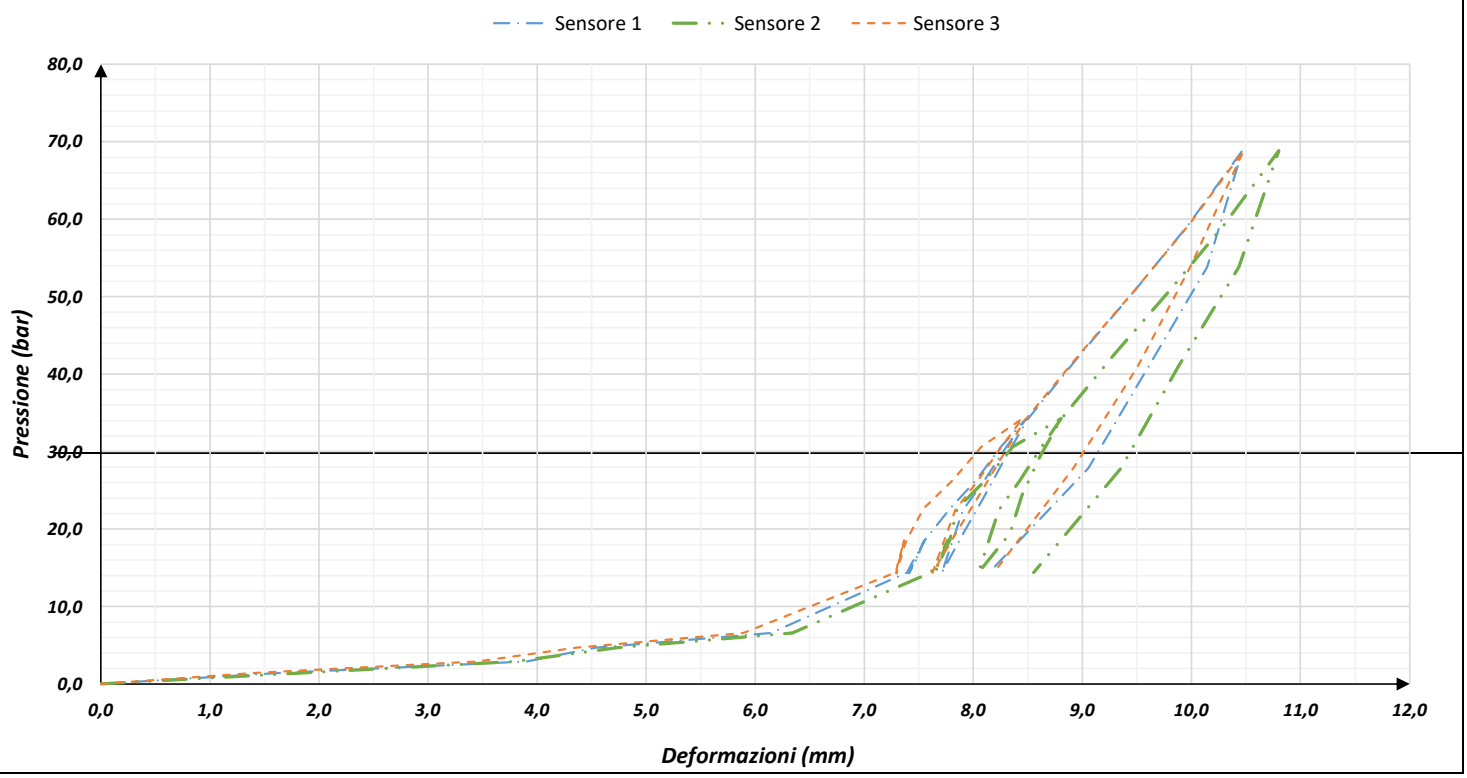
Ed2 =	196,3	(Mpa)	Ee2 =	310,7	(Mpa)	(calcolato sul 2° Ciclo)
EGm =	199,4	(Mpa)	Ee3 =	298,6	(Mpa)	

GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT2	95		ALT. MARNOSO ARENACEA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		184-185	101	70			

RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT2	95		ALT. MARNOSO ARENACEA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		184-185	101	70			

STANDARDIZZAZIONE DELLA SONDA DILATOMETRICA

La standardizzazione permette di determinare la resistenza della membrana :

$$P_{resistenza\ guaina}(D_{misurata}) = P_e(D_{misurata})$$

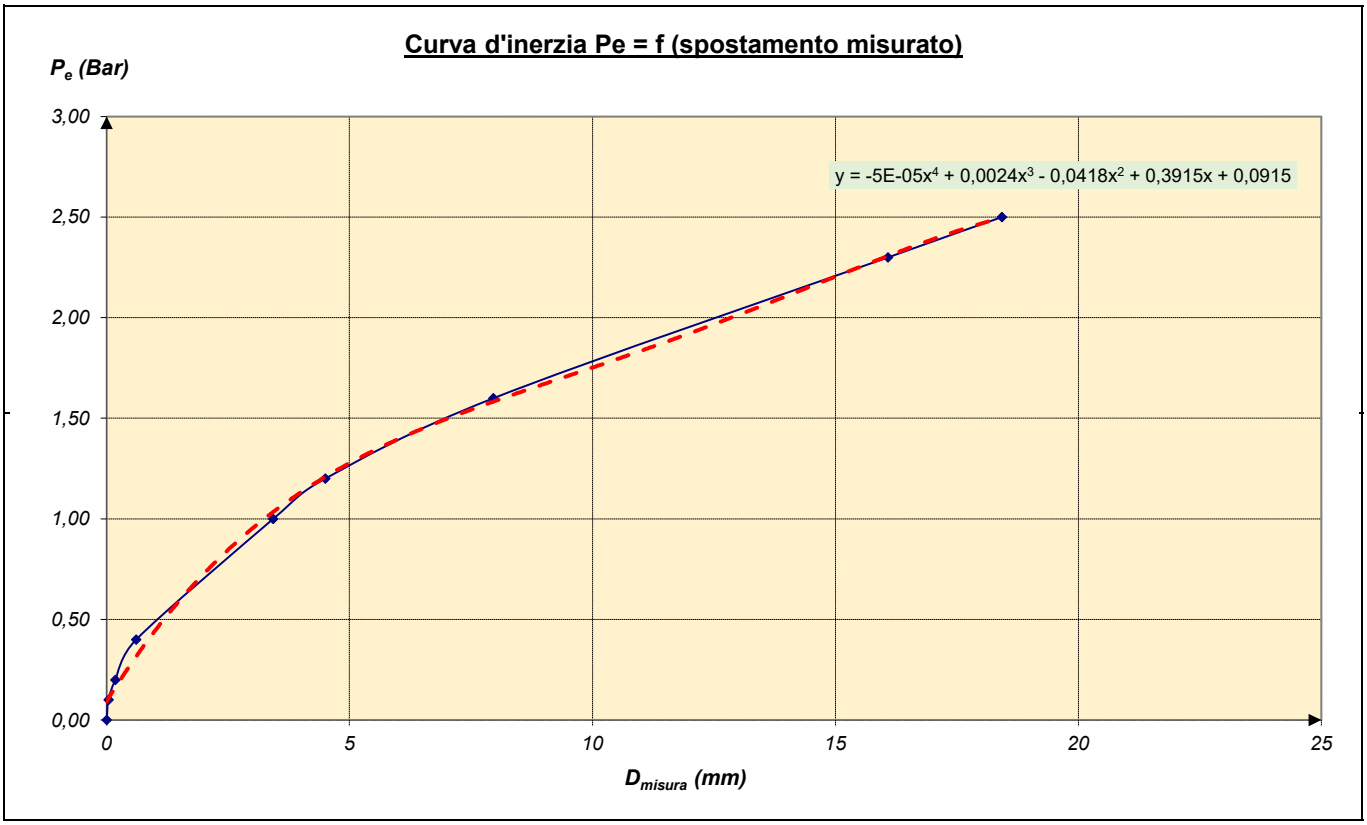
P_e espresso sotto forma di poligono :

$$P_e(D_{misurata}) = a \times D_{misurata}^{\alpha} + b \times D_{misurata}^{\beta} + c \times D_{misurata}^{\gamma} + d \times D_{misurata}^{\delta} + e \times D_{misurata}^{\varepsilon} + f \times D_{misurata}^{\phi}$$

La pressione applicata può essere corretta secondo la relazione :

$$P_{corretta} = P_{misurata}(D_{misurata}) - P_e(D_{misurata})$$

Pressione (bar)	Spostamenti (mm)				Definizioni di coefficienti :	
	C1	C2	C3	Media		
0,0		0,000	0,000	0,000		
0,1		0,014	0,063	0,039		
0,2	0,110	0,126	0,298	0,178	a = -5,00E-05	$\alpha = 4$
0,4	0,605	0,458	0,756	0,606		
1,0	3,522	3,253	3,514	3,430	b = 2,40E-03	$\beta = 3$
1,2	4,597	4,307	4,608	4,504		
1,6	7,965	7,622	8,296	7,961	c = -4,19E-02	$\gamma = 2$
2,3	15,466	15,053	17,729	16,083		
2,5	17,562	17,192	20,540	18,431	d = 3,93E-01	$\delta = 1$
					e = 7,82E-02	$\varepsilon = 0$
					f = 0,00E+00	$\phi = 0$



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333°
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT2	95		ALT. MARNOSO ARENACEA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		184-185	101	70			

CALIBRAZIONE DELLA SONDA DILATOMETRICA

La calibrazione permette di determinare con precisione il diametro della sonda dilatometrica. Ciò corrisponde alla differenza tra il diametro del tubo in cui viene gonfiata la sonda e la media degli spostamenti dei tre sensori:

$$Ø_s = Ø_{tubo} - \Delta d_m$$

Da questi dati è quindi possibile determinare il diametro iniziale del pozzo alla profondità della prova dilatometrica.
Questo è definito dalla relazione (Ddm, P0 è la media degli spostamenti dei sensori alla pressione di contatto - P0):

$$Ø_{F,0} = Ø_s - \Delta d_{m,P0}$$

Pressione (bar)	Spostamenti (mm)			
	C1	C2	C3	Media
0,0	0,000	0,000	0,000	0,000
0,1	0,010	0,010	0,010	0,010
0,6	1,971	1,981	2,120	2,024
1,1	4,102	3,476	3,229	3,602
1,5	4,196	3,911	3,310	3,806
2,0	4,262	4,167	3,324	3,918
4,0	4,324	4,230	3,309	3,954
30,6	4,383	4,279	3,230	3,964
60,8	4,380	4,306	3,229	3,972
89,9	4,374	4,304	3,234	3,971

Determinazione del diametro della sonda dilatometrica

Diametro interno del tubo :

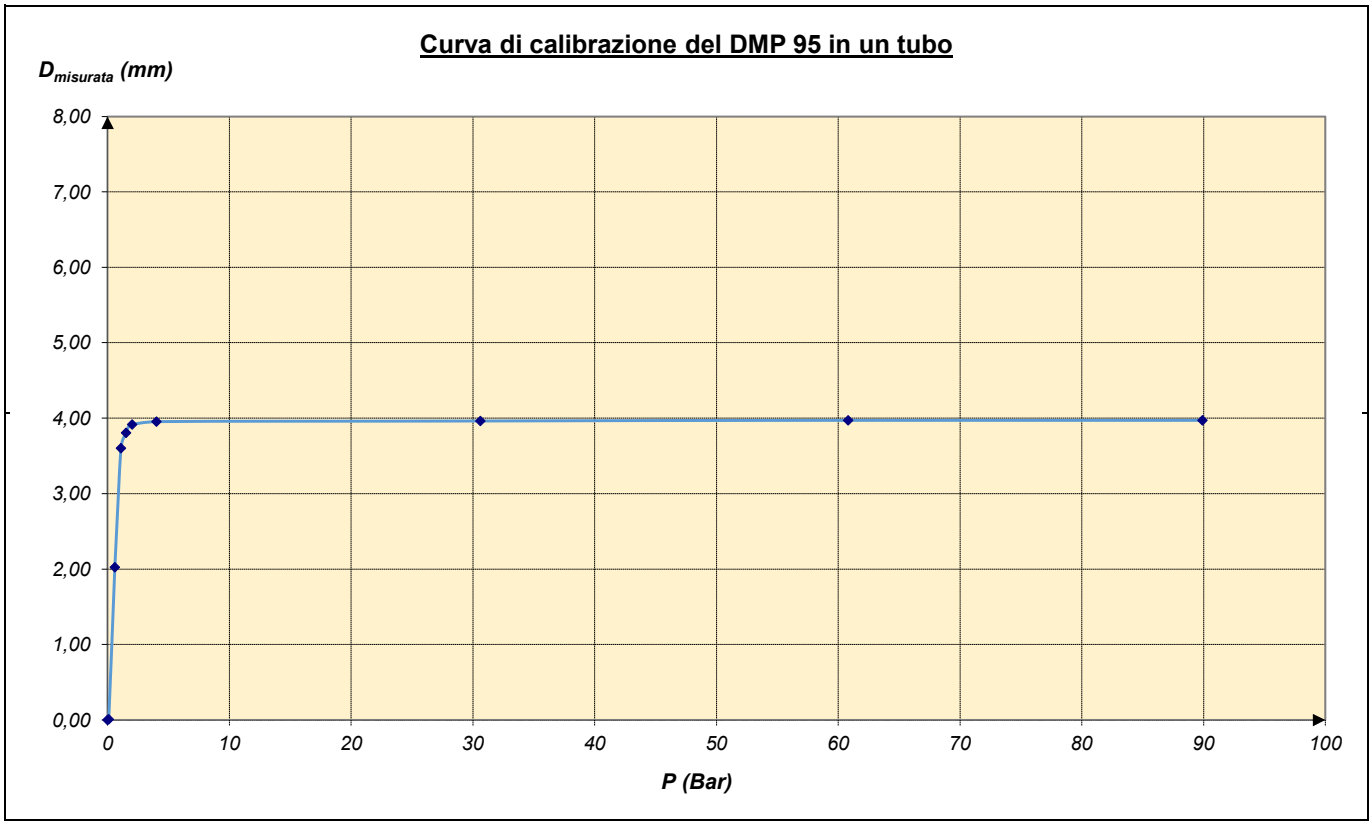
$Ø_{intérieur\ tube}$ = 100,000 mm

Spostamento medio dei sensori diametrali al contatto :

Δd_m = 3,956 mm

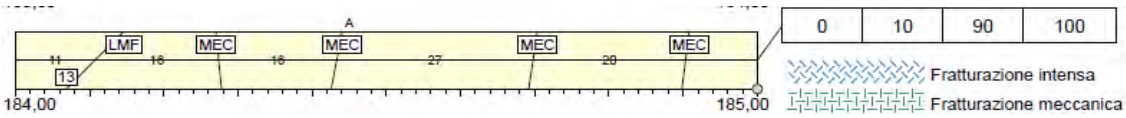
Diametro sonda :

$Ø_{sonda} = Ø_{tubo} - \Delta d_m$ = 96,044 mm

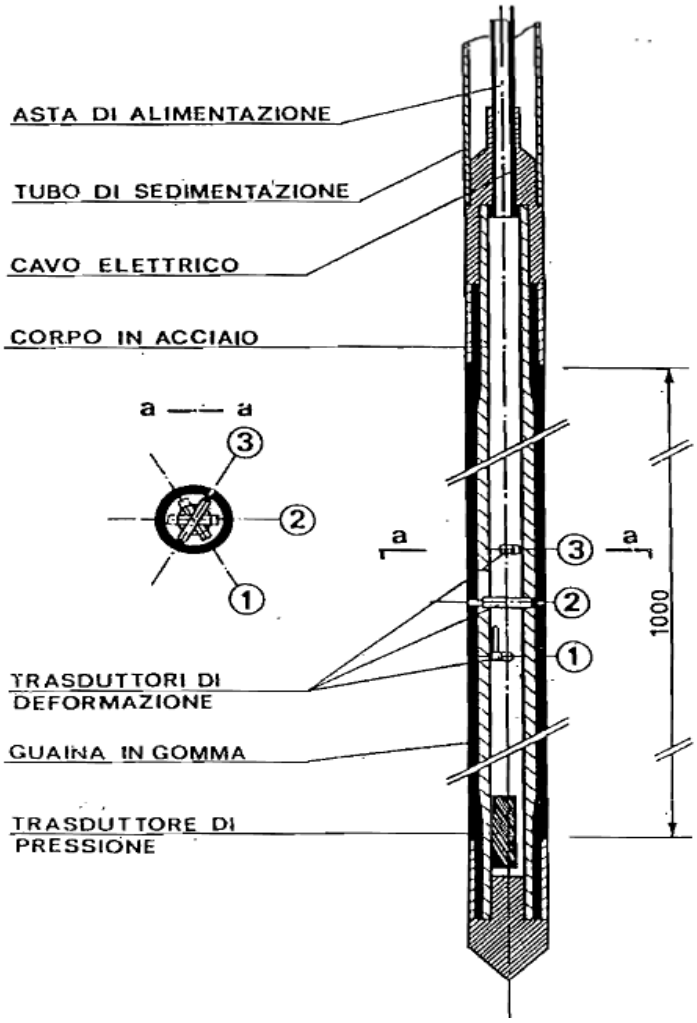


GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333°
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT2	95	0	ALT. MARNOSO ARENACEA		
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	S. BAUR
		184-185	101	70			

CL3 - DRT2



SCHEMADILAROC DMP-95



GEOTEC SPA	COMMITTENTE:	VIANINI	COORDINATE:	41.278883°
	CANTIERE:	DIGA CAMPOLATTARO		14.723333°
	SONDAGGIO:	CL3	Quota (m.s.l.m.):	556

TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT3	95		ALT. ARENACEO MARNOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		194-195	101	74			

Ciclo		Pressione (Bar)		Deformazioni (mm)				Mod. Dilato (MPa)
		Letta	Corretta	Sensore 1	Sensore 2	Sensore 3	Media	
Contatto		0,0	0,0	0,000	0,000	0,000	0,000	
		2,5	1,9	1,635	1,501	1,399	1,512	
		5,1	4,0	3,905	3,464	3,451	3,607	
		7,0	5,8	4,535	4,400	4,356	4,430	
P_0		10,1	8,7	6,145	6,007	5,890	6,014	
$2\ P_0$		20,1	18,6	7,395	7,279	7,289	7,321	E_{D1}
Ciclo 1	Carico	21,2	19,7	7,440	7,319	7,308	7,356	
		22,5	21,0	7,490	7,358	7,328	7,392	458,7
		23,4	21,9	7,530	7,398	7,347	7,425	
	P_1	25,0	23,5	7,553	7,437	7,366	7,452	
	Scarico	23,5	22,0	7,533	7,406	7,348	7,429	E_{E1}
		22,4	20,9	7,498	7,375	7,331	7,401	531,8
		21,1	19,6	7,445	7,344	7,313	7,367	
	$2P_0$	20,0	18,5	7,399	7,313	7,295	7,336	
	Ricarico	21,2	19,7	7,449	7,348	7,318	7,372	E_{DR1}
		22,4	20,9	7,510	7,382	7,342	7,411	469,3
		23,5	22,0	7,539	7,417	7,365	7,440	
	P_1	25,0	23,5	7,561	7,451	7,388	7,467	E_{D2}
Ciclo 2	Carico	28,2	26,7	7,593	7,518	7,543	7,551	
		31,5	30,0	7,630	7,773	7,808	7,737	218,2
		35,0	33,4	7,656	8,029	8,074	7,920	
	$1{,}5.P_1 < P_2 < 2.P_1$	38,0	36,4	7,687	8,472	8,451	8,203	
	Scarico	34,7	33,1	7,679	8,282	8,245	8,069	E_{E2}
		31,5	29,9	7,671	8,092	8,039	7,934	401,3
		28,0	26,5	7,662	7,902	7,833	7,799	
	$2P_0$	20,1	18,6	7,654	7,712	7,627	7,664	
	Ricarico	28,0	26,4	7,707	8,003	7,840	7,850	E_{DR2}
		31,4	29,8	7,704	8,113	8,053	7,956	408,9
		34,7	33,1	7,700	8,278	8,265	8,081	
	P_2	37,9	36,3	7,696	8,467	8,478	8,214	E_{D3}
Ciclo 3	Carico	47,0	45,4	8,013	8,967	8,978	8,653	
		56,1	54,5	8,331	9,468	9,478	9,092	260,5
		64,8	63,1	8,648	9,968	9,977	9,531	
	$1{,}5.P_2 < P_3 < 2.P_2$	74,0	72,3	8,965	10,468	10,477	9,970	
	Scarico	60,5	58,8	8,810	10,103	9,990	9,634	E_{E3}
		47,0	45,3	8,518	9,543	9,504	9,188	
		33,5	31,9	8,290	9,023	8,918	8,744	377,2
	$2P_0$	19,5	17,9	8,020	8,221	8,189	8,143	

Calcolo del modulo dilatometrico (Ed) :

$$Ed = 2 \times G \times (1 + \nu)$$

Modulo di taglio :

$$G = \Delta P \times 0{,}5 \times Ø_{F,0} / \Delta d$$

Risultato :

$$Ed = (1 + \nu) \times Ø_{F,0} \times \Delta P / \Delta d$$

Dati di calcolo :

- ν coefficiente di Poisson :

ν =	0,25

- $Ø_{F,0}$ diametro iniziale di foro (ØF,0 =ØS + Dd0) :

$Ø_{F,0}$ =	102,1	(mm)

- $Ø_S$ diametro della sonda dilatometrica :

$Ø_S$ =	96,0	(mm)

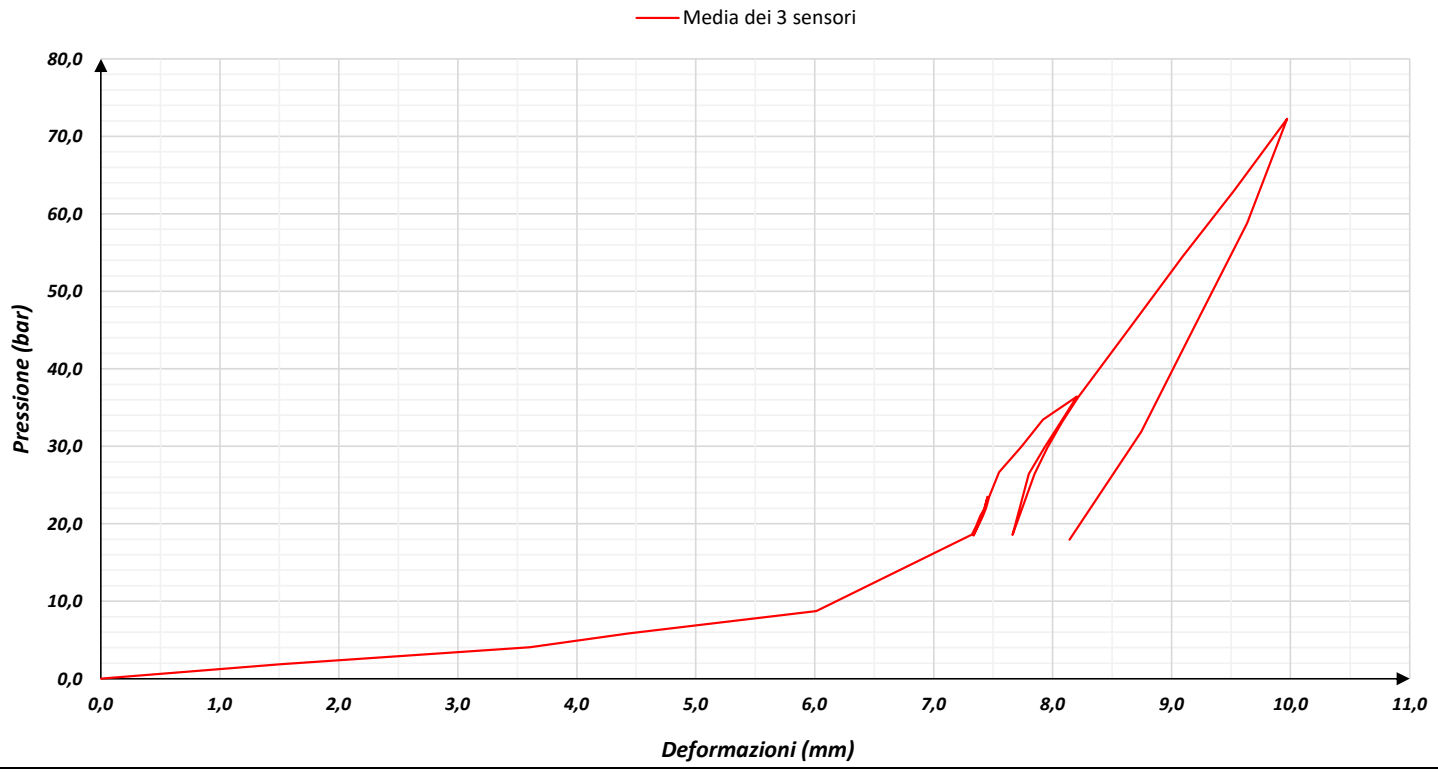
- Risultato :

$(1 + \nu) \times Ø_{F,0}$ =	127,6	(mm)

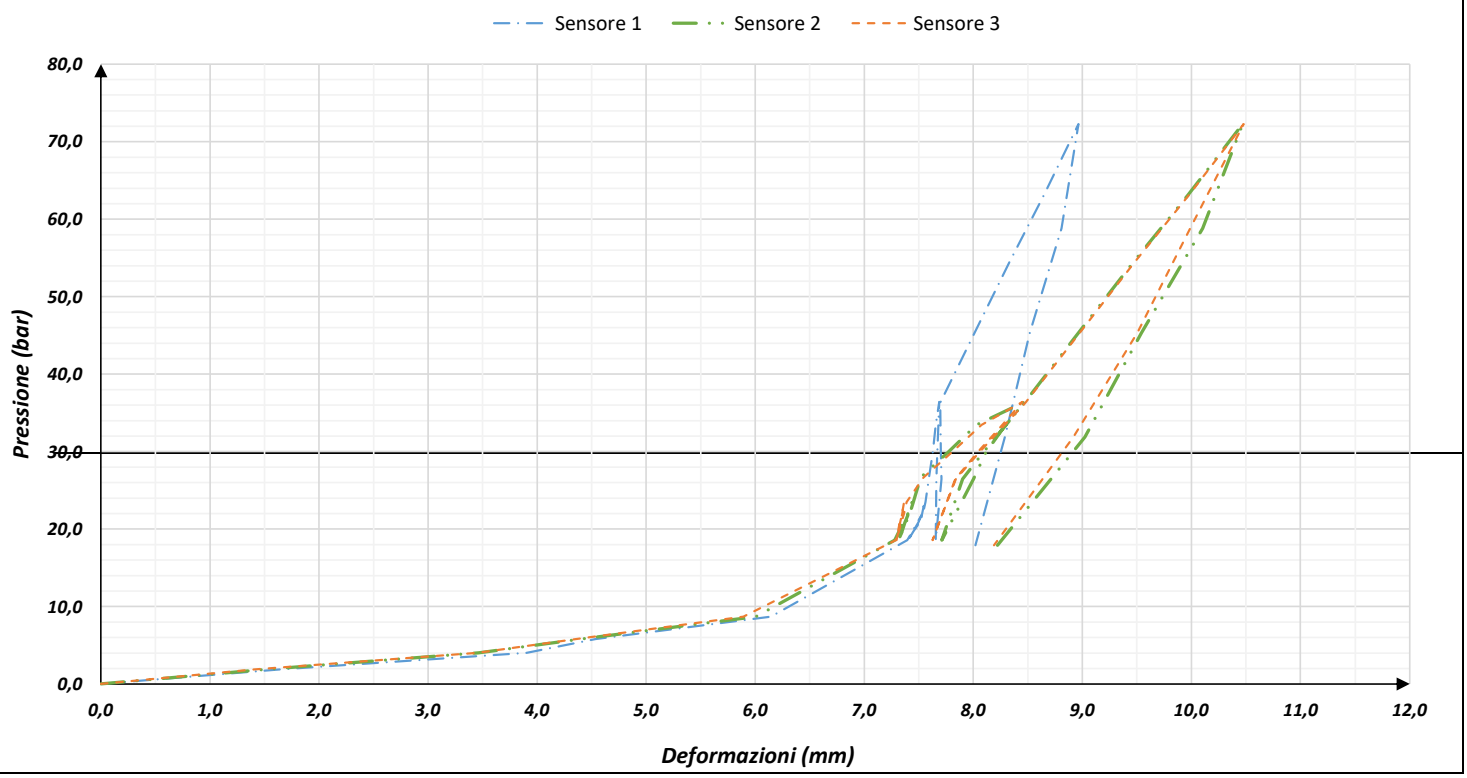
Ed2 =	218,2	(Mpa)	Ee2 =	401,3	(Mpa)	(calcolato sul 2° Ciclo)
EGm =	230,7	(Mpa)	Ee3 =	377,2	(Mpa)	

GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT3	95		ALT. ARENACEO MARNOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		194-195	101	74			

RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



RAPPRESENTAZIONE DELLA PROVA DILATOMETRICA



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT3	95		ALT. ARENACEO MARNOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		194-195	101	74			

STANDARDIZZAZIONE DELLA SONDA DILATOMETRICA

La standardizzazione permette di determinare la resistenza della membrana :

$$P_{resistenza\ guaina}(D_{misurata}) = P_e(D_{misurata})$$

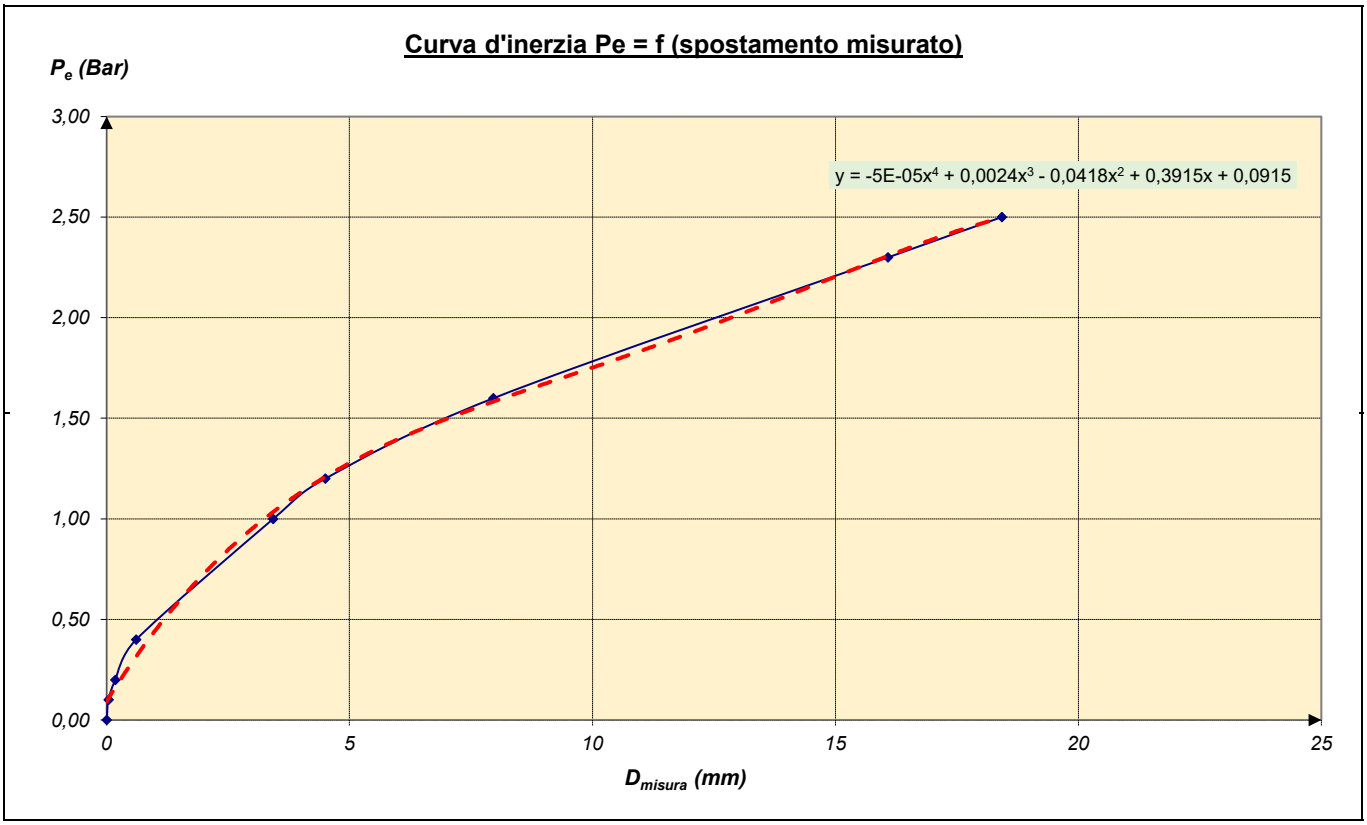
P_e espresso sotto forma di poligono :

$$P_e(D_{misurata}) = a \times D_{misurata}^{\alpha} + b \times D_{misurata}^{\beta} + c \times D_{misurata}^{\gamma} + d \times D_{misurata}^{\delta} + e \times D_{misurata}^{\varepsilon} + f \times D_{misurata}^{\phi}$$

La pressione applicata può essere corretta secondo la relazione :

$$P_{corretta} = P_{misurata}(D_{misurata}) - P_e(D_{misurata})$$

Pressione (bar)	Spostamenti (mm)				Definizioni di coefficienti :	
	C1	C2	C3	Media		
0,0		0,000	0,000	0,000		
0,1		0,014	0,063	0,039		
0,2	0,110	0,126	0,298	0,178	a = -5,00E-05	$\alpha = 4$
0,4	0,605	0,458	0,756	0,606		
1,0	3,522	3,253	3,514	3,430	b = 2,40E-03	$\beta = 3$
1,2	4,597	4,307	4,608	4,504		
1,6	7,965	7,622	8,296	7,961	c = -4,19E-02	$\gamma = 2$
2,3	15,466	15,053	17,729	16,083		
2,5	17,562	17,192	20,540	18,431	d = 3,93E-01	$\delta = 1$
					e = 7,82E-02	$\varepsilon = 0$
					f = 0,00E+00	$\phi = 0$



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333°
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT3	95		ALT. ARENACEO MARNOSA		S. BAUR
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	
		194-195	101	74			

CALIBRAZIONE DELLA SONDA DILATOMETRICA

La calibrazione permette di determinare con precisione il diametro della sonda dilatometrica. Ciò corrisponde alla differenza tra il diametro del tubo in cui viene gonfiata la sonda e la media degli spostamenti dei tre sensori:

$$Ø_s = Ø_{tubo} - \Delta d_m$$

Da questi dati è quindi possibile determinare il diametro iniziale del pozzo alla profondità della prova dilatometrica.
Questo è definito dalla relazione (Ddm, P0 è la media degli spostamenti dei sensori alla pressione di contatto - P0):

$$Ø_{F,0} = Ø_s - \Delta d_{m,P0}$$

Pressione (bar)	Spostamenti (mm)			
	C1	C2	C3	Media
0,0	0,000	0,000	0,000	0,000
0,1	0,010	0,010	0,010	0,010
0,6	1,971	1,981	2,120	2,024
1,1	4,102	3,476	3,229	3,602
1,5	4,196	3,911	3,310	3,806
2,0	4,262	4,167	3,324	3,918
4,0	4,324	4,230	3,309	3,954
30,6	4,383	4,279	3,230	3,964
60,8	4,380	4,306	3,229	3,972
89,9	4,374	4,304	3,234	3,971

Determinazione del diametro della sonda dilatometrica

Diametro interno del tubo :

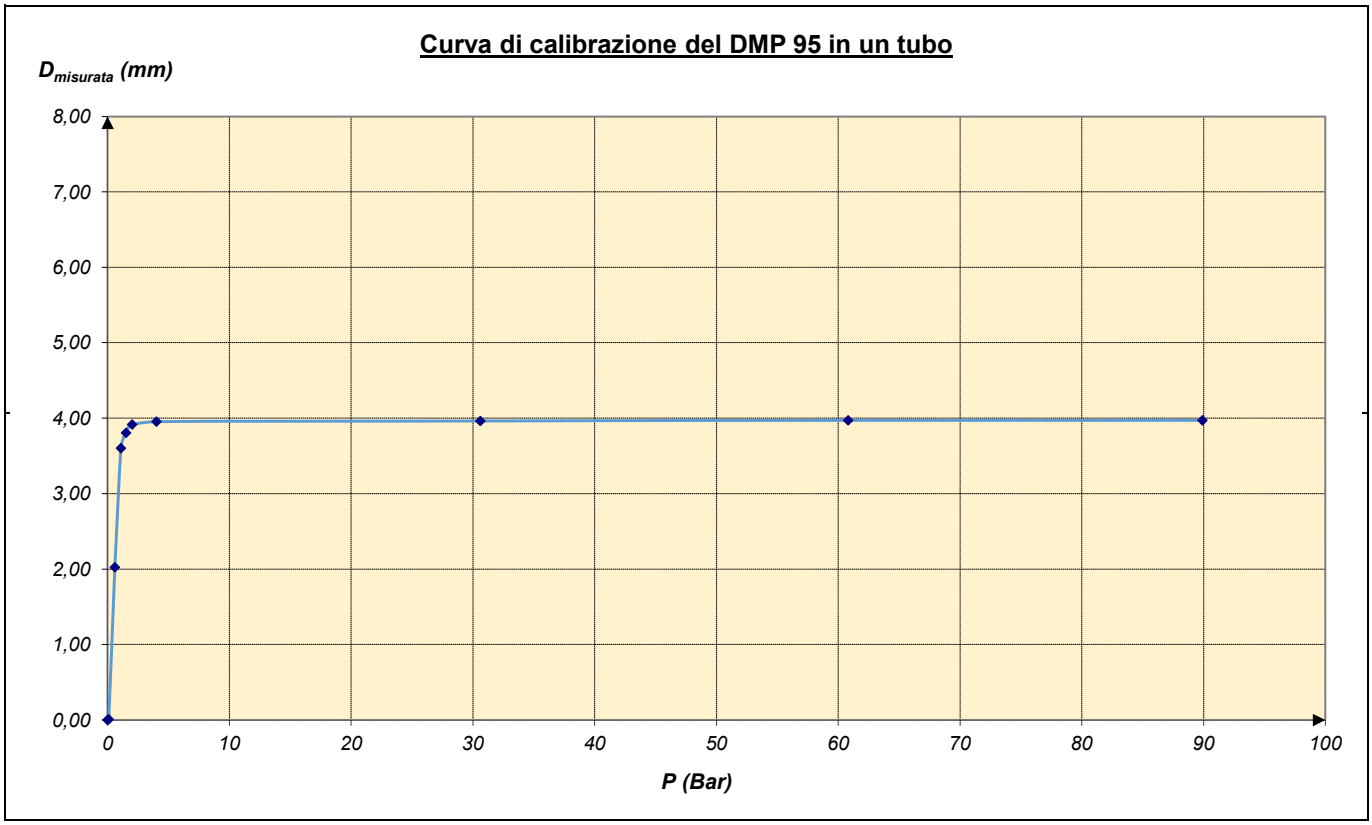
$Ø_{intérieur\ tube}$ = 100,000 mm

Spostamento medio dei sensori diametrali al contatto :

Δd_m = 3,956 mm

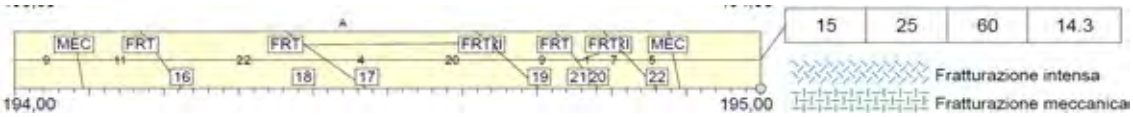
Diametro sonda :

$Ø_{sonda} = Ø_{tubo} - \Delta d_m$ = 96,044 mm



GEOTEC SPA		COMMITTENTE:		VIANINI		COORDINATE:	41.278883°
		CANTIERE:		DIGA CAMPOLATTARO			14.723333°
		SONDAGGIO:		CL3		Quota (m.s.l.m.):	556
TEST:	Test dilatometro flessibile	PROVA	DIAM. SONDA (mm)	FALDA	LITOLOGIA	DATA	OPERATORE
		DRT3	95	0	ALT. ARENACEO MARNOSA		
DEV:	DMP-95 NF EN ISO 22476-5	PROFONDITA' (m)	DIAM. FORO (mm)	RQD %		ORA	S. BAUR
		194-195	101	74			

CL3 - DRT 3



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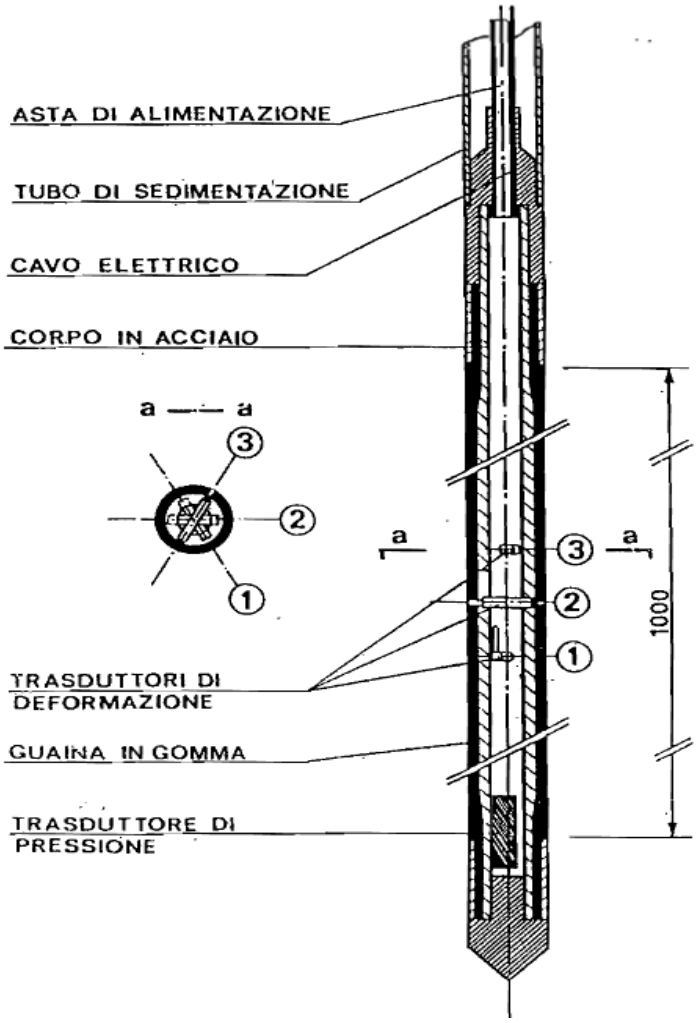


PROVE IN FORO
LOG GEOFISICO
CL3

Bohrlochmessung / prove in foro

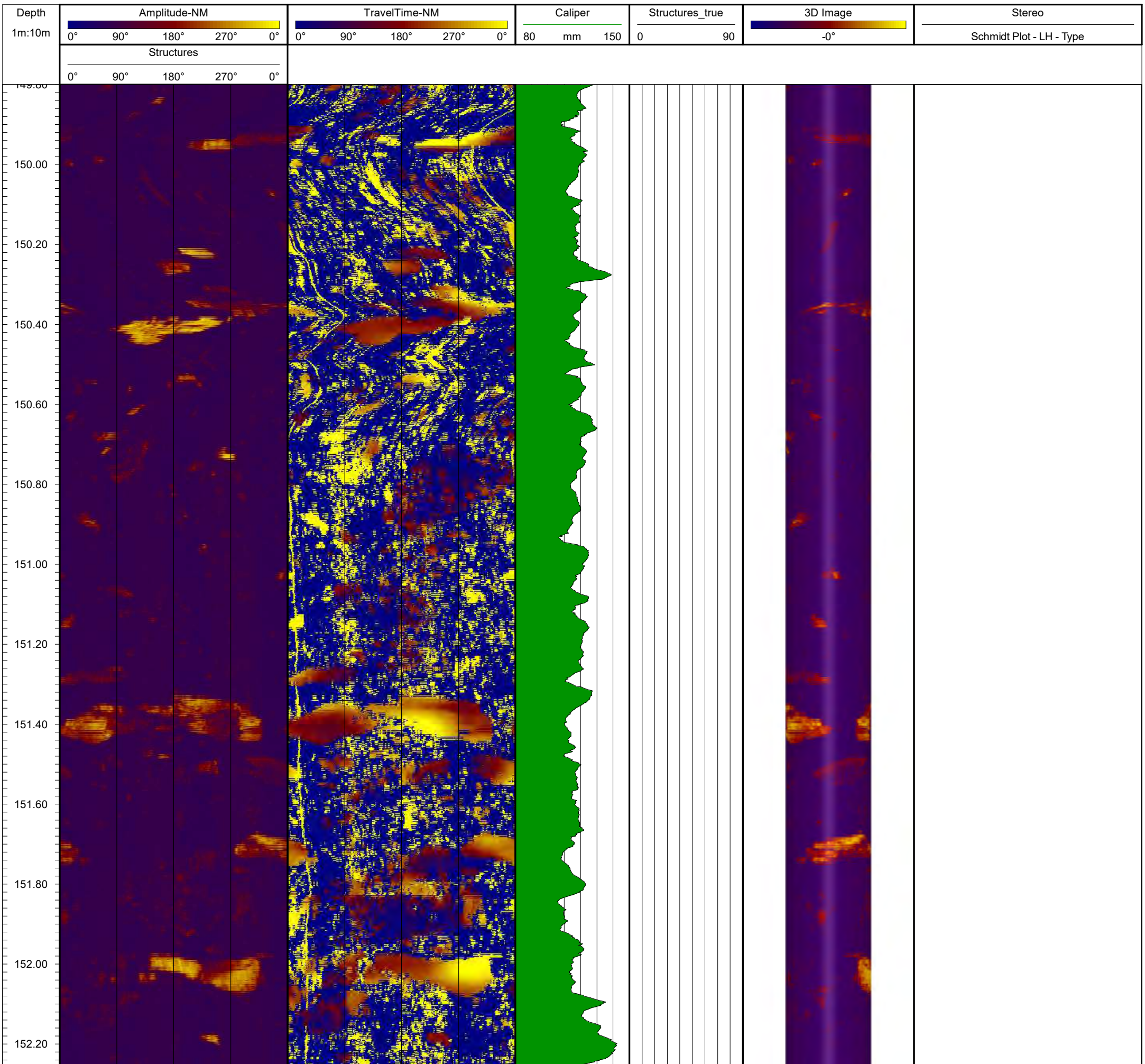
Bohrung / Sondaggio	**CL3**	**Messungen / Misure**			**Koordinaten / Coordinate**	
Gesellschaft / Società	Geotec SpA.	ABI			X	
Projekt / Progetto					Y	
Ort / Località	Campolattaro		von / da [m]	bis / a [m]	Z	
Land / Provincia	Benevento	ABI	149.80	201.13		
Staat / Stato	Italia				**Maßstab / Scala**	1:10

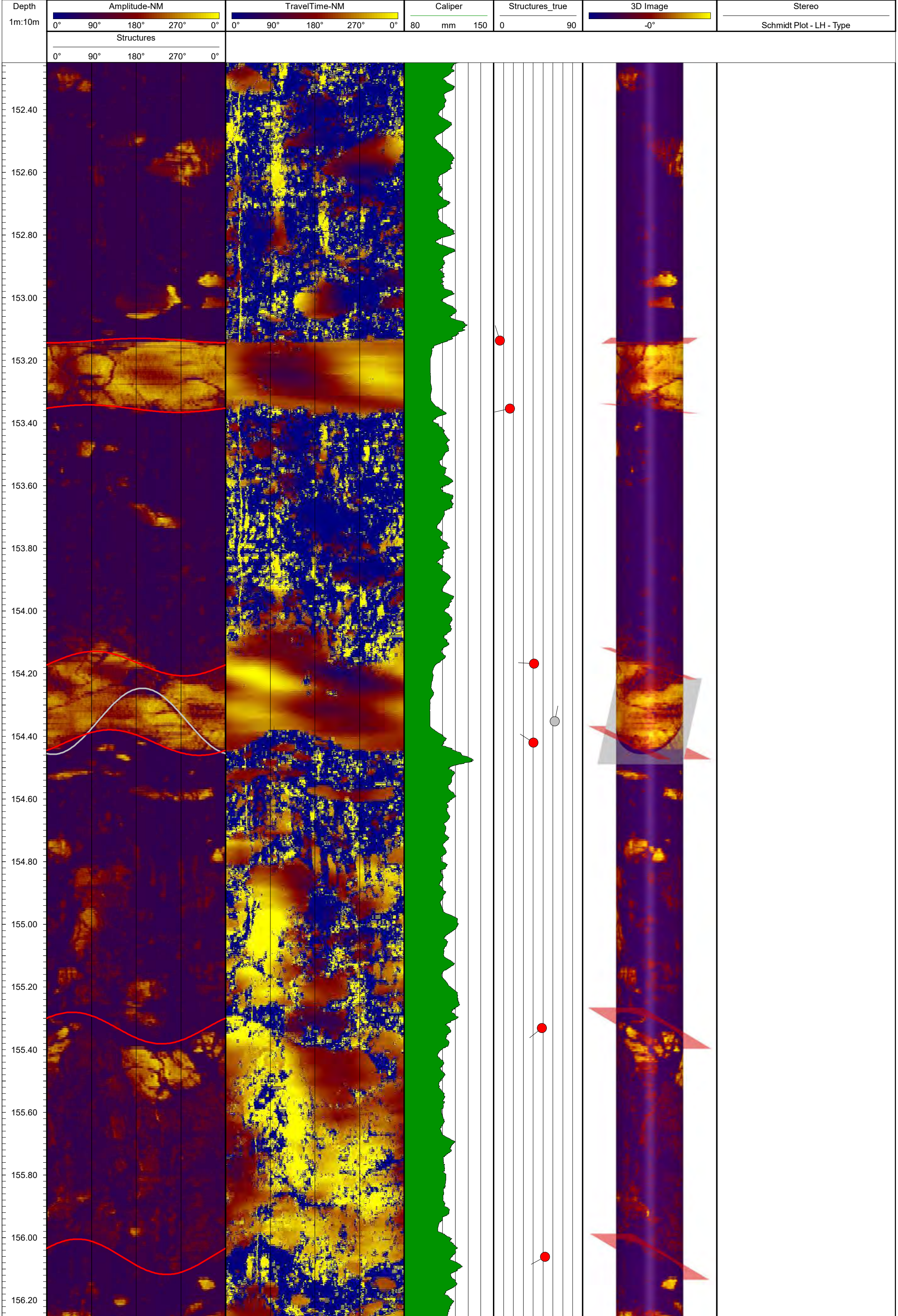
Datum / Data	01.10.2020	Aufgezeichnet von / Registrato da	S.Baur	Beobachtungen / Osservazioni
Messung Nr. / Misura nr.	1	Beobachter / Supervisore	S.Baur	
Bezugspunkt / livello di riferimento	piano campagna			
Endteufe / Profondità finale	201.13 m			
Wasserstand / Livello dell'acqua				
Bohrlochfluid / Tipo di Fluido				

Ø Bohrloch / Foro	von / da [m]	bis / a [m]
101 mm	149.80	201.13

Ø Verrohrung / Tubi di rivestimento	von / da [m]	bis / a [m]
122 mm	0.00	149.80

Major Open Joint / Fracture Filled Fracture / Joint

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-0°
Stereo
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Structures
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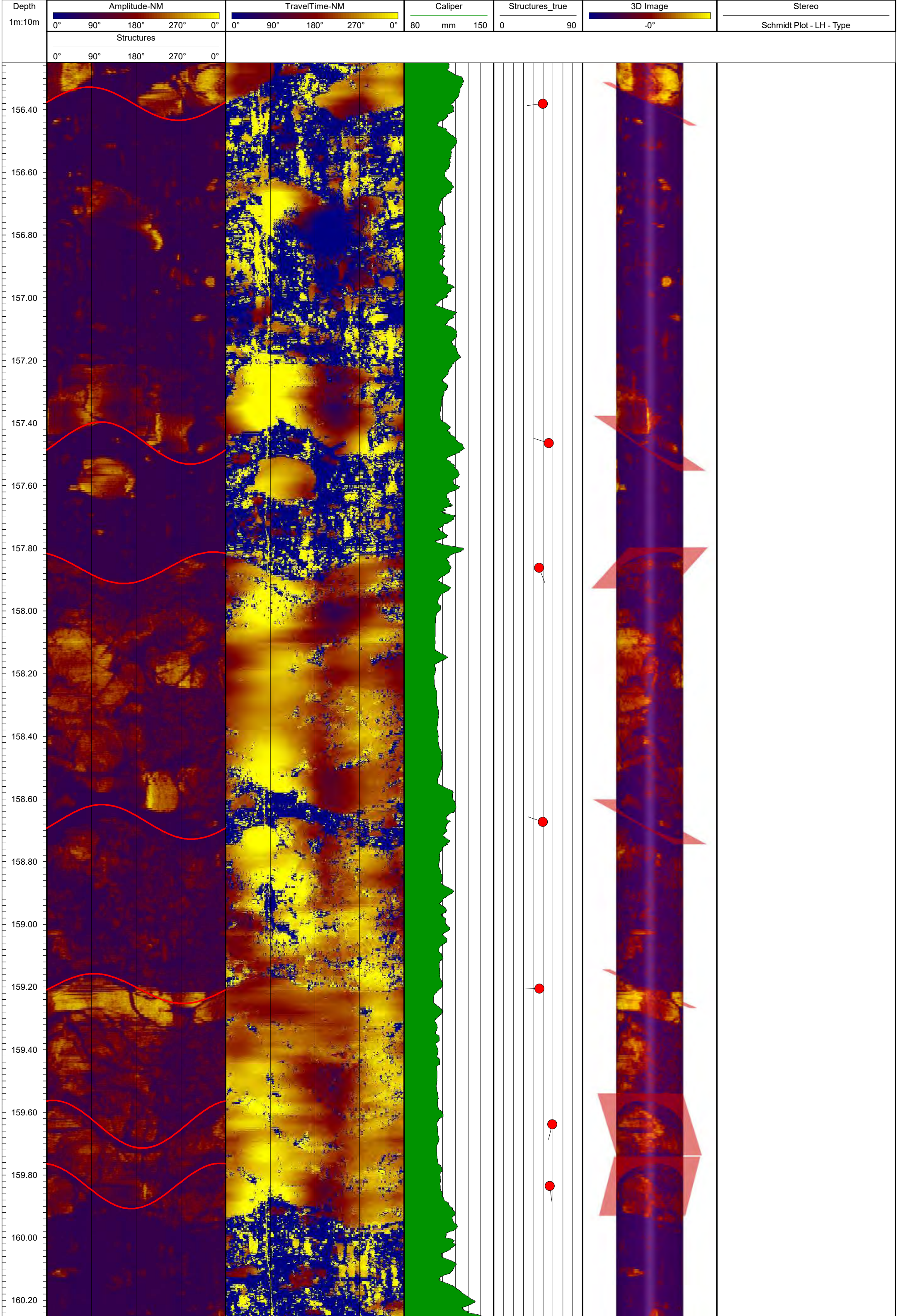
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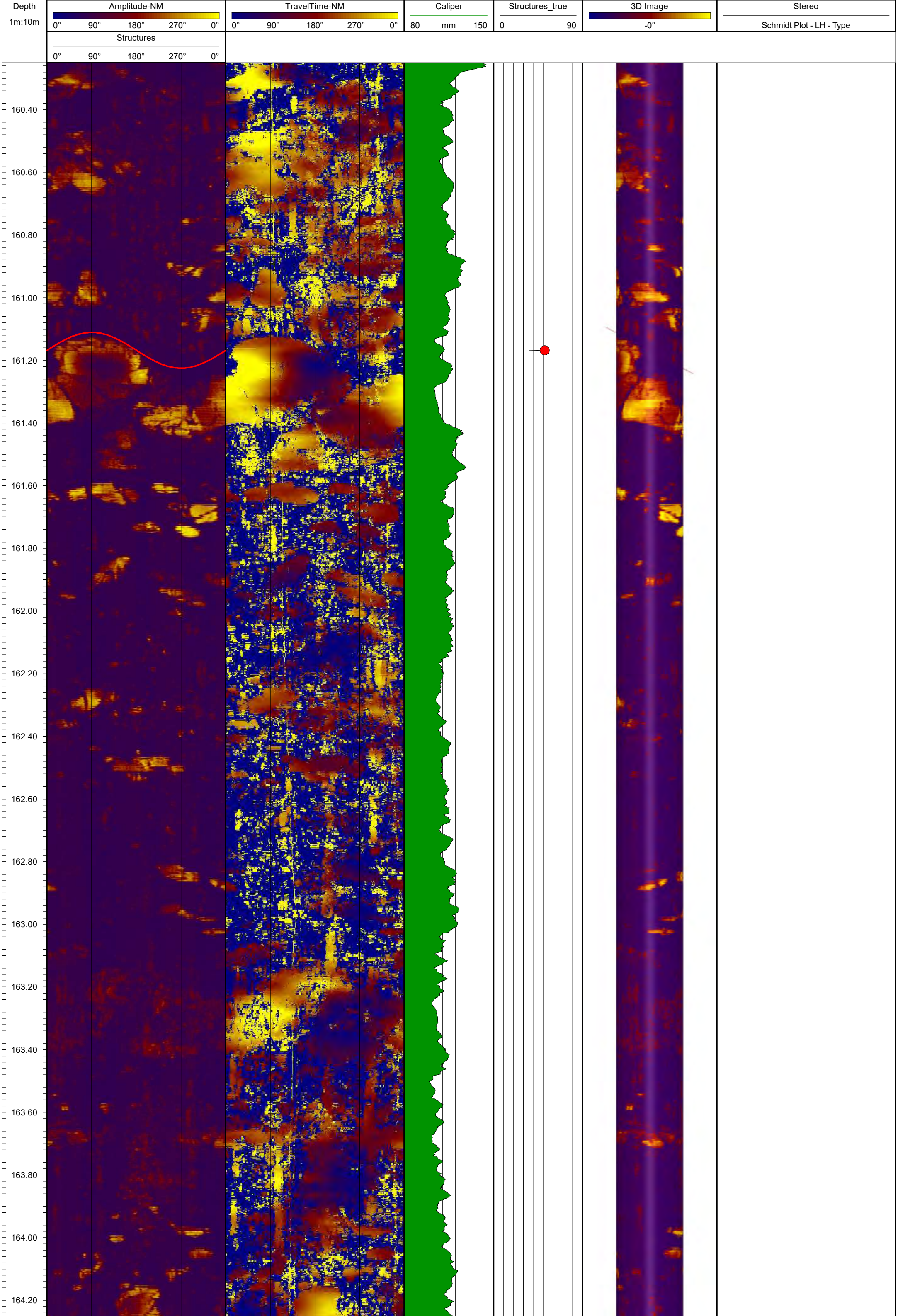
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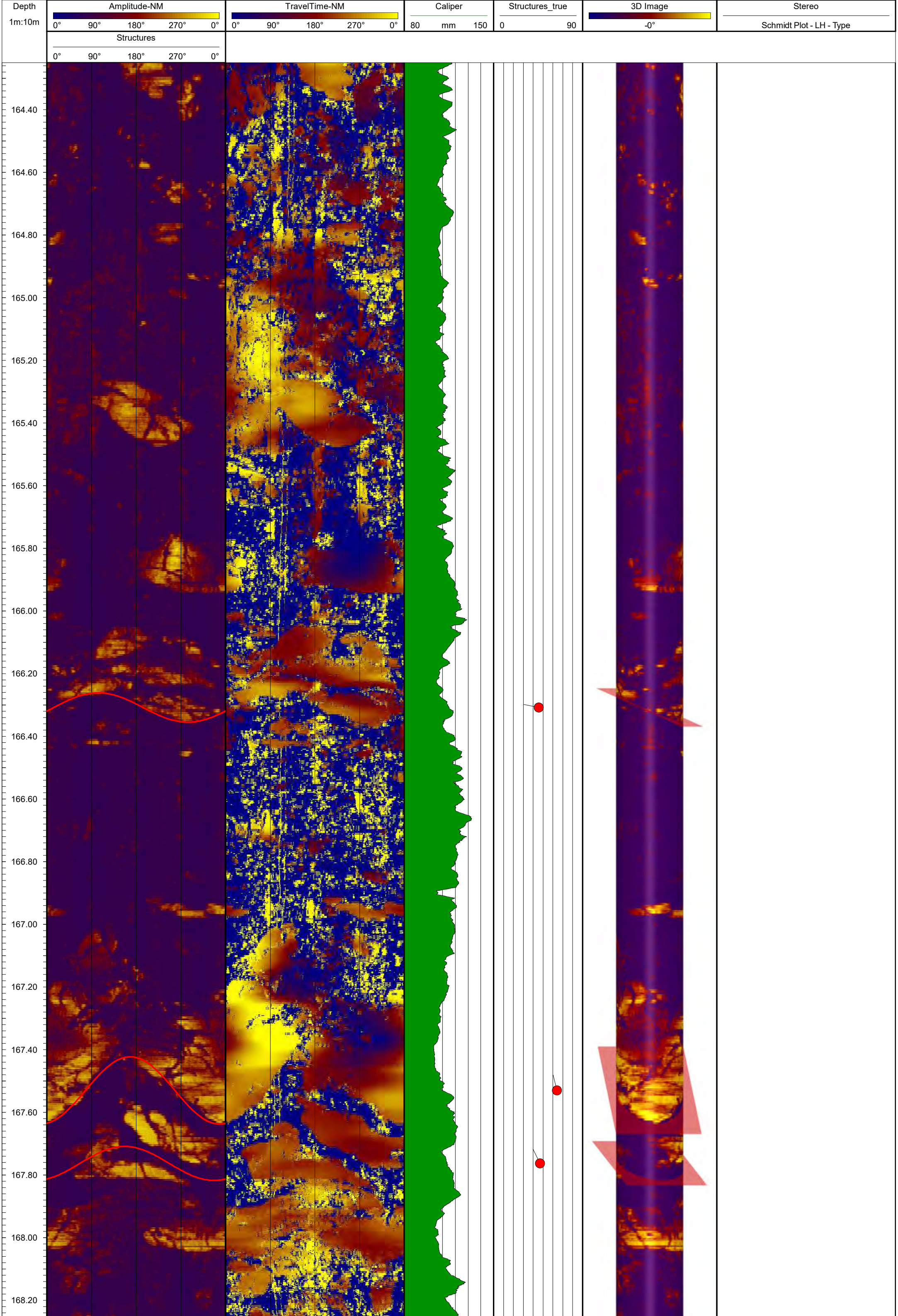
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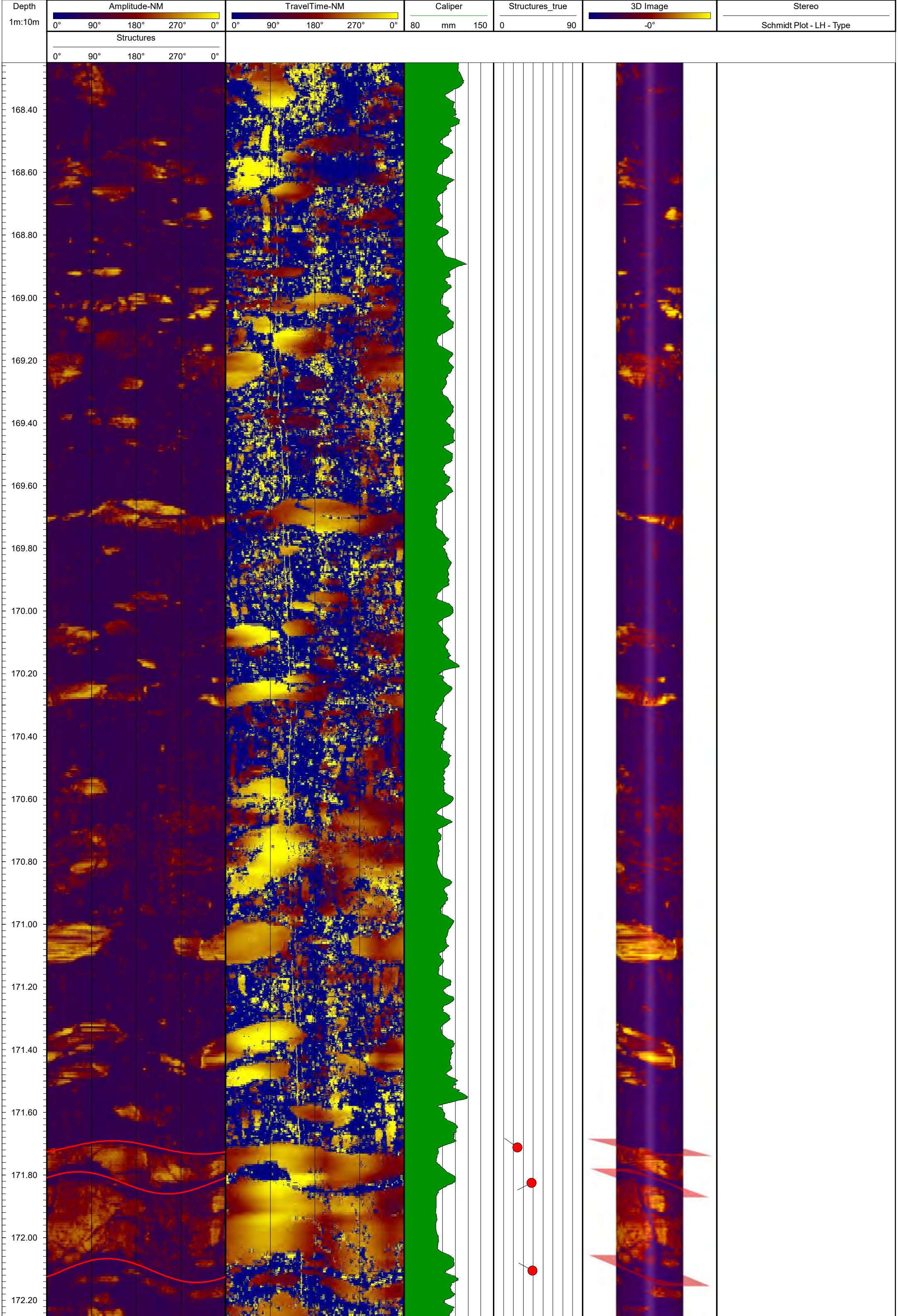
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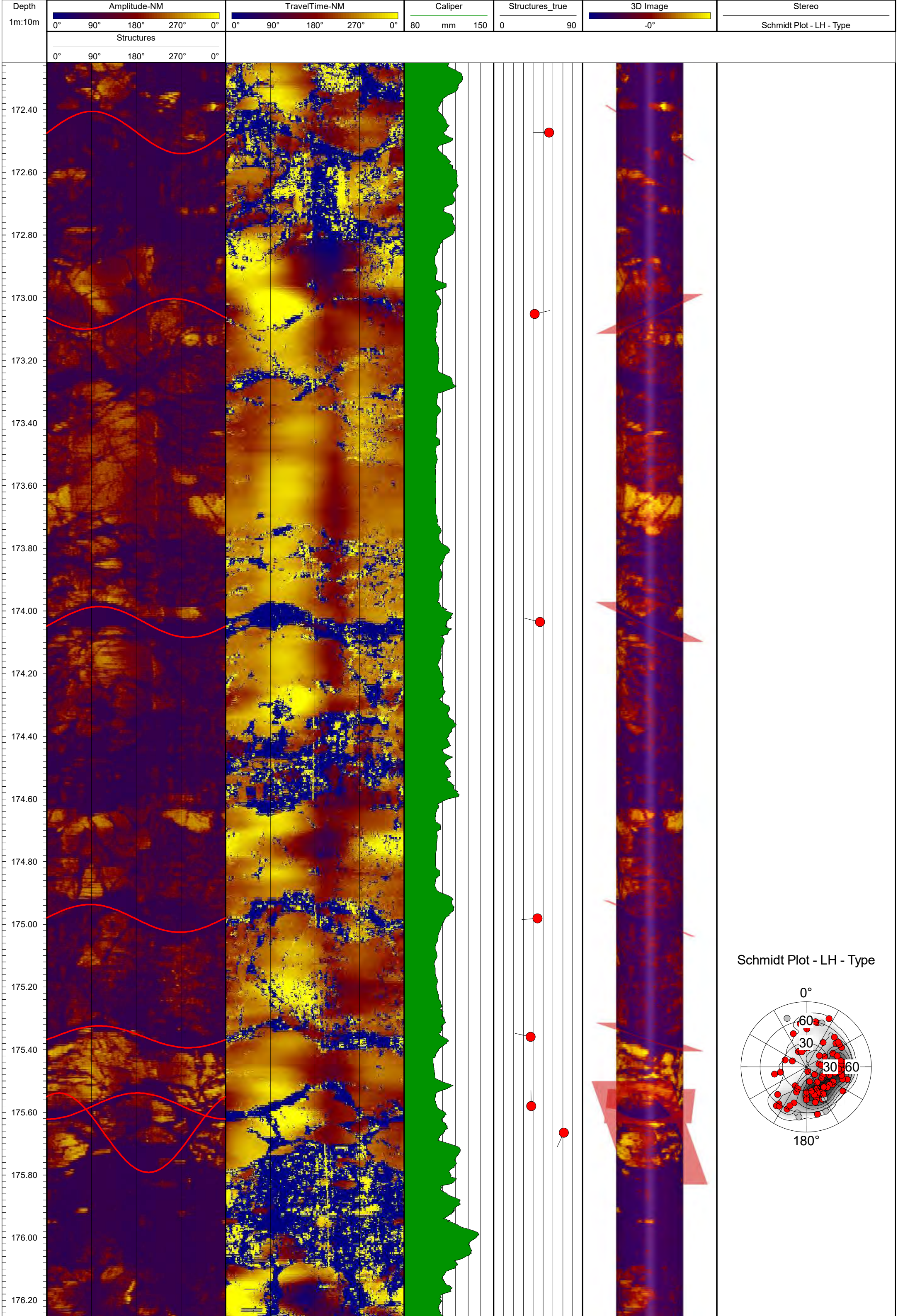
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Stereo
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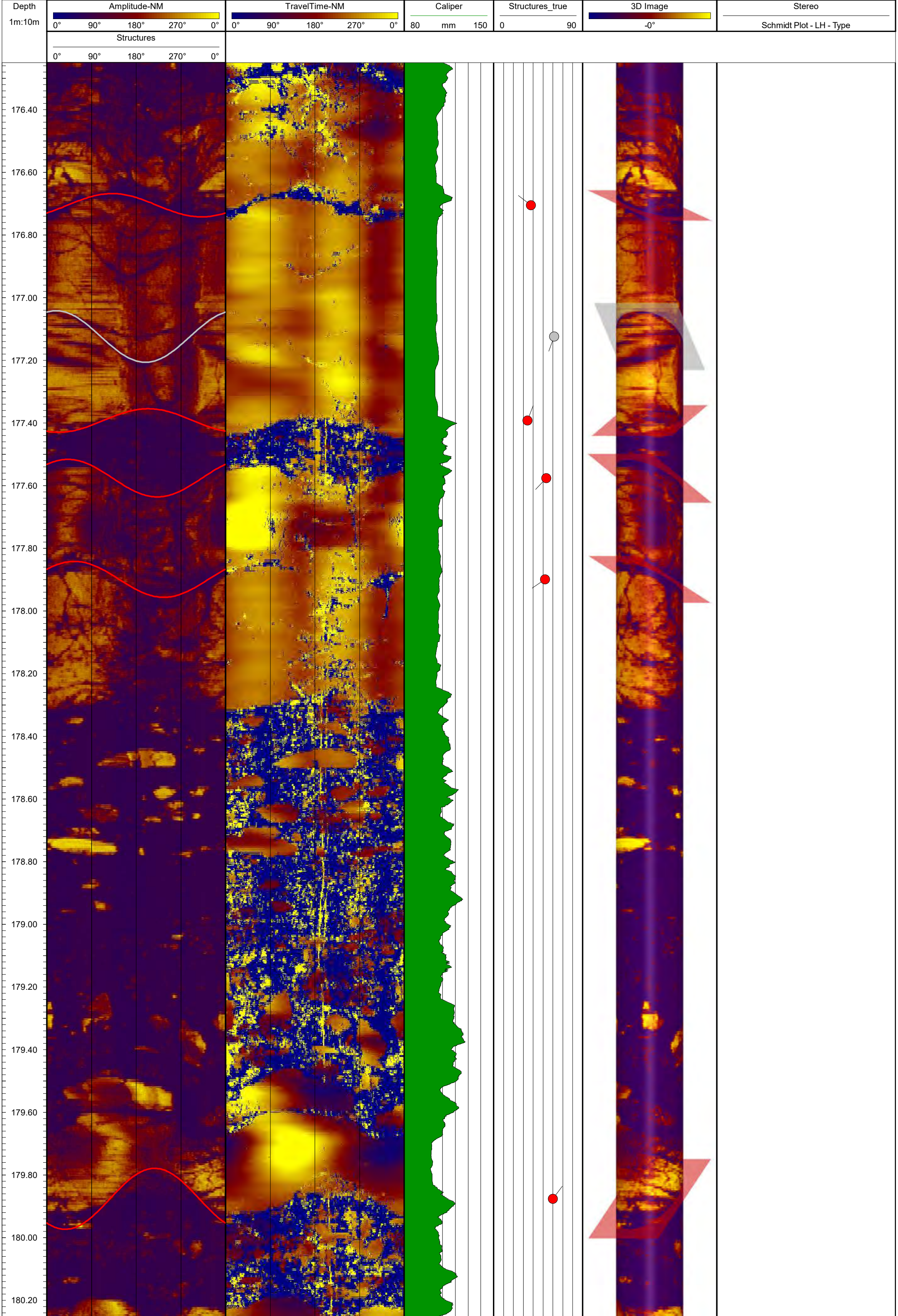
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Stereo
Schmidt Plot - LH - Type
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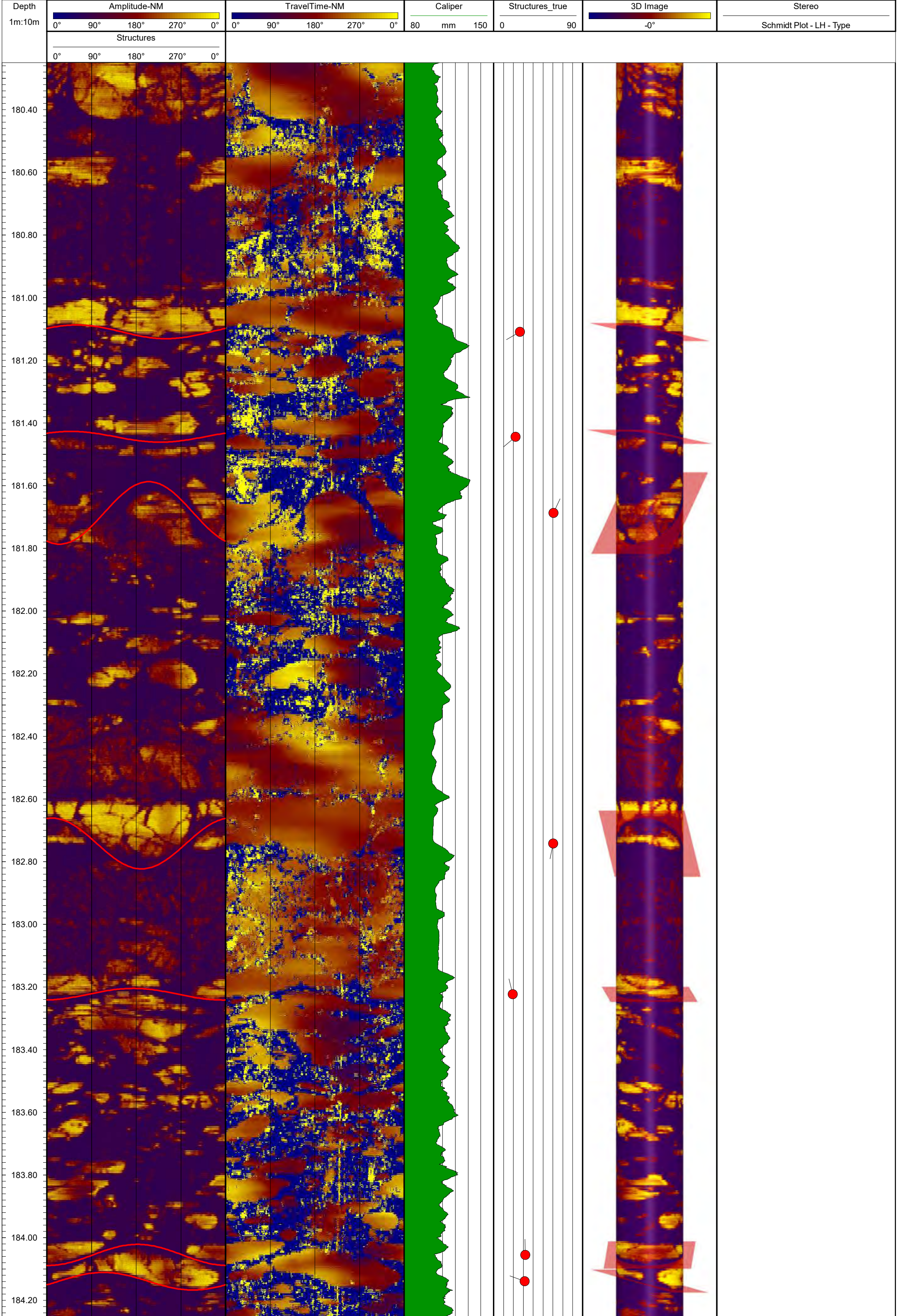
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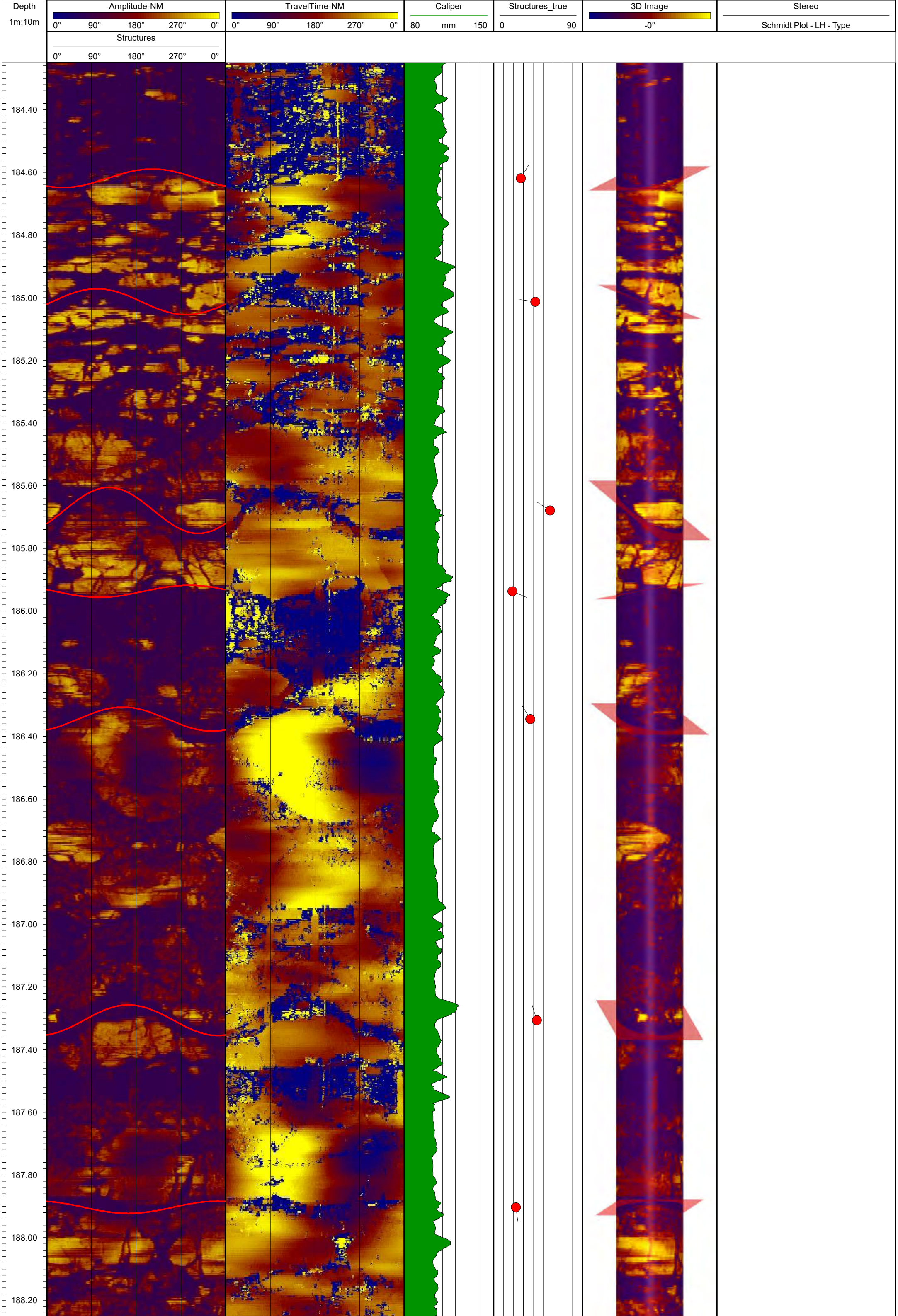
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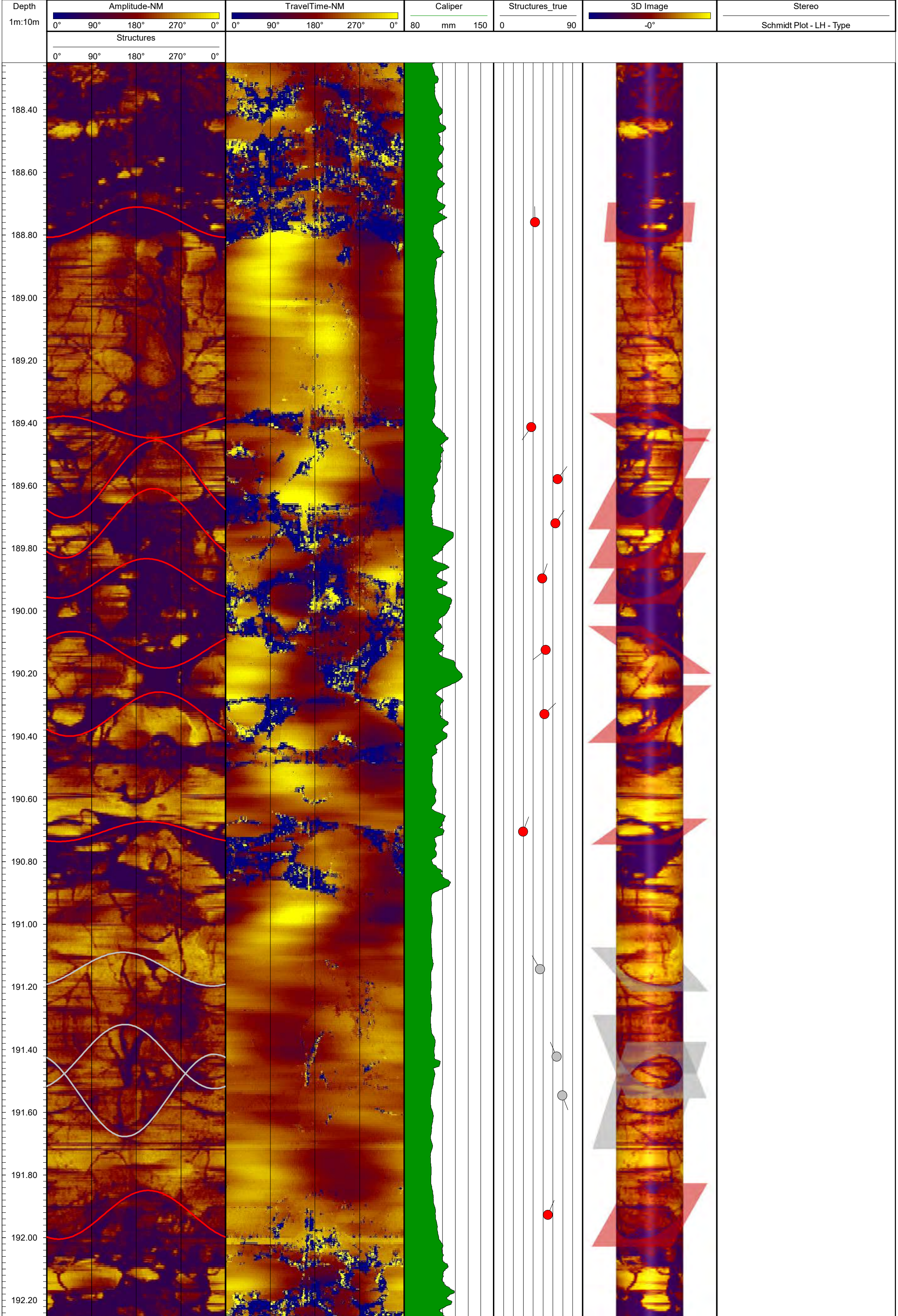
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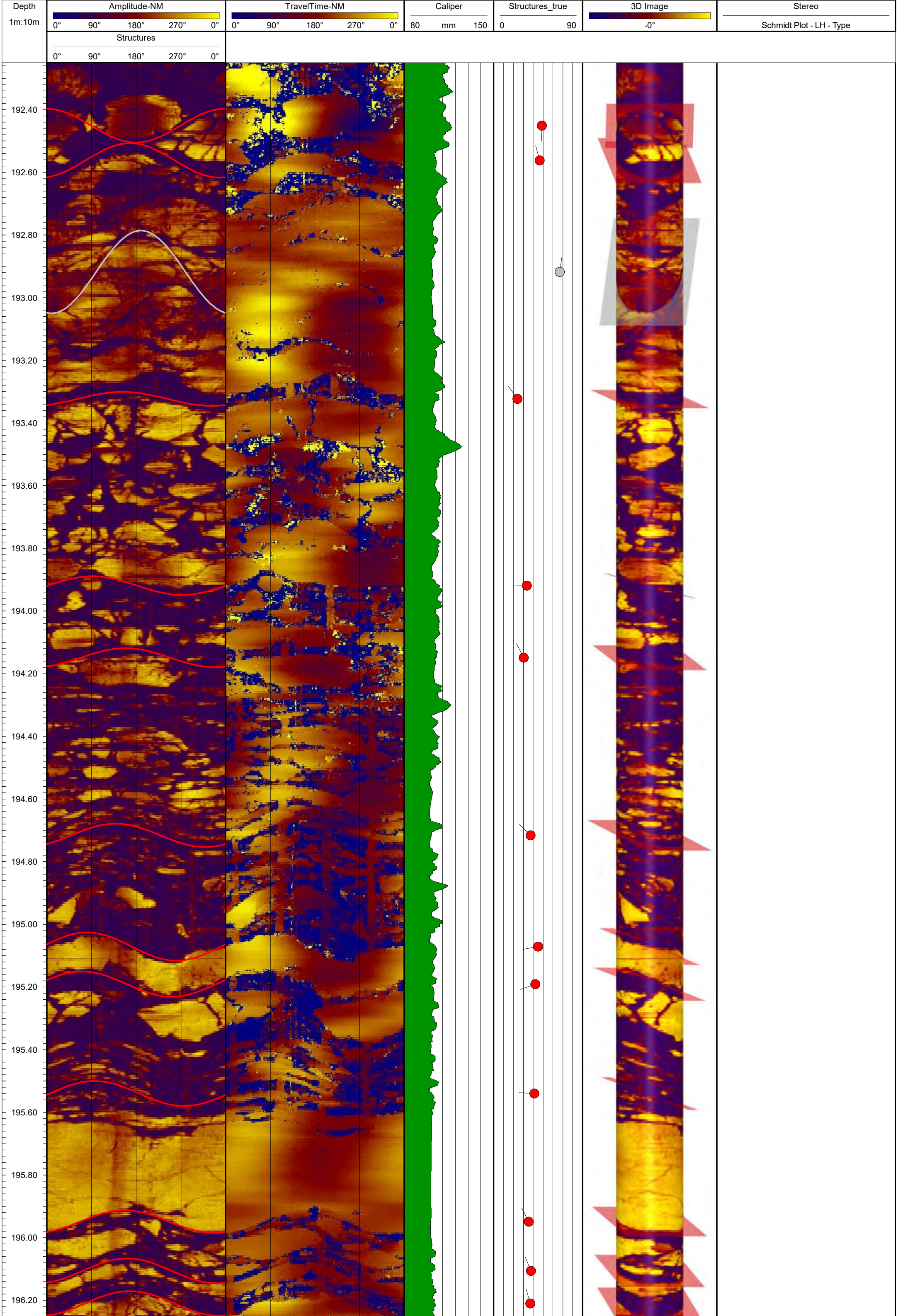
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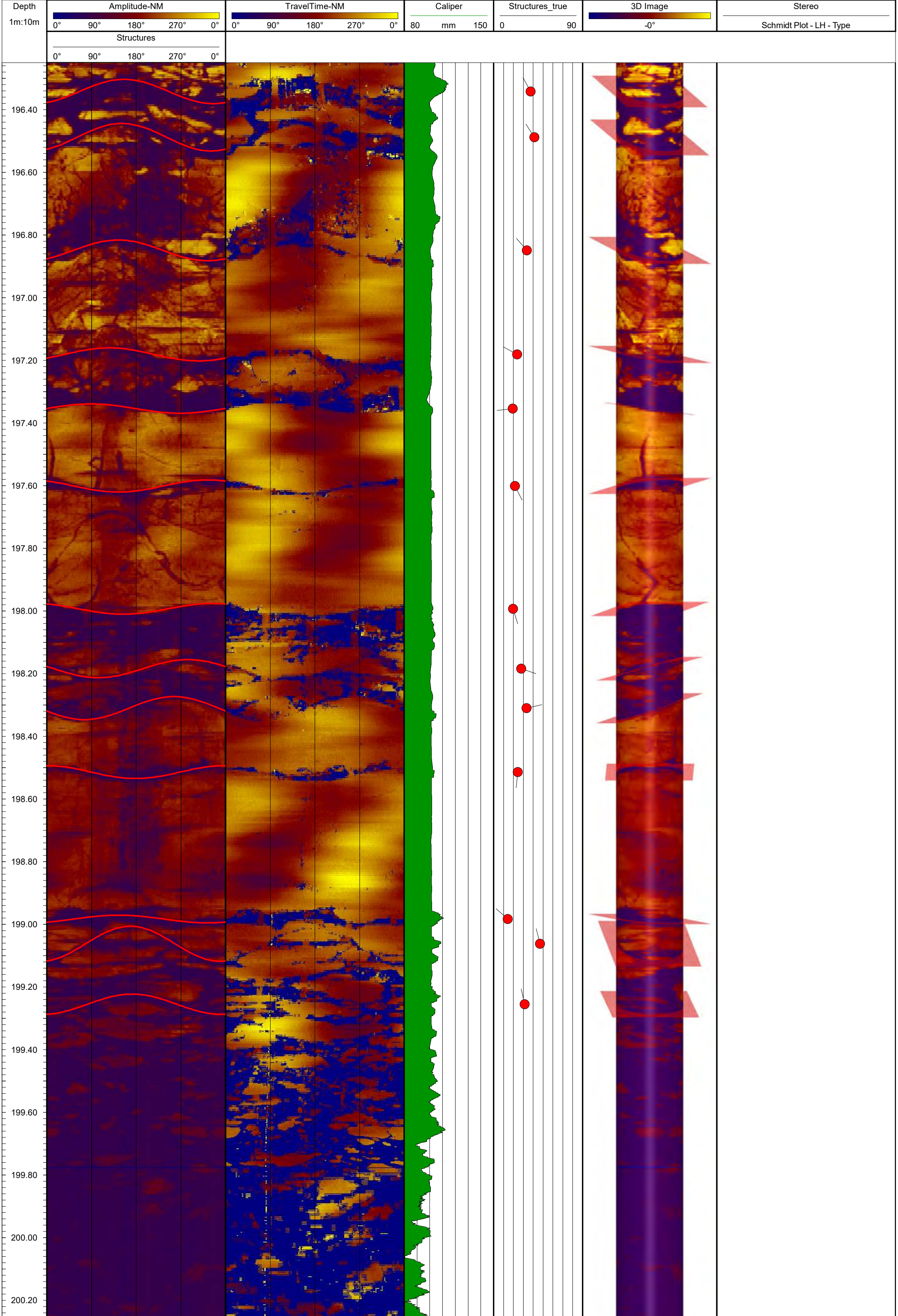
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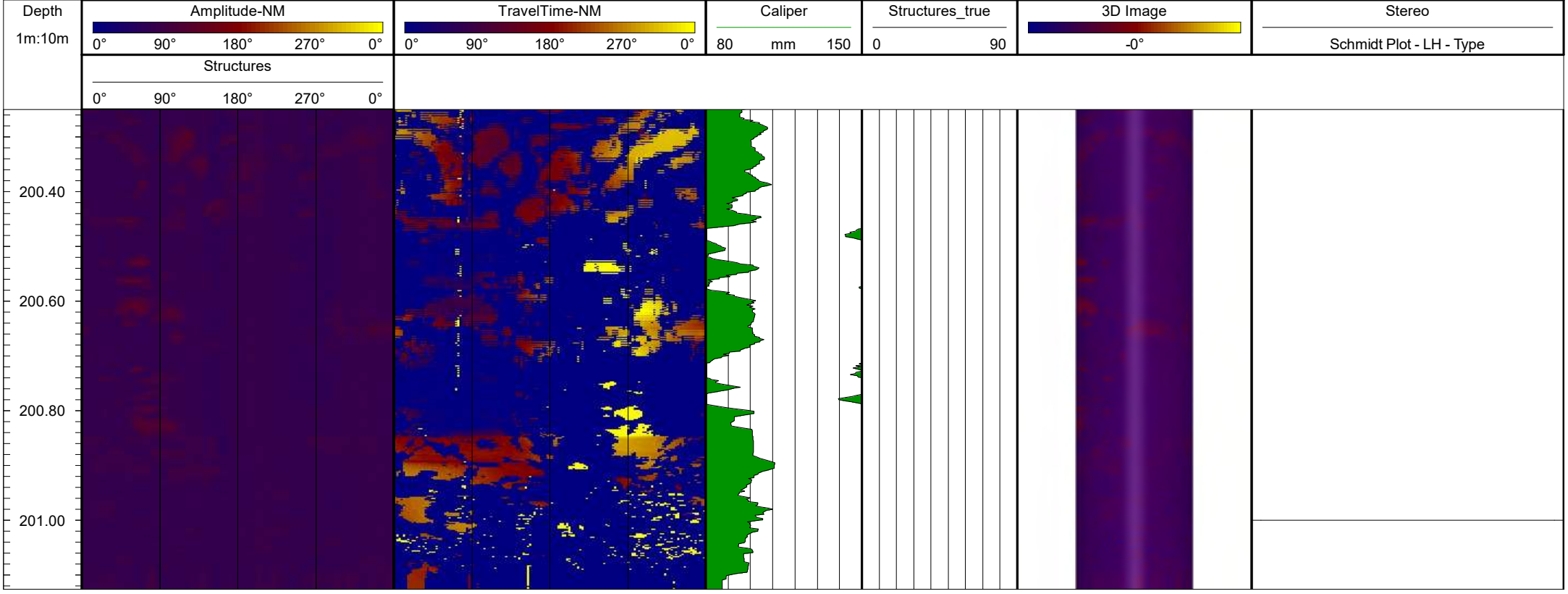
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3D Image
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Stereo
Schmidt Plot - LH - Type
Structures
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200.40
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200.80
201.00

ALLEGATO 3.4
PROVE IN FORO
(LUGEON, DILATOMETRICHE, LOG GEOFISICO)
CL4 (210,0 m)

PROVE IN FORO
LUGEON
CL4

GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE: VIANINI SPA
CANTIERE: INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO
LOCALITA': PONTELANDOLFO (BN)
SONDAGGIO: CL4 **PROVA N°** L1 **04/09/2020**

ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE Carotaggio Continuo
CORONA TIPO Diamantata Imp.

TEST avanzamento / risalita — Azimuth / Inclinazione — degree

PROFONDITA' PROVA da m. 193,00 m a m. 196,00 m

ALTEZZA MANOMETRO 1,10 m **QUOTA MANOMETRO**

QUOTA 533 m

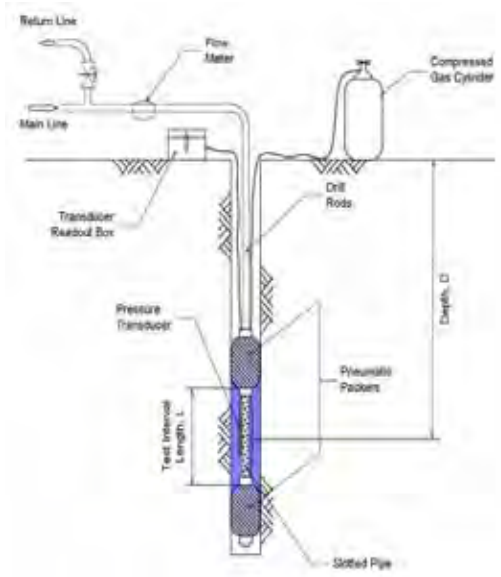
ACQUA IN FORO 14,00 m

DIAMETRO FORO Ø 101 mm

TIPO PACKER

ASTE

Diametro esterno (mm).	88,9
Diametro interno	77,8
Lunghezza (m)	193,00



DATI DI CAMPAGNA

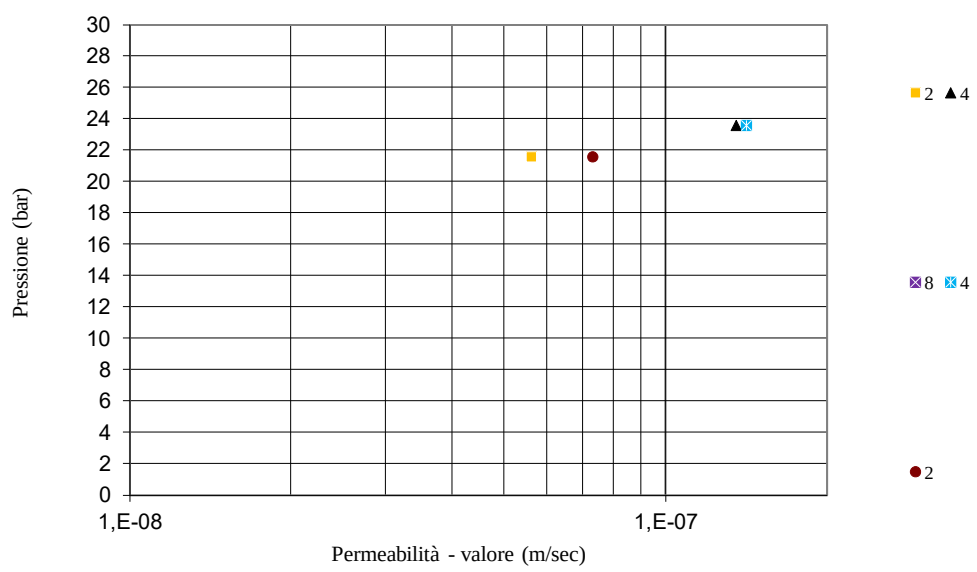
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	2	33,00	108,00	116,00	123,00	130,00	136,00	141,00
	10	4	87,00	150,00	167,00	183,00	201,00	218,00	237,00
	10	8	163,00	250,00	283,00	315,00	349,00	381,00	413,00
CICLO DI SCARICO	10	4	91,00	440,00	456,00	474,00	494,00	513,00	531,00
	10	2	43,00	560,00	568,00	575,00	585,00	594,00	603,00

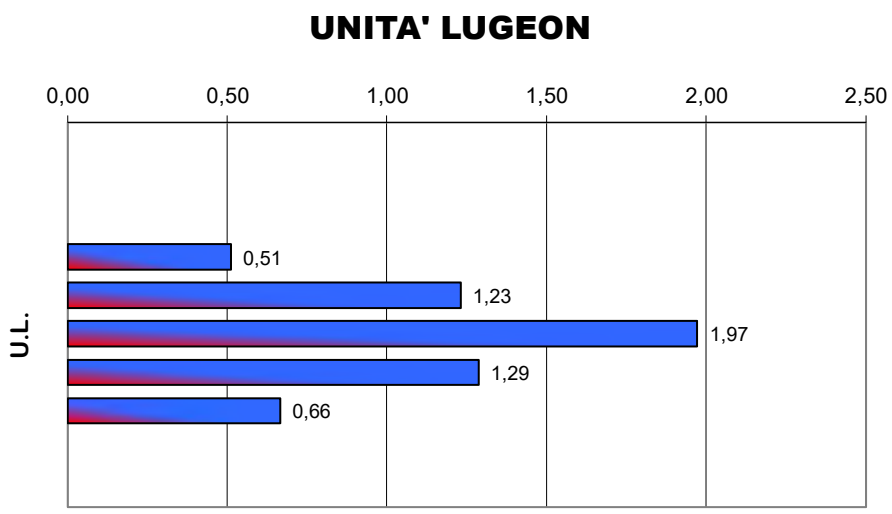
Assorbimento (l)

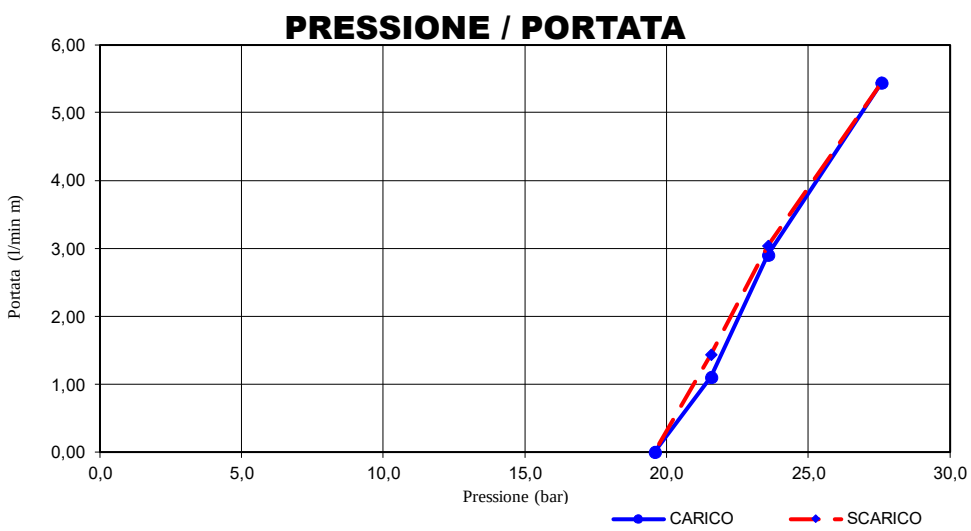
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	2,00	1,038E-04	21,560	33,00	0,51	5,599E-08
	10	4,00	5,426E-04	23,559	87,00	1,23	1,351E-07
da m.:	10	8,00	1,598E-03	27,558	163,00	1,97	2,164E-07
193,00	10	4,00	5,861E-04	23,559	91,00	1,29	1,413E-07
a m.:	10	2,00	1,629E-04	21,560	43,00	0,66	7,296E-08
196,00							
					Valore medio	**1,13**	**1,243E-07**







GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

COMMITTENTE: VIANINI SPA
CANTIERE: INTERVENTO DI UTILIZZO INVASO DI CAMPOLATTARO
LOCALITA': PONTELANDOLFO (BN)
SONDAGGIO: CL4 **PROVA N°** L2 **05/09/2020**

ATTREZZATURA DI PERFORAZIONE

METODO DI PERFORAZIONE Carotaggio Continuo
CORONA TIPO Diamantata Imp.

TEST avanzamento / risalita — Azimuth / Inclinazione — degree

PROFONDITA' PROVA da m. 202,00 m a m. 205,00 m

ALTEZZA MANOMETRO 1,10 m **QUOTA MANOMETRO**

QUOTA 533 m

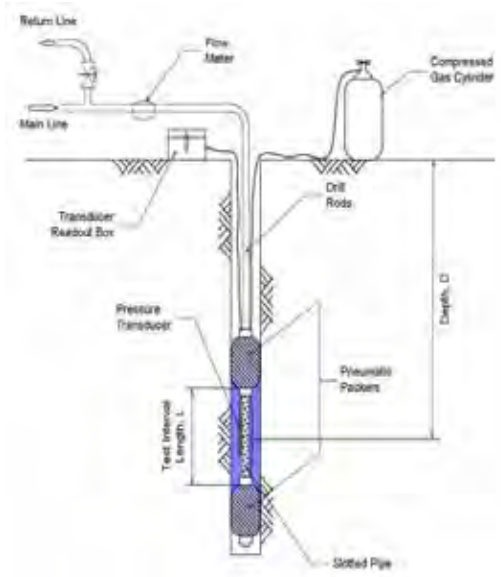
ACQUA IN FORO 14,00 m

DIAMETRO FORO Ø 101 mm

TIPO PACKER

ASTE

Diametro esterno (mm).	88,9
Diametro interno	77,8
Lunghezza (m)	202,00



DATI DI CAMPAGNA

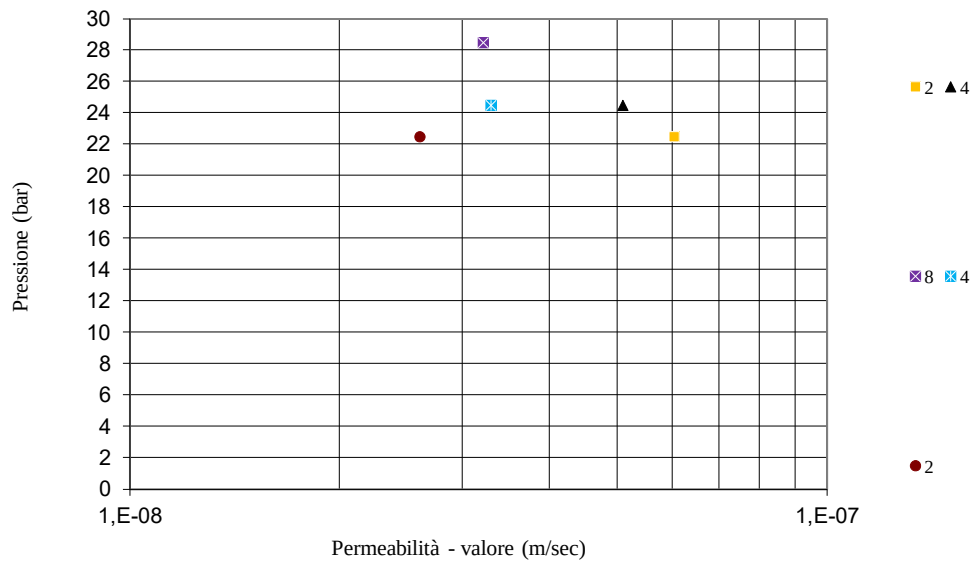
	Durata (min)	Pressione applicata (Bar)	Totale Assorbimento (l)	Progressiva Tempo (min) 0	2	4	6	8	10
CICLO DI CARICO	10	2	37,00	620,00	629,00	637,00	644,00	651,00	657,00
	10	4	34,00	670,00	677,00	684.5	691.5	697.5	704,00
	10	8	25,00	720,00	724,00	729,00	735,00	740,00	745,00
CICLO DI SCARICO	10	4	22,00	750,00	756,00	760,00	764,00	769,00	772,00
	10	2	16,00	790,00	794,00	797,00	800,00	802,00	806,00

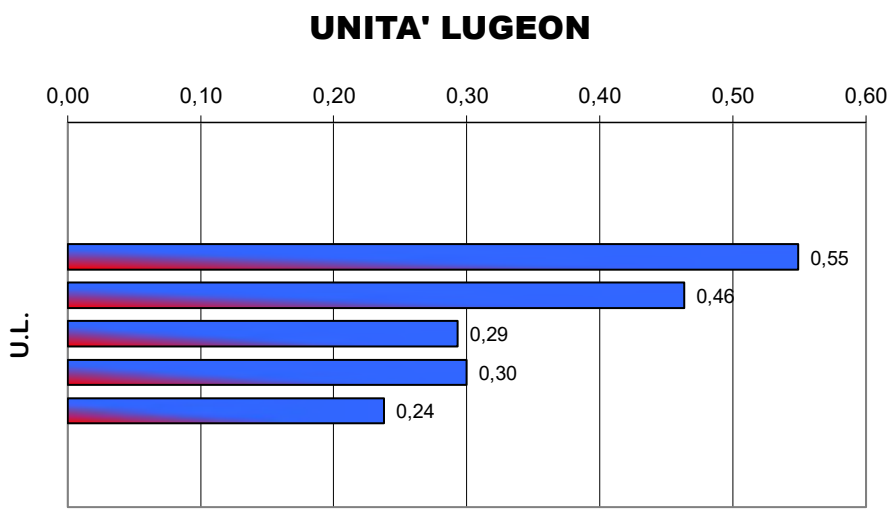
Assorbimento (l)

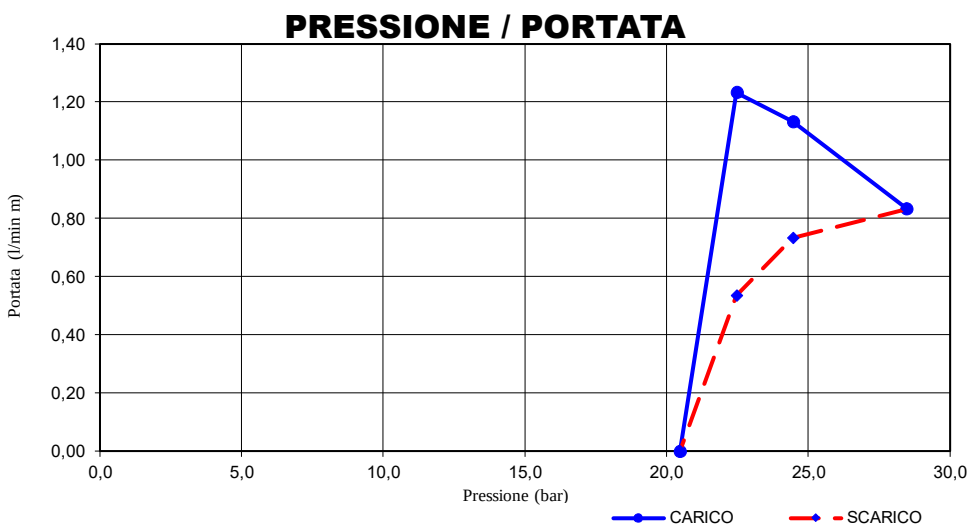
GEOTEC SPA

PROVA DI PERMEABILITA' - LUGEON

PROFONDITA' DI PROVA	DURATA (min)	PRESSIONE (BAR) Teorica	Perdite di carico	Applicata	PORTATA Litri	PERMEABILITA' U.L.	k = m/sec
	10	2,00	1,320E-04	22,460	37,00	0,55	6,026E-08
	10	4,00	1,143E-04	24,460	34,00	0,46	5,085E-08
da m.:	10	8,00	6,784E-05	28,460	25,00	0,29	3,213E-08
202,00	10	4,00	5,462E-05	24,460	22,00	0,30	3,290E-08
a m.:	10	2,00	3,185E-05	22,460	16,00	0,24	2,606E-08
205,00							
					Valore medio	**0,24**	**2,606E-08**







PROVE IN FORO
DILATOMETRICHE
CL4

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

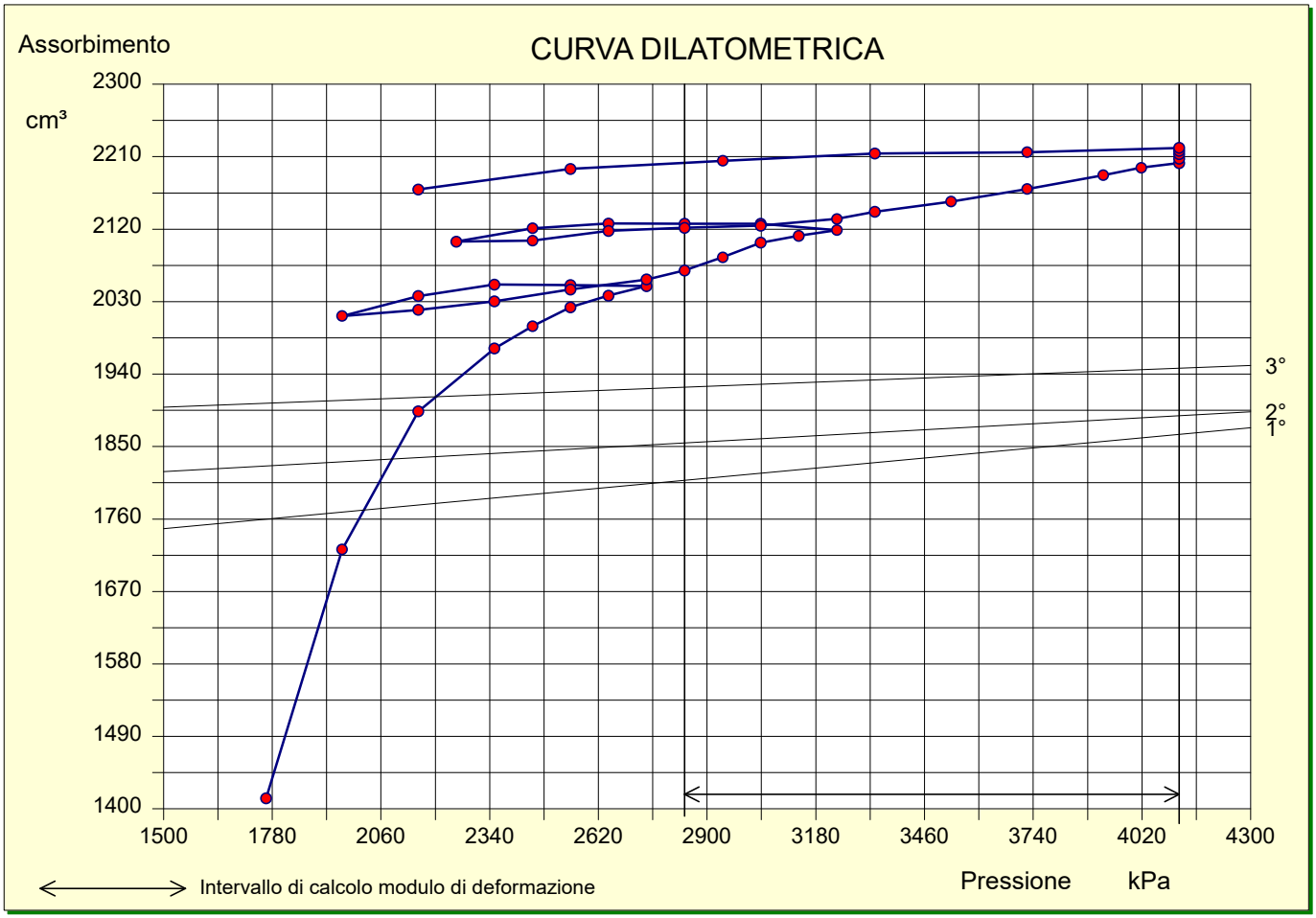
Profondità di prova (centro della cella) (m)	181,50	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia:			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1764,00	1431,67	18,64	1413,03	18,26	41	4116,00	2258,24	37,26	2220,99	28,70
2	1960,00	1742,65	20,44	1722,21	22,25	42	3724,00	2250,13	34,61	2215,52	28,63
3	2156,00	1915,76	22,20	1893,56	24,47	43	3332,00	2245,75	31,78	2213,97	28,61
4	2352,00	1995,63	23,91	1971,71	25,48	44	2940,00	2233,68	28,77	2204,91	28,49
5	2450,00	2024,31	24,75	1999,56	25,84	45	2548,00	2220,43	25,58	2194,86	28,36
6	2548,00	2048,56	25,58	2022,98	26,14	46	2156,00	2191,46	22,20	2169,26	28,03
7	2646,00	2063,88	26,39	2037,49	26,33						
8	2744,00	2076,40	27,20	2049,20	26,48						
9	2548,00	2075,98	25,58	2050,40	26,50						
10	2352,00	2075,08	23,91	2051,17	26,51						
11	2156,00	2059,24	22,20	2037,04	26,32						
12	1960,00	2032,66	20,44	2012,22	26,00						
13	2156,00	2042,02	22,20	2019,82	26,10						
14	2352,00	2054,23	23,91	2030,31	26,24						
15	2548,00	2070,61	25,58	2045,03	26,43						
16	2744,00	2084,67	27,20	2057,47	26,59						
17	2842,00	2096,66	27,99	2068,67	26,73						
18	2940,00	2113,83	28,77	2085,06	26,94						
19	3038,00	2132,79	29,54	2103,25	27,18						
20	3136,00	2142,04	30,30	2111,74	27,29						
21	3234,00	2150,02	31,05	2118,97	27,38						
22	3038,00	2156,14	29,54	2126,60	27,48						
23	2842,00	2154,71	27,99	2126,72	27,48						
24	2646,00	2153,33	26,39	2126,94	27,48						
25	2450,00	2145,79	24,75	2121,04	27,41						
26	2254,00	2127,53	23,06	2104,47	27,19						
27	2450,00	2130,53	24,75	2105,77	27,21						
28	2646,00	2144,15	26,39	2117,75	27,37						
29	2842,00	2149,55	27,99	2121,56	27,42						
30	3038,00	2153,76	29,54	2124,22	27,45						
31	3234,00	2163,75	31,05	2132,70	27,56						
32	3332,00	2173,36	31,78	2141,57	27,67						
33	3528,00	2187,53	33,22	2154,31	27,84						
34	3724,00	2204,49	34,61	2169,88	28,04						
35	3920,00	2223,00	35,96	2187,05	28,26						
36	4018,00	2232,98	36,61	2196,37	28,38						
37	4116,00	2239,28	37,26	2202,02	28,45						
38	4116,00	2244,76	37,26	2207,50	28,53						
39	4116,00	2250,39	37,26	2213,13	28,60						
40	4116,00	2254,62	37,26	2217,36	28,65						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	2842,00
Volume iniziale [Vo] (cm³):	2068,67
Pressione finale [Pf] (kPa):	4116,00
Volume finale [Vf] (cm³):	2202,02

RISULTATI	
Modulo di taglio (kPa):	47481
Modulo di deformazione dilatometrico (kPa):	126299
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4970

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2012	2104	2202
Volume finale [Vf] (cm³):	2057	2133	2169
Pressione iniziale [Po] (kPa):	1960	2254	4116
Pressione finale [Pf] (kPa):	2744	3234	2156
Modulo di deformazione dilatometrico (kPa):	225668	445268	793178
Modulo da linea di tendenza (kPa):	276403	470582	683080

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

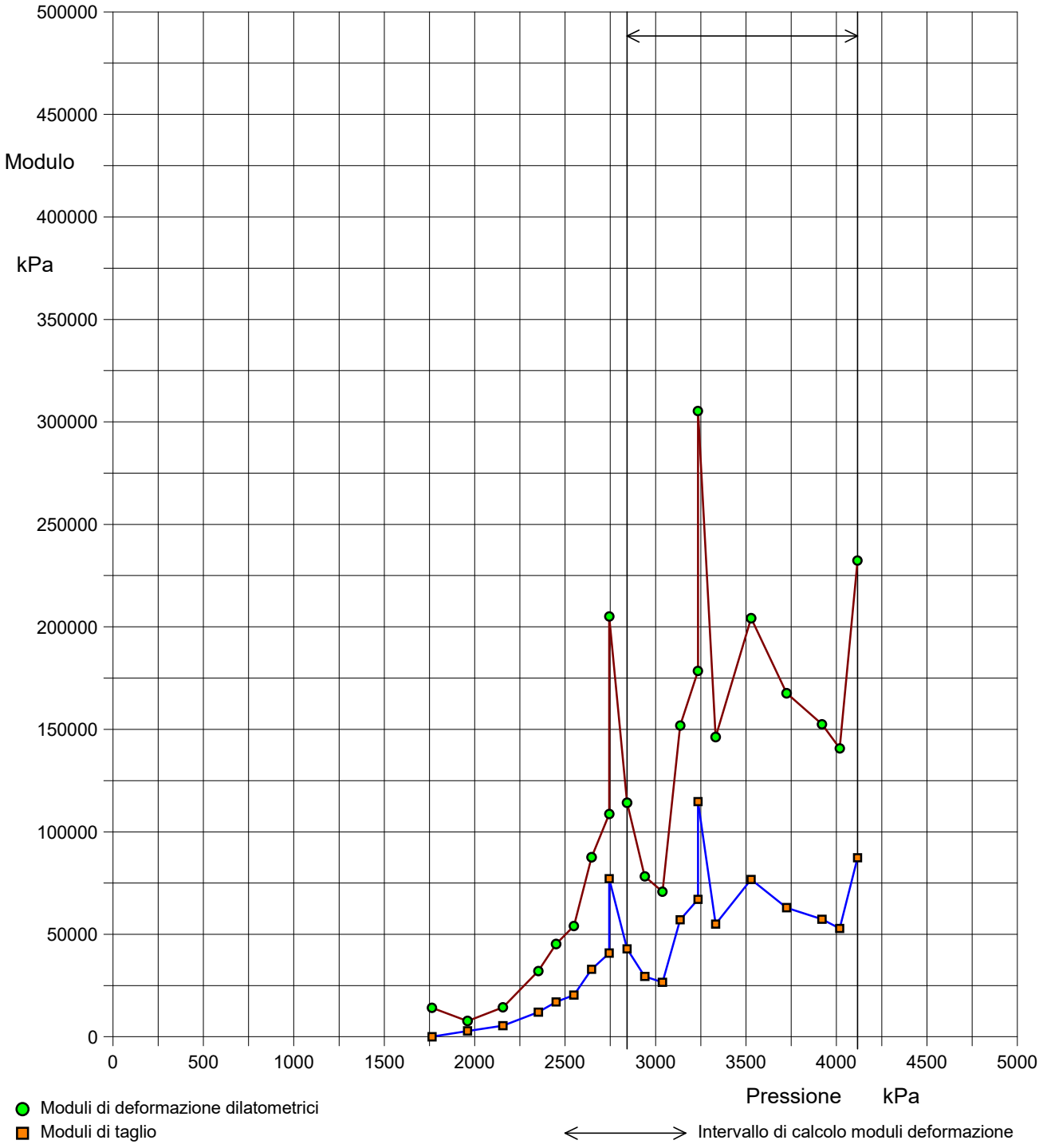
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1960,00	196,00	1722,21	309,18	2889	7685						
2156,00	196,00	1893,56	171,35	5409	14388						
2352,00	196,00	1971,71	78,15	12055	32066						
2450,00	98,00	1999,56	27,85	17013	45255						
2548,00	98,00	2022,98	23,42	20331	54080						
2646,00	98,00	2037,49	14,50	32920	87567						
2744,00	98,00	2049,20	11,71	40862	108693						
2744,00	196,00	2057,47	12,44	77081	205035						
2842,00	98,00	2068,67	11,19	42932	114199						
2940,00	98,00	2085,06	16,39	29415	78244						
3038,00	98,00	2103,25	18,19	26610	70783						
3136,00	98,00	2111,74	8,49	57089	151857						
3234,00	98,00	2118,97	7,24	67100	178486						
3234,00	196,00	2132,70	8,48	114774	305299						
3332,00	98,00	2141,57	8,87	54992	146279						
3528,00	196,00	2154,31	12,74	76763	204190						
3724,00	196,00	2169,88	15,57	63013	167615						
3920,00	196,00	2187,05	17,17	57333	152506						
4018,00	98,00	2196,37	9,32	52892	140693						
4116,00	98,00	2202,02	5,65	87343	232332						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

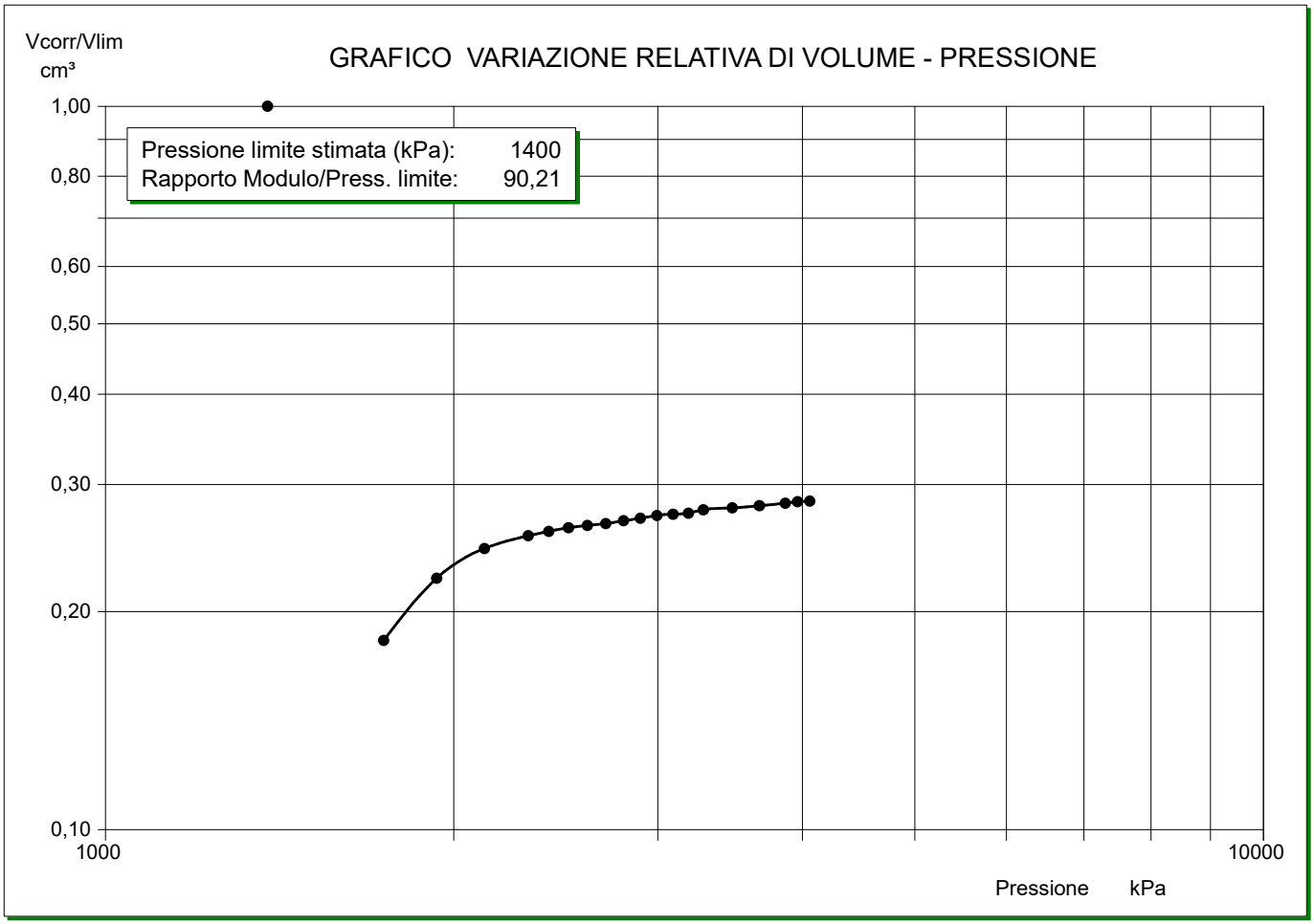
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

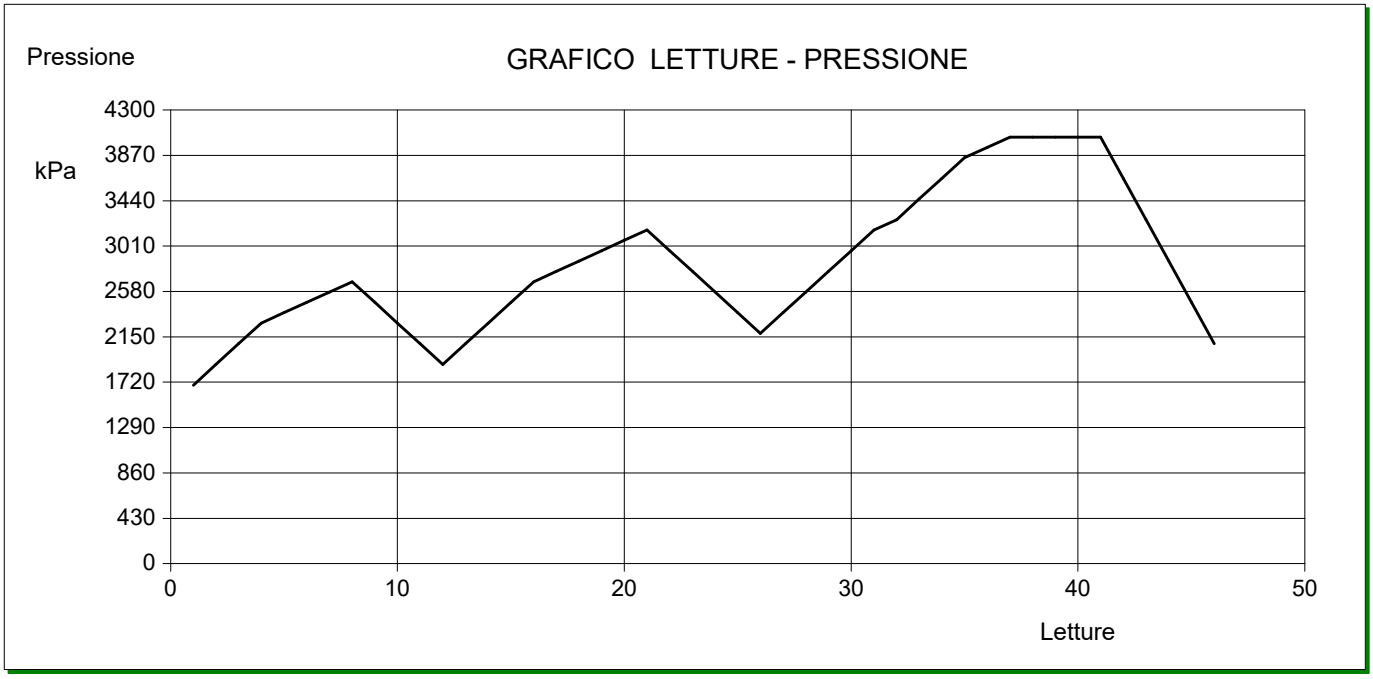
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

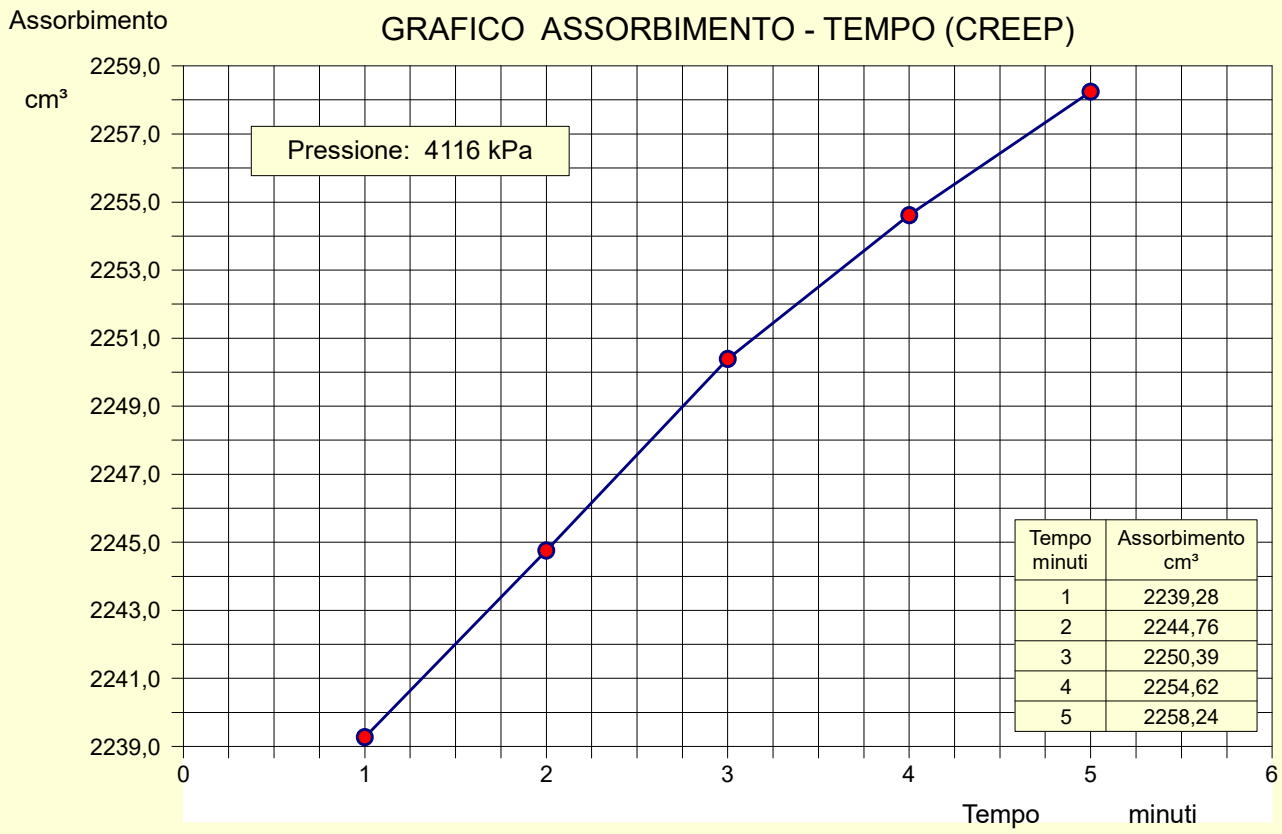
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:



Tempo minuti	Assorbimento cm³
1	2239,28
2	2244,76
3	2250,39
4	2254,62
5	2258,24

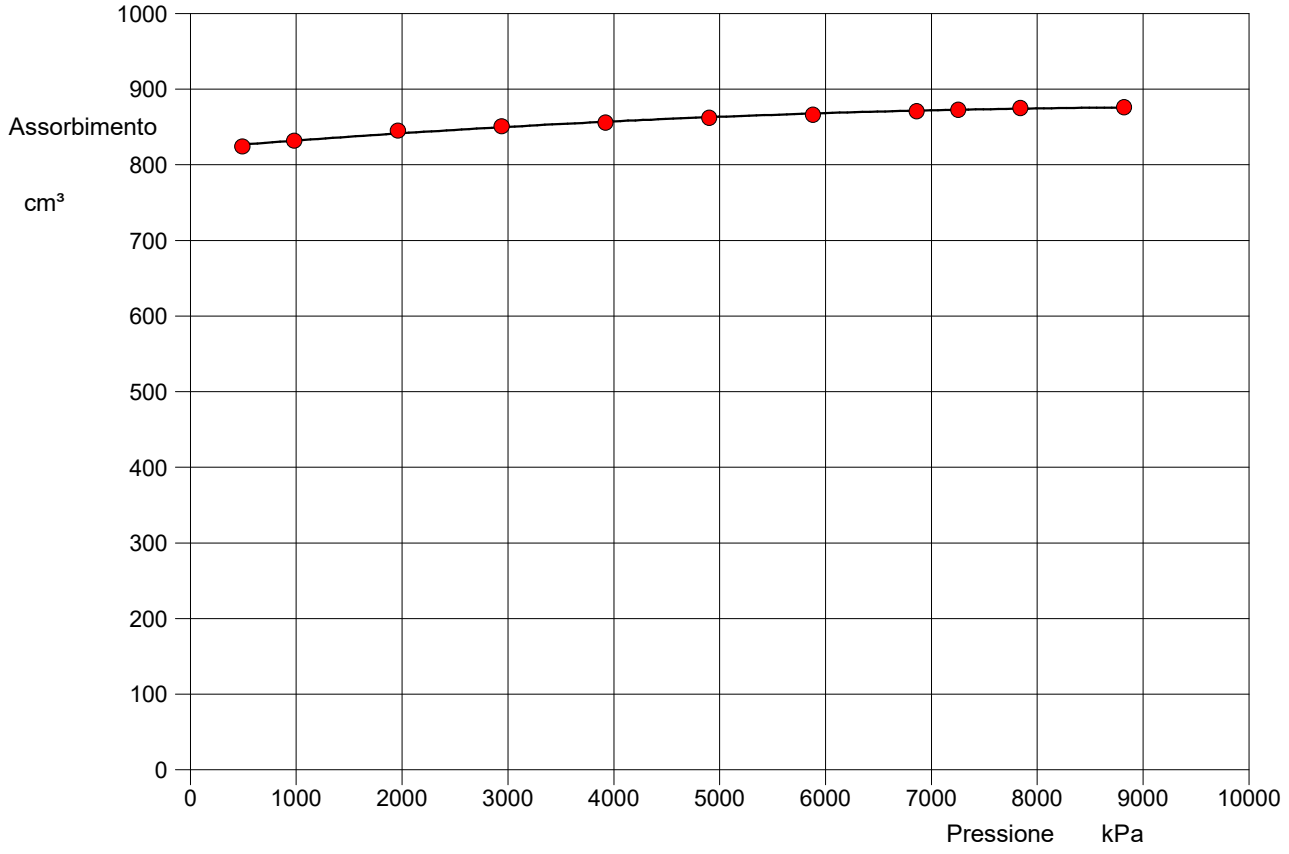
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 3
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	14/10/2019	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	824,35	5,81	8820,00	876,22	54,73						
980,00	831,89	10,97									
1960,00	845,36	20,44									
2940,00	851,04	28,77									
3920,00	855,91	35,96									
4900,00	862,30	42,00									
5880,00	866,22	46,90									
6860,00	870,99	50,65									
7252,00	872,90	51,83									
7840,00	875,16	53,26									

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

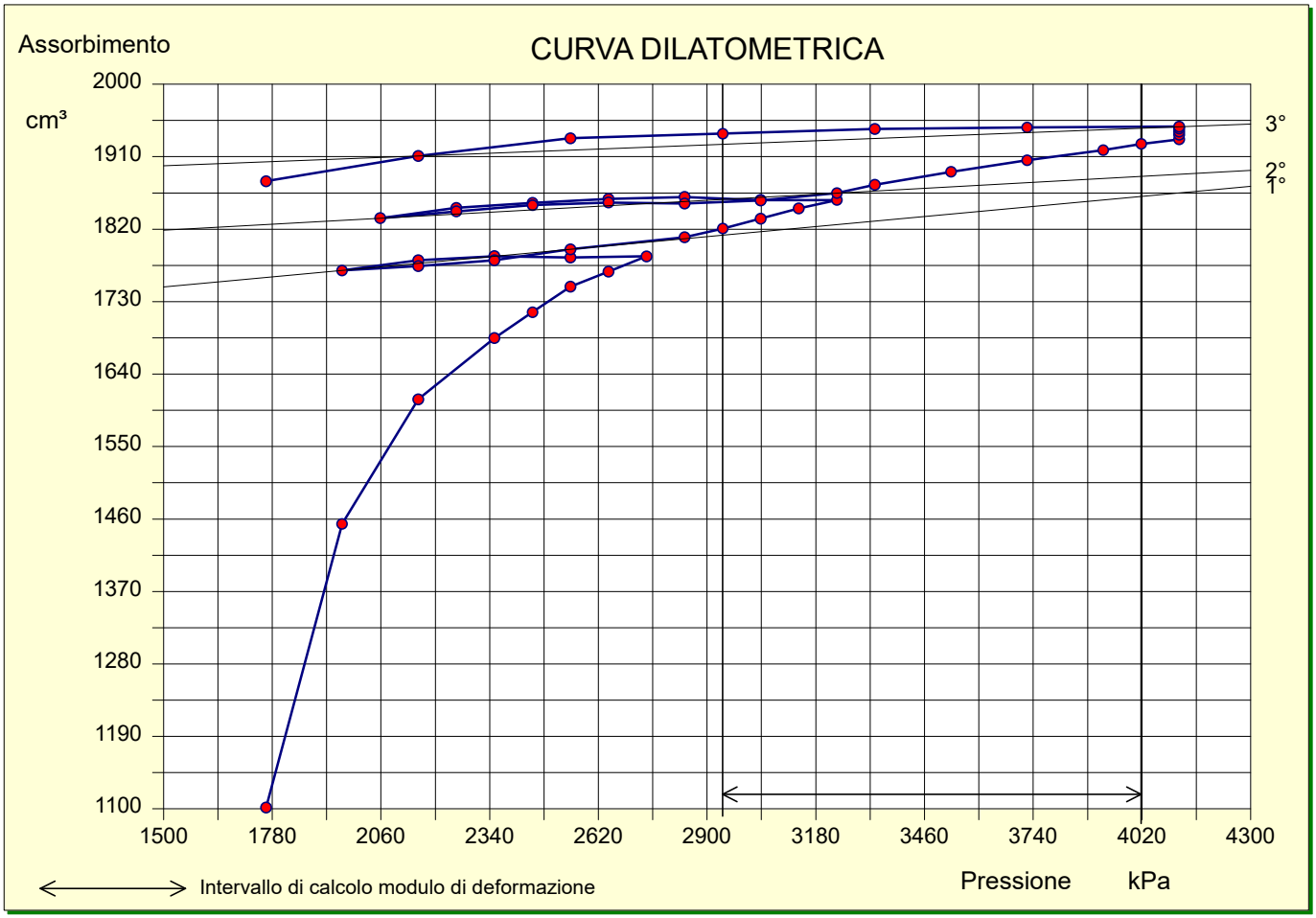
Profondità di prova (centro della cella) (m)	190,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia:			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1764,00	1120,38	18,64	1101,74	14,71	41	4116,00	1982,25	37,26	1944,99	25,95
2	1960,00	1474,40	20,44	1453,95	19,41	42	4116,00	1984,54	37,26	1947,29	26,00
3	2156,00	1630,97	22,20	1608,77	21,48	43	3724,00	1980,95	34,61	1946,34	25,98
4	2352,00	1708,65	23,91	1684,74	22,49	44	3332,00	1976,25	31,78	1944,46	25,96
5	2450,00	1741,59	24,75	1716,84	22,92	45	2940,00	1967,45	28,77	1938,67	25,88
6	2548,00	1774,15	25,58	1748,57	23,34	46	2548,00	1958,49	25,58	1932,91	25,80
7	2646,00	1793,66	26,39	1767,27	23,59	47	2156,00	1933,16	22,20	1910,96	25,51
8	2744,00	1813,34	27,20	1786,15	23,84	48	1764,00	1898,16	18,64	1879,52	25,09
9	2548,00	1810,36	25,58	1784,78	23,83						
10	2352,00	1810,45	23,91	1786,54	23,85						
11	2156,00	1803,60	22,20	1781,40	23,78						
12	1960,00	1789,10	20,44	1768,66	23,61						
13	2156,00	1796,40	22,20	1774,20	23,69						
14	2352,00	1805,33	23,91	1781,42	23,78						
15	2548,00	1820,53	25,58	1794,95	23,96						
16	2842,00	1838,05	27,99	1810,06	24,16						
17	2940,00	1849,57	28,77	1820,80	24,31						
18	3038,00	1862,64	29,54	1833,10	24,47						
19	3136,00	1875,97	30,30	1845,67	24,64						
20	3234,00	1887,32	31,05	1856,27	24,78						
21	3038,00	1885,68	29,54	1856,14	24,78						
22	2842,00	1887,93	27,99	1859,94	24,83						
23	2646,00	1884,10	26,39	1857,70	24,80						
24	2450,00	1877,51	24,75	1852,75	24,73						
25	2254,00	1869,41	23,06	1846,35	24,65						
26	2058,00	1854,92	21,33	1833,60	24,48						
27	2254,00	1865,13	23,06	1842,07	24,59						
28	2450,00	1874,66	24,75	1849,91	24,70						
29	2646,00	1879,56	26,39	1853,17	24,74						
30	2842,00	1879,92	27,99	1851,93	24,72						
31	3038,00	1885,34	29,54	1855,80	24,77						
32	3234,00	1895,83	31,05	1864,78	24,89						
33	3332,00	1906,84	31,78	1875,06	25,03						
34	3528,00	1924,48	33,22	1891,26	25,25						
35	3724,00	1940,18	34,61	1905,57	25,44						
36	3920,00	1954,09	35,96	1918,13	25,61						
37	4018,00	1962,46	36,61	1925,85	25,71						
38	4116,00	1968,84	37,26	1931,58	25,79						
39	4116,00	1974,51	37,26	1937,25	25,86						
40	4116,00	1978,55	37,26	1941,30	25,92						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	2940,00
Volume iniziale [Vo] (cm³):	1820,80
Pressione finale [Pf] (kPa):	4018,00
Volume finale [Vf] (cm³):	1925,85

RISULTATI	
Modulo di taglio (kPa):	48313
Modulo di deformazione dilatometrico (kPa):	128513
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4708

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1769	1834	1947
Volume finale [Vf] (cm³):	1795	1865	1911
Pressione iniziale [Po] (kPa):	1960	2058	4116
Pressione finale [Pf] (kPa):	2548	3234	2156
Modulo di deformazione dilatometrico (kPa):	277745	472705	689933
Modulo da linea di tendenza (kPa):	276403	470582	683080

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

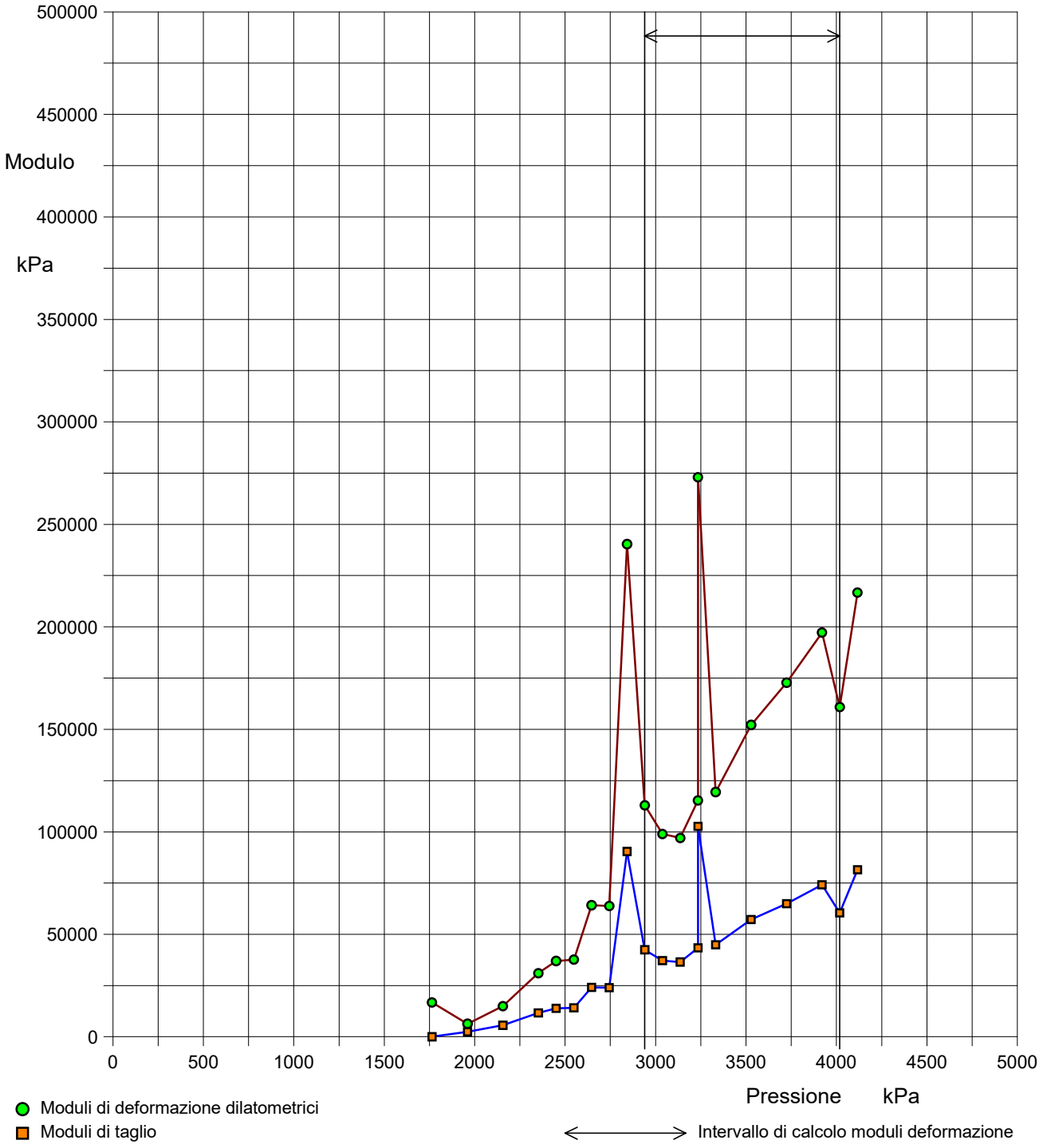
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1960,00	196,00	1453,95	352,21	2387	6349						
2156,00	196,00	1608,77	154,81	5626	14965						
2352,00	196,00	1684,74	75,97	11661	31018						
2450,00	98,00	1716,84	32,11	13894	36958						
2548,00	98,00	1748,57	31,73	14157	37658						
2646,00	98,00	1767,27	18,70	24124	64170						
2744,00	98,00	1786,15	18,88	23986	63803						
2842,00	294,00	1810,06	15,11	90372	240390						
2940,00	98,00	1820,80	10,74	42472	112976						
3038,00	98,00	1833,10	12,30	37206	98968						
3136,00	98,00	1845,67	12,57	36485	97050						
3234,00	98,00	1856,27	10,60	43366	115354						
3234,00	196,00	1864,78	8,97	102637	273014						
3332,00	98,00	1875,06	10,28	44891	119410						
3528,00	196,00	1891,26	16,20	57181	152101						
3724,00	196,00	1905,57	14,31	64943	172748						
3920,00	196,00	1918,13	12,57	74136	197202						
4018,00	98,00	1925,85	7,72	60464	160834						
4116,00	98,00	1931,58	5,73	81473	216718						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

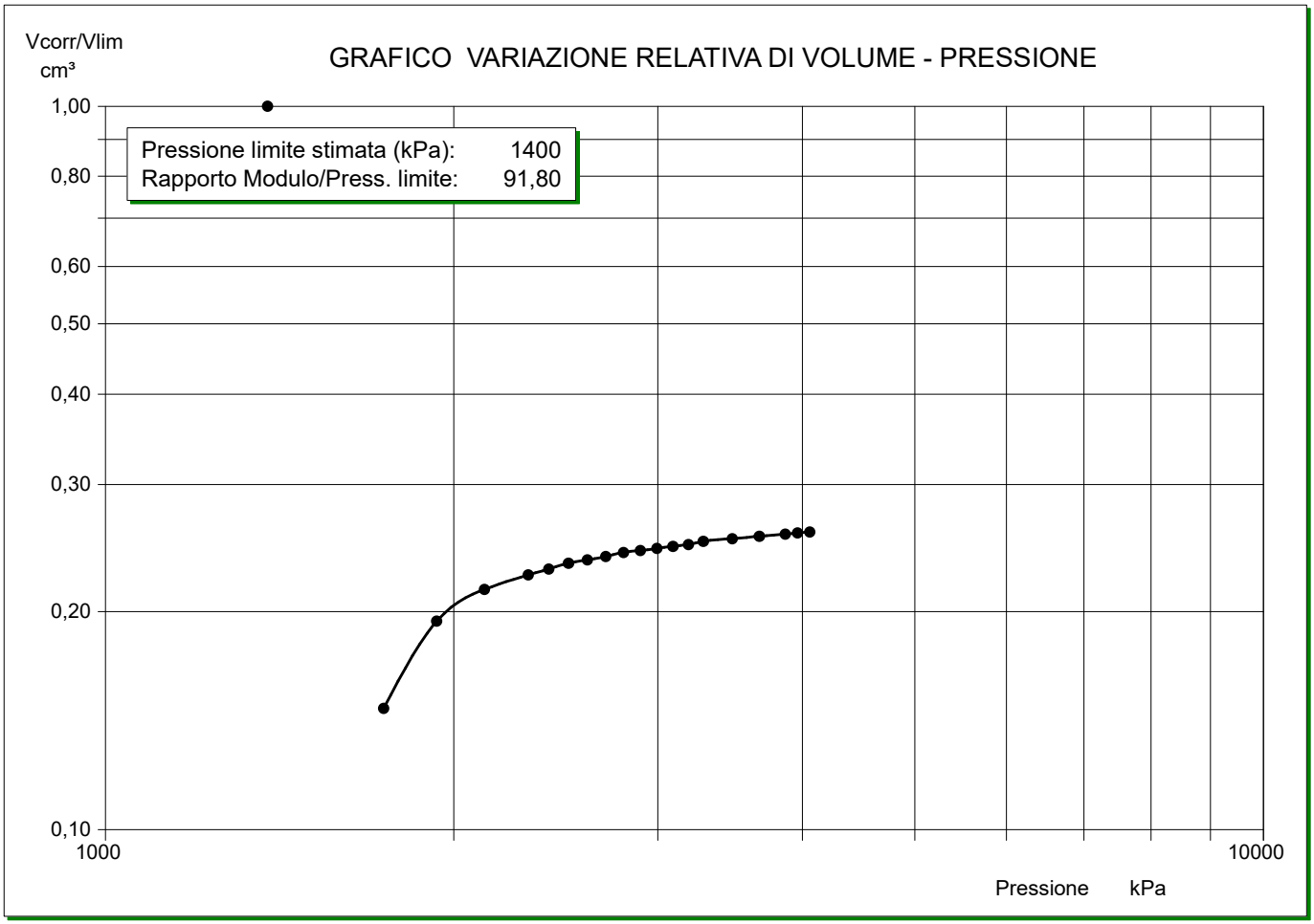
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

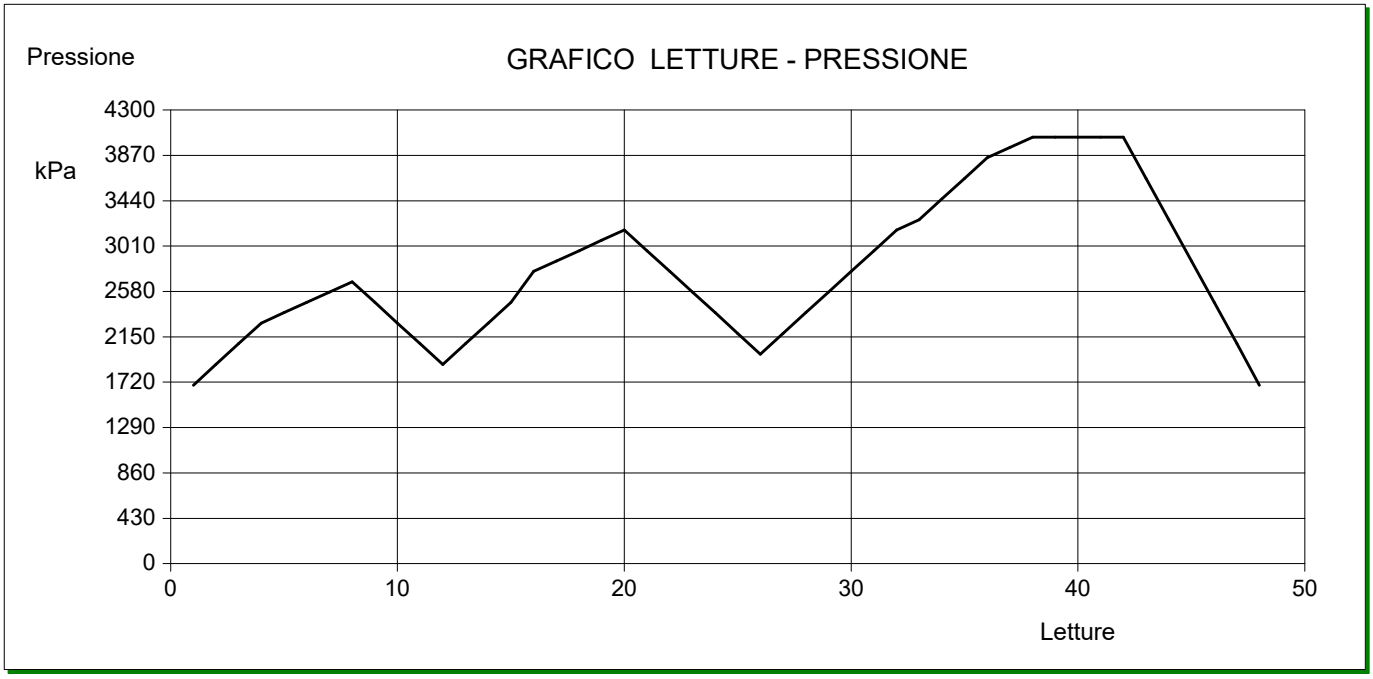
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

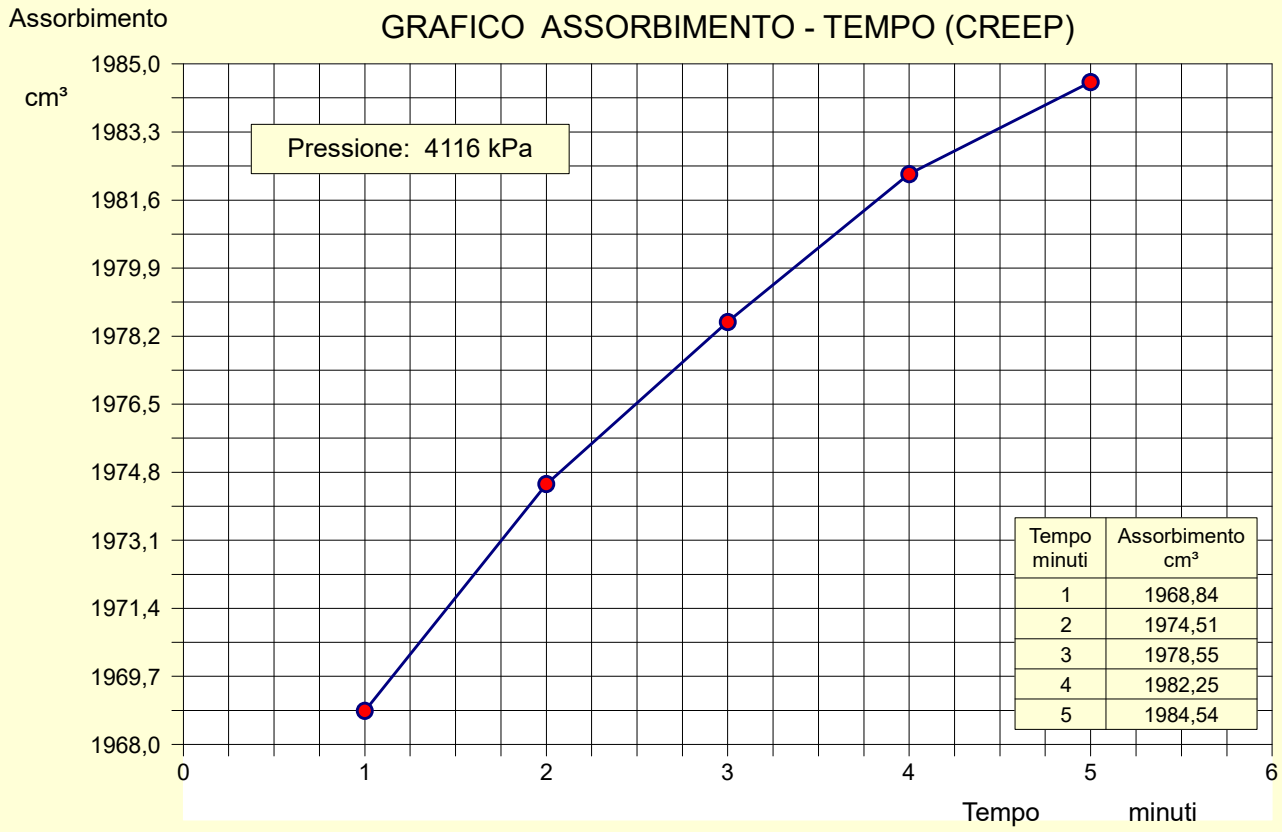
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:



Tempo minuti	Assorbimento cm³
1	1968,84
2	1974,51
3	1978,55
4	1982,25
5	1984,54

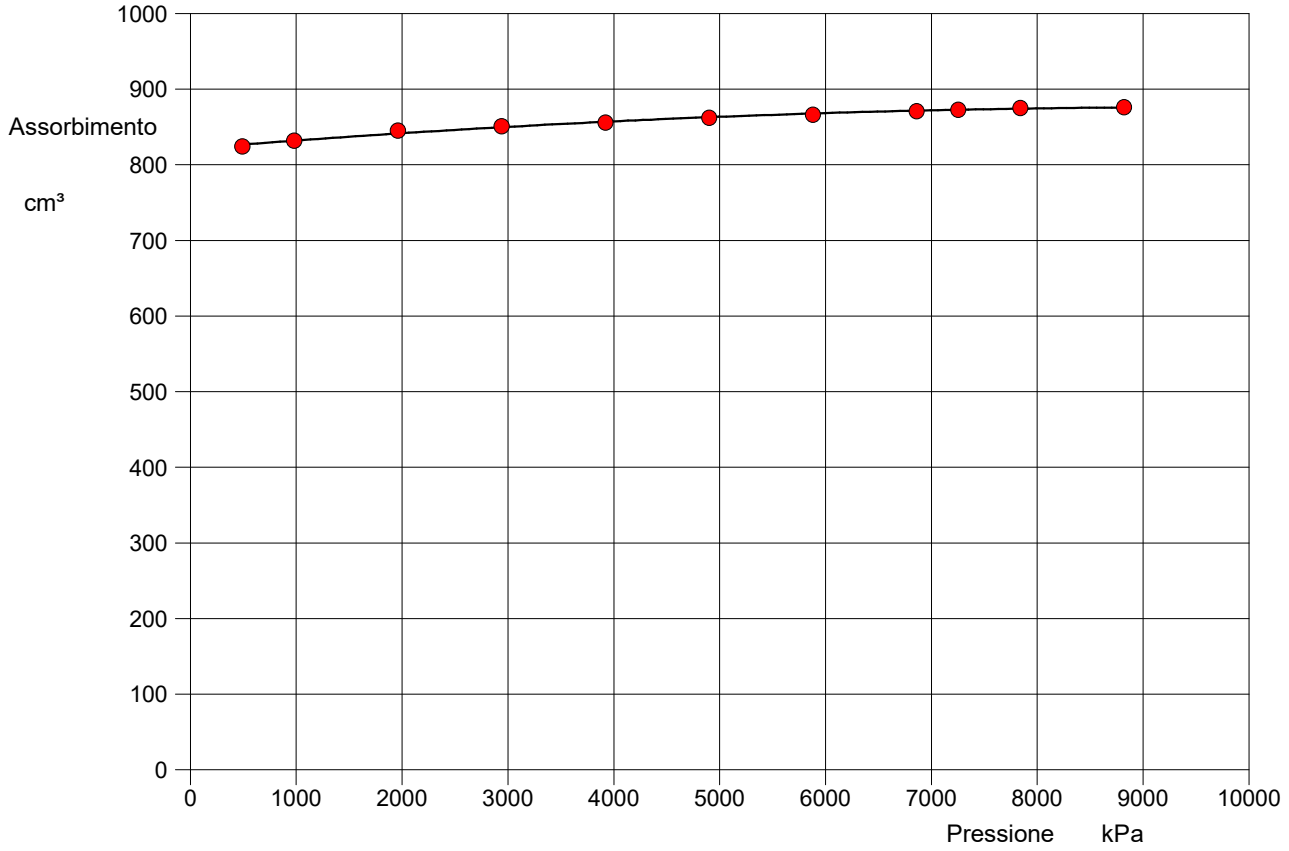
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 2
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	14/10/2019	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	824,35	5,81	8820,00	876,22	54,73						
980,00	831,89	10,97									
1960,00	845,36	20,44									
2940,00	851,04	28,77									
3920,00	855,91	35,96									
4900,00	862,30	42,00									
5880,00	866,22	46,90									
6860,00	870,99	50,65									
7252,00	872,90	51,83									
7840,00	875,16	53,26									

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

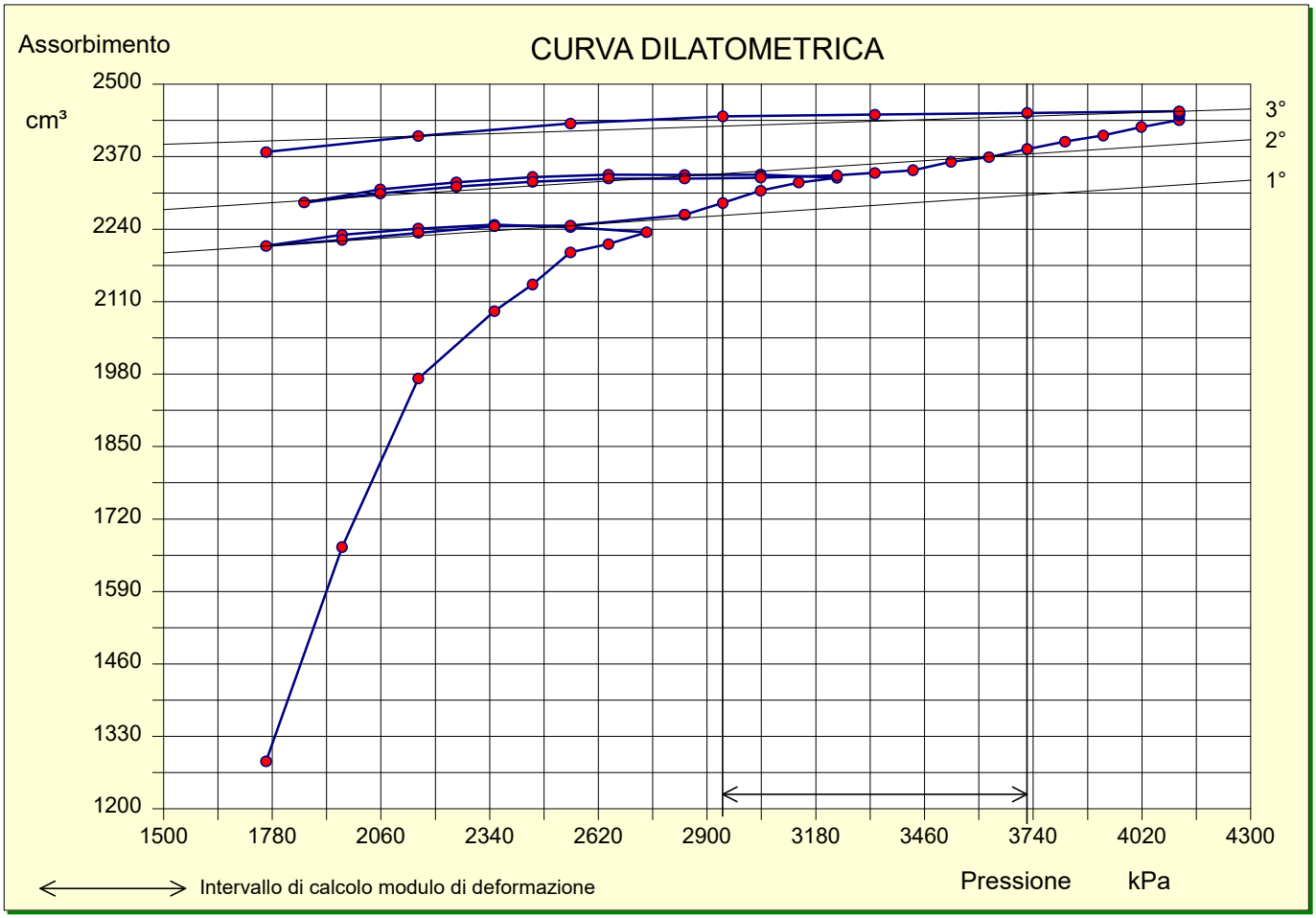
Profondità di prova (centro della cella) (m)	199,50	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia:			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1764,00	1304,08	18,64	1285,44	16,15	41	3626,00	2403,07	33,92	2369,15	29,77
2	1960,00	1690,16	20,44	1669,72	20,98	42	3724,00	2418,15	34,61	2383,54	29,95
3	2156,00	1994,21	22,20	1972,01	24,78	43	3822,00	2432,32	35,29	2397,03	30,12
4	2352,00	2116,65	23,91	2092,74	26,30	44	3920,00	2443,99	35,96	2408,03	30,26
5	2450,00	2165,47	24,75	2140,72	26,90	45	4018,00	2459,87	36,61	2423,26	30,45
6	2548,00	2223,82	25,58	2198,25	27,63	46	4116,00	2472,88	37,26	2435,62	30,61
7	2646,00	2239,51	26,39	2213,11	27,81	47	4116,00	2481,23	37,26	2443,98	30,71
8	2744,00	2261,67	27,20	2234,48	28,08	48	4116,00	2483,80	37,26	2446,54	30,75
9	2548,00	2269,21	25,58	2243,64	28,20	49	4116,00	2485,92	37,26	2448,67	30,77
10	2352,00	2271,83	23,91	2247,92	28,25	50	4116,00	2488,80	37,26	2451,54	30,81
11	2156,00	2263,25	22,20	2241,05	28,16	51	3724,00	2483,04	34,61	2448,43	30,77
12	1960,00	2250,09	20,44	2229,65	28,02	52	3332,00	2477,14	31,78	2445,36	30,73
13	1764,00	2228,59	18,64	2209,95	27,77	53	2940,00	2471,13	28,77	2442,36	30,69
14	1960,00	2241,28	20,44	2220,84	27,91	54	2548,00	2454,88	25,58	2429,31	30,53
15	2156,00	2255,48	22,20	2233,28	28,07	55	2156,00	2429,41	22,20	2407,21	30,25
16	2352,00	2269,17	23,91	2245,26	28,22	56	1764,00	2396,82	18,64	2378,18	29,89
17	2548,00	2271,93	25,58	2246,35	28,23						
18	2842,00	2293,89	27,99	2265,90	28,48						
19	2842,00	2293,89	27,99	2265,90	28,48						
20	2940,00	2315,86	28,77	2287,09	28,74						
21	3038,00	2338,58	29,54	2309,04	29,02						
22	3136,00	2353,96	30,30	2323,66	29,20						
23	3234,00	2363,16	31,05	2332,11	29,31						
24	3038,00	2367,38	29,54	2337,84	29,38						
25	2842,00	2365,19	27,99	2337,20	29,37						
26	2646,00	2364,15	26,39	2337,75	29,38						
27	2450,00	2358,39	24,75	2333,64	29,33						
28	2254,00	2346,99	23,06	2323,93	29,21						
29	2058,00	2332,59	21,33	2311,27	29,05						
30	1862,00	2307,44	19,55	2287,89	28,75						
31	2058,00	2325,23	21,33	2303,90	28,95						
32	2254,00	2339,12	23,06	2316,06	29,11						
33	2450,00	2349,91	24,75	2325,16	29,22						
34	2646,00	2357,21	26,39	2330,82	29,29						
35	2842,00	2358,91	27,99	2330,92	29,29						
36	3038,00	2361,96	29,54	2332,42	29,31						
37	3234,00	2367,57	31,05	2336,52	29,36						
38	3332,00	2372,60	31,78	2340,82	29,42						
39	3430,00	2378,26	32,51	2345,76	29,48						
40	3528,00	2393,97	33,22	2360,75	29,67						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	2940,00
Volume iniziale [Vo] (cm³):	2287,09
Pressione finale [Pf] (kPa):	3724,00
Volume finale [Vf] (cm³):	2383,54

RISULTATI	
Modulo di taglio (kPa):	42025
Modulo di deformazione dilatometrico (kPa):	111787
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	5170

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2210	2288	2452
Volume finale [Vf] (cm³):	2246	2337	2407
Pressione iniziale [Po] (kPa):	1764	1862	4116
Pressione finale [Pf] (kPa):	2548	3234	2156
Modulo di deformazione dilatometrico (kPa):	293294	383386	609933
Modulo da linea di tendenza (kPa):	292028	307629	618382

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

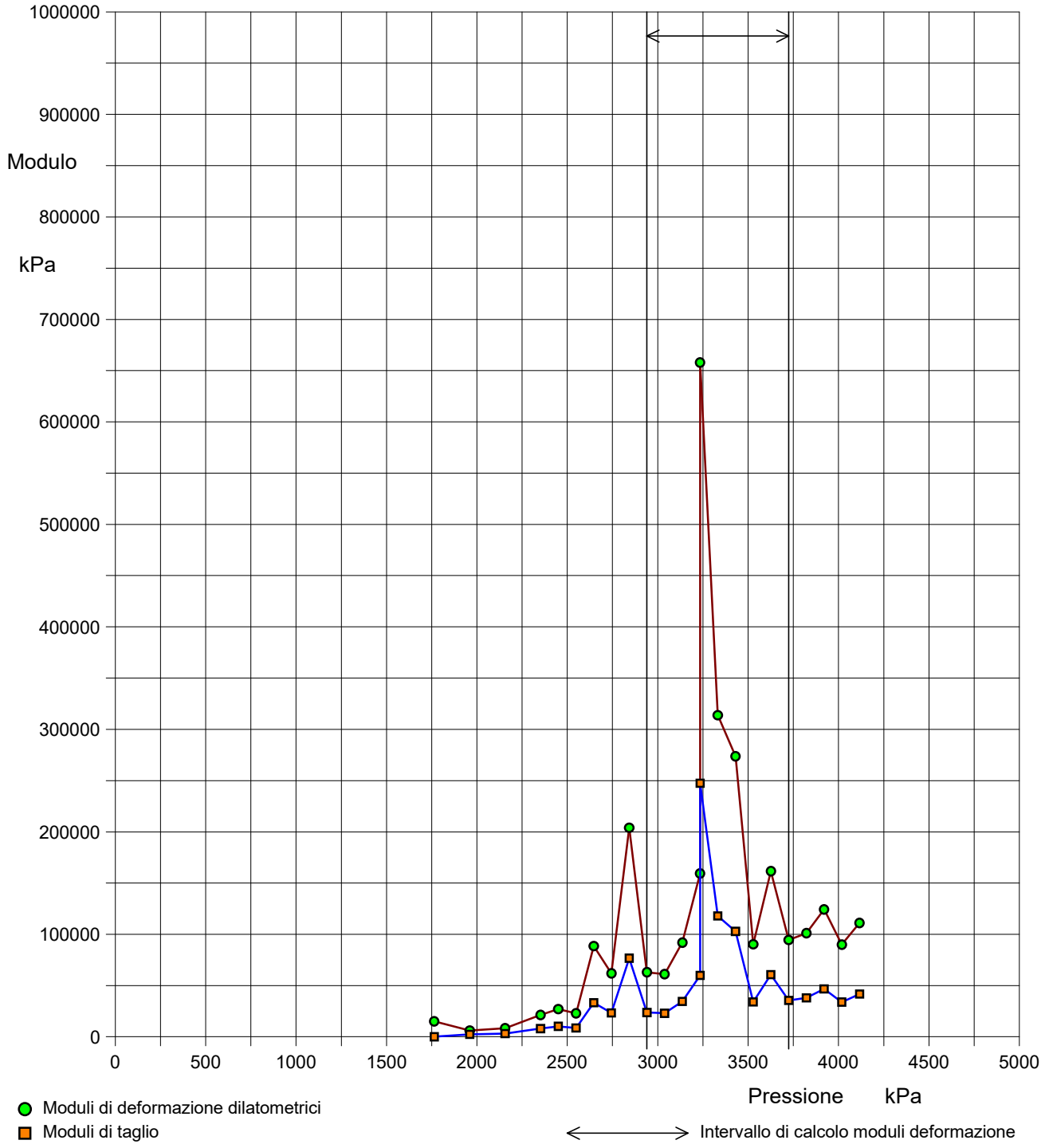
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
						3626,00	98,00	2369,15	8,40	60739	161566
1960,00	196,00	1669,72	384,28	2298	6113	3724,00	98,00	2383,54	14,39	35541	94539
2156,00	196,00	1972,01	302,30	3117	8291	3822,00	98,00	2397,03	13,50	37992	101059
2352,00	196,00	2092,74	120,73	8000	21280	3920,00	98,00	2408,03	10,99	46734	124312
2450,00	98,00	2140,72	47,98	10164	27036	4018,00	98,00	2423,26	15,23	33839	90012
2548,00	98,00	2198,25	57,53	8574	22807	4116,00	98,00	2435,62	12,36	41777	111127
2646,00	98,00	2213,11	14,87	33276	88514						
2744,00	98,00	2234,48	21,36	23256	61861						
2842,00	294,00	2265,90	19,55	76698	204017						
2940,00	98,00	2287,09	21,18	23695	63029						
3038,00	98,00	2309,04	21,95	22967	61092						
3136,00	98,00	2323,66	14,62	34574	91967						
3234,00	98,00	2332,11	8,45	59914	159371						
3234,00	196,00	2336,52	4,10	247336	657914						
3332,00	98,00	2340,82	4,30	117946	313736						
3430,00	98,00	2345,76	4,93	102884	273671						
3528,00	98,00	2360,75	15,00	33954	90318						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

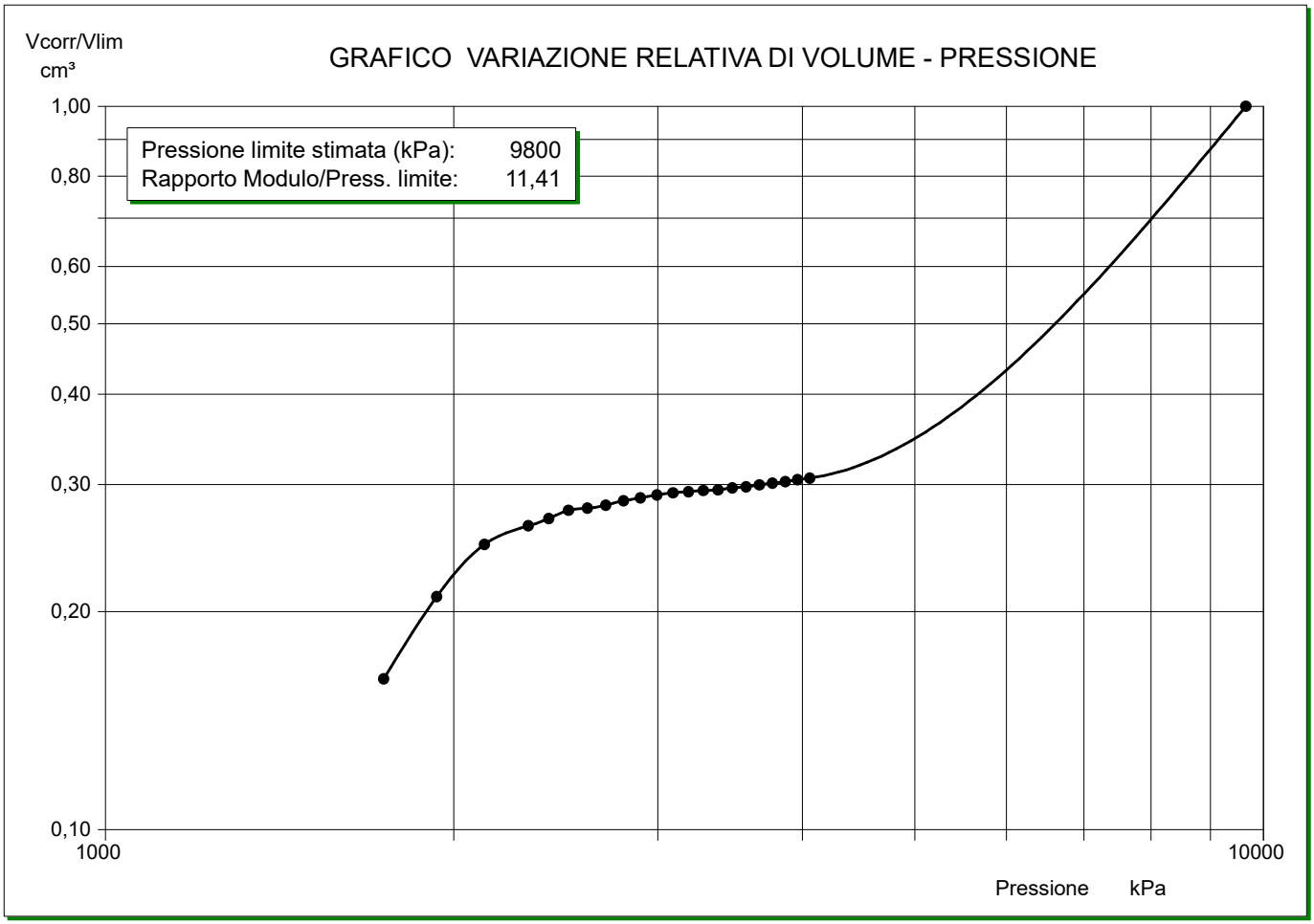
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

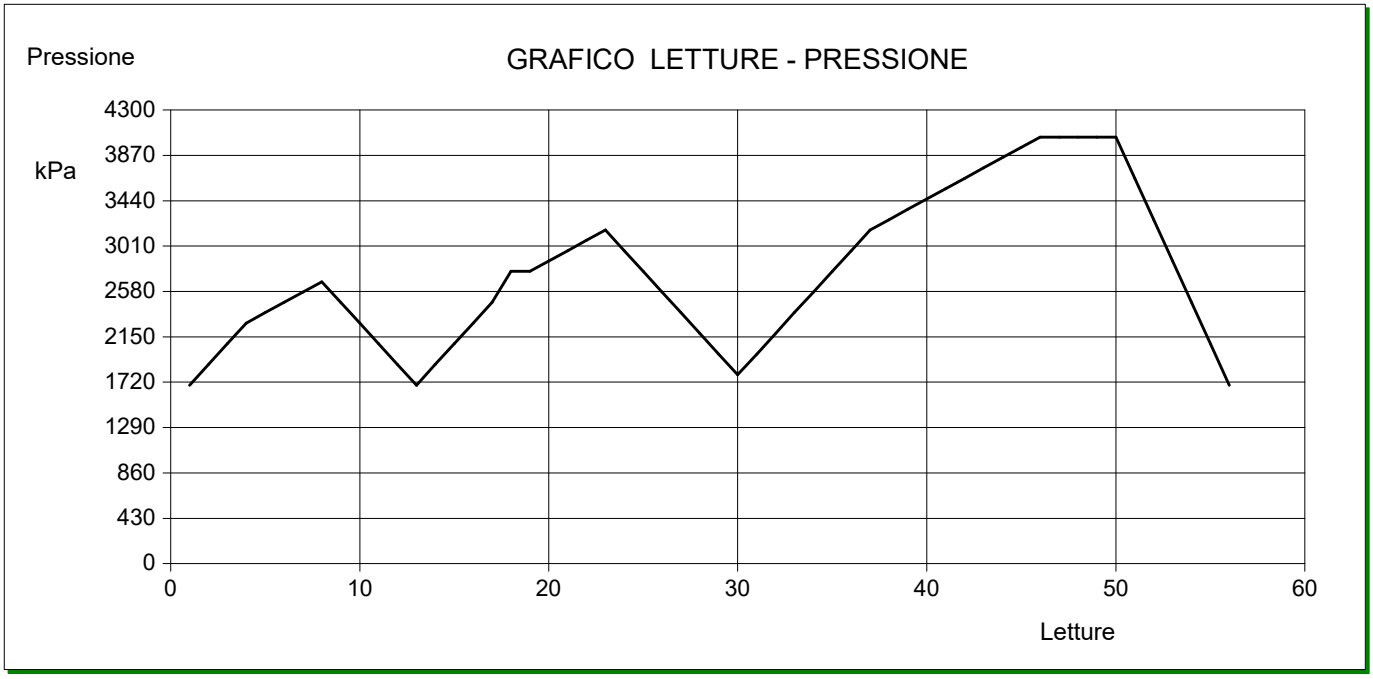
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

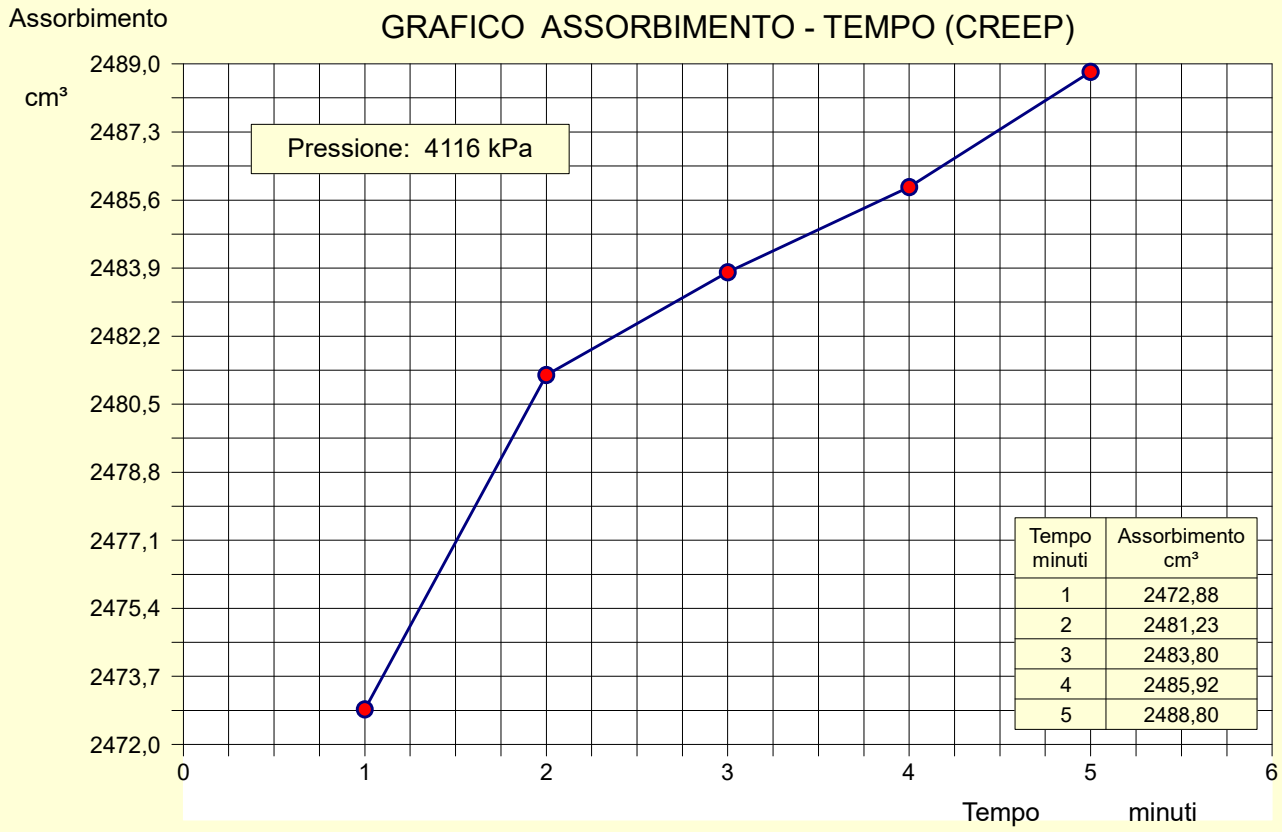
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:



Tempo minuti	Assorbimento cm³
1	2472,88
2	2481,23
3	2483,80
4	2485,92
5	2488,80

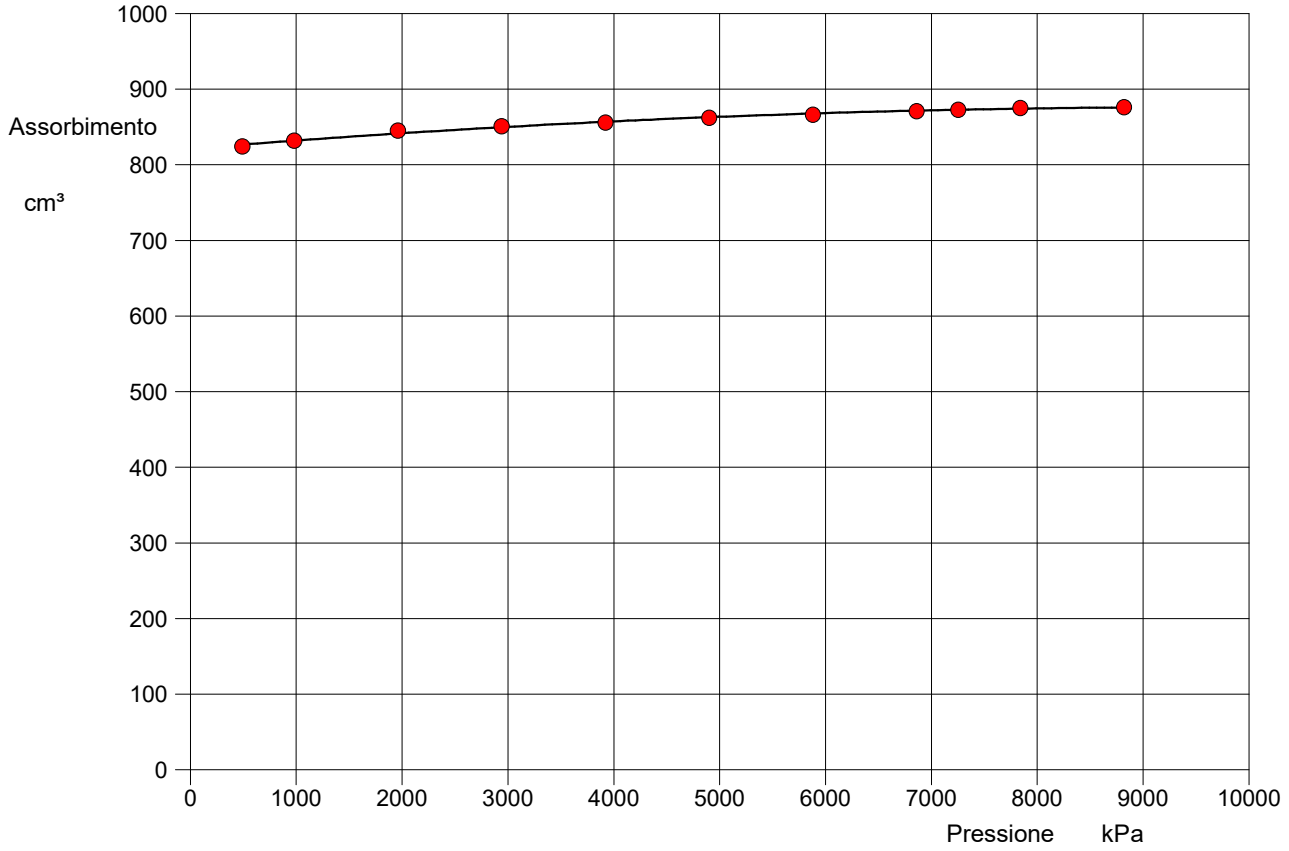
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: 1
Località: Campolattaro	Data: 08/09/2020
Sondaggio: CL-4	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	14/10/2019	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	824,35	5,81	8820,00	876,22	54,73						
980,00	831,89	10,97									
1960,00	845,36	20,44									
2940,00	851,04	28,77									
3920,00	855,91	35,96									
4900,00	862,30	42,00									
5880,00	866,22	46,90									
6860,00	870,99	50,65									
7252,00	872,90	51,83									
7840,00	875,16	53,26									

PROVE IN FORO
LOG GEOFISICO
CL4

Bohrlochmessung / prove in foro

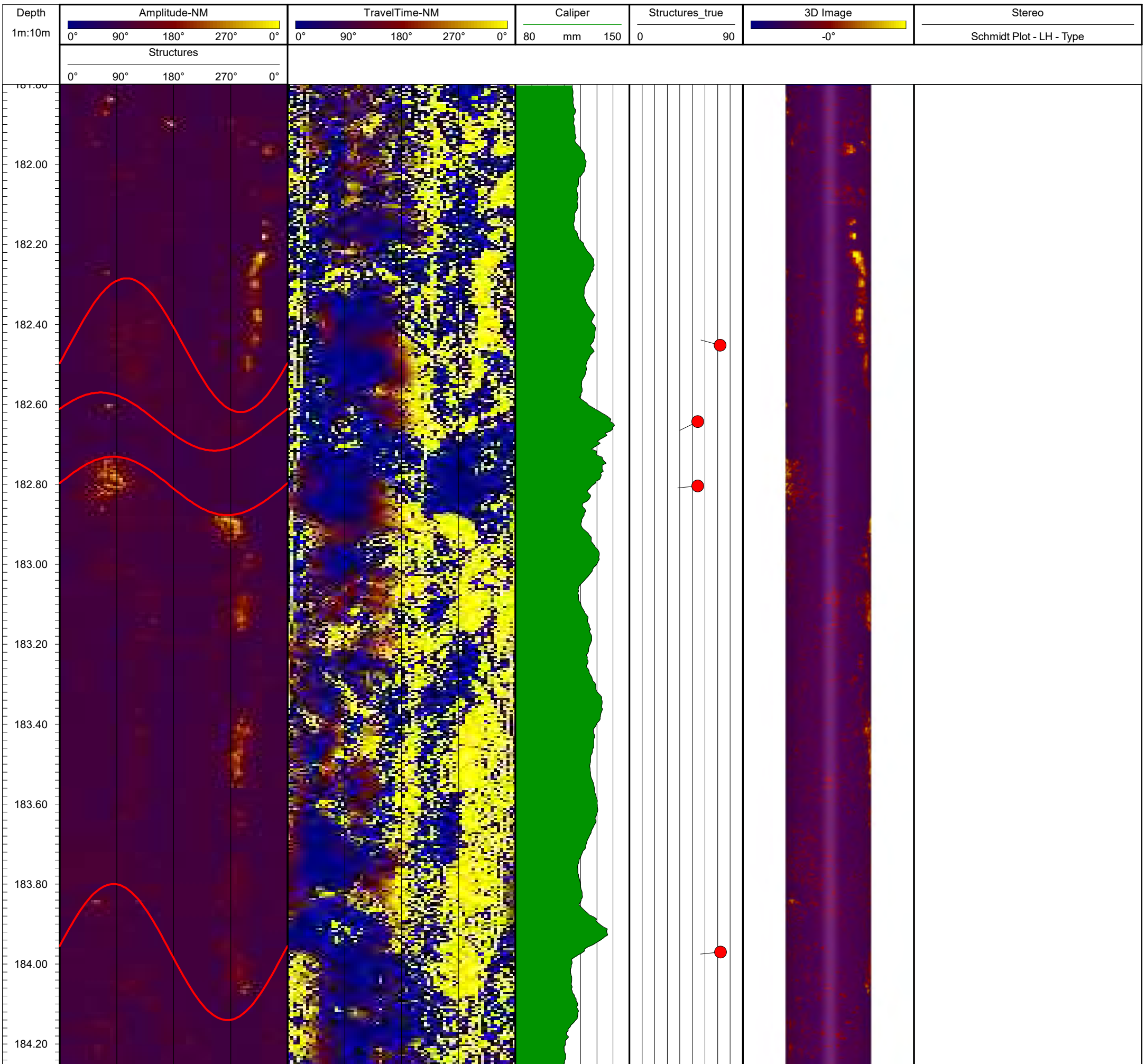
Bohrung / Sondaggio	**CL4**	**Messungen / Misure**			**Koordinaten / Coordinate**	
Gesellschaft / Società	Geotec SpA.	ABI			X	
Projekt / Progetto					Y	
Ort / Località	Campolattaro		von / da [m]	bis / a [m]	Z	
Land / Provincia	Benevento	ABI	181.80	199.25		
Staat / Stato	Italia				**Maßstab / Scala**	1:10

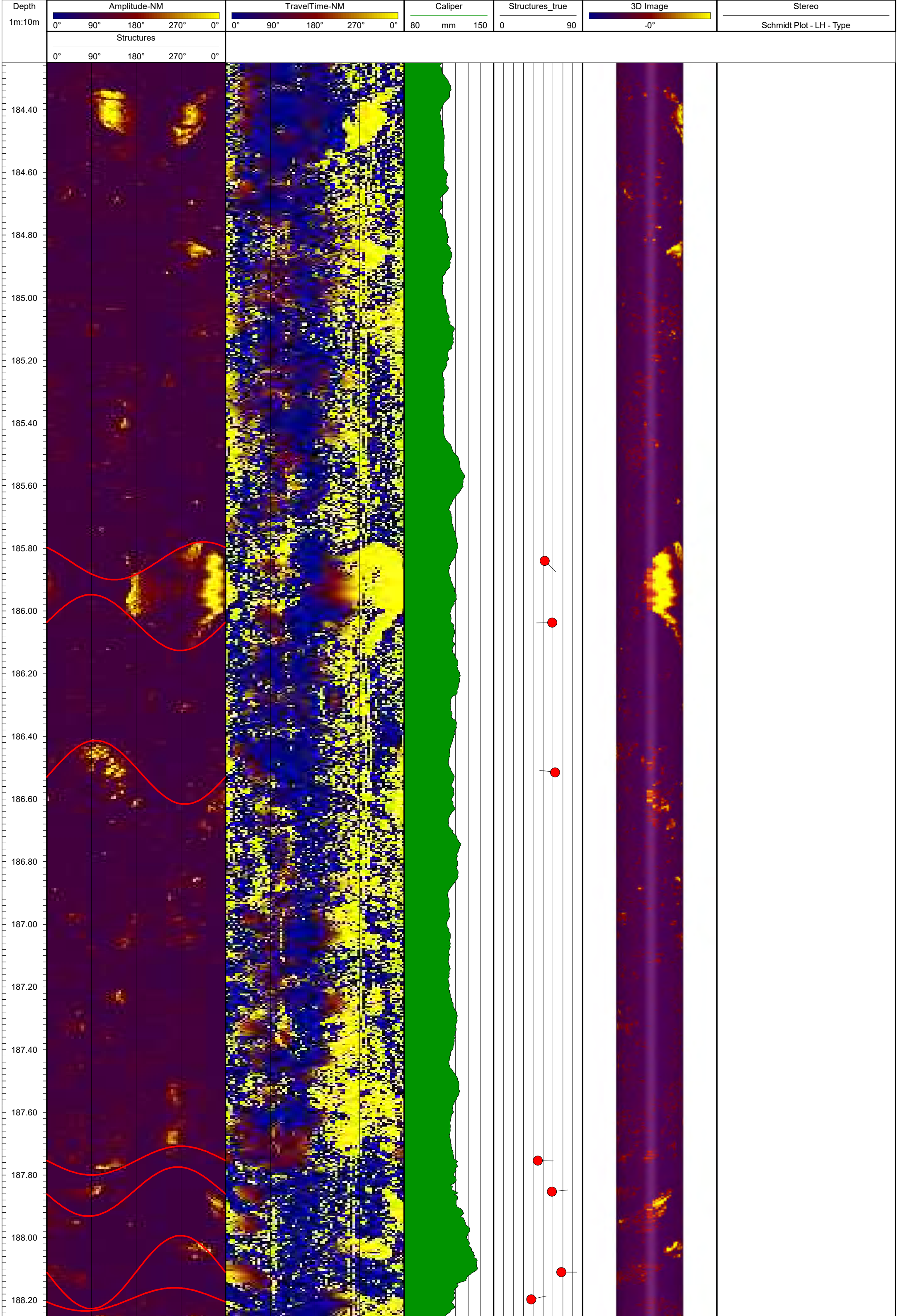
Datum / Data	07.09.2020	Aufgezeichnet von / Registrato da	G.Dragà	Beobachtungen / Osservazioni
Messung Nr. / Misura nr.	1	Beobachter / Supervisore	G.Dragà	
Bezugspunkt / livello di riferimento	piano campagna			
Endteufe / Profondità finale	199.25 m			
Wasserstand / Livello dell'acqua				
Bohrlochfluid / Tipo di Fluido				

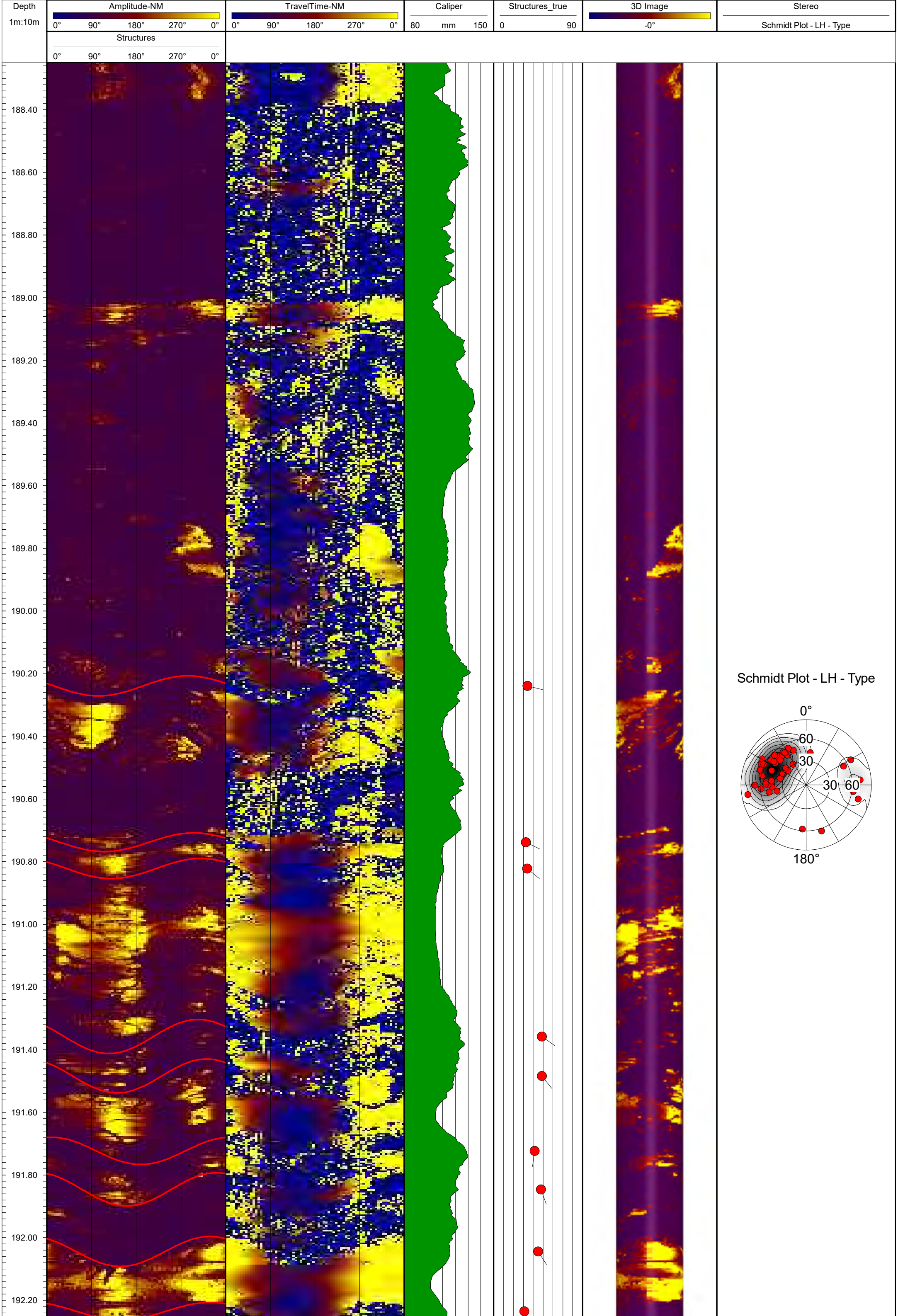
Ø Bohrloch / Foro	von / da [m]	bis / a [m]
101 mm	170.00	199.25

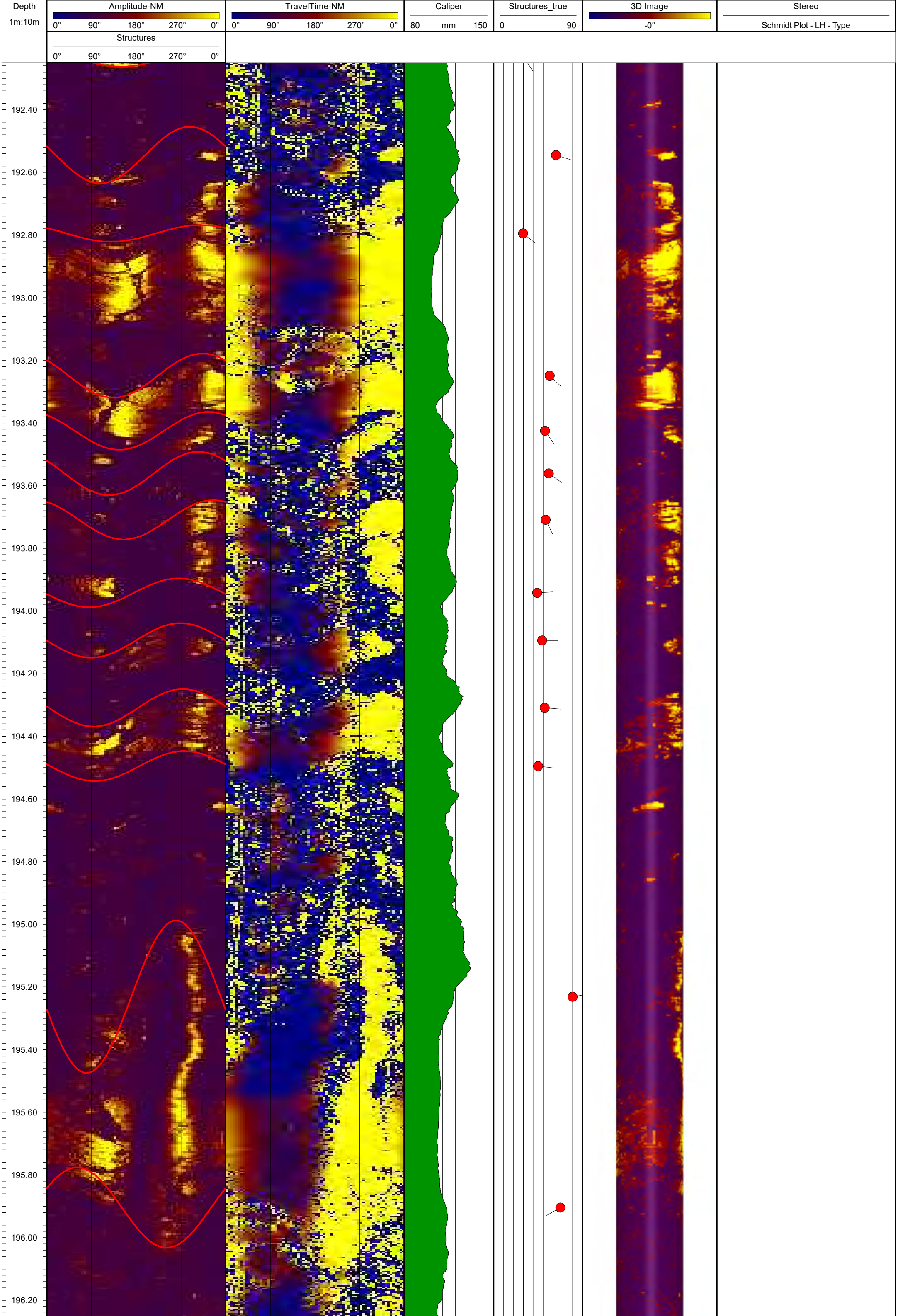
Ø Verrohrung / Tubi di rivestimento	von / da [m]	bis / a [m]
122 mm	0.00	170.00

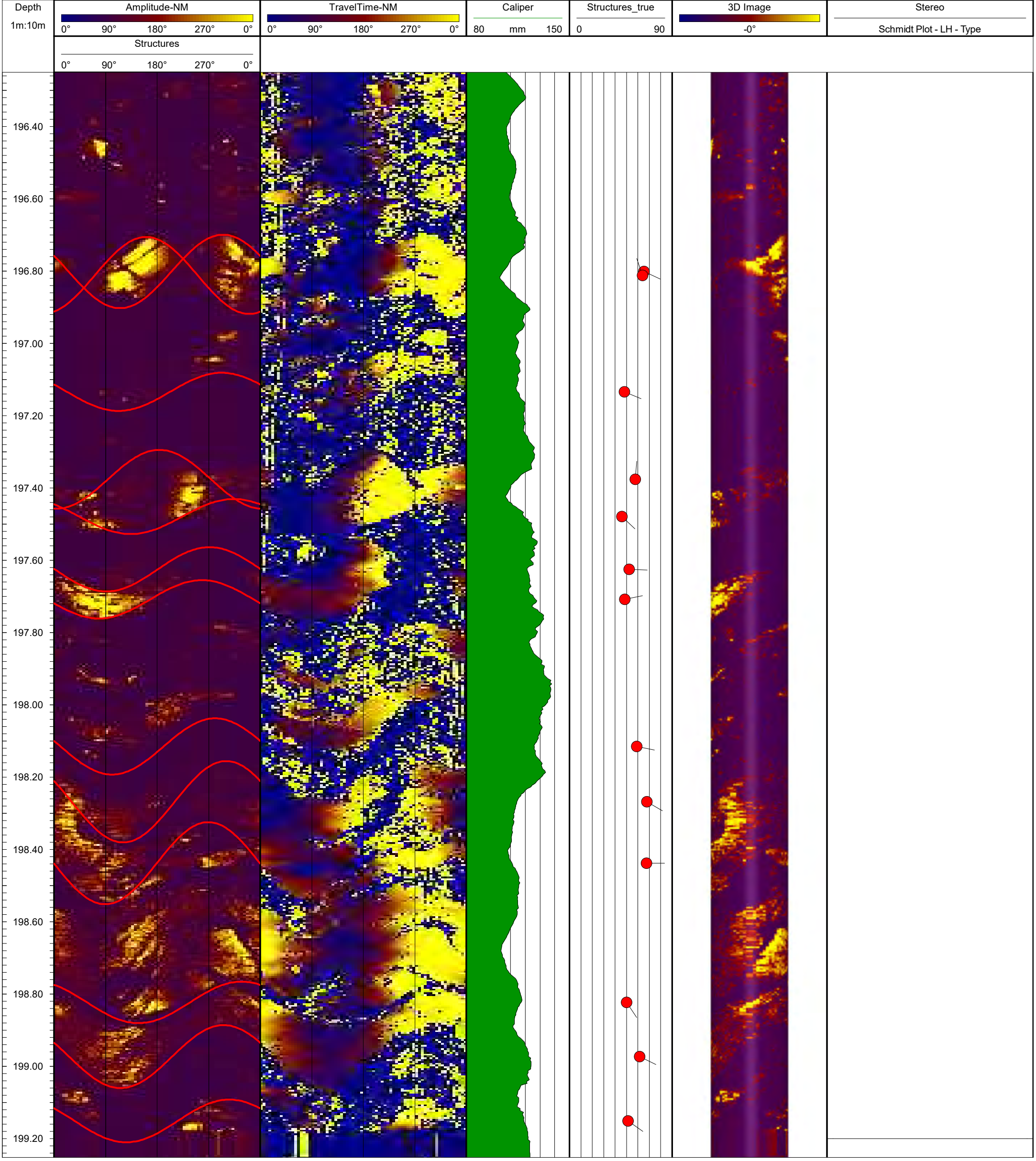
Major Open Joint / Fracture




Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 150
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
184.40
184.60
184.80
185.00
185.20
185.40
185.60
185.80
186.00
186.20
186.40
186.60
186.80
187.00
187.20
187.40
187.60
187.80
188.00
188.20


Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 150
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
188.40
188.60
188.80
189.00
189.20
189.40
189.60
189.80
190.00
190.20
190.40
190.60
190.80
191.00
191.20
191.40
191.60
191.80
192.00
192.20
Schmidt Plot - LH - Type
0°
60
30
30
60
180°


Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 150
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
192.40
192.60
192.80
193.00
193.20
193.40
193.60
193.80
194.00
194.20
194.40
194.60
194.80
195.00
195.20
195.40
195.60
195.80
196.00
196.20


Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Caliper
80 mm 150
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
196.40
196.60
196.80
197.00
197.20
197.40
197.60
197.80
198.00
198.20
198.40
198.60
198.80
199.00
199.20

GEOTEC SPA

SOIL INVESTIGATIONS & LAND SURVEYING

Indagini geofisiche a supporto della Progettazione Definitiva di utilizzo idropotabile delle acque dell'invaso di Campolattaro (BN)

ELABORAZIONE PROVA DOWN HOLE

CL9

Marzo 2021

SOMMARIO

1 PREMESSA

Il presente rapporto illustra e sintetizza i risultati delle indagini geofisiche eseguite a supporto della Progettazione Definitiva di utilizzo idropotabile delle acque dell'invaso di Campolattaro (BN) sul sondaggio **CL9**.

Finalità dell'intervento è stata la caratterizzazione dal punto di vista sismico delle unità geolitologiche dei materiali carotati nei fori di sondaggio definendo un modello sismo-stratigrafico in termini di Vp, Vs e dei rispettivi moduli dinamici; l'elaborazione finale ha consentito inoltre la determinazione del parametro Vs_{eq} per la definizione della categoria sismica del suolo di fondazione ai sensi delle NTC 2018.

Sono state realizzate le seguenti indagini geofisiche:

- n. 1 prove sismiche in foro di tipo Down-Hole (**DH-CL9**), registrata nel foro di sondaggio **CL9** fino alla profondità di 110.0 m.

Fig. 1 – Ubicazione planimetrica delle indagini sismiche di tipo Down-Hole.

2 PROVE SISMICHE IN FORO – DOWN HOLE

Per la definizione dei valori di Vp, Vs e Vs_{eq} ai sensi delle NTC 2018 e dei moduli dinamici dei terreni carotati, in corrispondenza del sondaggio **CL9** opportunamente attrezzati, e stata effettuata n.1 prova Down-Hole denominata **DH-CL9**.

2.1 Acquisizione dati

La tecnica del Down-Hole consiste nel misurare i tempi di arrivo delle onde sismiche P e S, generate da una specifica sorgente a geofoni tridimensionali posti in un foro di sondaggio a profondità crescenti (Fig. 2).

Le onde di compressione (P) sono create con impulsi verticali generati da una massa battente agente su una piastra posta in prossimità del sondaggio.

Le onde di taglio (S), sono generate con impulsi orizzontali ottenuti battendo su lati opposti di due tavole rese solidali con il terreno dal peso del veicolo d'appoggio.

Fig. 2 – Schema prova Down-Hole.

Il sistema di ricezione si compone di un ricevitore, costituito da un contenitore cilindrico contenente una terna di trasduttori di velocità (geofoni) orientati secondo le componenti di una terna ortonormale in modo che uno sia orientato secondo la lunghezza del contenitore (trasduttore verticale) e gli altri ad esso perpendicolari (trasduttori orizzontali). I trasduttori devono possedere appropriate caratteristiche di frequenza e sensitività.

Fig. 3 – Componente ricettiva degli impulsi sismici della strumentazione.

La strumentazione si compone inoltre di un "trigger", dotato di sensore collegato al sistema di acquisizione dati che permette di far partire la registrazione del segnale sismico acquisito dai geofoni nell'istante in cui la sorgente viene attivata e parte la sollecitazione dinamica.

Il trigger è realizzato mediante un circuito elettrico che viene chiuso nell'istante in cui la massa battente (martello) colpisce la sorgente.

Il sistema di acquisizione e registrazione dei dati (sismografo) è composto da un sistema multicanale in grado di registrare su ciascun canale in forma digitale le forme d'onda, ed è collegato a ciascuno dei trasduttori del ricevitore e al sensore del trigger oltre che ad un pc portatile per la visualizzazione dei dati acquisiti.

2.2 Modalità operative

Le operazioni da seguire per l'esecuzione della prova Down-Hole sono le seguenti:

- si predispone il piano d'appoggio per le sorgenti togliendo le eventuali asperità rendendo la superficie liscia;
- il sistema di ricezione (ricevitore e relativi trasduttori) è inserito nel foro fino a raggiungere la profondità di prova facendo sì che uno dei due trasduttori orizzontali del ricevitore risulti parallelo all'asse della sorgente;
- il ricevitore viene assicurato alle pareti del tubo di rivestimento del sondaggio;
- la sorgente di onde SH viene generata energizzando sui lati opposti di due tavole rese solidali al terreno mediante il peso del veicolo di appoggio, mentre la sorgente di onde P si genera energizzando verticalmente su una piastra (Fig. 4), allo stesso tempo inizia la registrazione del segnale (trigger e ricevitori);

Fig. 4 – Energizzazione in onde P (a sinistra) e in onde S (a destra).

- eseguite le registrazioni, la profondità viene modificata traslando il sistema di ricezione di 1.0 m e la procedura ripetuta fino a coprire l'intera lunghezza del sondaggio.

2.3 Elaborazione e restituzione dei dati

Dai sismogrammi registrati sono stati "letti" i tempi di arrivo (picking) delle onde sismiche P e S, ad ogni intervallo di profondità raggiunto dal geofono. Il calcolo delle velocità sismiche è stato realizzato attraverso la misura della differenza di tempi fra posizioni differenti del geofono ed il punto di energizzazione.

Si specifica che in fase di elaborazione per quanto riguarda le Vs, sono stati analizzati solamente i film sismici dei "primi arrivi" migliori dal punto di vista qualitativo, inerenti uno solo dei due sensi di battitura.

Nei grafici, contenuti nei paragrafi **Errore. L'origine riferimento non è stata trovata.** e 2.4 sono visualizzati i sismogrammi acquisiti con il relativo "picking", l'andamento delle velocità sismiche Vp e Vs calcolate per ciascun intervallo di profondità e le tabelle di sintesi dei dati elaborati, unitamente ai moduli dinamici calcolati sulla base dei parametri sismici e degli specifici valori di peso di volume (y) delle litologie presenti. In dettaglio sono riportati:

- Velocità Onde P= Vp;
- Velocità Onde S= Vs;
- Rapporto Vp/Vs;
- Rapporto di Poisson σ;
- Modulo di taglio G din;
- Modulo di Young E din;
- Modulo di compressione Ev;
- Densità ρ.

2.4 Prova DH-CL9

Fig. 5 - Ubicazione territoriale della prova DH-CL9.

Commento

- Relativamente alle velocità sismiche **Vp** si registra un incremento dei valori da 400 a 1300 m/s nei primi 7.0 m di spessore. A partire da -8.0 m di profondità dal p.c. le velocità superano i 2000 m/s. Fino a profondità indicative di 95.0 m dal p.c. si alternano valori compresi tra 2000 m/s e 2500 m/s; solamente oltre tale quota le velocità superano i 2800 m/s sino a fondo foro con valori massimi dell'ordine di 3000 m/s.
- Per le velocità **Vs** si descrive un graduale incremento dei valori da 160 a 470 m/s nei primi 7.0 m di spessore. Da -8.0 m dal p.c. le velocità superano i 700 m/s, segue un'alternanza di valori sino a fondo foro con valori di Vs che oltre i -55.0 m di profondità dal p.c. si attestano in un range compreso tra 750 e 1000 m/s.

SISMOGRAMMI

DOWN HOLE

DH CL9

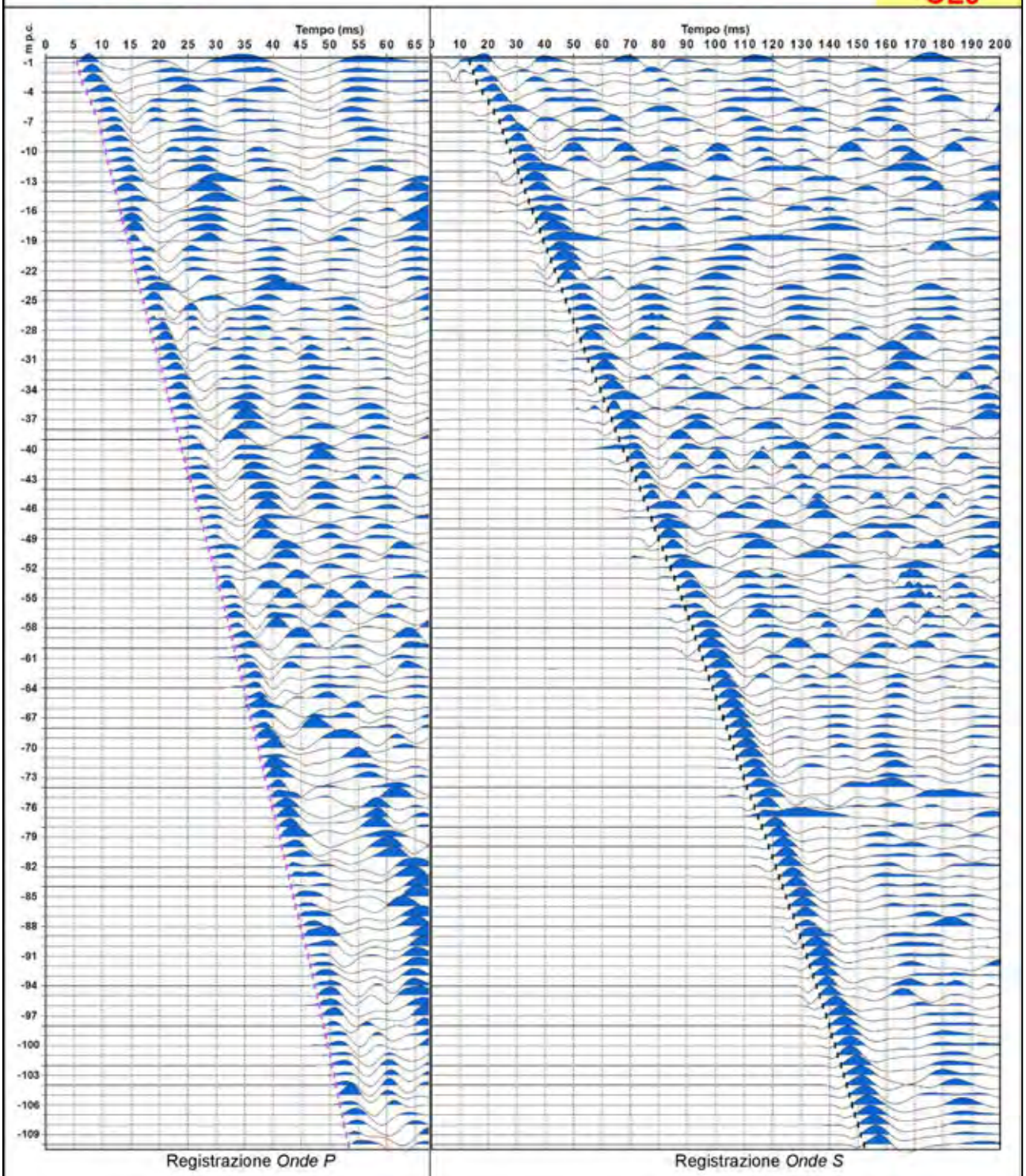
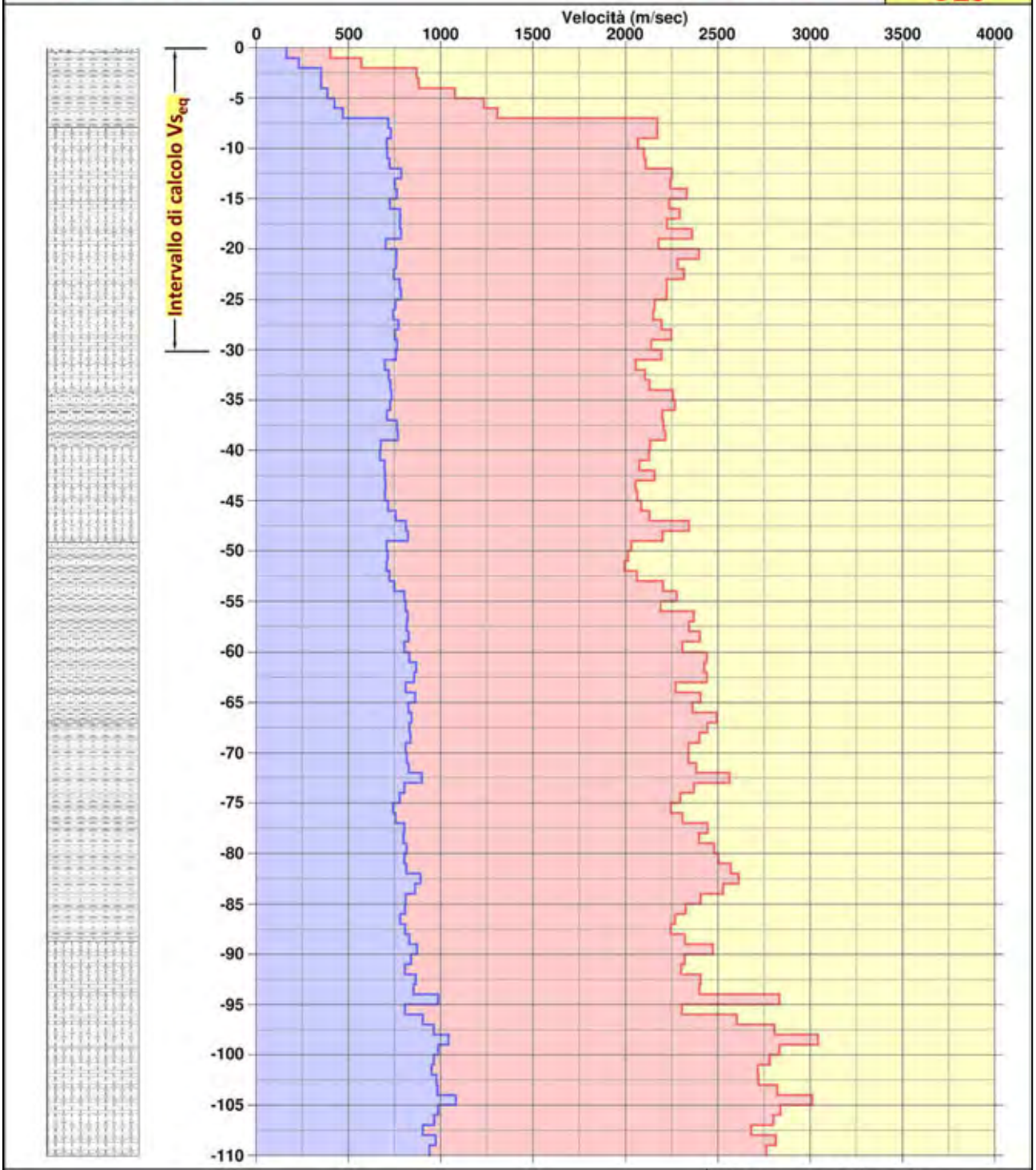


GRAFICO VELOCITÀ

DOWN HOLE

DH CL9



Velocità Onde VSH

Velocità Onde VP

Vs_{eq} = 558 m/sec

H_{rif} = 30.0 m

Classificazione sismica del suolo di fondazione:

Categoria B

TABELLA PARAMETRI — DOWN HOLE — DH CL9 (1/3)

Prof. (m)	TP letti (ms)	TP corretti (ms)	VP (m/s)	TSH letti (ms)	TSH corretti (ms)	VSH (m/s)	VP/VSH	Rapporto di Poisson	Mod. taglio G Gdin (MPa)	Mod. Young E Edin (MPa)	Mod. Comp. Vol. Ev (MPa)	Densità (t/m3)
0			403			165	2.44	0.40	5.0E+01	1.4E+02	2.3E+03	1.80
-1	5.549	2.481	403	13.552	6.061	165	2.44	0.40	5.0E+01	1.4E+02	2.3E+03	1.80
-2	5.986	4.233	571	14.693	10.390	231	2.47	0.40	9.8E+01	2.8E+02	4.7E+03	1.80
-3	6.467	5.381	871	15.891	13.222	353	2.47	0.40	2.3E+02	6.4E+02	1.1E+04	1.80
-4	7.285	6.516	881	17.950	16.055	353	2.50	0.40	2.3E+02	6.4E+02	1.1E+04	1.80
-5	8.017	7.444	1078	20.075	18.639	387	2.79	0.43	2.8E+02	8.1E+02	1.8E+04	1.85
-6	8.700	8.253	1235	22.128	20.992	425	2.91	0.43	3.4E+02	9.8E+02	2.4E+04	1.85
-7	9.379	9.018	1308	24.040	23.115	471	2.78	0.43	4.2E+02	1.2E+03	2.7E+04	1.85
-8	9.770	9.478	2172	25.264	24.510	717	3.03	0.44	1.0E+03	2.9E+03	7.8E+04	1.90
-9	10.181	9.939	2172	26.509	25.878	731	2.97	0.44	1.0E+03	3.0E+03	7.8E+04	1.90
-10	10.629	10.422	2068	27.829	27.289	709	2.92	0.43	9.8E+02	2.8E+03	7.0E+04	1.90
-11	11.077	10.899	2099	29.165	28.695	711	2.95	0.44	9.8E+02	2.8E+03	7.2E+04	1.90
-12	11.530	11.373	2109	30.491	30.076	724	2.91	0.43	1.0E+03	2.9E+03	7.3E+04	1.90
-13	11.956	11.817	2252	31.716	31.347	787	2.86	0.43	1.2E+03	3.4E+03	8.2E+04	1.90
-14	12.387	12.263	2241	33.010	32.678	751	2.98	0.44	1.1E+03	3.1E+03	8.3E+04	1.90
-15	12.804	12.692	2332	34.290	33.989	763	3.06	0.44	1.1E+03	3.3E+03	9.0E+04	1.90
-16	13.241	13.139	2238	35.644	35.368	725	3.09	0.44	1.0E+03	2.9E+03	8.3E+04	1.90
-17	13.668	13.575	2294	36.902	36.649	781	2.94	0.43	1.2E+03	3.4E+03	8.6E+04	1.90
-18	14.111	14.024	2224	38.164	37.931	780	2.85	0.43	1.2E+03	3.4E+03	8.0E+04	1.90
-19	14.528	14.448	2360	39.420	39.203	786	3.00	0.44	1.2E+03	3.4E+03	9.2E+04	1.90
-20	14.981	14.907	2178	40.828	40.626	703	3.10	0.44	9.6E+02	2.8E+03	7.9E+04	1.90
-21	15.393	15.324	2398	42.129	41.940	761	3.15	0.44	1.1E+03	3.2E+03	9.6E+04	1.90
-22	15.827	15.762	2283	43.436	43.257	759	3.01	0.44	1.1E+03	3.2E+03	8.6E+04	1.90
-23	16.255	16.194	2317	44.766	44.598	746	3.11	0.44	1.1E+03	3.1E+03	9.0E+04	1.90
-24	16.701	16.644	2223	46.040	45.881	779	2.85	0.43	1.2E+03	3.4E+03	8.0E+04	1.90
-25	17.148	17.093	2223	47.304	47.154	786	2.83	0.43	1.2E+03	3.4E+03	8.0E+04	1.90
-26	17.609	17.557	2158	48.621	48.478	755	2.86	0.43	1.1E+03	3.2E+03	7.6E+04	1.90
-27	18.071	18.022	2151	49.960	49.824	743	2.90	0.43	1.1E+03	3.1E+03	7.5E+04	1.90
-28	18.524	18.477	2195	51.251	51.121	771	2.85	0.43	1.2E+03	3.3E+03	7.8E+04	1.90
-29	18.967	18.922	2248	52.574	52.449	753	2.99	0.44	1.1E+03	3.2E+03	8.3E+04	1.90
-30	19.432	19.389	2140	53.877	53.758	764	2.80	0.43	1.1E+03	3.2E+03	7.4E+04	1.90
-31	19.886	19.845	2195	55.192	55.077	758	2.90	0.43	1.1E+03	3.2E+03	7.9E+04	1.90
-32	20.371	20.332	2055	56.620	56.510	698	2.94	0.43	9.5E+02	2.7E+03	6.9E+04	1.90
-33	20.845	20.807	2105	58.007	57.901	719	2.93	0.43	1.0E+03	3.0E+03	7.4E+04	1.95
-34	21.313	21.276	2129	59.375	59.272	729	2.92	0.43	1.1E+03	3.0E+03	7.6E+04	1.95
-35	21.755	21.719	2257	60.736	60.637	733	3.08	0.44	1.1E+03	3.1E+03	8.7E+04	1.95
-36	22.194	22.160	2268	62.106	62.010	728	3.12	0.44	1.1E+03	3.0E+03	8.8E+04	1.95
-37	22.648	22.615	2200	63.511	63.419	710	3.10	0.44	1.0E+03	2.9E+03	8.3E+04	1.95
-38	23.100	23.068	2205	64.819	64.729	763	2.89	0.43	1.2E+03	3.3E+03	8.1E+04	1.95
-39	23.551	23.520	2216	66.118	66.031	768	2.89	0.43	1.2E+03	3.4E+03	8.2E+04	1.95
-40	24.018	23.988	2133	67.597	67.513	675	3.16	0.44	9.1E+02	2.6E+03	7.8E+04	1.95
-41	24.487	24.458	2128	69.085	69.003	671	3.17	0.44	9.0E+02	2.6E+03	7.8E+04	1.95
-42	24.969	24.940	2075	70.518	70.438	697	2.98	0.44	9.7E+02	2.8E+03	7.3E+04	1.95
-43	25.431	25.404	2158	71.946	71.869	699	3.09	0.44	9.7E+02	2.8E+03	8.0E+04	1.95
-44	25.917	25.891	2054	73.371	73.295	701	2.93	0.43	9.8E+02	2.8E+03	7.1E+04	1.95
-45	26.401	26.375	2064	74.799	74.726	699	2.95	0.44	9.7E+02	2.8E+03	7.2E+04	1.95
-46	26.880	26.855	2085	76.196	76.124	715	2.92	0.43	1.0E+03	2.9E+03	7.3E+04	1.95
-47	27.349	27.324	2129	77.515	77.445	757	2.81	0.43	1.1E+03	3.3E+03	7.5E+04	1.95
-48	27.775	27.751	2343	78.745	78.677	812	2.89	0.43	1.3E+03	3.8E+03	9.2E+04	1.95
-49	28.229	28.206	2201	79.958	79.892	823	2.67	0.42	1.3E+03	3.8E+03	7.8E+04	1.95
-50	28.721	28.698	2032	81.371	81.306	707	2.87	0.43	1.0E+03	2.9E+03	6.9E+04	1.95

TABELLA PARAMETRI DOWN HOLE **DH CL9 (2/3)**

Prof. (m)	TP letti (ms)	TP corretti (ms)	VP (m/s)	TSH letti (ms)	TSH corretti (ms)	VSH (m/s)	VP/VSH	Rapporto di Poisson	Mod. taglio G Gdin (MPa)	Mod. Young E Edin (MPa)	Mod. Comp. Vol. Ev (MPa)	Densità (t/m3)
-50	28.721	28.698	2032	81.371	81.306	707	2.87	0.43	1.0E+03	2.9E+03	6.9E+04	1.95
-51	29.217	29.194	2014	82.772	82.709	713	2.82	0.43	1.0E+03	2.9E+03	6.7E+04	1.95
-52	29.718	29.696	1994	84.186	84.123	707	2.82	0.43	1.0E+03	2.8E+03	6.6E+04	1.95
-53	30.202	30.181	2061	85.567	85.506	723	2.85	0.43	1.0E+03	3.0E+03	7.1E+04	1.95
-54	30.656	30.635	2203	86.901	86.842	749	2.94	0.43	1.1E+03	3.2E+03	8.2E+04	1.95
-55	31.094	31.074	2278	88.145	88.087	803	2.84	0.43	1.3E+03	3.7E+03	8.6E+04	1.95
-56	31.551	31.530	2190	89.377	89.320	811	2.70	0.42	1.3E+03	3.7E+03	7.8E+04	1.95
-57	31.972	31.952	2371	90.594	90.538	821	2.89	0.43	1.4E+03	3.9E+03	9.6E+04	2.00
-58	32.398	32.379	2343	91.816	91.762	817	2.87	0.43	1.4E+03	3.9E+03	9.4E+04	2.00
-59	32.814	32.795	2403	93.025	92.971	827	2.91	0.43	1.4E+03	4.0E+03	9.9E+04	2.00
-60	33.247	33.228	2308	94.269	94.216	803	2.87	0.43	1.3E+03	3.8E+03	9.1E+04	2.00
-61	33.656	33.638	2441	95.471	95.420	831	2.94	0.43	1.4E+03	4.0E+03	1.0E+05	2.00
-62	34.068	34.050	2427	96.622	96.572	868	2.80	0.43	1.5E+03	4.4E+03	1.0E+05	2.00
-63	34.477	34.460	2441	97.788	97.739	857	2.85	0.43	1.5E+03	4.3E+03	1.0E+05	2.00
-64	34.917	34.900	2271	99.020	98.972	811	2.80	0.43	1.3E+03	3.8E+03	8.7E+04	2.00
-65	35.332	35.316	2407	100.178	100.131	863	2.79	0.43	1.5E+03	4.3E+03	9.8E+04	2.00
-66	35.755	35.739	2363	101.388	101.341	826	2.86	0.43	1.4E+03	4.0E+03	9.5E+04	2.00
-67	36.155	36.139	2496	102.573	102.528	843	2.96	0.44	1.5E+03	4.2E+03	1.1E+05	2.00
-68	36.565	36.549	2443	103.776	103.731	831	2.94	0.43	1.4E+03	4.0E+03	1.0E+05	2.00
-69	36.981	36.965	2401	104.970	104.926	837	2.87	0.43	1.4E+03	4.1E+03	9.9E+04	2.00
-70	37.408	37.392	2341	106.202	106.159	811	2.89	0.43	1.3E+03	3.8E+03	9.4E+04	2.00
-71	37.835	37.820	2341	107.425	107.383	817	2.87	0.43	1.4E+03	3.9E+03	9.4E+04	2.00
-72	38.254	38.239	2383	108.634	108.592	827	2.88	0.43	1.4E+03	4.0E+03	9.7E+04	2.00
-73	38.644	38.629	2564	109.745	109.704	899	2.85	0.43	1.7E+03	4.7E+03	1.1E+05	2.00
-74	39.065	39.051	2371	110.990	110.950	803	2.95	0.44	1.3E+03	3.8E+03	9.7E+04	2.00
-75	39.501	39.487	2296	112.275	112.235	778	2.95	0.44	1.2E+03	3.6E+03	9.1E+04	2.00
-76	39.946	39.932	2246	113.620	113.581	743	3.02	0.44	1.1E+03	3.2E+03	8.8E+04	2.00
-77	40.378	40.365	2309	114.942	114.904	756	3.05	0.44	1.2E+03	3.4E+03	9.3E+04	2.00
-78	40.787	40.774	2445	116.187	116.149	803	3.04	0.44	1.3E+03	3.8E+03	1.0E+05	2.00
-79	41.204	41.191	2398	117.438	117.400	799	3.00	0.44	1.3E+03	3.8E+03	1.0E+05	2.00
-80	41.607	41.594	2481	118.663	118.626	816	3.04	0.44	1.4E+03	3.9E+03	1.1E+05	2.00
-81	42.006	41.993	2503	119.908	119.871	803	3.12	0.44	1.3E+03	3.8E+03	1.1E+05	2.00
-82	42.395	42.382	2571	121.136	121.100	814	3.16	0.44	1.4E+03	3.9E+03	1.2E+05	2.00
-83	42.778	42.765	2612	122.258	122.222	891	2.93	0.43	1.6E+03	4.7E+03	1.2E+05	2.00
-84	43.173	43.161	2529	123.417	123.382	862	2.93	0.43	1.5E+03	4.4E+03	1.1E+05	2.00
-85	43.588	43.576	2406	124.650	124.615	811	2.97	0.44	1.3E+03	3.9E+03	1.0E+05	2.00
-86	44.018	44.006	2326	125.888	125.854	807	2.88	0.43	1.3E+03	3.8E+03	9.3E+04	2.00
-87	44.459	44.447	2268	127.168	127.135	781	2.90	0.43	1.2E+03	3.6E+03	8.8E+04	2.00
-88	44.904	44.893	2245	128.407	128.374	807	2.78	0.43	1.3E+03	3.8E+03	8.5E+04	2.00
-89	45.335	45.323	2322	129.610	129.577	831	2.79	0.43	1.4E+03	4.0E+03	9.1E+04	2.00
-90	45.739	45.728	2473	130.755	130.723	873	2.83	0.43	1.6E+03	4.5E+03	1.0E+05	2.00
-91	46.170	46.158	2321	131.947	131.915	839	2.77	0.42	1.4E+03	4.1E+03	9.1E+04	2.00
-92	46.604	46.593	2302	133.187	133.155	806	2.86	0.43	1.3E+03	3.8E+03	9.0E+04	2.00
-93	47.019	47.008	2407	134.342	134.311	865	2.78	0.43	1.5E+03	4.4E+03	9.8E+04	2.00
-94	47.436	47.425	2401	135.514	135.484	853	2.81	0.43	1.5E+03	4.2E+03	9.8E+04	2.00
-95	47.788	47.778	2834	136.527	136.497	987	2.87	0.43	2.1E+03	6.0E+03	1.4E+05	2.10
-96	48.222	48.211	2305	137.766	137.736	807	2.86	0.43	1.4E+03	4.0E+03	9.5E+04	2.10
-97	48.606	48.596	2603	138.873	138.844	903	2.88	0.43	1.7E+03	5.0E+03	1.2E+05	2.10
-98	48.962	48.952	2807	139.911	139.882	963	2.91	0.43	2.0E+03	5.7E+03	1.4E+05	2.10
-99	49.291	49.281	3043	140.869	140.841	1043	2.92	0.43	2.3E+03	6.7E+03	1.7E+05	2.10
-100	49.643	49.633	2834	141.882	141.854	987	2.87	0.43	2.1E+03	6.0E+03	1.4E+05	2.10

TABELLA PARAMETRI — DOWN HOLE — DH CL9 (3/3)

Prof. (m)	TP letti (ms)	TP corretti (ms)	VP (m/s)	TSH letti (ms)	TSH corretti (ms)	VSH (m/s)	VP/VSH	Rapporto di Poisson	Mod. taglio G Gdin (MPa)	Mod. Young E Edin (MPa)	Mod. Comp. Vol. Ev (MPa)	Densità (t/m3)
100	49.643	49.633	2834	141.882	141.854	987	2.87	0.43	2.1E+03	6.0E+03	1.4E+05	2.10
101	50.003	49.993	2781	142.920	142.892	963	2.89	0.43	2.0E+03	5.7E+03	1.4E+05	2.10
102	50.371	50.361	2717	143.971	143.944	951	2.86	0.43	1.9E+03	5.6E+03	1.3E+05	2.10
103	50.738	50.729	2721	144.994	144.966	978	2.78	0.43	2.1E+03	5.9E+03	1.3E+05	2.10
104	51.092	51.083	2823	146.011	145.984	983	2.87	0.43	2.1E+03	5.9E+03	1.4E+05	2.10
105	51.424	51.415	3011	146.934	146.907	1083	2.78	0.43	2.5E+03	7.2E+03	1.6E+05	2.10
106	51.776	51.767	2839	147.946	147.920	987	2.88	0.43	2.1E+03	6.0E+03	1.4E+05	2.10
107	52.133	52.124	2801	148.982	148.956	965	2.90	0.43	2.0E+03	5.7E+03	1.4E+05	2.10
108	52.506	52.497	2681	150.090	150.064	903	2.97	0.44	1.7E+03	5.0E+03	1.3E+05	2.10
109	52.861	52.852	2815	151.116	151.091	974	2.89	0.43	2.0E+03	5.8E+03	1.4E+05	2.10
110	53.223	53.214	2763	152.181	152.155	939	2.94	0.43	1.9E+03	5.4E+03	1.4E+05	2.10

3 CARATTERIZZAZIONE SISMICA DEI SITI – DETERMINAZIONE PARAMETRO VS_{EQ}

La normativa D.M. 14.01.08 "Norme tecniche per le costruzioni" aggiornata con D.M. del 17 gennaio 2018, afferma che ai fini della definizione dell'azione sismica di progetto (punto 3.2.2), deve essere valutata l'influenza delle condizioni litologiche e morfologiche locali sulle caratteristiche del moto del suolo in superficie, mediante studi specifici di risposta sismica locale.

In alternativa, qualora le condizioni stratigrafiche e le proprietà dei terreni siano chiaramente riconducibili alle categorie definite nella Tab. 3.2.II, si può fare riferimento a un approccio semplificato che si basa sulla classificazione del sottosuolo in funzione dei valori della velocità di propagazione delle onde di taglio V_S.

I valori di V_S sono ottenuti mediante specifiche prove oppure, con giustificata motivazione e limitatamente all'approccio semplificato, sono valutati tramite relazioni empiriche di comprovata affidabilità con i risultati di altre prove in sito, quali ad esempio le prove penetrometriche dinamiche per i terreni a grana grossa e le prove penetrometriche statiche per i terreni a grana fine.

La classificazione del sottosuolo si effettua in base alle condizioni stratigrafiche ed ai valori della velocità equivalente di propagazione delle onde di taglio, $V_{S,eq}$ (in m/s), definita dall'espressione:

$$V_{S,eq} = \frac{H}{\sum_{i=1}^{N} \frac{h_i}{V_{S,i}}} \qquad [3.2.1]$$

con:

h_i spessore dell'i-esimo strato;
$V_{S,i}$ velocità delle onde di taglio nell'i-esimo strato;
N numero di strati;
H profondità del substrato, definito come quella formazione costituita da roccia o terreno molto rigido, caratterizzata da Vs non inferiore a 800 m/s.

Per le fondazioni superficiali, la profondità del substrato è riferita al piano d' imposta delle stesse, mentre per le fondazioni su pali è riferita alla testa dei pali. Nel caso di opere di sostegno di terreni naturali, la profondità è riferita alla testa dell'opera. Per muri di sostegno di terrapieni, la profondità è riferita al piano d'imposta della fondazione.

Per depositi con profondità H del substrato superiore a 30 m, la velocità equivalente delle onde di taglio $Vs_{,eq}$ è definita dal parametro Vs_{30}, ottenuto ponendo H=30 m nella precedente espressione e considerando le proprietà degli strati di terreno fino a tale profondità.

Le categorie di sottosuolo che permettono l'utilizzo dell'approccio semplificato sono definite in Tab. 3.2.II.

Tab. 3.2.II – *Categorie di sottosuolo che permettono l'utilizzo dell'approccio semplificato.*

Categoria	Caratteristiche sismiche del sottosuolo
A	*Ammassi rocciosi affioranti o terreni molto rigidi* caratterizzati da valori di velocità delle onde di taglio superiori a 800 m/s, eventualmente comprendenti in superficie terreni di caratteristiche meccaniche più scadenti con spessore massimo pari a 3 m.
B	*Rocce tenere e depositi di terreni a grana grossa molto addensati o terreni a grana fina molto consistenti*, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 360 m/s e 800 m/s.
C	*Depositi di terreni a grana grossa mediamente addensati o terreni a grana fina mediamente consistenti* con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 180 m/s e 360 m/s.
D	*Depositi di terreni a grana grossa scarsamente addensati o di terreni a grana fina scarsamente consistenti*, con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 100 e 180 m/s.
E	*Terreni con caratteristiche e valori di velocità equivalente riconducibili a quelle definite per le categorie C o D*, con profondità del substrato non superiore a 30 m.

Per queste cinque categorie di sottosuolo, le azioni sismiche sono definibili come descritto al § 3.2.3 delle NTC 2018.

Per qualsiasi condizione di sottosuolo non classificabile nelle categorie precedenti, è necessario predisporre specifiche analisi di risposta locale per la definizione delle azioni sismiche.

L'analisi dei dati relativi alla velocità delle onde di taglio (Vs) inerenti la prova Down-Hole eseguite, ha consentito quindi di definire la categoria sismica dei suoli:

Prova DH-CL9: valore **Vs_{eq}** pari a **558 m/s** (H_{rif}=da 0 a 30 m da p.c.) definisce un suolo di **Categoria B**

GEOTEC SPA

SOIL INVESTIGATIONS & LAND SURVEYING

Indagini geofisiche a supporto della Progettazione Definitiva di utilizzo idropotabile delle acque dell'invaso di Campolattaro (BN)

ELABORAZIONE PROVA DOWN HOLE

CL1bis

Marzo 2021

SOMMARIO

1 PREMESSA

Il presente rapporto illustra e sintetizza i risultati delle indagini geofisiche eseguite a supporto della Progettazione Definitiva di utilizzo idropotabile delle acque dell'invaso di Campolattaro (BN) sul sondaggio CL1bis.

Finalità dell'intervento è stata la caratterizzazione dal punto di vista sismico delle unità geolitologiche dei materiali carotati nei fori di sondaggio definendo un modello sismo-stratigrafico in termini di Vp, Vs e dei rispettivi moduli dinamici; l'elaborazione finale ha consentito inoltre la determinazione del parametro Vs_{eq} per la definizione della categoria sismica del suolo di fondazione ai sensi delle NTC 2018.

Sono state realizzate le seguenti indagini geofisiche:

- n. 1 prove sismiche in foro di tipo Down-Hole (**DH-CL1bis**) registrata nel foro di sondaggio **CL1bis** ad una profondità di 40.0.

Fig. 1 – Ubicazione planimetrica delle indagini sismiche di tipo Down-Hole.

2 PROVE SISMICHE IN FORO – DOWN HOLE

Per la definizione dei valori di Vp, Vs e Vs_{eq} ai sensi delle NTC 2018 e dei moduli dinamici dei terreni carotati, in corrispondenza del sondaggio **CL1bis** opportunamente attrezzato, è stata eseguita una prova Down-Hole denominata **DH-CL1bis**.

2.1 Acquisizione dati

La tecnica del Down-Hole consiste nel misurare i tempi di arrivo delle onde sismiche P e S, generate da una specifica sorgente a geofoni tridimensionali posti in un foro di sondaggio a profondità crescenti (Fig. 2).

Le onde di compressione (P) sono create con impulsi verticali generati da una massa battente agente su una piastra posta in prossimità del sondaggio.

Le onde di taglio (S), sono generate con impulsi orizzontali ottenuti battendo su lati opposti di due tavole rese solidali con il terreno dal peso del veicolo d'appoggio.

Fig. 2 – Schema prova Down-Hole.

Il sistema di ricezione si compone di un ricevitore, costituito da un contenitore cilindrico contenente una terna di trasduttori di velocità (geofoni) orientati secondo le componenti di una terna ortonormale in modo che uno sia orientato secondo la lunghezza del contenitore (trasduttore verticale) e gli altri ad esso perpendicolari (trasduttori orizzontali). I trasduttori devono possedere appropriate caratteristiche di frequenza e sensitività.

Fig. 3 – Componente ricettiva degli impulsi sismici della strumentazione.

La strumentazione si compone inoltre di un "trigger", dotato di sensore collegato al sistema di acquisizione dati che permette di far partire la registrazione del segnale sismico acquisito dai geofoni nell'istante in cui la sorgente viene attivata e parte la sollecitazione dinamica.

Il trigger è realizzato mediante un circuito elettrico che viene chiuso nell'istante in cui la massa battente (martello) colpisce la sorgente.

Il sistema di acquisizione e registrazione dei dati (sismografo) è composto da un sistema multicanale in grado di registrare su ciascun canale in forma digitale le forme d'onda, ed è collegato a ciascuno dei trasduttori del ricevitore e al sensore del trigger oltre che ad un pc portatile per la visualizzazione dei dati acquisiti.

2.2 Modalità operative

Le operazioni da seguire per l'esecuzione della prova Down-Hole sono le seguenti:

- si predispone il piano d'appoggio per le sorgenti togliendo le eventuali asperità rendendo la superficie liscia;
- il sistema di ricezione (ricevitore e relativi trasduttori) è inserito nel foro fino a raggiungere la profondità di prova facendo sì che uno dei due trasduttori orizzontali del ricevitore risulti parallelo all'asse della sorgente;
- il ricevitore viene assicurato alle pareti del tubo di rivestimento del sondaggio;
- la sorgente di onde SH viene generata energizzando sui lati opposti di due tavole rese solidali al terreno mediante il peso del veicolo di appoggio, mentre la sorgente di onde P si genera energizzando verticalmente su una piastra (Fig. 4), allo stesso tempo inizia la registrazione del segnale (trigger e ricevitori);

Fig. 4 – Energizzazione in onde P (a sinistra) e in onde S (a destra).

- eseguite le registrazioni, la profondità viene modificata traslando il sistema di ricezione di 1.0 m e la procedura ripetuta fino a coprire l'intera lunghezza del sondaggio.

2.3 Elaborazione e restituzione dei dati

Dai sismogrammi registrati sono stati "letti" i tempi di arrivo (picking) delle onde sismiche P e S, ad ogni intervallo di profondità raggiunto dal geofono. Il calcolo delle velocità sismiche è stato realizzato attraverso la misura della differenza di tempi fra posizioni differenti del geofono ed il punto di energizzazione.

Si specifica che in fase di elaborazione per quanto riguarda le Vs, sono stati analizzati solamente i film sismici dei "primi arrivi" migliori dal punto di vista qualitativo, inerenti uno solo dei due sensi di battitura.

Nei grafici, contenuti nei paragrafi 2.4 e **Errore. L'origine riferimento non è stata trovata.** sono visualizzati i sismogrammi acquisiti con il relativo "picking", l'andamento delle velocità sismiche Vp e Vs calcolate per ciascun intervallo di profondità e le tabelle di sintesi dei dati elaborati, unitamente ai moduli dinamici calcolati sulla base dei parametri sismici e degli specifici valori di peso di volume (y) delle litologie presenti. In dettaglio sono riportati:

- Velocità Onde P= Vp;
- Velocità Onde S= Vs;
- Rapporto Vp/Vs;
- Rapporto di Poisson σ;
- Modulo di taglio G din;
- Modulo di Young E din;
- Modulo di compressione Ev;
- Densità ρ.

2.4 Prova DH-CL1bis

Fig. 5 - Ubicazione territoriale della prova DH-CL1bis.

Commento

- In termini di velocità sismiche **Vp** si registrano valori progressivamente crescenti da 350 a 1300 m/s nei primi 6.0 m di spessore. Segue un marcato incremento di velocità con valori dell'ordine di 1700-1800m/s fino a -22.0m. Immediatamente al di sotto le velocità si riducono lievemente e solamente a partire da -26.0 m di profondità dal p.c. le velocità superano i 2400 m/s per raggiungere e superare i 3000 m/s ad oltre -34.0 m dal p.c. sino a fondo foro.
- In termini di velocità sismiche **Vs** si descrivono valori gradualmente crescenti da 150 a 360 m/s nei primi -6.0 m di profondità dal p.c. Al di sotto e fino -25.0 m dal p.c., le velocità si stabilizzano su valori dell'ordine di 500-600 m/s. Segue un marcato incremento dei valori di Vs fino a 700 m/s che raggiungono e superano 1000m/s in prossimità del fondo foro a partire da -35.0 m dal p.c..

SISMOGRAMMI

DOWN HOLE

DH CL1bis

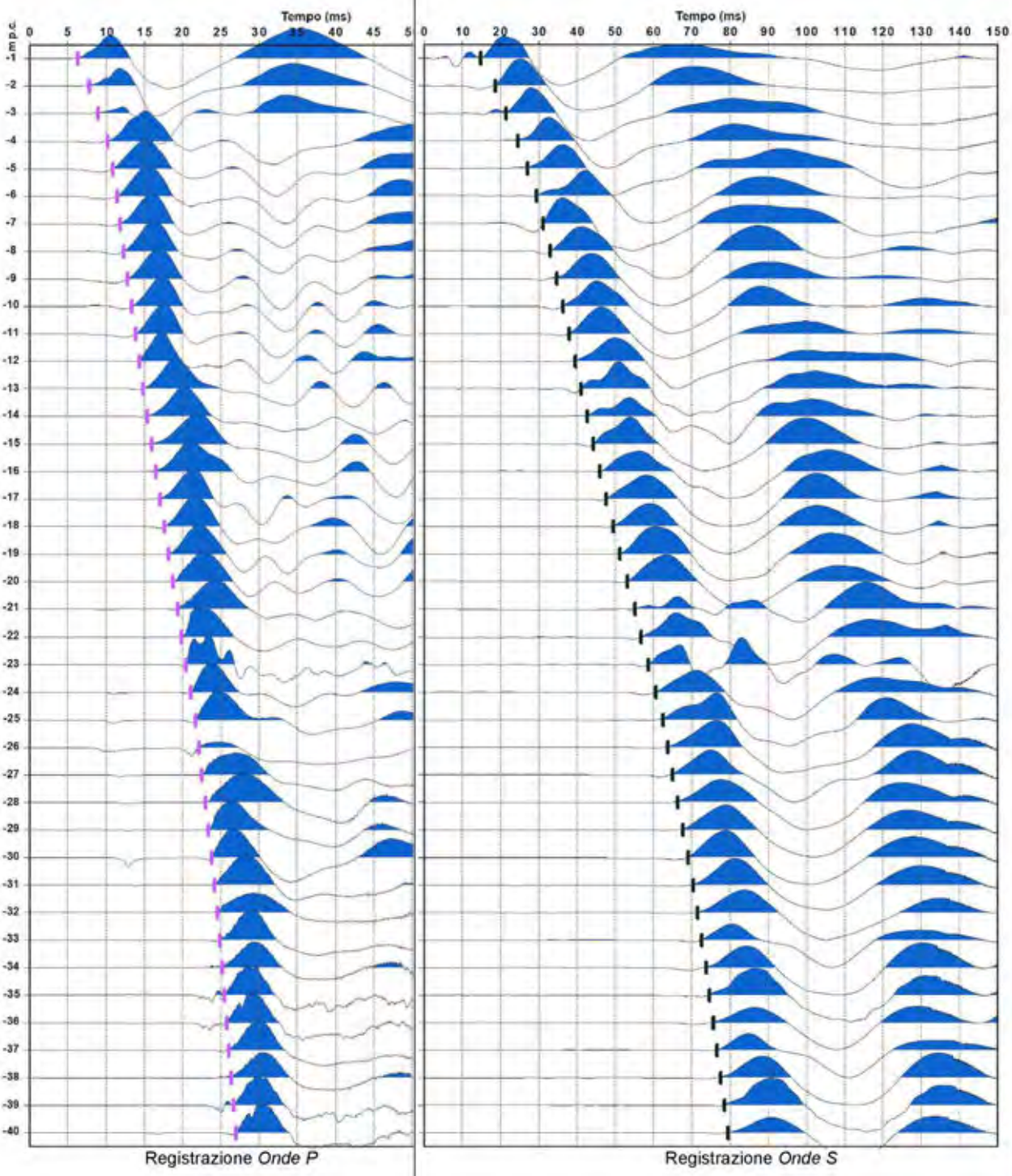
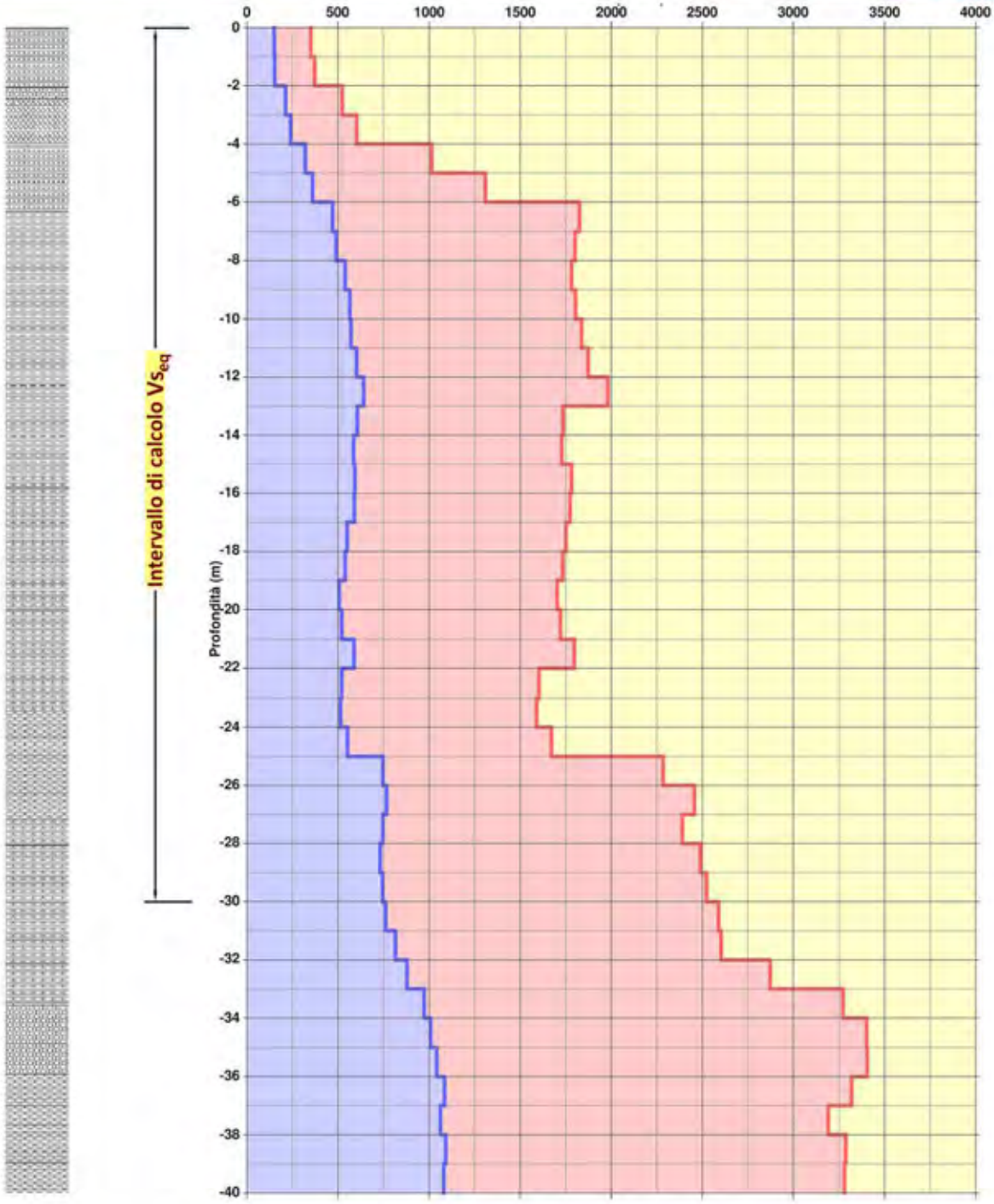


GRAFICO VELOCITÀ

DOWN HOLE

DH CL1bis



Velocità Onde VSH

Velocità Onde VP

Vs_{eq} = 435 m/sec

H_{rif} = 30.0 m

Classificazione sismica del suolo di fondazione:

Categoria B

TABELLA PARAMETRI — DOWN HOLE — **DH CL1bis**

Prof. (m)	TP letti (ms)	TP corretti (ms)	VP (m/s)	TSH letti (ms)	TSH corretti (ms)	VSH (m/s)	VP/VSH	Rapporto di Poisson	Mod. taglio G Gdin (MPa)	Mod. Young E Edin (MPa)	Mod. Comp. Vol. Ev (MPa)	Densità (t/m3)
0			351			151	2.32	0.39	4.2E+01	1.2E+02	1.7E+03	1.80
-1	6.371	2.849	351	14.808	6.623	151	2.32	0.39	4.2E+01	1.2E+02	1.7E+03	1.80
-2	7.841	5.544	371	18.609	13.158	153	2.42	0.40	4.3E+01	1.2E+02	2.0E+03	1.80
-3	8.962	7.456	523	21.457	17.853	213	2.46	0.40	8.3E+01	2.3E+02	3.9E+03	1.80
-4	10.191	9.115	603	24.600	22.003	241	2.50	0.40	1.1E+02	3.0E+02	5.3E+03	1.80
-5	10.879	10.101	1014	27.053	25.118	321	3.16	0.44	1.9E+02	5.6E+02	1.7E+04	1.85
-6	11.453	10.866	1308	29.397	27.888	361	3.62	0.46	2.5E+02	7.2E+02	2.9E+04	1.85
-7	11.870	11.414	1825	31.212	30.011	471	3.87	0.46	4.3E+02	1.3E+03	5.9E+04	1.90
-8	12.337	11.969	1801	33.034	32.048	491	3.67	0.46	4.7E+02	1.4E+03	5.7E+04	1.90
-9	12.836	12.530	1781	34.723	33.896	541	3.29	0.45	5.7E+02	1.6E+03	5.4E+04	1.90
-10	13.344	13.085	1803	36.369	35.663	566	3.19	0.45	6.2E+02	1.8E+03	5.5E+04	1.90
-11	13.853	13.630	1836	38.022	37.408	573	3.20	0.45	6.4E+02	1.8E+03	5.7E+04	1.90
-12	14.359	14.164	1872	39.606	39.067	603	3.10	0.44	7.1E+02	2.0E+03	5.9E+04	1.90
-13	14.841	14.669	1981	41.102	40.624	642	3.09	0.44	8.0E+02	2.3E+03	6.5E+04	1.90
-14	15.400	15.245	1735	42.701	42.272	607	2.86	0.43	7.2E+02	2.0E+03	4.9E+04	1.90
-15	15.964	15.824	1727	44.364	43.975	587	2.94	0.43	6.7E+02	1.9E+03	4.9E+04	1.90
-16	16.513	16.385	1781	46.017	45.662	593	3.00	0.44	6.8E+02	2.0E+03	5.2E+04	1.90
-17	17.066	16.949	1773	47.680	47.354	591	3.00	0.44	6.8E+02	1.9E+03	5.2E+04	1.90
-18	17.628	17.521	1751	49.471	49.169	551	3.18	0.45	5.9E+02	1.7E+03	5.2E+04	1.90
-19	18.198	18.098	1733	51.299	51.017	541	3.20	0.45	5.7E+02	1.6E+03	5.1E+04	1.90
-20	18.778	18.685	1703	53.254	52.989	507	3.36	0.45	5.0E+02	1.4E+03	5.0E+04	1.90
-21	19.353	19.266	1721	55.157	54.909	521	3.30	0.45	5.3E+02	1.5E+03	5.0E+04	1.90
-22	19.904	19.823	1796	56.840	56.607	589	3.05	0.44	6.7E+02	1.9E+03	5.4E+04	1.90
-23	20.524	20.446	1603	58.747	58.526	521	3.08	0.44	5.1E+02	1.5E+03	4.2E+04	1.85
-24	21.149	21.076	1589	60.677	60.468	515	3.09	0.44	5.0E+02	1.4E+03	4.1E+04	1.85
-25	21.743	21.674	1671	62.475	62.276	553	3.02	0.44	5.8E+02	1.7E+03	4.5E+04	1.85
-26	22.177	22.112	2284	63.801	63.613	748	3.05	0.44	1.1E+03	3.1E+03	8.7E+04	1.90
-27	22.581	22.519	2457	65.093	64.915	768	3.20	0.45	1.1E+03	3.3E+03	1.0E+05	1.90
-28	22.996	22.938	2389	66.421	66.252	748	3.19	0.45	1.1E+03	3.2E+03	9.9E+04	1.95
-29	23.395	23.340	2488	67.779	67.618	732	3.40	0.45	1.0E+03	3.0E+03	1.1E+05	1.90
-30	23.789	23.736	2523	69.110	68.957	747	3.38	0.45	1.1E+03	3.2E+03	1.1E+05	1.95
-31	24.172	24.122	2589	70.413	70.267	763	3.39	0.45	1.2E+03	3.4E+03	1.2E+05	1.95
-32	24.554	24.506	2603	71.631	71.491	817	3.19	0.45	1.3E+03	3.8E+03	1.2E+05	1.95
-33	24.900	24.854	2873	72.764	72.630	878	3.27	0.45	1.6E+03	4.6E+03	1.5E+05	2.00
-34	25.204	25.160	3271	73.787	73.660	971	3.37	0.45	1.9E+03	5.6E+03	1.9E+05	2.00
-35	25.496	25.454	3400	74.775	74.653	1007	3.38	0.45	2.2E+03	6.3E+03	2.2E+05	2.10
-36	25.788	25.748	3403	75.730	75.614	1041	3.27	0.45	2.3E+03	6.7E+03	2.2E+05	2.10
-37	26.088	26.049	3318	76.648	76.536	1084	3.06	0.44	2.5E+03	7.3E+03	2.0E+05	2.10
-38	26.400	26.363	3189	77.585	77.478	1062	3.00	0.44	2.4E+03	7.0E+03	1.9E+05	2.10
-39	26.702	26.667	3286	78.498	78.394	1091	3.01	0.44	2.6E+03	7.3E+03	2.0E+05	2.10
-40	27.006	26.972	3278	79.420	79.321	1079	3.04	0.44	2.5E+03	7.2E+03	2.0E+05	2.10

3 CARATTERIZZAZIONE SISMICA DEI SITI – DETERMINAZIONE PARAMETRO VS_{EQ}

La normativa D.M. 14.01.08 "Norme tecniche per le costruzioni" aggiornata con D.M. del 17 gennaio 2018, afferma che ai fini della definizione dell'azione sismica di progetto (punto 3.2.2), deve essere valutata l'influenza delle condizioni litologiche e morfologiche locali sulle caratteristiche del moto del suolo in superficie, mediante studi specifici di risposta sismica locale.

In alternativa, qualora le condizioni stratigrafiche e le proprietà dei terreni siano chiaramente riconducibili alle categorie definite nella Tab. 3.2.II, si può fare riferimento a un approccio semplificato che si basa sulla classificazione del sottosuolo in funzione dei valori della velocità di propagazione delle onde di taglio V_S.

I valori di V_S sono ottenuti mediante specifiche prove oppure, con giustificata motivazione e limitatamente all'approccio semplificato, sono valutati tramite relazioni empiriche di comprovata affidabilità con i risultati di altre prove in sito, quali ad esempio le prove penetrometriche dinamiche per i terreni a grana grossa e le prove penetrometriche statiche per i terreni a grana fine.

La classificazione del sottosuolo si effettua in base alle condizioni stratigrafiche ed ai valori della velocità equivalente di propagazione delle onde di taglio, $V_{S,eq}$ (in m/s), definita dall'espressione:

$$V_{S,eq} = \frac{H}{\sum_{i=1}^{N} \frac{h_i}{V_{S,i}}} \qquad [3.2.1]$$

con:

h_i	spessore dell'i-esimo strato;
$V_{S,i}$	velocità delle onde di taglio nell'i-esimo strato;
N	numero di strati;
H	profondità del substrato, definito come quella formazione costituita da roccia o terreno molto rigido, caratterizzata da Vs non inferiore a 800 m/s.

Per le fondazioni superficiali, la profondità del substrato è riferita al piano d' imposta delle stesse, mentre per le fondazioni su pali è riferita alla testa dei pali. Nel caso di opere di sostegno di terreni naturali, la profondità è riferita alla testa dell'opera. Per muri di sostegno di terrapieni, la profondità è riferita al piano d'imposta della fondazione.

Per depositi con profondità H del substrato superiore a 30 m, la velocità equivalente delle onde di taglio $Vs_{,eq}$ è definita dal parametro Vs_{30}, ottenuto ponendo H=30 m nella precedente espressione e considerando le proprietà degli strati di terreno fino a tale profondità.

Le categorie di sottosuolo che permettono l'utilizzo dell'approccio semplificato sono definite in Tab. 3.2.II.

Tab. 3.2.II – *Categorie di sottosuolo che permettono l'utilizzo dell'approccio semplificato.*

Categoria	Caratteristiche sismiche del sottosuolo
A	*Ammassi rocciosi affioranti o terreni molto rigidi* caratterizzati da valori di velocità delle onde di taglio superiori a 800 m/s, eventualmente comprendenti in superficie terreni di caratteristiche meccaniche più scadenti con spessore massimo pari a 3 m.
B	*Rocce tenere e depositi di terreni a grana grossa molto addensati o terreni a grana fina molto consistenti*, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 360 m/s e 800 m/s.
C	*Depositi di terreni a grana grossa mediamente addensati o terreni a grana fina mediamente consistenti* con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 180 m/s e 360 m/s.
D	*Depositi di terreni a grana grossa scarsamente addensati o di terreni a grana fina scarsamente consistenti*, con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da valori di velocità equivalente compresi tra 100 e 180 m/s.
E	*Terreni con caratteristiche e valori di velocità equivalente riconducibili a quelle definite per le categorie C o D*, con profondità del substrato non superiore a 30 m.

Per queste cinque categorie di sottosuolo, le azioni sismiche sono definibili come descritto al § 3.2.3 delle NTC 2018.

Per qualsiasi condizione di sottosuolo non classificabile nelle categorie precedenti, è necessario predisporre specifiche analisi di risposta locale per la definizione delle azioni sismiche.

L'analisi dei dati relativi alla velocità delle onde di taglio (Vs) inerenti la prova Down-Hole eseguita, ha consentito quindi di definire la categoria sismica del suolo:

Prova DH-CL1bis: valore **Vs_{eq}** pari a **435 m/s** (H_{rif}=da 0 a 30 m da p.c.) definisce un suolo di **Categoria B**

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COMMITTENTE : VIANINI LAVORI S.P.A.

PROGETTO : ATTIVITA' DI COLLABORAZIONE ALLE ATTIVITA' DI PROGETTAZIONE DEFINITIVA CONCERNENTI L'INTERVENTO DI UTILIZZO IDROPOTABILE DELLE ACQUE DELL'INVASO DELL'INVASO DI CAMPOLATTARO

Allegato: IG02	INDAGINI GEOGNOSTICHE
	Prove in foro

Rev.	Emissione	Redatto	Approvato	Responsabile di sito
00	01/2021	C. Brunelli	C. Scasserra	C. Brunelli

Ministero delle Infrastrutture - **Concessione Settore C**
Indagini geognostiche, prelievo di campioni e prove in sito
Circolare LL.PP. n. 7619 del 08/09/2010
Decreto n. 156 del 19/04/2011

Il Direttore di Laboratorio
Dott. Geol. Carlo Scasserra

Allegato IG02-A

Prove di permeabilità *Lugeon*

Sondaggio CL-5

LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-5** **COD. PROVA:** **LU_01**

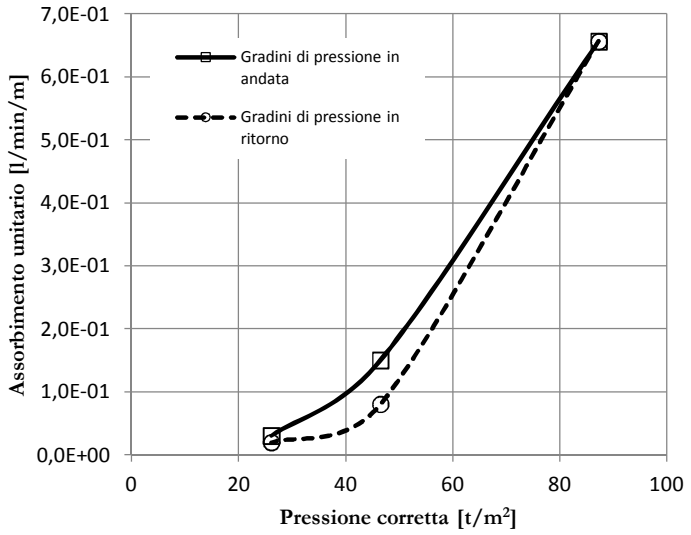
DATA: 06/10/2020 **TRATTO di PROVA:** **da m:** 89,4 **a m:** 92,7

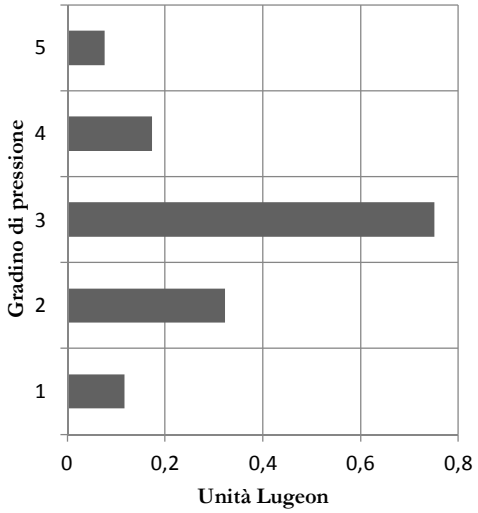
diametro foro	**d =**	0,101	***m***	altezza manometro	**h_m=**	0,80	***m dal p.c.***
lunghezza tratto prov:	**L =**	3,3	***m***	dislivello	**h=**	91,85	***m***
profondità falda	**z_w =**	5,7	***m dal p.c.***	coefficiente di forma	**C_L =**	4,96	***m***

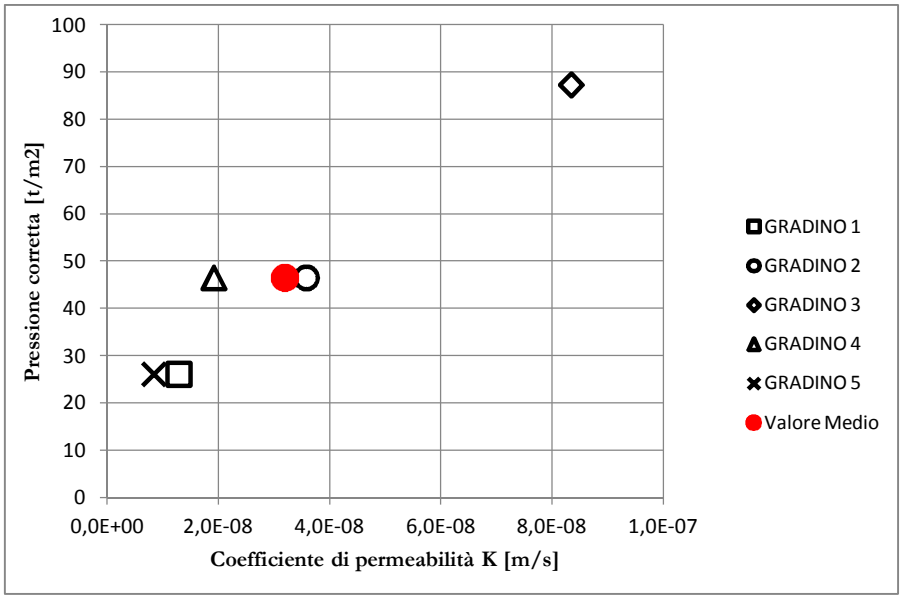
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	26,08982918	2	0,60	0,20	0,03	1,67E-06	1,29E-08	0,116
			4	0,80					
			6	0,30					
			8	0,20					
			10	0,10					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
2	40,7796584	46,47965836	2	1,20	0,99	0,15	8,25E-06	3,58E-08	0,323
			4	1,80					
			6	2,70					
			8	3,10					
			10	1,10					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
3	81,5593167	87,25931672	2	3,80	4,33	0,66	3,61E-05	8,34E-08	0,752
			4	4,10					
			6	4,10					
			8	4,70					
			10	4,40					
			12	4,40					
			14	4,60					
			16	4,70					
			18	4,20					
			20	4,30					
4	40,7796584	46,47965836	2	1,80	0,53	0,08	4,42E-06	1,92E-08	0,173
			4	1,90					
			6	1,60					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
5	20,3898292	26,08982918	2	0,30	0,13	0,02	1,08E-06	8,38E-09	0,075
			4	1,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-5**	**COD. PROVA:**	**LU_01**				
DATA:	06/10/2020	**TRATTO di PROVA:**	**da m:**	89,4	**a m:**	92,7	

diametro foro	**d =**	0,101	***m***	altezza manometro	**h_m=**	0,80	***m dal p.c.***
lunghezza tratto prov	**L =**	3,3	***m***	dislivello	**h=**	91,85	***m***
profondità falda	**z_w =**	5,7	***m dal p.c.***	coefficiente di forma	**C_L =**	4,96	***m***







LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-5** **COD. PROVA:** **LU_02**

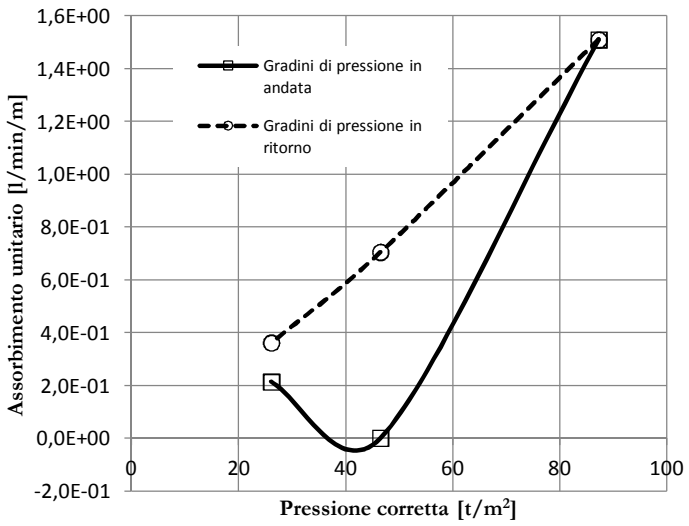
DATA: 08/10/2020 **TRATTO di PROVA:** **da m:** 102 **a m:** 103,15

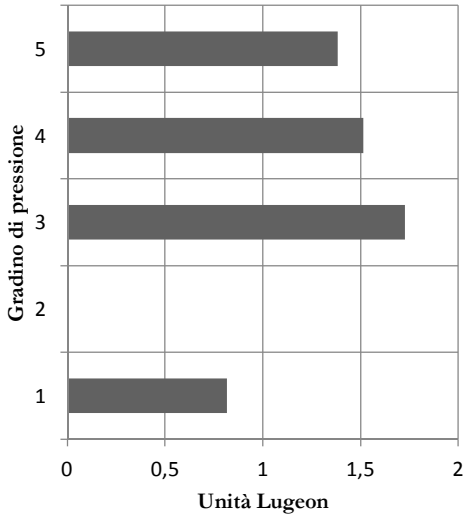
diametro foro	**d =**	0,101	*m*	altezza manometro	h_m=	0,50	*m dal p.c.*
lunghezza tratto prov:	**L =**	1,15	*m*	dislivello	**h=**	103,08	*m*
profondità falda	z_w =	5,7	*m dal p.c.*	coefficiente di forma	C_L =	2,30	*m*

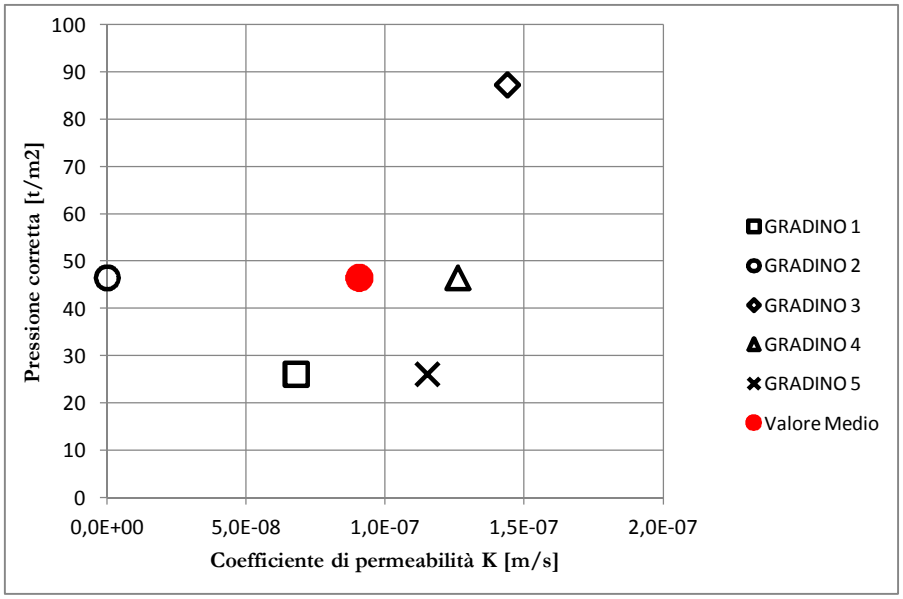
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	26,08982918	2	1,80	0,49	0,21	4,08E-06	6,80E-08	0,817
			4	1,50					
			6	1,30					
			8	0,30					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
2	40,7796584	46,47965836	2	0,00	0,00	0,00	0,00E+00	0,00E+00	0,000
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
3	81,5593167	87,25931672	2	1,50	3,47	1,51	2,89E-05	1,44E-07	1,729
			4	6,10					
			6	5,20					
			8	4,10					
			10	3,60					
			12	3,20					
			14	3,00					
			16	2,30					
			18	2,80					
			20	2,90					
4	40,7796584	46,47965836	2	1,30	1,62	0,70	1,35E-05	1,26E-07	1,515
			4	2,20					
			6	1,90					
			8	0,10					
			10	2,50					
			12	2,40					
			14	2,10					
			16	0,90					
			18	2,80					
			20	0,00					
5	20,3898292	26,08982918	2	0,00	0,83	0,36	6,92E-06	1,15E-07	1,383
			4	1,70					
			6	0,80					
			8	1,10					
			10	0,70					
			12	1,10					
			14	0,90					
			16	1,00					
			18	0,60					
			20	0,40					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-5**	**COD. PROVA:**	**LU_02**				
DATA:	08/10/2020	**TRATTO di PROVA:**	**da m:**	102	**a m:**	103,15	

diametro foro	**d =**	0,101	***m***	altezza manometro	h_m=	0,50	***m dal p.c.***
lunghezza tratto prov.	**L =**	1,15	***m***	dislivello	**h=**	103,08	***m***
profondità falda	z_w =	5,7	***m dal p.c.***	coefficiente di forma	C_L =	2,30	***m***







Sondaggio CL-6

LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-6** **COD. PROVA:** **LU_01**

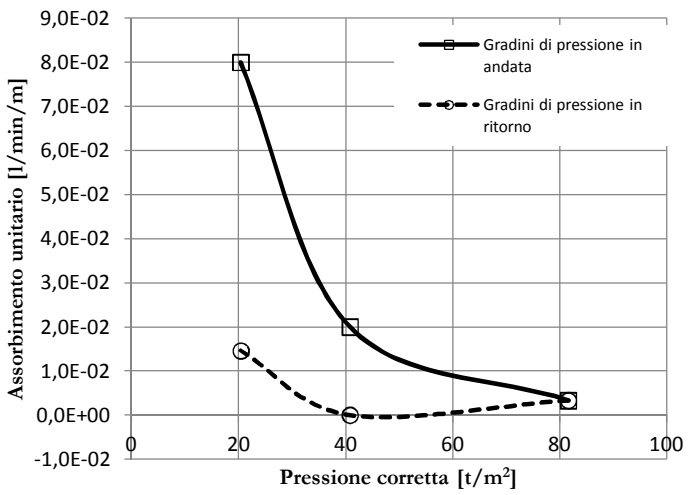
DATA: 11/09/2020 **TRATTO di PROVA:** **da m:** 90,4 **a m:** 93,4

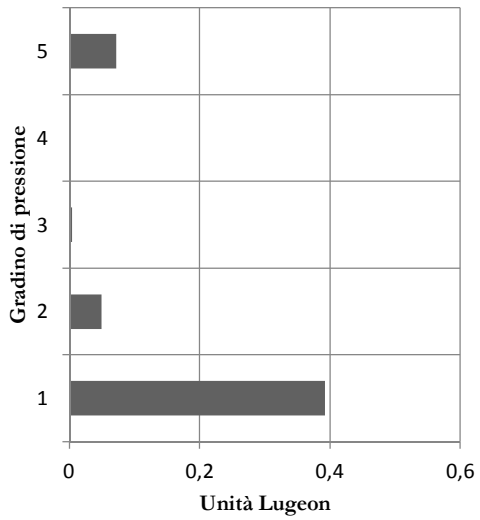
diametro foro	**d =**	0,101	***m***	altezza manometro	**h_m=**	1,25	***m dal p.c.***
lunghezza tratto prov:	**L =**	3	***m***	dislivello	**h=**	93,15	***m***
profondità falda	**z_w =**	0	***m dal p.c.***	coefficiente di forma	**C_L =**	4,61	***m***

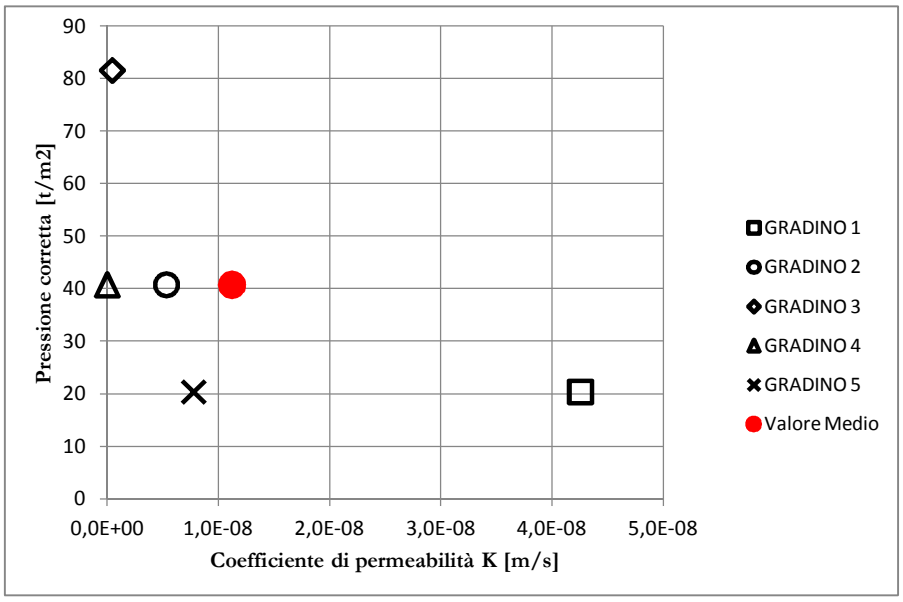
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	20,38982918	2	**0,70**	0,48	0,08	4,00E-06	4,26E-08	0,392
			4	**0,70**					
			6	**0,80**					
			8	**0,80**					
			10	**0,90**					
			12	**0,90**					
			14	**0,00**					
			16	**0,00**					
			18	**0,00**					
			20	**0,00**					
2	40,7796584	40,77965836	2	**0,20**	0,12	0,02	1,00E-06	5,32E-09	0,049
			4	**0,40**					
			6	**0,60**					
			8	**0,00**					
			10	**0,00**					
			12	**0,00**					
			14	**0,00**					
			16	**0,00**					
			18	**0,00**					
			20	**0,00**					
3	81,5593167	81,55931672	2	**0,10**	0,02	0,00	1,67E-07	4,43E-10	0,004
			4	**0,05**					
			6	**0,05**					
			8	**0,00**					
			10	**0,00**					
			12	**0,00**					
			14	**0,00**					
			16	**0,00**					
			18	**0,00**					
			20	**0,00**					
4	40,7796584	40,77965836	2	**0,00**	0,00	0,00	0,00E+00	0,00E+00	0,000
			4	**0,00**					
			6	**0,00**					
			8	**0,00**					
			10	**0,00**					
			12	**0,00**					
			14	**0,00**					
			16	**0,00**					
5	20,3898292	20,38982918	2	**0,00**	0,09	0,01	7,29E-07	7,76E-09	0,072
			4	**0,10**					
			6	**0,10**					
			8	**0,10**					
			10	**0,10**					
			12	**0,10**					
			14	**0,10**					
			16	**0,10**					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-6**	**COD. PROVA:**	**LU_01**				
DATA:	11/09/2020	**TRATTO di PROVA:**	**da m:**	90,4	**a m:**	93,4	

diametro foro	**d =**	0,101	*m*	altezza manometro	**h_m=**	1,25	*m dal p.c.*
lunghezza tratto prov.	**L =**	3	*m*	dislivello	**h=**	93,15	*m*
profondità falda	**z_w =**	0	*m dal p.c.*	coefficiente di forma	**C_L =**	4,61	*m*







LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-6** **COD. PROVA:** **LU_02**

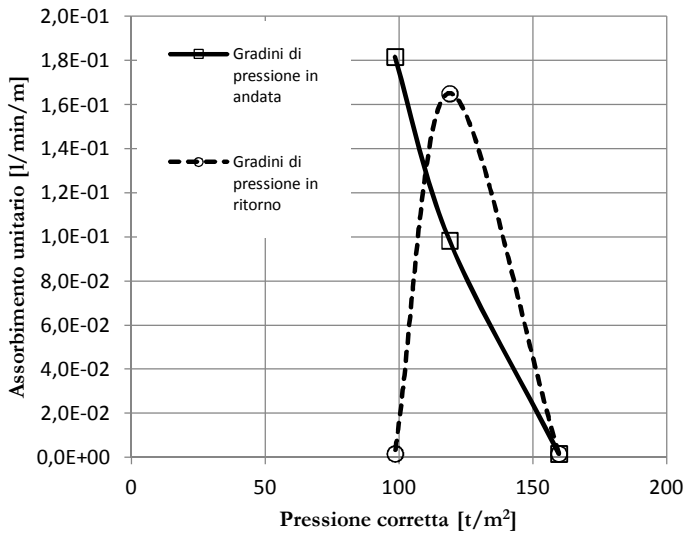
DATA: 17/09/2020 **TRATTO di PROVA:** **da m:** 107 **a m:** 110

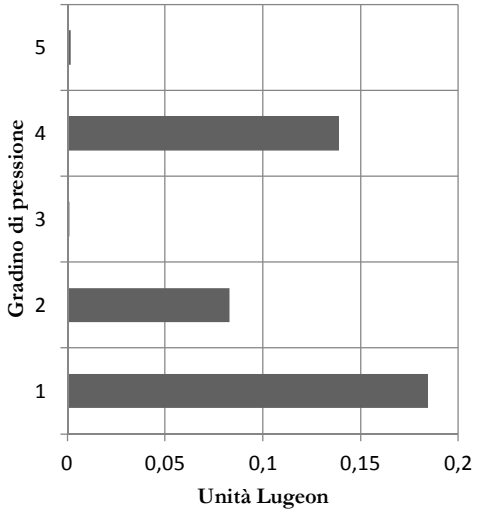
diametro foro	**d =**	0,101	*m*	altezza manometro	h_m=	1,25	*m dal p.c.*
lunghezza tratto prov:	**L =**	3	*m*	dislivello	**h=**	109,75	*m*
profondità falda	z_w =	78	*m dal p.c.*	coefficiente di forma	C_L =	4,61	*m*

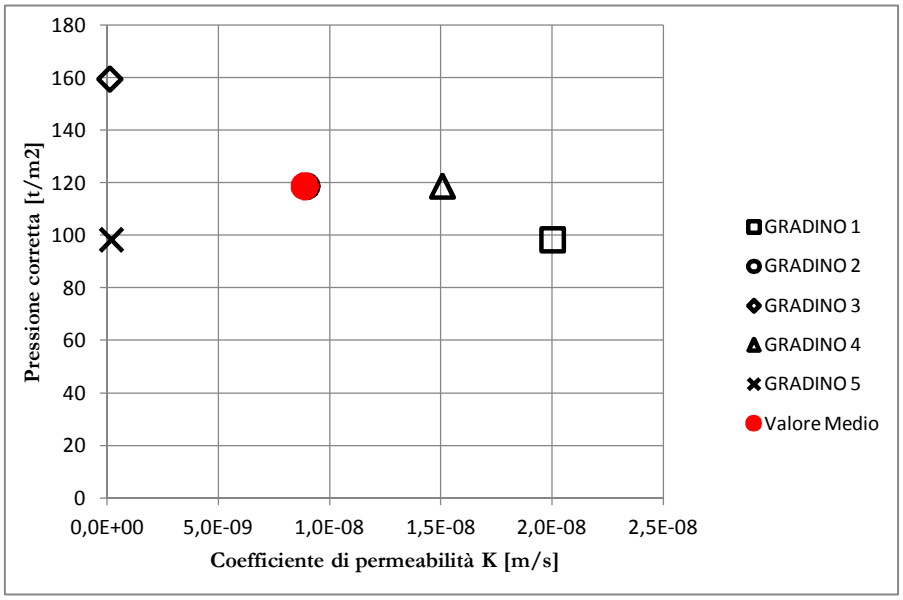
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	98,38982918	2	0,00	1,09	0,18	9,08E-06	2,00E-08	0,185
			4	0,20					
			6	0,30					
			8	1,50					
			10	5,00					
			12	2,10					
			14	1,80					
			16	0,00					
			18	0,00					
			20	0,00					
2	40,7796584	118,7796584	2	0,00	0,59	0,10	4,92E-06	8,98E-09	0,083
			4	0,00					
			6	1,10					
			8	0,80					
			10	0,90					
			12	0,60					
			14	1,20					
			16	0,80					
			18	0,20					
			20	0,30					
3	81,5593167	159,5593167	2	0,00	0,01	0,00	8,33E-08	1,13E-10	0,001
			4	0,10					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
4	40,7796584	118,7796584	2	3,00	0,99	0,17	8,25E-06	1,51E-08	0,139
			4	2,50					
			6	1,90					
			8	1,70					
			10	0,80					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
5	20,3898292	98,38982918	2	0,00	0,01	0,00	8,33E-08	1,84E-10	0,002
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,10					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-6**	**COD. PROVA:**	**LU_02**				
DATA:	17/09/2020	**TRATTO di PROVA:**	**da m:**	107	**a m:**	110	

diametro foro	**d =**	0,101	***m***	altezza manometro	h_m=	1,25	***m dal p.c.***
lunghezza tratto prov.	**L =**	3	***m***	dislivello	**h=**	109,75	***m***
profondità falda	z_w =	78	***m dal p.c.***	coefficiente di forma	C_L =	4,61	***m***







Sondaggio CL-7

LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-7** **COD. PROVA:** **LU_01**

DATA: 18/09/2020 **TRATTO di PROVA:** **da m:** 96,5 **a m:** 98,5

diametro foro	**d =**	0,101	***m***	altezza manometro	**h_m=**	1,20	***m dal p.c.***
lunghezza tratto prov	**L =**	2	***m***	dislivello	**h=**	98,70	***m***
profondità falda	**z_w =**	102	***m dal p.c.***	coefficiente di forma	**C_L =**	3,41	***m***

Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	0	102	2	400,00					
			4	400,00					
			6	400,00					
			8	400,00					
			10	400,00					
			12						
			14						
			16						
			18						
			20						
2	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						
			18						
			20						
3	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						
			18						
			20						
4	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						
5	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						

PROVA LUGEON _01 SOSPESA
PER ECCESSO DI ASSORBIMENTO
DOVUTA A FRATTURAZIONE INTENSA

TENTATE N. 2 TASCHE PROVE
1° - m 96,5-98,5 - PRESSIONE CAMERA NULLA
2° - m 97,5-98,5 - PRESSIONE CAMERA NULLA

PERMEABILITA' STIMATA tipo PROVA LEFRANC
CARICO COSTANTE (> 200 l/min - Sez. m 97,5-98,5)
>1,17E-04 m/s

LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-7** **COD. PROVA:** **LU_02**

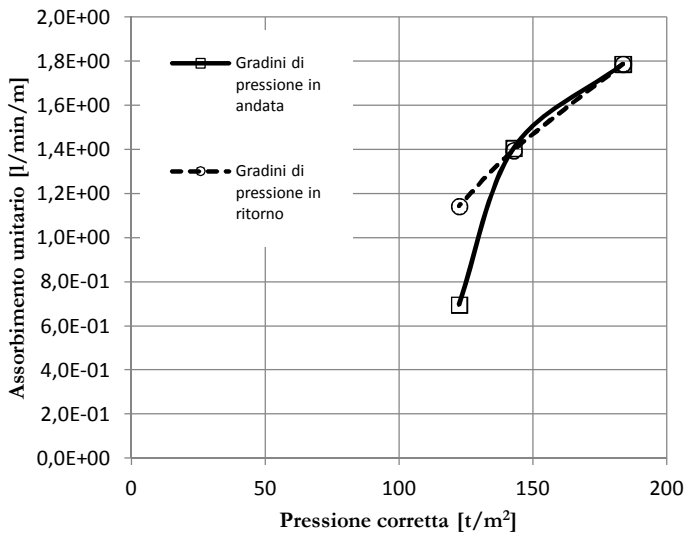
DATA: 30/09/2020 **TRATTO di PROVA:** **da m:** 112 **a m:** 115

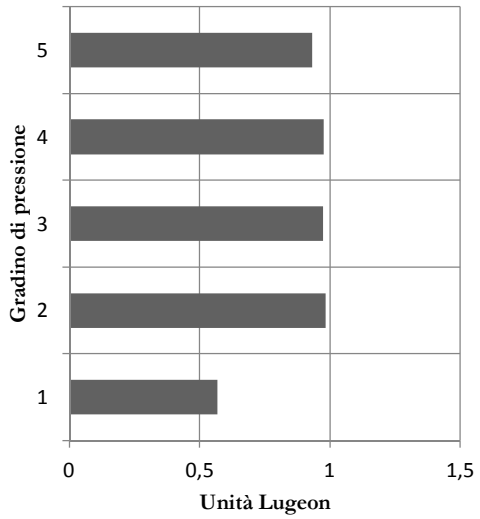
diametro foro	**d =**	0,101	***m***	altezza manometro	**h_m=**	1,35	***m dal p.c.***
lunghezza tratto prov:	**L =**	3	***m***	dislivello	**h=**	114,85	***m***
profondità falda	**z_w =**	102	***m dal p.c.***	coefficiente di forma	**C_L =**	4,61	***m***

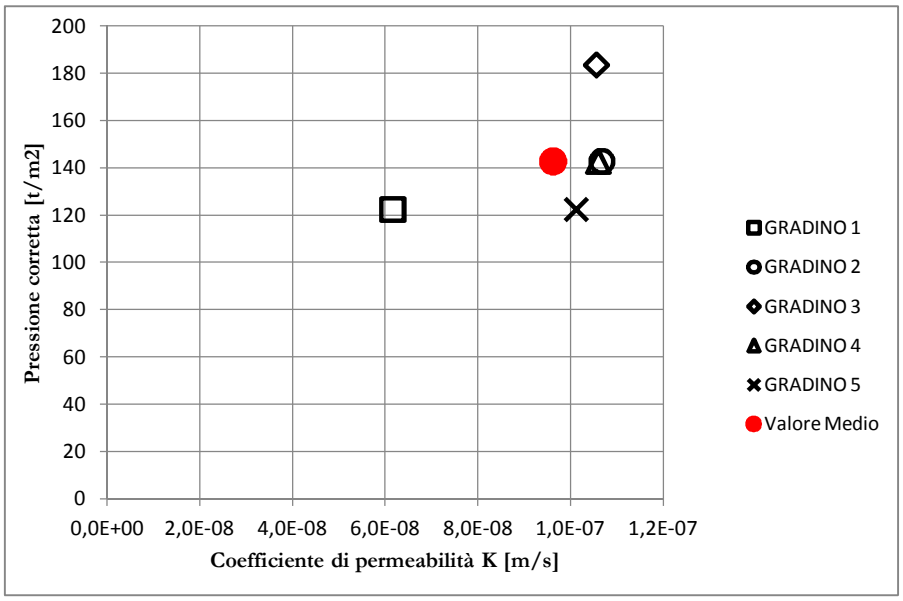
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	122,3898292	2	0,10	4,17	0,70	3,48E-05	6,16E-08	0,568
			4	0,10					
			6	1,80					
			8	4,00					
			10	2,00					
			12	7,00					
			14	7,00					
			16	7,50					
			18	6,80					
			20	5,40					
2	40,7796584	142,7796584	2	8,60	8,43	1,41	7,03E-05	1,07E-07	0,984
			4	8,00					
			6	8,70					
			8	8,00					
			10	9,00					
			12	8,20					
			14	8,80					
			16	8,00					
			18	9,00					
			20	8,00					
3	81,5593167	183,5593167	2	12,00	10,72	1,79	8,93E-05	1,06E-07	0,973
			4	10,50					
			6	10,50					
			8	10,50					
			10	11,00					
			12	11,00					
			14	10,50					
			16	9,00					
			18	11,30					
			20	10,90					
4	40,7796584	142,7796584	2	9,40	8,37	1,40	6,98E-05	1,06E-07	0,977
			4	9,00					
			6	8,70					
			8	9,50					
			10	8,20					
			12	7,90					
			14	7,20					
			16	8,00					
			18	7,90					
			20	7,90					
5	20,3898292	122,3898292	2	7,00	6,85	1,14	5,71E-05	1,01E-07	0,933
			4	6,80					
			6	6,70					
			8	7,00					
			10	7,30					
			12	6,50					
			14	6,70					
			16	6,50					
			18	7,30					
			20	6,70					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-7**	**COD. PROVA:**	**LU_02**				
DATA:	30/09/2020	**TRATTO di PROVA:**	**da m:**	112	**a m:**	115	

diametro foro	**d =**	0,101	*m*	altezza manometro	h_m=	1,35	*m dal p.c.*
lunghezza tratto prov.	**L =**	3	*m*	dislivello	h=	114,85	*m*
profondità falda	z_w =	102	*m dal p.c.*	coefficiente di forma	C_L =	4,61	*m*







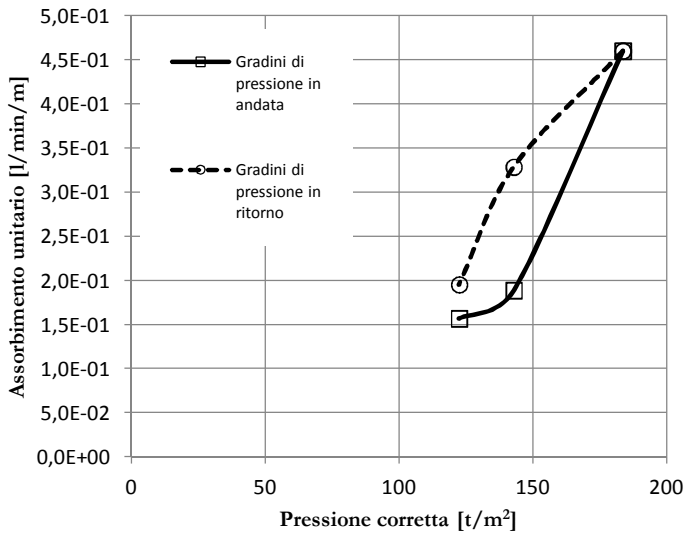
LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-7**	**COD. PROVA:**	**LU_03**				
DATA:	16/10/2020	**TRATTO di PROVA:**	**da m:**	127	**a m:**	130	

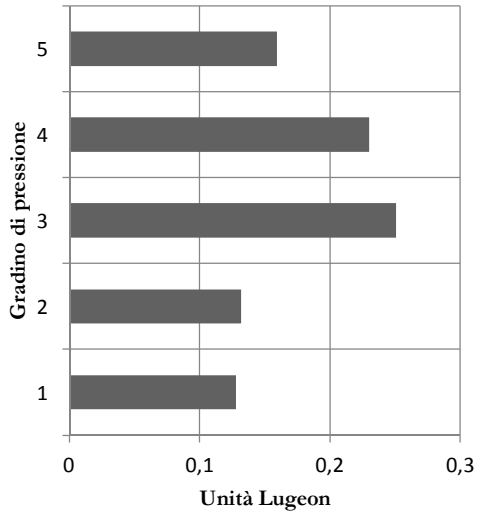
diametro foro	**d =**	0,101	***m***	altezza manometro	h_m=	1,35	***m dal p.c.***
lunghezza tratto prov:	**L =**	3	***m***	dislivello	**h=**	129,85	***m***
profondità falda	z_w =	102	***m dal p.c.***	coefficiente di forma	C_L =	4,61	***m***

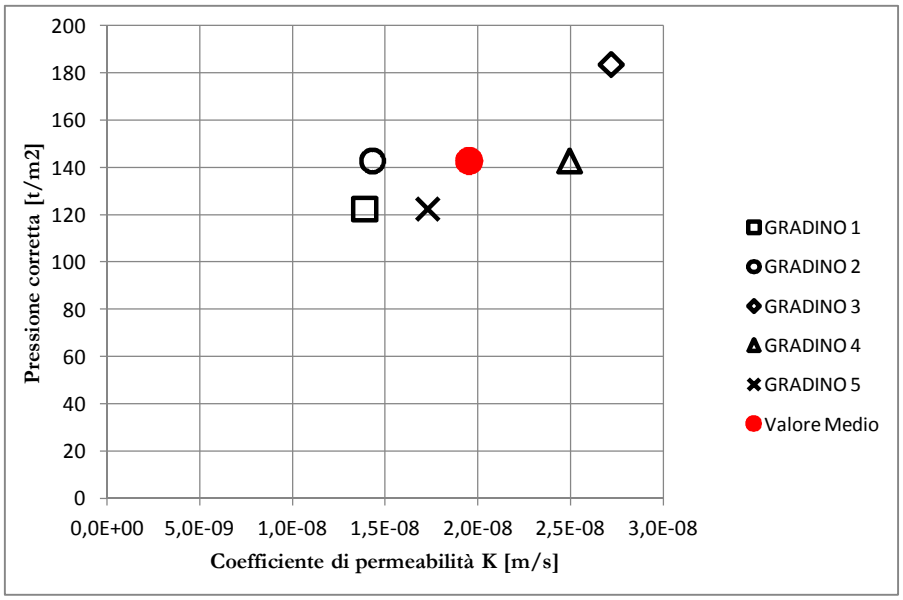
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	122,3898292	2	4,30	0,94	0,16	7,83E-06	1,39E-08	0,128
			4	2,00					
			6	1,30					
			8	0,30					
			10	0,30					
			12	1,20					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
2	40,7796584	142,7796584	2	0,00	1,13	0,19	9,42E-06	1,43E-08	0,132
			4	0,60					
			6	1,20					
			8	1,40					
			10	1,60					
			12	1,40					
			14	1,50					
			16	1,40					
			18	1,20					
			20	1,00					
3	81,5593167	183,5593167	2	1,20	2,76	0,46	2,30E-05	2,72E-08	0,251
			4	5,80					
			6	1,10					
			8	2,30					
			10	2,30					
			12	3,00					
			14	3,00					
			16	3,00					
			18	3,00					
			20	2,90					
4	40,7796584	142,7796584	2	1,30	1,97	0,33	1,64E-05	2,49E-08	0,230
			4	2,00					
			6	1,80					
			8	1,50					
			10	2,00					
			12	2,00					
			14	1,10					
			16	2,00					
			18	3,20					
			20	2,80					
5	20,3898292	122,3898292	2	0,90	1,17	0,20	9,75E-06	1,73E-08	0,159
			4	1,20					
			6	0,70					
			8	1,00					
			10	0,60					
			12	1,00					
			14	2,50					
			16	1,20					
			18	2,00					
			20	0,60					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-7**	**COD. PROVA:**	**LU_03**				
DATA:	16/10/2020	**TRATTO di PROVA:**	**da m:**	127	**a m:**	130	

diametro foro	**d =**	0,101	*m*	altezza manometro	h_m=	1,35	*m dal p.c.*
lunghezza tratto prov.	**L =**	3	*m*	dislivello	h=	129,85	*m*
profondità falda	z_w =	102	*m dal p.c.*	coefficiente di forma	C_L =	4,61	*m*







Sondaggio CL-8

LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-8** **COD. PROVA:** **LU_01**

DATA: 03/11/2020 **TRATTO di PROVA:** **da m:** 71,6 **a m:** 73,1

diametro foro	**d =**	0,101	***m***	altezza manometro	h_m=	1,20	***m dal p.c.***
lunghezza tratto prov:	**L =**	1,5	***m***	dislivello	**h=**	73,55	***m***
profondità falda	z_w =		***m dal p.c.***	coefficiente di forma	C_L =	2,77	***m***

Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	0	0	2	200,00					
			4	400,00					
			6	600,00					
			8	800,00					
			10	1000,00					
			12	1200,00					
			14	1400,00					
			16	1600,00					
			18	1800,00					
			20	2000,00					
2	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						
			18						
			20						
3	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						
			18						
			20						
4	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						
5	0		2						
			4						
			6						
			8						
			10						
			12						
			14						
			16						

PROVA LUGEON _01 SOSPESA
PER ECCESSO DI ASSORBIMENTO
DOVUTA A FRATTURAZIONE INTENSA

TENTATE N. 2 TASCHE PROVE
1° - m 71,6-73,1 - PRESSIONE CAMERA NULLA
2° - m 72,0-73,1 - PRESSIONE CAMERA NULLA

PERMEABILITA' STIMATA tipo PROVA LEFRANC
CARICO COSTANTE (> 100l/min - Sez. m 72,0-73,1)
>**7,87E-05** m/s

LAVORO: VIANINI LAVORI SPA - CAMPOLATTARO (BN)

SONDAGGIO: **CL-8** **COD. PROVA:** **LU_02**

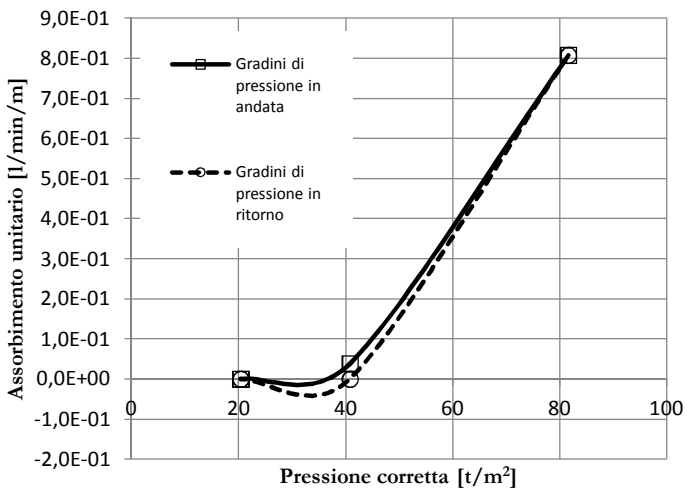
DATA: 10/11/2020 **TRATTO di PROVA:** **da m:** 76,5 **a m:** 79,1

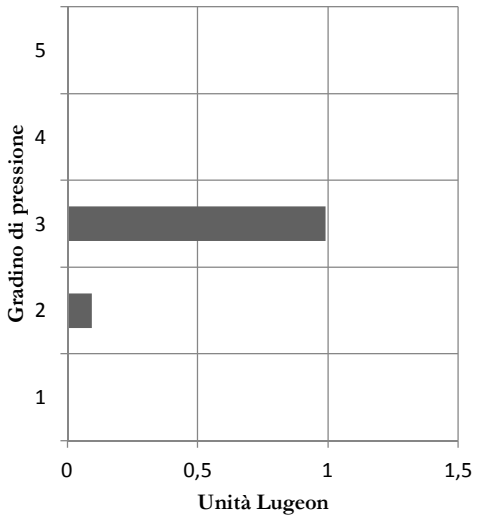
diametro foro	**d =**	0,101	***m***	altezza manometro	**h_m=**	1,65	***m dal p.c.***
lunghezza tratto prov:	**L =**	2,6	***m***	dislivello	**h=**	79,45	***m***
profondità falda	**z_w =**	0	***m dal p.c.***	coefficiente di forma	**C_L =**	4,14	***m***

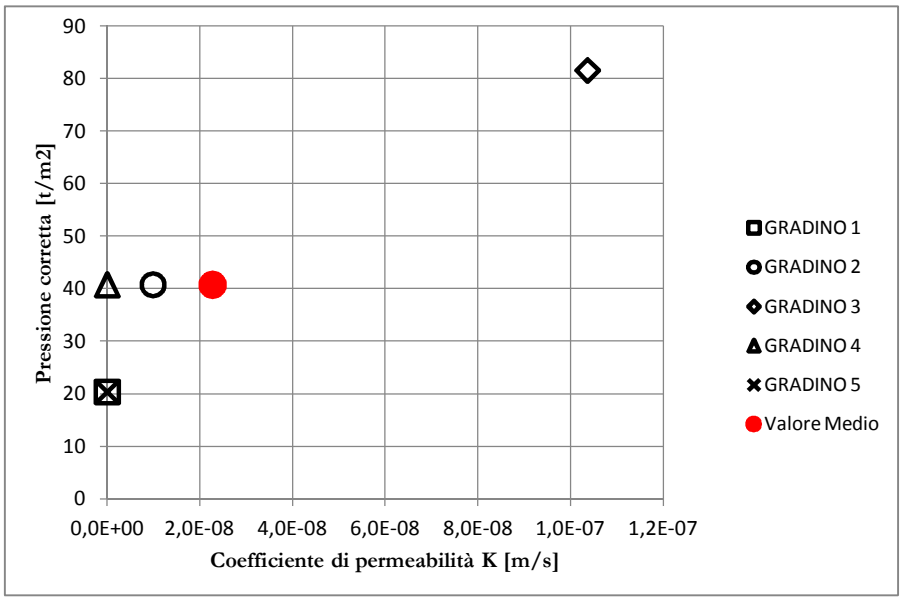
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	20,38982918	2	0,00	0,00	0,00	0,00E+00	0,00E+00	0,000
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
2	40,7796584	40,77965836	2	0,00	0,20	0,04	1,67E-06	9,87E-09	0,094
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	1,00					
			20	1,00					
3	81,5593167	81,55931672	2	13,00	4,20	0,81	3,50E-05	1,04E-07	0,990
			4	5,00					
			6	5,00					
			8	4,00					
			10	5,00					
			12	4,00					
			14	4,00					
			16	2,00					
			18	0,00					
			20	0,00					
4	40,7796584	40,77965836	2	0,00	0,00	0,00	0,00E+00	0,00E+00	0,000
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
5	20,3898292	20,38982918	2	0,00	0,00	0,00	0,00E+00	0,00E+00	0,000
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-8**	**COD. PROVA:**	**LU_02**				
DATA:	10/11/2020	**TRATTO di PROVA:**	**da m:**	76,5	**a m:**	79,1	

diametro foro	**d =**	0,101	***m***	altezza manometro	**h_m=**	1,65	***m dal p.c.***
lunghezza tratto prov.	**L =**	2,6	***m***	dislivello	**h=**	79,45	***m***
profondità falda	**z_w =**	0	***m dal p.c.***	coefficiente di forma	**C_L =**	4,14	***m***







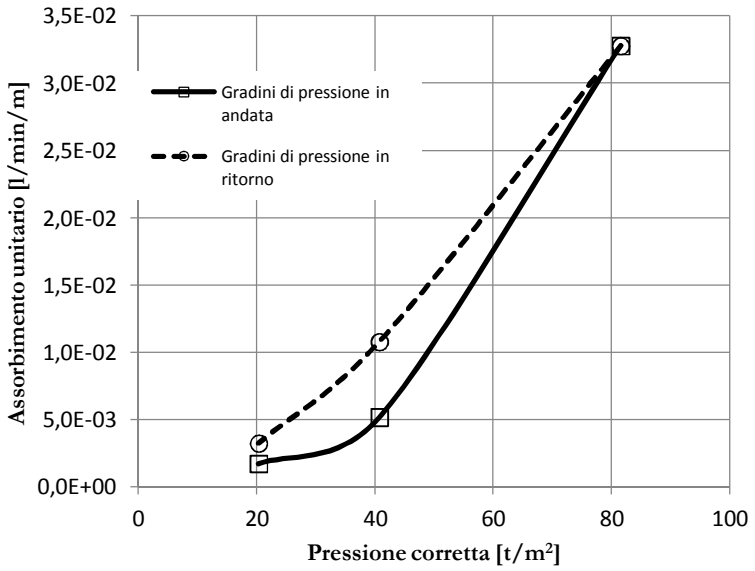
LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-8**	**COD. PROVA:**	**LU_03**				
DATA:	10/11/2020	**TRATTO di PROVA:**	**da m:**	90	**a m:**	95,8	

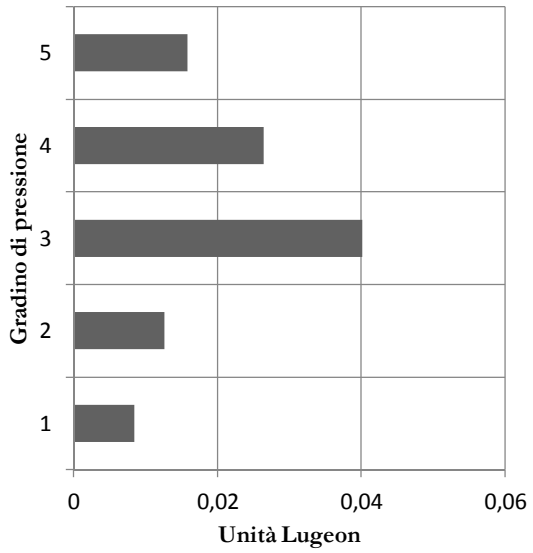
diametro foro	**d =**	0,101	***m***	altezza manometro	h_m=	1,35	***m dal p.c.***
lunghezza tratto prova	**L =**	5,8	***m***	dislivello	**h=**	94,25	***m***
profondità falda	z_w =	0	***m dal p.c.***	coefficiente di forma	C_L =	7,68	***m***

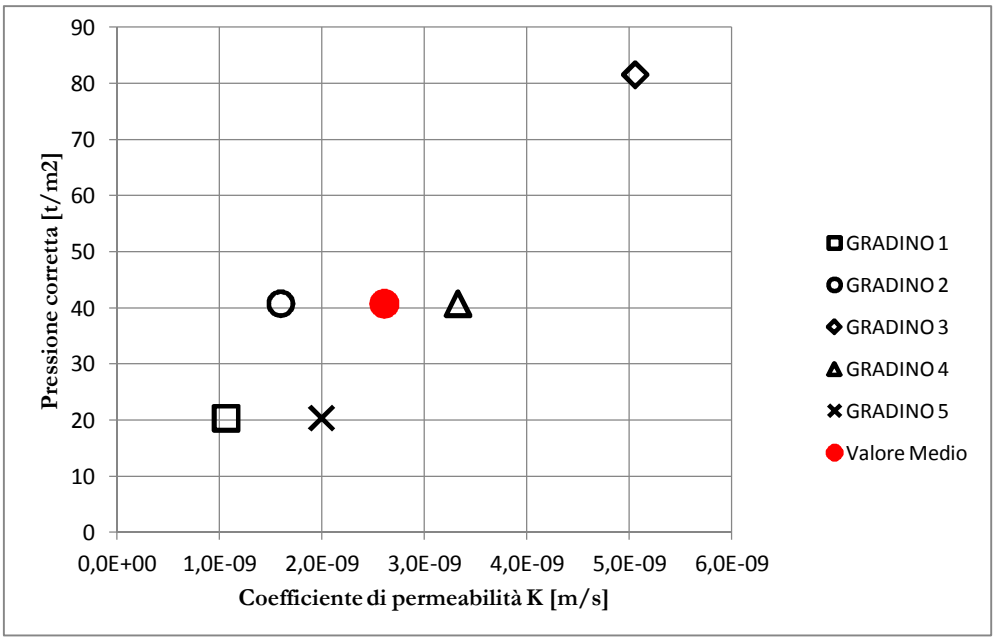
Gradino	Pm	Pressione corretta Pc	Tempi	Volume immesso	Assorbimento medio	Assorbimento unitario	Portata totale Q	Permeabilità k	Unità di Assorbimento Lugeon
n°	*[t/m²]*	*[t/m²]*	*[min]*	*[l]*	*[l]*	*[l/min/m]*	*[m³/s]*	*[m/s]*	*[UL]*
1	20,3898292	20,38982918	2	0,20	0,02	0,00	1,67E-07	1,06E-09	0,008
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
2	40,7796584	40,77965836	2	0,60	0,06	0,01	5,00E-07	1,60E-09	0,013
			4	0,00					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
3	81,5593167	81,55931672	2	1,30	0,38	0,03	3,17E-06	5,06E-09	0,040
			4	2,20					
			6	0,20					
			8	0,10					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
			18	0,00					
			20	0,00					
4	40,7796584	40,77965836	2	0,60	0,13	0,01	1,04E-06	3,33E-09	0,026
			4	0,20					
			6	0,20					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					
5	20,3898292	20,38982918	2	0,20	0,04	0,00	3,12E-07	2,00E-09	0,016
			4	0,10					
			6	0,00					
			8	0,00					
			10	0,00					
			12	0,00					
			14	0,00					
			16	0,00					

LAVORO:	VIANINI LAVORI SPA - CAMPOLATTARO (BN)						
SONDAGGIO:	**CL-8**	**COD. PROVA:**	**LU_03**				
DATA:	10/11/2020	**TRATTO di PROVA:**	**da m:**	90	**a m:**	95,8	

diametro foro	**d =**	0,101	***m***	altezza manometro	h_m=	1,35	***m dal p.c.***
lunghezza tratto prova	**L =**	5,8	***m***	dislivello	**h=**	94,25	***m***
profondità falda	z_w =	0	***m dal p.c.***	coefficiente di forma	C_L =	7,68	***m***







Allegato IG02-B

Prove dilatometriche DRT

Sondaggio CL-5

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

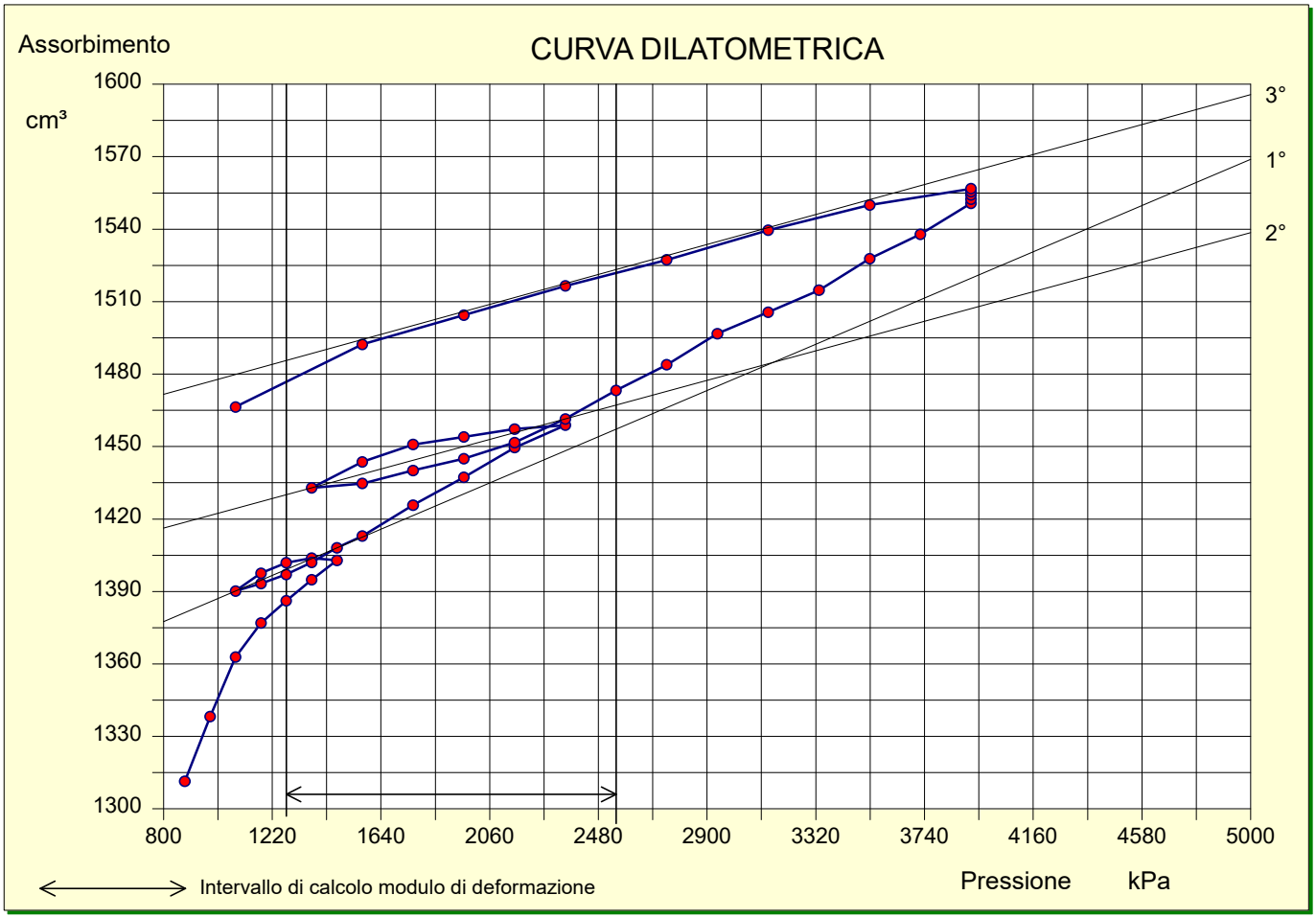
Profondità di prova (centro della cella) (m)	76,50	Volume della sonda (cm³)	2835,81
Profondità della falda (m)	5.20		
Litologia: Argille marnose con interstrati cm di natura calcarea			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	882,00	1340,65	29,26	1311,39	18,58	41	3920,00	1627,09	71,60	1555,49	22,04
2	980,00	1370,05	31,81	1338,23	18,96	42	3920,00	1628,38	71,60	1556,78	22,06
3	1078,00	1397,09	34,24	1362,84	19,31	43	3528,00	1618,64	68,61	1550,02	21,96
4	1176,00	1413,46	36,56	1376,91	19,51	44	3136,00	1604,85	65,29	1539,56	21,81
5	1274,00	1424,93	38,76	1386,18	19,64	45	2744,00	1588,76	61,46	1527,30	21,64
6	1372,00	1435,71	40,85	1394,86	19,76	46	2352,00	1573,43	56,91	1516,51	21,49
7	1470,00	1445,74	42,84	1402,90	19,88	47	1960,00	1555,79	51,42	1504,37	21,31
8	1372,00	1444,67	40,85	1403,82	19,89	48	1568,00	1537,03	44,73	1492,30	21,14
9	1274,00	1440,65	38,76	1401,89	19,86	49	1078,00	1500,66	34,24	1466,41	20,78
10	1176,00	1434,13	36,56	1397,57	19,80						
11	1078,00	1424,46	34,24	1390,22	19,70						
12	1176,00	1429,81	36,56	1393,26	19,74						
13	1274,00	1435,79	38,76	1397,04	19,79						
14	1372,00	1442,91	40,85	1402,06	19,87						
15	1470,00	1450,92	42,84	1408,08	19,95						
16	1568,00	1457,69	44,73	1412,96	20,02						
17	1764,00	1473,98	48,24	1425,74	20,20						
18	1960,00	1488,68	51,42	1437,26	20,36						
19	2156,00	1503,89	54,30	1449,59	20,54						
20	2352,00	1515,76	56,91	1458,85	20,67						
21	2156,00	1511,55	54,30	1457,25	20,65						
22	1960,00	1505,39	51,42	1453,97	20,60						
23	1764,00	1499,06	48,24	1450,82	20,56						
24	1568,00	1488,40	44,73	1443,66	20,45						
25	1372,00	1473,75	40,85	1432,91	20,30						
26	1568,00	1479,43	44,73	1434,70	20,33						
27	1764,00	1488,32	48,24	1440,08	20,40						
28	1960,00	1496,40	51,42	1444,98	20,47						
29	2156,00	1505,96	54,30	1451,66	20,57						
30	2352,00	1518,35	56,91	1461,43	20,71						
31	2548,00	1532,52	59,29	1473,24	20,87						
32	2744,00	1545,33	61,46	1483,87	21,02						
33	2940,00	1560,16	63,45	1496,71	21,21						
34	3136,00	1570,87	65,29	1505,58	21,33						
35	3332,00	1581,70	67,01	1514,70	21,46						
36	3528,00	1596,40	68,61	1527,78	21,65						
37	3724,00	1608,04	70,14	1537,90	21,79						
38	3920,00	1622,31	71,60	1550,71	21,97						
39	3920,00	1623,99	71,60	1552,39	22,00						
40	3920,00	1625,79	71,60	1554,19	22,02						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1274,00
Volume iniziale [Vo] (cm³):	1386,18
Pressione finale [Pf] (kPa):	2548,00
Volume finale [Vf] (cm³):	1473,24

RISULTATI	
Modulo di taglio (kPa):	62428
Modulo di deformazione dilatometrico (kPa):	166058
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4266

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1390	1433	1557
Volume finale [Vf] (cm³):	1408	1461	1492
Pressione iniziale [Po] (kPa):	1078	1372	3920
Pressione finale [Pf] (kPa):	1470	2352	1568
Modulo di deformazione dilatometrico (kPa):	245318	398730	419685
Modulo da linea di tendenza (kPa):	251548	394137	393422

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

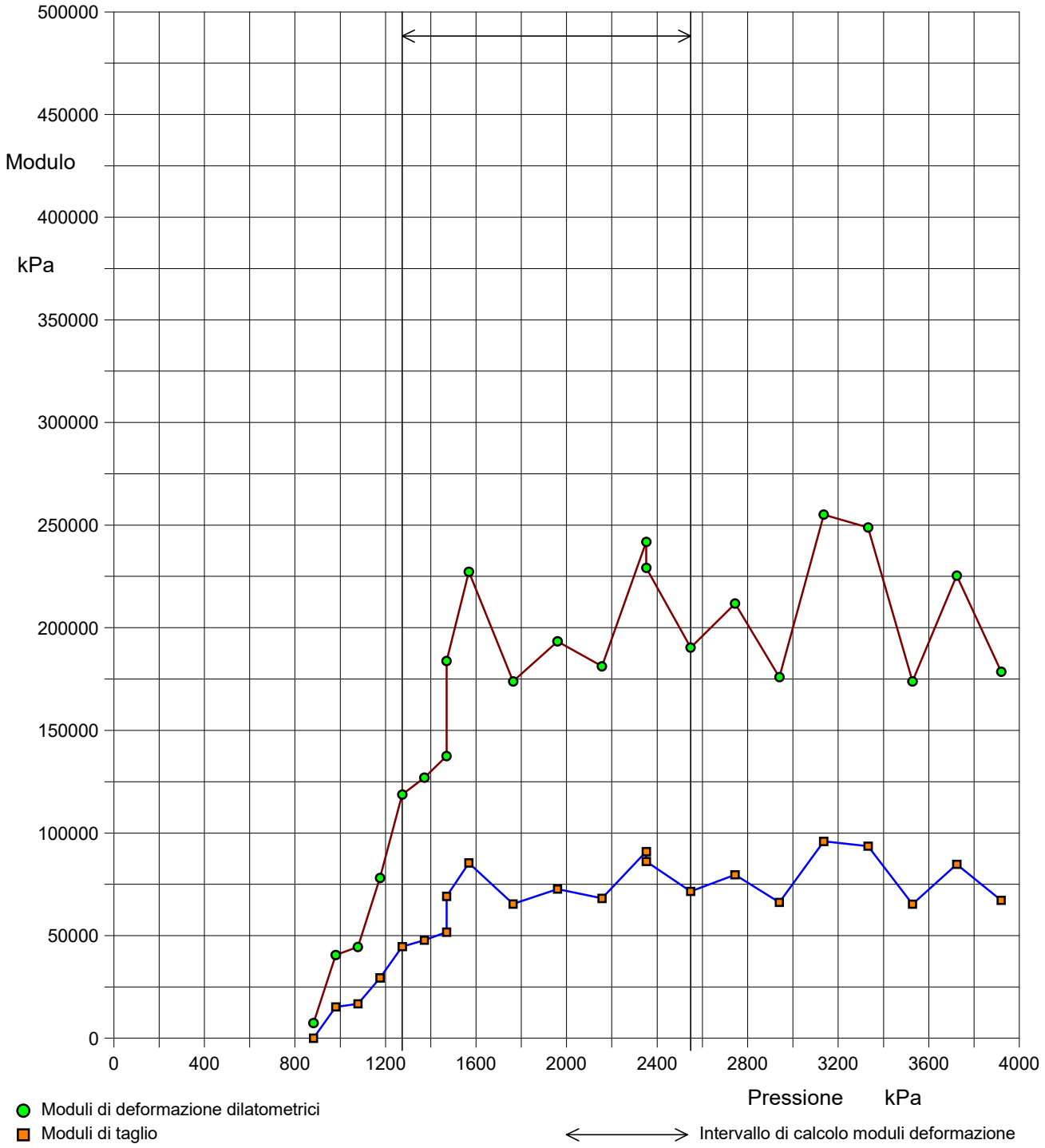
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
980,00	98,00	1338,23	26,84	15242	40544						
1078,00	98,00	1362,84	24,61	16718	44470						
1176,00	98,00	1376,91	14,06	29361	78100						
1274,00	98,00	1386,18	9,27	44624	118700						
1372,00	98,00	1394,86	8,69	47738	126983						
1470,00	98,00	1402,90	8,04	51679	137466						
1470,00	98,00	1408,08	6,02	69098	183801						
1568,00	98,00	1412,96	4,87	85428	227238						
1764,00	196,00	1425,74	12,78	65357	173850						
1960,00	196,00	1437,26	11,52	72702	193387						
2156,00	196,00	1449,59	12,33	68110	181173						
2352,00	196,00	1458,85	9,26	90902	241799						
2352,00	196,00	1461,43	9,78	86147	229151						
2548,00	196,00	1473,24	11,80	71550	190323						
2744,00	196,00	1483,87	10,63	79618	211784						
2940,00	196,00	1496,71	12,84	66140	175932						
3136,00	196,00	1505,58	8,87	95909	255118						
3332,00	196,00	1514,70	9,12	93539	248814						
3528,00	196,00	1527,78	13,09	65352	173836						
3724,00	196,00	1537,90	10,12	84718	225350						
3920,00	196,00	1550,71	12,81	67142	178598						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

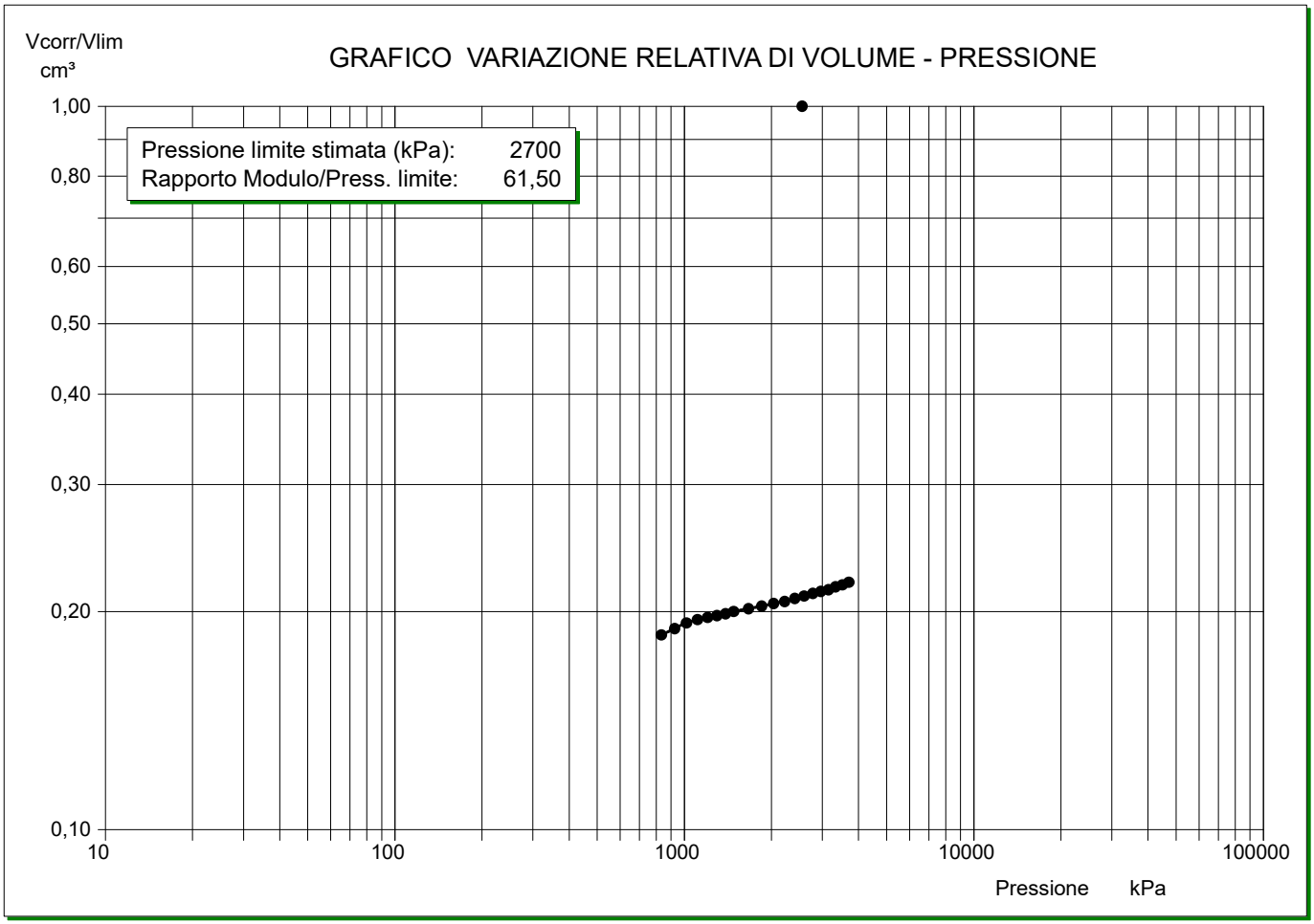
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

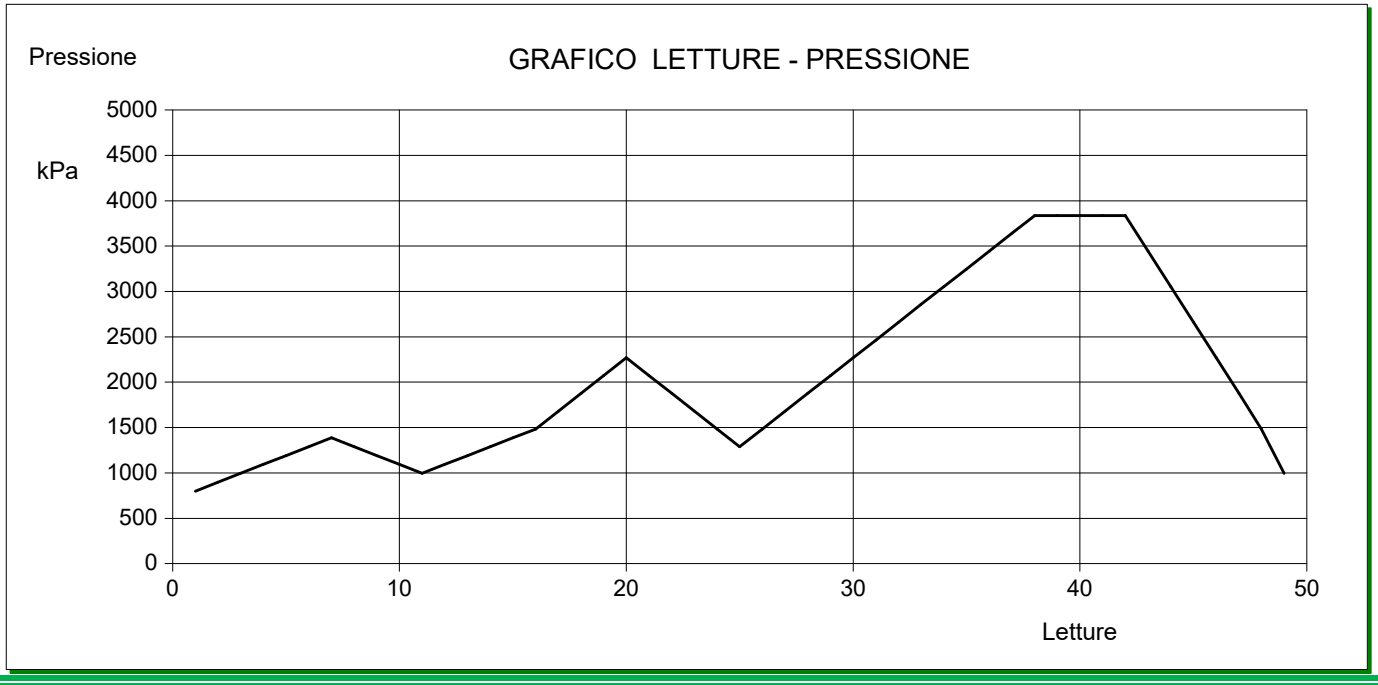
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

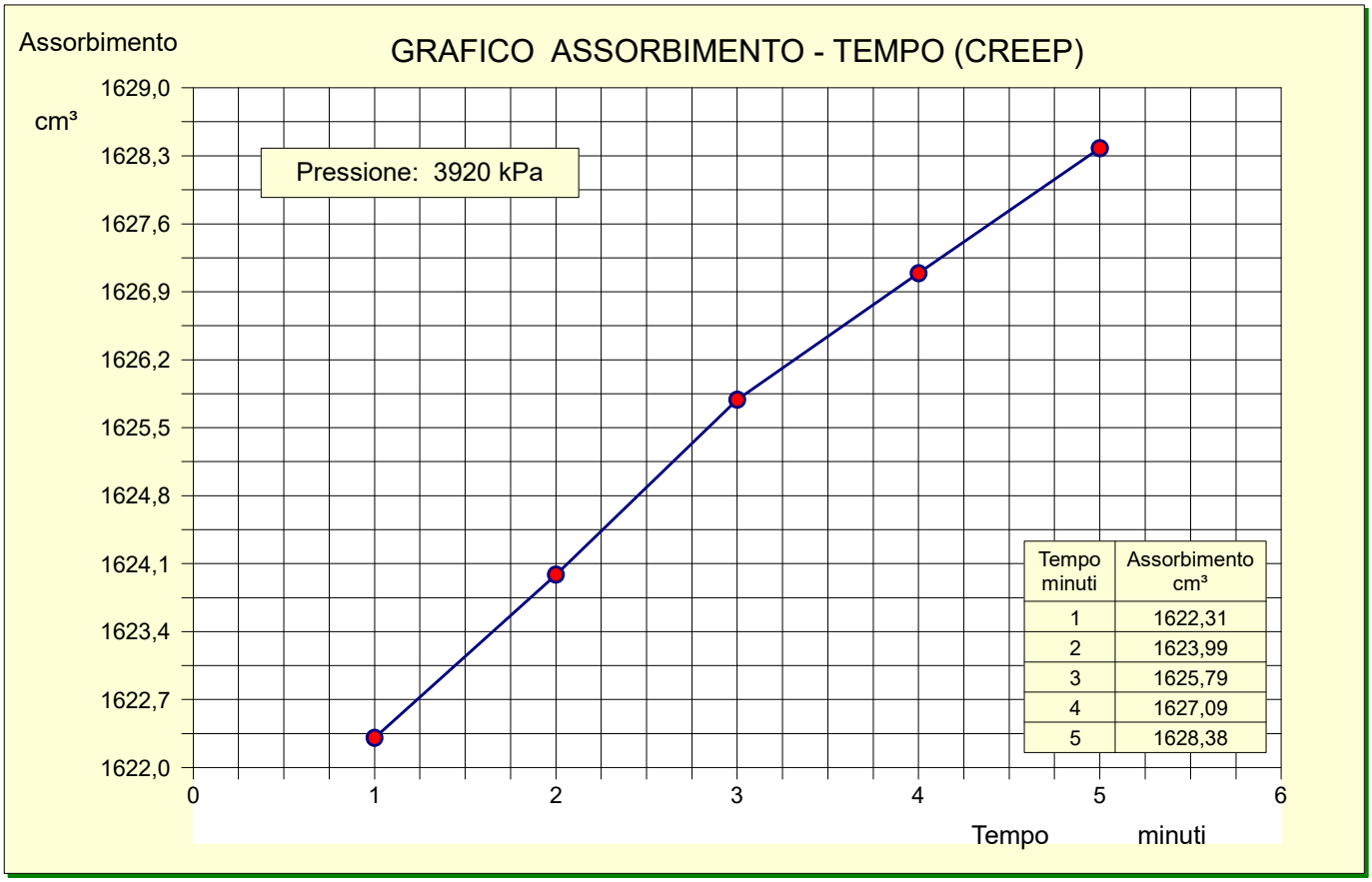
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:



Tempo minuti	Assorbimento cm³
1	1622,31
2	1623,99
3	1625,79
4	1627,09
5	1628,38

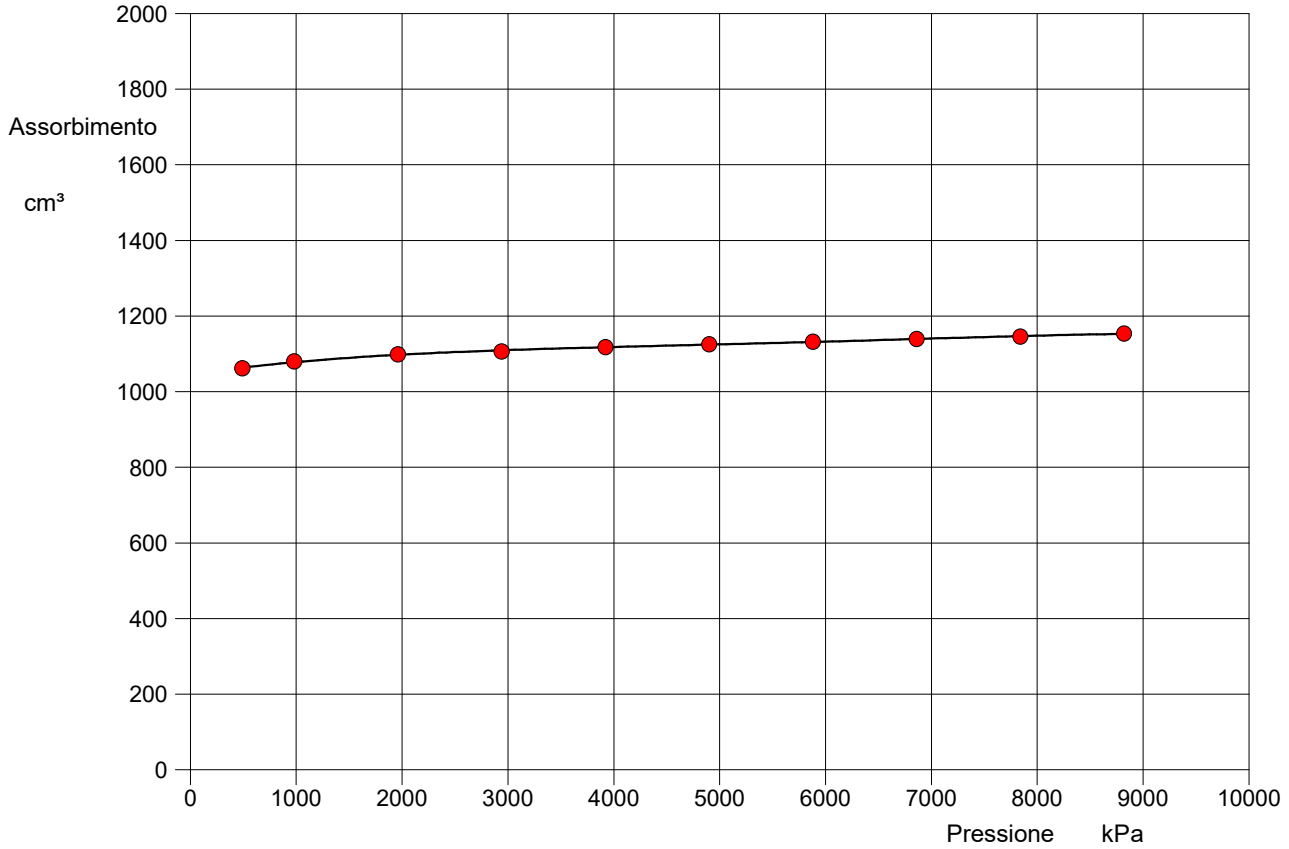
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,81

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	1062,13	17,71									
980,00	1079,92	31,81									
1960,00	1098,82	51,42									
2940,00	1106,28	63,45									
3920,00	1117,66	71,60									
4900,00	1125,58	78,47									
5880,00	1132,31	85,57									
6860,00	1139,51	93,33									
7840,00	1145,59	101,06									
8820,00	1153,64	107,00									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

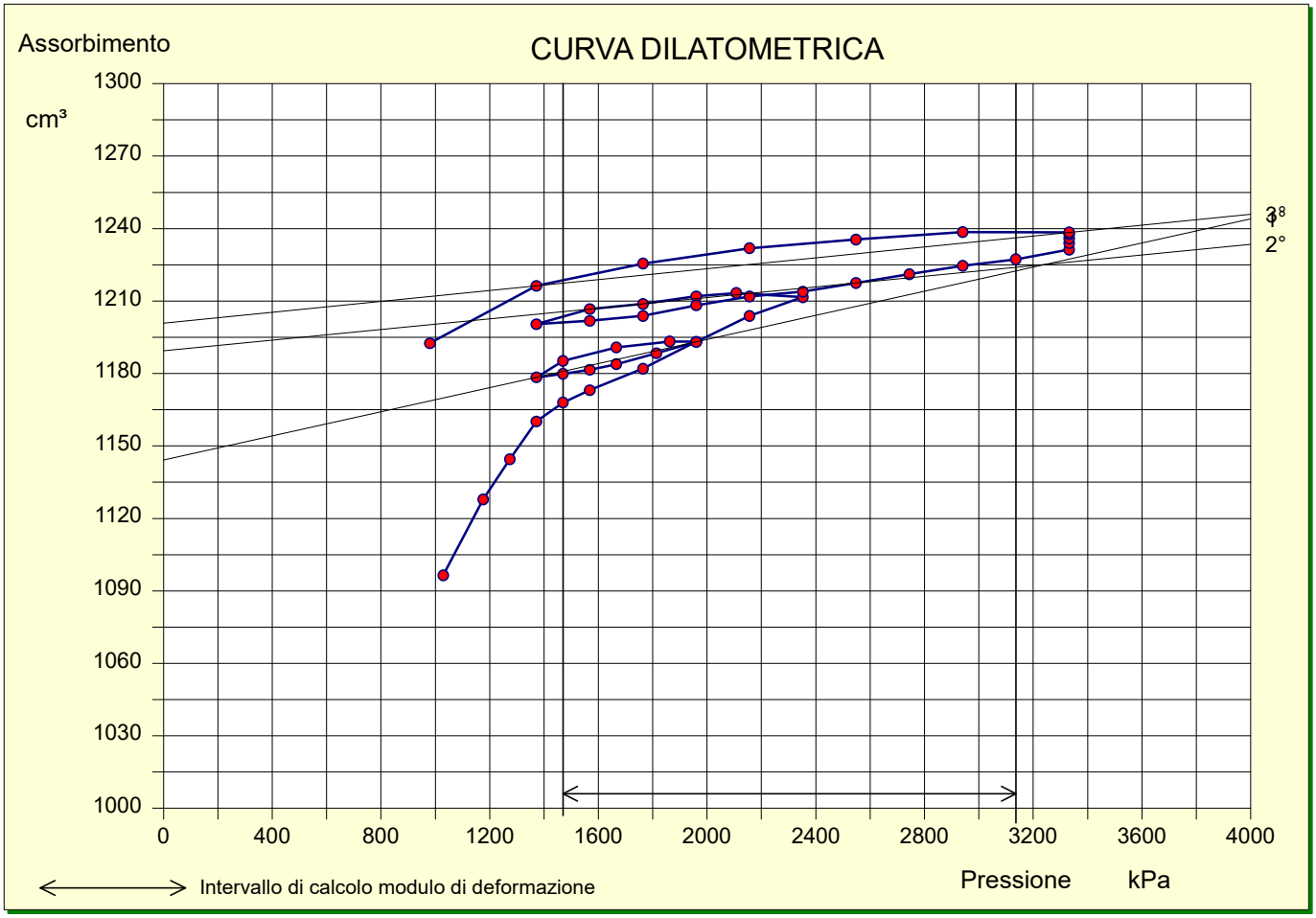
Profondità di prova (centro della cella) (m)	85,50	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	5.20		
Litologia: Calcare marnoso poco fratturato			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1029,00	1121,63	25,20	1096,43	16,03	41	2156,00	1273,39	41,54	1231,86	18,01
2	1176,00	1155,78	27,90	1127,88	16,49	42	1764,00	1262,41	36,88	1225,53	17,92
3	1274,00	1174,07	29,59	1144,48	16,74	43	1372,00	1247,49	31,20	1216,29	17,79
4	1372,00	1191,35	31,20	1160,15	16,97	44	980,00	1216,79	24,26	1192,53	17,44
5	1470,00	1200,73	32,73	1168,00	17,08						
6	1568,00	1207,29	34,18	1173,11	17,16						
7	1764,00	1218,86	36,88	1181,98	17,29						
8	1960,00	1232,49	39,33	1193,16	17,45						
9	1862,00	1231,41	38,14	1193,27	17,45						
10	1666,00	1226,36	35,57	1190,79	17,41						
11	1470,00	1217,94	32,73	1185,21	17,33						
12	1372,00	1209,60	31,20	1178,40	17,23						
13	1470,00	1212,62	32,73	1179,89	17,25						
14	1568,00	1215,69	34,18	1181,50	17,28						
15	1666,00	1219,44	35,57	1183,87	17,31						
16	1813,00	1225,94	37,52	1188,43	17,38						
17	1960,00	1232,40	39,33	1193,07	17,45						
18	2156,00	1245,40	41,54	1203,86	17,61						
19	2352,00	1255,15	43,54	1211,60	17,72						
20	2107,00	1254,36	41,00	1213,35	17,74						
21	1960,00	1251,29	39,33	1211,96	17,72						
22	1764,00	1245,65	36,88	1208,76	17,68						
23	1568,00	1240,86	34,18	1206,67	17,65						
24	1372,00	1231,62	31,20	1200,42	17,56						
25	1568,00	1235,98	34,18	1201,79	17,58						
26	1764,00	1240,76	36,88	1203,88	17,61						
27	1960,00	1247,54	39,33	1208,22	17,67						
28	2156,00	1253,45	41,54	1211,92	17,72						
29	2352,00	1257,39	43,54	1213,84	17,75						
30	2548,00	1262,85	45,37	1217,48	17,80						
31	2744,00	1268,16	47,04	1221,12	17,86						
32	2940,00	1273,17	48,57	1224,60	17,91						
33	3136,00	1277,30	49,98	1227,32	17,95						
34	3332,00	1282,58	51,30	1231,28	18,01						
35	3332,00	1285,29	51,30	1233,99	18,05						
36	3332,00	1287,18	51,30	1235,88	18,07						
37	3332,00	1288,95	51,30	1237,65	18,10						
38	3332,00	1289,73	51,30	1238,43	18,11						
39	2940,00	1287,12	48,57	1238,55	18,11						
40	2548,00	1280,83	45,37	1235,46	18,07						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1470,00
Volume iniziale [Vo] (cm³):	1168,00
Pressione finale [Pf] (kPa):	3136,00
Volume finale [Vf] (cm³):	1227,32

RISULTATI	
Modulo di taglio (kPa):	113274
Modulo di deformazione dilatometrico (kPa):	301309
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4033

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1178	1207	1238
Volume finale [Vf] (cm³):	1193	1217	1216
Pressione iniziale [Po] (kPa):	1372	1568	3332
Pressione finale [Pf] (kPa):	1960	2548	1372
Modulo di deformazione dilatometrico (kPa):	419226	1054972	962620
Modulo da linea di tendenza (kPa):	429483	976321	955722

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

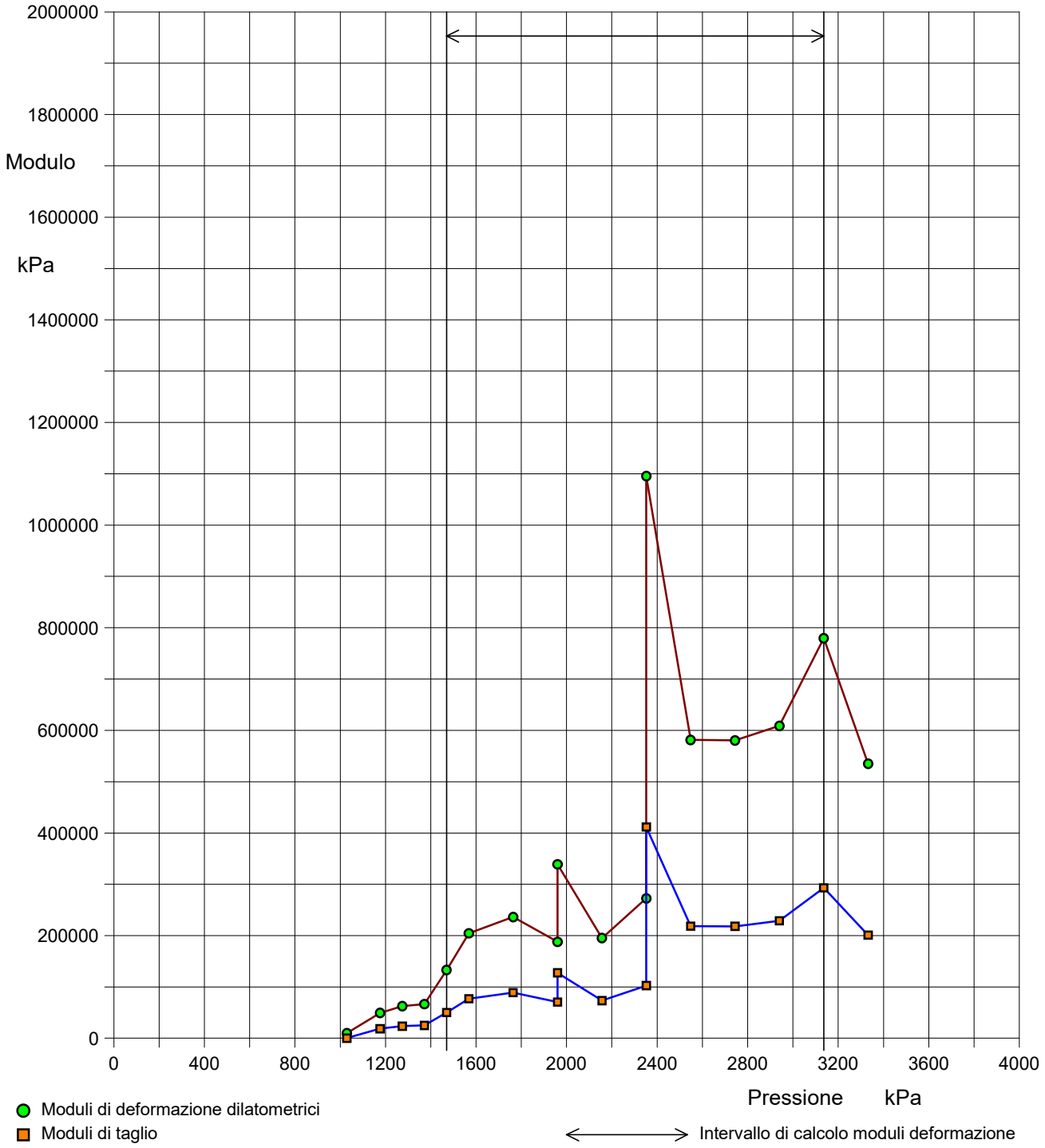
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1176,00	147,00	1127,88	31,45	18520	49263						
1274,00	98,00	1144,48	16,59	23505	62523						
1372,00	98,00	1160,15	15,67	24983	66455						
1470,00	98,00	1168,00	7,85	49960	132894						
1568,00	98,00	1173,11	5,11	76853	204429						
1764,00	196,00	1181,98	8,87	88763	236110						
1960,00	196,00	1193,16	11,18	70598	187791						
1960,00	147,00	1193,07	4,65	127435	338977						
2156,00	196,00	1203,86	10,79	73385	195204						
2352,00	196,00	1211,60	7,74	102458	272538						
2352,00	196,00	1213,84	1,93	411818	1095436						
2548,00	196,00	1217,48	3,63	218569	581394						
2744,00	196,00	1221,12	3,64	218172	580338						
2940,00	196,00	1224,60	3,48	228838	608709						
3136,00	196,00	1227,32	2,72	293058	779534						
3332,00	196,00	1231,28	3,96	201163	535094						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

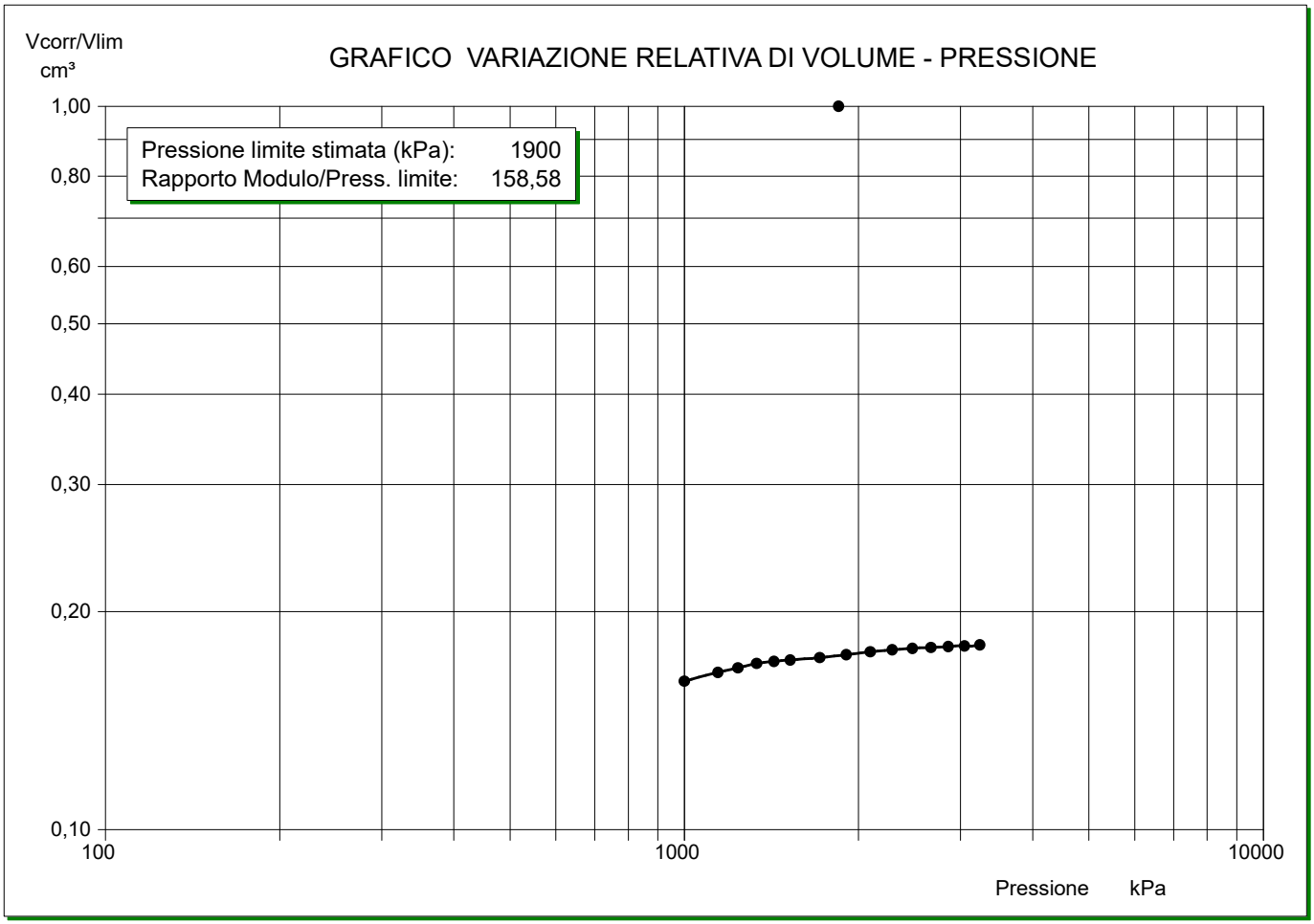
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

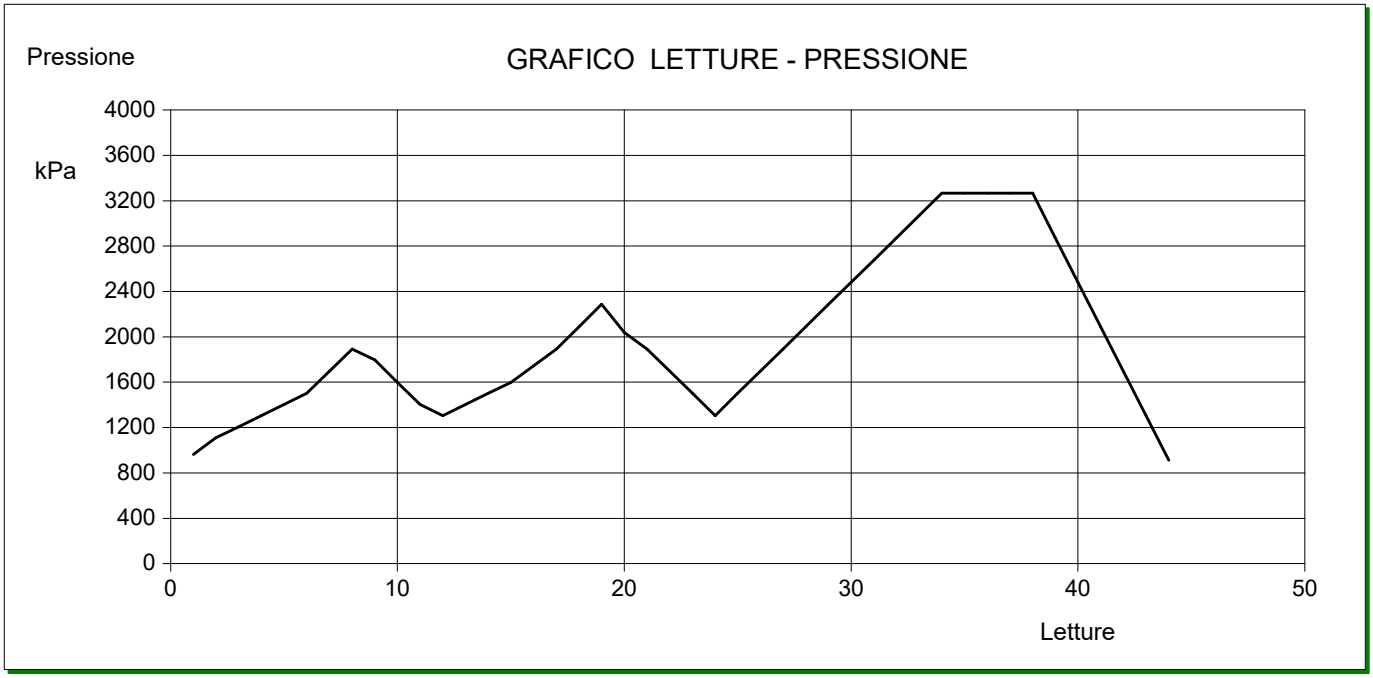
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

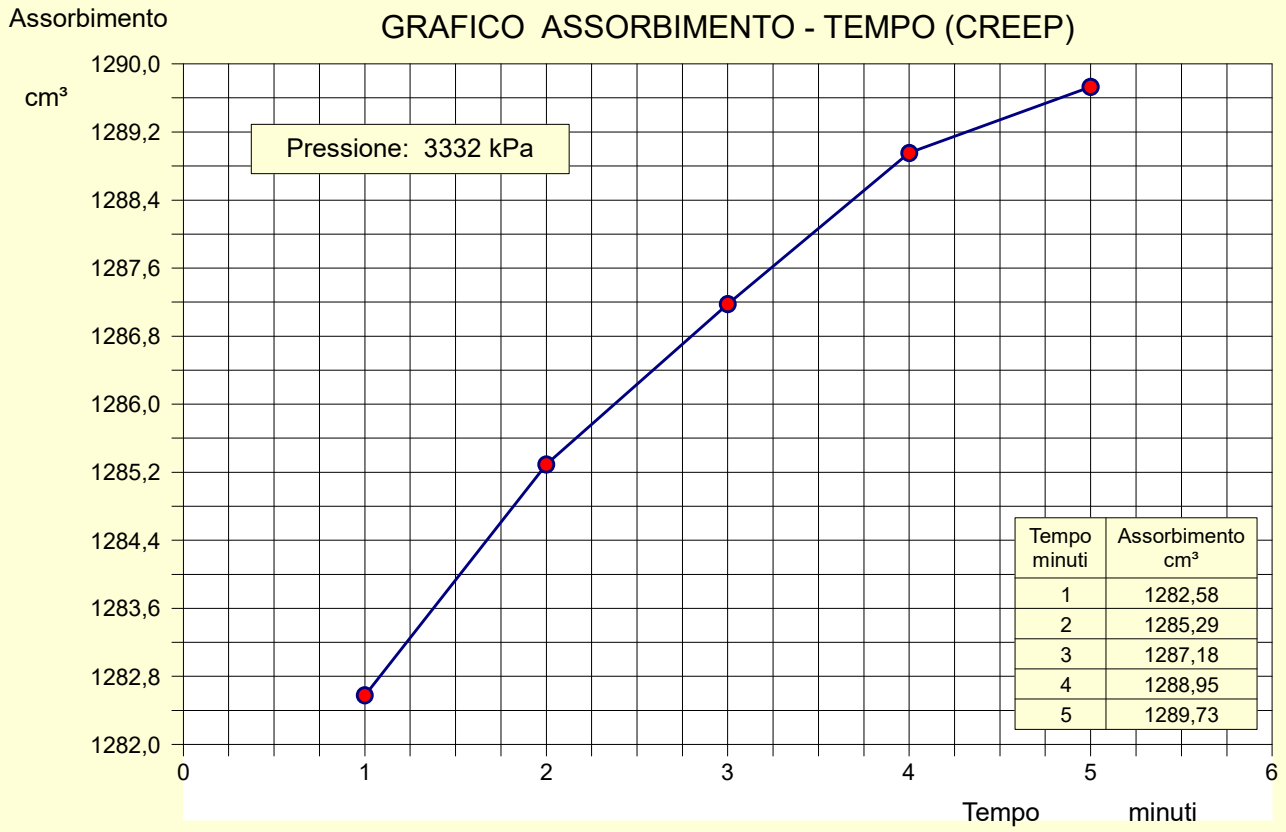
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:



Tempo minuti	Assorbimento cm³
1	1282,58
2	1285,29
3	1287,18
4	1288,95
5	1289,73

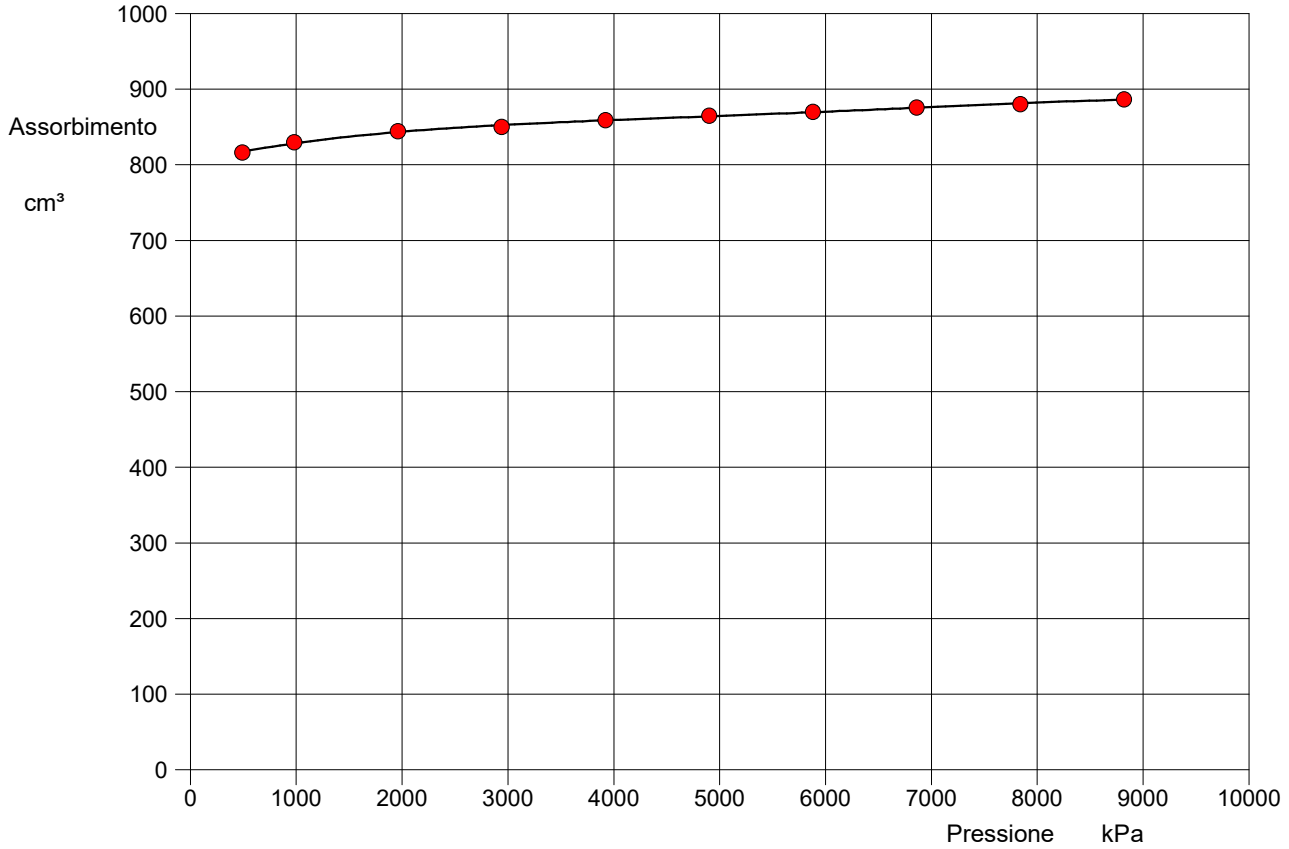
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	816,20	13,42									
980,00	829,88	24,26									
1960,00	844,40	39,33									
2940,00	850,13	48,57									
3920,00	858,88	54,83									
4900,00	864,96	60,11									
5880,00	870,14	65,57									
6860,00	875,67	71,53									
7840,00	880,34	77,47									
8820,00	886,52	82,04									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

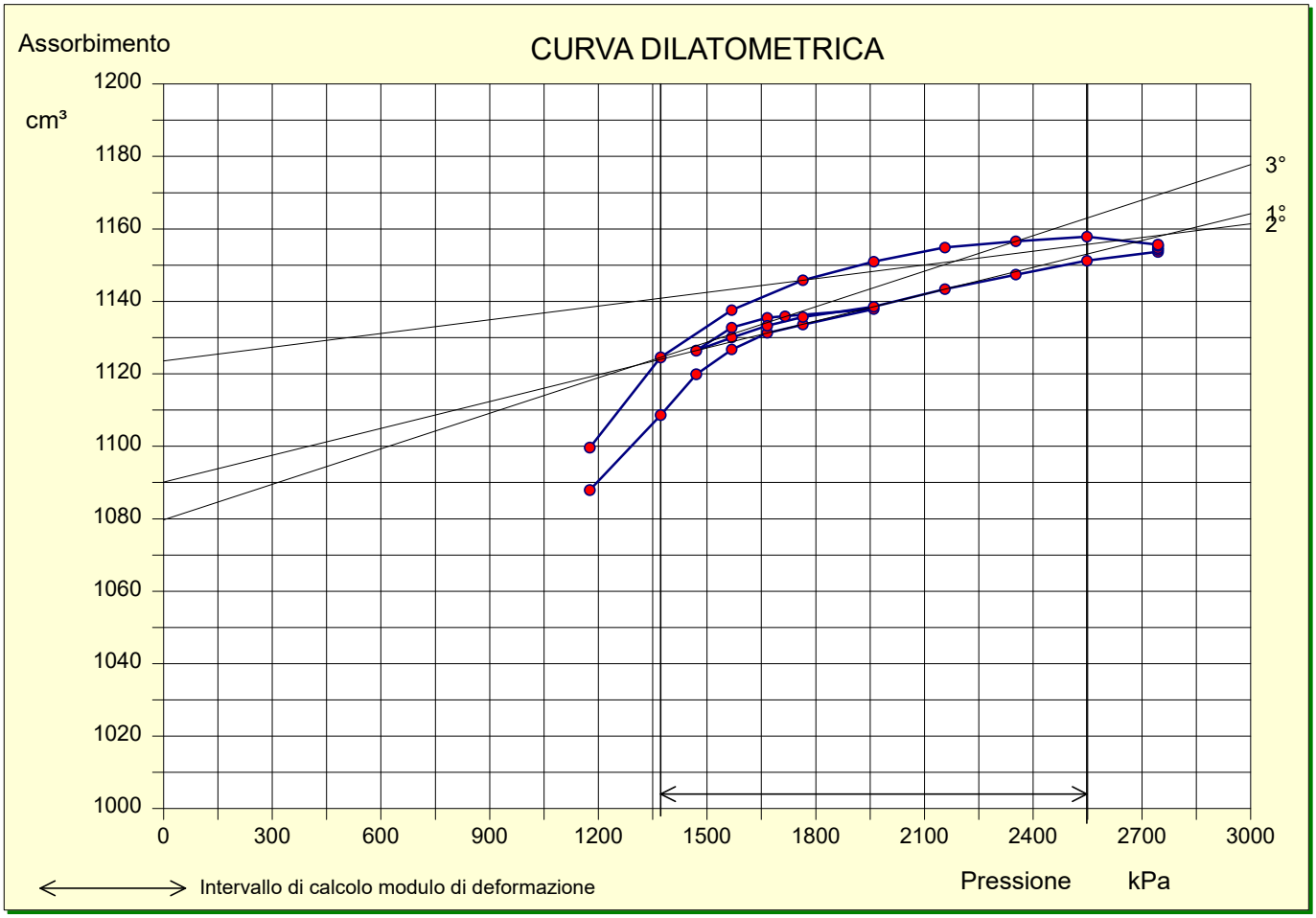
Profondità di prova (centro della cella) (m)	94,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	5.20		
Litologia: Calcare marnoso/marna siltosa			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1176,00	1115,83	27,90	1087,93	16,05						
2	1372,00	1139,81	31,20	1108,61	16,35						
3	1470,00	1152,58	32,73	1119,85	16,52						
4	1568,00	1160,92	34,18	1126,74	16,62						
5	1666,00	1166,85	35,57	1131,28	16,69						
6	1764,00	1170,47	36,88	1133,59	16,72						
7	1960,00	1177,21	39,33	1137,88	16,79						
8	1715,00	1172,13	36,23	1135,89	16,76						
9	1666,00	1171,05	35,57	1135,48	16,75						
10	1568,00	1166,96	34,18	1132,78	16,71						
11	1470,00	1159,16	32,73	1126,43	16,62						
12	1568,00	1164,22	34,18	1130,03	16,67						
13	1666,00	1168,84	35,57	1133,27	16,72						
14	1764,00	1172,55	36,88	1135,67	16,75						
15	1960,00	1177,85	39,33	1138,52	16,80						
16	2156,00	1184,93	41,54	1143,40	16,87						
17	2352,00	1190,92	43,54	1147,37	16,93						
18	2548,00	1196,60	45,37	1151,23	16,98						
19	2744,00	1200,72	47,04	1153,68	17,02						
20	2744,00	1201,31	47,04	1154,27	17,03						
21	2744,00	1201,75	47,04	1154,71	17,04						
22	2744,00	1202,42	47,04	1155,38	17,06						
23	2744,00	1202,71	47,04	1155,67	17,07						
24	2548,00	1203,20	45,37	1157,83	17,08						
25	2352,00	1200,12	43,54	1156,58	17,06						
26	2156,00	1196,38	41,54	1154,84	17,04						
27	1960,00	1190,30	39,33	1150,97	16,98						
28	1764,00	1182,70	36,88	1145,82	16,90						
29	1568,00	1171,80	34,18	1137,62	16,78						
30	1372,00	1155,74	31,20	1124,54	16,59						
31	1176,00	1127,54	27,90	1099,64	16,22						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1372,00
Volume iniziale [Vo] (cm³):	1108,61
Pressione finale [Pf] (kPa):	2548,00
Volume finale [Vf] (cm³):	1151,23

RISULTATI	
Modulo di taglio (kPa):	109403
Modulo di deformazione dilatometrico (kPa):	291012
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	3965

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1126	1156	1157
Volume finale [Vf] (cm³):	1139	1146	1125
Pressione iniziale [Po] (kPa):	1470	2744	2352
Pressione finale [Pf] (kPa):	1960	1764	1372
Modulo di deformazione dilatometrico (kPa):	397788	1039070	323895
Modulo da linea di tendenza (kPa):	426995	839567	322466

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

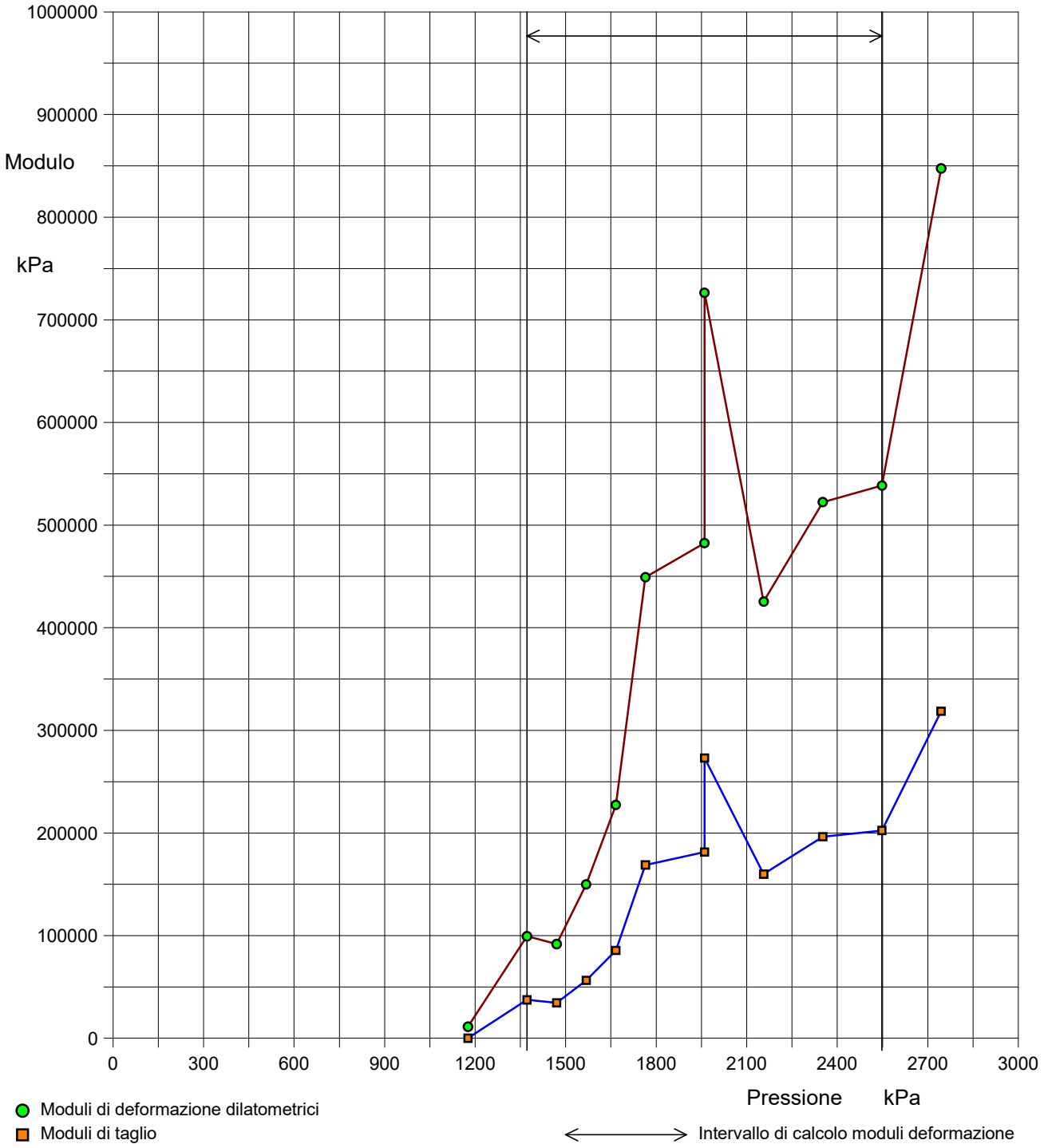
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1372,00	196,00	1108,61	20,68	37381	99433						
1470,00	98,00	1119,85	11,24	34489	91741						
1568,00	98,00	1126,74	6,89	56356	149907						
1666,00	98,00	1131,28	4,55	85470	227350						
1764,00	98,00	1133,59	2,30	168851	449144						
1960,00	196,00	1137,88	4,29	181371	482447						
1960,00	196,00	1138,52	2,85	273105	726459						
2156,00	196,00	1143,40	4,88	159932	425419						
2352,00	196,00	1147,37	3,97	196389	522395						
2548,00	196,00	1151,23	3,86	202449	538514						
2744,00	196,00	1153,68	2,45	318609	847500						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

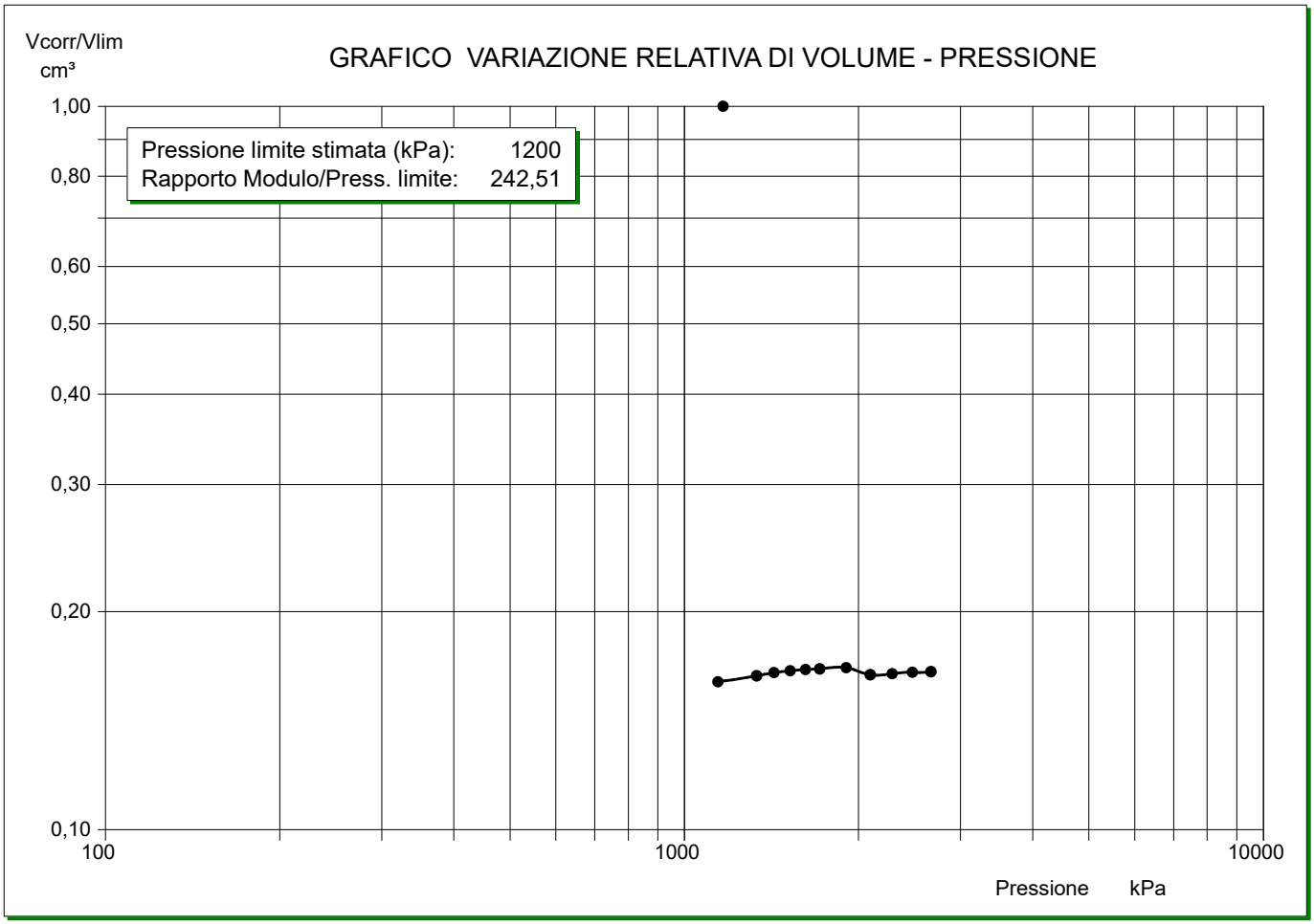
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

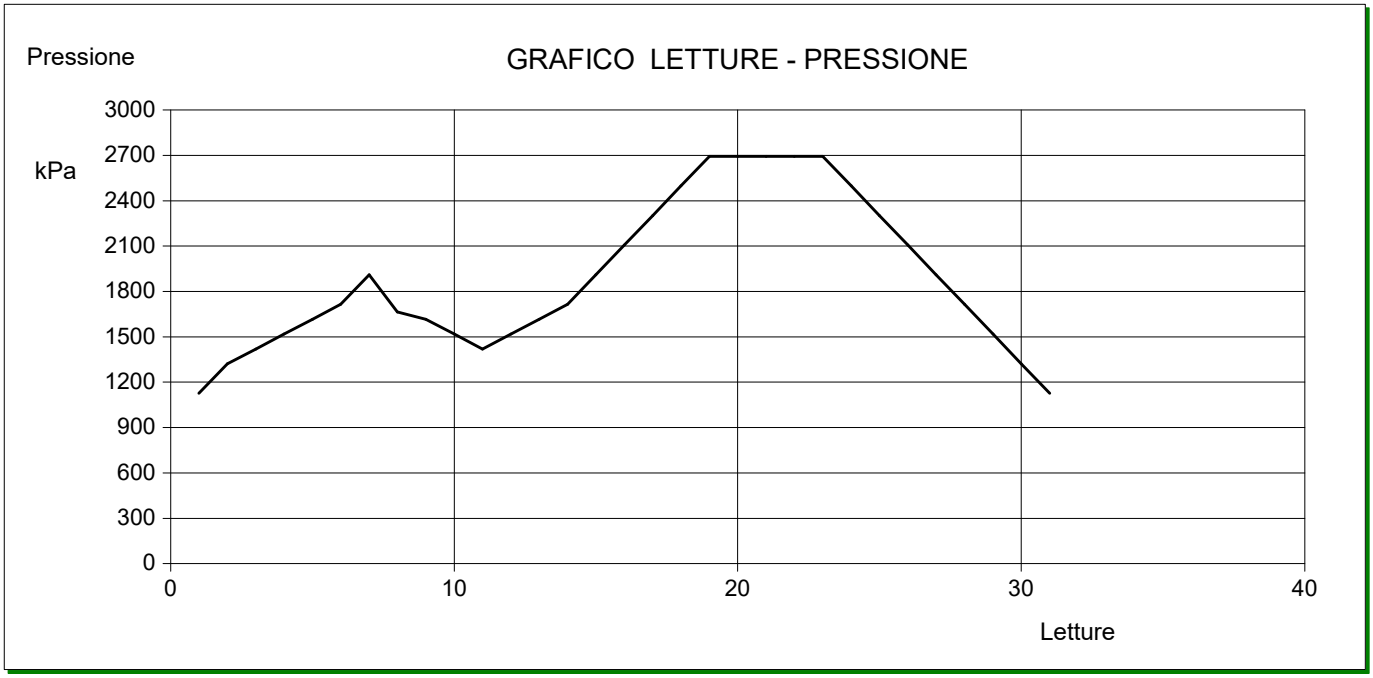
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

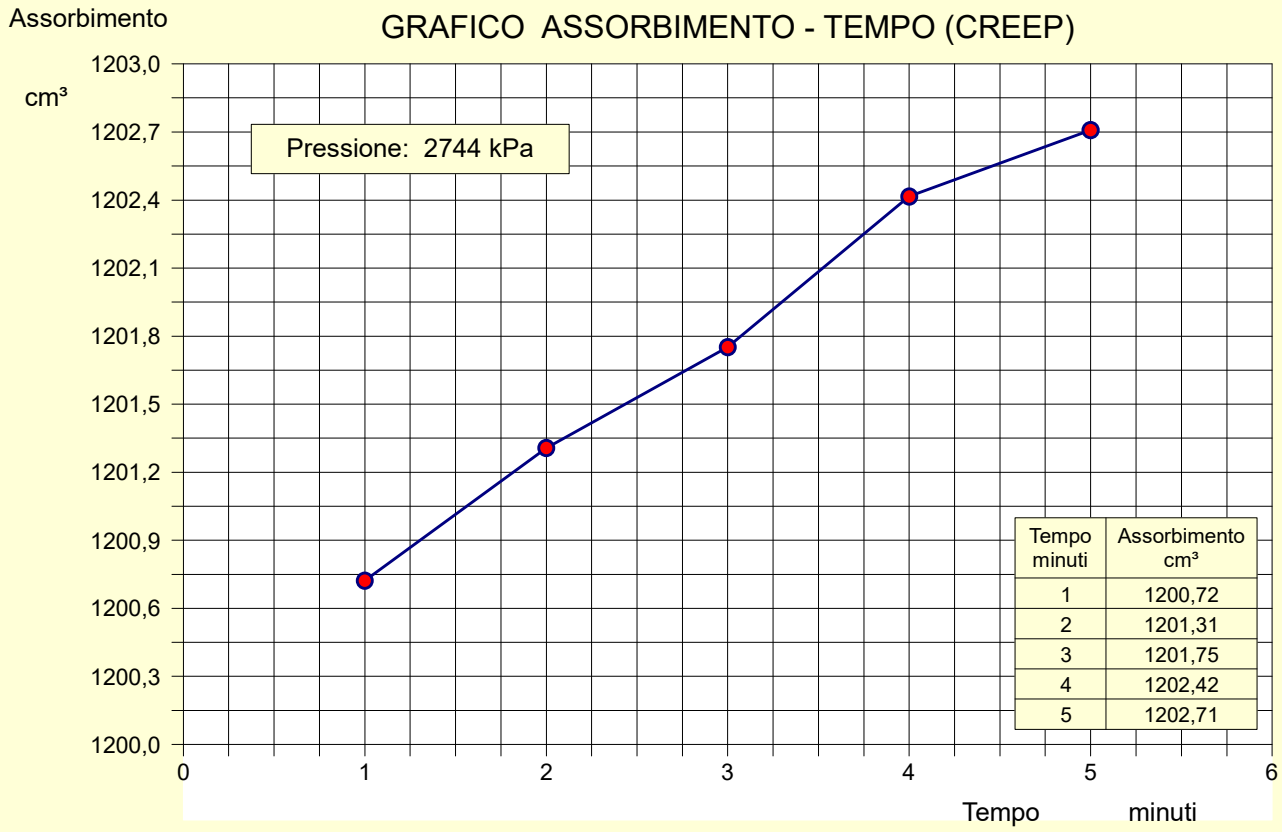
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:



Tempo minuti	Assorbimento cm³
1	1200,72
2	1201,31
3	1201,75
4	1202,42
5	1202,71

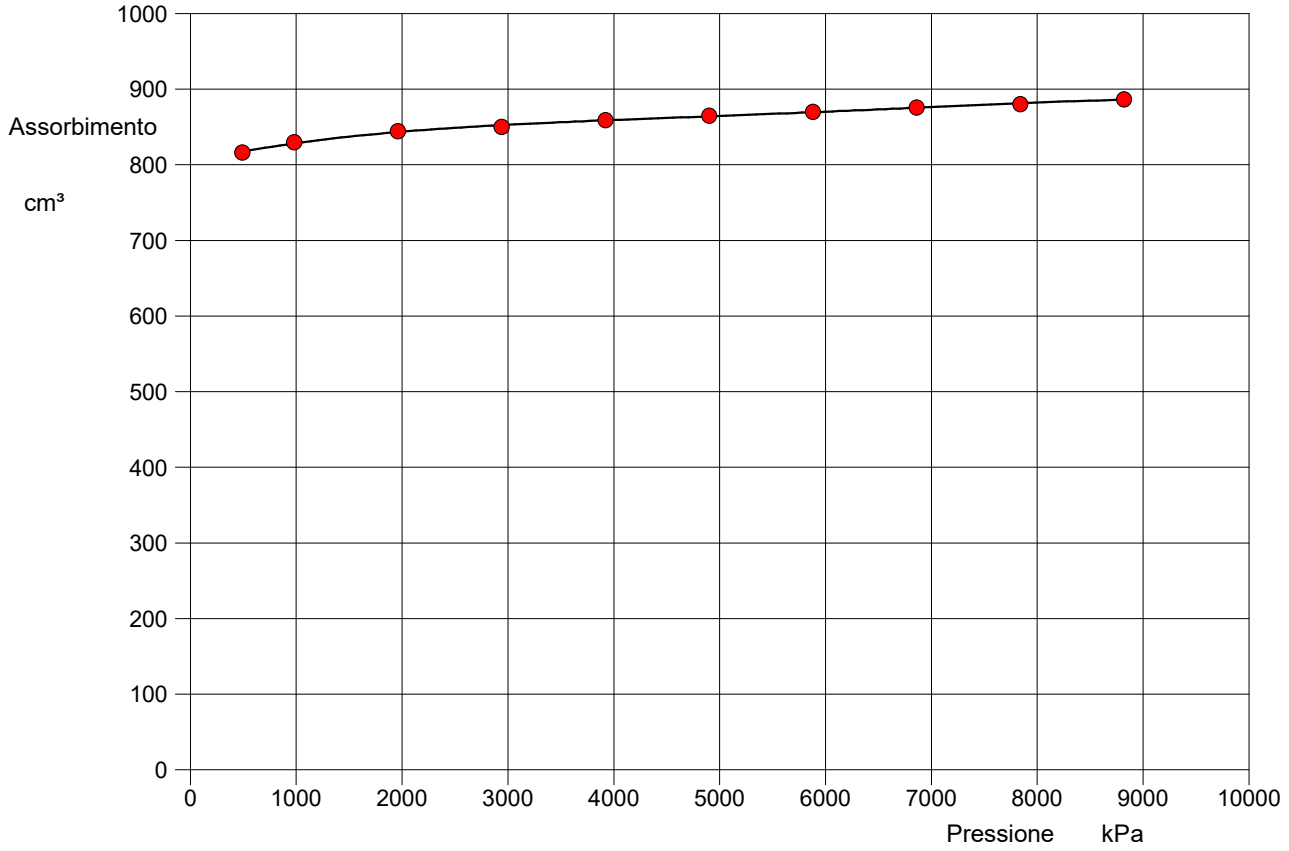
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-5	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	816,20	13,42									
980,00	829,88	24,26									
1960,00	844,40	39,33									
2940,00	850,13	48,57									
3920,00	858,88	54,83									
4900,00	864,96	60,11									
5880,00	870,14	65,57									
6860,00	875,67	71,53									
7840,00	880,34	77,47									
8820,00	886,52	82,04									

Sondaggio CL-6

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

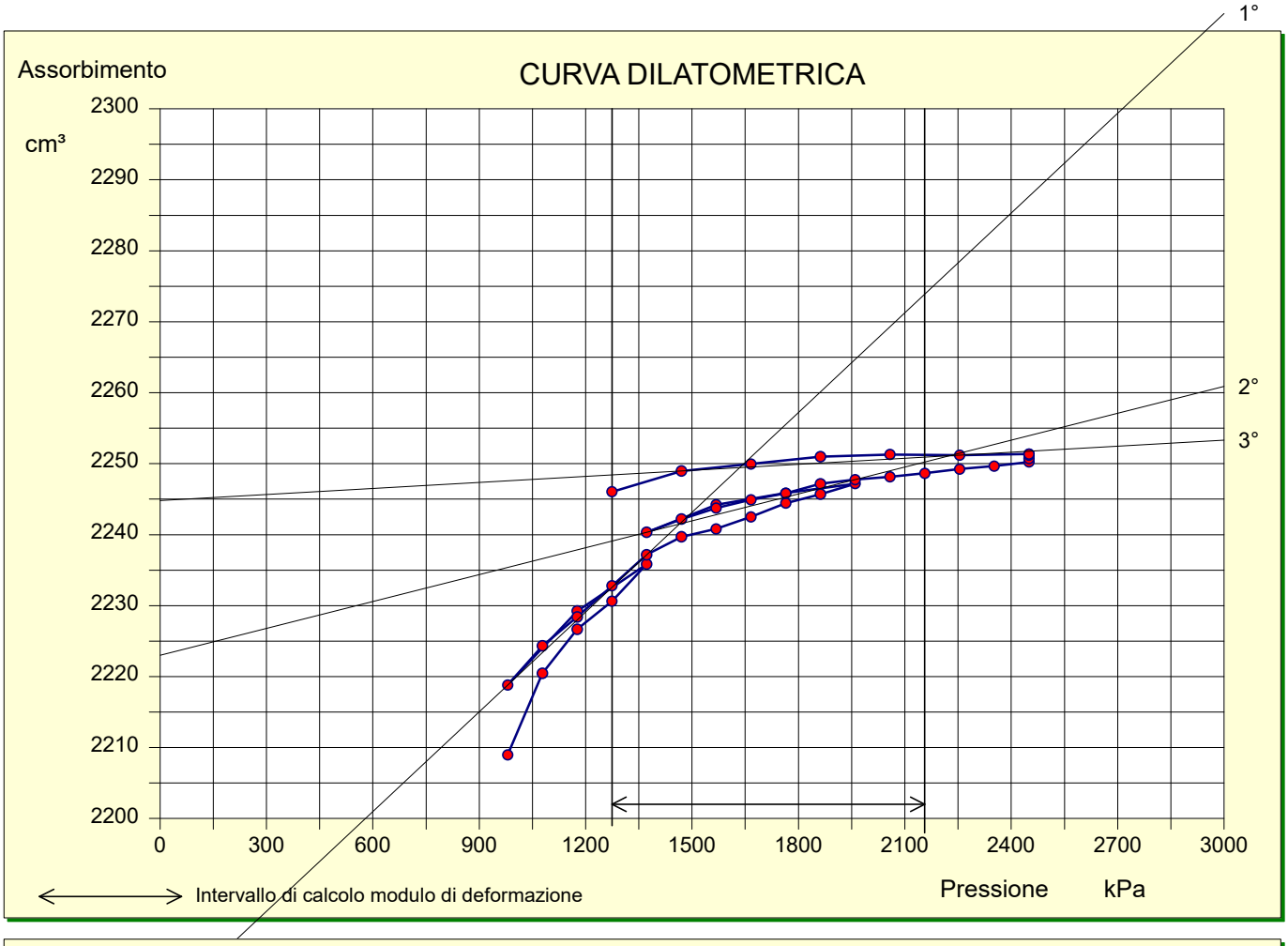
Profondità di prova (centro della cella) (m)	81,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia: Arenarie integre			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	980,00	2233,22	24,26	2208,97	27,96	41	1274,00	2275,64	29,59	2246,05	28,43
2	1078,00	2246,59	26,12	2220,47	28,11						
3	1176,00	2254,59	27,90	2226,69	28,18						
4	1274,00	2260,22	29,59	2230,62	28,23						
5	1372,00	2267,05	31,20	2235,85	28,30						
6	1176,00	2257,13	27,90	2229,23	28,22						
7	980,00	2243,07	24,26	2218,82	28,08						
8	1078,00	2250,46	26,12	2224,34	28,15						
9	1176,00	2256,31	27,90	2228,41	28,21						
10	1274,00	2262,40	29,59	2232,81	28,26						
11	1372,00	2268,38	31,20	2237,18	28,32						
12	1470,00	2272,42	32,73	2239,69	28,35						
13	1568,00	2274,99	34,18	2240,81	28,36						
14	1666,00	2278,06	35,57	2242,50	28,38						
15	1764,00	2281,32	36,88	2244,44	28,41						
16	1862,00	2283,84	38,14	2245,71	28,42						
17	1960,00	2286,52	39,33	2247,19	28,44						
18	1764,00	2282,74	36,88	2245,85	28,43						
19	1568,00	2278,42	34,18	2244,23	28,41						
20	1372,00	2271,52	31,20	2240,32	28,36						
21	1470,00	2274,93	32,73	2242,20	28,38						
22	1568,00	2277,94	34,18	2243,76	28,40						
23	1666,00	2280,48	35,57	2244,91	28,41						
24	1764,00	2282,71	36,88	2245,82	28,43						
25	1862,00	2285,30	38,14	2247,17	28,44						
26	1960,00	2287,08	39,33	2247,75	28,45						
27	2058,00	2288,61	40,46	2248,15	28,46						
28	2156,00	2290,18	41,54	2248,64	28,46						
29	2254,00	2291,80	42,57	2249,23	28,47						
30	2352,00	2293,21	43,54	2249,67	28,47						
31	2450,00	2294,72	44,48	2250,24	28,48						
32	2450,00	2295,17	44,48	2250,70	28,49						
33	2450,00	2295,68	44,48	2251,20	28,49						
34	2450,00	2295,83	44,48	2251,35	28,50						
35	2450,00	2295,83	44,48	2251,35	28,50						
36	2254,00	2293,77	42,57	2251,20	28,49						
37	2058,00	2291,76	40,46	2251,30	28,50						
38	1862,00	2289,13	38,14	2250,99	28,49						
39	1666,00	2285,53	35,57	2249,96	28,48						
40	1470,00	2281,71	32,73	2248,98	28,47						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1274,00
Volume iniziale [Vo] (cm³):	2230,62
Pressione finale [Pf] (kPa):	2156,00
Volume finale [Vf] (cm³):	2248,64

RISULTATI	
Modulo di taglio (kPa):	248439
Modulo di deformazione dilatometrico (kPa):	660848
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	5075

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2219	2240	2251
Volume finale [Vf] (cm³):	2237	2248	2249
Pressione iniziale [Po] (kPa):	980	1372	2254
Pressione finale [Pf] (kPa):	1372	1960	1470
Modulo di deformazione dilatometrico (kPa):	293294	992995	5302231
Modulo da linea di tendenza (kPa):	288357	1068994	4763868

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

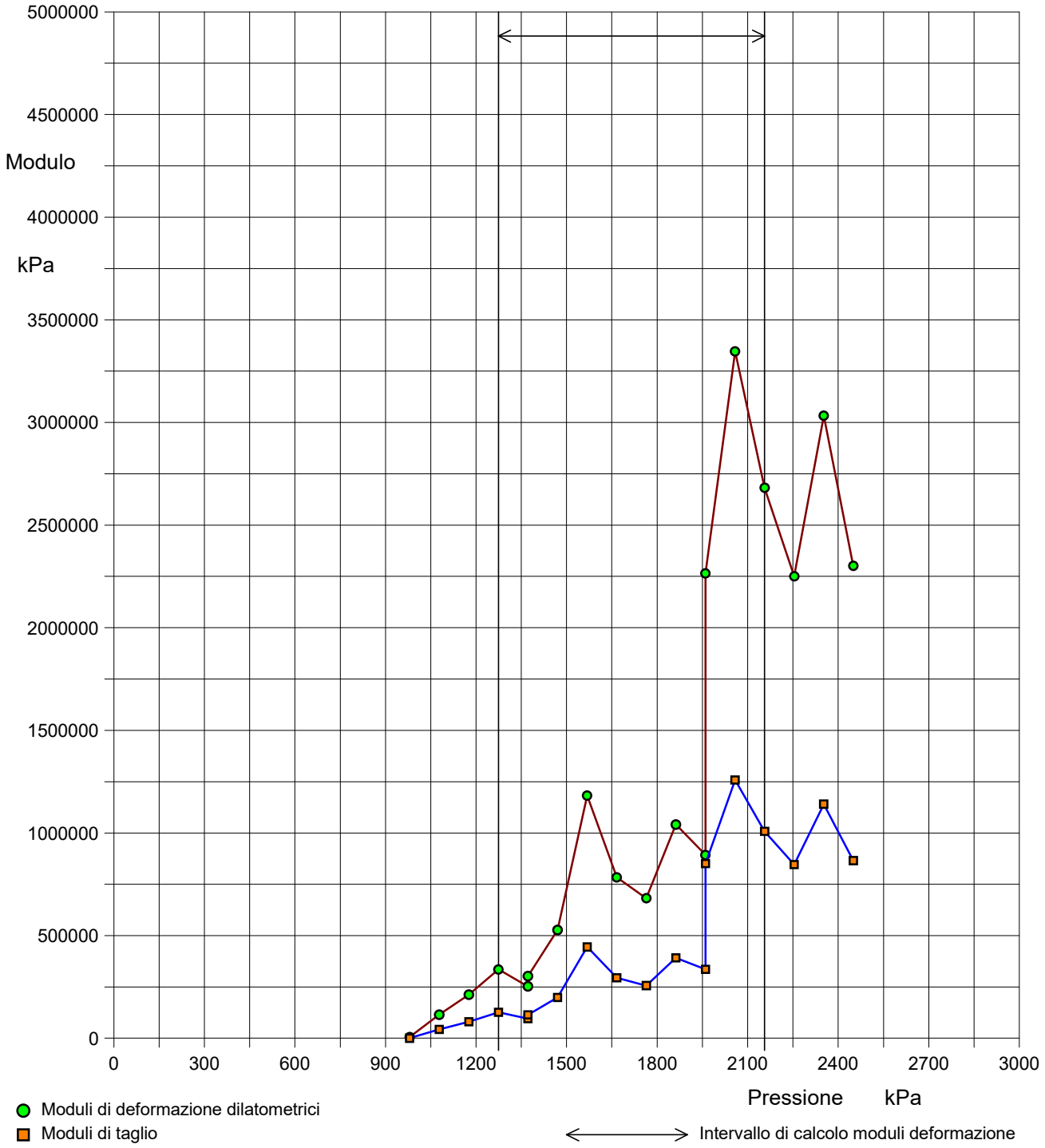
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1078,00	98,00	2220,47	11,50	43074	114577						
1176,00	98,00	2226,69	6,22	79813	212303						
1274,00	98,00	2230,62	3,94	126031	335242						
1372,00	98,00	2235,85	5,23	95054	252844						
1372,00	98,00	2237,18	4,37	113668	302357						
1470,00	98,00	2239,69	2,51	198289	527449						
1568,00	98,00	2240,81	1,12	444571	1182559						
1666,00	98,00	2242,50	1,69	294743	784016						
1764,00	98,00	2244,44	1,94	256469	682208						
1862,00	98,00	2245,71	1,27	391447	1041249						
1960,00	98,00	2247,19	1,48	335642	892808						
1960,00	98,00	2247,75	0,58	851526	2265059						
2058,00	98,00	2248,15	0,40	1257963	3346182						
2156,00	98,00	2248,64	0,49	1008209	2681836						
2254,00	98,00	2249,23	0,59	846124	2250690						
2352,00	98,00	2249,67	0,44	1140238	3033033						
2450,00	98,00	2250,24	0,58	865306	2301714						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

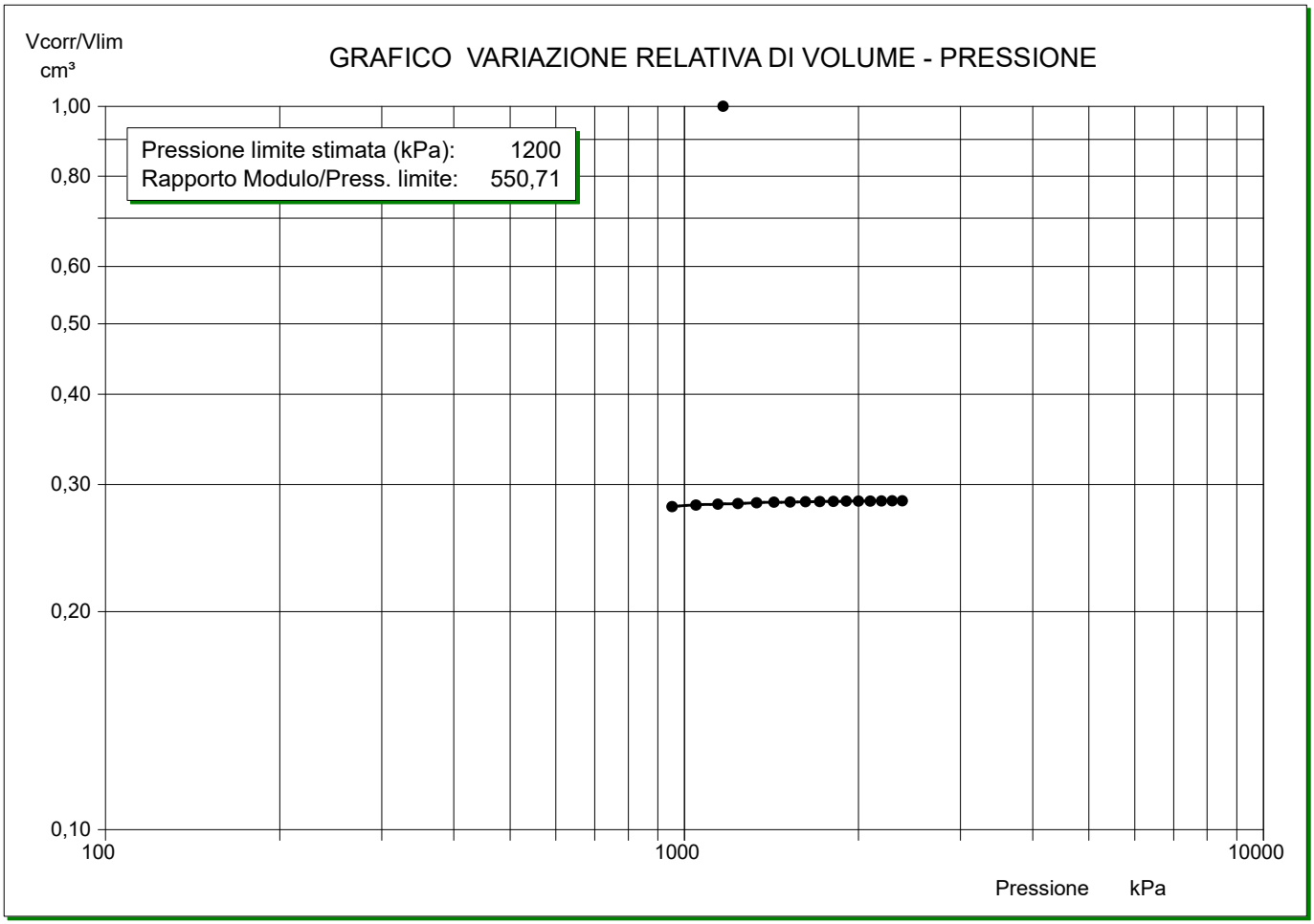
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

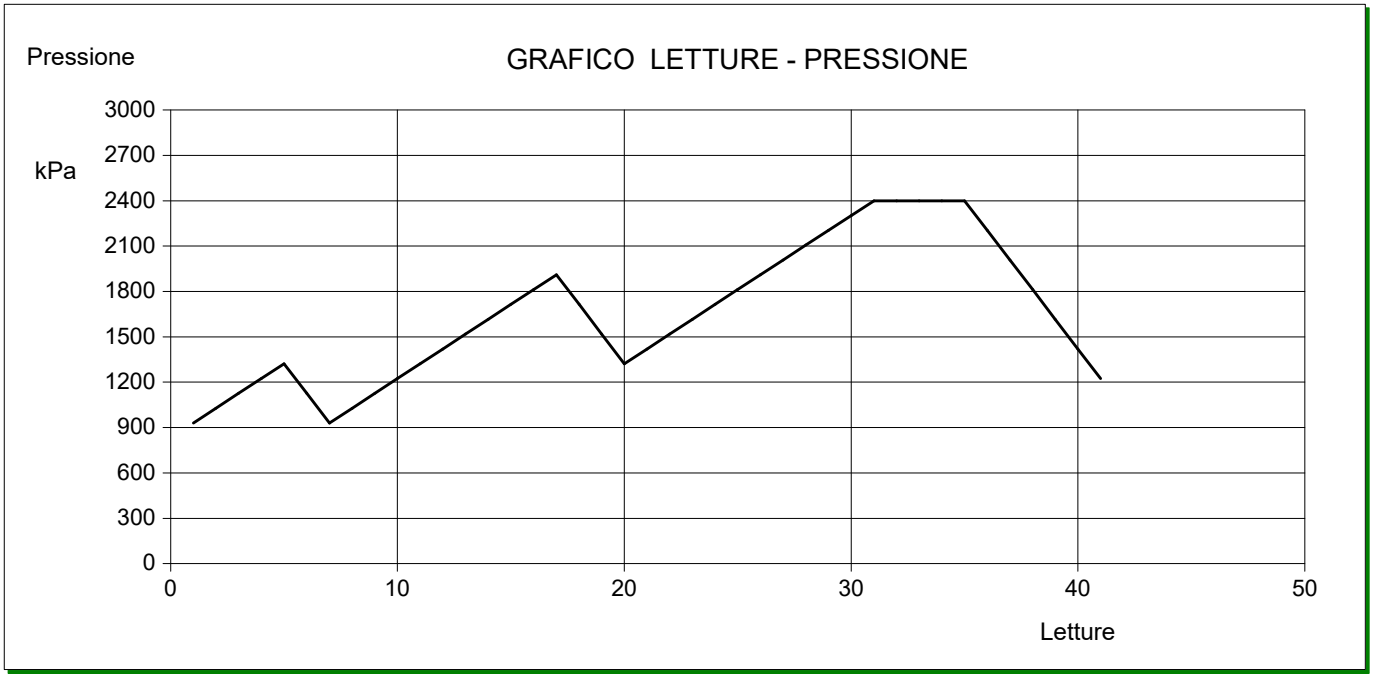
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

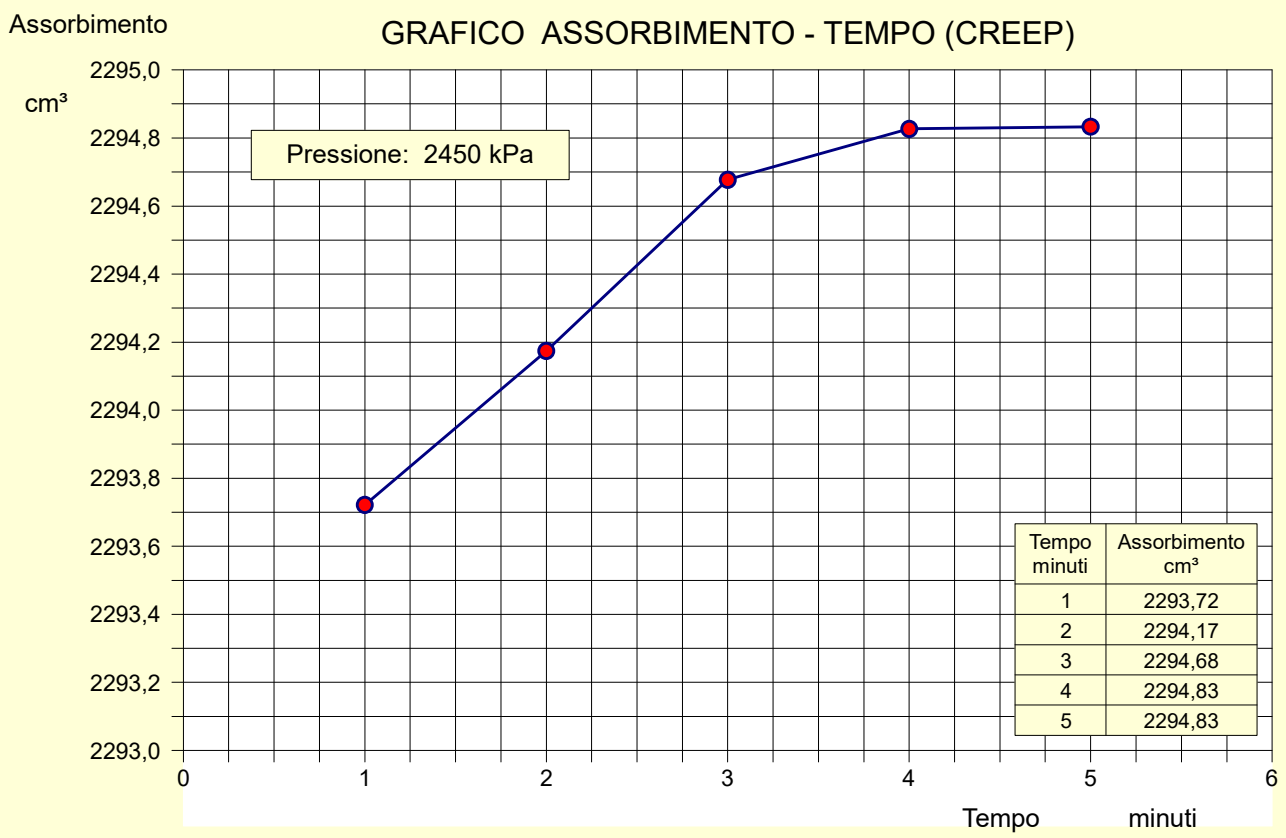
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:



Tempo minuti	Assorbimento cm³
1	2293,72
2	2294,17
3	2294,68
4	2294,83
5	2294,83

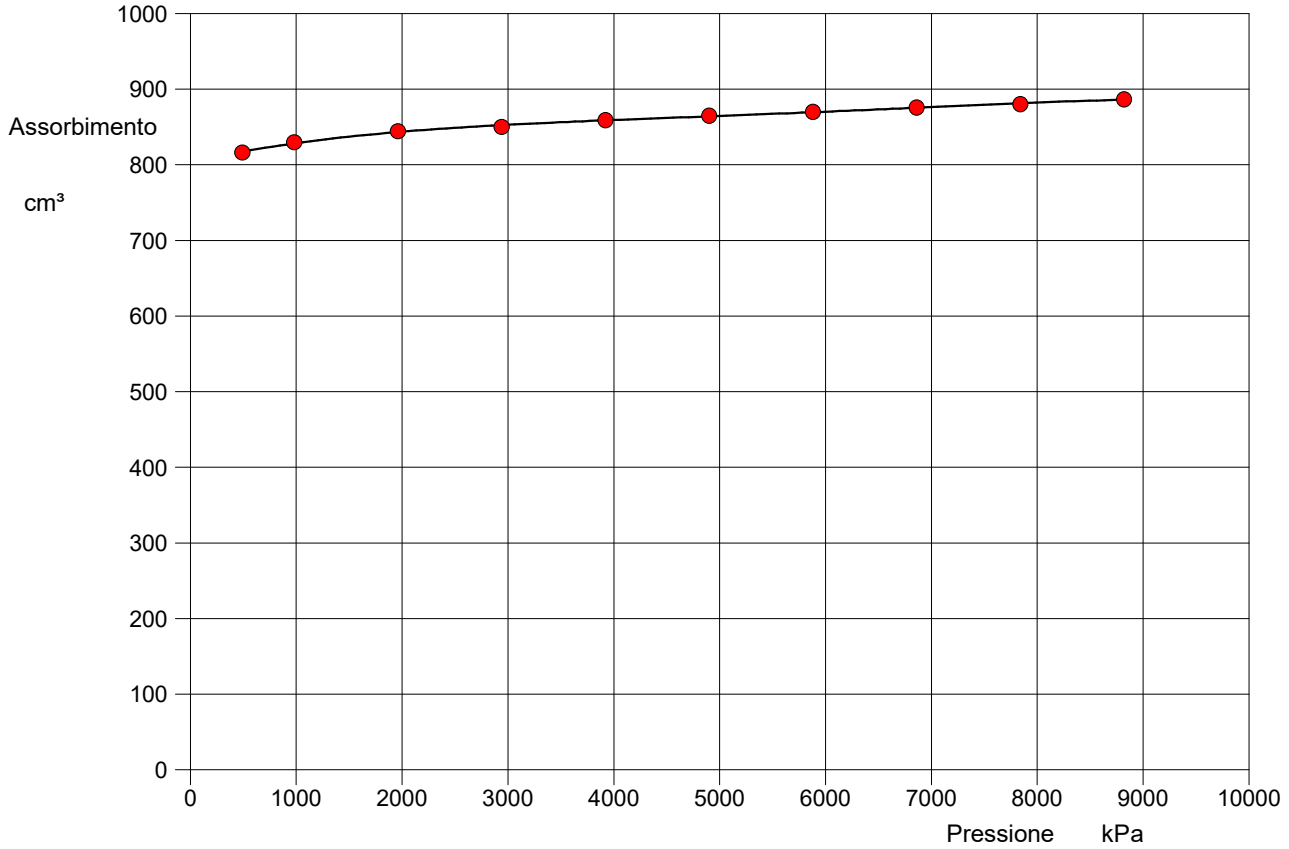
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	816,20	13,42									
980,00	829,88	24,26									
1960,00	844,40	39,33									
2940,00	850,13	48,57									
3920,00	858,88	54,83									
4900,00	864,96	60,11									
5880,00	870,14	65,57									
6860,00	875,67	71,53									
7840,00	880,34	77,47									
8820,00	886,52	82,04									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

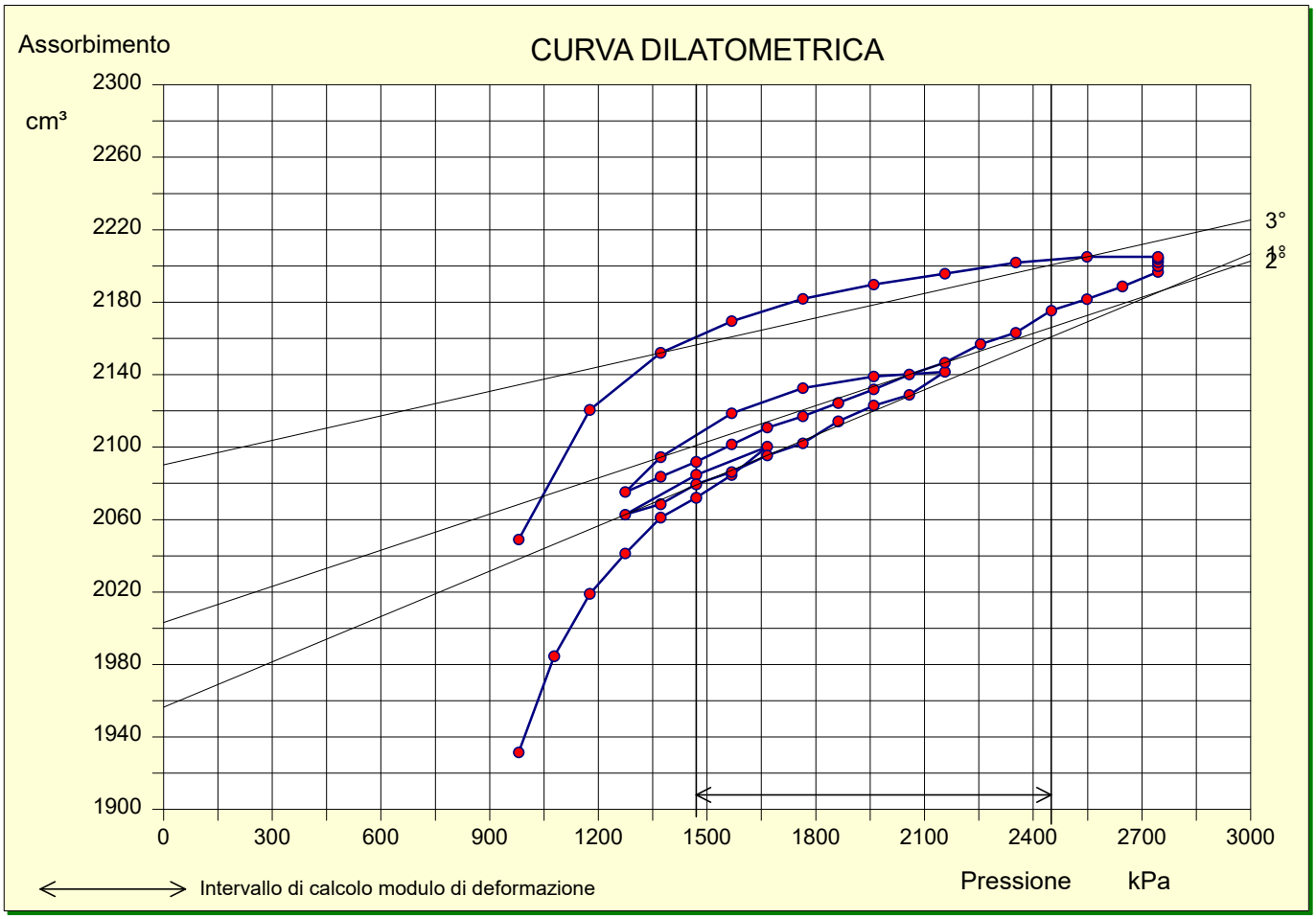
Profondità di prova (centro della cella) (m)	90,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia: Marne argillose			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	980,00	1955,67	24,26	1931,41	24,95	41	2744,00	2249,21	47,04	2202,17	28,44
2	1078,00	2010,70	26,12	1984,57	25,63	42	2744,00	2250,97	47,04	2203,93	28,47
3	1176,00	2046,88	27,90	2018,98	26,08	43	2744,00	2252,02	47,04	2204,98	28,48
4	1274,00	2070,85	29,59	2041,26	26,37	44	2548,00	2250,41	45,37	2205,04	28,48
5	1372,00	2092,30	31,20	2061,10	26,62	45	2352,00	2245,39	43,54	2201,84	28,44
6	1470,00	2104,75	32,73	2072,02	26,76	46	2156,00	2237,25	41,54	2195,71	28,36
7	1568,00	2118,77	34,18	2084,59	26,93	47	1960,00	2229,05	39,33	2189,73	28,28
8	1666,00	2135,81	35,57	2100,24	27,13	48	1764,00	2218,70	36,88	2181,81	28,18
9	1470,00	2117,43	32,73	2084,71	26,93	49	1568,00	2203,72	34,18	2169,53	28,02
10	1274,00	2092,32	29,59	2062,73	26,64	50	1372,00	2183,26	31,20	2152,06	27,80
11	1372,00	2099,74	31,20	2068,54	26,72	51	1176,00	2148,43	27,90	2120,53	27,39
12	1470,00	2112,25	32,73	2079,53	26,86	52	980,00	2073,23	24,26	2048,97	26,47
13	1568,00	2120,47	34,18	2086,29	26,95						
14	1666,00	2130,99	35,57	2095,42	27,07						
15	1764,00	2138,98	36,88	2102,09	27,15						
16	1862,00	2152,40	38,14	2114,26	27,31						
17	1960,00	2162,30	39,33	2122,97	27,42						
18	2058,00	2169,29	40,46	2128,83	27,50						
19	2156,00	2183,11	41,54	2141,57	27,66						
20	1960,00	2178,33	39,33	2139,01	27,63						
21	1764,00	2169,44	36,88	2132,55	27,55						
22	1568,00	2152,85	34,18	2118,67	27,37						
23	1372,00	2125,66	31,20	2094,46	27,05						
24	1274,00	2104,82	29,59	2075,22	26,80						
25	1372,00	2114,83	31,20	2083,63	26,91						
26	1470,00	2124,59	32,73	2091,86	27,02						
27	1568,00	2135,66	34,18	2101,47	27,14						
28	1666,00	2146,35	35,57	2110,78	27,26						
29	1764,00	2153,90	36,88	2117,01	27,34						
30	1862,00	2162,54	38,14	2124,41	27,44						
31	1960,00	2171,20	39,33	2131,87	27,54						
32	2058,00	2180,50	40,46	2140,04	27,64						
33	2156,00	2188,14	41,54	2146,60	27,73						
34	2254,00	2199,45	42,57	2156,88	27,86						
35	2352,00	2206,68	43,54	2163,14	27,94						
36	2450,00	2219,80	44,48	2175,32	28,10						
37	2548,00	2227,04	45,37	2181,67	28,18						
38	2646,00	2234,88	46,22	2188,66	28,27						
39	2744,00	2243,73	47,04	2196,69	28,37						
40	2744,00	2246,90	47,04	2199,86	28,41						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1470,00
Volume iniziale [Vo] (cm³):	2072,02
Pressione finale [Pf] (kPa):	2450,00
Volume finale [Vf] (cm³):	2175,32

RISULTATI	
Modulo di taglio (kPa):	47043
Modulo di deformazione dilatometrico (kPa):	125134
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4959

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2063	2094	2205
Volume finale [Vf] (cm³):	2095	2147	2152
Pressione iniziale [Po] (kPa):	1274	1372	2548
Pressione finale [Pf] (kPa):	1666	2156	1372
Modulo di deformazione dilatometrico (kPa):	160123	194989	295906
Modulo da linea di tendenza (kPa):	156847	197497	294780

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

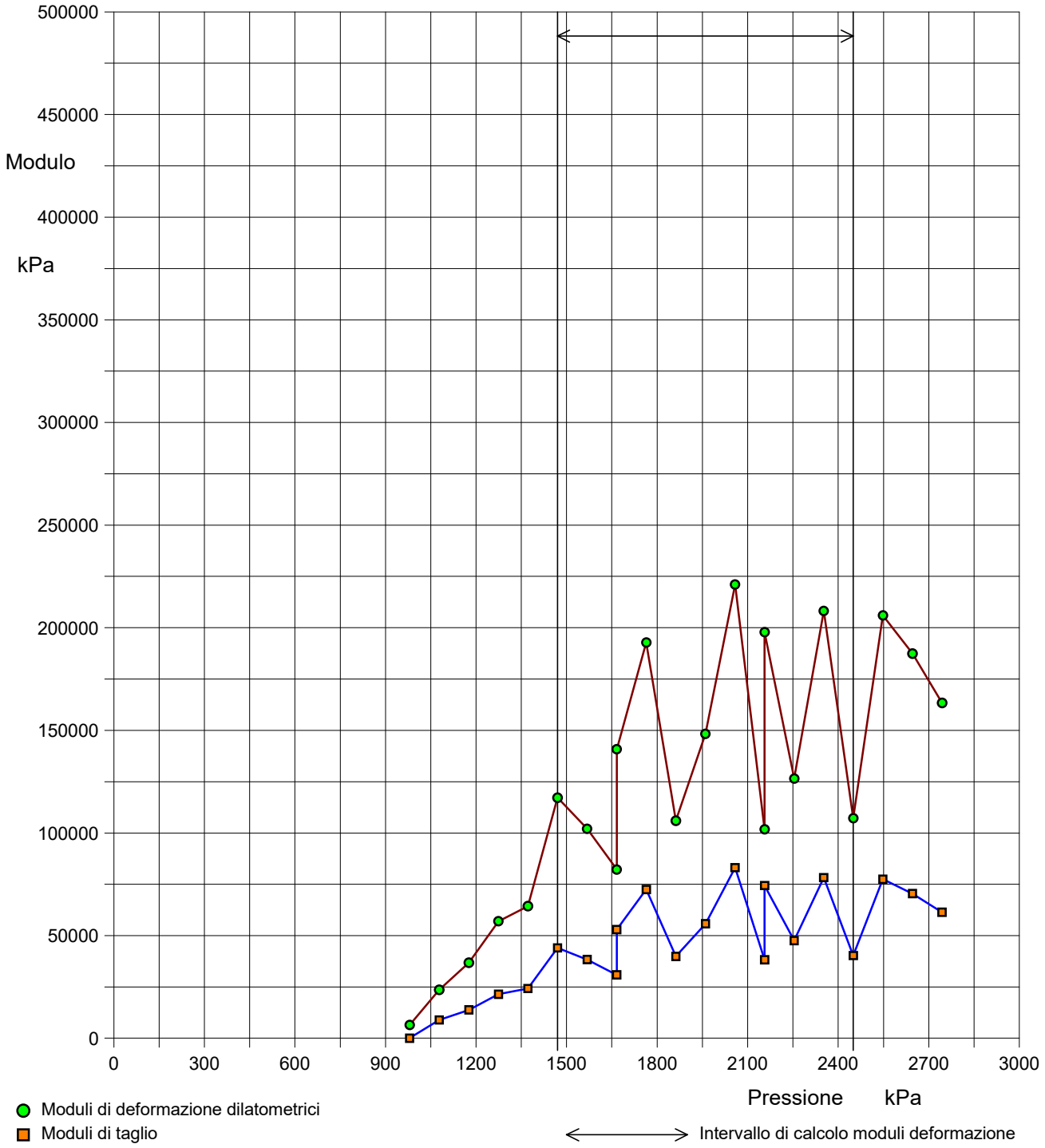
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
1078,00	98,00	1984,57	53,16	8884	23631						
1176,00	98,00	2018,98	34,41	13826	36777						
1274,00	98,00	2041,26	22,28	21448	57052						
1372,00	98,00	2061,10	19,84	24180	64319						
1470,00	98,00	2072,02	10,92	44057	117192						
1568,00	98,00	2084,59	12,57	38358	102032						
1666,00	98,00	2100,24	15,66	30893	82175						
1666,00	98,00	2095,42	9,13	52940	140820						
1764,00	98,00	2102,09	6,68	72474	192781						
1862,00	98,00	2114,26	12,17	39858	106022						
1960,00	98,00	2122,97	8,71	55771	148351						
2058,00	98,00	2128,83	5,85	83101	221049						
2156,00	98,00	2141,57	12,74	38269	101796						
2156,00	98,00	2146,60	6,56	74397	197896						
2254,00	98,00	2156,88	10,28	47579	126560						
2352,00	98,00	2163,14	6,26	78273	208206						
2450,00	98,00	2175,32	12,19	40296	107187						
2548,00	98,00	2181,67	6,35	77460	206044						
2646,00	98,00	2188,66	6,99	70442	187376						
2744,00	98,00	2196,69	8,03	61400	163324						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

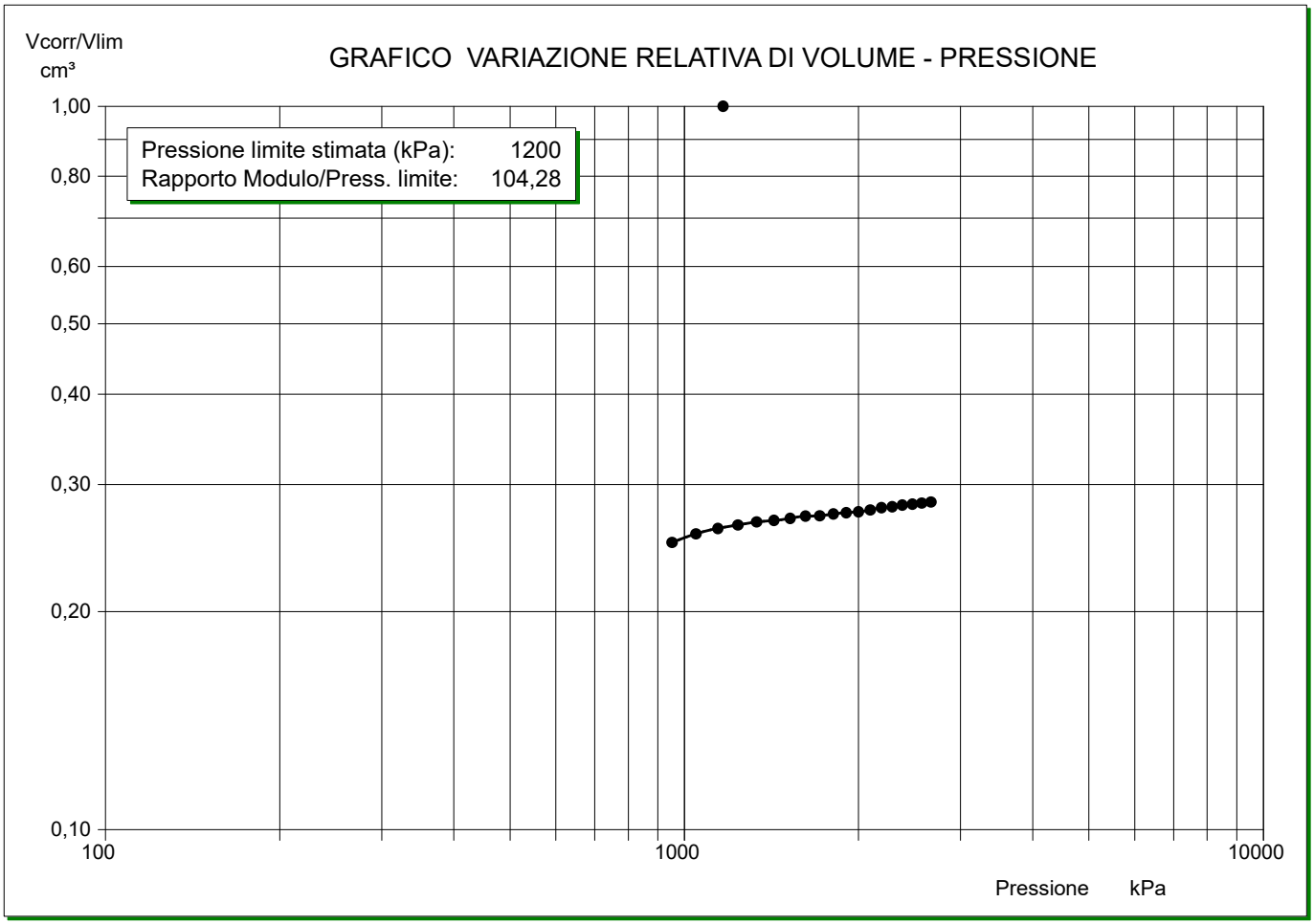
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

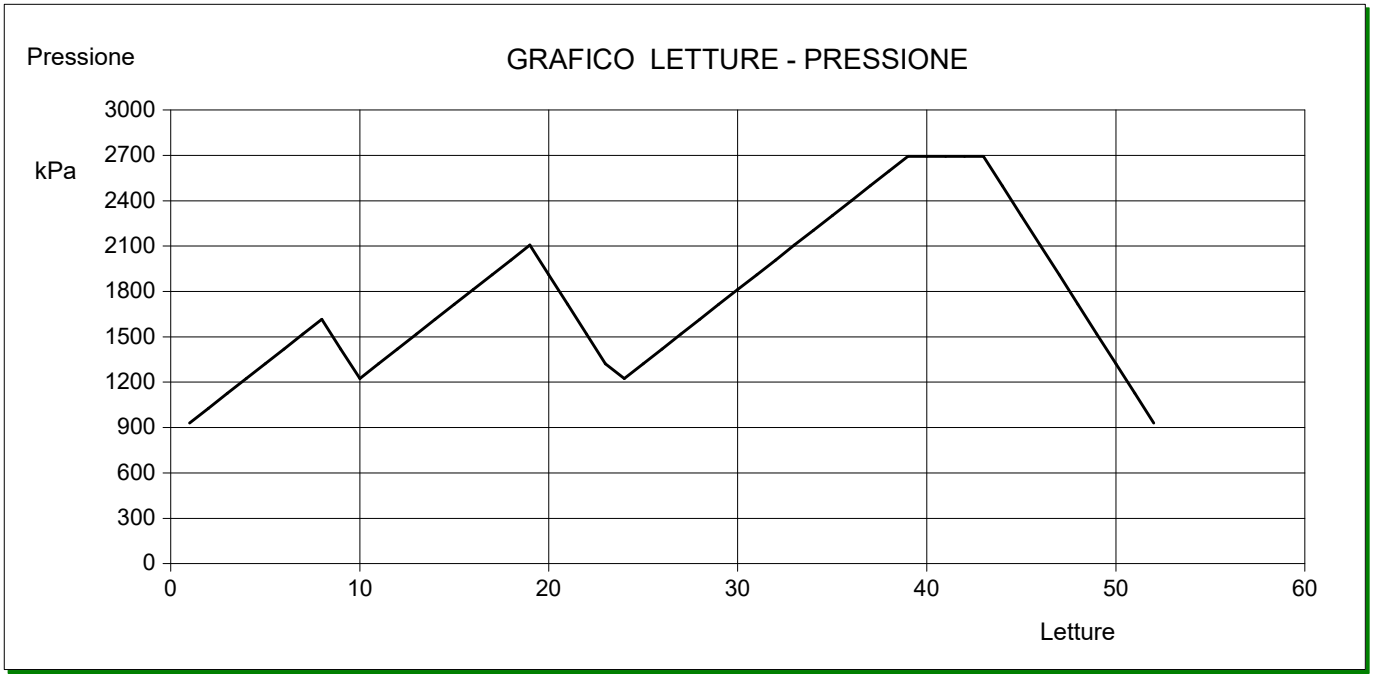
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

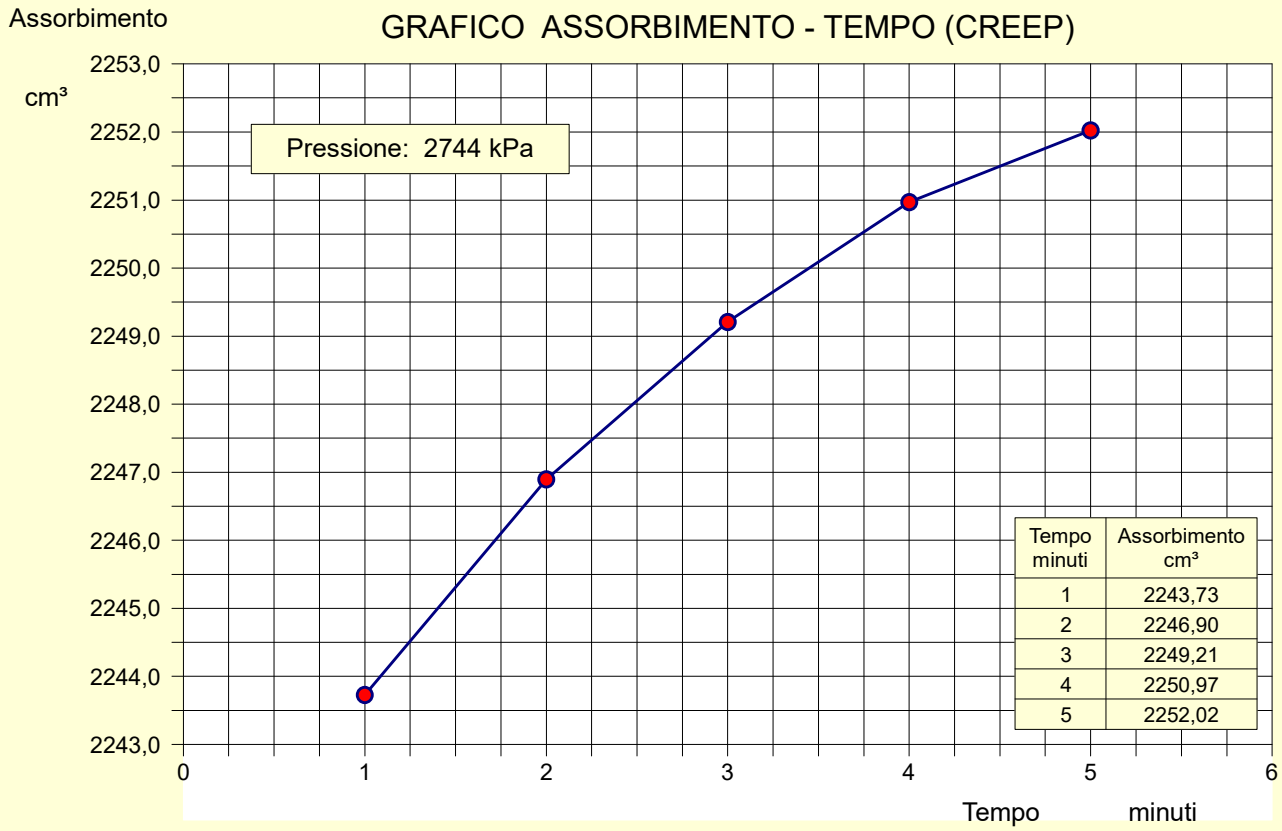
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:



Tempo minuti	Assorbimento cm³
1	2243,73
2	2246,90
3	2249,21
4	2250,97
5	2252,02

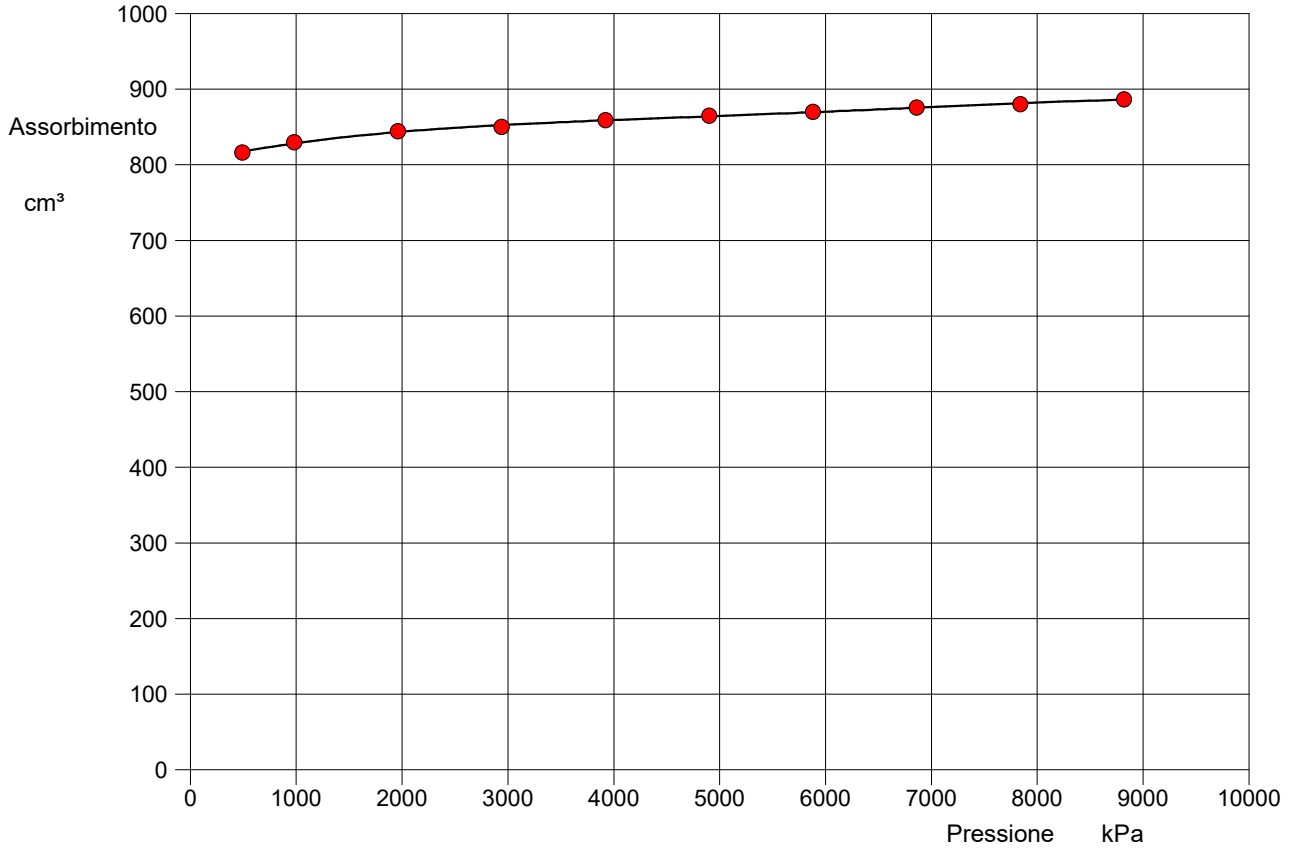
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	816,20	13,42									
980,00	829,88	24,26									
1960,00	844,40	39,33									
2940,00	850,13	48,57									
3920,00	858,88	54,83									
4900,00	864,96	60,11									
5880,00	870,14	65,57									
6860,00	875,67	71,53									
7840,00	880,34	77,47									
8820,00	886,52	82,04									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

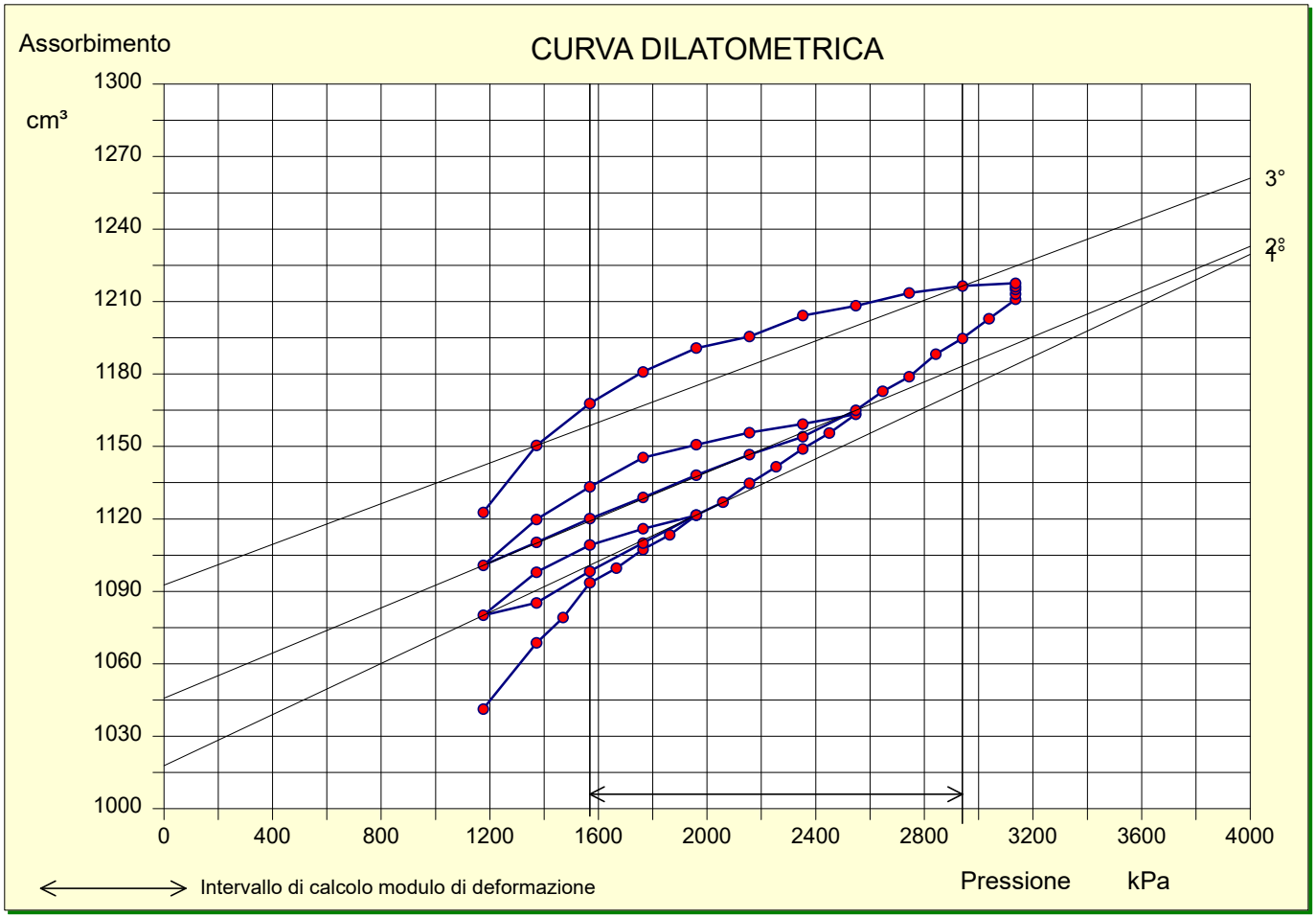
Profondità di prova (centro della cella) (m)	99,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia:Marne siltose			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	1176,00	1069,20	27,90	1041,30	15,36	41	3038,00	1252,15	49,29	1202,86	17,75
2	1372,00	1099,85	31,20	1068,65	15,77	42	3136,00	1260,90	49,98	1210,91	17,87
3	1470,00	1111,91	32,73	1079,18	15,92	43	3136,00	1263,11	49,98	1213,13	17,90
4	1568,00	1127,75	34,18	1093,56	16,14	44	3136,00	1264,97	49,98	1214,99	17,93
5	1666,00	1135,16	35,57	1099,60	16,22	45	3136,00	1266,13	49,98	1216,14	17,94
6	1764,00	1144,23	36,88	1107,35	16,34	46	3136,00	1267,53	49,98	1217,55	17,96
7	1862,00	1151,52	38,14	1113,39	16,43	47	2940,00	1264,97	48,57	1216,40	17,95
8	1960,00	1160,87	39,33	1121,54	16,55	48	2744,00	1260,60	47,04	1213,56	17,91
9	1764,00	1152,78	36,88	1115,89	16,47	49	2548,00	1253,61	45,37	1208,24	17,83
10	1568,00	1143,38	34,18	1109,19	16,37	50	2352,00	1247,73	43,54	1204,18	17,77
11	1372,00	1129,10	31,20	1097,90	16,20	51	2156,00	1237,02	41,54	1195,48	17,64
12	1176,00	1107,99	27,90	1080,09	15,94	52	1960,00	1230,09	39,33	1190,76	17,57
13	1372,00	1116,44	31,20	1085,24	16,01	53	1764,00	1217,72	36,88	1180,84	17,42
14	1568,00	1132,47	34,18	1098,29	16,21	54	1568,00	1201,94	34,18	1167,75	17,23
15	1764,00	1146,85	36,88	1109,96	16,38	55	1372,00	1181,63	31,20	1150,43	16,97
16	1960,00	1160,92	39,33	1121,60	16,55	56	1176,00	1150,57	27,90	1122,67	16,56
17	2058,00	1167,41	40,46	1126,95	16,63						
18	2156,00	1176,25	41,54	1134,71	16,74						
19	2254,00	1184,14	42,57	1141,58	16,84						
20	2352,00	1192,54	43,54	1148,99	16,95						
21	2450,00	1200,03	44,48	1155,55	17,05						
22	2548,00	1208,72	45,37	1163,35	17,17						
23	2352,00	1202,79	43,54	1159,25	17,10						
24	2156,00	1197,27	41,54	1155,73	17,05						
25	1960,00	1190,07	39,33	1150,75	16,98						
26	1764,00	1182,28	36,88	1145,40	16,90						
27	1568,00	1167,46	34,18	1133,27	16,72						
28	1372,00	1150,97	31,20	1119,77	16,52						
29	1176,00	1128,70	27,90	1100,80	16,24						
30	1372,00	1141,49	31,20	1110,29	16,38						
31	1568,00	1154,25	34,18	1120,07	16,53						
32	1764,00	1165,79	36,88	1128,90	16,66						
33	1960,00	1177,41	39,33	1138,08	16,79						
34	2156,00	1188,15	41,54	1146,62	16,92						
35	2352,00	1197,56	43,54	1154,02	17,03						
36	2548,00	1210,33	45,37	1164,96	17,19						
37	2646,00	1219,03	46,22	1172,80	17,30						
38	2744,00	1225,91	47,04	1178,88	17,39						
39	2842,00	1236,02	47,82	1188,20	17,53						
40	2940,00	1243,26	48,57	1194,69	17,63						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1568,00
Volume iniziale [Vo] (cm³):	1093,56
Pressione finale [Pf] (kPa):	2940,00
Volume finale [Vf] (cm³):	1194,69

RISULTATI	
Modulo di taglio (kPa):	53985
Modulo di deformazione dilatometrico (kPa):	143600
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	3979

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1080	1101	1216
Volume finale [Vf] (cm³):	1122	1165	1150
Pressione iniziale [Po] (kPa):	1176	1176	2940
Pressione finale [Pf] (kPa):	1960	2548	1372
Modulo di deformazione dilatometrico (kPa):	195436	226270	253918
Modulo da linea di tendenza (kPa):	198911	226073	253646

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

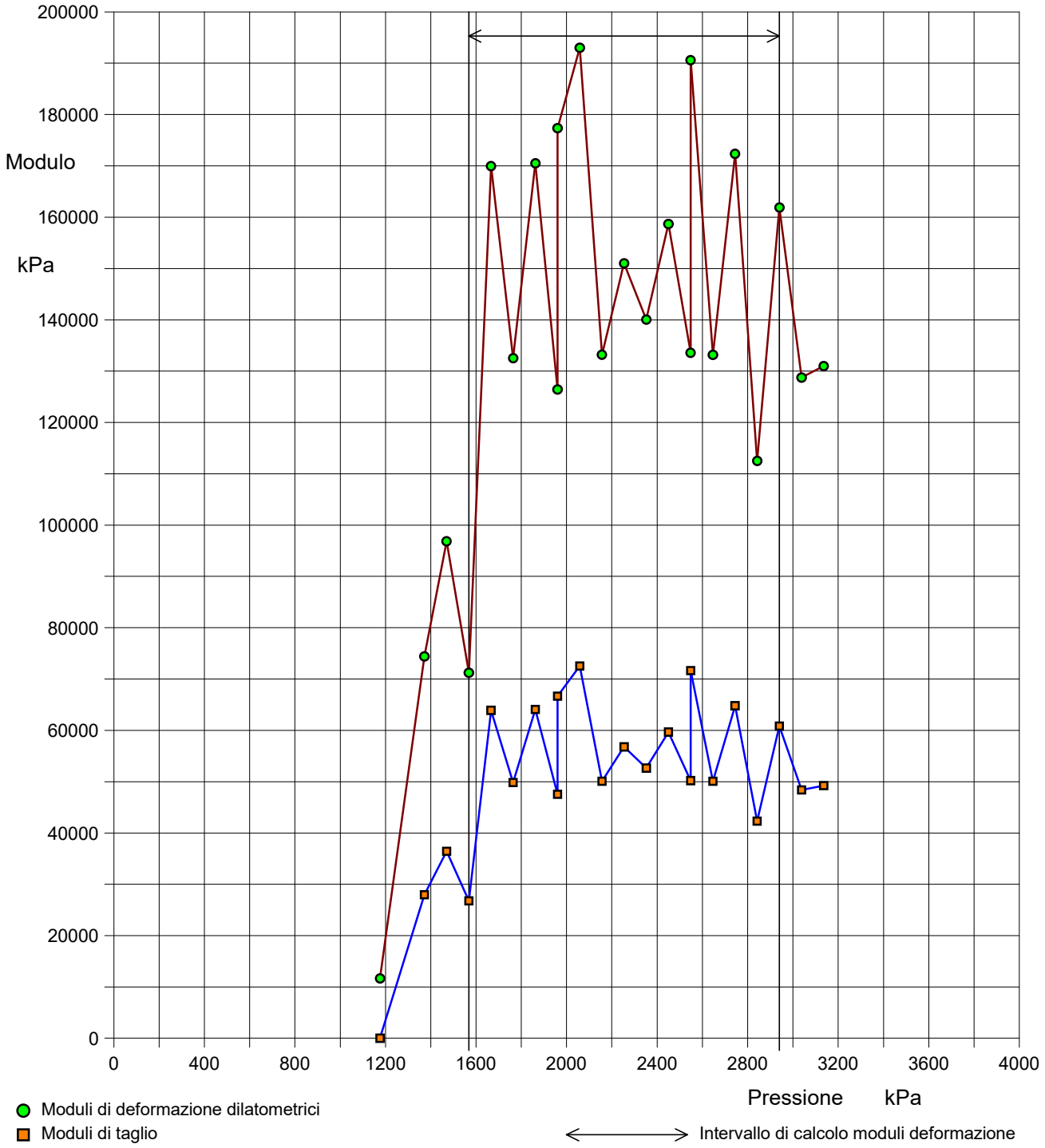
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
						3038,00	98,00	1202,86	8,18	48400	128744
1372,00	196,00	1068,65	27,35	27977	74419	3136,00	98,00	1210,91	8,05	49242	130984
1470,00	98,00	1079,18	10,53	36414	96861						
1568,00	98,00	1093,56	14,38	26775	71222						
1666,00	98,00	1099,60	6,03	63893	169955						
1764,00	98,00	1107,35	7,75	49832	132553						
1862,00	98,00	1113,39	6,04	64095	170493						
1960,00	98,00	1121,54	8,16	47529	126427						
1960,00	196,00	1121,60	11,63	66669	177340						
2058,00	98,00	1126,95	5,35	72559	193007						
2156,00	98,00	1134,71	7,77	50082	133218						
2254,00	98,00	1141,58	6,86	56775	151022						
2352,00	98,00	1148,99	7,42	52654	140060						
2450,00	98,00	1155,55	6,55	59661	158698						
2548,00	98,00	1163,35	7,80	50209	133556						
2548,00	196,00	1164,96	10,94	71657	190608						
2646,00	98,00	1172,80	7,84	50072	133192						
2744,00	98,00	1178,88	6,07	64793	172349						
2842,00	98,00	1188,20	9,32	42299	112515						
2940,00	98,00	1194,69	6,49	60858	161882						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

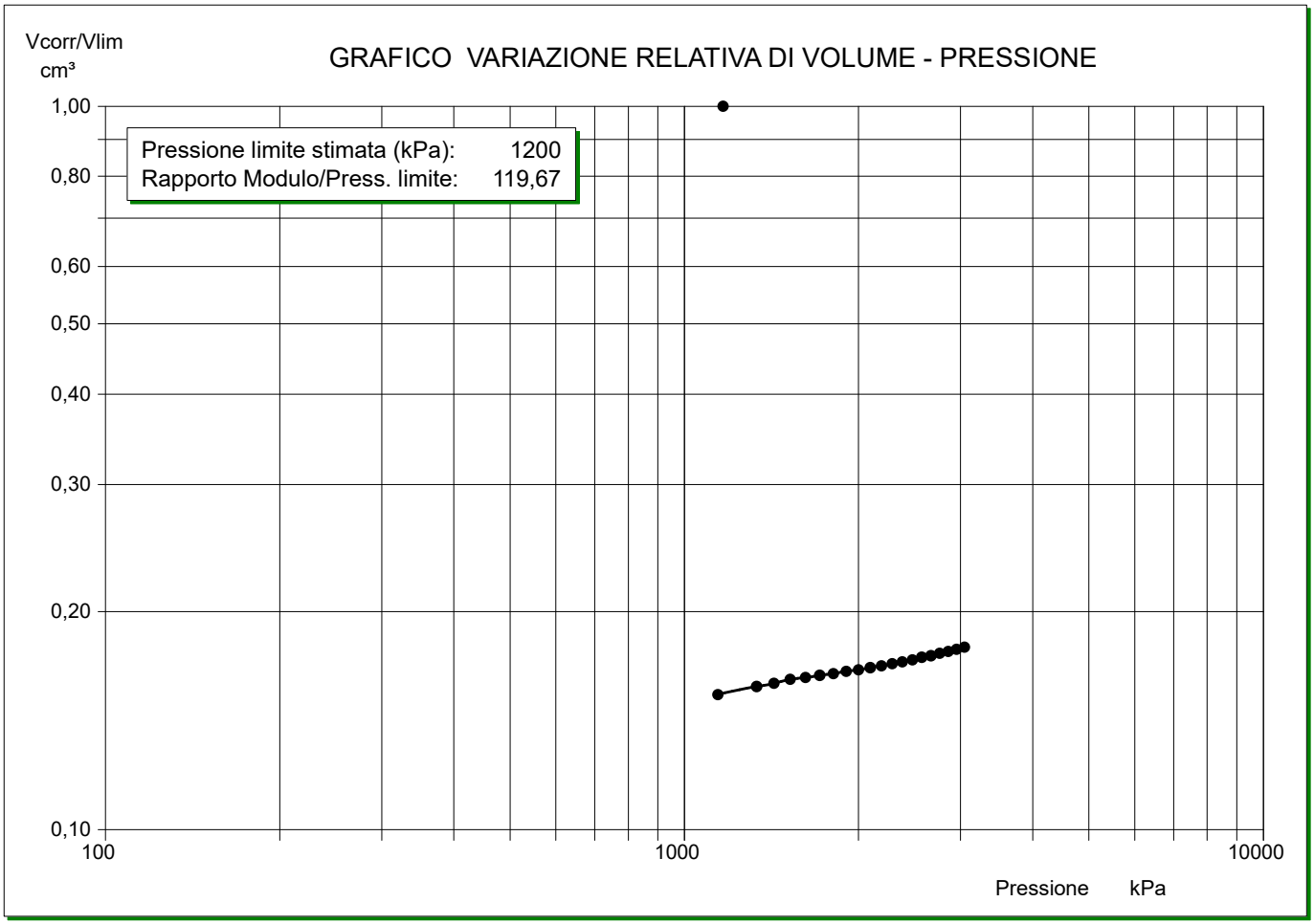
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

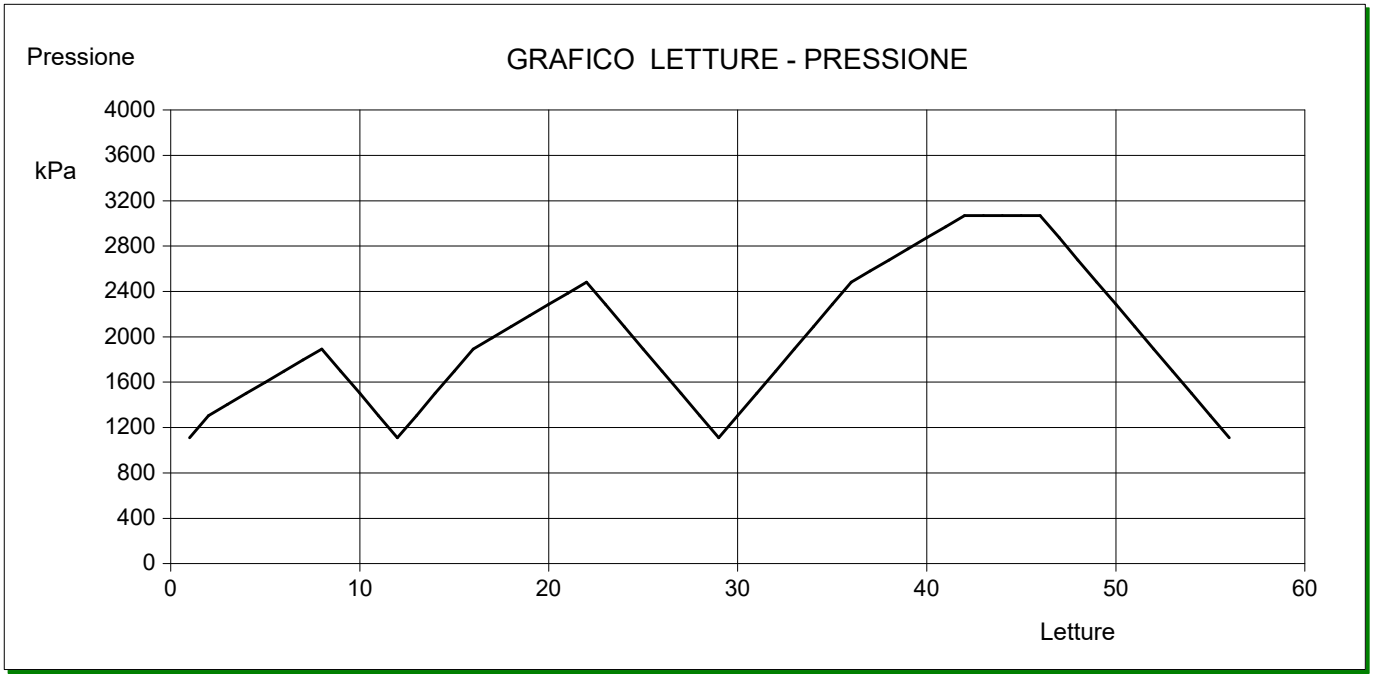
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

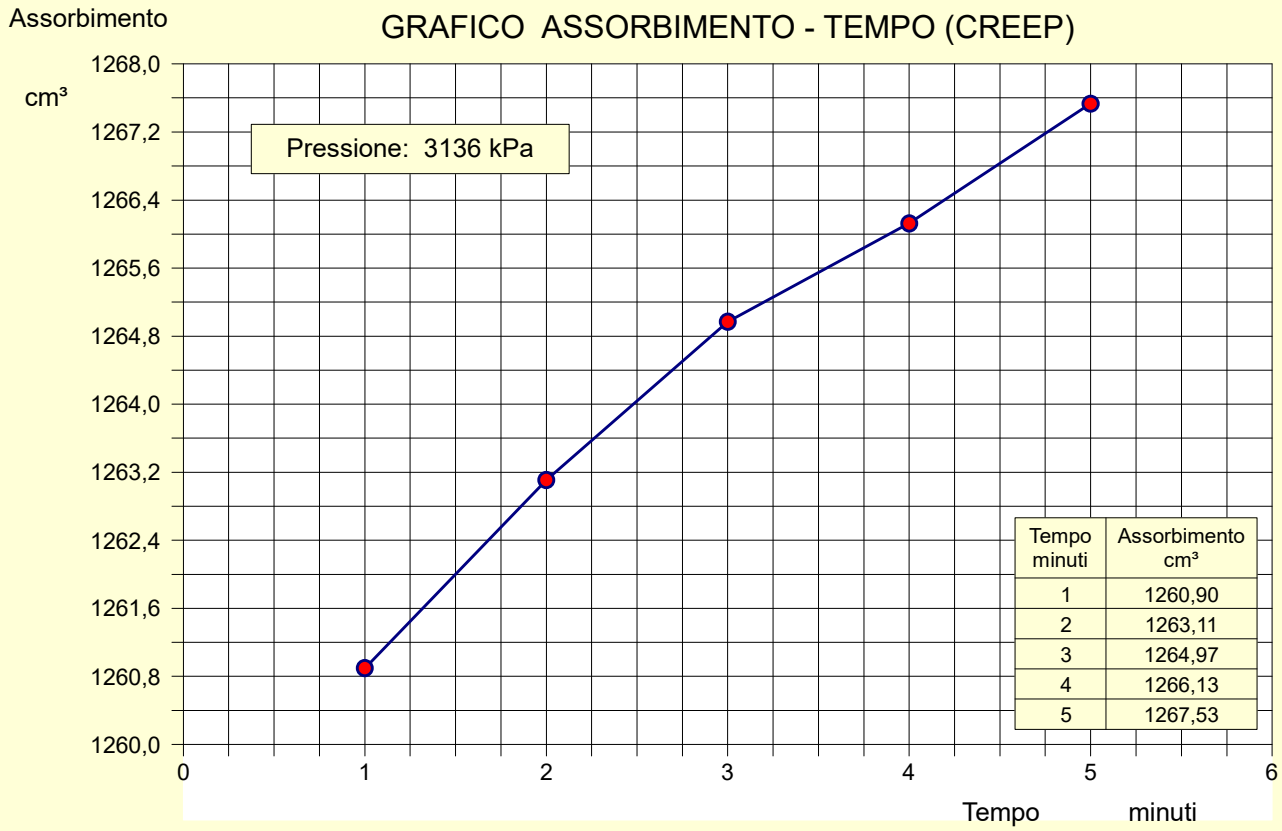
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:



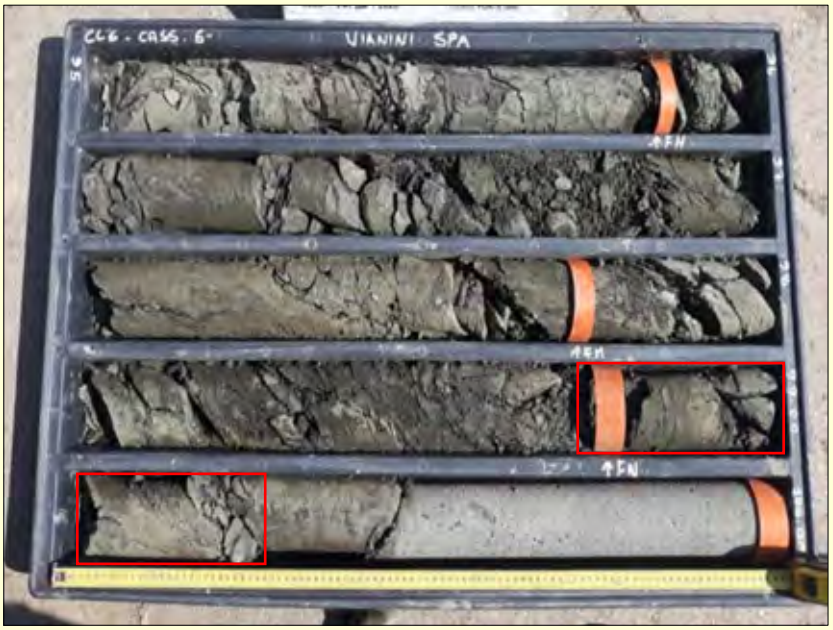


PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:



Tempo minuti	Assorbimento cm³
1	1260,90
2	1263,11
3	1264,97
4	1266,13
5	1267,53



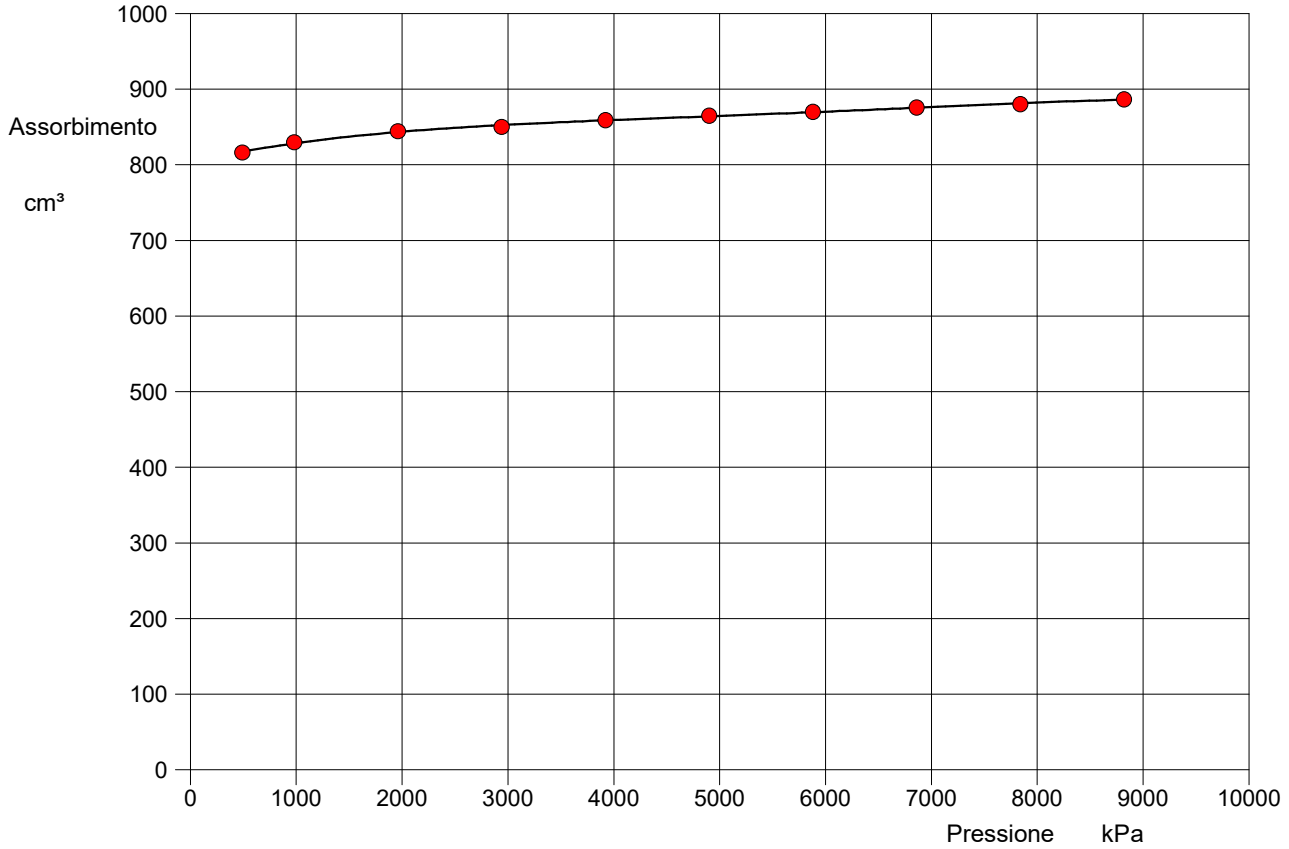
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 12/09/2020
Sondaggio: CL-6	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	816,20	13,42									
980,00	829,88	24,26									
1960,00	844,40	39,33									
2940,00	850,13	48,57									
3920,00	858,88	54,83									
4900,00	864,96	60,11									
5880,00	870,14	65,57									
6860,00	875,67	71,53									
7840,00	880,34	77,47									
8820,00	886,52	82,04									

Sondaggio CL-7

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

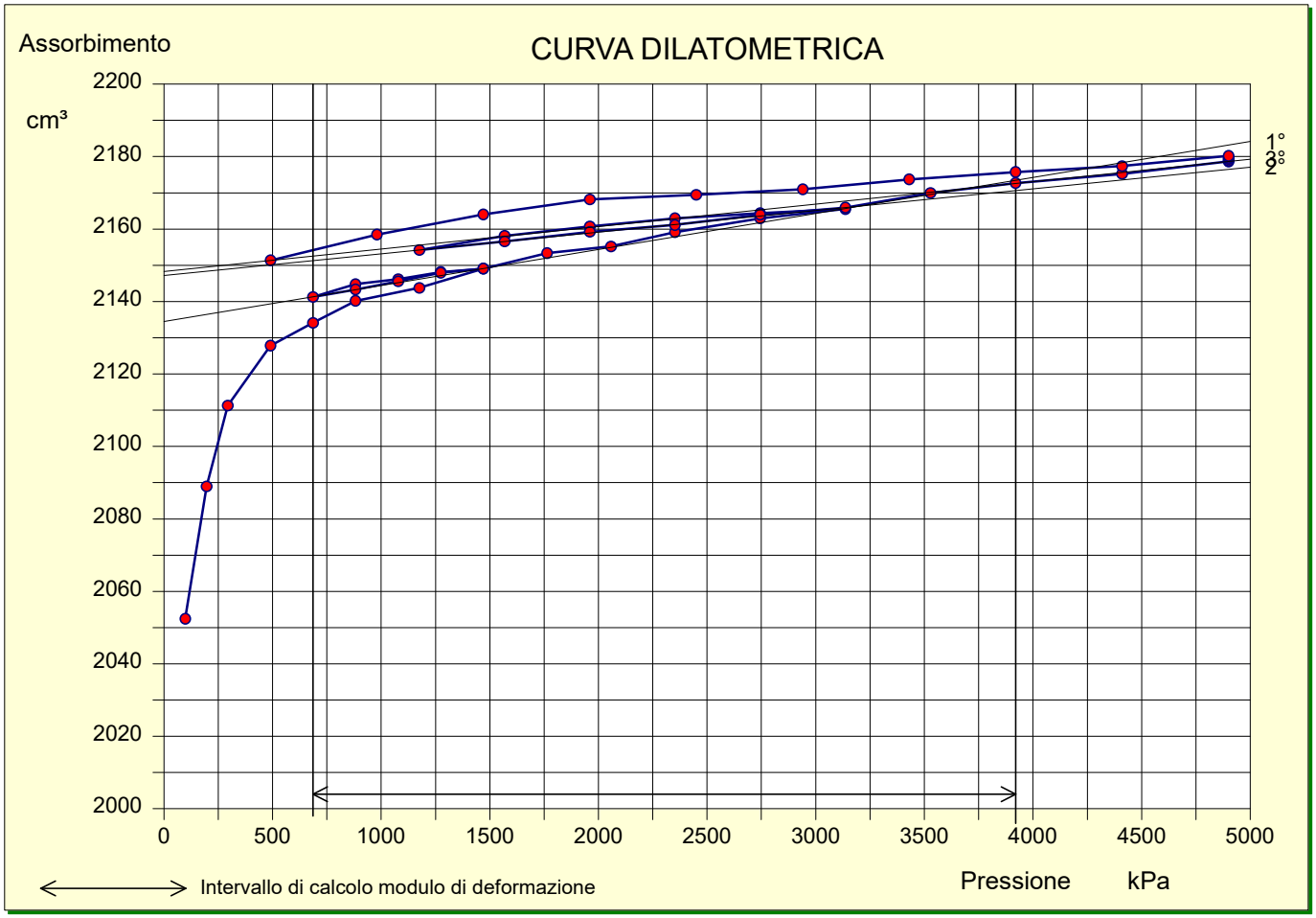
Profondità di prova (centro della cella) (m)	90,00	Volume della sonda (cm³)	2835,81
Profondità della falda (m)			
Litologia: Calcareniti fratturate			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	98,00	2052,05	-0,40	2052,45	26,29	41	3920,00	2210,76	35,04	2175,73	27,87
2	196,00	2089,07	0,09	2088,98	26,76	42	3430,00	2206,35	32,61	2173,74	27,85
3	294,00	2112,18	0,90	2111,28	27,05	43	2940,00	2201,31	30,34	2170,97	27,81
4	490,00	2131,11	3,28	2127,84	27,26	44	2450,00	2197,20	27,73	2169,47	27,79
5	686,00	2140,35	6,25	2134,11	27,34	45	1960,00	2192,19	24,02	2168,17	27,78
6	882,00	2149,65	9,46	2140,19	27,42	46	1470,00	2182,51	18,50	2164,01	27,72
7	1176,00	2158,01	14,23	2143,78	27,46	47	980,00	2169,56	11,08	2158,48	27,65
8	1470,00	2167,56	18,50	2149,06	27,53	48	490,00	2154,64	3,28	2151,36	27,56
9	1274,00	2163,86	15,73	2148,14	27,52						
10	1078,00	2158,85	12,68	2146,17	27,49						
11	882,00	2154,28	9,46	2144,81	27,48						
12	686,00	2147,52	6,25	2141,27	27,43						
13	882,00	2152,77	9,46	2143,31	27,46						
14	1078,00	2158,26	12,68	2145,58	27,49						
15	1274,00	2163,66	15,73	2147,94	27,52						
16	1470,00	2167,58	18,50	2149,08	27,53						
17	1764,00	2175,42	22,06	2153,36	27,59						
18	2058,00	2180,09	24,89	2155,19	27,61						
19	2352,00	2186,28	27,10	2159,17	27,66						
20	2744,00	2192,32	29,37	2162,95	27,71						
21	3136,00	2196,80	31,25	2165,55	27,74						
22	2744,00	2193,76	29,37	2164,39	27,73						
23	2352,00	2190,08	27,10	2162,98	27,71						
24	1960,00	2184,77	24,02	2160,74	27,68						
25	1568,00	2177,90	19,77	2158,13	27,65						
26	1176,00	2168,45	14,23	2154,22	27,60						
27	1568,00	2176,35	19,77	2156,58	27,63						
28	1960,00	2183,24	24,02	2159,21	27,66						
29	2352,00	2188,23	27,10	2161,12	27,69						
30	2744,00	2193,37	29,37	2164,00	27,72						
31	3136,00	2197,19	31,25	2165,94	27,75						
32	3528,00	2203,02	33,07	2169,95	27,80						
33	3920,00	2207,73	35,04	2172,69	27,83						
34	4410,00	2213,03	37,78	2175,25	27,87						
35	4900,00	2219,33	40,67	2178,66	27,91						
36	4900,00	2219,59	40,67	2178,91	27,91						
37	4900,00	2220,03	40,67	2179,36	27,92						
38	4900,00	2220,36	40,67	2179,69	27,92						
39	4900,00	2220,89	40,67	2180,22	27,93						
40	4410,00	2215,16	37,78	2177,38	27,89						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	686,00
Volume iniziale [Vo] (cm³):	2134,11
Pressione finale [Pf] (kPa):	3920,00
Volume finale [Vf] (cm³):	2172,69

RISULTATI	
Modulo di taglio (kPa):	418132
Modulo di deformazione dilatometrico (kPa):	1112231
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4989

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2141	2154	2179
Volume finale [Vf] (cm³):	2149	2166	2151
Pressione iniziale [Po] (kPa):	686	1176	4900
Pressione finale [Pf] (kPa):	1470	3136	490
Modulo di deformazione dilatometrico (kPa):	1298398	2170513	2095089
Modulo da linea di tendenza (kPa):	1335010	2222159	2148446

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

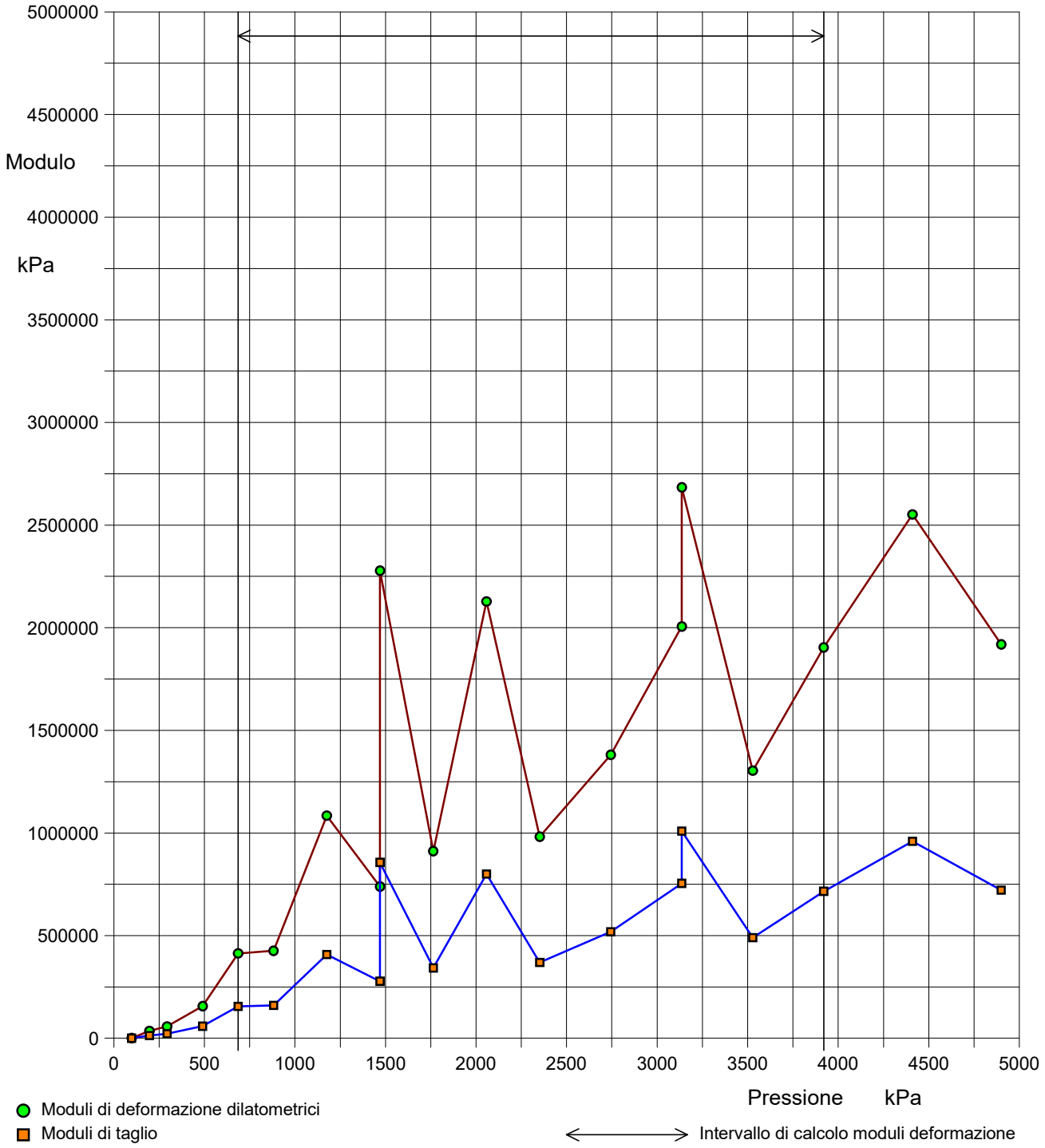
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
196,00	98,00	2088,98	36,53	13211	35141						
294,00	98,00	2111,28	22,29	21747	57847						
490,00	196,00	2127,84	16,56	58748	156270						
686,00	196,00	2134,11	6,27	155359	413255						
882,00	196,00	2140,19	6,09	160254	426276						
1176,00	294,00	2143,78	3,59	407679	1084426						
1470,00	294,00	2149,06	5,27	277835	739041						
1470,00	196,00	2149,08	1,14	856398	2278019						
1764,00	294,00	2153,36	4,28	342555	911196						
2058,00	294,00	2155,19	1,83	799985	2127960						
2352,00	294,00	2159,17	3,98	369068	981721						
2744,00	392,00	2162,95	3,78	518956	1380423						
3136,00	392,00	2165,55	2,60	754306	2006454						
3136,00	392,00	2165,94	1,94	1009043	2684054						
3528,00	392,00	2169,95	4,00	489966	1303310						
3920,00	392,00	2172,69	2,74	715782	1903980						
4410,00	490,00	2175,25	2,56	959492	2552249						
4900,00	490,00	2178,66	3,41	721399	1918921						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

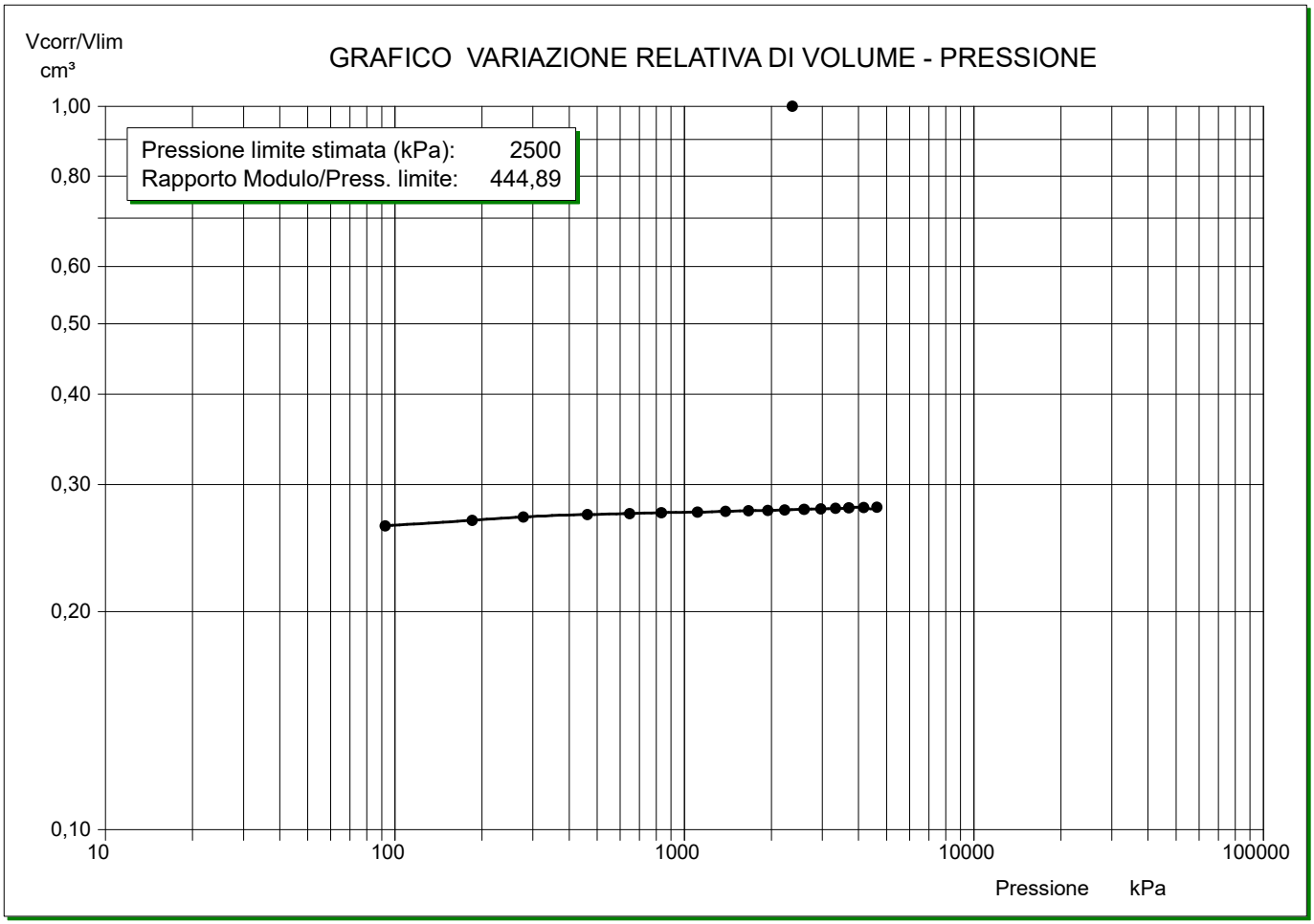
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

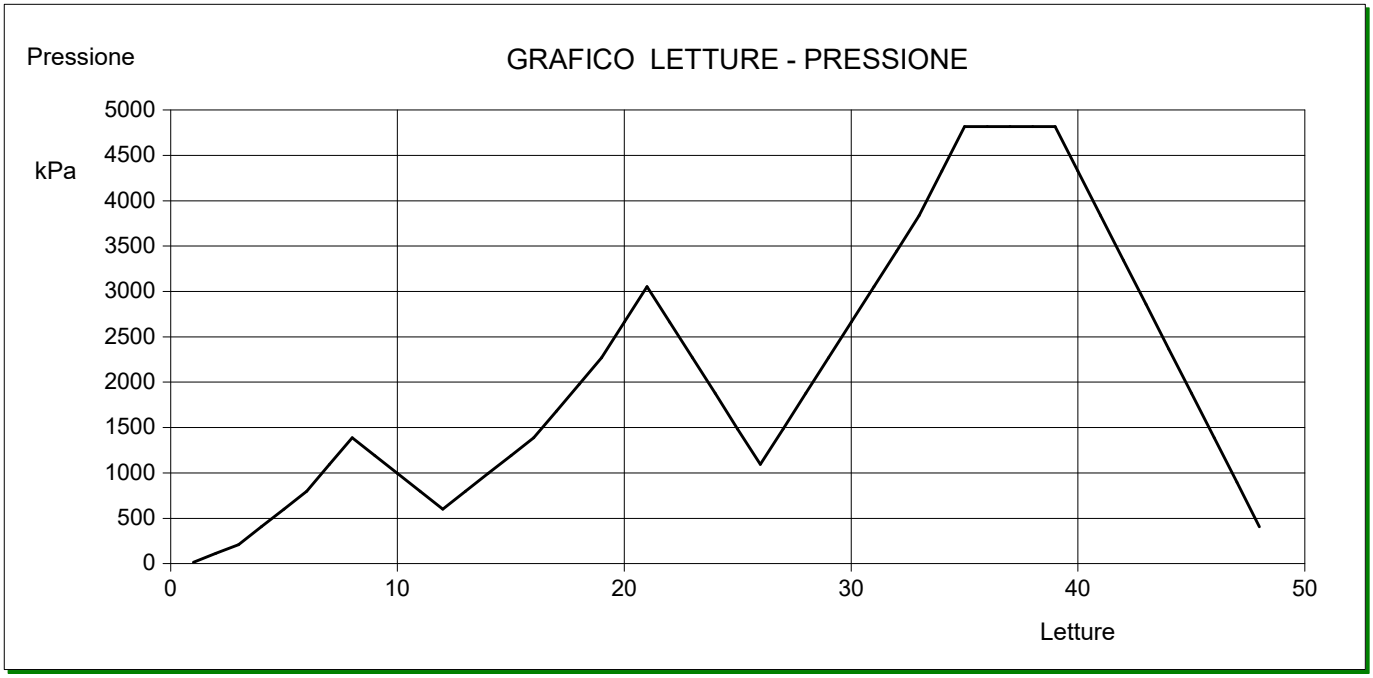
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

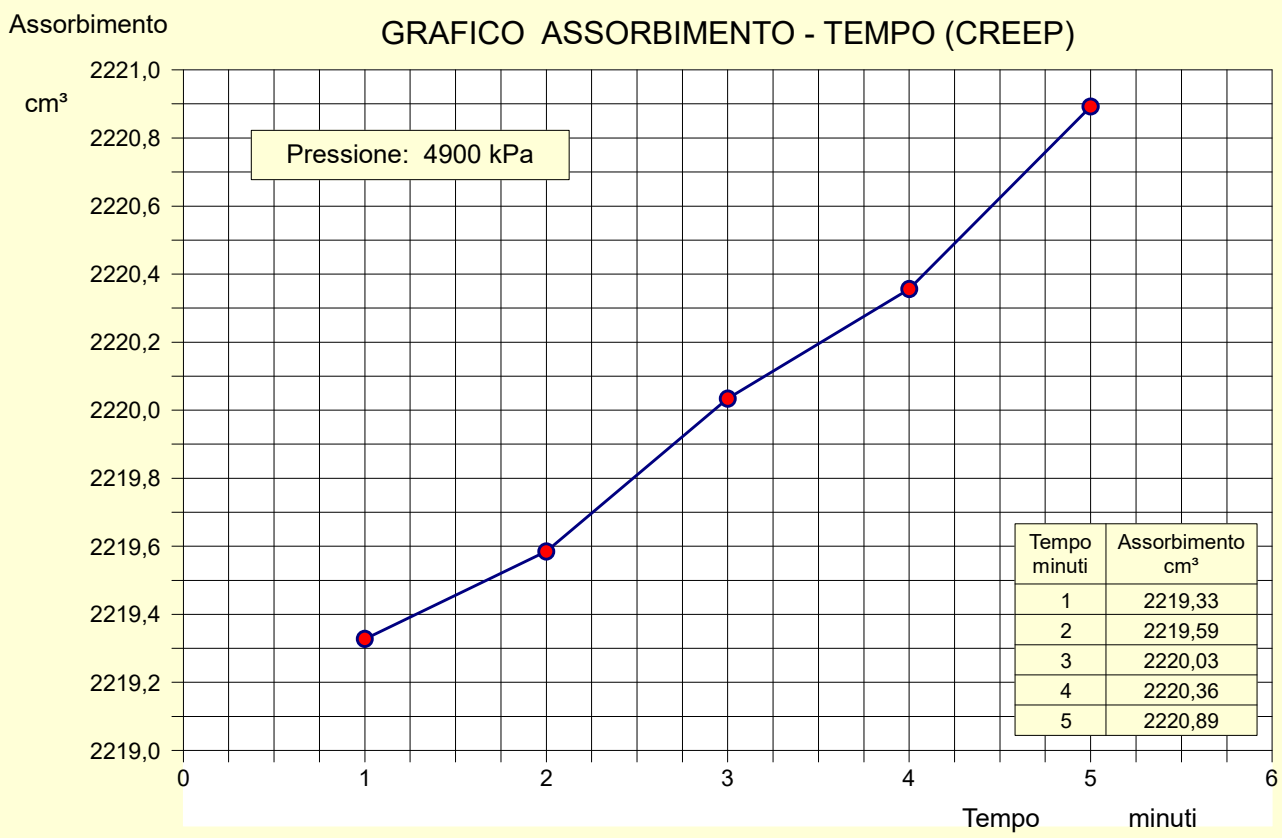
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:



Tempo minuti	Assorbimento cm³
1	2219,33
2	2219,59
3	2220,03
4	2220,36
5	2220,89

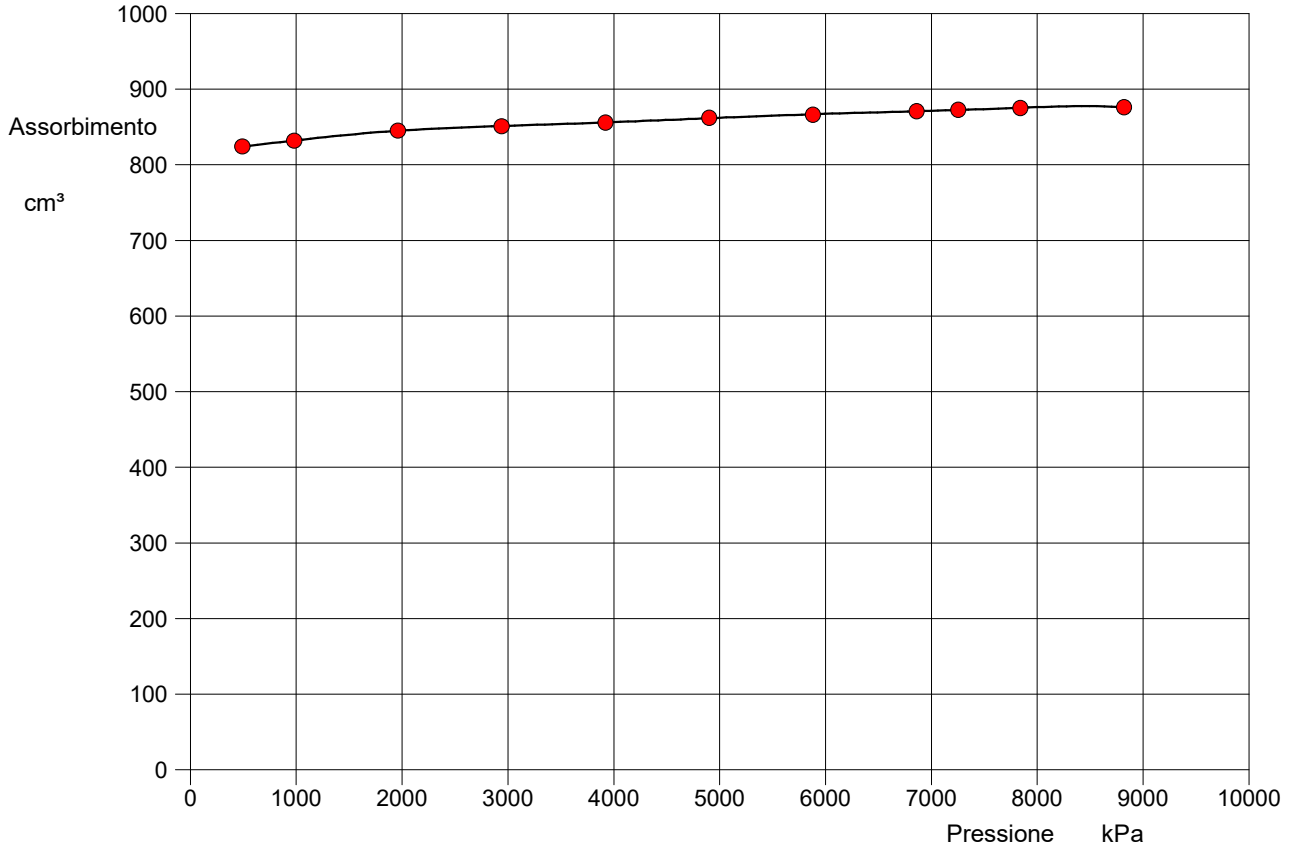
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	14/10/2019	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,81

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	824,35	3,28	8820,00	876,22	55,19						
980,00	831,89	11,08									
1960,00	845,36	24,02									
2940,00	851,04	30,34									
3920,00	855,91	35,04									
4900,00	862,30	40,67									
5880,00	866,22	45,88									
6860,00	870,99	49,87									
7252,00	872,90	51,54									
7840,00	875,16	54,42									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

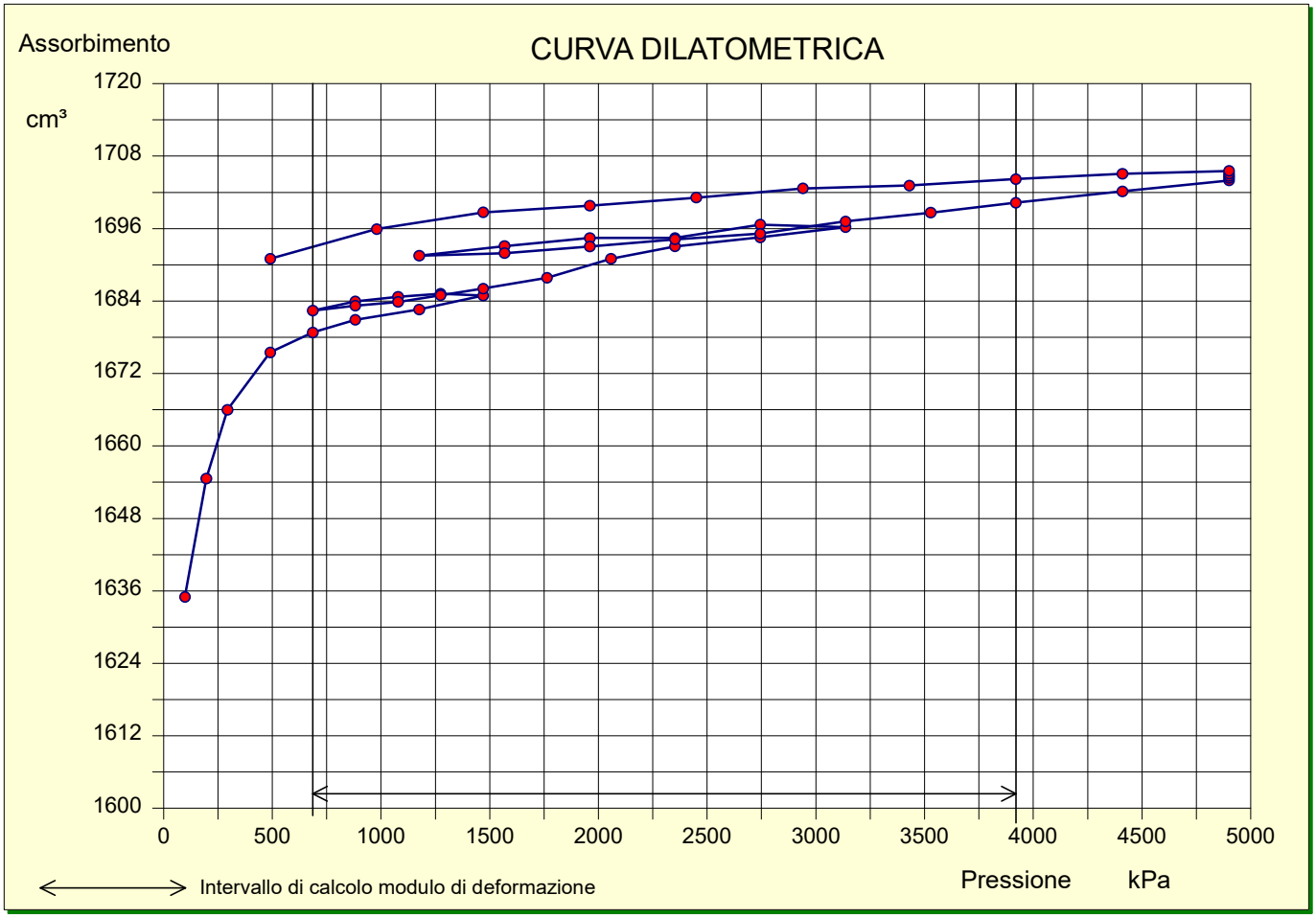
Profondità di prova (centro della cella) (m)	95,00	Volume della sonda (cm³)	2835,81
Profondità della falda (m)	-		
Litologia: Calcareniti integre-poco fratturate			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	98,00	1634,61	-0,40	1635,01	22,24	41	3920,00	1739,24	35,04	1704,20	23,19
2	196,00	1654,71	0,09	1654,63	22,51	42	3430,00	1735,74	32,61	1703,13	23,17
3	294,00	1666,89	0,90	1665,98	22,67	43	2940,00	1732,97	30,34	1702,64	23,16
4	490,00	1678,78	3,28	1675,50	22,79	44	2450,00	1728,84	27,73	1701,12	23,14
5	686,00	1685,04	6,25	1678,80	22,84	45	1960,00	1723,81	24,02	1699,78	23,12
6	882,00	1690,35	9,46	1680,88	22,87	46	1470,00	1717,19	18,50	1698,69	23,11
7	1176,00	1696,83	14,23	1682,60	22,89	47	980,00	1707,01	11,08	1695,93	23,07
8	1470,00	1703,42	18,50	1684,91	22,92	48	490,00	1694,27	3,28	1691,00	23,01
9	1274,00	1700,93	15,73	1685,20	22,93						
10	1078,00	1697,39	12,68	1684,71	22,92						
11	882,00	1693,39	9,46	1683,93	22,91						
12	686,00	1688,66	6,25	1682,41	22,89						
13	882,00	1692,71	9,46	1683,24	22,90						
14	1078,00	1696,52	12,68	1683,85	22,91						
15	1274,00	1700,67	15,73	1684,95	22,92						
16	1470,00	1704,55	18,50	1686,05	22,94						
17	1764,00	1709,92	22,06	1687,86	22,96						
18	2058,00	1715,91	24,89	1691,01	23,01						
19	2352,00	1720,15	27,10	1693,05	23,03						
20	2744,00	1723,91	29,37	1694,53	23,05						
21	3136,00	1727,49	31,25	1696,24	23,08						
22	2744,00	1726,04	29,37	1696,67	23,08						
23	2352,00	1721,55	27,10	1694,44	23,05						
24	1960,00	1718,47	24,02	1694,44	23,05						
25	1568,00	1712,86	19,77	1693,09	23,03						
26	1176,00	1705,74	14,23	1691,50	23,01						
27	1568,00	1711,70	19,77	1691,93	23,02						
28	1960,00	1717,06	24,02	1693,03	23,03						
29	2352,00	1721,34	27,10	1694,23	23,05						
30	2744,00	1724,53	29,37	1695,16	23,06						
31	3136,00	1728,44	31,25	1697,19	23,09						
32	3528,00	1731,72	33,07	1698,65	23,11						
33	3920,00	1735,32	35,04	1700,29	23,13						
34	4410,00	1739,93	37,78	1702,15	23,16						
35	4900,00	1744,64	40,67	1703,97	23,18						
36	4900,00	1745,05	40,67	1704,37	23,19						
37	4900,00	1745,40	40,67	1704,73	23,19						
38	4900,00	1745,77	40,67	1705,10	23,20						
39	4900,00	1746,21	40,67	1705,54	23,20						
40	4410,00	1742,86	37,78	1705,09	23,20						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	686,00
Volume iniziale [Vo] (cm³):	1678,80
Pressione finale [Pf] (kPa):	3920,00
Volume finale [Vf] (cm³):	1700,29

RISULTATI	
Modulo di taglio (kPa):	680950
Modulo di deformazione dilatometrico (kPa):	1811327
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4525

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1682	1692	1704
Volume finale [Vf] (cm³):	1686	1697	1691
Pressione iniziale [Po] (kPa):	686	1176	4900
Pressione finale [Pf] (kPa):	1470	3136	490
Modulo di deformazione dilatometrico (kPa):	2356448	4723845	4090650
Modulo da linea di tendenza (kPa):	1334925	2222214	2148412

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

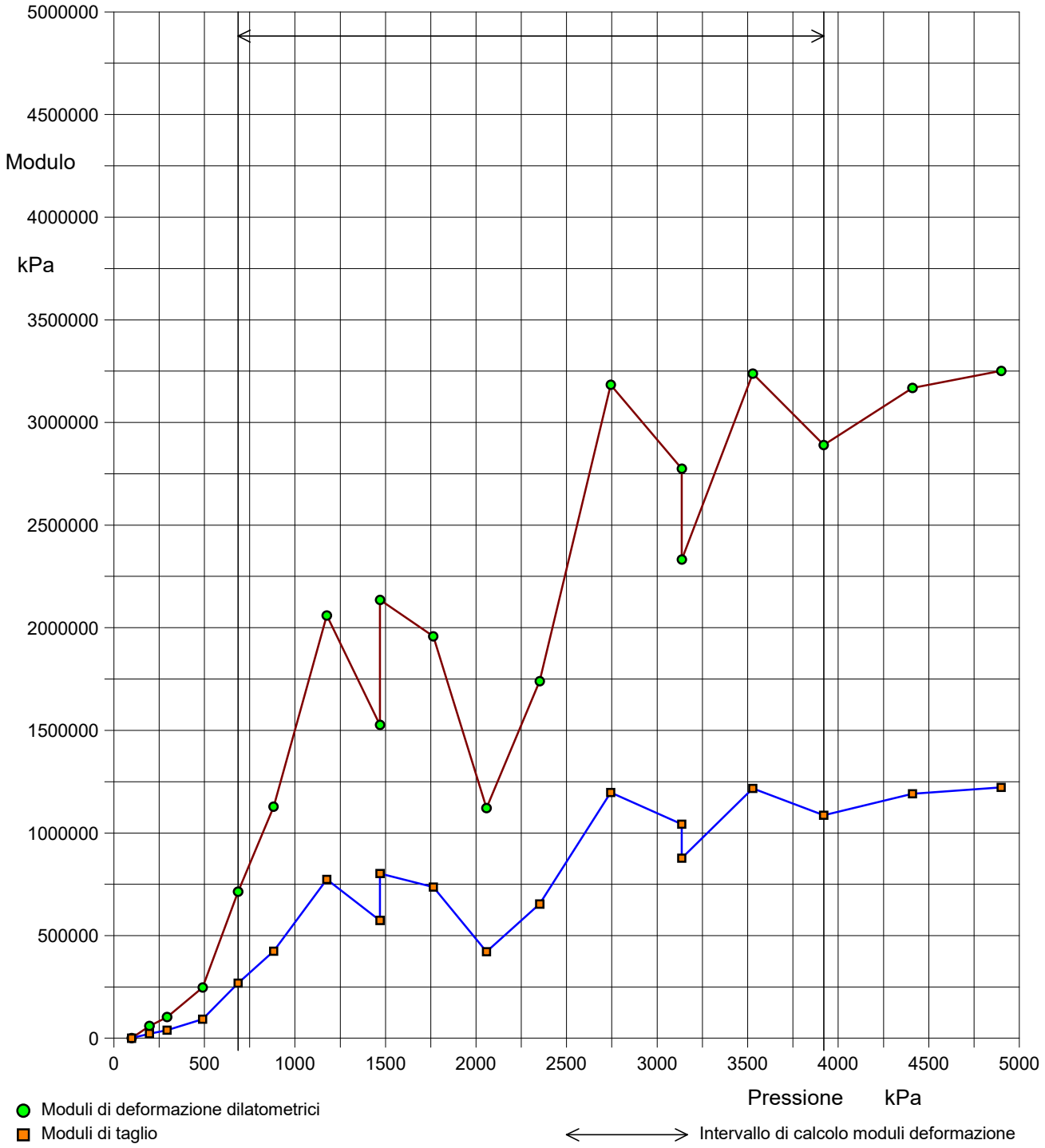
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
196,00	98,00	1654,63	19,62	22426	59653						
294,00	98,00	1665,98	11,35	38856	103357						
490,00	196,00	1675,50	9,52	92920	247167						
686,00	196,00	1678,80	3,30	268444	714061						
882,00	196,00	1680,88	2,09	424052	1127978						
1176,00	294,00	1682,60	1,72	774379	2059848						
1470,00	294,00	1684,91	2,32	573925	1526641						
1470,00	196,00	1686,05	1,10	802791	2135424						
1764,00	294,00	1687,86	1,81	736100	1958026						
2058,00	294,00	1691,01	3,16	421504	1121201						
2352,00	294,00	1693,05	2,04	653928	1739448						
2744,00	392,00	1694,53	1,48	1196786	3183451						
3136,00	392,00	1696,24	1,70	1043119	2774697						
3136,00	392,00	1697,19	2,03	876801	2332291						
3528,00	392,00	1698,65	1,46	1217198	3237747						
3920,00	392,00	1700,29	1,64	1086654	2890500						
4410,00	490,00	1702,15	1,87	1191039	3168164						
4900,00	490,00	1703,97	1,82	1222285	3251278						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

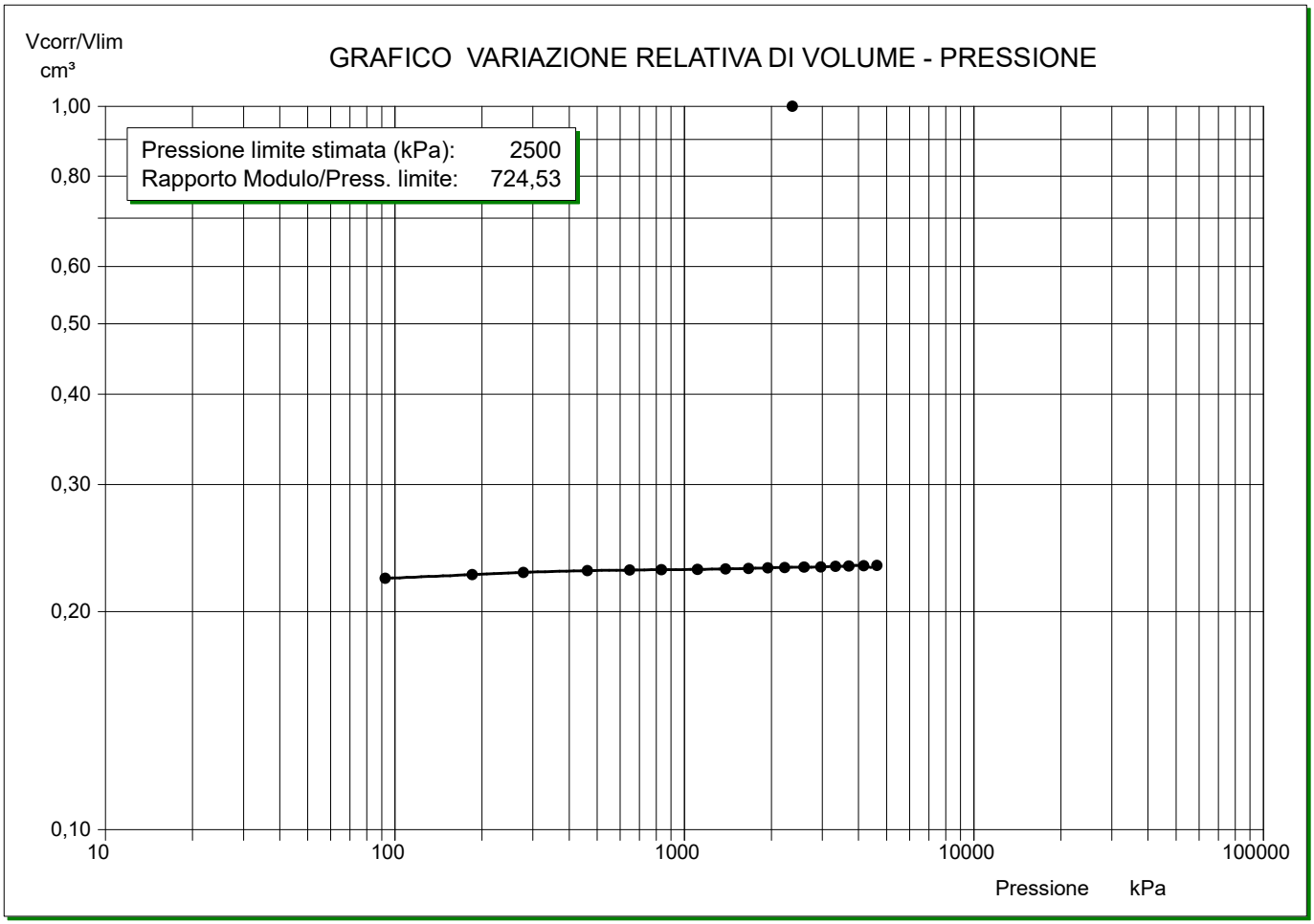
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

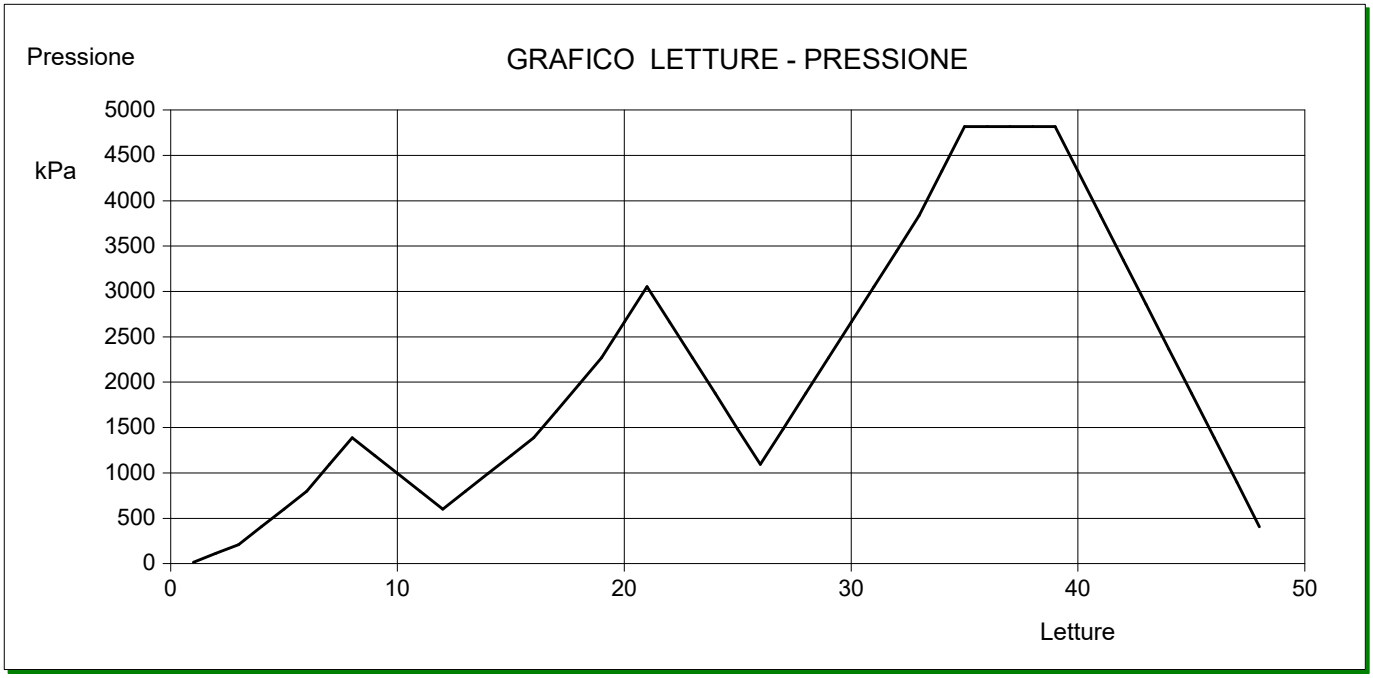
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

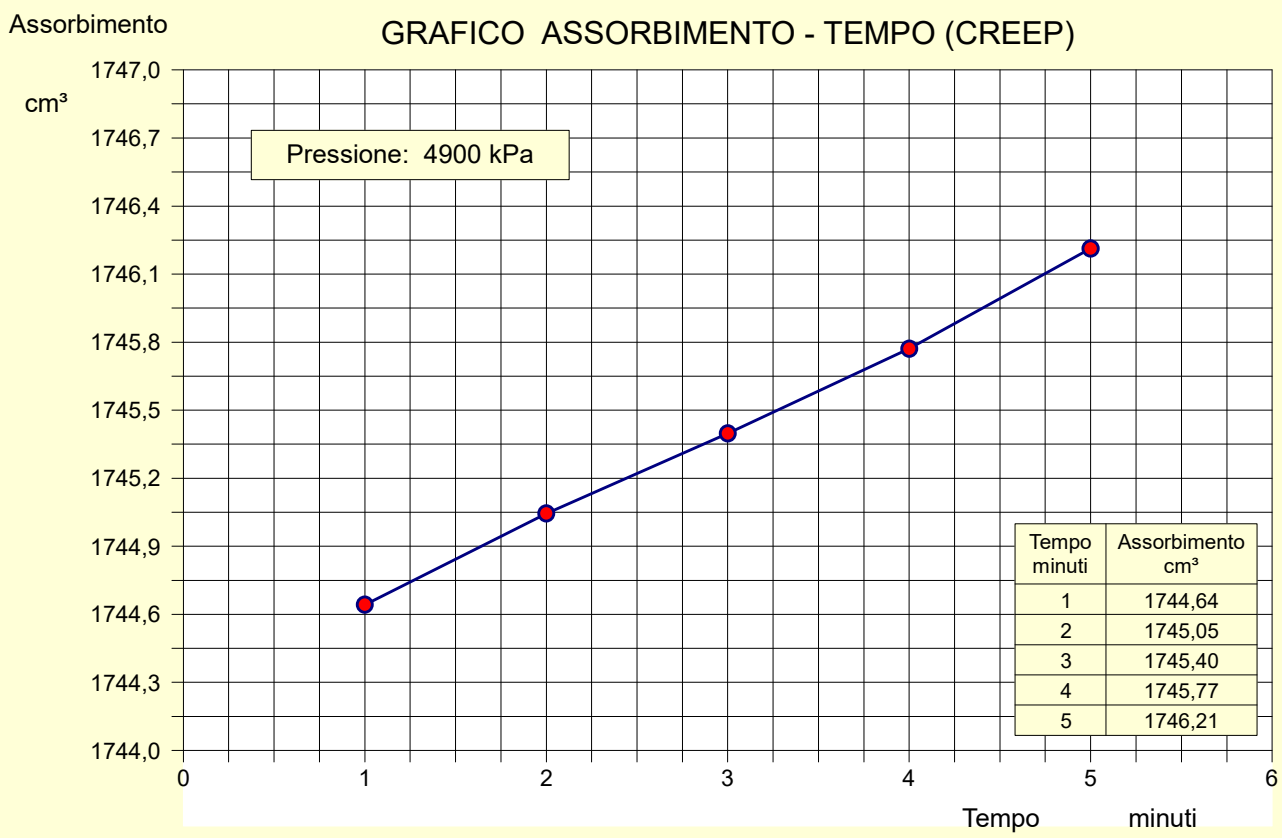
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:



Tempo minuti	Assorbimento cm³
1	1744,64
2	1745,05
3	1745,40
4	1745,77
5	1746,21

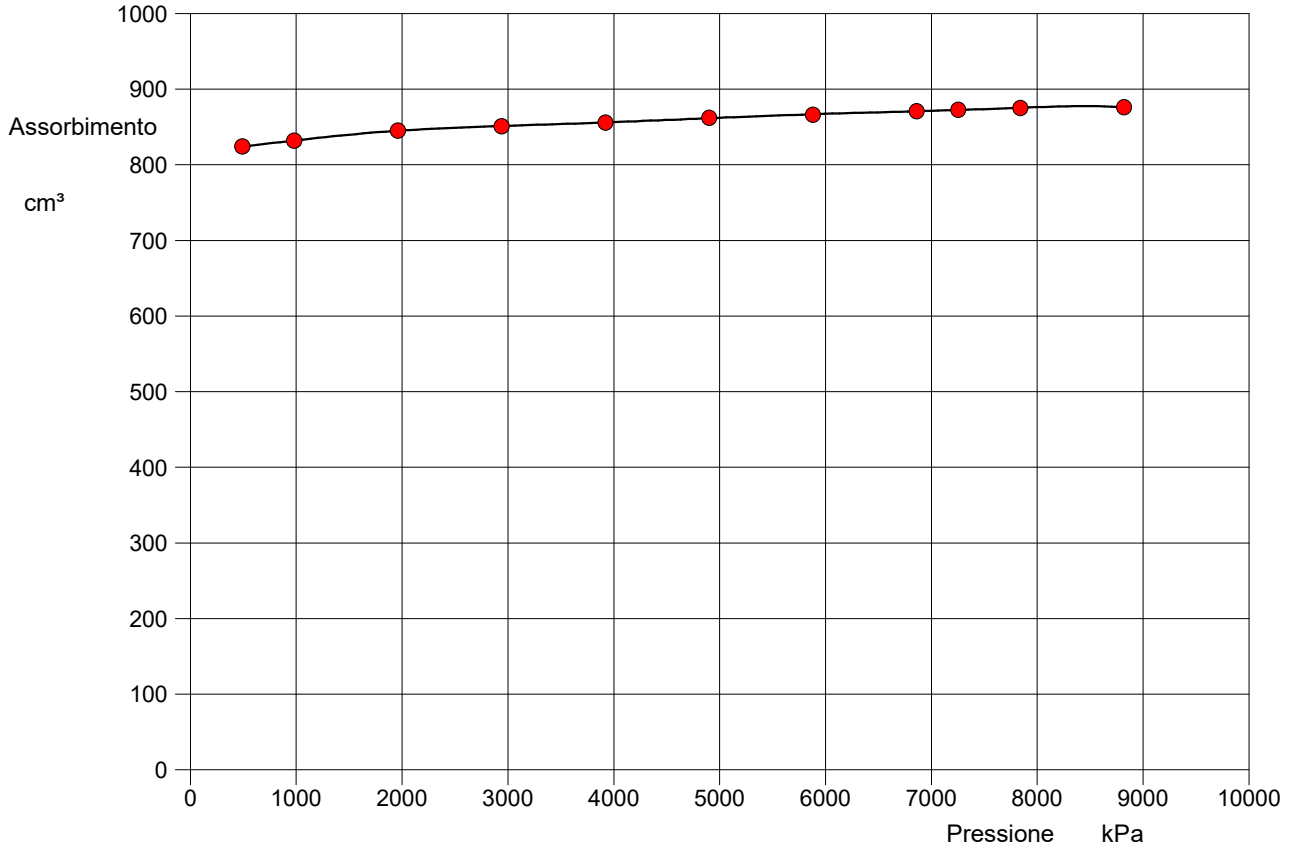
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 18/09/2020
Sondaggio: CL-7	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	14/10/2019	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,81

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	824,35	3,28	8820,00	876,22	55,19						
980,00	831,89	11,08									
1960,00	845,36	24,02									
2940,00	851,04	30,34									
3920,00	855,91	35,04									
4900,00	862,30	40,67									
5880,00	866,22	45,88									
6860,00	870,99	49,87									
7252,00	872,90	51,54									
7840,00	875,16	54,42									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

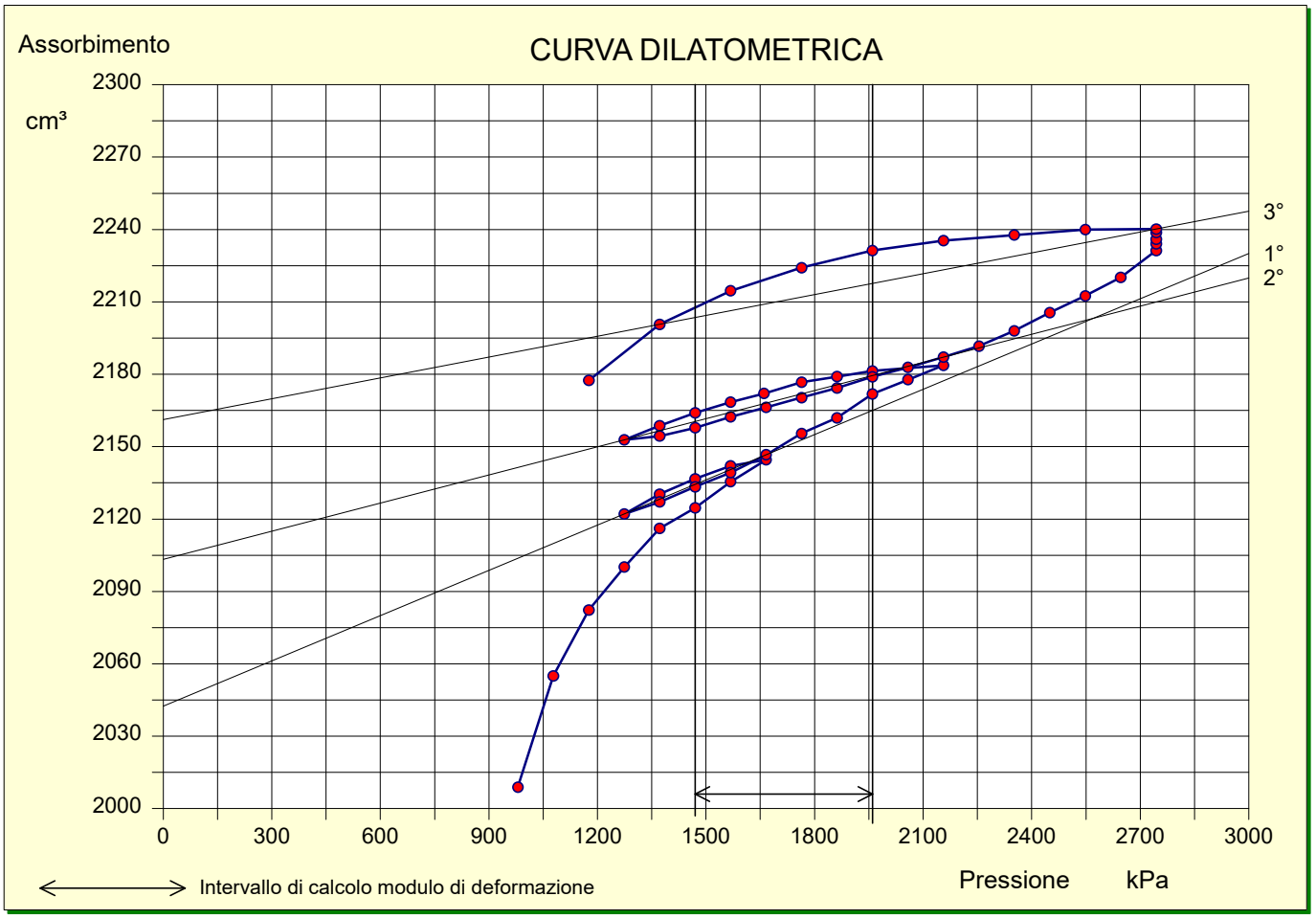
Profondità di prova (centro della cella) (m)	105,50	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	102.0		
Litologia: Marne argillose/marne			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	980,00	2034,89	25,99	2008,90	25,77	41	2450,00	2252,49	46,96	2205,53	28,30
2	1078,00	2082,93	27,92	2055,01	26,36	42	2548,00	2260,36	47,89	2212,47	28,38
3	1176,00	2112,09	29,77	2082,32	26,71	43	2646,00	2268,91	48,77	2220,14	28,48
4	1274,00	2131,68	31,52	2100,16	26,94	44	2744,00	2280,87	49,61	2231,25	28,63
5	1372,00	2149,34	33,19	2116,15	27,15	45	2744,00	2283,62	49,61	2234,01	28,66
6	1470,00	2159,43	34,78	2124,65	27,26	46	2744,00	2285,62	49,61	2236,01	28,69
7	1568,00	2171,79	36,28	2135,51	27,40	47	2744,00	2288,40	49,61	2238,79	28,72
8	1666,00	2182,32	37,72	2144,60	27,51	48	2744,00	2289,77	49,61	2240,16	28,74
9	1568,00	2178,33	36,28	2142,05	27,48	49	2548,00	2287,84	47,89	2239,95	28,74
10	1470,00	2171,43	34,78	2136,65	27,41	50	2352,00	2283,70	45,99	2237,71	28,71
11	1372,00	2163,52	33,19	2130,33	27,33	51	2156,00	2279,30	43,91	2235,39	28,68
12	1274,00	2153,65	31,52	2122,12	27,23	52	1960,00	2272,90	41,62	2231,29	28,63
13	1372,00	2160,29	33,19	2127,10	27,29	53	1764,00	2263,25	39,08	2224,17	28,53
14	1470,00	2168,14	34,78	2133,36	27,37	54	1568,00	2250,88	36,28	2214,60	28,41
15	1568,00	2175,55	36,28	2139,27	27,45	55	1372,00	2233,86	33,19	2200,67	28,23
16	1666,00	2184,35	37,72	2146,63	27,54	56	1176,00	2207,20	29,77	2177,44	27,94
17	1764,00	2194,51	39,08	2155,42	27,65						
18	1862,00	2202,31	40,38	2161,93	27,74						
19	1960,00	2213,44	41,62	2171,83	27,86						
20	2058,00	2220,58	42,79	2177,79	27,94						
21	2156,00	2227,58	43,91	2183,67	28,02						
22	1960,00	2223,00	41,62	2181,38	27,99						
23	1862,00	2219,40	40,38	2179,02	27,96						
24	1764,00	2215,79	39,08	2176,71	27,93						
25	1660,00	2209,70	37,63	2172,07	27,87						
26	1568,00	2204,76	36,28	2168,48	27,82						
27	1470,00	2198,82	34,78	2164,04	27,76						
28	1372,00	2191,86	33,19	2158,67	27,69						
29	1274,00	2184,35	31,52	2152,83	27,62						
30	1372,00	2187,58	33,19	2154,39	27,64						
31	1470,00	2192,61	34,78	2157,83	27,68						
32	1568,00	2198,64	36,28	2162,36	27,74						
33	1666,00	2204,03	37,72	2166,31	27,79						
34	1764,00	2209,38	39,08	2170,29	27,84						
35	1862,00	2214,67	40,38	2174,28	27,89						
36	1960,00	2220,56	41,62	2178,95	27,95						
37	2058,00	2225,66	42,79	2182,87	28,00						
38	2156,00	2231,05	43,91	2187,14	28,06						
39	2254,00	2236,61	44,98	2191,64	28,12						
40	2352,00	2243,99	45,99	2198,00	28,20						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1470,00
Volume iniziale [Vo] (cm³):	2124,65
Pressione finale [Pf] (kPa):	1960,00
Volume finale [Vf] (cm³):	2178,95

RISULTATI	
Modulo di taglio (kPa):	45005
Modulo di deformazione dilatometrico (kPa):	119713
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4987

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2122	2153	2240
Volume finale [Vf] (cm³):	2147	2187	2201
Pressione iniziale [Po] (kPa):	1274	1274	2744
Pressione finale [Pf] (kPa):	1666	2156	1372
Modulo di deformazione dilatometrico (kPa):	207272	345363	473081
Modulo da linea di tendenza (kPa):	211516	341674	465814

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

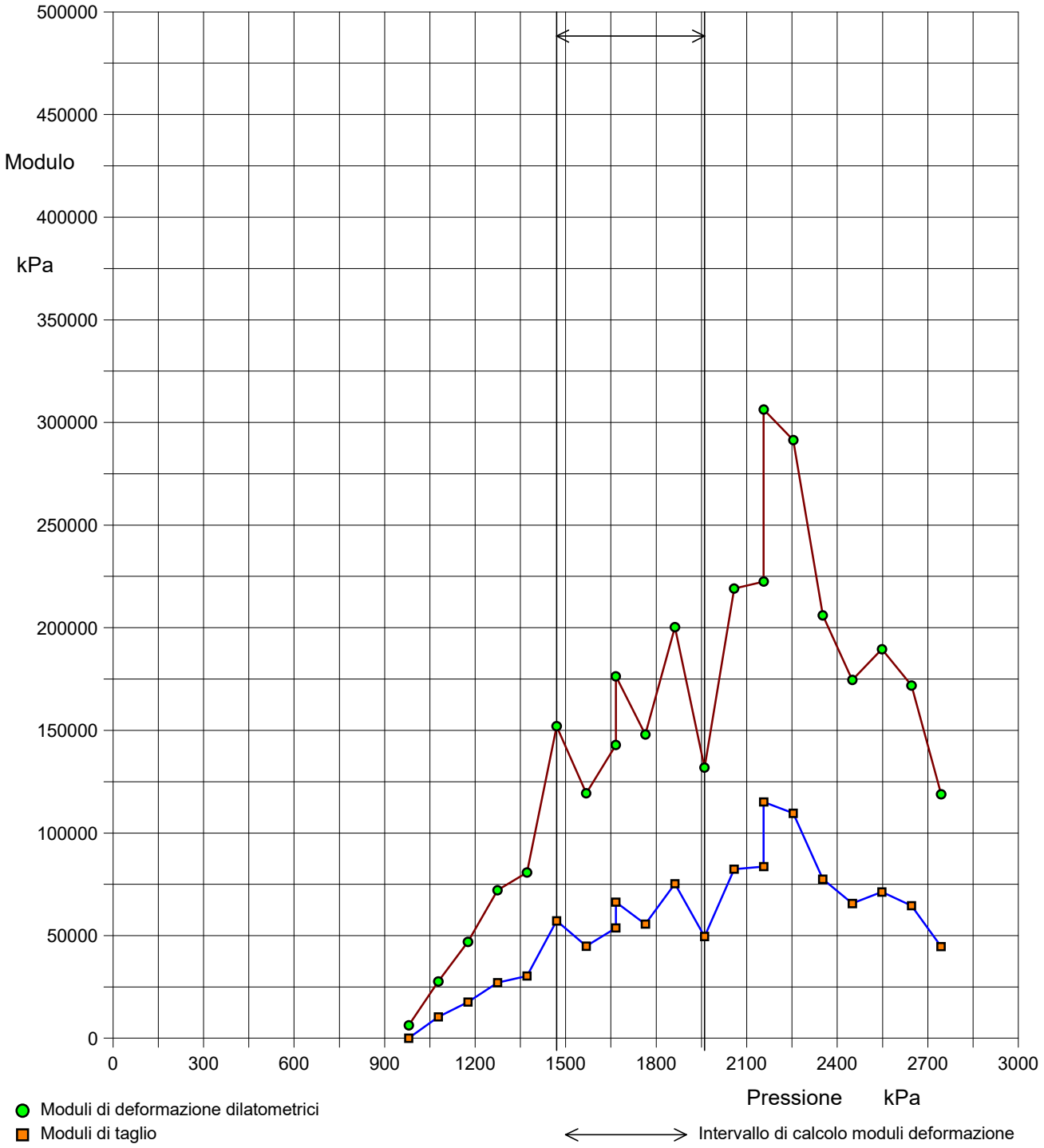
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
						2450,00	98,00	2205,53	7,53	65617	174541
1078,00	98,00	2055,01	46,11	10393	27645	2548,00	98,00	2212,47	6,94	71246	189514
1176,00	98,00	2082,32	27,31	17645	46936	2646,00	98,00	2220,14	7,67	64603	171844
1274,00	98,00	2100,16	17,84	27115	72126	2744,00	98,00	2231,25	11,11	44686	118865
1372,00	98,00	2116,15	15,99	30342	80710						
1470,00	98,00	2124,65	8,50	57156	152035						
1568,00	98,00	2135,51	10,86	44856	119317						
1666,00	98,00	2144,60	9,09	53709	142866						
1666,00	98,00	2146,63	7,36	66298	176353						
1764,00	98,00	2155,42	8,79	55637	147994						
1862,00	98,00	2161,93	6,50	75287	200263						
1960,00	98,00	2171,83	9,90	49554	131814						
2058,00	98,00	2177,79	5,96	82362	219083						
2156,00	98,00	2183,67	5,88	83632	222461						
2156,00	98,00	2187,14	4,27	115143	306280						
2254,00	98,00	2191,64	4,50	109558	291424						
2352,00	98,00	2198,00	6,37	77456	206033						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

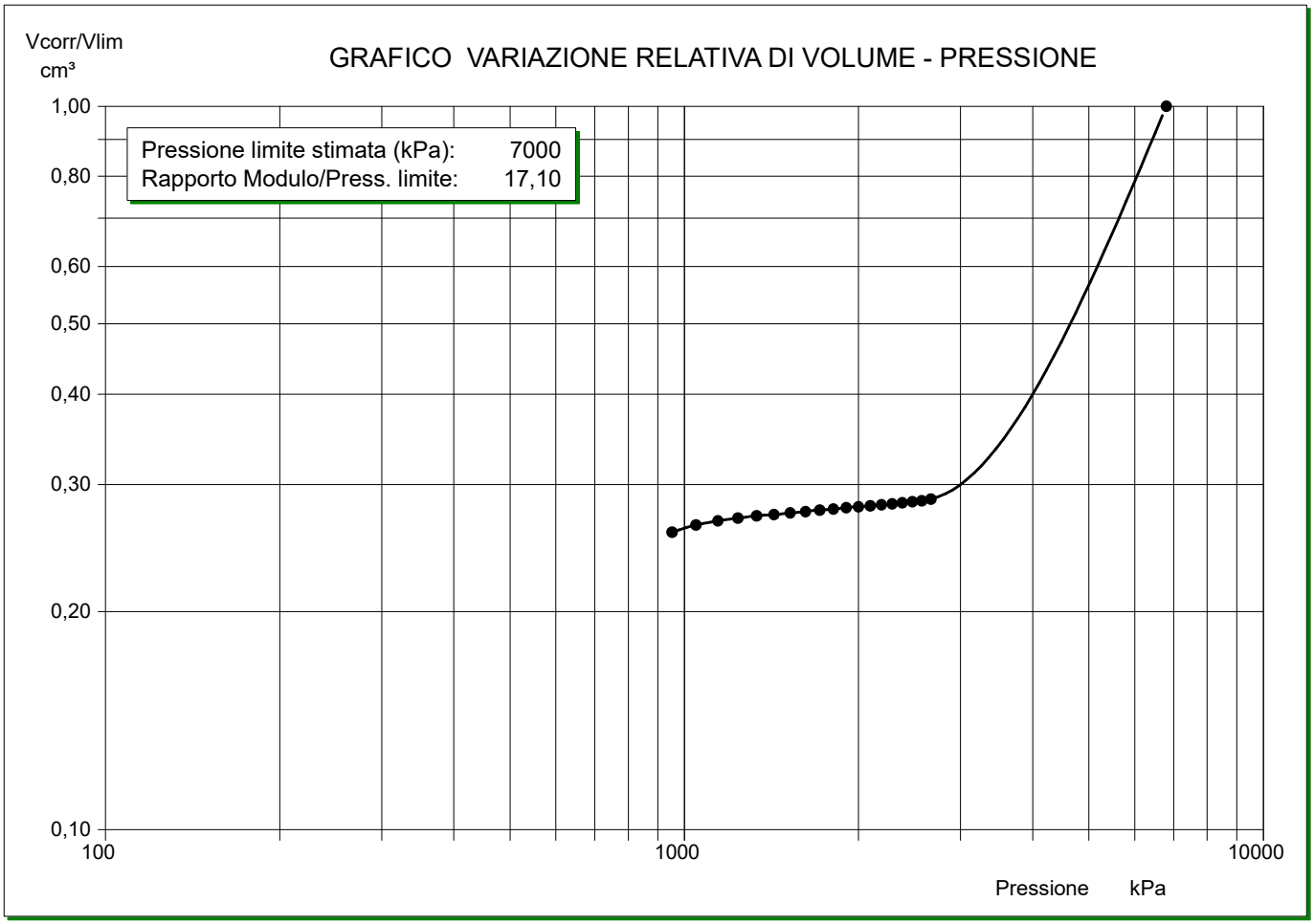
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

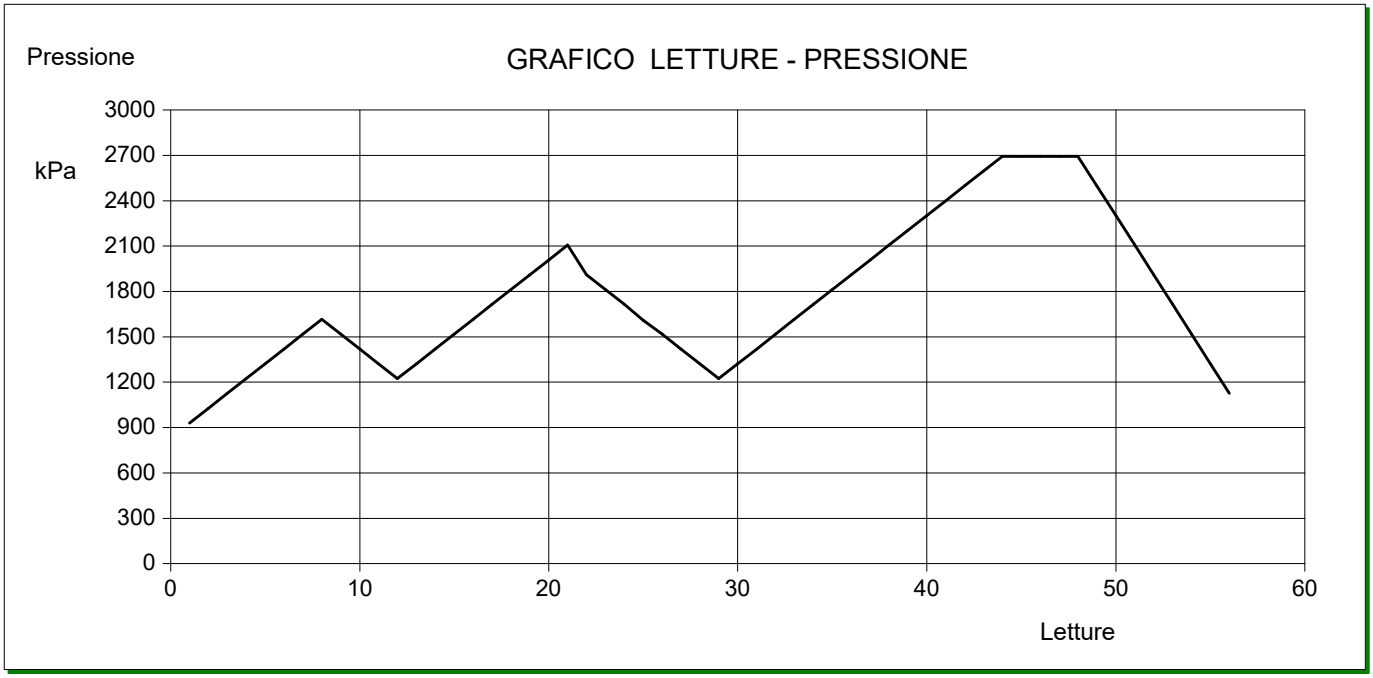
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

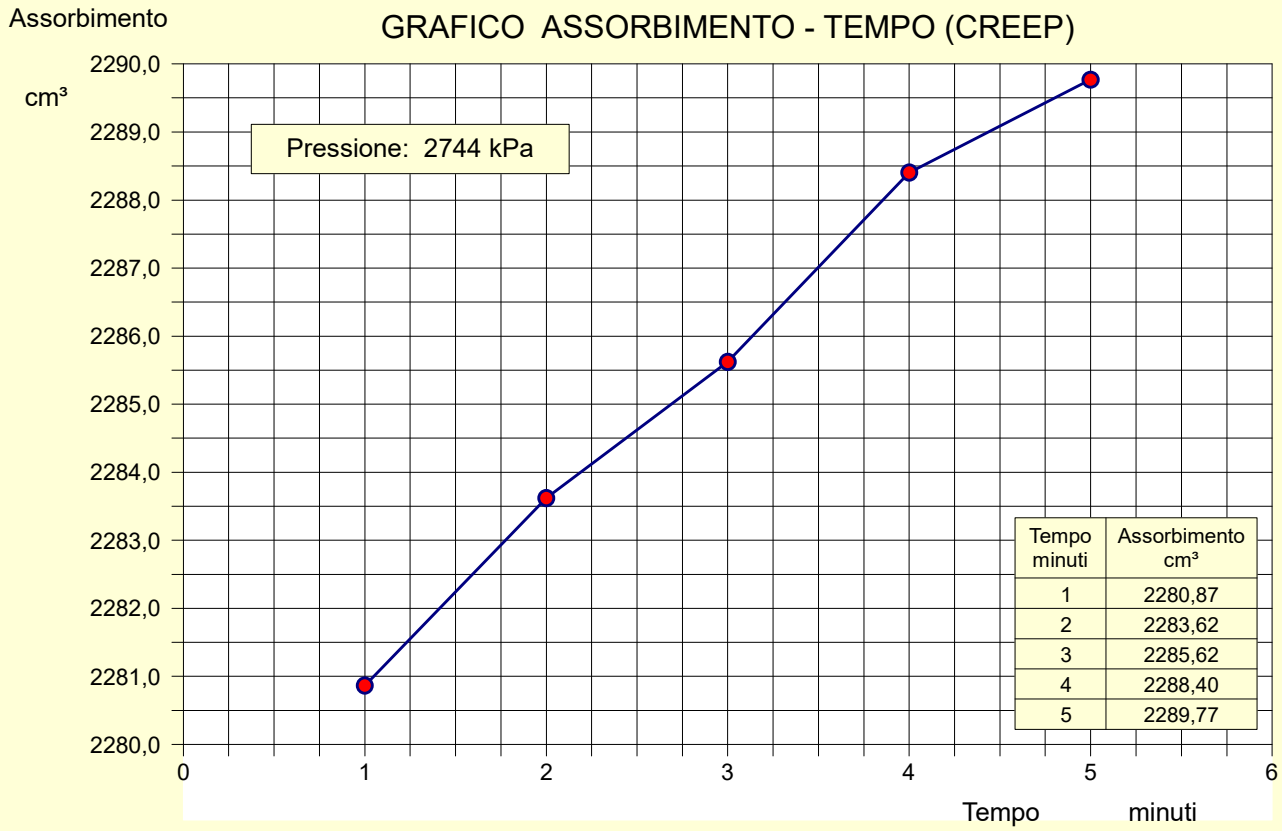
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:



Tempo minuti	Assorbimento cm³
1	2280,87
2	2283,62
3	2285,62
4	2288,40
5	2289,77

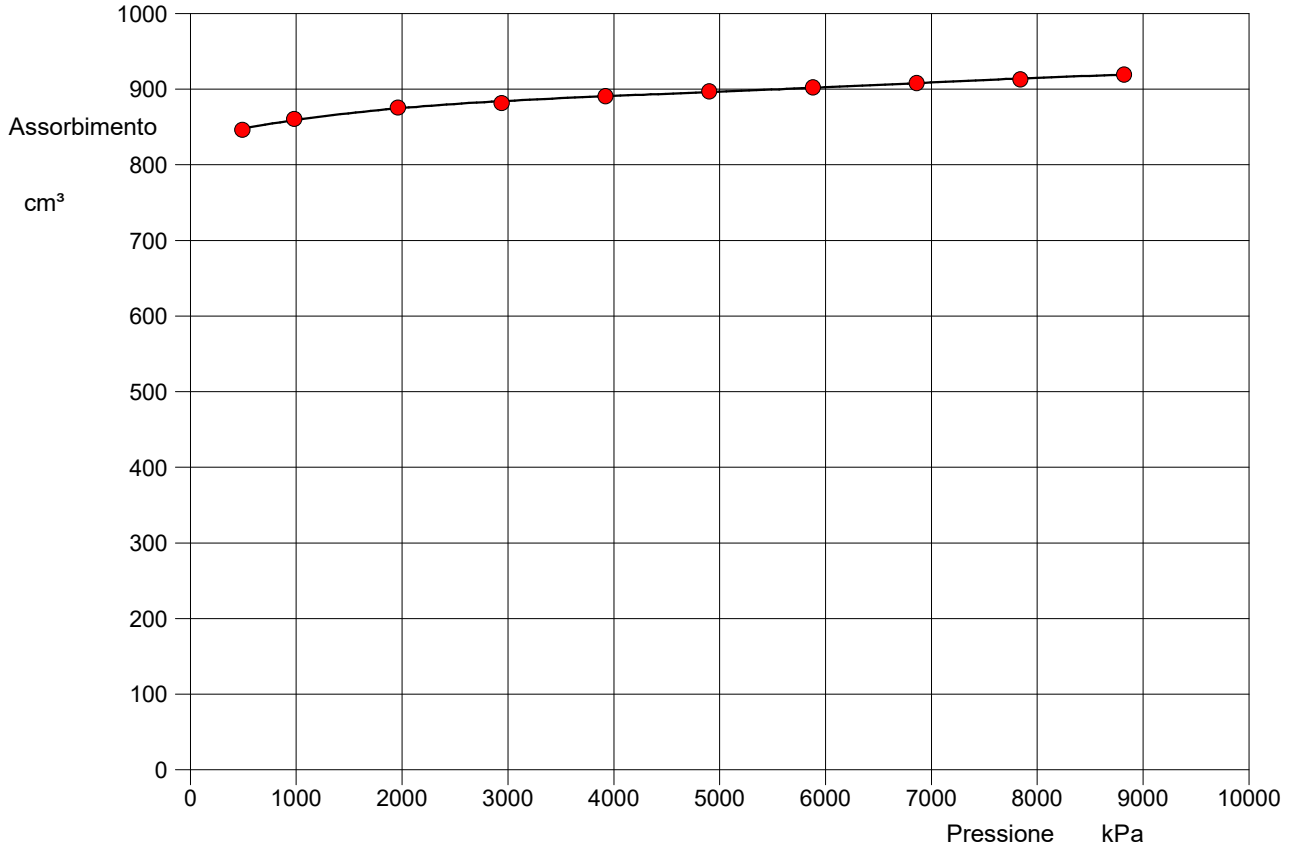
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	846,49	14,75									
980,00	860,67	25,99									
1960,00	875,73	41,62									
2940,00	881,67	51,20									
3920,00	890,75	57,70									
4900,00	897,05	63,17									
5880,00	902,42	68,83									
6860,00	908,16	75,01									
7840,00	913,00	81,18									
8820,00	919,42	85,91									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

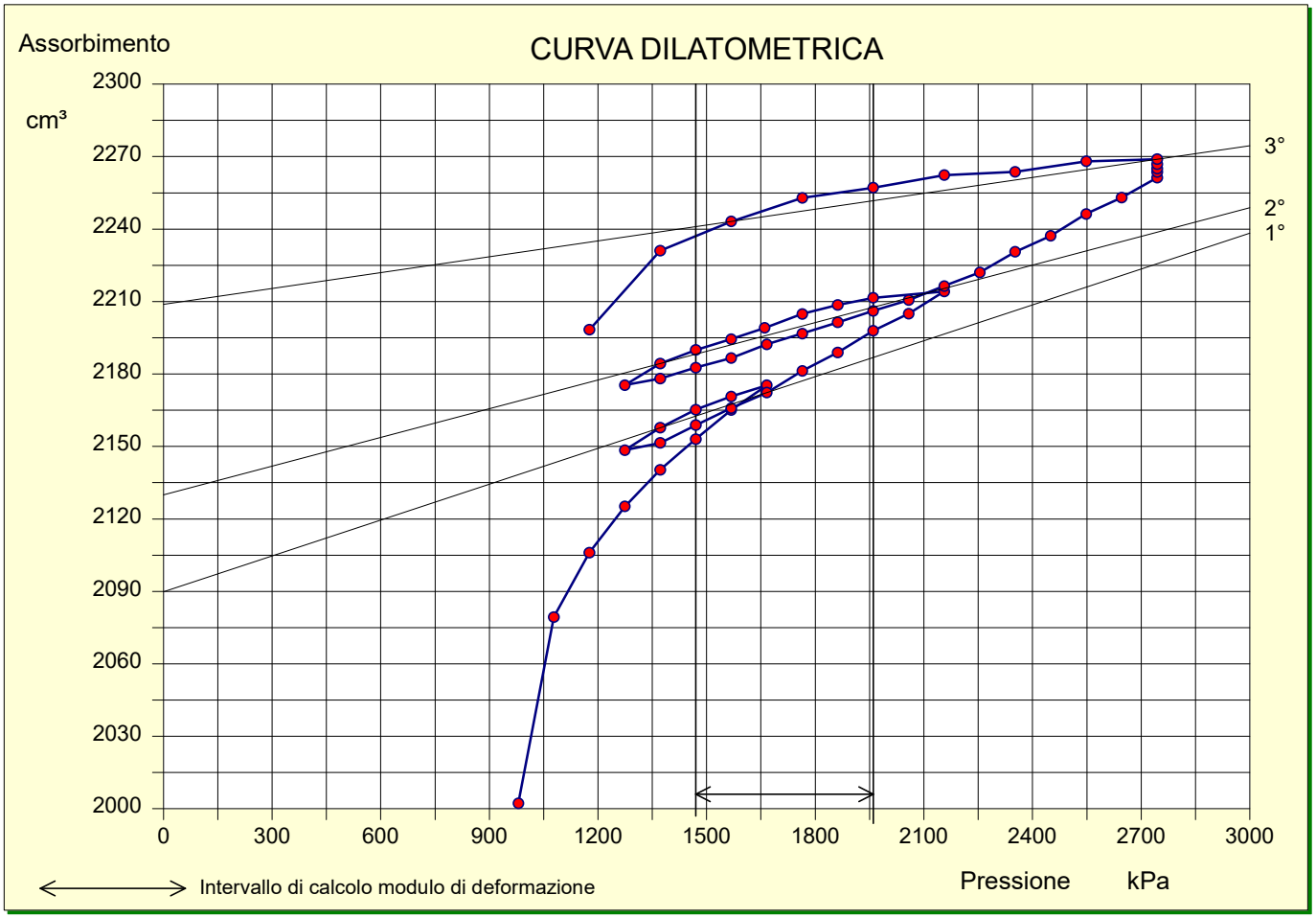
Profondità di prova (centro della cella) (m)	109,50	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	102.0		
Litologia: Argille marnose/Marne			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	980,00	2028,23	25,99	2002,24	25,59	41	2450,00	2284,16	46,96	2237,20	28,60
2	1078,00	2107,30	27,92	2079,38	26,58	42	2548,00	2294,15	47,88	2246,27	28,69
3	1176,00	2135,82	29,77	2106,06	26,92	43	2646,00	2301,80	48,77	2253,04	28,80
4	1274,00	2156,69	31,52	2125,16	27,17	44	2744,00	2310,88	49,61	2261,26	28,91
5	1372,00	2173,56	33,19	2140,38	27,35	45	2744,00	2313,26	49,61	2263,65	28,94
6	1470,00	2187,84	34,78	2153,06	27,52	46	2744,00	2314,66	49,61	2265,05	28,95
7	1568,00	2201,38	36,28	2165,10	27,68	47	2744,00	2316,49	49,61	2266,87	28,98
8	1666,00	2213,06	37,72	2175,34	27,81	48	2744,00	2318,58	49,61	2268,97	29,00
9	1568,00	2206,99	36,28	2170,71	27,75	49	2548,00	2315,91	47,88	2268,03	28,99
10	1470,00	2200,00	34,78	2165,22	27,68	50	2352,00	2309,70	45,99	2263,71	28,94
11	1372,00	2190,97	33,19	2157,78	27,58	51	2156,00	2306,25	43,91	2262,34	28,92
12	1274,00	2179,96	31,52	2148,44	27,46	52	1960,00	2298,76	41,62	2257,14	28,85
13	1372,00	2184,66	33,19	2151,47	27,50	53	1764,00	2292,02	39,08	2252,94	28,80
14	1470,00	2193,63	34,78	2158,85	27,60	54	1568,00	2279,48	36,28	2243,20	28,67
15	1568,00	2202,15	36,28	2165,87	27,69	55	1372,00	2264,27	33,19	2231,08	28,52
16	1666,00	2210,05	37,72	2172,33	27,77	56	1176,00	2228,14	29,77	2198,37	28,10
17	1764,00	2220,34	39,08	2181,26	27,88						
18	1862,00	2229,26	40,38	2188,88	27,99						
19	1960,00	2239,53	41,62	2197,91	28,10						
20	2058,00	2247,77	42,79	2204,98	28,19						
21	2156,00	2258,11	43,91	2214,20	28,30						
22	1960,00	2253,16	41,62	2211,54	28,27						
23	1862,00	2248,94	40,38	2208,56	28,23						
24	1764,00	2243,93	39,08	2204,85	28,18						
25	1660,00	2236,75	37,63	2199,11	28,11						
26	1568,00	2230,73	36,28	2194,44	28,05						
27	1470,00	2224,71	34,78	2189,93	27,99						
28	1372,00	2217,53	33,19	2184,34	27,92						
29	1274,00	2206,91	31,52	2175,39	27,81						
30	1372,00	2211,30	33,19	2178,11	27,84						
31	1470,00	2217,40	34,78	2182,63	27,90						
32	1568,00	2222,90	36,28	2186,62	27,95						
33	1666,00	2229,99	37,72	2192,27	28,02						
34	1764,00	2235,81	39,08	2196,73	28,08						
35	1862,00	2241,78	40,38	2201,40	28,14						
36	1960,00	2247,76	41,62	2206,14	28,20						
37	2058,00	2253,40	42,79	2210,61	28,26						
38	2156,00	2260,32	43,91	2216,41	28,32						
39	2254,00	2267,06	44,98	2222,09	28,40						
40	2352,00	2276,56	45,99	2230,57	28,50						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1470,00
Volume iniziale [Vo] (cm³):	2153,06
Pressione finale [Pf] (kPa):	1960,00
Volume finale [Vf] (cm³):	2206,14

RISULTATI	
Modulo di taglio (kPa):	46300
Modulo di deformazione dilatometrico (kPa):	123158
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	5015

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2158	2184	2269
Volume finale [Vf] (cm³):	2172	2216	2243
Pressione iniziale [Po] (kPa):	1372	1372	2744
Pressione finale [Pf] (kPa):	1666	2156	1568
Modulo di deformazione dilatometrico (kPa):	279300	328131	612518
Modulo da linea di tendenza (kPa):	268695	337175	616342

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

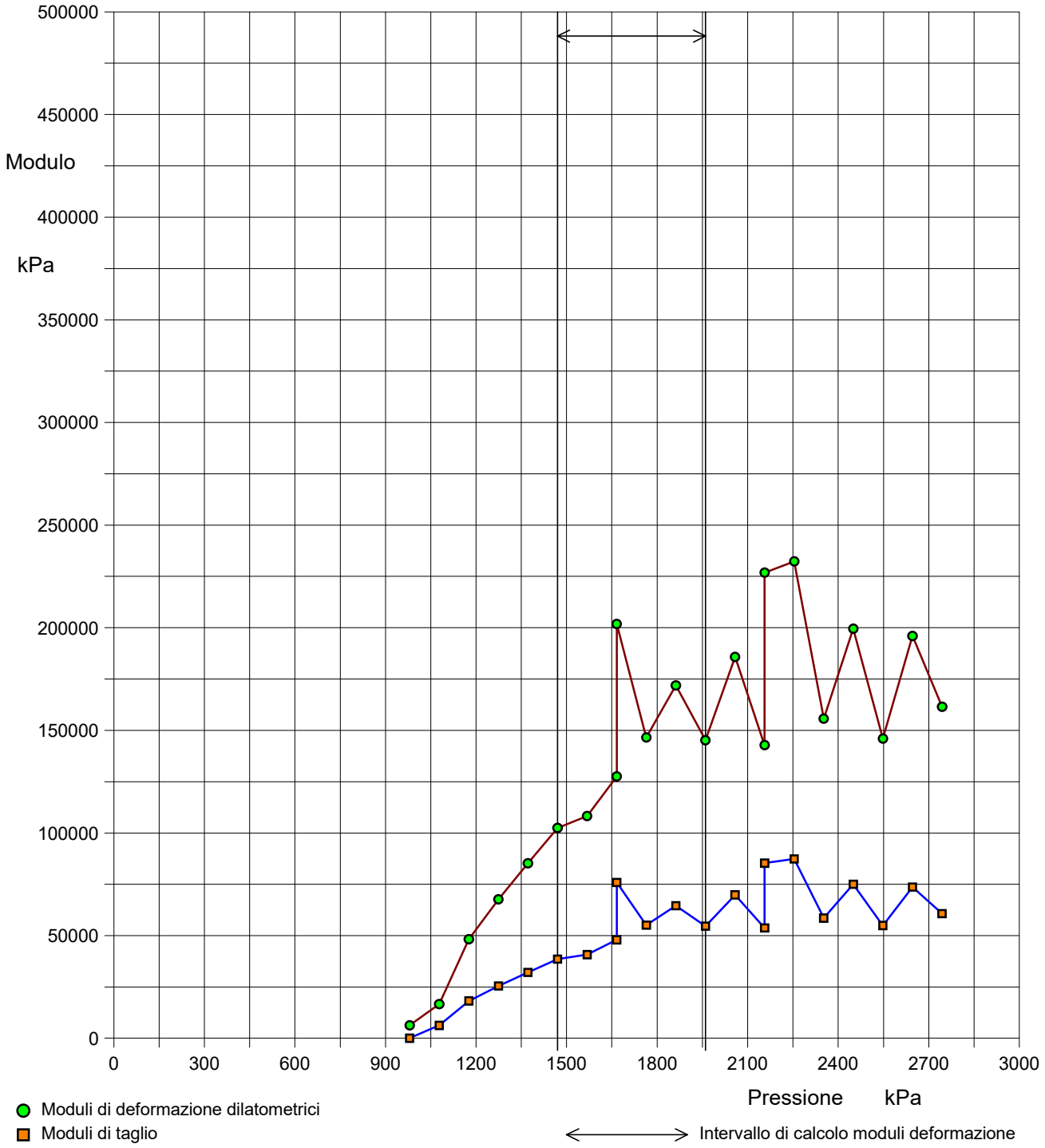
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
						2450,00	98,00	2237,20	6,63	75008	199521
1078,00	98,00	2079,38	77,14	6244	16609	2548,00	98,00	2246,27	9,07	54887	145999
1176,00	98,00	2106,06	26,68	18149	48276	2646,00	98,00	2253,04	6,77	73682	195994
1274,00	98,00	2125,16	19,11	25439	67668	2744,00	98,00	2261,26	8,23	60692	161441
1372,00	98,00	2140,38	15,21	32056	85269						
1470,00	98,00	2153,06	12,69	38523	102471						
1568,00	98,00	2165,10	12,04	40712	108294						
1666,00	98,00	2175,34	10,24	47965	127587						
1666,00	98,00	2172,33	6,47	75880	201841						
1764,00	98,00	2181,26	8,92	55086	146529						
1862,00	98,00	2188,88	7,62	64613	171871						
1960,00	98,00	2197,91	9,04	54590	145209						
2058,00	98,00	2204,98	7,07	69853	185809						
2156,00	98,00	2214,20	9,22	53686	142805						
2156,00	98,00	2216,41	5,81	85275	226832						
2254,00	98,00	2222,09	5,67	87347	232343						
2352,00	98,00	2230,57	8,48	58532	155695						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

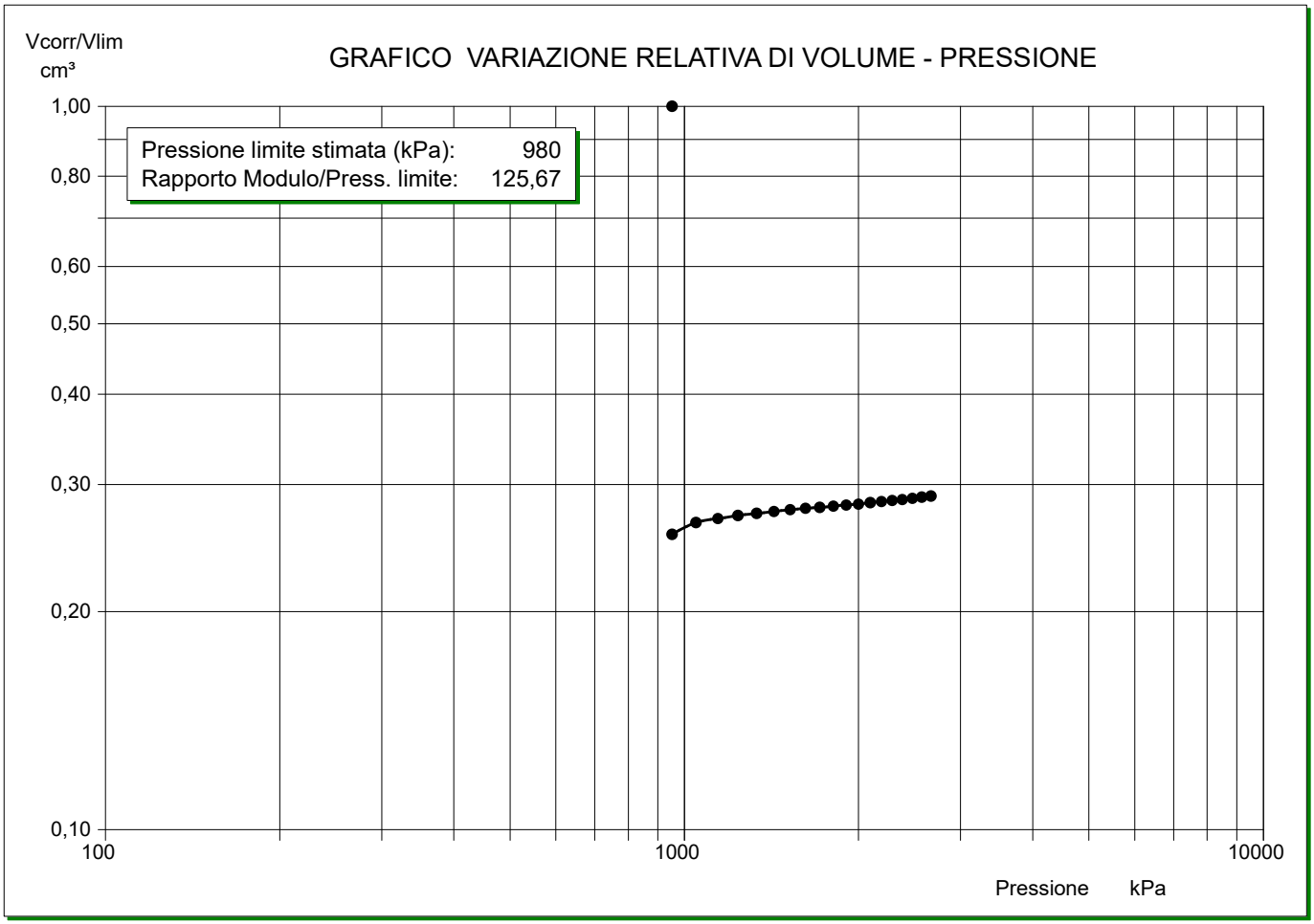
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

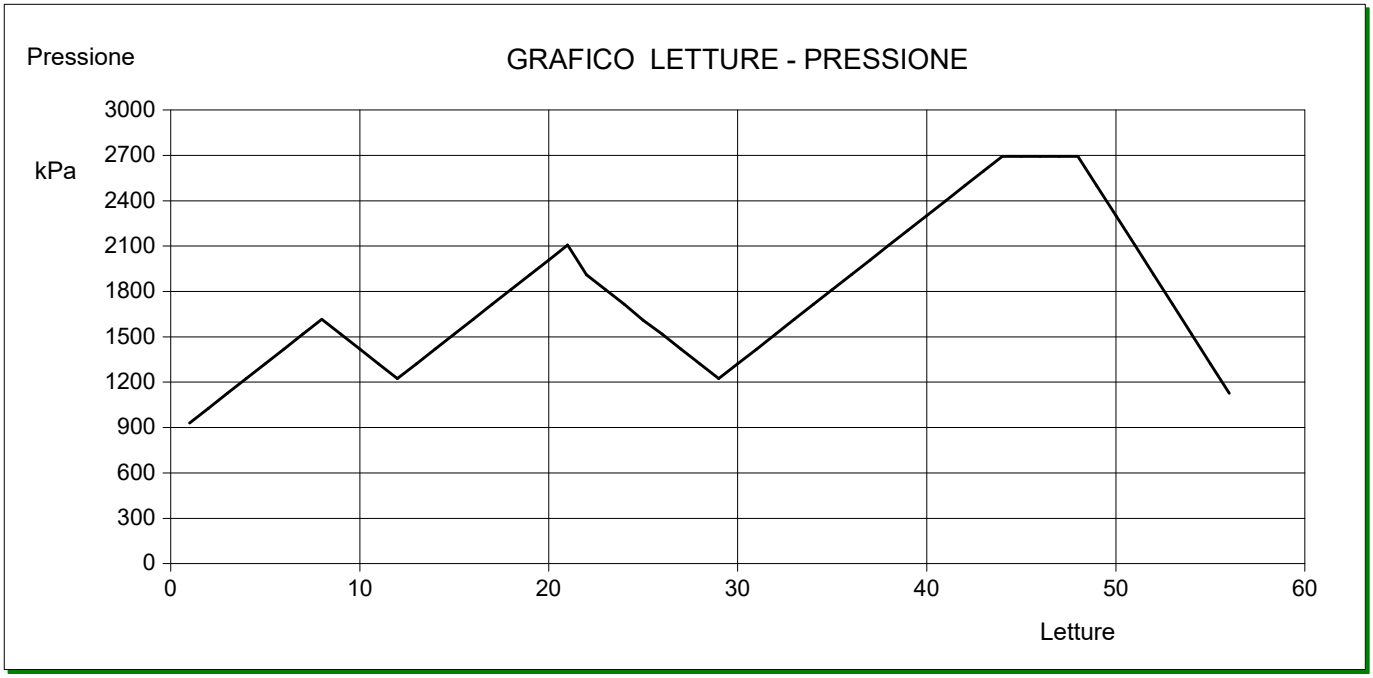
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

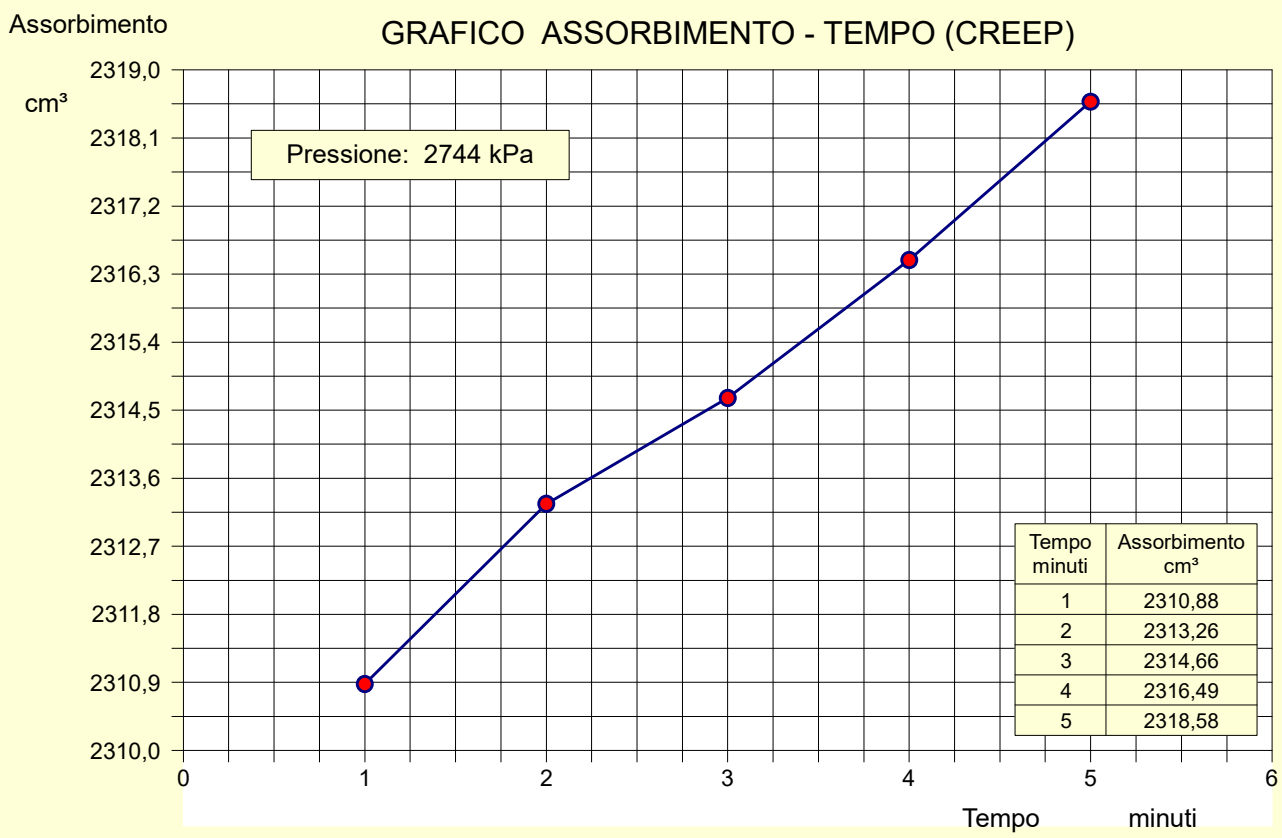
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:



Tempo minuti	Assorbimento cm³
1	2310,88
2	2313,26
3	2314,66
4	2316,49
5	2318,58

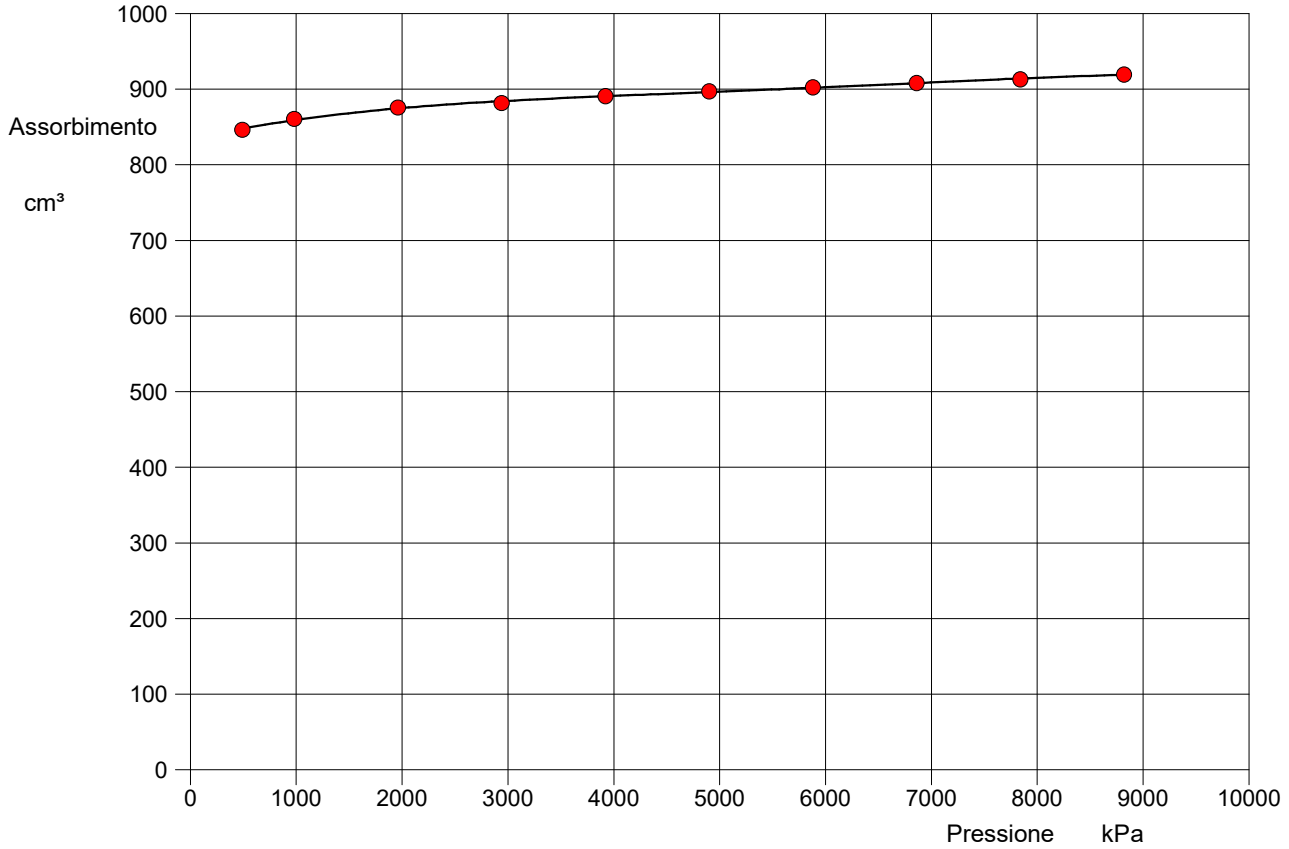
PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	846,49	13,90									
980,00	860,67	24,73									
1960,00	875,73	39,79									
2940,00	881,67	49,03									
3920,00	890,75	55,28									
4900,00	897,05	60,56									
5880,00	902,42	66,02									
6860,00	908,16	71,97									
7840,00	913,00	77,91									
8820,00	919,42	82,47									

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-05
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

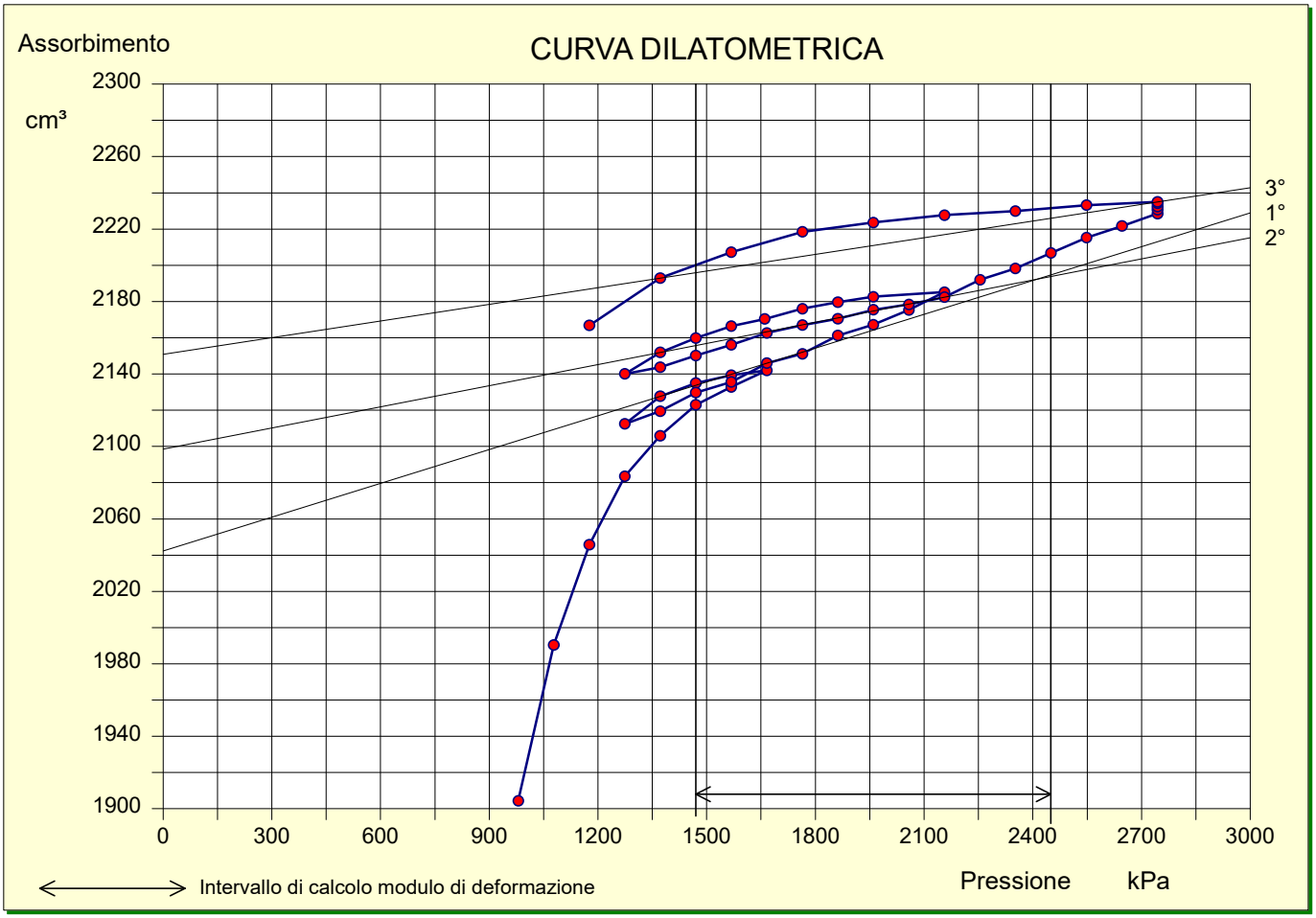
Profondità di prova (centro della cella) (m)	118,50	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	102.0		
Litologia: Marne - Marne argillose			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	980,00	1930,37	25,99	1904,38	24,44	41	2450,00	2253,78	46,96	2206,82	28,32
2	1078,00	2018,36	27,92	1990,43	25,54	42	2548,00	2263,19	47,89	2215,31	28,43
3	1176,00	2075,49	29,77	2045,72	26,25	43	2646,00	2270,49	48,77	2221,72	28,51
4	1274,00	2115,06	31,52	2083,54	26,74	44	2744,00	2278,14	49,61	2228,52	28,60
5	1372,00	2139,09	33,19	2105,90	27,02	45	2744,00	2280,34	49,61	2230,72	28,62
6	1470,00	2157,79	34,78	2123,01	27,24	46	2744,00	2281,97	49,61	2232,35	28,65
7	1568,00	2169,15	36,28	2132,86	27,37	47	2744,00	2283,87	49,61	2234,25	28,67
8	1666,00	2179,66	37,72	2141,94	27,49	48	2744,00	2284,66	49,61	2235,04	28,68
9	1568,00	2175,68	36,28	2139,39	27,45	49	2548,00	2281,10	47,89	2233,22	28,66
10	1470,00	2169,78	34,78	2135,01	27,40	50	2352,00	2275,98	45,99	2229,99	28,62
11	1372,00	2160,88	33,19	2127,69	27,30	51	2156,00	2271,58	43,91	2227,67	28,59
12	1274,00	2144,01	31,52	2112,49	27,11	52	1960,00	2265,18	41,62	2223,57	28,53
13	1372,00	2152,66	33,19	2119,47	27,20	53	1764,00	2257,53	39,08	2218,44	28,47
14	1470,00	2164,53	34,78	2129,75	27,33	54	1568,00	2243,54	36,28	2207,26	28,32
15	1568,00	2171,89	36,28	2135,61	27,40	55	1372,00	2226,17	33,19	2192,98	28,14
16	1666,00	2183,70	37,72	2145,98	27,54	56	1176,00	2196,54	29,77	2166,77	27,80
17	1764,00	2190,20	39,08	2151,12	27,60						
18	1862,00	2201,63	40,38	2161,25	27,73						
19	1960,00	2208,87	41,62	2167,25	27,81						
20	2058,00	2218,16	42,79	2175,37	27,91						
21	2156,00	2229,04	43,91	2185,13	28,04						
22	1960,00	2224,21	41,62	2182,60	28,01						
23	1862,00	2220,05	40,38	2179,67	27,97						
24	1764,00	2215,11	39,08	2176,03	27,92						
25	1660,00	2208,03	37,63	2170,39	27,85						
26	1568,00	2202,72	36,28	2166,44	27,80						
27	1470,00	2194,61	34,78	2159,84	27,72						
28	1372,00	2185,09	33,19	2151,90	27,61						
29	1274,00	2171,60	31,52	2140,08	27,46						
30	1372,00	2176,92	33,19	2143,74	27,51						
31	1470,00	2184,95	34,78	2150,17	27,59						
32	1568,00	2192,37	36,28	2156,08	27,67						
33	1666,00	2200,36	37,72	2162,64	27,75						
34	1764,00	2206,13	39,08	2167,05	27,81						
35	1862,00	2210,88	40,38	2170,50	27,85						
36	1960,00	2217,08	41,62	2175,47	27,92						
37	2058,00	2221,15	42,79	2178,36	27,95						
38	2156,00	2226,29	43,91	2182,38	28,00						
39	2254,00	2236,94	44,98	2191,97	28,13						
40	2352,00	2244,28	45,99	2198,28	28,21						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-05
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1470,00
Volume iniziale [Vo] (cm³):	2123,01
Pressione finale [Pf] (kPa):	2450,00
Volume finale [Vf] (cm³):	2206,82

RISULTATI	
Modulo di taglio (kPa):	58467
Modulo di deformazione dilatometrico (kPa):	155522
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	5000

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2128	2152	2235
Volume finale [Vf] (cm³):	2146	2182	2193
Pressione iniziale [Po] (kPa):	1372	1372	2744
Pressione finale [Pf] (kPa):	1666	2156	1372
Modulo di deformazione dilatometrico (kPa):	216017	347712	438724
Modulo da linea di tendenza (kPa):	212568	341514	436602

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-05
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

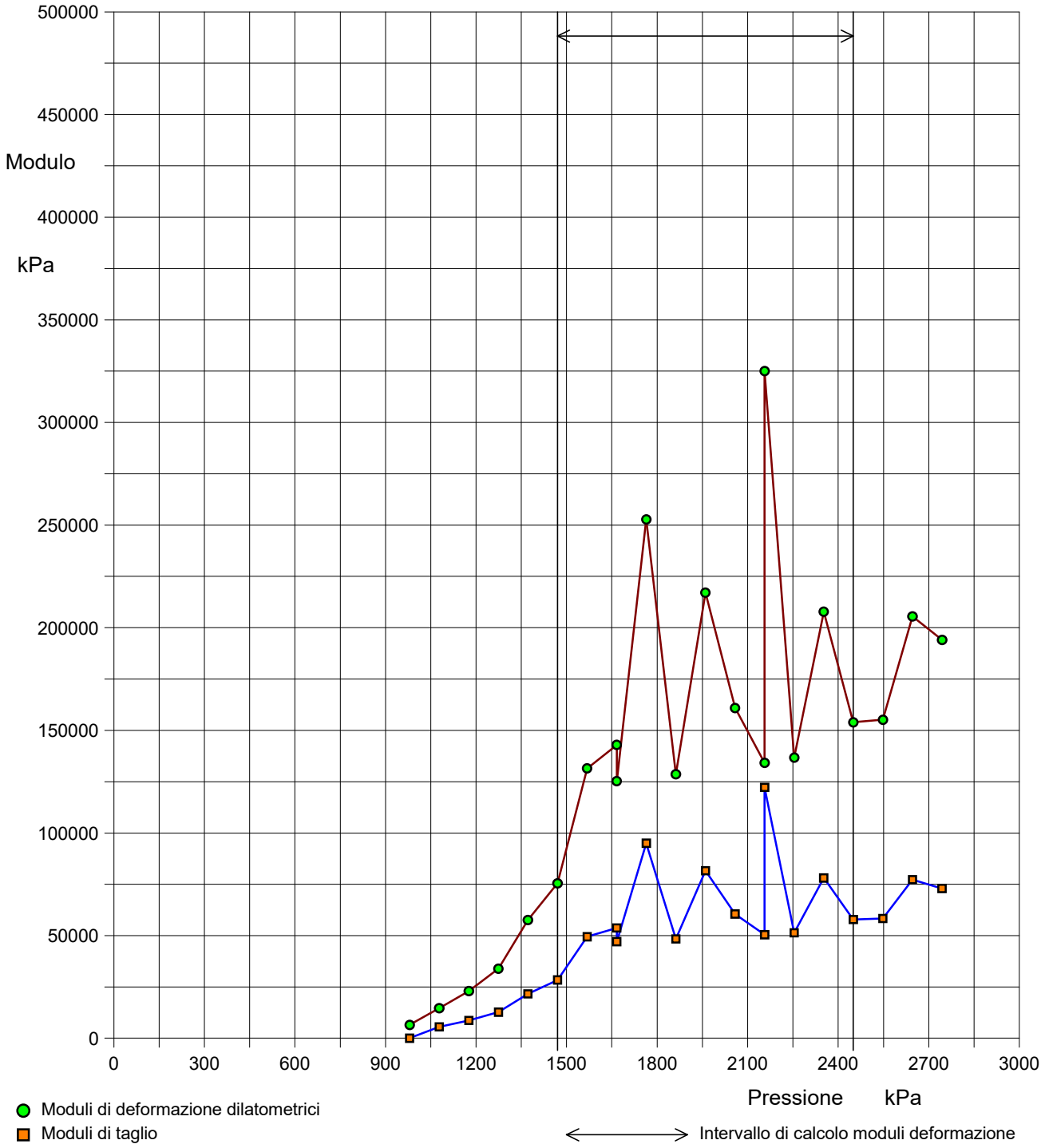
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
						2450,00	98,00	2206,82	8,54	57863	153916
1078,00	98,00	1990,43	86,05	5496	14619	2548,00	98,00	2215,31	8,48	58336	155174
1176,00	98,00	2045,72	55,29	8651	23012	2646,00	98,00	2221,72	6,41	77264	205522
1274,00	98,00	2083,54	37,82	12745	33902	2744,00	98,00	2228,52	6,80	72940	194020
1372,00	98,00	2105,90	22,36	21658	57610						
1470,00	98,00	2123,01	17,11	28390	75517						
1568,00	98,00	2132,86	9,85	49428	131478						
1666,00	98,00	2141,94	9,08	53734	142932						
1666,00	98,00	2145,98	10,37	47081	125235						
1764,00	98,00	2151,12	5,14	95023	252761						
1862,00	98,00	2161,25	10,12	48360	128638						
1960,00	98,00	2167,25	6,01	81610	217083						
2058,00	98,00	2175,37	8,12	60476	160866						
2156,00	98,00	2185,13	9,75	50435	134157						
2156,00	98,00	2182,38	4,02	122195	325039						
2254,00	98,00	2191,97	9,59	51388	136692						
2352,00	98,00	2198,28	6,31	78113	207781						

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-05
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

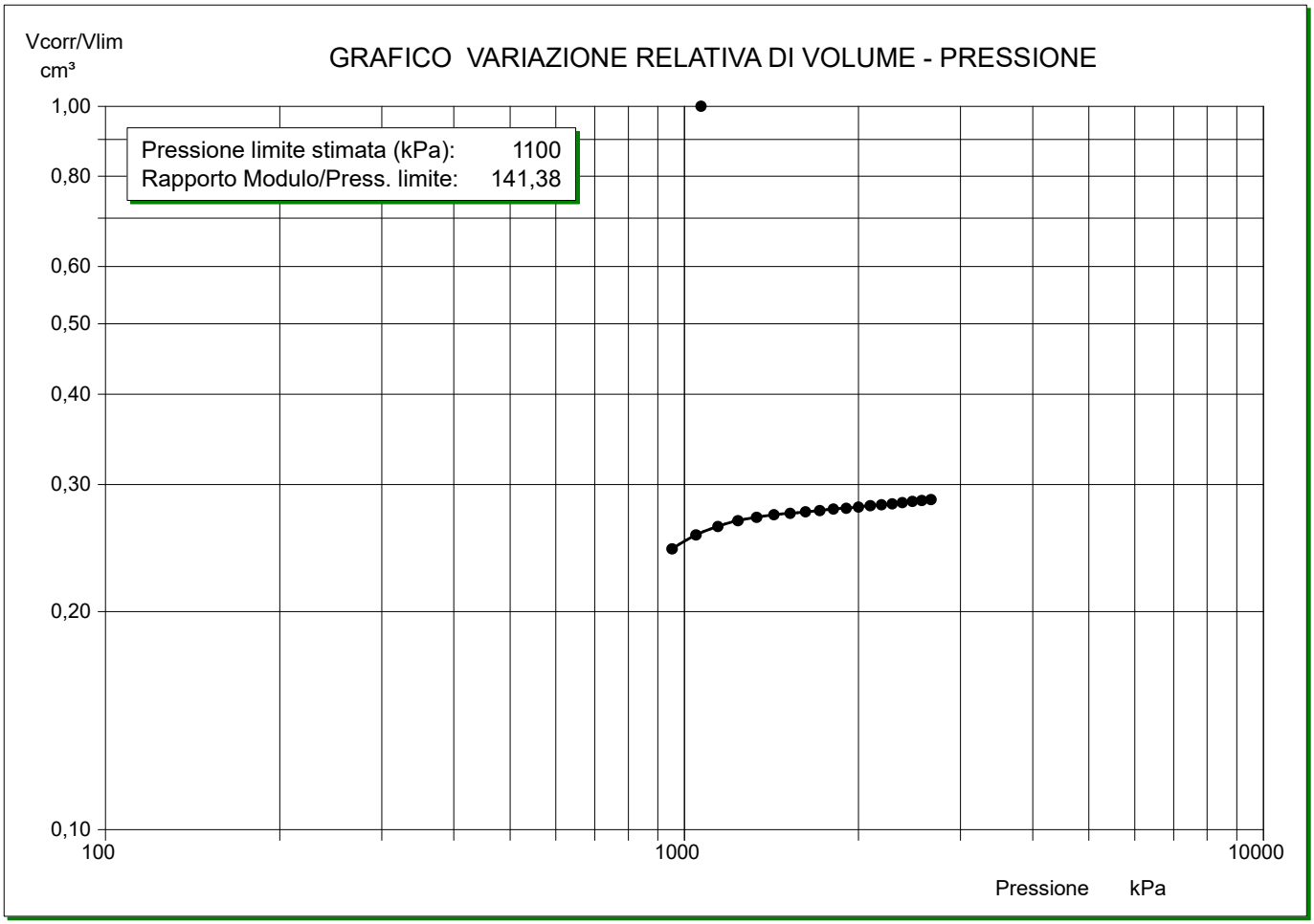
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

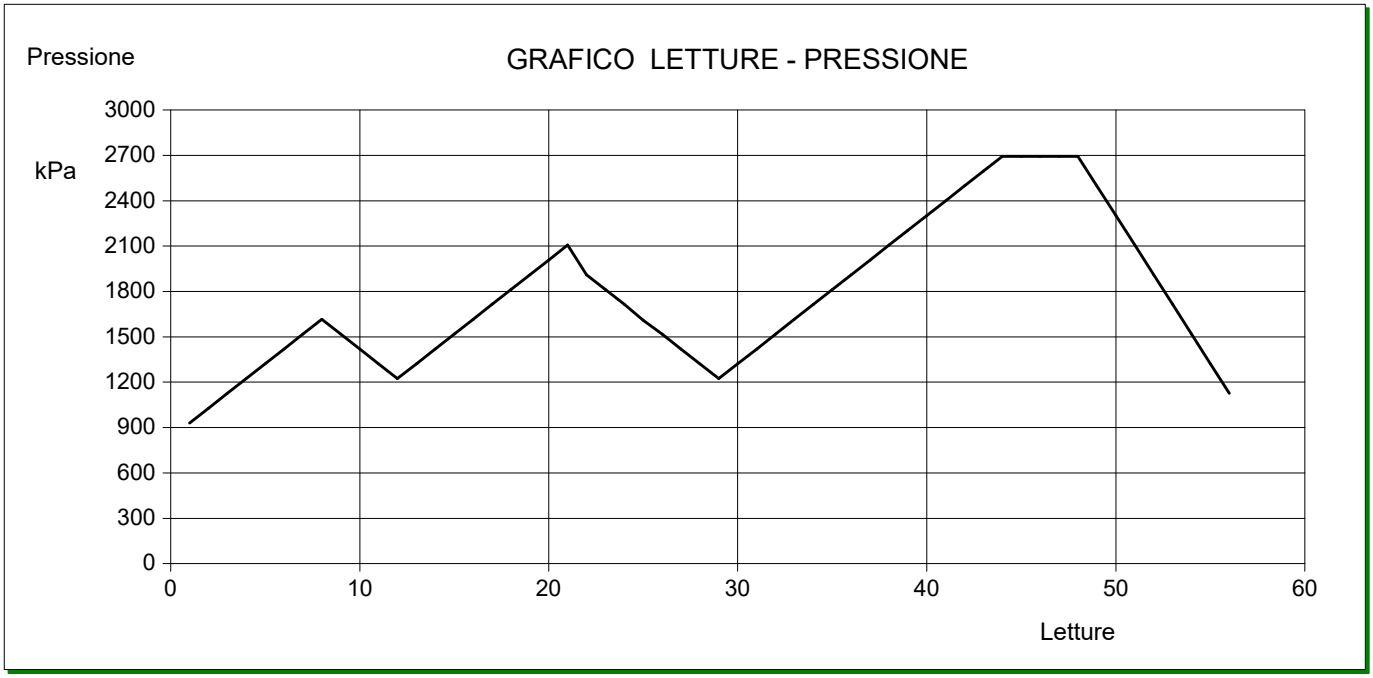
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

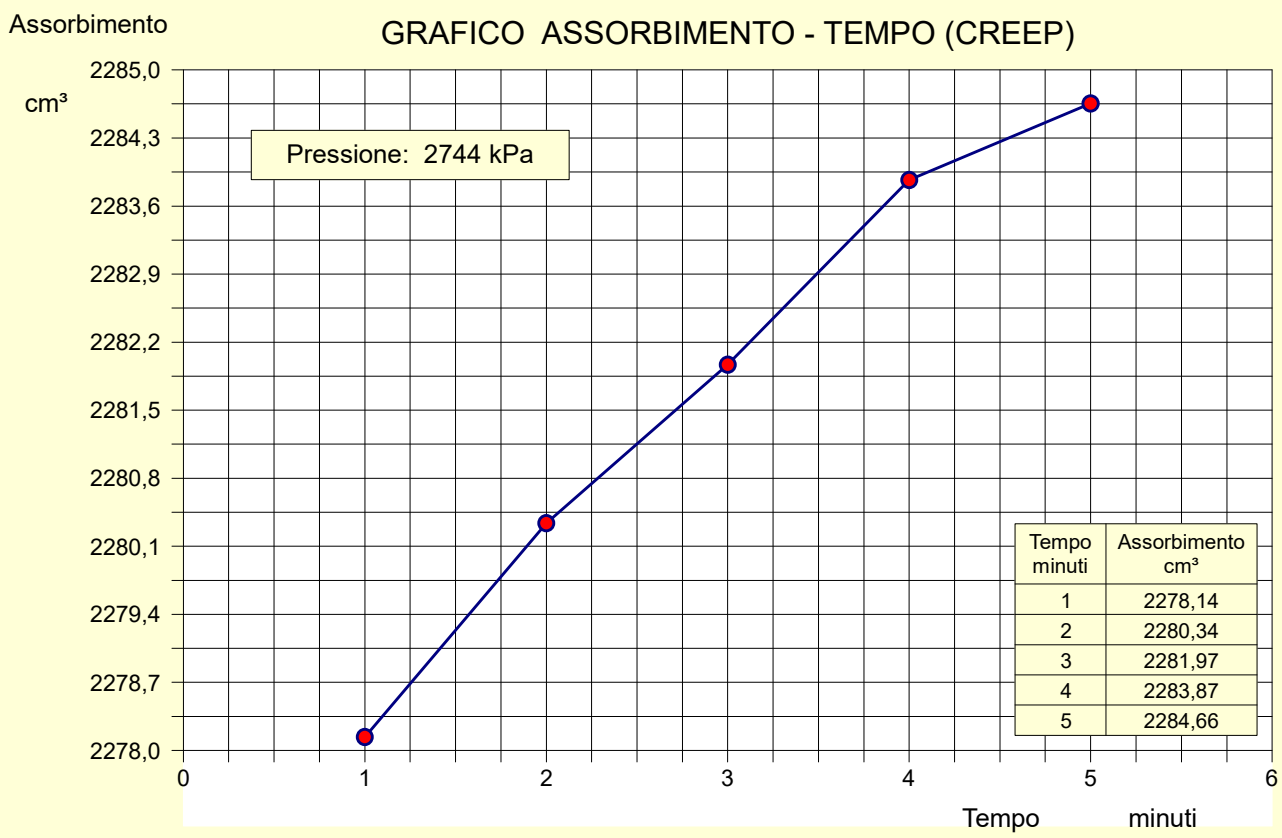
Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-05
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:





PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-05
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:



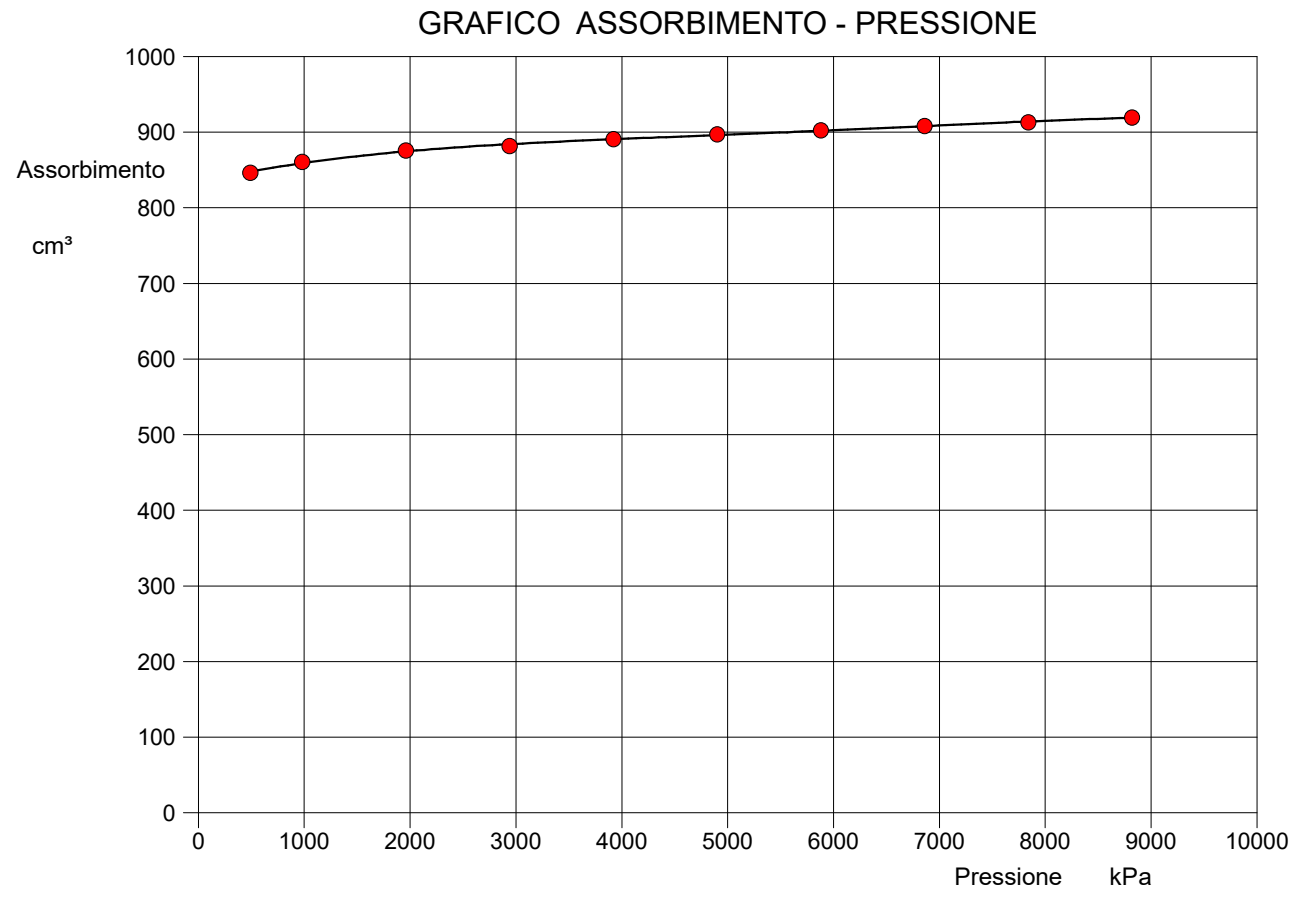
Tempo minuti	Assorbimento cm³
1	2278,14
2	2280,34
3	2281,97
4	2283,87
5	2284,66

PROVA DILATOMETRICA

Committente: Vianini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-05
Località: Campolattaro	Data: 10/10/2020
Sondaggio: CL-7	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	846,49	14,75									
980,00	860,67	25,99									
1960,00	875,73	41,62									
2940,00	881,67	51,20									
3920,00	890,75	57,70									
4900,00	897,05	63,17									
5880,00	902,42	68,83									
6860,00	908,16	75,01									
7840,00	913,00	81,18									
8820,00	919,42	85,91									

Sondaggio CL-8

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 22/10/2020
Sondaggio: CL-8	Orario prova:

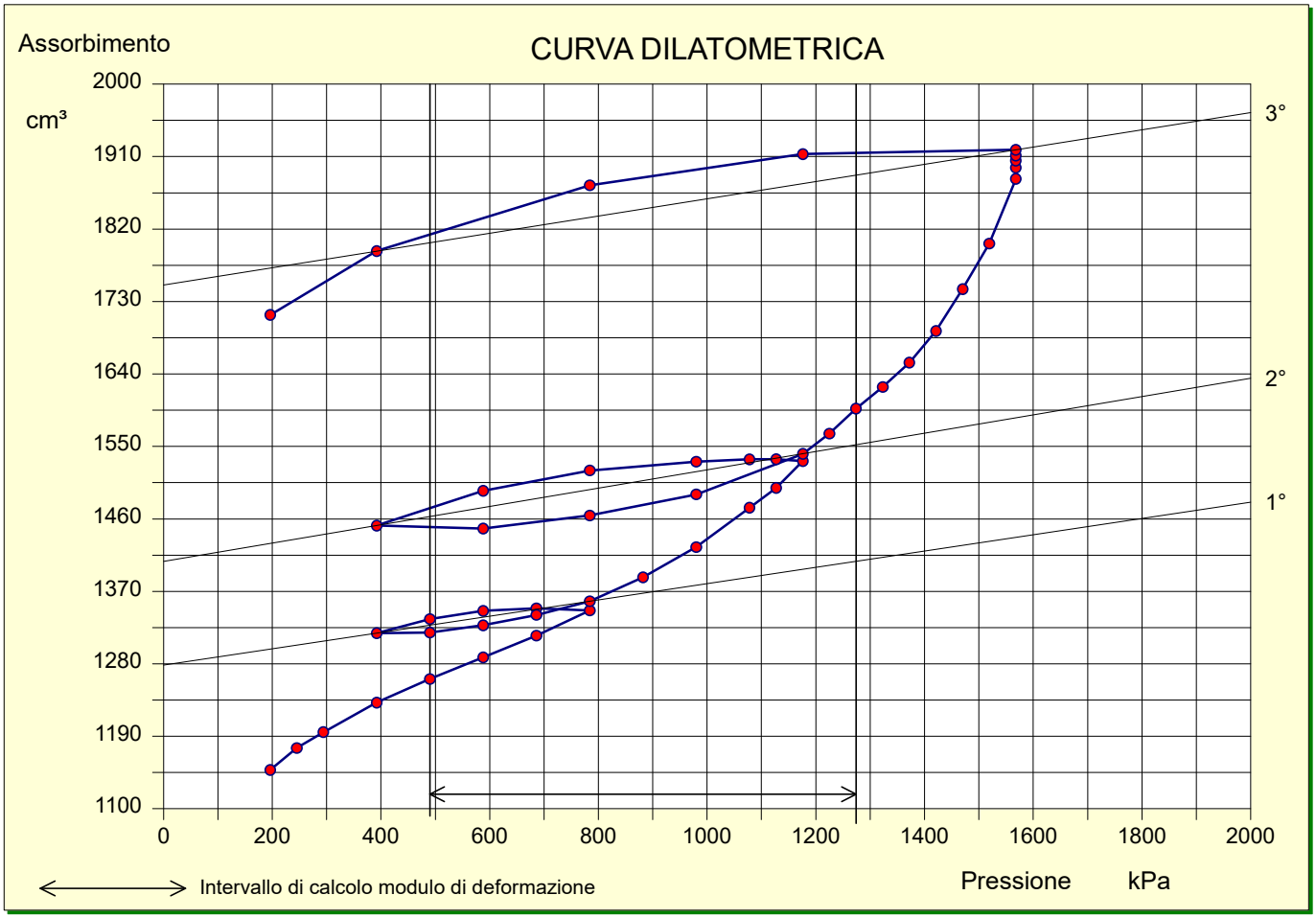
Profondità di prova (centro della cella) (m)	20,00	Volume della sonda (cm³)	2835,81
Profondità della falda (m)	-		
Litologia: argille marnose/marne argillose con lamine e/o piccoli trovanti litoidi			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	196,00	1154,29	6,06	1148,23	16,56	41	1568,00	1939,64	34,67	1904,97	27,48
2	245,00	1182,88	7,45	1175,44	16,95	42	1568,00	1945,97	34,67	1911,30	27,57
3	294,00	1204,02	8,80	1195,22	17,24	43	1568,00	1953,10	34,67	1918,43	27,67
4	392,00	1243,33	11,42	1231,91	17,77	44	1176,00	1941,35	28,39	1912,97	27,59
5	490,00	1275,19	13,92	1261,27	18,19	45	784,00	1894,96	20,73	1874,24	27,03
6	588,00	1304,27	16,30	1287,97	18,58	46	392,00	1804,05	11,42	1792,64	25,86
7	686,00	1333,52	18,56	1314,96	18,97	47	196,00	1719,36	6,06	1713,30	24,71
8	784,00	1366,96	20,73	1346,24	19,42						
9	686,00	1367,57	18,56	1349,00	19,46						
10	588,00	1362,18	16,30	1345,88	19,41						
11	490,00	1349,53	13,92	1335,62	19,26						
12	392,00	1329,44	11,42	1318,02	19,01						
13	490,00	1332,70	13,92	1318,78	19,02						
14	588,00	1344,11	16,30	1327,81	19,15						
15	686,00	1359,37	18,56	1340,81	19,34						
16	784,00	1378,43	20,73	1357,71	19,58						
17	882,00	1410,23	22,78	1387,45	20,01						
18	980,00	1449,85	24,75	1425,11	20,56						
19	1078,00	1500,60	26,61	1473,98	21,26						
20	1127,00	1525,84	27,51	1498,33	21,61						
21	1176,00	1560,26	28,39	1531,87	22,10						
22	1127,00	1561,62	27,51	1534,11	22,13						
23	1078,00	1560,53	26,61	1533,91	22,13						
24	980,00	1555,90	24,75	1531,15	22,09						
25	784,00	1540,83	20,73	1520,10	21,93						
26	588,00	1511,15	16,30	1494,86	21,56						
27	392,00	1463,09	11,42	1451,67	20,94						
28	588,00	1464,31	16,30	1448,01	20,89						
29	784,00	1484,91	20,73	1464,18	21,12						
30	980,00	1515,21	24,75	1490,46	21,50						
31	1176,00	1569,21	28,39	1540,82	22,22						
32	1225,00	1595,20	29,24	1565,96	22,59						
33	1274,00	1626,98	30,08	1596,90	23,03						
34	1323,00	1654,81	30,89	1623,92	23,42						
35	1372,00	1685,85	31,68	1654,17	23,86						
36	1421,00	1725,83	32,46	1693,37	24,43						
37	1470,00	1778,54	33,21	1745,32	25,17						
38	1519,00	1835,80	33,95	1801,85	25,99						
39	1568,00	1917,13	34,67	1882,46	27,15						
40	1568,00	1931,00	34,67	1896,33	27,35						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 22/10/2020
Sondaggio: CL-8	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	490,00
Volume iniziale [Vo] (cm³):	1261,27
Pressione finale [Pf] (kPa):	1274,00
Volume finale [Vf] (cm³):	1596,90

RISULTATI	
Modulo di taglio (kPa):	9963
Modulo di deformazione dilatometrico (kPa):	26502
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4265

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1318	1452	1918
Volume finale [Vf] (cm³):	1358	1541	1793
Pressione iniziale [Po] (kPa):	392	392	1568
Pressione finale [Pf] (kPa):	784	1176	392
Modulo di deformazione dilatometrico (kPa):	108803	101514	117401
Modulo da linea di tendenza (kPa):	110762	101906	116713

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 22/10/2020
Sondaggio: CL-8	Orario prova:

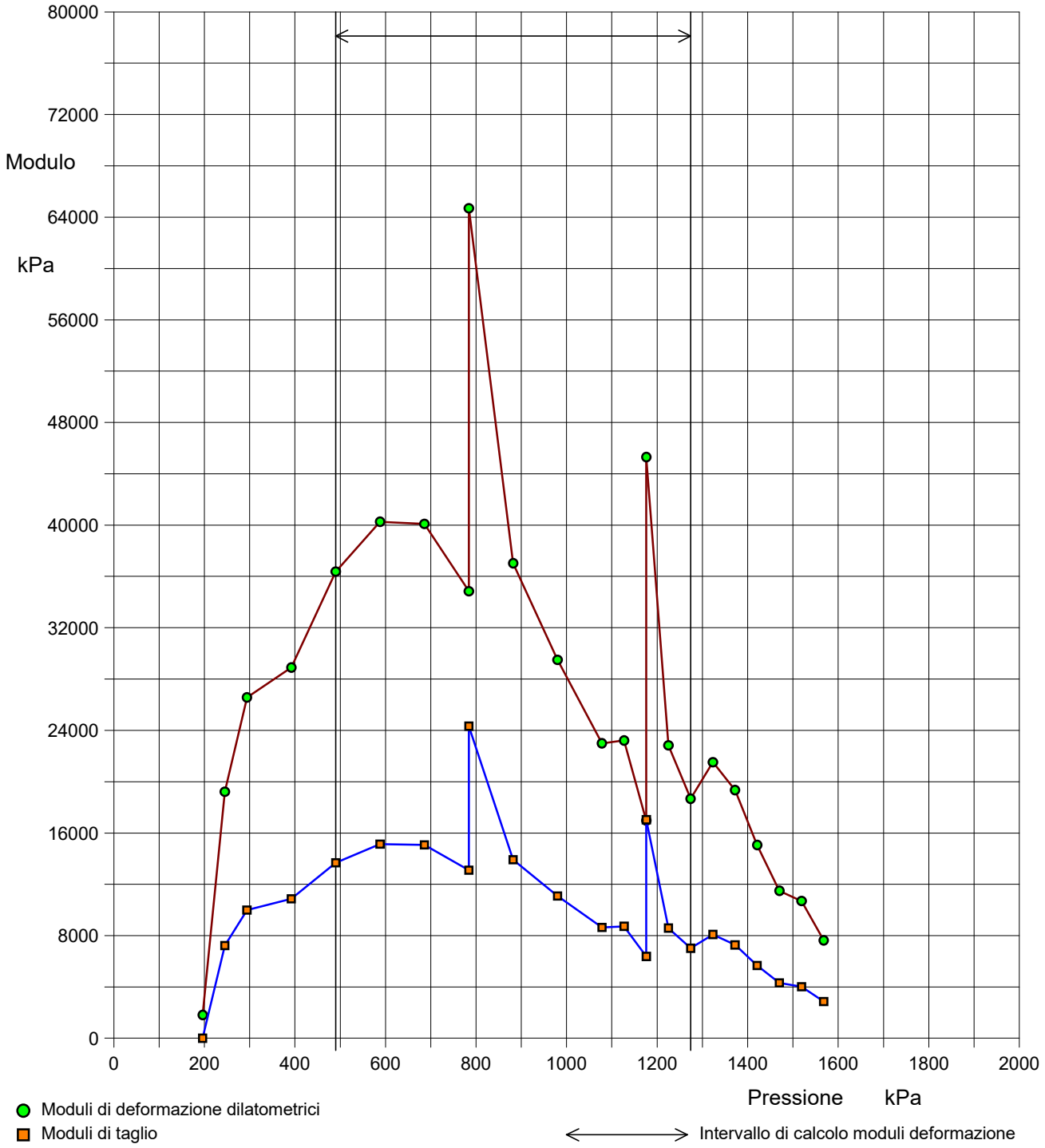
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
245,00	49,00	1175,44	27,20	7225	19219						
294,00	49,00	1195,22	19,78	9986	26563						
392,00	98,00	1231,91	36,69	10864	28898						
490,00	98,00	1261,27	29,36	13675	36376						
588,00	98,00	1287,97	26,70	15136	40262						
686,00	98,00	1314,96	26,99	15073	40094						
784,00	98,00	1346,24	31,28	13102	34851						
784,00	98,00	1357,71	16,90	24323	64699						
882,00	98,00	1387,45	29,74	13917	37019						
980,00	98,00	1425,11	37,66	11087	29491						
1078,00	98,00	1473,98	48,88	8642	22988						
1127,00	49,00	1498,33	24,34	8725	23209						
1176,00	49,00	1531,87	33,55	6380	16971						
1176,00	196,00	1540,82	50,36	17034	45310						
1225,00	49,00	1565,96	25,13	8581	22825						
1274,00	49,00	1596,90	30,95	7019	18671						
1323,00	49,00	1623,92	27,02	8089	21517						
1372,00	49,00	1654,17	30,25	7273	19346						
1421,00	49,00	1693,37	39,20	5661	15058						
1470,00	49,00	1745,32	51,95	4321	11494						
1519,00	49,00	1801,85	56,53	4020	10693						
1568,00	49,00	1882,46	80,61	2868	7629						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 22/10/2020
Sondaggio: CL-8	Orario prova:

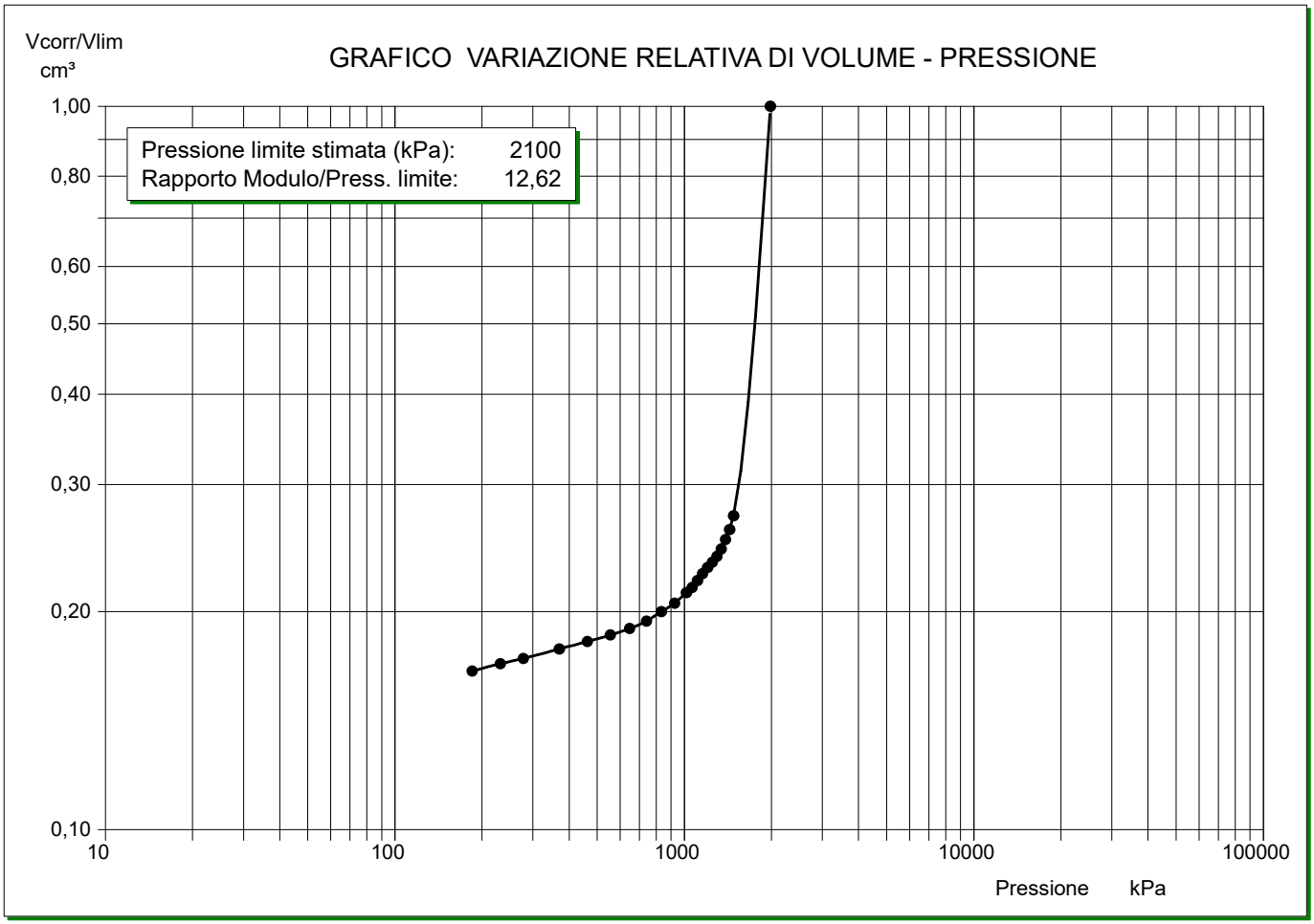
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

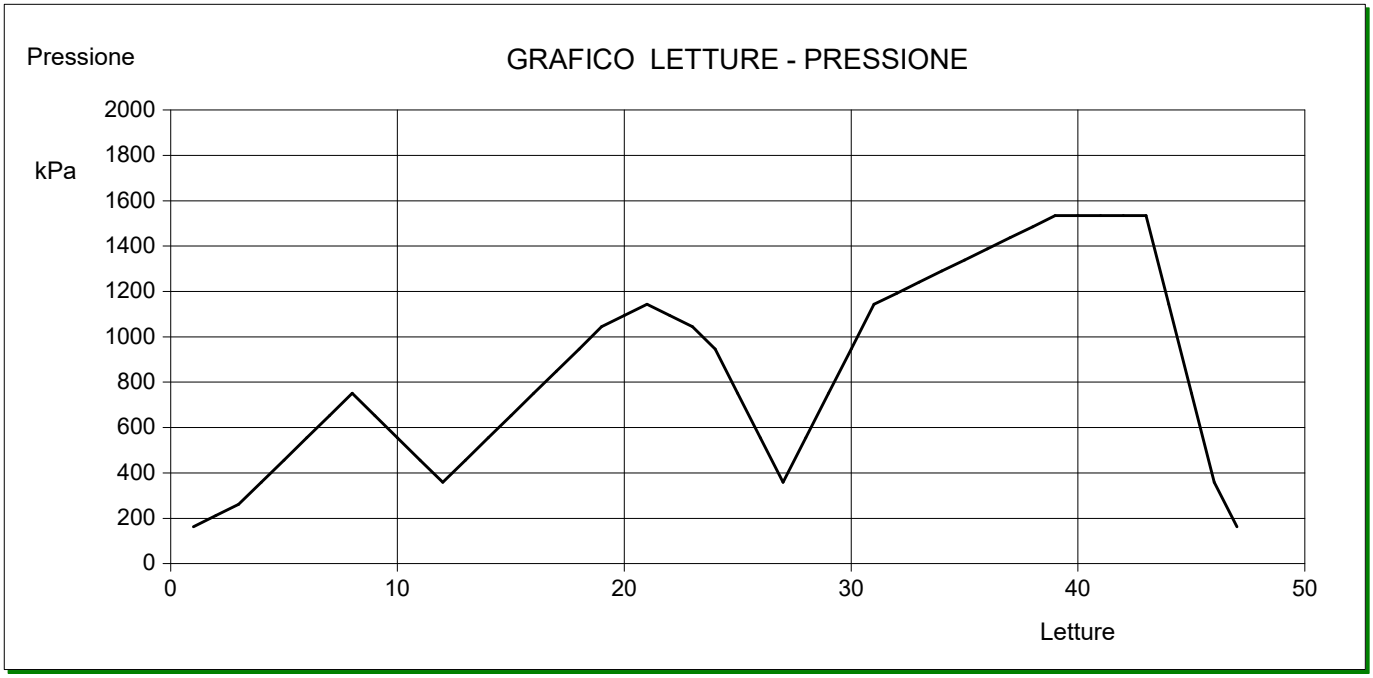
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

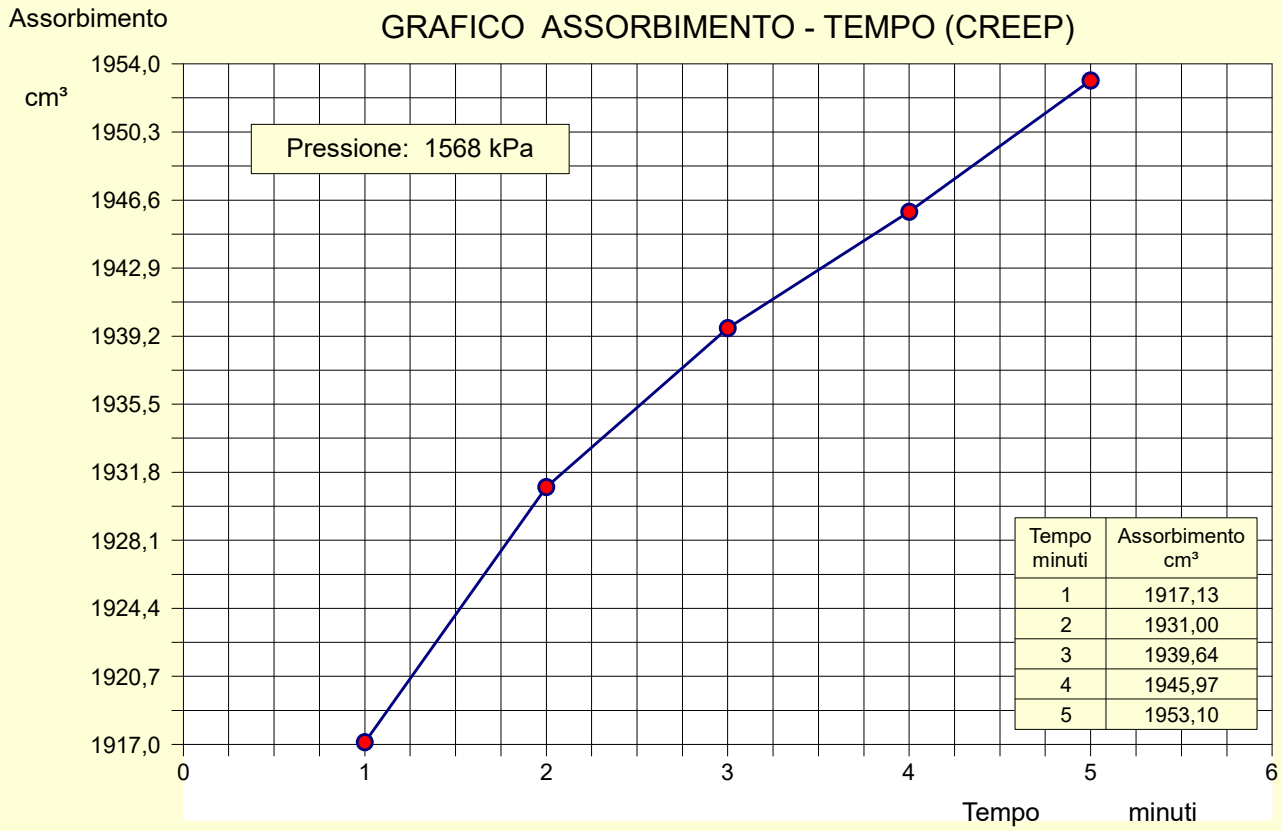
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 22/10/2020
Sondaggio: CL-8	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 22/10/2020
Sondaggio: CL-8	Orario prova:



Tempo minuti	Assorbimento cm³
1	1917,13
2	1931,00
3	1939,64
4	1945,97
5	1953,10

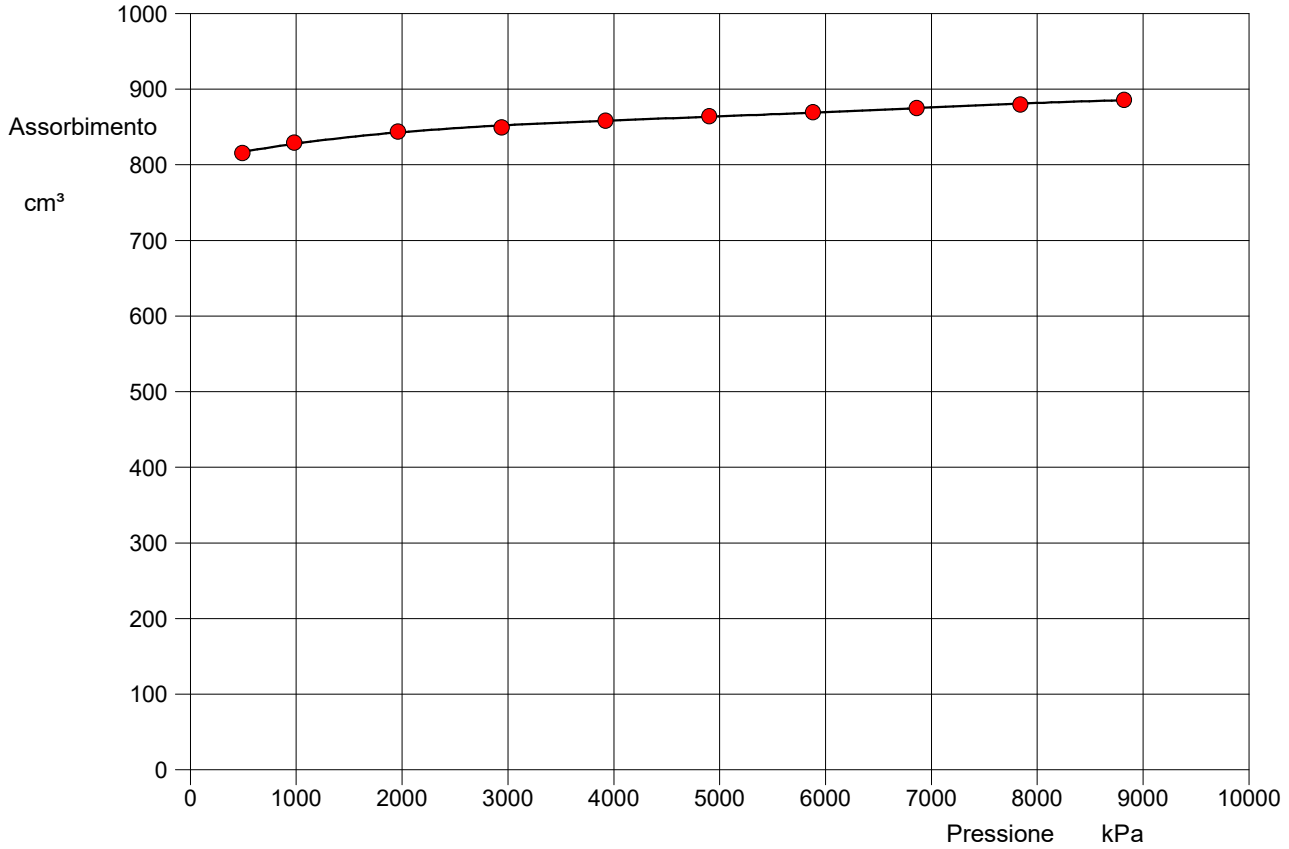
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-01
Località: Campolattaro	Data: 22/10/2020
Sondaggio: CL-8	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,81

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	815,70	13,92									
980,00	829,36	24,75									
1960,00	843,88	39,81									
2940,00	849,61	49,04									
3920,00	858,35	55,30									
4900,00	864,43	60,58									
5880,00	869,60	66,03									
6860,00	875,13	71,99									
7840,00	879,80	77,93									
8820,00	885,98	82,49									

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

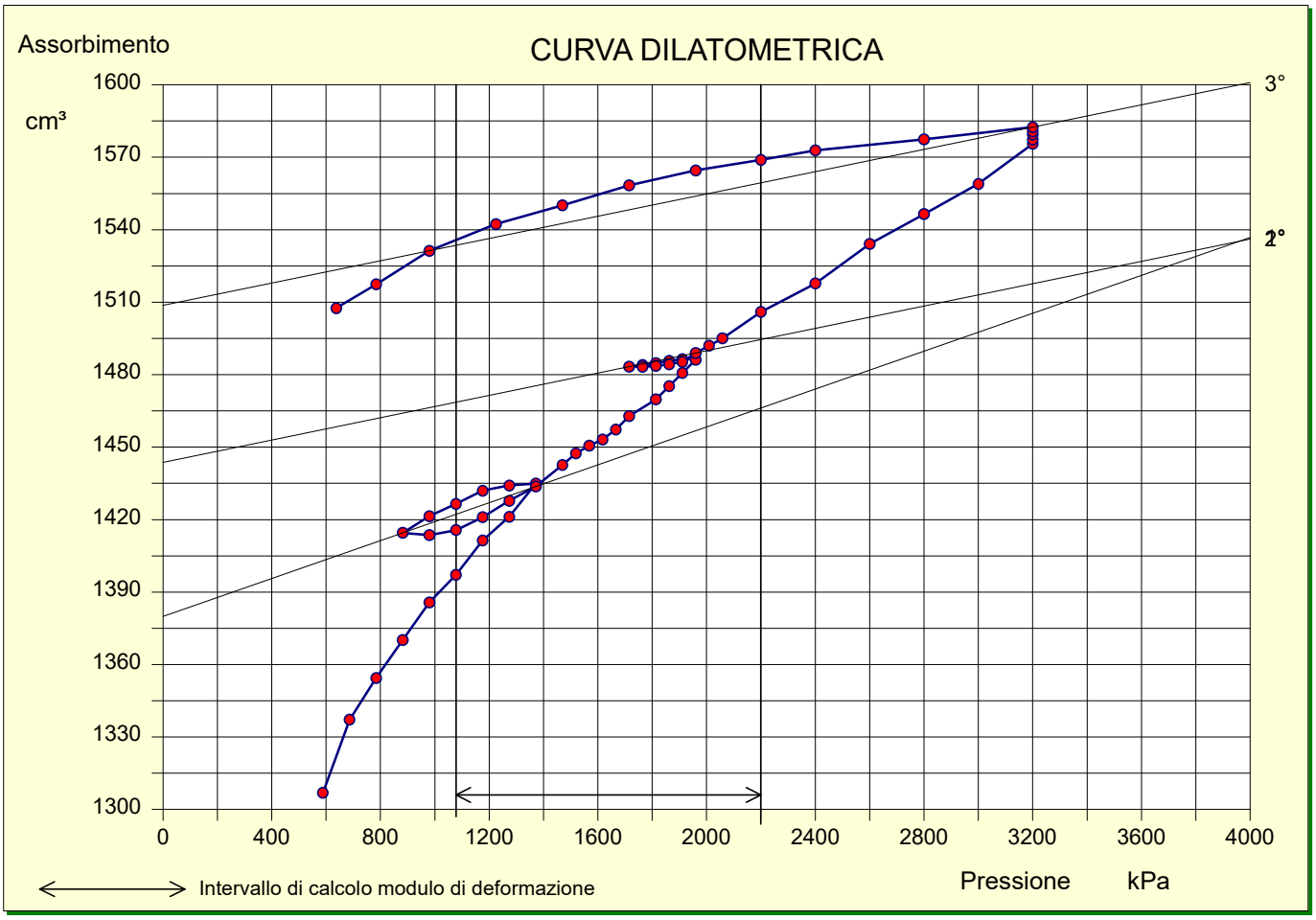
Profondità di prova (centro della cella) (m)	63,00	Volume della sonda (cm³)	2835,81
Profondità della falda (m)	-		
Litologia: calcareniti con sottili livelli argilloso-marnosi			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	588,00	1323,18	16,30	1306,88	18,49	41	2058,00	1535,95	40,94	1495,01	21,15
2	686,00	1355,75	18,56	1337,18	18,92	42	2200,00	1548,47	42,48	1505,98	21,30
3	784,00	1375,15	20,73	1354,42	19,16	43	2400,00	1562,26	44,48	1517,77	21,47
4	882,00	1392,94	22,78	1370,16	19,38	44	2600,00	1580,46	46,30	1534,15	21,70
5	980,00	1410,49	24,75	1385,74	19,60	45	2800,00	1594,45	47,96	1546,48	21,88
6	1078,00	1423,81	26,61	1397,20	19,77	46	3000,00	1608,45	49,49	1558,96	22,05
7	1176,00	1439,74	28,39	1411,35	19,97	47	3200,00	1626,46	50,90	1575,56	22,29
8	1274,00	1451,25	30,08	1421,17	20,10	48	3200,00	1628,21	50,90	1577,31	22,31
9	1372,00	1466,58	31,68	1434,90	20,30	49	3200,00	1630,27	50,90	1579,37	22,34
10	1274,00	1464,17	30,08	1434,09	20,29	50	3200,00	1631,52	50,90	1580,62	22,36
11	1176,00	1460,35	28,39	1431,96	20,26	51	3200,00	1633,36	50,90	1582,46	22,39
12	1078,00	1453,08	26,61	1426,47	20,18	52	2800,00	1625,36	47,96	1577,40	22,31
13	980,00	1446,17	24,75	1421,43	20,11	53	2400,00	1617,36	44,48	1572,88	22,25
14	882,00	1437,33	22,78	1414,54	20,01	54	2200,00	1611,36	42,48	1568,88	22,19
15	980,00	1438,33	24,75	1413,59	20,00	55	1960,00	1604,36	39,81	1564,56	22,13
16	1078,00	1442,25	26,61	1415,64	20,03	56	1715,00	1595,07	36,72	1558,35	22,05
17	1176,00	1449,39	28,39	1421,00	20,10	57	1470,00	1583,31	33,21	1550,10	21,93
18	1274,00	1457,84	30,08	1427,76	20,20	58	1225,00	1571,59	29,24	1542,35	21,82
19	1372,00	1465,43	31,68	1433,74	20,28	59	980,00	1556,04	24,75	1531,29	21,66
20	1470,00	1475,83	33,21	1442,62	20,41	60	784,00	1538,13	20,73	1517,40	21,47
21	1519,00	1481,41	33,95	1447,46	20,48	61	637,00	1524,97	17,44	1507,52	21,33
22	1568,00	1485,23	34,67	1450,56	20,52						
23	1617,00	1488,55	35,37	1453,18	20,56						
24	1666,00	1493,32	36,05	1457,27	20,62						
25	1715,00	1499,56	36,72	1462,84	20,69						
26	1813,00	1507,80	38,00	1469,80	20,79						
27	1862,00	1513,83	38,62	1475,22	20,87						
28	1911,00	1519,96	39,22	1480,75	20,95						
29	1960,00	1526,00	39,81	1486,19	21,02						
30	1911,00	1525,69	39,22	1486,48	21,03						
31	1862,00	1524,34	38,62	1485,72	21,02						
32	1813,00	1522,83	38,00	1484,83	21,01						
33	1764,00	1521,37	37,37	1484,01	20,99						
34	1715,00	1520,06	36,72	1483,35	20,98						
35	1764,00	1520,62	37,37	1483,25	20,98						
36	1813,00	1521,57	38,00	1483,57	20,99						
37	1862,00	1522,88	38,62	1484,26	21,00						
38	1911,00	1524,49	39,22	1485,27	21,01						
39	1960,00	1528,82	39,81	1489,01	21,06						
40	2009,00	1532,39	40,38	1492,01	21,11						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1078,00
Volume iniziale [Vo] (cm³):	1397,20
Pressione finale [Pf] (kPa):	2200,00
Volume finale [Vf] (cm³):	1505,98

RISULTATI	
Modulo di taglio (kPa):	44215
Modulo di deformazione dilatometrico (kPa):	117612
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4287

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1415	1483	1582
Volume finale [Vf] (cm³):	1434	1489	1531
Pressione iniziale [Po] (kPa):	882	1715	3200
Pressione finale [Pf] (kPa):	1372	1960	980
Modulo di deformazione dilatometrico (kPa):	292257	469421	508578
Modulo da linea di tendenza (kPa):	291541	497896	506702

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

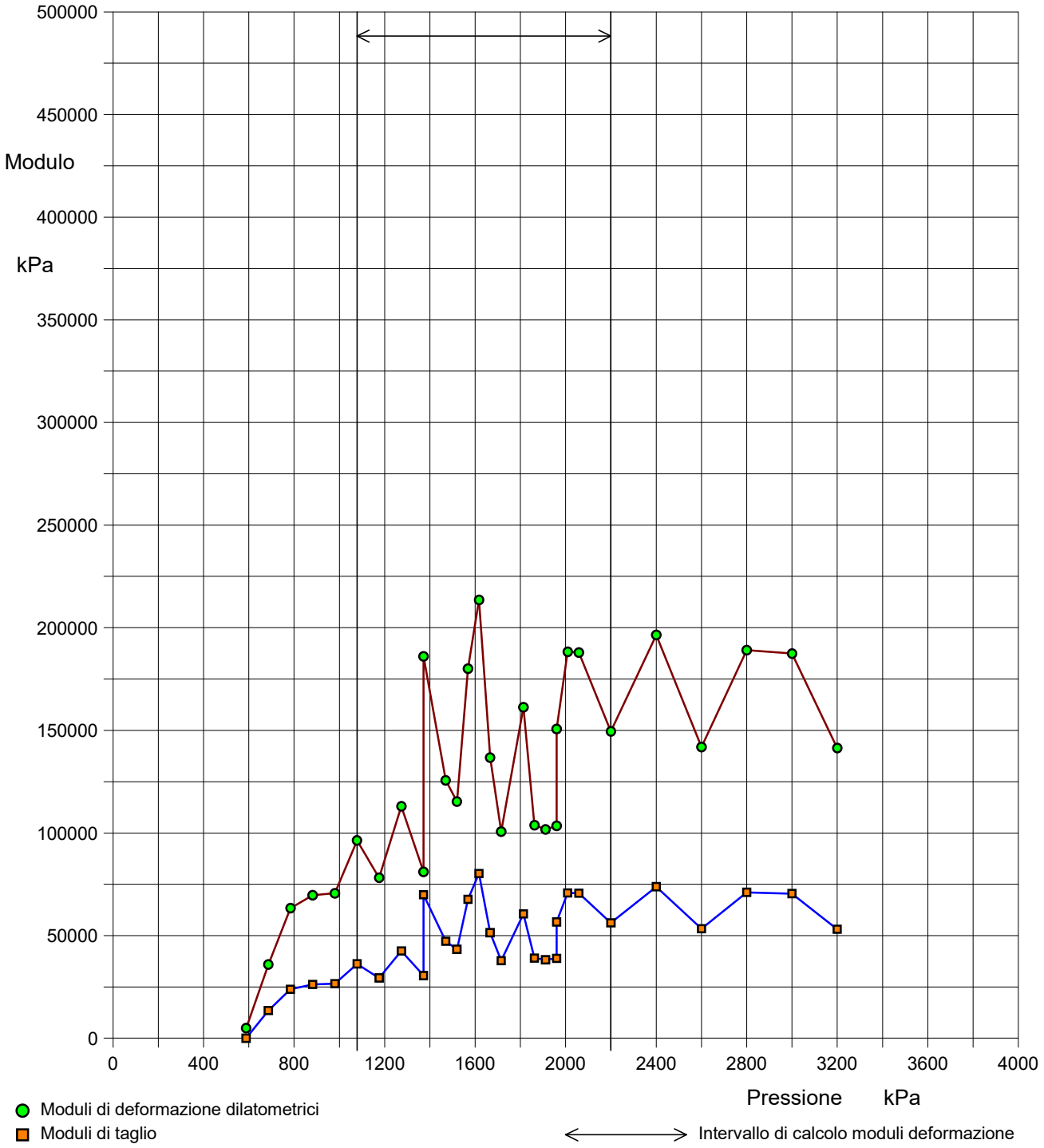
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
						2058,00	49,00	1495,01	3,00	70650	187929
686,00	98,00	1337,18	30,30	13495	35897	2200,00	142,00	1505,98	10,97	56191	149468
784,00	98,00	1354,42	17,24	23819	63359	2400,00	200,00	1517,77	11,79	73859	196465
882,00	98,00	1370,16	15,73	26196	69681	2600,00	200,00	1534,15	16,38	53354	141922
980,00	98,00	1385,74	15,58	26551	70626	2800,00	200,00	1546,48	12,33	71082	189078
1078,00	98,00	1397,20	11,45	36217	96337	3000,00	200,00	1558,96	12,47	70457	187416
1176,00	98,00	1411,35	14,16	29398	78199	3200,00	200,00	1575,56	16,60	53146	141368
1274,00	98,00	1421,17	9,82	42480	112997						
1372,00	98,00	1434,90	13,72	30497	81122						
1372,00	98,00	1433,74	5,98	69937	186032						
1470,00	98,00	1442,62	8,88	47238	125653						
1519,00	49,00	1447,46	4,84	43333	115266						
1568,00	49,00	1450,56	3,10	67700	180082						
1617,00	49,00	1453,18	2,62	80289	213569						
1666,00	49,00	1457,27	4,09	51404	136735						
1715,00	49,00	1462,84	5,57	37834	100638						
1813,00	98,00	1469,80	6,96	60615	161236						
1862,00	49,00	1475,22	5,41	39015	103780						
1911,00	49,00	1480,75	5,53	38249	101742						
1960,00	49,00	1486,19	5,44	38900	103474						
1960,00	49,00	1489,01	3,74	56651	150692						
2009,00	49,00	1492,01	3,00	70777	188267						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

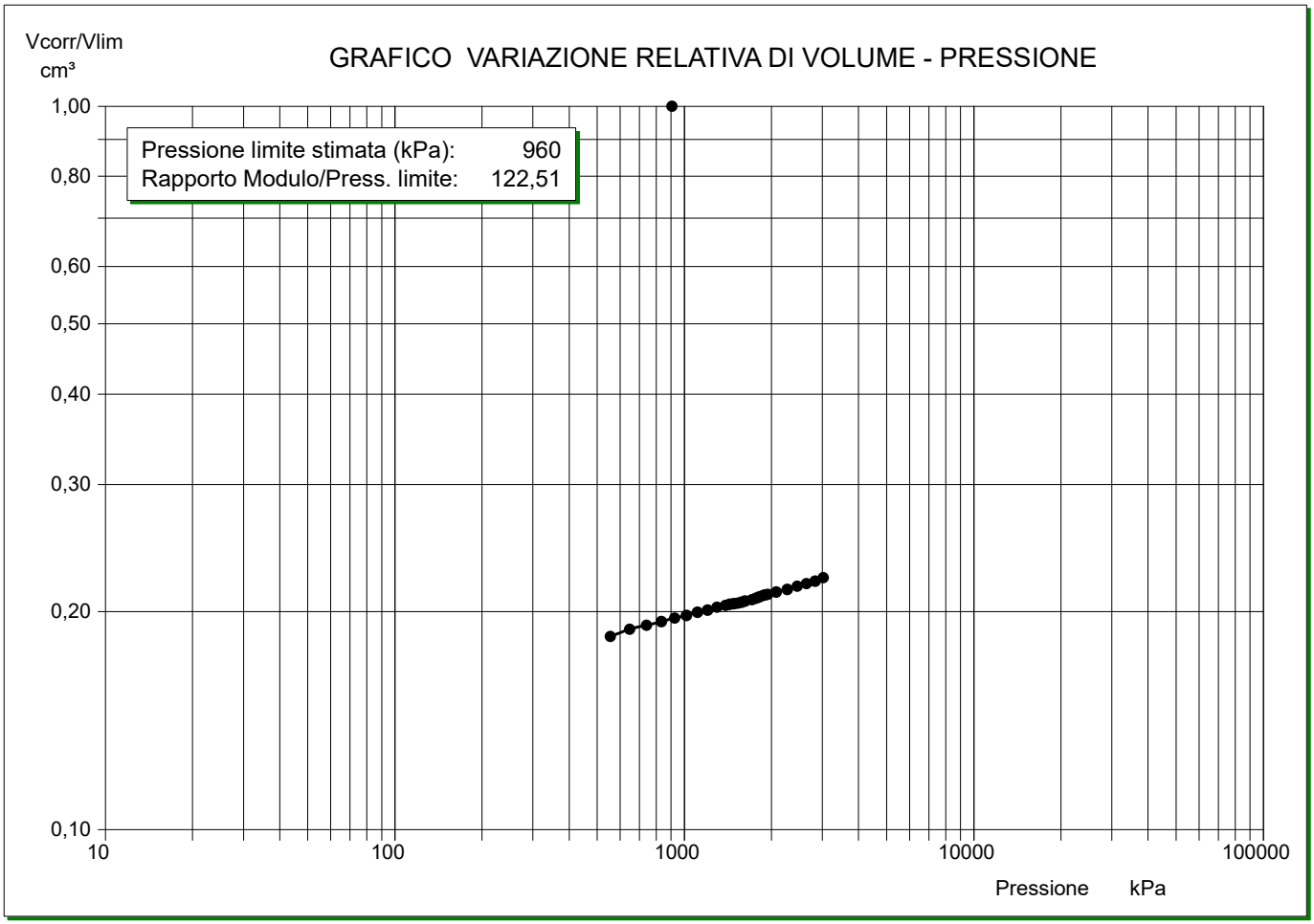
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

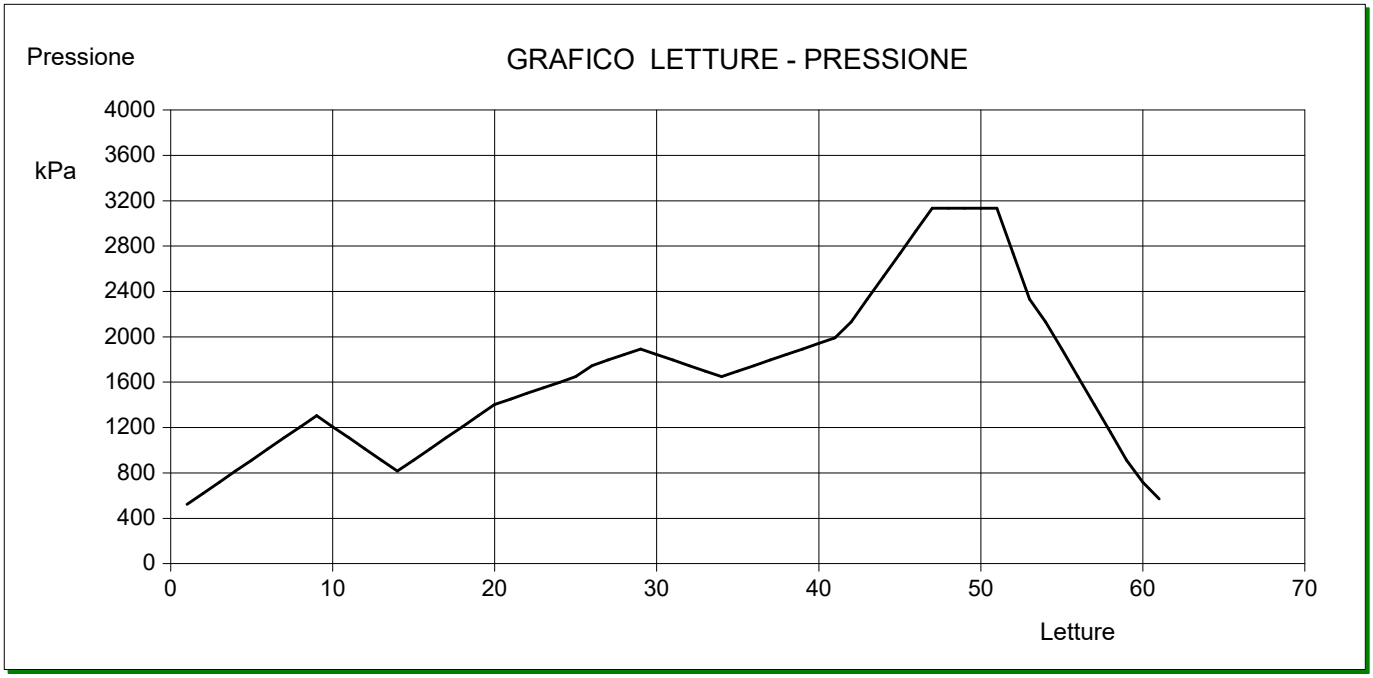
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

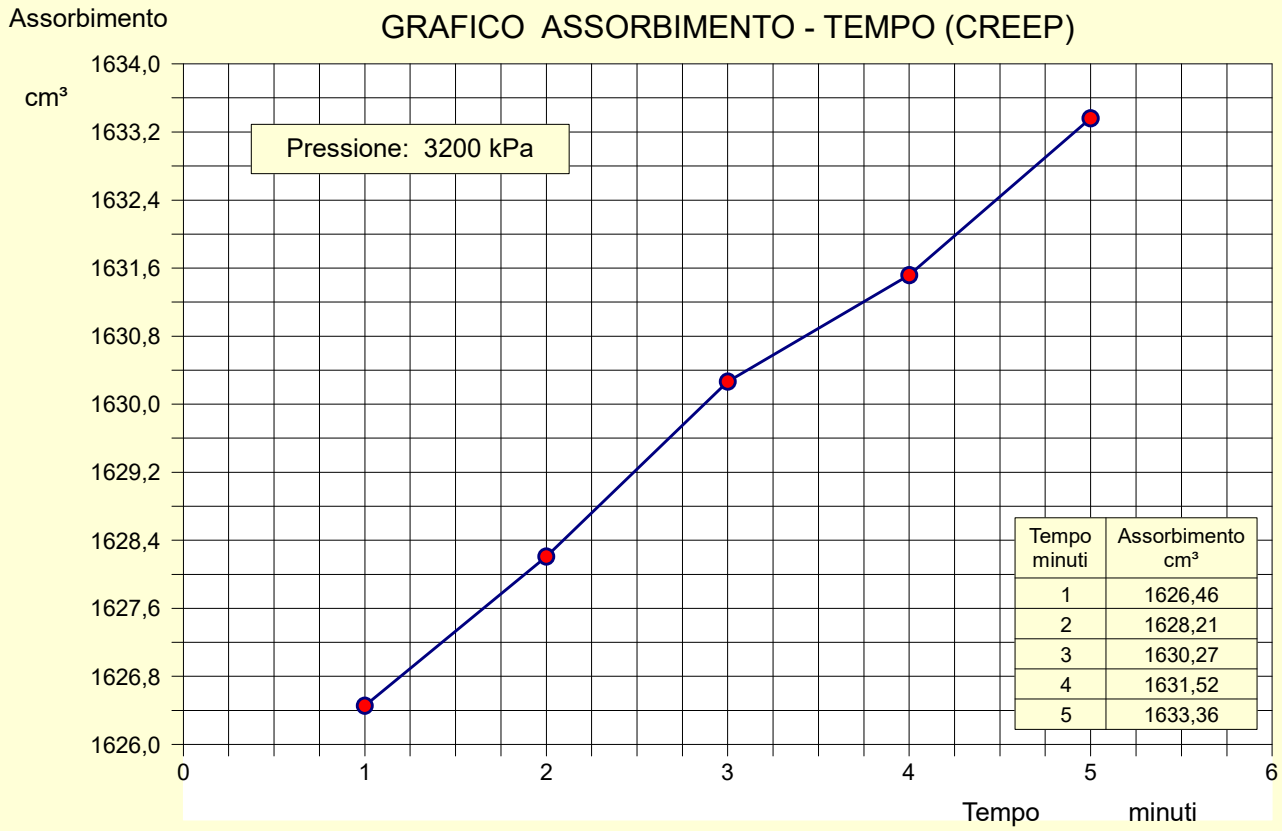
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:



Tempo minuti	Assorbimento cm³
1	1626,46
2	1628,21
3	1630,27
4	1631,52
5	1633,36

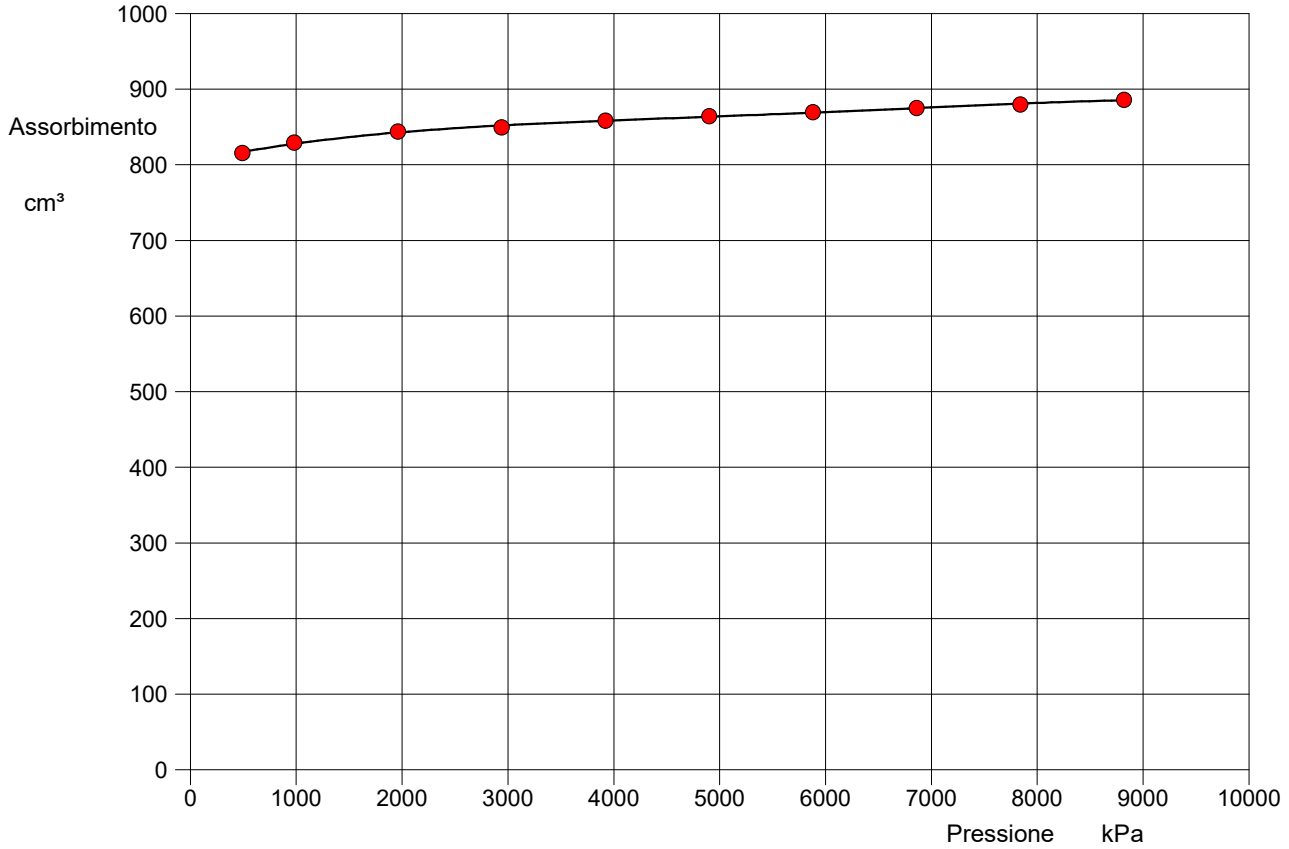
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-02
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,81

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	815,70	13,92									
980,00	829,36	24,75									
1960,00	843,88	39,81									
2940,00	849,61	49,04									
3920,00	858,35	55,30									
4900,00	864,43	60,58									
5880,00	869,60	66,03									
6860,00	875,13	71,99									
7840,00	879,80	77,93									
8820,00	885,98	82,49									

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

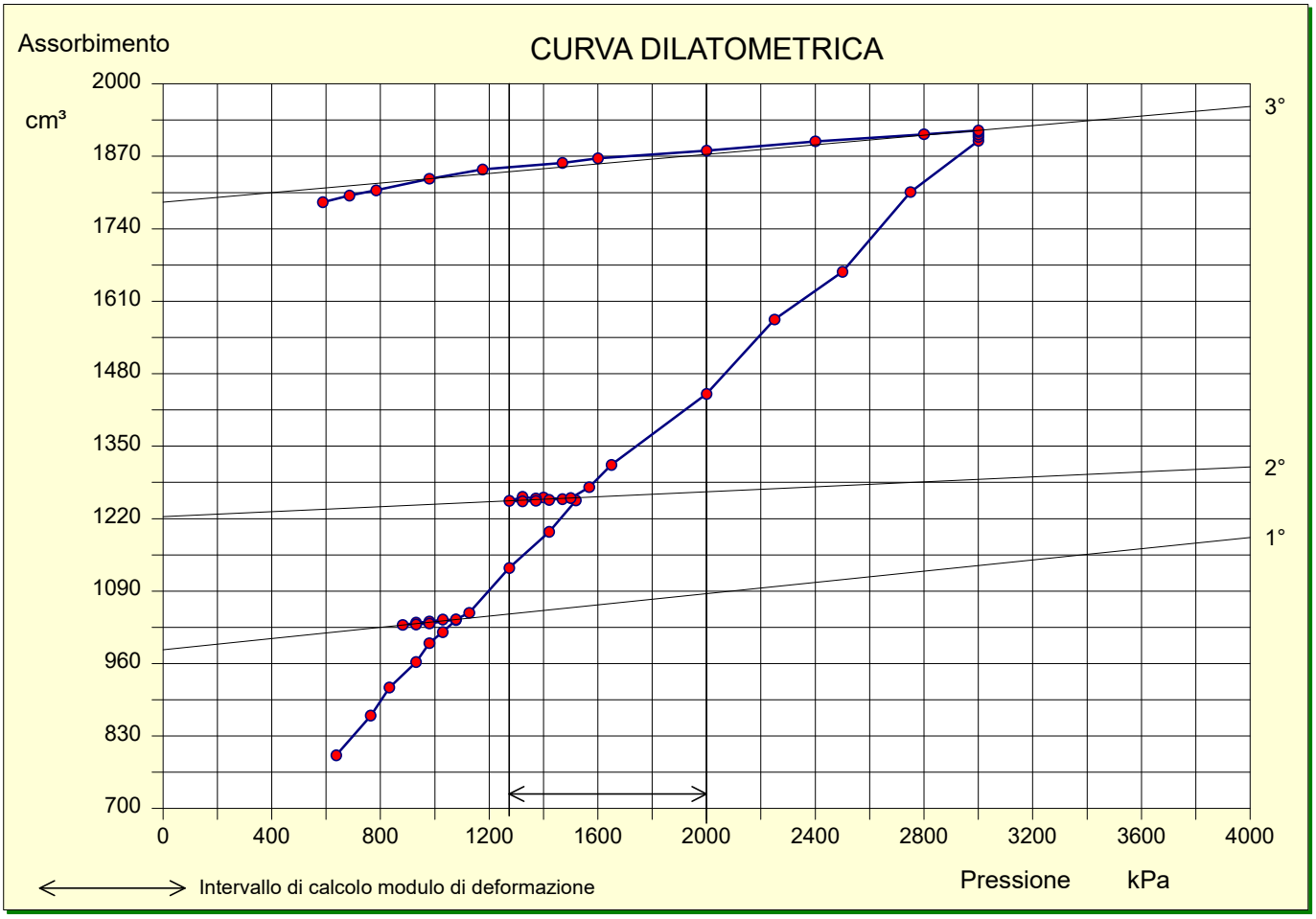
Profondità di prova (centro della cella) (m)	72,00	Volume della sonda (cm³)	2835,81
Profondità della falda (m)	-		
Litologia: calcareniti/calciruditi cementate			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	637,00	813,04	17,44	795,59	11,69	41	2000,00	1920,41	40,27	1880,13	27,64
2	764,40	886,78	20,30	866,47	12,74	42	1600,00	1901,41	35,13	1866,28	27,43
3	833,00	938,80	21,77	917,03	13,48	43	1470,00	1891,41	33,21	1858,19	27,31
4	931,00	986,35	23,78	962,57	14,15	44	1176,00	1874,82	28,39	1846,43	27,14
5	980,00	1021,28	24,75	996,54	14,65	45	980,00	1854,46	24,75	1829,71	26,90
6	1029,00	1042,25	25,69	1016,56	14,94	46	784,00	1829,67	20,73	1808,95	26,59
7	1078,00	1064,81	26,61	1038,20	15,26	47	686,00	1818,26	18,56	1799,70	26,45
8	1029,00	1064,41	25,69	1038,72	15,27	48	588,00	1804,08	16,30	1787,79	26,28
9	980,00	1060,44	24,75	1035,70	15,22						
10	931,00	1057,17	23,78	1033,40	15,19						
11	882,00	1052,10	22,78	1029,31	15,13						
12	931,00	1053,91	23,78	1030,13	15,14						
13	980,00	1056,62	24,75	1031,88	15,17						
14	1078,00	1065,77	26,61	1039,16	15,27						
15	1127,00	1078,64	27,51	1051,13	15,45						
16	1274,00	1161,45	30,08	1131,38	16,63						
17	1421,00	1228,87	32,46	1196,41	17,59						
18	1519,00	1286,63	33,95	1252,68	18,41						
19	1470,00	1288,19	33,21	1254,98	18,45						
20	1400,00	1290,10	32,13	1257,97	18,49						
21	1372,00	1287,89	31,68	1256,21	18,47						
22	1323,00	1289,90	30,89	1259,01	18,51						
23	1274,00	1281,86	30,08	1251,78	18,40						
24	1323,00	1281,91	30,89	1251,02	18,39						
25	1372,00	1283,57	31,68	1251,88	18,40						
26	1421,00	1286,18	32,46	1253,72	18,43						
27	1500,00	1290,50	33,67	1256,84	18,47						
28	1568,00	1311,11	34,67	1276,45	18,76						
29	1650,00	1352,29	35,83	1316,46	19,35						
30	2000,00	1484,03	40,27	1443,75	21,22						
31	2250,00	1620,23	43,00	1577,23	23,18						
32	2500,00	1708,17	45,42	1662,75	24,44						
33	2750,00	1853,44	47,56	1805,87	26,55						
34	3000,00	1947,44	49,49	1897,95	27,90						
35	3000,00	1954,37	49,49	1904,89	28,00						
36	3000,00	1958,75	49,49	1909,26	28,06						
37	3000,00	1963,27	49,49	1913,78	28,13						
38	3000,00	1965,88	49,49	1916,40	28,17						
39	2800,00	1957,39	47,96	1909,42	28,07						
40	2400,00	1941,41	44,48	1896,92	27,88						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	1274,00
Volume iniziale [Vo] (cm³):	1131,38
Pressione finale [Pf] (kPa):	2000,00
Volume finale [Vf] (cm³):	1443,75

RISULTATI	
Modulo di taglio (kPa):	9582
Modulo di deformazione dilatometrico (kPa):	25488
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	4123

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	1029	1252	1916
Volume finale [Vf] (cm³):	1039	1257	1830
Pressione iniziale [Po] (kPa):	882	1274	3000
Pressione finale [Pf] (kPa):	1078	1500	980
Modulo di deformazione dilatometrico (kPa):	201756	491786	294202
Modulo da linea di tendenza (kPa):	207659	487945	291911

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

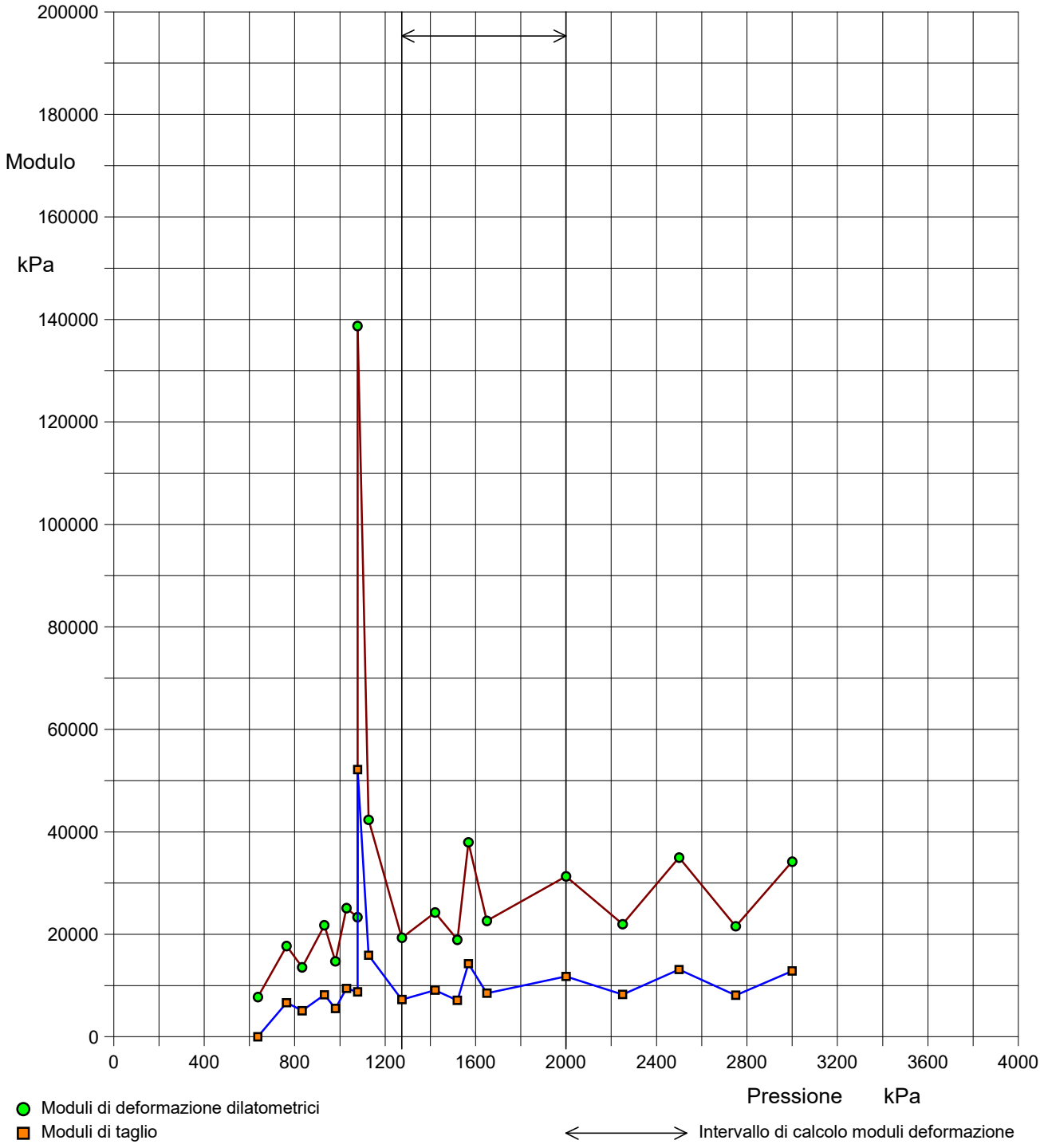
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
764,40	127,40	866,47	70,88	6654	17700						
833,00	68,60	917,03	50,56	5092	13545						
931,00	98,00	962,57	45,54	8174	21743						
980,00	49,00	996,54	33,97	5529	14707						
1029,00	49,00	1016,56	20,02	9431	25086						
1078,00	49,00	1038,20	21,65	8769	23326						
1078,00	98,00	1039,16	7,28	52149	138716						
1127,00	49,00	1051,13	11,97	15913	42329						
1274,00	147,00	1131,38	80,25	7267	19330						
1421,00	147,00	1196,41	65,03	9114	24243						
1519,00	98,00	1252,68	56,27	7120	18939						
1568,00	68,00	1276,45	19,61	14261	37934						
1650,00	82,00	1316,46	40,02	8508	22631						
2000,00	350,00	1443,75	127,29	11767	31300						
2250,00	250,00	1577,23	133,47	8266	21988						
2500,00	250,00	1662,75	85,53	13150	34979						
2750,00	250,00	1805,87	143,12	8108	21567						
3000,00	250,00	1897,95	92,07	12853	34189						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

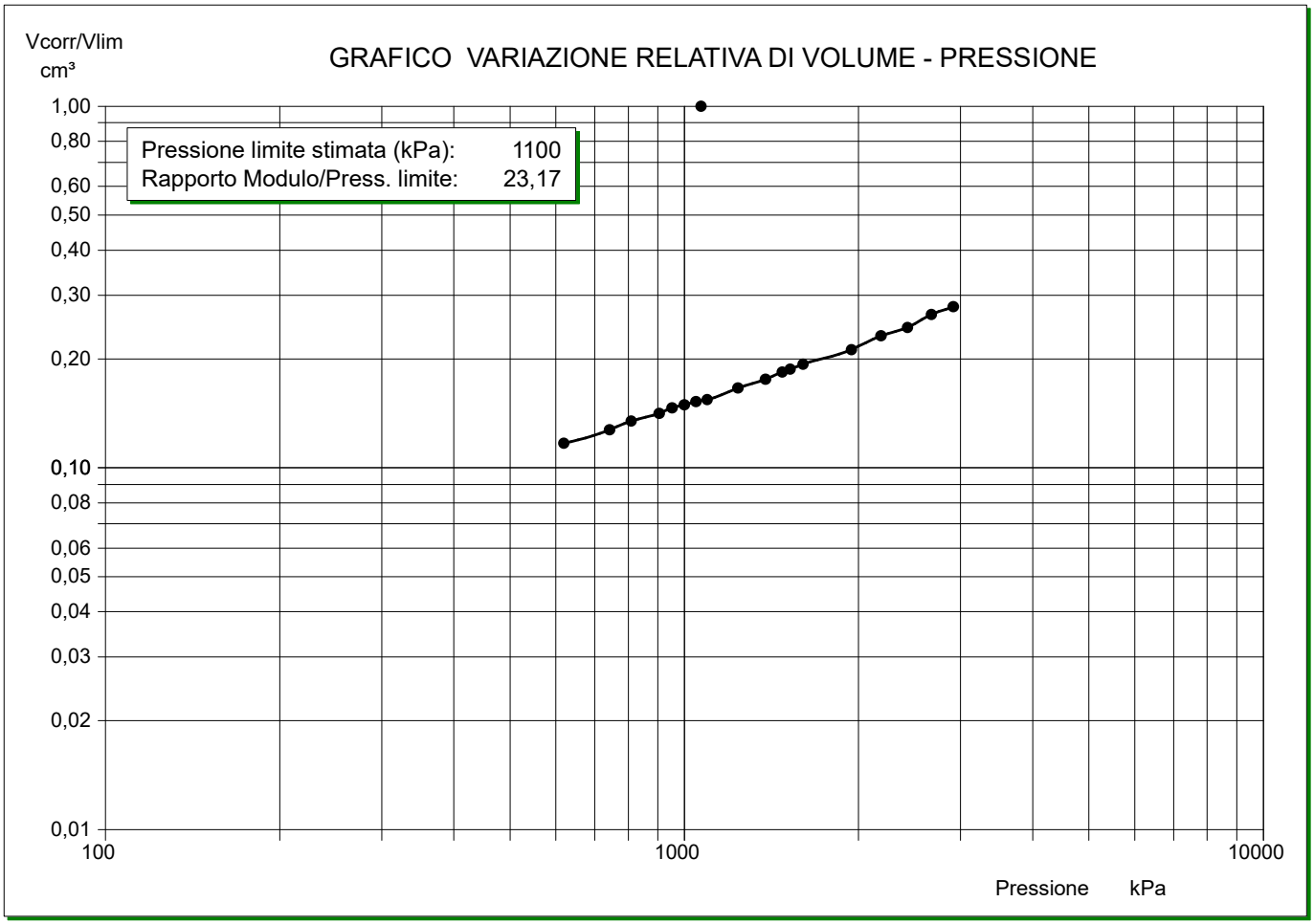
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

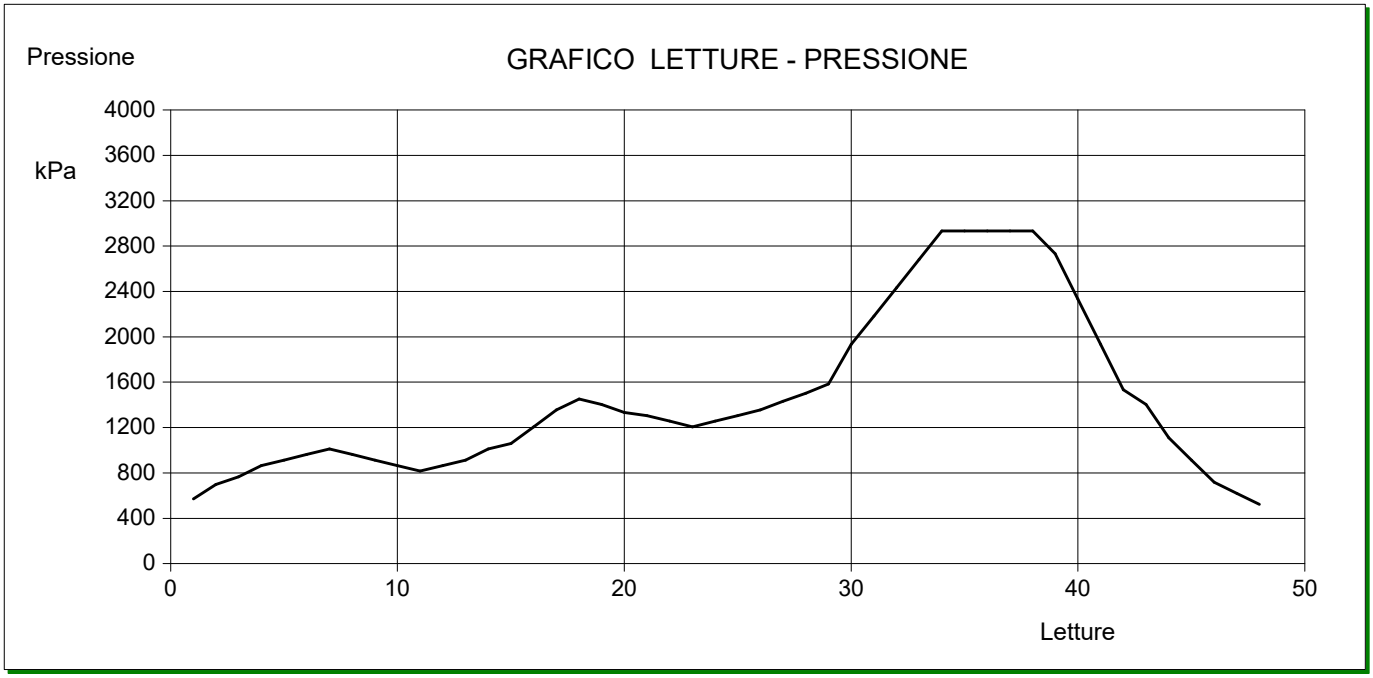
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

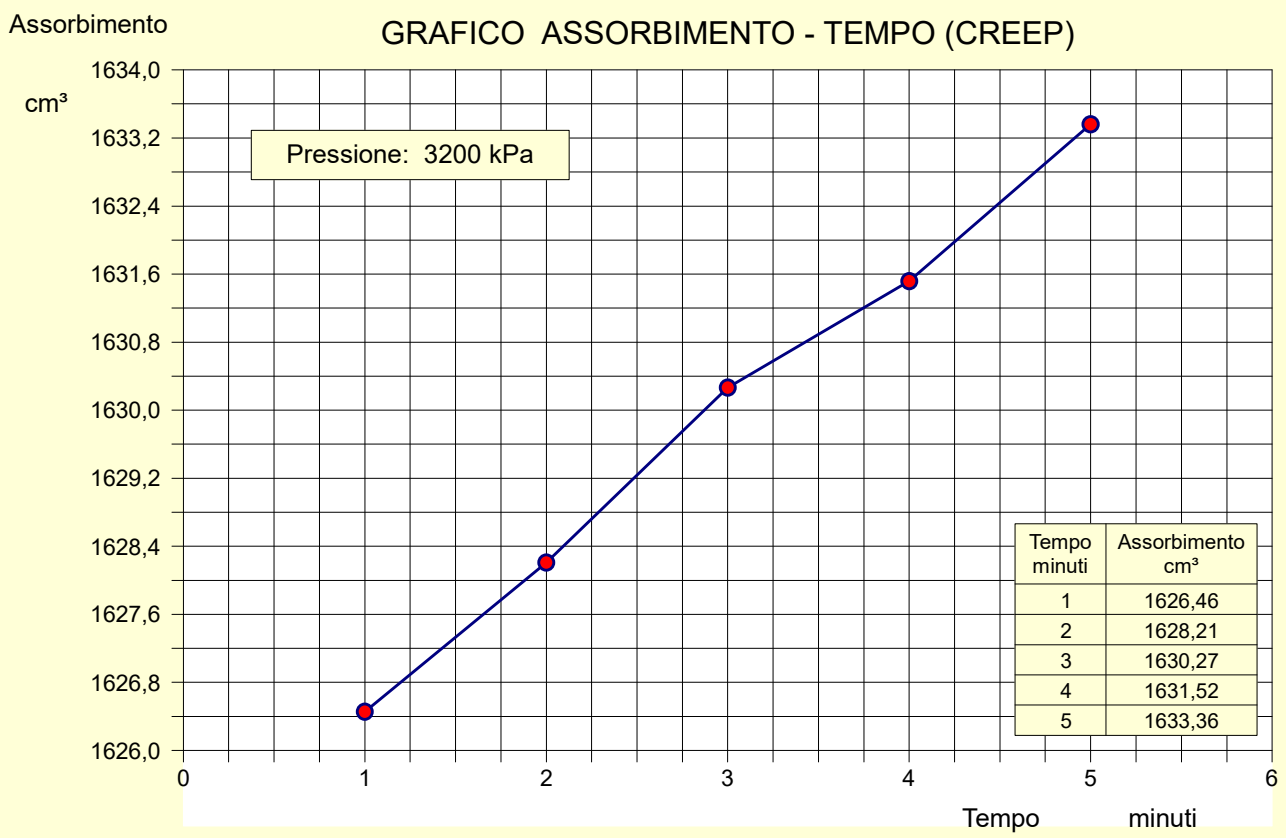
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:



Tempo minuti	Assorbimento cm³
1	1626,46
2	1628,21
3	1630,27
4	1631,52
5	1633,36

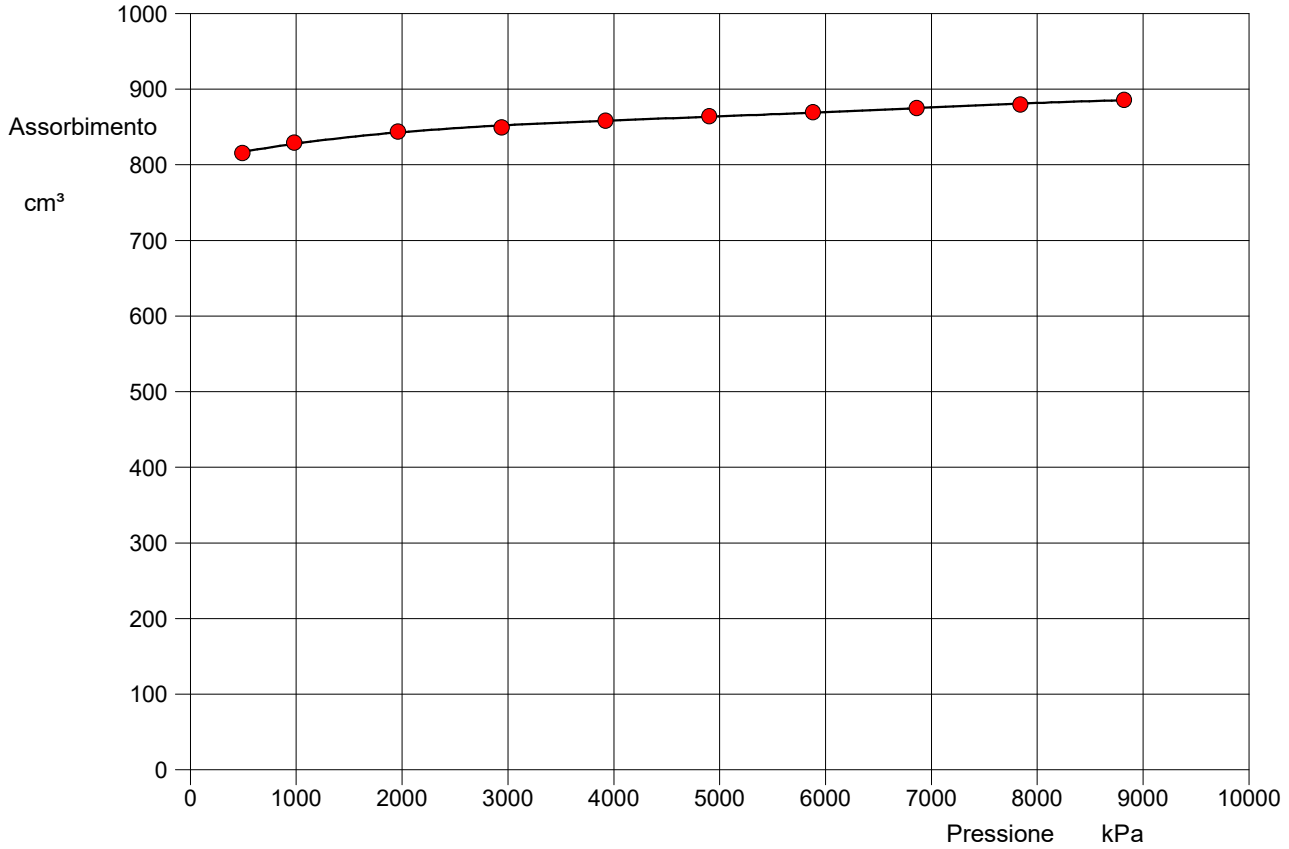
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-03
Località: Campolattaro	Data: 03/11/2020
Sondaggio: CL-8	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,81

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	815,70	13,92									
980,00	829,36	24,75									
1960,00	843,88	39,81									
2940,00	849,61	49,04									
3920,00	858,35	55,30									
4900,00	864,43	60,58									
5880,00	869,60	66,03									
6860,00	875,13	71,99									
7840,00	879,80	77,93									
8820,00	885,98	82,49									

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 04/11/2020
Sondaggio: CL-8	Orario prova:

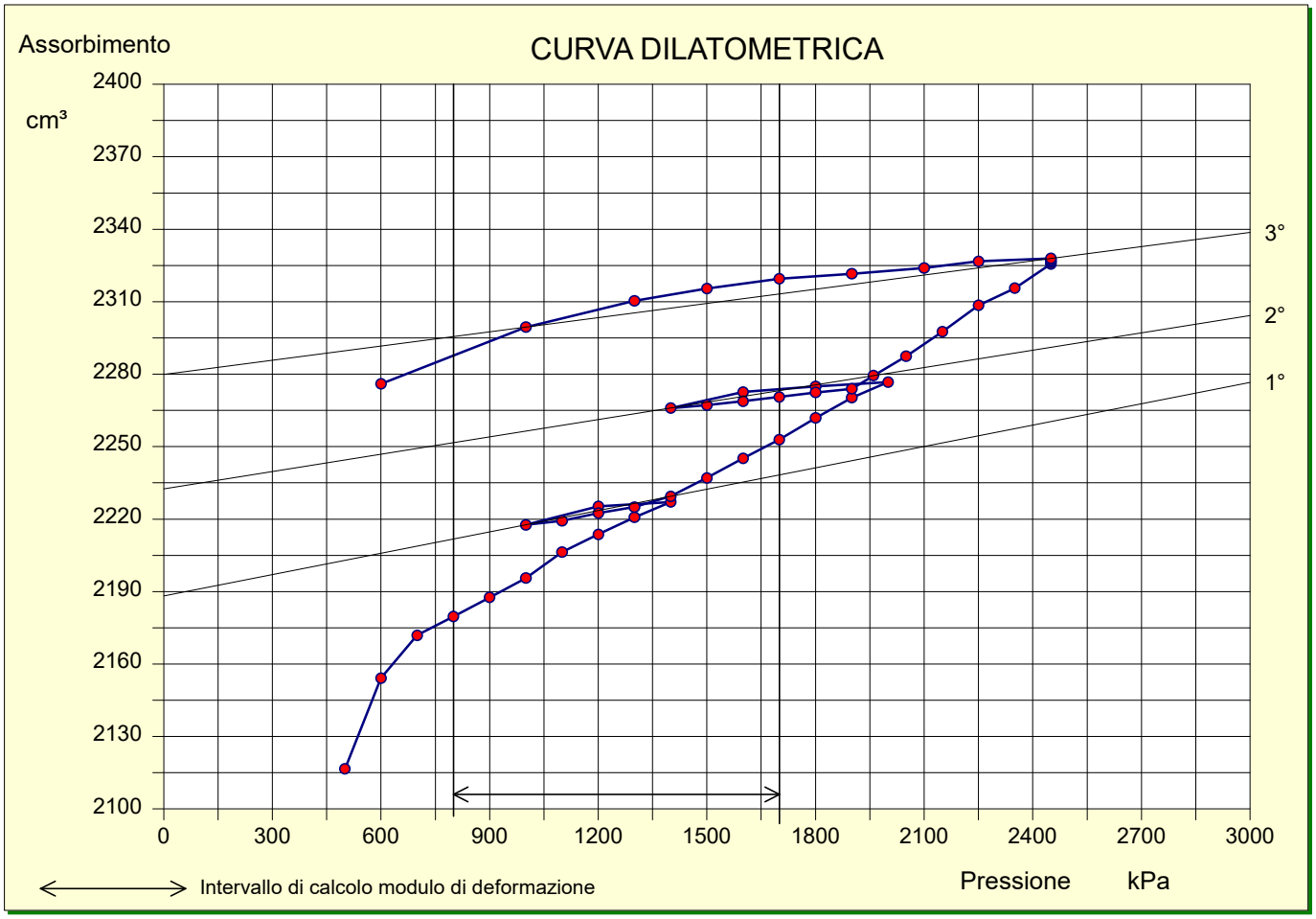
Profondità di prova (centro della cella) (m)	78,00	Volume della sonda (cm³)	2835,00
Profondità della falda (m)	-		
Litologia: calcareniti fratturate			

Tabella riepilogativa

Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume	Gradino di pressione	Pressione	Volume	Taratura sonda (Vt)	Volume corretto	Variazione di volume
	kPa	cm³	cm³	cm³	%		kPa	cm³	cm³	cm³	%
1	500,00	2130,25	13,67	2116,59	26,96	41	2250,00	2369,23	42,52	2326,70	29,64
2	600,00	2170,25	16,08	2154,17	27,44	42	2100,00	2364,87	40,93	2323,95	29,61
3	700,00	2190,25	18,39	2171,87	27,67	43	1900,00	2360,21	38,60	2321,61	29,58
4	800,00	2200,25	20,58	2179,68	27,77	44	1700,00	2355,55	36,03	2319,52	29,55
5	900,00	2210,25	22,66	2187,59	27,87	45	1500,00	2348,64	33,18	2315,46	29,50
6	1000,00	2220,25	24,65	2195,61	27,97	46	1300,00	2340,39	30,03	2310,37	29,43
7	1100,00	2232,85	26,53	2206,32	28,11	47	1000,00	2324,10	24,65	2299,46	29,29
8	1200,00	2242,02	28,32	2213,70	28,20	48	600,00	2292,07	16,08	2275,99	28,99
9	1300,00	2250,78	30,03	2220,75	28,29						
10	1400,00	2258,71	31,64	2227,07	28,37						
11	1200,00	2253,59	28,32	2225,27	28,35						
12	1000,00	2242,27	24,65	2217,63	28,25						
13	1100,00	2245,81	26,53	2219,28	28,27						
14	1200,00	2250,78	28,32	2222,45	28,31						
15	1300,00	2254,97	30,03	2224,95	28,34						
16	1400,00	2261,07	31,64	2229,42	28,40						
17	1500,00	2270,18	33,18	2237,00	28,50						
18	1600,00	2279,81	34,64	2245,17	28,60						
19	1700,00	2288,93	36,03	2252,90	28,70						
20	1800,00	2299,27	37,35	2261,92	28,82						
21	1900,00	2308,85	38,60	2270,24	28,92						
22	2000,00	2316,53	39,80	2276,74	29,00						
23	1800,00	2312,28	37,35	2274,93	28,98						
24	1600,00	2307,21	34,64	2272,57	28,95						
25	1400,00	2297,63	31,64	2265,99	28,87						
26	1500,00	2300,35	33,18	2267,16	28,88						
27	1600,00	2303,42	34,64	2268,78	28,90						
28	1700,00	2306,60	36,03	2270,56	28,93						
29	1800,00	2309,77	37,35	2272,42	28,95						
30	1900,00	2312,59	38,60	2273,98	28,97						
31	1960,00	2318,72	39,33	2279,39	29,04						
32	2050,00	2327,80	40,37	2287,43	29,14						
33	2150,00	2339,06	41,47	2297,59	29,27						
34	2250,00	2351,05	42,52	2308,52	29,41						
35	2350,00	2359,15	43,52	2315,63	29,50						
36	2450,00	2370,11	44,48	2325,63	29,63						
37	2450,00	2370,77	44,48	2326,29	29,64						
38	2450,00	2371,28	44,48	2326,80	29,64						
39	2450,00	2371,84	44,48	2327,36	29,65						
40	2450,00	2372,40	44,48	2327,92	29,66						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 04/11/2020
Sondaggio: CL-8	Orario prova:



CALCOLO MODULO DI DEFORMAZIONE	
Pressione iniziale [Po] (kPa):	800,00
Volume iniziale [Vo] (cm³):	2179,68
Pressione finale [Pf] (kPa):	1700,00
Volume finale [Vf] (cm³):	2270,56

RISULTATI	
Modulo di taglio (kPa):	50106
Modulo di deformazione dilatometrico (kPa):	133282
PARAMETRI DI CALCOLO	
Volume medio della cella [Vm] (cm³):	5060

CICLO DI ISTERESI	1° CICLO	2° CICLO	3° CICLO
Volume iniziale [Vo] (cm³):	2218	2266	2328
Volume finale [Vf] (cm³):	2229	2279	2299
Pressione iniziale [Po] (kPa):	1000	1400	2450
Pressione finale [Pf] (kPa):	1400	1960	1000
Modulo di deformazione dilatometrico (kPa):	489295	585241	684751
Modulo da linea di tendenza (kPa):	457138	567049	696973

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 04/11/2020
Sondaggio: CL-8	Orario prova:

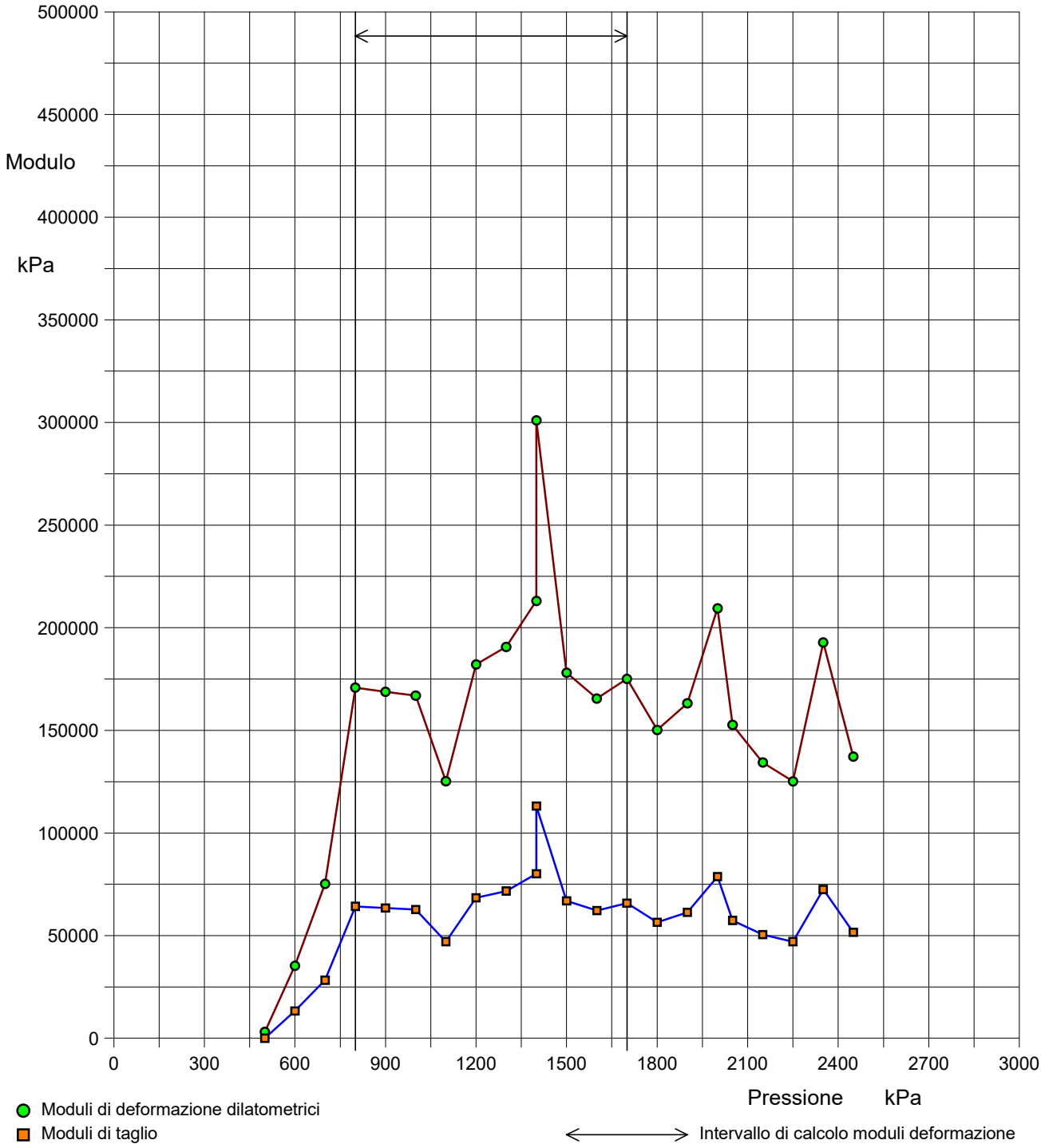
Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.	Pressione	Δ Pressione	Volume	Δ Volume	Modulo di taglio	Modulo deformaz.
kPa	kPa	cm³	cm³	kPa	kPa	kPa	kPa	cm³	cm³	kPa	kPa
600,00	100,00	2154,17	37,58	13275	35312						
700,00	100,00	2171,87	17,70	28291	75254						
800,00	100,00	2179,68	7,81	64216	170815						
900,00	100,00	2187,59	7,92	63448	168772						
1000,00	100,00	2195,61	8,02	62750	166915						
1100,00	100,00	2206,32	10,71	47062	125185						
1200,00	100,00	2213,70	7,38	68457	182096						
1300,00	100,00	2220,75	7,05	71682	190674						
1400,00	100,00	2227,07	6,32	80111	213095						
1400,00	100,00	2229,42	4,48	113169	301030						
1500,00	100,00	2237,00	7,58	66932	178039						
1600,00	100,00	2245,17	8,17	62211	165481						
1700,00	100,00	2252,90	7,73	65837	175126						
1800,00	100,00	2261,92	9,03	56470	150210						
1900,00	100,00	2270,24	8,32	61339	163162						
2000,00	100,00	2276,74	6,49	78749	209472						
2050,00	90,00	2287,43	8,03	57391	152660						
2150,00	100,00	2297,59	10,16	50507	134349						
2250,00	100,00	2308,52	10,93	47051	125156						
2350,00	100,00	2315,63	7,11	72473	192778						
2450,00	100,00	2325,63	10,00	51596	137245						

PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 04/11/2020
Sondaggio: CL-8	Orario prova:

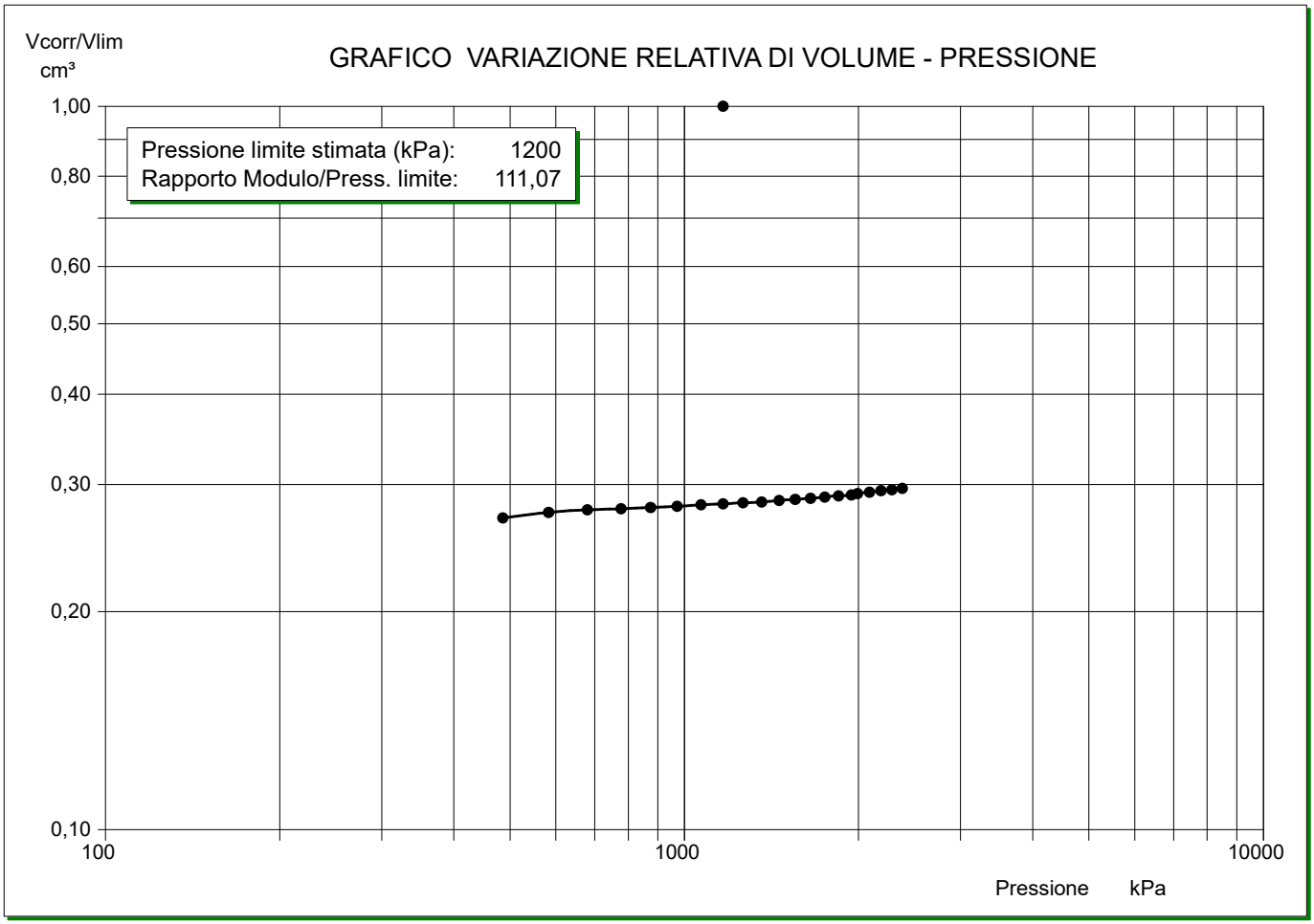
GRAFICO MODULI DI TAGLIO E MODULI DI DEFORMAZIONE DILATOMETRICI - PRESSIONE

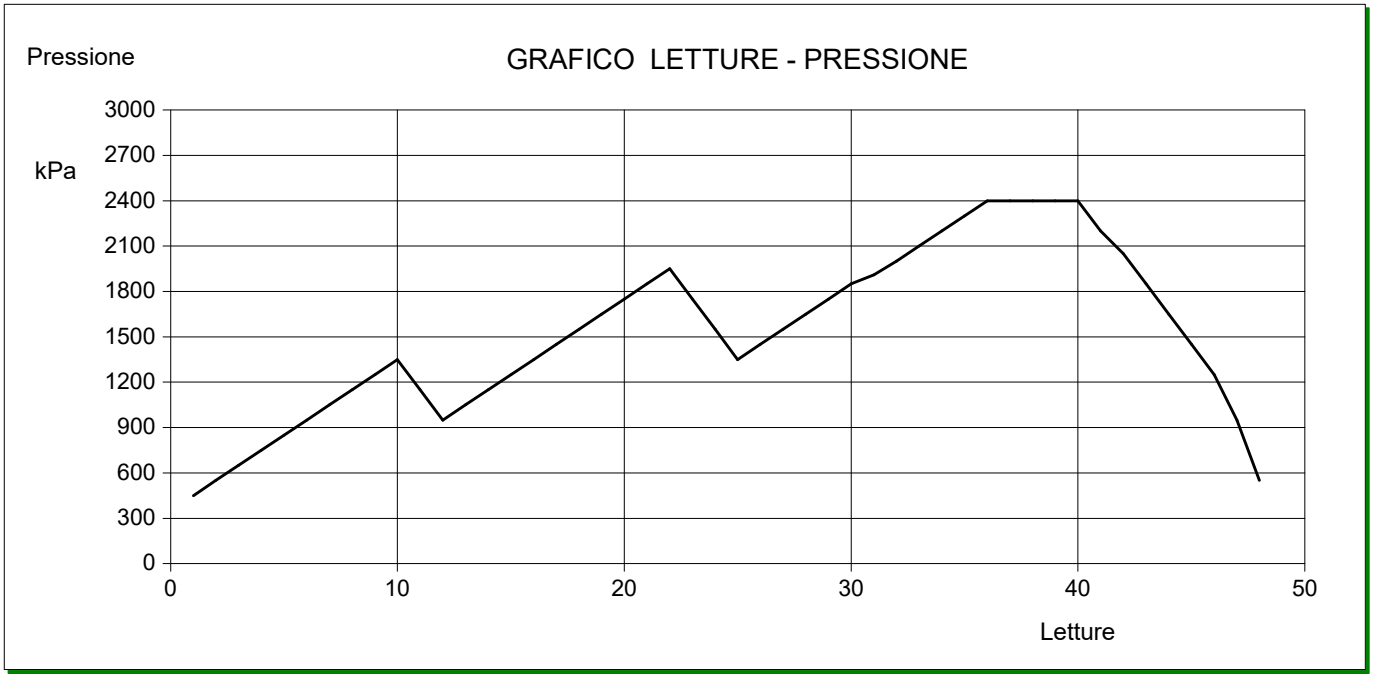
(Calcolati in ogni intervallo di pressione)



PROVA DILATOMETRICA

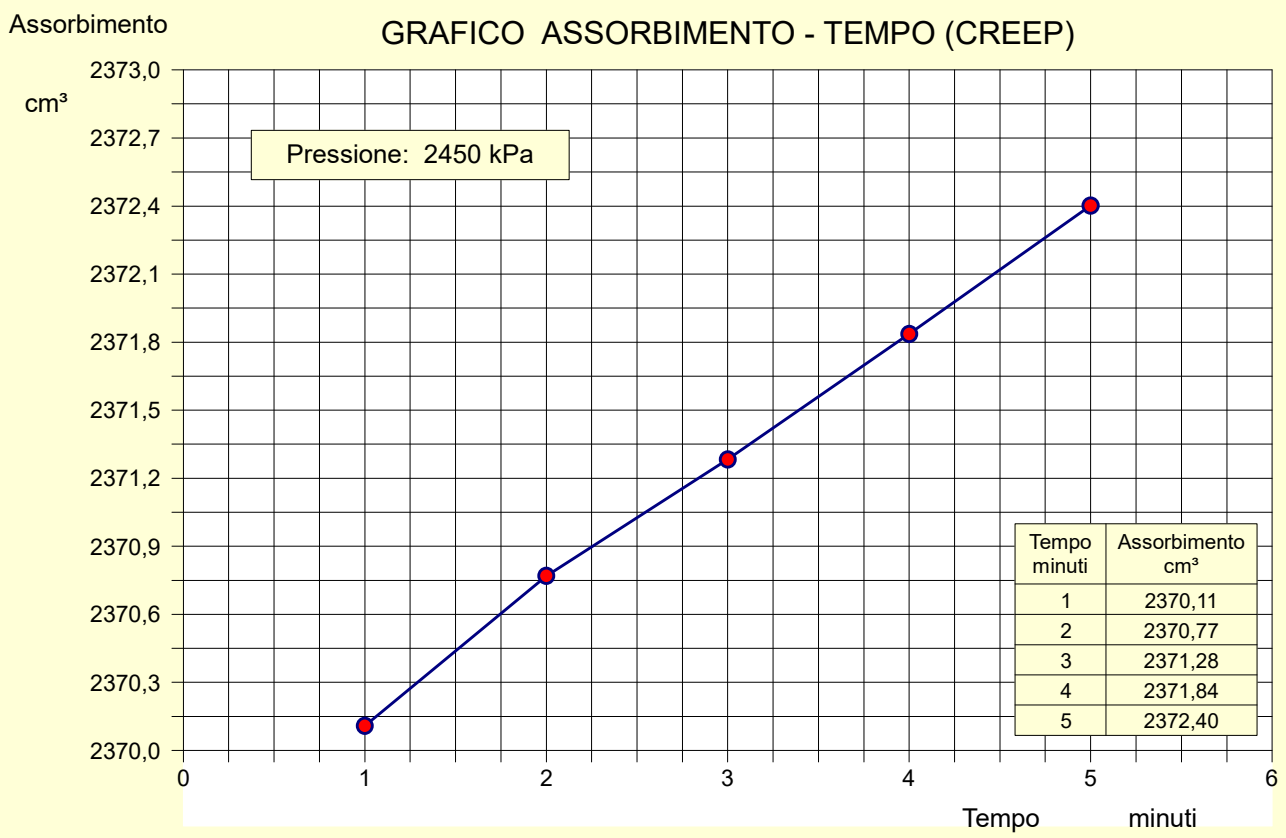
Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 04/11/2020
Sondaggio: CL-8	Orario prova:





PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 04/11/2020
Sondaggio: CL-8	Orario prova:



Tempo minuti	Assorbimento cm³
1	2370,11
2	2370,77
3	2371,28
4	2371,84
5	2372,40

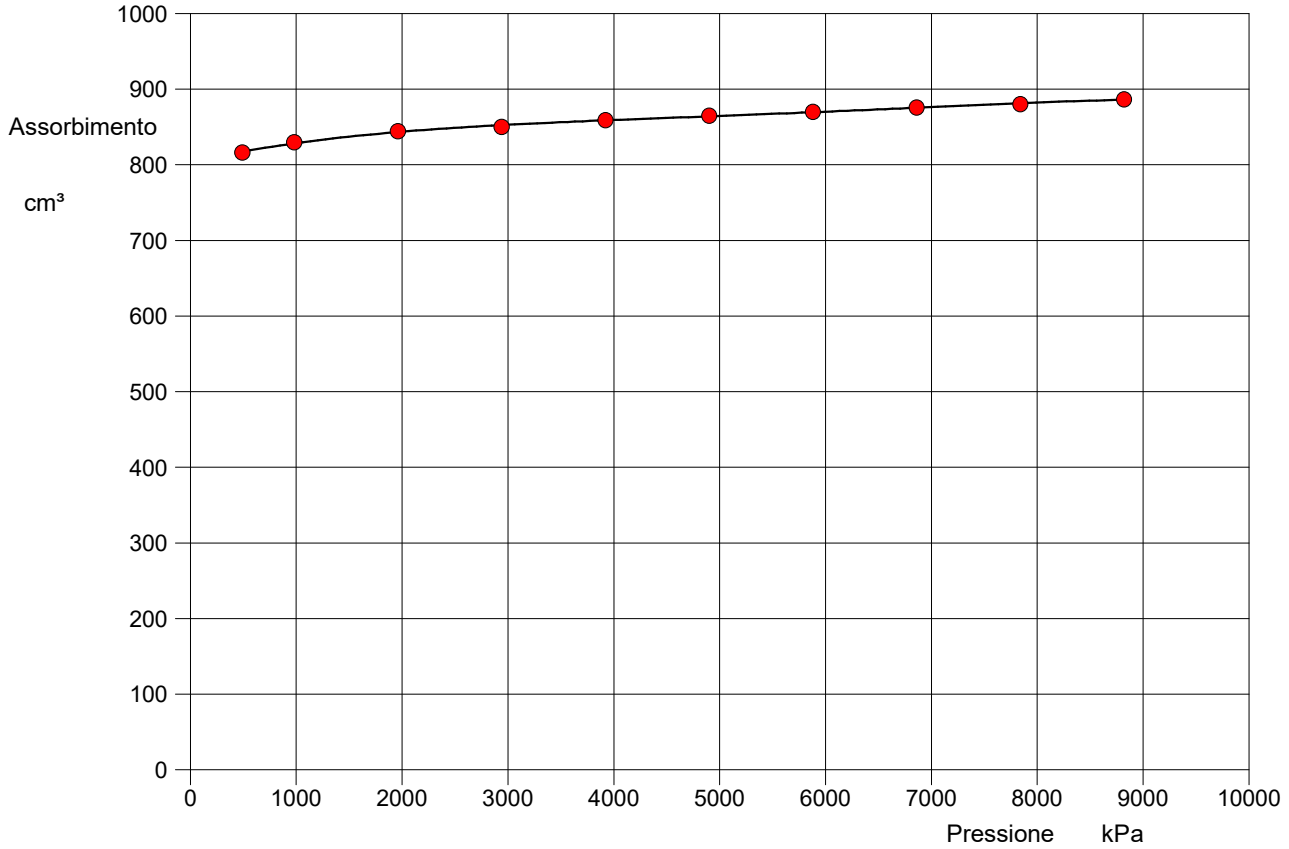
PROVA DILATOMETRICA

Committente: Viannini S.P.A.	
Riferimento: Progettazione definitiva utilizzo acque Campolattaro	Prova: DRT-04
Località: Campolattaro	Data: 04/11/2020
Sondaggio: CL-8	Orario prova:

TARATURA DEL SISTEMA

Data di taratura:	02/03/2020	Diametro del tubo di taratura (mm):	90	Lunghezza cella (cm):	50,0
Lunghezza dei cavi (m):	200,00	Spessore del tubo di taratura (mm):	6	Volume cella (cm³):	2835,00

GRAFICO ASSORBIMENTO - PRESSIONE



Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³	Pressione speriment. kPa	Volume speriment. cm³	Correzione volume cm³
490,00	816,20	13,42									
980,00	829,88	24,26									
1960,00	844,40	39,33									
2940,00	850,13	48,57									
3920,00	858,88	54,83									
4900,00	864,96	60,11									
5880,00	870,14	65,57									
6860,00	875,67	71,53									
7840,00	880,34	77,47									
8820,00	886,52	82,04									

Allegato IG02-C

Prove sonda acustica – ALT AB140

TITLE:

AVAILABLE LANGUAGE: ITA

Log acustico esegiuto nei sondaggi CL5, CL6 e CL7 a Casalduni nella Provincia di Benevento(BN)

00	26/10/2020	*Issued*	Gianfranco Draga	GEOLOGIN s.r.l. Via Isarco, 5 39040 VARNA (BZ) P. IVA 02621760343

1. INTRODUZIONE

Su incarico della società I.m.o.s Srl di Campobasso, in data 16.09.2020 e 12.10.2020, sono stati eseguiti dei log acustici nei fori di sondaggio CL5, CL6 e CL7, ubicati nel Comune di Casalduni nella provincia di Benevento.

2. UBICAZIONE DEL SITO D'INDAGINE

Fig. 1: Ubicazione approssimativa dei sondaggi

Fig. 2: Foto del sondaggio

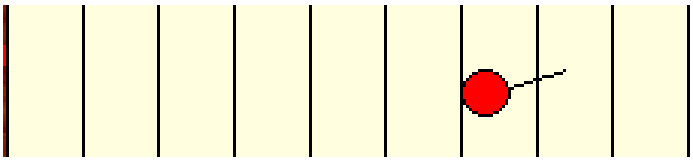
Fig. 3: Foto del sondaggio

Fig. 4: Foto della strumentazione

3. MODALITA' DI ESECUZIONE DELLE PROVE

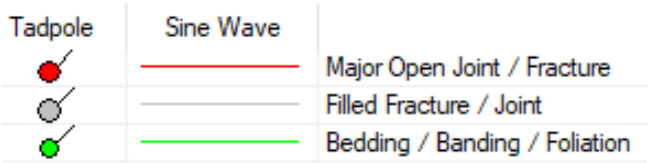
3.1. Sonda acustica (ABI-ABHTV)

La sonda esegue una scansione ad ultrasuoni della parete del foro. Viene misurato il tempo di percorrenza di un segnale ad ultrasuoni dalla trasmittente alla parete del foro e viceversa e l'ampiezza del segnale riflesso. L'ampiezza dipende dalla geometria del foro e dal coefficiente di riflessione al passaggio tra fluido di circolazione e roccia (o calcestruzzo). Le ampiezze sono riprodotte a colori su uno sviluppo planare della parete del foro. Colorazioni scure indicano riflessioni ridotte (fratture, fessure e materiale tenero come per esempio argilla o materiale degradato), colorazioni gialle indicano forti riflessioni (materiale competente). La graduazione della scala di colori viene adattata in relazione alle unità di misura. Giunti, fessure o faglie vengono rappresentate mediante strutture sinusoidali. Per rappresentare con un simbolo la posizione tridimensionale di queste strutture e al fine di poterle classificare in modo semplice, vengono utilizzati i cosiddetti „Tad poles". La posizione sull'asse orizzontale indica l'inclinazione della struttura (0 – 90 gradi) e la linea sul simbolo indica la direzione dell'immersione della struttura.



tad pole: giunto o fessura con direzione ca. N80 (ca. est) e inclinazione ca. 62°.

Di seguito vengono indicati i simboli utilizzati per la classificazione delle strutture:



Le strutture riconosciute vengono rappresentate su appositi diagrammi come proiezione sferica (reticolo di Schmidt - come proiezione equi areale sull'emisfero sud). La sonda misura anche l'orientamento del foro di sondaggio; inclinazione (tilt) e direzione (azimut). Le curve dell'inclinazione (Dip, Tilt) e direzione (Azimut, riferito al Nord magnetico) indicano la deviazione del foro alle diverse profondità. La graduazione della scala di direzione avviene da 0 a 360 gradi. La sonda acustica fornisce inoltre la misura del diametro del foro di sondaggio e sue variazioni.

3.2. Verricello

La sonda è stata calate all'interno del foro di sondaggio per mezzo di un verricello a motore. Il motore è stato alimentato con corrente elettrica a 220 Volt. La profondità massima che può raggiungere il verricello è di 1800 m.

3.3. Hardware e Software utilizzata

Come il verricello, anche l'Hardware e il computer sono stati alimentati con corrente elettrica a 220 Volt. L'Hardware viene connesso al computer, sul quale vengono registrati i dati. Per mezzo dei programmi LoggerSuite e WellCAD i dati possono essere visualizzati in tempo reale sul computer. I dati in un secondo momento vengono elaborati col programma WellCAD del fornitore Advanced Logic Technology (ALT).

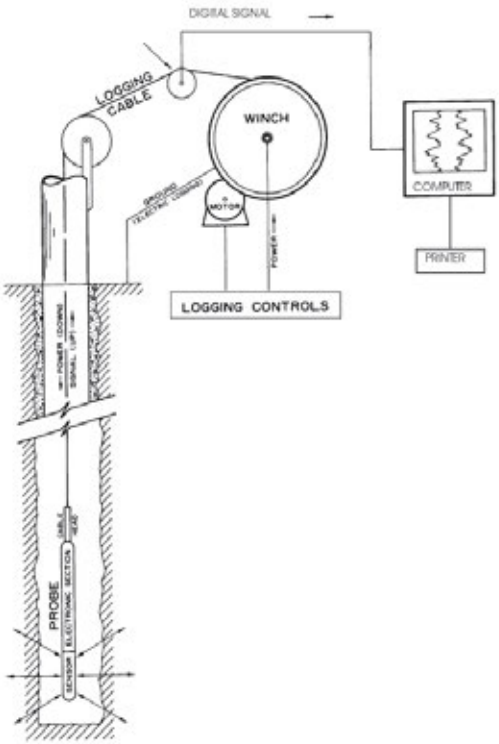
3.4. Parametri di acquisizione

In fase di acquisizione sono stati impostati i seguenti parametri:

ABI sampling rate:	1 scan/mm
Velocità d'acquisizione:	1m/min

3.5. Procedura per l'esecuzione dei log geofisici

Per l'esecuzione di log geofisici, la sonda viene calata all'interno del foro di sondaggio per mezzo di un verricello a velocità costante, con l'acquisizione dei dati consultabili in tempo reale su un PC. Tutti i dati sono stati elaborati con il programma Well Cad e sono consultabile con l'apposito programma Well Cad reader messo a disposizione in allegato.



4. CARATTERISTICHE TECNICHE DELLA STRUMENTAZIONE UTILIZZATA

4.1. Sonda acustica (ABI)

Specification	Metric	Imperial
Diameter	40 mm	1.57 in.
Length	1.61 m	63 in.
Weight	6.7 kg	14.7 lbs.
Max. Temp.	70 ºC	158 ºF
Max. Pressure	200 bar	2900 psi

Acoustic Sensor: Fixed transducer, rotating focusing mirror

Focus Optimized For: 15.2 cm (6 in.) borehole

Frequency: 1.2 MHz

Acoustic Beam Width: 1.5 mm focal distance

Rotation Speed: Up to 35 revolutions/sec.

Samples per Rev.: 72, 144, 216, 288, and 360

Measurement Ranges:

Standard ABI-2G or ABI40-GR: 5 to 51 cm (2 to 20 inch) open or cased borehole

QL40-ABI-VLB : 25 to 76 cm (10 to 30 inch) in a cased borehole, minimum thickness 5 mm

Caliper Resolution: 0.08 mm (.003 in.)

Orientation Sensor: APS 544, 3-Axis Magnetometer and Accelerometer

Inclination Accuracy: ± 0.5 º

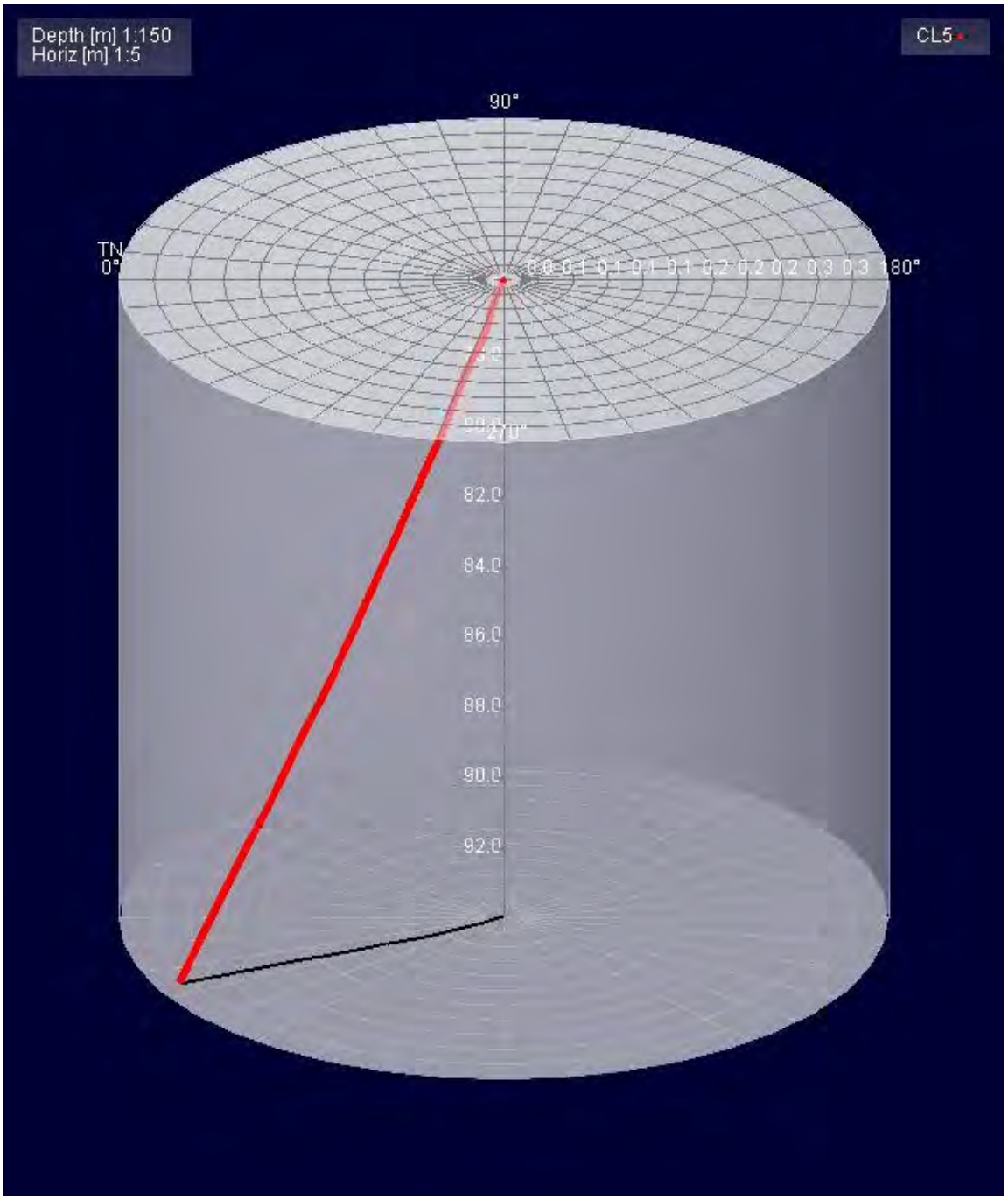
Azimuth Accuracy: ± 1.2 º

5. RISULTATI DELLE INDAGINI

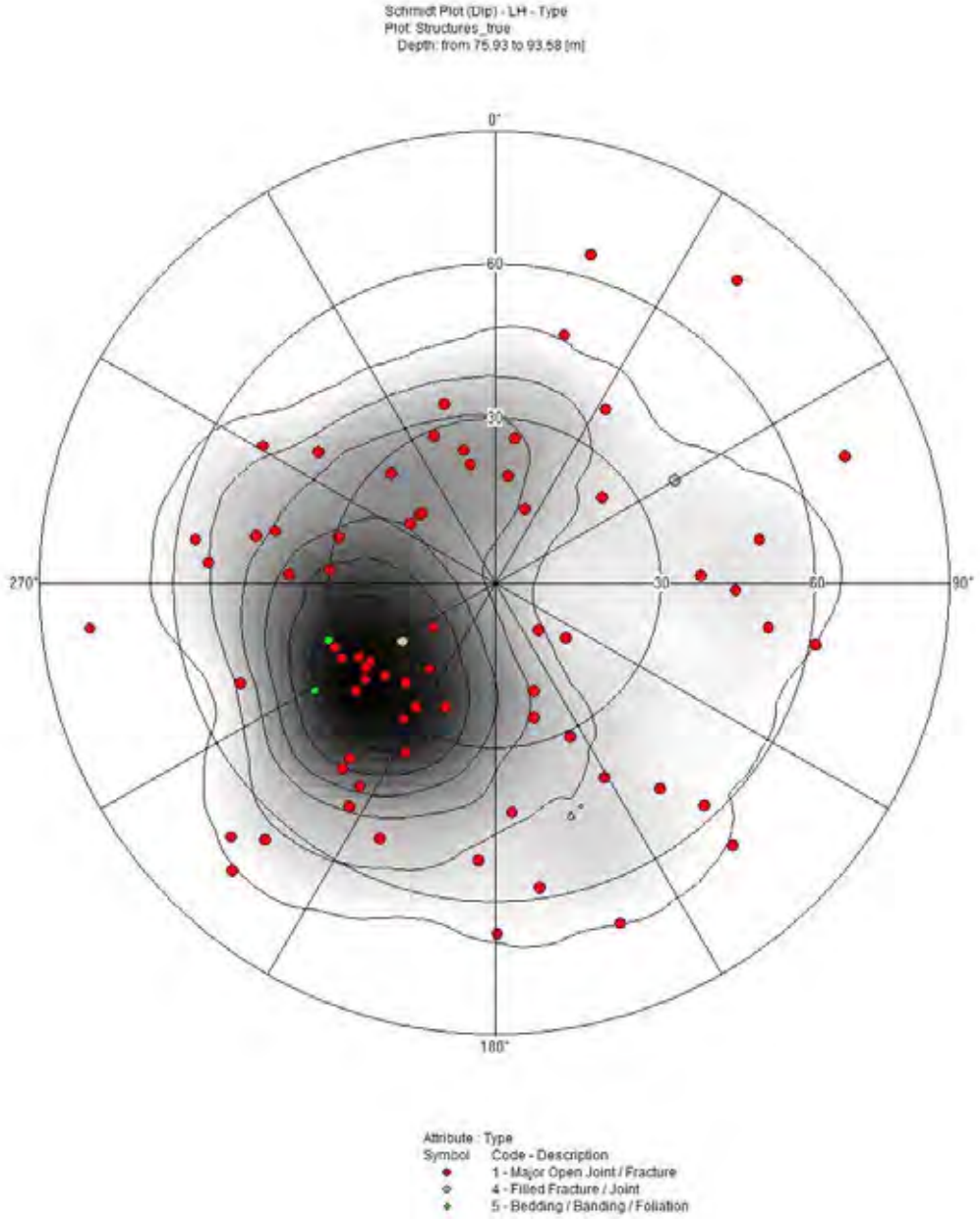
5.1. Sondaggio CL5

Condizioni del foro di sondaggio CL5

I valori medi dell'inclinazione nel tratto del foro di sondaggio indagato risultano essere, rispetto alla verticale assoluta, di ca. 0.98° in direzione ca. N333°. La misura della deviazione del foro di sondaggio è stata misurata per mezzo della sonda acustica.



Nel suo insieme la roccia si presenta fratturata e parzialmente con una bassa risposta alle onde acustiche.

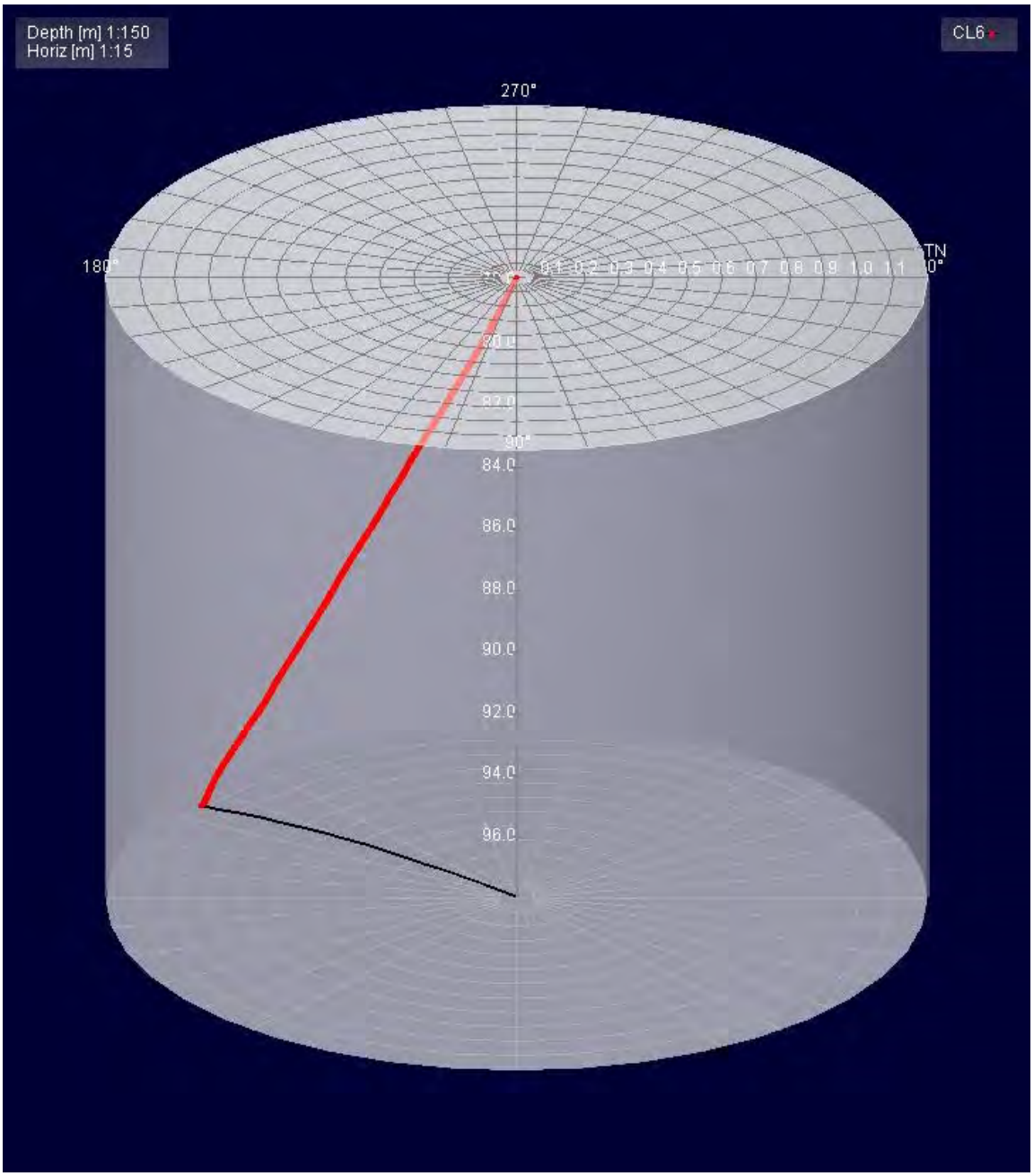


Come si vede nel diagramma di Schmidt (emisfero inferiore), la roccia mostara una famiglie di strutture che immerge con ca. 30° in direzione N055°.

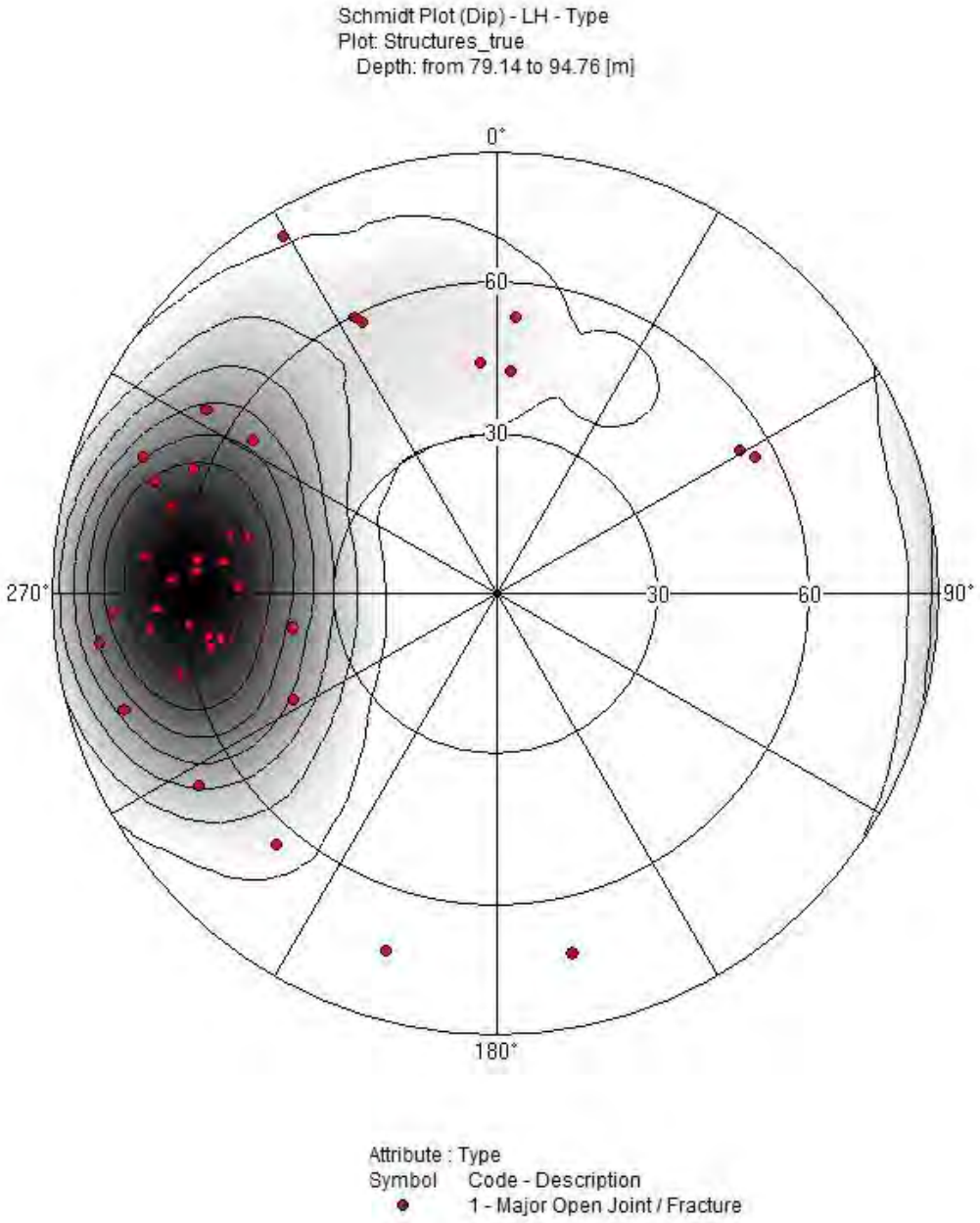
5.2. Sondaggio CL6

Condizioni del foro di sondaggio CL6

I valori medi dell'inclinazione nel tratto del foro di sondaggio indagato risultano essere, rispetto alla verticale assoluta, di ca. 3.20° in direzione ca. N214°. La misura della deviazione del foro di sondaggio è stata misurata per mezzo della sonda acustica.



Nel suo insieme la roccia si presenta fratturata e parzialmente con una bassa risposta alle onde acustiche.

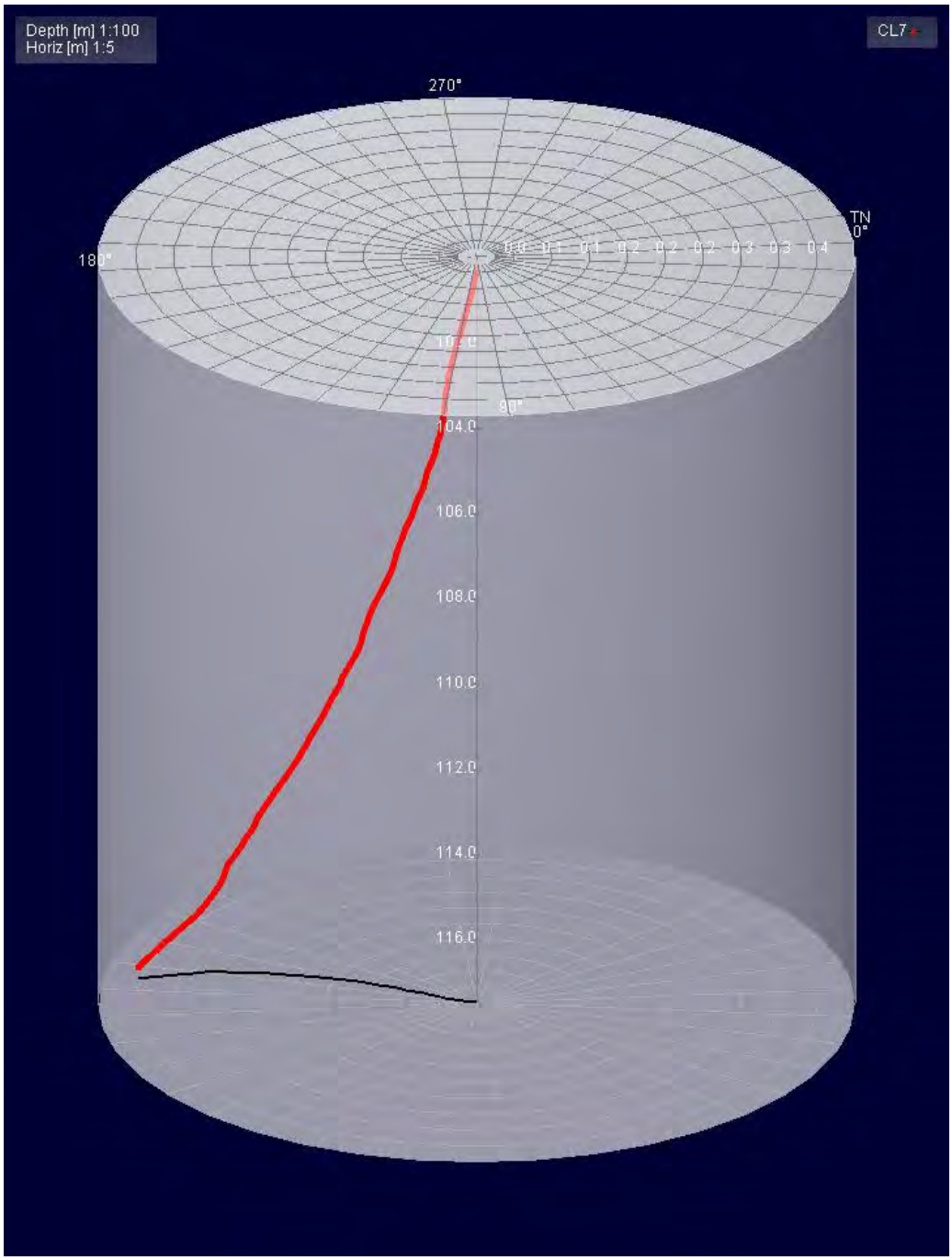


Come si vede nel diagramma di Schmidt (emisfero inferiore), la roccia mostara una famiglie di strutture che immerge con ca. 60° in direzione N090°.

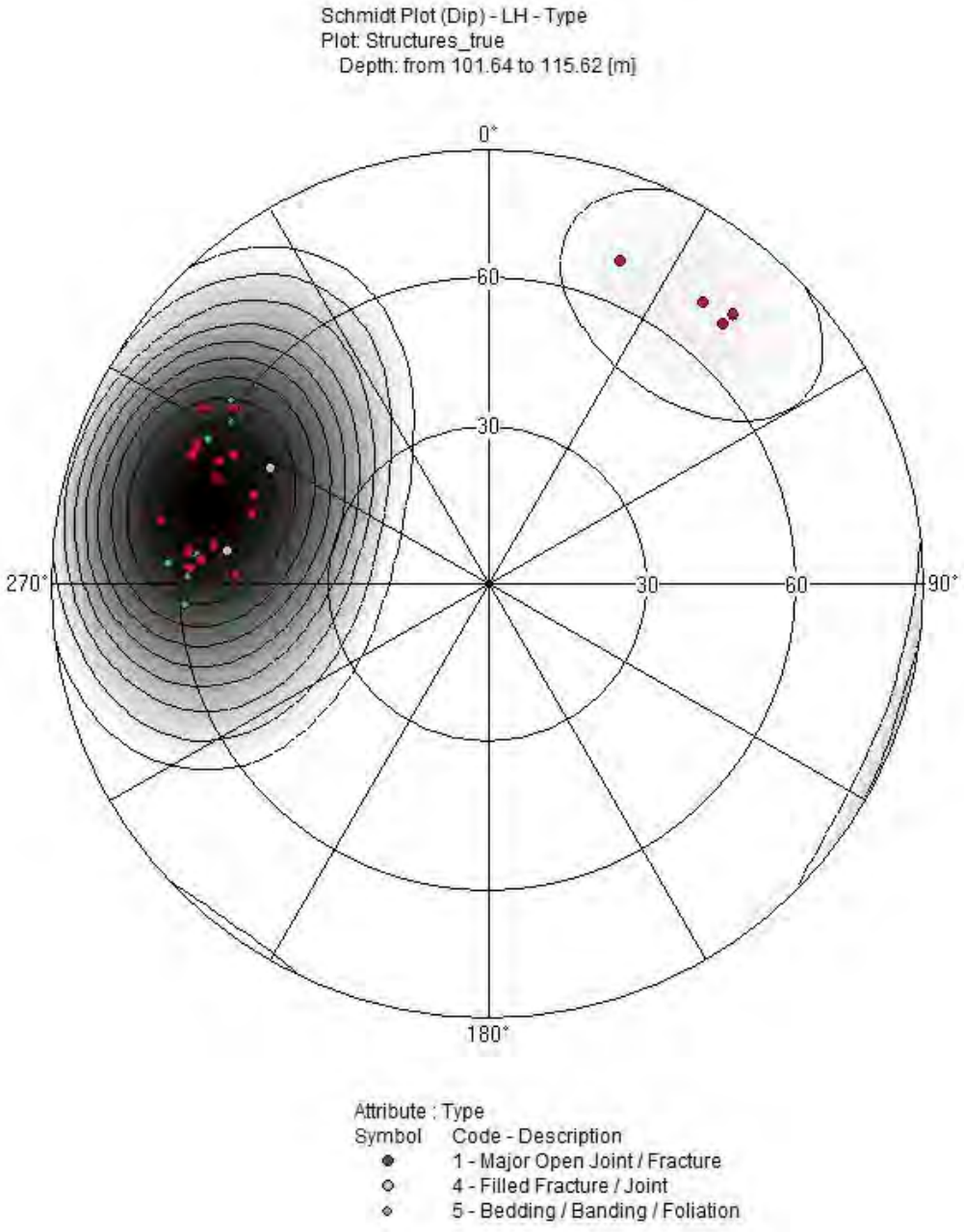
5.3. Sondaggio CL7

Condizioni del foro di sondaggio CL7

I valori medi dell'inclinazione nel tratto del foro di sondaggio indagato risultano essere, rispetto alla verticale assoluta, di ca. 1.28° in direzione ca. N200°. La misura della deviazione del foro di sondaggio è stata misurata per mezzo della sonda acustica.



Nel suo insieme la roccia si presenta fratturata e parzialmente con una bassa risposta alle onde acustiche.



Come si vede nel diagramma di Schmidt (emisfero inferiore), la roccia mostara una famiglie di strutture che immerge con ca. 60° in direzione N105°.

Sondaggio CL-5

Bohrlochmessung / prove in foro

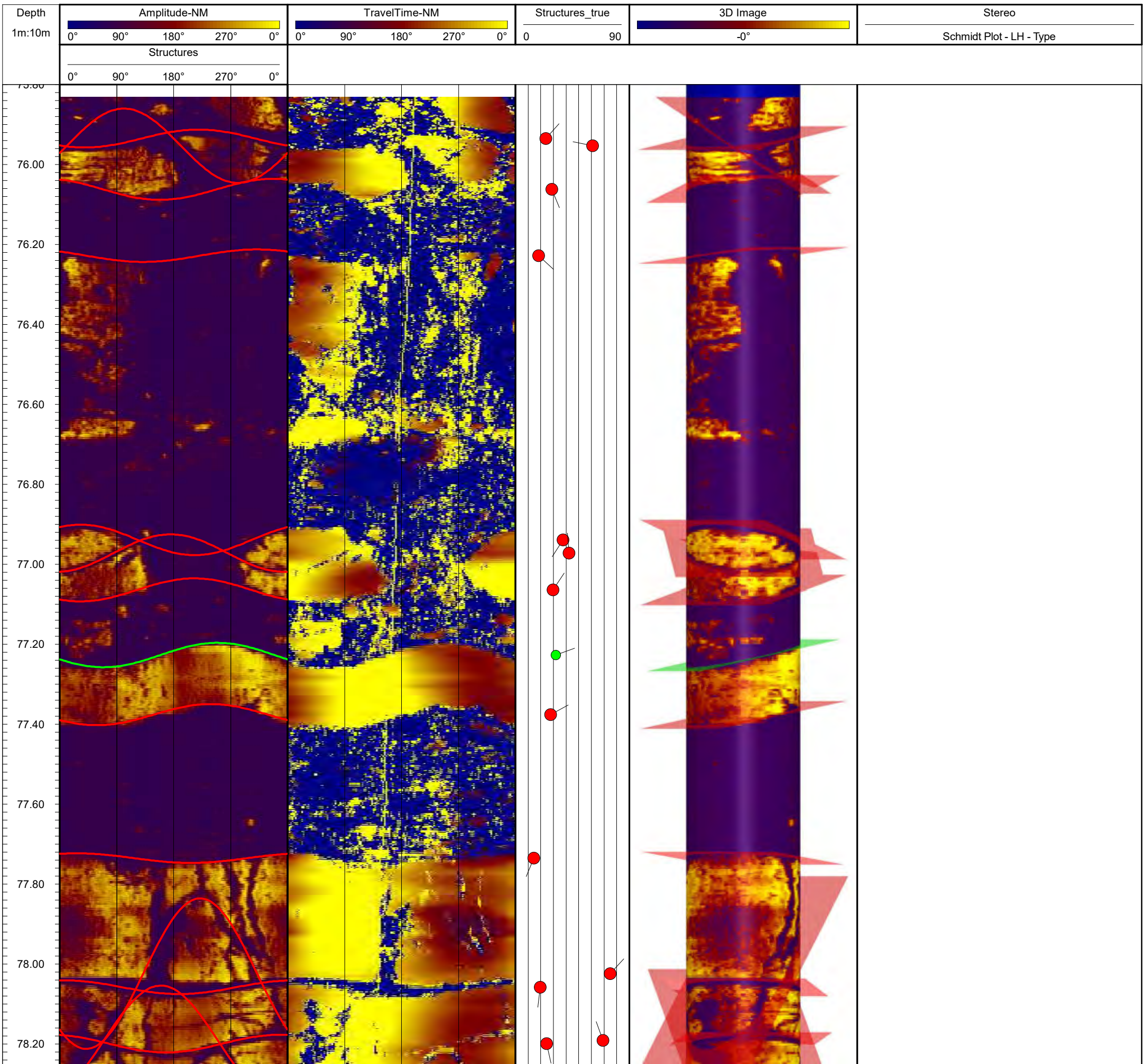
Bohrung / Sondaggio	**CL5**	**Messungen / Misure**			**Koordinaten / Coordinate**	
Gesellschaft / Società	I.m.o.s Srl	ABI			X	
Projekt / Progetto					Y	
Ort / Località	Casalduni		von / da [m]	bis / a [m]	Z	
Land / Provincia	Benevento	ABI	75.83	93.86		
Staat / Stato	Italia				**Maßstab / Scala**	1:10

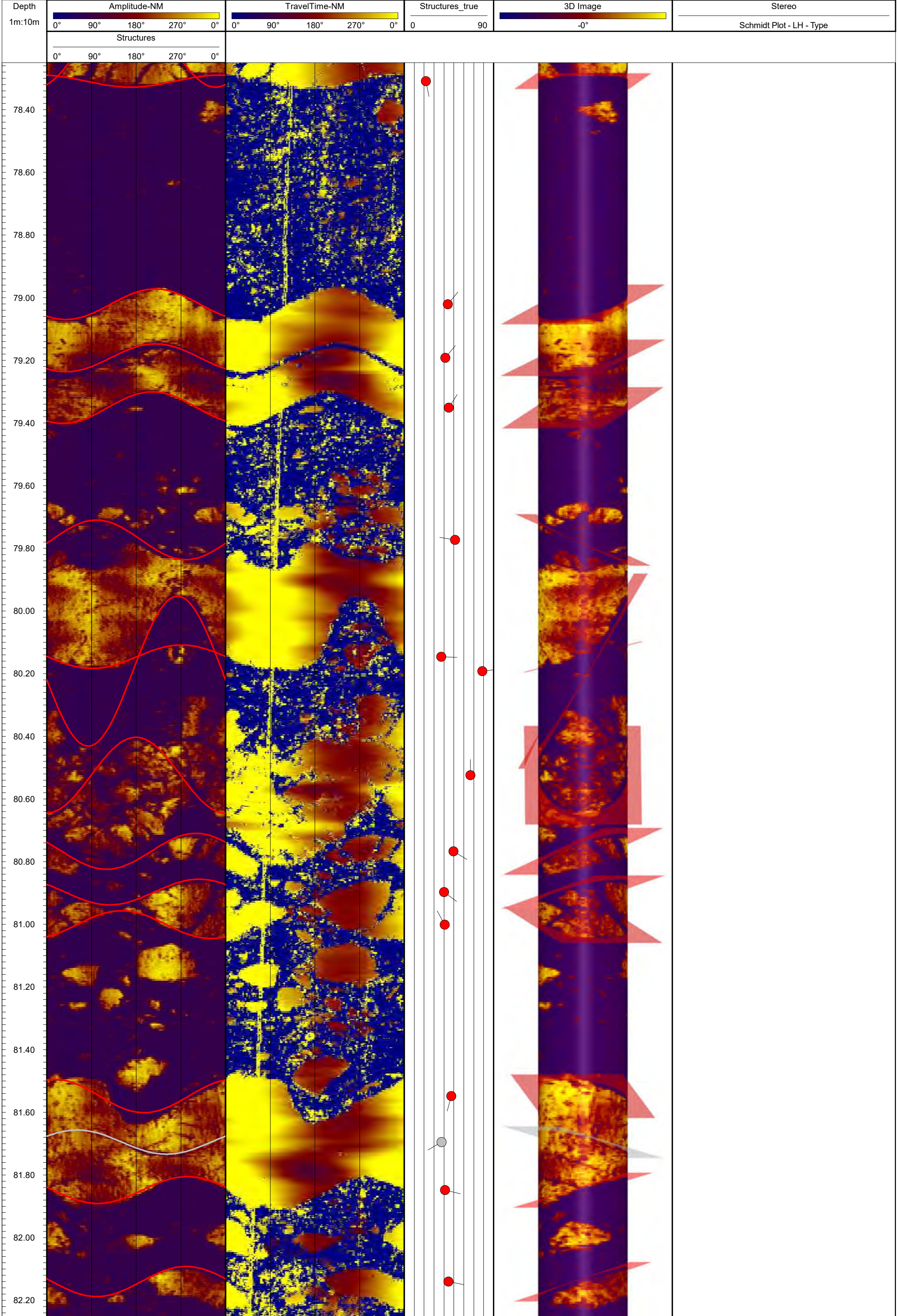
Datum / Data	12.10.2020	Aufgezeichnet von / Registrato da	L.Fuschino	Beobachtungen / Osservazioni
Messung Nr. / Misura nr.	1	Beobachter / Supervisore	L.Fuschino	
Bezugspunkt / livello di riferimento	piano campagna			
Endteufe / Profondità finale	93.86 m			
Wasserstand / Livello dell'acqua				
Bohrlochfluid / Tipo di Fluido				

Ø Bohrloch / Foro	von / da [m]	bis / a [m]
101 mm		

Ø Verrohrung / Tubi di rivestimento	von / da [m]	bis / a [m]

Major Open Joint / Fracture Filled Fracture / Joint Bedding / Banding / Foliation

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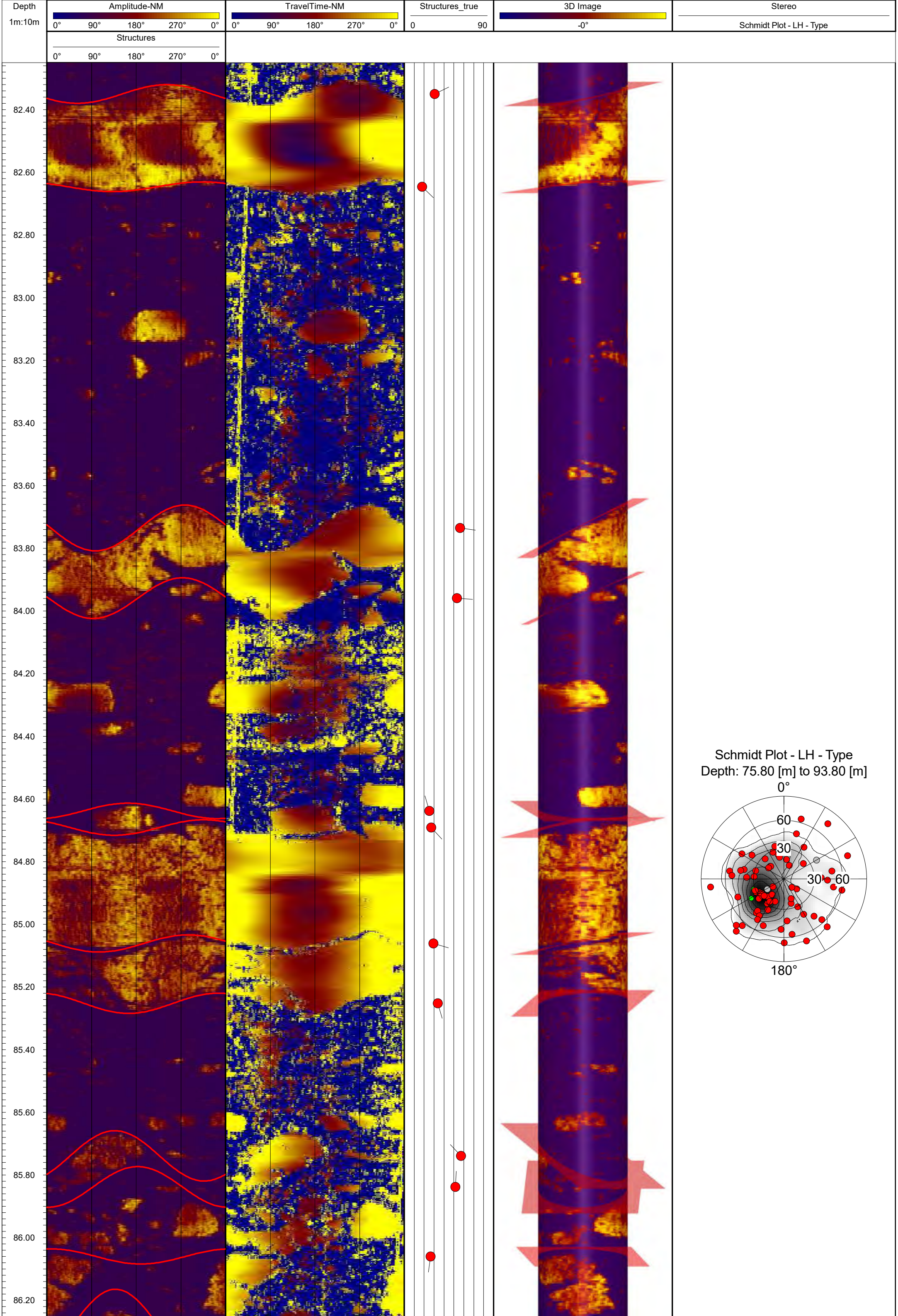
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
78.40
78.60
78.80
79.00
79.20
79.40
79.60
79.80
80.00
80.20
80.40
80.60
80.80
81.00
81.20
81.40
81.60
81.80
82.00
82.20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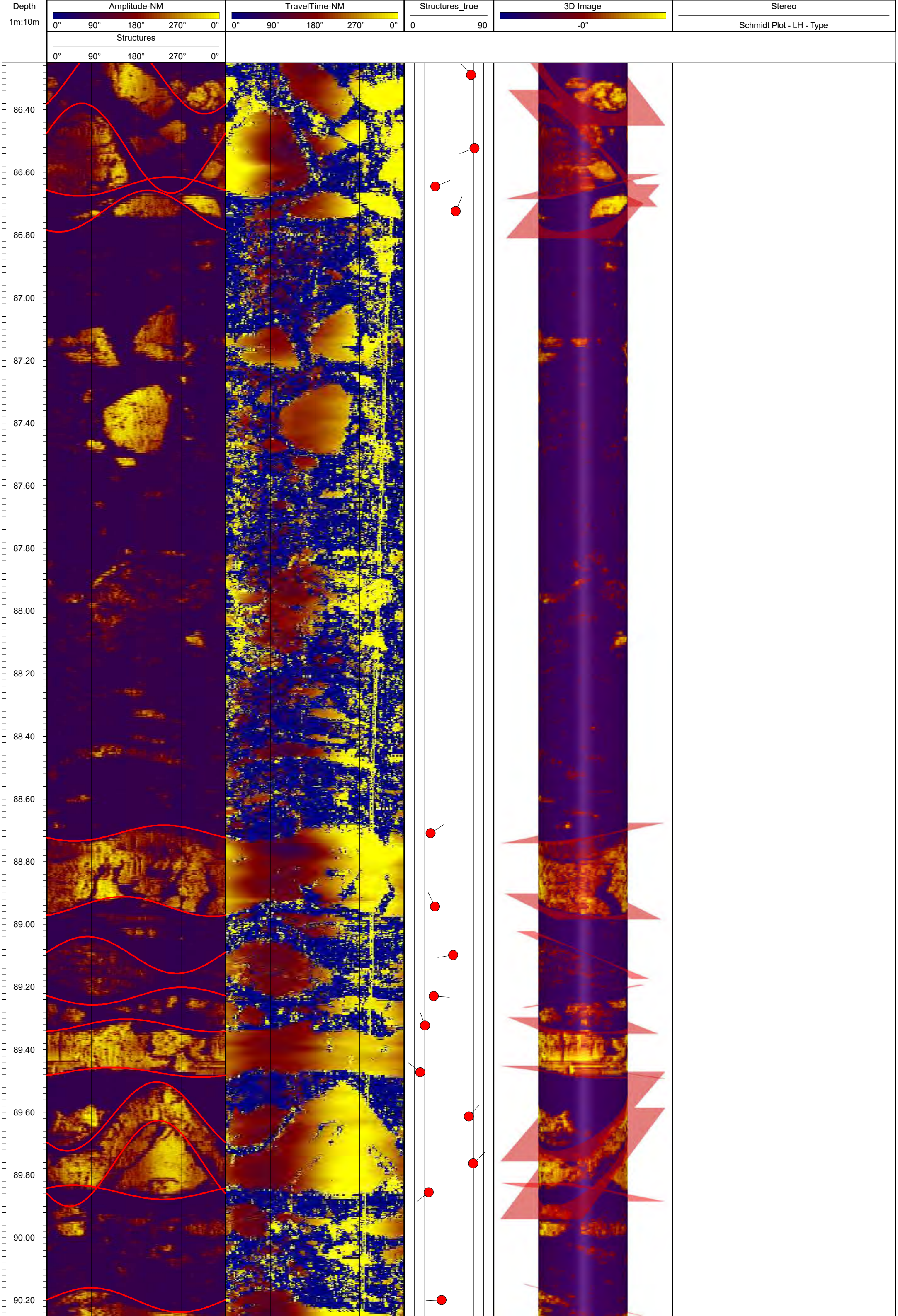
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
82.40
82.60
82.80
83.00
83.20
83.40
83.60
83.80
84.00
84.20
84.40
84.60
84.80
85.00
85.20
85.40
85.60
85.80
86.00
86.20
Schmidt Plot - LH - Type
Depth: 75.80 [m] to 93.80 [m]
0°
60
30
30
60
180°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Amplitude-NM
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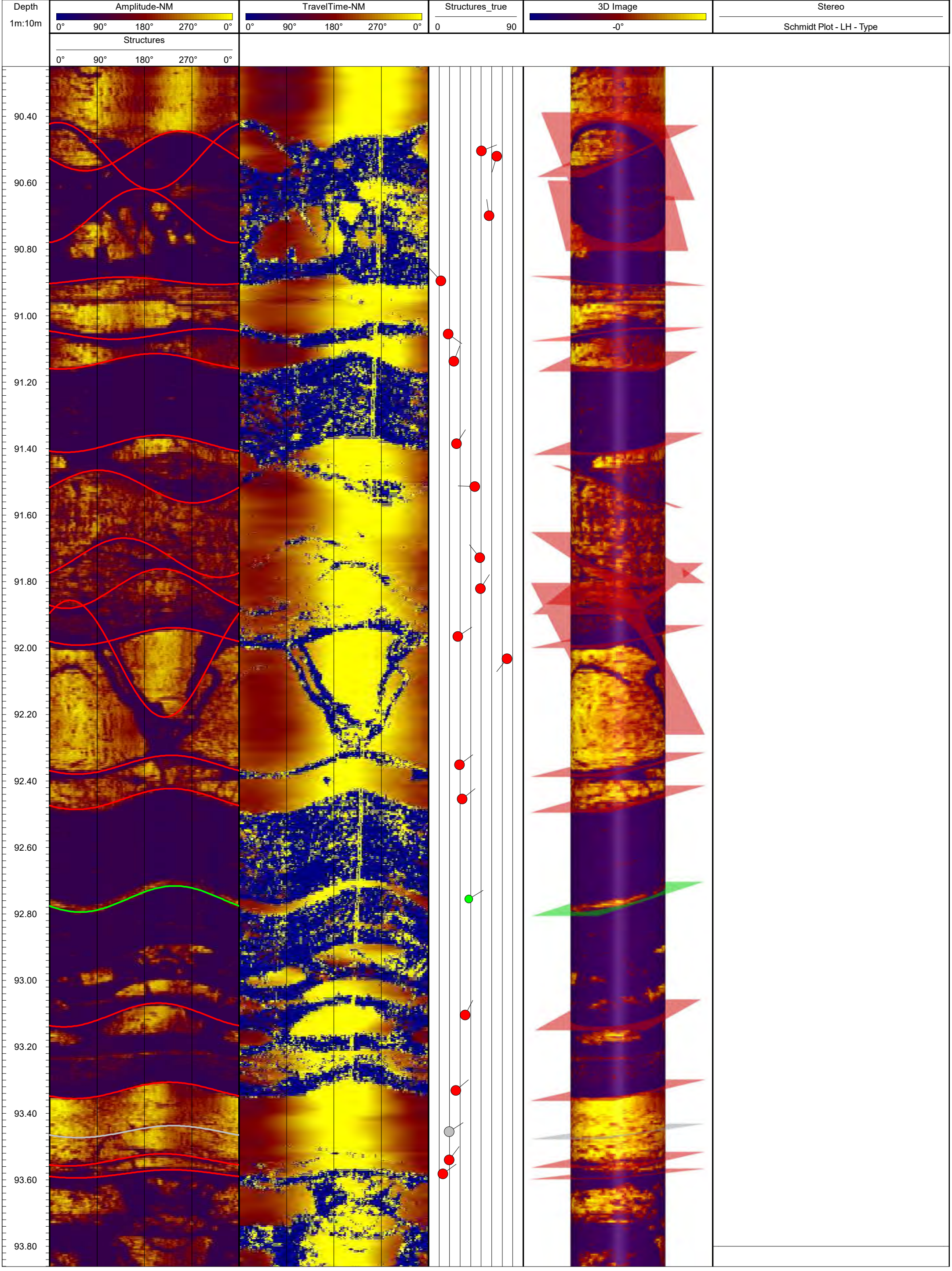
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
86.40
86.60
86.80
87.00
87.20
87.40
87.60
87.80
88.00
88.20
88.40
88.60
88.80
89.00
89.20
89.40
89.60
89.80
90.00
90.20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1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
90.40
90.60
90.80
91.00
91.20
91.40
91.60
91.80
92.00
92.20
92.40
92.60
92.80
93.00
93.20
93.40
93.60
93.80

Sondaggio CL-6

Bohrlochmessung / prove in foro

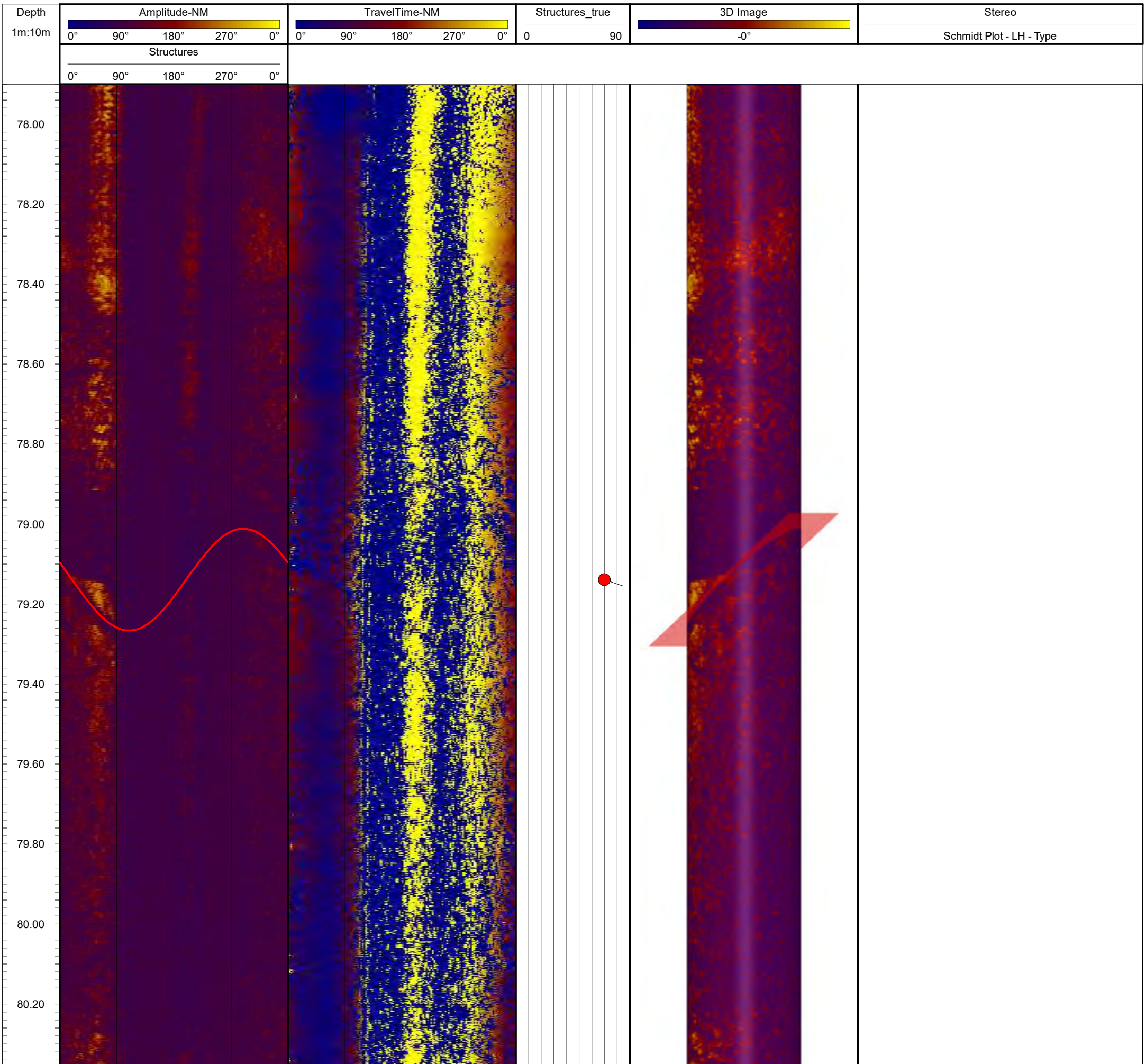
Bohrung / Sondaggio	**CL6**	**Messungen / Misure**			**Koordinaten / Coordinate**	
Gesellschaft / Società	I.m.o.s Srl	ABI			X	
Projekt / Progetto					Y	
Ort / Località	Casalduni		von / da [m]	bis / a [m]	Z	
Land / Provincia	Benevento	ABI	77.90	97.99		
Staat / Stato	Italia				**Maßstab / Scala**	1:10

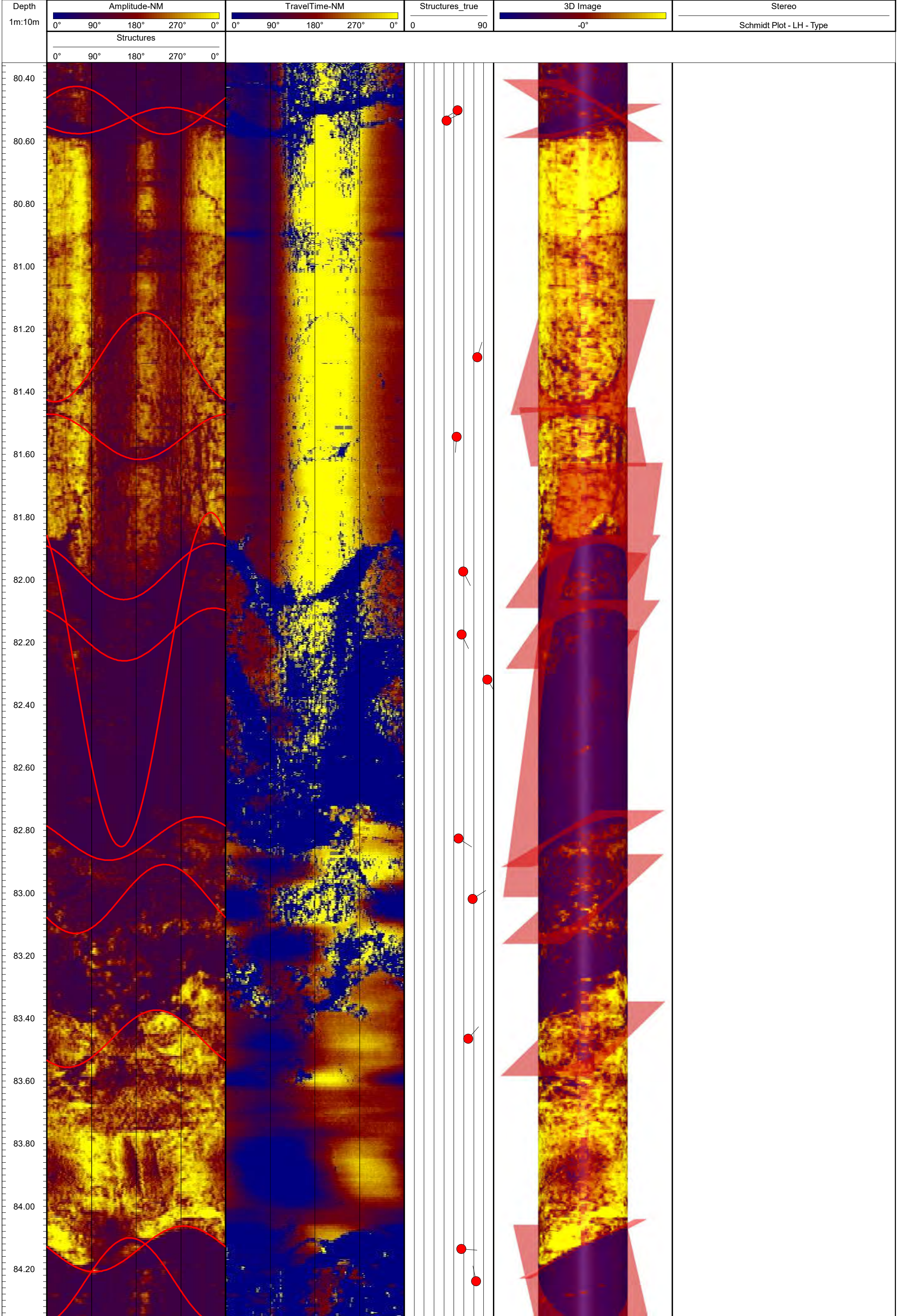
Datum / Data	16.09.2020	Aufgezeichnet von / Registrato da	L.Fuschino	Beobachtungen / Osservazioni
Messung Nr. / Misura nr.	1	Beobachter / Supervisore	L.Fuschino	
Bezugspunkt / livello di riferimento	piano campagna			
Endteufe / Profondità finale	97.99 m			
Wasserstand / Livello dell'acqua				
Bohrlochfluid / Tipo di Fluido				

Ø Bohrloch / Foro	von / da [m]	bis / a [m]
101 mm		

Ø Verrohrung / Tubi di rivestimento	von / da [m]	bis / a [m]

Major Open Joint / Fracture

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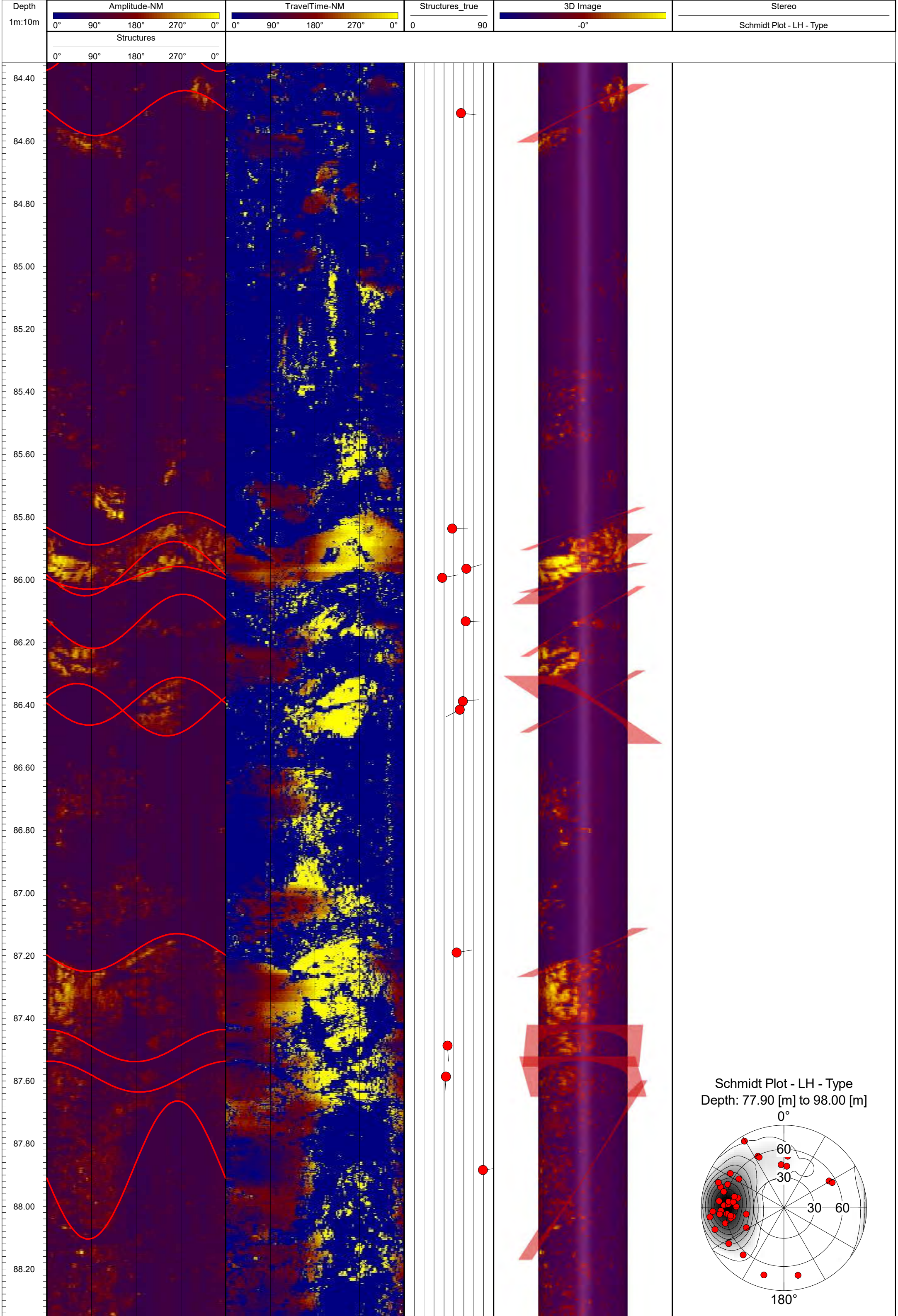
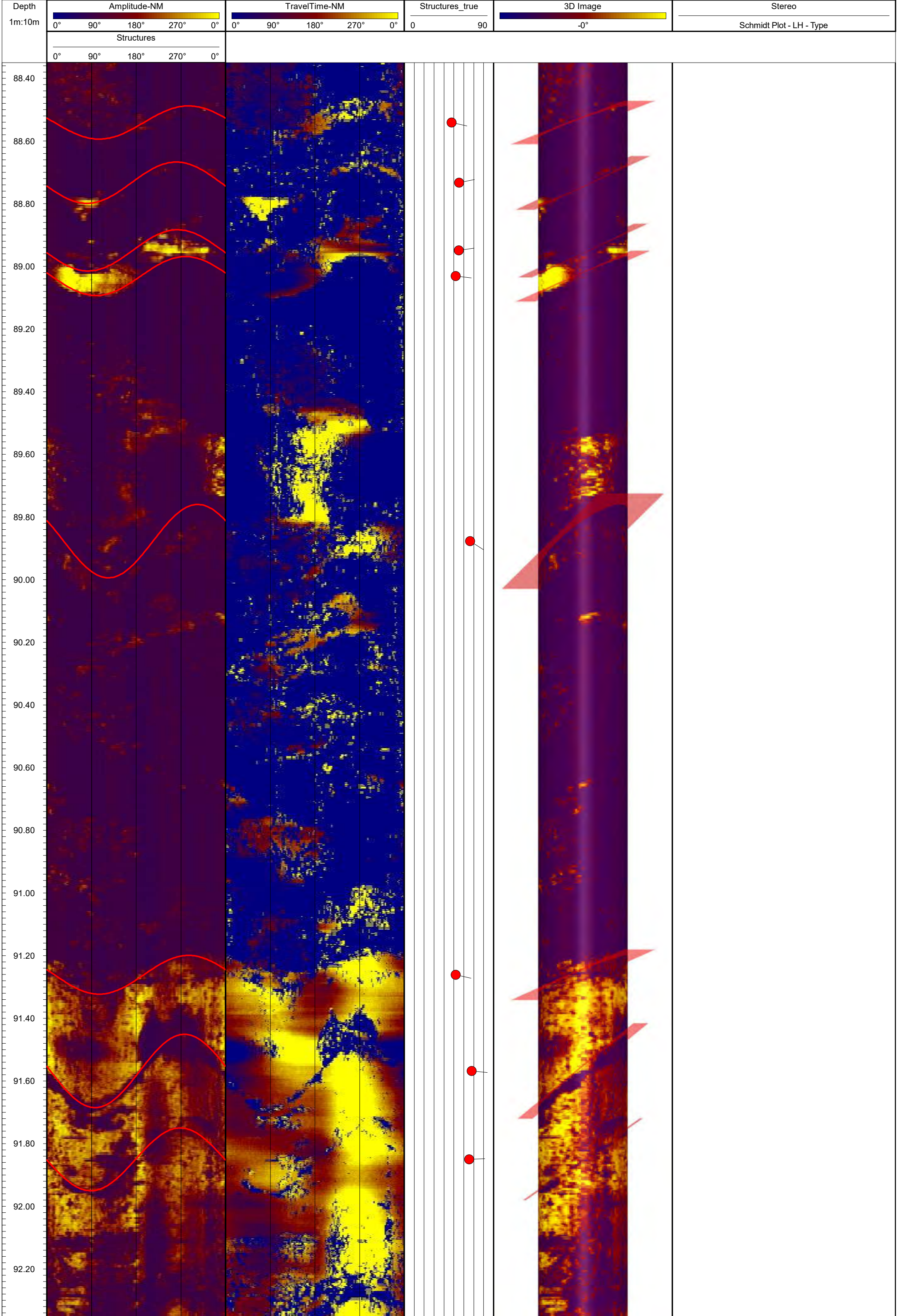
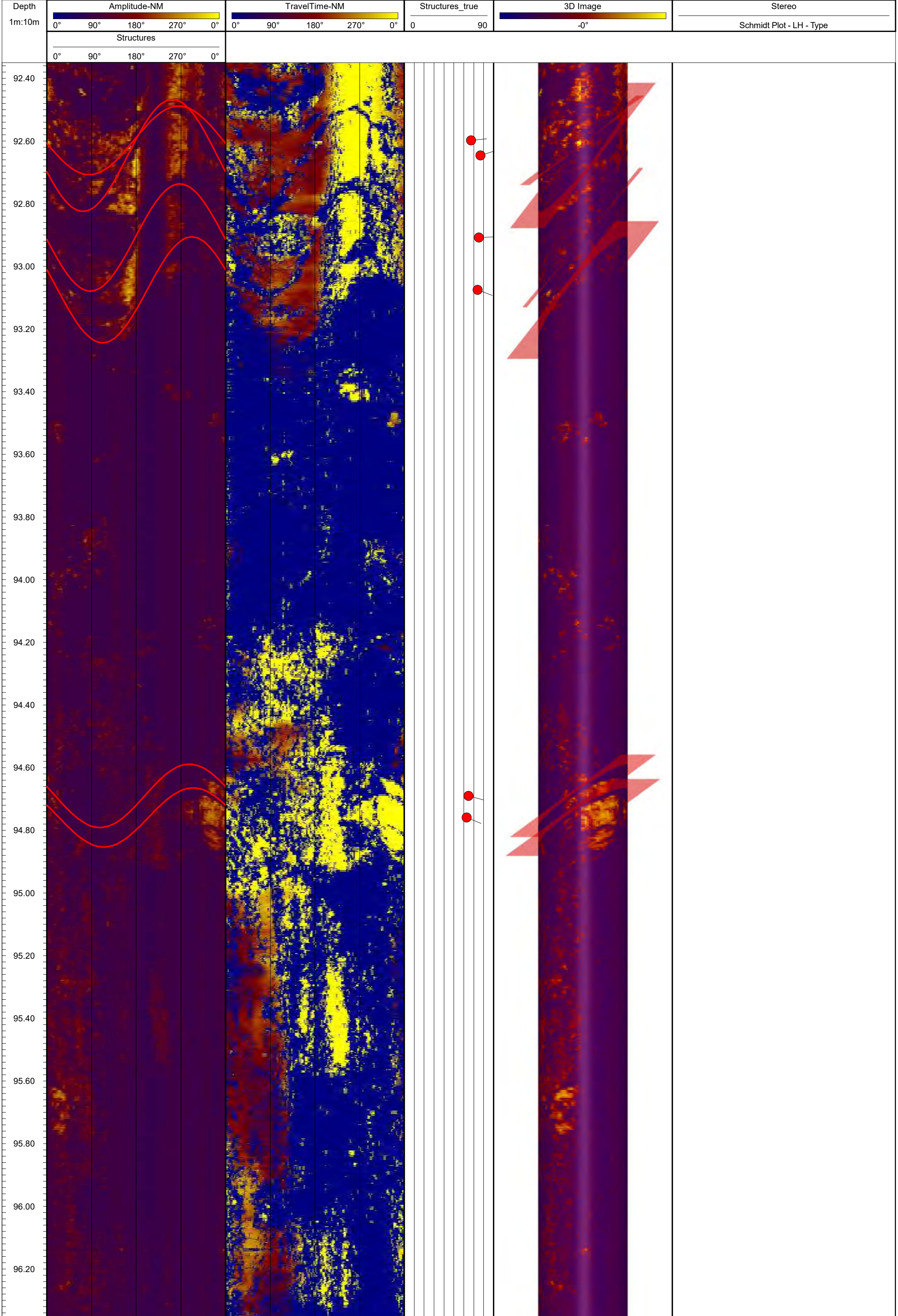
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
80.40
80.60
80.80
81.00
81.20
81.40
81.60
81.80
82.00
82.20
82.40
82.60
82.80
83.00
83.20
83.40
83.60
83.80
84.00
84.20


Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
84.40
84.60
84.80
85.00
85.20
85.40
85.60
85.80
86.00
86.20
86.40
86.60
86.80
87.00
87.20
87.40
87.60
87.80
88.00
88.20
Schmidt Plot - LH - Type
Depth: 77.90 [m] to 98.00 [m]
0°
60
30
30
60
180°


Depth
1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
88.40
88.60
88.80
89.00
89.20
89.40
89.60
89.80
90.00
90.20
90.40
90.60
90.80
91.00
91.20
91.40
91.60
91.80
92.00
92.20


Depth
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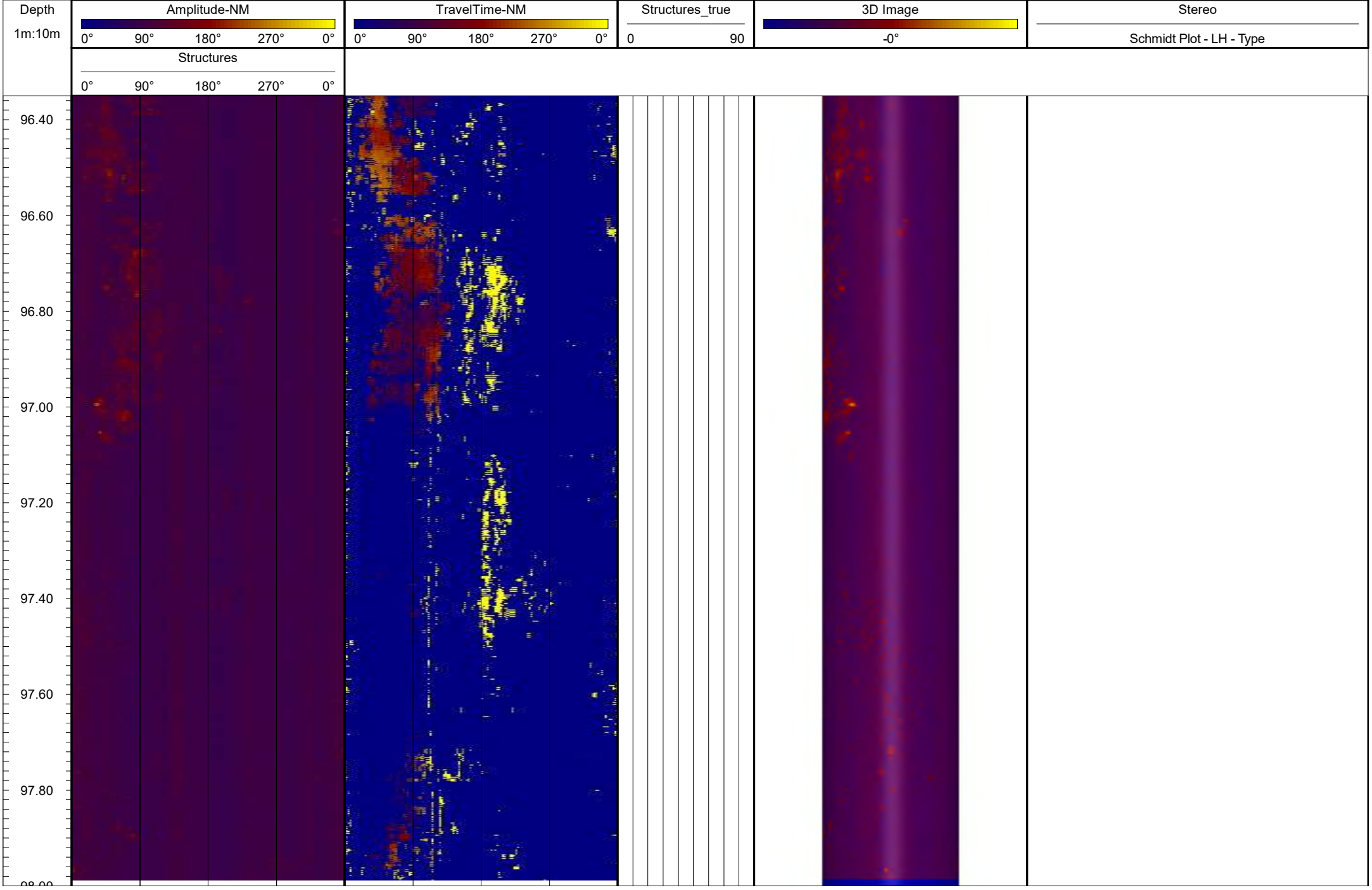
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
92.40
92.60
92.80
93.00
93.20
93.40
93.60
93.80
94.00
94.20
94.40
94.60
94.80
95.00
95.20
95.40
95.60
95.80
96.00
96.20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1m:10m
Amplitude-NM
0° 90° 180° 270° 0°
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
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-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
96.40
96.60
96.80
97.00
97.20
97.40
97.60
97.80

Sondaggio CL-7

Bohrlochmessung / prove in foro

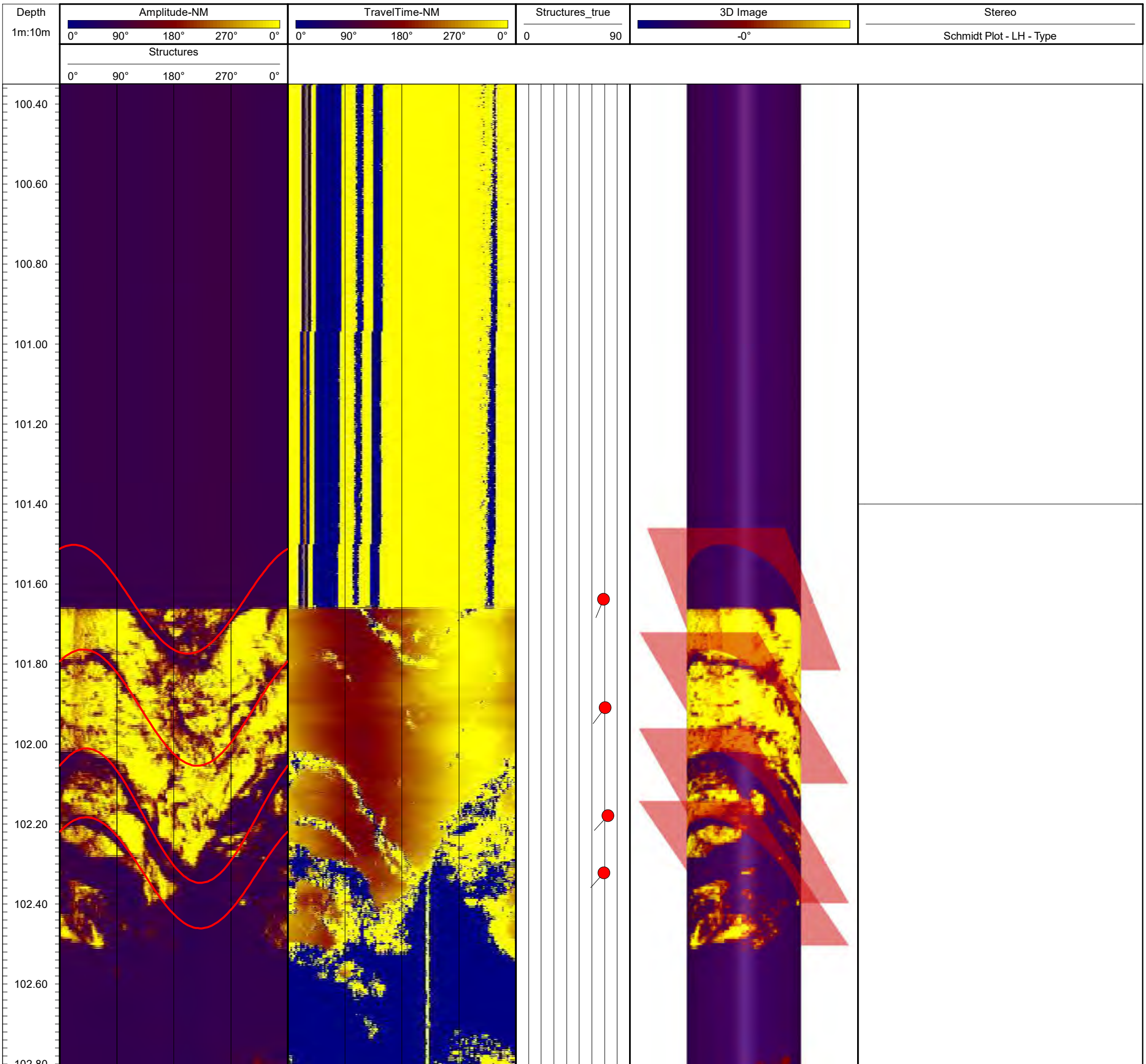
Bohrung / Sondaggio	**CL7**	**Messungen / Misure**			**Koordinaten / Coordinate**	
Gesellschaft / Società	I.m.o.s Srl	ABI			X	
Projekt / Progetto					Y	
Ort / Località	Casalduni		von / da [m]	bis / a [m]	Z	
Land / Provincia	Benevento	ABI	100.35	117.22		
Staat / Stato	Italia				**Maßstab / Scala**	1:10

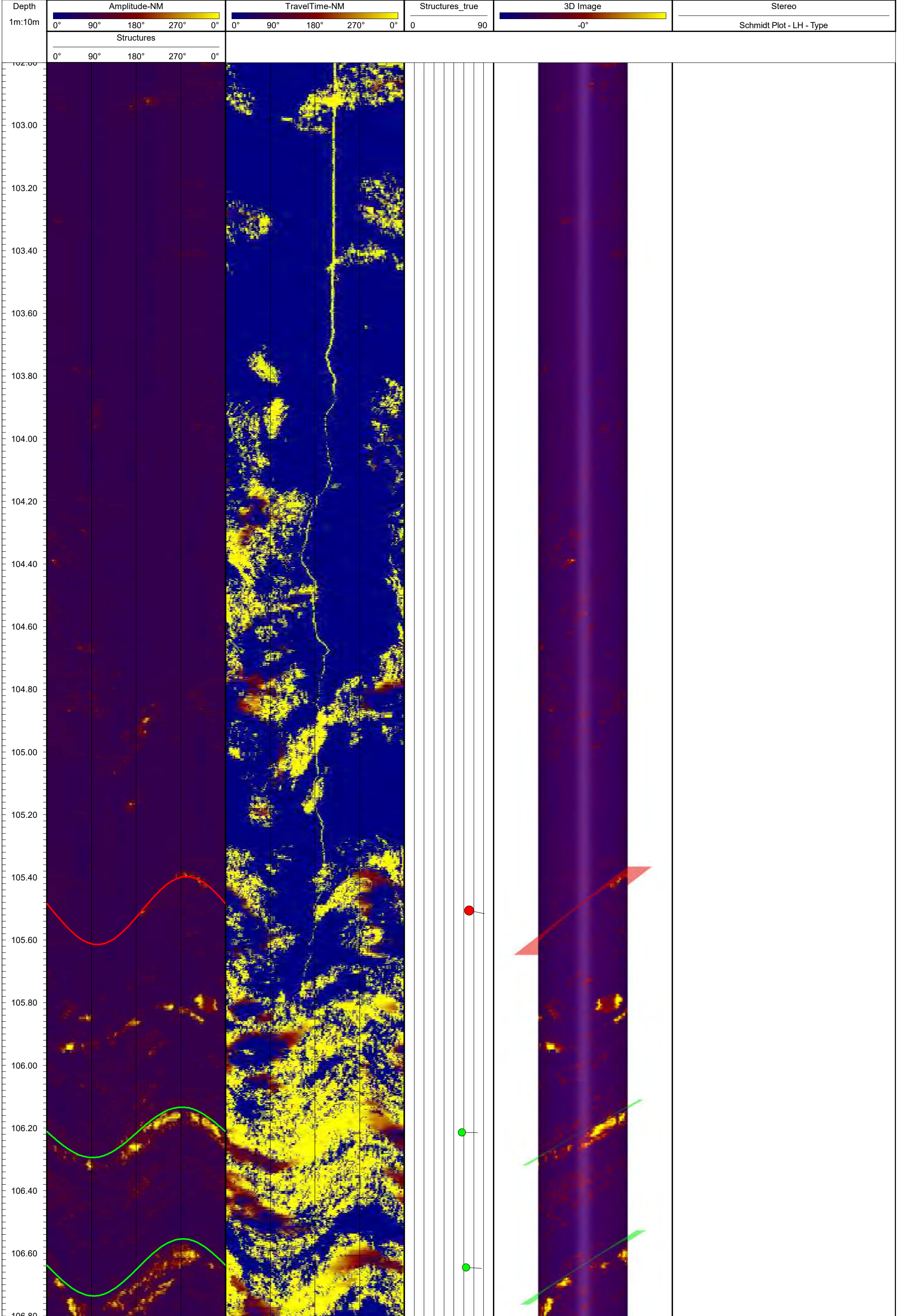
Datum / Data	12.10.2020	Aufgezeichnet von / Registrato da	L.Fuschino	Beobachtungen / Osservazioni
Messung Nr. / Misura nr.	1	Beobachter / Supervisore	L.Fuschino	
Bezugspunkt / livello di riferimento	piano campagna			
Endteufe / Profondità finale	117.22 m			
Wasserstand / Livello dell'acqua				
Bohrlochfluid / Tipo di Fluido				

Ø Bohrloch / Foro	von / da [m]	bis / a [m]
101 mm		

Ø Verrohrung / Tubi di rivestimento	von / da [m]	bis / a [m]

Major Open Joint / Fracture Filled Fracture / Joint Bedding / Banding / Foliation

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Amplitude-NM
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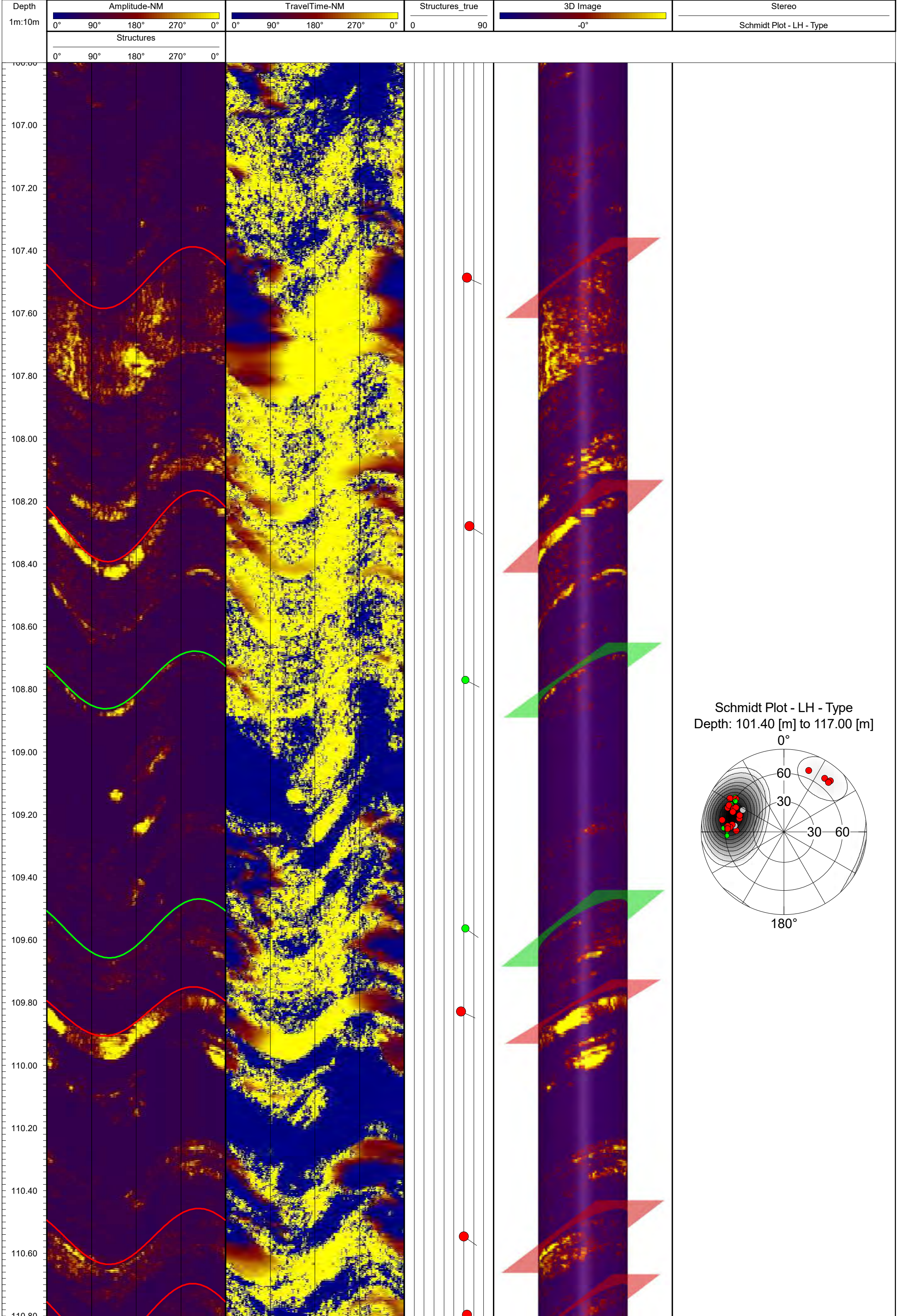
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
103.00
103.20
103.40
103.60
103.80
104.00
104.20
104.40
104.60
104.80
105.00
105.20
105.40
105.60
105.80
106.00
106.20
106.40
106.60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Amplitude-NM
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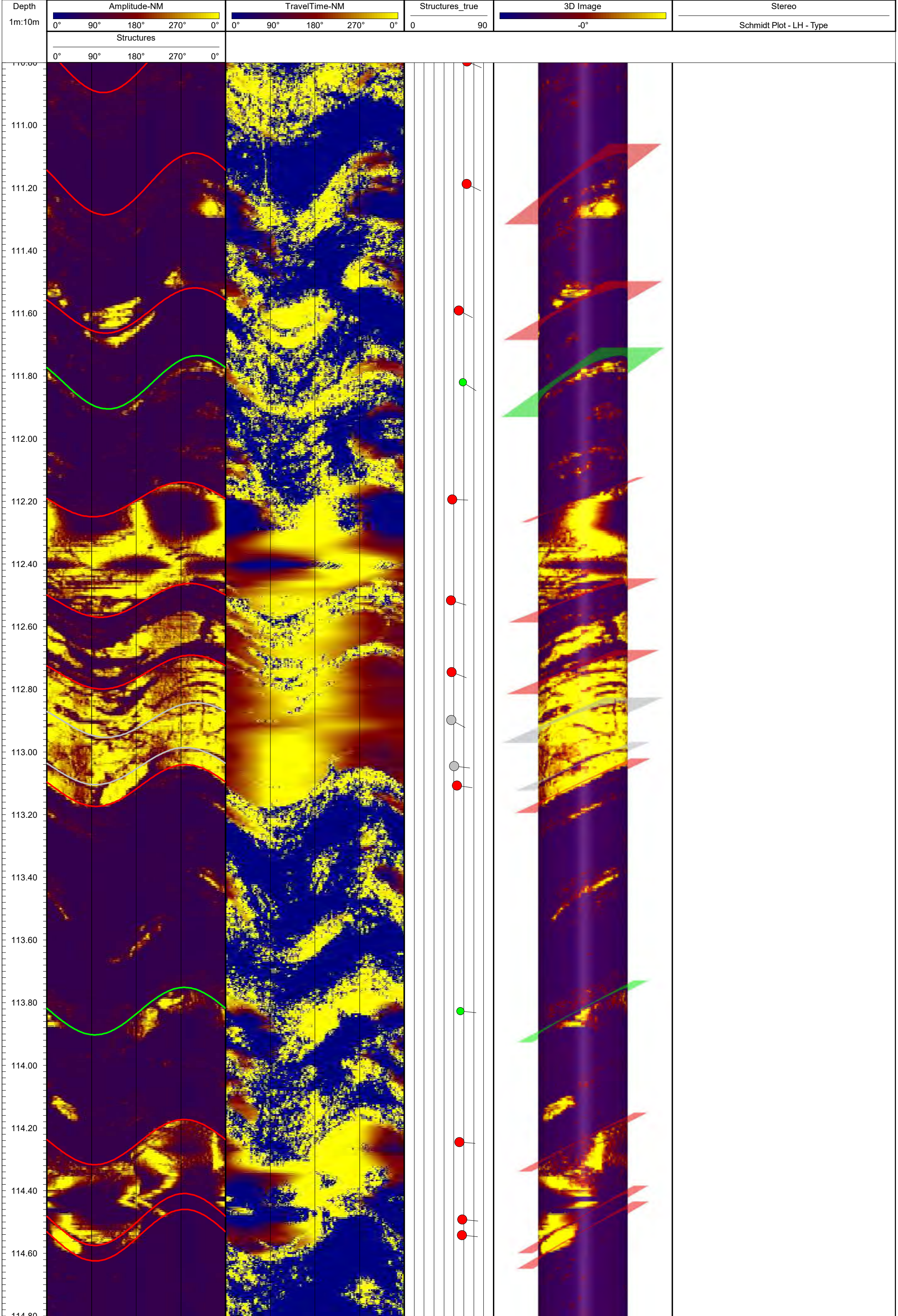
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
107.00
107.20
107.40
107.60
107.80
108.00
108.20
108.40
108.60
108.80
109.00
109.20
109.40
109.60
109.80
110.00
110.20
110.40
110.60
Schmidt Plot - LH - Type
Depth: 101.40 [m] to 117.00 [m]
0°
60
30
30
60
180°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Amplitude-NM
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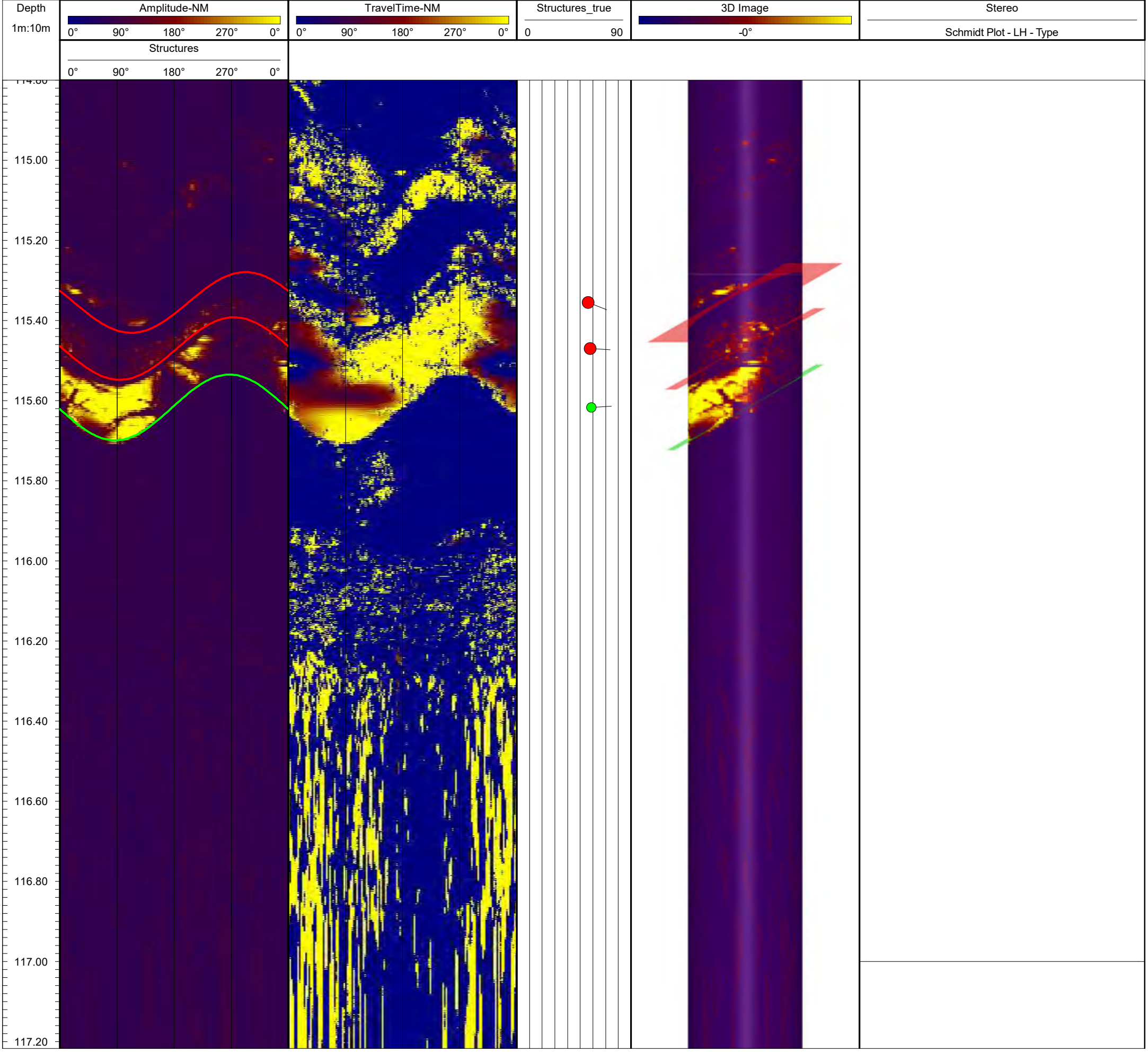
TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
3D Image
-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
111.00
111.20
111.40
111.60
111.80
112.00
112.20
112.40
112.60
112.80
113.00
113.20
113.40
113.60
113.80
114.00
114.20
114.40
114.60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TravelTime-NM
0° 90° 180° 270° 0°
Structures_true
0 90
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-0°
Stereo
Schmidt Plot - LH - Type
Structures
0° 90° 180° 270° 0°
115.00
115.20
115.40
115.60
115.80
116.00
116.20
116.40
116.60
116.80
117.00
117.20

Allegato IG02-D

Prova geofisica Down-Hole

INDICE

PREMESSA

Su incarico ricevuto dalla Ditta IMOS di Campobasso per conto di Vianini Lavori S.P.A., è stata eseguita una campagna di indagini geofisiche costituita da n. 1 prova sismica in foro di tipo Down Hole nel foro denominato SG2.

La prova è stata realizzata in un foro preparato mediante l'installazione di un tubo in PVC di 80 mm di diametro, opportunamente cementato alle pareti del foro stesso; sono state eseguite quindi misure ad intervalli regolari di un metro, per la lunghezza di 30 metri, pari cioè alla profondità del fondo foro.

Delle prove vengono presentati:

- profilo tempi di arrivo – profondità;
- profilo velocità – profondità;
- regressione lineare finalizzata per il calcolo della velocità media;
- profilo profondità - coefficiente di Poisson;
- moduli elastici e rigidità sismica.

PERSONALE ED APPARECCHIATURE IMPIEGATI NEL RILIEVO

Per l'esecuzione della campagna geofisica sono state utilizzate le seguenti attrezzature e personale.

Attrezzature per il rilievo sismico.

- n. 1 sismografo GEOMETRICS mod. GEODE a 24 canali ad incremento di segnale;
- n. 3 accumulatori per sismografo (12 V C.C.);
- n. 1 PC portatile con processore Pentium III - 800 MHz;
- n. 1 tripletta di geofoni 10 Hz (2 orizzontali ed 1 verticale) Mod. Sensor dotati di sistema di ancoraggio pneumatico;
- n. 1 geofono starter MOD. Sensor 14 Hz;
- martello da 10 Kg.;
- batterie di aste a sezione rettangolare;
- compressore.

Personale

- n. 1 geofisico prospettore;
- n. 1 aiuto prospettore.

Risorse hardware e software utilizzate

Lo strumento di registrazione utilizzato per l'acquisizione dei dati sismici fa parte della gamma dei prodotti Geometrics, vale a dire GEODE controllato in remoto da un pc portatile con processore da 800 Mhz. Questo strumento è dotato di un convertitore analogico-digitale a 24 bit ed un amplificatore IFP a 24 dB che determinano una dinamica (dynamic range) di 120 dB, in grado di riprodurre in modo molto accurato il segnale sismico, anche nelle sue componenti in frequenza più elevate.
Il range di intervallo di campionamento varia da 20.833 μs (durata max totale di 1,365 secondi) sino a 16 ms (durata max totale di 17 minuti e 48,576 secondi).
I dati acquisiti in formato SEG-2, sono stati visionati, filtrati e studiati per il "picking" mediante il software specifico di Seisimager, Winpick della OYO Corp.

IL TEST SISMICO DOWN-HOLE

La prova Down - Hole è una delle più comunemente usate per la misurazione delle onde di taglio. Il test consiste nell'utilizzare una sorgente reversibile bidirezionale sulla superficie del terreno ed un ricevitore opportunamente orientato e disposto a diverse profondità.

La sorgente è stata posizionata vicino al foro, vale a dire 3.80 metri, in modo da poter registrare le onde di taglio e di volume dirette e non rifratte dai diversi strati di terreno. Un opportuno sistema di acquisizione degli output della tripletta consente inoltre la visualizzazione delle tracce delle onde prodotte dalla sorgente.

Per identificare facilmente gli arrivi delle onde di taglio, una sorgente di downhole deve produrre forti impulsi di taglio e trascurabili quelli di compressione.

Quello che si misura nella prova downhole è la velocità delle onde di taglio bidirezionali polarizzate nel piano orizzontale (SH), quindi si utilizzano due geofoni orizzontali ortogonali tra loro ed un geofono verticale utilizzato per acquisire le onde di compressione.

METOLOGIA INTERPRETATIVA

La strumentazione utilizzata per l'esecuzione delle prove Down-Hole è costituita da un sismografo GEOMETRICS mod. GEODE a 24 canali ad incremento di segnale, da una tripletta di geofoni coassiali munita di sistema pneumatico di ancoraggio.

L'energizzazione necessaria a sviluppare le onde S è stata effettuata tramite un martello di 10 Kg, utilizzato per percuotere, nelle direzioni orizzontali, un blocco ligneo tenuto solidale al suolo mediante il carico dell'autovettura. In tal modo l'energia così prodotta ha garantito la trasmissione al terreno dell'impulso di taglio.

La trasmissione delle onde di compressione si è ottenuta mediante colpi verticali. Le curve tempi di arrivo – profondità hanno consentito di individuare sismostrati a comportamento elastico simile, valutando cioè i tratti di curva a pendenza costante.

MODULI ELASTICI

Dai dati ottenuti delle down-hole, nota la densità del terreno, è stato possibile ricavare i moduli relativi alle proprietà elastiche dei mezzi attraversati. In genere le deformazioni di taglio così ottenute sono molto basse (<0.001%) per cui il modulo di taglio è Gmax. Tale modulo riveste particolare importanza nei problemi dell'interazione dinamica terreno – struttura che coinvolgono grosse deformazioni, tipo le scosse di terremoto; le proprietà dinamiche di bassa ampiezza a partire dai punti di sorgente forniscono infatti importanti dati di riferimento. I parametri di deformazione del terreno, sono legati al rapporto esistente tra gli incrementi di tensione e deformazioni unitarie, e possono essere:

- di compressione assiale;
- di distorsione, secondo le varie componenti cartesiane;
- di variazione di volume.

Tali parametri non sono costanti, come per un mezzo elastico, ma variano a seconda della storia tensionale del materiale, secondo una sorta di ciclo isteretico, legato al decorso della dello stress, tale che a ciascun decorso di tensione corrispondono degli stati di deformazione. Tale binomio stress-deformazioni costituisce una descrizione completa delle caratteristiche meccaniche del terreno in questione. Dalla teoria dell'elasticità è pertanto possibile esprimere le proprietà elastiche dei terreni secondo i seguenti parametri:

deformazioni di volume:

MODULO DI COMPRESSIBILITÀ espresso dalla formula $M = (\gamma * Vp^2)/g$

deformazioni di taglio:

MODULO DI TAGLIO espresso dalla formula $G = (\gamma * Vs^2)/g$

MODULO DI YOUNG ESPRESSO DALLA FORMULA $G = (2\gamma * Vs^2)(1+\nu)/g$

con g = accelerazione di gravità

γ = peso di volume

ν = coefficiente di Poisson

Al fine della valutazione dei cedimenti - a causa del meccanismo di deformazione che si instaura nel terreno – è fondamentale considerare le proprietà elastiche del terreno stesso, esprimibili mediante il coefficiente di Poisson, il quale nei valori minimi e massimi può assume i seguenti significati:

$\nu = 0$ => indilatabilità (assenza di deformazione laterale)

$\nu = 0.5$ => indeformabilità

Il geologo prospettore
(Dr. Domenico Angelone)

Misure sismiche in foro

PROVA DOWN HOLE LOCALITA' CASALDUNI (BN) - PER CONTO DI VIANINI LAVORI S.P.A.

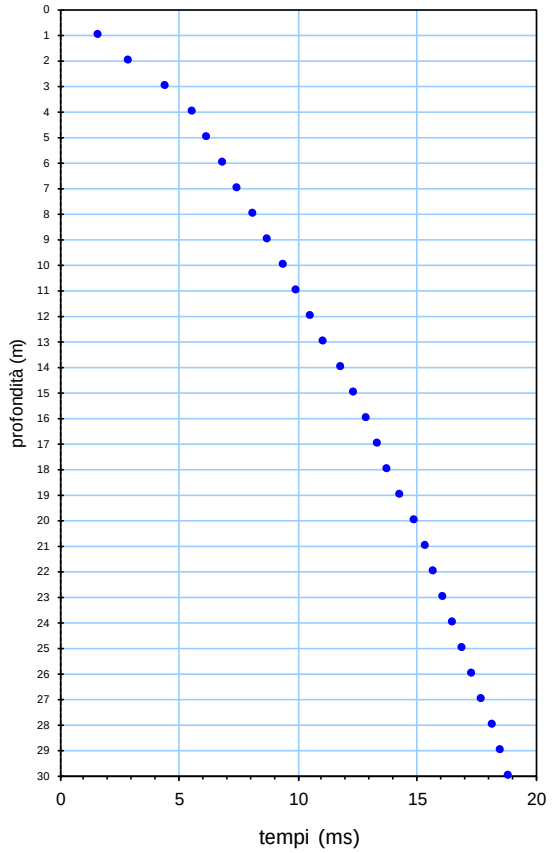
	orientamento:		
	Offset dal foro (Vs):	3.80	metri
	Offset dal foro (Vp):	3.80	metri
	Numero di misure:	30	

		Tempi Sperimentali		Tempi Reali		Velocità Intervallari	
Misure in foro	Profondità (metri)	Onda P (ms)	Onda S (ms)	Onda P (ms)	Onda S (ms)	Vp (m/s)	Vs (m/s)
1	1.0	6.54871	9.83536	1.667	2.503	600	400
2	2.0	6.32654	11.76640	2.947	5.480	781	336
3	3.0	7.23556	15.25021	4.483	9.450	651	252
4	4.0	7.71246	19.14394	5.592	13.879	902	226
5	5.0	7.83541	20.98207	6.238	16.705	1546	354
6	6.0	8.12145	23.47885	6.861	19.835	1605	319
7	7.0	8.52146	25.75802	7.489	22.638	1592	357
8	8.0	8.99841	27.70817	8.128	25.028	1565	418
9	9.0	9.52314	30.49877	8.773	28.097	1550	326
10	10.0	10.09712	32.59259	9.439	30.467	1503	422
11	11.0	10.56987	35.63457	9.991	33.681	1812	311
12	12.0	11.07414	38.23681	10.557	36.453	1764	361
13	13.0	11.55215	41.08668	11.088	39.436	1884	335
14	14.0	12.27471	43.73333	11.846	42.206	1319	361
15	15.0	12.80221	45.94568	12.410	44.539	1773	429
16	16.0	13.26312	48.47408	12.904	47.162	2024	381
17	17.0	13.74521	50.13334	13.414	48.926	1961	567
18	18.0	14.12215	53.05679	13.818	51.913	2479	335
19	19.0	14.64547	55.58519	14.361	54.506	1840	386
20	20.0	15.17921	57.34967	14.912	56.342	1814	545
21	21.0	15.63654	59.06173	15.387	58.118	2109	563
22	22.0	15.94324	61.15556	15.711	60.263	3087	466
23	23.0	16.33855	62.53827	16.120	61.702	2443	695
24	24.0	16.75215	63.79697	16.546	63.012	2347	763
25	25.0	17.12012	65.73827	16.926	64.992	2634	505
26	26.0	17.52145	66.82120	17.337	66.119	2430	887
27	27.0	17.90125	67.87519	17.727	67.213	2569	914
28	28.0	18.36254	68.95264	18.196	68.326	2131	898
29	29.0	18.69321	69.99115	18.535	69.398	2950	933
30	30.0	19.03215	70.96948	18.881	70.407	2886	991

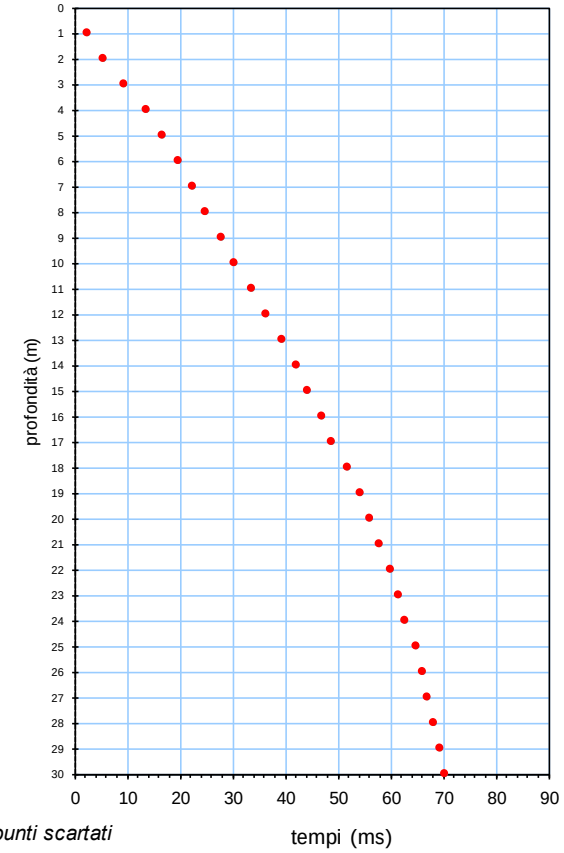
PROVA DOWN HOLE LOCALITA' CASALDUNI (BN) - PER CONTO DI VIANINI LAVORI S.P.A.

PROFILO TEMPI DI ARRIVO - PROFONDITA'

Primi arrivi



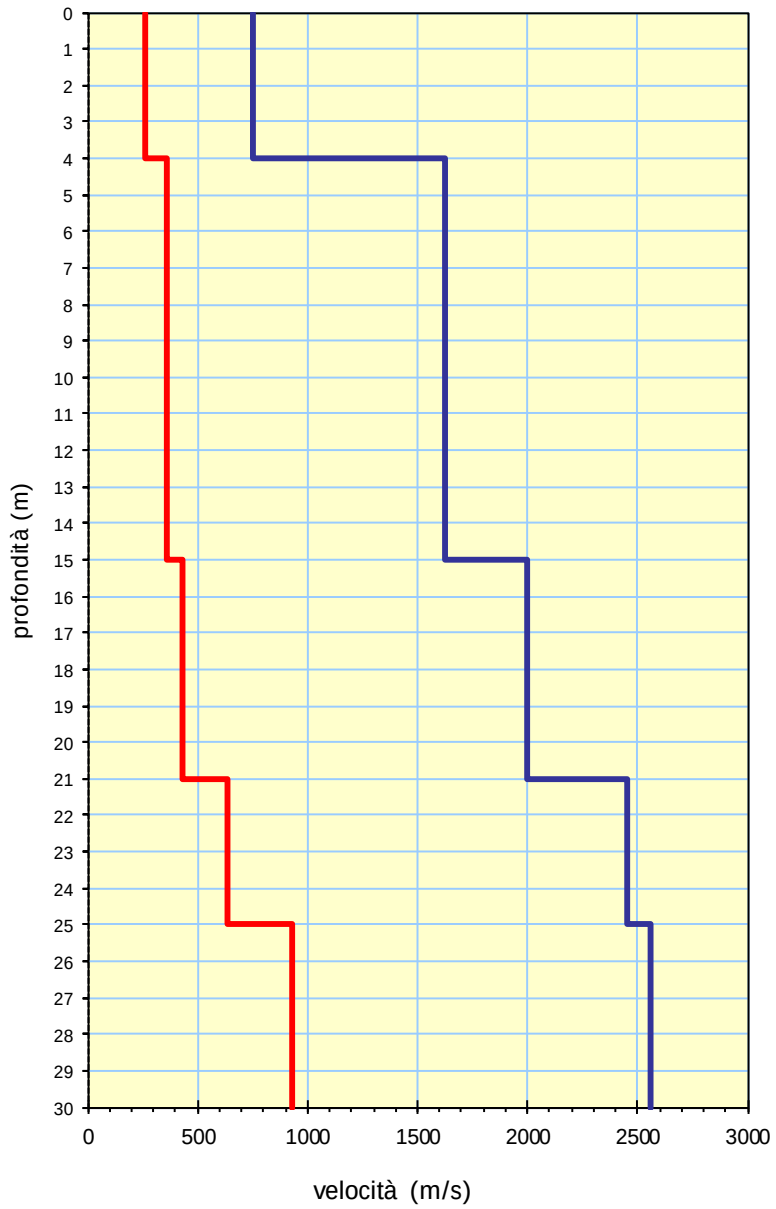
Secondi arrivi



| *punti scartati*

PROVA DOWN HOLE LOCALITA' CASALDUNI (BN) - PER CONTO DI VIANINI LAVORI S.P.A.

PROFILO VELOCITA' - PROFONDITA'



Vs **Vp**

INDAGINE DOWN-HOLE - PROSPETTO RIEPILOGATIVO DEI MODULI ELASTICI

sismostrati da m	a m	Vp (m/s)	Vs (m/s)	γ (KN/m^3)	ν	G_0 (MN/m^2)	M (MN/m^2)	E (MN/m^2)	Rp (MPa/m*s)	Rs (MPa/m*s)
0.0	4.0	749	261	20.00	0.431	1.385.E+03	1.144.E+04	3.965.E+03	1.528.E+01	5.317.E+00
4.0	15.0	1624	358	21.00	0.475	2.740.E+03	5.655.E+04	8.080.E+03	3.481.E+01	7.662.E+00
15.0	21.0	2002	436	21.00	0.475	4.073.E+03	8.592.E+04	1.202.E+04	4.291.E+01	9.343.E+00
21.0	25.0	2455	640	21.00	0.464	8.770.E+03	1.291.E+05	2.567.E+04	5.261.E+01	1.371.E+01
25.0	30.0	2557	929	21.00	0.424	1.849.E+04	1.401.E+05	5.266.E+04	5.480.E+01	1.991.E+01

ν	coefficiente di Poisson
G_0	Modulo di Taglio iniziale
M	Modulo di Compressibilità
E	Modulo di Young
Rp, Rs	Rigidità sismiche

Vs_{eq} (m) = 378

PROVA DOWN HOLE LOCALITA' CASALDUNI (BN) - PER CONTO DI VIANINI LAVORI S.P.A.

COMMITTENTE:

VIANINI LAVORI S. p. A.

CANTIERE E/O OPERA:

PROGETTAZIONE DI FATTIBILITA' TECNICA ED ECONOMICA CONCERNENTI L'INTERVENTO DI UTILIZZO IDROPOTABILE DELLE ACQUE DELL'INVASO DI CAMPOLATTARO

LOCALITA':

COLLEMASTARZO - CASALDUNI (BN)

ALLEGATO I

PROVE DILATOMETRICHE

I.G. S.r.l. (MANDATARIA)
dr. ing. Vincenzo

I. G. s.r.l.
L'Amministratore
Ing. V. PINTO

GEOTEC S.p.A. (MANDANTE)
dr. geol. Antonello Reale

GEOTEC S.p.A.
Via G. Barbato, 20
Zona Industriale S. Giovanni in Galdo
86100 CAMPOBASSO
P. IVA 007 1263 070 6

R.T.I. tra	borehole	S3	probe depth m	90,5	mod DVT REV 2 MARZO 2018 code 3
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
GEOTEC SPA - Campobasso (mandante)	Project	DERIVAZIONE CAMPOLATTARO	coordinates	EAST	report 2001 DRT
	site	CASALDUNI (BN)		NORTH	date 30.01.2020 pag 1/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

Borehole	S3		
test	3	depth m	90,50
slope (degree) 90		core barrell C.SEMPLICE	
Device: CSM Type GEODV01 95 mm			
Orientation capteur C1=		Standard method: ISRM 1987	
Probe diam 95 MM		Borehole diam 101 MM	
Meteo		Temperature	
lithotype	ARGILLA MARNOSA		
water table	25,9	POCKET PENETRO METER	

Creep test P (Bars) =

Temps min	PBAR	MM
0	30,0	103,684
1	30,0	103,710
2	30,0	103,736
3	30,0	103,749
4	30,0	103,762
5	30,0	103,787

PROBE SCHEME

rod adaptor
electronic device
double action piston
expandable cylinder

PROBE CALIBRATION

probe	GEODV01 CSM TYPE
membrane	CAUCCIU' ARMATO
measure cell height (cm)	
V0 cell volume at rest (cmc)	3171
lenght cable (mt)	100
Volume initial Vi (cmc)	635
diam calibration tube (cm)	10,1
tube calibration volume cmc	3806

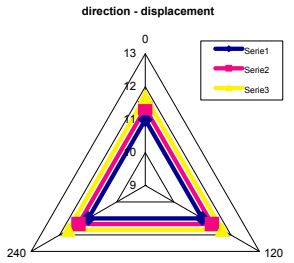
Calibration in air

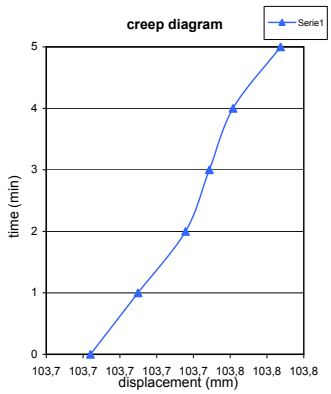
coeff *m* 0,11 Kpa/cmc

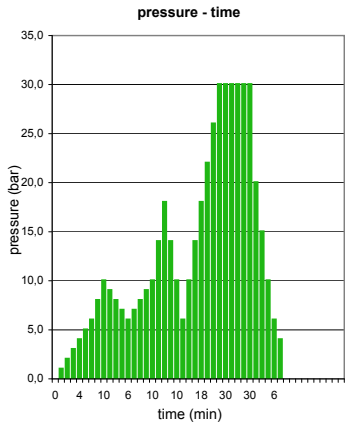
Confined calibration

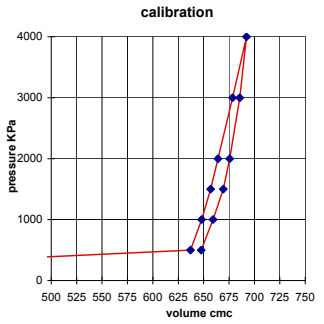
first load 14,3 cmc/Mpa
unload 10,4 cmc/Mpa

LITHOTYPE









PRESSURE STEP	P bar	Pcorr Kpa	Vol cmc	e c %	1/V 1000/cmc	diameter (mm)	Dil. Diam (mm)	Modulo MPa
0	0,0	0	0,0	-9,077	0,000	92,204	0,000	0,0
1	1,0	955	424,0	-3,190	2,359	98,174	5,970	19,0
2	2,0	1044	502,9	-2,132	1,988	99,247	7,043	10,2
3	3,0	1134	571,9	-1,218	1,749	100,174	7,970	12,1
4	4,0	1227	615,8	-0,640	1,624	100,760	8,556	19,9
5	5,0	1322	639,8	-0,326	1,563	101,079	8,875	37,8
6	**6,0**	**1417**	**664,8**	**0,000**	**1,504**	**101,409**	**9,205**	**36,4**
7	8,0	1611	681,7	0,220	1,467	101,632	9,428	110,2
8	10,0	1805	697,6	0,427	1,433	101,842	9,638	117,7
9	9,0	1707	697,6	0,428	1,433	101,843	9,639	-23519,9
10	8,0	1609	697,7	0,428	1,433	101,843	9,639	-23520,2
11	7,0	1512	696,7	0,416	1,435	101,831	9,627	986,2
12	6,0	1414	694,8	0,390	1,439	101,805	9,601	482,2
13	7,0	1511	697,7	0,429	1,433	101,844	9,640	319,0
14	8,0	1609	698,7	0,441	1,431	101,856	9,652	986,5
15	9,0	1707	701,6	0,480	1,425	101,895	9,691	319,3
16	10,0	1805	705,6	0,531	1,417	101,947	9,743	238,6
17	14,0	2193	733,4	0,891	1,363	102,313	10,109	135,8
18	18,0	2582	759,3	1,225	1,317	102,651	10,447	147,4
19	14,0	2190	759,4	1,227	1,317	102,653	10,449	-23895,3
20	10,0	1799	753,6	1,151	1,327	102,577	10,373	658,0
21	6,0	1408	745,8	1,050	1,341	102,474	10,270	489,0
22	10,0	1799	750,6	1,113	1,332	102,537	10,333	792,5
23	14,0	2191	756,4	1,188	1,322	102,614	10,410	657,5
24	18,0	2581	767,3	1,328	1,303	102,755	10,551	354,4
25	22,0	2971	789,1	1,608	1,267	103,040	10,836	176,1
26	26,0	3360	817,0	1,965	1,224	103,401	11,197	138,7
27	**30,0**	**3749**	**838,8**	**2,243**	**1,192**	**103,684**	**11,480**	**178,3**
28	30,0	3749	840,8	2,269	1,189	103,710	11,506	-1,1
29	30,0	3749	842,8	2,294	1,187	103,736	11,532	-1,1
30	30,0	3748	843,8	2,307	1,185	103,749	11,545	-1,1
31	30,0	3748	844,8	2,320	1,184	103,762	11,558	-1,1
32	30,0	3748	846,8	2,345	1,181	103,787	11,583	-1,1
33	20,0	2769	838,2	2,236	1,193	103,676	11,472	1142,4
34	15,0	2280	831,4	2,149	1,203	103,588	11,384	720,5
35	10,0	1791	820,6	2,011	1,219	103,449	11,245	452,2
36	6,0	1401	807,8	1,847	1,238	103,282	11,078	303,0
37	4,0	1206	798,8	1,733	1,252	103,166	10,962	217,2

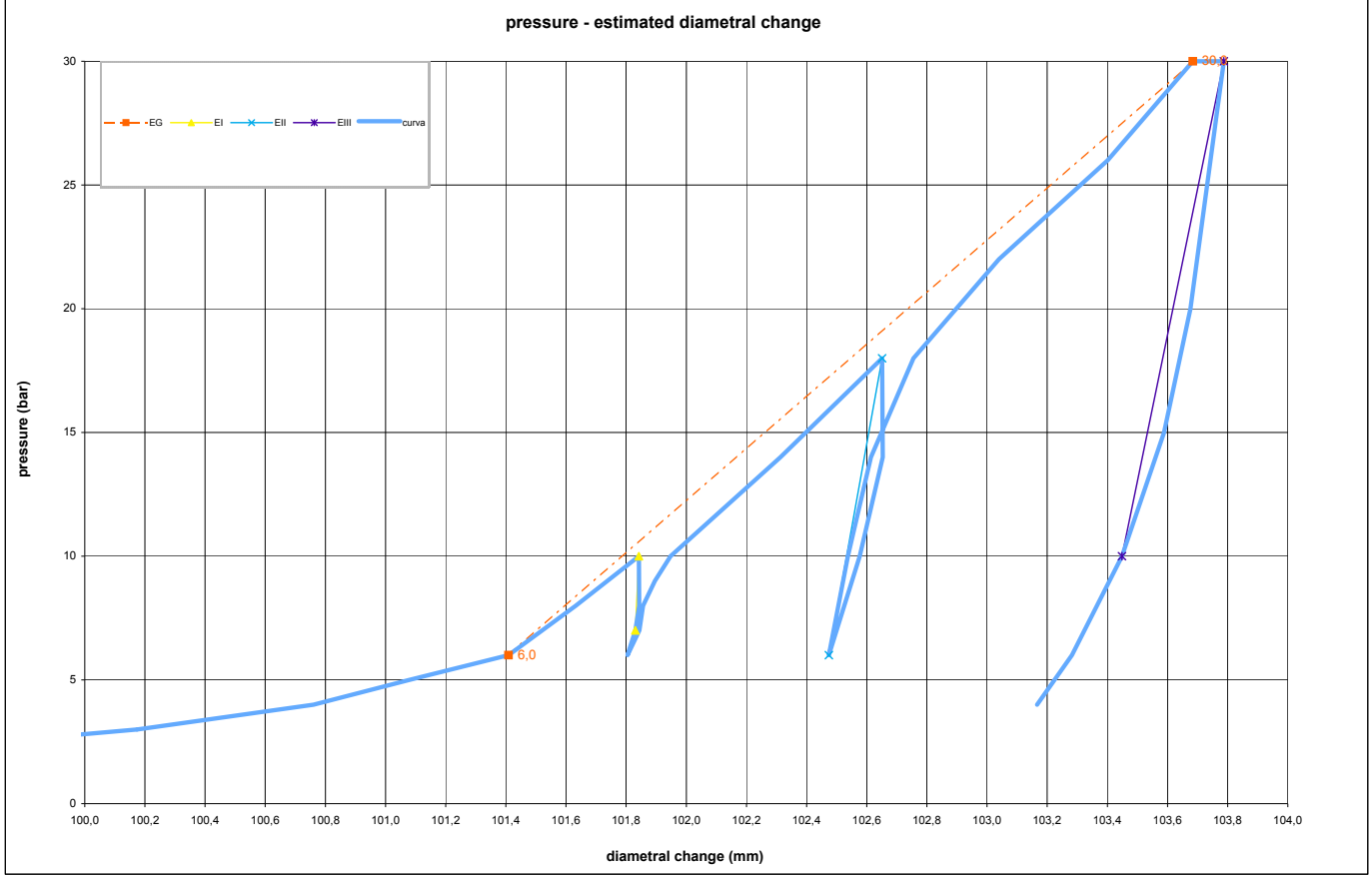
i valori diametrali sono calcolati come valore medio della sonda cillindrica in espansione

FIELD LIMITS

	P	P corr	V corr	creep	1000/V	diameter	Dil. Diam	loop
min	6,0	1417,2	664,8	0,0	1,5	101,4	9,2	primo
max	30,0	3749,0	838,8	2,2	1,2	103,7	11,5	carico
max	10,0	1805,4	697,6	0,4	1,4	101,8	9,6	I
min	7,0	1511,6	696,7	0,4	1,4	101,8	9,6	
max	18,0	2582,3	759,3	1,2	1,3	102,7	10,4	II
min	6,0	1408,0	745,8	1,1	1,3	102,5	10,3	
max	30,0	3748,1	846,8	2,3	1,2	103,8	11,6	III
min	10,0	1791,4	820,6	2,0	1,2	103,4	11,2	

R.T.I. tra	DILATOMETRIC ROCK TEST DRT						mod DVT REV 2 MARZO 2018
	borehole	S3	probe depth m	90,5		code	3
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept.	2001	
GEOTEC SPA -Campobasso(mandante)	Project	DERIVAZIONE CAMPOLATTARO			report	2001	DRT
			coordinates	EAST			
	site	CASALDUNI (BN)		NORTH	date	30.01.2020	pag 2/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987



DATA PROCESSING						SENSOR 1	SENSOR 2	SENSOR 3	SENSOR AVE
			ELASTICITY MODULUS Ei						
Legend:	DATA		loop	Pmax	Pmin	E1 (Mpa)	E2 (Mpa)	E3 (Mpa)	Eav (Mpa)
H = test depth	symbol	datum	1	10,00	7,00				3219
W = water table depth	γnsoil	2,4	2	18,00	6,00				843
ν = Poisson ratio	W (ml)	90,5	3						732
vo = cell initial volume	ν	0,25	4						
do =cell initial diameter	vo (cmc)	3171	5						
Φ = borehole wall diameter	do (mm)	92,20	DEFORMATION MODULUS Ti						
Po = start pressure	σv (kPa)	2172	loop	Pmax	Pmin	T1 (Mpa)	T2 (Mpa)	T3 (Mpa)	Tm (Mpa)
Pmax = max loop pressure (MPa)			1	10,00	6,00				114
Pmin = min loop pressure (MPa)			2	18,00	10,00				122
d max displacement at P max			3	30,00	18,00				130
d min displacement at P min			4						
σv vertical total stress estimated			5						
ε c = dR / Ro			GLOBAL DEFORMATION MODULUS EG						
ELASTICITY MODULUS Ei	ELASTICITY MODULUS Ey estimated			Pmax	Pmin	EG1 (Mpa)	EG2 (Mpa)	EG3 (Mpa)	EGm (Mpa)
Ei = (1+ ν) Φ Pax - Pmin	Ey= (EII+EIII)/2			30,00	6,00				130
dmax - dmin	Ey= EIII		DIAMETER			F	F	F	F
			beginning diameter (mm)						101,409
DEFORMATION MODULUS Ti			final diameter (mm)						102,651
Ti = (1+ ν) Φ Pi - Pi-1			range mm						1,242
Xi - Xi-1	DM loop minimun displacement					DILATOMETRIC AND GEOTECHNICAL ESTIMATED PARAMETERS			
	Pbar	C1	C2	C3	Cm	Po initial pressure (KPa)	1417	**T3** (MPa)	**130**
GLOBAL DEFORMATION MODULUS EG	bar	0	120	240	0	Pf creep pressure (KPa)	3749	**E3** (MPa)	**732**
EG = (1+ ν) Φ Pmax - Po	10,0	10,997	10,997	10,997	9,638	PL limit pres. (KPa) Cassan >	5157	E/P'L	38,03
dmax - do						PL' net limit pres (KPa) >	3419	EG/Ey	0,18
note:						Ko lateral coeff at rest (KPa)	0,80	**cu** coesion (KPa) johnson	
						Pho lateral pressure (KPa)	1738	**ϕ** friction angle (°) >	

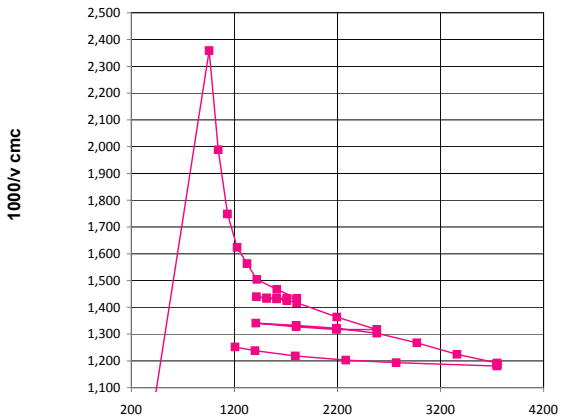
R.T.I. tra	DILATOMETRIC ROCK TEST DRT				mod DVT REV 2 MARZO 2018
	borehole	S3	probe depth m	90,5	code 3
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
GEOTEC SPA -Campobasso(mandante)	coordinates		EAST		
	site	CASALDUNI (BN)	NORTH	date 30.01.2020	pag 3/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

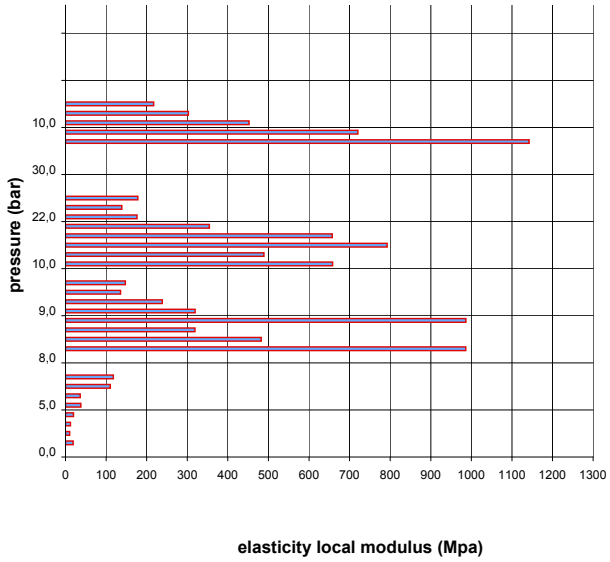
PLACE

SECTION

pressure - 1/V



elasticity local modulus - pressure



R.T.I. tra	borehole	S3	probe depth m	79,5	mod DVT REV 2 MARZO 2018 code 2
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
GEOTEC SPA - Campobasso (mandante)	Project	DERIVAZIONE CAMPOLATTARO	coordinates	EAST	report 2001 DRT
	site	CASALDUNI (BN)		NORTH	date 30.01.2020 pag 1/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

Borehole	S3		
test	2	depth m	79,50
slope (degree)	90	core barrell	C.SEMPLICE
Device:	CSM Type GEODV01 95 mm		
Orientation capteur C1=		Standard method:	ISRM 1987
Probe diam	95 MM	Borehole diam	101 MM
Meteo		Temperature	
lithotype	ARGILLA DEBOLMENTE MARNOSA SCAGLIOSA		
water table	25,9	POCKET PENETRO METER	

Creep test P (Bars) =

Temps min	PBAR	MM
0	26,0	103,931
1	26,0	103,957
2	26,0	103,983
3	26,0	103,996
4	26,0	104,022
5	26,0	104,035

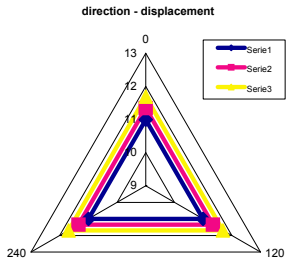
PROBE SCHEME

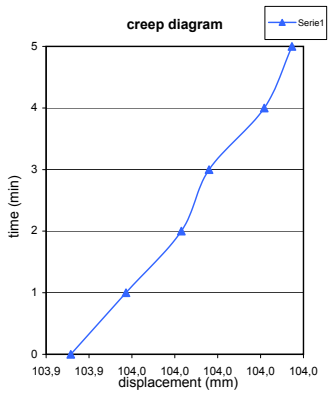
rod adaptor
electronic device
double action piston
expandable cylinder

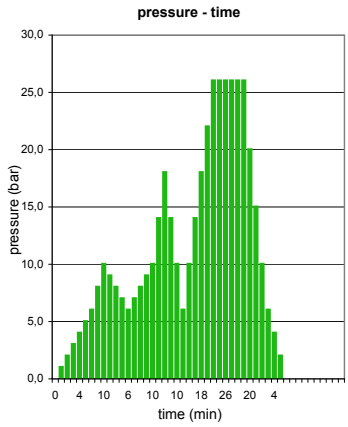
PROBE CALIBRATION

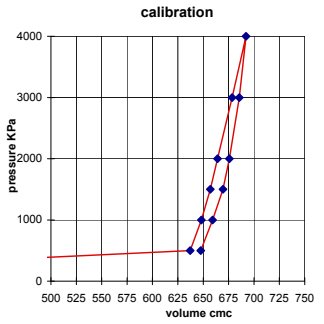
probe	GEODV01 CSM TYPE	
membrane	CAUCCIU' ARMATO	
measure cell height (cm)		
V0 cell volume at rest (cmc)	3171	
lenght cable (mt)	100	
Volume initial Vi (cmc)	635	
diam calibration tube (cm)	10,1	
tube calibration volume cmc	3806	
Calibration in air		
coeff *m*	0,11	Kpa/cmc
Confined calibration		
first load	14,3	cmc/Mpa
unload	10,4	cmc/Mpa

LITHOTYPE









PRESSURE STEP	P bar	Pcorr Kpa	Vol cmc	e c %	1/V 1000/cmc	diameter (mm)	Dil. Diam (mm)	Modulo MPa
0	0,0	0	0,0	-9,699	0,000	92,204	0,000	0,0
1	1,0	818	655,0	-0,811	1,527	101,279	9,075	10,9
2	2,0	915	668,9	-0,630	1,495	101,464	9,260	66,2
3	3,0	1011	681,9	-0,462	1,467	101,635	9,431	71,6
4	4,0	1108	691,8	-0,334	1,445	101,766	9,562	93,8
5	5,0	1205	705,8	-0,154	1,417	101,950	9,746	66,8
6	**6,0**	**1301**	**717,8**	**0,000**	**1,393**	**102,107**	**9,903**	**78,4**
7	8,0	1495	732,7	0,192	1,365	102,303	10,099	126,8
8	10,0	1691	738,6	0,268	1,354	102,380	10,176	322,2
9	9,0	1593	736,6	0,242	1,358	102,355	10,151	487,5
10	8,0	1495	735,7	0,230	1,359	102,342	10,138	996,2
11	7,0	1397	735,7	0,231	1,359	102,343	10,139	-23751,4
12	6,0	1300	732,8	0,193	1,365	102,304	10,100	322,1
13	7,0	1397	735,7	0,231	1,359	102,343	10,139	322,1
14	8,0	1495	736,7	0,243	1,357	102,355	10,151	996,2
15	9,0	1593	739,6	0,281	1,352	102,394	10,190	322,4
16	10,0	1690	744,6	0,344	1,343	102,459	10,255	192,2
17	14,0	2079	769,4	0,662	1,300	102,783	10,579	153,8
18	18,0	2468	794,3	0,979	1,259	103,107	10,903	154,8
19	14,0	2076	794,4	0,981	1,259	103,109	10,905	-24108,1
20	10,0	1685	788,6	0,907	1,268	103,033	10,829	663,8
21	6,0	1295	773,8	0,717	1,292	102,840	10,636	259,8
22	10,0	1686	783,6	0,843	1,276	102,968	10,764	392,2
23	14,0	2076	798,4	1,032	1,252	103,161	10,957	260,5
24	18,0	2467	809,3	1,170	1,236	103,302	11,098	358,2
25	22,0	2856	830,1	1,434	1,205	103,572	11,368	186,5
26	**26,0**	**3245**	**858,0**	**1,787**	**1,166**	**103,931**	**11,728**	**140,2**
27	26,0	3245	860,0	1,812	1,163	103,957	11,753	-1,1
28	26,0	3244	862,0	1,837	1,160	103,983	11,779	-1,1
29	26,0	3244	863,0	1,850	1,159	103,996	11,792	-1,1
30	26,0	3244	865,0	1,875	1,156	104,022	11,818	-1,1
31	26,0	3244	866,0	1,888	1,155	104,035	11,831	-1,1
32	20,0	2657	856,2	1,764	1,168	103,909	11,705	606,1
33	15,0	2168	849,4	1,678	1,177	103,821	11,617	723,8
34	10,0	1679	838,6	1,542	1,192	103,682	11,478	454,2
35	6,0	1289	825,8	1,379	1,211	103,515	11,311	304,4
36	4,0	1094	816,8	1,266	1,224	103,400	11,196	218,1
37	2,0	899	805,9	1,127	1,241	103,258	11,054	177,5

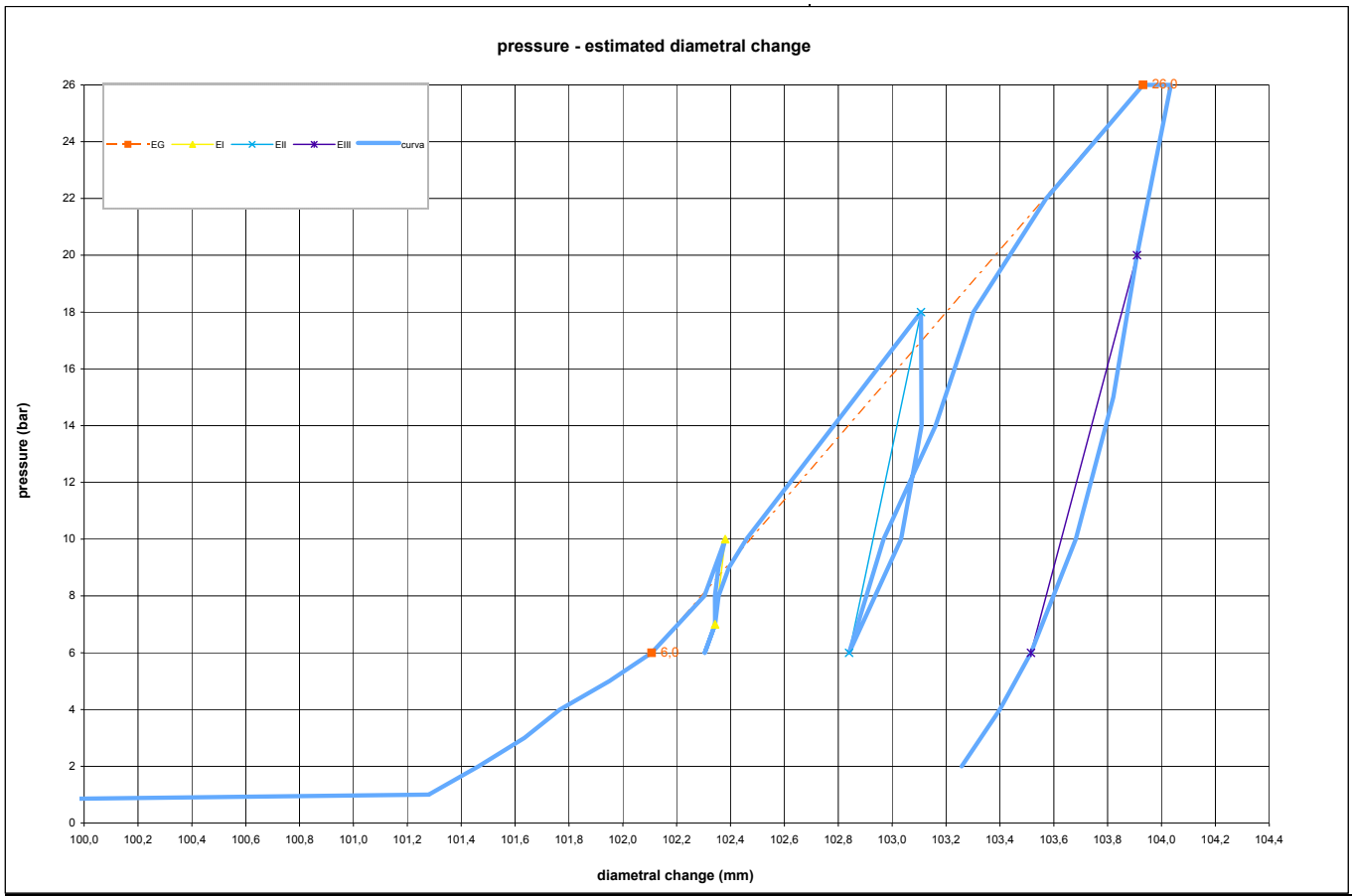
i valori diametrali sono calcolati come valore medio della sonda cillindrica in espansione

FIELD LIMITS

	P	P corr	V corr	creep	1000/V	diameter	Dil. Diam	loop
min	6,0	1301,2	717,8	0,0	1,4	102,1	9,9	primo
max	26,0	3244,9	858,0	1,8	1,2	103,9	11,7	carico
max	10,0	1690,8	738,6	0,3	1,4	102,4	10,2	I
min	7,0	1397,1	735,7	0,2	1,4	102,3	10,1	
max	18,0	2468,3	794,3	1,0	1,3	103,1	10,9	II
min	6,0	1294,8	773,8	0,7	1,3	102,8	10,6	
max	20,0	2657,2	856,2	1,8	1,2	103,9	11,7	III
min	6,0	1288,9	825,8	1,4	1,2	103,5	11,3	

A.T.I. tra	DILATOMETRIC ROCK TEST DRT				mod DVT REV 2 MARZO 2018
	borehole	S3	probe depth m	79,5	code 2
R.T.I. I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001,000
GEOTEC SPA -Campobasso(mandante)	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
		coordinates	EAST		
	site	CASALDUNI (BN)	NORTH	date 30.01.2020	pag 2/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987



DATA PROCESSING						SENSOR 1	SENSOR 2	SENSOR 3	SENSOR AVE
			ELASTICITY MODULUS Ei						
Legend:	DATA		loop	Pmax	Pmin	E1 (Mpa)	E2 (Mpa)	E3 (Mpa)	Eav (Mpa)
H = test depth	symbol	datum	1	10,00	7,00				994
W = water table depth	γnsoil	2,4	2	18,00	6,00				561
ν = Poisson ratio	W (ml)	79,5	3						444
vo = cell initial volume	ν	0,25	4						
do =cell initial diameter	vo (cmc)	3171	5						
Φ = borehole wall diameter	do (mm)	92,20	DEFORMATION MODULUS Ti						
Po = start pressure	σv (kPa)	1908	loop	Pmax	Pmin	T1 (Mpa)	T2 (Mpa)	T3 (Mpa)	Tm (Mpa)
Pmax = max loop pressure (MPa)			1	10,00	6,00				182
Pmin = min loop pressure (MPa)			2	18,00	10,00				137
d max displacement at P max			3	20,00	18,00				30
d min displacement at P min			4						
σv vertical total stress estimated			5						
ε c = dR / Ro			GLOBAL DEFORMATION MODULUS EG						
ELASTICITY MODULUS Ei	ELASTICITY MODULUS Ey estimated			Pmax	Pmin	EG1 (Mpa)	EG2 (Mpa)	EG3 (Mpa)	EGm (Mpa)
Ei = (1+ ν) Φ Pax - Pmin	Ey= (EII+EIII)/2			26,00	6,00				136
dmax - dmin	Ey= EIII		DIAMETER			F	F	F	F
			beginning diameter (mm)						102,107
DEFORMATION MODULUS Ti			final diameter (mm)						103,107
Ti = (1+ ν) Φ Pi - Pi-1			range mm						1,000
Xi - Xi-1	DM loop minimun displacement					DILATOMETRIC AND GEOTECHNICAL ESTIMATED PARAMETERS			
	Pbar	C1	C2	C3	Cm	Po initial pressure (KPa)	1301	**T3** (MPa)	**30**
GLOBAL DEFORMATION MODULUS EG	bar	0	120	240	0	Pf creep pressure (KPa)	3245	**E3** (MPa)	**444**
EG = (1+ ν) Φ Pmax - Po	10,0	10,997	10,997	10,997	10,176	PL limit pres. (KPa) Cassan >	4448	E/P'L	10,29
dmax - do						PL' net limit pres (KPa) >	2921	EG/Ey	0,07
note:						Ko lateral coeff at rest (KPa)	0,80	**cu** coesion (KPa) johnson	
						Pho lateral pressure (KPa)	1526	**ϕ** friction angle (°) >	

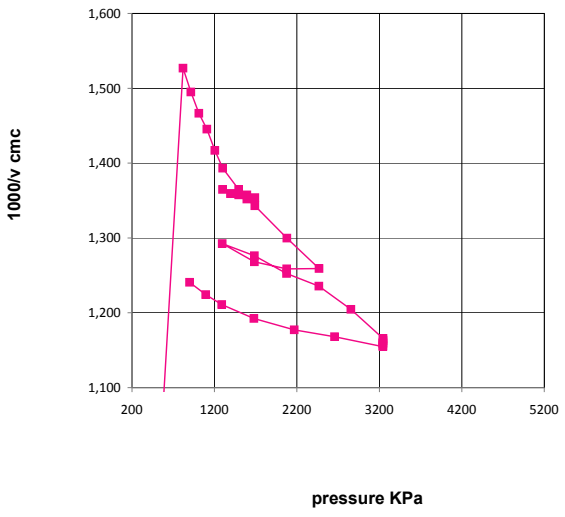
A.T.I. tra	DILATOMETRIC ROCK TEST DRT				mod DVT REV 2 MARZO 2018
	borehole	S3	probe depth m	79,5	code 2
R.T.I. I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
GEOTEC SPA -Campobasso(mandante)	coordinates		EAST		
	site	CASALDUNI (BN)	NORTH	date 30.01.2020	pag 3/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

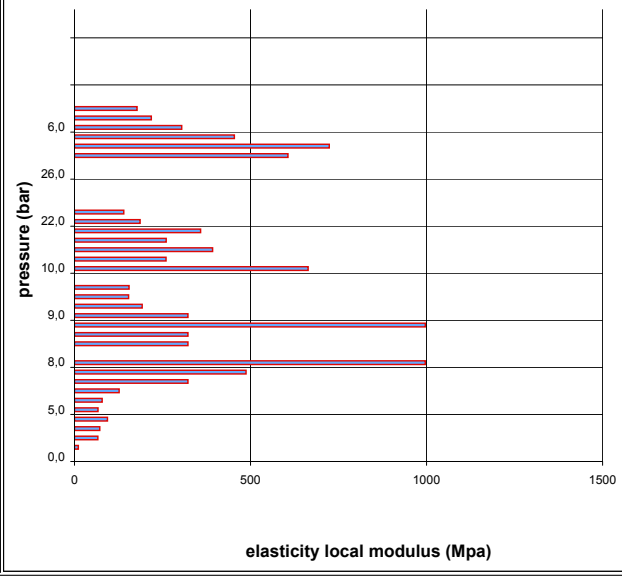
PLACE

SECTION

pressure - 1/V



elasticity local modulus - pressure



R.T.I. tra	borehole	S3	probe depth m	72,0	mod DVT REV 2 MARZO 2018 code 1
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
GEOTEC SPA - Campobasso (mandante)	Project	DERIVAZIONE CAMPOLATTARO	coordinates	EAST	report 2001 DRT
	site	CASALDUNI (BN)		NORTH	date 30.01.2020 pag 1/3

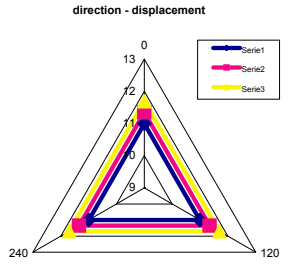
DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

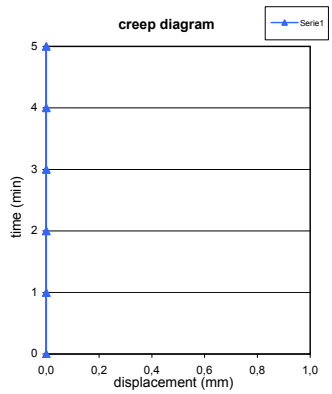
Borehole	S3		
test	1	depth m	72,00
slope (degree)	90	core barrell	C.SEMPLICE
Device:	CSM Type GEODV01 95 mm		
Orientation capteur C1=		Standard method:	ISRM 1987
Probe diam 95 MM		Borehole diam	101 MM
Meteo		Temperature	
lithotype	ARGILLA DEBOLMENTE MARNOSA SCAGLIOSA		
water table	15,0	POCKET PENETRO METER	

Creep test P (Bars) =

Temps min	PBAR	MM
0	0,0	0,000
1	0,0	0,000
2	0,0	0,000
3	0,0	0,000
4	0,0	0,000
5	0,0	0,000

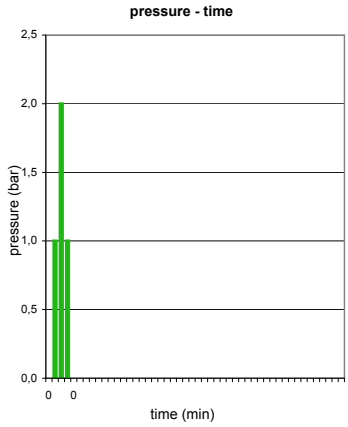
LITHOTYPE





PROBE SCHEME

rod adaptor
electronic device
double action piston
expandable cylinder

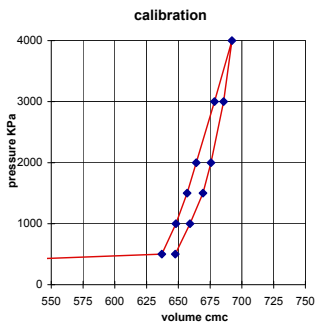


PRESSURE STEP	P bar	Pcorr Kpa	Vol cmc	e c %	1/V 1000/cmc	diameter (mm)	Dil. Diam (mm)	Modulo MPa
0	0,0	0	0,0	-8,358	0,000	92,204	0,000	0,0
1	1,0	749	604,8	0,000	1,654	100,613	8,409	10,8
2	2,0	666	2197,9	19,245	0,455	119,976	27,772	-0,6
3	1,0	665	1344,0	9,351	0,744	110,022	17,818	0,0
4	0,0	668	455,0	-2,003	2,198	98,597	6,393	0,0

i valori diametrali sono calcolati come valore medio della sonda cillindrica in espansione

PROBE CALIBRATION

probe	GEODV01 CSM TYPE	
membrane	CAUCCIU' ARMATO	
measure cell height (cm)		
V0 cell volume at rest (cmc)	3171	
lenght cable (mt)	100	
Volume initial Vi (cmc)	635	
diam calibration tube (cm)	10,1	
tube calibration volume cmc	3806	
Calibration in air		
coeff *m*	0,11	Kpa/cmc
Confined calibration		
first load	14,3	cmc/Mpa
unload	10,4	cmc/Mpa

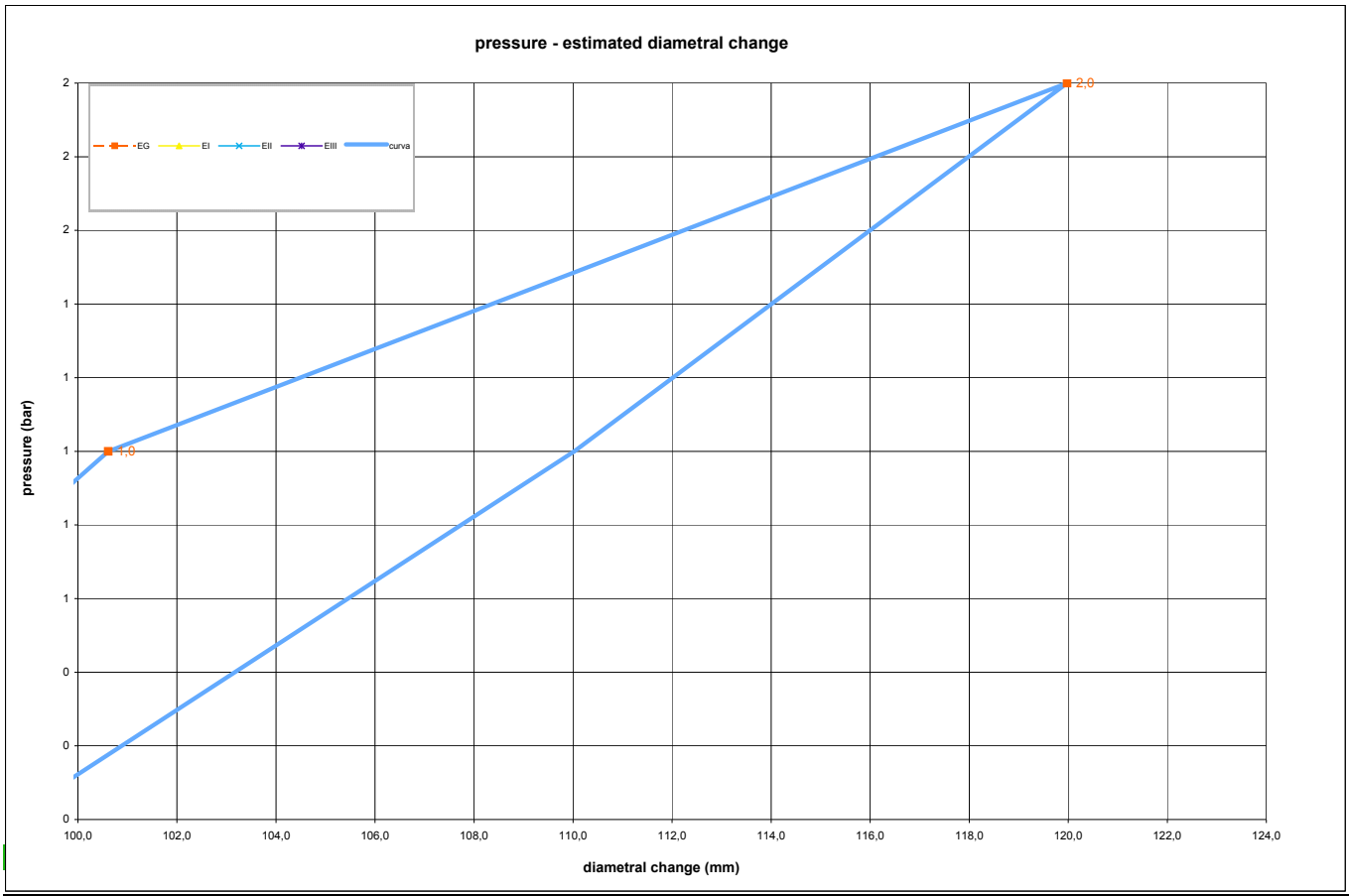


FIELD LIMITS

	P	P corr	V corr	creep	1000/V	diameter	Dil. Diam	loop
min	1,0	749,2	604,8	0,0	1,7	100,6	8,4	primo
max	2,0	665,8	2197,9	19,2	0,5	120,0	27,8	carico
max								
min								
max								
min								
max								
min								

R.T.I. tra	DILATOMETRIC ROCK TEST DRT						mod DVT REV 2 MARZO 2018
	borehole	S3	probe depth m	72,0		code	1
I. I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.		job	2001	v. accept.	2001
	Project	DERIVAZIONE CAMPOLATTARO			report	2001	DRT
GEOTEC SPA -Campobasso(mandante)			coordinates	EAST			
	site	CASALDUNI (BN)		NORTH	date	30.01.2020	pag 2/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987



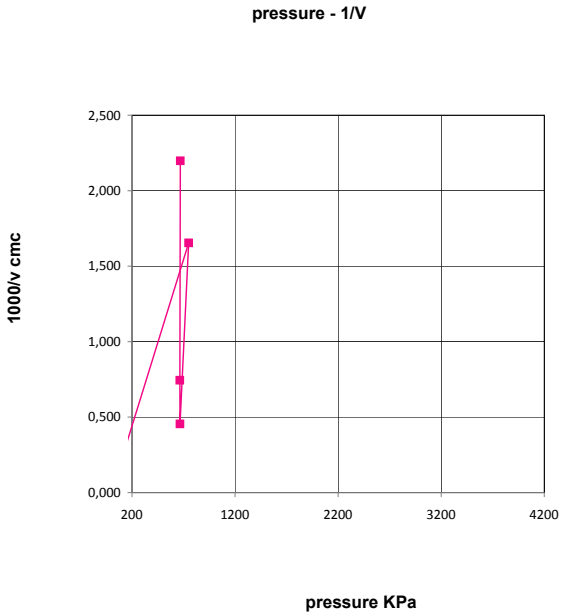
DATA PROCESSING						SENSOR 1	SENSOR 2	SENSOR 3	SENSOR AVE
			ELASTICITY MODULUS Ei						
Legend:	DATA		loop	Pmax	Pmin	E1 (Mpa)	E2 (Mpa)	E3 (Mpa)	Eav (Mpa)
H = test depth	symbol	datum	1	0,00	0,00				
W = water table depth	γnsoil	2,4	2	0,00	0,00				
ν = Poisson ratio	W (ml)	72,0	3						
vo = cell initial volume	ν	0,25	4						
do =cell initial diameter	vo (cmc)	3171	5						
Φ = borehole wall diameter	do (mm)	92,20	DEFORMATION MODULUS Ti						
Po = start pressure	σv (kPa)	1728	loop	Pmax	Pmin	T1 (Mpa)	T2 (Mpa)	T3 (Mpa)	
Pmax = max loop pressure (MPa)			1	0,00	1,00				
Pmin = min loop pressure (MPa)			2	0,00	0,00				
d max displacement at P max			3	0,00	0,00				
d min displacement at P min			4						
σv vertical total stress estimated			5						
ε c = dR / Ro			GLOBAL DEFORMATION MODULUS EG						
ELASTICITY MODULUS Ei	ELASTICITY MODULUS Ey estimated			Pmax	Pmin	EG1 (Mpa)	EG2 (Mpa)	EG3 (Mpa)	
Ei = (1+ ν) Φ Pax - Pmin	Ey= (EII+EIII)/2			2,00	1,00				
dmax - dmin	Ey= EIII		DIAMETER			F	F	F	F
			beginning diameter (mm)						100,613
DEFORMATION MODULUS Ti			final diameter (mm)						119,976
Ti = (1+ ν) Φ Pi - Pi-1			range mm						19,363
Xi - Xi-1	DM loop minimun displacement					DILATOMETRIC AND GEOTECHNICAL ESTIMATED PARAMETERS			
	Pbar	C1	C2	C3	Cm	Po initial pressure (KPa)		**T3** (MPa)	
GLOBAL DEFORMATION MODULUS EG	bar	0	120	240	0	Pf creep pressure (KPa)		**E3** (MPa)	
EG = (1+ ν) Φ Pmax - Po	0,0	10,997	10,997	10,997	0,000	PL limit pres. (KPa) Cassan >		E/P'L	
dmax - do						PL' net limit pres (KPa) >		EG/Ey	
note: FORO MOLTO LARGO - NON RICOSTRUITA CURVA SFORZI DEFORMAZIONI						Ko lateral coeff at rest (KPa)		**cu** coesion (KPa) johnson	
						Pho lateral pressure (KPa)		**ϕ** friction angle (°) >	

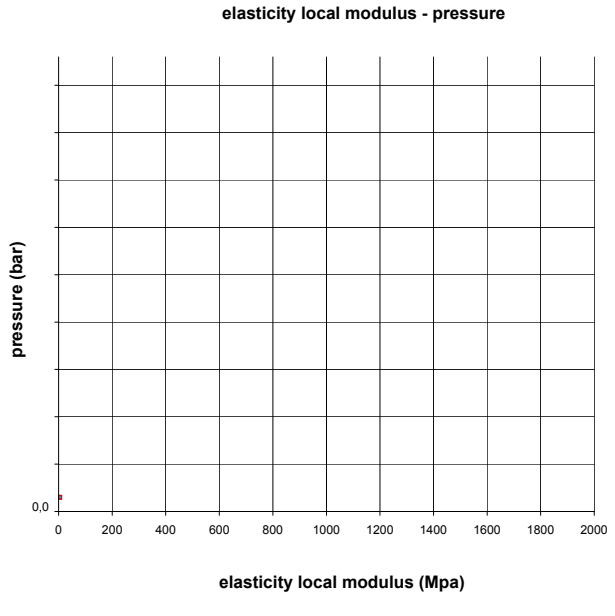
R.T.I. tra	DILATOMETRIC ROCK TEST DRT				mod DVT REV 2 MARZO 2018
	borehole	S3	probe depth m	72,0	code 1
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
GEOTEC SPA -Campobasso(mandante)	coordinates		EAST		
	site	CASALDUNI (BN)	NORTH	date 30.01.2020	pag 3/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

PLACE

SECTION





R.T.I. tra	borehole	S3 BIS	probe depth m	138,5	mod DVT REV 2 MARZO 2018 code 3
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
	Project	DERIVAZIONE CAMPOLATTARO			report 2001 DRT
GEOTEC SPA - Campobasso (mandante)	site	CASALDUNI (BN)	coordinates	EAST / NORTH	date 29.01.2020 pag 1/3

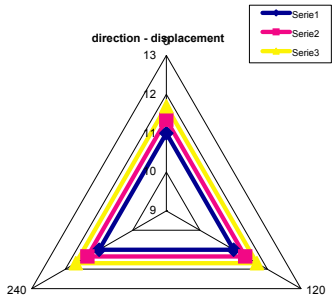
DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

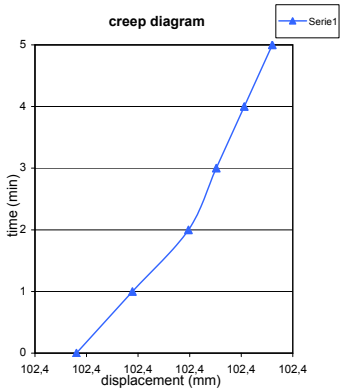
Borehole	S3 BIS		
test	3	depth m	138,50
slope (degree)	90	core barrell	HQ 101 MM
Device:	CSM Type GEODV03 STIFF 96mm		
Orientation capteur C1=		Standard method:	ISRM 1987
Probe diam	95 MM	Borehole diam	101 MM
Meteo		Temperature	
lithotype	MARNA CALCARE/CALCARE MARNOSO		
water table	28,0	POCKET PENETRO METER	

Creep test P (Bars) =

Temps min	PBAR	MM
0	16,0	102,414
1	16,0	102,419
2	16,0	102,425
3	16,0	102,428
4	16,0	102,430
5	16,0	102,433

LITHOTYPE





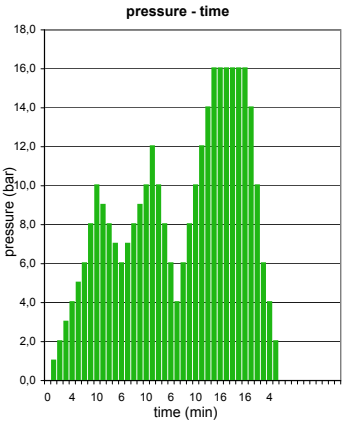
PROBE SCHEME

rod adaptor

electronic device

double action piston

expandable cylinder

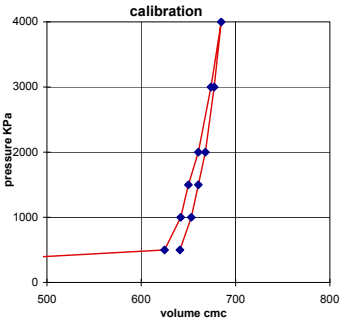


PRESSURE STEP	P bar	Pcorr Kpa	Vol cmc	e c %	1/V 1000/cmc	diameter (mm)	Dil. Diam (mm)	Modulo MPa
0	0,0	0	0,0	-7,955	0,000	93,376	0,000	0,0
1	1,0	1422	538,9	-0,622	1,856	100,816	7,440	23,2
2	2,0	1515	576,4	-0,131	1,735	101,313	7,937	23,8
3	**3,0**	**1612**	**586,5**	**0,000**	**1,705**	**101,447**	**8,071**	**92,0**
4	4,0	1709	593,6	0,093	1,685	101,541	8,165	130,3
5	5,0	1807	600,8	0,186	1,665	101,635	8,259	131,4
6	6,0	1904	607,0	0,267	1,648	101,717	8,341	151,1
7	8,0	2098	620,3	0,440	1,612	101,893	8,517	140,5
8	10,0	2293	635,3	0,633	1,574	102,089	8,713	126,3
9	9,0	2195	635,8	0,640	1,573	102,096	8,720	-1887,8
10	8,0	2097	635,0	0,630	1,575	102,086	8,710	1246,5
11	7,0	1999	634,0	0,617	1,577	102,073	8,697	973,6
12	6,0	1901	632,2	0,594	1,582	102,049	8,673	519,8
13	7,0	1999	633,2	0,606	1,579	102,062	8,686	969,8
14	8,0	2097	634,6	0,625	1,576	102,080	8,704	678,4
15	9,0	2195	635,8	0,640	1,573	102,096	8,720	801,7
16	10,0	2292	638,0	0,669	1,567	102,125	8,749	424,7
17	12,0	2487	645,4	0,765	1,549	102,222	8,846	256,9
18	10,0	2291	647,0	0,786	1,546	102,244	8,868	-1162,4
19	8,0	2095	646,2	0,775	1,548	102,232	8,856	2187,3
20	6,0	1900	643,0	0,733	1,555	102,191	8,814	596,9
21	4,0	1704	637,0	0,656	1,570	102,112	8,736	319,0
22	6,0	1900	638,5	0,676	1,566	102,132	8,756	1245,8
23	8,0	2096	643,2	0,736	1,555	102,194	8,818	406,5
24	10,0	2291	647,5	0,791	1,545	102,249	8,873	449,9
25	12,0	2487	652,5	0,856	1,533	102,316	8,939	377,7
26	14,0	2682	656,9	0,913	1,522	102,373	8,997	434,5
27	**16,0**	**2878**	**660,0**	**0,954**	**1,515**	**102,414**	**9,038**	**611,4**
28	16,0	2878	660,4	0,959	1,514	102,419	9,043	-1,1
29	16,0	2878	660,9	0,964	1,513	102,425	9,049	-1,1
30	16,0	2878	661,1	0,967	1,513	102,428	9,051	-1,1
31	16,0	2878	661,3	0,970	1,512	102,430	9,054	-1,1
32	16,0	2878	661,5	0,972	1,512	102,433	9,057	-1,1
33	14,0	2682	661,3	0,969	1,512	102,430	9,054	8781,4
34	10,0	2290	660,8	0,964	1,513	102,424	9,048	8632,2
35	6,0	1898	657,4	0,920	1,521	102,380	9,004	1134,7
36	4,0	1703	652,0	0,850	1,534	102,309	8,932	348,9
37	2,0	1509	635,1	0,631	1,575	102,087	8,711	111,7

i valori diametrali sono calcolati come valore medio della sonda cillindrica in espansione

PROBE CALIBRATION

probe	GEODV03 STIFF CSM T	
membrane	CAUCCIU' ARMATO	
measure cell height (cm)		
V0 cell volume at rest (cmc)	3252	
lenght cable (mt)	200	
Volume initial Vi (cmc)	629	
diam calibration tube (cm)	10,2	
tube calibration volume cmc	3881	
Calibration in air		
coeff *m*	0,11	Kpa/cmc
Confined calibration		
first load	14,2	cmc/Mpa
unload	9,3	cmc/Mpa

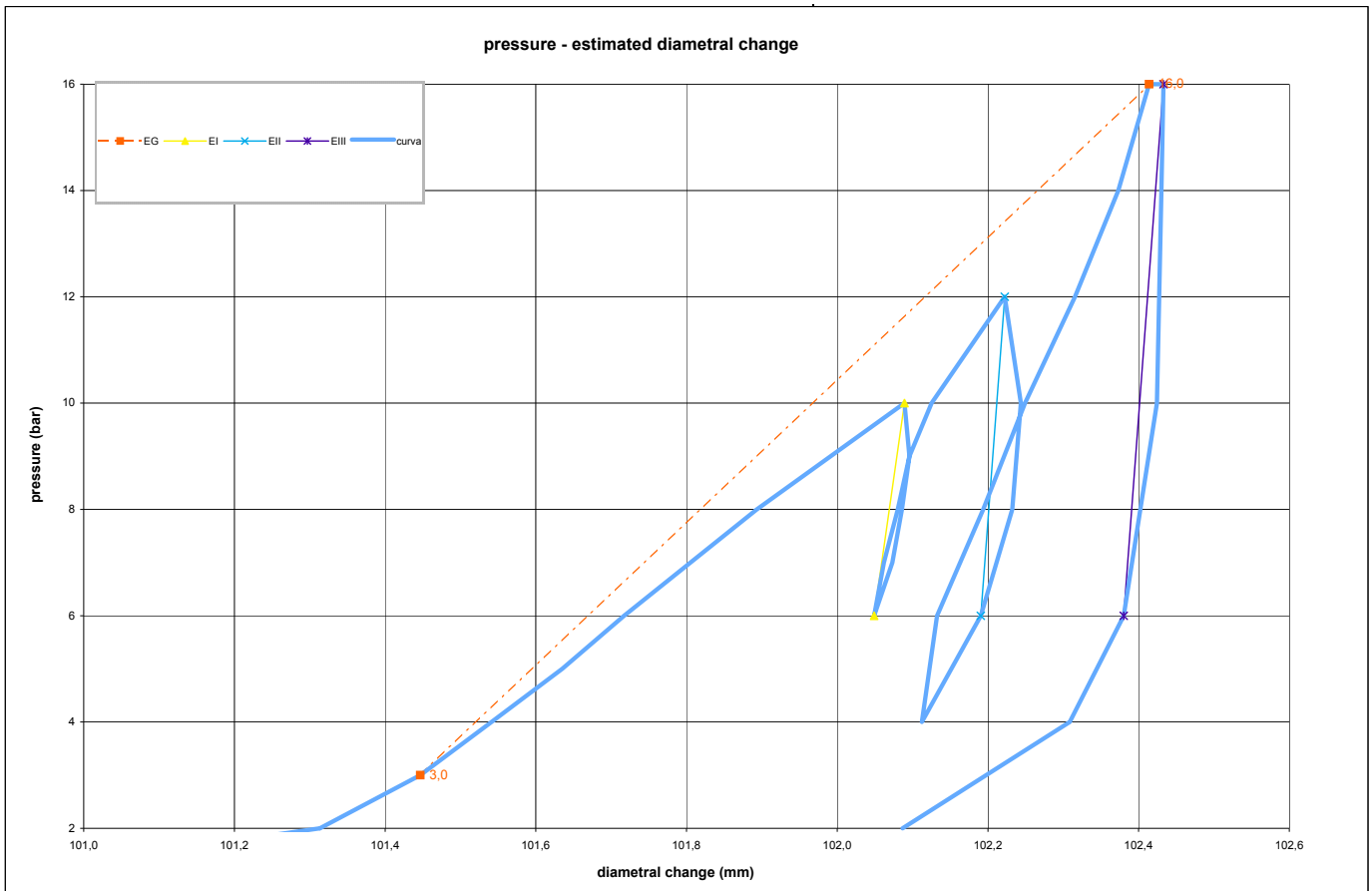


FIELD LIMITS

	P	P corr	V corr	creep	1000/V	diameter	Dil. Diam	loop
min	3,0	1612,2	586,5	0,0	1,7	101,4	8,1	primo
max	16,0	2877,8	660,0	1,0	1,5	102,4	9,0	carico
max	10,0	2292,7	635,3	0,6	1,6	102,1	8,7	I
min	6,0	1901,0	632,2	0,6	1,6	102,0	8,7	
max	12,0	2487,5	645,4	0,8	1,5	102,2	8,8	II
min	6,0	1899,8	643,0	0,7	1,6	102,2	8,8	
max	16,0	2877,6	661,5	1,0	1,5	102,4	9,1	III
min	6,0	1898,2	657,4	0,9	1,5	102,4	9,0	

R.T.I. tra	DILATOMETRIC ROCK TEST DRT						mod DVT REV 2 MARZO 2018
	borehole	S3 BIS	probe depth m	138,5		code	3
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept.	2001	
	Project	DERIVAZIONE CAMPOLATTARO			report	2001	DRT
GEOTEC SPA - Campobasso(mandante)	site	CASALDUNI (BN)	coordinates	EAST / NORTH	date	29.01.2020	pag 2/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987



DATA PROCESSING						SENSOR 1	SENSOR 2	SENSOR 3	SENSOR AVE
			ELASTICITY MODULUS Ei						
Legend:	DATA		loop	Pmax	Pmin	E1 (Mpa)	E2 (Mpa)	E3 (Mpa)	Eav (Mpa)
H = test depth	symbol	datum	1	10,00	6,00				1235
W = water table depth	γnsoil	2,4	2	12,00	6,00				2347
ν = Poisson ratio	W (ml)	138,5	3	16,00	6,00				2350
vo = cell initial volume	ν	0,25	4						
do =cell initial diameter	vo (cmc)	3252	5						
Φ = borehole wall diameter	do (mm)	93,38	DEFORMATION MODULUS Ti						
Po = start pressure	σv (kPa)	3324	loop	Pmax	Pmin	T1 (Mpa)	T2 (Mpa)	T3 (Mpa)	Tm (Mpa)
Pmax = max loop pressure (MPa)			1	10,00	3,00				134
Pmin = min loop pressure (MPa)			2	12,00	10,00				186
d max displacement at P max			3	16,00	12,00				235
d min displacement at P min			4						
σv vertical total stress estimated			5						
ε c = dR / Ro			GLOBAL DEFORMATION MODULUS EG						
ELASTICITY MODULUS Ei	ELASTICITY MODULUS Ey estimated			Pmax	Pmin	EG1 (Mpa)	EG2 (Mpa)	EG3 (Mpa)	EGm (Mpa)
Ei = (1+ ν) Φ Pax - Pmin	Ey= (EII+EIII)/2			16,00	3,00				166
dmax - dmin	Ey= EIII		DIAMETER			F	F	F	F
			beginning diameter (mm)						101,447
DEFORMATION MODULUS Ti			final diameter (mm)						102,222
Ti = (1+ ν) Φ Pi - Pi-1			range mm						0,776
Xi - Xi-1	DM loop minimun displacement					DILATOMETRIC AND GEOTECHNICAL ESTIMATED PARAMETERS			
	Pbar	C1	C2	C3	Cm	Po initial pressure (KPa)	1612	**T3** (MPa)	**235**
GLOBAL DEFORMATION MODULUS EG	bar	0	120	240	0	Pf creep pressure (KPa)	2878	**E3** (MPa)	**2.350**
EG = (1+ ν) Φ Pmax - Po	10,0	10,997	10,997	10,997	8,713	PL limit pres. (KPa) Cassan >	3729	E/P'L	113,60
dmax - do						PL' net limit pres (KPa) >	2067	EG/Ey	0,10
note: FORO LARGO						Ko lateral coeff at rest (KPa)	0,50	**cu** coesion (KPa) johnson	
						Pho lateral pressure (KPa)	1662	**ϕ** friction angle (°) >	

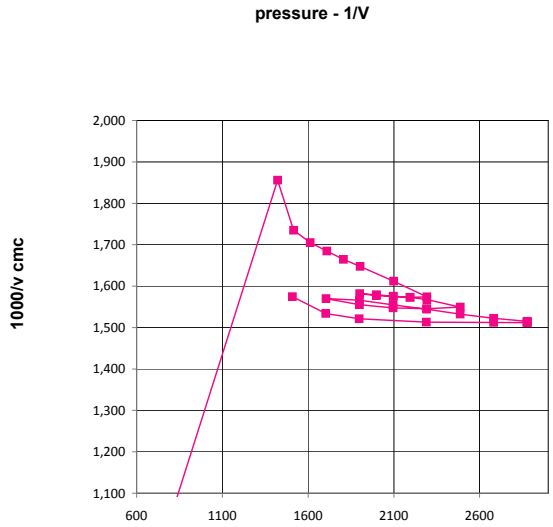
R.T.I. tra	DILATOMETRIC ROCK TEST DRT				mod DVT REV 2 MARZO 2018
	borehole	S3 BIS	probe depth m	138,5	code 3
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
		coordinates	EAST		
GEOTEC SPA - Campobasso(mandante)	site	CASALDUNI (BN)	NORTH	date 29.01.2020	pag 3/3

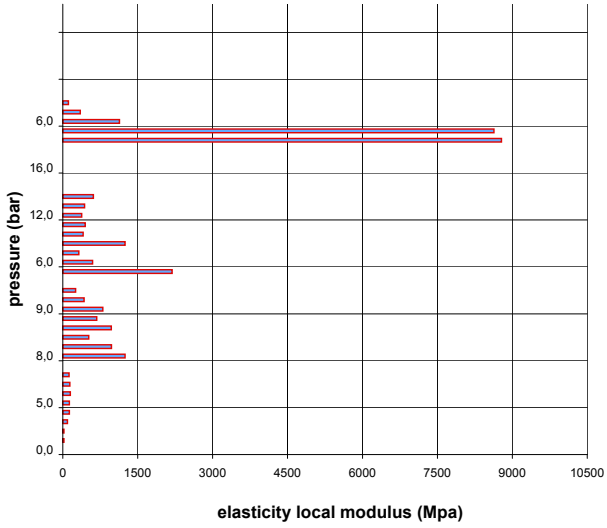
DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

PLACE

SECTION

DATI





R.T.I. tra	borehole	S3 BIS	probe depth m	130,5	mod DVT REV 2 MARZO 2018 code 2
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
GEOTEC SPA - Campobasso (mandante)	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
	coordinates		EAST		
	site	CASALDUNI (BN)	NORTH	date 29.01.2020	pag 1/3

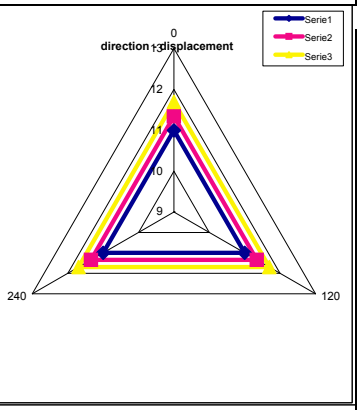
DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

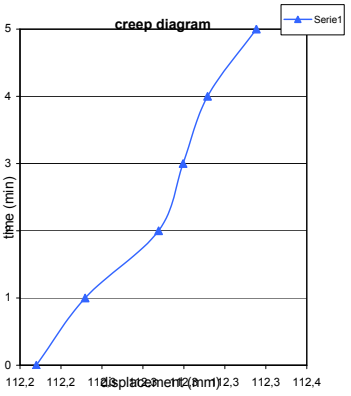
Borehole	S3 BIS		
test	2	depth m	130,50
slope (degree)	90	core barrell	HQ 101 MM
Device:	CSM Type GEODV03 STIFF 96mm		
Orientation capteur	C1=	Standard method:	ISRM 1987
Probe diam	95 MM	Borehole diam	101 MM
Meteo		Temperature	
lithotype	ARGILLA MARNOSA A STRUTTURA SCAGLIOSA		
water table	28,0	POCKET PENETRO METER	

Creep test P (Bars) =

Temps min	PBAR	MM
0	10,0	112,228
1	10,0	112,252
2	10,0	112,288
3	10,0	112,300
4	10,0	112,312
5	10,0	112,335

LITHOTYPE





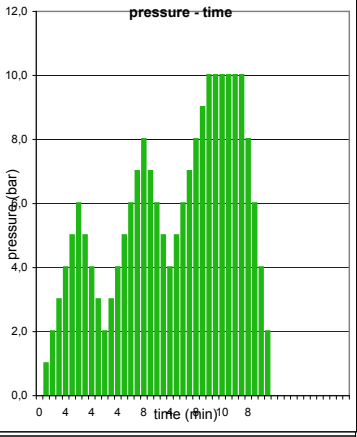
PROBE SCHEME

rod adaptor

electronic device

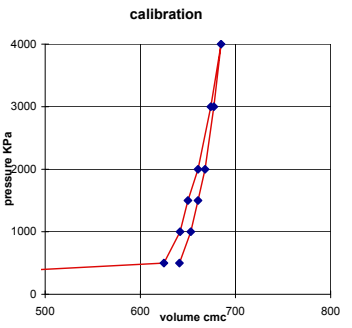
double action piston

expandable cylinder



PROBE CALIBRATION

probe	GEODV03 STIFF CSM T	
membrane	CAUCCIU' ARMATO	
measure cell height (cm)		
V0 cell volume at rest (cmc)	3252	
lenght cable (mt)	200	
Volume initial Vi (cmc)	629	
diam calibration tube (cm)	10,2	
tube calibration volume cmc	3881	
Calibration in air		
coeff *m*	0,11	Kpa/cmc
Confined calibration		
first load	14,2	cmc/Mpa
unload	9,3	cmc/Mpa



PRESSURE STEP	P bar	Pcorr Kpa	Vol cmc	e c %	1/V 1000/cmc	diameter (mm)	Dil. Diam (mm)	Modulo MPa
0	0,0	0	0,0	-16,296	0,000	93,376	0,000	0,0
1	1,0	1339	564,1	-9,327	1,773	101,150	7,774	21,0
2	2,0	1414	765,1	-6,969	1,307	103,781	10,405	3,7
3	3,0	1487	984,2	-4,466	1,016	106,573	13,197	3,4
4	4,0	1576	1063,3	-3,579	0,940	107,563	14,187	12,0
5	5,0	1664	1150,4	-2,611	0,869	108,643	15,267	11,0
6	6,0	1753	1232,4	-1,707	0,811	109,651	16,275	12,0
7	5,0	1656	1224,4	-1,796	0,817	109,552	16,176	134,7
8	4,0	1561	1191,3	-2,159	0,839	109,147	15,770	31,8
9	3,0	1468	1150,2	-2,613	0,869	108,641	15,265	25,1
10	2,0	1378	1084,1	-3,346	0,922	107,823	14,446	15,0
11	3,0	1470	1135,2	-2,779	0,881	108,456	15,080	19,7
12	4,0	1563	1174,3	-2,347	0,852	108,938	15,561	26,4
13	5,0	1657	1213,4	-1,917	0,824	109,417	16,041	26,6
14	6,0	1750	1252,4	-1,488	0,798	109,895	16,519	26,8
15	7,0	1840	1322,5	-0,725	0,756	110,746	17,370	14,6
16	**8,0**	**1931**	**1389,6**	**0,000**	**0,720**	**111,555**	**18,179**	**15,5**
17	7,0	1834	1381,5	-0,087	0,724	111,458	18,082	139,4
18	6,0	1738	1363,4	-0,282	0,733	111,241	17,865	61,4
19	5,0	1643	1332,4	-0,618	0,751	110,866	17,489	35,0
20	4,0	1549	1297,3	-0,999	0,771	110,441	17,065	30,6
21	5,0	1645	1320,4	-0,748	0,757	110,720	17,344	47,1
22	6,0	1739	1349,4	-0,433	0,741	111,072	17,696	37,3
23	7,0	1834	1375,5	-0,152	0,727	111,386	18,010	42,0
24	8,0	1930	1396,6	0,075	0,716	111,639	18,263	52,6
25	9,0	2025	1420,7	0,334	0,704	111,928	18,552	46,1
26	**10,0**	**2120**	**1445,7**	**0,603**	**0,692**	**112,228**	**18,852**	**44,4**
27	10,0	2120	1447,7	0,624	0,691	112,252	18,876	-1,3
28	10,0	2120	1450,7	0,656	0,689	112,288	18,912	-1,3
29	10,0	2120	1451,7	0,667	0,689	112,300	18,923	-1,3
30	10,0	2120	1452,7	0,678	0,688	112,312	18,935	-1,3
31	10,0	2119	1454,7	0,699	0,687	112,335	18,959	-1,3
32	8,0	1924	1445,6	0,601	0,692	112,226	18,850	250,6
33	6,0	1731	1427,4	0,407	0,701	112,009	18,633	125,3
34	4,0	1538	1394,3	0,051	0,717	111,612	18,236	67,6
35	2,0	1352	1313,1	-0,827	0,762	110,633	17,257	26,5

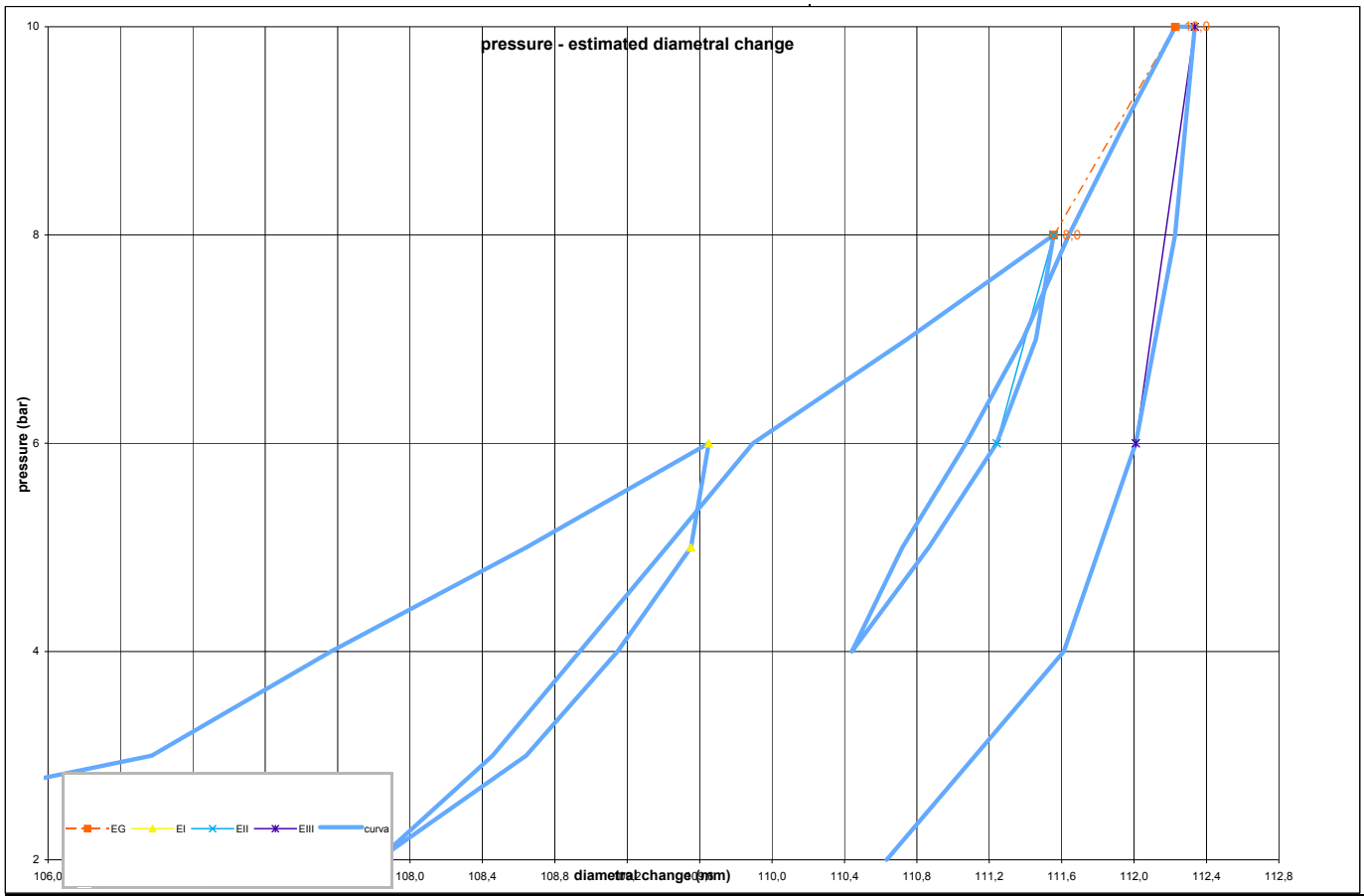
i valori diametrali sono calcolati come valore medio della sonda cillindrica in espansione

FIELD LIMITS

	P	P corr	V corr	creep	1000/V	diameter	Dil. Diam	loop
min	8,0	1930,8	1389,6	0,0	0,7	111,6	18,2	primo
max	10,0	2120,4	1445,7	0,6	0,7	112,2	18,9	carico
max	6,0	1752,7	1232,4	-1,7	0,8	109,7	16,3	I
min	5,0	1655,6	1224,4	-1,8	0,8	109,6	16,2	
max	8,0	1930,8	1389,6	0,0	0,7	111,6	18,2	II
min	6,0	1737,8	1363,4	-0,3	0,7	111,2	17,9	
max	10,0	2119,4	1454,7	0,7	0,7	112,3	19,0	III
min	6,0	1730,5	1427,4	0,4	0,7	112,0	18,6	

R.T.I. tra	DILATOMETRIC ROCK TEST DRT						mod DVT REV 2 MARZO 2018
	borehole	S3 BIS	probe depth m	130,5		code	2
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept.	2001	
GEOTEC SPA -Campobasso(mandante)	Project	DERIVAZIONE CAMPOLATTARO			report	2001	DRT
			coordinates	EAST			
	site	CASALDUNI (BN)		NORTH	date	29.01.2020	pag 2/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987



DATA PROCESSING						SENSOR 1	SENSOR 2	SENSOR 3	SENSOR AVE
			ELASTICITY MODULUS Ei						
Legend:	DATA		loop	Pmax	Pmin	E1 (Mpa)	E2 (Mpa)	E3 (Mpa)	Eav (Mpa)
H = test depth	symbol	datum	1	6,00	5,00				137
W = water table depth	γnsoil	2,4	2	8,00	6,00				86
ν = Poisson ratio	W (ml)	130,5	3	10,00	6,00				166
vo = cell initial volume	ν	0,25	4						
do =cell initial diameter	vo (cmc)	3252	5						
Φ = borehole wall diameter	do (mm)	93,38	DEFORMATION MODULUS Ti						
Po = start pressure	σv (kPa)	3132	loop	Pmax	Pmin	T1 (Mpa)	T2 (Mpa)	T3 (Mpa)	Tm (Mpa)
Pmax = max loop pressure (MPa)			1	6,00	8,00				13
Pmin = min loop pressure (MPa)			2	8,00	6,00				13
d max displacement at P max			3	10,00	8,00				34
d min displacement at P min			4						
σv vertical total stress estimated			5						
ε c = dR / Ro			GLOBAL DEFORMATION MODULUS EG						
ELASTICITY MODULUS Ei	ELASTICITY MODULUS Ey estimated			Pmax	Pmin	EG1 (Mpa)	EG2 (Mpa)	EG3 (Mpa)	EGm (Mpa)
Ei = (1+ ν) Φ Pax - Pmin	Ey= (EII+EIII)/2			10,00	8,00				39
dmax - dmin	Ey= EIII		DIAMETER			F	F	F	F
			beginning diameter (mm)						111,555
DEFORMATION MODULUS Ti			final diameter (mm)						111,555
Ti = (1+ ν) Φ Pi - Pi-1			range mm						0,000
Xi - Xi-1	DM loop minimun displacement					DILATOMETRIC AND GEOTECHNICAL ESTIMATED PARAMETERS			
	Pbar	C1	C2	C3	Cm	Po initial pressure (KPa)	1931	**T3** (MPa)	**34**
GLOBAL DEFORMATION MODULUS EG	bar	0	120	240	0	Pf creep pressure (KPa)	2120	**E3** (MPa)	**166**
EG = (1+ ν) Φ Pmax - Po	6,0	10,997	10,997	10,997	16,275	PL limit pres. (KPa) Cassan >	2070	E/P'L	
dmax - do						PL' net limit pres (KPa) >		EG/Ey	0,20
note: FORO LARGO						Ko lateral coeff at rest (KPa)	0,70	**cu** coesion (KPa) johnson	
						Pho lateral pressure (KPa)	2192	**ϕ** friction angle (°) >	

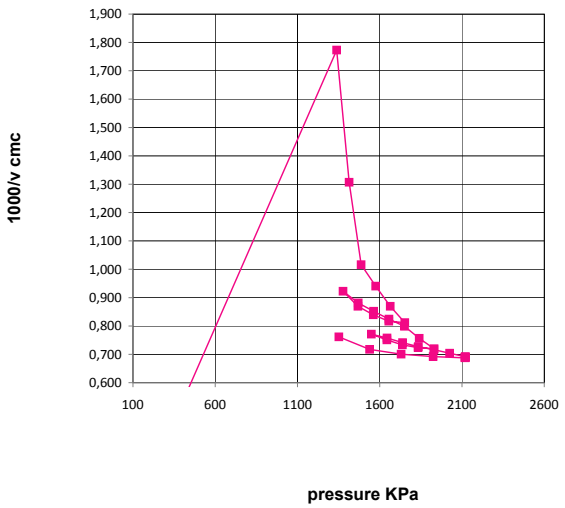
R.T.I. tra	DILATOMETRIC ROCK TEST DRT				mod DVT REV 2 MARZO 2018
	borehole	S3 BIS	probe depth m	130,5	code 2
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
GEOTEC SPA -Campobasso(mandante)	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
		coordinates	EAST		
	site	CASALDUNI (BN)	NORTH	date 9.01.2020	pag 3/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

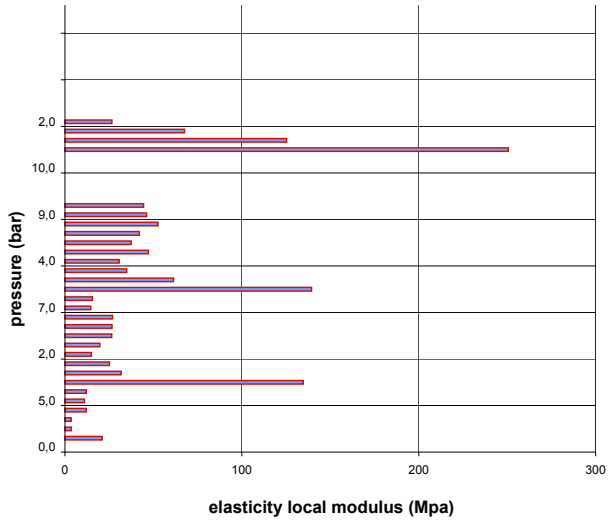
PLACE

SECTION

pressure - 1/V



elasticity local modulus - pressure



R.T.I. tra	borehole	S3 BIS	probe depth m	119,5	mod DVT REV 2 MARZO 2018 code 1
I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
	Project	DERIVAZIONE CAMPOLATTARO			report 2001 DRT
GEOTEC SPA - Campobasso (mandante)	site	CASALDUNI (BN)	coordinates EAST / NORTH		date 29.01.2020 pag 1/3

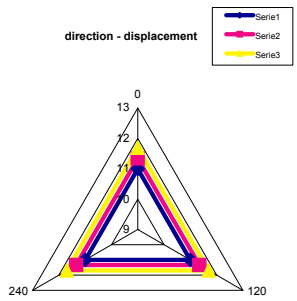
DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

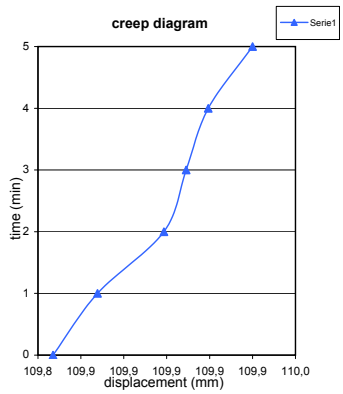
Borehole	S3 BIS		
test	1	depth m	119,50
slope (degree)	90	core barrell	HQ 101 MM
Device:	CSM Type GEODV03 STIFF 96mm		
Orientation capteur C1=		Standard method:	ISRM 1987
Probe diam	95 MM	Borehole diam	101 MM
Meteo		Temperature	
lithotype	ARGILLA MARNOSA A STRUTTURA SCAGLIOSA		
water table	28,0	POCKET PENETRO METER	

Creep test P (Bars) =

Temps min	PBAR	MM
0	10,0	109,847
1	10,0	109,868
2	10,0	109,899
3	10,0	109,909
4	10,0	109,919
5	10,0	109,940

LITHOTYPE





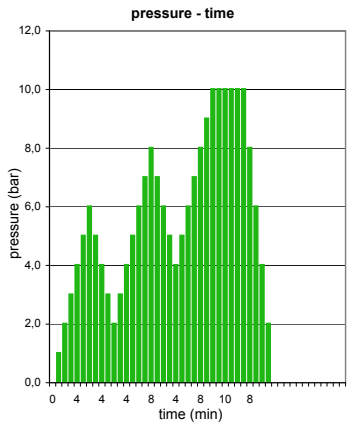
PROBE SCHEME

rod adaptor

electronic device

double action piston

expandable cylinder

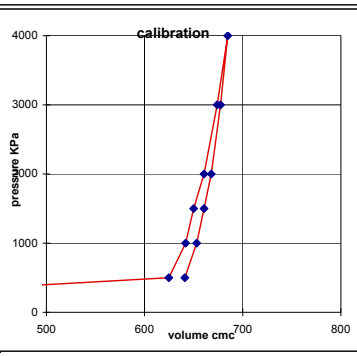


PRESSURE STEP	P bar	Pcorr Kpa	Vol cmc	e c %	1/V 1000/cmc	diameter (mm)	Dil. Diam (mm)	Modulo MPa
0	0,0	0	0,0	-13,689	0,000	93,376	0,000	0,0
1	1,0	1203	795,1	-3,715	1,258	104,167	10,791	13,8
2	2,0	1292	869,1	-2,838	1,151	105,116	11,739	12,3
3	3,0	1382	940,2	-2,004	1,064	106,018	12,642	13,1
4	4,0	1474	996,3	-1,351	1,004	106,725	13,349	17,2
5	5,0	1564	1060,4	-0,610	0,943	107,526	14,150	15,1
6	**6,0**	**1656**	**1113,4**	**0,000**	**0,898**	**108,186**	**14,810**	**18,8**
7	5,0	1559	1106,4	-0,081	0,904	108,098	14,722	149,9
8	4,0	1462	1099,3	-0,162	0,910	108,011	14,635	149,6
9	3,0	1365	1089,2	-0,278	0,918	107,886	14,509	104,5
10	2,0	1271	1058,1	-0,635	0,945	107,499	14,123	32,9
11	3,0	1366	1077,2	-0,416	0,928	107,736	14,360	54,3
12	4,0	1463	1092,3	-0,242	0,916	107,924	14,548	69,3
13	5,0	1559	1108,4	-0,058	0,902	108,123	14,747	65,1
14	6,0	1654	1131,4	0,206	0,884	108,409	15,033	45,2
15	7,0	1749	1161,5	0,549	0,861	108,780	15,404	34,6
16	8,0	1845	1176,8	0,723	0,850	108,968	15,592	69,6
17	7,0	1748	1168,5	0,628	0,856	108,866	15,490	129,0
18	6,0	1651	1163,8	0,575	0,859	108,808	15,432	230,4
19	5,0	1554	1153,6	0,459	0,867	108,683	15,307	104,8
20	4,0	1457	1142,8	0,336	0,875	108,550	15,173	98,7
21	5,0	1554	1149,3	0,410	0,870	108,629	15,253	165,6
22	6,0	1651	1160,7	0,540	0,862	108,771	15,395	92,9
23	7,0	1747	1176,5	0,720	0,850	108,965	15,589	67,4
24	8,0	1842	1201,6	1,005	0,832	109,273	15,897	42,1
25	9,0	1938	1223,7	1,254	0,817	109,543	16,167	48,3
26	**10,0**	**2033**	**1248,5**	**1,535**	**0,801**	**109,847**	**16,471**	**43,0**
27	10,0	2033	1250,2	1,554	0,800	109,868	16,492	-1,3
28	10,0	2032	1252,7	1,583	0,798	109,899	16,523	-1,3
29	10,0	2032	1253,6	1,593	0,798	109,909	16,533	-1,3
30	10,0	2032	1254,4	1,602	0,797	109,919	16,543	-1,3
31	10,0	2032	1256,1	1,621	0,796	109,940	16,564	-1,3
32	8,0	1837	1249,6	1,547	0,800	109,860	16,484	335,6
33	6,0	1642	1239,4	1,433	0,807	109,736	16,360	215,9
34	4,0	1449	1211,3	1,115	0,826	109,392	16,016	76,7
35	2,0	1257	1176,1	0,716	0,850	108,960	15,584	60,7

i valori diametrali sono calcolati come valore medio della sonda cillindrica in espansione

PROBE CALIBRATION

probe	GEODV03 STIFF CSM T	
membrane	CAUCCIU' ARMATO	
measure cell height (cm)		
V0 cell volume at rest (cmc)	3252	
lenght cable (mt)	200	
Volume initial Vi (cmc)	629	
diam calibration tube (cm)	10,2	
tube calibration volume cmc	3881	
Calibration in air		
coeff *m*	0,11	Kpa/cmc
Confined calibration		
first load	14,2	cmc/Mpa
unload	9,3	cmc/Mpa

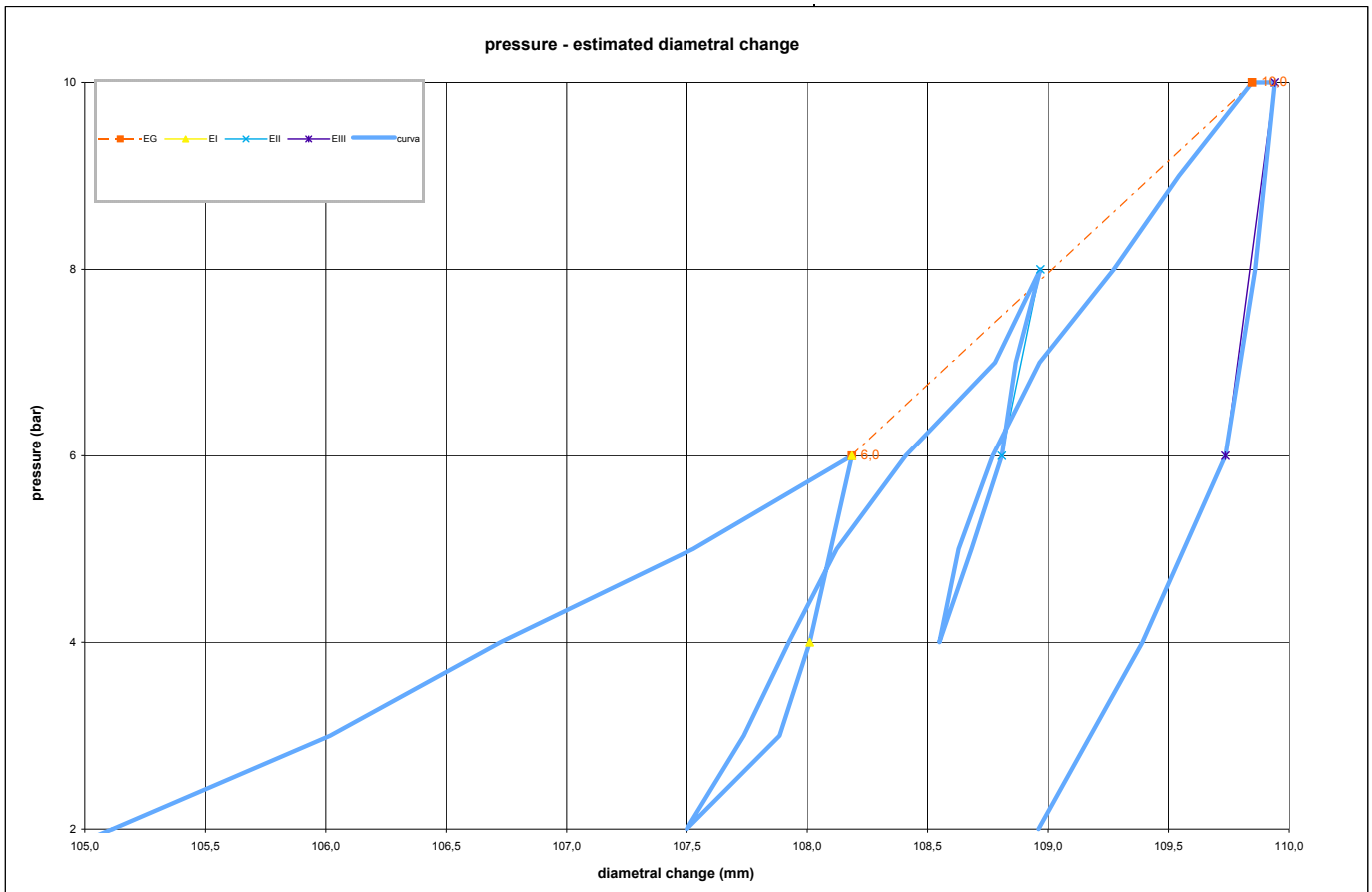


FIELD LIMITS

	P	P corr	V corr	creep	1000/V	diameter	Dil. Diam	loop
min	6,0	1656,3	1113,4	0,0	0,9	108,2	14,8	primo
max	10,0	2032,9	1248,5	1,5	0,8	109,8	16,5	carico
max	6,0	1656,3	1113,4	0,0	0,9	108,2	14,8	I
min	4,0	1461,9	1099,3	-0,2	0,9	108,0	14,6	
max	8,0	1845,0	1176,8	0,7	0,8	109,0	15,6	II
min	6,0	1650,5	1163,8	0,6	0,9	108,8	15,4	
max	10,0	2032,0	1256,1	1,6	0,8	109,9	16,6	III
min	6,0	1641,9	1239,4	1,4	0,8	109,7	16,4	

R.T.I. tra	DILATOMETRIC ROCK TEST DRT						mod DVT REV 2 MARZO 2018
	borehole	S3 BIS	probe depth m	119,5		code	1
R.T.I. I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept.	2001	
	Project	DERIVAZIONE CAMPOLATTARO			report	2001	DRT
GEOTEC SPA -Campobasso(mandante)	site	CASALDUNI (BN)	coordinates	EAST / NORTH	date	29.01.2020	pag 2/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987



DATA PROCESSING						SENSOR 1	SENSOR 2	SENSOR 3	SENSOR AVE
			ELASTICITY MODULUS Ei						
Legend:	DATA		loop	Pmax	Pmin	E1 (Mpa)	E2 (Mpa)	E3 (Mpa)	Eav (Mpa)
H = test depth	symbol	datum	1	6,00	4,00				150
W = water table depth	γnsoil	2,4	2	8,00	6,00				164
ν = Poisson ratio	W (ml)	119,5	3	10,00	6,00				259
vo = cell initial volume	ν	0,25	4						
do =cell initial diameter	vo (cmc)	3252	5						
Φ = borehole wall diameter	do (mm)	93,38	DEFORMATION MODULUS Ti						
Po = start pressure	σv (kPa)	2868	loop	Pmax	Pmin	T1 (Mpa)	T2 (Mpa)	T3 (Mpa)	Tm (Mpa)
Pmax = max loop pressure (MPa)			1	6,00	6,00				#DIV/0!
Pmin = min loop pressure (MPa)			2	8,00	6,00				33
d max displacement at P max			3	10,00	8,00				26
d min displacement at P min			4						
σv vertical total stress estimated			5						
ε c = dR / Ro			GLOBAL DEFORMATION MODULUS EG						
ELASTICITY MODULUS Ei	ELASTICITY MODULUS Ey estimated			Pmax	Pmin	EG1 (Mpa)	EG2 (Mpa)	EG3 (Mpa)	EGm (Mpa)
Ei = (1+ ν) Φ Pax - Pmin	Ey= (EII+EIII)/2			10,00	6,00				31
dmax - dmin	Ey= EIII		DIAMETER			F	F	F	F
			beginning diameter (mm)						108,186
DEFORMATION MODULUS Ti			final diameter (mm)						108,968
Ti = (1+ ν) Φ Pi - Pi-1			range mm						0,782
Xi - Xi-1	DM loop minimun displacement					DILATOMETRIC AND GEOTECHNICAL ESTIMATED PARAMETERS			
	Pbar	C1	C2	C3	Cm	Po initial pressure (KPa)	1656	**T3** (MPa)	**26**
GLOBAL DEFORMATION MODULUS EG	bar	0	120	240	0	Pf creep pressure (KPa)	2033	**E3** (MPa)	**259**
EG = (1+ ν) Φ Pmax - Po	6,0	10,997	10,997	10,997	14,810	PL limit pres. (KPa) Cassan >	2051	E/P'L	605,70
dmax - do						PL' net limit pres (KPa) >	43	EG/Ey	0,10
note: FORO LARGO						Ko lateral coeff at rest (KPa)	0,70	**cu** coesion (KPa) johnson	
						Pho lateral pressure (KPa)	2008	**ϕ** friction angle (°) >	

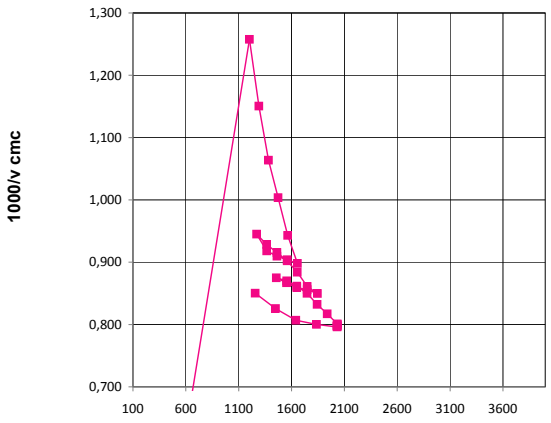
R.T.I. tra	DILATOMETRIC ROCK TEST DRT				mod DVT REV 2 MARZO 2018
	borehole	S3 BIS	probe depth m	119,5	code 1
R.T.I. I.G. Sr.l.- Ercolano (mandataria)	Client:	VIANINI LAVORI S.p.A.	job	2001	v. accept. 2001
	Project	DERIVAZIONE CAMPOLATTARO	report	2001	DRT
GEOTEC SPA -Campobasso(mandante)	site	CASALDUNI (BN)	coordinates EAST NORTH	date 29.01.2020	pag 3/3

DILATOMETRIC ROCK TEST WITH VOLUME CHANGE MEASUREMENTS - ISRM 1987

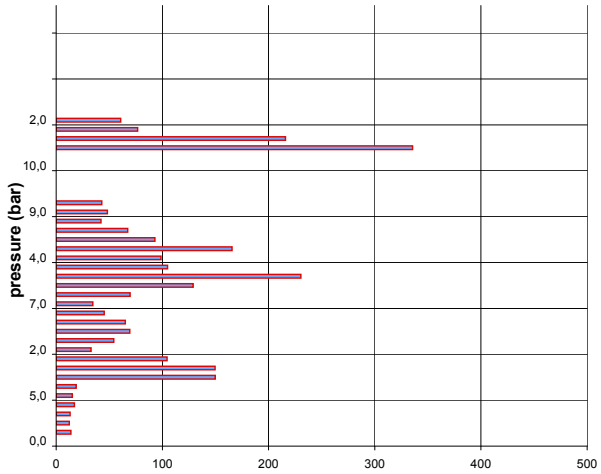
PLACE

SECTION

pressure - 1/V



elasticity local modulus - pressure



ZONA IMBOCCO, IMPIANTI E SERBATOIO – PROVE IN SITO

I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Laboratorio Autorizzato
per Indagini Geognostiche
prelievo di campioni e Prove in Sito
DECRETO N° 900 del 28/01/11

Codifica Commessa	:	301/2020	Data inizio: 07/08/2020	Data ultimazione: 30/10/2020

COMMITTENTE:

VIANINI LAVORI S.p.A.

CANTIERE E/O OPERA:

PROGETTAZIONE DEFINITIVA PER L'INTERVENTO DI UTILIZZO IDROPOTABILE DELLE ACQUE DELL'INVASO DI CAMPOLATTARO

AREA IMPIANTI – SERBATOI DI ACCUMULO
IMBOCCO TBM- TERRE ARMATE

LOCALITA':

COMUNI DI PONTE (BN)

ALLEGATO III

PROVE PENETROMETRICHE STATICHE E DINAMICHE CONTINUE

Direttore Tecnico
dr. ing. Vincenzo Pinto

I. G. S.r.l.
L'Amministratore
Ing. V. PINTO

80056 Ercolano (NA) – VIA L. PALMIERI, 104/A– TEL. (081) 7398115 – FAX (081) 7398115– E-MAIL igpinto@alice.it – www.igpinto.com
Codice Fiscale: 05433440632 - Partita I.V.A.: 01423891215 - C.C.I.A.A. - R.E.A: 442053 -

I N D I C E

I. PREMESSA.

A partire dall'Ordine LAV/461/GDA/rf del 07 agosto 2020 e delle sue successive estensioni la VIANINI LAVORI S.p.A., con sede legale in Roma, ha delegato la I.G. S.r.l. all'esecuzione di una campagna di Indagini Geologiche-Geotecniche-Geomeccaniche e Geofisiche in Sito e Prove di Laboratorio.

Le Indagini e Prove riguardano la Progettazione Definitiva per l'Intervento di Utilizzo Idropotabile delle Acque dell'Invaso di Campolattaro.

Le attività hanno compreso l'Esecuzione e l'Elaborazione di Indagini Geognostiche in Sito, che hanno riguardato Indagini Geotecniche ed Indagini Geofisiche, e la Certificazione di Prove di Laboratorio Geotecnico e Geomeccanico.

Le Indagini e Prove sono state eseguite in osservanza ad un programma di indagini redatto dal Consulente Geologico Prof. Silvio Di Nocera e dal Consulente Geotecnico Ing. Giuseppe Maria Grimaldi.

Le attività effettuate hanno interessato quattro zone site nel Comune di Ponte (BN): "*Area Impianti*"; "*Serbatoi di Accumulo*"; "*Imbocco Galleria TBM*" e "*Terre Armate*".

Le *Indagini Geotecniche in Sito* sono state svolte in base: alle vigenti Norme Tecniche per le Costruzioni, di cui al Decreto del Ministero delle Infrastrutture e dei Trasporti del 17 gennaio 2018; alla Circolare 08 settembre 2010, n. 7619/STC che detta i "*Criteri per il Rilascio dell'Autorizzazione ai Laboratori per l'Esecuzione e Certificazione di Indagini Geognostiche, Prelievo di Campioni e Prove in Sito* di cui all'art.59 del D.P.R. n. 380/2001"; secondo le Raccomandazioni dell'*Associazione Geotecnica Italiana* (A.G.I.-1977) ed in accordo con le Modalità d'Esecuzione dell'A.N.I.S.I.G. (*Associazione Nazionale Imprese Specializzate* in *Indagini Geognostiche*).

I resoconti delle *Prove Penetrometriche Statiche e Dinamiche Continue* sono consegnati nel presente Allegato III alla Relazione Tecnica Generale.

II. PROVE ESEGUITE.

Le *prove penetrometriche continue* hanno compreso l'esecuzione di:

- n. 14 prove penetrometriche statiche del tipo C.P.T.;
- n. 14 prove penetrometriche dinamiche continue del tipo D.P.S.H..

Entrambe le tipologie di prova sono state effettuate con il *Penetrometro Statico /Dinamico* della *Geo Deep Drill*.

Le foto delle ventotto postazioni di prova sono consegnate nell'Appendice al presente documento.

Come segnalato al paragrafo II.10 della Relazione Tecnica Generale, le *Prove Penetrometriche Dinamiche Continue Superpesanti D.P.S.H.* (*Dinamic Probing Super Heavy*) sono state effettuate in adiacenza alle *Prove Penetrometriche Statiche con Punta Meccanica* (*C.P.T. – Cone Penetration Test*) perchè queste ultime hanno fatto registrare sistematicamente il cosiddetto "*rifiuto*" dell'attrezzatura di prova già a breve profondità dal piano di campagna, cioè ad una profondità poco significativa ai fini tecnici/progettuali.

Le ubicazioni dei ventotto *punti di prova* sono riportate nelle quattro Ortofoto di cui ai MOD UI30-a ÷ MOD UI30-d.

Le SCHEDE RIEPILOGATIVE delle *Prove Penetrometriche Statiche con Punta Meccanica* (*C.P.T. – Cone Penetration Test*) e delle *Prove Penetrometriche Dinamiche Continue Super pesanti D.P.S.H.* (*Dinamic Probing Super Heavy*) sono rappresentate, rispettivamente, dai MOD CC2-A e MOD CC2-B.

La modulistica richiamata è riportata nell'Appendice alla Relazione Tecnica Generale.

Nelle schede appena citate (MOD CC2-A e MOD CC2-B), sono specificate: la *sigla* della prova, la *data di esecuzione*, la *profondità* raggiunta, l'*Area* dell'Opera di pertinenza, e i valori delle *coordinate geografiche*, espresse in *Latitudine* Nord e in *Longitudine* Est. Le *coordinate* sono state rilevate in sito con il Sistema di Navigazione Satellitare.

II.1. Prove Penetrometriche Statiche con Punta Meccanica

La *Prova Penetrometrica Statica con Punta Meccanica* del tipo C.P.T. , come è noto, consiste nella misura della *Resistenza alla Penetrazione* di una *Punta Conica*, di dimensioni e *caratteristiche standardizzate* (area di 10 cm^2; angolo di apertura del cono = 60°), e di un *manicotto* (superficie laterale = 150 cm^2) per la misura di *attrito laterale* (*Friction Sleeve*) situato al di sopra della punta stessa.

L'infissione avviene a velocità costante (2 cm/sec), indipendentemente dalla resistenza offerta dal terreno.

Lo sforzo necessario alla penetrazione è fornito da un dispositivo di spinta, che agisce su di una batteria di aste cave alla cui base sono collegati la *punta* e il suddetto *manicotto*.

E' stata utilizzato un *penetrometro autocarrato* da 20 ton con *punta meccanica*, modello tipo *Begemann*.

La tecnica operativa della prova, si articola attraverso le seguenti fasi:

- avanzamento di 4 cm della sola *punta* e misura della *resistenza alla punta* (r_p);
- avanzamento di altri 4 cm dell'insieme *punta - manicotto* e misura della *resistenza alla punta più resistenza per attrito laterale locale* (r_{ll});
- avanzamento per ulteriori 12 cm dell'insieme *punta - manicotto - tubazione di rivestimento*.

Come si evince dalla Scheda Riepilogativa di cui al richiamato MOD CC2-A, le quattordici CPT programmate hanno presentato le seguenti caratteristiche:

- tutte le prove sono state interrotte per il cosiddetto "*rifiuto*", cioè in corrispondenza della portata dell'attrezzatura di prova, per il raggiungimento della *Resistenza di Punta* o della *Resistenza Totale* e/o il *disancoraggio* delle eliche di contrasto.
- *profondità media* di circa 1,9 m:
- soltanto una prova (CPT-4) ha raggiunto la lunghezza di tre metri.

I risultati di queste prove, cioè i valori della *Resistenza alla Punta* r_p (kg/cm^2) e della *Resistenza Laterale Locale* r_{ll} (kg/cm^2), misurati per tratti di 20 cm, nonché l'*Indice della Resistenza* ($F= r_p/r_{ll}$), in funzione della profondità dal piano di campagna, sono riportati in Appendice al presente nell'Allegato III sotto forma di tabulati ed in forma grafica, con gli andamenti di r_p e r_{ll} con la profondità z dal piano di campagna.

II.1. Prove Penetrometriche Dinamiche Continue Super Pesanti (D.P.S.H.).

La prova *penetrometrica dinamica continua* si effettua facendo penetrare a percussione nel terreno, alternativamente, e per tratti (generalmente) di 20 cm, una *punta conica metallica*, montata all'estremità inferiore di un'*asta di acciaio* di una batteria di aste prolungabile, con l'ausilio di un *penetrometro dinamico*.

Gli elementi caratteristici di un penetrometro dinamico sono i seguenti:

- *peso massa battente M*
- *altezza libera caduta H*
- *punta conica*: diametro base cono *D*, area base A, angolo di apertura α
- *avanzamento* o *penetrazione* δ
- presenza o meno del rivestimento esterno.

La Classificazione ISSMFE (1988) dei diversi tipi di penetrometri dinamici, in base al peso M della massa battente, ne rileva una prima suddivisione in quattro *classi*:

- tipo *LEGGERO* (*DPL*)
- tipo *MEDIO* (*DPM*)
- tipo *PESANTE* (*DPH*)
- tipo *SUPER PESANTE* (*DPSH*: *Dinamic Probing Super Heavy*)

Classificazione ISSMFE (1988) dei Penetrometri Dinamici:

TIPO	SIGLA DI RIFERIMENTO	PESO DELLA MASSA M (kg)
Leggero	DPL (*Light*)	$M \leq 10$
Medio	DPM (*Medium*)	$10 < M < 40$
Pesante	DPH (*Heavy*)	$40 \leq M < 60$
Super Pesante	DPSH (*Super Heavy*)	$M \geq 60$

In Italia risultano attualmente in uso diversi tipi di penetrometri dinamici, tra i quali: *Dinamico Super Pesante Tipo Emilia*. Nel caso in esame è stato utilizzato un penetrometro di questo tipo ed, in particolare, Marca e Modello GEO DEEP DRILL.

L'energia di infissione è fornita dal *maglio* che, a seguito della *caduta libera* standardizzata, impatta sulle aste per mezzo di un *dispositivo di sganciamento automatico*, che provvede al ripristino della corretta altezza di caduta.

La tabella seguente riassume le caratteristiche del *penetrometro dinamico* utilizzato:

CARATTERISTICHE TECNICHE D.P.S.H. **(Secondo la Classificazione ISSMFE)**		
MODELLO e MARCA GEO DEEP DRILL		
PESO MASSA BATTENTE **M = 73 Kg**	**ALTEZZA CADUTA LIBERA** **H = 0,75 m**	**PESO SISTEMA BATTUTA** **Ms = 30.00 Kg**
DIAMETRO PUNTA CONICA **D = 50,80 mm**	**AREA BASE PUNTA CONICA** **A = 20.27 cm^2**	**ANGOLO APERTURA PUNTA** **α = 60°**
LUNGHEZZA DELLE ASTE **La = 1.00 m**	**PESO ASTE PER METRO** **Ma = 8.00 kg**	**PROF. GIUNZIONE 1° ASTA** **P1 = 0.80 m**
AVANZAMENTO PUNTA **δ = 0,20 m**	**NUMERO DI COLPI PUNTA** **N = N(20)**	**RIVESTIMENTO** **NO**

I risultati delle prove in descrizione sono raccolti in schede nella richiamata Appendice, che comprendono i *tabulati* con i dati misurati (N° Colpi=N= N_{DP}) ogni 20 cm e i *grafici a barre* degli stessi numeri di colpi registrati in funzione della profondità dal piano di campagna.

Negli stessi *tabulati* sono riportati anche i valori di calcolo della *resistenza dinamica alla punta Rpd*. Questi ultimi valori sono dedotti con le cosi dette *Formule Olandesi* che considerano la Rpd = resistenza dinamica punta (di area A) funzione di:

M = *peso massa battente* [kg];

H = *altezza libera caduta* [cm];

e = *infissione media per colpo* (= δ/ N);

δ = *passo di avanzamento*;

P = *peso totale aste e sistema battuta* (alla profondità di prova) [kg]

ed espressa dalla seguente formula:

$$Rpd = \frac{M^2 \cdot H}{[A \cdot e \cdot (M+P)]} = \frac{M^2 \cdot H \cdot N}{[A \cdot \delta \cdot (M+P)]} = Rpd\ [kg/cm^2]$$

$$Rpd\ [MPa] = Rpd\ [kg/cm^2] \cdot 0{,}098$$

Come risulta dalla Scheda Riepilogativa di cui al richiamato MOD CC2-B, le quattordici DPSH effettuate hanno presentato le seguenti caratteristiche:

- tutte le prove sono state interrotte per il cosiddetto "*rifiuto*" dell'attrezzatura con rimbalzo del maglio.
- profondità massima di 13,20 m (DPSH-7) e minima di 2,8 (DPSH-1). La *profondità media* è risultata essere pari a circa 7,1 m.

Ercolano, 30 ottobre 2020

Direttore di Laboratorio
dr. ing. Vincenzo Pinto

I. G. s.r.l.
L'Amministratore
Ing. V. PINTO

A P P E N D I C E

Tab. I ÷ Tab. XIV	**RISULTATI PROVA PENETROMETRICA STATICA (CPT)**
Fig. 1 ÷ Tab. 14	**ANDAMENTO RESISTENZE UNITARIE (r_p,r_{ll}) – profondità (z)**
TABELLE E GRAFICI	**PROVA PENETROMETRICA DINAMICA SUPER PESANTE DPSH**

DOCUMENTAZIONE FOTOGRAFICA:

- Postazioni Prove CPT e DPSH

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INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. R.E.A. 442053
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Tab. I. RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT1

Profondità	ACQUISIZIONE		ELABORAZIONE		
z (m)	I Lettura (bar)	II Lettura (bar)	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	16	21	32	0,67	48,0
0,40	21	27	42	0,80	52,5
0,60	18	23	36	0,67	54,0
0,80	20	26	40	0,80	50,0
1,00	22	28	44	0,80	55,0
1,20	20	25	40	0,67	60,0
1,40	26	32	52	0,80	65,0
1,60	34	36	68	0,27	255,0
1,80	102	132	204	4,00	51,0
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z (m)	I Lettura (bar)	II Lettura (bar)	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 1

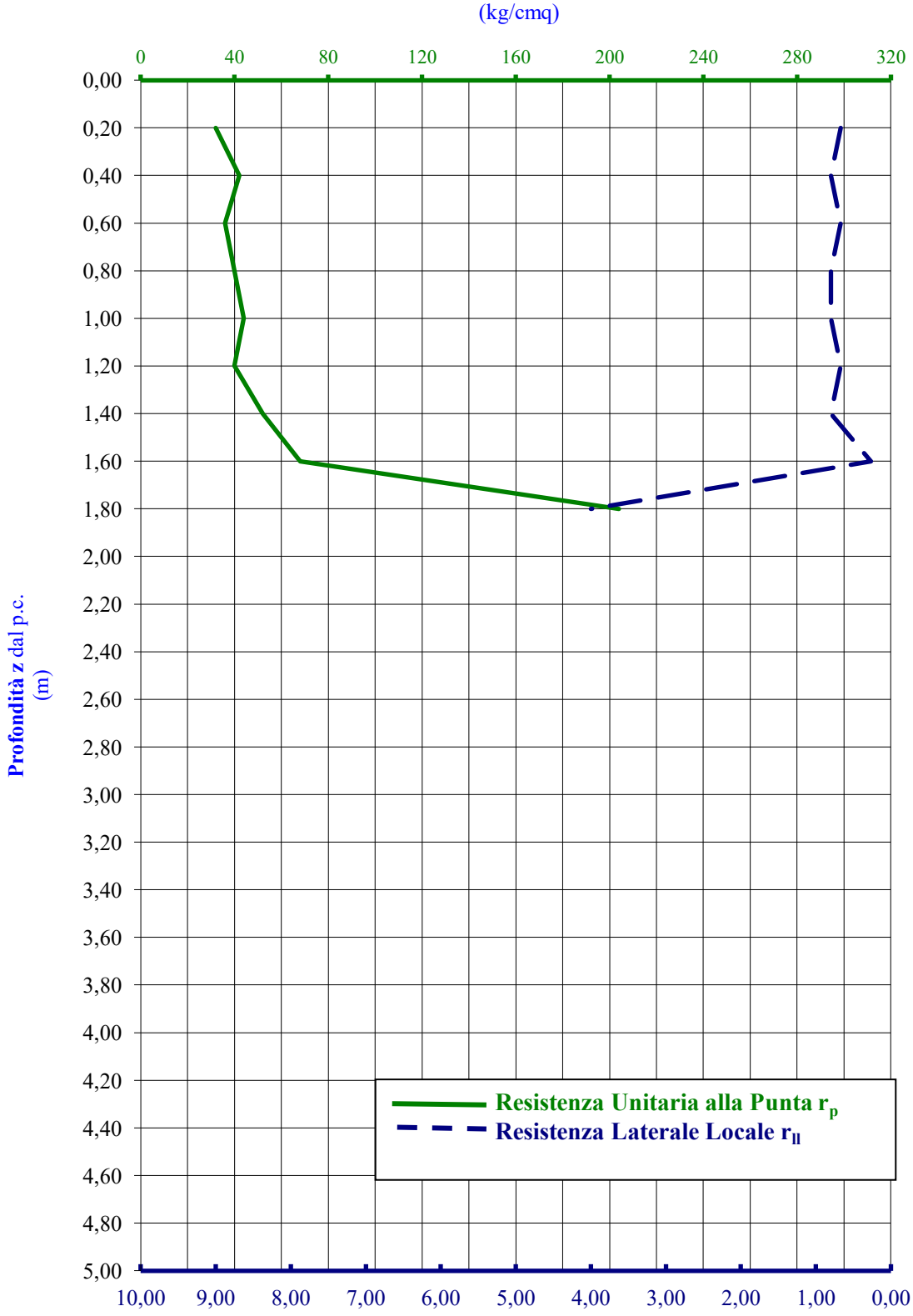

Fig.1- ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. II - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT 2

Profondità	ACQUISIZIONE			ELABORAZIONE	
z (m)	I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	8	10	16	0,27	60,0
0,40	8	9	16	0,13	120,0
0,60	20	22	40	0,27	150,0
0,80	22	25	44	0,40	110,0
1,00	18	23	36	0,67	54,0
1,20	16	21	32	0,67	48,0
1,40	22	26	44	0,53	82,5
1,60	24	27	48	0,40	120,0
1,80	30	32	60	0,27	225,0
2,00	48	62	96	1,87	51,4
2,20	---	---		---	---
2,40	---	---		---	---
2,60	---	---		---	---
2,80	---	---		---	---
3,00	---	---		---	---
3,20	---	---		---	---
3,40	---	---		---	---
3,60	---	---		---	---
3,80	---	---		---	---
4,00	---	---		---	---
4,20	---	---		---	---
4,40	---	---		---	---
4,60	---	---		---	---
4,80	---	---		---	---
5,00	---	---		---	---
5,20	---	---		---	---
5,40	---	---		---	---
5,60	---	---		---	---
5,80	---	---		---	---
6,00	---	---		---	---
6,20	---	---		---	---
6,40	---	---		---	---
6,60	---	---		---	---
6,80	---	---		---	---
7,00	---	---		---	---
7,20	---	---		---	---
7,40	---	---		---	---
7,60	---	---		---	---
7,80	---	---		---	---
8,00	---	---		---	---
8,20	---	---		---	---
8,40	---	---		---	---
8,60	---	---		---	---
8,80	---	---		---	---
9,00	---	---		---	---
9,20	---	---		---	---
9,40	---	---		---	---
9,60	---	---		---	---
9,80	---	---		---	---
10,00	---	---		---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z (m)	I Lettura (bar)	II Lettura (bar)	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 2

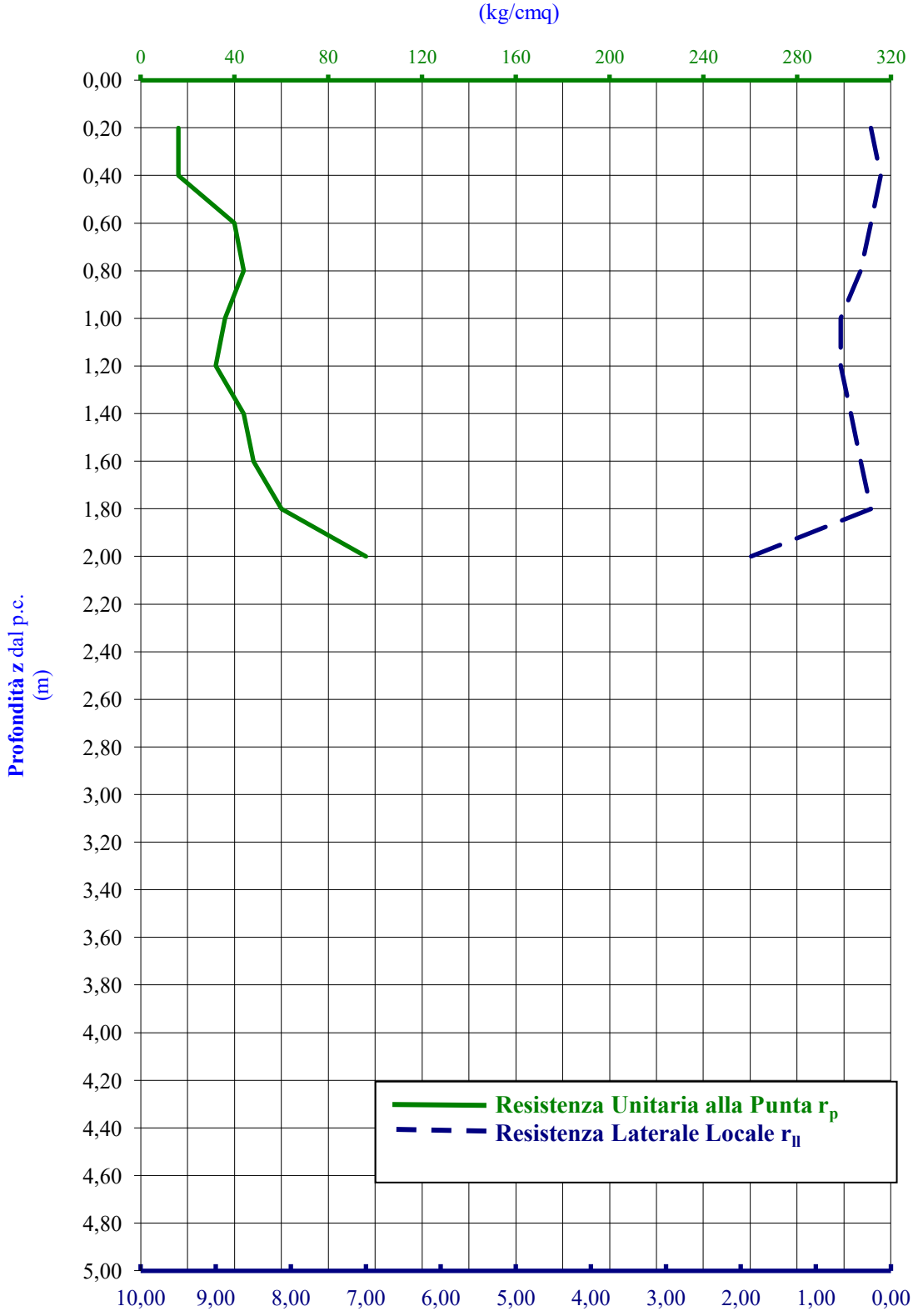

Fig.2- ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. III - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT 3

Profondità	ACQUISIZIONE			ELABORAZIONE	
z (m)	I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	7	10	14	0,40	35,0
0,40	18	23	36	0,67	54,0
0,60	28	34	56	0,80	70,0
0,80	22	25	44	0,40	110,0
1,00	24	26	48	0,27	180,0
1,20	20	23	40	0,40	100,0
1,40	28	30	56	0,27	210,0
1,60	63	69	126	0,80	157,5
1,80	---	---	---	---	---
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z (m)	I Lettura (bar)	II Lettura (bar)	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 3

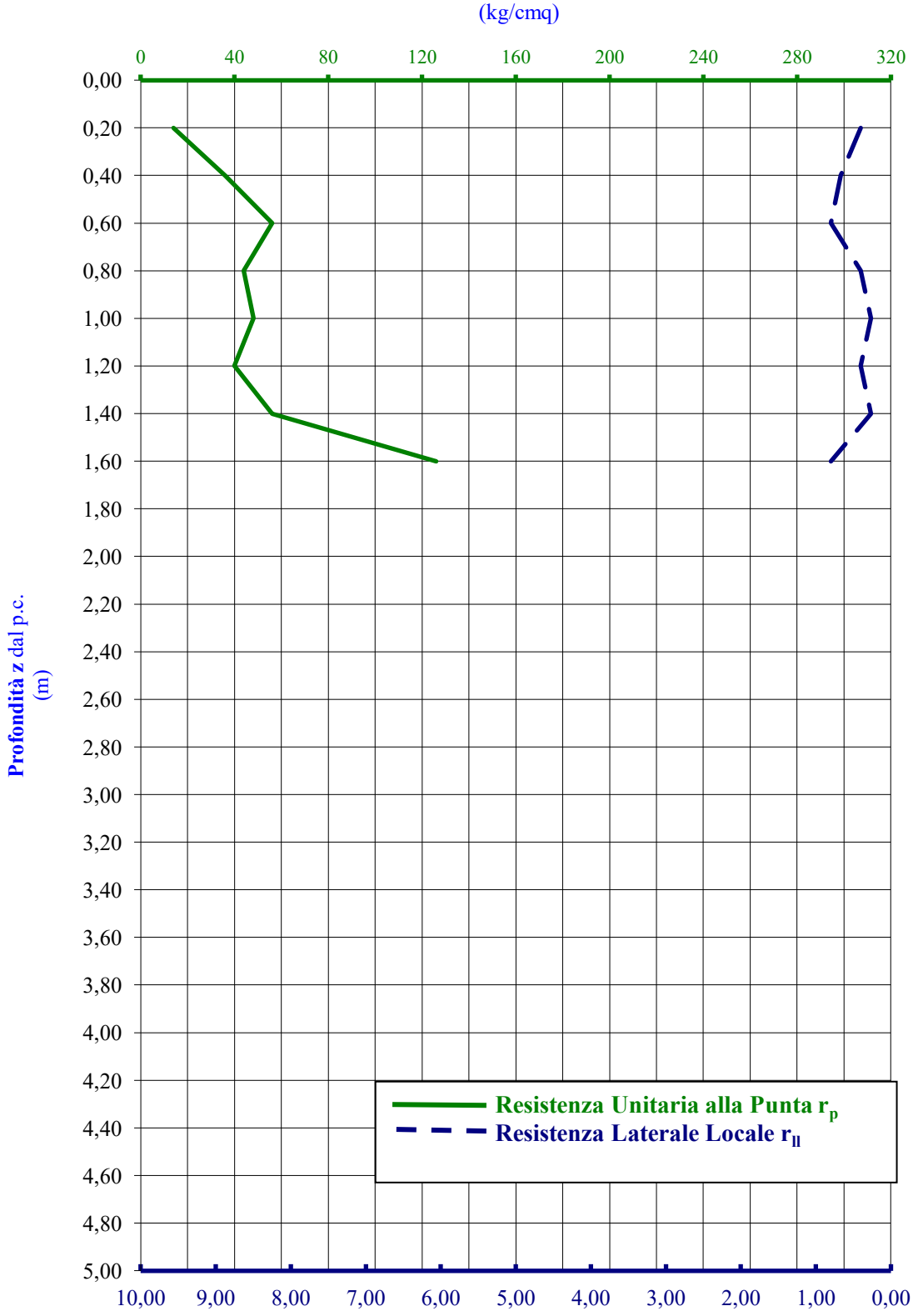

Fig . 3 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. IV - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT4

Profondità	ACQUISIZIONE				
z (m)	I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	20	25	40	0,67	60,0
0,40	21	27	42	0,80	52,5
0,60	22	35	44	1,73	25,4
0,80	20	25	40	0,67	60,0
1,00	15	28	30	1,73	17,3
1,20	16	35	32	2,53	12,6
1,40	35	45	70	1,33	52,5
1,60	20	29	40	1,20	33,3
1,80	19	35	38	2,13	17,8
2,00	10	23	20	1,733333	11,53846
2,20	15	27	30	1,6	18,75
2,40	18	35	36	2,266667	15,88235
2,60	30	36	60	0,8	75
2,80	25	37	50	1,6	31,25
3,00	150	158	300	1,066667	281,25
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z (m)	I Lettura (bar)	II Lettura (bar)	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 4

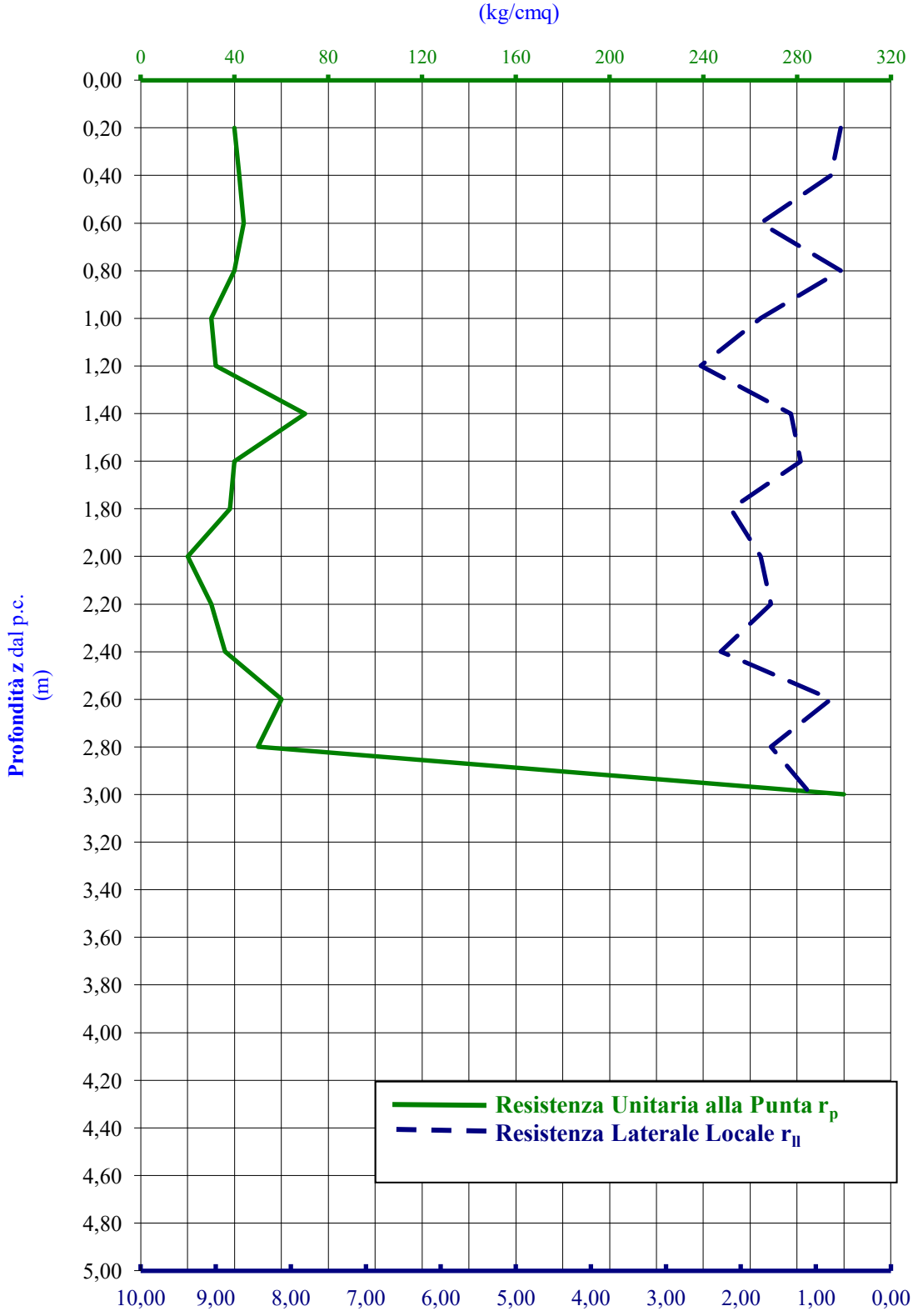

Fig.4 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. V - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT 5

Profondità	ACQUISIZIONE				
z	I Lettura	II Lettura	r_p	r_{II}	$F = r_p/r_{II}$
(m)			(kg/cm^2)	(kg/cm^2)	(-)
0,20	15	20	30	0,67	45,0
0,40	13	21	26	1,07	24,4
0,60	16	27	32	1,47	21,8
0,80	13	22	26	1,20	21,7
1,00	20	25	40	0,67	60,0
1,20	18	25	36	0,93	38,6
1,40	25	30	50	0,67	75,0
1,60	126	138	252	1,60	157,5
1,80	---	---	---	---	---
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z	I Lettura	II Lettura	r_p	r_{II}	$F = r_p/r_{II}$
(m)	(bar)	(bar)	(kg/cm^2)	(kg/cm^2)	(-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 5

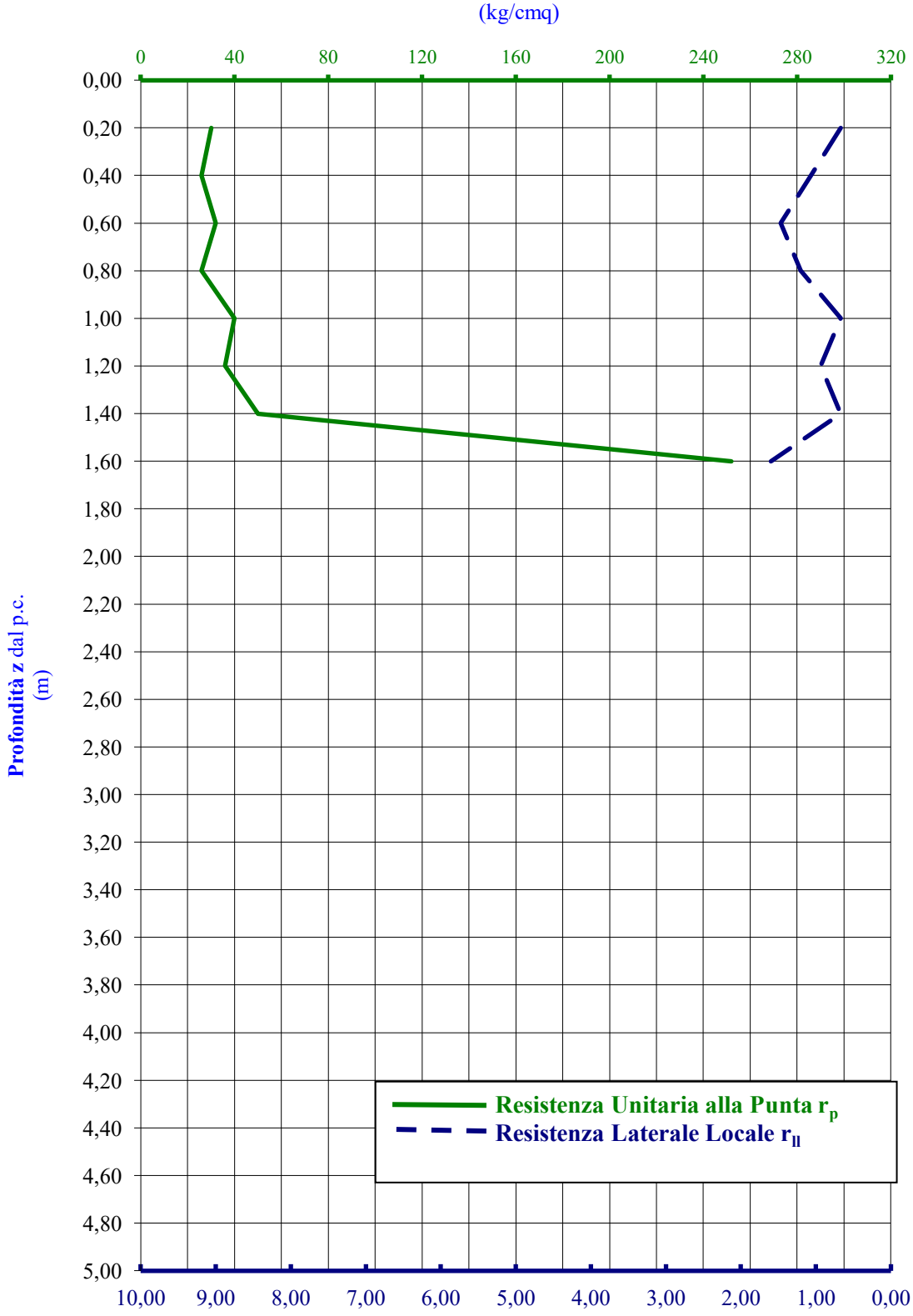

Fig. 5 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. VI - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT 6

Profondità	ACQUISIZIONE			ELABORAZIONE	
z (m)	I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	12	18	24	0,80	30,0
0,40	10	19	20	1,20	16,7
0,60	12	17	24	0,67	36,0
0,80	22	28	44	0,80	55,0
1,00	20	27	40	0,93	42,9
1,20	19	23	38	0,53	71,3
1,40	33	39	66	0,80	82,5
1,60	85	97	170	1,60	106,3
1,80	---	---	---	---	---
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z (m)	I Lettura (bar)	II Lettura (bar)	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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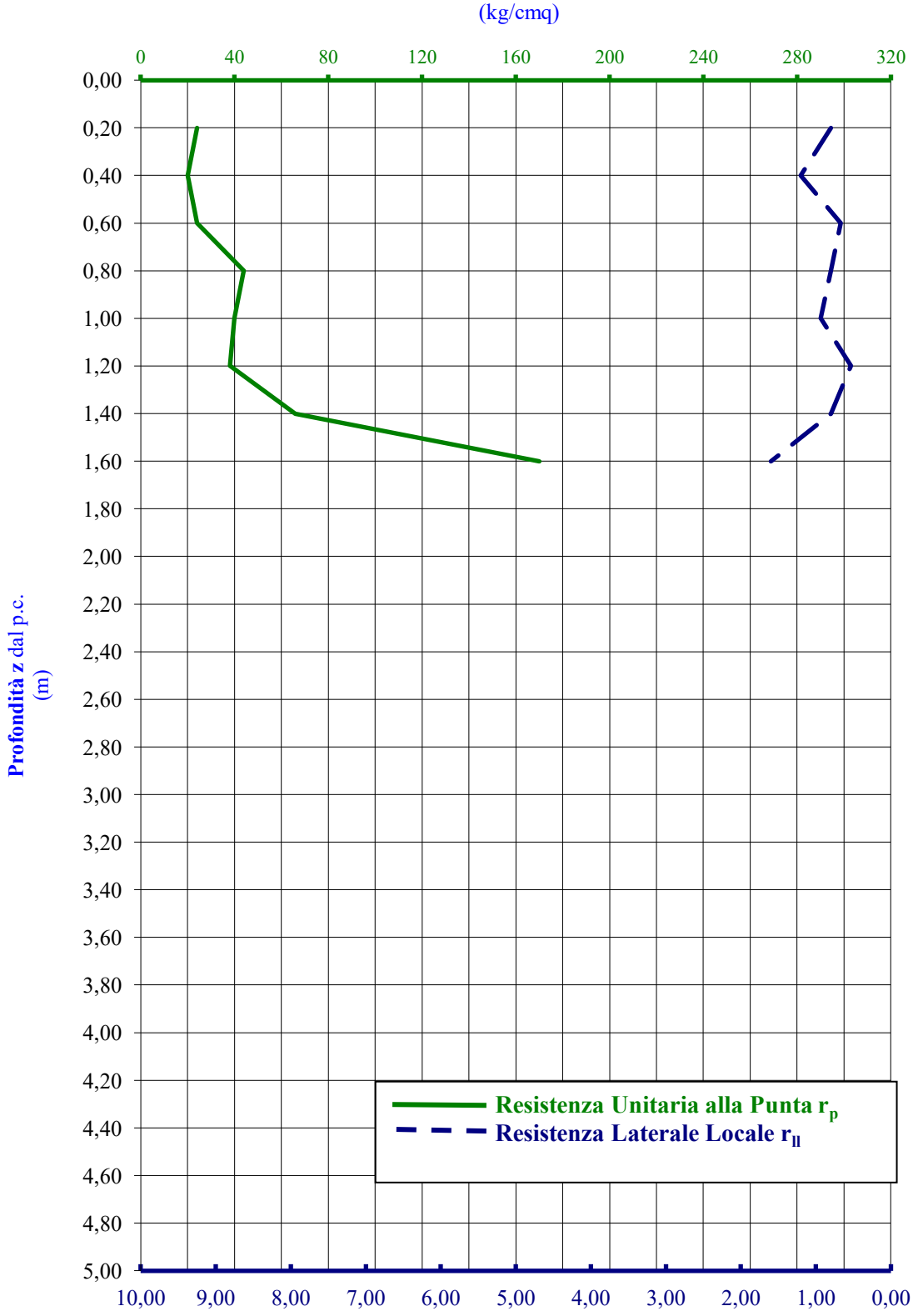

Fig.6 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. VII - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT 7

Profondità z (m)	ACQUISIZIONE I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	20	35	40	2,00	20,0
0,40	18	37	36	2,53	14,2
0,60	21	34	42	1,73	24,2
0,80	19	33	38	1,87	20,4
1,00	20	37	40	2,27	17,6
1,20	19	30	38	1,47	25,9
1,40	17	30	34	1,73	19,6
1,60	147	161	294	1,87	157,5
1,80	---	---	---	---	---
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità z (m)	ACQUISIZIONE I Lettura (bar)	II Lettura (bar)	ELABORAZIONE r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 7

Fig. 7 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. VIII - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT8

Profondità	ACQUISIZIONE				
z	I Lettura	II Lettura	r_p	r_{II}	$F = r_p/r_{II}$
(m)			(kg/cm^2)	(kg/cm^2)	(-)
0,20	16	20	32	1,20	26,7
0,40	18	25	36	1,47	24,5
0,60	23	29	46	0,13	345,0
0,80	22	24	44	0,40	110,0
1,00	21	25	42	1,07	39,4
1,20	24	29	48	0,93	51,4
1,40	26	31	52	0,93	55,7
1,60	29	33	58	3,47	16,7
1,80	45	55	90	1,33	67,5
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z	I Lettura	II Lettura	r_p	r_{II}	$F = r_p/r_{II}$
(m)	(bar)	(bar)	(kg/cm^2)	(kg/cm^2)	(-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 8

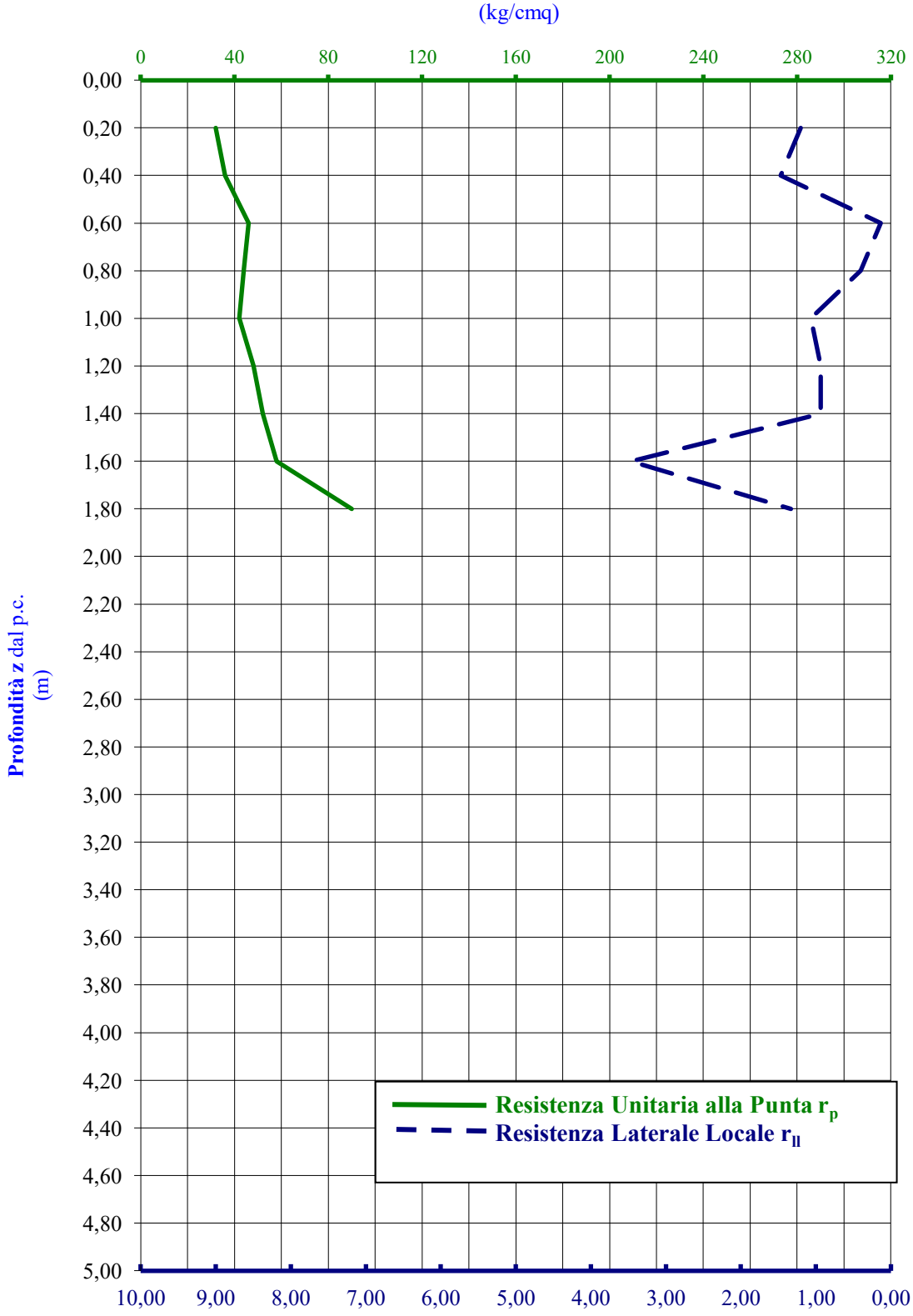

Fig.8 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. IX - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT9

Profondità	ACQUISIZIONE				
z	I Lettura	II Lettura	r_p	r_{II}	$F = r_p/r_{II}$
(m)			(kg/cm^2)	(kg/cm^2)	(-)
0,20	15	21	30	0,80	37,5
0,40	22	27	44	0,67	66,0
0,60	20	26	40	0,80	50,0
0,80	15	21	30	0,80	37,5
1,00	23	28	46	0,67	69,0
1,20	19	25	38	0,80	47,5
1,40	24	31	48	0,93	51,4
1,60	32	36	64	0,53	120,0
1,80	30	37	60	0,93	64,3
2,00	31	38	62	0,93	66,4
2,20	132	148	264	2,13	123,8
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z	I Lettura	II Lettura	r_p	r_{II}	$F = r_p/r_{II}$
(m)	(bar)	(bar)	(kg/cm^2)	(kg/cm^2)	(-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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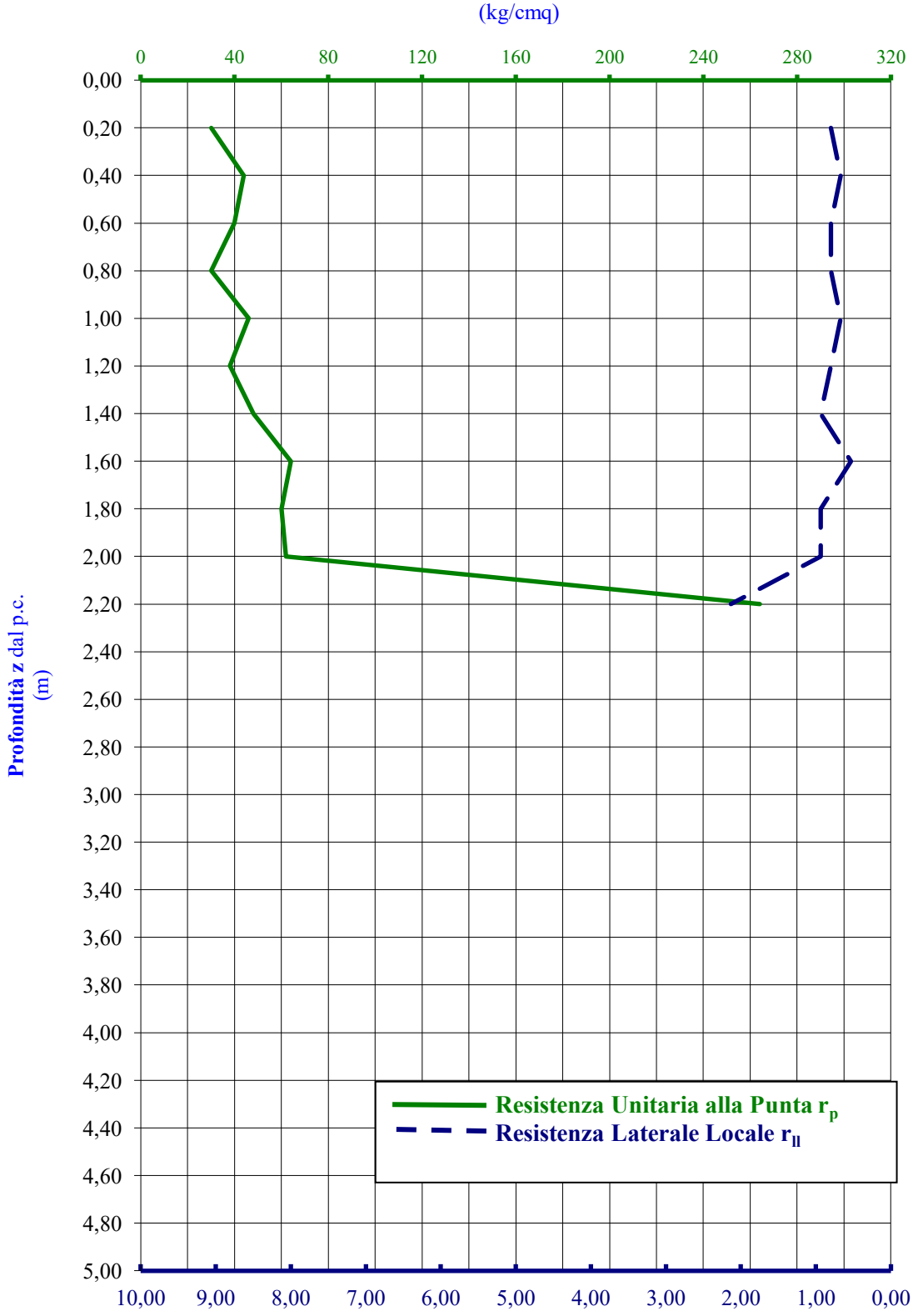

Fig.9 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. X - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT10

Profondità z (m)	ACQUISIZIONE I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	18	22	36	0,53	67,5
0,40	20	25	40	0,67	60,0
0,60	18	24	36	0,80	45,0
0,80	12	19	24	0,93	25,7
1,00	20	30	40	1,33	30,0
1,20	22	29	44	0,93	47,1
1,40	20	26	40	0,80	50,0
1,60	22	30	44	1,07	41,3
1,80	25	36	50	1,47	34,1
2,00	26	30	52	0,53	97,5
2,20	87	99	174	1,6	108,8
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10	---		---		

Profondità z (m)	ACQUISIZIONE I Lettura (bar)	II Lettura (bar)	ELABORAZIONE r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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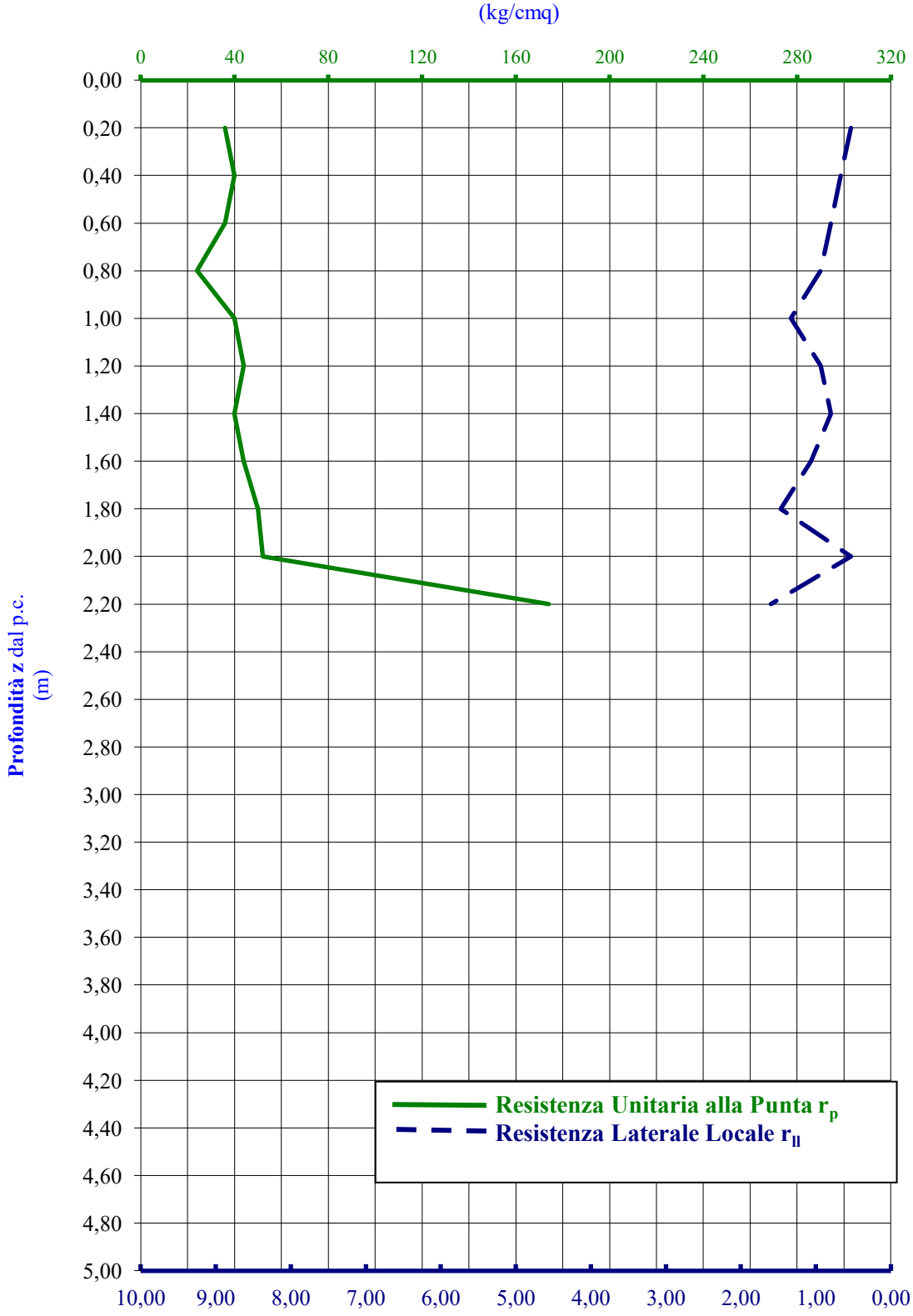

Fig. 10 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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Tab. XI - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT 11

Profondità	ACQUISIZIONE				
z (m)	I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	15	20	30	0,67	45,0
0,40	22	29	44	0,93	47,1
0,60	21	27	42	0,80	52,5
0,80	15	22	30	0,93	32,1
1,00	23	27	46	0,53	86,3
1,20	111	134	222	3,07	72,4
1,40	---	---	---	---	---
1,60	---	---	---	---	---
1,80	---	---	---	---	---
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE		
z (m)	I Lettura (bar)	II Lettura (bar)	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. R.E.A. 442053
Attestazione S.O.A. UNISOA S.p.A.

PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 11

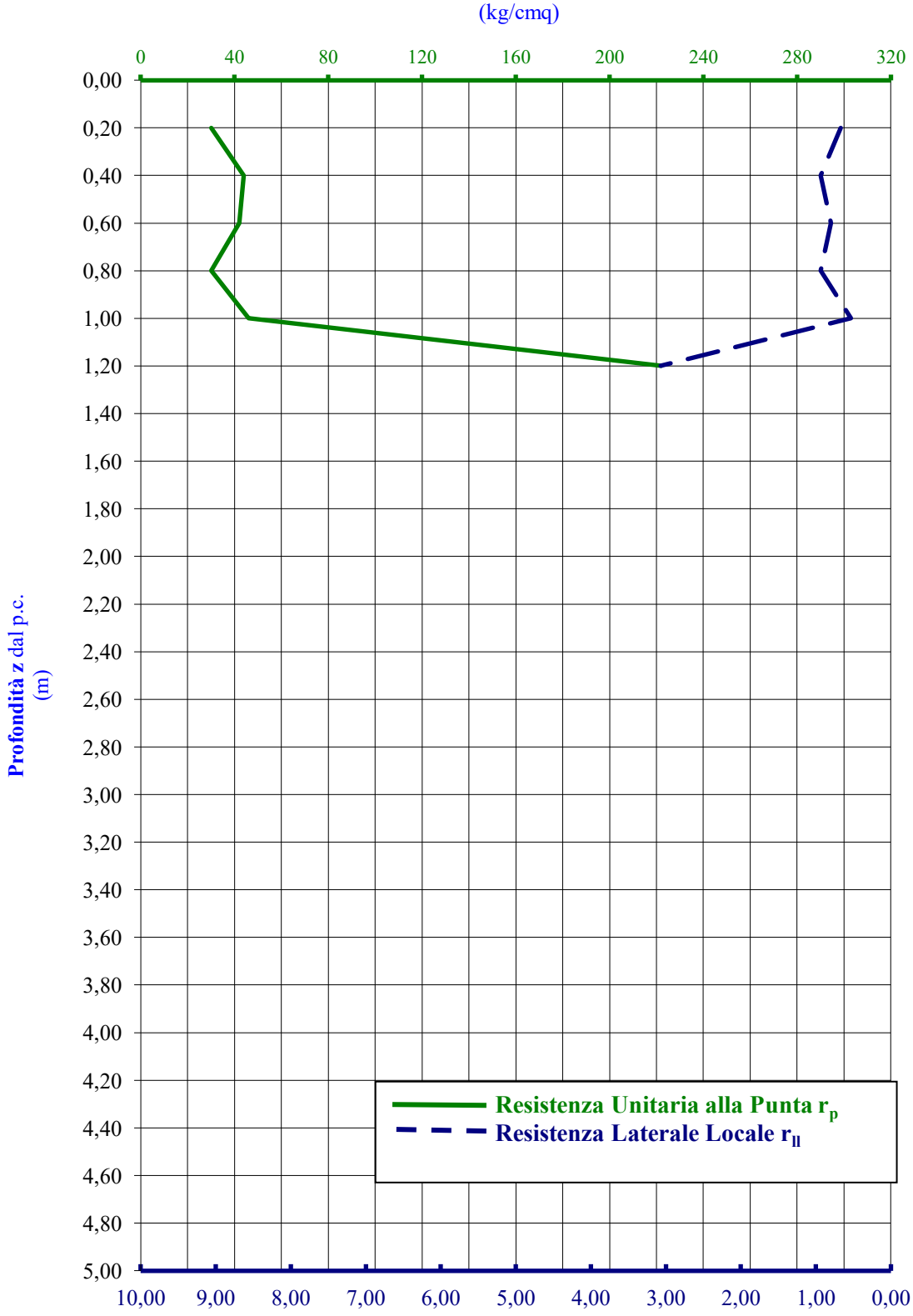

Fig.11 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

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Tab. XII - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT12

Profondità	ACQUISIZIONE			ELABORAZIONE	
z	I Lettura	II Lettura	r_p	r_{ll}	$F = r_p/r_{ll}$
(m)			(kg/cm^2)	(kg/cm^2)	(-)
0,20	7	9	14	0,27	52,5
0,40	10	14	20	0,53	37,5
0,60	12	17	24	0,67	36,0
0,80	15	18	30	0,40	75,0
1,00	19	25	38	0,80	47,5
1,20	20	25	40	0,67	60,0
1,40	15	19	30	0,53	56,3
1,60	22	28	44	0,80	55,0
1,80	21	28	42	0,93	45,0
2,00	25	31	50	0,80	62,5
2,20	106	119	212	1,73	122,3
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità	ACQUISIZIONE		ELABORAZIONE	
z	r_p	$r_p + 15\ r_{ll}$	r_{ll}	$F = r_p/r_{ll}$
(m)	(MPa)	(MPa)	(MPa)	(-)
10,20	---	---	---	---
10,40	---	---	---	---
10,60	---	---	---	---
10,80	---	---	---	---
11,00	---	---	---	---
11,20	---	---	---	---
11,40	---	---	---	---
11,60	---	---	---	---
11,80	---	---	---	---
12,00	---	---	---	---
12,20	---	---	---	---
12,40	---	---	---	---
12,60	---	---	---	---
12,80	---	---	---	---
13,00	---	---	---	---
13,20	---	---	---	---
13,40	---	---	---	---
13,60	---	---	---	---
13,80	---	---	---	---
14,00	---	---	---	---
14,20	---	---	---	---
14,40	---	---	---	---
14,60	---	---	---	---
14,80	---	---	---	---
15,00	---	---	---	---
15,20	---	---	---	---
15,40	---	---	---	---
15,60	---	---	---	---
15,80	---	---	---	---
16,00	---	---	---	---
16,20	---	---	---	---
16,40	---	---	---	---
16,60	---	---	---	---
16,80	---	---	---	---
17,00	---	---	---	---
17,20	---	---	---	---
17,40	---	---	---	---
17,60	---	---	---	---
17,80	---	---	---	---
18,00	---	---	---	---
18,20	---	---	---	---
18,40	---	---	---	---
18,60	---	---	---	---
18,80	---	---	---	---
19,00	---	---	---	---
19,20	---	---	---	---
19,40	---	---	---	---
19,60	---	---	---	---
19,80	---	---	---	---
20,00	---	---	---	---

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INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

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C.C.I.A.A. R.E.A. 442053
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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 12

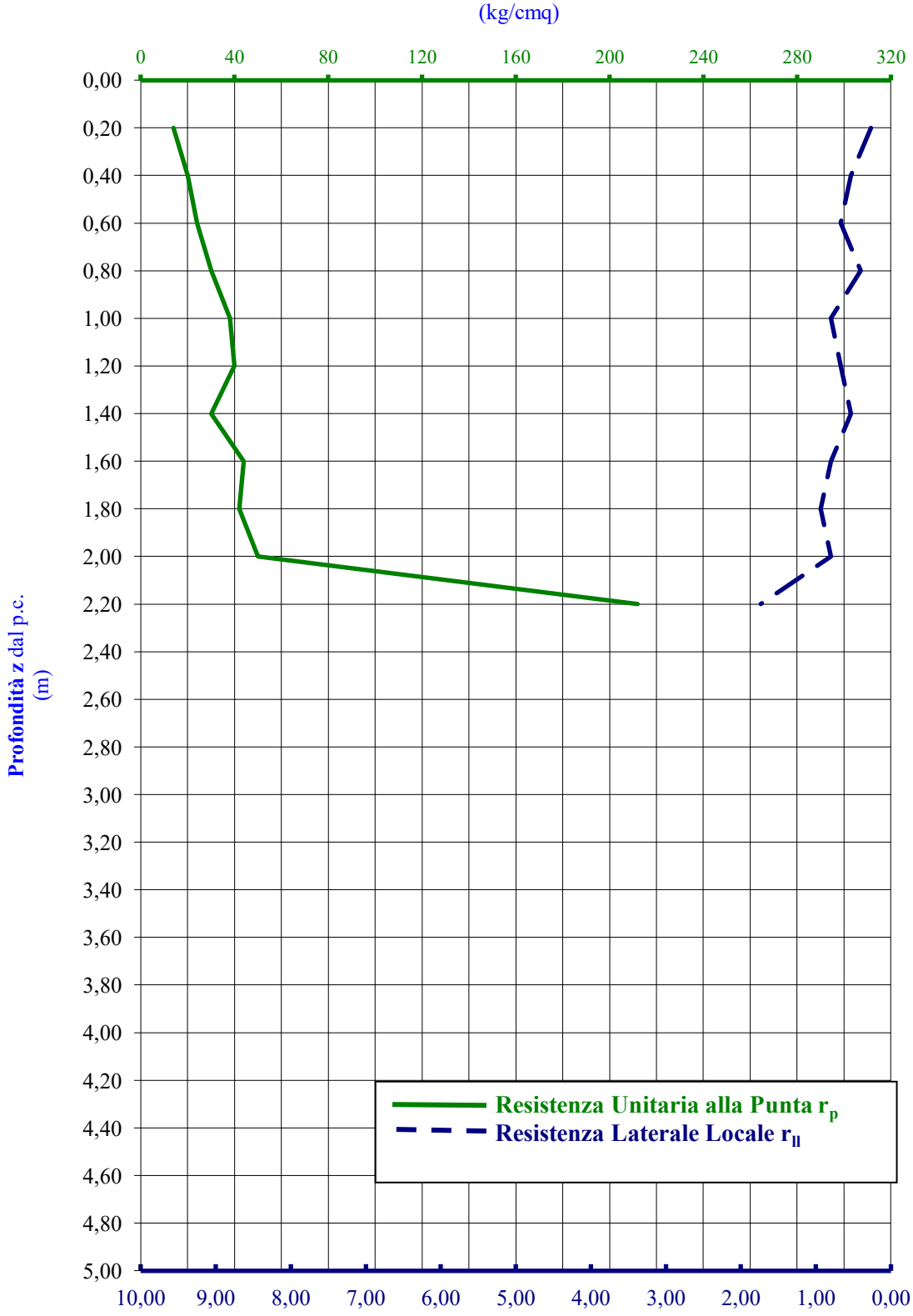

Fig.12 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

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Tab. XIII - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT13

Profondità z (m)	ACQUISIZIONE I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	7	10	14	0,40	35,0
0,40	12	16	24	0,53	45,0
0,60	11	16	22	0,67	33,0
0,80	20	26	40	0,80	50,0
1,00	19	23	38	0,53	71,3
1,20	21	27	42	0,80	52,5
1,40	22	27	44	0,67	66,0
1,60	30	36	60	0,80	75,0
1,80	31	39	62	1,07	58,1
2,00	48	62	96	1,87	51,4
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità z (m)	ACQUISIZIONE I Lettura (bar)	II Lettura (bar)	ELABORAZIONE r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 13

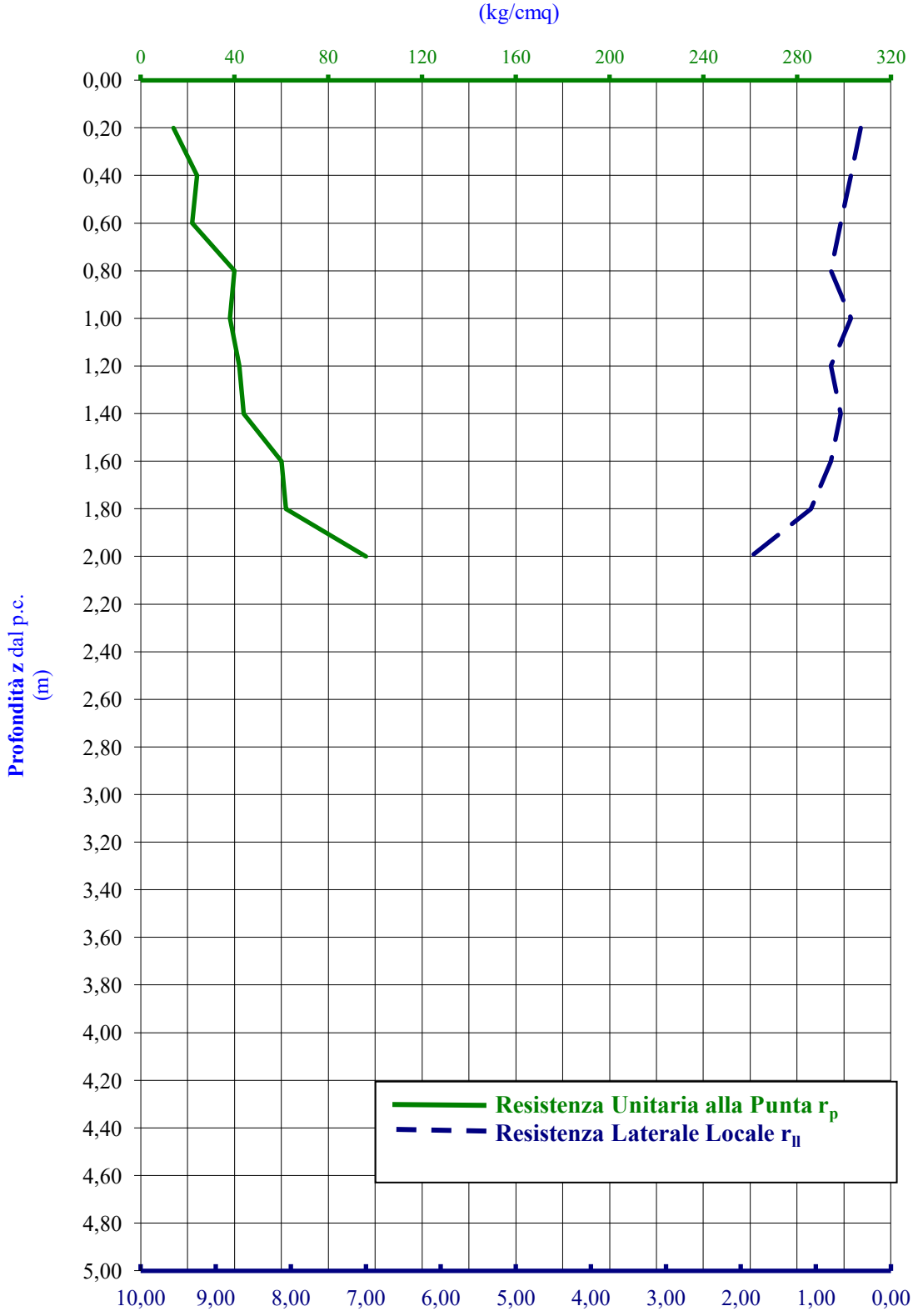

Fig. 13- ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

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INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Tab. XIV - RISULTATI PROVA PENETROMETRICA STATICA (C.P.T.) : CPT14

Profondità z (m)	ACQUISIZIONE I Lettura	II Lettura	r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
0,20	6	9	12	0,40	30,0
0,40	20	25	40	0,67	60,0
0,60	22	27	44	0,67	66,0
0,80	23	27	46	0,53	86,3
1,00	25	33	50	1,07	46,9
1,20	30	39	60	1,20	50,0
1,40	123	145	246	2,93	83,9
1,60	---	---	---	---	---
1,80	---	---	---	---	---
2,00	---	---	---	---	---
2,20	---	---	---	---	---
2,40	---	---	---	---	---
2,60	---	---	---	---	---
2,80	---	---	---	---	---
3,00	---	---	---	---	---
3,20	---	---	---	---	---
3,40	---	---	---	---	---
3,60	---	---	---	---	---
3,80	---	---	---	---	---
4,00	---	---	---	---	---
4,20	---	---	---	---	---
4,40	---	---	---	---	---
4,60	---	---	---	---	---
4,80	---	---	---	---	---
5,00	---	---	---	---	---
5,20	---	---	---	---	---
5,40	---	---	---	---	---
5,60	---	---	---	---	---
5,80	---	---	---	---	---
6,00	---	---	---	---	---
6,20	---	---	---	---	---
6,40	---	---	---	---	---
6,60	---	---	---	---	---
6,80	---	---	---	---	---
7,00	---	---	---	---	---
7,20	---	---	---	---	---
7,40	---	---	---	---	---
7,60	---	---	---	---	---
7,80	---	---	---	---	---
8,00	---	---	---	---	---
8,20	---	---	---	---	---
8,40	---	---	---	---	---
8,60	---	---	---	---	---
8,80	---	---	---	---	---
9,00	---	---	---	---	---
9,20	---	---	---	---	---
9,40	---	---	---	---	---
9,60	---	---	---	---	---
9,80	---	---	---	---	---
10,00	---	---	---	---	---

Profondità z (m)	ACQUISIZIONE I Lettura (bar)	II Lettura (bar)	ELABORAZIONE r_p (kg/cm^2)	r_{II} (kg/cm^2)	$F = r_p/r_{II}$ (-)
10,20	---	---	---	---	---
10,40	---	---	---	---	---
10,60	---	---	---	---	---
10,80	---	---	---	---	---
11,00	---	---	---	---	---
11,20	---	---	---	---	---
11,40	---	---	---	---	---
11,60	---	---	---	---	---
11,80	---	---	---	---	---
12,00	---	---	---	---	---
12,20	---	---	---	---	---
12,40	---	---	---	---	---
12,60	---	---	---	---	---
12,80	---	---	---	---	---
13,00	---	---	---	---	---
13,20	---	---	---	---	---
13,40	---	---	---	---	---
13,60	---	---	---	---	---
13,80	---	---	---	---	---
14,00	---	---	---	---	---
14,20	---	---	---	---	---
14,40	---	---	---	---	---
14,60	---	---	---	---	---
14,80	---	---	---	---	---
15,00	---	---	---	---	---
15,20	---	---	---	---	---
15,40	---	---	---	---	---
15,60	---	---	---	---	---
15,80	---	---	---	---	---
16,00	---	---	---	---	---
16,20	---	---	---	---	---
16,40	---	---	---	---	---
16,60	---	---	---	---	---
16,80	---	---	---	---	---
17,00	---	---	---	---	---
17,20	---	---	---	---	---
17,40	---	---	---	---	---
17,60	---	---	---	---	---
17,80	---	---	---	---	---
18,00	---	---	---	---	---
18,20	---	---	---	---	---
18,40	---	---	---	---	---
18,60	---	---	---	---	---
18,80	---	---	---	---	---
19,00	---	---	---	---	---
19,20	---	---	---	---	---
19,40	---	---	---	---	---
19,60	---	---	---	---	---
19,80	---	---	---	---	---
20,00	---	---	---	---	---

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PROVA PENETROMETRICA STATICA CON PUNTA MECCANICA (C.P.T.) : CPT 14

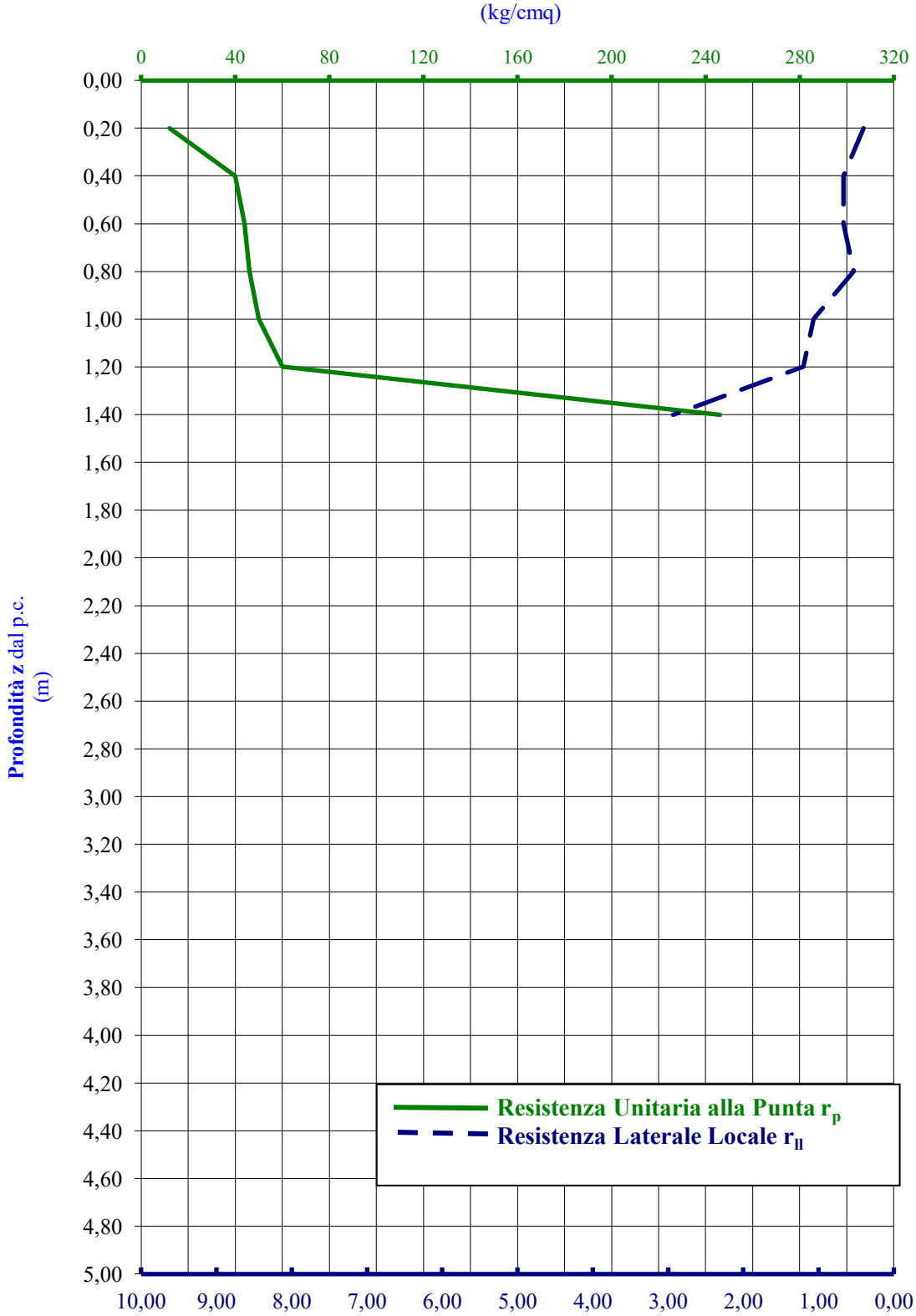


Fig.14 - ANDAMENTO RESISTENZE UNITARIE (r_p , r_{ll}) - PROFONDITA' (z)

I.G. S.r.l.

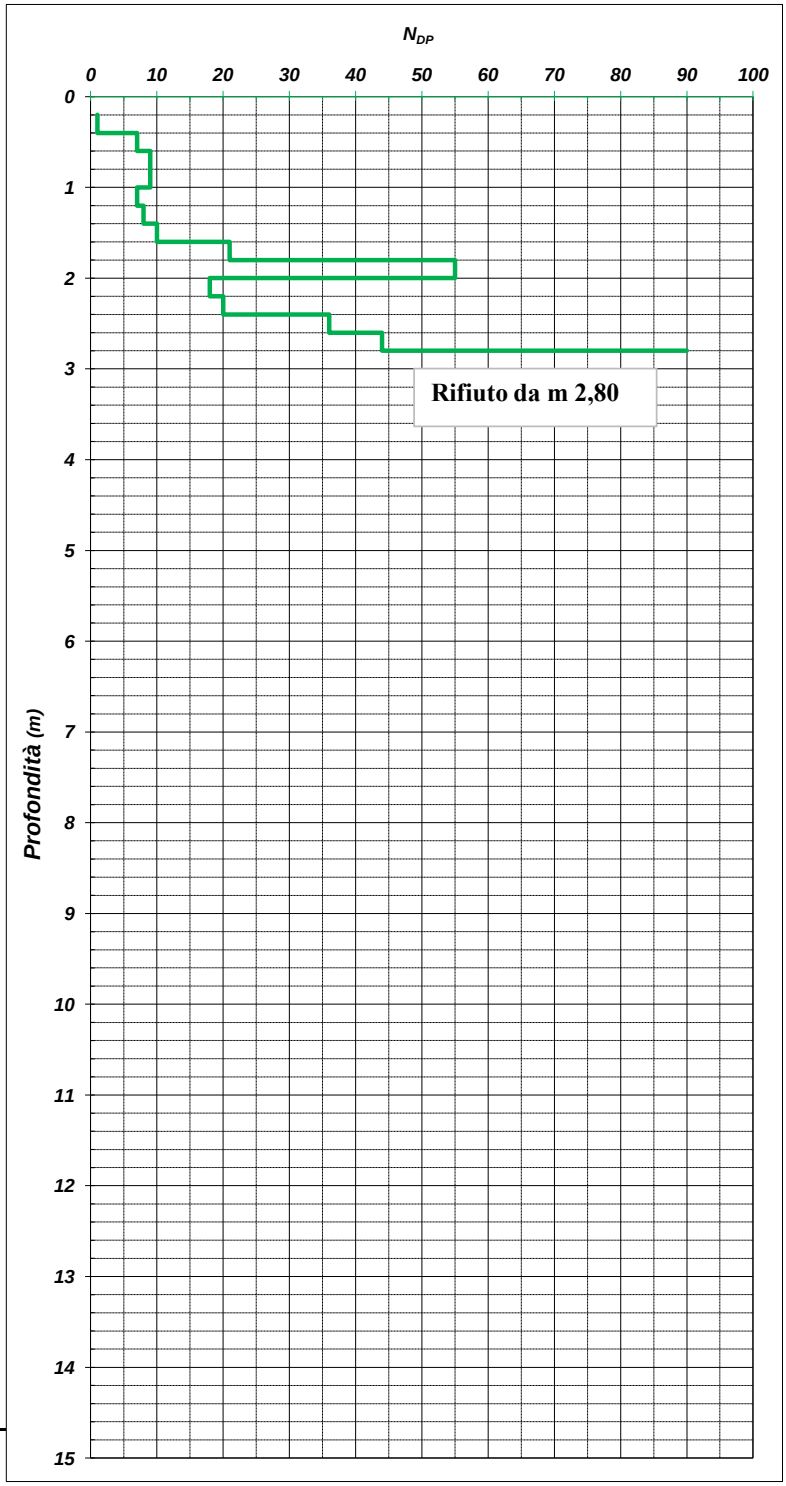
Laboratorio Autorizzato
per Indagini Geognostiche e Prove in Sito
DECRETO N 900 del 28/01/11

Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. IMBOCCO TBM.	Località:	PONTE (BN)
Prova: DPSH 1		Data Esecuzione: 14/09/20	Profondità (m): 2,80

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	1	0,7	10,4			20,6		
0,4	7	5,1	10,6			20,8		
0,6	9	6,6	10,8			21,0		
0,8	9	6,6	11,0			21,2		
1,0	7	4,7	11,2			21,4		
1,2	8	5,4	11,4			21,6		
1,4	10	6,8	11,6			21,8		
1,6	21	14,2	11,8			22,0		
1,8	55	37,2	12,0			22,2		
2,0	18	11,4	12,2			22,4		
2,2	20	12,6	12,4			22,6		
2,4	36	22,7	12,6			22,8		
2,6	44	27,7	12,8			23,0		
2,8	90	56,8	13,0			23,2		
3,0			13,2			23,4		
3,2			13,4			23,6		
3,4			13,6			23,8		
3,6			13,8			24,0		
3,8			14,0			24,2		
4,0			14,2			24,4		
4,2			14,4			24,6		
4,4			14,6			24,8		
4,6			14,8			25,0		
4,8			15,0			25,2		
5,0			15,2			25,4		
5,2			15,4			25,6		
5,4			15,6			25,8		
5,6			15,8			26,0		
5,8			16,0			26,2		
6,0			16,2			26,4		
6,2			16,4			26,6		
6,4			16,6			26,8		
6,6			16,8			27,0		
6,8			17,0			27,2		
7,0			17,2			27,4		
7,2			17,4			27,6		
7,4			17,6			27,8		
7,6			17,8			28,0		
7,8			18,0			28,2		
8,0			18,2			28,4		
8,2			18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-1.

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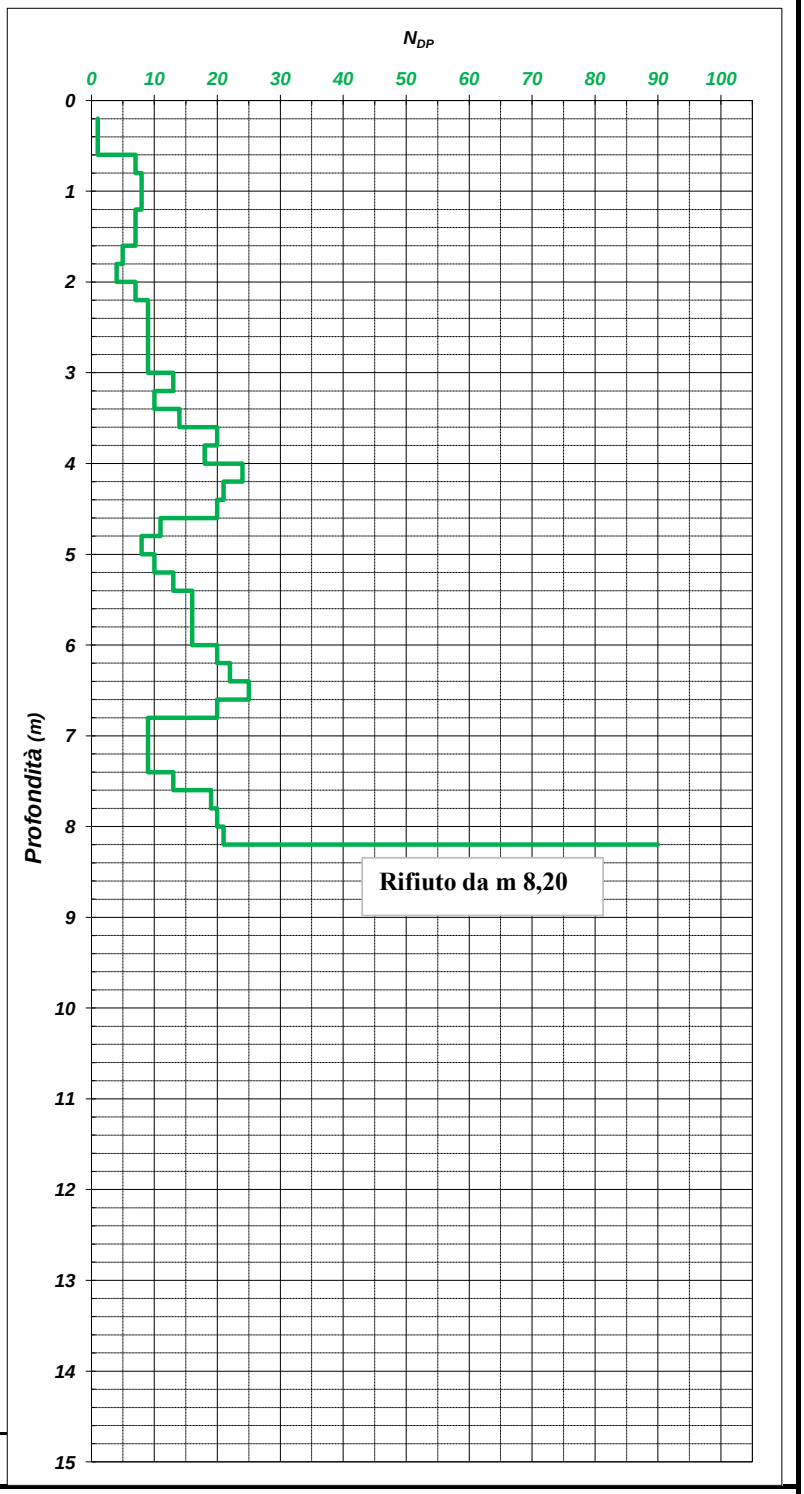
Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 2		Data Esecuzione: 14/09/20	Profondità (m): 8,20

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0		0,00	10,2			20,4		
0,2	1	0,73	10,4	101		20,6		
0,4	1	0,73	10,6			20,8		
0,6	7	5,11	10,8			21,0		
0,8	8	5,84	11,0			21,2		
1,0	8	5,41	11,2			21,4		
1,2	7	4,74	11,4			21,6		
1,4	7	4,74	11,6			21,8		
1,6	5	3,38	11,8			22,0		
1,8	4	2,71	12,0			22,2		
2,0	7	4,41	12,2			22,4		
2,2	9	5,68	12,4			22,6		
2,4	9	5,68	12,6			22,8		
2,6	9	5,68	12,8			23,0		
2,8	9	5,68	13,0			23,2		
3,0	13	7,67	13,2			23,4		
3,2	10	5,90	13,4			23,6		
3,4	14	8,27	13,6			23,8		
3,6	20	11,81	13,8			24,0		
3,8	18	10,63	14,0			24,2		
4,0	24	13,32	14,2			24,4		
4,2	21	11,66	14,4			24,6		
4,4	20	11,10	14,6			24,8		
4,6	11	6,11	14,8			25,0		
4,8	8	4,44	15,0			25,2		
5,0	10	5,24	15,2			25,4		
5,2	13	6,81	15,4			25,6		
5,4	16	8,38	15,6			25,8		
5,6	16	8,38	15,8			26,0		
5,8	16	8,38	16,0			26,2		
6,0	20	9,91	16,2			26,4		
6,2	22	10,90	16,4			26,6		
6,4	25	12,39	16,6			26,8		
6,6	20	9,91	16,8			27,0		
6,8	9	4,46	17,0			27,2		
7,0	9	4,23	17,2			27,4		
7,2	9	4,23	17,4			27,6		
7,4	13	6,12	17,6			27,8		
7,6	19	8,94	17,8			28,0		
7,8	20	9,41	18,0			28,2		
8,0	21	9,40	18,2			28,4		
8,2	90	40,29	18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-2.

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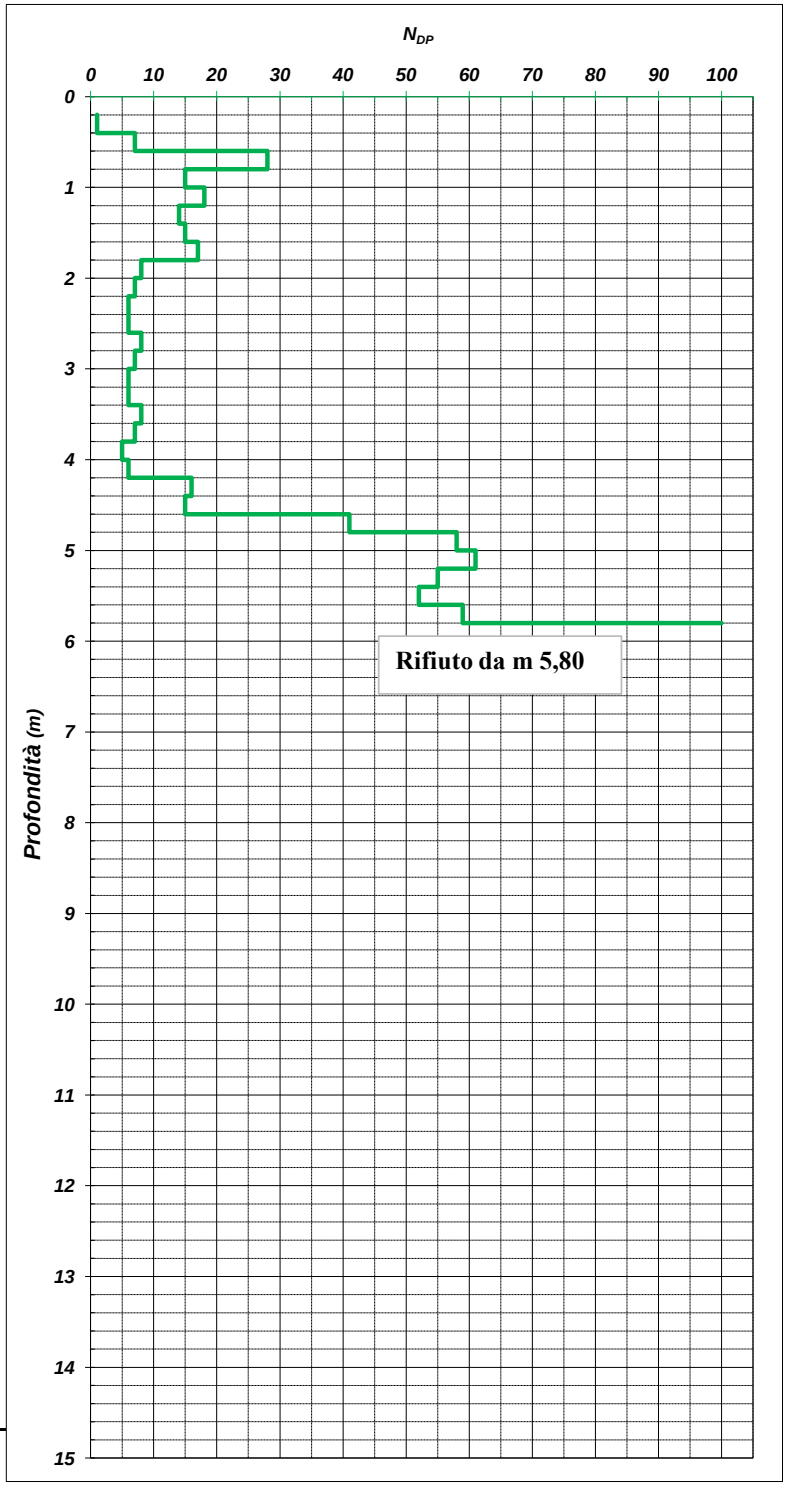
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 3		Data Esecuzione: 08/09/20	Profondità (m): 5,8

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	1	0,73	10,4			20,6		
0,4	7	5,11	10,6			20,8		
0,6	28	20,44	10,8			21,0		
0,8	15	10,95	11,0			21,2		
1,0	18	12,18	11,2			21,4		
1,2	14	9,47	11,4			21,6		
1,4	15	10,15	11,6			21,8		
1,6	17	11,50	11,8			22,0		
1,8	8	5,41	12,0			22,2		
2,0	7	4,41	12,2			22,4		
2,2	6	3,78	12,4			22,6		
2,4	6	3,78	12,6			22,8		
2,6	8	5,04	12,8			23,0		
2,8	7	4,41	13,0			23,2		
3,0	6	3,54	13,2			23,4		
3,2	6	3,54	13,4			23,6		
3,4	8	4,72	13,6			23,8		
3,6	7	4,13	13,8			24,0		
3,8	5	2,95	14,0			24,2		
4,0	6	3,33	14,2			24,4		
4,2	16	8,88	14,4			24,6		
4,4	15	8,33	14,6			24,8		
4,6	41	22,76	14,8			25,0		
4,8	58	32,19	15,0			25,2		
5,0	61	31,94	15,2			25,4		
5,2	55	28,80	15,4			25,6		
5,4	52	27,23	15,6			25,8		
5,6	59	30,89	15,8			26,0		
5,8	100	52,36	16,0			26,2		
6,0			16,2			26,4		
6,2			16,4			26,6		
6,4			16,6			26,8		
6,6			16,8			27,0		
6,8			17,0			27,2		
7,0			17,2			27,4		
7,2			17,4			27,6		
7,4			17,6			27,8		
7,6			17,8			28,0		
7,8			18,0			28,2		
8,0			18,2			28,4		
8,2			18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-3.

I.G. S.r.l.

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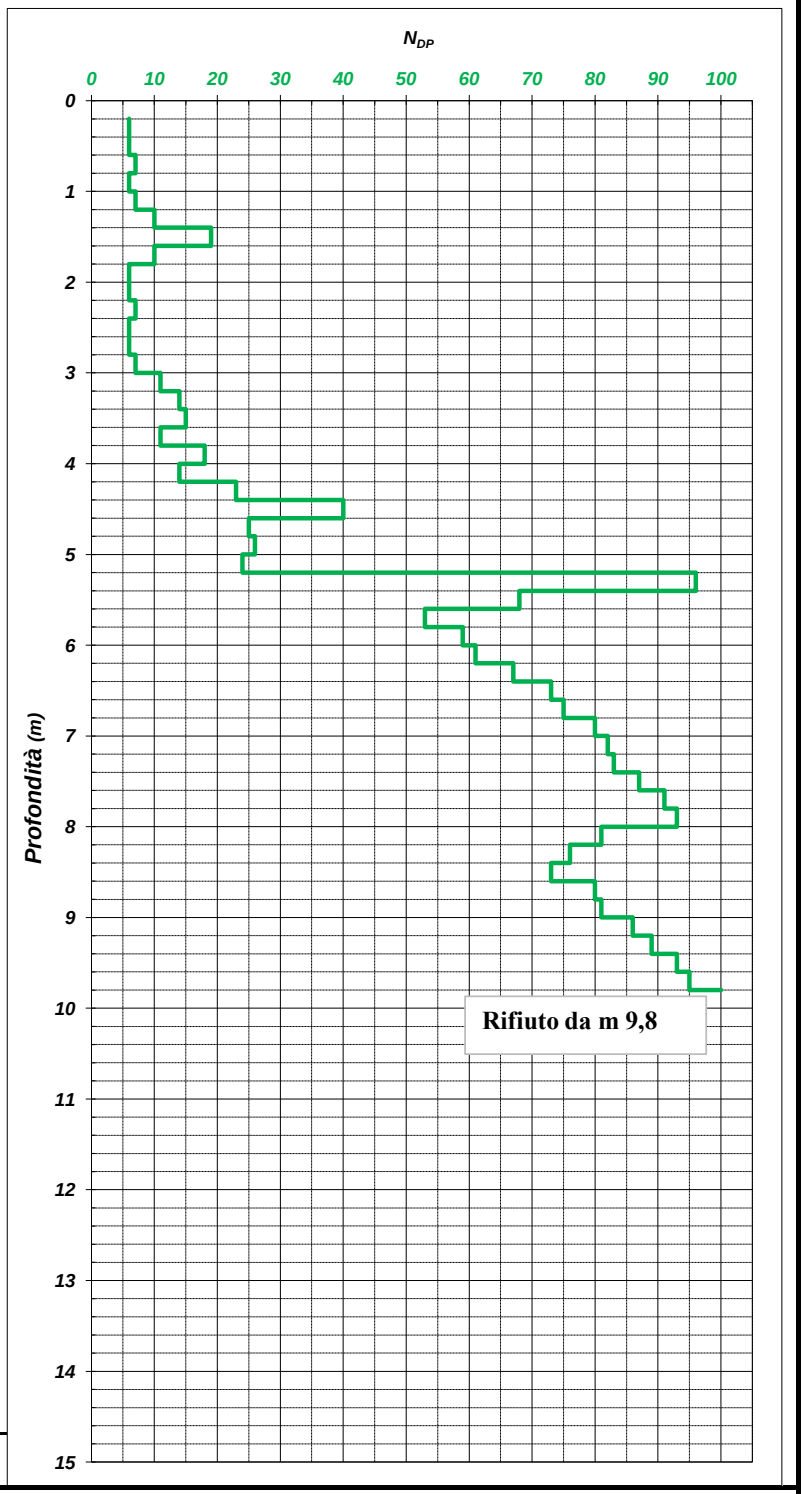
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 4		Data Esecuzione: 07/09/20	Profondità (m): 9,8

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	6	4,38	10,4			20,6		
0,4	6	4,38	10,6			20,8		
0,6	7	5,11	10,8			21,0		
0,8	6	4,38	11,0			21,2		
1,0	7	4,74	11,2			21,4		
1,2	10	6,77	11,4			21,6		
1,4	19	12,86	11,6			21,8		
1,6	10	6,77	11,8			22,0		
1,8	6	4,06	12,0			22,2		
2,0	6	3,78	12,2			22,4		
2,2	7	4,41	12,4			22,6		
2,4	6	3,78	12,6			22,8		
2,6	6	3,78	12,8			23,0		
2,8	7	4,41	13,0			23,2		
3,0	11	6,49	13,2			23,4		
3,2	14	8,27	13,4			23,6		
3,4	15	8,86	13,6			23,8		
3,6	11	6,49	13,8			24,0		
3,8	18	10,63	14,0			24,2		
4,0	14	7,77	14,2			24,4		
4,2	23	12,77	14,4			24,6		
4,4	40	22,20	14,6			24,8		
4,6	25	13,88	14,8			25,0		
4,8	26	14,43	15,0			25,2		
5,0	24	12,57	15,2			25,4		
5,2	96	50,27	15,4			25,6		
5,4	68	35,61	15,6			25,8		
5,6	53	27,75	15,8			26,0		
5,8	59	30,89	16,0			26,2		
6,0	61	30,23	16,2			26,4		
6,2	67	33,21	16,4			26,6		
6,4	73	36,18	16,6			26,8		
6,6	75	37,17	16,8			27,0		
6,8	80	39,65	17,0			27,2		
7,0	82	38,58	17,2			27,4		
7,2	83	39,05	17,4			27,6		
7,4	87	40,93	17,6			27,8		
7,6	91	42,81	17,8			28,0		
7,8	93	43,75	18,0			28,2		
8,0	81	36,26	18,2			28,4		
8,2	76	34,02	18,4			28,6		
8,4	73	32,68	18,6			28,8		
8,6	80	35,82	18,8			29,0		
8,8	81	36,26	19,0			29,2		
9,0	86	36,73	19,2			29,4		
9,2	89	38,01	19,4			29,6		
9,4	93	39,72	19,6			29,8		
9,6	95	40,57	19,8			30,0		
9,8	100	42,70	20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-4.

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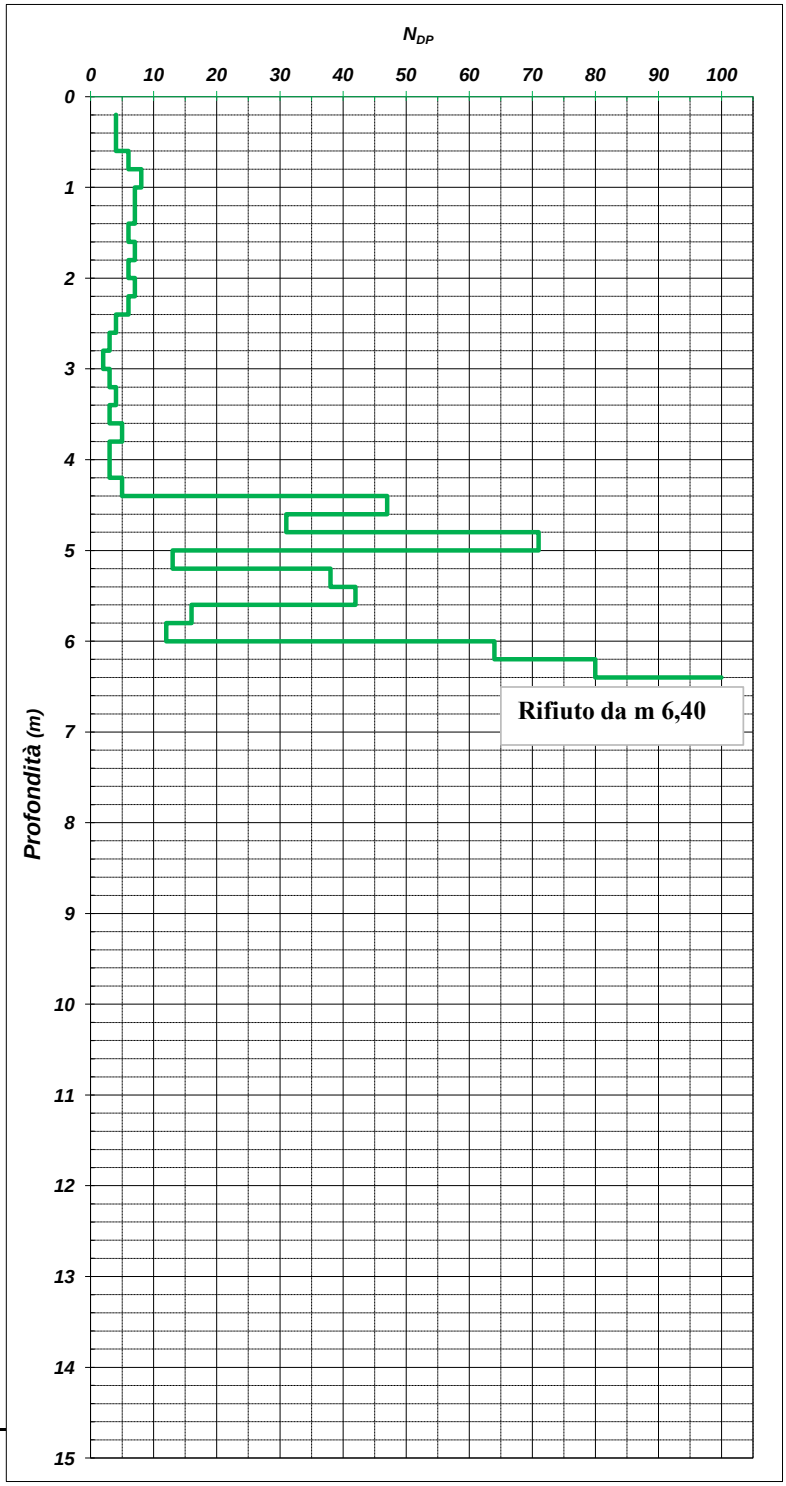
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 5		Data Esecuzione: 07/09/20	Profondità (m): 6,4

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	4	2,92	10,4			20,6		
0,4	4	2,92	10,6			20,8		
0,6	6	4,38	10,8			21,0		
0,8	8	5,84	11,0			21,2		
1,0	7	4,74	11,2			21,4		
1,2	7	4,74	11,4			21,6		
1,4	6	4,06	11,6			21,8		
1,6	7	4,74	11,8			22,0		
1,8	6	4,06	12,0			22,2		
2,0	7	4,41	12,2			22,4		
2,2	6	3,78	12,4			22,6		
2,4	4	2,52	12,6			22,8		
2,6	3	1,89	12,8			23,0		
2,8	2	1,26	13,0			23,2		
3,0	3	1,77	13,2			23,4		
3,2	4	2,36	13,4			23,6		
3,4	3	1,77	13,6			23,8		
3,6	5	2,95	13,8			24,0		
3,8	3	1,77	14,0			24,2		
4,0	3	1,67	14,2			24,4		
4,2	5	2,78	14,4			24,6		
4,4	47	26,09	14,6			24,8		
4,6	31	17,21	14,8			25,0		
4,8	71	39,41	15,0			25,2		
5,0	13	6,81	15,2			25,4		
5,2	38	19,90	15,4			25,6		
5,4	42	21,99	15,6			25,8		
5,6	16	8,38	15,8			26,0		
5,8	12	6,28	16,0			26,2		
6,0	64	31,72	16,2			26,4		
6,2	80	39,65	16,4			26,6		
6,4	100	49,56	16,6			26,8		
6,6			16,8			27,0		
6,8			17,0			27,2		
7,0			17,2			27,4		
7,2			17,4			27,6		
7,4			17,6			27,8		
7,6			17,8			28,0		
7,8			18,0			28,2		
8,0			18,2			28,4		
8,2			18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-5.

I.G. S.r.l.

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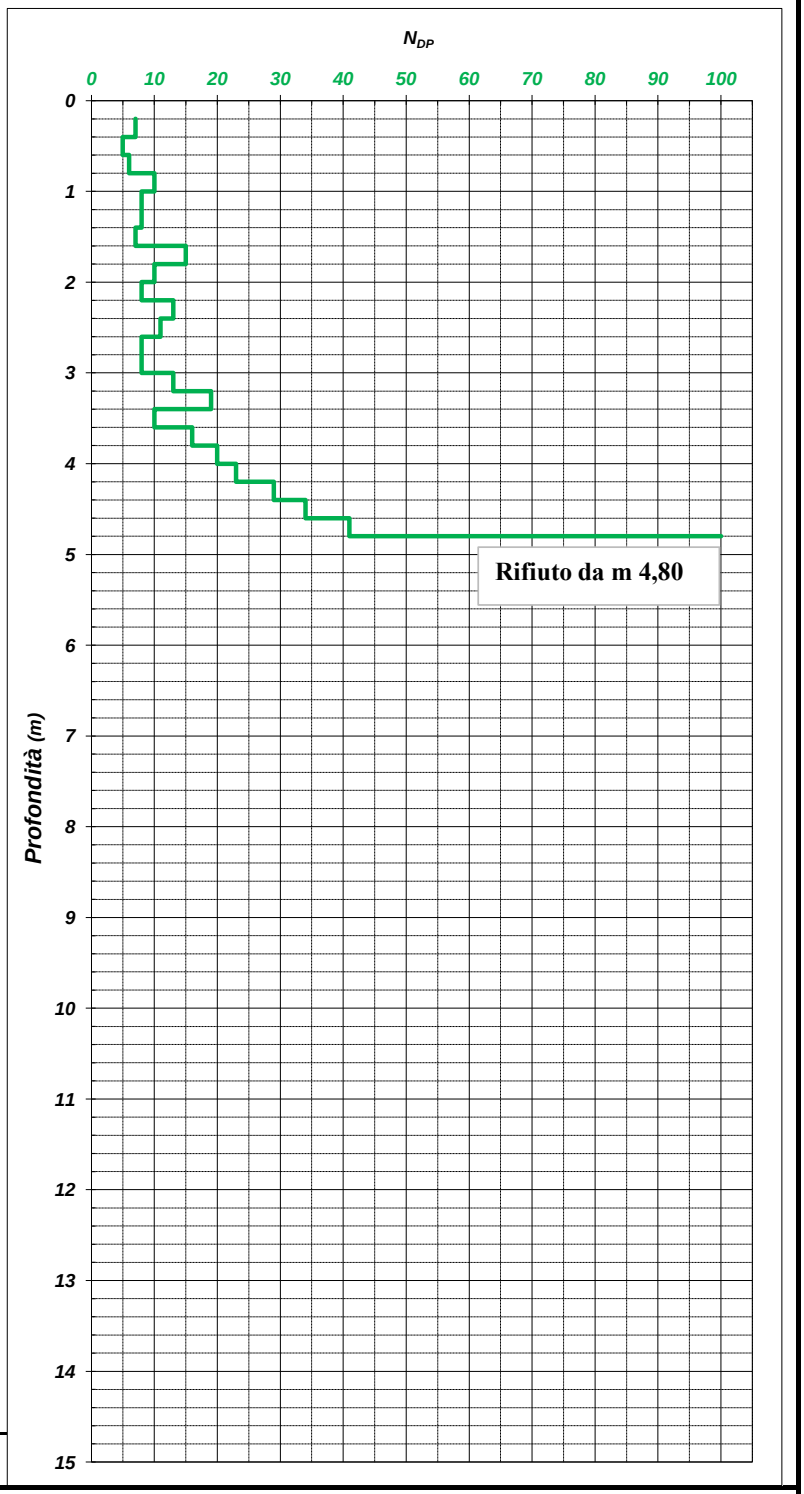
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 6		Data Esecuzione: 08/09/20	Profondità (m): 4,80

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	7	5,11	10,4	101		20,6		
0,4	5	3,65	10,6			20,8		
0,6	6	4,38	10,8			21,0		
0,8	10	7,30	11,0			21,2		
1,0	8	5,41	11,2			21,4		
1,2	8	5,41	11,4			21,6		
1,4	7	4,74	11,6			21,8		
1,6	15	10,15	11,8			22,0		
1,8	10	6,77	12,0			22,2		
2,0	8	5,04	12,2			22,4		
2,2	13	8,20	12,4			22,6		
2,4	11	6,94	12,6			22,8		
2,6	8	5,04	12,8			23,0		
2,8	8	5,04	13,0			23,2		
3,0	13	7,67	13,2			23,4		
3,2	19	11,22	13,4			23,6		
3,4	10	5,90	13,6			23,8		
3,6	16	9,45	13,8			24,0		
3,8	20	11,81	14,0			24,2		
4,0	23	12,77	14,2			24,4		
4,2	29	16,10	14,4			24,6		
4,4	34	18,87	14,6			24,8		
4,6	41	22,76	14,8			25,0		
4,8	100	55,50	15,0			25,2		
5,0			15,2			25,4		
5,2			15,4			25,6		
5,4			15,6			25,8		
5,6			15,8			26,0		
5,8			16,0			26,2		
6,0			16,2			26,4		
6,2			16,4			26,6		
6,4			16,6			26,8		
6,6			16,8			27,0		
6,8			17,0			27,2		
7,0			17,2			27,4		
7,2			17,4			27,6		
7,4			17,6			27,8		
7,6			17,8			28,0		
7,8			18,0			28,2		
8,0			18,2			28,4		
8,2			18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-6.

I.G. S.r.l.

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DECRETO N 900 del 28/01/11

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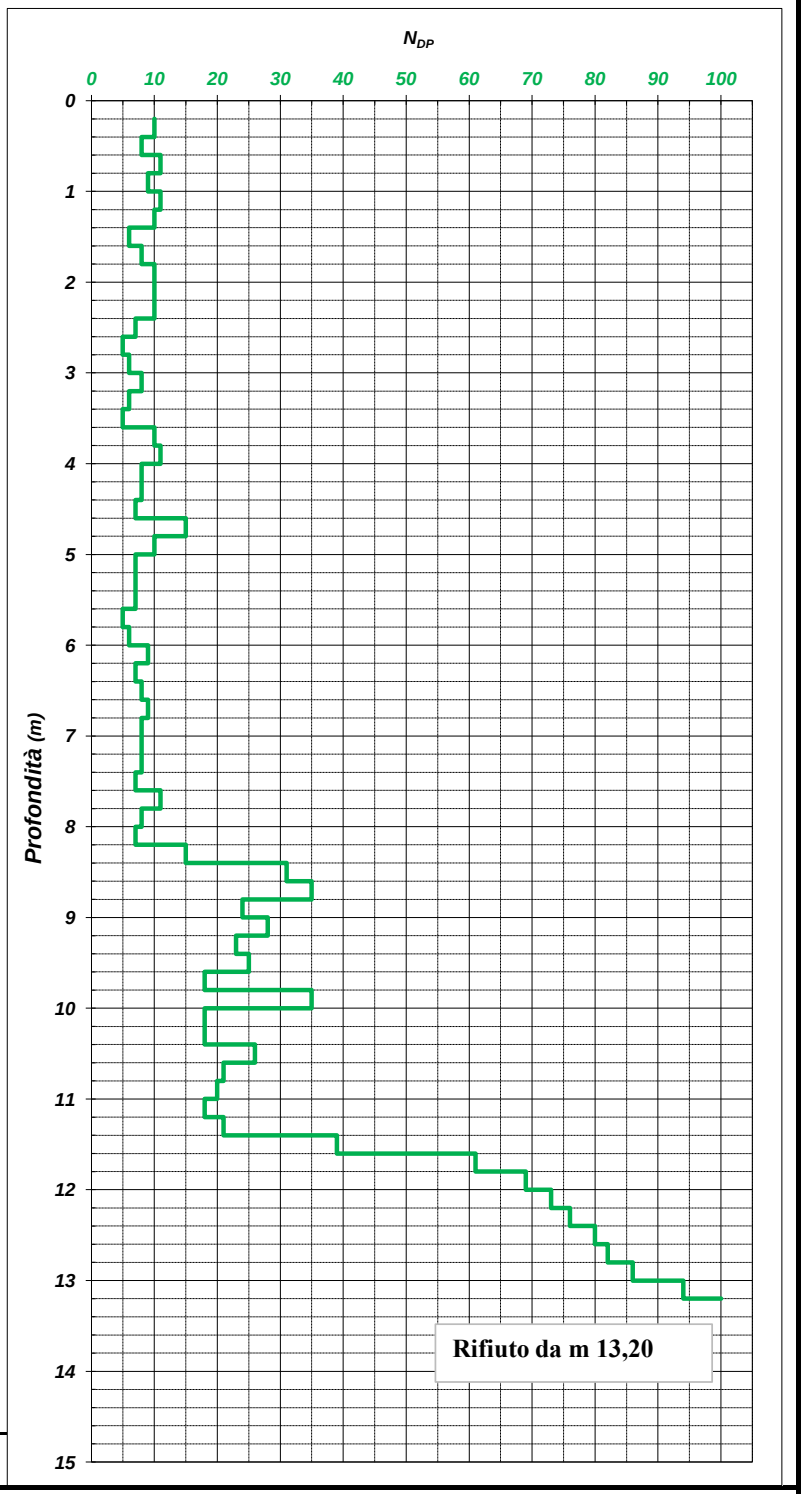
Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 7		Data Esecuzione: 07/09/20	Profondità (m): 13,20

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0		0,00	10,2	18	7,35	20,4		
0,2	10	7,30	10,4	26	10,61	20,6		
0,4	8	5,84	10,6	21	8,57	20,8		
0,6	11	8,03	10,8	20	8,16	21,0		
0,8	9	6,57	11,0	18	7,04	21,2		
1,0	11	7,44	11,2	21	8,21	21,4		
1,2	10	6,77	11,4	39	15,25	21,6		
1,4	6	4,06	11,6	61	23,85	21,8		
1,6	8	5,41	11,8	69	26,98	22,0		
1,8	10	6,77	12,0	73	27,39	22,2		
2,0	10	6,31	12,2	76	28,51	22,4		
2,2	10	6,31	12,4	80	30,01	22,6		
2,4	7	4,41	12,6	82	30,76	22,8		
2,6	5	3,15	12,8	86	32,26	23,0		
2,8	6	3,78	13,0	94	33,89	23,2		
3,0	8	4,72	13,2	100	36,05	23,4		
3,2	6	3,54	13,4			23,6		
3,4	5	2,95	13,6			23,8		
3,6	10	5,90	13,8			24,0		
3,8	11	6,49	14,0			24,2		
4,0	8	4,44	14,2			24,4		
4,2	8	4,44	14,4			24,6		
4,4	7	3,89	14,6			24,8		
4,6	15	8,33	14,8			25,0		
4,8	10	5,55	15,0			25,2		
5,0	7	3,67	15,2			25,4		
5,2	7	3,67	15,4			25,6		
5,4	7	3,67	15,6			25,8		
5,6	5	2,62	15,8			26,0		
5,8	6	3,14	16,0			26,2		
6,0	9	4,46	16,2			26,4		
6,2	7	3,47	16,4			26,6		
6,4	8	3,96	16,6			26,8		
6,6	9	4,46	16,8			27,0		
6,8	8	3,96	17,0			27,2		
7,0	8	3,76	17,2			27,4		
7,2	8	3,76	17,4			27,6		
7,4	7	3,29	17,6			27,8		
7,6	11	5,17	17,8			28,0		
7,8	8	3,76	18,0			28,2		
8,0	7	3,13	18,2			28,4		
8,2	15	6,72	18,4			28,6		
8,4	31	13,88	18,6			28,8		
8,6	35	15,67	18,8			29,0		
8,8	24	10,74	19,0			29,2		
9,0	28	11,96	19,2			29,4		
9,2	23	9,82	19,4			29,6		
9,4	25	10,68	19,6			29,8		
9,6	18	7,69	19,8			30,0		
9,8	35	14,95	20,0					
10,0	18	7,35	20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-7.

I.G. S.r.l.

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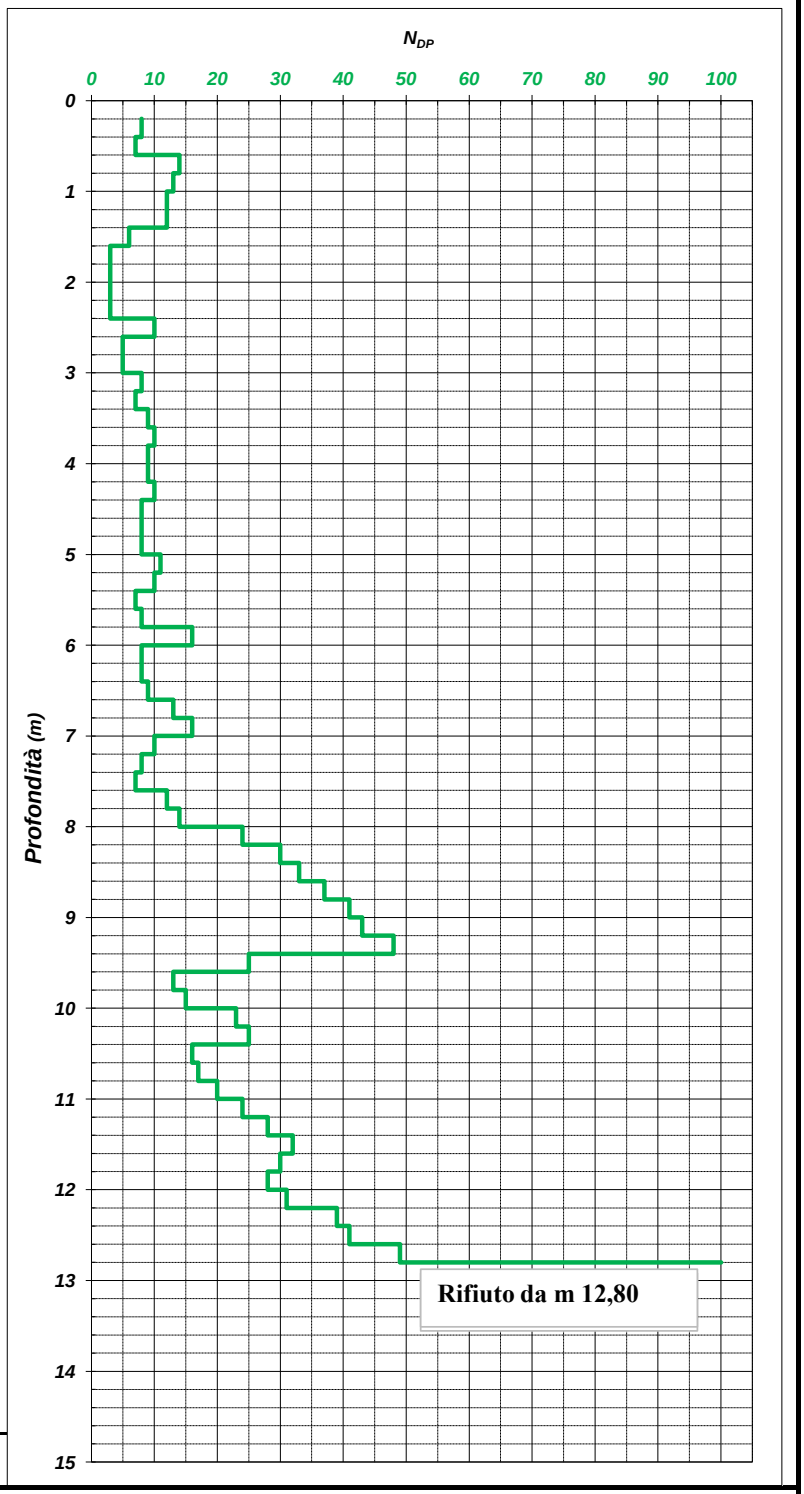
Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 8		Data Esecuzione: 07/09/20	Profondità (m): 12,80

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2	25	10,21	20,4		
0,2	8	5,84	10,4	101	6,53	20,6		
0,4	7	5,11	10,6	17	6,94	20,8		
0,6	14	10,22	10,8	20	8,16	21,0		
0,8	13	9,49	11,0	24	9,38	21,2		
1,0	12	8,12	11,2	28	10,95	21,4		
1,2	12	8,12	11,4	32	12,51	21,6		
1,4	6	4,06	11,6	30	11,73	21,8		
1,6	3	2,03	11,8	28	10,95	22,0		
1,8	3	2,03	12,0	31	11,63	22,2		
2,0	3	1,89	12,2	39	14,63	22,4		
2,2	3	1,89	12,4	41	15,38	22,6		
2,4	10	6,31	12,6	49	18,38	22,8		
2,6	5	3,15	12,8	100	37,52	23,0		
2,8	5	3,15	13,0			23,2		
3,0	8	4,72	13,2			23,4		
3,2	7	4,13	13,4			23,6		
3,4	9	5,31	13,6			23,8		
3,6	10	5,90	13,8			24,0		
3,8	9	5,31	14,0			24,2		
4,0	9	5,00	14,2			24,4		
4,2	10	5,55	14,4			24,6		
4,4	8	4,44	14,6			24,8		
4,6	8	4,44	14,8			25,0		
4,8	8	4,44	15,0			25,2		
5,0	11	5,76	15,2			25,4		
5,2	10	5,24	15,4			25,6		
5,4	7	3,67	15,6			25,8		
5,6	8	4,19	15,8			26,0		
5,8	16	8,38	16,0			26,2		
6,0	8	3,96	16,2			26,4		
6,2	8	3,96	16,4			26,6		
6,4	9	4,46	16,6			26,8		
6,6	13	6,44	16,8			27,0		
6,8	16	7,93	17,0			27,2		
7,0	10	4,70	17,2			27,4		
7,2	8	3,76	17,4			27,6		
7,4	7	3,29	17,6			27,8		
7,6	12	5,65	17,8			28,0		
7,8	14	6,59	18,0			28,2		
8,0	24	10,74	18,2			28,4		
8,2	30	13,43	18,4			28,6		
8,4	33	14,77	18,6			28,8		
8,6	37	16,56	18,8			29,0		
8,8	41	18,36	19,0			29,2		
9,0	43	18,36	19,2			29,4		
9,2	48	20,50	19,4			29,6		
9,4	25	10,68	19,6			29,8		
9,6	13	5,55	19,8			30,0		
9,8	15	6,41	20,0					
10,0	23	9,39	20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-8.

I.G. S.r.l.

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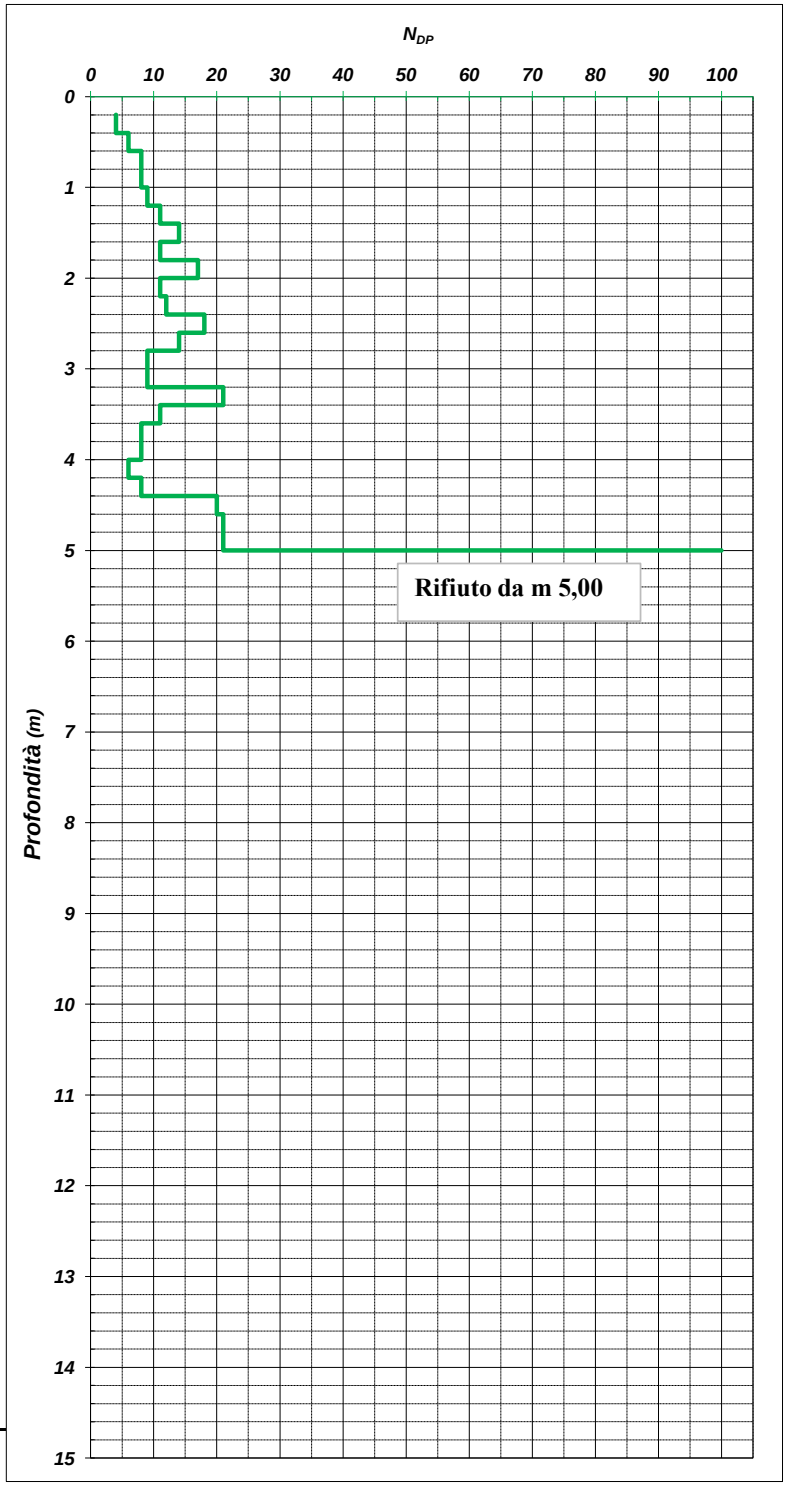
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 9		Data Esecuzione: 08/09/20	Profondità (m): 5,00

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	4	2,92	10,4			20,6		
0,4	6	4,38	10,6			20,8		
0,6	8	5,84	10,8			21,0		
0,8	8	5,84	11,0			21,2		
1,0	9	6,09	11,2			21,4		
1,2	11	7,44	11,4			21,6		
1,4	14	9,47	11,6			21,8		
1,6	11	7,44	11,8			22,0		
1,8	17	11,50	12,0			22,2		
2,0	11	6,94	12,2			22,4		
2,2	12	7,57	12,4			22,6		
2,4	18	11,35	12,6			22,8		
2,6	14	8,83	12,8			23,0		
2,8	9	5,68	13,0			23,2		
3,0	9	5,31	13,2			23,4		
3,2	21	12,40	13,4			23,6		
3,4	11	6,49	13,6			23,8		
3,6	8	4,72	13,8			24,0		
3,8	8	4,72	14,0			24,2		
4,0	6	3,33	14,2			24,4		
4,2	8	4,44	14,4			24,6		
4,4	20	11,10	14,6			24,8		
4,6	21	11,66	14,8			25,0		
4,8	21	11,66	15,0			25,2		
5,0	100	52,36	15,2			25,4		
5,2			15,4			25,6		
5,4			15,6			25,8		
5,6			15,8			26,0		
5,8			16,0			26,2		
6,0			16,2			26,4		
6,2			16,4			26,6		
6,4			16,6			26,8		
6,6			16,8			27,0		
6,8			17,0			27,2		
7,0			17,2			27,4		
7,2			17,4			27,6		
7,4			17,6			27,8		
7,6			17,8			28,0		
7,8			18,0			28,2		
8,0			18,2			28,4		
8,2			18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-9.

I.G. S.r.l.

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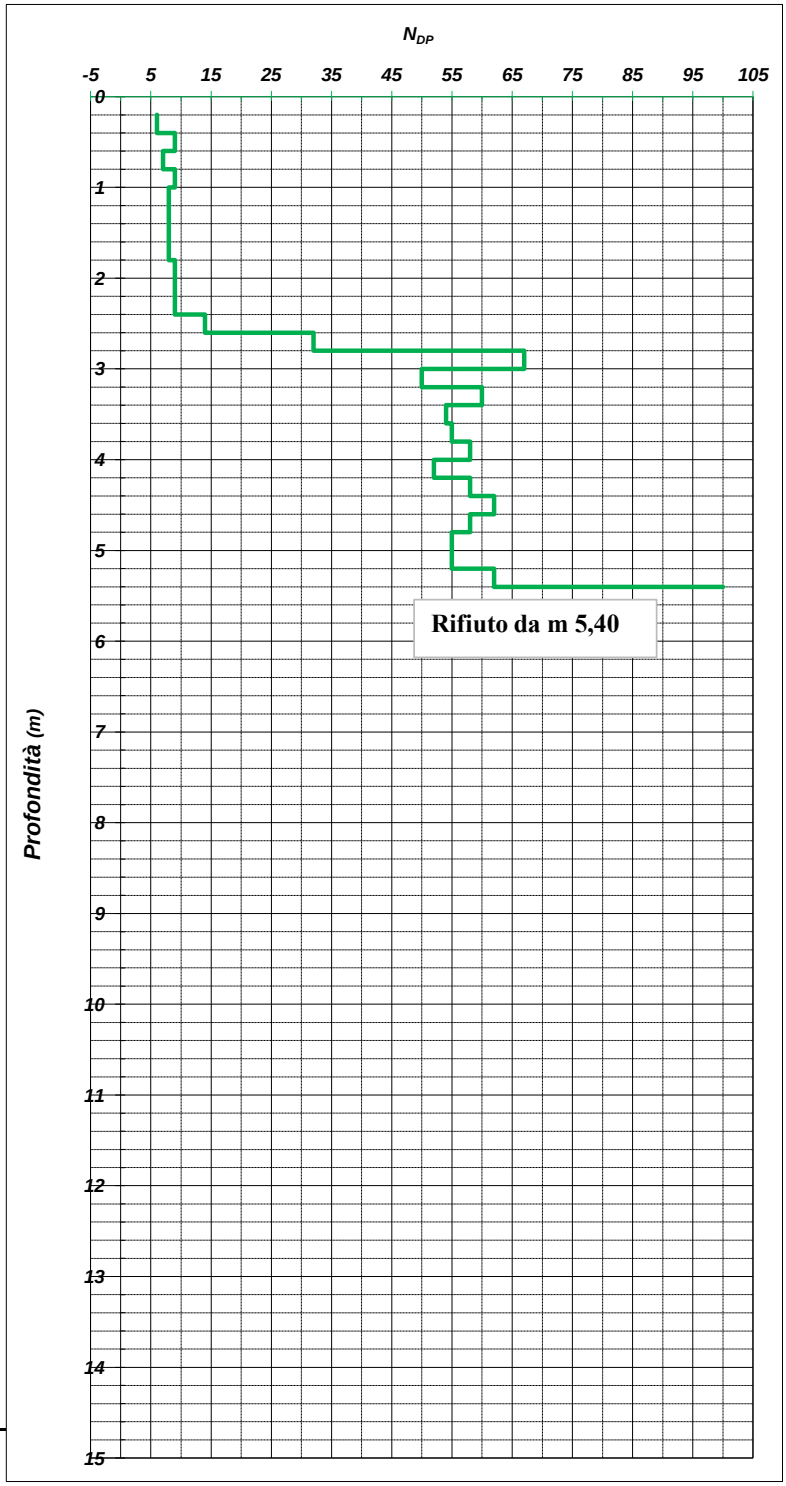
Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 10		Data Esecuzione: 08/09/20	Profondità (m): 5,4

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	6	4,38	10,4			20,6		
0,4	9	6,57	10,6			20,8		
0,6	7	5,11	10,8			21,0		
0,8	9	6,57	11,0			21,2		
1,0	8	5,41	11,2			21,4		
1,2	8	5,41	11,4			21,6		
1,4	8	5,41	11,6			21,8		
1,6	8	5,41	11,8			22,0		
1,8	9	6,09	12,0			22,2		
2,0	9	5,68	12,2			22,4		
2,2	9	5,68	12,4			22,6		
2,4	14	8,83	12,6			22,8		
2,6	32	20,18	12,8			23,0		
2,8	67	42,25	13,0			23,2		
3,0	50	29,52	13,2			23,4		
3,2	60	35,42	13,4			23,6		
3,4	54	32,47	13,6			23,8		
3,6	55	31,88	13,8			24,0		
3,8	58	32,47	14,0			24,2		
4,0	52	32,19	14,2			24,4		
4,2	58	28,86	14,4			24,6		
4,4	62	32,19	14,6			24,8		
4,6	58	34,41	14,8			25,0		
4,8	55	32,19	15,0			25,2		
5,0	62	28,80	15,2			25,4		
5,2	62	32,46	15,4			25,6		
5,4	100	52,36	15,6			25,8		
5,6			15,8			26,0		
5,8			16,0			26,2		
6,0			16,2			26,4		
6,2			16,4			26,6		
6,4			16,6			26,8		
6,6			16,8			27,0		
6,8			17,0			27,2		
7,0			17,2			27,4		
7,2			17,4			27,6		
7,4			17,6			27,8		
7,6			17,8			28,0		
7,8			18,0			28,2		
8,0			18,2			28,4		
8,2			18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-10.

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DECRETO N 900 del 28/01/11

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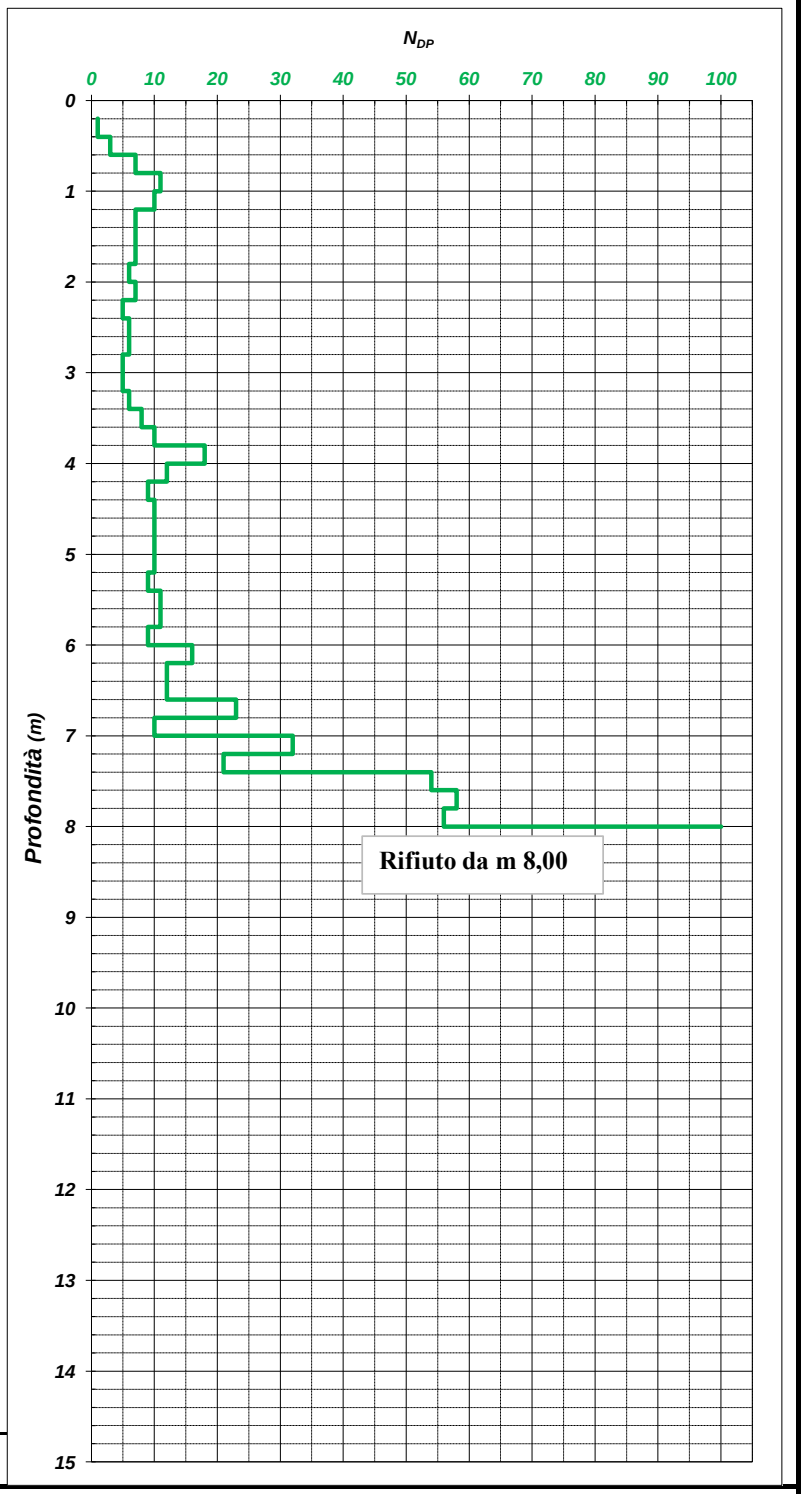
Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 11		Data Esecuzione: 08/09/20	Profondità (m): 8,0

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	1	0,73	10,4	101		20,6		
0,4	3	2,19	10,6			20,8		
0,6	7	5,11	10,8			21,0		
0,8	11	8,03	11,0			21,2		
1,0	10	6,77	11,2			21,4		
1,2	7	4,74	11,4			21,6		
1,4	7	4,74	11,6			21,8		
1,6	7	4,74	11,8			22,0		
1,8	6	4,06	12,0			22,2		
2,0	7	4,41	12,2			22,4		
2,2	5	3,15	12,4			22,6		
2,4	6	3,78	12,6			22,8		
2,6	6	3,78	12,8			23,0		
2,8	5	3,15	13,0			23,2		
3,0	5	2,95	13,2			23,4		
3,2	6	3,54	13,4			23,6		
3,4	8	4,72	13,6			23,8		
3,6	10	5,90	13,8			24,0		
3,8	18	10,63	14,0			24,2		
4,0	12	6,66	14,2			24,4		
4,2	9	5,00	14,4			24,6		
4,4	10	5,55	14,6			24,8		
4,6	10	5,55	14,8			25,0		
4,8	10	5,55	15,0			25,2		
5,0	10	5,24	15,2			25,4		
5,2	9	4,71	15,4			25,6		
5,4	11	5,76	15,6			25,8		
5,6	11	5,76	15,8			26,0		
5,8	9	4,71	16,0			26,2		
6,0	16	7,93	16,2			26,4		
6,2	12	5,95	16,4			26,6		
6,4	12	5,95	16,6			26,8		
6,6	23	11,40	16,8			27,0		
6,8	10	4,96	17,0			27,2		
7,0	32	15,05	17,2			27,4		
7,2	21	9,88	17,4			27,6		
7,4	54	25,40	17,6			27,8		
7,6	58	27,28	17,8			28,0		
7,8	56	26,34	18,0			28,2		
8,0	100	44,77	18,2			28,4		
8,2			18,4			28,6		
8,4			18,6			28,8		
8,6			18,8			29,0		
8,8			19,0			29,2		
9,0			19,2			29,4		
9,2			19,4			29,6		
9,4			19,6			29,8		
9,6			19,8			30,0		
9,8			20,0					
10,0			20,2					



N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-11.

I.G. S.r.l.

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Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE(DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 12		Data Esecuzione: 08/09/20	Profondità (m): 5,20

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	2	1,46	10,4			20,6		
0,4	5	3,65	10,6			20,8		
0,6	6	4,38	10,8			21,0		
0,8	8	5,84	11,0			21,2		
1,0	12	8,12	11,2			21,4		
1,2	11	7,44	11,4			21,6		
1,4	11	7,44	11,6			21,8		
1,6	8	5,41	11,8			22,0		
1,8	9	6,09	12,0			22,2		
2,0	7	4,41	12,2			22,4		
2,2	15	9,46	12,4			22,6		
2,4	80	50,45	12,6			22,8		
2,6	73	46,03	12,8			23,0		
2,8	71	44,77	13,0			23,2		
3,0	21	12,40	13,2			23,4		
3,2	56	33,06	13,4			23,6		
3,4	51	30,11	13,6			23,8		
3,6	48	28,34	13,8			24,0		
3,8	36	21,25	14,0			24,2		
4,0	42	23,31	14,2			24,4		
4,2	52	28,86	14,4			24,6		
4,4	54	29,97	14,6			24,8		
4,6	49	27,20	14,8			25,0		
4,8	57	31,64	15,0			25,2		
5,0	61	31,94	15,2			25,4		
5,2	100	52,36	15,4			25,6		
5,4			15,6			25,8		
5,6			15,8			26,0		
5,8			16,0			26,2		
6,0			16,2			26,4		
6,2			16,4			26,6		
6,4			16,6			26,8		
6,6			16,8			27,0		
6,8			17,0			27,2		
7,0			17,2			27,4		
7,2			17,4			27,6		
7,4			17,6			27,8		
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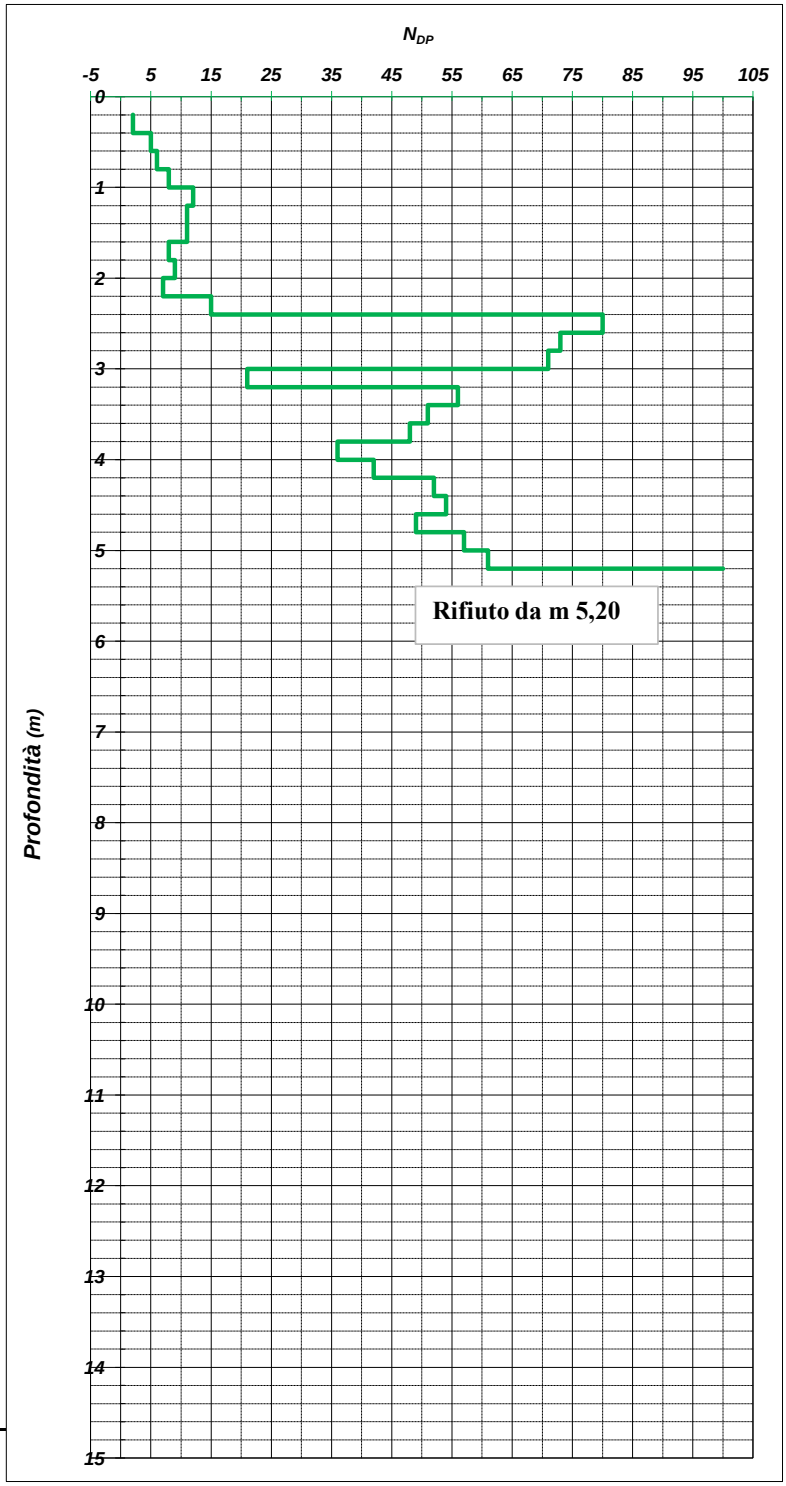

N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-12.

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Partita I.V.A. 01423891215
C.C.I.A.A. - R.E.A. 442053

PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 13		Data Esecuzione: 08/09/20	Profondità (m): 5,2

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	3	2,19	10,4			20,6		
0,4	9	6,57	10,6			20,8		
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0,8	8	5,84	11,0			21,2		
1,0	7	4,74	11,2			21,4		
1,2	6	4,06	11,4			21,6		
1,4	8	5,41	11,6			21,8		
1,6	10	6,77	11,8			22,0		
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2,0	15	9,46	12,2			22,4		
2,2	12	7,57	12,4			22,6		
2,4	12	7,57	12,6			22,8		
2,6	12	7,57	12,8			23,0		
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3,4	14	8,27	13,6			23,8		
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8,4			18,6			28,8		
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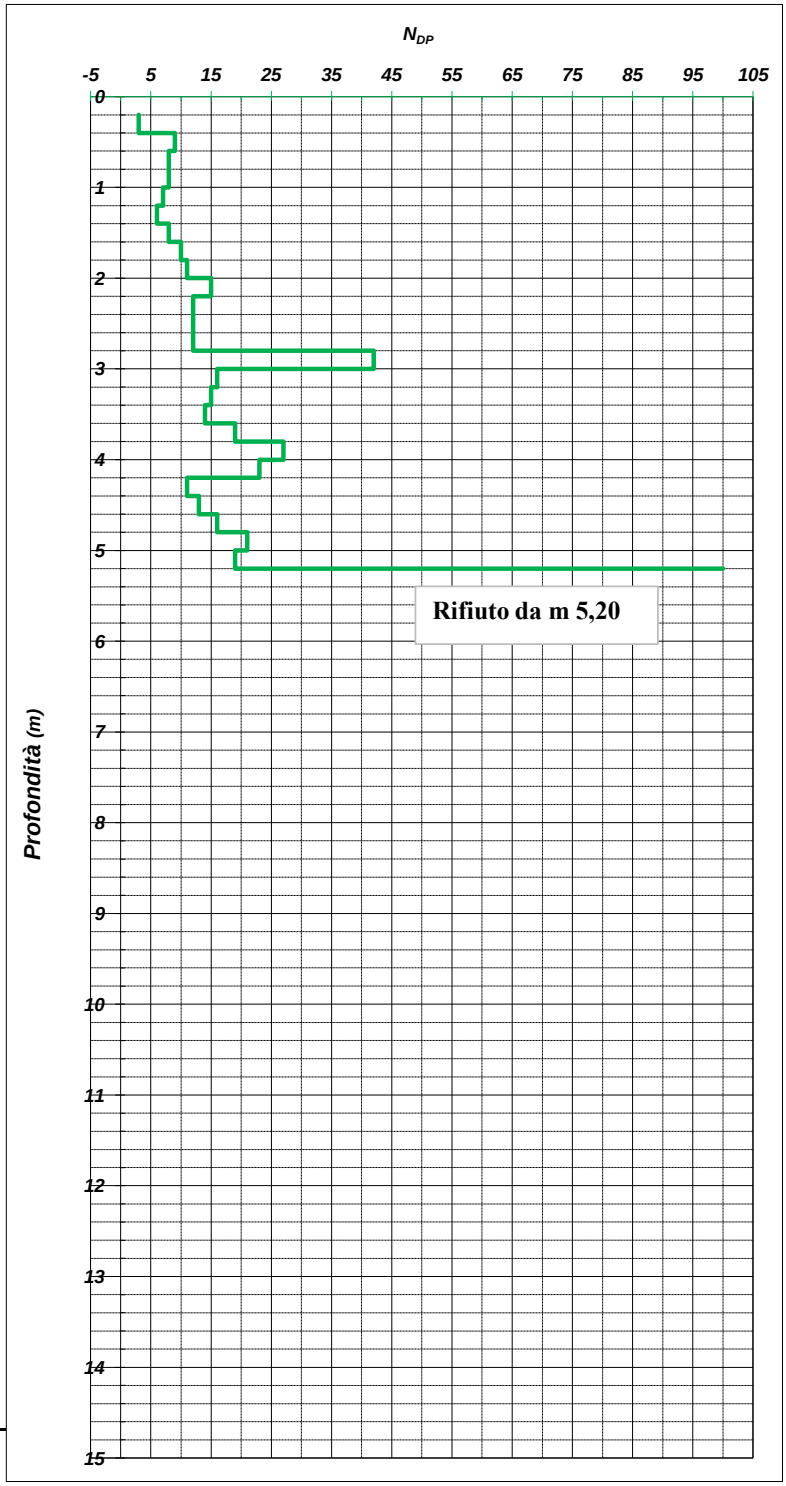

N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-13.

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PROVA PENETROMETRICA DINAMICA SUPER PESANTE (DPSH)

Codifica Commessa:	301/20	Committente:	VIANINI LAVORI S.p.A.
Cantiere e/o Opera:	INVASO DI CAMPOLATTARO. AREA IMPIANTI.	Località:	PONTE (BN)
Prova: DPSH 14		Data Esecuzione: 08/09/20	Profondità (m): 7,0

Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]	Prof. [m]	N° Colpi	Rpd [Mpa]
0,0			10,2			20,4		
0,2	3	2,19	10,4			20,6		
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1,8	13	8,80	12,0			22,2		
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2,4	8	5,04	12,6			22,8		
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4,4	18	9,99	14,6			24,8		
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4,8	8	4,44	15,0			25,2		
5,0	12	6,28	15,2			25,4		
5,2	19	9,95	15,4			25,6		
5,4	14	7,33	15,6			25,8		
5,6	12	6,28	15,8			26,0		
5,8	10	5,24	16,0			26,2		
6,0	12	5,95	16,2			26,4		
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6,4	23	11,40	16,6			26,8		
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6,8	13	6,44	17,0			27,2		
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7,4			17,6			27,8		
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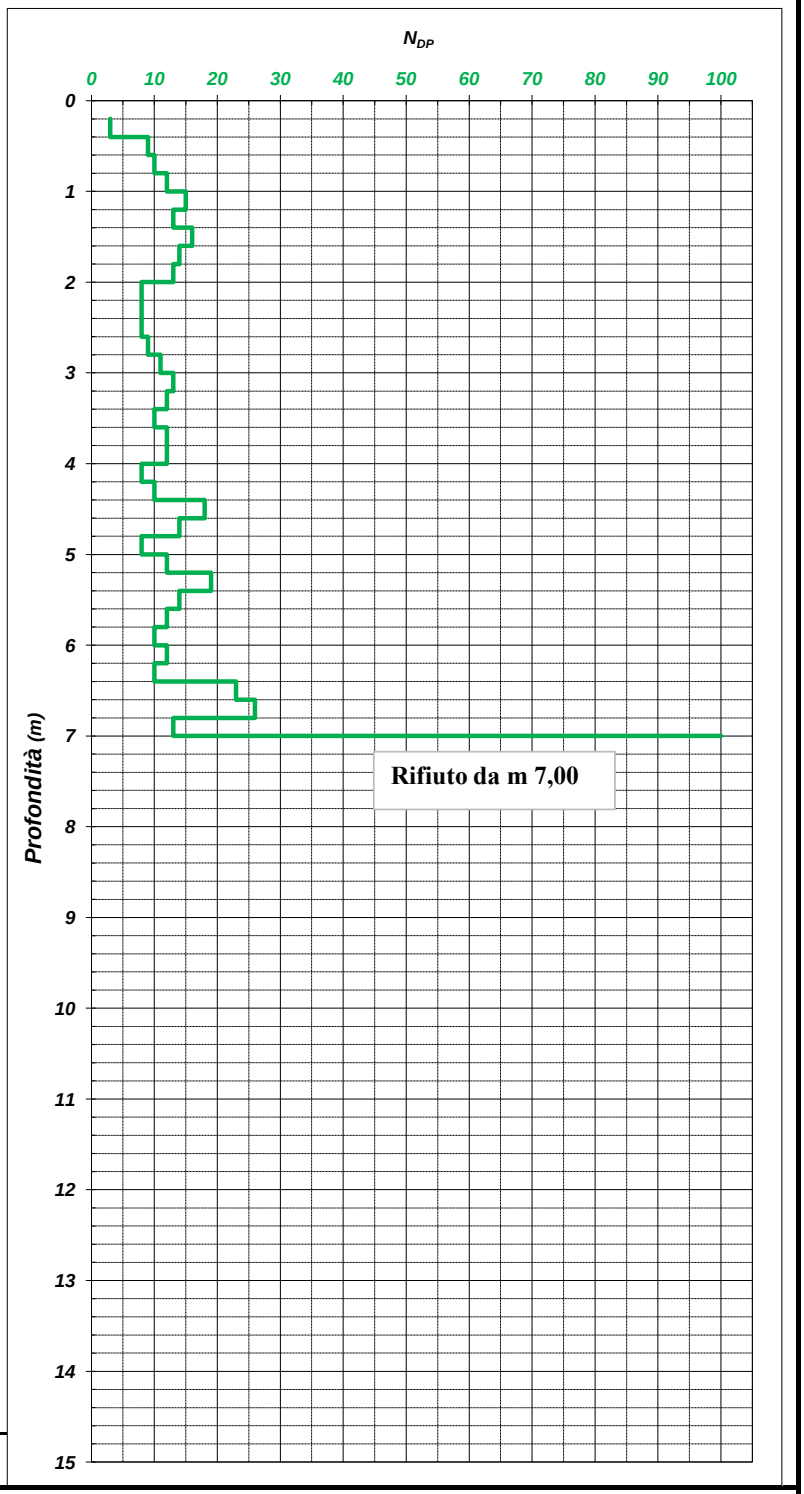

N.B. Questa prova DPSH è stata eseguita in prossimità della prova CPT-14.

Cantiere: **INVASO DI CAMPOLATTARO. IMBOCCO TBM.** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 1 Foto 2: POSTAZIONE DPSH - 1

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OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

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Prelievo di Campioni e Prove in Sito
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Cantiere: **INVASO DI CAMPOLATTARO. AREA IMPIANTI.** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 4 Foto 2: POSTAZIONE DPSH - 4

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Cantiere: **INVASO DI CAMPOLATTARO. AREA IMPIANTI.** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 6 Foto 2: POSTAZIONE DPSH - 6

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Cantiere: **INVASO DI CAMPOLATTARO. AREA IMPIANTI.** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 8 Foto 2: POSTAZIONE DPSH - 8

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DECRETO N° 900 del 28/01/11

Cantiere: **INVASO DI CAMPOLATTARO. AREA IMPIANTI** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 10 Foto 2: POSTAZIONE DPSH - 10

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Cantiere: **INVASO DI CAMPOLATTARO. AREA SERBATOIO DI ACCUMULO** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 11 Foto 2: POSTAZIONE DPSH - 11

Cantiere: **INVASO DI CAMPOLATTARO. AREA SERBATOIO DI ACCUMULO** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 12 Foto 2: POSTAZIONE DPSH - 12

Cantiere: **INVASO DI CAMPOLATTARO. AREA SERBATOIO DI ACCUMULO** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 13 Foto 2: POSTAZIONE DPSH - 13

Cantiere: **INVASO DI CAMPOLATTARO. AREA SERBATOIO DI ACCUMULO** Località: **PONTE (BN)**	Foto 1: POSTAZIONE CPT - 14 Foto 2: POSTAZIONE DPSH - 14

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INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Laboratorio Autorizzato
per Indagini Geognostiche
prelievo di campioni e Prove in Sito
DECRETO N° 900 del 28/01/11

Codifica Commessa	:	301/2020	Data inizio: 07/08/2020	Data ultimazione: 30/10/2020

COMMITTENTE:

VIANINI LAVORI S.p.A.

CANTIERE E/O OPERA:

PROGETTAZIONE DEFINITIVA PER L'INTERVENTO DI UTILIZZO IDROPOTABILE DELLE ACQUE DELL'INVASO DI CAMPOLATTARO

AREA IMPIANTI – SERBATOI DI ACCUMULO
IMBOCCO TBM- TERRE ARMATE

LOCALITA':

COMUNI DI PONTE (BN)

ALLEGATO IV

PROVE DOWN - HOLE

Direttore Tecnico
dr. ing. Vincenzo Pinto

I. G. s.r.l.
L'Amministratore
Ing. V. PINTO

80056 Ercolano (NA) – VIA L. PALMIERI, 104/A– TEL. (081) 7398115 – FAX (081) 7398115– E-MAIL igpinto@alice.it – www.igpinto.com
Codice Fiscale: 05433440632 - Partita I.V.A.: 01423891215 - C.C.I.A.A. - R.E.A: 442053 -

I N D I C E

A P P E N D I C E

1.PREMESSA

A partire dall'Ordine LAV/461/GDA/rf del 07 agosto 2020 e delle sue successive estensioni la VIANINI LAVORI S.p.A., con sede legale in Roma, ha delegato la I.G. S.r.l. all'esecuzione di una campagna di Indagini Geologiche-Geotecniche-Geomeccaniche e Geofisiche in Sito e Prove di Laboratorio.

Le Indagini e Prove riguardano la Progettazione Definitiva per l'Intervento di Utilizzo Idropotabile delle Acque dell'Invaso di Campolattaro.

Le attività hanno compreso l'Esecuzione e l'Elaborazione di Indagini Geognostiche in Sito, che hanno riguardato Indagini Geotecniche ed Indagini Geofisiche, e la Certificazione di Prove di Laboratorio Geotecnico e Geomeccanico.

Le Indagini e Prove sono state eseguite in osservanza ad un programma di indagini redatto dal Consulente Geologico Prof. Silvio Di Nocera e dal Consulente Geotecnico Ing. Giuseppe Maria Grimaldi.

Le attività effettuate hanno interessato quattro zone site nel Comune di Ponte (BN), così contraddistinte: "*Area Impianti*"; "*Serbatoi di Accumulo*"; "*Imbocco Galleria TBM*" e "*Terre Armate*".

La metodologia e i risultati delle *Indagini Geofisiche*, che sono consistite in tre prospezioni di sismica in foro tipo *Down-Hole* sono consegnati nel presente Allegato IV alla Relazione Tecnica Generale.

Il fine del presente documento è quello di definire le Caratteristiche Sismostratigrafiche dei litotipi e Classificare Sismicamente il sottosuolo, secondo la Normativa vigente (D.M. 17 gennaio 2018).

2. CENNI SULLE PROVE DOWN-HOLE

Lo scopo delle prove *Down-Hole* consiste nel determinare direttamente la velocità di propagazione, all'interno del mezzo in esame, delle *onde di compressione* (*onde P*) e di taglio (*onde S*) ed indirettamente, utilizzando i valori delle velocità acquisiti (V_P, V_S), i *moduli dinamici* delle litologie investigate.

Le indagini sismiche che utilizzano i fori dei sondaggi sono utili per avere una *sismostratigrafia* dettagliata del sottosuolo. Nell'ambito delle *indagini sismiche in foro*, il *metodo Down-Hole* è il più utilizzato.

La prospezione *sismica Down-Hole*, il cui sistema è schematizzato in Fig.1, prevede la *sorgente energizzante* in superficie ed i *sensori di misura* (*geofoni*) delle *onde d'arrivo* all'interno del perforo. Si adoperano *geofoni* assemblati per essere calati e fissati a profondità via via crescenti (o decrescenti) a contatto della parete della *tubazione*, installata propedeuticamente all'interno di un perforo appositamente condizionato.

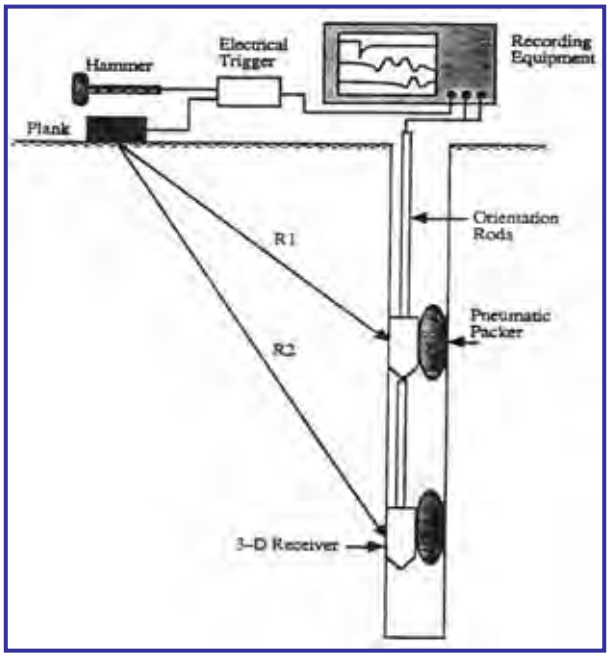

Fig. 1 – *Diagramma schematico della strumentazione/sistema di una prospezione sismica Down-Hole.*

Energizzando il terreno in superficie e misurando i tempi di arrivo delle onde *P* ed *S* ai geofoni, si ha la possibilità di determinare le velocità dei litotipi riscontrati nella perforazione ed i loro moduli elastici.

L'*energizzazione* genera onde elastiche longitudinali (P) e *trasversali* (S) che si propagano in tutte le direzioni; in particolare le onde longitudinali (Fig. 2) si propagano mediante oscillazioni delle particelle che costituiscono il mezzo attraversato nella stessa direzione della propagazione dell'onda.

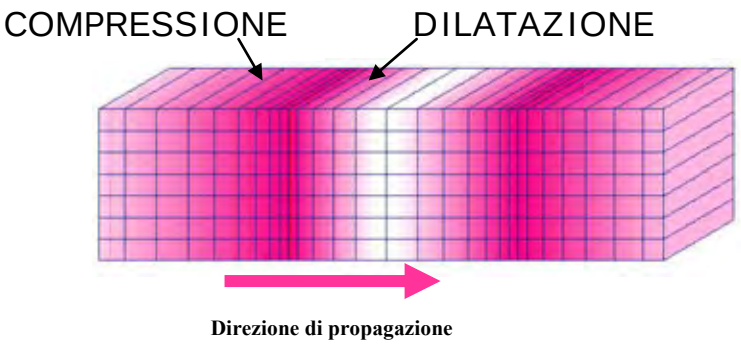

Fig. 2 - *Rappresentazione grafica della direzione di oscillazione delle particelle che costituiscono il mezzo nel caso della propagazione di onde longitudinali P (direzione di oscillazione coincidente con quella di propagazione dell'onda)*.

Di conseguenza, il mezzo sarà soggetto principalmente a *sforzi di compressione* e *dilatazione* e la velocità dell'onda sarà anche funzione del *modulo di incompressibilità k* (*Bulk*), che esprime la resistenza del mezzo a questo tipo di sforzo, oltre che del *modulo di rigidità* (μ) detto anche *modulo di taglio G* (*shear*), e della *densit*à (ρ), secondo la seguente espressione:

$$V_p = \sqrt{\frac{k + 4\mu/3}{\rho}}$$

Le *onde trasversali* (Fig. 3) si propagano mediante oscillazioni delle particelle del mezzo perpendicolarmente alla direzione di propagazione dell'onda. Di conseguenza, il mezzo sarà soggetto a *sforzi di taglio* e la velocità delle onde sarà funzione della resistenza del mezzo a questo tipo di sforzo, che è espressa dal *modulo di rigidità* (μ):

$$V_s = \sqrt{\frac{\mu}{\rho}}$$

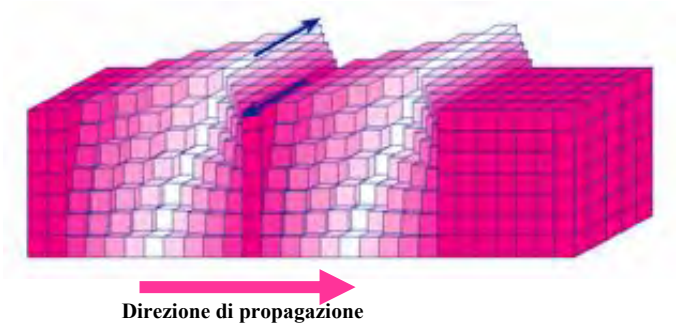

Fig.3 - *Rappresentazione grafica delle direzioni di oscillazione delle particelle che costituiscono il mezzo nel caso della propagazione di onde di taglio S (direzione di oscillazione perpendicolare alla direzione di propagazione dell'onda)*.

Le onde sismiche non sono caratterizzate da un trasporto di materia, ma da un *trasferimento di energia*. Tenendo presente che lo sforzo impulsivo può ripartirsi in componenti normali e tangenziali, si deduce che le *onde longitudinali* (*P*) possono anche essere chiamate *onde di compressione* in quanto generate dalla reazione elastica che si oppone a *variazioni di volume e/o di lunghezza del corpo* e di cui sono responsabili le componenti normali dello sforzo.

Le *onde trasversali* (*S*) sono anche dette *onde di taglio* in quanto generate da reazione elastica che si oppone a *variazioni di forma del corpo* e di cui sono responsabili le componenti tangenziali dello sforzo.

Logicamente onde di compressione e di taglio si generano contemporaneamente in seguito ad uno sforzo impulsivo, ma sono caratterizzate da differenti velocità di propagazione.

Attraverso lo studio dei tempi di percorso delle onde di compressione e di taglio e quindi delle velocità, si può risalire alla disposizione geometrica e alle caratteristiche meccanico-elastiche dei litotipi presenti nell'area di indagine.

Le onde di volume *P* ed *S*, che attraversano un mezzo omogeneo e isotropo (condizioni ideali), hanno *equazioni di moto* ben definite.

In altri termini, le *Prospezioni Geofisiche in Foro con tecnica Down-Hole*, costituiscono una metodologia che consiste nell'immettere energia nel terreno tramite una *sorgente*, posta in superficie a ridosso della verticale da investigare (*asse del foro*), e nel registrare l'arrivo del segnale, per mezzo di una *tripletta* di *geofoni tridirezionali.* La tripletta è posizionata in un *tubo* in PVC, installato in un foro di *sondaggio*, alle varie profondità di prova. Il tubo è reso solidale al terreno con iniezione di miscela cementizia.

Il *passo di misura* delle prove *Down-Hole* è scelto in funzione del grado di dettaglio che si vuole ottenere.

Da ciò si deduce che la tecnica *Down-Hole* rappresenta un'indagine puntuale, lungo una verticale, anche se estremamente dettagliata.

L'immissione di energia viene eseguita a distanze non inferiori ai 2 metri dall'asse del foro, in modo tale da evitare il generarsi di *Onde di Tubo*, che possono mascherare il segnale da acquisire.

Considerato il percorso dei *raggi diretti* e misurando i *Tempi di Arrivo* del primo impulso registrato dal *geofono*, è possibile calcolare la *velocità media dei litotipi* attraversati dalle *Onde Sismiche* in base alla seguente semplice equazione:

$$V_m = z/t \cos \alpha$$

dove: z = profondità a cui è posto il geofono;

t = tempo di arrivo del primo impulso;

α = angolo che la congiungente dei baricentri geofono – sorgente di energia forma con l'asse del perforo.

Il termine $t\cos\alpha$ rappresenta il tempo di propagazione dell'*Onda Sismica* secondo la verticale del perforo ed è, perciò, detto *Tempo Verticale* (o *Tempo Corretto*). In altre parole, il *Tempo di Arrivo* delle *Onde Sismiche* viene corretto dell'angolo α al vertice del triangolo formato dalla congiungente (*d*) *asse foro – sorgente di energia* e (*z*) *profondità di fissaggio del geofono* dal p.c.. In questo modo si considera come se l'energizzazione fosse fornita sulla verticale del foro stesso.

Per ogni *intervallo di misura*, viene calcolato il valore di velocità sia delle onde longitudinali sia di quelle trasversali. L'*Onda Longitudinale* (o *Prima*) è chiamata anche *Onda di Compressione* e la sua velocità è espressa da *Vp; l'Onda Trasversale* (*o Secunda*) è detta anche *Onda di Taglio* e la sua velocità è simboleggiata da *Vs.*

I valori di *Vp* e *Vs* sono calcolati attraverso una semplice relazione spazio/tempo:

$$V_i = \Delta z_i / \Delta t_i$$

nella quale, detta *i* la misura iesima, risulta che:

V_i viene definita come *Velocità Intervallo*

$\Delta z_i = z_i - z_{i-1}$ rappresenta la *Distanza Parziale*, cioè l'*intervallo di misura* tra due letture successive;

$\Delta t_i = t_i - t_{i-1}$ rappresenta il *Tempo Intervallo* che impiega il raggio sismico a percorrere ogni intervallo di misura Δz_i.

Per ogni intervallo di misura vengono quindi calcolate le Vp_i e le Vs_i.

Ipotizzando che la propagazione delle *Onde* avvenga all'interno di un mezzo elastico lineare, è possibile associare ai valori così definiti per *Vs* e *Vp* i *parametri elastici*: *v*, *k*, *E* e *G* mediante le relazioni:

$$v = \frac{\frac{1}{2}\left(\frac{V_P}{V_s}\right)^2 - 1}{\left(\frac{V_P}{V_s}\right)^2 - 1} \qquad (-)$$

$$k = \rho \cdot \left[V_p^{\,2} - \frac{4}{3} \cdot V_s^{\,2} \right] \qquad (kg/cm^2)$$

$$E = \rho \cdot V_s^{\,2} \cdot \frac{3V_p^{\,2} - 4V_s^{\,2}}{V_p^{\,2} - V_s^{\,2}} \qquad (kg/cm^2)$$

$$G = \rho \cdot V_S^{\,2} \qquad (kg/cm^2)$$

dove:

v = *coefficiente di Poisson* dello strato: esprime la misura della *deformazione totale* subita da un corpo;

k = *modulo di incompressibilità* (o *modulo di volume*): esprime la resistenza di un corpo alla *deformazione volumetrica*, quando lo si sottopone ad uno sforzo di *dilatazione* o *compressione*;

E = *modulo di Young* o *di elasticità normale*: esprime la resistenza di un corpo alla *deformazione lineare*, quando lo si sottopone ad un sforzo di *dilatazione* o *compressione*;

G = *modulo di taglio*, o *di rigidità*, o *di elasticità tangenziale*: esprime la resistenza di un corpo alle *variazioni lineari di forma*, quando lo si sottopone ad *un sforzo di taglio puro*.

Con ρ è indicata la *densità* dello strato ed il legame tra la stessa e l'unità del *peso di volume* γ, è espresso dalla relazione:

$$\gamma = \rho \cdot g$$

dove *g* è *l'accelerazione di gravità* ($g = 9.81\ m/s^2$).

Le espressioni precedenti, possono esplicitarsi, in funzione di ν, anche nei modi seguenti:

$$E = \frac{\rho V_p^2 (1-2\nu)(1+\nu)}{1-\nu}$$

$$G = \frac{E}{2(1+\nu)}$$

$$k = \frac{E}{3(1-2\nu)}$$

Il *coefficiente di Poisson* è un parametro adimensionale fondamentale che offre un criterio di valutazione della deformazione totale che può subire una roccia o un terreno, ed è legato al grado di litificazione, alla porosità ed al grado di saturazione della roccia stessa.

Il coefficiente di Poisson varia da 0 a 0.5 ed in larga massima si può affermare che varia tra 0.2 a 0.3 per le *rocce compatte*, da 0.3 a 0.35 per le *sabbie* e da 0.4 a 0.5 per le *argille*.

Come è noto, nei fluidi V_S=0, ν risulta uguale a 0.5. Nei solidi, il valore ν varia generalmente da 0.1 a 0.4. Pertanto, valori più elevati di ν possono essere indicativi della presenza di frazioni di liquido nel mezzo attraversato.

3. PROSPEZIONI SISMICHE ESEGUITE

Come già rilevato in Premessa alla presente Relazione, al fine di caratterizzare sismicamente il sottosuolo oggetto di indagine, sono state effettuate tre *prospezioni sismiche del tipo Down-Hole*, all'interno di altrettanti *fori di sondaggio* (SG5, SG8 e SG13) eseguiti a carotaggio continuo e condizionati, allo scopo, fino alla profondità di 30 m dal piano di campagna. Le loro ubicazioni sono rappresentate in Appendice al presente testo nei MOD. UI30b ÷ UI30d.

Sono state interessate le seguenti zone: Area Impianti, Serbatoi di Accumulo e Imbocco Galleria TBM e Terre Armate.

Le tubazioni in PVC, propedeutiche all'esecuzione delle Prove Down-Hole, sono state installate all'interno dei rispettivi fori così come descritto nel paragrafo II. 8 della Relazione Tecnica Generale.

Di seguito si riportano le foto delle esecuzione delle tre Down-Hole (DH1/SG5, DH2/SG8 e DH3/SG13) oggetto del presente Allegato IV alla Relazione Tecnica Generale:

Foto 1: *DH1- SG5 IMBOCCO GALLERIA TBM E TERRE ARMATE*

Foto 2: *DH2-SG8 AREA IMPIANTI*

Foto 3: *DH3-SG13 SERBATOI DI ACCUMULO*

3.1. Strumentazione Utilizzata

La strumentazione utilizzata per l'esecuzione delle prove sismiche *Down-Hole* comprende un *Sismografo* multicanale e digitale della *P.A.S.I.* modello *16S* (*16 Bit*), alimentato da una batteria da 12 Volts, un *sistema di rilevazione* del segnale costituito da *gefoni*, ovvero *trasduttori di velocità*, con *frequenza di oscillazione* di 14 Hz ed una *sorgente di energia* per produrre le onde sismiche.

I tre *geofoni* sono assemblati in un cilindro (*geofono da pozzo*), dotato di una camera d'aria che è possibile gonfiare dalla superficie, per farlo aderire alle pareti del foro alla profondità di prova. La *sonda geofonica tridimensionale* è costituita da geofoni disposti secondo un sistema di *assi cartesiani ortogonali*, in cui l'asse "*z*" coincide con quello del cilindro. Il *geofono da pozzo* registra la componente verticale dell'oscillazione indotta da un impulso, che genera *onde elastiche longitudinali* (*P*, *Primae*) e le due *componenti orizzontali*, generate da un impulso che produce *onde elastiche trasversali* (*S*, *Secundae*).

La *sorgente* (per la generazione di onde *P* ed *S*) è costituita da *piastre metalliche*, a base quadrata di diverse dimensioni, percosse da una *mazzola* di 10 kg, in grado di generare *onde elastiche direzionali*. Come *trigger/starter* è stato utilizzato un geofono verticale/trasduttore posto in prossimità della sorgente energizzante posizionata alla distanza di 2 *m* dal boccaforo, che collegato al sismografo fornisce l'*istante di energizzazione*.

Per evidenziare le *onde di compressione,* si pone una piastra sul terreno in posizione orizzontale e la si batte lasciando cadere verticalmente la mazza.

Per generare le *onde di taglio*, si percuotono, alternativamente, due *piastre incassate nel terreno obliquamente*, con un inclinazione di circa 45°.

La gestione dell'apparecchiatura è notevolmente semplificata dall'interfaccia grafica e dall'interazione con essa tramite il *sistema di puntamento touch-screen*, che consente di eseguire tutte le operazioni toccando con un pennino gli oggetti interessati direttamente sullo schermo.

L'ambiente operativo dello strumento è quello di Microsoft Windows XP.

3.2. Geometria dell'Indagine e Campionamento

Date le finalità dell'indagine, le prove Down-Hole sono state eseguite ponendo l'energizzazione a 2 m dall'asse foro ed eseguendo le acquisizioni calando la sonda geofonica tridimensionale nel perforo (da quota fondo foro a quota bocca foro), con intervalli (*passo misura*) di 1m.

I *Tempi di Arrivo* (T_P) delle *Onde Sismiche Primae* (*P*) si ricavano dall'analisi dei *sismogrammi*, registrati dal *sensore verticale* della *sonda geofonica*, individuando il punto in cui arriva il primo *impulso*.

I *Tempi di Arrivo* (T_S) delle *Onde Sismiche Secundae* (*S*) si ottengono dall'analisi contemporanea dei *sismogrammi*, registrati dai due *sensori orizzontali* della *sonda geofonica*, individuando il punto in cui avviene l'*inversione di fase* delle onde registrate.

Quando la *battuta* su di una piastra non risultava netta, o comunque il segnale non era significativo per la presenza di noise ambientale, la prova veniva ripetuta.

Essendo il *rumore di fondo* (*noise*) poco accentuato, il campionamento non ha presentato difficoltà.

3.3. Elaborazione ed Interpretazione dei Dati

Il metodo di calcolo impiegato per l'elaborazione delle prove *Down-Hole* comporta la risoluzione/implementazione, con l'ausilio di un foglio elettronico, delle *equazioni di calcolo* richiamate nel precedente capitolo 2.

L'*input* consiste nell'immissione in calcolo dei Tempi di Arrivo *(*T_P *e* T_S*) delle* Onde Sismiche *(*P *e* S*)* ricavati dall'analisi contemporanea dei *sismogrammi* registrati in campagna e successivamente riportati ai Tempi Corretti, l'*output* nel calcolo delle velocità *(*V_P *e* V_S*)* e dei relativi parametri elastici *(*ν, k, E, G*)*.

I valori di *peso unità di volume* γ, indispensabili per il calcolo dei moduli dinamici, sono stati desunti da elaborazioni mediate per altri terreni, analoghi a quelli presenti nella *stratigrafia* dei sondaggi SG5, SG8 e SG13, e riportati nella Bibliografia Tecnica Specializzata,

oltre che da apposite *determinazioni di laboratorio* effettuate su *campioni indisturbati* prelevati in detti fori.

In Appendice al presente documento, sono riportati gli elaborati per ognuna delle tre tubazione di prova SG5/DH1, SG8/DH2 e SG13/DH3, sia in forma numerica e sia sottoforma grafica. In particolare, in tabella sono riportati i "*Dati Sperimentali*" ed i "*Valori Calcolati*"; graficamente sono rappresentate le velocità V_P e V_S e i *Tempi Corretti* (corrispondenti ai *Tempi di Arrivo* T_P e T_S), in funzione della *profondità z* dal piano di campagna.

In particolare, i *grafici velocità / profondità z* evidenziano e danno un'idea del grado di disomogeneità dei *litotipi* presenti nel sottosuolo investigato, e possono essere interpretati come delle *dromocrone* che consentono di individuare il numero di *sismostrati* in cui può essere suddiviso il sottosuolo stesso.

Dall'analisi delle velocità ottenute è possibile affermare che esse sono in linea con le litologie attraversate. È possibile, infatti, distinguere su tutte e tre le verticali i seguenti n° 5 *sismostrati*:

DH1 – SG5 (Imbocco Galleria TBM e Terre Armate):

- tra 0÷2 metri di profondità caratterizzato da velocità (Vp) comprese tra 260 e 350 m/s e velocità (Vs) comprese tra 140 e 180 m/s;
- tra 2÷9 m con Vp tra 540 e 610 m/s e Vs tra 300 e 333 m/s;
- tra 9÷19 m con Vp tra 660 e 730 m/s e Vs tra 360 e 400 m/s;
- tra 19÷23 m con Vp tra 760 e 950 m/s e Vs tra 400 e 510 m/s;
- tra 23÷30 m con Vp tra 950 e 1100 m/s e Vs tra 510 e 600 m/s.

DH2 – SG8 (Area Impianti):

- tra 0÷2 metri di profondità caratterizzato da velocità (Vp) comprese tra 260 e 350 m/s e velocità (Vs) comprese tra 140 e 180 m/s;
- tra 2÷11 m con Vp tra 490 e 630 m/s e Vs tra 260 e 340 m/s;
- tra 11÷20 m con Vp tra 680 e 730 m/s e Vs tra 360 e 400 m/s;
- tra 20÷23 m con Vp tra 760 e 830 m/s e Vs tra 410 e 440 m/s;
- tra 23÷30 m con Vp tra 950 e 1130 m/s e Vs tra 530 e 620 m/s.

DH3– SG13 (Serbatoi di Accumulo):

- tra 0÷3 metri di profondità caratterizzato da velocità (Vp) comprese tra 240 e 460 m/s e velocità (Vs) comprese tra 120 e 2500 m/s;
- tra 3÷12 m con Vp tra 580 e 630 m/s e Vs tra 310 e 340 m/s;
- tra 12÷18 m con Vp tra 650 e 730 m/s e Vs tra 360 e 380 m/s;
- tra 18÷20 m con Vp tra 790 e 820 m/s e Vs tra 430 e 440 m/s;
- tra 20÷30 m con Vp tra 900 e 1100 m/s e Vs tra 490 e 590 m/s.

I tutti i casi, è stato rilevato un graduale aumento delle velocità con la profondità.

Come riportato nella Normativa vigente (D.M. 17 gennaio 2018), ai fini della definizione dell'*azione sismica di progetto*, si rende necessario valutare l'effetto della *risposta sismica locale* mediante specifiche analisi. In assenza di tali analisi, per la definizione dell'azione sismica si può fare riferimento a un approccio semplificato, che si basa sull'individuazione di *categorie di sottosuolo di riferimento*.

Per l'identificazione della categoria di sottosuolo, la Normativa in descrizione raccomanda di privilegiare la misura diretta della velocità di propagazione delle onde di taglio e, quindi, di calcolare la *velocità equivalente* $V_{s,eq}$ con la seguente espressione:

$$V_{S,eq} = \frac{H}{\sum_{i=1}^{N} \frac{h_i}{V_{S,i}}}$$

dove hi e V_i indicano lo *spessore* in metri e *la velocità delle onde di taglio* (per deformazioni di taglio $\gamma < 10^{-6}$) dello *strato i-esimo* per un totale di *N strati* presenti fino ad individuare il *bedrock sismico* o, qualora non individuato nei primi 30 metri di profondità, al di sotto del *piano fondale*.

Come è noto, per le fondazioni superficiali, tale profondità è riferita al piano di imposta delle stesse, mentre per le fondazioni su pali è riferita alla testa dei pali.

Le tre indagini sismiche effettuate, considerando la *sismostratigrafia* fino alla profondità di 30 m (0 m-30 m) dal p.c., ha fornito risultati che collocano i terreni oggetto d'indagine sempre nella categoria B del richiamato D.M. 17 gennaio 2018 (v. Tab.1 e Tab.2).

Prospezione Sismica	$V_{S,\ eq\ 0\text{-}30}$ *(m/s)*	*Categoria Sottosuoli di Fondazione (D.M. 17/01/2018)*
DH1/SG5	**362**	**B**
DH2/SG8	**361**	**B**
DH3/SG13	**362**	**B**

Tab.1 – Categoria di sottosuolo di fondazione relative alle tre prospezioni sismiche in foro Down- Hole effettuate.

Categorie di sottosuolo

Decreto del 17 gennaio 2018 - Norme Tecniche per le Costruzioni

Categoria A
Ammassi rocciosi affioranti o terreni molto rigidi caratterizzati da **valori di velocità delle onde di taglio superiori a 800 m/s**, eventualmente comprendenti in superficie terreni di caratteristiche meccaniche più scadenti con spessore massimo pari a 3 m.

Categoria B
Rocce tenere e depositi di terreni a grana grossa molto addensati o terreni a grana fina molto consistenti, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da **valori di velocità equivalente compresi tra 360 m/s e 800 m/s**.

Categoria C
Depositi di terreni a grana grossa mediamente addensati o terreni a grana fina mediamente consistenti con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da **valori di velocità equivalente compresi tra 180 m/s e 360 m/s**.

Categoria D
Depositi di terreni a grana grossa scarsamente addensati o di terreni a grana fina scarsamente consistenti, con profondità del substrato superiori a 30 m, caratterizzati da un miglioramento delle proprietà meccaniche con la profondità e da **valori di velocità equivalente compresi tra 100 m/s e 180 m/s**.

Categoria E
Terreni con caratteristiche e valori di velocità equivalente riconducibili a quelle definite per le categorie C o D, con profondità del substrato non superiore a 30m.

Tab. 2 – Categorie Sottosuoli di Fondazione (D.M. 17 gennaio 2018).

Quella appena effettuata è una delle possibili interpretazioni; considerati però i valori $V_{S,\ eq\ 0\text{-}30}$, praticamente coincidenti con il *limite* (360 m/s) posto dalla Normativa vigente, cautelativamente, a tutte e tre le aree appositamente investigate, potrebbe associarsi la Categoria di Sottosuolo "*C*".

Ercolano, 30 ottobre 2020

Direttore di Laboratorio
dr. ing. Vincenzo Pinto

I. G. s.r.l.
L'Amministratore
Ing. V. PINTO

A P P E N D I C E

MOD	**UI30b ÷UI30d**	**ORTOFOTO (*) CON UBICAZIONE INDAGINI (n° 3)**
TABELLA		**DATI SPERIMENTALI e VALORI CALCOLATI (n° 3)**
GRAFICI		**V_P/z e V_S/z – T_p/z e T_s/z (n° 3)**

(*)tratte da Google Earth

I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Laboratorio Autorizzato
per Indagini Geognostiche
Prelievo di Campioni e Prove in Sito
DECRETO N° 900 del 28/01/11

MOD. UI 30b - ORTOFOTO CON UBICAZIONE INDAGINI

Codifica Commessa	:	**301/20**	Committente	:	**VIANINI LAVORI S.p.A.**
Cantiere e/o Opera	:	**DERIVAZIONE DI CAMPOLATTARO. AREA IMPIANTI**	Località	:	**COMUNE DI PONTE (BN)**

I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Laboratorio Autorizzato
per Indagini Geognostiche
Prelievo di Campioni e Prove in Sito
DECRETO N° 900 del 28/01/11

MOD. UI 30c - ORTOFOTO CON UBICAZIONE INDAGINI

Codifica Commessa	:	**301/20**	Committente	:	**VIANINI LAVORI S.p.A.**
Cantiere e/o Opera	:	**DERIVAZIONE DI CAMPOLATTARO. IMBOCCO TBM E TERRE ARMATE**	Località	:	**COMUNE DI PONTE (BN)**

I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Laboratorio Autorizzato
per Indagini Geognostiche
Prelievo di Campioni e Prove in Sito
DECRETO N° 900 del 28/01/11

MOD. UI 30d - ORTOFOTO CON UBICAZIONE INDAGINI

Codifica Commessa	:	**301/20**	Committente	:	**VIANINI LAVORI S.p.A.**
Cantiere e/o Opera	:	**DERIVAZIONE DI CAMPOLATTARO. SERBATOIO DI ACCUMULO**	Località	:	**COMUNE DI PONTE (BN)**

I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
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Partita I.V.A. 01423891215
C.C.I.A.A. R.E.A. 442053
Attestazione S.O.A. UNISOA S.p.A.

PROVA SISMICA DOWN-HOLE - TABELLA DATI SPERIMENTALI e VALORI CALCOLATI

Tecnica	**down-hole**						
Committente	VIANINI LAVORI S.p.A						
Cantiere	DERIVAZIONE DI CAMPOLATTARO.						
Opera	IMBOCCO GALLERIA TBM E TERRE ARMATE						
Prova	**DH1**			**Sondaggio**	**SG5**		
Data esecuzione	12/10/2020			V_{S30}	**362**	(m/sec)	
Distanza battuta dall'asse foro	2,00	(m)		Profondità foro	**30,00**	(m)	
Letture dal p.c.:	30 da	1,00 (m)	a 30,00 (m)	Passo letture	**1,00**	(m)	

DATI SPERIMENTALI						*VALORI CALCOLATI*					
Profondità misure dal p.c. m	Tempi Onde P Sperimentali msec	Tempi Onde P Corretti msec	Tempi Onde S Sperimentali msec	Tempi Onde S Corretti msec	Pesi di Volume Bibliografici e di Laboratorio gr/cmc	Velocità Onde P Vp km/sec	Velocità Onde S Vs km/sec	Coeff. di Poisson ν (--)	Modulo di Incompressibilità k kg/cmq	Modulo di Young E kg/cmq	Modulo di Taglio G kg/cmq
0,0	0,00	0,00	0,0	0,0	0,00	0,00	0,00	0,00	0	0	0
1,0	8,5	3,80	16,0	7,2	1,90	0,26	0,14	0,30	836	986	378
2,0	9,4	6,65	17,8	12,6	1,90	0,35	0,18	0,31	1517	1721	657
3,0	10,2	8,49	19,2	16,0	1,90	0,54	0,30	0,29	3471	4354	1686
4,0	11,4	10,15	21,3	19,1	1,90	0,60	0,33	0,29	4258	5293	2047
5,0	12,8	11,84	23,9	22,2	1,90	0,59	0,32	0,30	4190	5099	1965
6,0	14,2	13,47	26,6	25,2	1,90	0,61	0,33	0,30	4475	5425	2090
7,0	15,9	15,29	29,7	28,6	1,90	0,55	0,30	0,29	3527	4515	1755
8,0	17,5	16,98	32,7	31,7	1,90	0,59	0,32	0,30	4212	5027	1932
9,0	19,1	18,65	35,6	34,8	1,90	0,60	0,33	0,28	4149	5416	2112
10,0	20,5	20,10	38,2	37,5	1,90	0,69	0,37	0,30	5600	6856	2645
11,0	21,9	21,55	40,8	40,1	1,90	0,69	0,37	0,30	5692	6970	2689
12,0	23,3	22,98	43,4	42,8	1,90	0,70	0,37	0,30	5760	7054	2722
13,0	24,7	24,41	46,1	45,5	1,90	0,70	0,37	0,31	5945	6915	2647
14,0	26,2	25,89	48,8	48,3	1,90	0,68	0,36	0,31	5604	6482	2479
15,0	27,7	27,41	51,6	51,1	1,90	0,66	0,36	0,29	5058	6420	2491
16,0	29,1	28,88	54,2	53,8	1,90	0,68	0,37	0,29	5404	6920	2689
17,0	30,5	30,24	56,8	56,4	1,90	0,73	0,39	0,31	6497	7596	2910
18,0	31,8	31,61	59,3	58,9	1,90	0,73	0,40	0,29	6363	7855	3035
19,0	33,2	33,02	61,9	61,5	1,90	0,71	0,38	0,30	5959	7298	2816
20,0	34,5	34,33	64,3	64,0	1,90	0,76	0,40	0,30	7035	8274	3173
21,0	35,7	35,54	66,5	66,2	1,90	0,83	0,45	0,29	7978	10130	3931
22,0	36,9	36,75	68,8	68,5	1,90	0,83	0,43	0,31	8434	9473	3608
23,0	38,1	37,91	71,0	70,7	1,90	0,86	0,45	0,31	9170	10352	3945
24,0	39,1	38,96	73,0	72,7	1,90	0,95	0,51	0,30	10615	13001	5016
25,0	40,2	40,02	74,9	74,7	1,90	0,95	0,51	0,30	10630	13021	5024
26,0	41,1	40,98	76,7	76,4	1,90	1,05	0,57	0,29	12845	16096	6233
27,0	42,0	41,89	78,3	78,1	1,90	1,10	0,60	0,29	14229	18070	7013
28,0	43,0	42,84	80,1	79,9	1,90	1,05	0,56	0,30	13063	15857	6110
29,0	43,9	43,79	81,8	81,6	1,90	1,06	0,57	0,29	13148	16519	6400
30,0	44,8	44,70	83,5	83,3	1,90	1,09	0,59	0,30	14302	17233	6632

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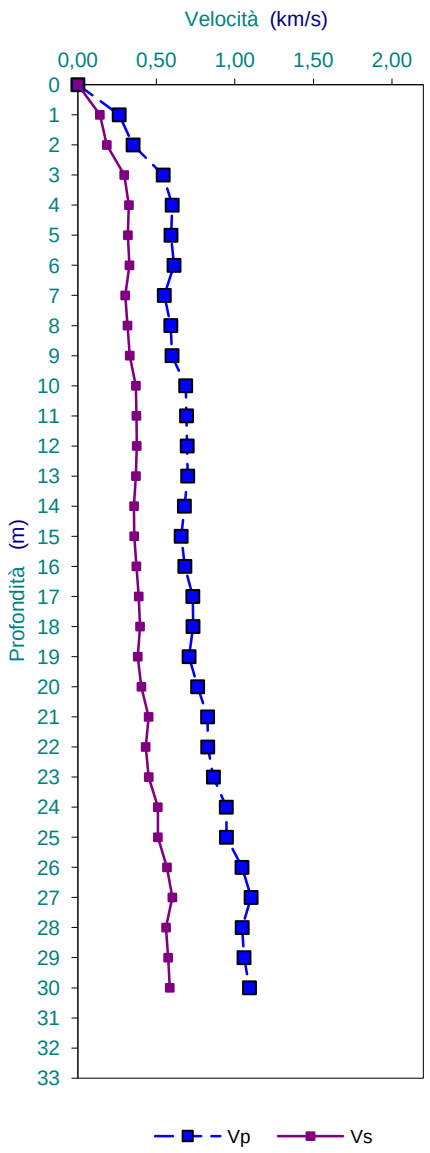
I.G. S.r.l.

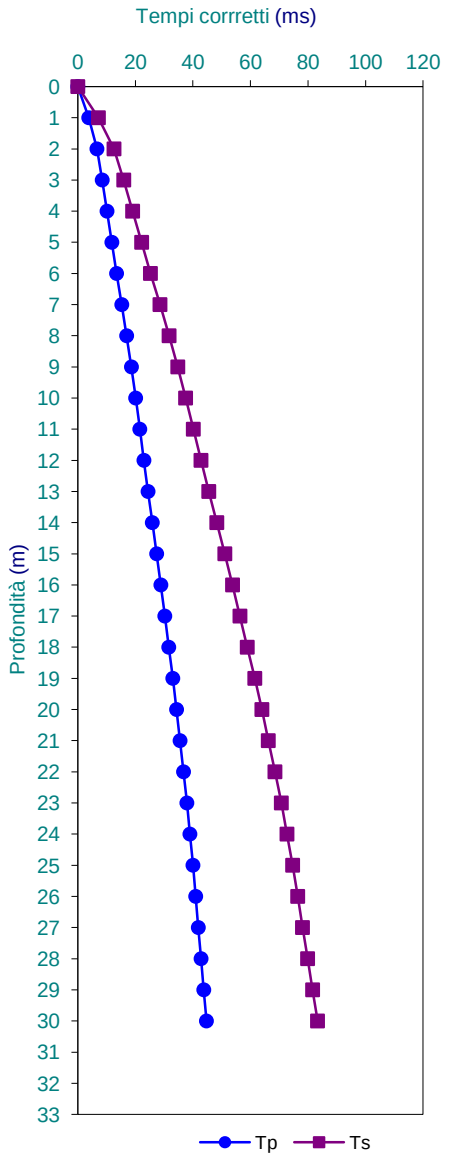
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. R.E.A. 442053
Attestazione S.O.A. UNISOA S.p.A.

PROVA SISMICA DOWN-HOLE - GRAFICI: V_P e V_S/z - T_P e T_S/z

Committente	VIANINI LAVORI S.p.A		
Cantiere	DERIVAZIONE DI CAMPOLATTARO.		
Opera	IMBOCCO GALLERIA TBM E TERRE ARMATE		
Letture dal p.c.	30 (n°)	Prova	DH1
Passo letture	1 (m)	Sondaggio	SG5
Distanza battuta	2 (m)	Data esecuzione	12/10/20
Profondità foro	30 (m)	Pagina	2 di 2





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I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. R.E.A. 442053
Attestazione S.O.A. UNISOA S.p.A.

PROVA SISMICA DOWN-HOLE - TABELLA DATI SPERIMENTALI e VALORI CALCOLATI

Tecnica	**down-hole**						
Committente	VIANINI LAVORI S.p.A						
Cantiere	DERIVAZIONE DI CAMPOLATTARO.						
Opera	AREA IMPIANTI						
Prova	**DH2**				**Sondaggio**	**SG8**	
Data esecuzione		12/10/2020			V_{S30}	**362**	(m/sec)
Distanza battuta dall'asse foro		2,00	(m)		Profondità foro	**30,00**	(m)
Letture dal p.c.:	30	da 1,00	(m)	a 30,00 (m)	Passo letture	**1,00**	(m)

DATI SPERIMENTALI						*VALORI CALCOLATI*					
Profondità misure dal p.c. m	Tempi Onde P Sperimentali msec	Tempi Onde P Corretti msec	Tempi Onde S Sperimentali msec	Tempi Onde S Corretti msec	Pesi di Volume Bibliografici e di Laboratorio gr/cmc	Velocità Onde P Vp km/sec	Velocità Onde S Vs km/sec	Coeff. di Poisson ν (--)	Modulo di Incompressibilità k kg/cmq	Modulo di Young E kg/cmq	Modulo di Taglio G kg/cmq
0,0	0,00	0,00	0,0	0,0	0,00	0,00	0,00	0,00	0	0	0
1,0	8,7	3,89	16,2	7,2	1,90	0,26	0,14	0,30	787	957	369
2,0	9,6	6,79	17,9	12,7	1,90	0,35	0,18	0,30	1425	1718	661
3,0	10,6	8,82	19,9	16,6	1,90	0,49	0,26	0,31	2996	3345	1273
4,0	11,8	10,55	22,1	19,8	1,90	0,58	0,31	0,29	3930	4866	1881
5,0	13,2	12,26	24,7	22,9	1,90	0,59	0,32	0,30	4113	5010	1932
6,0	14,6	13,85	27,4	26,0	1,90	0,63	0,33	0,31	4857	5432	2068
7,0	16,1	15,48	30,2	29,0	1,90	0,61	0,33	0,29	4415	5566	2158
8,0	17,6	17,07	32,9	31,9	1,90	0,63	0,34	0,29	4610	5827	2260
9,0	19,2	18,69	35,8	34,9	1,90	0,62	0,33	0,30	4572	5486	2110
10,0	20,7	20,30	38,7	37,9	1,90	0,62	0,34	0,29	4564	5737	2223
11,0	22,3	21,94	41,7	41,0	1,90	0,61	0,32	0,31	4542	5185	1980
12,0	23,7	23,38	44,3	43,7	1,90	0,70	0,37	0,30	5753	7043	2717
13,0	25,2	24,86	47,0	46,5	1,90	0,68	0,36	0,30	5443	6616	2550
14,0	26,6	26,33	49,7	49,2	1,90	0,68	0,37	0,29	5352	6850	2662
15,0	28,0	27,75	52,3	51,8	1,90	0,70	0,38	0,30	5879	7199	2778
16,0	29,4	29,17	54,9	54,4	1,90	0,70	0,38	0,30	5904	7231	2790
17,0	30,9	30,69	57,6	57,2	1,90	0,66	0,36	0,29	5090	6462	2508
18,0	32,3	32,05	60,1	59,7	1,90	0,73	0,40	0,29	6360	7851	3033
19,0	33,6	33,42	62,7	62,3	1,90	0,73	0,39	0,31	6531	7635	2925
20,0	35,0	34,83	65,3	64,9	1,90	0,71	0,38	0,30	5968	7310	2821
21,0	36,3	36,14	67,7	67,4	1,90	0,76	0,41	0,29	6906	8501	3283
22,0	37,5	37,35	69,9	69,6	1,90	0,83	0,44	0,30	8173	9870	3800
23,0	38,8	38,60	72,2	71,9	1,90	0,79	0,43	0,29	7416	9322	3612
24,0	39,8	39,66	74,1	73,8	1,90	0,95	0,53	0,27	10109	13731	5390
25,0	40,7	40,57	75,7	75,4	1,90	1,10	0,62	0,27	13596	18849	7427
26,0	41,6	41,48	77,3	77,1	1,90	1,10	0,61	0,28	13859	18542	7260
27,0	42,6	42,43	79,0	78,8	1,90	1,05	0,58	0,27	12367	16830	6609
28,0	43,5	43,36	80,7	80,5	1,90	1,08	0,58	0,29	13774	17112	6618
29,0	44,4	44,24	82,3	82,1	1,90	1,13	0,62	0,28	14746	19176	7471
30,0	45,3	45,15	83,9	83,7	1,90	1,11	0,62	0,27	13682	18980	7479

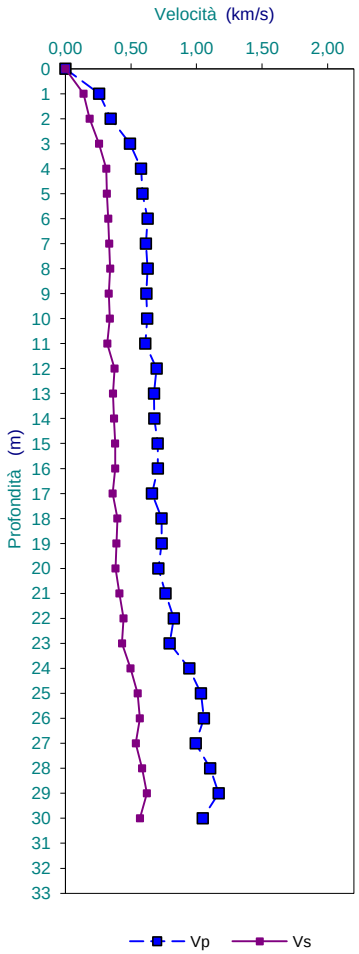
I.G. S.r.l.

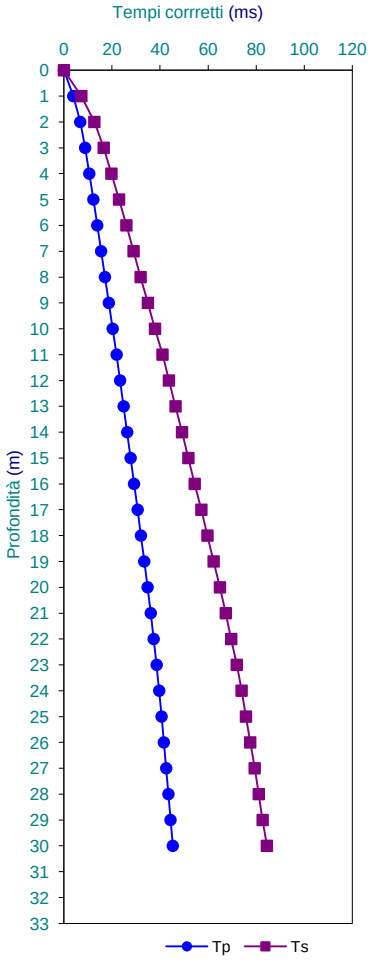
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. R.E.A. 442053
Attestazione S.O.A. UNISOA S.p.A.

PROVA SISMICA DOWN-HOLE - GRAFICI: V_P e V_S/z - T_P e T_S/z

Committente	VIANINI LAVORI S.p.A		
Cantiere	DERIVAZIONE DI CAMPOLATTARO.		
Opera	AREA IMPIANTI		
Letture dal p.c.	30 (n°)	Prova	DH2
Passo letture	1 (m)	Sondaggio	SG8
Distanza battuta	2 (m)	Data esecuzione	12/10/20
Profondità foro	30 (m)	Pagina	2 di 2





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I.G. S.r.l.
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

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PROVA SISMICA DOWN-HOLE - TABELLA DATI SPERIMENTALI e VALORI CALCOLATI

Tecnica	**down-hole**						
Committente	VIANINI LAVORI S.p.A						
Cantiere	DERIVAZIONE DI CAMPOLATTARO.						
Opera	SERBATOI DI ACCUMULO						
Prova	**DH3**			**Sondaggio**	**SG13**		
Data esecuzione	12/10/2020			V_{S30}	**361**	(m/sec)	
Distanza battuta dall'asse foro	2,00	(m)		Profondità foro	**30,00**	(m)	
Letture dal p.c.:	30 da	1,00	(m) a	30,00 (m)	Passo letture	**1,00**	(m)

DATI SPERIMENTALI						*VALORI CALCOLATI*					
Profondità misure dal p.c. m	Tempi Onde P Sperimentali msec	Tempi Onde P Corretti msec	Tempi Onde S Sperimentali msec	Tempi Onde S Corretti msec	Pesi di Volume Bibliografici e di Laboratorio gr/cmc	Velocità Onde P Vp km/sec	Velocità Onde S Vs km/sec	Coeff. di Poisson ν (--)	Modulo di Incompressibilità k kg/cmq	Modulo di Young E kg/cmq	Modulo di Taglio G kg/cmq
0,0	0,00	0,00	0,0	0,0	0,00	0,00	0,00	0,00	0	0	0
1,0	9,2	4,11	18,0	8,0	1,90	0,24	0,12	0,32	746	791	299
2,0	10,0	7,07	19,2	13,6	1,90	0,34	0,18	0,30	1370	1648	634
3,0	11,1	9,24	21,2	17,6	1,90	0,46	0,25	0,30	2569	3055	1173
4,0	12,3	10,96	23,4	20,9	1,90	0,58	0,31	0,30	4088	4797	1839
5,0	13,7	12,67	25,9	24,0	1,90	0,58	0,32	0,29	3988	5000	1936
6,0	15,1	14,33	28,6	27,1	1,90	0,61	0,32	0,30	4388	5288	2035
7,0	16,6	15,91	31,3	30,1	1,90	0,63	0,34	0,30	4739	5728	2206
8,0	18,1	17,56	34,2	33,1	1,90	0,61	0,33	0,29	4341	5432	2103
9,0	19,7	19,18	37,0	36,1	1,90	0,62	0,33	0,29	4466	5599	2169
10,0	21,2	20,79	39,9	39,1	1,90	0,62	0,33	0,30	4650	5573	2143
11,0	22,8	22,43	42,8	42,1	1,90	0,61	0,34	0,28	4267	5576	2174
12,0	24,4	24,02	45,7	45,0	1,90	0,63	0,34	0,29	4665	5866	2273
13,0	25,9	25,55	48,4	47,8	1,90	0,65	0,36	0,29	4992	6329	2456
14,0	27,3	26,98	51,1	50,5	1,90	0,70	0,37	0,31	5972	6942	2657
15,0	28,7	28,45	53,8	53,3	1,90	0,68	0,36	0,31	5622	6500	2486
16,0	30,2	29,97	56,6	56,1	1,90	0,66	0,36	0,29	5070	6434	2497
17,0	31,6	31,38	59,1	58,7	1,90	0,71	0,38	0,29	5834	7378	2861
18,0	33,0	32,75	61,7	61,3	1,90	0,73	0,38	0,31	6598	7470	2848
19,0	34,2	34,01	64,0	63,6	1,90	0,79	0,43	0,29	7356	9242	3581
20,0	35,4	35,22	66,3	65,9	1,90	0,82	0,44	0,30	8181	9757	3749
21,0	36,5	36,34	68,3	68,0	1,90	0,90	0,49	0,29	9546	11897	4603
22,0	37,6	37,40	70,2	69,9	1,90	0,94	0,52	0,29	10364	13255	5150
23,0	38,6	38,43	72,1	71,8	1,90	0,96	0,53	0,28	10609	14058	5495
24,0	39,6	39,46	74,0	73,7	1,90	0,97	0,52	0,29	11206	13812	5334
25,0	40,6	40,47	75,8	75,6	1,90	0,99	0,53	0,30	11728	14303	5515
26,0	41,6	41,43	77,6	77,3	1,90	1,05	0,57	0,29	12748	16233	6303
27,0	42,5	42,33	79,2	79,0	1,90	1,10	0,59	0,30	14554	17574	6766
28,0	43,4	43,27	81,0	80,7	1,90	1,07	0,58	0,29	13498	16726	6466
29,0	44,4	44,24	82,7	82,5	1,90	1,03	0,56	0,29	12394	15455	5980
30,0	45,3	45,20	84,5	84,3	1,90	1,05	0,57	0,29	12900	16166	6260

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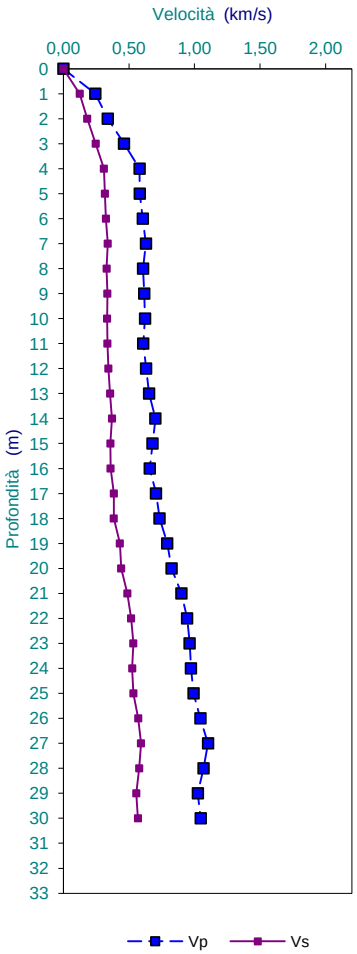
I.G. S.r.l.

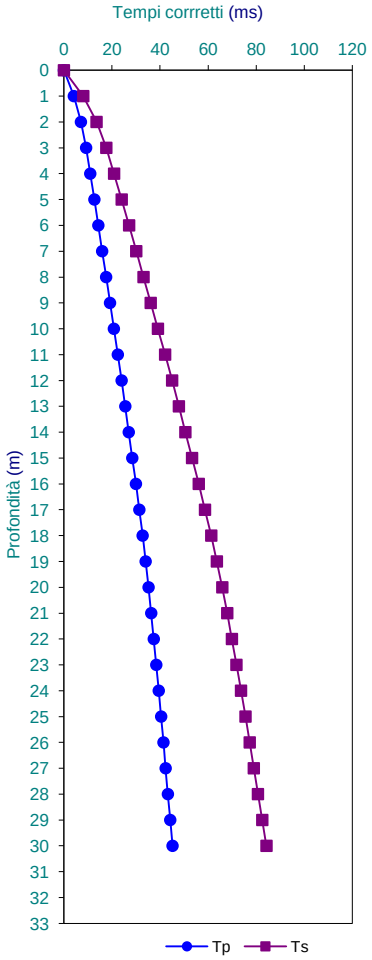
INDAGINI GEOTECNICHE IN SITO, MONITORAGGIO,
OPERE DI FONDAZIONE, DI SOSTEGNO E SIMILI

Codice Fiscale 05433440632
Partita I.V.A. 01423891215
C.C.I.A.A. R.E.A. 442053
Attestazione S.O.A. UNISOA S.p.A.

PROVA SISMICA DOWN-HOLE - GRAFICI: V_P e V_S/z - T_P e T_S/z

Committente	VIANINI LAVORI S.p.A		
Cantiere	DERIVAZIONE DI CAMPOLATTARO.		
Opera	SERBATOI DI ACCUMULO		
Letture dal p.c.	30 (n°)	Prova	DH3
Passo letture	1 (m)	Sondaggio	SG13
Distanza battuta	2 (m)	Data esecuzione	12/10/20
Profondità foro	30 (m)	Pagina	2 di 2





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SVILUPPO CONDOTTE – PROVE IN SITO

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 066
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-066
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,00	----
0,60	35,0	50,0	35,0	2,13	16,0
0,80	67,0	99,0	67,0	1,60	42,0
1,00	70,0	94,0	70,0	1,93	36,0
1,20	66,0	95,0	66,0	2,87	23,0
1,40	33,0	76,0	33,0	0,73	45,0
1,60	103,0	114,0	103,0	2,33	44,0
1,80	30,0	65,0	30,0	1,93	16,0
2,00	41,0	70,0	41,0	1,93	21,0
2,20	46,0	75,0	46,0	2,80	16,0
2,40	43,0	85,0	43,0	2,67	16,0
2,60	63,0	103,0	63,0	3,47	18,0
2,80	58,0	110,0	58,0	5,00	12,0
3,00	73,0	148,0	73,0	5,27	14,0
3,20	122,0	201,0	122,0	6,47	19,0
3,40	118,0	215,0	118,0	7,73	15,0
3,60	129,0	245,0	129,0	11,00	12,0
3,80	95,0	260,0	95,0	3,40	28,0
4,00	104,0	155,0	104,0	4,53	23,0
4,20	71,0	139,0	71,0	4,20	17,0
4,40	106,0	169,0	106,0	5,47	19,0
4,60	170,0	252,0	170,0	9,73	17,0
4,80	269,0	415,0	269,0	8,60	31,0
5,00	240,0	369,0	240,0	18,33	13,0
5,20	140,0	415,0	140,0	11,80	12,0
5,40	131,0	308,0	131,0	8,93	15,0
5,60	141,0	275,0	141,0	7,53	19,0
5,80	357,0	470,0	357,0	8,67	41,0
6,00	230,0	360,0	230,0	10,13	23,0
6,20	128,0	280,0	128,0	10,67	12,0
6,40	135,0	295,0	135,0	8,67	16,0
6,60	350,0	480,0	350,0	17,33	20,0
6,80	180,0	440,0	180,0	14,00	13,0
7,00	260,0	470,0	260,0	12,27	21,0
7,20	206,0	390,0	206,0	10,67	19,0
7,40	270,0	430,0	270,0	11,33	24,0
7,60	280,0	450,0	280,0	16,00	18,0
7,80	280,0	520,0	280,0	13,33	21,0
8,00	350,0	550,0	350,0	8,00	44,0
8,20	450,0	570,0	450,0	13,33	34,0
8,40	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 064
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-064
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	10,0	16,0	10,0	0,47	21,0
0,80	12,0	19,0	12,0	0,93	13,0
1,00	12,0	26,0	12,0	0,87	14,0
1,20	15,0	28,0	15,0	0,80	19,0
1,40	14,0	26,0	14,0	1,00	14,0
1,60	19,0	34,0	19,0	1,07	18,0
1,80	19,0	35,0	19,0	1,07	18,0
2,00	19,0	35,0	19,0	1,20	16,0
2,20	19,0	37,0	19,0	0,80	24,0
2,40	25,0	37,0	25,0	0,87	29,0
2,60	25,0	38,0	25,0	1,07	23,0
2,80	24,0	40,0	24,0	1,27	19,0
3,00	23,0	42,0	23,0	1,40	16,0
3,20	28,0	49,0	28,0	1,00	28,0
3,40	46,0	61,0	46,0	2,80	16,0
3,60	160,0	202,0	160,0	4,53	35,0
3,80	55,0	123,0	55,0	1,33	41,0
4,00	46,0	66,0	46,0	1,60	29,0
4,20	42,0	66,0	42,0	1,47	29,0
4,40	37,0	59,0	37,0	1,20	31,0
4,60	25,0	43,0	25,0	0,80	31,0
4,80	27,0	39,0	27,0	2,47	11,0
5,00	49,0	86,0	49,0	2,00	24,0
5,20	186,0	216,0	186,0	6,93	27,0
5,40	134,0	238,0	134,0	6,13	22,0
5,60	81,0	173,0	81,0	3,73	22,0
5,80	87,0	143,0	87,0	4,53	19,0
6,00	94,0	162,0	94,0	4,53	21,0
6,20	124,0	192,0	124,0	3,07	40,0
6,40	106,0	152,0	106,0	4,20	25,0
6,60	35,0	98,0	35,0	2,60	13,0
6,80	72,0	111,0	72,0	3,27	22,0
7,00	74,0	123,0	74,0	5,47	14,0
7,20	90,0	172,0	90,0	2,33	39,0
7,40	143,0	178,0	143,0	5,20	28,0
7,60	87,0	165,0	87,0	5,67	15,0
7,80	80,0	165,0	80,0	6,73	12,0
8,00	79,0	180,0	79,0	7,53	10,0
8,20	77,0	190,0	77,0	4,80	16,0
8,40	82,0	154,0	82,0	5,73	14,0
8,60	70,0	156,0	70,0	8,33	8,0
8,80	140,0	265,0	140,0	8,87	16,0
9,00	70,0	203,0	70,0	7,53	9,0
9,20	157,0	270,0	157,0	10,67	15,0
9,40	190,0	350,0	190,0	13,33	14,0
9,60	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 065
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-065
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	52,0	62,0	52,0	1,53	34,0
0,80	34,0	57,0	34,0	1,07	32,0
1,00	50,0	66,0	50,0	1,60	31,0
1,20	50,0	74,0	50,0	2,40	21,0
1,40	54,0	90,0	54,0	2,53	21,0
1,60	54,0	92,0	54,0	2,47	22,0
1,80	45,0	82,0	45,0	2,80	16,0
2,00	44,0	86,0	44,0	3,07	14,0
2,20	52,0	98,0	52,0	3,47	15,0
2,40	40,0	92,0	40,0	3,00	13,0
2,60	46,0	91,0	46,0	2,47	19,0
2,80	51,0	88,0	51,0	3,20	16,0
3,00	45,0	93,0	45,0	2,53	18,0
3,20	40,0	78,0	40,0	3,20	12,0
3,40	41,0	89,0	41,0	3,20	13,0
3,60	50,0	98,0	50,0	2,53	20,0
3,80	76,0	114,0	76,0	4,47	17,0
4,00	104,0	171,0	104,0	4,67	22,0
4,20	74,0	144,0	74,0	7,00	11,0
4,40	133,0	238,0	133,0	4,13	32,0
4,60	162,0	224,0	162,0	6,27	26,0
4,80	246,0	340,0	246,0	10,13	24,0
5,00	223,0	375,0	223,0	10,33	22,0
5,20	206,0	361,0	206,0	6,67	31,0
5,40	280,0	380,0	280,0	8,73	32,0
5,60	203,0	334,0	203,0	8,33	24,0
5,80	290,0	415,0	290,0	16,27	18,0
6,00	206,0	450,0	206,0	12,33	17,0
6,20	175,0	360,0	175,0	10,60	17,0
6,40	136,0	295,0	136,0	2,40	57,0
6,60	202,0	238,0	202,0	2,80	72,0
6,80	170,0	212,0	170,0	5,93	29,0
7,00	145,0	234,0	145,0	2,27	64,0
7,20	155,0	189,0	155,0	3,73	42,0
7,40	170,0	226,0	170,0	10,13	17,0
7,60	102,0	254,0	102,0	13,73	7,0
7,80	115,0	321,0	115,0	4,67	25,0
8,00	380,0	450,0	380,0	10,00	38,0
8,20	400,0	550,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 061
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-061
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	3,20	----
0,60	41,0	89,0	41,0	1,13	36,0
0,80	61,0	78,0	61,0	2,07	30,0
1,00	74,0	105,0	74,0	4,00	18,0
1,20	76,0	136,0	76,0	6,27	12,0
1,40	72,0	166,0	72,0	7,07	10,0
1,60	53,0	159,0	53,0	5,33	10,0
1,80	54,0	134,0	54,0	4,33	12,0
2,00	53,0	118,0	53,0	2,73	19,0
2,20	45,0	86,0	45,0	2,67	17,0
2,40	41,0	81,0	41,0	3,33	12,0
2,60	24,0	74,0	24,0	3,07	8,0
2,80	28,0	74,0	28,0	2,73	10,0
3,00	33,0	74,0	33,0	2,60	13,0
3,20	30,0	69,0	30,0	2,67	11,0
3,40	34,0	74,0	34,0	2,60	13,0
3,60	30,0	69,0	30,0	2,40	12,0
3,80	34,0	70,0	34,0	1,93	18,0
4,00	29,0	58,0	29,0	1,67	17,0
4,20	31,0	56,0	31,0	1,53	20,0
4,40	37,0	60,0	37,0	2,27	16,0
4,60	36,0	70,0	36,0	1,87	19,0
4,80	29,0	57,0	29,0	1,67	17,0
5,00	31,0	56,0	31,0	1,67	19,0
5,20	33,0	58,0	33,0	1,93	17,0
5,40	36,0	65,0	36,0	2,47	15,0
5,60	47,0	84,0	47,0	2,47	19,0
5,80	44,0	81,0	44,0	3,20	14,0
6,00	47,0	95,0	47,0	3,87	12,0
6,20	47,0	105,0	47,0	2,87	16,0
6,40	46,0	89,0	46,0	2,40	19,0
6,60	50,0	86,0	50,0	1,80	28,0
6,80	64,0	91,0	64,0	1,80	36,0
7,00	50,0	77,0	50,0	2,00	25,0
7,20	36,0	66,0	36,0	1,47	25,0
7,40	47,0	69,0	47,0	2,93	16,0
7,60	72,0	116,0	72,0	4,13	17,0
7,80	69,0	131,0	69,0	2,13	32,0
8,00	192,0	224,0	192,0	8,13	24,0
8,20	228,0	350,0	228,0	13,33	17,0
8,40	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 060
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-060
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	2,67	----
0,60	49,0	89,0	49,0	2,67	18,0
0,80	50,0	90,0	50,0	3,93	13,0
1,00	150,0	209,0	150,0	4,07	37,0
1,20	149,0	210,0	149,0	4,53	33,0
1,40	109,0	177,0	109,0	3,20	34,0
1,60	37,0	85,0	37,0	3,33	11,0
1,80	38,0	88,0	38,0	2,53	15,0
2,00	33,0	71,0	33,0	2,20	15,0
2,20	39,0	72,0	39,0	2,47	16,0
2,40	37,0	74,0	37,0	2,27	16,0
2,60	53,0	87,0	53,0	3,00	18,0
2,80	43,0	88,0	43,0	3,87	11,0
3,00	61,0	119,0	61,0	2,27	27,0
3,20	109,0	143,0	109,0	5,33	20,0
3,40	94,0	174,0	94,0	5,53	17,0
3,60	130,0	213,0	130,0	6,67	20,0
3,80	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 059
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P003-20-059
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	5,60	----
0,40	66,0	150,0	66,0	8,27	8,0
0,60	126,0	250,0	126,0	3,60	35,0
0,80	57,0	111,0	57,0	2,80	20,0
1,00	70,0	112,0	70,0	3,33	21,0
1,20	42,0	92,0	42,0	2,80	15,0
1,40	45,0	87,0	45,0	1,93	23,0
1,60	100,0	129,0	100,0	2,93	34,0
1,80	41,0	85,0	41,0	3,07	13,0
2,00	46,0	92,0	46,0	3,13	15,0
2,20	62,0	109,0	62,0	3,73	17,0
2,40	41,0	97,0	41,0	3,13	13,0
2,60	45,0	92,0	45,0	2,20	20,0
2,80	49,0	82,0	49,0	2,87	17,0
3,00	47,0	90,0	47,0	3,33	14,0
3,20	45,0	95,0	45,0	1,93	23,0
3,40	34,0	63,0	34,0	2,67	13,0
3,60	31,0	71,0	31,0	2,13	15,0
3,80	28,0	60,0	28,0	2,60	11,0
4,00	46,0	85,0	46,0	1,53	30,0
4,20	34,0	57,0	34,0	2,00	17,0
4,40	40,0	70,0	40,0	2,40	17,0
4,60	29,0	65,0	29,0	2,20	13,0
4,80	34,0	67,0	34,0	2,73	12,0
5,00	57,0	98,0	57,0	2,13	27,0
5,20	65,0	97,0	65,0	2,53	26,0
5,40	35,0	73,0	35,0	2,47	14,0
5,60	33,0	70,0	33,0	1,60	21,0
5,80	50,0	74,0	50,0	2,20	23,0
6,00	35,0	68,0	35,0	1,40	25,0
6,20	60,0	81,0	60,0	3,07	20,0
6,40	47,0	93,0	47,0	1,67	28,0
6,60	42,0	67,0	42,0	2,53	17,0
6,80	47,0	85,0	47,0	0,93	50,0
7,00	44,0	58,0	44,0	1,93	23,0
7,20	73,0	102,0	73,0	1,73	42,0
7,40	75,0	101,0	75,0	2,53	30,0
7,60	33,0	71,0	33,0	2,33	14,0
7,80	36,0	71,0	36,0	2,07	17,0
8,00	80,0	111,0	80,0	3,40	24,0
8,20	158,0	209,0	158,0	2,00	79,0
8,40	150,0	180,0	150,0	4,33	35,0
8,60	170,0	235,0	170,0	4,60	37,0
8,80	161,0	230,0	161,0	2,73	59,0
9,00	45,0	86,0	45,0	2,20	20,0
9,20	49,0	82,0	49,0	1,80	27,0
9,40	54,0	81,0	54,0	1,33	40,0
9,60	51,0	71,0	51,0	1,67	31,0
9,80	61,0	86,0	61,0	2,93	21,0
10,00	69,0	113,0	69,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 056
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P003-20-056
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	2,27	----
0,40	46,0	80,0	46,0	2,87	16,0
0,60	27,0	70,0	27,0	1,87	14,0
0,80	35,0	63,0	35,0	1,73	20,0
1,00	22,0	48,0	22,0	2,00	11,0
1,20	22,0	52,0	22,0	2,13	10,0
1,40	20,0	52,0	20,0	1,87	11,0
1,60	25,0	53,0	25,0	2,00	12,0
1,80	26,0	56,0	26,0	2,20	12,0
2,00	25,0	58,0	25,0	2,00	12,0
2,20	25,0	55,0	25,0	1,87	13,0
2,40	30,0	58,0	30,0	1,80	17,0
2,60	35,0	62,0	35,0	2,07	17,0
2,80	39,0	70,0	39,0	2,27	17,0
3,00	37,0	71,0	37,0	2,27	16,0
3,20	35,0	69,0	35,0	2,13	16,0
3,40	30,0	62,0	30,0	1,73	17,0
3,60	27,0	53,0	27,0	1,73	16,0
3,80	26,0	52,0	26,0	1,27	21,0
4,00	27,0	46,0	27,0	1,93	14,0
4,20	33,0	62,0	33,0	1,33	25,0
4,40	23,0	43,0	23,0	1,27	18,0
4,60	18,0	37,0	18,0	0,87	21,0
4,80	28,0	41,0	28,0	1,07	26,0
5,00	19,0	35,0	19,0	1,07	18,0
5,20	19,0	35,0	19,0	1,00	19,0
5,40	27,0	42,0	27,0	1,40	19,0
5,60	22,0	43,0	22,0	0,87	25,0
5,80	29,0	42,0	29,0	1,60	18,0
6,00	31,0	55,0	31,0	1,47	21,0
6,20	31,0	53,0	31,0	1,93	16,0
6,40	27,0	56,0	27,0	1,27	21,0
6,60	27,0	46,0	27,0	1,67	16,0
6,80	34,0	59,0	34,0	1,53	22,0
7,00	30,0	53,0	30,0	1,07	28,0
7,20	28,0	44,0	28,0	1,33	21,0
7,40	27,0	47,0	27,0	1,27	21,0
7,60	27,0	46,0	27,0	1,33	20,0
7,80	29,0	49,0	29,0	1,13	26,0
8,00	36,0	53,0	36,0	1,47	25,0
8,20	23,0	45,0	23,0	0,93	25,0
8,40	22,0	36,0	22,0	10,00	2,0
8,60	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 057
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P003-20-057
- data : 01/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,87	----
0,40	15,0	28,0	15,0	1,47	10,0
0,60	23,0	45,0	23,0	1,80	13,0
0,80	27,0	54,0	27,0	2,13	13,0
1,00	28,0	60,0	28,0	2,27	12,0
1,20	30,0	64,0	30,0	2,20	14,0
1,40	33,0	66,0	33,0	1,73	19,0
1,60	38,0	64,0	38,0	2,53	15,0
1,80	38,0	76,0	38,0	3,00	13,0
2,00	38,0	83,0	38,0	3,20	12,0
2,20	41,0	89,0	41,0	3,13	13,0
2,40	38,0	85,0	38,0	3,07	12,0
2,60	38,0	84,0	38,0	2,47	15,0
2,80	43,0	80,0	43,0	2,93	15,0
3,00	46,0	90,0	46,0	3,27	14,0
3,20	44,0	93,0	44,0	3,60	12,0
3,40	45,0	99,0	45,0	1,87	24,0
3,60	112,0	140,0	112,0	3,13	36,0
3,80	36,0	83,0	36,0	3,00	12,0
4,00	46,0	91,0	46,0	3,87	12,0
4,20	72,0	130,0	72,0	3,13	23,0
4,40	48,0	95,0	48,0	1,67	29,0
4,60	86,0	111,0	86,0	1,40	61,0
4,80	88,0	109,0	88,0	4,13	21,0
5,00	130,0	192,0	130,0	7,00	19,0
5,20	108,0	213,0	108,0	2,87	38,0
5,40	53,0	96,0	53,0	3,20	17,0
5,60	102,0	150,0	102,0	3,80	27,0
5,80	150,0	207,0	150,0	3,73	40,0
6,00	149,0	205,0	149,0	2,73	55,0
6,20	57,0	98,0	57,0	4,40	13,0
6,40	42,0	108,0	42,0	1,87	22,0
6,60	53,0	81,0	53,0	2,73	19,0
6,80	64,0	105,0	64,0	2,80	23,0
7,00	80,0	122,0	80,0	3,13	26,0
7,20	83,0	130,0	83,0	3,67	23,0
7,40	79,0	134,0	79,0	3,27	24,0
7,60	84,0	133,0	84,0	3,67	23,0
7,80	75,0	130,0	75,0	3,20	23,0
8,00	74,0	122,0	74,0	3,47	21,0
8,20	78,0	130,0	78,0	3,20	24,0
8,40	64,0	112,0	64,0	3,07	21,0
8,60	64,0	110,0	64,0	2,80	23,0
8,80	69,0	111,0	69,0	3,07	23,0
9,00	55,0	101,0	55,0	2,87	19,0
9,20	62,0	105,0	62,0	2,80	22,0
9,40	63,0	105,0	63,0	3,20	20,0
9,60	102,0	150,0	102,0	4,00	26,0
9,80	90,0	150,0	90,0	4,40	20,0
10,00	84,0	150,0	84,0	4,07	21,0
10,20	97,0	158,0	97,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 058

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P003-20-058
- data : 31/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	4,00	----	1,20	59,0	110,0	59,0	3,47	17,0
0,40	55,0	115,0	55,0	4,07	14,0	1,40	158,0	210,0	158,0	4,07	39,0
0,60	150,0	211,0	150,0	2,07	73,0	1,60	256,0	317,0	256,0	10,00	26,0
0,80	164,0	195,0	164,0	3,07	53,0	1,80	350,0	500,0	350,0	-----	----
1,00	64,0	110,0	64,0	3,40	19,0						

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 055
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P003-20-055
- data : 31/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	2,93	----
0,40	74,0	118,0	74,0	5,00	15,0
0,60	102,0	177,0	102,0	8,27	12,0
0,80	99,0	223,0	99,0	5,33	19,0
1,00	150,0	230,0	150,0	4,47	34,0
1,20	103,0	170,0	103,0	4,47	23,0
1,40	95,0	162,0	95,0	4,87	20,0
1,60	150,0	223,0	150,0	4,00	38,0
1,80	60,0	120,0	60,0	1,93	31,0
2,00	37,0	66,0	37,0	1,00	37,0
2,20	42,0	57,0	42,0	1,73	24,0
2,40	45,0	71,0	45,0	1,73	26,0
2,60	41,0	67,0	41,0	1,47	28,0
2,80	38,0	60,0	38,0	1,80	21,0
3,00	33,0	60,0	33,0	1,20	27,0
3,20	45,0	63,0	45,0	1,60	28,0
3,40	36,0	60,0	36,0	2,20	16,0
3,60	35,0	68,0	35,0	2,40	15,0
3,80	34,0	70,0	34,0	3,20	11,0
4,00	78,0	126,0	78,0	1,33	58,0
4,20	80,0	100,0	80,0	3,67	22,0
4,40	68,0	123,0	68,0	2,87	24,0
4,60	38,0	81,0	38,0	1,60	24,0
4,80	46,0	70,0	46,0	1,80	26,0
5,00	36,0	63,0	36,0	1,93	19,0
5,20	34,0	63,0	34,0	1,93	18,0
5,40	45,0	74,0	45,0	2,40	19,0
5,60	55,0	91,0	55,0	2,67	21,0
5,80	100,0	140,0	100,0	3,33	30,0
6,00	50,0	100,0	50,0	3,27	15,0
6,20	54,0	103,0	54,0	3,07	18,0
6,40	52,0	98,0	52,0	2,87	18,0
6,60	55,0	98,0	55,0	2,80	20,0
6,80	75,0	117,0	75,0	2,67	28,0
7,00	80,0	120,0	80,0	2,40	33,0
7,20	62,0	98,0	62,0	4,00	16,0
7,40	91,0	151,0	91,0	2,13	43,0
7,60	48,0	80,0	48,0	1,73	28,0
7,80	74,0	100,0	74,0	3,33	22,0
8,00	68,0	118,0	68,0	2,13	32,0
8,20	36,0	68,0	36,0	1,33	27,0
8,40	36,0	56,0	36,0	1,27	28,0
8,60	45,0	64,0	45,0	1,33	34,0
8,80	48,0	68,0	48,0	1,60	30,0
9,00	50,0	74,0	50,0	1,93	26,0
9,20	56,0	85,0	56,0	2,07	27,0
9,40	60,0	91,0	60,0	1,60	37,0
9,60	59,0	83,0	59,0	2,00	30,0
9,80	60,0	90,0	60,0	2,13	28,0
10,00	62,0	94,0	62,0	2,47	25,0
10,20	57,0	94,0	57,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 052
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-052
- data : 31/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	1,20	----
0,40	74,0	92,0	74,0	2,00	37,0
0,60	64,0	94,0	64,0	2,67	24,0
0,80	180,0	220,0	180,0	1,27	142,0
1,00	151,0	170,0	151,0	2,73	55,0
1,20	124,0	165,0	124,0	4,53	27,0
1,40	109,0	177,0	109,0	6,67	16,0
1,60	150,0	250,0	150,0	6,67	23,0
1,80	250,0	350,0	250,0	1,80	139,0
2,00	233,0	260,0	233,0	3,13	74,0
2,20	133,0	180,0	133,0	4,47	30,0
2,40	61,0	128,0	61,0	5,33	11,0
2,60	82,0	162,0	82,0	2,53	32,0
2,80	114,0	152,0	114,0	4,47	26,0
3,00	113,0	180,0	113,0	1,40	81,0
3,20	79,0	100,0	79,0	5,40	15,0
3,40	229,0	310,0	229,0	6,67	34,0
3,60	60,0	160,0	60,0	2,27	26,0
3,80	58,0	92,0	58,0	2,13	27,0
4,00	56,0	88,0	56,0	2,20	25,0
4,20	34,0	67,0	34,0	1,47	23,0
4,40	40,0	62,0	40,0	1,07	37,0
4,60	46,0	62,0	46,0	1,73	27,0
4,80	35,0	61,0	35,0	2,33	15,0
5,00	39,0	74,0	39,0	1,80	22,0
5,20	38,0	65,0	38,0	2,07	18,0
5,40	44,0	75,0	44,0	2,07	21,0
5,60	38,0	69,0	38,0	1,80	21,0
5,80	44,0	71,0	44,0	2,07	21,0
6,00	52,0	83,0	52,0	2,20	24,0
6,20	49,0	82,0	49,0	2,13	23,0
6,40	49,0	81,0	49,0	2,27	22,0
6,60	47,0	81,0	47,0	2,33	20,0
6,80	47,0	82,0	47,0	2,40	20,0
7,00	45,0	81,0	45,0	2,00	22,0
7,20	54,0	84,0	54,0	4,67	12,0
7,40	330,0	400,0	330,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 051
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-051
- data : 31/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	1,47	----	3,60	37,0	70,0	37,0	3,13	12,0
0,40	50,0	72,0	50,0	1,47	34,0	3,80	33,0	80,0	33,0	2,00	16,0
0,60	67,0	89,0	67,0	6,00	11,0	**4,00**	36,0	66,0	36,0	2,20	16,0
0,80	68,0	158,0	68,0	2,13	32,0	4,20	36,0	69,0	36,0	2,07	17,0
1,00	54,0	86,0	54,0	1,73	31,0	4,40	40,0	71,0	40,0	2,93	14,0
1,20	35,0	61,0	35,0	1,27	28,0	4,60	35,0	79,0	35,0	2,73	13,0
1,40	32,0	51,0	32,0	1,60	20,0	4,80	34,0	75,0	34,0	2,67	13,0
1,60	29,0	53,0	29,0	2,40	12,0	**5,00**	34,0	74,0	34,0	2,67	13,0
1,80	23,0	59,0	23,0	1,67	14,0	5,20	37,0	77,0	37,0	2,53	15,0
2,00	20,0	45,0	20,0	1,40	14,0	5,40	43,0	81,0	43,0	2,40	18,0
2,20	18,0	39,0	18,0	1,33	13,0	5,60	45,0	81,0	45,0	1,73	26,0
2,40	22,0	42,0	22,0	1,80	12,0	5,80	72,0	98,0	72,0	3,07	23,0
2,60	24,0	51,0	24,0	2,00	12,0	**6,00**	49,0	95,0	49,0	3,27	15,0
2,80	25,0	55,0	25,0	2,20	11,0	6,20	56,0	105,0	56,0	3,13	18,0
3,00	30,0	63,0	30,0	2,07	15,0	6,40	56,0	103,0	56,0	6,33	9,0
3,20	34,0	65,0	34,0	2,00	17,0	6,60	130,0	225,0	130,0	10,00	13,0
3,40	37,0	67,0	37,0	2,20	17,0	6,80	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 053

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	31/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-053	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	2,13	----	1,80	105,0	166,0	105,0	6,67	16,0
0,40	37,0	69,0	37,0	3,33	11,0	**2,00**	50,0	150,0	50,0	3,73	13,0
0,60	44,0	94,0	44,0	4,33	10,0	2,20	50,0	106,0	50,0	2,33	21,0
0,80	58,0	123,0	58,0	4,20	14,0	2,40	87,0	122,0	87,0	1,80	48,0
1,00	55,0	118,0	55,0	3,60	15,0	2,60	78,0	105,0	78,0	1,40	56,0
1,20	55,0	109,0	55,0	2,73	20,0	2,80	72,0	93,0	72,0	1,73	42,0
1,40	50,0	91,0	50,0	3,53	14,0	**3,00**	53,0	79,0	53,0	10,00	5,0
1,60	72,0	125,0	72,0	4,07	18,0	3,20	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 050
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-050
- data : 29/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	1,80	----
0,40	52,0	79,0	52,0	1,73	30,0
0,60	49,0	75,0	49,0	1,80	27,0
0,80	68,0	95,0	68,0	2,33	29,0
1,00	30,0	65,0	30,0	1,67	18,0
1,20	17,0	42,0	17,0	1,33	13,0
1,40	16,0	36,0	16,0	0,87	18,0
1,60	17,0	30,0	17,0	1,07	16,0
1,80	15,0	31,0	15,0	0,67	22,0
2,00	13,0	23,0	13,0	0,67	19,0
2,20	14,0	24,0	14,0	0,47	30,0
2,40	15,0	22,0	15,0	0,67	22,0
2,60	15,0	25,0	15,0	0,47	32,0
2,80	16,0	23,0	16,0	0,93	17,0
3,00	19,0	33,0	19,0	2,67	7,0
3,20	57,0	97,0	57,0	1,00	57,0
3,40	30,0	45,0	30,0	0,40	75,0
3,60	36,0	42,0	36,0	0,80	45,0
3,80	26,0	38,0	26,0	1,27	21,0
4,00	35,0	54,0	35,0	0,80	44,0
4,20	36,0	48,0	36,0	0,87	42,0
4,40	43,0	56,0	43,0	1,47	29,0
4,60	32,0	54,0	32,0	0,93	34,0
4,80	35,0	49,0	35,0	3,13	11,0
5,00	55,0	102,0	55,0	3,13	18,0
5,20	51,0	98,0	51,0	2,40	21,0
5,40	36,0	72,0	36,0	1,53	23,0
5,60	45,0	68,0	45,0	1,67	27,0
5,80	159,0	184,0	159,0	2,40	66,0
6,00	84,0	120,0	84,0	1,33	63,0
6,20	45,0	65,0	45,0	1,53	29,0
6,40	35,0	58,0	35,0	1,73	20,0
6,60	41,0	67,0	41,0	2,07	20,0
6,80	40,0	71,0	40,0	2,27	18,0
7,00	50,0	84,0	50,0	2,60	19,0
7,20	58,0	97,0	58,0	2,13	27,0
7,40	53,0	85,0	53,0	2,20	24,0
7,60	49,0	82,0	49,0	2,00	24,0
7,80	46,0	76,0	46,0	1,87	25,0
8,00	47,0	75,0	47,0	1,47	32,0
8,20	47,0	69,0	47,0	2,40	20,0
8,40	48,0	84,0	48,0	1,40	34,0
8,60	63,0	84,0	63,0	1,87	34,0
8,80	56,0	84,0	56,0	1,40	40,0
9,00	65,0	86,0	65,0	1,87	35,0
9,20	56,0	84,0	56,0	1,67	34,0
9,40	63,0	88,0	63,0	3,07	21,0
9,60	63,0	109,0	63,0	2,80	23,0
9,80	63,0	105,0	63,0	3,33	19,0
10,00	56,0	106,0	56,0	3,00	19,0
10,20	57,0	102,0	57,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 049
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-049
- data : 29/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	0,60	----
0,40	21,0	30,0	21,0	1,07	20,0
0,60	22,0	38,0	22,0	2,33	9,0
0,80	24,0	59,0	24,0	1,80	13,0
1,00	25,0	52,0	25,0	2,20	11,0
1,20	20,0	53,0	20,0	2,13	9,0
1,40	24,0	56,0	24,0	1,27	19,0
1,60	33,0	52,0	33,0	1,60	21,0
1,80	30,0	54,0	30,0	2,07	15,0
2,00	22,0	53,0	22,0	1,00	22,0
2,20	32,0	47,0	32,0	1,47	22,0
2,40	38,0	60,0	38,0	1,93	20,0
2,60	35,0	64,0	35,0	1,00	35,0
2,80	35,0	50,0	35,0	1,87	19,0
3,00	35,0	63,0	35,0	1,87	19,0
3,20	33,0	61,0	33,0	2,00	16,0
3,40	34,0	64,0	34,0	1,27	27,0
3,60	41,0	60,0	41,0	1,93	21,0
3,80	45,0	74,0	45,0	2,07	22,0
4,00	53,0	84,0	53,0	2,60	20,0
4,20	42,0	81,0	42,0	1,87	22,0
4,40	49,0	77,0	49,0	1,80	27,0
4,60	44,0	71,0	44,0	2,20	20,0
4,80	40,0	73,0	40,0	1,47	27,0
5,00	46,0	68,0	46,0	2,00	23,0
5,20	30,0	60,0	30,0	1,53	20,0
5,40	30,0	53,0	30,0	1,80	17,0
5,60	21,0	48,0	21,0	1,20	17,0
5,80	22,0	40,0	22,0	0,80	27,0
6,00	18,0	30,0	18,0	0,80	22,0
6,20	29,0	41,0	29,0	1,00	29,0
6,40	23,0	38,0	23,0	1,00	23,0
6,60	37,0	52,0	37,0	1,53	24,0
6,80	23,0	46,0	23,0	1,60	14,0
7,00	25,0	49,0	25,0	1,33	19,0
7,20	24,0	44,0	24,0	1,47	16,0
7,40	22,0	44,0	22,0	1,40	16,0
7,60	42,0	63,0	42,0	10,00	4,0
7,80	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 048
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-048
- data : 29/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,60	----
0,40	21,0	30,0	21,0	1,07	20,0
0,60	28,0	44,0	28,0	1,53	18,0
0,80	23,0	46,0	23,0	1,40	16,0
1,00	21,0	42,0	21,0	1,73	12,0
1,20	20,0	46,0	20,0	1,73	12,0
1,40	15,0	41,0	15,0	1,47	10,0
1,60	21,0	43,0	21,0	1,53	14,0
1,80	28,0	51,0	28,0	1,33	21,0
2,00	33,0	53,0	33,0	2,00	16,0
2,20	33,0	63,0	33,0	1,93	17,0
2,40	33,0	62,0	33,0	2,53	13,0
2,60	35,0	73,0	35,0	2,40	15,0
2,80	36,0	72,0	36,0	2,20	16,0
3,00	38,0	71,0	38,0	2,40	16,0
3,20	37,0	73,0	37,0	2,00	18,0
3,40	39,0	69,0	39,0	1,87	21,0
3,60	39,0	67,0	39,0	2,20	18,0
3,80	40,0	73,0	40,0	2,00	20,0
4,00	34,0	64,0	34,0	2,20	15,0
4,20	34,0	67,0	34,0	1,93	18,0
4,40	51,0	80,0	51,0	1,87	27,0
4,60	54,0	82,0	54,0	2,53	21,0
4,80	56,0	94,0	56,0	3,00	19,0
5,00	56,0	101,0	56,0	2,33	24,0
5,20	51,0	86,0	51,0	2,07	25,0
5,40	52,0	83,0	52,0	2,47	21,0
5,60	40,0	77,0	40,0	2,13	19,0
5,80	36,0	68,0	36,0	2,27	16,0
6,00	35,0	69,0	35,0	1,33	26,0
6,20	41,0	61,0	41,0	2,20	19,0
6,40	32,0	65,0	32,0	1,73	18,0
6,60	31,0	57,0	31,0	1,20	26,0
6,80	37,0	55,0	37,0	2,13	17,0
7,00	36,0	68,0	36,0	2,00	18,0
7,20	25,0	55,0	25,0	1,33	19,0
7,40	38,0	58,0	38,0	1,33	28,0
7,60	41,0	61,0	41,0	2,00	20,0
7,80	41,0	71,0	41,0	0,33	123,0
8,00	59,0	64,0	59,0	1,47	40,0
8,20	41,0	63,0	41,0	2,20	19,0
8,40	38,0	71,0	38,0	1,93	20,0
8,60	35,0	64,0	35,0	1,67	21,0
8,80	35,0	60,0	35,0	2,07	17,0
9,00	31,0	62,0	31,0	1,87	17,0
9,20	31,0	59,0	31,0	10,00	3,0
9,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 047
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-047
- data : 29/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,33	----
0,60	51,0	71,0	51,0	3,33	15,0
0,80	31,0	81,0	31,0	0,80	39,0
1,00	51,0	63,0	51,0	2,40	21,0
1,20	82,0	118,0	82,0	1,47	56,0
1,40	104,0	126,0	104,0	1,40	74,0
1,60	75,0	96,0	75,0	1,67	45,0
1,80	45,0	70,0	45,0	2,13	21,0
2,00	45,0	77,0	45,0	4,40	10,0
2,20	150,0	216,0	150,0	6,67	23,0
2,40	150,0	250,0	150,0	6,00	25,0
2,60	150,0	240,0	150,0	2,47	61,0
2,80	29,0	66,0	29,0	1,87	16,0
3,00	37,0	65,0	37,0	1,60	23,0
3,20	26,0	50,0	26,0	1,60	16,0
3,40	29,0	53,0	29,0	0,93	31,0
3,60	29,0	43,0	29,0	0,80	36,0
3,80	30,0	42,0	30,0	1,53	20,0
4,00	32,0	55,0	32,0	1,93	17,0
4,20	24,0	53,0	24,0	1,73	14,0
4,40	30,0	56,0	30,0	2,00	15,0
4,60	32,0	62,0	32,0	3,73	9,0
4,80	94,0	150,0	94,0	0,93	101,0
5,00	30,0	44,0	30,0	1,07	28,0
5,20	30,0	46,0	30,0	1,13	26,0
5,40	28,0	45,0	28,0	1,00	28,0
5,60	28,0	43,0	28,0	1,13	25,0
5,80	28,0	45,0	28,0	1,27	22,0
6,00	23,0	42,0	23,0	0,93	25,0
6,20	23,0	37,0	23,0	1,07	22,0
6,40	16,0	32,0	16,0	0,93	17,0
6,60	18,0	32,0	18,0	0,93	19,0
6,80	18,0	32,0	18,0	1,33	13,0
7,00	15,0	35,0	15,0	0,73	20,0
7,20	19,0	30,0	19,0	0,93	20,0
7,40	17,0	31,0	17,0	1,73	10,0
7,60	11,0	37,0	11,0	1,13	10,0
7,80	19,0	36,0	19,0	1,27	15,0
8,00	18,0	37,0	18,0	0,80	22,0
8,20	18,0	30,0	18,0	0,60	30,0
8,40	18,0	27,0	18,0	0,80	22,0
8,60	22,0	34,0	22,0	0,67	33,0
8,80	23,0	33,0	23,0	0,87	27,0
9,00	19,0	32,0	19,0	0,33	57,0
9,20	28,0	33,0	28,0	0,93	30,0
9,40	23,0	37,0	23,0	1,07	22,0
9,60	19,0	35,0	19,0	1,00	19,0
9,80	18,0	33,0	18,0	0,67	27,0
10,00	23,0	33,0	23,0	0,67	34,0
10,20	24,0	34,0	24,0	1,33	18,0
10,40	27,0	47,0	27,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 046

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-046
- data : 29/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,27	----
0,60	7,0	26,0	7,0	0,67	10,0
0,80	23,0	33,0	23,0	0,60	38,0
1,00	15,0	24,0	15,0	1,27	12,0
1,20	7,0	26,0	7,0	0,87	8,0
1,40	109,0	122,0	109,0	0,87	126,0
1,60	28,0	41,0	28,0	1,87	15,0
1,80	12,0	40,0	12,0	0,67	18,0
2,00	13,0	23,0	13,0	0,40	32,0
2,20	17,0	23,0	17,0	0,67	25,0
2,40	18,0	28,0	18,0	1,07	17,0
2,60	19,0	35,0	19,0	1,20	16,0
2,80	15,0	33,0	15,0	1,27	12,0
3,00	18,0	37,0	18,0	1,00	18,0
3,20	18,0	33,0	18,0	1,27	14,0
3,40	25,0	44,0	25,0	1,13	22,0
3,60	24,0	41,0	24,0	1,40	17,0
3,80	24,0	45,0	24,0	0,67	36,0
4,00	31,0	41,0	31,0	2,20	14,0
4,20	36,0	69,0	36,0	1,93	19,0
4,40	35,0	64,0	35,0	2,20	16,0
4,60	39,0	72,0	39,0	2,80	14,0
4,80	37,0	79,0	37,0	3,53	10,0
5,00	34,0	87,0	34,0	2,33	15,0
5,20	40,0	75,0	40,0	2,87	14,0
5,40	50,0	93,0	50,0	2,27	22,0
5,60	51,0	85,0	51,0	10,00	5,0
5,80	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 039
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-039
- data : 28/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,87	----
0,40	80,0	93,0	80,0	1,20	67,0
0,60	59,0	77,0	59,0	1,80	33,0
0,80	50,0	77,0	50,0	5,33	9,0
1,00	240,0	320,0	240,0	3,87	62,0
1,20	64,0	122,0	64,0	1,87	34,0
1,40	69,0	97,0	69,0	4,00	17,0
1,60	50,0	110,0	50,0	3,53	14,0
1,80	37,0	90,0	37,0	3,07	12,0
2,00	36,0	82,0	36,0	4,60	8,0
2,20	169,0	238,0	169,0	2,87	59,0
2,40	138,0	181,0	138,0	5,73	24,0
2,60	264,0	350,0	264,0	3,47	76,0
2,80	233,0	285,0	233,0	4,67	50,0
3,00	160,0	230,0	160,0	4,60	35,0
3,20	186,0	255,0	186,0	10,00	19,0
3,40	400,0	550,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 034

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	28/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-034	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,93	----
0,60	47,0	61,0	47,0	1,00	47,0
0,80	30,0	45,0	30,0	2,13	14,0
1,00	44,0	76,0	44,0	1,67	26,0
1,20	39,0	64,0	39,0	2,33	17,0
1,40	39,0	74,0	39,0	1,73	22,0
1,60	93,0	119,0	93,0	4,20	22,0
1,80	242,0	305,0	242,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 019
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-019
- data : 26/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	0,87	----
0,40	47,0	60,0	47,0	2,07	23,0
0,60	65,0	96,0	65,0	1,13	57,0
0,80	77,0	94,0	77,0	9,40	8,0
1,00	11,0	152,0	11,0	6,20	2,0
1,20	126,0	219,0	126,0	8,53	15,0
1,40	132,0	260,0	132,0	7,33	18,0
1,60	180,0	290,0	180,0	5,13	35,0
1,80	99,0	176,0	99,0	3,67	27,0
2,00	81,0	136,0	81,0	4,13	20,0
2,20	112,0	174,0	112,0	3,67	31,0
2,40	109,0	164,0	109,0	3,87	28,0
2,60	104,0	162,0	104,0	3,60	29,0
2,80	86,0	140,0	86,0	4,80	18,0
3,00	128,0	200,0	128,0	5,87	22,0
3,20	225,0	313,0	225,0	8,60	26,0
3,40	134,0	263,0	134,0	6,73	20,0
3,60	57,0	158,0	57,0	3,33	17,0
3,80	95,0	145,0	95,0	2,20	43,0
4,00	38,0	71,0	38,0	2,67	14,0
4,20	35,0	75,0	35,0	2,20	16,0
4,40	35,0	68,0	35,0	2,00	18,0
4,60	26,0	56,0	26,0	2,73	10,0
4,80	26,0	67,0	26,0	1,87	14,0
5,00	22,0	50,0	22,0	2,07	11,0
5,20	32,0	63,0	32,0	2,60	12,0
5,40	31,0	70,0	31,0	3,33	9,0
5,60	36,0	86,0	36,0	2,80	13,0
5,80	37,0	79,0	37,0	3,00	12,0
6,00	40,0	85,0	40,0	2,80	14,0
6,20	41,0	83,0	41,0	3,00	14,0
6,40	45,0	90,0	45,0	3,13	14,0
6,60	57,0	104,0	57,0	4,27	13,0
6,80	70,0	134,0	70,0	2,07	34,0
7,00	182,0	213,0	182,0	5,67	32,0
7,20	44,0	129,0	44,0	3,13	14,0
7,40	49,0	96,0	49,0	3,13	16,0
7,60	49,0	96,0	49,0	3,00	16,0
7,80	54,0	99,0	54,0	3,20	17,0
8,00	40,0	88,0	40,0	3,07	13,0
8,20	54,0	100,0	54,0	2,80	19,0
8,40	48,0	90,0	48,0	2,93	16,0
8,60	37,0	81,0	37,0	3,00	12,0
8,80	38,0	83,0	38,0	2,40	16,0
9,00	22,0	58,0	22,0	1,73	13,0
9,20	22,0	48,0	22,0	1,60	14,0
9,40	31,0	55,0	31,0	2,33	13,0
9,60	42,0	77,0	42,0	2,33	18,0
9,80	27,0	62,0	27,0	2,60	10,0
10,00	37,0	76,0	37,0	1,13	33,0
10,20	114,0	131,0	114,0	2,87	40,0
10,40	71,0	114,0	71,0	12,00	6,0
10,60	360,0	540,0	360,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 018

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-018	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	2,33	----	1,40	186,0	192,0	186,0	3,67	51,0
0,40	62,0	97,0	62,0	2,27	27,0	1,60	120,0	175,0	120,0	3,80	32,0
0,60	50,0	84,0	50,0	1,40	36,0	1,80	273,0	330,0	273,0	7,00	39,0
0,80	75,0	96,0	75,0	2,27	33,0	**2,00**	205,0	310,0	205,0	5,67	36,0
1,00	90,0	124,0	90,0	2,07	44,0	2,20	205,0	290,0	205,0	13,33	15,0
1,20	111,0	142,0	111,0	0,40	277,0	2,40	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 017

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-017	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,47	----
0,40	51,0	58,0	51,0	1,87	27,0
0,60	24,0	52,0	24,0	0,53	45,0
0,80	58,0	66,0	58,0	1,40	41,0
1,00	50,0	71,0	50,0	1,27	39,0
1,20	56,0	75,0	56,0	2,47	23,0
1,40	63,0	100,0	63,0	2,80	23,0
1,60	63,0	105,0	63,0	4,13	15,0
1,80	47,0	109,0	47,0	1,20	39,0

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
2,00	65,0	83,0	65,0	2,13	30,0
2,20	44,0	76,0	44,0	2,07	21,0
2,40	41,0	72,0	41,0	1,47	28,0
2,60	71,0	93,0	71,0	5,67	13,0
2,80	215,0	300,0	215,0	6,93	31,0
3,00	176,0	280,0	176,0	8,67	20,0
3,20	220,0	350,0	220,0	6,80	32,0
3,40	158,0	260,0	158,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 016
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Guardia Sanfromondi (BN)
- note : Cert. P003-20-016
- data : 26/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,93	----	2,40	84,0	183,0	84,0	5,87	14,0
0,40	88,0	102,0	88,0	1,47	60,0	2,60	89,0	177,0	89,0	7,53	12,0
0,60	82,0	104,0	82,0	2,47	33,0	2,80	54,0	167,0	54,0	3,33	16,0
0,80	77,0	114,0	77,0	5,00	15,0	**3,00**	56,0	106,0	56,0	2,93	19,0
1,00	285,0	360,0	285,0	5,20	55,0	3,20	72,0	116,0	72,0	3,20	22,0
1,20	180,0	258,0	180,0	4,00	45,0	3,40	89,0	137,0	89,0	1,87	48,0
1,40	154,0	214,0	154,0	5,20	30,0	3,60	65,0	93,0	65,0	3,93	17,0
1,60	97,0	175,0	97,0	4,87	20,0	3,80	74,0	133,0	74,0	5,47	14,0
1,80	96,0	169,0	96,0	5,73	17,0	**4,00**	83,0	165,0	83,0	5,33	16,0
2,00	95,0	181,0	95,0	4,53	21,0	4,20	220,0	300,0	220,0	13,33	17,0
2,20	95,0	163,0	95,0	6,60	14,0	4,40	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 014
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Ponte (BN)
- note : Cert. P003-20-014
- data : 25/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	2,20	----
0,40	43,0	76,0	43,0	1,73	25,0
0,60	46,0	72,0	46,0	1,73	27,0
0,80	62,0	88,0	62,0	2,47	25,0
1,00	56,0	93,0	56,0	4,47	13,0
1,20	45,0	112,0	45,0	3,73	12,0
1,40	54,0	110,0	54,0	2,40	22,0
1,60	62,0	98,0	62,0	3,20	19,0
1,80	54,0	102,0	54,0	3,07	18,0
2,00	60,0	106,0	60,0	3,67	16,0
2,20	64,0	119,0	64,0	3,60	18,0
2,40	66,0	120,0	66,0	4,20	16,0
2,60	85,0	148,0	85,0	4,13	21,0
2,80	58,0	120,0	58,0	3,67	16,0
3,00	45,0	100,0	45,0	3,53	13,0
3,20	49,0	102,0	49,0	2,87	17,0
3,40	44,0	87,0	44,0	1,93	23,0
3,60	40,0	69,0	40,0	1,60	25,0
3,80	52,0	76,0	52,0	3,00	17,0
4,00	50,0	95,0	50,0	3,13	16,0
4,20	56,0	103,0	56,0	3,40	16,0
4,40	54,0	105,0	54,0	3,00	18,0
4,60	44,0	89,0	44,0	2,13	21,0
4,80	32,0	64,0	32,0	1,27	25,0
5,00	56,0	75,0	56,0	3,53	16,0
5,20	43,0	96,0	43,0	2,53	17,0
5,40	40,0	78,0	40,0	4,20	10,0
5,60	47,0	110,0	47,0	7,33	6,0
5,80	250,0	360,0	250,0	4,67	54,0
6,00	50,0	120,0	50,0	9,60	5,0
6,20	105,0	249,0	105,0	3,40	31,0
6,40	62,0	113,0	62,0	3,13	20,0
6,60	60,0	107,0	60,0	1,87	32,0
6,80	66,0	94,0	66,0	4,53	15,0
7,00	56,0	124,0	56,0	3,00	19,0
7,20	50,0	95,0	50,0	3,93	13,0
7,40	79,0	138,0	79,0	2,27	35,0
7,60	181,0	215,0	181,0	2,13	85,0
7,80	120,0	152,0	120,0	1,60	75,0
8,00	77,0	101,0	77,0	4,20	18,0
8,20	90,0	153,0	90,0	4,40	20,0
8,40	180,0	246,0	180,0	10,67	17,0
8,60	440,0	600,0	440,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 012
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Ponte (BN)
- note : Cert. P003-20-012
- data : 25/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,33	----
0,40	35,0	40,0	35,0	1,13	31,0
0,60	30,0	47,0	30,0	1,07	28,0
0,80	64,0	80,0	64,0	1,60	40,0
1,00	91,0	115,0	91,0	7,00	13,0
1,20	118,0	223,0	118,0	4,40	27,0
1,40	100,0	166,0	100,0	5,20	19,0
1,60	115,0	193,0	115,0	1,33	86,0
1,80	130,0	150,0	130,0	4,73	27,0
2,00	157,0	228,0	157,0	4,93	32,0
2,20	115,0	189,0	115,0	6,47	18,0
2,40	151,0	248,0	151,0	4,67	32,0
2,60	220,0	290,0	220,0	6,00	37,0
2,80	330,0	420,0	330,0	9,73	34,0
3,00	414,0	560,0	414,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 011
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Ponte (BN)
- note : Cert. P003-20-011
- data : 25/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	1,73	----
0,40	75,0	101,0	75,0	2,53	30,0
0,60	69,0	107,0	69,0	2,67	26,0
0,80	87,0	127,0	87,0	3,73	23,0
1,00	89,0	145,0	89,0	3,07	29,0
1,20	107,0	153,0	107,0	2,40	45,0
1,40	100,0	136,0	100,0	5,47	18,0
1,60	78,0	160,0	78,0	3,13	25,0
1,80	73,0	120,0	73,0	2,53	29,0
2,00	75,0	113,0	75,0	2,20	34,0
2,20	53,0	86,0	53,0	3,13	17,0
2,40	63,0	110,0	63,0	3,53	18,0
2,60	53,0	106,0	53,0	4,93	11,0
2,80	48,0	122,0	48,0	2,33	21,0
3,00	54,0	89,0	54,0	2,20	25,0
3,20	46,0	79,0	46,0	1,40	33,0
3,40	50,0	71,0	50,0	3,87	13,0
3,60	50,0	108,0	50,0	3,73	13,0
3,80	54,0	110,0	54,0	2,27	24,0
4,00	54,0	88,0	54,0	2,73	20,0
4,20	52,0	93,0	52,0	3,60	14,0
4,40	48,0	102,0	48,0	2,80	17,0
4,60	55,0	97,0	55,0	3,53	16,0
4,80	66,0	119,0	66,0	3,07	22,0
5,00	81,0	127,0	81,0	2,00	40,0
5,20	83,0	113,0	83,0	2,27	37,0
5,40	93,0	127,0	93,0	3,60	26,0
5,60	87,0	141,0	87,0	1,20	72,0
5,80	107,0	125,0	107,0	1,93	55,0
6,00	84,0	113,0	84,0	4,00	21,0
6,20	93,0	153,0	93,0	7,27	13,0
6,40	148,0	257,0	148,0	4,00	37,0
6,60	300,0	360,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 007

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-007	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,47	----
0,40	78,0	85,0	78,0	5,33	15,0
0,60	111,0	191,0	111,0	2,20	50,0
0,80	97,0	130,0	97,0	6,67	15,0
1,00	300,0	400,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

CPT 006

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Ponte (BN)
- note : Cert. P003-20-006
- data : 24/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	1,47	----	1,40	160,0	190,0	160,0	6,33	25,0
0,40	24,0	46,0	24,0	2,53	9,0	1,60	285,0	380,0	285,0	6,00	48,0
0,60	108,0	146,0	108,0	1,53	70,0	1,80	240,0	330,0	240,0	5,87	41,0
0,80	67,0	90,0	67,0	3,60	19,0	**2,00**	127,0	215,0	127,0	9,07	14,0
1,00	140,0	194,0	140,0	2,80	50,0	2,20	264,0	400,0	264,0	10,47	25,0
1,20	54,0	96,0	54,0	2,00	27,0	2,40	443,0	600,0	443,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 003
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Ponte (BN)
- note : Cert. P003-20-003
- data : 24/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	1,33	----
0,40	65,0	85,0	65,0	1,33	49,0
0,60	80,0	100,0	80,0	3,47	23,0
0,80	75,0	127,0	75,0	4,67	16,0
1,00	130,0	200,0	130,0	1,93	67,0
1,20	81,0	110,0	81,0	2,00	40,0
1,40	44,0	74,0	44,0	1,33	33,0
1,60	41,0	61,0	41,0	2,20	19,0
1,80	19,0	52,0	19,0	2,33	8,0
2,00	21,0	56,0	21,0	2,47	9,0
2,20	23,0	60,0	23,0	2,07	11,0
2,40	26,0	57,0	26,0	1,73	15,0
2,60	22,0	48,0	22,0	1,87	12,0
2,80	34,0	62,0	34,0	2,13	16,0
3,00	37,0	69,0	37,0	2,27	16,0
3,20	25,0	59,0	25,0	2,20	11,0
3,40	22,0	55,0	22,0	2,13	10,0
3,60	22,0	54,0	22,0	9,27	2,0
3,80	411,0	550,0	411,0	6,00	68,0
4,00	360,0	450,0	360,0	4,93	73,0
4,20	227,0	301,0	227,0	3,33	68,0
4,40	109,0	159,0	109,0	6,53	17,0
4,60	38,0	136,0	38,0	7,67	5,0
4,80	225,0	340,0	225,0	7,53	30,0
5,00	108,0	221,0	108,0	5,27	21,0
5,20	48,0	127,0	48,0	10,00	5,0
5,40	400,0	550,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 002
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Ponte (BN)
- note : Cert. P003-20-002
- data : 24/08/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	0,27	----
0,40	28,0	32,0	28,0	0,33	84,0
0,60	37,0	42,0	37,0	0,33	111,0
0,80	36,0	41,0	36,0	1,07	34,0
1,00	18,0	34,0	18,0	0,53	34,0
1,20	17,0	25,0	17,0	1,07	16,0
1,40	13,0	29,0	13,0	1,27	10,0
1,60	12,0	31,0	12,0	0,60	20,0
1,80	16,0	25,0	16,0	1,47	11,0
2,00	125,0	147,0	125,0	1,20	104,0
2,20	54,0	72,0	54,0	1,00	54,0
2,40	20,0	35,0	20,0	1,33	15,0
2,60	18,0	38,0	18,0	1,40	13,0
2,80	20,0	41,0	20,0	2,27	9,0
3,00	29,0	63,0	29,0	2,33	12,0
3,20	27,0	62,0	27,0	2,73	10,0
3,40	30,0	71,0	30,0	2,67	11,0
3,60	26,0	66,0	26,0	2,60	10,0
3,80	31,0	70,0	31,0	0,93	33,0
4,00	56,0	70,0	56,0	3,27	17,0
4,20	26,0	75,0	26,0	2,60	10,0
4,40	35,0	74,0	35,0	1,33	26,0
4,60	27,0	47,0	27,0	2,53	11,0
4,80	28,0	66,0	28,0	2,40	12,0
5,00	40,0	76,0	40,0	2,73	15,0
5,20	26,0	67,0	26,0	3,00	9,0
5,40	48,0	93,0	48,0	1,60	30,0
5,60	113,0	137,0	113,0	4,67	24,0
5,80	44,0	114,0	44,0	1,73	25,0
6,00	97,0	123,0	97,0	4,40	22,0
6,20	39,0	105,0	39,0	3,47	11,0
6,40	43,0	95,0	43,0	8,00	5,0
6,60	300,0	420,0	300,0	4,40	68,0
6,80	53,0	119,0	53,0	8,00	7,0
7,00	330,0	450,0	330,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 070
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-070
- data : 02/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,20	72,0	205,0	72,0	7,13	10,0
0,40	----	----	--	1,80	----	2,40	153,0	260,0	153,0	4,73	32,0
0,60	44,0	71,0	44,0	1,27	35,0	2,60	209,0	280,0	209,0	7,60	28,0
0,80	52,0	71,0	52,0	1,27	41,0	2,80	201,0	315,0	201,0	8,67	23,0
1,00	52,0	71,0	52,0	1,87	28,0	**3,00**	220,0	350,0	220,0	5,60	39,0
1,20	57,0	85,0	57,0	1,53	37,0	3,20	228,0	312,0	228,0	4,27	53,0
1,40	66,0	89,0	66,0	1,87	35,0	3,40	226,0	290,0	226,0	4,67	48,0
1,60	66,0	94,0	66,0	3,20	21,0	3,60	310,0	380,0	310,0	6,60	47,0
1,80	66,0	114,0	66,0	4,33	15,0	3,80	411,0	510,0	411,0	6,67	62,0
2,00	62,0	127,0	62,0	8,87	7,0	**4,00**	500,0	600,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 071
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-071
- data : 02/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,73	----
0,60	30,0	56,0	30,0	0,80	37,0
0,80	60,0	72,0	60,0	1,40	43,0
1,00	53,0	74,0	53,0	1,93	27,0
1,20	49,0	78,0	49,0	2,07	24,0
1,40	47,0	78,0	47,0	1,87	25,0
1,60	47,0	75,0	47,0	2,60	18,0
1,80	43,0	82,0	43,0	2,60	17,0
2,00	46,0	85,0	46,0	3,40	14,0
2,20	43,0	94,0	43,0	4,13	10,0
2,40	60,0	122,0	60,0	3,20	19,0
2,60	64,0	112,0	64,0	3,20	20,0
2,80	115,0	163,0	115,0	3,73	31,0
3,00	49,0	105,0	49,0	3,93	12,0
3,20	63,0	122,0	63,0	6,20	10,0
3,40	82,0	175,0	82,0	7,27	11,0
3,60	86,0	195,0	86,0	4,93	17,0
3,80	150,0	224,0	150,0	7,60	20,0
4,00	107,0	221,0	107,0	4,67	23,0
4,20	130,0	200,0	130,0	5,80	22,0
4,40	158,0	245,0	158,0	8,67	18,0
4,60	250,0	380,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 072
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-072
- data : 02/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	2,20	----
0,60	32,0	65,0	32,0	1,40	23,0
0,80	39,0	60,0	39,0	2,27	17,0
1,00	34,0	68,0	34,0	3,07	11,0
1,20	29,0	75,0	29,0	3,07	9,0
1,40	41,0	87,0	41,0	2,33	18,0
1,60	23,0	58,0	23,0	2,40	10,0
1,80	19,0	55,0	19,0	2,13	9,0
2,00	18,0	50,0	18,0	2,07	9,0
2,20	14,0	45,0	14,0	1,87	7,0
2,40	32,0	60,0	32,0	3,27	10,0
2,60	50,0	99,0	50,0	1,67	30,0
2,80	30,0	55,0	30,0	2,73	11,0
3,00	50,0	91,0	50,0	2,67	19,0
3,20	72,0	112,0	72,0	4,00	18,0
3,40	56,0	116,0	56,0	3,80	15,0
3,60	79,0	136,0	79,0	4,67	17,0
3,80	79,0	149,0	79,0	5,60	14,0
4,00	83,0	167,0	83,0	5,60	15,0
4,20	62,0	146,0	62,0	4,93	13,0
4,40	68,0	142,0	68,0	4,80	14,0
4,60	68,0	140,0	68,0	5,87	12,0
4,80	88,0	176,0	88,0	6,87	13,0
5,00	77,0	180,0	77,0	6,00	13,0
5,20	110,0	200,0	110,0	8,13	14,0
5,40	97,0	219,0	97,0	8,00	12,0
5,60	97,0	217,0	97,0	2,67	36,0
5,80	210,0	250,0	210,0	6,67	32,0
6,00	160,0	260,0	160,0	8,27	19,0
6,20	186,0	310,0	186,0	9,40	20,0
6,40	209,0	350,0	209,0	6,67	31,0
6,60	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 074
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-074
- data : 02/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	19,0	25,0	19,0	0,87	22,0
0,80	17,0	30,0	17,0	1,07	16,0
1,00	14,0	30,0	14,0	1,27	11,0
1,20	20,0	39,0	20,0	1,27	16,0
1,40	20,0	39,0	20,0	1,60	12,0
1,60	21,0	45,0	21,0	1,60	13,0
1,80	20,0	44,0	20,0	1,07	19,0
2,00	25,0	41,0	25,0	1,13	22,0
2,20	35,0	52,0	35,0	1,07	33,0
2,40	48,0	64,0	48,0	1,13	42,0
2,60	51,0	68,0	51,0	1,33	38,0
2,80	51,0	71,0	51,0	3,53	14,0
3,00	45,0	98,0	45,0	2,13	21,0
3,20	77,0	109,0	77,0	4,40	17,0
3,40	71,0	137,0	71,0	3,80	19,0
3,60	53,0	110,0	53,0	2,93	18,0
3,80	58,0	102,0	58,0	3,27	18,0
4,00	46,0	95,0	46,0	2,53	18,0
4,20	61,0	99,0	61,0	2,20	28,0
4,40	55,0	88,0	55,0	2,20	25,0
4,60	20,0	53,0	20,0	1,13	18,0
4,80	13,0	30,0	13,0	0,60	22,0
5,00	14,0	23,0	14,0	0,33	42,0
5,20	14,0	19,0	14,0	0,67	21,0
5,40	14,0	24,0	14,0	1,73	8,0
5,60	26,0	52,0	26,0	5,27	5,0
5,80	35,0	114,0	35,0	4,93	7,0
6,00	39,0	113,0	39,0	2,67	15,0
6,20	30,0	70,0	30,0	2,73	11,0
6,40	29,0	70,0	29,0	1,73	17,0
6,60	28,0	54,0	28,0	1,60	17,0
6,80	30,0	54,0	30,0	8,00	4,0
7,00	100,0	220,0	100,0	6,67	15,0
7,20	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 075
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-075
- data : 02/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	2,67	----
0,60	130,0	170,0	130,0	2,33	56,0
0,80	115,0	150,0	115,0	2,67	43,0
1,00	90,0	130,0	90,0	2,87	31,0
1,20	79,0	122,0	79,0	2,93	27,0
1,40	90,0	134,0	90,0	3,33	27,0
1,60	69,0	119,0	69,0	3,40	20,0
1,80	58,0	109,0	58,0	2,47	24,0
2,00	30,0	67,0	30,0	2,67	11,0
2,20	25,0	65,0	25,0	2,53	10,0
2,40	23,0	61,0	23,0	2,73	8,0
2,60	20,0	61,0	20,0	4,07	5,0
2,80	23,0	84,0	23,0	1,73	13,0
3,00	32,0	58,0	32,0	2,67	12,0
3,20	32,0	72,0	32,0	2,27	14,0
3,40	96,0	130,0	96,0	2,00	48,0
3,60	50,0	80,0	50,0	2,00	25,0
3,80	30,0	60,0	30,0	1,33	22,0
4,00	28,0	48,0	28,0	1,27	22,0
4,20	26,0	45,0	26,0	1,33	19,0
4,40	30,0	50,0	30,0	1,60	19,0
4,60	102,0	126,0	102,0	1,73	59,0
4,80	126,0	152,0	126,0	5,07	25,0
5,00	30,0	106,0	30,0	2,73	11,0
5,20	45,0	86,0	45,0	2,80	16,0
5,40	44,0	86,0	44,0	0,93	47,0
5,60	36,0	50,0	36,0	1,40	26,0
5,80	34,0	55,0	34,0	1,20	28,0
6,00	40,0	58,0	40,0	1,20	33,0
6,20	30,0	48,0	30,0	1,87	16,0
6,40	55,0	83,0	55,0	2,07	27,0
6,60	52,0	83,0	52,0	2,20	24,0
6,80	56,0	89,0	56,0	2,27	25,0
7,00	50,0	84,0	50,0	1,67	30,0
7,20	45,0	70,0	45,0	2,00	22,0
7,40	40,0	70,0	40,0	1,93	21,0
7,60	65,0	94,0	65,0	2,20	30,0
7,80	70,0	103,0	70,0	2,47	28,0
8,00	77,0	114,0	77,0	2,73	28,0
8,20	68,0	109,0	68,0	2,60	26,0
8,40	75,0	114,0	75,0	2,67	28,0
8,60	67,0	107,0	67,0	2,47	27,0
8,80	65,0	102,0	65,0	2,60	25,0
9,00	79,0	118,0	79,0	2,93	27,0
9,20	68,0	112,0	68,0	2,53	27,0
9,40	67,0	105,0	67,0	2,53	26,0
9,60	70,0	108,0	70,0	2,40	29,0
9,80	85,0	121,0	85,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 077
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-077
- data : 02/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	1,40	30,0	50,0	30,0	1,67	18,0
0,40	----	----	--	2,00	----	1,60	37,0	62,0	37,0	9,13	4,0
0,60	63,0	93,0	63,0	1,80	35,0	1,80	113,0	250,0	113,0	9,13	12,0
0,80	75,0	102,0	75,0	2,53	30,0	**2,00**	113,0	250,0	113,0	4,33	26,0
1,00	39,0	77,0	39,0	2,00	20,0	2,20	150,0	215,0	150,0	4,67	32,0
1,20	30,0	60,0	30,0	1,33	22,0	2,40	350,0	420,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 078
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-078
- data : 03/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	41,0	54,0	41,0	2,00	20,0
0,80	20,0	50,0	20,0	1,13	18,0
1,00	20,0	37,0	20,0	0,47	43,0
1,20	20,0	27,0	20,0	0,60	33,0
1,40	13,0	22,0	13,0	0,60	22,0
1,60	13,0	22,0	13,0	0,60	22,0
1,80	13,0	22,0	13,0	0,40	32,0
2,00	15,0	21,0	15,0	0,33	45,0
2,20	13,0	18,0	13,0	0,67	19,0
2,40	12,0	22,0	12,0	0,27	45,0
2,60	18,0	22,0	18,0	1,87	10,0
2,80	25,0	53,0	25,0	0,80	31,0
3,00	70,0	82,0	70,0	1,60	44,0
3,20	74,0	98,0	74,0	2,20	34,0
3,40	12,0	45,0	12,0	1,07	11,0
3,60	65,0	81,0	65,0	1,40	46,0
3,80	81,0	102,0	81,0	1,80	45,0
4,00	83,0	110,0	83,0	1,80	46,0
4,20	94,0	121,0	94,0	2,13	44,0
4,40	91,0	123,0	91,0	2,33	39,0
4,60	85,0	120,0	85,0	1,73	49,0
4,80	88,0	114,0	88,0	1,87	47,0
5,00	86,0	114,0	86,0	1,93	44,0
5,20	73,0	102,0	73,0	1,73	42,0
5,40	72,0	98,0	72,0	1,13	64,0
5,60	79,0	96,0	79,0	1,47	54,0
5,80	84,0	106,0	84,0	1,20	70,0
6,00	84,0	102,0	84,0	1,33	63,0
6,20	76,0	96,0	76,0	1,33	57,0
6,40	76,0	96,0	76,0	1,00	76,0
6,60	75,0	90,0	75,0	1,00	75,0
6,80	74,0	89,0	74,0	1,27	58,0
7,00	68,0	87,0	68,0	0,73	93,0
7,20	52,0	63,0	52,0	1,27	41,0
7,40	31,0	50,0	31,0	1,33	23,0
7,60	52,0	72,0	52,0	0,40	130,0
7,80	17,0	23,0	17,0	1,20	14,0
8,00	60,0	78,0	60,0	1,07	56,0
8,20	102,0	118,0	102,0	1,67	61,0
8,40	80,0	105,0	80,0	1,13	71,0
8,60	86,0	103,0	86,0	1,47	59,0
8,80	70,0	92,0	70,0	1,80	39,0
9,00	79,0	106,0	79,0	4,53	17,0
9,20	57,0	125,0	57,0	2,53	23,0
9,40	67,0	105,0	67,0	1,20	56,0
9,60	61,0	79,0	61,0	1,93	32,0
9,80	72,0	101,0	72,0	1,60	45,0
10,00	86,0	110,0	86,0	1,47	59,0
10,20	32,0	54,0	32,0	1,60	20,0
10,40	140,0	164,0	140,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 079
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-079
- data : 03/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	57,0	68,0	57,0	1,80	32,0
0,80	62,0	89,0	62,0	2,27	27,0
1,00	36,0	70,0	36,0	1,87	19,0
1,20	36,0	64,0	36,0	1,93	19,0
1,40	45,0	74,0	45,0	3,40	13,0
1,60	36,0	87,0	36,0	0,80	45,0
1,80	36,0	48,0	36,0	1,60	22,0
2,00	66,0	90,0	66,0	1,73	38,0
2,20	59,0	85,0	59,0	2,20	27,0
2,40	74,0	107,0	74,0	1,93	38,0
2,60	78,0	107,0	78,0	1,60	49,0
2,80	85,0	109,0	85,0	1,80	47,0
3,00	80,0	107,0	80,0	3,07	26,0
3,20	80,0	126,0	80,0	4,20	19,0
3,40	96,0	159,0	96,0	2,60	37,0
3,60	105,0	144,0	105,0	1,93	54,0
3,80	86,0	115,0	86,0	1,53	56,0
4,00	90,0	113,0	90,0	1,27	71,0
4,20	101,0	120,0	101,0	1,53	66,0
4,40	104,0	127,0	104,0	1,47	71,0
4,60	102,0	124,0	102,0	1,67	61,0
4,80	101,0	126,0	101,0	2,13	47,0
5,00	67,0	99,0	67,0	3,67	18,0
5,20	30,0	85,0	30,0	1,07	28,0
5,40	41,0	57,0	41,0	1,87	22,0
5,60	42,0	70,0	42,0	1,07	39,0
5,80	54,0	70,0	54,0	3,00	18,0
6,00	54,0	99,0	54,0	1,13	48,0
6,20	18,0	35,0	18,0	1,07	17,0
6,40	7,0	23,0	7,0	2,33	3,0
6,60	22,0	57,0	22,0	1,40	16,0
6,80	50,0	71,0	50,0	2,07	24,0
7,00	54,0	85,0	54,0	0,87	62,0
7,20	68,0	81,0	68,0	0,80	85,0
7,40	76,0	88,0	76,0	1,20	63,0
7,60	72,0	90,0	72,0	0,67	108,0
7,80	75,0	85,0	75,0	0,93	80,0
8,00	69,0	83,0	69,0	0,87	80,0
8,20	62,0	75,0	62,0	0,67	93,0
8,40	62,0	72,0	62,0	0,67	93,0
8,60	50,0	60,0	50,0	1,00	50,0
8,80	17,0	32,0	17,0	0,40	42,0
9,00	26,0	32,0	26,0	0,80	32,0
9,20	49,0	61,0	49,0	1,40	35,0
9,40	47,0	68,0	47,0	1,47	32,0
9,60	46,0	68,0	46,0	1,13	41,0
9,80	45,0	62,0	45,0	1,33	34,0
10,00	48,0	68,0	48,0	1,20	40,0
10,20	44,0	62,0	44,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 080
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : Castelvenere (BN)
- note : Cert. P002-20-080.
- data : 03/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,73	----
0,60	68,0	94,0	68,0	1,87	36,0
0,80	70,0	98,0	70,0	3,13	22,0
1,00	59,0	106,0	59,0	3,47	17,0
1,20	61,0	113,0	61,0	4,27	14,0
1,40	52,0	116,0	52,0	4,27	12,0
1,60	51,0	115,0	51,0	3,47	15,0
1,80	60,0	112,0	60,0	2,27	26,0
2,00	86,0	120,0	86,0	1,47	59,0
2,20	85,0	107,0	85,0	3,13	27,0
2,40	81,0	128,0	81,0	2,47	33,0
2,60	83,0	120,0	83,0	2,93	28,0
2,80	81,0	125,0	81,0	2,60	31,0
3,00	81,0	120,0	81,0	2,87	28,0
3,20	82,0	125,0	82,0	2,93	28,0
3,40	86,0	130,0	86,0	3,60	24,0
3,60	66,0	120,0	66,0	3,13	21,0
3,80	68,0	115,0	68,0	2,33	29,0
4,00	65,0	100,0	65,0	3,73	17,0
4,20	64,0	120,0	64,0	2,13	30,0
4,40	78,0	110,0	78,0	2,93	27,0
4,60	76,0	120,0	76,0	2,27	34,0
4,80	74,0	108,0	74,0	2,40	31,0
5,00	74,0	110,0	74,0	2,93	25,0
5,20	76,0	120,0	76,0	0,80	95,0
5,40	84,0	96,0	84,0	1,60	52,0
5,60	86,0	110,0	86,0	1,13	76,0
5,80	88,0	105,0	88,0	1,07	82,0
6,00	84,0	100,0	84,0	1,07	79,0
6,20	74,0	90,0	74,0	0,80	92,0
6,40	76,0	88,0	76,0	0,87	88,0
6,60	79,0	92,0	79,0	1,33	59,0
6,80	78,0	98,0	78,0	1,60	49,0
7,00	64,0	88,0	64,0	0,93	69,0
7,20	66,0	80,0	66,0	0,80	82,0
7,40	46,0	58,0	46,0	0,80	57,0
7,60	60,0	72,0	60,0	0,80	75,0
7,80	62,0	74,0	62,0	0,93	66,0
8,00	66,0	80,0	66,0	1,20	55,0
8,20	70,0	88,0	70,0	1,20	58,0
8,40	72,0	90,0	72,0	1,33	54,0
8,60	74,0	94,0	74,0	0,53	139,0
8,80	48,0	56,0	48,0	0,80	60,0
9,00	50,0	62,0	50,0	1,47	34,0
9,20	68,0	90,0	68,0	1,87	36,0
9,40	64,0	92,0	64,0	2,13	30,0
9,60	66,0	98,0	66,0	1,67	40,0
9,80	75,0	100,0	75,0	1,33	56,0
10,00	88,0	108,0	88,0	2,27	39,0
10,20	76,0	110,0	76,0	2,40	32,0
10,40	76,0	112,0	76,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 084
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-084
- data : 04/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	59,0	73,0	59,0	1,00	59,0
0,40	----	----	--	3,80	----	5,40	58,0	73,0	58,0	1,00	58,0
0,60	50,0	107,0	50,0	0,67	75,0	5,60	64,0	79,0	64,0	1,40	46,0
0,80	90,0	100,0	90,0	1,33	67,0	5,80	65,0	86,0	65,0	1,40	46,0
1,00	64,0	84,0	64,0	2,60	25,0	**6,00**	96,0	117,0	96,0	1,47	65,0
1,20	46,0	85,0	46,0	2,80	16,0	6,20	70,0	92,0	70,0	1,00	70,0
1,40	32,0	74,0	32,0	2,47	13,0	6,40	70,0	85,0	70,0	1,47	48,0
1,60	67,0	104,0	67,0	0,87	77,0	6,60	73,0	95,0	73,0	1,80	41,0
1,80	41,0	54,0	41,0	3,87	11,0	6,80	82,0	109,0	82,0	1,67	49,0
2,00	39,0	97,0	39,0	1,73	22,0	**7,00**	97,0	122,0	97,0	1,80	54,0
2,20	240,0	266,0	240,0	6,00	40,0	7,20	96,0	123,0	96,0	1,67	58,0
2,40	230,0	320,0	230,0	8,27	28,0	7,40	96,0	121,0	96,0	2,20	44,0
2,60	36,0	160,0	36,0	2,40	15,0	7,60	90,0	123,0	90,0	1,80	50,0
2,80	50,0	86,0	50,0	1,80	28,0	7,80	102,0	129,0	102,0	2,47	41,0
3,00	119,0	146,0	119,0	1,87	64,0	**8,00**	108,0	145,0	108,0	1,40	77,0
3,20	50,0	78,0	50,0	1,33	37,0	8,20	114,0	135,0	114,0	2,13	53,0
3,40	64,0	84,0	64,0	0,53	120,0	8,40	102,0	134,0	102,0	1,80	57,0
3,60	61,0	69,0	61,0	0,80	76,0	8,60	97,0	124,0	97,0	1,80	54,0
3,80	56,0	68,0	56,0	1,00	56,0	8,80	89,0	116,0	89,0	1,87	48,0
4,00	45,0	60,0	45,0	0,80	56,0	**9,00**	96,0	124,0	96,0	1,73	55,0
4,20	20,0	32,0	20,0	0,53	37,0	9,20	102,0	128,0	102,0	1,47	70,0
4,40	64,0	72,0	64,0	0,87	74,0	9,40	123,0	145,0	123,0	1,73	71,0
4,60	60,0	73,0	60,0	1,07	56,0	9,60	117,0	143,0	117,0	2,00	58,0
4,80	56,0	72,0	56,0	0,80	70,0	9,80	123,0	153,0	123,0	1,87	66,0
5,00	53,0	65,0	53,0	0,93	57,0	**10,00**	120,0	148,0	120,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 090
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-090
- data : 04/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	180,0	250,0	180,0	3,53	51,0
0,40	----	----	--	0,33	----	5,40	195,0	248,0	195,0	4,13	47,0
0,60	5,0	10,0	5,0	0,27	19,0	5,60	216,0	278,0	216,0	5,67	38,0
0,80	3,0	7,0	3,0	0,47	6,0	5,80	183,0	268,0	183,0	2,53	72,0
1,00	15,0	22,0	15,0	1,87	8,0	**6,00**	202,0	240,0	202,0	4,07	50,0
1,20	3,0	31,0	3,0	0,93	3,0	6,20	210,0	271,0	210,0	5,33	39,0
1,40	35,0	49,0	35,0	1,33	26,0	6,40	187,0	267,0	187,0	4,67	40,0
1,60	23,0	43,0	23,0	1,27	18,0	6,60	190,0	260,0	190,0	4,93	39,0
1,80	20,0	39,0	20,0	0,73	27,0	6,80	196,0	270,0	196,0	4,93	40,0
2,00	14,0	25,0	14,0	1,80	8,0	**7,00**	216,0	290,0	216,0	4,67	46,0
2,20	123,0	150,0	123,0	3,07	40,0	7,20	217,0	287,0	217,0	4,93	44,0
2,40	119,0	165,0	119,0	3,67	32,0	7,40	222,0	296,0	222,0	5,00	44,0
2,60	153,0	208,0	153,0	4,07	38,0	7,60	230,0	305,0	230,0	4,80	48,0
2,80	186,0	247,0	186,0	3,93	47,0	7,80	250,0	322,0	250,0	5,20	48,0
3,00	191,0	250,0	191,0	4,60	42,0	**8,00**	233,0	311,0	233,0	5,67	41,0
3,20	170,0	239,0	170,0	4,07	42,0	8,20	240,0	325,0	240,0	12,27	20,0
3,40	157,0	218,0	157,0	3,73	42,0	8,40	213,0	397,0	213,0	5,93	36,0
3,60	168,0	224,0	168,0	3,40	49,0	8,60	205,0	294,0	205,0	4,80	43,0
3,80	167,0	218,0	167,0	3,67	46,0	8,80	215,0	287,0	215,0	4,67	46,0
4,00	164,0	219,0	164,0	3,80	43,0	**9,00**	220,0	290,0	220,0	4,07	54,0
4,20	170,0	227,0	170,0	3,07	55,0	9,20	225,0	286,0	225,0	3,33	68,0
4,40	170,0	216,0	170,0	4,13	41,0	9,40	210,0	260,0	210,0	6,13	34,0
4,60	169,0	231,0	169,0	3,00	56,0	9,60	223,0	315,0	223,0	6,67	33,0
4,80	186,0	231,0	186,0	3,87	48,0	9,80	250,0	350,0	250,0	10,00	25,0
5,00	196,0	254,0	196,0	4,67	42,0	**10,00**	300,0	450,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 085
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-085
- data : 04/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	2,00	----
0,60	90,0	120,0	90,0	2,00	45,0
0,80	89,0	119,0	89,0	3,93	23,0
1,00	53,0	112,0	53,0	3,93	13,0
1,20	30,0	89,0	30,0	1,93	16,0
1,40	23,0	52,0	23,0	1,20	19,0
1,60	22,0	40,0	22,0	0,87	25,0
1,80	19,0	32,0	19,0	0,67	28,0
2,00	22,0	32,0	22,0	1,00	22,0
2,20	19,0	34,0	19,0	0,87	22,0
2,40	18,0	31,0	18,0	1,00	18,0
2,60	17,0	32,0	17,0	1,27	13,0
2,80	18,0	37,0	18,0	1,13	16,0
3,00	26,0	43,0	26,0	1,53	17,0
3,20	26,0	49,0	26,0	1,67	16,0
3,40	35,0	60,0	35,0	1,67	21,0
3,60	33,0	58,0	33,0	2,07	16,0
3,80	26,0	57,0	26,0	1,07	24,0
4,00	26,0	42,0	26,0	0,93	28,0
4,20	24,0	38,0	24,0	0,87	28,0
4,40	24,0	37,0	24,0	0,93	26,0
4,60	37,0	51,0	37,0	1,47	25,0
4,80	27,0	49,0	27,0	1,27	21,0
5,00	36,0	55,0	36,0	1,07	34,0
5,20	55,0	71,0	55,0	1,47	37,0
5,40	58,0	80,0	58,0	2,00	29,0
5,60	55,0	85,0	55,0	2,27	24,0
5,80	60,0	94,0	60,0	2,47	24,0
6,00	60,0	97,0	60,0	2,13	28,0
6,20	66,0	98,0	66,0	2,87	23,0
6,40	74,0	117,0	74,0	2,53	29,0
6,60	79,0	117,0	79,0	2,87	28,0
6,80	85,0	128,0	85,0	3,40	25,0
7,00	84,0	135,0	84,0	3,07	27,0
7,20	84,0	130,0	84,0	3,60	23,0
7,40	87,0	141,0	87,0	3,93	22,0
7,60	80,0	139,0	80,0	3,47	23,0
7,80	79,0	131,0	79,0	3,33	24,0
8,00	85,0	135,0	85,0	3,80	22,0
8,20	93,0	150,0	93,0	3,87	24,0
8,40	112,0	170,0	112,0	4,80	23,0
8,60	124,0	196,0	124,0	4,93	25,0
8,80	145,0	219,0	145,0	3,80	38,0
9,00	155,0	212,0	155,0	5,27	29,0
9,20	146,0	225,0	146,0	3,93	37,0
9,40	166,0	225,0	166,0	5,00	33,0
9,60	160,0	235,0	160,0	4,80	33,0
9,80	177,0	249,0	177,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 086
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-086
- data : 04/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,60	----
0,60	14,0	23,0	14,0	0,47	30,0
0,80	15,0	22,0	15,0	0,93	16,0
1,00	28,0	42,0	28,0	0,93	30,0
1,20	34,0	48,0	34,0	1,33	25,0
1,40	45,0	65,0	45,0	1,33	34,0
1,60	60,0	80,0	60,0	2,67	22,0
1,80	57,0	97,0	57,0	3,47	16,0
2,00	62,0	114,0	62,0	3,47	18,0
2,20	60,0	112,0	60,0	4,33	14,0
2,40	57,0	122,0	57,0	4,00	14,0
2,60	68,0	128,0	68,0	3,87	18,0
2,80	64,0	122,0	64,0	3,27	20,0
3,00	63,0	112,0	63,0	3,80	17,0
3,20	76,0	133,0	76,0	3,47	22,0
3,40	88,0	140,0	88,0	3,53	25,0
3,60	99,0	152,0	99,0	3,20	31,0
3,80	95,0	143,0	95,0	3,33	29,0
4,00	92,0	142,0	92,0	2,93	31,0
4,20	109,0	153,0	109,0	3,40	32,0
4,40	111,0	162,0	111,0	3,40	33,0
4,60	112,0	163,0	112,0	3,20	35,0
4,80	140,0	188,0	140,0	3,13	45,0
5,00	134,0	181,0	134,0	5,20	26,0
5,20	130,0	208,0	130,0	4,73	27,0
5,40	144,0	215,0	144,0	2,27	64,0
5,60	174,0	208,0	174,0	4,00	44,0
5,80	149,0	209,0	149,0	5,33	28,0
6,00	157,0	237,0	157,0	3,40	46,0
6,20	179,0	230,0	179,0	5,07	35,0
6,40	149,0	225,0	149,0	4,87	31,0
6,60	154,0	227,0	154,0	5,27	29,0
6,80	163,0	242,0	163,0	4,20	39,0
7,00	152,0	215,0	152,0	3,73	41,0
7,20	74,0	130,0	74,0	4,20	18,0
7,40	146,0	209,0	146,0	4,73	31,0
7,60	138,0	209,0	138,0	6,00	23,0
7,80	50,0	140,0	50,0	2,33	21,0
8,00	67,0	102,0	67,0	2,53	26,0
8,20	42,0	80,0	42,0	1,87	22,0
8,40	50,0	78,0	50,0	0,87	58,0
8,60	89,0	102,0	89,0	1,47	61,0
8,80	97,0	119,0	97,0	3,80	26,0
9,00	105,0	162,0	105,0	2,60	40,0
9,20	127,0	166,0	127,0	2,93	43,0
9,40	104,0	148,0	104,0	3,00	35,0
9,60	85,0	130,0	85,0	3,33	26,0
9,80	80,0	130,0	80,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 087
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-087
- data : 04/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	3,67	----
0,60	80,0	135,0	80,0	3,33	24,0
0,80	80,0	130,0	80,0	2,07	39,0
1,00	109,0	140,0	109,0	4,67	23,0
1,20	70,0	140,0	70,0	7,53	9,0
1,40	47,0	160,0	47,0	3,07	15,0
1,60	54,0	100,0	54,0	3,33	16,0
1,80	64,0	114,0	64,0	2,87	22,0
2,00	39,0	82,0	39,0	1,47	27,0
2,20	64,0	86,0	64,0	2,80	23,0
2,40	63,0	105,0	63,0	1,93	33,0
2,60	58,0	87,0	58,0	2,27	26,0
2,80	49,0	83,0	49,0	2,13	23,0
3,00	48,0	80,0	48,0	2,20	22,0
3,20	56,0	89,0	56,0	2,13	26,0
3,40	68,0	100,0	68,0	2,80	24,0
3,60	66,0	108,0	66,0	2,80	24,0
3,80	70,0	112,0	70,0	2,80	25,0
4,00	67,0	109,0	67,0	2,53	26,0
4,20	70,0	108,0	70,0	3,07	23,0
4,40	84,0	130,0	84,0	3,33	25,0
4,60	87,0	137,0	87,0	3,07	28,0
4,80	96,0	142,0	96,0	3,40	28,0
5,00	92,0	143,0	92,0	3,67	25,0
5,20	103,0	158,0	103,0	4,40	23,0
5,40	114,0	180,0	114,0	4,20	27,0
5,60	98,0	161,0	98,0	4,80	20,0
5,80	108,0	180,0	108,0	5,33	20,0
6,00	126,0	206,0	126,0	4,87	26,0
6,20	118,0	191,0	118,0	4,67	25,0
6,40	140,0	210,0	140,0	5,47	26,0
6,60	133,0	215,0	133,0	5,67	23,0
6,80	124,0	209,0	124,0	4,47	28,0
7,00	128,0	195,0	128,0	7,13	18,0
7,20	133,0	240,0	133,0	5,00	27,0
7,40	155,0	230,0	155,0	5,60	28,0
7,60	154,0	238,0	154,0	8,60	18,0
7,80	170,0	299,0	170,0	5,33	32,0
8,00	80,0	160,0	80,0	4,53	18,0
8,20	23,0	91,0	23,0	4,00	6,0
8,40	190,0	250,0	190,0	4,13	46,0
8,60	50,0	112,0	50,0	4,80	10,0
8,80	41,0	113,0	41,0	3,33	12,0
9,00	19,0	69,0	19,0	1,80	11,0
9,20	39,0	66,0	39,0	0,93	42,0
9,40	39,0	53,0	39,0	1,27	31,0
9,60	47,0	66,0	47,0	2,00	24,0
9,80	45,0	75,0	45,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 091
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-091
- data : 05/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	4,87	----
0,60	30,0	103,0	30,0	1,00	30,0
0,80	69,0	84,0	69,0	1,20	57,0
1,00	34,0	52,0	34,0	0,60	57,0
1,20	75,0	84,0	75,0	1,47	51,0
1,40	59,0	81,0	59,0	1,47	40,0
1,60	45,0	67,0	45,0	1,67	27,0
1,80	44,0	69,0	44,0	3,40	13,0
2,00	44,0	95,0	44,0	3,60	12,0
2,20	43,0	97,0	43,0	3,00	14,0
2,40	45,0	90,0	45,0	3,40	13,0
2,60	39,0	90,0	39,0	3,20	12,0
2,80	40,0	88,0	40,0	2,80	14,0
3,00	35,0	77,0	35,0	2,07	17,0
3,20	32,0	63,0	32,0	1,47	22,0
3,40	33,0	55,0	33,0	1,20	27,0
3,60	31,0	49,0	31,0	0,33	93,0
3,80	37,0	42,0	37,0	1,00	37,0
4,00	30,0	45,0	30,0	1,27	24,0
4,20	31,0	50,0	31,0	1,53	20,0
4,40	38,0	61,0	38,0	2,00	19,0
4,60	50,0	80,0	50,0	2,00	25,0
4,80	56,0	86,0	56,0	2,00	28,0
5,00	100,0	130,0	100,0	4,20	24,0
5,20	102,0	165,0	102,0	3,27	31,0
5,40	106,0	155,0	106,0	4,07	26,0
5,60	116,0	177,0	116,0	3,93	29,0
5,80	75,0	134,0	75,0	4,47	17,0
6,00	88,0	155,0	88,0	3,53	25,0
6,20	115,0	168,0	115,0	3,80	30,0
6,40	116,0	173,0	116,0	3,93	29,0
6,60	112,0	171,0	112,0	4,33	26,0
6,80	109,0	174,0	109,0	4,07	27,0
7,00	111,0	172,0	111,0	5,40	21,0
7,20	106,0	187,0	106,0	4,40	24,0
7,40	114,0	180,0	114,0	3,33	34,0
7,60	113,0	163,0	113,0	2,80	40,0
7,80	98,0	140,0	98,0	4,07	24,0
8,00	93,0	154,0	93,0	2,73	34,0
8,20	113,0	154,0	113,0	3,93	29,0
8,40	98,0	157,0	98,0	4,73	21,0
8,60	102,0	173,0	102,0	5,73	18,0
8,80	107,0	193,0	107,0	5,53	19,0
9,00	116,0	199,0	116,0	6,60	18,0
9,20	117,0	216,0	117,0	6,67	18,0
9,40	126,0	226,0	126,0	6,67	19,0
9,60	124,0	224,0	124,0	6,73	18,0
9,80	129,0	230,0	129,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 093
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-093
- data : 05/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,00	----
0,60	130,0	145,0	130,0	1,53	85,0
0,80	107,0	130,0	107,0	6,00	18,0
1,00	85,0	175,0	85,0	6,80	12,0
1,20	88,0	190,0	88,0	5,60	16,0
1,40	90,0	174,0	90,0	5,07	18,0
1,60	84,0	160,0	84,0	4,20	20,0
1,80	78,0	141,0	78,0	4,87	16,0
2,00	55,0	128,0	55,0	5,13	11,0
2,20	37,0	114,0	37,0	3,33	11,0
2,40	42,0	92,0	42,0	3,67	11,0
2,60	45,0	100,0	45,0	4,13	11,0
2,80	35,0	97,0	35,0	1,27	28,0
3,00	45,0	64,0	45,0	1,73	26,0
3,20	50,0	76,0	50,0	3,93	13,0
3,40	51,0	110,0	51,0	4,00	13,0
3,60	48,0	108,0	48,0	1,27	38,0
3,80	33,0	52,0	33,0	2,07	16,0
4,00	35,0	66,0	35,0	1,53	23,0
4,20	25,0	48,0	25,0	1,60	16,0
4,40	26,0	50,0	26,0	1,47	18,0
4,60	23,0	45,0	23,0	1,47	16,0
4,80	25,0	47,0	25,0	1,53	16,0
5,00	33,0	56,0	33,0	1,67	20,0
5,20	26,0	51,0	26,0	1,47	18,0
5,40	28,0	50,0	28,0	2,13	13,0
5,60	28,0	60,0	28,0	1,20	23,0
5,80	23,0	41,0	23,0	0,93	25,0
6,00	28,0	42,0	28,0	1,13	25,0
6,20	23,0	40,0	23,0	0,67	34,0
6,40	23,0	33,0	23,0	1,07	22,0
6,60	20,0	36,0	20,0	0,93	21,0
6,80	28,0	42,0	28,0	1,53	18,0
7,00	113,0	136,0	113,0	5,07	22,0
7,20	59,0	135,0	59,0	4,93	12,0
7,40	40,0	114,0	40,0	3,87	10,0
7,60	30,0	88,0	30,0	4,53	7,0
7,80	65,0	133,0	65,0	4,13	16,0
8,00	40,0	102,0	40,0	2,00	20,0
8,20	44,0	74,0	44,0	2,20	20,0
8,40	47,0	80,0	47,0	3,00	16,0
8,60	35,0	80,0	35,0	1,20	29,0
8,80	122,0	140,0	122,0	5,93	21,0
9,00	130,0	219,0	130,0	4,67	28,0
9,20	131,0	201,0	131,0	5,33	25,0
9,40	129,0	209,0	129,0	6,20	21,0
9,60	137,0	230,0	137,0	6,13	22,0
9,80	138,0	230,0	138,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 095
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Intervento di utilizzo idropotabile acque invaso di
- località : San Salvatore Telesino (BN)
- note : Cert. P003-20-095
- data : 05/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,80	----
0,60	11,0	23,0	11,0	0,80	14,0
0,80	7,0	19,0	7,0	0,73	10,0
1,00	10,0	21,0	10,0	0,80	12,0
1,20	10,0	22,0	10,0	0,67	15,0
1,40	10,0	20,0	10,0	0,60	17,0
1,60	13,0	22,0	13,0	0,80	16,0
1,80	12,0	24,0	12,0	0,67	18,0
2,00	13,0	23,0	13,0	0,67	19,0
2,20	11,0	21,0	11,0	0,47	24,0
2,40	15,0	22,0	15,0	0,67	22,0
2,60	11,0	21,0	11,0	0,27	41,0
2,80	16,0	20,0	16,0	0,40	40,0
3,00	12,0	18,0	12,0	0,13	90,0
3,20	12,0	14,0	12,0	2,00	6,0
3,40	11,0	41,0	11,0	1,00	11,0
3,60	15,0	30,0	15,0	0,40	37,0
3,80	9,0	15,0	9,0	0,33	27,0
4,00	6,0	11,0	6,0	0,20	30,0
4,20	5,0	8,0	5,0	0,13	37,0
4,40	6,0	8,0	6,0	0,53	11,0
4,60	16,0	24,0	16,0	1,00	16,0
4,80	11,0	26,0	11,0	3,00	4,0
5,00	58,0	103,0	58,0	6,80	9,0
5,20	158,0	260,0	158,0	6,67	24,0
5,40	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 094
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-094
- data : 05/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	17,0	21,0	17,0	0,20	85,0
0,80	17,0	20,0	17,0	0,53	32,0
1,00	17,0	25,0	17,0	0,47	36,0
1,20	19,0	26,0	19,0	0,47	41,0
1,40	15,0	22,0	15,0	0,53	28,0
1,60	13,0	21,0	13,0	0,80	16,0
1,80	14,0	26,0	14,0	0,40	35,0
2,00	11,0	17,0	11,0	0,47	24,0
2,20	8,0	15,0	8,0	0,60	13,0
2,40	10,0	19,0	10,0	0,53	19,0
2,60	11,0	19,0	11,0	0,47	24,0
2,80	12,0	19,0	12,0	0,53	22,0
3,00	15,0	23,0	15,0	0,47	32,0
3,20	15,0	22,0	15,0	0,40	37,0
3,40	34,0	40,0	34,0	0,53	64,0
3,60	37,0	45,0	37,0	1,27	29,0
3,80	30,0	49,0	30,0	1,07	28,0
4,00	34,0	50,0	34,0	1,13	30,0
4,20	37,0	54,0	37,0	1,27	29,0
4,40	33,0	52,0	33,0	1,27	26,0
4,60	34,0	53,0	34,0	1,33	25,0
4,80	40,0	60,0	40,0	1,47	27,0
5,00	40,0	62,0	40,0	1,07	37,0
5,20	22,0	38,0	22,0	0,80	27,0
5,40	18,0	30,0	18,0	0,67	27,0
5,60	18,0	28,0	18,0	0,67	27,0
5,80	17,0	27,0	17,0	0,53	32,0
6,00	23,0	31,0	23,0	0,60	38,0
6,20	19,0	28,0	19,0	0,67	28,0
6,40	21,0	31,0	21,0	0,27	79,0
6,60	17,0	21,0	17,0	0,60	28,0
6,80	26,0	35,0	26,0	1,33	19,0
7,00	40,0	60,0	40,0	0,80	50,0
7,20	25,0	37,0	25,0	0,87	29,0
7,40	18,0	31,0	18,0	1,27	14,0
7,60	16,0	35,0	16,0	1,40	11,0
7,80	29,0	50,0	29,0	1,27	23,0
8,00	43,0	62,0	43,0	1,87	23,0
8,20	56,0	84,0	56,0	2,13	26,0
8,40	74,0	106,0	74,0	2,27	33,0
8,60	80,0	114,0	80,0	2,80	29,0
8,80	78,0	120,0	78,0	2,47	32,0
9,00	78,0	115,0	78,0	1,60	49,0
9,20	66,0	90,0	66,0	2,87	23,0
9,40	71,0	114,0	71,0	2,60	27,0
9,60	95,0	134,0	95,0	3,00	32,0
9,80	102,0	147,0	102,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 096
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-096
- data : 07/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,80	----
0,60	73,0	85,0	73,0	0,87	84,0
0,80	72,0	85,0	72,0	3,00	24,0
1,00	53,0	98,0	53,0	2,20	24,0
1,20	81,0	114,0	81,0	1,60	51,0
1,40	96,0	120,0	96,0	5,53	17,0
1,60	72,0	155,0	72,0	5,40	13,0
1,80	76,0	157,0	76,0	6,47	12,0
2,00	79,0	176,0	79,0	5,27	15,0
2,20	78,0	157,0	78,0	9,07	9,0
2,40	60,0	196,0	60,0	2,33	26,0
2,60	95,0	130,0	95,0	3,13	30,0
2,80	104,0	151,0	104,0	2,27	46,0
3,00	117,0	151,0	117,0	3,13	37,0
3,20	103,0	150,0	103,0	3,53	29,0
3,40	73,0	126,0	73,0	3,07	24,0
3,60	78,0	124,0	78,0	0,27	292,0
3,80	109,0	113,0	109,0	3,60	30,0
4,00	74,0	128,0	74,0	3,67	20,0
4,20	103,0	158,0	103,0	3,87	27,0
4,40	101,0	159,0	101,0	2,80	36,0
4,60	121,0	163,0	121,0	1,47	82,0
4,80	131,0	153,0	131,0	4,00	33,0
5,00	115,0	175,0	115,0	2,47	47,0
5,20	136,0	173,0	136,0	3,60	38,0
5,40	123,0	177,0	123,0	3,33	37,0
5,60	121,0	171,0	121,0	3,00	40,0
5,80	140,0	185,0	140,0	4,07	34,0
6,00	140,0	201,0	140,0	4,07	34,0
6,20	160,0	221,0	160,0	4,47	36,0
6,40	161,0	228,0	161,0	4,00	40,0
6,60	180,0	240,0	180,0	3,67	49,0
6,80	175,0	230,0	175,0	6,67	26,0
7,00	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 101
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-101
- data : 07/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,13	----
0,60	85,0	102,0	85,0	2,20	39,0
0,80	90,0	123,0	90,0	4,93	18,0
1,00	90,0	164,0	90,0	5,60	16,0
1,20	58,0	142,0	58,0	3,33	17,0
1,40	53,0	103,0	53,0	2,40	22,0
1,60	63,0	99,0	63,0	3,13	20,0
1,80	67,0	114,0	67,0	3,93	17,0
2,00	70,0	129,0	70,0	2,07	34,0
2,20	112,0	143,0	112,0	2,80	40,0
2,40	132,0	174,0	132,0	3,80	35,0
2,60	146,0	203,0	146,0	4,47	33,0
2,80	158,0	225,0	158,0	3,13	50,0
3,00	177,0	224,0	177,0	3,80	47,0
3,20	190,0	247,0	190,0	5,07	38,0
3,40	205,0	281,0	205,0	5,93	35,0
3,60	239,0	328,0	239,0	5,93	40,0
3,80	249,0	338,0	249,0	2,93	85,0
4,00	201,0	245,0	201,0	7,27	28,0
4,20	128,0	237,0	128,0	5,53	23,0
4,40	145,0	228,0	145,0	5,87	25,0
4,60	173,0	261,0	173,0	7,80	22,0
4,80	251,0	368,0	251,0	7,93	32,0
5,00	273,0	392,0	273,0	6,60	41,0
5,20	285,0	384,0	285,0	6,80	42,0
5,40	304,0	406,0	304,0	7,20	42,0
5,60	300,0	408,0	300,0	7,00	43,0
5,80	270,0	375,0	270,0	5,60	48,0
6,00	227,0	311,0	227,0	5,07	45,0
6,20	190,0	266,0	190,0	4,47	43,0
6,40	224,0	291,0	224,0	4,60	49,0
6,60	276,0	345,0	276,0	5,60	49,0
6,80	326,0	410,0	326,0	4,60	71,0
7,00	340,0	409,0	340,0	7,00	49,0
7,20	338,0	443,0	338,0	6,13	55,0
7,40	276,0	368,0	276,0	7,20	38,0
7,60	238,0	346,0	238,0	8,67	27,0
7,80	270,0	400,0	270,0	4,87	55,0
8,00	137,0	210,0	137,0	7,27	19,0
8,20	48,0	157,0	48,0	3,07	16,0
8,40	36,0	82,0	36,0	0,53	67,0
8,60	32,0	40,0	32,0	1,07	30,0
8,80	37,0	53,0	37,0	1,20	31,0
9,00	52,0	70,0	52,0	1,80	29,0
9,20	54,0	81,0	54,0	2,27	24,0
9,40	41,0	75,0	41,0	1,60	26,0
9,60	41,0	65,0	41,0	1,20	34,0
9,80	43,0	61,0	43,0	1,53	28,0
10,00	41,0	64,0	41,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 102
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P002-20-102
- data : 07/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,47	----
0,60	75,0	97,0	75,0	2,60	29,0
0,80	90,0	129,0	90,0	3,40	26,0
1,00	94,0	145,0	94,0	5,20	18,0
1,20	92,0	170,0	92,0	5,40	17,0
1,40	120,0	201,0	120,0	5,73	21,0
1,60	144,0	230,0	144,0	6,07	24,0
1,80	145,0	236,0	145,0	8,20	18,0
2,00	167,0	290,0	167,0	5,67	29,0
2,20	200,0	285,0	200,0	8,33	24,0
2,40	195,0	320,0	195,0	10,20	19,0
2,60	199,0	352,0	199,0	5,07	39,0
2,80	250,0	326,0	250,0	2,67	94,0
3,00	350,0	390,0	350,0	2,33	150,0
3,20	385,0	420,0	385,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 108
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-108
- data : 08/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	3,60	32,0	54,0	32,0	1,40	23,0
0,40	----	----	--	2,47	----	3,80	36,0	57,0	36,0	1,60	22,0
0,60	108,0	145,0	108,0	1,87	58,0	**4,00**	46,0	70,0	46,0	1,33	34,0
0,80	120,0	148,0	120,0	0,53	225,0	4,20	55,0	75,0	55,0	1,87	29,0
1,00	50,0	58,0	50,0	2,07	24,0	4,40	46,0	74,0	46,0	1,67	28,0
1,20	33,0	64,0	33,0	2,07	16,0	4,60	40,0	65,0	40,0	1,53	26,0
1,40	40,0	71,0	40,0	1,87	21,0	4,80	31,0	54,0	31,0	1,40	22,0
1,60	36,0	64,0	36,0	2,20	16,0	**5,00**	27,0	48,0	27,0	0,73	37,0
1,80	57,0	90,0	57,0	2,47	23,0	5,20	22,0	33,0	22,0	0,67	33,0
2,00	55,0	92,0	55,0	2,33	24,0	5,40	22,0	32,0	22,0	1,40	16,0
2,20	37,0	72,0	37,0	3,20	12,0	5,60	91,0	112,0	91,0	3,73	24,0
2,40	34,0	82,0	34,0	2,93	12,0	5,80	45,0	101,0	45,0	0,40	112,0
2,60	34,0	78,0	34,0	2,27	15,0	**6,00**	18,0	24,0	18,0	9,60	2,0
2,80	78,0	112,0	78,0	2,13	37,0	6,20	76,0	220,0	76,0	1,33	57,0
3,00	71,0	103,0	71,0	5,07	14,0	6,40	285,0	305,0	285,0	8,00	36,0
3,20	121,0	197,0	121,0	2,33	52,0	6,60	320,0	440,0	320,0	3,33	96,0
3,40	32,0	67,0	32,0	1,47	22,0	6,80	350,0	400,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 110
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-110
- data : 08/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,27	----
0,60	34,0	53,0	34,0	0,93	36,0
0,80	36,0	50,0	36,0	2,60	14,0
1,00	69,0	108,0	69,0	2,53	27,0
1,20	52,0	90,0	52,0	3,47	15,0
1,40	54,0	106,0	54,0	3,73	14,0
1,60	51,0	107,0	51,0	3,07	17,0
1,80	59,0	105,0	59,0	4,07	15,0
2,00	39,0	100,0	39,0	4,53	9,0
2,20	37,0	105,0	37,0	3,20	12,0
2,40	43,0	91,0	43,0	2,80	15,0
2,60	52,0	94,0	52,0	3,40	15,0
2,80	60,0	111,0	60,0	4,27	14,0
3,00	62,0	126,0	62,0	3,67	17,0
3,20	81,0	136,0	81,0	5,13	16,0
3,40	74,0	151,0	74,0	3,80	19,0
3,60	115,0	172,0	115,0	3,87	30,0
3,80	150,0	208,0	150,0	9,73	15,0
4,00	130,0	276,0	130,0	4,60	28,0
4,20	206,0	275,0	206,0	7,40	28,0
4,40	108,0	219,0	108,0	4,93	22,0
4,60	130,0	204,0	130,0	4,53	29,0
4,80	88,0	156,0	88,0	4,53	19,0
5,00	75,0	143,0	75,0	4,13	18,0
5,20	63,0	125,0	63,0	4,20	15,0
5,40	48,0	111,0	48,0	3,73	13,0
5,60	64,0	120,0	64,0	3,40	19,0
5,80	60,0	111,0	60,0	3,00	20,0
6,00	53,0	98,0	53,0	1,67	32,0
6,20	49,0	74,0	49,0	1,87	26,0
6,40	65,0	93,0	65,0	2,40	27,0
6,60	78,0	114,0	78,0	2,80	28,0
6,80	85,0	127,0	85,0	3,93	22,0
7,00	79,0	138,0	79,0	2,40	33,0
7,20	70,0	106,0	70,0	3,00	23,0
7,40	47,0	92,0	47,0	2,27	21,0
7,60	45,0	79,0	45,0	1,87	24,0
7,80	55,0	83,0	55,0	1,00	55,0
8,00	55,0	70,0	55,0	1,40	39,0
8,20	64,0	85,0	64,0	1,40	46,0
8,40	63,0	84,0	63,0	2,13	30,0
8,60	76,0	108,0	76,0	3,13	24,0
8,80	69,0	116,0	69,0	3,33	21,0
9,00	66,0	116,0	66,0	2,27	29,0
9,20	75,0	109,0	75,0	2,33	32,0
9,40	67,0	102,0	67,0	2,13	31,0
9,60	63,0	95,0	63,0	2,33	27,0
9,80	60,0	95,0	60,0	2,67	22,0
10,00	68,0	108,0	68,0	2,53	27,0
10,20	72,0	110,0	72,0	2,87	25,0
10,40	69,0	112,0	69,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 109
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-109
- data : 08/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	32,0	55,0	32,0	1,60	20,0
0,40	----	----	--	1,87	----	5,40	30,0	54,0	30,0	1,67	18,0
0,60	13,0	41,0	13,0	0,60	22,0	5,60	41,0	66,0	41,0	1,93	21,0
0,80	41,0	50,0	41,0	1,33	31,0	5,80	173,0	202,0	173,0	3,47	50,0
1,00	65,0	85,0	65,0	3,33	20,0	**6,00**	129,0	181,0	129,0	1,87	69,0
1,20	31,0	81,0	31,0	3,00	10,0	6,20	77,0	105,0	77,0	4,67	17,0
1,40	26,0	71,0	26,0	2,00	13,0	6,40	90,0	160,0	90,0	2,87	31,0
1,60	22,0	52,0	22,0	1,87	12,0	6,60	67,0	110,0	67,0	1,33	50,0
1,80	23,0	51,0	23,0	2,13	11,0	6,80	55,0	75,0	55,0	2,13	26,0
2,00	24,0	56,0	24,0	1,93	12,0	**7,00**	41,0	73,0	41,0	1,73	24,0
2,20	27,0	56,0	27,0	2,27	12,0	7,20	44,0	70,0	44,0	2,20	20,0
2,40	47,0	81,0	47,0	2,53	19,0	7,40	48,0	81,0	48,0	1,93	25,0
2,60	56,0	94,0	56,0	2,53	22,0	7,60	49,0	78,0	49,0	2,47	20,0
2,80	114,0	152,0	114,0	3,93	29,0	7,80	45,0	82,0	45,0	2,00	22,0
3,00	105,0	164,0	105,0	3,93	27,0	**8,00**	51,0	81,0	51,0	2,67	19,0
3,20	95,0	154,0	95,0	3,33	29,0	8,20	52,0	92,0	52,0	2,53	21,0
3,40	68,0	118,0	68,0	4,00	17,0	8,40	52,0	90,0	52,0	2,67	19,0
3,60	52,0	112,0	52,0	2,33	22,0	8,60	56,0	96,0	56,0	2,33	24,0
3,80	59,0	94,0	59,0	2,80	21,0	8,80	77,0	112,0	77,0	3,20	24,0
4,00	54,0	96,0	54,0	2,40	22,0	**9,00**	58,0	106,0	58,0	2,40	24,0
4,20	53,0	89,0	53,0	1,93	27,0	9,20	52,0	88,0	52,0	1,20	43,0
4,40	60,0	89,0	60,0	2,53	24,0	9,40	47,0	65,0	47,0	2,07	23,0
4,60	51,0	89,0	51,0	1,93	26,0	9,60	37,0	68,0	37,0	1,73	21,0
4,80	60,0	89,0	60,0	2,07	29,0	9,80	44,0	70,0	44,0	1,53	29,0
5,00	44,0	75,0	44,0	1,53	29,0	**10,00**	51,0	74,0	51,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 122
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-122
- data : 09/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,40	----
0,60	22,0	43,0	22,0	1,47	15,0
0,80	21,0	43,0	21,0	1,00	21,0
1,00	22,0	37,0	22,0	0,53	41,0
1,20	34,0	42,0	34,0	0,93	36,0
1,40	34,0	48,0	34,0	0,80	42,0
1,60	41,0	53,0	41,0	1,93	21,0
1,80	42,0	71,0	42,0	3,27	13,0
2,00	38,0	87,0	38,0	3,47	11,0
2,20	35,0	87,0	35,0	2,93	12,0
2,40	34,0	78,0	34,0	3,40	10,0
2,60	17,0	68,0	17,0	2,67	6,0
2,80	160,0	200,0	160,0	4,33	37,0
3,00	220,0	285,0	220,0	6,67	33,0
3,20	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 136
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-136
- data : 10/01/1997
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	3,20	70,0	102,0	70,0	1,67	42,0
0,40	----	----	--	0,47	----	3,40	65,0	90,0	65,0	2,33	28,0
0,60	13,0	20,0	13,0	0,20	65,0	3,60	51,0	86,0	51,0	1,40	36,0
0,80	18,0	21,0	18,0	0,47	39,0	3,80	41,0	62,0	41,0	1,47	28,0
1,00	13,0	20,0	13,0	2,87	5,0	**4,00**	49,0	71,0	49,0	1,00	49,0
1,20	80,0	123,0	80,0	4,07	20,0	4,20	55,0	70,0	55,0	1,07	52,0
1,40	52,0	113,0	52,0	4,27	12,0	4,40	47,0	63,0	47,0	0,87	54,0
1,60	86,0	150,0	86,0	1,33	64,0	4,60	43,0	56,0	43,0	1,67	26,0
1,80	104,0	124,0	104,0	1,07	97,0	4,80	30,0	55,0	30,0	1,33	22,0
2,00	119,0	135,0	119,0	1,07	112,0	**5,00**	130,0	150,0	130,0	7,67	17,0
2,20	87,0	103,0	87,0	1,00	87,0	5,20	155,0	270,0	155,0	8,67	18,0
2,40	55,0	70,0	55,0	1,00	55,0	5,40	150,0	280,0	150,0	6,67	23,0
2,60	56,0	71,0	56,0	1,33	42,0	5,60	180,0	280,0	180,0	8,67	21,0
2,80	82,0	102,0	82,0	1,73	47,0	5,80	190,0	320,0	190,0	8,00	24,0
3,00	80,0	106,0	80,0	2,13	37,0	**6,00**	330,0	450,0	330,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 139
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-139
- data : 10/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	3,20	52,0	81,0	52,0	2,13	24,0
0,40	----	----	--	1,20	----	3,40	52,0	84,0	52,0	2,47	21,0
0,60	22,0	40,0	22,0	1,67	13,0	3,60	50,0	87,0	50,0	2,07	24,0
0,80	25,0	50,0	25,0	2,13	12,0	3,80	51,0	82,0	51,0	1,80	28,0
1,00	26,0	58,0	26,0	1,20	22,0	**4,00**	48,0	75,0	48,0	2,00	24,0
1,20	27,0	45,0	27,0	1,07	25,0	4,20	49,0	79,0	49,0	1,93	25,0
1,40	26,0	42,0	26,0	1,80	14,0	4,40	39,0	68,0	39,0	1,60	24,0
1,60	27,0	54,0	27,0	1,13	24,0	4,60	35,0	59,0	35,0	1,67	21,0
1,80	36,0	53,0	36,0	1,07	34,0	4,80	32,0	57,0	32,0	1,60	20,0
2,00	45,0	61,0	45,0	1,13	40,0	**5,00**	36,0	60,0	36,0	1,80	20,0
2,20	26,0	43,0	26,0	0,80	32,0	5,20	43,0	70,0	43,0	1,53	28,0
2,40	23,0	35,0	23,0	0,20	115,0	5,40	50,0	73,0	50,0	2,60	19,0
2,60	28,0	31,0	28,0	0,93	30,0	5,60	55,0	94,0	55,0	3,13	18,0
2,80	23,0	37,0	23,0	1,13	20,0	5,80	58,0	105,0	58,0	8,00	7,0
3,00	50,0	67,0	50,0	1,93	26,0	**6,00**	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 144
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-144
- data : 10/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	3,27	----
0,60	39,0	88,0	39,0	2,80	14,0
0,80	38,0	80,0	38,0	2,40	16,0
1,00	38,0	74,0	38,0	3,07	12,0
1,20	36,0	82,0	36,0	2,47	15,0
1,40	22,0	59,0	22,0	1,33	16,0
1,60	28,0	48,0	28,0	1,33	21,0
1,80	27,0	47,0	27,0	0,87	31,0
2,00	13,0	26,0	13,0	0,60	22,0
2,20	12,0	21,0	12,0	0,53	22,0
2,40	15,0	23,0	15,0	0,53	28,0
2,60	19,0	27,0	19,0	0,60	32,0
2,80	16,0	25,0	16,0	0,67	24,0
3,00	14,0	24,0	14,0	0,60	23,0
3,20	14,0	23,0	14,0	0,47	30,0
3,40	18,0	25,0	18,0	0,73	25,0
3,60	14,0	25,0	14,0	0,40	35,0
3,80	17,0	23,0	17,0	0,73	23,0
4,00	15,0	26,0	15,0	0,67	22,0
4,20	17,0	27,0	17,0	0,73	23,0
4,40	19,0	30,0	19,0	0,80	24,0
4,60	19,0	31,0	19,0	1,00	19,0
4,80	22,0	37,0	22,0	0,73	30,0
5,00	18,0	29,0	18,0	0,53	34,0
5,20	16,0	24,0	16,0	0,33	48,0
5,40	13,0	18,0	13,0	0,33	39,0
5,60	10,0	15,0	10,0	0,33	30,0
5,80	7,0	12,0	7,0	0,33	21,0
6,00	11,0	16,0	11,0	0,27	41,0
6,20	11,0	15,0	11,0	0,47	24,0
6,40	9,0	16,0	9,0	0,27	34,0
6,60	11,0	15,0	11,0	0,47	24,0
6,80	10,0	17,0	10,0	0,67	15,0
7,00	15,0	25,0	15,0	0,47	32,0
7,20	15,0	22,0	15,0	0,33	45,0
7,40	18,0	23,0	18,0	0,40	45,0
7,60	35,0	41,0	35,0	1,13	31,0
7,80	33,0	50,0	33,0	2,73	12,0
8,00	39,0	80,0	39,0	0,87	45,0
8,20	97,0	110,0	97,0	1,00	97,0
8,40	76,0	91,0	76,0	0,53	142,0
8,60	128,0	136,0	128,0	6,00	21,0
8,80	150,0	240,0	150,0	10,00	15,0
9,00	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 147
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-147
- data : 11/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	3,93	----
0,40	----	59,0	--	1,00	----
0,60	59,0	74,0	59,0	2,27	26,0
0,80	90,0	124,0	90,0	1,60	56,0
1,00	87,0	111,0	87,0	4,00	22,0
1,20	104,0	164,0	104,0	4,40	24,0
1,40	75,0	141,0	75,0	3,87	19,0
1,60	45,0	103,0	45,0	1,87	24,0
1,80	39,0	67,0	39,0	3,13	12,0
2,00	48,0	95,0	48,0	3,47	14,0
2,20	48,0	100,0	48,0	4,40	11,0
2,40	47,0	113,0	47,0	4,13	11,0
2,60	40,0	102,0	40,0	1,00	40,0
2,80	56,0	71,0	56,0	3,67	15,0
3,00	63,0	118,0	63,0	4,53	14,0
3,20	282,0	350,0	282,0	10,07	28,0
3,40	136,0	287,0	136,0	8,53	16,0
3,60	332,0	460,0	332,0	4,67	71,0
3,80	350,0	420,0	350,0	5,33	66,0
4,00	300,0	380,0	300,0	1,33	225,0
4,20	38,0	58,0	38,0	0,87	44,0
4,40	48,0	61,0	48,0	1,07	45,0
4,60	41,0	57,0	41,0	1,33	31,0
4,80	40,0	60,0	40,0	1,80	22,0
5,00	43,0	70,0	43,0	1,27	34,0
5,20	42,0	61,0	42,0	1,27	33,0
5,40	36,0	55,0	36,0	1,40	26,0
5,60	37,0	58,0	37,0	3,73	10,0
5,80	33,0	89,0	33,0	5,07	7,0
6,00	140,0	216,0	140,0	5,80	24,0
6,20	313,0	400,0	313,0	6,00	52,0
6,40	330,0	420,0	330,0	6,67	50,0
6,60	400,0	500,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 148
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-148
- data : 11/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,40	----
0,60	65,0	86,0	65,0	0,87	75,0
0,80	70,0	83,0	70,0	2,13	33,0
1,00	118,0	150,0	118,0	2,33	51,0
1,20	95,0	130,0	95,0	2,67	36,0
1,40	88,0	128,0	88,0	2,27	39,0
1,60	80,0	114,0	80,0	4,33	18,0
1,80	82,0	147,0	82,0	5,73	14,0
2,00	41,0	127,0	41,0	3,87	11,0
2,20	40,0	98,0	40,0	2,87	14,0
2,40	49,0	92,0	49,0	2,47	20,0
2,60	59,0	96,0	59,0	3,47	17,0
2,80	76,0	128,0	76,0	4,33	18,0
3,00	84,0	149,0	84,0	6,93	12,0
3,20	83,0	187,0	83,0	6,60	13,0
3,40	73,0	172,0	73,0	6,00	12,0
3,60	70,0	160,0	70,0	5,53	13,0
3,80	58,0	141,0	58,0	2,60	22,0
4,00	61,0	100,0	61,0	4,07	15,0
4,20	68,0	129,0	68,0	1,00	68,0
4,40	42,0	57,0	42,0	1,13	37,0
4,60	54,0	71,0	54,0	2,00	27,0
4,80	50,0	80,0	50,0	3,53	14,0
5,00	36,0	89,0	36,0	1,27	28,0
5,20	41,0	60,0	41,0	1,53	27,0
5,40	29,0	52,0	29,0	1,13	26,0
5,60	24,0	41,0	24,0	0,93	26,0
5,80	24,0	38,0	24,0	1,00	24,0
6,00	32,0	47,0	32,0	1,40	23,0
6,20	30,0	51,0	30,0	2,93	10,0
6,40	90,0	134,0	90,0	1,27	71,0
6,60	85,0	104,0	85,0	2,13	40,0
6,80	91,0	123,0	91,0	4,00	23,0
7,00	78,0	138,0	78,0	3,93	20,0
7,20	66,0	125,0	66,0	4,47	15,0
7,40	67,0	134,0	67,0	3,53	19,0
7,60	69,0	122,0	69,0	4,33	16,0
7,80	70,0	135,0	70,0	4,00	18,0
8,00	66,0	126,0	66,0	2,20	30,0
8,20	69,0	102,0	69,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 149
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-149
- data : 11/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,20	----
0,60	49,0	67,0	49,0	1,47	33,0
0,80	24,0	46,0	24,0	1,33	18,0
1,00	40,0	60,0	40,0	1,80	22,0
1,20	28,0	55,0	28,0	2,40	12,0
1,40	50,0	86,0	50,0	2,93	17,0
1,60	49,0	93,0	49,0	3,07	16,0
1,80	35,0	81,0	35,0	2,27	15,0
2,00	25,0	59,0	25,0	1,60	16,0
2,20	19,0	43,0	19,0	1,20	16,0
2,40	19,0	37,0	19,0	1,27	15,0
2,60	22,0	41,0	22,0	1,53	14,0
2,80	28,0	51,0	28,0	1,53	18,0
3,00	37,0	60,0	37,0	2,00	18,0
3,20	38,0	68,0	38,0	0,93	41,0
3,40	42,0	56,0	42,0	2,00	21,0
3,60	37,0	67,0	37,0	2,13	17,0
3,80	41,0	73,0	41,0	2,20	19,0
4,00	37,0	70,0	37,0	1,47	25,0
4,20	39,0	61,0	39,0	1,53	25,0
4,40	28,0	51,0	28,0	1,47	19,0
4,60	30,0	52,0	30,0	1,47	20,0
4,80	23,0	45,0	23,0	1,53	15,0
5,00	31,0	54,0	31,0	1,13	27,0
5,20	41,0	58,0	41,0	1,60	26,0
5,40	37,0	61,0	37,0	5,73	6,0
5,60	135,0	221,0	135,0	3,00	45,0
5,80	194,0	239,0	194,0	6,80	29,0
6,00	60,0	162,0	60,0	11,40	5,0
6,20	19,0	190,0	19,0	9,67	2,0
6,40	215,0	360,0	215,0	4,87	44,0
6,60	47,0	120,0	47,0	4,20	11,0
6,80	67,0	130,0	67,0	7,33	9,0
7,00	290,0	400,0	290,0	10,00	29,0
7,20	230,0	380,0	230,0	12,87	18,0
7,40	257,0	450,0	257,0	10,00	26,0
7,60	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 150
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-150	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	1,00	----	0,80	39,0	64,0	39,0	3,27	12,0
0,40	25,0	40,0	25,0	0,73	34,0	**1,00**	41,0	90,0	41,0	4,67	9,0
0,60	34,0	45,0	34,0	1,67	20,0	1,20	280,0	350,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 277
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-277
- data : 24/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,20	82,0	133,0	82,0	4,67	18,0
0,40	----	----	--	5,13	----	2,40	80,0	150,0	80,0	9,73	8,0
0,60	50,0	127,0	50,0	2,20	23,0	2,60	100,0	246,0	100,0	8,40	12,0
0,80	67,0	100,0	67,0	3,07	22,0	2,80	114,0	240,0	114,0	9,33	12,0
1,00	80,0	126,0	80,0	4,27	19,0	**3,00**	120,0	260,0	120,0	9,00	13,0
1,20	88,0	152,0	88,0	4,73	19,0	3,20	140,0	275,0	140,0	10,00	14,0
1,40	70,0	141,0	70,0	1,93	36,0	3,40	150,0	300,0	150,0	6,00	25,0
1,60	88,0	117,0	88,0	1,47	60,0	3,60	220,0	310,0	220,0	8,00	28,0
1,80	90,0	112,0	90,0	3,60	25,0	3,80	280,0	400,0	280,0	16,67	17,0
2,00	88,0	142,0	88,0	3,40	26,0	**4,00**	450,0	700,0	450,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 281
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-281
- data : 24/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	2,73	----
0,60	105,0	146,0	105,0	1,87	56,0
0,80	178,0	206,0	178,0	2,73	65,0
1,00	128,0	169,0	128,0	4,13	31,0
1,20	142,0	204,0	142,0	4,80	30,0
1,40	99,0	171,0	99,0	3,80	26,0
1,60	70,0	127,0	70,0	2,80	25,0
1,80	72,0	114,0	72,0	2,60	28,0
2,00	39,0	78,0	39,0	1,67	23,0
2,20	78,0	103,0	78,0	1,47	53,0
2,40	76,0	98,0	76,0	0,67	114,0
2,60	82,0	92,0	82,0	2,07	40,0
2,80	55,0	86,0	55,0	1,87	29,0
3,00	48,0	76,0	48,0	1,40	34,0

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
3,20	100,0	121,0	100,0	2,47	41,0
3,40	78,0	115,0	78,0	2,27	34,0
3,60	61,0	95,0	61,0	1,93	32,0
3,80	47,0	76,0	47,0	0,80	59,0
4,00	37,0	49,0	37,0	1,60	23,0
4,20	26,0	50,0	26,0	2,00	13,0
4,40	26,0	56,0	26,0	3,80	7,0
4,60	190,0	247,0	190,0	5,47	35,0
4,80	164,0	246,0	164,0	4,60	36,0
5,00	147,0	216,0	147,0	8,73	17,0
5,20	119,0	250,0	119,0	3,00	40,0
5,40	165,0	210,0	165,0	8,67	19,0
5,60	320,0	450,0	320,0	13,33	24,0
5,80	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 272
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-272
- data : 23/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	59,0	72,0	59,0	2,67	22,0
0,80	40,0	80,0	40,0	1,47	27,0
1,00	50,0	72,0	50,0	1,47	34,0
1,20	33,0	55,0	33,0	3,33	10,0
1,40	14,0	64,0	14,0	0,40	35,0
1,60	9,0	15,0	9,0	0,60	15,0
1,80	7,0	16,0	7,0	0,47	15,0
2,00	12,0	19,0	12,0	1,47	8,0
2,20	60,0	82,0	60,0	5,33	11,0
2,40	340,0	420,0	340,0	6,00	57,0
2,60	350,0	440,0	350,0	9,20	38,0
2,80	22,0	160,0	22,0	0,53	41,0
3,00	18,0	26,0	18,0	1,73	10,0
3,20	31,0	57,0	31,0	1,67	19,0
3,40	20,0	45,0	20,0	0,93	21,0
3,60	25,0	39,0	25,0	0,60	42,0
3,80	25,0	34,0	25,0	1,00	25,0
4,00	19,0	34,0	19,0	0,67	28,0
4,20	25,0	35,0	25,0	1,07	23,0
4,40	23,0	39,0	23,0	1,07	22,0
4,60	25,0	41,0	25,0	1,20	21,0
4,80	25,0	43,0	25,0	1,93	13,0
5,00	26,0	55,0	26,0	2,80	9,0
5,20	29,0	71,0	29,0	1,93	15,0
5,40	31,0	60,0	31,0	2,00	16,0
5,60	45,0	75,0	45,0	3,27	14,0
5,80	34,0	83,0	34,0	3,20	11,0
6,00	28,0	76,0	28,0	2,93	10,0
6,20	28,0	72,0	28,0	2,93	10,0
6,40	27,0	71,0	27,0	3,00	9,0
6,60	27,0	72,0	27,0	2,33	12,0
6,80	31,0	66,0	31,0	2,67	12,0
7,00	35,0	75,0	35,0	7,47	5,0
7,20	46,0	158,0	46,0	5,27	9,0
7,40	37,0	116,0	37,0	3,67	10,0
7,60	42,0	97,0	42,0	2,33	18,0
7,80	40,0	75,0	40,0	2,80	14,0
8,00	40,0	82,0	40,0	2,87	14,0
8,20	40,0	83,0	40,0	4,20	10,0
8,40	39,0	102,0	39,0	4,53	9,0
8,60	37,0	105,0	37,0	3,60	10,0
8,80	36,0	90,0	36,0	3,20	11,0
9,00	40,0	88,0	40,0	3,33	12,0
9,20	42,0	92,0	42,0	2,93	14,0
9,40	44,0	88,0	44,0	4,07	11,0
9,60	39,0	100,0	39,0	4,27	9,0
9,80	38,0	102,0	38,0	3,87	10,0
10,00	42,0	100,0	42,0	3,87	11,0
10,20	44,0	102,0	44,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 274
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-274
- data : 23/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	33,0	87,0	33,0	1,87	18,0
0,40	----	----	--	0,93	----	5,40	20,0	48,0	20,0	1,33	15,0
0,60	40,0	54,0	40,0	1,47	27,0	5,60	30,0	50,0	30,0	1,27	24,0
0,80	38,0	60,0	38,0	1,93	20,0	5,80	33,0	52,0	33,0	2,60	13,0
1,00	35,0	64,0	35,0	0,73	48,0	**6,00**	32,0	71,0	32,0	2,27	14,0
1,20	60,0	71,0	60,0	3,53	17,0	6,20	33,0	67,0	33,0	0,93	35,0
1,40	42,0	95,0	42,0	2,27	19,0	6,40	36,0	50,0	36,0	2,40	15,0
1,60	43,0	77,0	43,0	2,00	22,0	6,60	26,0	62,0	26,0	1,87	14,0
1,80	50,0	80,0	50,0	2,47	20,0	6,80	34,0	62,0	34,0	1,67	20,0
2,00	40,0	77,0	40,0	2,47	16,0	**7,00**	29,0	54,0	29,0	2,07	14,0
2,20	26,0	63,0	26,0	1,73	15,0	7,20	17,0	48,0	17,0	1,60	11,0
2,40	23,0	49,0	23,0	1,33	17,0	7,40	27,0	51,0	27,0	1,87	14,0
2,60	21,0	41,0	21,0	1,27	17,0	7,60	28,0	56,0	28,0	1,80	16,0
2,80	14,0	33,0	14,0	1,07	13,0	7,80	54,0	81,0	54,0	3,07	18,0
3,00	18,0	34,0	18,0	0,80	22,0	**8,00**	48,0	94,0	48,0	2,47	19,0
3,20	21,0	33,0	21,0	0,73	29,0	8,20	83,0	120,0	83,0	2,27	37,0
3,40	26,0	37,0	26,0	1,07	24,0	8,40	115,0	149,0	115,0	2,47	47,0
3,60	29,0	45,0	29,0	2,07	14,0	8,60	101,0	138,0	101,0	2,80	36,0
3,80	14,0	45,0	14,0	1,67	8,0	8,80	91,0	133,0	91,0	2,47	37,0
4,00	10,0	35,0	10,0	0,80	12,0	**9,00**	111,0	148,0	111,0	3,33	33,0
4,20	10,0	22,0	10,0	0,73	14,0	9,20	105,0	155,0	105,0	4,87	22,0
4,40	18,0	29,0	18,0	0,47	39,0	9,40	107,0	180,0	107,0	4,33	25,0
4,60	27,0	34,0	27,0	1,60	17,0	9,60	110,0	175,0	110,0	3,67	30,0
4,80	42,0	66,0	42,0	1,80	23,0	9,80	90,0	145,0	90,0	3,87	23,0
5,00	26,0	53,0	26,0	3,60	7,0	**10,00**	104,0	162,0	104,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 284
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P003-20-284
- data : 25/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	44,0	78,0	44,0	2,07	21,0
0,40	----	----	--	1,00	----	5,40	40,0	71,0	40,0	3,07	13,0
0,60	14,0	29,0	14,0	0,47	30,0	5,60	39,0	85,0	39,0	2,53	15,0
0,80	13,0	20,0	13,0	1,53	8,0	5,80	48,0	86,0	48,0	3,13	15,0
1,00	40,0	63,0	40,0	1,40	29,0	**6,00**	45,0	92,0	45,0	3,33	14,0
1,20	65,0	86,0	65,0	2,67	24,0	6,20	50,0	100,0	50,0	3,27	15,0
1,40	73,0	113,0	73,0	2,13	34,0	6,40	54,0	103,0	54,0	3,93	14,0
1,60	71,0	103,0	71,0	2,13	33,0	6,60	26,0	85,0	26,0	4,33	6,0
1,80	45,0	77,0	45,0	3,47	13,0	6,80	49,0	114,0	49,0	6,40	8,0
2,00	33,0	85,0	33,0	1,20	27,0	**7,00**	72,0	168,0	72,0	5,47	13,0
2,20	30,0	48,0	30,0	1,33	22,0	7,20	95,0	177,0	95,0	3,93	24,0
2,40	23,0	43,0	23,0	1,73	13,0	7,40	41,0	100,0	41,0	4,00	10,0
2,60	21,0	47,0	21,0	1,53	14,0	7,60	36,0	96,0	36,0	2,87	13,0
2,80	38,0	61,0	38,0	1,53	25,0	7,80	45,0	88,0	45,0	3,40	13,0
3,00	18,0	41,0	18,0	1,27	14,0	**8,00**	54,0	105,0	54,0	0,33	162,0
3,20	14,0	33,0	14,0	0,87	16,0	8,20	97,0	102,0	97,0	2,60	37,0
3,40	14,0	27,0	14,0	0,87	16,0	8,40	78,0	117,0	78,0	5,20	15,0
3,60	9,0	22,0	9,0	0,73	12,0	8,60	43,0	121,0	43,0	4,40	10,0
3,80	14,0	25,0	14,0	0,87	16,0	8,80	44,0	110,0	44,0	4,80	9,0
4,00	14,0	27,0	14,0	1,27	11,0	**9,00**	56,0	128,0	56,0	4,00	14,0
4,20	23,0	42,0	23,0	3,40	7,0	9,20	55,0	115,0	55,0	4,33	13,0
4,40	18,0	69,0	18,0	2,13	8,0	9,40	62,0	127,0	62,0	4,47	14,0
4,60	44,0	76,0	44,0	1,67	26,0	9,60	68,0	135,0	68,0	4,47	15,0
4,80	47,0	72,0	47,0	2,33	20,0	9,80	43,0	110,0	43,0	5,27	8,0
5,00	79,0	114,0	79,0	2,27	35,0	**10,00**	54,0	133,0	54,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 285
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P003-20-285
- data : 25/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,40	----
0,60	68,0	89,0	68,0	2,47	28,0
0,80	55,0	92,0	55,0	1,60	34,0
1,00	57,0	81,0	57,0	2,13	27,0
1,20	49,0	81,0	49,0	2,87	17,0
1,40	44,0	87,0	44,0	2,73	16,0
1,60	51,0	92,0	51,0	0,20	255,0
1,80	29,0	32,0	29,0	1,07	27,0
2,00	18,0	34,0	18,0	1,00	18,0
2,20	14,0	29,0	14,0	0,80	17,0
2,40	21,0	33,0	21,0	1,13	19,0
2,60	22,0	39,0	22,0	1,47	15,0
2,80	22,0	44,0	22,0	1,80	12,0
3,00	27,0	54,0	27,0	2,47	11,0
3,20	123,0	160,0	123,0	9,80	13,0
3,40	36,0	183,0	36,0	2,60	14,0
3,60	33,0	72,0	33,0	7,13	5,0
3,80	36,0	143,0	36,0	1,40	26,0
4,00	105,0	126,0	105,0	3,13	34,0
4,20	78,0	125,0	78,0	3,00	26,0
4,40	35,0	80,0	35,0	2,40	15,0
4,60	30,0	66,0	30,0	2,40	12,0
4,80	30,0	66,0	30,0	2,53	12,0
5,00	62,0	100,0	62,0	2,60	24,0
5,20	80,0	119,0	80,0	3,93	20,0
5,40	63,0	122,0	63,0	3,60	18,0
5,60	75,0	129,0	75,0	4,60	16,0
5,80	60,0	129,0	60,0	3,87	16,0
6,00	69,0	127,0	69,0	2,20	31,0
6,20	110,0	143,0	110,0	5,07	22,0
6,40	100,0	176,0	100,0	4,47	22,0
6,60	77,0	144,0	77,0	4,27	18,0
6,80	80,0	144,0	80,0	14,00	6,0
7,00	220,0	430,0	220,0	14,27	15,0
7,20	190,0	404,0	190,0	4,13	46,0
7,40	150,0	212,0	150,0	4,80	31,0
7,60	80,0	152,0	80,0	4,27	19,0
7,80	77,0	141,0	77,0	5,27	15,0
8,00	69,0	148,0	69,0	4,80	14,0
8,20	95,0	167,0	95,0	5,20	18,0
8,40	100,0	178,0	100,0	6,40	16,0
8,60	96,0	192,0	96,0	7,87	12,0
8,80	85,0	203,0	85,0	6,27	14,0
9,00	124,0	218,0	124,0	5,33	23,0
9,20	100,0	180,0	100,0	3,40	29,0
9,40	99,0	150,0	99,0	2,73	36,0
9,60	103,0	144,0	103,0	5,07	20,0
9,80	150,0	226,0	150,0	4,27	35,0
10,00	126,0	190,0	126,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 286
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P003-20-286
- data : 25/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	38,0	100,0	38,0	2,80	14,0
0,40	----	----	--	1,00	----	5,40	60,0	102,0	60,0	3,60	17,0
0,60	14,0	29,0	14,0	0,93	15,0	5,60	45,0	99,0	45,0	1,53	29,0
0,80	18,0	32,0	18,0	1,13	16,0	5,80	76,0	99,0	76,0	2,00	38,0
1,00	18,0	35,0	18,0	1,20	15,0	**6,00**	94,0	124,0	94,0	1,73	54,0
1,20	12,0	30,0	12,0	1,67	7,0	6,20	92,0	118,0	92,0	2,40	38,0
1,40	15,0	40,0	15,0	0,53	28,0	6,40	88,0	124,0	88,0	1,93	46,0
1,60	36,0	44,0	36,0	0,80	45,0	6,60	75,0	104,0	75,0	1,60	47,0
1,80	38,0	50,0	38,0	1,13	34,0	6,80	82,0	106,0	82,0	1,73	47,0
2,00	37,0	54,0	37,0	2,27	16,0	**7,00**	84,0	110,0	84,0	4,53	19,0
2,20	28,0	62,0	28,0	1,33	21,0	7,20	166,0	234,0	166,0	3,73	44,0
2,40	20,0	40,0	20,0	2,20	9,0	7,40	171,0	227,0	171,0	6,40	27,0
2,60	22,0	55,0	22,0	2,40	9,0	7,60	87,0	183,0	87,0	2,73	32,0
2,80	24,0	60,0	24,0	2,27	11,0	7,80	85,0	126,0	85,0	1,80	47,0
3,00	18,0	52,0	18,0	1,67	11,0	**8,00**	83,0	110,0	83,0	3,20	26,0
3,20	37,0	62,0	37,0	1,73	21,0	8,20	120,0	168,0	120,0	1,67	72,0
3,40	42,0	68,0	42,0	2,13	20,0	8,40	130,0	155,0	130,0	4,27	30,0
3,60	40,0	72,0	40,0	2,93	14,0	8,60	86,0	150,0	86,0	4,93	17,0
3,80	44,0	88,0	44,0	2,33	19,0	8,80	88,0	162,0	88,0	4,47	20,0
4,00	42,0	77,0	42,0	1,73	24,0	**9,00**	85,0	152,0	85,0	4,13	21,0
4,20	36,0	62,0	36,0	2,87	13,0	9,20	98,0	160,0	98,0	5,00	20,0
4,40	27,0	70,0	27,0	2,33	12,0	9,40	135,0	210,0	135,0	4,07	33,0
4,60	33,0	68,0	33,0	2,33	14,0	9,60	127,0	188,0	127,0	3,47	37,0
4,80	37,0	72,0	37,0	3,40	11,0	9,80	120,0	172,0	120,0	3,73	32,0
5,00	40,0	91,0	40,0	4,13	10,0	**10,00**	110,0	166,0	110,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 267
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P003-20-267
- data : 22/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,80	----
0,60	51,0	63,0	51,0	1,00	51,0
0,80	63,0	78,0	63,0	0,73	86,0
1,00	64,0	75,0	64,0	3,20	20,0
1,20	80,0	128,0	80,0	2,07	39,0
1,40	32,0	63,0	32,0	2,40	13,0
1,60	43,0	79,0	43,0	3,20	13,0
1,80	47,0	95,0	47,0	4,13	11,0
2,00	36,0	98,0	36,0	2,73	13,0
2,20	49,0	90,0	49,0	3,33	15,0
2,40	29,0	79,0	29,0	3,27	9,0
2,60	31,0	80,0	31,0	1,20	26,0
2,80	49,0	67,0	49,0	3,87	13,0
3,00	54,0	112,0	54,0	2,93	18,0
3,20	54,0	98,0	54,0	2,00	27,0
3,40	72,0	102,0	72,0	3,33	22,0
3,60	53,0	103,0	53,0	3,20	17,0
3,80	49,0	97,0	49,0	1,87	26,0
4,00	72,0	100,0	72,0	3,20	22,0
4,20	37,0	85,0	37,0	3,40	11,0
4,40	46,0	97,0	46,0	2,73	17,0
4,60	47,0	88,0	47,0	3,73	13,0
4,80	80,0	136,0	80,0	4,87	16,0
5,00	60,0	133,0	60,0	2,53	24,0
5,20	129,0	167,0	129,0	7,60	17,0
5,40	80,0	194,0	80,0	4,80	17,0
5,60	111,0	183,0	111,0	4,47	25,0
5,80	101,0	168,0	101,0	6,07	17,0
6,00	124,0	215,0	124,0	8,67	14,0
6,20	220,0	350,0	220,0	8,67	25,0
6,40	203,0	333,0	203,0	9,13	22,0
6,60	198,0	335,0	198,0	1,67	119,0
6,80	200,0	225,0	200,0	4,67	43,0
7,00	280,0	350,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 262
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Circello (BN)
- note : Cert. P003-20-262
- data : 22/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,00	----
0,60	55,0	70,0	55,0	1,27	43,0
0,80	56,0	75,0	56,0	1,00	56,0
1,00	55,0	70,0	55,0	1,40	39,0
1,20	62,0	83,0	62,0	2,47	25,0
1,40	52,0	89,0	52,0	2,40	22,0
1,60	70,0	106,0	70,0	2,67	26,0
1,80	70,0	110,0	70,0	1,60	44,0
2,00	98,0	122,0	98,0	2,53	39,0
2,20	69,0	107,0	69,0	2,00	34,0
2,40	68,0	98,0	68,0	1,73	39,0
2,60	55,0	81,0	55,0	0,40	137,0
2,80	58,0	64,0	58,0	1,60	36,0
3,00	45,0	69,0	45,0	1,20	37,0
3,20	90,0	108,0	90,0	2,40	37,0
3,40	166,0	202,0	166,0	5,27	32,0
3,60	196,0	275,0	196,0	8,00	24,0
3,80	170,0	290,0	170,0	8,47	20,0
4,00	185,0	312,0	185,0	7,47	25,0
4,20	160,0	272,0	160,0	8,73	18,0
4,40	111,0	242,0	111,0	7,67	14,0
4,60	154,0	269,0	154,0	5,87	26,0
4,80	155,0	243,0	155,0	3,33	47,0
5,00	280,0	330,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :
- lavoro :
- località :
- note :

- data : 30/12/1899
- quota inizio :
- prof. falda : 0,00 m da quota inizio
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,60	42,0	70,0	42,0	2,13	20,0	0,60	42,0	70,0	42,0	2,13	20,0
0,80	38,0	70,0	38,0	2,33	16,0	0,80	38,0	70,0	38,0	2,33	16,0
1,00	45,0	80,0	45,0	0,80	56,0	**1,00**	45,0	80,0	45,0	0,80	56,0
1,20	50,0	62,0	50,0	1,07	47,0	1,20	50,0	62,0	50,0	1,07	47,0
1,40	34,0	50,0	34,0	1,00	34,0	1,40	34,0	50,0	34,0	1,00	34,0
1,60	27,0	42,0	27,0	1,87	14,0	1,60	27,0	42,0	27,0	1,87	14,0
1,80	32,0	60,0	32,0	1,53	21,0	1,80	32,0	60,0	32,0	1,53	21,0
2,00	115,0	138,0	115,0	2,73	42,0	**2,00**	115,0	138,0	115,0	2,73	42,0
2,20	30,0	71,0	30,0	2,20	14,0	2,20	30,0	71,0	30,0	2,20	14,0
2,40	12,0	45,0	12,0	1,20	10,0	2,40	12,0	45,0	12,0	1,20	10,0
2,60	12,0	30,0	12,0	1,27	9,0	2,60	12,0	30,0	12,0	1,27	9,0
2,80	12,0	31,0	12,0	1,40	9,0	2,80	12,0	31,0	12,0	1,40	9,0
3,00	16,0	37,0	16,0	1,47	11,0	**3,00**	16,0	37,0	16,0	1,47	11,0
3,20	16,0	38,0	16,0	1,53	10,0	3,20	16,0	38,0	16,0	1,53	10,0
3,40	15,0	38,0	15,0	1,40	11,0	3,40	15,0	38,0	15,0	1,40	11,0
3,60	19,0	40,0	19,0	1,53	12,0	3,60	19,0	40,0	19,0	1,53	12,0
3,80	15,0	38,0	15,0	1,27	12,0	3,80	15,0	38,0	15,0	1,27	12,0
4,00	14,0	33,0	14,0	0,80	17,0	**4,00**	14,0	33,0	14,0	0,80	17,0
4,20	19,0	31,0	19,0	0,67	28,0	4,20	19,0	31,0	19,0	0,67	28,0
4,40	22,0	32,0	22,0	1,00	22,0	4,40	22,0	32,0	22,0	1,00	22,0
4,60	32,0	47,0	32,0	1,53	21,0	4,60	32,0	47,0	32,0	1,53	21,0
4,80	53,0	76,0	53,0	1,40	38,0	4,80	53,0	76,0	53,0	1,40	38,0
5,00	44,0	65,0	44,0	2,07	21,0	**5,00**	44,0	65,0	44,0	2,07	21,0
5,20	34,0	65,0	34,0	2,07	16,0	5,20	34,0	65,0	34,0	2,07	16,0
5,40	44,0	75,0	44,0	2,33	19,0	5,40	44,0	75,0	44,0	2,33	19,0
5,60	75,0	110,0	75,0	1,33	56,0	5,60	75,0	110,0	75,0	1,33	56,0
5,80	90,0	110,0	90,0	4,33	21,0	5,80	90,0	110,0	90,0	4,33	21,0
6,00	69,0	134,0	69,0	2,80	25,0	**6,00**	69,0	134,0	69,0	2,80	25,0
6,20	45,0	87,0	45,0	2,87	16,0	6,20	45,0	87,0	45,0	2,87	16,0
6,40	40,0	83,0	40,0	1,53	26,0	6,40	40,0	83,0	40,0	1,53	26,0
6,60	59,0	82,0	59,0	2,67	22,0	6,60	59,0	82,0	59,0	2,67	22,0
6,80	45,0	85,0	45,0	2,27	20,0	6,80	45,0	85,0	45,0	2,27	20,0
7,00	54,0	88,0	54,0	3,27	17,0	**7,00**	54,0	88,0	54,0	3,27	17,0
7,20	58,0	107,0	58,0	3,27	18,0	7,20	58,0	107,0	58,0	3,27	18,0
7,40	56,0	105,0	56,0	0,73	76,0	7,40	56,0	105,0	56,0	0,73	76,0
7,60	97,0	108,0	97,0	3,73	26,0	7,60	97,0	108,0	97,0	3,73	26,0
7,80	52,0	108,0	52,0	3,73	14,0	7,80	52,0	108,0	52,0	3,73	14,0
8,00	74,0	130,0	74,0	3,67	20,0	**8,00**	74,0	130,0	74,0	3,67	20,0
8,20	67,0	122,0	67,0	3,20	21,0	8,20	67,0	122,0	67,0	3,20	21,0
8,40	66,0	114,0	66,0	3,93	17,0	8,40	66,0	114,0	66,0	3,93	17,0
8,60	53,0	112,0	53,0	3,47	15,0	8,60	53,0	112,0	53,0	3,47	15,0
8,80	60,0	112,0	60,0	4,00	15,0	8,80	60,0	112,0	60,0	4,00	15,0
9,00	52,0	112,0	52,0	3,60	14,0	**9,00**	52,0	112,0	52,0	3,60	14,0
9,20	64,0	118,0	64,0	4,27	15,0	9,20	64,0	118,0	64,0	4,27	15,0
9,40	54,0	118,0	54,0	2,07	26,0	9,40	54,0	118,0	54,0	2,07	26,0
9,60	84,0	115,0	84,0	3,67	23,0	9,60	84,0	115,0	84,0	3,67	23,0
9,80	225,0	280,0	225,0	7,73	29,0	9,80	225,0	280,0	225,0	7,73	29,0
10,00	244,0	360,0	244,0	------	----	**10,00**	244,0	360,0	244,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 0 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 265
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Circello (BN)
- note : Cert. P003-20-265
- data : 22/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	36,0	78,0	36,0	3,20	11,0
0,40	----	----	--	0,33	----	5,40	35,0	83,0	35,0	3,80	9,0
0,60	35,0	40,0	35,0	1,60	22,0	5,60	30,0	87,0	30,0	3,60	8,0
0,80	26,0	50,0	26,0	1,80	14,0	5,80	34,0	88,0	34,0	3,87	9,0
1,00	23,0	50,0	23,0	2,00	12,0	**6,00**	32,0	90,0	32,0	3,53	9,0
1,20	26,0	56,0	26,0	1,80	14,0	6,20	30,0	83,0	30,0	3,80	8,0
1,40	22,0	49,0	22,0	1,20	18,0	6,40	30,0	87,0	30,0	4,00	8,0
1,60	30,0	48,0	30,0	2,13	14,0	6,60	40,0	100,0	40,0	0,87	46,0
1,80	24,0	56,0	24,0	1,73	14,0	6,80	79,0	92,0	79,0	4,07	19,0
2,00	23,0	49,0	23,0	1,87	12,0	**7,00**	55,0	116,0	55,0	2,87	19,0
2,20	35,0	63,0	35,0	2,40	15,0	7,20	72,0	115,0	72,0	2,00	36,0
2,40	23,0	59,0	23,0	1,20	19,0	7,40	105,0	135,0	105,0	4,80	22,0
2,60	39,0	57,0	39,0	1,67	23,0	7,60	64,0	136,0	64,0	1,40	46,0
2,80	28,0	53,0	28,0	2,73	10,0	7,80	103,0	124,0	103,0	1,67	62,0
3,00	27,0	68,0	27,0	2,33	12,0	**8,00**	100,0	125,0	100,0	2,00	50,0
3,20	33,0	68,0	33,0	3,00	11,0	8,20	76,0	106,0	76,0	1,20	63,0
3,40	25,0	70,0	25,0	2,60	10,0	8,40	116,0	134,0	116,0	4,87	24,0
3,60	33,0	72,0	33,0	0,73	45,0	8,60	71,0	144,0	71,0	5,87	12,0
3,80	59,0	70,0	59,0	2,80	21,0	8,80	61,0	149,0	61,0	4,33	14,0
4,00	27,0	69,0	27,0	2,40	11,0	**9,00**	84,0	149,0	84,0	5,73	15,0
4,20	35,0	71,0	35,0	2,73	13,0	9,20	89,0	175,0	89,0	5,53	16,0
4,40	34,0	75,0	34,0	3,53	10,0	9,40	85,0	168,0	85,0	6,33	13,0
4,60	34,0	87,0	34,0	3,20	11,0	9,60	99,0	194,0	99,0	4,80	21,0
4,80	30,0	78,0	30,0	3,07	10,0	9,80	118,0	190,0	118,0	4,67	25,0
5,00	31,0	77,0	31,0	2,80	11,0	**10,00**	120,0	190,0	120,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 219
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pontelandolfo (BN)
- note : Cert. P003-20-219
- data : 19/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,47	----
0,60	17,0	39,0	17,0	1,07	16,0
0,80	47,0	63,0	47,0	1,87	25,0
1,00	46,0	74,0	46,0	1,67	28,0
1,20	48,0	73,0	48,0	1,20	40,0
1,40	63,0	81,0	63,0	0,80	79,0
1,60	70,0	82,0	70,0	0,33	210,0
1,80	69,0	74,0	69,0	1,33	52,0
2,00	100,0	120,0	100,0	1,47	68,0
2,20	78,0	100,0	78,0	2,13	37,0
2,40	64,0	96,0	64,0	1,60	40,0
2,60	70,0	94,0	70,0	1,20	58,0
2,80	100,0	118,0	100,0	0,67	150,0
3,00	108,0	118,0	108,0	1,67	65,0
3,20	95,0	120,0	95,0	1,47	65,0
3,40	70,0	92,0	70,0	0,87	81,0
3,60	105,0	118,0	105,0	2,60	40,0
3,80	58,0	97,0	58,0	1,60	36,0
4,00	103,0	127,0	103,0	1,47	70,0
4,20	114,0	136,0	114,0	2,87	40,0
4,40	145,0	188,0	145,0	1,60	91,0
4,60	132,0	156,0	132,0	1,13	116,0
4,80	103,0	120,0	103,0	2,27	45,0
5,00	161,0	195,0	161,0	1,33	121,0
5,20	179,0	199,0	179,0	1,80	99,0
5,40	115,0	142,0	115,0	2,80	41,0
5,60	105,0	147,0	105,0	2,27	46,0
5,80	141,0	175,0	141,0	4,00	35,0
6,00	161,0	221,0	161,0	4,00	40,0
6,20	103,0	163,0	103,0	7,07	15,0
6,40	144,0	250,0	144,0	3,87	37,0
6,60	176,0	234,0	176,0	2,53	69,0
6,80	170,0	208,0	170,0	5,60	30,0
7,00	125,0	209,0	125,0	6,47	19,0
7,20	79,0	176,0	79,0	2,93	27,0
7,40	89,0	133,0	89,0	6,13	15,0
7,60	175,0	267,0	175,0	2,87	61,0
7,80	87,0	130,0	87,0	3,00	29,0
8,00	115,0	160,0	115,0	1,93	59,0
8,20	81,0	110,0	81,0	1,60	51,0
8,40	75,0	99,0	75,0	2,33	32,0
8,60	160,0	195,0	160,0	3,47	46,0
8,80	153,0	205,0	153,0	5,80	26,0
9,00	130,0	217,0	130,0	3,60	36,0
9,20	93,0	147,0	93,0	10,33	9,0
9,40	195,0	350,0	195,0	6,67	29,0
9,60	300,0	400,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 221
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pontelandolfo (BN)
- note : Cert. P003-20-221
- data : 19/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,33	----
0,60	15,0	35,0	15,0	1,33	11,0
0,80	43,0	63,0	43,0	0,20	215,0
1,00	48,0	51,0	48,0	0,80	60,0
1,20	44,0	56,0	44,0	1,80	24,0
1,40	44,0	71,0	44,0	1,53	29,0
1,60	46,0	69,0	46,0	0,87	53,0
1,80	54,0	67,0	54,0	3,33	16,0
2,00	150,0	200,0	150,0	2,07	73,0
2,20	120,0	151,0	120,0	1,67	72,0
2,40	55,0	80,0	55,0	1,80	31,0
2,60	56,0	83,0	56,0	1,27	44,0
2,80	91,0	110,0	91,0	2,00	46,0
3,00	110,0	140,0	110,0	2,33	47,0
3,20	55,0	90,0	55,0	1,33	41,0
3,40	127,0	147,0	127,0	2,07	61,0
3,60	129,0	160,0	129,0	3,07	42,0
3,80	76,0	122,0	76,0	0,93	81,0
4,00	102,0	116,0	102,0	1,33	76,0
4,20	98,0	118,0	98,0	0,67	147,0
4,40	109,0	119,0	109,0	4,00	27,0
4,60	118,0	178,0	118,0	3,13	38,0
4,80	118,0	165,0	118,0	4,67	25,0
5,00	280,0	350,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 216
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pontelandolfo (BN)
- note : Cert. P003-20-216
- data : 18/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,47	----
0,60	42,0	64,0	42,0	2,47	17,0
0,80	35,0	72,0	35,0	2,53	14,0
1,00	32,0	70,0	32,0	1,60	20,0
1,20	44,0	68,0	44,0	1,73	25,0
1,40	46,0	72,0	46,0	1,73	27,0
1,60	44,0	70,0	44,0	1,33	33,0
1,80	36,0	56,0	36,0	0,93	39,0
2,00	38,0	52,0	38,0	0,67	57,0
2,20	52,0	62,0	52,0	0,40	130,0
2,40	60,0	66,0	60,0	0,93	64,0
2,60	54,0	68,0	54,0	0,87	62,0
2,80	56,0	69,0	56,0	1,13	49,0
3,00	53,0	70,0	53,0	2,33	23,0
3,20	33,0	68,0	33,0	2,00	16,0
3,40	32,0	62,0	32,0	2,00	16,0
3,60	28,0	58,0	28,0	1,40	20,0
3,80	81,0	102,0	81,0	1,20	67,0
4,00	82,0	100,0	82,0	2,20	37,0
4,20	33,0	66,0	33,0	2,20	15,0
4,40	35,0	68,0	35,0	1,20	29,0
4,60	40,0	58,0	40,0	1,33	30,0
4,80	42,0	62,0	42,0	0,53	79,0
5,00	36,0	44,0	36,0	1,47	25,0
5,20	40,0	62,0	40,0	2,40	17,0
5,40	62,0	98,0	62,0	0,67	93,0
5,60	42,0	52,0	42,0	2,67	16,0
5,80	60,0	100,0	60,0	1,60	37,0
6,00	88,0	112,0	88,0	2,00	44,0
6,20	96,0	126,0	96,0	1,87	51,0
6,40	108,0	136,0	108,0	2,60	42,0
6,60	105,0	144,0	105,0	1,93	54,0
6,80	98,0	127,0	98,0	1,07	92,0
7,00	86,0	102,0	86,0	2,40	36,0
7,20	98,0	134,0	98,0	5,00	20,0
7,40	164,0	239,0	164,0	5,00	33,0
7,60	155,0	230,0	155,0	5,60	28,0
7,80	166,0	250,0	166,0	2,13	78,0
8,00	294,0	326,0	294,0	20,00	15,0
8,20	500,0	800,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 213
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pontelandolfo (BN)
- note : Cert. P003-20-213
- data : 18/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	48,0	100,0	48,0	3,13	15,0
0,40	----	----	--	1,53	----	5,40	49,0	96,0	49,0	2,13	23,0
0,60	55,0	78,0	55,0	2,47	22,0	5,60	161,0	193,0	161,0	3,73	43,0
0,80	55,0	92,0	55,0	2,93	19,0	5,80	63,0	119,0	63,0	4,27	15,0
1,00	62,0	106,0	62,0	2,07	30,0	**6,00**	43,0	107,0	43,0	2,13	20,0
1,20	66,0	97,0	66,0	2,60	25,0	6,20	49,0	81,0	49,0	2,93	17,0
1,40	56,0	95,0	56,0	2,87	20,0	6,40	45,0	89,0	45,0	3,53	13,0
1,60	47,0	90,0	47,0	2,40	20,0	6,60	170,0	223,0	170,0	6,47	26,0
1,80	48,0	84,0	48,0	3,40	14,0	6,80	63,0	160,0	63,0	4,47	14,0
2,00	48,0	99,0	48,0	2,93	16,0	**7,00**	122,0	189,0	122,0	5,87	21,0
2,20	36,0	80,0	36,0	2,87	13,0	7,20	58,0	146,0	58,0	4,07	14,0
2,40	41,0	84,0	41,0	3,53	12,0	7,40	50,0	111,0	50,0	3,00	17,0
2,60	43,0	96,0	43,0	2,53	17,0	7,60	50,0	95,0	50,0	3,67	14,0
2,80	52,0	90,0	52,0	2,47	21,0	7,80	52,0	107,0	52,0	3,07	17,0
3,00	50,0	87,0	50,0	3,53	14,0	**8,00**	58,0	104,0	58,0	6,00	10,0
3,20	47,0	100,0	47,0	2,93	16,0	8,20	96,0	186,0	96,0	3,53	27,0
3,40	64,0	108,0	64,0	3,47	18,0	8,40	79,0	132,0	79,0	4,60	17,0
3,60	41,0	93,0	41,0	2,80	15,0	8,60	55,0	124,0	55,0	4,53	12,0
3,80	38,0	80,0	38,0	2,73	14,0	8,80	52,0	120,0	52,0	3,87	13,0
4,00	70,0	111,0	70,0	2,80	25,0	**9,00**	88,0	146,0	88,0	4,87	18,0
4,20	53,0	95,0	53,0	3,73	14,0	9,20	65,0	138,0	65,0	2,80	23,0
4,40	42,0	98,0	42,0	3,60	12,0	9,40	108,0	150,0	108,0	3,73	29,0
4,60	51,0	105,0	51,0	2,80	18,0	9,60	76,0	132,0	76,0	5,27	14,0
4,80	63,0	105,0	63,0	3,13	20,0	9,80	60,0	139,0	60,0	4,13	15,0
5,00	64,0	111,0	64,0	3,47	18,0	**10,00**	72,0	134,0	72,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 211
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-211
- data : 17/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	32,0	90,0	32,0	5,67	6,0
0,40	----	----	--	0,53	----	5,40	91,0	176,0	91,0	4,73	19,0
0,60	42,0	50,0	42,0	2,53	17,0	5,60	46,0	117,0	46,0	4,87	9,0
0,80	26,0	64,0	26,0	1,33	19,0	5,80	32,0	105,0	32,0	4,67	7,0
1,00	24,0	44,0	24,0	1,07	22,0	**6,00**	34,0	104,0	34,0	6,13	6,0
1,20	24,0	40,0	24,0	1,80	13,0	6,20	28,0	120,0	28,0	2,60	11,0
1,40	18,0	45,0	18,0	1,73	10,0	6,40	83,0	122,0	83,0	5,67	15,0
1,60	22,0	48,0	22,0	3,33	7,0	6,60	37,0	122,0	37,0	4,07	9,0
1,80	85,0	135,0	85,0	1,27	67,0	6,80	35,0	96,0	35,0	3,60	10,0
2,00	37,0	56,0	37,0	2,60	14,0	**7,00**	38,0	92,0	38,0	5,27	7,0
2,20	19,0	58,0	19,0	2,13	9,0	7,20	83,0	162,0	83,0	1,80	46,0
2,40	23,0	55,0	23,0	2,60	9,0	7,40	92,0	119,0	92,0	2,73	34,0
2,60	21,0	60,0	21,0	2,40	9,0	7,60	66,0	107,0	66,0	5,67	12,0
2,80	20,0	56,0	20,0	2,27	9,0	7,80	142,0	227,0	142,0	3,67	39,0
3,00	20,0	54,0	20,0	2,47	8,0	**8,00**	41,0	96,0	41,0	4,33	9,0
3,20	22,0	59,0	22,0	2,93	7,0	8,20	48,0	113,0	48,0	4,87	10,0
3,40	22,0	66,0	22,0	3,20	7,0	8,40	61,0	134,0	61,0	4,07	15,0
3,60	78,0	126,0	78,0	3,60	22,0	8,60	38,0	99,0	38,0	4,00	10,0
3,80	26,0	80,0	26,0	3,20	8,0	8,80	35,0	95,0	35,0	4,40	8,0
4,00	35,0	83,0	35,0	1,13	31,0	**9,00**	40,0	106,0	40,0	4,00	10,0
4,20	89,0	106,0	89,0	1,67	53,0	9,20	360,0	420,0	360,0	2,00	180,0
4,40	86,0	111,0	86,0	5,20	17,0	9,40	190,0	220,0	190,0	5,33	36,0
4,60	123,0	201,0	123,0	3,20	38,0	9,60	170,0	250,0	170,0	5,00	34,0
4,80	62,0	110,0	62,0	4,60	13,0	9,80	220,0	295,0	220,0	2,53	87,0
5,00	36,0	105,0	36,0	3,87	9,0	**10,00**	230,0	268,0	230,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 208
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-208
- data : 17/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,07	----
0,60	27,0	43,0	27,0	2,07	13,0
0,80	24,0	55,0	24,0	2,07	12,0
1,00	21,0	52,0	21,0	2,40	9,0
1,20	22,0	58,0	22,0	2,60	8,0
1,40	21,0	60,0	21,0	2,60	8,0
1,60	19,0	58,0	19,0	2,07	9,0
1,80	17,0	48,0	17,0	1,87	9,0
2,00	19,0	47,0	19,0	1,87	10,0
2,20	21,0	49,0	21,0	1,93	11,0
2,40	21,0	50,0	21,0	2,40	9,0
2,60	23,0	59,0	23,0	2,67	9,0
2,80	27,0	67,0	27,0	3,47	8,0
3,00	24,0	76,0	24,0	3,13	8,0
3,20	23,0	70,0	23,0	2,40	10,0
3,40	23,0	59,0	23,0	2,87	8,0
3,60	24,0	67,0	24,0	3,40	7,0
3,80	29,0	80,0	29,0	3,47	8,0
4,00	26,0	78,0	26,0	3,07	8,0
4,20	39,0	85,0	39,0	3,27	12,0
4,40	34,0	83,0	34,0	3,87	9,0
4,60	35,0	93,0	35,0	2,33	15,0
4,80	46,0	81,0	46,0	3,80	12,0
5,00	29,0	86,0	29,0	4,47	6,0
5,20	42,0	109,0	42,0	5,07	8,0
5,40	72,0	148,0	72,0	5,00	14,0
5,60	240,0	315,0	240,0	14,67	16,0
5,80	400,0	620,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 209
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-209
- data : 17/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	3,20	31,0	65,0	31,0	3,27	9,0
0,40	----	----	--	2,60	----	3,40	25,0	74,0	25,0	3,53	7,0
0,60	29,0	68,0	29,0	2,80	10,0	3,60	30,0	83,0	30,0	3,67	8,0
0,80	14,0	56,0	14,0	1,60	9,0	3,80	79,0	134,0	79,0	5,27	15,0
1,00	12,0	36,0	12,0	1,20	10,0	**4,00**	29,0	108,0	29,0	3,33	9,0
1,20	9,0	27,0	9,0	0,93	10,0	4,20	32,0	82,0	32,0	2,93	11,0
1,40	10,0	24,0	10,0	1,33	7,0	4,40	37,0	81,0	37,0	4,47	8,0
1,60	15,0	35,0	15,0	1,20	12,0	4,60	30,0	97,0	30,0	5,20	6,0
1,80	16,0	34,0	16,0	1,60	10,0	4,80	320,0	398,0	320,0	3,87	83,0
2,00	16,0	40,0	16,0	1,53	10,0	**5,00**	190,0	248,0	190,0	8,93	21,0
2,20	20,0	43,0	20,0	1,87	11,0	5,20	45,0	179,0	45,0	7,47	6,0
2,40	20,0	48,0	20,0	2,07	10,0	5,40	71,0	183,0	71,0	7,73	9,0
2,60	18,0	49,0	18,0	2,33	8,0	5,60	71,0	187,0	71,0	8,47	8,0
2,80	24,0	59,0	24,0	3,20	7,0	5,80	134,0	261,0	134,0	13,33	10,0
3,00	24,0	72,0	24,0	2,27	11,0	**6,00**	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 210
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-210
- data : 17/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	3,20	----
0,60	72,0	120,0	72,0	2,87	25,0
0,80	40,0	83,0	40,0	1,80	22,0
1,00	26,0	53,0	26,0	1,93	13,0
1,20	59,0	88,0	59,0	2,47	24,0
1,40	30,0	67,0	30,0	4,67	6,0
1,60	250,0	320,0	250,0	3,33	75,0
1,80	85,0	135,0	85,0	1,07	80,0
2,00	36,0	52,0	36,0	2,07	17,0
2,20	18,0	49,0	18,0	2,00	9,0
2,40	18,0	48,0	18,0	2,47	7,0
2,60	97,0	134,0	97,0	2,40	40,0
2,80	88,0	124,0	88,0	3,07	29,0
3,00	55,0	101,0	55,0	1,13	49,0
3,20	143,0	160,0	143,0	1,93	74,0
3,40	196,0	225,0	196,0	1,13	173,0
3,60	188,0	205,0	188,0	2,27	83,0
3,80	33,0	67,0	33,0	18,67	2,0
4,00	220,0	500,0	220,0	1,80	122,0
4,20	137,0	164,0	137,0	1,93	71,0
4,40	29,0	58,0	29,0	1,93	15,0
4,60	36,0	65,0	36,0	3,13	11,0
4,80	190,0	237,0	190,0	4,67	41,0
5,00	38,0	108,0	38,0	0,80	47,0
5,20	83,0	95,0	83,0	13,33	6,0
5,40	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 202
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-202
- data : 17/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,07	----
0,60	27,0	43,0	27,0	1,53	18,0
0,80	24,0	47,0	24,0	1,73	14,0
1,00	30,0	56,0	30,0	2,00	15,0
1,20	59,0	89,0	59,0	3,73	16,0
1,40	65,0	121,0	65,0	3,40	19,0
1,60	50,0	101,0	50,0	2,07	24,0
1,80	30,0	61,0	30,0	0,80	37,0
2,00	42,0	54,0	42,0	1,07	39,0
2,20	26,0	42,0	26,0	0,60	43,0
2,40	75,0	84,0	75,0	2,73	27,0
2,60	84,0	125,0	84,0	1,93	43,0
2,80	41,0	70,0	41,0	1,33	31,0
3,00	28,0	48,0	28,0	1,53	18,0
3,20	39,0	62,0	39,0	1,07	37,0
3,40	42,0	58,0	42,0	2,47	17,0
3,60	40,0	77,0	40,0	1,40	29,0
3,80	219,0	240,0	219,0	0,67	328,0
4,00	105,0	115,0	105,0	2,07	51,0
4,20	79,0	110,0	79,0	2,87	28,0
4,40	59,0	102,0	59,0	1,27	47,0
4,60	80,0	99,0	80,0	2,27	35,0
4,80	71,0	105,0	71,0	2,13	33,0
5,00	60,0	92,0	60,0	3,47	17,0
5,20	67,0	119,0	67,0	2,20	30,0
5,40	64,0	97,0	64,0	2,73	23,0
5,60	71,0	112,0	71,0	1,80	39,0
5,80	85,0	112,0	85,0	1,67	51,0
6,00	130,0	155,0	130,0	7,73	17,0
6,20	230,0	346,0	230,0	4,00	58,0
6,40	130,0	190,0	130,0	5,40	24,0
6,60	79,0	160,0	79,0	3,33	24,0
6,80	180,0	230,0	180,0	11,33	16,0
7,00	280,0	450,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 203
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-203	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,47	----
0,60	32,0	54,0	32,0	1,20	27,0
0,80	40,0	58,0	40,0	0,53	75,0
1,00	45,0	53,0	45,0	2,60	17,0
1,20	49,0	88,0	49,0	3,40	14,0
1,40	88,0	139,0	88,0	6,00	15,0
1,60	150,0	240,0	150,0	5,00	30,0
1,80	215,0	290,0	215,0	10,67	20,0
2,00	177,0	337,0	177,0	12,33	14,0
2,20	180,0	365,0	180,0	13,13	14,0
2,40	190,0	387,0	190,0	11,73	16,0
2,60	114,0	290,0	114,0	15,67	7,0
2,80	145,0	380,0	145,0	8,00	18,0
3,00	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 200
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-200
- data : 16/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	33,0	70,0	33,0	3,47	10,0
0,40	----	----	--	0,33	----	5,40	32,0	84,0	32,0	2,80	11,0
0,60	16,0	21,0	16,0	0,80	20,0	5,60	33,0	75,0	33,0	4,80	7,0
0,80	20,0	32,0	20,0	1,87	11,0	5,80	24,0	96,0	24,0	1,53	16,0
1,00	17,0	45,0	17,0	1,27	13,0	**6,00**	83,0	106,0	83,0	1,27	66,0
1,20	17,0	36,0	17,0	1,40	12,0	6,20	91,0	110,0	91,0	4,00	23,0
1,40	17,0	38,0	17,0	1,33	13,0	6,40	36,0	96,0	36,0	4,07	9,0
1,60	16,0	36,0	16,0	1,60	10,0	6,60	34,0	95,0	34,0	3,73	9,0
1,80	17,0	41,0	17,0	1,53	11,0	6,80	34,0	90,0	34,0	4,00	8,0
2,00	16,0	39,0	16,0	1,67	10,0	**7,00**	37,0	97,0	37,0	4,00	9,0
2,20	18,0	43,0	18,0	1,73	10,0	7,20	230,0	290,0	230,0	1,13	203,0
2,40	23,0	49,0	23,0	2,33	10,0	7,40	133,0	150,0	133,0	1,00	133,0
2,60	280,0	315,0	280,0	4,53	62,0	7,60	134,0	149,0	134,0	4,40	30,0
2,80	57,0	125,0	57,0	1,07	53,0	7,80	64,0	130,0	64,0	0,93	69,0
3,00	36,0	52,0	36,0	2,40	15,0	**8,00**	89,0	103,0	89,0	1,13	79,0
3,20	31,0	67,0	31,0	2,27	14,0	8,20	83,0	100,0	83,0	3,73	22,0
3,40	34,0	68,0	34,0	1,93	18,0	8,40	94,0	150,0	94,0	3,13	30,0
3,60	35,0	64,0	35,0	2,87	12,0	8,60	93,0	140,0	93,0	3,67	25,0
3,80	30,0	73,0	30,0	4,27	7,0	8,80	57,0	112,0	57,0	2,40	24,0
4,00	135,0	199,0	135,0	2,33	58,0	**9,00**	63,0	99,0	63,0	1,60	39,0
4,20	35,0	70,0	35,0	2,33	15,0	9,20	96,0	120,0	96,0	2,27	42,0
4,40	34,0	69,0	34,0	2,80	12,0	9,40	96,0	130,0	96,0	4,27	22,0
4,60	38,0	80,0	38,0	3,67	10,0	9,60	51,0	115,0	51,0	2,00	26,0
4,80	68,0	123,0	68,0	1,00	68,0	9,80	75,0	105,0	75,0	2,33	32,0
5,00	95,0	110,0	95,0	2,47	39,0	**10,00**	71,0	106,0	71,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 192
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-192
- data : 16/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	8,0	16,0	8,0	1,80	4,0
0,80	23,0	50,0	23,0	1,27	18,0
1,00	22,0	41,0	22,0	1,33	16,0
1,20	28,0	48,0	28,0	1,93	14,0
1,40	22,0	51,0	22,0	0,93	24,0
1,60	12,0	26,0	12,0	1,07	11,0
1,80	15,0	31,0	15,0	1,53	10,0
2,00	18,0	41,0	18,0	2,60	7,0
2,20	39,0	78,0	39,0	1,53	25,0
2,40	20,0	43,0	20,0	2,20	9,0
2,60	18,0	51,0	18,0	1,20	15,0
2,80	94,0	112,0	94,0	2,00	47,0
3,00	42,0	72,0	42,0	1,53	27,0
3,20	49,0	72,0	49,0	0,87	57,0
3,40	68,0	81,0	68,0	1,13	60,0
3,60	49,0	66,0	49,0	2,00	24,0
3,80	70,0	100,0	70,0	4,20	17,0
4,00	41,0	104,0	41,0	0,93	44,0
4,20	60,0	74,0	60,0	1,33	45,0
4,40	220,0	240,0	220,0	0,93	236,0
4,60	130,0	144,0	130,0	4,00	32,0
4,80	44,0	104,0	44,0	1,73	25,0
5,00	57,0	83,0	57,0	3,33	17,0
5,20	58,0	108,0	58,0	8,00	7,0
5,40	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 198
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-198
- data : 16/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,13	----
0,60	14,0	31,0	14,0	1,07	13,0
0,80	14,0	30,0	14,0	0,80	17,0
1,00	18,0	30,0	18,0	1,67	11,0
1,20	32,0	57,0	32,0	1,73	18,0
1,40	30,0	56,0	30,0	0,80	37,0
1,60	24,0	36,0	24,0	1,00	24,0
1,80	15,0	30,0	15,0	2,07	7,0
2,00	56,0	87,0	56,0	1,80	31,0
2,20	22,0	49,0	22,0	2,00	11,0
2,40	18,0	48,0	18,0	1,00	18,0
2,60	18,0	33,0	18,0	1,13	16,0
2,80	24,0	41,0	24,0	1,13	21,0
3,00	28,0	45,0	28,0	0,87	32,0
3,20	38,0	51,0	38,0	1,67	23,0
3,40	22,0	47,0	22,0	2,27	10,0
3,60	32,0	66,0	32,0	2,40	13,0
3,80	29,0	65,0	29,0	2,53	11,0
4,00	30,0	68,0	30,0	2,53	12,0
4,20	24,0	62,0	24,0	2,33	10,0
4,40	33,0	68,0	33,0	2,40	14,0
4,60	29,0	65,0	29,0	2,47	12,0
4,80	28,0	65,0	28,0	0,60	47,0
5,00	53,0	62,0	53,0	0,67	79,0
5,20	46,0	56,0	46,0	0,73	63,0
5,40	52,0	63,0	52,0	1,07	49,0
5,60	42,0	58,0	42,0	0,47	90,0
5,80	45,0	52,0	45,0	1,67	27,0
6,00	30,0	55,0	30,0	2,00	15,0
6,20	30,0	60,0	30,0	1,33	22,0
6,40	60,0	80,0	60,0	3,13	19,0
6,60	44,0	91,0	44,0	3,33	13,0
6,80	130,0	180,0	130,0	8,67	15,0
7,00	250,0	380,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 199
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Campolattaro (BN)
- note : Cert. P003-20-199
- data : 16/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,20	160,0	273,0	160,0	3,40	47,0
0,40	----	----	--	1,67	----	2,40	79,0	130,0	79,0	1,20	66,0
0,60	33,0	58,0	33,0	1,40	24,0	2,60	47,0	65,0	47,0	0,53	88,0
0,80	34,0	55,0	34,0	1,27	27,0	2,80	47,0	55,0	47,0	0,40	117,0
1,00	42,0	61,0	42,0	1,80	23,0	**3,00**	47,0	53,0	47,0	1,87	25,0
1,20	36,0	63,0	36,0	3,33	11,0	3,20	30,0	58,0	30,0	2,07	15,0
1,40	76,0	126,0	76,0	3,33	23,0	3,40	40,0	71,0	40,0	2,47	16,0
1,60	47,0	97,0	47,0	3,40	14,0	3,60	35,0	72,0	35,0	2,80	13,0
1,80	145,0	196,0	145,0	1,13	128,0	3,80	39,0	81,0	39,0	6,67	6,0
2,00	283,0	300,0	283,0	7,53	38,0	**4,00**	300,0	400,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 194
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-194
- data : 15/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,80	----
0,60	40,0	67,0	40,0	2,33	17,0
0,80	35,0	70,0	35,0	2,27	15,0
1,00	74,0	108,0	74,0	3,80	19,0
1,20	19,0	76,0	19,0	1,87	10,0
1,40	15,0	43,0	15,0	1,87	8,0
1,60	13,0	41,0	13,0	1,87	7,0
1,80	14,0	42,0	14,0	1,67	8,0
2,00	11,0	36,0	11,0	1,33	8,0
2,20	11,0	31,0	11,0	1,33	8,0
2,40	12,0	32,0	12,0	1,07	11,0
2,60	15,0	31,0	15,0	2,20	7,0
2,80	75,0	108,0	75,0	5,47	14,0
3,00	21,0	103,0	21,0	2,27	9,0
3,20	22,0	56,0	22,0	0,73	30,0
3,40	63,0	74,0	63,0	2,53	25,0
3,60	18,0	56,0	18,0	1,60	11,0
3,80	29,0	53,0	29,0	1,73	17,0
4,00	132,0	158,0	132,0	3,80	35,0
4,20	40,0	97,0	40,0	2,33	17,0
4,40	34,0	69,0	34,0	2,80	12,0
4,60	31,0	73,0	31,0	3,40	9,0
4,80	30,0	81,0	30,0	2,87	10,0
5,00	29,0	72,0	29,0	2,73	11,0
5,20	41,0	82,0	41,0	3,13	13,0
5,40	29,0	76,0	29,0	3,27	9,0
5,60	33,0	82,0	33,0	2,73	12,0
5,80	29,0	70,0	29,0	6,40	5,0
6,00	139,0	235,0	139,0	5,53	25,0
6,20	35,0	118,0	35,0	4,20	8,0
6,40	30,0	93,0	30,0	4,53	7,0
6,60	41,0	109,0	41,0	7,13	6,0
6,80	175,0	282,0	175,0	5,33	33,0
7,00	173,0	253,0	173,0	8,67	20,0
7,20	350,0	480,0	350,0	13,33	26,0
7,40	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 193
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-193
- data : 15/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	2,07	----
0,60	32,0	63,0	32,0	3,40	9,0
0,80	57,0	108,0	57,0	4,27	13,0
1,00	33,0	97,0	33,0	3,07	11,0
1,20	29,0	75,0	29,0	1,53	19,0
1,40	216,0	239,0	216,0	2,07	105,0
1,60	43,0	74,0	43,0	3,40	13,0
1,80	24,0	75,0	24,0	1,93	12,0
2,00	24,0	53,0	24,0	2,73	9,0
2,20	33,0	74,0	33,0	2,53	13,0
2,40	24,0	62,0	24,0	1,87	13,0
2,60	17,0	45,0	17,0	1,73	10,0
2,80	23,0	49,0	23,0	1,80	13,0
3,00	24,0	51,0	24,0	2,53	9,0
3,20	19,0	57,0	19,0	2,93	6,0
3,40	24,0	68,0	24,0	2,67	9,0
3,60	24,0	64,0	24,0	2,53	9,0
3,80	24,0	62,0	24,0	2,40	10,0
4,00	29,0	65,0	29,0	2,80	10,0
4,20	23,0	65,0	23,0	2,53	9,0
4,40	69,0	107,0	69,0	4,33	16,0
4,60	30,0	95,0	30,0	6,07	5,0
4,80	156,0	247,0	156,0	6,20	25,0
5,00	39,0	132,0	39,0	2,67	15,0
5,20	39,0	79,0	39,0	3,67	11,0
5,40	34,0	89,0	34,0	4,47	8,0
5,60	29,0	96,0	29,0	2,47	12,0
5,80	50,0	87,0	50,0	4,20	12,0
6,00	41,0	104,0	41,0	4,40	9,0
6,20	34,0	100,0	34,0	4,00	8,0
6,40	40,0	100,0	40,0	4,80	8,0
6,60	33,0	105,0	33,0	3,93	8,0
6,80	40,0	99,0	40,0	5,13	8,0
7,00	40,0	117,0	40,0	4,93	8,0
7,20	36,0	110,0	36,0	4,40	8,0
7,40	41,0	107,0	41,0	3,40	12,0
7,60	75,0	126,0	75,0	5,53	14,0
7,80	42,0	125,0	42,0	4,53	9,0
8,00	39,0	107,0	39,0	3,53	11,0
8,20	54,0	107,0	54,0	5,07	11,0
8,40	50,0	126,0	50,0	3,20	16,0
8,60	52,0	100,0	52,0	5,87	9,0
8,80	49,0	137,0	49,0	13,00	4,0
9,00	455,0	650,0	455,0	13,33	34,0
9,20	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA CPT 195
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-195
- data : 15/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	**1,00**	50,0	73,0	50,0	2,73	18,0
0,40	----	----	--	1,00	----	1,20	45,0	86,0	45,0	11,27	4,0
0,60	45,0	60,0	45,0	0,47	96,0	1,40	283,0	452,0	283,0	10,00	28,0
0,80	49,0	56,0	49,0	1,53	32,0	1,60	600,0	750,0	600,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 196
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-196
- data : 15/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,73	----
0,60	30,0	56,0	30,0	1,93	16,0
0,80	34,0	63,0	34,0	2,13	16,0
1,00	44,0	76,0	44,0	2,93	15,0
1,20	38,0	82,0	38,0	2,80	14,0
1,40	43,0	85,0	43,0	2,73	16,0
1,60	67,0	108,0	67,0	3,73	18,0
1,80	68,0	124,0	68,0	2,60	26,0
2,00	71,0	110,0	71,0	6,33	11,0
2,20	220,0	315,0	220,0	8,47	26,0
2,40	265,0	392,0	265,0	11,73	23,0
2,60	124,0	300,0	124,0	8,20	15,0
2,80	67,0	190,0	67,0	4,93	14,0
3,00	54,0	128,0	54,0	3,20	17,0
3,20	62,0	110,0	62,0	3,67	17,0
3,40	45,0	100,0	45,0	2,87	16,0
3,60	58,0	101,0	58,0	3,53	16,0
3,80	46,0	99,0	46,0	3,53	13,0
4,00	48,0	101,0	48,0	3,40	14,0
4,20	37,0	88,0	37,0	3,80	10,0
4,40	35,0	92,0	35,0	3,60	10,0
4,60	128,0	182,0	128,0	3,20	40,0
4,80	104,0	152,0	104,0	0,93	111,0
5,00	88,0	102,0	88,0	1,47	60,0
5,20	80,0	102,0	80,0	7,20	11,0
5,40	226,0	334,0	226,0	5,33	42,0
5,60	360,0	440,0	360,0	13,33	27,0
5,80	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 190
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Casalduni (BN)
- note : Cert. P003-20-190
- data : 15/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	49,0	62,0	49,0	1,47	33,0
0,80	55,0	77,0	55,0	2,07	27,0
1,00	30,0	61,0	30,0	2,00	15,0
1,20	28,0	58,0	28,0	0,93	30,0
1,40	37,0	51,0	37,0	1,20	31,0
1,60	50,0	68,0	50,0	2,00	25,0
1,80	38,0	68,0	38,0	2,60	15,0
2,00	68,0	107,0	68,0	3,00	23,0
2,20	78,0	123,0	78,0	3,60	22,0
2,40	70,0	124,0	70,0	4,27	16,0
2,60	55,0	119,0	55,0	4,20	13,0
2,80	58,0	121,0	58,0	4,67	12,0
3,00	70,0	140,0	70,0	4,40	16,0
3,20	78,0	144,0	78,0	4,40	18,0
3,40	76,0	142,0	76,0	3,20	24,0
3,60	64,0	112,0	64,0	2,87	22,0
3,80	56,0	99,0	56,0	2,67	21,0
4,00	41,0	81,0	41,0	3,40	12,0
4,20	50,0	101,0	50,0	3,87	13,0
4,40	75,0	133,0	75,0	4,07	18,0
4,60	76,0	137,0	76,0	6,13	12,0
4,80	63,0	155,0	63,0	5,60	11,0
5,00	70,0	154,0	70,0	7,47	9,0
5,20	54,0	166,0	54,0	6,00	9,0
5,40	73,0	163,0	73,0	5,73	13,0
5,60	270,0	356,0	270,0	6,67	41,0
5,80	170,0	270,0	170,0	4,00	42,0
6,00	170,0	230,0	170,0	4,00	42,0
6,20	90,0	150,0	90,0	2,27	40,0
6,40	82,0	116,0	82,0	3,00	27,0
6,60	199,0	244,0	199,0	1,73	115,0
6,80	188,0	214,0	188,0	8,00	24,0
7,00	280,0	400,0	280,0	4,13	68,0
7,20	250,0	312,0	250,0	6,67	38,0
7,40	240,0	340,0	240,0	7,33	33,0
7,60	230,0	340,0	230,0	10,00	23,0
7,80	400,0	550,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 189
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-189
- data : 15/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	22,0	26,0	22,0	0,13	165,0
0,80	22,0	24,0	22,0	0,80	27,0
1,00	28,0	40,0	28,0	0,67	42,0
1,20	32,0	42,0	32,0	0,60	53,0
1,40	33,0	42,0	33,0	1,67	20,0
1,60	24,0	49,0	24,0	1,47	16,0
1,80	33,0	55,0	33,0	1,80	18,0
2,00	33,0	60,0	33,0	1,53	22,0
2,20	19,0	42,0	19,0	2,33	8,0
2,40	22,0	57,0	22,0	1,80	12,0
2,60	25,0	52,0	25,0	2,13	12,0
2,80	23,0	55,0	23,0	2,27	10,0
3,00	26,0	60,0	26,0	2,27	11,0
3,20	28,0	62,0	28,0	2,20	13,0
3,40	28,0	61,0	28,0	1,53	18,0
3,60	32,0	55,0	32,0	2,73	12,0
3,80	27,0	68,0	27,0	2,80	10,0
4,00	39,0	81,0	39,0	2,53	15,0
4,20	34,0	72,0	34,0	4,07	8,0
4,40	62,0	123,0	62,0	2,00	31,0
4,60	76,0	106,0	76,0	3,40	22,0
4,80	46,0	97,0	46,0	3,47	13,0
5,00	45,0	97,0	45,0	3,67	12,0
5,20	43,0	98,0	43,0	3,87	11,0
5,40	55,0	113,0	55,0	4,60	12,0
5,60	46,0	115,0	46,0	4,80	10,0
5,80	49,0	121,0	49,0	1,20	41,0
6,00	112,0	130,0	112,0	2,87	39,0
6,20	87,0	130,0	87,0	5,80	15,0
6,40	56,0	143,0	56,0	3,07	18,0
6,60	87,0	133,0	87,0	5,60	16,0
6,80	56,0	140,0	56,0	3,20	17,0
7,00	87,0	135,0	87,0	6,40	14,0
7,20	52,0	148,0	52,0	5,67	9,0
7,40	61,0	146,0	61,0	4,93	12,0
7,60	69,0	143,0	69,0	5,33	13,0
7,80	97,0	177,0	97,0	6,60	15,0
8,00	89,0	188,0	89,0	7,20	12,0
8,20	68,0	176,0	68,0	6,87	10,0
8,40	146,0	249,0	146,0	8,13	18,0
8,60	108,0	230,0	108,0	6,00	18,0
8,80	155,0	245,0	155,0	8,00	19,0
9,00	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 191
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-191
- data : 15/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,20	----
0,60	7,0	10,0	7,0	0,13	52,0
0,80	9,0	11,0	9,0	0,47	19,0
1,00	10,0	17,0	10,0	3,40	3,0
1,20	89,0	140,0	89,0	3,73	24,0
1,40	64,0	120,0	64,0	1,60	40,0
1,60	32,0	56,0	32,0	1,20	27,0
1,80	30,0	48,0	30,0	2,20	14,0
2,00	69,0	102,0	69,0	3,93	18,0
2,20	130,0	189,0	130,0	3,53	37,0
2,40	157,0	210,0	157,0	3,20	49,0
2,60	140,0	188,0	140,0	1,87	75,0
2,80	68,0	96,0	68,0	2,40	28,0
3,00	72,0	108,0	72,0	3,87	19,0
3,20	66,0	124,0	66,0	4,13	16,0
3,40	121,0	183,0	121,0	3,60	34,0
3,60	156,0	210,0	156,0	5,53	28,0
3,80	200,0	283,0	200,0	8,00	25,0
4,00	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 187
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-187	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,47	----
0,60	41,0	63,0	41,0	1,47	28,0
0,80	51,0	73,0	51,0	1,60	32,0
1,00	44,0	68,0	44,0	1,53	29,0
1,20	45,0	68,0	45,0	2,27	20,0
1,40	36,0	70,0	36,0	4,33	8,0
1,60	35,0	100,0	35,0	3,00	12,0
1,80	90,0	135,0	90,0	3,33	27,0
2,00	90,0	140,0	90,0	2,33	39,0
2,20	75,0	110,0	75,0	0,60	125,0
2,40	74,0	83,0	74,0	1,87	40,0
2,60	61,0	89,0	61,0	1,40	44,0
2,80	58,0	79,0	58,0	2,20	26,0
3,00	77,0	110,0	77,0	5,33	14,0
3,20	180,0	260,0	180,0	4,67	39,0
3,40	350,0	420,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 186
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-186
- data : 14/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,87	----
0,60	23,0	51,0	23,0	1,47	16,0
0,80	41,0	63,0	41,0	1,13	36,0
1,00	66,0	83,0	66,0	1,73	38,0
1,20	37,0	63,0	37,0	1,47	25,0
1,40	51,0	73,0	51,0	2,33	22,0
1,60	74,0	109,0	74,0	2,47	30,0
1,80	40,0	77,0	40,0	2,47	16,0
2,00	26,0	63,0	26,0	1,60	16,0
2,20	34,0	58,0	34,0	1,67	20,0
2,40	33,0	58,0	33,0	1,80	18,0
2,60	20,0	47,0	20,0	1,27	16,0
2,80	24,0	43,0	24,0	0,93	26,0
3,00	44,0	58,0	44,0	1,07	41,0
3,20	38,0	54,0	38,0	1,80	21,0
3,40	36,0	63,0	36,0	2,53	14,0
3,60	23,0	61,0	23,0	1,73	13,0
3,80	32,0	58,0	32,0	1,67	19,0
4,00	77,0	102,0	77,0	2,60	30,0
4,20	41,0	80,0	41,0	2,60	16,0
4,40	46,0	85,0	46,0	1,60	29,0
4,60	58,0	82,0	58,0	7,33	8,0
4,80	170,0	280,0	170,0	7,00	24,0
5,00	176,0	281,0	176,0	1,67	106,0
5,20	41,0	66,0	41,0	2,60	16,0
5,40	41,0	80,0	41,0	1,47	28,0
5,60	58,0	80,0	58,0	3,53	16,0
5,80	122,0	175,0	122,0	2,00	61,0
6,00	150,0	180,0	150,0	4,00	38,0
6,20	260,0	320,0	260,0	6,67	39,0
6,40	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 182
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-182
- data : 14/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	23,0	30,0	23,0	1,33	17,0
0,80	33,0	53,0	33,0	0,60	55,0
1,00	18,0	27,0	18,0	1,80	10,0
1,20	18,0	45,0	18,0	0,73	25,0
1,40	17,0	28,0	17,0	0,53	32,0
1,60	108,0	116,0	108,0	3,00	36,0
1,80	42,0	87,0	42,0	2,40	17,0
2,00	44,0	80,0	44,0	3,73	12,0
2,20	28,0	84,0	28,0	1,33	21,0
2,40	26,0	46,0	26,0	1,73	15,0
2,60	26,0	52,0	26,0	1,67	16,0
2,80	27,0	52,0	27,0	1,80	15,0
3,00	27,0	54,0	27,0	2,00	14,0
3,20	80,0	110,0	80,0	2,20	36,0
3,40	62,0	95,0	62,0	1,80	34,0
3,60	28,0	55,0	28,0	2,07	14,0
3,80	30,0	61,0	30,0	2,27	13,0
4,00	116,0	150,0	116,0	1,80	64,0
4,20	28,0	55,0	28,0	2,53	11,0
4,40	40,0	78,0	40,0	2,60	15,0
4,60	31,0	70,0	31,0	1,33	23,0
4,80	100,0	120,0	100,0	3,33	30,0
5,00	30,0	80,0	30,0	10,00	3,0
5,20	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 183
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-183
- data : 14/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,20	30,0	85,0	30,0	2,47	12,0
0,40	----	----	--	2,13	----	2,40	38,0	75,0	38,0	3,13	12,0
0,60	42,0	74,0	42,0	2,60	16,0	2,60	65,0	112,0	65,0	3,73	17,0
0,80	30,0	69,0	30,0	1,80	17,0	2,80	121,0	177,0	121,0	2,60	47,0
1,00	30,0	57,0	30,0	2,20	14,0	**3,00**	151,0	190,0	151,0	4,73	32,0
1,20	43,0	76,0	43,0	1,67	26,0	3,20	190,0	261,0	190,0	5,33	36,0
1,40	41,0	66,0	41,0	2,60	16,0	3,40	154,0	234,0	154,0	7,60	20,0
1,60	34,0	73,0	34,0	2,13	16,0	3,60	147,0	261,0	147,0	3,20	46,0
1,80	40,0	72,0	40,0	2,00	20,0	3,80	123,0	171,0	123,0	6,67	18,0
2,00	43,0	73,0	43,0	3,67	12,0	**4,00**	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 185
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P003-20-185
- data : 14/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	1,60	62,0	93,0	62,0	2,60	24,0
0,40	----	----	--	1,87	----	1,80	101,0	140,0	101,0	0,93	108,0
0,60	41,0	69,0	41,0	1,87	22,0	**2,00**	101,0	115,0	101,0	2,27	45,0
0,80	42,0	70,0	42,0	0,47	90,0	2,20	136,0	170,0	136,0	2,40	57,0
1,00	55,0	62,0	55,0	2,00	28,0	2,40	180,0	216,0	180,0	4,27	42,0
1,20	63,0	93,0	63,0	1,73	36,0	2,60	69,0	133,0	69,0	6,67	10,0
1,40	63,0	89,0	63,0	2,07	30,0	2,80	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 163
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-163
- data : 22/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	3,07	----
0,60	59,0	105,0	59,0	1,40	42,0
0,80	66,0	87,0	66,0	2,00	33,0
1,00	37,0	67,0	37,0	2,13	17,0
1,20	48,0	80,0	48,0	2,73	18,0
1,40	45,0	86,0	45,0	3,00	15,0
1,60	57,0	102,0	57,0	3,87	15,0
1,80	51,0	109,0	51,0	3,73	14,0
2,00	43,0	99,0	43,0	2,47	17,0
2,20	40,0	77,0	40,0	2,13	19,0
2,40	44,0	76,0	44,0	1,53	29,0
2,60	40,0	63,0	40,0	1,60	25,0
2,80	42,0	66,0	42,0	1,87	22,0
3,00	28,0	56,0	28,0	2,40	12,0
3,20	36,0	72,0	36,0	1,53	23,0
3,40	63,0	86,0	63,0	1,40	45,0
3,60	54,0	75,0	54,0	7,33	7,0
3,80	69,0	179,0	69,0	2,47	28,0
4,00	72,0	109,0	72,0	1,87	39,0
4,20	65,0	93,0	65,0	2,73	24,0
4,40	80,0	121,0	80,0	1,67	48,0
4,60	59,0	84,0	59,0	2,87	21,0
4,80	70,0	113,0	70,0	4,47	16,0
5,00	47,0	114,0	47,0	3,27	14,0
5,20	76,0	125,0	76,0	8,53	9,0
5,40	185,0	313,0	185,0	4,40	42,0
5,60	280,0	346,0	280,0	10,00	28,0
5,80	450,0	600,0	450,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 159
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-159
- data : 22/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	1,80	53,0	123,0	53,0	2,87	18,0
0,40	----	----	--	1,87	----	**2,00**	70,0	113,0	70,0	2,73	26,0
0,60	50,0	78,0	50,0	2,47	20,0	2,20	82,0	123,0	82,0	7,20	11,0
0,80	68,0	105,0	68,0	2,80	24,0	2,40	138,0	246,0	138,0	9,33	15,0
1,00	63,0	105,0	63,0	2,87	22,0	2,60	145,0	285,0	145,0	4,67	31,0
1,20	54,0	97,0	54,0	3,13	17,0	2,80	290,0	360,0	290,0	10,00	29,0
1,40	64,0	111,0	64,0	3,07	21,0	**3,00**	290,0	440,0	290,0	13,33	22,0
1,60	60,0	106,0	60,0	4,67	13,0	3,20	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 161
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-161
- data : 22/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,67	----
0,60	30,0	55,0	30,0	1,87	16,0
0,80	33,0	61,0	33,0	2,07	16,0
1,00	40,0	71,0	40,0	1,40	29,0
1,20	40,0	61,0	40,0	1,73	23,0
1,40	38,0	64,0	38,0	2,13	18,0
1,60	30,0	62,0	30,0	2,53	12,0
1,80	34,0	72,0	34,0	2,53	13,0
2,00	26,0	64,0	26,0	2,60	10,0
2,20	16,0	55,0	16,0	1,80	9,0
2,40	16,0	43,0	16,0	1,13	14,0
2,60	27,0	44,0	27,0	1,13	24,0
2,80	15,0	32,0	15,0	6,93	2,0
3,00	18,0	122,0	18,0	17,33	1,0
3,20	200,0	460,0	200,0	10,00	20,0
3,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 158
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-158
- data : 22/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,27	----
0,60	31,0	50,0	31,0	2,60	12,0
0,80	19,0	58,0	19,0	1,93	10,0
1,00	24,0	53,0	24,0	2,00	12,0
1,20	18,0	48,0	18,0	1,73	10,0
1,40	26,0	52,0	26,0	1,93	13,0
1,60	15,0	44,0	15,0	5,40	3,0
1,80	62,0	143,0	62,0	4,67	13,0
2,00	45,0	115,0	45,0	7,93	6,0
2,20	48,0	167,0	48,0	2,67	18,0
2,40	180,0	220,0	180,0	6,20	29,0
2,60	68,0	161,0	68,0	3,40	20,0
2,80	43,0	94,0	43,0	3,73	12,0
3,00	49,0	105,0	49,0	4,33	11,0
3,20	57,0	122,0	57,0	2,93	19,0
3,40	26,0	70,0	26,0	7,13	4,0
3,60	66,0	173,0	66,0	9,13	7,0
3,80	36,0	173,0	36,0	4,27	8,0
4,00	34,0	98,0	34,0	3,67	9,0
4,20	58,0	113,0	58,0	4,27	14,0
4,40	33,0	97,0	33,0	4,33	8,0
4,60	49,0	114,0	49,0	4,93	10,0
4,80	40,0	114,0	40,0	4,27	9,0
5,00	108,0	172,0	108,0	7,00	15,0
5,20	89,0	194,0	89,0	4,53	20,0
5,40	88,0	156,0	88,0	5,47	16,0
5,60	48,0	130,0	48,0	5,53	9,0
5,80	76,0	159,0	76,0	3,13	24,0
6,00	88,0	135,0	88,0	3,40	26,0
6,20	42,0	93,0	42,0	3,27	13,0
6,40	53,0	102,0	53,0	5,00	11,0
6,60	47,0	122,0	47,0	5,67	8,0
6,80	50,0	135,0	50,0	4,60	11,0
7,00	64,0	133,0	64,0	5,87	11,0
7,20	46,0	134,0	46,0	5,73	8,0
7,40	56,0	142,0	56,0	7,67	7,0
7,60	300,0	415,0	300,0	10,00	30,0
7,80	400,0	550,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 131
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-131
- data : 10/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	31,0	42,0	31,0	0,47	66,0
0,80	38,0	45,0	38,0	1,00	38,0
1,00	43,0	58,0	43,0	0,73	59,0
1,20	52,0	63,0	52,0	0,87	60,0
1,40	58,0	71,0	58,0	0,27	217,0
1,60	10,0	14,0	10,0	0,20	50,0
1,80	11,0	14,0	11,0	0,93	12,0
2,00	9,0	23,0	9,0	0,47	19,0
2,20	9,0	16,0	9,0	0,33	27,0
2,40	8,0	13,0	8,0	0,13	60,0
2,60	6,0	8,0	6,0	0,27	22,0
2,80	4,0	8,0	4,0	0,27	15,0
3,00	6,0	10,0	6,0	0,13	45,0
3,20	5,0	7,0	5,0	0,13	37,0
3,40	4,0	6,0	4,0	0,20	20,0
3,60	8,0	11,0	8,0	0,13	60,0
3,80	4,0	6,0	4,0	0,27	15,0
4,00	4,0	8,0	4,0	0,47	9,0
4,20	3,0	10,0	3,0	0,13	22,0
4,40	4,0	6,0	4,0	0,13	30,0
4,60	5,0	7,0	5,0	0,13	37,0
4,80	3,0	5,0	3,0	0,13	22,0
5,00	4,0	6,0	4,0	0,27	15,0
5,20	3,0	7,0	3,0	0,33	9,0
5,40	6,0	11,0	6,0	0,33	18,0
5,60	13,0	18,0	13,0	4,80	3,0
5,80	102,0	174,0	102,0	3,20	32,0
6,00	208,0	256,0	208,0	0,47	446,0
6,20	99,0	106,0	99,0	1,47	67,0
6,40	12,0	34,0	12,0	1,87	6,0
6,60	84,0	112,0	84,0	3,67	23,0
6,80	258,0	313,0	258,0	13,67	19,0
7,00	420,0	625,0	420,0	13,33	32,0
7,20	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 132
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Faicchio (BN)
- note : Cert. P003-20-132
- data : 10/09/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,20	----
0,60	20,0	38,0	20,0	1,20	17,0
0,80	24,0	42,0	24,0	0,80	30,0
1,00	36,0	48,0	36,0	0,53	67,0
1,20	36,0	44,0	36,0	1,40	26,0
1,40	34,0	55,0	34,0	0,93	36,0
1,60	36,0	50,0	36,0	0,80	45,0
1,80	20,0	32,0	20,0	0,33	60,0
2,00	11,0	16,0	11,0	0,27	41,0
2,20	12,0	16,0	12,0	0,27	45,0
2,40	10,0	14,0	10,0	0,13	75,0
2,60	4,0	6,0	4,0	0,20	20,0
2,80	4,0	7,0	4,0	0,33	12,0
3,00	5,0	10,0	5,0	0,33	15,0
3,20	3,0	8,0	3,0	0,40	7,0
3,40	4,0	10,0	4,0	0,20	20,0
3,60	3,0	6,0	3,0	0,20	15,0
3,80	5,0	8,0	5,0	0,20	25,0
4,00	3,0	6,0	3,0	0,27	11,0
4,20	4,0	8,0	4,0	0,13	30,0
4,40	4,0	6,0	4,0	0,20	20,0
4,60	3,0	6,0	3,0	0,27	11,0
4,80	4,0	8,0	4,0	0,27	15,0
5,00	4,0	8,0	4,0	0,13	30,0
5,20	6,0	8,0	6,0	0,20	30,0
5,40	5,0	8,0	5,0	0,27	19,0
5,60	4,0	8,0	4,0	0,40	10,0
5,80	4,0	10,0	4,0	1,27	3,0
6,00	80,0	99,0	80,0	1,07	75,0
6,20	92,0	108,0	92,0	1,87	49,0
6,40	76,0	104,0	76,0	1,47	52,0
6,60	88,0	110,0	88,0	1,00	88,0
6,80	97,0	112,0	97,0	5,40	18,0
7,00	152,0	233,0	152,0	5,93	26,0
7,20	178,0	267,0	178,0	8,33	21,0
7,40	211,0	336,0	211,0	4,80	44,0
7,60	290,0	362,0	290,0	10,00	29,0
7,80	400,0	550,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 134
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-134	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	2,00	----
0,60	145,0	175,0	145,0	2,00	72,0
0,80	83,0	113,0	83,0	1,40	59,0
1,00	63,0	84,0	63,0	1,53	41,0
1,20	34,0	57,0	34,0	0,73	46,0
1,40	24,0	35,0	24,0	0,47	51,0
1,60	19,0	26,0	19,0	0,33	57,0
1,80	22,0	27,0	22,0	0,73	30,0
2,00	22,0	33,0	22,0	1,00	22,0
2,20	14,0	29,0	14,0	0,13	105,0
2,40	9,0	11,0	9,0	0,60	15,0
2,60	47,0	56,0	47,0	8,87	5,0
2,80	249,0	382,0	249,0	4,67	53,0
3,00	350,0	420,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 165
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-165
- data : 13/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,00	----
0,60	8,0	23,0	8,0	0,73	11,0
0,80	10,0	21,0	10,0	0,47	21,0
1,00	7,0	14,0	7,0	0,53	13,0
1,20	9,0	17,0	9,0	0,53	17,0
1,40	20,0	28,0	20,0	1,73	12,0
1,60	27,0	53,0	27,0	1,67	16,0
1,80	31,0	56,0	31,0	1,60	19,0
2,00	31,0	55,0	31,0	1,33	23,0
2,20	27,0	47,0	27,0	1,07	25,0
2,40	25,0	41,0	25,0	1,27	20,0
2,60	29,0	48,0	29,0	0,93	31,0
2,80	33,0	47,0	33,0	0,80	41,0
3,00	37,0	49,0	37,0	1,60	23,0
3,20	46,0	70,0	46,0	1,00	46,0
3,40	31,0	46,0	31,0	1,27	24,0
3,60	29,0	48,0	29,0	0,80	36,0
3,80	24,0	36,0	24,0	0,87	28,0
4,00	22,0	35,0	22,0	0,40	55,0
4,20	29,0	35,0	29,0	0,87	33,0
4,40	16,0	29,0	16,0	1,00	16,0
4,60	45,0	60,0	45,0	1,47	31,0
4,80	43,0	65,0	43,0	1,00	43,0
5,00	46,0	61,0	46,0	1,27	36,0
5,20	49,0	68,0	49,0	1,07	46,0
5,40	65,0	81,0	65,0	1,00	65,0
5,60	69,0	84,0	69,0	2,87	24,0
5,80	66,0	109,0	66,0	1,53	43,0
6,00	66,0	89,0	66,0	0,80	82,0
6,20	14,0	26,0	14,0	2,40	6,0
6,40	16,0	52,0	16,0	0,60	27,0
6,60	18,0	27,0	18,0	0,40	45,0
6,80	24,0	30,0	24,0	0,73	33,0
7,00	31,0	42,0	31,0	0,93	33,0
7,20	30,0	44,0	30,0	1,80	17,0
7,40	20,0	47,0	20,0	0,93	21,0
7,60	31,0	45,0	31,0	1,27	24,0
7,80	37,0	56,0	37,0	2,00	18,0
8,00	34,0	64,0	34,0	2,20	15,0
8,20	43,0	76,0	43,0	1,53	28,0
8,40	39,0	62,0	39,0	1,87	21,0
8,60	40,0	68,0	40,0	2,00	20,0
8,80	42,0	72,0	42,0	1,93	22,0
9,00	41,0	70,0	41,0	1,93	21,0
9,20	39,0	68,0	39,0	2,20	18,0
9,40	44,0	77,0	44,0	2,07	21,0
9,60	45,0	76,0	45,0	2,33	19,0
9,80	37,0	72,0	37,0	2,00	18,0
10,00	40,0	70,0	40,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 166
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-166
- data : 13/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,67	----
0,60	21,0	46,0	21,0	2,73	8,0
0,80	15,0	56,0	15,0	2,13	7,0
1,00	58,0	90,0	58,0	2,20	26,0
1,20	39,0	72,0	39,0	1,87	21,0
1,40	35,0	63,0	35,0	2,80	13,0
1,60	66,0	108,0	66,0	1,80	37,0
1,80	71,0	98,0	71,0	1,93	37,0
2,00	61,0	90,0	61,0	1,40	44,0
2,20	37,0	58,0	37,0	3,07	12,0
2,40	61,0	107,0	61,0	1,53	40,0
2,60	70,0	93,0	70,0	5,20	13,0
2,80	79,0	157,0	79,0	6,80	12,0
3,00	64,0	166,0	64,0	4,00	16,0
3,20	74,0	134,0	74,0	3,20	23,0
3,40	52,0	100,0	52,0	2,80	19,0
3,60	81,0	123,0	81,0	4,73	17,0
3,80	108,0	179,0	108,0	3,07	35,0
4,00	97,0	143,0	97,0	4,60	21,0
4,20	176,0	245,0	176,0	3,33	53,0
4,40	184,0	234,0	184,0	6,80	27,0
4,60	147,0	249,0	147,0	13,33	11,0
4,80	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 167
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-167
- data : 13/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,47	----
0,60	14,0	36,0	14,0	7,00	2,0
0,80	41,0	146,0	41,0	3,27	13,0
1,00	120,0	169,0	120,0	4,33	28,0
1,20	170,0	235,0	170,0	1,07	159,0
1,40	49,0	65,0	49,0	3,13	16,0
1,60	41,0	88,0	41,0	8,67	5,0
1,80	230,0	360,0	230,0	4,67	49,0
2,00	250,0	320,0	250,0	7,33	34,0
2,20	260,0	370,0	260,0	10,67	24,0
2,40	260,0	420,0	260,0	9,33	28,0
2,60	280,0	420,0	280,0	11,67	24,0
2,80	275,0	450,0	275,0	13,33	21,0
3,00	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 169
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-169
- data : 13/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,07	----
0,60	13,0	29,0	13,0	1,00	13,0
0,80	11,0	26,0	11,0	1,07	10,0
1,00	28,0	44,0	28,0	2,13	13,0
1,20	28,0	60,0	28,0	1,33	21,0
1,40	29,0	49,0	29,0	2,27	13,0
1,60	41,0	75,0	41,0	2,13	19,0
1,80	86,0	118,0	86,0	2,13	40,0
2,00	88,0	120,0	88,0	4,00	22,0
2,20	92,0	152,0	92,0	4,67	20,0
2,40	90,0	160,0	90,0	8,13	11,0
2,60	128,0	250,0	128,0	8,33	15,0
2,80	137,0	262,0	137,0	10,07	14,0
3,00	220,0	371,0	220,0	9,20	24,0
3,20	260,0	398,0	260,0	9,00	29,0
3,40	325,0	460,0	325,0	13,33	24,0
3,60	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 168
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-168
- data : 13/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	3,13	----
0,60	32,0	79,0	32,0	1,13	28,0
0,80	21,0	38,0	21,0	1,67	13,0
1,00	20,0	45,0	20,0	1,13	18,0
1,20	78,0	95,0	78,0	2,67	29,0
1,40	19,0	59,0	19,0	1,87	10,0
1,60	38,0	66,0	38,0	1,60	24,0
1,80	37,0	61,0	37,0	7,00	5,0
2,00	91,0	196,0	91,0	2,87	32,0
2,20	101,0	144,0	101,0	3,93	26,0
2,40	63,0	122,0	63,0	3,67	17,0
2,60	112,0	167,0	112,0	1,27	88,0
2,80	112,0	131,0	112,0	1,80	62,0
3,00	76,0	103,0	76,0	3,80	20,0
3,20	43,0	100,0	43,0	3,87	11,0
3,40	38,0	96,0	38,0	5,53	7,0
3,60	67,0	150,0	67,0	8,00	8,0
3,80	140,0	260,0	140,0	4,00	35,0
4,00	165,0	225,0	165,0	2,73	60,0
4,20	143,0	184,0	143,0	5,27	27,0
4,40	128,0	207,0	128,0	3,07	42,0
4,60	250,0	296,0	250,0	3,87	65,0
4,80	264,0	322,0	264,0	7,47	35,0
5,00	288,0	400,0	288,0	7,00	41,0
5,20	320,0	425,0	320,0	12,67	25,0
5,40	310,0	500,0	310,0	10,00	31,0
5,60	450,0	600,0	450,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 171
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-171
- data : 17/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,13	----
0,60	9,0	26,0	9,0	1,13	8,0
0,80	10,0	27,0	10,0	1,40	7,0
1,00	13,0	34,0	13,0	1,33	10,0
1,20	29,0	49,0	29,0	1,40	21,0
1,40	57,0	78,0	57,0	2,33	24,0
1,60	40,0	75,0	40,0	0,87	46,0
1,80	39,0	52,0	39,0	2,07	19,0
2,00	44,0	75,0	44,0	2,87	15,0
2,20	66,0	109,0	66,0	2,47	27,0
2,40	79,0	116,0	79,0	2,00	40,0
2,60	46,0	76,0	46,0	2,53	18,0
2,80	82,0	120,0	82,0	0,93	88,0
3,00	48,0	62,0	48,0	2,87	17,0
3,20	27,0	70,0	27,0	7,13	4,0
3,40	66,0	173,0	66,0	2,67	25,0
3,60	120,0	160,0	120,0	2,00	60,0
3,80	35,0	65,0	35,0	3,33	11,0
4,00	100,0	150,0	100,0	4,47	22,0
4,20	98,0	165,0	98,0	6,20	16,0
4,40	98,0	191,0	98,0	4,80	20,0
4,60	89,0	161,0	89,0	4,87	18,0
4,80	81,0	154,0	81,0	5,80	14,0
5,00	58,0	145,0	58,0	4,33	13,0
5,20	140,0	205,0	140,0	9,00	16,0
5,40	109,0	244,0	109,0	3,73	29,0
5,60	140,0	196,0	140,0	7,40	19,0
5,80	135,0	246,0	135,0	8,53	16,0
6,00	133,0	261,0	133,0	14,60	9,0
6,20	131,0	350,0	131,0	10,00	13,0
6,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 174
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-174
- data : 17/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	70,0	93,0	70,0	1,67	42,0
0,40	----	----	--	1,00	----	5,40	80,0	105,0	80,0	1,73	46,0
0,60	10,0	25,0	10,0	1,13	9,0	5,60	69,0	95,0	69,0	1,73	40,0
0,80	15,0	32,0	15,0	1,80	8,0	5,80	67,0	93,0	67,0	1,93	35,0
1,00	18,0	45,0	18,0	1,27	14,0	**6,00**	70,0	99,0	70,0	1,27	55,0
1,20	10,0	29,0	10,0	1,40	7,0	6,20	53,0	72,0	53,0	0,93	57,0
1,40	12,0	33,0	12,0	1,47	8,0	6,40	48,0	62,0	48,0	1,47	33,0
1,60	18,0	40,0	18,0	1,60	11,0	6,60	36,0	58,0	36,0	0,73	49,0
1,80	23,0	47,0	23,0	1,87	12,0	6,80	64,0	75,0	64,0	1,33	48,0
2,00	23,0	51,0	23,0	1,67	14,0	**7,00**	71,0	91,0	71,0	0,53	133,0
2,20	36,0	61,0	36,0	2,13	17,0	7,20	76,0	84,0	76,0	1,80	42,0
2,40	37,0	69,0	37,0	3,07	12,0	7,40	62,0	89,0	62,0	1,47	42,0
2,60	37,0	83,0	37,0	3,07	12,0	7,60	60,0	82,0	60,0	1,27	47,0
2,80	30,0	76,0	30,0	2,47	12,0	7,80	72,0	91,0	72,0	3,87	19,0
3,00	28,0	65,0	28,0	1,73	16,0	**8,00**	68,0	126,0	68,0	1,93	35,0
3,20	29,0	55,0	29,0	1,53	19,0	8,20	62,0	91,0	62,0	2,13	29,0
3,40	30,0	53,0	30,0	3,07	10,0	8,40	51,0	83,0	51,0	1,60	32,0
3,60	30,0	76,0	30,0	1,80	17,0	8,60	55,0	79,0	55,0	1,27	43,0
3,80	16,0	43,0	16,0	2,47	6,0	8,80	61,0	80,0	61,0	2,00	30,0
4,00	28,0	65,0	28,0	2,00	14,0	**9,00**	57,0	87,0	57,0	1,67	34,0
4,20	74,0	104,0	74,0	1,00	74,0	9,20	46,0	71,0	46,0	1,47	31,0
4,40	17,0	32,0	17,0	1,53	11,0	9,40	42,0	64,0	42,0	1,33	31,0
4,60	21,0	44,0	21,0	2,33	9,0	9,60	53,0	73,0	53,0	2,07	26,0
4,80	20,0	55,0	20,0	2,80	7,0	9,80	51,0	82,0	51,0	1,33	38,0
5,00	60,0	102,0	60,0	1,53	39,0	**10,00**	61,0	81,0	61,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 173
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-173
- data : 17/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,60	----
0,60	8,0	17,0	8,0	0,87	9,0
0,80	4,0	17,0	4,0	1,20	3,0
1,00	11,0	29,0	11,0	1,40	8,0
1,20	15,0	36,0	15,0	1,53	10,0
1,40	18,0	41,0	18,0	1,00	18,0
1,60	56,0	71,0	56,0	3,53	16,0
1,80	29,0	82,0	29,0	1,47	20,0
2,00	28,0	50,0	28,0	1,73	16,0
2,20	38,0	64,0	38,0	2,27	17,0
2,40	31,0	65,0	31,0	2,07	15,0
2,60	32,0	63,0	32,0	2,20	15,0
2,80	30,0	63,0	30,0	2,20	14,0
3,00	29,0	62,0	29,0	0,87	33,0
3,20	28,0	41,0	28,0	1,33	21,0
3,40	33,0	53,0	33,0	4,67	7,0
3,60	120,0	190,0	120,0	10,00	12,0
3,80	120,0	270,0	120,0	3,33	36,0
4,00	33,0	83,0	33,0	0,80	41,0
4,20	33,0	45,0	33,0	4,60	7,0
4,40	87,0	156,0	87,0	4,40	20,0
4,60	69,0	135,0	69,0	3,13	22,0
4,80	89,0	136,0	89,0	4,00	22,0
5,00	43,0	103,0	43,0	4,00	11,0
5,20	230,0	290,0	230,0	4,33	53,0
5,40	31,0	96,0	31,0	2,07	15,0
5,60	37,0	68,0	37,0	2,13	17,0
5,80	37,0	69,0	37,0	2,47	15,0
6,00	50,0	87,0	50,0	2,73	18,0
6,20	32,0	73,0	32,0	2,87	11,0
6,40	36,0	79,0	36,0	3,07	12,0
6,60	84,0	130,0	84,0	5,80	14,0
6,80	201,0	288,0	201,0	6,67	30,0
7,00	250,0	350,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 170
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-170
- data : 19/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	10,0	20,0	10,0	0,80	12,0
0,80	11,0	23,0	11,0	0,67	16,0
1,00	12,0	22,0	12,0	0,40	30,0
1,20	18,0	24,0	18,0	0,67	27,0
1,40	22,0	32,0	22,0	0,67	33,0
1,60	20,0	30,0	20,0	0,80	25,0
1,80	25,0	37,0	25,0	0,67	37,0
2,00	28,0	38,0	28,0	0,87	32,0
2,20	34,0	47,0	34,0	1,07	32,0
2,40	20,0	36,0	20,0	1,13	18,0
2,60	21,0	38,0	21,0	0,93	22,0
2,80	22,0	36,0	22,0	1,13	19,0
3,00	11,0	28,0	11,0	0,93	12,0
3,20	16,0	30,0	16,0	0,80	20,0
3,40	12,0	24,0	12,0	0,73	16,0
3,60	14,0	25,0	14,0	0,73	19,0
3,80	16,0	27,0	16,0	0,87	18,0
4,00	20,0	33,0	20,0	0,93	21,0
4,20	21,0	35,0	21,0	0,80	26,0
4,40	26,0	38,0	26,0	1,33	19,0
4,60	30,0	50,0	30,0	2,13	14,0
4,80	52,0	84,0	52,0	1,07	49,0
5,00	88,0	104,0	88,0	5,67	16,0
5,20	205,0	290,0	205,0	4,13	50,0
5,40	268,0	330,0	268,0	6,67	40,0
5,60	300,0	400,0	300,0	13,33	23,0
5,80	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 172
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-172
- data : 19/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,40	37,0	53,0	37,0	1,53	24,0
0,40	----	----	--	0,60	----	2,60	66,0	89,0	66,0	1,80	37,0
0,60	12,0	21,0	12,0	0,40	30,0	2,80	118,0	145,0	118,0	2,47	48,0
0,80	11,0	17,0	11,0	0,60	18,0	**3,00**	37,0	74,0	37,0	2,60	14,0
1,00	14,0	23,0	14,0	0,73	19,0	3,20	147,0	186,0	147,0	9,67	15,0
1,20	12,0	23,0	12,0	1,07	11,0	3,40	240,0	385,0	240,0	8,40	29,0
1,40	14,0	30,0	14,0	1,20	12,0	3,60	270,0	396,0	270,0	8,00	34,0
1,60	21,0	39,0	21,0	7,13	3,0	3,80	290,0	410,0	290,0	10,00	29,0
1,80	150,0	257,0	150,0	6,47	23,0	**4,00**	255,0	405,0	255,0	7,40	34,0
2,00	23,0	120,0	23,0	1,13	20,0	4,20	300,0	411,0	300,0	10,00	30,0
2,20	27,0	44,0	27,0	1,07	25,0	4,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 179
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Gioia Sannitica (CE)
- note : Cert. P003-20-179
- data : 19/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,20	----
0,60	8,0	26,0	8,0	1,27	6,0
0,80	8,0	27,0	8,0	2,13	4,0
1,00	22,0	54,0	22,0	0,80	27,0
1,20	23,0	35,0	23,0	0,73	31,0
1,40	12,0	23,0	12,0	1,00	12,0
1,60	15,0	30,0	15,0	1,20	12,0
1,80	12,0	30,0	12,0	0,73	16,0
2,00	16,0	27,0	16,0	1,07	15,0
2,20	23,0	39,0	23,0	1,53	15,0
2,40	22,0	45,0	22,0	1,40	16,0
2,60	40,0	61,0	40,0	2,27	18,0
2,80	22,0	56,0	22,0	2,07	11,0
3,00	19,0	50,0	19,0	2,20	9,0
3,20	20,0	53,0	20,0	1,93	10,0
3,40	27,0	56,0	27,0	2,93	9,0
3,60	26,0	70,0	26,0	2,00	13,0
3,80	59,0	89,0	59,0	5,00	12,0
4,00	56,0	131,0	56,0	4,07	14,0
4,20	79,0	140,0	79,0	4,13	19,0
4,40	56,0	118,0	56,0	4,07	14,0
4,60	62,0	123,0	62,0	5,07	12,0
4,80	62,0	138,0	62,0	4,80	13,0
5,00	114,0	186,0	114,0	4,40	26,0
5,20	84,0	150,0	84,0	7,33	11,0
5,40	130,0	240,0	130,0	6,80	19,0
5,60	71,0	173,0	71,0	6,53	11,0
5,80	70,0	168,0	70,0	5,60	13,0
6,00	56,0	140,0	56,0	7,07	8,0
6,20	50,0	156,0	50,0	8,00	6,0
6,40	320,0	440,0	320,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 227
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-227
- data : 06/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	6,0	14,0	6,0	1,20	5,0
0,80	12,0	30,0	12,0	1,40	9,0
1,00	34,0	55,0	34,0	1,67	20,0
1,20	45,0	70,0	45,0	1,73	26,0
1,40	60,0	86,0	60,0	0,47	129,0
1,60	68,0	75,0	68,0	1,60	42,0
1,80	56,0	80,0	56,0	1,93	29,0
2,00	35,0	64,0	35,0	1,80	19,0
2,20	27,0	54,0	27,0	1,73	16,0
2,40	45,0	71,0	45,0	1,07	42,0
2,60	55,0	71,0	55,0	1,80	31,0
2,80	45,0	72,0	45,0	2,33	19,0
3,00	67,0	102,0	67,0	2,13	31,0
3,20	145,0	177,0	145,0	3,60	40,0
3,40	65,0	119,0	65,0	3,87	17,0
3,60	57,0	115,0	57,0	4,80	12,0
3,80	57,0	129,0	57,0	4,87	12,0
4,00	67,0	140,0	67,0	5,07	13,0
4,20	90,0	166,0	90,0	4,07	22,0
4,40	59,0	120,0	59,0	6,80	9,0
4,60	78,0	180,0	78,0	5,00	16,0
4,80	65,0	140,0	65,0	6,00	11,0
5,00	85,0	175,0	85,0	6,47	13,0
5,20	80,0	177,0	80,0	6,47	12,0
5,40	93,0	190,0	93,0	6,80	14,0
5,60	93,0	195,0	93,0	6,93	13,0
5,80	141,0	245,0	141,0	7,87	18,0
6,00	75,0	193,0	75,0	7,67	10,0
6,20	77,0	192,0	77,0	5,73	13,0
6,40	68,0	154,0	68,0	6,13	11,0
6,60	89,0	181,0	89,0	6,20	14,0
6,80	65,0	158,0	65,0	6,13	11,0
7,00	64,0	156,0	64,0	4,33	15,0
7,20	55,0	120,0	55,0	4,87	11,0
7,40	128,0	201,0	128,0	4,60	28,0
7,60	121,0	190,0	121,0	8,07	15,0
7,80	135,0	256,0	135,0	7,00	19,0
8,00	135,0	240,0	135,0	10,47	13,0
8,20	101,0	258,0	101,0	6,80	15,0
8,40	210,0	312,0	210,0	5,27	40,0
8,60	177,0	256,0	177,0	8,73	20,0
8,80	134,0	265,0	134,0	8,53	16,0
9,00	300,0	428,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 230
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-230
- data : 06/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	7,0	12,0	7,0	0,53	13,0
0,80	6,0	14,0	6,0	0,27	22,0
1,00	11,0	15,0	11,0	0,53	21,0
1,20	11,0	19,0	11,0	0,87	13,0
1,40	10,0	23,0	10,0	0,80	12,0
1,60	11,0	23,0	11,0	0,80	14,0
1,80	14,0	26,0	14,0	0,93	15,0
2,00	15,0	29,0	15,0	1,67	9,0
2,20	12,0	37,0	12,0	1,67	7,0
2,40	14,0	39,0	14,0	1,60	9,0
2,60	15,0	39,0	15,0	1,47	10,0
2,80	18,0	40,0	18,0	1,47	12,0
3,00	25,0	47,0	25,0	1,67	15,0
3,20	20,0	45,0	20,0	2,73	7,0
3,40	35,0	76,0	35,0	2,27	15,0
3,60	30,0	64,0	30,0	2,67	11,0
3,80	37,0	77,0	37,0	2,00	18,0
4,00	54,0	84,0	54,0	2,13	25,0
4,20	40,0	72,0	40,0	2,00	20,0
4,40	25,0	55,0	25,0	1,33	19,0
4,60	51,0	71,0	51,0	5,00	10,0
4,80	43,0	118,0	43,0	0,80	54,0
5,00	59,0	71,0	59,0	3,20	18,0
5,20	35,0	83,0	35,0	3,60	10,0
5,40	36,0	90,0	36,0	3,87	9,0
5,60	39,0	97,0	39,0	4,00	10,0
5,80	41,0	101,0	41,0	4,13	10,0
6,00	38,0	100,0	38,0	3,93	10,0
6,20	36,0	95,0	36,0	3,67	10,0
6,40	36,0	91,0	36,0	3,73	10,0
6,60	38,0	94,0	38,0	2,93	13,0
6,80	45,0	89,0	45,0	3,60	13,0
7,00	47,0	101,0	47,0	4,47	11,0
7,20	52,0	119,0	52,0	5,20	10,0
7,40	50,0	128,0	50,0	4,87	10,0
7,60	43,0	116,0	43,0	2,60	17,0
7,80	62,0	101,0	62,0	4,13	15,0
8,00	68,0	130,0	68,0	4,87	14,0
8,20	43,0	116,0	43,0	3,47	12,0
8,40	92,0	144,0	92,0	1,07	86,0
8,60	84,0	100,0	84,0	2,20	38,0
8,80	43,0	76,0	43,0	3,53	12,0
9,00	54,0	107,0	54,0	4,40	12,0
9,20	52,0	118,0	52,0	2,67	19,0
9,40	50,0	90,0	50,0	4,53	11,0
9,60	50,0	118,0	50,0	10,00	5,0
9,80	300,0	450,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 232
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-232
- data : 06/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	5,0	13,0	5,0	1,07	5,0
0,80	24,0	40,0	24,0	1,20	20,0
1,00	21,0	39,0	21,0	1,00	21,0
1,20	31,0	46,0	31,0	1,67	19,0
1,40	39,0	64,0	39,0	2,33	17,0
1,60	29,0	64,0	29,0	2,07	14,0
1,80	29,0	60,0	29,0	1,87	16,0
2,00	34,0	62,0	34,0	2,20	15,0
2,20	23,0	56,0	23,0	2,20	10,0
2,40	20,0	53,0	20,0	2,67	7,0
2,60	20,0	60,0	20,0	2,80	7,0
2,80	21,0	63,0	21,0	2,13	10,0
3,00	29,0	61,0	29,0	1,93	15,0
3,20	42,0	71,0	42,0	2,67	16,0
3,40	30,0	70,0	30,0	3,00	10,0
3,60	30,0	75,0	30,0	2,93	10,0
3,80	32,0	76,0	32,0	4,93	6,0
4,00	72,0	146,0	72,0	5,27	14,0
4,20	101,0	180,0	101,0	3,47	29,0
4,40	158,0	210,0	158,0	7,73	20,0
4,60	70,0	186,0	70,0	5,73	12,0
4,80	79,0	165,0	79,0	3,40	23,0
5,00	102,0	153,0	102,0	7,80	13,0
5,20	79,0	196,0	79,0	7,40	11,0
5,40	112,0	223,0	112,0	10,40	11,0
5,60	95,0	251,0	95,0	9,87	10,0
5,80	310,0	458,0	310,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 233
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-233
- data : 06/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	5,0	12,0	5,0	0,47	11,0
0,80	7,0	14,0	7,0	0,67	10,0
1,00	5,0	15,0	5,0	0,47	11,0
1,20	9,0	16,0	9,0	0,53	17,0
1,40	26,0	34,0	26,0	2,13	12,0
1,60	55,0	87,0	55,0	2,67	21,0
1,80	47,0	87,0	47,0	2,40	20,0
2,00	47,0	83,0	47,0	2,40	20,0
2,20	63,0	99,0	63,0	3,13	20,0
2,40	38,0	85,0	38,0	3,00	13,0
2,60	41,0	86,0	41,0	1,87	22,0
2,80	33,0	61,0	33,0	1,73	19,0
3,00	87,0	113,0	87,0	1,20	72,0
3,20	63,0	81,0	63,0	4,13	15,0
3,40	64,0	126,0	64,0	2,27	28,0
3,60	76,0	110,0	76,0	2,67	28,0
3,80	44,0	84,0	44,0	2,33	19,0
4,00	41,0	76,0	41,0	3,67	11,0
4,20	59,0	114,0	59,0	3,80	16,0
4,40	60,0	117,0	60,0	1,20	50,0
4,60	84,0	102,0	84,0	3,27	26,0
4,80	52,0	101,0	52,0	1,27	41,0
5,00	64,0	83,0	64,0	1,60	40,0
5,20	77,0	101,0	77,0	1,53	50,0
5,40	67,0	90,0	67,0	1,27	53,0
5,60	83,0	102,0	83,0	1,13	73,0
5,80	81,0	98,0	81,0	1,20	67,0
6,00	84,0	102,0	84,0	1,00	84,0
6,20	83,0	98,0	83,0	1,47	57,0
6,40	68,0	90,0	68,0	1,33	51,0
6,60	90,0	110,0	90,0	1,60	56,0
6,80	77,0	101,0	77,0	9,33	8,0
7,00	320,0	460,0	320,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 234
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-234
- data : 06/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	6,0	13,0	6,0	1,07	6,0
0,80	18,0	34,0	18,0	0,27	67,0
1,00	88,0	92,0	88,0	1,80	49,0
1,20	64,0	91,0	64,0	2,00	32,0
1,40	49,0	79,0	49,0	1,93	25,0
1,60	36,0	65,0	36,0	2,07	17,0
1,80	22,0	53,0	22,0	1,60	14,0
2,00	32,0	56,0	32,0	0,60	53,0
2,20	42,0	51,0	42,0	2,00	21,0
2,40	28,0	58,0	28,0	0,73	38,0
2,60	41,0	52,0	41,0	2,27	18,0
2,80	27,0	61,0	27,0	2,67	10,0
3,00	33,0	73,0	33,0	2,40	14,0
3,20	38,0	74,0	38,0	2,73	14,0
3,40	30,0	71,0	30,0	2,33	13,0
3,60	29,0	64,0	29,0	2,13	14,0
3,80	36,0	68,0	36,0	2,27	16,0
4,00	35,0	69,0	35,0	2,13	16,0
4,20	34,0	66,0	34,0	1,47	23,0
4,40	39,0	61,0	39,0	2,40	16,0
4,60	27,0	63,0	27,0	1,73	16,0
4,80	41,0	67,0	41,0	2,20	19,0
5,00	27,0	60,0	27,0	1,80	15,0
5,20	31,0	58,0	31,0	1,60	19,0
5,40	34,0	58,0	34,0	2,07	16,0
5,60	34,0	65,0	34,0	2,20	15,0
5,80	31,0	64,0	31,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 237
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-237
- data : 07/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	9,0	19,0	9,0	0,27	34,0
0,80	19,0	23,0	19,0	1,13	17,0
1,00	28,0	45,0	28,0	1,27	22,0
1,20	46,0	65,0	46,0	2,13	22,0
1,40	58,0	90,0	58,0	3,07	19,0
1,60	57,0	103,0	57,0	2,93	19,0
1,80	68,0	112,0	68,0	2,93	23,0
2,00	82,0	126,0	82,0	2,40	34,0
2,20	158,0	194,0	158,0	2,40	66,0
2,40	107,0	143,0	107,0	4,00	27,0
2,60	106,0	166,0	106,0	3,27	32,0
2,80	177,0	226,0	177,0	3,73	47,0
3,00	223,0	279,0	223,0	3,53	63,0
3,20	190,0	243,0	190,0	3,67	52,0
3,40	182,0	237,0	182,0	2,13	85,0
3,60	171,0	203,0	171,0	3,07	56,0
3,80	155,0	201,0	155,0	2,67	58,0
4,00	105,0	145,0	105,0	1,67	63,0
4,20	77,0	102,0	77,0	1,33	58,0
4,40	77,0	97,0	77,0	2,80	28,0
4,60	68,0	110,0	68,0	2,47	28,0
4,80	85,0	122,0	85,0	3,93	22,0
5,00	62,0	121,0	62,0	3,93	16,0
5,20	50,0	109,0	50,0	2,40	21,0
5,40	39,0	75,0	39,0	3,53	11,0
5,60	89,0	142,0	89,0	2,07	43,0
5,80	137,0	168,0	137,0	4,00	34,0
6,00	160,0	220,0	160,0	3,60	44,0
6,20	124,0	178,0	124,0	3,33	37,0
6,40	123,0	173,0	123,0	2,40	51,0
6,60	147,0	183,0	147,0	6,00	24,0
6,80	201,0	291,0	201,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 236
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-236
- data : 07/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	10,0	18,0	10,0	0,60	17,0
0,80	8,0	17,0	8,0	0,40	20,0
1,00	7,0	13,0	7,0	0,47	15,0
1,20	9,0	16,0	9,0	0,13	67,0
1,40	5,0	7,0	5,0	0,13	37,0
1,60	6,0	8,0	6,0	0,13	45,0
1,80	7,0	9,0	7,0	0,13	52,0
2,00	5,0	7,0	5,0	0,27	19,0
2,20	17,0	21,0	17,0	0,33	51,0
2,40	6,0	11,0	6,0	0,47	13,0
2,60	9,0	16,0	9,0	2,20	4,0
2,80	80,0	113,0	80,0	1,60	50,0
3,00	21,0	45,0	21,0	0,47	45,0
3,20	15,0	22,0	15,0	1,93	8,0
3,40	23,0	52,0	23,0	0,27	86,0
3,60	10,0	14,0	10,0	0,27	37,0
3,80	7,0	11,0	7,0	0,33	21,0
4,00	10,0	15,0	10,0	0,87	12,0
4,20	37,0	50,0	37,0	4,13	9,0
4,40	70,0	132,0	70,0	1,13	62,0
4,60	37,0	54,0	37,0	1,33	28,0
4,80	50,0	70,0	50,0	2,00	25,0
5,00	24,0	54,0	24,0	0,93	26,0
5,20	34,0	48,0	34,0	1,47	23,0
5,40	29,0	51,0	29,0	0,80	36,0
5,60	48,0	60,0	48,0	1,27	38,0
5,80	48,0	67,0	48,0	1,07	45,0
6,00	38,0	54,0	38,0	1,33	28,0
6,20	56,0	76,0	56,0	2,00	28,0
6,40	66,0	96,0	66,0	2,73	24,0
6,60	92,0	133,0	92,0	2,67	34,0
6,80	76,0	116,0	76,0	3,33	23,0
7,00	112,0	162,0	112,0	3,87	29,0
7,20	104,0	162,0	104,0	2,93	35,0
7,40	147,0	191,0	147,0	2,00	74,0
7,60	136,0	166,0	136,0	8,00	17,0
7,80	260,0	380,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 235
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-235
- data : 07/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	7,0	18,0	7,0	1,07	7,0
0,80	10,0	26,0	10,0	1,27	8,0
1,00	33,0	52,0	33,0	2,13	15,0
1,20	28,0	60,0	28,0	3,27	9,0
1,40	30,0	79,0	30,0	2,87	10,0
1,60	26,0	69,0	26,0	2,93	9,0
1,80	86,0	130,0	86,0	3,33	26,0
2,00	40,0	90,0	40,0	2,67	15,0
2,20	81,0	121,0	81,0	7,33	11,0
2,40	200,0	310,0	200,0	7,40	27,0
2,60	209,0	320,0	209,0	7,47	28,0
2,80	241,0	353,0	241,0	10,00	24,0
3,00	300,0	450,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 239
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-239
- data : 07/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	3,60	76,0	109,0	76,0	1,00	76,0
0,40	----	----	--	0,53	----	3,80	88,0	103,0	88,0	2,33	38,0
0,60	11,0	19,0	11,0	1,13	10,0	**4,00**	55,0	90,0	55,0	2,00	28,0
0,80	11,0	28,0	11,0	1,20	9,0	4,20	39,0	69,0	39,0	2,80	14,0
1,00	12,0	30,0	12,0	1,27	9,0	4,40	40,0	82,0	40,0	2,13	19,0
1,20	16,0	35,0	16,0	1,07	15,0	4,60	39,0	71,0	39,0	2,73	14,0
1,40	22,0	38,0	22,0	1,67	13,0	4,80	99,0	140,0	99,0	4,80	21,0
1,60	23,0	48,0	23,0	1,60	14,0	**5,00**	61,0	133,0	61,0	5,13	12,0
1,80	19,0	43,0	19,0	1,80	11,0	5,20	40,0	117,0	40,0	2,80	14,0
2,00	14,0	41,0	14,0	1,07	13,0	5,40	73,0	115,0	73,0	3,47	21,0
2,20	15,0	31,0	15,0	1,13	13,0	5,60	60,0	112,0	60,0	3,73	16,0
2,40	15,0	32,0	15,0	1,13	13,0	5,80	39,0	95,0	39,0	5,07	8,0
2,60	26,0	43,0	26,0	5,07	5,0	**6,00**	68,0	144,0	68,0	4,27	16,0
2,80	52,0	128,0	52,0	3,93	13,0	6,20	88,0	152,0	88,0	4,00	22,0
3,00	81,0	140,0	81,0	1,93	42,0	6,40	160,0	220,0	160,0	7,00	23,0
3,20	86,0	115,0	86,0	1,13	76,0	6,60	240,0	345,0	240,0	10,67	22,0
3,40	27,0	44,0	27,0	2,20	12,0	6,80	340,0	500,0	340,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 240
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-240
- data : 07/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,60	108,0	222,0	108,0	5,53	20,0
0,40	----	----	--	0,40	----	2,80	116,0	199,0	116,0	7,47	16,0
0,60	9,0	15,0	9,0	0,27	34,0	**3,00**	90,0	202,0	90,0	5,27	17,0
0,80	14,0	18,0	14,0	0,60	23,0	3,20	165,0	244,0	165,0	5,40	31,0
1,00	17,0	26,0	17,0	0,60	28,0	3,40	104,0	185,0	104,0	6,00	17,0
1,20	11,0	20,0	11,0	0,40	27,0	3,60	45,0	135,0	45,0	4,00	11,0
1,40	20,0	26,0	20,0	1,20	17,0	3,80	60,0	120,0	60,0	2,33	26,0
1,60	45,0	63,0	45,0	2,80	16,0	**4,00**	46,0	81,0	46,0	2,33	20,0
1,80	86,0	128,0	86,0	2,47	35,0	4,20	70,0	105,0	70,0	3,87	18,0
2,00	68,0	105,0	68,0	5,40	13,0	4,40	264,0	322,0	264,0	4,33	61,0
2,20	107,0	188,0	107,0	5,33	20,0	4,60	280,0	345,0	280,0	9,33	30,0
2,40	160,0	240,0	160,0	7,60	21,0	4,80	360,0	500,0	360,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 241
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-241
- data : 07/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	10,0	18,0	10,0	0,53	19,0
0,80	12,0	20,0	12,0	0,53	22,0
1,00	9,0	17,0	9,0	0,53	17,0
1,20	15,0	23,0	15,0	0,67	22,0
1,40	14,0	24,0	14,0	0,73	19,0
1,60	18,0	29,0	18,0	0,80	22,0
1,80	19,0	31,0	19,0	1,87	10,0
2,00	30,0	58,0	30,0	1,27	24,0
2,20	36,0	55,0	36,0	1,27	28,0
2,40	33,0	52,0	33,0	1,33	25,0
2,60	28,0	48,0	28,0	2,93	10,0
2,80	60,0	104,0	60,0	3,33	18,0
3,00	58,0	108,0	58,0	4,60	13,0
3,20	66,0	135,0	66,0	3,67	18,0
3,40	89,0	144,0	89,0	4,00	22,0
3,60	92,0	152,0	92,0	5,87	16,0
3,80	48,0	136,0	48,0	4,27	11,0
4,00	64,0	128,0	64,0	4,93	13,0
4,20	61,0	135,0	61,0	4,80	13,0
4,40	90,0	162,0	90,0	4,20	21,0
4,60	110,0	173,0	110,0	5,33	21,0
4,80	98,0	178,0	98,0	4,27	23,0
5,00	135,0	199,0	135,0	4,07	33,0
5,20	163,0	224,0	163,0	7,33	22,0
5,40	190,0	300,0	190,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 243
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-243
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	11,0	16,0	11,0	0,87	13,0
0,80	12,0	25,0	12,0	2,20	5,0
1,00	30,0	63,0	30,0	1,93	16,0
1,20	71,0	100,0	71,0	3,67	19,0
1,40	77,0	132,0	77,0	3,13	25,0
1,60	72,0	119,0	72,0	3,47	21,0
1,80	60,0	112,0	60,0	4,67	13,0
2,00	60,0	130,0	60,0	4,60	13,0
2,20	75,0	144,0	75,0	4,47	17,0
2,40	83,0	150,0	83,0	4,53	18,0
2,60	90,0	158,0	90,0	4,53	20,0
2,80	102,0	170,0	102,0	4,93	21,0
3,00	136,0	210,0	136,0	5,47	25,0
3,20	108,0	190,0	108,0	6,53	17,0
3,40	92,0	190,0	92,0	6,40	14,0
3,60	96,0	192,0	96,0	5,60	17,0
3,80	87,0	171,0	87,0	2,20	40,0
4,00	127,0	160,0	127,0	7,33	17,0
4,20	120,0	230,0	120,0	4,40	27,0
4,40	92,0	158,0	92,0	5,07	18,0
4,60	93,0	169,0	93,0	6,73	14,0
4,80	110,0	211,0	110,0	8,67	13,0
5,00	150,0	280,0	150,0	9,40	16,0
5,20	158,0	299,0	158,0	9,67	16,0
5,40	175,0	320,0	175,0	8,60	20,0
5,60	211,0	340,0	211,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 244
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-244
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	17,0	27,0	17,0	0,80	21,0
0,80	20,0	32,0	20,0	1,20	17,0
1,00	24,0	42,0	24,0	1,67	14,0
1,20	30,0	55,0	30,0	2,20	14,0
1,40	39,0	72,0	39,0	2,27	17,0
1,60	29,0	63,0	29,0	2,20	13,0
1,80	32,0	65,0	32,0	3,40	9,0
2,00	56,0	107,0	56,0	2,87	20,0
2,20	33,0	76,0	33,0	2,40	14,0
2,40	43,0	79,0	43,0	3,80	11,0
2,60	48,0	105,0	48,0	3,00	16,0
2,80	35,0	80,0	35,0	3,20	11,0
3,00	35,0	83,0	35,0	3,07	11,0
3,20	57,0	103,0	57,0	3,40	17,0
3,40	84,0	135,0	84,0	4,80	17,0
3,60	66,0	138,0	66,0	6,13	11,0
3,80	78,0	170,0	78,0	5,13	15,0
4,00	105,0	182,0	105,0	5,13	20,0
4,20	59,0	136,0	59,0	4,00	15,0
4,40	64,0	124,0	64,0	4,27	15,0
4,60	75,0	139,0	75,0	6,73	11,0
4,80	74,0	175,0	74,0	6,00	12,0
5,00	250,0	340,0	250,0	13,33	19,0
5,20	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 246
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-246
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,07	----
0,60	7,0	23,0	7,0	1,00	7,0
0,80	12,0	27,0	12,0	2,47	5,0
1,00	32,0	69,0	32,0	2,27	14,0
1,20	109,0	143,0	109,0	2,60	42,0
1,40	113,0	152,0	113,0	2,60	43,0
1,60	93,0	132,0	93,0	3,20	29,0
1,80	65,0	113,0	65,0	4,33	15,0
2,00	97,0	162,0	97,0	4,27	23,0
2,20	98,0	162,0	98,0	1,47	67,0
2,40	85,0	107,0	85,0	1,80	47,0
2,60	41,0	68,0	41,0	2,13	19,0
2,80	46,0	78,0	46,0	2,67	17,0
3,00	28,0	68,0	28,0	0,93	30,0
3,20	27,0	41,0	27,0	0,67	40,0
3,40	22,0	32,0	22,0	0,33	66,0
3,60	25,0	30,0	25,0	5,47	5,0
3,80	113,0	195,0	113,0	4,07	28,0
4,00	159,0	220,0	159,0	4,93	32,0
4,20	128,0	202,0	128,0	1,13	113,0
4,40	25,0	42,0	25,0	0,53	47,0
4,60	13,0	21,0	13,0	0,60	22,0
4,80	18,0	27,0	18,0	0,60	30,0
5,00	16,0	25,0	16,0	0,53	30,0
5,20	14,0	22,0	14,0	0,27	52,0
5,40	16,0	20,0	16,0	0,33	48,0
5,60	18,0	23,0	18,0	0,67	27,0
5,80	24,0	34,0	24,0	0,93	26,0
6,00	16,0	30,0	16,0	0,80	20,0
6,20	22,0	34,0	22,0	1,07	21,0
6,40	36,0	52,0	36,0	3,73	10,0
6,60	40,0	96,0	40,0	3,27	12,0
6,80	27,0	76,0	27,0	3,07	9,0
7,00	59,0	105,0	59,0	3,33	18,0
7,20	47,0	97,0	47,0	5,87	8,0
7,40	72,0	160,0	72,0	5,20	14,0
7,60	193,0	271,0	193,0	6,67	29,0
7,80	78,0	178,0	78,0	2,00	39,0
8,00	180,0	210,0	180,0	6,33	28,0
8,20	220,0	315,0	220,0	5,00	44,0
8,40	280,0	355,0	280,0	10,67	26,0
8,60	300,0	460,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 249
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-249
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,80	----
0,60	10,0	22,0	10,0	1,07	9,0
0,80	8,0	24,0	8,0	1,33	6,0
1,00	10,0	30,0	10,0	1,07	9,0
1,20	9,0	25,0	9,0	1,20	7,0
1,40	10,0	28,0	10,0	1,33	7,0
1,60	19,0	39,0	19,0	1,40	14,0
1,80	17,0	38,0	17,0	1,27	13,0
2,00	17,0	36,0	17,0	5,80	3,0
2,20	92,0	179,0	92,0	4,53	20,0
2,40	17,0	85,0	17,0	1,53	11,0
2,60	18,0	41,0	18,0	1,33	13,0
2,80	12,0	32,0	12,0	1,00	12,0
3,00	16,0	31,0	16,0	0,93	17,0
3,20	16,0	30,0	16,0	1,00	16,0
3,40	22,0	37,0	22,0	1,80	12,0
3,60	23,0	50,0	23,0	2,60	9,0
3,80	26,0	65,0	26,0	2,93	9,0
4,00	24,0	68,0	24,0	3,13	8,0
4,20	34,0	81,0	34,0	3,67	9,0
4,40	31,0	86,0	31,0	3,27	9,0
4,60	31,0	80,0	31,0	3,20	10,0
4,80	32,0	80,0	32,0	3,60	9,0
5,00	29,0	83,0	29,0	2,87	10,0
5,20	37,0	80,0	37,0	3,07	12,0
5,40	45,0	91,0	45,0	2,20	20,0
5,60	94,0	127,0	94,0	4,67	20,0
5,80	54,0	124,0	54,0	2,80	19,0
6,00	116,0	158,0	116,0	5,93	20,0
6,20	91,0	180,0	91,0	5,73	16,0
6,40	72,0	158,0	72,0	5,00	14,0
6,60	58,0	133,0	58,0	3,33	17,0
6,80	52,0	102,0	52,0	9,33	6,0
7,00	220,0	360,0	220,0	8,00	28,0
7,20	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 247
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-247
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,93	----
0,60	7,0	21,0	7,0	0,27	26,0
0,80	11,0	15,0	11,0	1,00	11,0
1,00	76,0	91,0	76,0	4,00	19,0
1,20	70,0	130,0	70,0	3,33	21,0
1,40	62,0	112,0	62,0	4,40	14,0
1,60	75,0	141,0	75,0	4,67	16,0
1,80	91,0	161,0	91,0	5,00	18,0
2,00	102,0	177,0	102,0	5,20	20,0
2,20	97,0	175,0	97,0	5,20	19,0
2,40	65,0	143,0	65,0	5,73	11,0
2,60	83,0	169,0	83,0	1,53	54,0
2,80	73,0	96,0	73,0	4,13	18,0
3,00	46,0	108,0	46,0	2,20	21,0
3,20	50,0	83,0	50,0	6,53	8,0
3,40	83,0	181,0	83,0	8,00	10,0
3,60	68,0	188,0	68,0	4,13	16,0
3,80	88,0	150,0	88,0	9,67	9,0
4,00	150,0	295,0	150,0	5,73	26,0
4,20	134,0	220,0	134,0	12,33	11,0
4,40	90,0	275,0	90,0	4,87	18,0
4,60	141,0	214,0	141,0	5,87	24,0
4,80	132,0	220,0	132,0	6,53	20,0
5,00	150,0	248,0	150,0	7,40	20,0
5,20	155,0	266,0	155,0	8,60	18,0
5,40	170,0	299,0	170,0	8,33	20,0
5,60	177,0	302,0	177,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 248
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-248
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	3,20	40,0	66,0	40,0	2,20	18,0
0,40	----	----	--	9,20	----	3,40	55,0	88,0	55,0	3,67	15,0
0,60	138,0	276,0	138,0	9,60	14,0	3,60	44,0	99,0	44,0	2,47	18,0
0,80	150,0	294,0	150,0	3,87	39,0	3,80	40,0	77,0	40,0	3,00	13,0
1,00	140,0	198,0	140,0	3,53	40,0	**4,00**	57,0	102,0	57,0	3,27	17,0
1,20	19,0	72,0	19,0	1,67	11,0	4,20	44,0	93,0	44,0	2,47	18,0
1,40	17,0	42,0	17,0	1,60	11,0	4,40	40,0	77,0	40,0	2,80	14,0
1,60	16,0	40,0	16,0	0,87	18,0	4,60	33,0	75,0	33,0	2,87	12,0
1,80	19,0	32,0	19,0	6,27	3,0	4,80	34,0	77,0	34,0	2,47	14,0
2,00	63,0	157,0	63,0	7,80	8,0	**5,00**	51,0	88,0	51,0	4,07	13,0
2,20	20,0	137,0	20,0	2,00	10,0	5,20	38,0	99,0	38,0	4,73	8,0
2,40	37,0	67,0	37,0	1,33	28,0	5,40	91,0	162,0	91,0	4,47	20,0
2,60	24,0	44,0	24,0	2,20	11,0	5,60	196,0	263,0	196,0	6,00	33,0
2,80	23,0	56,0	23,0	2,60	9,0	5,80	225,0	315,0	225,0	12,00	19,0
3,00	32,0	71,0	32,0	1,73	18,0	**6,00**	400,0	580,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 251
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-251
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	17,0	25,0	17,0	0,87	20,0
0,80	15,0	28,0	15,0	0,87	17,0
1,00	29,0	42,0	29,0	3,13	9,0
1,20	64,0	111,0	64,0	1,73	37,0
1,40	41,0	67,0	41,0	2,00	20,0
1,60	50,0	80,0	50,0	2,33	21,0
1,80	41,0	76,0	41,0	2,00	20,0
2,00	48,0	78,0	48,0	4,00	12,0
2,20	124,0	184,0	124,0	1,87	66,0
2,40	51,0	79,0	51,0	0,93	55,0
2,60	16,0	30,0	16,0	1,27	13,0
2,80	17,0	36,0	17,0	0,93	18,0
3,00	27,0	41,0	27,0	1,67	16,0
3,20	20,0	45,0	20,0	3,67	5,0
3,40	71,0	126,0	71,0	7,47	10,0
3,60	102,0	214,0	102,0	5,00	20,0
3,80	260,0	335,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 253
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-253
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	9,0	16,0	9,0	1,00	9,0
0,80	14,0	29,0	14,0	0,87	16,0
1,00	28,0	41,0	28,0	2,13	13,0
1,20	28,0	60,0	28,0	3,20	9,0
1,40	32,0	80,0	32,0	3,60	9,0
1,60	28,0	82,0	28,0	1,93	14,0
1,80	41,0	70,0	41,0	6,33	6,0
2,00	220,0	315,0	220,0	7,67	29,0
2,20	140,0	255,0	140,0	1,53	91,0
2,40	34,0	57,0	34,0	8,00	4,0
2,60	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 258
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-258
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,20	124,0	172,0	124,0	2,47	50,0
0,40	----	----	--	0,80	----	2,40	67,0	104,0	67,0	3,00	22,0
0,60	10,0	22,0	10,0	1,07	9,0	2,60	35,0	80,0	35,0	4,33	8,0
0,80	9,0	25,0	9,0	1,07	8,0	2,80	88,0	153,0	88,0	3,13	28,0
1,00	19,0	35,0	19,0	1,93	10,0	**3,00**	139,0	186,0	139,0	2,47	56,0
1,20	37,0	66,0	37,0	1,87	20,0	3,20	70,0	107,0	70,0	2,20	32,0
1,40	28,0	56,0	28,0	2,47	11,0	3,40	17,0	50,0	17,0	3,20	5,0
1,60	54,0	91,0	54,0	2,00	27,0	3,60	28,0	76,0	28,0	6,33	4,0
1,80	95,0	125,0	95,0	3,07	31,0	3,80	230,0	325,0	230,0	13,33	17,0
2,00	89,0	135,0	89,0	3,20	28,0	**4,00**	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 259
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-259
- data : 08/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,20	----
0,60	12,0	30,0	12,0	1,40	9,0
0,80	11,0	32,0	11,0	1,27	9,0
1,00	9,0	28,0	9,0	1,20	7,0
1,20	9,0	27,0	9,0	3,87	2,0
1,40	35,0	93,0	35,0	7,47	5,0
1,60	166,0	278,0	166,0	4,87	34,0
1,80	272,0	345,0	272,0	9,27	29,0
2,00	151,0	290,0	151,0	8,73	17,0
2,20	157,0	288,0	157,0	9,20	17,0
2,40	99,0	237,0	99,0	9,00	11,0
2,60	89,0	224,0	89,0	7,00	13,0
2,80	110,0	215,0	110,0	6,87	16,0
3,00	75,0	178,0	75,0	5,07	15,0
3,20	88,0	164,0	88,0	5,33	16,0
3,40	70,0	150,0	70,0	3,07	23,0
3,60	58,0	104,0	58,0	2,87	20,0
3,80	56,0	99,0	56,0	9,60	6,0
4,00	127,0	271,0	127,0	5,93	21,0
4,20	151,0	240,0	151,0	8,40	18,0
4,40	89,0	215,0	89,0	5,73	16,0
4,60	124,0	210,0	124,0	6,00	21,0
4,80	220,0	310,0	220,0	10,00	22,0
5,00	300,0	450,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 287
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-287
- data : 09/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	14,0	25,0	14,0	0,80	17,0
0,80	10,0	22,0	10,0	0,93	11,0
1,00	26,0	40,0	26,0	3,33	8,0
1,20	120,0	170,0	120,0	2,67	45,0
1,40	88,0	128,0	88,0	3,60	24,0
1,60	26,0	80,0	26,0	2,33	11,0
1,80	23,0	58,0	23,0	1,93	12,0
2,00	40,0	69,0	40,0	1,47	27,0
2,20	40,0	62,0	40,0	1,73	23,0
2,40	26,0	52,0	26,0	1,60	16,0
2,60	23,0	47,0	23,0	1,27	18,0
2,80	31,0	50,0	31,0	4,40	7,0
3,00	286,0	352,0	286,0	4,40	65,0
3,20	120,0	186,0	120,0	5,33	22,0
3,40	250,0	330,0	250,0	7,33	34,0
3,60	290,0	400,0	290,0	6,40	45,0
3,80	130,0	226,0	130,0	6,93	19,0
4,00	181,0	285,0	181,0	8,00	23,0
4,20	300,0	420,0	300,0	10,00	30,0
4,40	310,0	460,0	310,0	10,67	29,0
4,60	300,0	460,0	300,0	10,00	30,0
4,80	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 288
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-288
- data : 09/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,20	----
0,60	10,0	13,0	10,0	0,27	37,0
0,80	10,0	14,0	10,0	0,27	37,0
1,00	10,0	14,0	10,0	0,53	19,0
1,20	17,0	25,0	17,0	2,40	7,0
1,40	20,0	56,0	20,0	3,73	5,0
1,60	58,0	114,0	58,0	2,40	24,0
1,80	102,0	138,0	102,0	3,93	26,0
2,00	63,0	122,0	63,0	3,13	20,0
2,20	67,0	114,0	67,0	2,40	28,0
2,40	58,0	94,0	58,0	6,60	9,0
2,60	97,0	196,0	97,0	2,40	40,0
2,80	125,0	161,0	125,0	5,27	24,0
3,00	112,0	191,0	112,0	5,87	19,0
3,20	89,0	177,0	89,0	4,60	19,0
3,40	62,0	131,0	62,0	3,53	18,0
3,60	44,0	97,0	44,0	4,40	10,0
3,80	52,0	118,0	52,0	3,07	17,0
4,00	93,0	139,0	93,0	5,20	18,0
4,20	90,0	168,0	90,0	3,80	24,0
4,40	120,0	177,0	120,0	5,13	23,0
4,60	106,0	183,0	106,0	5,80	18,0
4,80	93,0	180,0	93,0	6,60	14,0
5,00	105,0	204,0	105,0	6,33	17,0
5,20	112,0	207,0	112,0	6,47	17,0
5,40	94,0	191,0	94,0	5,87	16,0
5,60	130,0	218,0	130,0	6,87	19,0
5,80	158,0	261,0	158,0	6,47	24,0
6,00	247,0	344,0	247,0	10,27	24,0
6,20	160,0	314,0	160,0	9,47	17,0
6,40	150,0	292,0	150,0	8,47	18,0
6,60	203,0	330,0	203,0	5,60	36,0
6,80	170,0	254,0	170,0	4,53	38,0
7,00	232,0	300,0	232,0	5,60	41,0
7,20	106,0	190,0	106,0	2,60	41,0
7,40	104,0	143,0	104,0	2,73	38,0
7,60	109,0	150,0	109,0	12,93	8,0
7,80	106,0	300,0	106,0	3,47	31,0
8,00	274,0	326,0	274,0	8,33	33,0
8,20	275,0	400,0	275,0	10,00	28,0
8,40	300,0	450,0	300,0	9,33	32,0
8,60	260,0	400,0	260,0	11,07	23,0
8,80	134,0	300,0	134,0	7,47	18,0
9,00	140,0	252,0	140,0	8,93	16,0
9,20	108,0	242,0	108,0	4,00	27,0
9,40	240,0	300,0	240,0	6,67	36,0
9,60	280,0	380,0	280,0	4,33	65,0
9,80	265,0	330,0	265,0	10,00	26,0
10,00	300,0	450,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 289
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-289
- data : 09/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	18,0	26,0	18,0	1,00	18,0
0,80	19,0	34,0	19,0	1,87	10,0
1,00	24,0	52,0	24,0	1,80	13,0
1,20	23,0	50,0	23,0	1,47	16,0
1,40	26,0	48,0	26,0	1,73	15,0
1,60	12,0	38,0	12,0	1,67	7,0
1,80	14,0	39,0	14,0	1,13	12,0
2,00	10,0	27,0	10,0	1,80	6,0
2,20	22,0	49,0	22,0	1,93	11,0
2,40	32,0	61,0	32,0	2,20	15,0
2,60	33,0	66,0	33,0	2,07	16,0
2,80	28,0	59,0	28,0	2,80	10,0
3,00	18,0	60,0	18,0	2,40	7,0
3,20	28,0	64,0	28,0	2,07	14,0
3,40	38,0	69,0	38,0	1,53	25,0
3,60	42,0	65,0	42,0	2,00	21,0
3,80	40,0	70,0	40,0	2,07	19,0
4,00	41,0	72,0	41,0	0,73	56,0
4,20	88,0	99,0	88,0	1,33	66,0
4,40	82,0	102,0	82,0	3,60	23,0
4,60	46,0	100,0	46,0	4,00	12,0
4,80	44,0	104,0	44,0	2,33	19,0
5,00	92,0	127,0	92,0	2,60	35,0
5,20	96,0	135,0	96,0	2,13	45,0
5,40	93,0	125,0	93,0	2,73	34,0
5,60	97,0	138,0	97,0	3,80	26,0
5,80	86,0	143,0	86,0	3,47	25,0
6,00	84,0	136,0	84,0	4,27	20,0
6,20	122,0	186,0	122,0	4,80	25,0
6,40	120,0	192,0	120,0	3,73	32,0
6,60	96,0	152,0	96,0	4,33	22,0
6,80	99,0	164,0	99,0	4,93	20,0
7,00	130,0	204,0	130,0	7,53	17,0
7,20	187,0	300,0	187,0	8,40	22,0
7,40	204,0	330,0	204,0	7,33	28,0
7,60	280,0	390,0	280,0	10,67	26,0
7,80	320,0	480,0	320,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 290
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Morcone (BN)
- note : Cert. P003-20-290
- data : 09/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,33	----
0,60	10,0	30,0	10,0	0,60	17,0
0,80	43,0	52,0	43,0	1,00	43,0
1,00	48,0	63,0	48,0	2,93	16,0
1,20	40,0	84,0	40,0	3,07	13,0
1,40	42,0	88,0	42,0	3,27	13,0
1,60	42,0	91,0	42,0	4,67	9,0
1,80	190,0	260,0	190,0	10,00	19,0
2,00	300,0	450,0	300,0	4,00	75,0
2,20	290,0	350,0	290,0	8,67	33,0
2,40	250,0	380,0	250,0	6,00	42,0
2,60	270,0	360,0	270,0	6,67	41,0
2,80	300,0	400,0	300,0	8,00	38,0
3,00	300,0	420,0	300,0	8,67	35,0
3,20	320,0	450,0	320,0	8,67	37,0
3,40	350,0	480,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 292
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-292
- data : 09/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	15,0	26,0	15,0	0,67	22,0
0,80	19,0	29,0	19,0	1,07	18,0
1,00	48,0	64,0	48,0	1,00	48,0
1,20	54,0	69,0	54,0	1,40	39,0
1,40	88,0	109,0	88,0	3,00	29,0
1,60	59,0	104,0	59,0	2,60	23,0
1,80	102,0	141,0	102,0	2,00	51,0
2,00	98,0	128,0	98,0	2,13	46,0
2,20	92,0	124,0	92,0	3,13	29,0
2,40	99,0	146,0	99,0	3,73	27,0
2,60	29,0	85,0	29,0	2,73	11,0
2,80	22,0	63,0	22,0	2,07	11,0
3,00	27,0	58,0	27,0	1,27	21,0
3,20	75,0	94,0	75,0	1,60	47,0
3,40	72,0	96,0	72,0	1,73	42,0
3,60	78,0	104,0	78,0	4,00	20,0
3,80	94,0	154,0	94,0	2,80	34,0
4,00	132,0	174,0	132,0	3,33	40,0
4,20	72,0	122,0	72,0	5,20	14,0
4,40	125,0	203,0	125,0	3,67	34,0
4,60	297,0	352,0	297,0	8,73	34,0
4,80	115,0	246,0	115,0	4,80	24,0
5,00	54,0	126,0	54,0	7,27	7,0
5,20	136,0	245,0	136,0	5,40	25,0
5,40	114,0	195,0	114,0	6,13	19,0
5,60	56,0	148,0	56,0	4,93	11,0
5,80	66,0	140,0	66,0	5,20	13,0
6,00	78,0	156,0	78,0	12,00	6,0
6,20	300,0	480,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 293
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-293
- data : 12/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	10,0	18,0	10,0	0,20	50,0
0,80	12,0	15,0	12,0	0,40	30,0
1,00	10,0	16,0	10,0	0,60	17,0
1,20	18,0	27,0	18,0	0,67	27,0
1,40	19,0	29,0	19,0	0,80	24,0
1,60	18,0	30,0	18,0	1,13	16,0
1,80	22,0	39,0	22,0	1,27	17,0
2,00	20,0	39,0	20,0	1,20	17,0
2,20	24,0	42,0	24,0	1,33	18,0
2,40	20,0	40,0	20,0	1,47	14,0
2,60	26,0	48,0	26,0	1,33	19,0
2,80	24,0	44,0	24,0	0,93	26,0
3,00	28,0	42,0	28,0	0,87	32,0
3,20	26,0	39,0	26,0	0,80	32,0
3,40	29,0	41,0	29,0	1,20	24,0
3,60	33,0	51,0	33,0	1,60	21,0
3,80	28,0	52,0	28,0	1,60	17,0
4,00	36,0	60,0	36,0	1,67	22,0
4,20	33,0	58,0	33,0	2,00	16,0
4,40	36,0	66,0	36,0	2,27	16,0
4,60	120,0	154,0	120,0	1,80	67,0
4,80	110,0	137,0	110,0	2,07	53,0
5,00	48,0	79,0	48,0	1,67	29,0
5,20	52,0	77,0	52,0	2,40	22,0
5,40	56,0	92,0	56,0	3,00	19,0
5,60	44,0	89,0	44,0	2,67	16,0
5,80	70,0	110,0	70,0	3,53	20,0
6,00	89,0	142,0	89,0	3,33	27,0
6,20	86,0	136,0	86,0	2,80	31,0
6,40	99,0	141,0	99,0	4,40	22,0
6,60	72,0	138,0	72,0	4,40	16,0
6,80	95,0	161,0	95,0	4,53	21,0
7,00	92,0	160,0	92,0	5,13	18,0
7,20	124,0	201,0	124,0	6,80	18,0
7,40	96,0	198,0	96,0	5,93	16,0
7,60	88,0	177,0	88,0	5,00	18,0
7,80	152,0	227,0	152,0	5,33	28,0
8,00	220,0	300,0	220,0	5,67	39,0
8,20	280,0	365,0	280,0	8,67	32,0
8,40	320,0	450,0	320,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 294
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-294
- data : 12/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	5,0	15,0	5,0	0,87	6,0
0,80	9,0	22,0	9,0	0,53	17,0
1,00	20,0	28,0	20,0	1,27	16,0
1,20	14,0	33,0	14,0	1,13	12,0
1,40	18,0	35,0	18,0	1,07	17,0
1,60	16,0	32,0	16,0	1,60	10,0
1,80	22,0	46,0	22,0	0,67	33,0
2,00	28,0	38,0	28,0	1,67	17,0
2,20	19,0	44,0	19,0	1,40	14,0
2,40	20,0	41,0	20,0	1,73	12,0
2,60	23,0	49,0	23,0	1,80	13,0
2,80	26,0	53,0	26,0	1,87	14,0
3,00	20,0	48,0	20,0	2,00	10,0
3,20	21,0	51,0	21,0	2,07	10,0
3,40	33,0	64,0	33,0	1,67	20,0
3,60	53,0	78,0	53,0	2,93	18,0
3,80	38,0	82,0	38,0	1,67	23,0
4,00	80,0	105,0	80,0	4,00	20,0
4,20	30,0	90,0	30,0	3,87	8,0
4,40	41,0	99,0	41,0	2,80	15,0
4,60	50,0	92,0	50,0	4,53	11,0
4,80	42,0	110,0	42,0	4,33	10,0
5,00	54,0	119,0	54,0	4,33	12,0
5,20	64,0	129,0	64,0	4,87	13,0
5,40	77,0	150,0	77,0	5,47	14,0
5,60	86,0	168,0	86,0	4,73	18,0
5,80	91,0	162,0	91,0	4,80	19,0
6,00	92,0	164,0	92,0	8,00	12,0
6,20	67,0	187,0	67,0	5,67	12,0
6,40	76,0	161,0	76,0	6,47	12,0
6,60	80,0	177,0	80,0	6,47	12,0
6,80	73,0	170,0	73,0	6,40	11,0
7,00	83,0	179,0	83,0	6,40	13,0
7,20	73,0	169,0	73,0	7,27	10,0
7,40	101,0	210,0	101,0	7,27	14,0
7,60	135,0	244,0	135,0	7,73	17,0
7,80	122,0	238,0	122,0	8,33	15,0
8,00	158,0	283,0	158,0	6,80	23,0
8,20	198,0	300,0	198,0	6,73	29,0
8,40	238,0	339,0	238,0	10,00	24,0
8,60	400,0	550,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 295
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-295
- data : 12/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	3,60	55,0	102,0	55,0	3,33	17,0
0,40	----	----	--	0,53	----	3,80	48,0	98,0	48,0	3,53	14,0
0,60	10,0	18,0	10,0	0,13	75,0	**4,00**	44,0	97,0	44,0	1,60	27,0
0,80	12,0	14,0	12,0	0,40	30,0	4,20	79,0	103,0	79,0	2,20	36,0
1,00	10,0	16,0	10,0	1,33	7,0	4,40	68,0	101,0	68,0	2,80	24,0
1,20	20,0	40,0	20,0	1,07	19,0	4,60	92,0	134,0	92,0	2,33	39,0
1,40	22,0	38,0	22,0	1,13	19,0	4,80	92,0	127,0	92,0	2,87	32,0
1,60	19,0	36,0	19,0	0,93	20,0	**5,00**	90,0	133,0	90,0	3,60	25,0
1,80	24,0	38,0	24,0	1,47	16,0	5,20	97,0	151,0	97,0	3,40	29,0
2,00	82,0	104,0	82,0	1,53	53,0	5,40	110,0	161,0	110,0	4,07	27,0
2,20	75,0	98,0	75,0	1,80	42,0	5,60	127,0	188,0	127,0	5,47	23,0
2,40	77,0	104,0	77,0	3,27	24,0	5,80	210,0	292,0	210,0	8,13	26,0
2,60	37,0	86,0	37,0	3,13	12,0	**6,00**	180,0	302,0	180,0	6,67	27,0
2,80	45,0	92,0	45,0	3,47	13,0	6,20	190,0	290,0	190,0	4,33	44,0
3,00	44,0	96,0	44,0	3,07	14,0	6,40	275,0	340,0	275,0	4,67	59,0
3,20	52,0	98,0	52,0	2,73	19,0	6,60	290,0	360,0	290,0	6,67	44,0
3,40	58,0	99,0	58,0	3,13	19,0	6,80	320,0	420,0	320,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 003-20

PROVA PENETROMETRICA STATICA — CPT 296
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P003-20-296
- data : 12/10/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	14,0	18,0	14,0	0,40	35,0
0,80	18,0	24,0	18,0	0,53	34,0
1,00	21,0	29,0	21,0	1,20	17,0
1,20	56,0	74,0	56,0	8,87	6,0
1,40	75,0	208,0	75,0	7,93	9,0
1,60	79,0	198,0	79,0	4,93	16,0
1,80	76,0	150,0	76,0	6,07	13,0
2,00	29,0	120,0	29,0	6,40	5,0
2,20	28,0	124,0	28,0	2,93	10,0
2,40	33,0	77,0	33,0	2,80	12,0
2,60	32,0	74,0	32,0	3,20	10,0
2,80	30,0	78,0	30,0	3,13	10,0
3,00	27,0	74,0	27,0	1,40	19,0
3,20	55,0	76,0	55,0	1,33	41,0
3,40	62,0	82,0	62,0	2,80	22,0
3,60	48,0	90,0	48,0	2,87	17,0
3,80	51,0	94,0	51,0	2,53	20,0
4,00	62,0	100,0	62,0	2,27	27,0
4,20	88,0	122,0	88,0	2,53	35,0
4,40	97,0	135,0	97,0	4,53	21,0
4,60	194,0	262,0	194,0	3,53	55,0
4,80	297,0	350,0	297,0	8,67	34,0
5,00	320,0	450,0	320,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 301
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-301
- data : 11/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	18,0	26,0	18,0	1,07	17,0
0,80	15,0	31,0	15,0	1,07	14,0
1,00	18,0	34,0	18,0	1,47	12,0
1,20	13,0	35,0	13,0	1,20	11,0
1,40	25,0	43,0	25,0	1,47	17,0
1,60	27,0	49,0	27,0	1,47	18,0
1,80	31,0	53,0	31,0	2,53	12,0
2,00	35,0	73,0	35,0	2,13	16,0
2,20	30,0	62,0	30,0	2,13	14,0
2,40	62,0	94,0	62,0	2,60	24,0
2,60	31,0	70,0	31,0	2,87	11,0
2,80	33,0	76,0	33,0	3,00	11,0
3,00	30,0	75,0	30,0	2,67	11,0
3,20	30,0	70,0	30,0	3,20	9,0
3,40	28,0	76,0	28,0	2,80	10,0
3,60	28,0	70,0	28,0	2,47	11,0
3,80	32,0	69,0	32,0	2,60	12,0
4,00	31,0	70,0	31,0	2,40	13,0
4,20	31,0	67,0	31,0	3,00	10,0
4,40	29,0	74,0	29,0	2,07	14,0
4,60	34,0	65,0	34,0	7,33	5,0
4,80	160,0	270,0	160,0	3,00	53,0
5,00	100,0	145,0	100,0	3,60	28,0
5,20	44,0	98,0	44,0	3,33	13,0
5,40	70,0	120,0	70,0	2,27	31,0
5,60	45,0	79,0	45,0	3,60	13,0
5,80	54,0	108,0	54,0	12,93	4,0
6,00	234,0	428,0	234,0	13,33	18,0
6,20	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 302
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-302
- data : 11/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	3,80	22,0	40,0	22,0	2,00	11,0
0,40	----	----	--	1,27	----	**4,00**	23,0	53,0	23,0	1,40	16,0
0,60	14,0	33,0	14,0	1,33	10,0	4,20	28,0	49,0	28,0	1,20	23,0
0,80	13,0	33,0	13,0	1,80	7,0	4,40	28,0	46,0	28,0	1,87	15,0
1,00	19,0	46,0	19,0	1,93	10,0	4,60	25,0	53,0	25,0	2,20	11,0
1,20	15,0	44,0	15,0	1,60	9,0	4,80	72,0	105,0	72,0	1,27	57,0
1,40	20,0	44,0	20,0	1,33	15,0	**5,00**	129,0	148,0	129,0	4,80	27,0
1,60	29,0	49,0	29,0	0,87	33,0	5,20	23,0	95,0	23,0	1,67	14,0
1,80	31,0	44,0	31,0	2,13	15,0	5,40	194,0	219,0	194,0	6,07	32,0
2,00	30,0	62,0	30,0	1,13	26,0	5,60	125,0	216,0	125,0	5,67	22,0
2,20	25,0	42,0	25,0	1,60	16,0	5,80	105,0	190,0	105,0	4,00	26,0
2,40	31,0	55,0	31,0	1,60	19,0	**6,00**	160,0	220,0	160,0	3,67	44,0
2,60	29,0	53,0	29,0	1,27	23,0	6,20	155,0	210,0	155,0	2,53	61,0
2,80	26,0	45,0	26,0	1,13	23,0	6,40	198,0	236,0	198,0	1,47	135,0
3,00	26,0	43,0	26,0	1,47	18,0	6,60	298,0	320,0	298,0	6,33	47,0
3,20	31,0	53,0	31,0	1,40	22,0	6,80	310,0	405,0	310,0	8,67	36,0
3,40	31,0	52,0	31,0	2,07	15,0	**7,00**	360,0	490,0	360,0	13,33	27,0
3,60	27,0	58,0	27,0	1,20	22,0	7,20	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 297
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-297
- data : 11/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	78,0	128,0	78,0	3,27	24,0
0,40	----	----	--	0,40	----	5,40	93,0	142,0	93,0	2,13	44,0
0,60	11,0	17,0	11,0	0,80	14,0	5,60	157,0	189,0	157,0	6,00	26,0
0,80	15,0	27,0	15,0	0,93	16,0	5,80	60,0	150,0	60,0	4,60	13,0
1,00	13,0	27,0	13,0	1,00	13,0	**6,00**	57,0	126,0	57,0	2,87	20,0
1,20	18,0	33,0	18,0	1,13	16,0	6,20	62,0	105,0	62,0	3,13	20,0
1,40	18,0	35,0	18,0	1,07	17,0	6,40	76,0	123,0	76,0	3,40	22,0
1,60	18,0	34,0	18,0	1,60	11,0	6,60	105,0	156,0	105,0	3,67	29,0
1,80	18,0	42,0	18,0	1,73	10,0	6,80	99,0	154,0	99,0	5,87	17,0
2,00	22,0	48,0	22,0	1,40	16,0	**7,00**	110,0	198,0	110,0	4,07	27,0
2,20	39,0	60,0	39,0	2,20	18,0	7,20	129,0	190,0	129,0	4,73	27,0
2,40	52,0	85,0	52,0	4,00	13,0	7,40	119,0	190,0	119,0	6,33	19,0
2,60	106,0	166,0	106,0	4,73	22,0	7,60	80,0	175,0	80,0	4,87	16,0
2,80	50,0	121,0	50,0	3,67	14,0	7,80	110,0	183,0	110,0	5,80	19,0
3,00	109,0	164,0	109,0	3,27	33,0	**8,00**	83,0	170,0	83,0	5,40	15,0
3,20	158,0	207,0	158,0	6,13	26,0	8,20	189,0	270,0	189,0	5,27	36,0
3,40	139,0	231,0	139,0	3,60	39,0	8,40	190,0	269,0	190,0	9,67	20,0
3,60	129,0	183,0	129,0	3,47	37,0	8,60	180,0	325,0	180,0	5,13	35,0
3,80	186,0	238,0	186,0	4,93	38,0	8,80	239,0	316,0	239,0	8,73	27,0
4,00	130,0	204,0	130,0	4,13	31,0	**9,00**	256,0	387,0	256,0	10,00	26,0
4,20	105,0	167,0	105,0	2,73	38,0	9,20	289,0	439,0	289,0	10,67	27,0
4,40	89,0	130,0	89,0	4,47	20,0	9,40	270,0	430,0	270,0	11,33	24,0
4,60	60,0	127,0	60,0	3,47	17,0	9,60	320,0	490,0	320,0	8,00	40,0
4,80	44,0	96,0	44,0	2,73	16,0	9,80	300,0	420,0	300,0	8,00	38,0
5,00	80,0	121,0	80,0	3,33	24,0	**10,00**	340,0	460,0	340,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 298
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-298
- data : 11/11/2020
- quota inizio : Piano Campagna
- prof. falda : 2,00 m da quota inizio
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	8,0	21,0	8,0	0,40	20,0
0,80	9,0	15,0	9,0	0,27	34,0
1,00	9,0	13,0	9,0	1,13	8,0
1,20	9,0	26,0	9,0	2,20	4,0
1,40	13,0	46,0	13,0	2,13	6,0
1,60	37,0	69,0	37,0	1,53	24,0
1,80	29,0	52,0	29,0	1,20	24,0
2,00	16,0	34,0	16,0	1,67	10,0
2,20	33,0	58,0	33,0	3,20	10,0
2,40	22,0	70,0	22,0	1,33	16,0
2,60	25,0	45,0	25,0	3,67	7,0
2,80	35,0	90,0	35,0	6,20	6,0
3,00	97,0	190,0	97,0	4,33	22,0
3,20	95,0	160,0	95,0	4,13	23,0
3,40	33,0	95,0	33,0	4,27	8,0
3,60	74,0	138,0	74,0	1,67	44,0
3,80	67,0	92,0	67,0	3,27	21,0
4,00	54,0	103,0	54,0	3,93	14,0
4,20	48,0	107,0	48,0	5,67	8,0
4,40	150,0	235,0	150,0	4,87	31,0
4,60	54,0	127,0	54,0	3,33	16,0
4,80	60,0	110,0	60,0	4,07	15,0
5,00	108,0	169,0	108,0	5,47	20,0
5,20	42,0	124,0	42,0	4,87	9,0
5,40	56,0	129,0	56,0	4,27	13,0
5,60	60,0	124,0	60,0	5,00	12,0
5,80	56,0	131,0	56,0	5,67	10,0
6,00	106,0	191,0	106,0	7,73	14,0
6,20	100,0	216,0	100,0	7,07	14,0
6,40	104,0	210,0	104,0	3,33	31,0
6,60	98,0	148,0	98,0	4,13	24,0
6,80	42,0	104,0	42,0	1,60	26,0
7,00	70,0	94,0	70,0	2,53	28,0
7,20	58,0	96,0	58,0	3,93	15,0
7,40	116,0	175,0	116,0	4,33	27,0
7,60	176,0	241,0	176,0	5,80	30,0
7,80	127,0	214,0	127,0	4,40	29,0
8,00	100,0	166,0	100,0	3,93	25,0
8,20	109,0	168,0	109,0	7,13	15,0
8,40	96,0	203,0	96,0	3,73	26,0
8,60	164,0	220,0	164,0	6,07	27,0
8,80	130,0	221,0	130,0	5,33	24,0
9,00	150,0	230,0	150,0	5,67	26,0
9,20	160,0	245,0	160,0	8,13	20,0
9,40	88,0	210,0	88,0	8,27	11,0
9,60	96,0	220,0	96,0	7,00	14,0
9,80	100,0	205,0	100,0	7,47	13,0
10,00	98,0	210,0	98,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 299
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-299
- data : 11/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	36,0	99,0	36,0	3,73	10,0
0,40	----	----	--	1,07	----	5,40	41,0	97,0	41,0	2,93	14,0
0,60	11,0	27,0	11,0	1,00	11,0	5,60	56,0	100,0	56,0	1,73	32,0
0,80	11,0	26,0	11,0	0,80	14,0	5,80	162,0	188,0	162,0	4,33	37,0
1,00	9,0	21,0	9,0	0,53	17,0	**6,00**	65,0	130,0	65,0	5,60	12,0
1,20	12,0	20,0	12,0	1,00	12,0	6,20	48,0	132,0	48,0	4,73	10,0
1,40	13,0	28,0	13,0	1,07	12,0	6,40	58,0	129,0	58,0	4,40	13,0
1,60	17,0	33,0	17,0	1,00	17,0	6,60	64,0	130,0	64,0	5,60	11,0
1,80	18,0	33,0	18,0	1,40	13,0	6,80	49,0	133,0	49,0	5,00	10,0
2,00	13,0	34,0	13,0	1,07	12,0	**7,00**	72,0	147,0	72,0	1,73	42,0
2,20	20,0	36,0	20,0	0,93	21,0	7,20	124,0	150,0	124,0	5,07	24,0
2,40	21,0	35,0	21,0	1,53	14,0	7,40	84,0	160,0	84,0	4,87	17,0
2,60	20,0	43,0	20,0	1,20	17,0	7,60	89,0	162,0	89,0	4,93	18,0
2,80	22,0	40,0	22,0	1,13	19,0	7,80	82,0	156,0	82,0	4,33	19,0
3,00	22,0	39,0	22,0	1,67	13,0	**8,00**	80,0	145,0	80,0	4,53	18,0
3,20	20,0	45,0	20,0	1,67	12,0	8,20	84,0	152,0	84,0	4,93	17,0
3,40	25,0	50,0	25,0	2,00	12,0	8,40	86,0	160,0	86,0	3,80	23,0
3,60	25,0	55,0	25,0	2,40	10,0	8,60	125,0	182,0	125,0	4,00	31,0
3,80	25,0	61,0	25,0	3,00	8,0	8,80	100,0	160,0	100,0	3,73	27,0
4,00	33,0	78,0	33,0	3,40	10,0	**9,00**	98,0	154,0	98,0	4,27	23,0
4,20	34,0	85,0	34,0	3,60	9,0	9,20	88,0	152,0	88,0	7,07	12,0
4,40	33,0	87,0	33,0	3,80	9,0	9,40	92,0	198,0	92,0	4,27	22,0
4,60	35,0	92,0	35,0	3,80	9,0	9,60	88,0	152,0	88,0	4,53	19,0
4,80	33,0	90,0	33,0	4,00	8,0	9,80	92,0	160,0	92,0	4,00	23,0
5,00	36,0	96,0	36,0	4,20	9,0	**10,00**	98,0	158,0	98,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 303
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-303
- data : 26/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	10,0	18,0	10,0	1,80	6,0
0,80	33,0	60,0	33,0	1,80	18,0
1,00	63,0	90,0	63,0	4,20	15,0
1,20	56,0	119,0	56,0	4,07	14,0
1,40	70,0	131,0	70,0	3,40	21,0
1,60	94,0	145,0	94,0	5,73	16,0
1,80	98,0	184,0	98,0	5,93	17,0
2,00	71,0	160,0	71,0	4,53	16,0
2,20	108,0	176,0	108,0	3,87	28,0
2,40	62,0	120,0	62,0	4,47	14,0
2,60	56,0	123,0	56,0	4,33	13,0
2,80	56,0	121,0	56,0	4,80	12,0
3,00	69,0	141,0	69,0	4,80	14,0
3,20	80,0	152,0	80,0	3,73	21,0
3,40	70,0	126,0	70,0	3,27	21,0
3,60	63,0	112,0	63,0	3,00	21,0
3,80	79,0	124,0	79,0	4,27	19,0
4,00	106,0	170,0	106,0	4,27	25,0
4,20	75,0	139,0	75,0	4,13	18,0
4,40	85,0	147,0	85,0	5,47	16,0
4,60	93,0	175,0	93,0	5,60	17,0
4,80	108,0	192,0	108,0	9,20	12,0
5,00	120,0	258,0	120,0	5,67	21,0
5,20	140,0	225,0	140,0	10,00	14,0
5,40	350,0	500,0	350,0	15,33	23,0
5,60	420,0	650,0	420,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 304
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-304
- data : 26/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,20	----
0,60	22,0	40,0	22,0	1,00	22,0
0,80	59,0	74,0	59,0	1,40	42,0
1,00	61,0	82,0	61,0	3,27	19,0
1,20	66,0	115,0	66,0	2,87	23,0
1,40	65,0	108,0	65,0	3,47	19,0
1,60	69,0	121,0	69,0	3,47	20,0
1,80	85,0	137,0	85,0	3,60	24,0
2,00	88,0	142,0	88,0	3,13	28,0
2,20	93,0	140,0	93,0	2,13	44,0
2,40	95,0	127,0	95,0	4,80	20,0
2,60	70,0	142,0	70,0	5,00	14,0
2,80	77,0	152,0	77,0	5,00	15,0
3,00	80,0	155,0	80,0	5,27	15,0
3,20	83,0	162,0	83,0	5,20	16,0
3,40	82,0	160,0	82,0	4,27	19,0
3,60	94,0	158,0	94,0	4,20	22,0
3,80	99,0	162,0	99,0	2,73	36,0
4,00	107,0	148,0	107,0	3,60	30,0
4,20	110,0	164,0	110,0	4,20	26,0
4,40	92,0	155,0	92,0	5,13	18,0
4,60	84,0	161,0	84,0	4,00	21,0
4,80	160,0	220,0	160,0	7,20	22,0
5,00	190,0	298,0	190,0	3,20	59,0
5,20	172,0	220,0	172,0	1,80	96,0
5,40	188,0	215,0	188,0	4,40	43,0
5,60	196,0	262,0	196,0	4,80	41,0
5,80	184,0	256,0	184,0	7,47	25,0
6,00	260,0	372,0	260,0	7,87	33,0
6,20	292,0	410,0	292,0	10,00	29,0
6,40	350,0	500,0	350,0	10,00	35,0
6,60	450,0	600,0	450,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 305
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-305
- data : 26/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	10,0	14,0	10,0	0,67	15,0
0,80	12,0	22,0	12,0	0,53	22,0
1,00	15,0	23,0	15,0	1,80	8,0
1,20	22,0	49,0	22,0	1,67	13,0
1,40	25,0	50,0	25,0	2,20	11,0
1,60	27,0	60,0	27,0	2,40	11,0
1,80	33,0	69,0	33,0	2,20	15,0
2,00	27,0	60,0	27,0	4,13	7,0
2,20	70,0	132,0	70,0	4,93	14,0
2,40	56,0	130,0	56,0	3,67	15,0
2,60	43,0	98,0	43,0	3,47	12,0
2,80	34,0	86,0	34,0	3,53	10,0
3,00	27,0	80,0	27,0	2,87	9,0
3,20	37,0	80,0	37,0	3,73	10,0
3,40	40,0	96,0	40,0	3,67	11,0
3,60	41,0	96,0	41,0	3,67	11,0
3,80	50,0	105,0	50,0	4,67	11,0
4,00	46,0	116,0	46,0	3,27	14,0
4,20	43,0	92,0	43,0	4,07	11,0
4,40	47,0	108,0	47,0	4,33	11,0
4,60	49,0	114,0	49,0	3,07	16,0
4,80	158,0	204,0	158,0	10,13	16,0
5,00	126,0	278,0	126,0	6,13	21,0
5,20	118,0	210,0	118,0	6,07	19,0
5,40	49,0	140,0	49,0	3,53	14,0
5,60	122,0	175,0	122,0	5,20	23,0
5,80	170,0	248,0	170,0	7,20	24,0
6,00	94,0	202,0	94,0	5,27	18,0
6,20	122,0	201,0	122,0	6,07	20,0
6,40	85,0	176,0	85,0	5,27	16,0
6,60	114,0	193,0	114,0	7,73	15,0
6,80	90,0	206,0	90,0	7,07	13,0
7,00	120,0	226,0	120,0	11,47	10,0
7,20	150,0	322,0	150,0	13,33	11,0
7,40	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 306
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-306
- data : 26/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	3,80	42,0	101,0	42,0	3,93	11,0
0,40	----	----	--	2,00	----	**4,00**	63,0	122,0	63,0	3,87	16,0
0,60	90,0	120,0	90,0	1,13	79,0	4,20	50,0	108,0	50,0	2,53	20,0
0,80	135,0	152,0	135,0	2,53	53,0	4,40	65,0	103,0	65,0	2,80	23,0
1,00	122,0	160,0	122,0	2,20	55,0	4,60	66,0	108,0	66,0	2,60	25,0
1,20	100,0	133,0	100,0	2,40	42,0	4,80	60,0	99,0	60,0	2,87	21,0
1,40	105,0	141,0	105,0	3,00	35,0	**5,00**	58,0	101,0	58,0	3,73	16,0
1,60	88,0	133,0	88,0	3,47	25,0	5,20	70,0	126,0	70,0	3,60	19,0
1,80	68,0	120,0	68,0	3,67	19,0	5,40	74,0	128,0	74,0	2,13	35,0
2,00	50,0	105,0	50,0	3,33	15,0	5,60	72,0	104,0	72,0	2,67	27,0
2,20	52,0	102,0	52,0	2,87	18,0	5,80	60,0	100,0	60,0	2,13	28,0
2,40	45,0	88,0	45,0	3,60	13,0	**6,00**	72,0	104,0	72,0	6,33	11,0
2,60	37,0	91,0	37,0	3,40	11,0	6,20	130,0	225,0	130,0	7,20	18,0
2,80	42,0	93,0	42,0	3,47	12,0	6,40	128,0	236,0	128,0	8,20	16,0
3,00	44,0	96,0	44,0	3,53	12,0	6,60	135,0	258,0	135,0	7,33	18,0
3,20	35,0	88,0	35,0	3,73	9,0	6,80	210,0	320,0	210,0	10,67	20,0
3,40	37,0	93,0	37,0	3,60	10,0	**7,00**	340,0	500,0	340,0	13,33	26,0
3,60	48,0	102,0	48,0	3,93	12,0	7,20	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 307
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-307
- data : 27/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,60	91,0	167,0	91,0	6,00	15,0
0,40	----	----	--	1,27	----	2,80	181,0	271,0	181,0	5,60	32,0
0,60	14,0	33,0	14,0	1,33	10,0	**3,00**	90,0	174,0	90,0	6,07	15,0
0,80	15,0	35,0	15,0	1,53	10,0	3,20	117,0	208,0	117,0	7,33	16,0
1,00	16,0	39,0	16,0	1,40	11,0	3,40	110,0	220,0	110,0	12,73	9,0
1,20	20,0	41,0	20,0	1,80	11,0	3,60	150,0	341,0	150,0	9,33	16,0
1,40	29,0	56,0	29,0	2,07	14,0	3,80	100,0	240,0	100,0	4,80	21,0
1,60	65,0	96,0	65,0	2,53	26,0	**4,00**	145,0	217,0	145,0	3,80	38,0
1,80	70,0	108,0	70,0	2,20	32,0	4,20	308,0	365,0	308,0	10,13	30,0
2,00	172,0	205,0	172,0	1,53	112,0	4,40	98,0	250,0	98,0	9,33	11,0
2,20	118,0	141,0	118,0	4,27	28,0	4,60	290,0	430,0	290,0	10,00	29,0
2,40	69,0	133,0	69,0	5,07	14,0	4,80	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 308
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-308
- data : 27/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	80,0	126,0	80,0	4,07	20,0
0,40	----	----	--	0,87	----	5,40	43,0	104,0	43,0	4,13	10,0
0,60	8,0	21,0	8,0	1,00	8,0	5,60	42,0	104,0	42,0	3,80	11,0
0,80	17,0	32,0	17,0	0,67	25,0	5,80	44,0	101,0	44,0	3,27	13,0
1,00	22,0	32,0	22,0	1,80	12,0	**6,00**	41,0	90,0	41,0	3,93	10,0
1,20	14,0	41,0	14,0	0,93	15,0	6,20	42,0	101,0	42,0	3,53	12,0
1,40	23,0	37,0	23,0	1,07	22,0	6,40	43,0	96,0	43,0	2,40	18,0
1,60	16,0	32,0	16,0	4,00	4,0	6,60	69,0	105,0	69,0	5,07	14,0
1,80	38,0	98,0	38,0	1,67	23,0	6,80	31,0	107,0	31,0	3,00	10,0
2,00	19,0	44,0	19,0	2,13	9,0	**7,00**	48,0	93,0	48,0	3,93	12,0
2,20	19,0	51,0	19,0	1,93	10,0	7,20	32,0	91,0	32,0	3,73	9,0
2,40	17,0	46,0	17,0	1,73	10,0	7,40	28,0	84,0	28,0	2,20	13,0
2,60	30,0	56,0	30,0	2,93	10,0	7,60	46,0	79,0	46,0	2,67	17,0
2,80	94,0	138,0	94,0	1,67	56,0	7,80	39,0	79,0	39,0	3,93	10,0
3,00	20,0	45,0	20,0	2,07	10,0	**8,00**	41,0	100,0	41,0	2,33	18,0
3,20	24,0	55,0	24,0	2,40	10,0	8,20	60,0	95,0	60,0	3,93	15,0
3,40	74,0	110,0	74,0	2,20	34,0	8,40	56,0	115,0	56,0	5,13	11,0
3,60	22,0	55,0	22,0	2,53	9,0	8,60	57,0	134,0	57,0	4,60	12,0
3,80	34,0	72,0	34,0	2,93	12,0	8,80	50,0	119,0	50,0	5,13	10,0
4,00	30,0	74,0	30,0	3,07	10,0	**9,00**	40,0	117,0	40,0	4,73	8,0
4,20	66,0	112,0	66,0	2,87	23,0	9,20	45,0	116,0	45,0	3,93	11,0
4,40	39,0	82,0	39,0	3,47	11,0	9,40	68,0	127,0	68,0	4,93	14,0
4,60	30,0	82,0	30,0	3,40	9,0	9,60	69,0	143,0	69,0	5,27	13,0
4,80	28,0	79,0	28,0	2,80	10,0	9,80	69,0	148,0	69,0	5,40	13,0
5,00	29,0	71,0	29,0	3,07	9,0	**10,00**	72,0	153,0	72,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 309
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-309
- data : 27/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	5,0	11,0	5,0	4,20	1,0
0,80	10,0	73,0	10,0	3,33	3,0
1,00	20,0	70,0	20,0	1,80	11,0
1,20	12,0	39,0	12,0	1,20	10,0
1,40	15,0	33,0	15,0	2,47	6,0
1,60	71,0	108,0	71,0	4,80	15,0
1,80	118,0	190,0	118,0	3,47	34,0
2,00	128,0	180,0	128,0	4,00	32,0
2,20	100,0	160,0	100,0	0,93	107,0
2,40	26,0	40,0	26,0	9,33	3,0
2,60	165,0	305,0	165,0	2,87	58,0
2,80	100,0	143,0	100,0	5,13	19,0
3,00	26,0	103,0	26,0	1,93	13,0
3,20	26,0	55,0	26,0	1,67	16,0
3,40	22,0	47,0	22,0	2,13	10,0
3,60	19,0	51,0	19,0	3,00	6,0
3,80	22,0	67,0	22,0	1,93	11,0
4,00	41,0	70,0	41,0	2,53	16,0
4,20	37,0	75,0	37,0	2,47	15,0
4,40	31,0	68,0	31,0	2,13	15,0
4,60	46,0	78,0	46,0	2,80	16,0
4,80	39,0	81,0	39,0	2,40	16,0
5,00	45,0	81,0	45,0	2,40	19,0
5,20	24,0	60,0	24,0	2,33	10,0
5,40	26,0	61,0	26,0	3,33	8,0
5,60	25,0	75,0	25,0	3,67	7,0
5,80	46,0	101,0	46,0	2,67	17,0
6,00	69,0	109,0	69,0	2,53	27,0
6,20	35,0	73,0	35,0	1,73	20,0
6,40	38,0	64,0	38,0	1,47	26,0
6,60	29,0	51,0	29,0	2,07	14,0
6,80	39,0	70,0	39,0	2,53	15,0
7,00	28,0	66,0	28,0	1,47	19,0
7,20	70,0	92,0	70,0	10,00	7,0
7,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 310
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-310
- data : 27/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	9,0	19,0	9,0	0,80	11,0
0,80	13,0	25,0	13,0	1,00	13,0
1,00	13,0	28,0	13,0	2,33	6,0
1,20	35,0	70,0	35,0	1,40	25,0
1,40	29,0	50,0	29,0	3,47	8,0
1,60	60,0	112,0	60,0	2,27	26,0
1,80	56,0	90,0	56,0	3,47	16,0
2,00	72,0	124,0	72,0	2,93	25,0
2,20	56,0	100,0	56,0	4,27	13,0
2,40	106,0	170,0	106,0	2,87	37,0
2,60	190,0	233,0	190,0	6,47	29,0
2,80	69,0	166,0	69,0	3,93	18,0
3,00	37,0	96,0	37,0	3,47	11,0
3,20	33,0	85,0	33,0	3,47	10,0
3,40	30,0	82,0	30,0	3,67	8,0
3,60	34,0	89,0	34,0	6,67	5,0
3,80	39,0	139,0	39,0	2,73	14,0
4,00	87,0	128,0	87,0	4,13	21,0
4,20	60,0	122,0	60,0	4,00	15,0
4,40	39,0	99,0	39,0	2,93	13,0
4,60	46,0	90,0	46,0	3,07	15,0
4,80	44,0	90,0	44,0	5,13	9,0
5,00	158,0	235,0	158,0	11,93	13,0
5,20	216,0	395,0	216,0	10,00	22,0
5,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 311
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-311
- data : 27/11/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	9,0	14,0	9,0	0,47	19,0
0,80	16,0	23,0	16,0	0,80	20,0
1,00	22,0	34,0	22,0	1,67	13,0
1,20	25,0	50,0	25,0	2,20	11,0
1,40	42,0	75,0	42,0	2,73	15,0
1,60	45,0	86,0	45,0	3,73	12,0
1,80	74,0	130,0	74,0	5,27	14,0
2,00	73,0	152,0	73,0	4,47	16,0
2,20	80,0	147,0	80,0	5,40	15,0
2,40	69,0	150,0	69,0	5,00	14,0
2,60	88,0	163,0	88,0	5,87	15,0
2,80	72,0	160,0	72,0	6,07	12,0
3,00	76,0	167,0	76,0	4,80	16,0
3,20	84,0	156,0	84,0	5,87	14,0
3,40	77,0	165,0	77,0	6,13	13,0
3,60	90,0	182,0	90,0	5,40	17,0
3,80	109,0	190,0	109,0	7,87	14,0
4,00	76,0	194,0	76,0	4,53	17,0
4,20	98,0	166,0	98,0	8,27	12,0
4,40	83,0	207,0	83,0	7,80	11,0
4,60	108,0	225,0	108,0	7,93	14,0
4,80	86,0	205,0	86,0	8,73	10,0
5,00	69,0	200,0	69,0	11,73	6,0
5,20	84,0	260,0	84,0	10,00	8,0
5,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 312
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-312
- data : 02/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,60	----
0,60	6,0	15,0	6,0	0,53	11,0
0,80	7,0	15,0	7,0	1,27	6,0
1,00	8,0	27,0	8,0	0,67	12,0
1,20	25,0	35,0	25,0	3,13	8,0
1,40	40,0	87,0	40,0	1,33	30,0
1,60	89,0	109,0	89,0	3,33	27,0
1,80	100,0	150,0	100,0	2,33	43,0
2,00	100,0	135,0	100,0	1,80	56,0
2,20	100,0	127,0	100,0	4,67	21,0
2,40	100,0	170,0	100,0	2,47	41,0
2,60	35,0	72,0	35,0	2,67	13,0
2,80	35,0	75,0	35,0	1,80	19,0
3,00	95,0	122,0	95,0	0,73	130,0
3,20	59,0	70,0	59,0	1,67	35,0
3,40	45,0	70,0	45,0	1,20	37,0
3,60	33,0	51,0	33,0	1,47	22,0
3,80	18,0	40,0	18,0	1,07	17,0
4,00	25,0	41,0	25,0	1,47	17,0
4,20	23,0	45,0	23,0	1,20	19,0
4,40	30,0	48,0	30,0	1,13	26,0
4,60	26,0	43,0	26,0	1,33	19,0
4,80	30,0	50,0	30,0	1,80	17,0
5,00	30,0	57,0	30,0	1,73	17,0
5,20	29,0	55,0	29,0	2,20	13,0
5,40	25,0	58,0	25,0	1,27	20,0
5,60	30,0	49,0	30,0	0,47	64,0
5,80	45,0	52,0	45,0	1,47	31,0
6,00	37,0	59,0	37,0	0,93	40,0
6,20	28,0	42,0	28,0	1,60	17,0
6,40	33,0	57,0	33,0	1,80	18,0
6,60	33,0	60,0	33,0	2,67	12,0
6,80	180,0	220,0	180,0	6,67	27,0
7,00	250,0	350,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 313
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-313
- data : 02/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	8,0	18,0	8,0	0,73	11,0
0,80	8,0	19,0	8,0	0,67	12,0
1,00	15,0	25,0	15,0	0,73	20,0
1,20	16,0	27,0	16,0	1,13	14,0
1,40	16,0	33,0	16,0	0,67	24,0
1,60	20,0	30,0	20,0	1,53	13,0
1,80	19,0	42,0	19,0	1,67	11,0
2,00	38,0	63,0	38,0	2,73	14,0
2,20	33,0	74,0	33,0	2,00	16,0
2,40	37,0	67,0	37,0	2,47	15,0
2,60	40,0	77,0	40,0	2,33	17,0
2,80	30,0	65,0	30,0	3,00	10,0
3,00	65,0	110,0	65,0	2,13	30,0
3,20	63,0	95,0	63,0	2,07	30,0
3,40	55,0	86,0	55,0	2,33	24,0
3,60	73,0	108,0	73,0	0,93	78,0
3,80	66,0	80,0	66,0	2,33	28,0
4,00	78,0	113,0	78,0	2,47	32,0
4,20	44,0	81,0	44,0	1,67	26,0
4,40	85,0	110,0	85,0	1,73	49,0
4,60	87,0	113,0	87,0	2,40	36,0
4,80	85,0	121,0	85,0	2,53	34,0
5,00	49,0	87,0	49,0	3,73	13,0
5,20	58,0	114,0	58,0	3,73	16,0
5,40	30,0	86,0	30,0	3,13	10,0
5,60	40,0	87,0	40,0	3,27	12,0
5,80	101,0	150,0	101,0	1,27	80,0
6,00	92,0	111,0	92,0	3,13	29,0
6,20	144,0	191,0	144,0	5,33	27,0
6,40	86,0	166,0	86,0	4,80	18,0
6,60	70,0	142,0	70,0	5,40	13,0
6,80	96,0	177,0	96,0	0,87	111,0
7,00	95,0	108,0	95,0	2,53	38,0
7,20	87,0	125,0	87,0	3,40	26,0
7,40	58,0	109,0	58,0	2,67	22,0
7,60	66,0	106,0	66,0	1,20	55,0
7,80	34,0	52,0	34,0	1,67	20,0
8,00	30,0	55,0	30,0	1,20	25,0
8,20	34,0	52,0	34,0	7,53	5,0
8,40	177,0	290,0	177,0	5,33	33,0
8,60	200,0	280,0	200,0	4,00	50,0
8,80	193,0	253,0	193,0	5,40	36,0
9,00	180,0	261,0	180,0	4,00	45,0
9,20	230,0	290,0	230,0	6,67	35,0
9,40	250,0	350,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 317
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-317
- data : 05/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	22,0	33,0	22,0	1,20	18,0
0,80	26,0	44,0	26,0	1,80	14,0
1,00	20,0	47,0	20,0	1,47	14,0
1,20	22,0	44,0	22,0	1,07	21,0
1,40	24,0	40,0	24,0	0,73	33,0
1,60	42,0	53,0	42,0	0,87	48,0
1,80	33,0	46,0	33,0	1,80	18,0
2,00	43,0	70,0	43,0	1,87	23,0
2,20	42,0	70,0	42,0	2,33	18,0
2,40	33,0	68,0	33,0	2,33	14,0
2,60	36,0	71,0	36,0	2,20	16,0
2,80	41,0	74,0	41,0	2,80	15,0
3,00	36,0	78,0	36,0	3,07	12,0
3,20	33,0	79,0	33,0	2,00	16,0
3,40	37,0	67,0	37,0	1,33	28,0
3,60	76,0	96,0	76,0	2,20	35,0
3,80	97,0	130,0	97,0	1,40	69,0
4,00	112,0	133,0	112,0	0,67	168,0
4,20	104,0	114,0	104,0	3,33	31,0
4,40	41,0	91,0	41,0	3,80	11,0
4,60	47,0	104,0	47,0	2,67	18,0
4,80	78,0	118,0	78,0	2,33	33,0
5,00	40,0	75,0	40,0	2,00	20,0
5,20	43,0	73,0	43,0	2,20	20,0
5,40	54,0	87,0	54,0	3,60	15,0
5,60	66,0	120,0	66,0	4,73	14,0
5,80	69,0	140,0	69,0	4,87	14,0
6,00	66,0	139,0	66,0	4,40	15,0
6,20	47,0	113,0	47,0	4,33	11,0
6,40	55,0	120,0	55,0	3,47	16,0
6,60	78,0	130,0	78,0	4,27	18,0
6,80	64,0	128,0	64,0	6,67	10,0
7,00	350,0	450,0	350,0	13,33	26,0
7,20	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 318
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-318
- data : 05/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	**2,00**	94,0	156,0	94,0	5,33	18,0
0,40	----	----	--	0,47	----	2,20	97,0	177,0	97,0	4,93	20,0
0,60	14,0	21,0	14,0	1,00	14,0	2,40	90,0	164,0	90,0	3,40	26,0
0,80	31,0	46,0	31,0	1,60	19,0	2,60	90,0	141,0	90,0	6,73	13,0
1,00	30,0	54,0	30,0	3,07	10,0	2,80	66,0	167,0	66,0	3,93	17,0
1,20	30,0	76,0	30,0	3,60	8,0	**3,00**	89,0	148,0	89,0	5,53	16,0
1,40	30,0	84,0	30,0	2,73	11,0	3,20	89,0	172,0	89,0	3,20	28,0
1,60	35,0	76,0	35,0	0,53	66,0	3,40	102,0	150,0	102,0	10,00	10,0
1,80	102,0	110,0	102,0	4,13	25,0	3,60	300,0	450,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 320
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-320
- data : 05/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,53	----
0,60	33,0	56,0	33,0	1,20	27,0
0,80	44,0	62,0	44,0	2,80	16,0
1,00	50,0	92,0	50,0	2,27	22,0
1,20	53,0	87,0	53,0	2,80	19,0
1,40	70,0	112,0	70,0	1,47	48,0
1,60	76,0	98,0	76,0	2,87	27,0
1,80	92,0	135,0	92,0	1,87	49,0
2,00	95,0	123,0	95,0	2,07	46,0
2,20	112,0	143,0	112,0	1,40	80,0
2,40	112,0	133,0	112,0	1,67	67,0
2,60	98,0	123,0	98,0	0,73	134,0
2,80	102,0	113,0	102,0	2,13	48,0
3,00	112,0	144,0	112,0	3,80	29,0
3,20	98,0	155,0	98,0	1,60	61,0
3,40	107,0	131,0	107,0	2,80	38,0
3,60	35,0	77,0	35,0	2,20	16,0
3,80	56,0	89,0	56,0	2,33	24,0
4,00	51,0	86,0	51,0	3,13	16,0
4,20	73,0	120,0	73,0	0,67	109,0
4,40	105,0	115,0	105,0	2,73	38,0
4,60	90,0	131,0	90,0	3,20	28,0
4,80	97,0	145,0	97,0	2,20	44,0
5,00	109,0	142,0	109,0	3,20	34,0
5,20	113,0	161,0	113,0	3,40	33,0
5,40	114,0	165,0	114,0	5,93	19,0
5,60	181,0	270,0	181,0	3,67	49,0
5,80	90,0	145,0	90,0	1,53	59,0
6,00	49,0	72,0	49,0	1,80	27,0
6,20	43,0	70,0	43,0	1,67	26,0
6,40	45,0	70,0	45,0	2,00	22,0
6,60	35,0	65,0	35,0	1,27	28,0
6,80	44,0	63,0	44,0	1,53	29,0
7,00	40,0	63,0	40,0	1,73	23,0
7,20	55,0	81,0	55,0	1,53	36,0
7,40	64,0	87,0	64,0	4,00	16,0
7,60	46,0	106,0	46,0	1,33	34,0
7,80	36,0	56,0	36,0	1,60	22,0
8,00	60,0	84,0	60,0	2,67	22,0
8,20	230,0	270,0	230,0	3,00	77,0
8,40	135,0	180,0	135,0	2,87	47,0
8,60	97,0	140,0	97,0	1,20	81,0
8,80	94,0	112,0	94,0	7,87	12,0
9,00	60,0	178,0	60,0	8,47	7,0
9,20	150,0	277,0	150,0	10,00	15,0
9,40	280,0	430,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 321
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-321
- data : 07/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	42,0	53,0	42,0	1,00	42,0
0,40	----	----	--	0,33	----	5,40	29,0	44,0	29,0	1,20	24,0
0,60	3,0	8,0	3,0	0,73	4,0	5,60	21,0	39,0	21,0	0,87	24,0
0,80	8,0	19,0	8,0	0,67	12,0	5,80	22,0	35,0	22,0	0,47	47,0
1,00	9,0	19,0	9,0	0,80	11,0	**6,00**	38,0	45,0	38,0	1,53	25,0
1,20	11,0	23,0	11,0	0,60	18,0	6,20	14,0	37,0	14,0	0,40	35,0
1,40	18,0	27,0	18,0	1,53	12,0	6,40	29,0	35,0	29,0	1,07	27,0
1,60	20,0	43,0	20,0	1,47	14,0	6,60	29,0	45,0	29,0	0,53	54,0
1,80	23,0	45,0	23,0	1,53	15,0	6,80	38,0	46,0	38,0	1,33	28,0
2,00	20,0	43,0	20,0	1,60	12,0	**7,00**	27,0	47,0	27,0	1,27	21,0
2,20	20,0	44,0	20,0	1,40	14,0	7,20	16,0	35,0	16,0	0,53	30,0
2,40	22,0	43,0	22,0	1,60	14,0	7,40	18,0	26,0	18,0	1,20	15,0
2,60	32,0	56,0	32,0	1,40	23,0	7,60	36,0	54,0	36,0	1,00	36,0
2,80	38,0	59,0	38,0	1,07	36,0	7,80	18,0	33,0	18,0	0,73	25,0
3,00	44,0	60,0	44,0	1,13	39,0	**8,00**	19,0	30,0	19,0	0,80	24,0
3,20	37,0	54,0	37,0	1,07	35,0	8,20	18,0	30,0	18,0	0,73	25,0
3,40	28,0	44,0	28,0	1,33	21,0	8,40	35,0	46,0	35,0	1,13	31,0
3,60	28,0	48,0	28,0	0,87	32,0	8,60	40,0	57,0	40,0	3,40	12,0
3,80	37,0	50,0	37,0	1,53	24,0	8,80	46,0	97,0	46,0	4,20	11,0
4,00	24,0	47,0	24,0	1,07	22,0	**9,00**	92,0	155,0	92,0	1,67	55,0
4,20	30,0	46,0	30,0	0,53	56,0	9,20	87,0	112,0	87,0	3,07	28,0
4,40	28,0	36,0	28,0	0,60	47,0	9,40	111,0	157,0	111,0	7,33	15,0
4,60	37,0	46,0	37,0	0,80	46,0	9,60	74,0	184,0	74,0	3,60	21,0
4,80	31,0	43,0	31,0	1,40	22,0	9,80	133,0	187,0	133,0	3,60	37,0
5,00	34,0	55,0	34,0	0,73	46,0	**10,00**	133,0	187,0	133,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 322
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-322
- data : 07/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	15,0	23,0	15,0	0,40	37,0
0,80	12,0	18,0	12,0	0,47	26,0
1,00	14,0	21,0	14,0	0,93	15,0
1,20	21,0	35,0	21,0	1,53	14,0
1,40	29,0	52,0	29,0	1,47	20,0
1,60	61,0	83,0	61,0	7,27	8,0
1,80	71,0	180,0	71,0	2,67	27,0
2,00	78,0	118,0	78,0	1,80	43,0
2,20	57,0	84,0	57,0	1,67	34,0
2,40	28,0	53,0	28,0	1,60	17,0
2,60	30,0	54,0	30,0	1,13	26,0
2,80	31,0	48,0	31,0	1,53	20,0
3,00	20,0	43,0	20,0	0,80	25,0
3,20	30,0	42,0	30,0	1,40	21,0
3,40	38,0	59,0	38,0	1,80	21,0
3,60	29,0	56,0	29,0	2,00	14,0
3,80	34,0	64,0	34,0	2,13	16,0
4,00	31,0	63,0	31,0	2,07	15,0
4,20	39,0	70,0	39,0	1,93	20,0
4,40	37,0	66,0	37,0	2,67	14,0
4,60	25,0	65,0	25,0	2,47	10,0
4,80	29,0	66,0	29,0	2,93	10,0
5,00	31,0	75,0	31,0	3,40	9,0
5,20	31,0	82,0	31,0	3,60	9,0
5,40	37,0	91,0	37,0	3,33	11,0
5,60	33,0	83,0	33,0	3,13	11,0
5,80	30,0	77,0	30,0	2,53	12,0
6,00	47,0	85,0	47,0	2,20	21,0
6,20	42,0	75,0	42,0	4,20	10,0
6,40	34,0	97,0	34,0	4,40	8,0
6,60	32,0	98,0	32,0	4,13	8,0
6,80	33,0	95,0	33,0	3,60	9,0
7,00	41,0	95,0	41,0	1,60	26,0
7,20	109,0	133,0	109,0	1,27	86,0
7,40	101,0	120,0	101,0	3,27	31,0
7,60	44,0	93,0	44,0	3,27	13,0
7,80	42,0	91,0	42,0	3,60	12,0
8,00	39,0	93,0	39,0	5,20	8,0
8,20	44,0	122,0	44,0	5,13	9,0
8,40	32,0	109,0	32,0	4,33	7,0
8,60	55,0	120,0	55,0	3,07	18,0
8,80	66,0	112,0	66,0	5,47	12,0
9,00	63,0	145,0	63,0	7,53	8,0
9,20	67,0	180,0	67,0	6,60	10,0
9,40	66,0	165,0	66,0	7,20	9,0
9,60	92,0	200,0	92,0	10,00	9,0
9,80	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 324
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-324
- data : 07/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	6,0	14,0	6,0	0,67	9,0
0,80	5,0	15,0	5,0	0,53	9,0
1,00	10,0	18,0	10,0	0,67	15,0
1,20	10,0	20,0	10,0	0,80	12,0
1,40	24,0	36,0	24,0	0,87	28,0
1,60	39,0	52,0	39,0	2,93	13,0
1,80	30,0	74,0	30,0	4,20	7,0
2,00	28,0	91,0	28,0	2,60	11,0
2,20	33,0	72,0	33,0	2,47	13,0
2,40	55,0	92,0	55,0	3,67	15,0
2,60	30,0	85,0	30,0	3,80	8,0
2,80	28,0	85,0	28,0	2,13	13,0
3,00	57,0	89,0	57,0	1,80	32,0
3,20	74,0	101,0	74,0	1,40	53,0
3,40	74,0	95,0	74,0	2,53	29,0
3,60	74,0	112,0	74,0	2,40	31,0
3,80	73,0	109,0	73,0	2,80	26,0
4,00	88,0	130,0	88,0	2,87	31,0
4,20	78,0	121,0	78,0	2,60	30,0
4,40	73,0	112,0	73,0	1,00	73,0
4,60	74,0	89,0	74,0	1,33	55,0
4,80	82,0	102,0	82,0	1,33	61,0
5,00	86,0	106,0	86,0	1,07	81,0
5,20	88,0	104,0	88,0	0,67	132,0
5,40	94,0	104,0	94,0	1,00	94,0
5,60	93,0	108,0	93,0	1,67	56,0
5,80	100,0	125,0	100,0	2,07	48,0
6,00	100,0	131,0	100,0	2,27	44,0
6,20	119,0	153,0	119,0	2,07	58,0
6,40	108,0	139,0	108,0	1,40	77,0
6,60	128,0	149,0	128,0	10,33	12,0
6,80	125,0	280,0	125,0	1,87	67,0
7,00	140,0	168,0	140,0	5,80	24,0
7,20	93,0	180,0	93,0	11,40	8,0
7,40	109,0	280,0	109,0	8,47	13,0
7,60	260,0	387,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 323
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-323
- data : 07/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	8,0	18,0	8,0	0,73	11,0
0,80	9,0	20,0	9,0	0,53	17,0
1,00	14,0	22,0	14,0	0,47	30,0
1,20	15,0	22,0	15,0	0,67	22,0
1,40	13,0	23,0	13,0	0,87	15,0
1,60	16,0	29,0	16,0	1,00	16,0
1,80	20,0	35,0	20,0	0,80	25,0
2,00	28,0	40,0	28,0	1,87	15,0
2,20	28,0	56,0	28,0	2,07	14,0
2,40	29,0	60,0	29,0	2,33	12,0
2,60	46,0	81,0	46,0	2,27	20,0
2,80	45,0	79,0	45,0	1,53	29,0
3,00	86,0	109,0	86,0	3,47	25,0
3,20	107,0	159,0	107,0	2,33	46,0
3,40	119,0	154,0	119,0	6,67	18,0
3,60	123,0	223,0	123,0	9,33	13,0
3,80	139,0	279,0	139,0	8,00	17,0
4,00	280,0	400,0	280,0	4,27	66,0
4,20	186,0	250,0	186,0	3,33	56,0
4,40	141,0	191,0	141,0	5,47	26,0
4,60	156,0	238,0	156,0	6,93	22,0
4,80	123,0	227,0	123,0	7,33	17,0
5,00	125,0	235,0	125,0	10,73	12,0
5,20	140,0	301,0	140,0	7,67	18,0
5,40	270,0	385,0	270,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 325
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelpagano (BN)
- note : Cert. P001-21-325
- data : 07/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,20	100,0	143,0	100,0	5,00	20,0
0,40	----	----	--	0,60	----	2,40	44,0	119,0	44,0	4,33	10,0
0,60	15,0	24,0	15,0	0,53	28,0	2,60	64,0	129,0	64,0	3,87	17,0
0,80	15,0	23,0	15,0	0,60	25,0	2,80	67,0	125,0	67,0	3,80	18,0
1,00	18,0	27,0	18,0	0,87	21,0	**3,00**	73,0	130,0	73,0	2,27	32,0
1,20	12,0	25,0	12,0	0,87	14,0	3,20	68,0	102,0	68,0	3,00	23,0
1,40	24,0	37,0	24,0	3,07	8,0	3,40	76,0	121,0	76,0	2,27	34,0
1,60	43,0	89,0	43,0	3,07	14,0	3,60	73,0	107,0	73,0	3,27	22,0
1,80	44,0	90,0	44,0	3,13	14,0	3,80	60,0	109,0	60,0	8,00	8,0
2,00	45,0	92,0	45,0	2,87	16,0	**4,00**	265,0	385,0	265,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 332
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P001-21-332
- data : 09/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,13	----
0,60	8,0	10,0	8,0	0,07	120,0
0,80	9,0	10,0	9,0	0,40	22,0
1,00	10,0	16,0	10,0	1,20	8,0
1,20	26,0	44,0	26,0	1,33	19,0
1,40	30,0	50,0	30,0	1,53	20,0
1,60	33,0	56,0	33,0	2,47	13,0
1,80	34,0	71,0	34,0	2,93	12,0
2,00	33,0	77,0	33,0	2,80	12,0
2,20	59,0	101,0	59,0	4,47	13,0
2,40	60,0	127,0	60,0	2,87	21,0
2,60	49,0	92,0	49,0	2,67	18,0
2,80	59,0	99,0	59,0	2,67	22,0
3,00	54,0	94,0	54,0	2,87	19,0
3,20	148,0	191,0	148,0	2,53	58,0
3,40	44,0	82,0	44,0	2,67	16,0
3,60	44,0	84,0	44,0	3,13	14,0
3,80	37,0	84,0	37,0	3,73	10,0
4,00	59,0	115,0	59,0	3,53	17,0
4,20	40,0	93,0	40,0	3,40	12,0
4,40	48,0	99,0	48,0	2,87	17,0
4,60	146,0	189,0	146,0	4,33	34,0
4,80	160,0	225,0	160,0	6,33	25,0
5,00	49,0	144,0	49,0	2,93	17,0
5,20	71,0	115,0	71,0	6,00	12,0
5,40	57,0	147,0	57,0	2,93	19,0
5,60	78,0	122,0	78,0	3,20	24,0
5,80	81,0	129,0	81,0	6,07	13,0
6,00	58,0	149,0	58,0	5,13	11,0
6,20	47,0	124,0	47,0	4,27	11,0
6,40	57,0	121,0	57,0	5,33	11,0
6,60	45,0	125,0	45,0	5,13	9,0
6,80	56,0	133,0	56,0	6,00	9,0
7,00	250,0	340,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 331
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P001-21-331
- data : 09/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	10,0	15,0	10,0	0,93	11,0
0,80	20,0	34,0	20,0	1,13	18,0
1,00	20,0	37,0	20,0	0,40	50,0
1,20	16,0	22,0	16,0	0,40	40,0
1,40	20,0	26,0	20,0	0,60	33,0
1,60	14,0	23,0	14,0	1,87	7,0
1,80	43,0	71,0	43,0	7,40	6,0
2,00	60,0	171,0	60,0	1,40	43,0
2,20	33,0	54,0	33,0	2,00	16,0
2,40	39,0	69,0	39,0	1,00	39,0
2,60	56,0	71,0	56,0	6,00	9,0
2,80	55,0	145,0	55,0	1,60	34,0
3,00	77,0	101,0	77,0	1,53	50,0
3,20	57,0	80,0	57,0	1,80	32,0
3,40	45,0	72,0	45,0	1,87	24,0
3,60	78,0	106,0	78,0	2,00	39,0
3,80	76,0	106,0	76,0	4,53	17,0
4,00	58,0	126,0	58,0	3,27	18,0
4,20	121,0	170,0	121,0	5,73	21,0
4,40	56,0	142,0	56,0	2,47	23,0
4,60	93,0	130,0	93,0	1,53	61,0
4,80	100,0	123,0	100,0	4,53	22,0
5,00	87,0	155,0	87,0	10,67	8,0
5,20	260,0	420,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 330
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P001-21-330
- data : 10/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	4,20	60,0	80,0	60,0	5,13	12,0
0,40	----	----	--	0,20	----	4,40	130,0	207,0	130,0	4,07	32,0
0,60	4,0	7,0	4,0	0,53	7,0	4,60	137,0	198,0	137,0	2,53	54,0
0,80	8,0	16,0	8,0	0,60	13,0	4,80	150,0	188,0	150,0	1,87	80,0
1,00	7,0	16,0	7,0	0,53	13,0	**5,00**	162,0	190,0	162,0	1,33	121,0
1,20	11,0	19,0	11,0	0,87	13,0	5,20	180,0	200,0	180,0	1,40	129,0
1,40	13,0	26,0	13,0	0,80	16,0	5,40	68,0	89,0	68,0	1,53	44,0
1,60	14,0	26,0	14,0	1,33	10,0	5,60	71,0	94,0	71,0	2,07	34,0
1,80	14,0	34,0	14,0	1,47	10,0	5,80	65,0	96,0	65,0	2,40	27,0
2,00	24,0	46,0	24,0	2,33	10,0	**6,00**	66,0	102,0	66,0	1,60	41,0
2,20	14,0	49,0	14,0	2,40	6,0	6,20	74,0	98,0	74,0	1,40	53,0
2,40	15,0	51,0	15,0	1,53	10,0	6,40	81,0	102,0	81,0	2,00	40,0
2,60	21,0	44,0	21,0	1,33	16,0	6,60	90,0	120,0	90,0	2,13	42,0
2,80	29,0	49,0	29,0	2,00	14,0	6,80	63,0	95,0	63,0	2,40	26,0
3,00	21,0	51,0	21,0	1,67	13,0	**7,00**	68,0	104,0	68,0	1,80	38,0
3,20	23,0	48,0	23,0	2,20	10,0	7,20	79,0	106,0	79,0	2,20	36,0
3,40	20,0	53,0	20,0	2,80	7,0	7,40	102,0	135,0	102,0	1,67	61,0
3,60	24,0	66,0	24,0	2,07	12,0	7,60	121,0	146,0	121,0	22,93	5,0
3,80	21,0	52,0	21,0	2,27	9,0	7,80	306,0	650,0	306,0	13,33	23,0
4,00	29,0	63,0	29,0	1,33	22,0	**8,00**	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 329
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P001-21-329
- data : 10/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	3,20	66,0	96,0	66,0	1,73	38,0
0,40	----	----	--	1,07	----	3,40	72,0	98,0	72,0	1,60	45,0
0,60	13,0	29,0	13,0	1,80	7,0	3,60	78,0	102,0	78,0	1,60	49,0
0,80	34,0	61,0	34,0	1,27	27,0	3,80	77,0	101,0	77,0	1,93	40,0
1,00	18,0	37,0	18,0	0,73	25,0	**4,00**	96,0	125,0	96,0	2,27	42,0
1,20	19,0	30,0	19,0	1,13	17,0	4,20	98,0	132,0	98,0	2,20	45,0
1,40	18,0	35,0	18,0	1,40	13,0	4,40	129,0	162,0	129,0	2,13	60,0
1,60	18,0	39,0	18,0	0,87	21,0	4,60	145,0	177,0	145,0	2,53	57,0
1,80	32,0	45,0	32,0	5,47	6,0	4,80	99,0	137,0	99,0	3,67	27,0
2,00	172,0	254,0	172,0	3,67	47,0	**5,00**	125,0	180,0	125,0	4,47	28,0
2,20	98,0	153,0	98,0	3,67	27,0	5,20	132,0	199,0	132,0	5,33	25,0
2,40	31,0	86,0	31,0	8,33	4,0	5,40	97,0	177,0	97,0	4,07	24,0
2,60	155,0	280,0	155,0	10,67	15,0	5,60	99,0	160,0	99,0	10,00	10,0
2,80	160,0	320,0	160,0	8,27	19,0	5,80	350,0	500,0	350,0	13,33	26,0
3,00	171,0	295,0	171,0	2,00	86,0	**6,00**	420,0	620,0	420,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 333
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P001-21-333
- data : 10/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,67	----
0,60	20,0	45,0	20,0	0,60	33,0
0,80	11,0	20,0	11,0	0,47	24,0
1,00	13,0	20,0	13,0	3,67	4,0
1,20	19,0	74,0	19,0	1,87	10,0
1,40	92,0	120,0	92,0	0,67	138,0
1,60	36,0	46,0	36,0	2,40	15,0
1,80	20,0	56,0	20,0	0,40	50,0
2,00	27,0	33,0	27,0	1,60	17,0
2,20	16,0	40,0	16,0	1,20	13,0
2,40	20,0	38,0	20,0	1,40	14,0
2,60	23,0	44,0	23,0	1,73	13,0
2,80	52,0	78,0	52,0	1,87	28,0
3,00	15,0	43,0	15,0	1,93	8,0
3,20	15,0	44,0	15,0	1,67	9,0
3,40	28,0	53,0	28,0	2,80	10,0
3,60	29,0	71,0	29,0	3,40	9,0
3,80	19,0	70,0	19,0	0,93	20,0
4,00	19,0	33,0	19,0	1,53	12,0
4,20	27,0	50,0	27,0	2,07	13,0
4,40	33,0	64,0	33,0	9,93	3,0
4,60	301,0	450,0	301,0	11,47	26,0
4,80	198,0	370,0	198,0	2,13	93,0
5,00	56,0	88,0	56,0	3,20	17,0
5,20	44,0	92,0	44,0	2,60	17,0
5,40	49,0	88,0	49,0	2,67	18,0
5,60	37,0	77,0	37,0	2,67	14,0
5,80	41,0	81,0	41,0	2,73	15,0
6,00	51,0	92,0	51,0	3,07	17,0
6,20	56,0	102,0	56,0	4,07	14,0
6,40	66,0	127,0	66,0	3,80	17,0
6,60	65,0	122,0	65,0	5,00	13,0
6,80	61,0	136,0	61,0	5,60	11,0
7,00	68,0	152,0	68,0	2,47	28,0
7,20	51,0	88,0	51,0	2,33	22,0
7,40	56,0	91,0	56,0	3,53	16,0
7,60	71,0	124,0	71,0	3,47	20,0
7,80	77,0	129,0	77,0	4,13	19,0
8,00	75,0	137,0	75,0	4,27	18,0
8,20	161,0	225,0	161,0	5,33	30,0
8,40	370,0	450,0	370,0	13,33	28,0
8,60	500,0	700,0	500,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 334
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-334
- data : 14/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	5,0	10,0	5,0	0,47	11,0
0,80	3,0	10,0	3,0	0,47	6,0
1,00	10,0	17,0	10,0	0,53	19,0
1,20	19,0	27,0	19,0	1,33	14,0
1,40	13,0	33,0	13,0	11,33	1,0
1,60	160,0	330,0	160,0	5,33	30,0
1,80	190,0	270,0	190,0	3,40	56,0
2,00	135,0	186,0	135,0	0,67	202,0
2,20	46,0	56,0	46,0	1,93	24,0
2,40	27,0	56,0	27,0	1,27	21,0
2,60	33,0	52,0	33,0	1,60	21,0
2,80	19,0	43,0	19,0	1,27	15,0
3,00	20,0	39,0	20,0	1,20	17,0
3,20	26,0	44,0	26,0	1,40	19,0
3,40	29,0	50,0	29,0	1,87	16,0
3,60	42,0	70,0	42,0	2,33	18,0
3,80	34,0	69,0	34,0	2,60	13,0
4,00	27,0	66,0	27,0	1,47	18,0
4,20	34,0	56,0	34,0	1,67	20,0
4,40	26,0	51,0	26,0	2,07	13,0
4,60	27,0	58,0	27,0	1,93	14,0
4,80	30,0	59,0	30,0	2,07	15,0
5,00	27,0	58,0	27,0	2,20	12,0
5,20	39,0	72,0	39,0	2,00	20,0
5,40	48,0	78,0	48,0	2,47	19,0
5,60	43,0	80,0	43,0	2,00	22,0
5,80	70,0	100,0	70,0	1,33	52,0
6,00	71,0	91,0	71,0	2,67	27,0
6,20	26,0	66,0	26,0	2,13	12,0
6,40	25,0	57,0	25,0	3,33	8,0
6,60	140,0	190,0	140,0	4,67	30,0
6,80	52,0	122,0	52,0	12,00	4,0
7,00	350,0	530,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 335
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-335
- data : 14/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	1,60	45,0	80,0	45,0	3,00	15,0
0,40	----	----	--	0,47	----	1,80	78,0	123,0	78,0	4,47	17,0
0,60	9,0	16,0	9,0	0,53	17,0	**2,00**	39,0	106,0	39,0	2,47	16,0
0,80	8,0	16,0	8,0	0,67	12,0	2,20	21,0	58,0	21,0	3,87	5,0
1,00	18,0	28,0	18,0	1,07	17,0	2,40	102,0	160,0	102,0	4,67	22,0
1,20	29,0	45,0	29,0	4,27	7,0	2,60	190,0	260,0	190,0	6,00	32,0
1,40	80,0	144,0	80,0	2,33	34,0	2,80	250,0	340,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 336
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-336
- data : 14/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,20	----
0,60	8,0	11,0	8,0	0,20	40,0
0,80	9,0	12,0	9,0	8,00	1,0
1,00	160,0	280,0	160,0	2,67	60,0
1,20	38,0	78,0	38,0	3,80	10,0
1,40	52,0	109,0	52,0	2,47	21,0
1,60	46,0	83,0	46,0	1,27	36,0
1,80	16,0	35,0	16,0	1,73	9,0
2,00	39,0	65,0	39,0	1,40	28,0
2,20	62,0	83,0	62,0	2,07	30,0
2,40	74,0	105,0	74,0	11,33	7,0
2,60	280,0	450,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 338
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-338
- data : 14/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	1,60	87,0	108,0	87,0	4,80	18,0
0,40	----	----	--	0,93	----	1,80	77,0	149,0	77,0	4,40	17,0
0,60	12,0	26,0	12,0	1,47	8,0	**2,00**	75,0	141,0	75,0	2,27	33,0
0,80	11,0	33,0	11,0	0,93	12,0	2,20	81,0	115,0	81,0	1,87	43,0
1,00	20,0	34,0	20,0	1,07	19,0	2,40	78,0	106,0	78,0	2,80	28,0
1,20	20,0	36,0	20,0	2,80	7,0	2,60	77,0	119,0	77,0	8,67	9,0
1,40	95,0	137,0	95,0	1,40	68,0	2,80	250,0	380,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA CPT 339
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-339
- data : 16/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	1,40	9,0	17,0	9,0	0,60	15,0
0,40	----	----	--	0,40	----	1,60	15,0	24,0	15,0	0,60	25,0
0,60	6,0	12,0	6,0	0,40	15,0	1,80	15,0	24,0	15,0	0,87	17,0
0,80	5,0	11,0	5,0	0,53	9,0	**2,00**	19,0	32,0	19,0	7,33	3,0
1,00	7,0	15,0	7,0	0,67	10,0	2,20	150,0	260,0	150,0	8,00	19,0
1,20	9,0	19,0	9,0	0,53	17,0	2,40	260,0	380,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 343
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-343
- data : 16/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,13	----
0,60	7,0	9,0	7,0	0,20	35,0
0,80	4,0	7,0	4,0	0,33	12,0
1,00	4,0	9,0	4,0	0,40	10,0
1,20	17,0	23,0	17,0	0,73	23,0
1,40	19,0	30,0	19,0	0,60	32,0
1,60	24,0	33,0	24,0	0,93	26,0
1,80	26,0	40,0	26,0	1,40	19,0
2,00	26,0	47,0	26,0	1,60	16,0
2,20	27,0	51,0	27,0	1,40	19,0
2,40	27,0	48,0	27,0	1,20	22,0
2,60	28,0	46,0	28,0	1,13	25,0
2,80	56,0	73,0	56,0	2,53	22,0
3,00	52,0	90,0	52,0	2,00	26,0
3,20	53,0	83,0	53,0	4,47	12,0
3,40	85,0	152,0	85,0	9,13	9,0
3,60	245,0	382,0	245,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 356
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-356
- data : 17/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	5,0	18,0	5,0	0,87	6,0
0,80	7,0	20,0	7,0	0,67	10,0
1,00	9,0	19,0	9,0	1,13	8,0
1,20	16,0	33,0	16,0	0,40	40,0
1,40	29,0	35,0	29,0	1,33	22,0
1,60	14,0	34,0	14,0	0,80	17,0
1,80	17,0	29,0	17,0	4,13	4,0
2,00	156,0	218,0	156,0	4,73	33,0
2,20	144,0	215,0	144,0	6,93	21,0
2,40	156,0	260,0	156,0	2,87	54,0
2,60	97,0	140,0	97,0	1,33	73,0
2,80	77,0	97,0	77,0	4,67	17,0
3,00	280,0	350,0	280,0	4,67	60,0
3,20	280,0	350,0	280,0	10,00	28,0
3,40	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 349
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-349
- data : 17/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	10,0	21,0	10,0	1,20	8,0
0,80	16,0	34,0	16,0	0,80	20,0
1,00	29,0	41,0	29,0	0,73	40,0
1,20	29,0	40,0	29,0	1,53	19,0
1,40	30,0	53,0	30,0	1,20	25,0
1,60	22,0	40,0	22,0	1,80	12,0
1,80	27,0	54,0	27,0	2,67	10,0
2,00	40,0	80,0	40,0	2,00	20,0
2,20	100,0	130,0	100,0	4,40	23,0
2,40	22,0	88,0	22,0	3,80	6,0
2,60	18,0	75,0	18,0	0,60	30,0
2,80	32,0	41,0	32,0	1,40	23,0
3,00	22,0	43,0	22,0	0,80	27,0
3,20	31,0	43,0	31,0	1,40	22,0
3,40	36,0	57,0	36,0	1,20	30,0
3,60	46,0	64,0	46,0	4,47	10,0
3,80	58,0	125,0	58,0	8,53	7,0
4,00	160,0	288,0	160,0	10,00	16,0
4,20	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 350
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-350
- data : 17/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	1,60	32,0	47,0	32,0	1,33	24,0
0,40	----	----	--	1,53	----	1,80	39,0	59,0	39,0	1,13	34,0
0,60	20,0	43,0	20,0	1,60	12,0	**2,00**	26,0	43,0	26,0	1,00	26,0
0,80	23,0	47,0	23,0	1,40	16,0	2,20	39,0	54,0	39,0	1,33	29,0
1,00	24,0	45,0	24,0	0,67	36,0	2,40	33,0	53,0	33,0	1,80	18,0
1,20	29,0	39,0	29,0	1,00	29,0	2,60	35,0	62,0	35,0	8,67	4,0
1,40	35,0	50,0	35,0	1,00	35,0	2,80	250,0	380,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 351
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-351
- data : 17/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	7,0	15,0	7,0	0,33	21,0
0,80	4,0	9,0	4,0	1,53	3,0
1,00	100,0	123,0	100,0	1,53	65,0
1,20	102,0	125,0	102,0	2,93	35,0
1,40	20,0	64,0	20,0	0,80	25,0
1,60	20,0	32,0	20,0	0,87	23,0
1,80	22,0	35,0	22,0	1,47	15,0
2,00	18,0	40,0	18,0	1,33	13,0
2,20	32,0	52,0	32,0	1,27	25,0
2,40	21,0	40,0	21,0	1,00	21,0
2,60	25,0	40,0	25,0	1,27	20,0
2,80	28,0	47,0	28,0	1,93	14,0
3,00	27,0	56,0	27,0	1,33	20,0
3,20	26,0	46,0	26,0	1,33	19,0
3,40	22,0	42,0	22,0	0,80	27,0
3,60	32,0	44,0	32,0	1,40	23,0
3,80	30,0	51,0	30,0	1,47	20,0
4,00	24,0	46,0	24,0	2,40	10,0
4,20	27,0	63,0	27,0	0,40	67,0
4,40	13,0	19,0	13,0	0,47	28,0
4,60	15,0	22,0	15,0	0,47	32,0
4,80	13,0	20,0	13,0	0,87	15,0
5,00	16,0	29,0	16,0	0,27	60,0
5,20	17,0	21,0	17,0	0,60	28,0
5,40	26,0	35,0	26,0	0,93	28,0
5,60	25,0	39,0	25,0	1,47	17,0
5,80	23,0	45,0	23,0	0,67	34,0
6,00	23,0	33,0	23,0	1,93	12,0
6,20	22,0	51,0	22,0	1,00	22,0
6,40	23,0	38,0	23,0	0,53	43,0
6,60	26,0	34,0	26,0	1,33	19,0
6,80	19,0	39,0	19,0	0,67	28,0
7,00	22,0	32,0	22,0	1,00	22,0
7,20	24,0	39,0	24,0	0,40	60,0
7,40	34,0	40,0	34,0	1,80	19,0
7,60	49,0	76,0	49,0	4,33	11,0
7,80	85,0	150,0	85,0	7,00	12,0
8,00	95,0	200,0	95,0	9,33	10,0
8,20	240,0	380,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 352
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-352
- data : 17/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,73	----
0,60	8,0	19,0	8,0	0,80	10,0
0,80	7,0	19,0	7,0	0,73	10,0
1,00	10,0	21,0	10,0	0,73	14,0
1,20	11,0	22,0	11,0	1,47	7,0
1,40	17,0	39,0	17,0	1,33	13,0
1,60	18,0	38,0	18,0	1,07	17,0
1,80	20,0	36,0	20,0	1,73	12,0
2,00	20,0	46,0	20,0	4,13	5,0
2,20	20,0	82,0	20,0	0,87	23,0
2,40	24,0	37,0	24,0	0,80	30,0
2,60	24,0	36,0	24,0	1,87	13,0
2,80	21,0	49,0	21,0	1,73	12,0
3,00	127,0	153,0	127,0	3,00	42,0
3,20	205,0	250,0	205,0	5,67	36,0
3,40	250,0	335,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 354
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-354	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	6,0	12,0	6,0	0,53	11,0
0,80	7,0	15,0	7,0	0,60	12,0
1,00	7,0	16,0	7,0	0,33	21,0
1,20	7,0	12,0	7,0	0,73	10,0
1,40	13,0	24,0	13,0	0,73	18,0
1,60	18,0	29,0	18,0	1,40	13,0
1,80	16,0	37,0	16,0	1,33	12,0
2,00	14,0	34,0	14,0	0,27	52,0

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
2,20	19,0	23,0	19,0	0,27	71,0
2,40	18,0	22,0	18,0	0,47	39,0
2,60	15,0	22,0	15,0	0,93	16,0
2,80	12,0	26,0	12,0	0,93	13,0
3,00	13,0	27,0	13,0	4,93	3,0
3,20	130,0	204,0	130,0	2,60	50,0
3,40	146,0	185,0	146,0	2,20	66,0
3,60	180,0	213,0	180,0	8,00	22,0
3,80	240,0	360,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 355
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-355
- data : 17/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,20	15,0	26,0	15,0	0,27	56,0
0,40	----	----	--	0,47	----	2,40	24,0	28,0	24,0	0,60	40,0
0,60	6,0	13,0	6,0	0,40	15,0	2,60	17,0	26,0	17,0	8,00	2,0
0,80	6,0	12,0	6,0	0,47	13,0	2,80	160,0	280,0	160,0	3,73	43,0
1,00	11,0	18,0	11,0	0,93	12,0	**3,00**	48,0	104,0	48,0	1,80	27,0
1,20	14,0	28,0	14,0	1,27	11,0	3,20	43,0	70,0	43,0	2,07	21,0
1,40	23,0	42,0	23,0	0,40	57,0	3,40	70,0	101,0	70,0	1,20	58,0
1,60	27,0	33,0	27,0	0,60	45,0	3,60	88,0	106,0	88,0	9,00	10,0
1,80	21,0	30,0	21,0	1,07	20,0	3,80	115,0	250,0	115,0	7,33	16,0
2,00	14,0	30,0	14,0	0,73	19,0	**4,00**	260,0	370,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 340
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-340
- data : 19/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	11,0	17,0	11,0	0,47	24,0
0,80	8,0	15,0	8,0	0,53	15,0
1,00	9,0	17,0	9,0	0,80	11,0
1,20	21,0	33,0	21,0	0,53	39,0
1,40	29,0	37,0	29,0	1,47	20,0
1,60	28,0	50,0	28,0	1,47	19,0
1,80	68,0	90,0	68,0	2,60	26,0
2,00	76,0	115,0	76,0	6,00	13,0
2,20	74,0	164,0	74,0	5,00	15,0
2,40	66,0	141,0	66,0	6,00	11,0
2,60	160,0	250,0	160,0	12,00	13,0
2,80	180,0	360,0	180,0	7,33	25,0
3,00	240,0	350,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 344
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-344
- data : 19/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,60	----
0,60	11,0	20,0	11,0	1,00	11,0
0,80	14,0	29,0	14,0	0,80	17,0
1,00	15,0	27,0	15,0	1,00	15,0
1,20	14,0	29,0	14,0	1,33	10,0
1,40	13,0	33,0	13,0	1,27	10,0
1,60	16,0	35,0	16,0	1,27	13,0
1,80	15,0	34,0	15,0	1,40	11,0
2,00	14,0	35,0	14,0	1,27	11,0
2,20	21,0	40,0	21,0	1,33	16,0
2,40	20,0	40,0	20,0	1,53	13,0
2,60	24,0	47,0	24,0	1,73	14,0
2,80	23,0	49,0	23,0	1,27	18,0
3,00	25,0	44,0	25,0	1,87	13,0
3,20	27,0	55,0	27,0	2,47	11,0
3,40	34,0	71,0	34,0	2,53	13,0
3,60	40,0	78,0	40,0	3,13	13,0
3,80	36,0	83,0	36,0	2,47	15,0
4,00	33,0	70,0	33,0	2,00	16,0
4,20	26,0	56,0	26,0	2,00	13,0
4,40	24,0	54,0	24,0	0,93	26,0
4,60	29,0	43,0	29,0	1,47	20,0
4,80	29,0	51,0	29,0	1,60	18,0
5,00	39,0	63,0	39,0	2,73	14,0
5,20	33,0	74,0	33,0	2,53	13,0
5,40	36,0	74,0	36,0	2,00	18,0
5,60	33,0	63,0	33,0	2,40	14,0
5,80	27,0	63,0	27,0	1,07	25,0
6,00	37,0	53,0	37,0	1,07	35,0
6,20	30,0	46,0	30,0	1,40	21,0
6,40	24,0	45,0	24,0	1,60	15,0
6,60	27,0	51,0	27,0	2,07	13,0
6,80	31,0	62,0	31,0	1,13	27,0
7,00	48,0	65,0	48,0	0,73	65,0
7,20	60,0	71,0	60,0	8,67	7,0
7,40	350,0	480,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 358
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-358
- data : 19/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,07	----
0,60	12,0	28,0	12,0	1,00	12,0
0,80	12,0	27,0	12,0	1,07	11,0
1,00	12,0	28,0	12,0	0,80	15,0
1,20	16,0	28,0	16,0	0,93	17,0
1,40	15,0	29,0	15,0	1,07	14,0
1,60	24,0	40,0	24,0	0,60	40,0
1,80	15,0	24,0	15,0	0,53	28,0
2,00	15,0	23,0	15,0	1,07	14,0
2,20	19,0	35,0	19,0	1,20	16,0
2,40	54,0	72,0	54,0	2,93	18,0
2,60	70,0	114,0	70,0	4,73	15,0
2,80	99,0	170,0	99,0	1,47	67,0
3,00	87,0	109,0	87,0	1,67	52,0
3,20	63,0	88,0	63,0	3,53	18,0
3,40	74,0	127,0	74,0	2,40	31,0
3,60	50,0	86,0	50,0	4,13	12,0
3,80	51,0	113,0	51,0	3,27	16,0
4,00	51,0	100,0	51,0	1,13	45,0
4,20	85,0	102,0	85,0	2,73	31,0
4,40	63,0	104,0	63,0	3,47	18,0
4,60	56,0	108,0	56,0	1,13	49,0
4,80	56,0	73,0	56,0	1,80	31,0
5,00	53,0	80,0	53,0	1,00	53,0
5,20	54,0	69,0	54,0	0,93	58,0
5,40	56,0	70,0	56,0	1,33	42,0
5,60	58,0	78,0	58,0	1,13	51,0
5,80	36,0	53,0	36,0	1,27	28,0
6,00	68,0	87,0	68,0	1,67	41,0
6,20	65,0	90,0	65,0	1,40	46,0
6,40	78,0	99,0	78,0	1,47	53,0
6,60	43,0	65,0	43,0	1,40	31,0
6,80	49,0	70,0	49,0	1,87	26,0
7,00	54,0	82,0	54,0	1,33	40,0
7,20	54,0	74,0	54,0	1,00	54,0
7,40	80,0	95,0	80,0	1,33	60,0
7,60	62,0	82,0	62,0	1,07	58,0
7,80	50,0	66,0	50,0	0,93	54,0
8,00	103,0	117,0	103,0	1,00	103,0
8,20	108,0	123,0	108,0	7,33	15,0
8,40	250,0	360,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 359
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-359
- data : 21/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,60	18,0	30,0	18,0	0,73	25,0
0,40	----	----	--	0,47	----	2,80	22,0	33,0	22,0	2,40	9,0
0,60	8,0	15,0	8,0	0,67	12,0	**3,00**	47,0	83,0	47,0	1,47	32,0
0,80	8,0	18,0	8,0	0,80	10,0	3,20	66,0	88,0	66,0	2,07	32,0
1,00	10,0	22,0	10,0	0,93	11,0	3,40	100,0	131,0	100,0	1,13	88,0
1,20	14,0	28,0	14,0	1,13	12,0	3,60	68,0	85,0	68,0	9,67	7,0
1,40	19,0	36,0	19,0	0,80	24,0	3,80	86,0	231,0	86,0	7,33	12,0
1,60	19,0	31,0	19,0	0,67	28,0	**4,00**	150,0	260,0	150,0	7,33	20,0
1,80	16,0	26,0	16,0	0,87	18,0	4,20	176,0	286,0	176,0	3,33	53,0
2,00	13,0	26,0	13,0	0,73	18,0	4,40	235,0	285,0	235,0	5,13	46,0
2,20	13,0	24,0	13,0	0,67	19,0	4,60	201,0	278,0	201,0	8,00	25,0
2,40	16,0	26,0	16,0	0,80	20,0	4,80	260,0	380,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 361
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-361
- data : 21/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	3,0	10,0	3,0	0,40	7,0
0,80	6,0	12,0	6,0	0,67	9,0
1,00	16,0	26,0	16,0	0,87	18,0
1,20	24,0	37,0	24,0	0,80	30,0
1,40	23,0	35,0	23,0	1,40	16,0
1,60	16,0	37,0	16,0	0,53	30,0
1,80	22,0	30,0	22,0	0,67	33,0
2,00	21,0	31,0	21,0	0,40	52,0
2,20	26,0	32,0	26,0	1,07	24,0
2,40	15,0	31,0	15,0	0,93	16,0
2,60	19,0	33,0	19,0	0,47	41,0
2,80	67,0	74,0	67,0	1,40	48,0
3,00	35,0	56,0	35,0	1,40	25,0
3,20	35,0	56,0	35,0	1,53	23,0
3,40	21,0	44,0	21,0	0,93	22,0
3,60	53,0	67,0	53,0	1,33	40,0
3,80	50,0	70,0	50,0	1,47	34,0
4,00	17,0	39,0	17,0	0,67	25,0
4,20	31,0	41,0	31,0	9,00	3,0
4,40	180,0	315,0	180,0	10,00	18,0
4,60	250,0	400,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 362
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-362
- data : 21/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	22,0	35,0	22,0	0,87	25,0
0,80	11,0	24,0	11,0	1,00	11,0
1,00	11,0	26,0	11,0	0,27	41,0
1,20	11,0	15,0	11,0	0,47	24,0
1,40	8,0	15,0	8,0	0,47	17,0
1,60	7,0	14,0	7,0	0,60	12,0
1,80	10,0	19,0	10,0	0,80	12,0
2,00	13,0	25,0	13,0	0,40	32,0
2,20	14,0	20,0	14,0	1,20	12,0
2,40	22,0	40,0	22,0	0,33	66,0

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
2,60	21,0	26,0	21,0	1,13	19,0
2,80	15,0	32,0	15,0	1,20	12,0
3,00	18,0	36,0	18,0	1,13	16,0
3,20	22,0	39,0	22,0	1,07	21,0
3,40	24,0	40,0	24,0	0,60	40,0
3,60	61,0	70,0	61,0	1,47	42,0
3,80	36,0	58,0	36,0	1,00	36,0
4,00	59,0	74,0	59,0	1,27	47,0
4,20	51,0	70,0	51,0	1,33	38,0
4,40	43,0	63,0	43,0	2,53	17,0
4,60	76,0	114,0	76,0	7,33	10,0
4,80	250,0	360,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 363
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-363
- data : 21/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	1,80	20,0	30,0	20,0	0,53	37,0
0,40	----	----	--	0,33	----	**2,00**	21,0	29,0	21,0	1,00	21,0
0,60	3,0	8,0	3,0	0,27	11,0	2,20	24,0	39,0	24,0	0,93	26,0
0,80	7,0	11,0	7,0	0,60	12,0	2,40	24,0	38,0	24,0	3,80	6,0
1,00	10,0	19,0	10,0	0,40	25,0	2,60	50,0	107,0	50,0	0,80	62,0
1,20	12,0	18,0	12,0	0,33	36,0	2,80	61,0	73,0	61,0	4,73	13,0
1,40	20,0	25,0	20,0	1,13	18,0	**3,00**	64,0	135,0	64,0	6,00	11,0
1,60	14,0	31,0	14,0	0,67	21,0	3,20	240,0	330,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 360
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-360
- data : 21/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,20	89,0	121,0	89,0	2,67	33,0
0,40	----	----	--	0,20	----	2,40	61,0	101,0	61,0	2,07	30,0
0,60	8,0	11,0	8,0	0,40	20,0	2,60	47,0	78,0	47,0	1,13	41,0
0,80	8,0	14,0	8,0	0,53	15,0	2,80	56,0	73,0	56,0	1,40	40,0
1,00	14,0	22,0	14,0	1,00	14,0	**3,00**	39,0	60,0	39,0	0,60	65,0
1,20	12,0	27,0	12,0	1,33	9,0	3,20	46,0	55,0	46,0	0,93	49,0
1,40	20,0	40,0	20,0	1,13	18,0	3,40	27,0	41,0	27,0	1,80	15,0
1,60	52,0	69,0	52,0	1,33	39,0	3,60	62,0	89,0	62,0	1,73	36,0
1,80	57,0	77,0	57,0	2,20	26,0	3,80	59,0	85,0	59,0	8,00	7,0
2,00	87,0	120,0	87,0	2,13	41,0	**4,00**	240,0	360,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 364
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-364
- data : 21/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	7,0	12,0	7,0	0,47	15,0
0,80	5,0	12,0	5,0	0,27	19,0
1,00	5,0	9,0	5,0	1,27	4,0
1,20	50,0	69,0	50,0	2,47	20,0
1,40	33,0	70,0	33,0	1,47	22,0
1,60	18,0	40,0	18,0	0,87	21,0
1,80	17,0	30,0	17,0	0,87	20,0
2,00	28,0	41,0	28,0	0,80	35,0
2,20	19,0	31,0	19,0	0,93	20,0
2,40	16,0	30,0	16,0	0,53	30,0
2,60	35,0	43,0	35,0	1,27	28,0
2,80	19,0	38,0	19,0	1,40	14,0
3,00	22,0	43,0	22,0	0,87	25,0
3,20	50,0	63,0	50,0	1,27	39,0
3,40	31,0	50,0	31,0	1,00	31,0
3,60	20,0	35,0	20,0	0,93	21,0
3,80	22,0	36,0	22,0	1,47	15,0
4,00	20,0	42,0	20,0	0,53	37,0
4,20	28,0	36,0	28,0	0,67	42,0
4,40	18,0	28,0	18,0	0,20	90,0
4,60	18,0	21,0	18,0	0,67	27,0
4,80	26,0	36,0	26,0	3,07	8,0
5,00	52,0	98,0	52,0	0,87	60,0
5,20	30,0	43,0	30,0	8,33	4,0
5,40	34,0	159,0	34,0	6,00	6,0
5,60	240,0	330,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 365
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-365
- data : 21/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,60	----
0,60	8,0	17,0	8,0	0,53	15,0
0,80	7,0	15,0	7,0	0,60	12,0
1,00	10,0	19,0	10,0	0,67	15,0
1,20	15,0	25,0	15,0	1,00	15,0
1,40	17,0	32,0	17,0	1,47	12,0
1,60	20,0	42,0	20,0	0,93	21,0
1,80	24,0	38,0	24,0	1,33	18,0
2,00	22,0	42,0	22,0	1,00	22,0
2,20	21,0	36,0	21,0	0,93	22,0
2,40	21,0	35,0	21,0	0,93	22,0
2,60	24,0	38,0	24,0	1,20	20,0
2,80	28,0	46,0	28,0	1,13	25,0
3,00	33,0	50,0	33,0	1,73	19,0
3,20	28,0	54,0	28,0	1,60	17,0
3,40	30,0	54,0	30,0	1,67	18,0
3,60	38,0	63,0	38,0	2,33	16,0
3,80	45,0	80,0	45,0	1,27	36,0
4,00	49,0	68,0	49,0	1,93	25,0
4,20	32,0	61,0	32,0	1,33	24,0
4,40	52,0	72,0	52,0	3,33	16,0
4,60	28,0	78,0	28,0	1,53	18,0
4,80	26,0	49,0	26,0	1,27	21,0
5,00	33,0	52,0	33,0	0,93	35,0
5,20	36,0	50,0	36,0	3,00	12,0
5,40	39,0	84,0	39,0	1,33	29,0
5,60	38,0	58,0	38,0	2,80	14,0
5,80	39,0	81,0	39,0	1,93	20,0
6,00	41,0	70,0	41,0	1,33	31,0
6,20	43,0	63,0	43,0	3,20	13,0
6,40	47,0	95,0	47,0	6,67	7,0
6,60	240,0	340,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 366
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-366
- data : 22/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	2,0	8,0	2,0	0,60	3,0
0,80	10,0	19,0	10,0	1,07	9,0
1,00	14,0	30,0	14,0	0,93	15,0
1,20	14,0	28,0	14,0	0,67	21,0
1,40	19,0	29,0	19,0	0,67	28,0
1,60	16,0	26,0	16,0	0,80	20,0
1,80	19,0	31,0	19,0	1,20	16,0
2,00	23,0	41,0	23,0	1,07	22,0
2,20	28,0	44,0	28,0	0,73	38,0
2,40	35,0	46,0	35,0	2,40	15,0
2,60	28,0	64,0	28,0	1,80	16,0
2,80	32,0	59,0	32,0	1,87	17,0
3,00	26,0	54,0	26,0	2,53	10,0
3,20	29,0	67,0	29,0	1,73	17,0
3,40	32,0	58,0	32,0	0,87	37,0
3,60	64,0	77,0	64,0	2,80	23,0
3,80	48,0	90,0	48,0	2,60	18,0
4,00	29,0	68,0	29,0	1,20	24,0
4,20	41,0	59,0	41,0	1,27	32,0
4,40	39,0	58,0	39,0	1,33	29,0
4,60	36,0	56,0	36,0	5,27	7,0
4,80	82,0	161,0	82,0	2,47	33,0
5,00	33,0	70,0	33,0	2,27	15,0
5,20	85,0	119,0	85,0	5,60	15,0
5,40	60,0	144,0	60,0	2,73	22,0
5,60	33,0	74,0	33,0	3,73	9,0
5,80	26,0	82,0	26,0	0,80	32,0
6,00	30,0	42,0	30,0	0,93	32,0
6,20	22,0	36,0	22,0	1,13	19,0
6,40	45,0	62,0	45,0	6,27	7,0
6,60	46,0	140,0	46,0	6,60	7,0
6,80	51,0	150,0	51,0	3,33	15,0
7,00	70,0	120,0	70,0	1,40	50,0
7,20	200,0	221,0	200,0	2,33	86,0
7,40	55,0	90,0	55,0	3,53	16,0
7,60	24,0	77,0	24,0	3,40	7,0
7,80	29,0	80,0	29,0	7,33	4,0
8,00	250,0	360,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 367
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-367
- data : 22/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	5,0	10,0	5,0	0,33	15,0
0,80	5,0	10,0	5,0	0,20	25,0
1,00	7,0	10,0	7,0	0,47	15,0
1,20	10,0	17,0	10,0	0,93	11,0
1,40	14,0	28,0	14,0	0,73	19,0
1,60	19,0	30,0	19,0	0,73	26,0
1,80	25,0	36,0	25,0	0,67	37,0
2,00	31,0	41,0	31,0	0,47	66,0
2,20	38,0	45,0	38,0	1,27	30,0
2,40	28,0	47,0	28,0	1,13	25,0
2,60	33,0	50,0	33,0	1,47	22,0
2,80	25,0	47,0	25,0	1,73	14,0
3,00	25,0	51,0	25,0	1,73	14,0
3,20	25,0	51,0	25,0	1,67	15,0
3,40	29,0	54,0	29,0	1,87	16,0
3,60	39,0	67,0	39,0	1,87	21,0
3,80	33,0	61,0	33,0	1,80	18,0
4,00	19,0	46,0	19,0	0,67	28,0
4,20	21,0	31,0	21,0	1,67	13,0
4,40	59,0	84,0	59,0	1,33	44,0
4,60	80,0	100,0	80,0	2,13	37,0
4,80	70,0	102,0	70,0	2,60	27,0
5,00	93,0	132,0	93,0	1,47	63,0
5,20	65,0	87,0	65,0	0,80	81,0
5,40	68,0	80,0	68,0	3,13	22,0
5,60	138,0	185,0	138,0	2,80	49,0
5,80	81,0	123,0	81,0	5,13	16,0
6,00	89,0	166,0	89,0	6,67	13,0
6,20	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 368
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-368
- data : 22/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	25,0	42,0	25,0	1,07	23,0
0,40	----	----	--	0,67	----	5,40	15,0	31,0	15,0	0,60	25,0
0,60	8,0	18,0	8,0	0,67	12,0	5,60	13,0	22,0	13,0	0,73	18,0
0,80	7,0	17,0	7,0	1,13	6,0	5,80	12,0	23,0	12,0	0,33	36,0
1,00	18,0	35,0	18,0	1,20	15,0	**6,00**	15,0	20,0	15,0	0,73	20,0
1,20	22,0	40,0	22,0	1,27	17,0	6,20	12,0	23,0	12,0	0,67	18,0
1,40	22,0	41,0	22,0	1,73	13,0	6,40	10,0	20,0	10,0	0,40	25,0
1,60	22,0	48,0	22,0	1,40	16,0	6,60	9,0	15,0	9,0	0,33	27,0
1,80	20,0	41,0	20,0	1,33	15,0	6,80	13,0	18,0	13,0	0,40	32,0
2,00	20,0	40,0	20,0	1,20	17,0	**7,00**	11,0	17,0	11,0	0,33	33,0
2,20	20,0	38,0	20,0	1,40	14,0	7,20	13,0	18,0	13,0	0,33	39,0
2,40	25,0	46,0	25,0	1,47	17,0	7,40	12,0	17,0	12,0	0,40	30,0
2,60	25,0	47,0	25,0	1,40	18,0	7,60	6,0	12,0	6,0	0,13	45,0
2,80	25,0	46,0	25,0	1,60	16,0	7,80	4,0	6,0	4,0	3,33	1,0
3,00	22,0	46,0	22,0	1,47	15,0	**8,00**	60,0	110,0	60,0	0,53	112,0
3,20	27,0	49,0	27,0	1,80	15,0	8,20	26,0	34,0	26,0	0,33	78,0
3,40	33,0	60,0	33,0	2,20	15,0	8,40	8,0	13,0	8,0	0,53	15,0
3,60	34,0	67,0	34,0	2,27	15,0	8,60	8,0	16,0	8,0	2,20	4,0
3,80	34,0	68,0	34,0	2,00	17,0	8,80	26,0	59,0	26,0	0,60	43,0
4,00	31,0	61,0	31,0	0,80	39,0	**9,00**	42,0	51,0	42,0	0,67	63,0
4,20	46,0	58,0	46,0	2,53	18,0	9,20	40,0	50,0	40,0	1,20	33,0
4,40	32,0	70,0	32,0	1,67	19,0	9,40	22,0	40,0	22,0	0,27	82,0
4,60	36,0	61,0	36,0	1,53	23,0	9,60	9,0	13,0	9,0	0,27	34,0
4,80	29,0	52,0	29,0	1,80	16,0	9,80	12,0	16,0	12,0	2,93	4,0
5,00	26,0	53,0	26,0	1,13	23,0	**10,00**	33,0	77,0	33,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 369
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-369
- data : 22/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	1,40	13,0	28,0	13,0	0,33	39,0
0,40	----	----	--	0,33	----	1,60	16,0	21,0	16,0	0,13	120,0
0,60	5,0	10,0	5,0	0,33	15,0	1,80	16,0	18,0	16,0	0,80	20,0
0,80	5,0	10,0	5,0	1,00	5,0	**2,00**	16,0	28,0	16,0	3,80	4,0
1,00	10,0	25,0	10,0	0,47	21,0	2,20	121,0	178,0	121,0	6,00	20,0
1,20	28,0	35,0	28,0	1,00	28,0	2,40	240,0	330,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 370
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-370
- data : 23/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	8,0	14,0	8,0	0,27	30,0
0,80	18,0	22,0	18,0	0,93	19,0
1,00	80,0	94,0	80,0	1,13	71,0
1,20	82,0	99,0	82,0	1,73	47,0
1,40	90,0	116,0	90,0	1,87	48,0
1,60	136,0	164,0	136,0	2,47	55,0
1,80	126,0	163,0	126,0	2,80	45,0
2,00	148,0	190,0	148,0	3,53	42,0
2,20	143,0	196,0	143,0	2,00	72,0
2,40	170,0	200,0	170,0	5,80	29,0
2,60	145,0	232,0	145,0	3,73	39,0
2,80	76,0	132,0	76,0	2,00	38,0
3,00	30,0	60,0	30,0	0,73	41,0
3,20	31,0	42,0	31,0	0,60	52,0
3,40	36,0	45,0	36,0	1,40	26,0
3,60	30,0	51,0	30,0	1,40	21,0
3,80	27,0	48,0	27,0	1,20	22,0
4,00	32,0	50,0	32,0	1,93	17,0
4,20	37,0	66,0	37,0	2,33	16,0
4,40	45,0	80,0	45,0	4,00	11,0
4,60	47,0	107,0	47,0	2,00	24,0
4,80	119,0	149,0	119,0	1,40	85,0
5,00	111,0	132,0	111,0	5,33	21,0
5,20	240,0	320,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 371
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-371
- data : 23/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	10,0	20,0	10,0	0,60	17,0
0,80	16,0	25,0	16,0	0,80	20,0
1,00	44,0	56,0	44,0	1,60	27,0
1,20	72,0	96,0	72,0	2,87	25,0
1,40	27,0	70,0	27,0	1,87	14,0
1,60	47,0	75,0	47,0	1,07	44,0
1,80	26,0	42,0	26,0	0,80	32,0
2,00	22,0	34,0	22,0	0,53	41,0
2,20	16,0	24,0	16,0	0,93	17,0
2,40	13,0	27,0	13,0	0,53	24,0
2,60	16,0	24,0	16,0	0,67	24,0
2,80	16,0	26,0	16,0	1,00	16,0
3,00	31,0	46,0	31,0	1,40	22,0
3,20	33,0	54,0	33,0	2,00	16,0
3,40	26,0	56,0	26,0	1,73	15,0
3,60	24,0	50,0	24,0	1,47	16,0
3,80	27,0	49,0	27,0	1,07	25,0
4,00	53,0	69,0	53,0	6,07	9,0
4,20	127,0	218,0	127,0	8,67	15,0
4,40	250,0	380,0	250,0	8,00	31,0
4,60	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 372
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelvenere (BN)
- note : Cert. P001-21-372
- data : 23/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	5,0	11,0	5,0	0,53	9,0
0,80	6,0	14,0	6,0	0,73	8,0
1,00	9,0	20,0	9,0	0,87	10,0
1,20	12,0	25,0	12,0	1,00	12,0
1,40	23,0	38,0	23,0	1,33	17,0
1,60	31,0	51,0	31,0	1,33	23,0
1,80	41,0	61,0	41,0	2,40	17,0
2,00	45,0	81,0	45,0	2,27	20,0
2,20	43,0	77,0	43,0	2,13	20,0
2,40	57,0	89,0	57,0	3,00	19,0
2,60	52,0	97,0	52,0	4,07	13,0
2,80	51,0	112,0	51,0	4,80	11,0
3,00	68,0	140,0	68,0	4,27	16,0
3,20	68,0	132,0	68,0	4,93	14,0
3,40	63,0	137,0	63,0	3,33	19,0
3,60	74,0	124,0	74,0	4,33	17,0
3,80	52,0	117,0	52,0	3,00	17,0
4,00	40,0	85,0	40,0	2,00	20,0
4,20	53,0	83,0	53,0	1,67	32,0
4,40	59,0	84,0	59,0	2,93	20,0
4,60	66,0	110,0	66,0	2,80	24,0
4,80	68,0	110,0	68,0	5,80	12,0
5,00	58,0	145,0	58,0	1,53	38,0
5,20	88,0	111,0	88,0	6,53	13,0
5,40	118,0	216,0	118,0	6,80	17,0
5,60	144,0	246,0	144,0	10,20	14,0
5,80	116,0	269,0	116,0	10,07	12,0
6,00	178,0	329,0	178,0	11,93	15,0
6,20	189,0	368,0	189,0	10,93	17,0
6,40	116,0	280,0	116,0	9,20	13,0
6,60	118,0	256,0	118,0	9,07	13,0
6,80	124,0	260,0	124,0	8,60	14,0
7,00	196,0	325,0	196,0	10,73	18,0
7,20	99,0	260,0	99,0	8,40	12,0
7,40	127,0	253,0	127,0	5,87	22,0
7,60	147,0	235,0	147,0	9,87	15,0
7,80	92,0	240,0	92,0	7,33	13,0
8,00	120,0	230,0	120,0	7,60	16,0
8,20	146,0	260,0	146,0	11,33	13,0
8,40	93,0	263,0	93,0	7,87	12,0
8,60	136,0	254,0	136,0	6,93	20,0
8,80	195,0	299,0	195,0	15,33	13,0
9,00	230,0	460,0	230,0	10,93	21,0
9,20	196,0	360,0	196,0	15,80	12,0
9,40	263,0	500,0	263,0	13,60	19,0
9,60	196,0	400,0	196,0	14,67	13,0
9,80	280,0	500,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 373
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelvenere (BN)
- note : Cert. P001-21-373
- data : 23/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	74,0	121,0	74,0	3,87	19,0
0,40	----	----	--	0,60	----	5,40	30,0	88,0	30,0	3,47	9,0
0,60	10,0	19,0	10,0	1,13	9,0	5,60	57,0	109,0	57,0	6,00	10,0
0,80	12,0	29,0	12,0	0,87	14,0	5,80	49,0	139,0	49,0	4,07	12,0
1,00	16,0	29,0	16,0	1,13	14,0	**6,00**	90,0	151,0	90,0	4,73	19,0
1,20	18,0	35,0	18,0	2,07	9,0	6,20	42,0	113,0	42,0	3,93	11,0
1,40	37,0	68,0	37,0	1,47	25,0	6,40	94,0	153,0	94,0	3,87	24,0
1,60	16,0	38,0	16,0	1,53	10,0	6,60	55,0	113,0	55,0	4,53	12,0
1,80	17,0	40,0	17,0	1,07	16,0	6,80	53,0	121,0	53,0	4,73	11,0
2,00	18,0	34,0	18,0	1,00	18,0	**7,00**	52,0	123,0	52,0	5,93	9,0
2,20	19,0	34,0	19,0	1,67	11,0	7,20	54,0	143,0	54,0	3,07	18,0
2,40	36,0	61,0	36,0	2,20	16,0	7,40	56,0	102,0	56,0	4,80	12,0
2,60	39,0	72,0	39,0	1,80	22,0	7,60	64,0	136,0	64,0	4,67	14,0
2,80	33,0	60,0	33,0	0,40	82,0	7,80	60,0	130,0	60,0	5,00	12,0
3,00	37,0	43,0	37,0	2,00	18,0	**8,00**	52,0	127,0	52,0	1,80	29,0
3,20	40,0	70,0	40,0	1,07	37,0	8,20	39,0	66,0	39,0	0,87	45,0
3,40	24,0	40,0	24,0	1,13	21,0	8,40	48,0	61,0	48,0	1,67	29,0
3,60	27,0	44,0	27,0	10,60	3,0	8,60	48,0	73,0	48,0	2,00	24,0
3,80	40,0	199,0	40,0	6,20	6,0	8,80	40,0	70,0	40,0	6,67	6,0
4,00	52,0	145,0	52,0	2,40	22,0	**9,00**	210,0	310,0	210,0	14,07	15,0
4,20	25,0	61,0	25,0	1,80	14,0	9,20	108,0	319,0	108,0	8,33	13,0
4,40	33,0	60,0	33,0	4,67	7,0	9,40	135,0	260,0	135,0	11,53	12,0
4,60	130,0	200,0	130,0	3,87	34,0	9,60	87,0	260,0	87,0	8,73	10,0
4,80	63,0	121,0	63,0	3,93	16,0	9,80	67,0	198,0	67,0	6,67	10,0
5,00	65,0	124,0	65,0	3,13	21,0	**10,00**	164,0	264,0	164,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 374
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelvenere (BN)
- note : Cert. P001-21-374
- data : 23/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,20	16,0	40,0	16,0	1,60	10,0
0,40	----	----	--	0,20	----	2,40	18,0	42,0	18,0	1,53	12,0
0,60	3,0	6,0	3,0	0,33	9,0	2,60	24,0	47,0	24,0	1,73	14,0
0,80	8,0	13,0	8,0	0,27	30,0	2,80	19,0	45,0	19,0	2,13	9,0
1,00	8,0	12,0	8,0	0,33	24,0	**3,00**	18,0	50,0	18,0	1,27	14,0
1,20	9,0	14,0	9,0	1,07	8,0	3,20	30,0	49,0	30,0	2,40	12,0
1,40	12,0	28,0	12,0	1,13	11,0	3,40	34,0	70,0	34,0	2,33	15,0
1,60	23,0	40,0	23,0	1,00	23,0	3,60	52,0	87,0	52,0	3,27	16,0
1,80	25,0	40,0	25,0	2,53	10,0	3,80	34,0	83,0	34,0	6,00	6,0
2,00	18,0	56,0	18,0	1,60	11,0	**4,00**	250,0	340,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 375
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelvenere (BN)
- note : Cert. P001-21-375
- data : 23/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	7,0	15,0	7,0	1,07	7,0
0,80	7,0	23,0	7,0	0,53	13,0
1,00	7,0	15,0	7,0	0,93	7,0
1,20	15,0	29,0	15,0	0,87	17,0
1,40	37,0	50,0	37,0	1,93	19,0
1,60	30,0	59,0	30,0	1,40	21,0
1,80	56,0	77,0	56,0	3,20	17,0
2,00	39,0	87,0	39,0	2,60	15,0
2,20	44,0	83,0	44,0	3,00	15,0
2,40	42,0	87,0	42,0	2,87	15,0
2,60	45,0	88,0	45,0	3,33	14,0
2,80	82,0	132,0	82,0	12,67	6,0
3,00	135,0	325,0	135,0	6,67	20,0
3,20	275,0	375,0	275,0	8,00	34,0
3,40	280,0	400,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

PROVA PENETROMETRICA STATICA — CPT 376
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelvenere (BN)
- note : Cert. P001-21-376
- data : 23/12/2020
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	9,0	16,0	9,0	0,53	17,0
0,80	8,0	16,0	8,0	0,47	17,0
1,00	8,0	15,0	8,0	0,93	9,0
1,20	9,0	23,0	9,0	1,00	9,0
1,40	14,0	29,0	14,0	0,80	17,0
1,60	15,0	27,0	15,0	1,60	9,0
1,80	37,0	61,0	37,0	1,60	23,0
2,00	28,0	52,0	28,0	1,53	18,0
2,20	26,0	49,0	26,0	2,33	11,0
2,40	39,0	74,0	39,0	3,53	11,0
2,60	42,0	95,0	42,0	4,13	10,0
2,80	43,0	105,0	43,0	3,20	13,0
3,00	39,0	87,0	39,0	3,20	12,0
3,20	48,0	96,0	48,0	6,20	8,0
3,40	125,0	218,0	125,0	5,20	24,0
3,60	62,0	140,0	62,0	4,20	15,0
3,80	131,0	194,0	131,0	4,47	29,0
4,00	99,0	166,0	99,0	2,53	39,0
4,20	68,0	106,0	68,0	2,47	28,0
4,40	74,0	111,0	74,0	1,93	38,0
4,60	55,0	84,0	55,0	1,60	34,0
4,80	50,0	74,0	50,0	7,33	7,0
5,00	250,0	360,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 377
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelvenere (BN)
- note : Cert. P001-21-377
- data : 08/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	11,0	17,0	11,0	0,67	16,0
0,80	7,0	17,0	7,0	0,80	9,0
1,00	10,0	22,0	10,0	0,60	17,0
1,20	14,0	23,0	14,0	0,80	17,0
1,40	15,0	27,0	15,0	1,13	13,0
1,60	15,0	32,0	15,0	1,40	11,0
1,80	25,0	46,0	25,0	1,33	19,0
2,00	27,0	47,0	27,0	1,40	19,0
2,20	41,0	62,0	41,0	1,67	25,0
2,40	65,0	90,0	65,0	3,07	21,0
2,60	49,0	95,0	49,0	2,27	22,0
2,80	50,0	84,0	50,0	3,67	14,0
3,00	135,0	190,0	135,0	12,67	11,0
3,20	70,0	260,0	70,0	8,47	8,0
3,40	223,0	350,0	223,0	6,93	32,0
3,60	86,0	190,0	86,0	4,87	18,0
3,80	97,0	170,0	97,0	6,80	14,0
4,00	238,0	340,0	238,0	4,20	57,0
4,20	224,0	287,0	224,0	9,80	23,0
4,40	293,0	440,0	293,0	13,33	22,0
4,60	169,0	369,0	169,0	9,40	18,0
4,80	105,0	246,0	105,0	4,07	26,0
5,00	166,0	227,0	166,0	8,07	21,0
5,20	111,0	232,0	111,0	5,80	19,0
5,40	140,0	227,0	140,0	4,47	31,0
5,60	104,0	171,0	104,0	6,67	16,0
5,80	87,0	187,0	87,0	6,87	13,0
6,00	92,0	195,0	92,0	6,00	15,0
6,20	89,0	179,0	89,0	4,20	21,0
6,40	124,0	187,0	124,0	4,07	30,0
6,60	119,0	180,0	119,0	6,60	18,0
6,80	101,0	200,0	101,0	5,27	19,0
7,00	109,0	188,0	109,0	5,60	19,0
7,20	106,0	190,0	106,0	6,67	16,0
7,40	350,0	450,0	350,0	9,47	37,0
7,60	143,0	285,0	143,0	13,33	11,0
7,80	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 378
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Castelvenere (BN)
- note : Cert. P001-21-378
- data : 08/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	2,60	57,0	79,0	57,0	1,60	36,0
0,40	----	----	--	0,53	----	2,80	64,0	88,0	64,0	3,67	17,0
0,60	4,0	12,0	4,0	0,27	15,0	**3,00**	57,0	112,0	57,0	1,60	36,0
0,80	5,0	9,0	5,0	0,60	8,0	3,20	44,0	68,0	44,0	3,33	13,0
1,00	7,0	16,0	7,0	1,00	7,0	3,40	20,0	70,0	20,0	4,00	5,0
1,20	11,0	26,0	11,0	0,87	13,0	3,60	260,0	320,0	260,0	4,00	65,0
1,40	15,0	28,0	15,0	0,60	25,0	3,80	240,0	300,0	240,0	4,20	57,0
1,60	9,0	18,0	9,0	0,60	15,0	**4,00**	248,0	311,0	248,0	8,00	31,0
1,80	10,0	19,0	10,0	1,47	7,0	4,20	118,0	238,0	118,0	10,27	11,0
2,00	70,0	92,0	70,0	1,40	50,0	4,40	196,0	350,0	196,0	12,13	16,0
2,20	61,0	82,0	61,0	1,87	33,0	4,60	248,0	430,0	248,0	13,33	19,0
2,40	54,0	82,0	54,0	1,47	37,0	4,80	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 379
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-379	- pagina :	1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	10,0	14,0	10,0	0,20	50,0
0,80	8,0	11,0	8,0	0,53	15,0
1,00	10,0	18,0	10,0	0,47	21,0
1,20	14,0	21,0	14,0	4,67	3,0
1,40	250,0	320,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 384
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P001-21-384
- data : 19/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	15,0	20,0	15,0	0,33	45,0
0,80	11,0	16,0	11,0	0,80	14,0
1,00	10,0	22,0	10,0	0,67	15,0
1,20	11,0	21,0	11,0	0,47	24,0
1,40	5,0	12,0	5,0	0,73	7,0
1,60	25,0	36,0	25,0	0,87	29,0
1,80	24,0	37,0	24,0	0,93	26,0
2,00	25,0	39,0	25,0	0,60	42,0
2,20	45,0	54,0	45,0	1,00	45,0
2,40	45,0	60,0	45,0	0,73	61,0
2,60	44,0	55,0	44,0	0,73	60,0
2,80	46,0	57,0	46,0	2,00	23,0
3,00	49,0	79,0	49,0	0,93	52,0
3,20	56,0	70,0	56,0	1,33	42,0
3,40	48,0	68,0	48,0	1,07	45,0
3,60	48,0	64,0	48,0	1,40	34,0
3,80	49,0	70,0	49,0	2,00	24,0
4,00	40,0	70,0	40,0	2,07	19,0
4,20	72,0	103,0	72,0	2,20	33,0
4,40	128,0	161,0	128,0	2,33	55,0
4,60	125,0	160,0	125,0	3,13	40,0
4,80	144,0	191,0	144,0	2,93	49,0
5,00	168,0	212,0	168,0	5,13	33,0
5,20	143,0	220,0	143,0	3,53	40,0
5,40	150,0	203,0	150,0	5,07	30,0
5,60	119,0	195,0	119,0	5,07	23,0
5,80	111,0	187,0	111,0	4,87	23,0
6,00	118,0	191,0	118,0	5,53	21,0
6,20	107,0	190,0	107,0	4,80	22,0
6,40	125,0	197,0	125,0	6,60	19,0
6,60	107,0	206,0	107,0	3,67	29,0
6,80	133,0	188,0	133,0	4,60	29,0
7,00	133,0	202,0	133,0	6,60	20,0
7,20	122,0	221,0	122,0	5,13	24,0
7,40	143,0	220,0	143,0	5,53	26,0
7,60	136,0	219,0	136,0	6,20	22,0
7,80	150,0	243,0	150,0	6,93	22,0
8,00	169,0	273,0	169,0	6,87	25,0
8,20	175,0	278,0	175,0	8,00	22,0
8,40	240,0	360,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 382
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P001-21-382
- data : 19/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	13,0	18,0	13,0	0,60	22,0
0,80	17,0	26,0	17,0	0,80	21,0
1,00	25,0	37,0	25,0	0,93	27,0
1,20	30,0	44,0	30,0	1,00	30,0
1,40	29,0	44,0	29,0	0,87	33,0
1,60	47,0	60,0	47,0	1,00	47,0
1,80	52,0	67,0	52,0	1,33	39,0
2,00	46,0	66,0	46,0	0,93	49,0
2,20	48,0	62,0	48,0	1,53	31,0
2,40	44,0	67,0	44,0	0,87	51,0
2,60	56,0	69,0	56,0	1,20	47,0
2,80	57,0	75,0	57,0	1,07	53,0
3,00	58,0	74,0	58,0	0,87	67,0
3,20	42,0	55,0	42,0	1,13	37,0
3,40	39,0	56,0	39,0	1,00	39,0
3,60	41,0	56,0	41,0	1,67	25,0
3,80	43,0	68,0	43,0	1,67	26,0
4,00	44,0	69,0	44,0	1,33	33,0
4,20	42,0	62,0	42,0	1,47	29,0
4,40	50,0	72,0	50,0	1,53	33,0
4,60	64,0	87,0	64,0	1,87	34,0
4,80	62,0	90,0	62,0	1,53	40,0
5,00	73,0	96,0	73,0	1,33	55,0
5,20	70,0	90,0	70,0	2,20	32,0
5,40	66,0	99,0	66,0	0,87	76,0
5,60	76,0	89,0	76,0	1,53	50,0
5,80	81,0	104,0	81,0	1,60	51,0
6,00	66,0	90,0	66,0	1,67	40,0
6,20	65,0	90,0	65,0	1,33	49,0
6,40	70,0	90,0	70,0	2,67	26,0
6,60	50,0	90,0	50,0	2,20	23,0
6,80	65,0	98,0	65,0	2,00	32,0
7,00	70,0	100,0	70,0	2,73	26,0
7,20	45,0	86,0	45,0	2,07	22,0
7,40	77,0	108,0	77,0	2,60	30,0
7,60	74,0	113,0	74,0	2,47	30,0
7,80	75,0	112,0	75,0	2,47	30,0
8,00	74,0	111,0	74,0	2,53	29,0
8,20	72,0	110,0	72,0	1,67	43,0
8,40	66,0	91,0	66,0	2,00	33,0
8,60	83,0	113,0	83,0	1,67	50,0
8,80	45,0	70,0	45,0	2,67	17,0
9,00	73,0	113,0	73,0	1,93	38,0
9,20	105,0	134,0	105,0	4,67	23,0
9,40	105,0	175,0	105,0	4,00	26,0
9,60	115,0	175,0	115,0	4,07	28,0
9,80	115,0	176,0	115,0	4,40	26,0
10,00	114,0	180,0	114,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 381
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P001-21-381
- data : 19/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,93	----
0,60	17,0	31,0	17,0	0,93	18,0
0,80	20,0	34,0	20,0	0,53	37,0
1,00	20,0	28,0	20,0	0,73	27,0
1,20	19,0	30,0	19,0	0,73	26,0
1,40	17,0	28,0	17,0	0,60	28,0
1,60	22,0	31,0	22,0	0,73	30,0
1,80	15,0	26,0	15,0	0,73	20,0
2,00	14,0	25,0	14,0	0,53	26,0
2,20	18,0	26,0	18,0	0,53	34,0
2,40	14,0	22,0	14,0	0,67	21,0
2,60	11,0	21,0	11,0	0,40	27,0
2,80	5,0	11,0	5,0	0,33	15,0
3,00	5,0	10,0	5,0	0,33	15,0
3,20	7,0	12,0	7,0	0,87	8,0
3,40	14,0	27,0	14,0	3,93	4,0
3,60	41,0	100,0	41,0	2,87	14,0
3,80	41,0	84,0	41,0	1,67	25,0
4,00	58,0	83,0	58,0	0,93	62,0
4,20	82,0	96,0	82,0	2,27	36,0
4,40	59,0	93,0	59,0	2,07	29,0
4,60	39,0	70,0	39,0	1,93	20,0
4,80	36,0	65,0	36,0	2,07	17,0
5,00	24,0	55,0	24,0	1,80	13,0
5,20	19,0	46,0	19,0	1,40	14,0
5,40	23,0	44,0	23,0	1,47	16,0
5,60	25,0	47,0	25,0	1,27	20,0
5,80	27,0	46,0	27,0	1,27	21,0
6,00	26,0	45,0	26,0	1,80	14,0
6,20	8,0	35,0	8,0	0,53	15,0
6,40	4,0	12,0	4,0	0,20	20,0
6,60	10,0	13,0	10,0	0,40	25,0
6,80	4,0	10,0	4,0	0,40	10,0
7,00	4,0	10,0	4,0	0,33	12,0
7,20	4,0	9,0	4,0	1,40	3,0
7,40	27,0	48,0	27,0	0,80	34,0
7,60	27,0	39,0	27,0	0,53	51,0
7,80	4,0	12,0	4,0	0,27	15,0
8,00	5,0	9,0	5,0	0,40	12,0
8,20	6,0	12,0	6,0	5,07	1,0
8,40	114,0	190,0	114,0	2,47	46,0
8,60	143,0	180,0	143,0	2,40	60,0
8,80	127,0	163,0	127,0	2,07	61,0
9,00	129,0	160,0	129,0	2,07	62,0
9,20	130,0	161,0	130,0	2,73	48,0
9,40	130,0	171,0	130,0	2,73	48,0
9,60	119,0	160,0	119,0	3,60	33,0
9,80	130,0	184,0	130,0	3,27	40,0
10,00	136,0	185,0	136,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 383
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P001-21-383
- data : 19/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	18,0	25,0	18,0	0,73	25,0
0,80	22,0	33,0	22,0	0,27	82,0
1,00	29,0	33,0	29,0	1,00	29,0
1,20	33,0	48,0	33,0	1,27	26,0
1,40	30,0	49,0	30,0	1,40	21,0
1,60	27,0	48,0	27,0	1,47	18,0
1,80	26,0	48,0	26,0	1,20	22,0
2,00	31,0	49,0	31,0	2,00	16,0
2,20	36,0	66,0	36,0	1,07	34,0
2,40	36,0	52,0	36,0	1,27	28,0
2,60	19,0	38,0	19,0	0,60	32,0
2,80	20,0	29,0	20,0	1,40	14,0
3,00	19,0	40,0	19,0	0,47	41,0
3,20	23,0	30,0	23,0	0,80	29,0
3,40	27,0	39,0	27,0	1,00	27,0
3,60	29,0	44,0	29,0	0,73	40,0
3,80	29,0	40,0	29,0	1,00	29,0
4,00	18,0	33,0	18,0	1,13	16,0
4,20	13,0	30,0	13,0	1,53	8,0
4,40	121,0	144,0	121,0	2,67	45,0
4,60	127,0	167,0	127,0	3,40	37,0
4,80	123,0	174,0	123,0	2,60	47,0
5,00	128,0	167,0	128,0	3,60	36,0
5,20	148,0	202,0	148,0	7,33	20,0
5,40	157,0	267,0	157,0	5,00	31,0
5,60	163,0	238,0	163,0	6,93	24,0
5,80	144,0	248,0	144,0	5,07	28,0
6,00	196,0	272,0	196,0	7,33	27,0
6,20	123,0	233,0	123,0	5,33	23,0
6,40	170,0	250,0	170,0	6,13	28,0
6,60	102,0	194,0	102,0	3,60	28,0
6,80	118,0	172,0	118,0	4,67	25,0
7,00	160,0	230,0	160,0	3,80	42,0
7,20	156,0	213,0	156,0	4,47	35,0
7,40	136,0	203,0	136,0	5,67	24,0
7,60	85,0	170,0	85,0	1,80	47,0
7,80	100,0	127,0	100,0	3,93	25,0
8,00	133,0	192,0	133,0	4,73	28,0
8,20	180,0	251,0	180,0	7,07	25,0
8,40	195,0	301,0	195,0	7,60	26,0
8,60	201,0	315,0	201,0	7,80	26,0
8,80	233,0	350,0	233,0	9,07	26,0
9,00	185,0	321,0	185,0	8,33	22,0
9,20	180,0	305,0	180,0	10,60	17,0
9,40	162,0	321,0	162,0	5,33	30,0
9,60	145,0	225,0	145,0	2,67	54,0
9,80	125,0	165,0	125,0	6,13	20,0
10,00	119,0	211,0	119,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 386
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-386
- data : 19/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	5,0	9,0	5,0	0,47	11,0
0,80	6,0	13,0	6,0	0,60	10,0
1,00	6,0	15,0	6,0	1,73	3,0
1,20	34,0	60,0	34,0	2,13	16,0
1,40	43,0	75,0	43,0	1,07	40,0
1,60	49,0	65,0	49,0	1,40	35,0
1,80	45,0	66,0	45,0	1,27	36,0
2,00	54,0	73,0	54,0	1,53	35,0
2,20	55,0	78,0	55,0	0,60	92,0
2,40	59,0	68,0	59,0	2,07	29,0
2,60	49,0	80,0	49,0	1,27	39,0
2,80	59,0	78,0	59,0	2,40	25,0
3,00	53,0	89,0	53,0	2,67	20,0
3,20	55,0	95,0	55,0	3,53	16,0
3,40	55,0	108,0	55,0	3,13	18,0
3,60	60,0	107,0	60,0	2,67	22,0
3,80	59,0	99,0	59,0	2,87	21,0
4,00	38,0	81,0	38,0	3,33	11,0
4,20	38,0	88,0	38,0	1,60	24,0
4,40	48,0	72,0	48,0	1,93	25,0
4,60	71,0	100,0	71,0	1,87	38,0
4,80	62,0	90,0	62,0	0,53	116,0
5,00	83,0	91,0	83,0	2,07	40,0
5,20	59,0	90,0	59,0	1,07	55,0
5,40	74,0	90,0	74,0	1,87	40,0
5,60	34,0	62,0	34,0	1,40	24,0
5,80	83,0	104,0	83,0	3,00	28,0
6,00	25,0	70,0	25,0	1,33	19,0
6,20	26,0	46,0	26,0	0,67	39,0
6,40	31,0	41,0	31,0	1,00	31,0
6,60	20,0	35,0	20,0	0,53	37,0
6,80	22,0	30,0	22,0	1,07	21,0
7,00	38,0	54,0	38,0	2,47	15,0
7,20	23,0	60,0	23,0	1,33	17,0
7,40	20,0	40,0	20,0	3,33	6,0
7,60	170,0	220,0	170,0	6,00	28,0
7,80	250,0	340,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 387
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Ponte (BN)
- note : Cert. P001-21-387
- data : 19/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	12,0	17,0	12,0	0,60	20,0
0,80	8,0	17,0	8,0	0,60	13,0
1,00	23,0	32,0	23,0	1,40	16,0
1,20	30,0	51,0	30,0	1,13	26,0
1,40	30,0	47,0	30,0	0,93	32,0
1,60	41,0	55,0	41,0	0,93	44,0
1,80	33,0	47,0	33,0	1,53	22,0
2,00	40,0	63,0	40,0	3,07	13,0
2,20	42,0	88,0	42,0	2,53	17,0
2,40	37,0	75,0	37,0	1,73	21,0
2,60	29,0	55,0	29,0	0,93	31,0
2,80	22,0	36,0	22,0	2,73	8,0
3,00	29,0	70,0	29,0	1,80	16,0
3,20	23,0	50,0	23,0	0,47	49,0
3,40	33,0	40,0	33,0	0,93	35,0
3,60	26,0	40,0	26,0	0,80	32,0
3,80	27,0	39,0	27,0	0,93	29,0
4,00	23,0	37,0	23,0	0,93	25,0
4,20	33,0	47,0	33,0	0,67	49,0
4,40	41,0	51,0	41,0	0,93	44,0
4,60	39,0	53,0	39,0	1,60	24,0
4,80	34,0	58,0	34,0	1,07	32,0
5,00	34,0	50,0	34,0	0,87	39,0
5,20	39,0	52,0	39,0	0,53	73,0
5,40	45,0	53,0	45,0	0,87	52,0
5,60	41,0	54,0	41,0	1,53	27,0
5,80	41,0	64,0	41,0	1,47	28,0
6,00	50,0	72,0	50,0	2,33	21,0
6,20	41,0	76,0	41,0	2,40	17,0
6,40	43,0	79,0	43,0	2,20	20,0
6,60	43,0	76,0	43,0	2,27	19,0
6,80	46,0	80,0	46,0	2,00	23,0
7,00	54,0	84,0	54,0	2,80	19,0
7,20	52,0	94,0	52,0	1,53	34,0
7,40	57,0	80,0	57,0	2,07	28,0
7,60	48,0	79,0	48,0	2,07	23,0
7,80	49,0	80,0	49,0	2,07	24,0
8,00	41,0	72,0	41,0	2,07	20,0
8,20	121,0	152,0	121,0	2,00	60,0
8,40	82,0	112,0	82,0	1,47	56,0
8,60	50,0	72,0	50,0	3,33	15,0
8,80	146,0	196,0	146,0	2,13	68,0
9,00	98,0	130,0	98,0	3,53	28,0
9,20	84,0	137,0	84,0	2,53	33,0
9,40	71,0	109,0	71,0	5,33	13,0
9,60	87,0	167,0	87,0	3,73	23,0
9,80	227,0	283,0	227,0	5,67	40,0
10,00	281,0	366,0	281,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 385
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Salvatore Telesino (BN)
- note : Cert. P001-21-385
- data : 19/01/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	97,0	154,0	97,0	4,00	24,0
0,40	----	----	--	0,67	----	5,40	115,0	175,0	115,0	4,00	29,0
0,60	15,0	25,0	15,0	0,80	19,0	5,60	118,0	178,0	118,0	4,87	24,0
0,80	14,0	26,0	14,0	0,47	30,0	5,80	108,0	181,0	108,0	5,00	22,0
1,00	23,0	30,0	23,0	0,87	27,0	**6,00**	124,0	199,0	124,0	5,80	21,0
1,20	18,0	31,0	18,0	1,20	15,0	6,20	128,0	215,0	128,0	3,93	33,0
1,40	21,0	39,0	21,0	1,67	13,0	6,40	171,0	230,0	171,0	6,00	28,0
1,60	31,0	56,0	31,0	1,93	16,0	6,60	129,0	219,0	129,0	6,07	21,0
1,80	37,0	66,0	37,0	1,33	28,0	6,80	128,0	219,0	128,0	1,07	120,0
2,00	33,0	53,0	33,0	2,13	15,0	**7,00**	141,0	157,0	141,0	6,67	21,0
2,20	23,0	55,0	23,0	2,67	9,0	7,20	134,0	234,0	134,0	5,40	25,0
2,40	25,0	65,0	25,0	1,00	25,0	7,40	145,0	226,0	145,0	7,93	18,0
2,60	26,0	41,0	26,0	1,00	26,0	7,60	143,0	262,0	143,0	7,40	19,0
2,80	26,0	41,0	26,0	1,27	21,0	7,80	147,0	258,0	147,0	6,67	22,0
3,00	29,0	48,0	29,0	1,00	29,0	**8,00**	150,0	250,0	150,0	7,53	20,0
3,20	27,0	42,0	27,0	0,80	34,0	8,20	146,0	259,0	146,0	7,07	21,0
3,40	27,0	39,0	27,0	1,13	24,0	8,40	140,0	246,0	140,0	7,53	19,0
3,60	31,0	48,0	31,0	1,33	23,0	8,60	133,0	246,0	133,0	6,33	21,0
3,80	43,0	63,0	43,0	1,60	27,0	8,80	131,0	226,0	131,0	5,60	23,0
4,00	51,0	75,0	51,0	1,67	31,0	**9,00**	131,0	215,0	131,0	6,00	22,0
4,20	75,0	100,0	75,0	1,60	47,0	9,20	136,0	226,0	136,0	4,20	32,0
4,40	100,0	124,0	100,0	2,80	36,0	9,40	158,0	221,0	158,0	6,40	25,0
4,60	82,0	124,0	82,0	3,13	26,0	9,60	135,0	231,0	135,0	6,67	20,0
4,80	87,0	134,0	87,0	3,53	25,0	9,80	134,0	234,0	134,0	4,60	29,0
5,00	100,0	153,0	100,0	3,80	26,0	**10,00**	135,0	204,0	135,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 388
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P001-21-388
- data : 22/02/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	16,0	22,0	16,0	0,80	20,0
0,80	21,0	33,0	21,0	1,13	19,0
1,00	24,0	41,0	24,0	1,60	15,0
1,20	24,0	48,0	24,0	1,53	16,0
1,40	26,0	49,0	26,0	1,47	18,0
1,60	29,0	51,0	29,0	1,53	19,0
1,80	29,0	52,0	29,0	1,67	17,0
2,00	27,0	52,0	27,0	1,67	16,0
2,20	26,0	51,0	26,0	1,93	13,0
2,40	27,0	56,0	27,0	1,80	15,0
2,60	36,0	63,0	36,0	1,87	19,0
2,80	36,0	64,0	36,0	2,07	17,0
3,00	40,0	71,0	40,0	2,20	18,0
3,20	44,0	77,0	44,0	2,13	21,0
3,40	44,0	76,0	44,0	3,93	11,0
3,60	81,0	140,0	81,0	3,53	23,0
3,80	128,0	181,0	128,0	4,20	30,0
4,00	210,0	273,0	210,0	7,60	28,0
4,20	106,0	220,0	106,0	4,13	26,0
4,40	178,0	240,0	178,0	7,53	24,0
4,60	180,0	293,0	180,0	8,27	22,0
4,80	226,0	350,0	226,0	10,53	21,0
5,00	178,0	336,0	178,0	9,60	19,0
5,20	76,0	220,0	76,0	12,00	6,0
5,40	220,0	400,0	220,0	14,00	16,0
5,60	240,0	450,0	240,0	13,33	18,0
5,80	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 389
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto Monforte (BN)
- note : Cert. P001-21-389
- data : 22/02/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	11,0	17,0	11,0	0,67	16,0
0,80	16,0	26,0	16,0	3,33	5,0
1,00	190,0	240,0	190,0	3,67	52,0
1,20	69,0	124,0	69,0	3,07	23,0
1,40	29,0	75,0	29,0	2,07	14,0
1,60	29,0	60,0	29,0	2,33	12,0
1,80	22,0	57,0	22,0	1,87	12,0
2,00	28,0	56,0	28,0	2,67	10,0
2,20	34,0	74,0	34,0	1,47	23,0
2,40	82,0	104,0	82,0	4,20	20,0
2,60	118,0	181,0	118,0	3,67	32,0
2,80	90,0	145,0	90,0	14,73	6,0
3,00	159,0	380,0	159,0	4,40	36,0
3,20	86,0	152,0	86,0	13,33	6,0
3,40	300,0	500,0	300,0	13,33	23,0
3,60	400,0	600,0	400,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 390
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto L'Abate (BN)
- note : Cert. P001-21-390
- data : 22/02/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	13,0	18,0	13,0	0,47	28,0
0,80	14,0	21,0	14,0	0,80	17,0
1,00	13,0	25,0	13,0	0,80	16,0
1,20	18,0	30,0	18,0	0,93	19,0
1,40	22,0	36,0	22,0	1,13	19,0
1,60	24,0	41,0	24,0	1,67	14,0
1,80	23,0	48,0	23,0	1,27	18,0
2,00	23,0	42,0	23,0	2,00	12,0
2,20	21,0	51,0	21,0	2,00	10,0
2,40	22,0	52,0	22,0	1,73	13,0
2,60	22,0	48,0	22,0	1,33	16,0
2,80	26,0	46,0	26,0	1,60	16,0
3,00	22,0	46,0	22,0	1,33	16,0
3,20	36,0	56,0	36,0	2,13	17,0
3,40	27,0	59,0	27,0	2,07	13,0
3,60	25,0	56,0	25,0	3,07	8,0
3,80	30,0	76,0	30,0	2,60	12,0
4,00	26,0	65,0	26,0	2,47	11,0
4,20	30,0	67,0	30,0	2,60	12,0
4,40	28,0	67,0	28,0	2,73	10,0
4,60	33,0	74,0	33,0	1,93	17,0
4,80	36,0	65,0	36,0	2,27	16,0
5,00	36,0	70,0	36,0	2,80	13,0
5,20	29,0	71,0	29,0	2,53	11,0
5,40	35,0	73,0	35,0	3,07	11,0
5,60	32,0	78,0	32,0	3,07	10,0
5,80	36,0	82,0	36,0	2,80	13,0
6,00	40,0	82,0	40,0	3,33	12,0
6,20	35,0	85,0	35,0	3,13	11,0
6,40	40,0	87,0	40,0	4,07	10,0
6,60	41,0	102,0	41,0	2,33	18,0
6,80	65,0	100,0	65,0	3,67	18,0
7,00	42,0	97,0	42,0	3,60	12,0
7,20	42,0	96,0	42,0	3,33	13,0
7,40	44,0	94,0	44,0	4,27	10,0
7,60	44,0	108,0	44,0	3,93	11,0
7,80	55,0	114,0	55,0	10,67	5,0
8,00	120,0	280,0	120,0	2,53	47,0
8,20	108,0	146,0	108,0	5,80	19,0
8,40	156,0	243,0	156,0	5,33	29,0
8,60	65,0	145,0	65,0	4,87	13,0
8,80	62,0	135,0	62,0	4,93	13,0
9,00	86,0	160,0	86,0	4,67	18,0
9,20	66,0	136,0	66,0	4,07	16,0
9,40	84,0	145,0	84,0	5,13	16,0
9,60	76,0	153,0	76,0	5,73	13,0
9,80	74,0	160,0	74,0	5,40	14,0
10,00	72,0	153,0	72,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 392
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Fragneto L'Abate (BN)
- note : Cert. P001-21-392
- data : 05/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	6,0	10,0	6,0	0,47	13,0
0,80	14,0	21,0	14,0	0,87	16,0
1,00	12,0	25,0	12,0	1,20	10,0
1,20	14,0	32,0	14,0	1,27	11,0
1,40	23,0	42,0	23,0	0,80	29,0
1,60	55,0	67,0	55,0	2,00	28,0
1,80	22,0	52,0	22,0	1,27	17,0
2,00	22,0	41,0	22,0	1,67	13,0
2,20	22,0	47,0	22,0	3,27	7,0
2,40	44,0	93,0	44,0	2,67	16,0
2,60	88,0	128,0	88,0	4,33	20,0
2,80	25,0	90,0	25,0	1,33	19,0
3,00	25,0	45,0	25,0	2,33	11,0
3,20	23,0	58,0	23,0	1,47	16,0
3,40	42,0	64,0	42,0	2,00	21,0
3,60	32,0	62,0	32,0	2,07	15,0
3,80	50,0	81,0	50,0	2,73	18,0
4,00	53,0	94,0	53,0	2,80	19,0
4,20	60,0	102,0	60,0	3,53	17,0
4,40	67,0	120,0	67,0	4,73	14,0
4,60	79,0	150,0	79,0	4,73	17,0
4,80	86,0	157,0	86,0	4,40	20,0
5,00	86,0	152,0	86,0	5,87	15,0
5,20	46,0	134,0	46,0	5,07	9,0
5,40	76,0	152,0	76,0	2,47	31,0
5,60	131,0	168,0	131,0	3,80	34,0
5,80	76,0	133,0	76,0	7,20	11,0
6,00	99,0	207,0	99,0	4,73	21,0
6,20	149,0	220,0	149,0	2,53	59,0
6,40	87,0	125,0	87,0	8,07	11,0
6,60	82,0	203,0	82,0	5,13	16,0
6,80	77,0	154,0	77,0	3,27	24,0
7,00	54,0	103,0	54,0	3,53	15,0
7,20	59,0	112,0	59,0	2,87	21,0
7,40	85,0	128,0	85,0	2,27	38,0
7,60	92,0	126,0	92,0	13,33	7,0
7,80	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 393
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pesco Sannita (BN)
- note : Cert. P001-21-393
- data : 05/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,40	39,0	75,0	39,0	2,67	15,0
0,40	----	----	--	1,00	----	2,60	35,0	75,0	35,0	1,93	18,0
0,60	10,0	25,0	10,0	0,93	11,0	2,80	46,0	75,0	46,0	2,20	21,0
0,80	11,0	25,0	11,0	0,80	14,0	**3,00**	45,0	78,0	45,0	2,27	20,0
1,00	8,0	20,0	8,0	0,93	9,0	3,20	78,0	112,0	78,0	4,13	19,0
1,20	7,0	21,0	7,0	3,53	2,0	3,40	50,0	112,0	50,0	3,13	16,0
1,40	64,0	117,0	64,0	3,07	21,0	3,60	57,0	104,0	57,0	3,47	16,0
1,60	28,0	74,0	28,0	1,60	17,0	3,80	49,0	101,0	49,0	3,80	13,0
1,80	22,0	46,0	22,0	1,67	13,0	**4,00**	135,0	192,0	135,0	4,67	29,0
2,00	23,0	48,0	23,0	1,60	14,0	4,20	69,0	139,0	69,0	10,67	6,0
2,20	86,0	110,0	86,0	2,40	36,0	4,40	300,0	460,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 394
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pesco Sannita (BN)
- note : Cert. P001-21-394
- data : 05/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,80	----
0,60	20,0	32,0	20,0	2,93	7,0
0,80	94,0	138,0	94,0	0,67	141,0
1,00	95,0	105,0	95,0	1,40	68,0
1,20	38,0	59,0	38,0	2,33	16,0
1,40	41,0	76,0	41,0	1,60	26,0
1,60	48,0	72,0	48,0	0,87	55,0
1,80	27,0	40,0	27,0	1,20	22,0
2,00	34,0	52,0	34,0	1,00	34,0
2,20	82,0	97,0	82,0	2,07	40,0
2,40	44,0	75,0	44,0	3,47	13,0
2,60	143,0	195,0	143,0	5,40	26,0
2,80	53,0	134,0	53,0	2,20	24,0
3,00	70,0	103,0	70,0	2,40	29,0
3,20	116,0	152,0	116,0	6,07	19,0
3,40	74,0	165,0	74,0	6,60	11,0
3,60	106,0	205,0	106,0	5,60	19,0
3,80	123,0	207,0	123,0	2,67	46,0
4,00	120,0	160,0	120,0	4,07	30,0
4,20	159,0	220,0	159,0	4,33	37,0
4,40	195,0	260,0	195,0	7,40	26,0
4,60	72,0	183,0	72,0	6,27	11,0
4,80	83,0	177,0	83,0	4,27	19,0
5,00	83,0	147,0	83,0	5,47	15,0
5,20	71,0	153,0	71,0	5,07	14,0
5,40	99,0	175,0	99,0	10,00	10,0
5,60	95,0	245,0	95,0	13,33	7,0
5,80	250,0	450,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 395
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pesco Sannita (BN)
- note : Cert. P001-21-395
- data : 08/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	3,60	22,0	42,0	22,0	0,87	25,0
0,40	----	----	--	1,00	----	3,80	27,0	40,0	27,0	0,87	31,0
0,60	13,0	28,0	13,0	0,67	19,0	**4,00**	22,0	35,0	22,0	0,80	27,0
0,80	15,0	25,0	15,0	1,20	12,0	4,20	15,0	27,0	15,0	0,80	19,0
1,00	37,0	55,0	37,0	1,87	20,0	4,40	20,0	32,0	20,0	1,07	19,0
1,20	28,0	56,0	28,0	1,87	15,0	4,60	21,0	37,0	21,0	1,07	20,0
1,40	21,0	49,0	21,0	1,47	14,0	4,80	26,0	42,0	26,0	1,27	21,0
1,60	23,0	45,0	23,0	1,33	17,0	**5,00**	23,0	42,0	23,0	1,20	19,0
1,80	26,0	46,0	26,0	1,20	22,0	5,20	35,0	53,0	35,0	1,60	22,0
2,00	23,0	41,0	23,0	1,33	17,0	5,40	36,0	60,0	36,0	1,93	19,0
2,20	24,0	44,0	24,0	0,93	26,0	5,60	37,0	66,0	37,0	1,93	19,0
2,40	32,0	46,0	32,0	1,07	30,0	5,80	36,0	65,0	36,0	1,60	22,0
2,60	42,0	58,0	42,0	0,73	57,0	**6,00**	40,0	64,0	40,0	1,73	23,0
2,80	67,0	78,0	67,0	2,33	29,0	6,20	38,0	64,0	38,0	1,93	20,0
3,00	44,0	79,0	44,0	1,27	35,0	6,40	40,0	69,0	40,0	7,67	5,0
3,20	37,0	56,0	37,0	1,00	37,0	6,60	200,0	315,0	200,0	10,67	19,0
3,40	18,0	33,0	18,0	1,33	13,0	6,80	260,0	420,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 396
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pesco Sannita (BN)
- note : Cert. P001-21-396
- data : 08/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	1,40	38,0	52,0	38,0	1,07	36,0
0,40	----	----	--	0,93	----	1,60	17,0	33,0	17,0	5,60	3,0
0,60	8,0	22,0	8,0	0,93	9,0	1,80	30,0	114,0	30,0	3,47	9,0
0,80	14,0	28,0	14,0	1,00	14,0	**2,00**	140,0	192,0	140,0	9,73	14,0
1,00	9,0	24,0	9,0	1,07	8,0	2,20	80,0	226,0	80,0	8,00	10,0
1,20	13,0	29,0	13,0	0,93	14,0	2,40	300,0	420,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 397
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pesco Sannita (BN)
- note : Cert. P001-21-397
- data : 08/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	11,0	24,0	11,0	1,07	10,0
0,80	12,0	28,0	12,0	1,00	12,0
1,00	14,0	29,0	14,0	1,07	13,0
1,20	17,0	33,0	17,0	1,07	16,0
1,40	20,0	36,0	20,0	0,87	23,0
1,60	26,0	39,0	26,0	1,20	22,0
1,80	22,0	40,0	22,0	1,93	11,0
2,00	20,0	49,0	20,0	1,00	20,0
2,20	25,0	40,0	25,0	1,13	22,0
2,40	25,0	42,0	25,0	1,33	19,0
2,60	30,0	50,0	30,0	3,20	9,0
2,80	36,0	84,0	36,0	5,07	7,0
3,00	35,0	111,0	35,0	1,33	26,0
3,20	70,0	90,0	70,0	2,73	26,0
3,40	111,0	152,0	111,0	4,40	25,0
3,60	170,0	236,0	170,0	3,80	45,0
3,80	127,0	184,0	127,0	4,60	28,0
4,00	55,0	124,0	55,0	1,73	32,0
4,20	100,0	126,0	100,0	4,27	23,0
4,40	146,0	210,0	146,0	4,93	30,0
4,60	110,0	184,0	110,0	4,47	25,0
4,80	45,0	112,0	45,0	3,53	13,0
5,00	63,0	116,0	63,0	4,07	15,0
5,20	56,0	117,0	56,0	2,80	20,0
5,40	60,0	102,0	60,0	2,33	26,0
5,60	78,0	113,0	78,0	2,67	29,0
5,80	67,0	107,0	67,0	2,73	25,0
6,00	45,0	86,0	45,0	2,33	19,0
6,20	46,0	81,0	46,0	1,60	29,0
6,40	52,0	76,0	52,0	1,93	27,0
6,60	64,0	93,0	64,0	2,80	23,0
6,80	38,0	80,0	38,0	2,47	15,0
7,00	48,0	85,0	48,0	3,93	12,0
7,20	49,0	108,0	49,0	3,73	13,0
7,40	53,0	109,0	53,0	3,00	18,0
7,60	55,0	100,0	55,0	3,93	14,0
7,80	74,0	133,0	74,0	3,27	23,0
8,00	78,0	127,0	78,0	3,93	20,0
8,20	60,0	119,0	60,0	2,60	23,0
8,40	50,0	89,0	50,0	8,53	6,0
8,60	260,0	388,0	260,0	8,00	32,0
8,80	300,0	420,0	300,0	10,00	30,0
9,00	330,0	480,0	330,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 398
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Pesco Sannita (BN)
- note : Cert. P001-21-398
- data : 10/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	15,0	20,0	15,0	0,40	37,0
0,80	18,0	24,0	18,0	0,93	19,0
1,00	13,0	27,0	13,0	0,53	24,0
1,20	12,0	20,0	12,0	1,47	8,0
1,40	32,0	54,0	32,0	1,40	23,0
1,60	34,0	55,0	34,0	1,67	20,0
1,80	36,0	61,0	36,0	1,47	25,0
2,00	38,0	60,0	38,0	2,13	18,0
2,20	40,0	72,0	40,0	2,27	18,0
2,40	28,0	62,0	28,0	1,87	15,0
2,60	27,0	55,0	27,0	2,27	12,0
2,80	28,0	62,0	28,0	2,13	13,0
3,00	31,0	63,0	31,0	2,33	13,0
3,20	30,0	65,0	30,0	2,73	11,0
3,40	27,0	68,0	27,0	3,60	8,0
3,60	18,0	72,0	18,0	1,07	17,0
3,80	21,0	37,0	21,0	0,73	29,0
4,00	55,0	66,0	55,0	1,33	41,0
4,20	52,0	72,0	52,0	1,60	32,0
4,40	100,0	124,0	100,0	1,93	52,0
4,60	98,0	127,0	98,0	4,20	23,0
4,80	125,0	188,0	125,0	3,47	36,0
5,00	120,0	172,0	120,0	1,33	90,0
5,20	130,0	150,0	130,0	2,67	49,0
5,40	88,0	128,0	88,0	2,60	34,0
5,60	94,0	133,0	94,0	2,27	41,0
5,80	152,0	186,0	152,0	2,13	71,0
6,00	166,0	198,0	166,0	4,47	37,0
6,20	210,0	277,0	210,0	7,33	29,0
6,40	300,0	410,0	300,0	6,67	45,0
6,60	350,0	450,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente :
- lavoro :
- località :
- note :

- data : 30/12/1899
- quota inizio :
- prof. falda : 0,00 m da quota inizio
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,60	8,0	15,0	8,0	0,40	20,0
0,80	12,0	18,0	12,0	0,53	22,0
1,00	12,0	20,0	12,0	1,20	10,0
1,20	56,0	74,0	56,0	1,47	38,0
1,40	60,0	82,0	60,0	0,47	129,0
1,60	15,0	22,0	15,0	0,80	19,0
1,80	18,0	30,0	18,0	1,13	16,0
2,00	16,0	33,0	16,0	1,07	15,0
2,20	22,0	38,0	22,0	1,00	22,0
2,40	24,0	39,0	24,0	1,47	16,0
2,60	26,0	48,0	26,0	2,07	13,0
2,80	31,0	62,0	31,0	2,13	15,0
3,00	36,0	68,0	36,0	1,93	19,0
3,20	35,0	64,0	35,0	1,73	20,0
3,40	32,0	58,0	32,0	1,93	17,0
3,60	33,0	62,0	33,0	2,13	15,0
3,80	42,0	74,0	42,0	2,00	21,0
4,00	55,0	85,0	55,0	0,93	59,0
4,20	78,0	92,0	78,0	1,13	69,0
4,40	77,0	94,0	77,0	1,20	64,0
4,60	70,0	88,0	70,0	2,00	35,0
4,80	92,0	122,0	92,0	2,40	38,0
5,00	100,0	136,0	100,0	3,07	33,0
5,20	98,0	144,0	98,0	3,87	25,0
5,40	102,0	160,0	102,0	2,93	35,0
5,60	124,0	168,0	124,0	3,07	40,0
5,80	136,0	182,0	136,0	5,60	24,0
6,00	126,0	210,0	126,0	6,40	20,0
6,20	104,0	200,0	104,0	5,60	19,0
6,40	126,0	210,0	126,0	4,73	27,0
6,60	128,0	199,0	128,0	5,07	25,0
6,80	132,0	208,0	132,0	6,67	20,0
7,00	144,0	244,0	144,0	3,33	43,0
7,20	152,0	202,0	152,0	5,53	27,0
7,40	177,0	260,0	177,0	2,67	66,0
7,60	174,0	214,0	174,0	5,47	32,0
7,80	210,0	292,0	210,0	4,13	51,0
8,00	226,0	288,0	226,0	4,67	48,0
8,20	260,0	330,0	260,0	4,40	59,0
8,40	274,0	340,0	274,0	4,00	68,0
8,60	290,0	350,0	290,0	7,33	40,0
8,80	300,0	410,0	300,0	10,67	28,0
9,00	340,0	500,0	340,0	------	----

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,60	8,0	15,0	8,0	0,40	20,0
0,80	12,0	18,0	12,0	0,53	22,0
1,00	12,0	20,0	12,0	1,20	10,0
1,20	56,0	74,0	56,0	1,47	38,0
1,40	60,0	82,0	60,0	0,47	129,0
1,60	15,0	22,0	15,0	0,80	19,0
1,80	18,0	30,0	18,0	1,13	16,0
2,00	16,0	33,0	16,0	1,07	15,0
2,20	22,0	38,0	22,0	1,00	22,0
2,40	24,0	39,0	24,0	1,47	16,0
2,60	26,0	48,0	26,0	2,07	13,0
2,80	31,0	62,0	31,0	2,13	15,0
3,00	36,0	68,0	36,0	1,93	19,0
3,20	35,0	64,0	35,0	1,73	20,0
3,40	32,0	58,0	32,0	1,93	17,0
3,60	33,0	62,0	33,0	2,13	15,0
3,80	42,0	74,0	42,0	2,00	21,0
4,00	55,0	85,0	55,0	0,93	59,0
4,20	78,0	92,0	78,0	1,13	69,0
4,40	77,0	94,0	77,0	1,20	64,0
4,60	70,0	88,0	70,0	2,00	35,0
4,80	92,0	122,0	92,0	2,40	38,0
5,00	100,0	136,0	100,0	3,07	33,0
5,20	98,0	144,0	98,0	3,87	25,0
5,40	102,0	160,0	102,0	2,93	35,0
5,60	124,0	168,0	124,0	3,07	40,0
5,80	136,0	182,0	136,0	5,60	24,0
6,00	126,0	210,0	126,0	6,40	20,0
6,20	104,0	200,0	104,0	5,60	19,0
6,40	126,0	210,0	126,0	4,73	27,0
6,60	128,0	199,0	128,0	5,07	25,0
6,80	132,0	208,0	132,0	6,67	20,0
7,00	144,0	244,0	144,0	3,33	43,0
7,20	152,0	202,0	152,0	5,53	27,0
7,40	177,0	260,0	177,0	2,67	66,0
7,60	174,0	214,0	174,0	5,47	32,0
7,80	210,0	292,0	210,0	4,13	51,0
8,00	226,0	288,0	226,0	4,67	48,0
8,20	260,0	330,0	260,0	4,40	59,0
8,40	274,0	340,0	274,0	4,00	68,0
8,60	290,0	350,0	290,0	7,33	40,0
8,80	300,0	410,0	300,0	10,67	28,0
9,00	340,0	500,0	340,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 0 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 401
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Marco dei Cavoti (BN)
- note : Cert. P001-21-401
- data : 10/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	30,0	70,0	30,0	3,13	10,0
0,40	----	----	--	0,53	----	5,40	57,0	104,0	57,0	2,60	22,0
0,60	16,0	24,0	16,0	0,60	27,0	5,60	35,0	74,0	35,0	2,00	18,0
0,80	14,0	23,0	14,0	0,87	16,0	5,80	39,0	69,0	39,0	2,93	13,0
1,00	18,0	31,0	18,0	0,53	34,0	**6,00**	39,0	83,0	39,0	2,67	15,0
1,20	18,0	26,0	18,0	0,80	22,0	6,20	38,0	78,0	38,0	2,67	14,0
1,40	18,0	30,0	18,0	0,87	21,0	6,40	39,0	79,0	39,0	1,80	22,0
1,60	21,0	34,0	21,0	0,93	22,0	6,60	56,0	83,0	56,0	2,20	25,0
1,80	22,0	36,0	22,0	1,33	16,0	6,80	106,0	139,0	106,0	3,27	32,0
2,00	26,0	46,0	26,0	1,47	18,0	**7,00**	71,0	120,0	71,0	3,20	22,0
2,20	28,0	50,0	28,0	1,87	15,0	7,20	43,0	91,0	43,0	2,53	17,0
2,40	20,0	48,0	20,0	1,40	14,0	7,40	48,0	86,0	48,0	3,53	14,0
2,60	35,0	56,0	35,0	1,80	19,0	7,60	75,0	128,0	75,0	2,40	31,0
2,80	36,0	63,0	36,0	1,53	23,0	7,80	120,0	156,0	120,0	5,73	21,0
3,00	25,0	48,0	25,0	1,60	16,0	**8,00**	93,0	179,0	93,0	4,33	21,0
3,20	26,0	50,0	26,0	1,33	19,0	8,20	68,0	133,0	68,0	3,93	17,0
3,40	30,0	50,0	30,0	2,33	13,0	8,40	65,0	124,0	65,0	3,00	22,0
3,60	21,0	56,0	21,0	2,93	7,0	8,60	134,0	179,0	134,0	4,20	32,0
3,80	146,0	190,0	146,0	4,87	30,0	8,80	132,0	195,0	132,0	6,53	20,0
4,00	33,0	106,0	33,0	2,73	12,0	**9,00**	92,0	190,0	92,0	2,40	38,0
4,20	28,0	69,0	28,0	1,80	16,0	9,20	172,0	208,0	172,0	1,00	172,0
4,40	35,0	62,0	35,0	0,80	44,0	9,40	76,0	91,0	76,0	1,40	54,0
4,60	58,0	70,0	58,0	3,13	19,0	9,60	47,0	68,0	47,0	0,87	54,0
4,80	44,0	91,0	44,0	2,47	18,0	9,80	42,0	55,0	42,0	1,07	39,0
5,00	36,0	73,0	36,0	2,67	13,0	**10,00**	44,0	60,0	44,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 402
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Marco dei Cavoti (BN)
- note : Cert. P001-21-402
- data : 11/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,07	----
0,60	10,0	26,0	10,0	1,07	9,0
0,80	10,0	26,0	10,0	1,13	9,0
1,00	12,0	29,0	12,0	1,07	11,0
1,20	14,0	30,0	14,0	1,13	12,0
1,40	16,0	33,0	16,0	1,07	15,0
1,60	18,0	34,0	18,0	1,07	17,0
1,80	18,0	34,0	18,0	1,33	13,0
2,00	19,0	39,0	19,0	1,33	14,0
2,20	32,0	52,0	32,0	1,47	22,0
2,40	28,0	50,0	28,0	0,80	35,0
2,60	28,0	40,0	28,0	0,33	84,0
2,80	20,0	25,0	20,0	0,93	21,0
3,00	24,0	38,0	24,0	1,00	24,0
3,20	32,0	47,0	32,0	1,73	18,0
3,40	20,0	46,0	20,0	0,87	23,0
3,60	36,0	49,0	36,0	1,07	34,0
3,80	45,0	61,0	45,0	1,07	42,0
4,00	44,0	60,0	44,0	1,07	41,0
4,20	62,0	78,0	62,0	1,87	33,0
4,40	57,0	85,0	57,0	2,53	23,0
4,60	120,0	158,0	120,0	4,00	30,0
4,80	95,0	155,0	95,0	5,33	18,0
5,00	66,0	146,0	66,0	3,60	18,0
5,20	48,0	102,0	48,0	2,73	18,0
5,40	62,0	103,0	62,0	4,13	15,0
5,60	158,0	220,0	158,0	1,53	103,0
5,80	63,0	86,0	63,0	1,20	52,0
6,00	88,0	106,0	88,0	1,47	60,0
6,20	98,0	120,0	98,0	2,87	34,0
6,40	40,0	83,0	40,0	1,87	21,0
6,60	40,0	68,0	40,0	1,60	25,0
6,80	50,0	74,0	50,0	2,33	21,0
7,00	46,0	81,0	46,0	2,27	20,0
7,20	46,0	80,0	46,0	1,27	36,0
7,40	56,0	75,0	56,0	3,00	19,0
7,60	57,0	102,0	57,0	3,07	19,0
7,80	54,0	100,0	54,0	3,73	14,0
8,00	52,0	108,0	52,0	2,40	22,0
8,20	59,0	95,0	59,0	2,93	20,0
8,40	52,0	96,0	52,0	3,33	16,0
8,60	54,0	104,0	54,0	4,00	14,0
8,80	106,0	166,0	106,0	4,00	26,0
9,00	52,0	112,0	52,0	3,53	15,0
9,20	63,0	116,0	63,0	1,47	43,0
9,40	98,0	120,0	98,0	4,40	22,0
9,60	88,0	154,0	88,0	4,60	19,0
9,80	103,0	172,0	103,0	3,27	32,0
10,00	137,0	186,0	137,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 403
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Marco dei Cavoti (BN)
- note : Cert. P001-21-403
- data : 11/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,33	----
0,60	8,0	13,0	8,0	0,47	17,0
0,80	6,0	13,0	6,0	0,40	15,0
1,00	5,0	11,0	5,0	0,27	19,0
1,20	5,0	9,0	5,0	0,27	19,0
1,40	12,0	16,0	12,0	0,53	22,0
1,60	15,0	23,0	15,0	0,47	32,0
1,80	17,0	24,0	17,0	1,13	15,0
2,00	20,0	37,0	20,0	3,00	7,0
2,20	24,0	69,0	24,0	1,47	16,0
2,40	37,0	59,0	37,0	0,73	50,0
2,60	42,0	53,0	42,0	2,07	20,0
2,80	121,0	152,0	121,0	1,13	107,0
3,00	71,0	88,0	71,0	2,60	27,0
3,20	56,0	95,0	56,0	1,60	35,0
3,40	74,0	98,0	74,0	3,27	23,0
3,60	33,0	82,0	33,0	1,20	27,0
3,80	60,0	78,0	60,0	3,13	19,0
4,00	52,0	99,0	52,0	2,40	22,0
4,20	54,0	90,0	54,0	7,00	8,0
4,40	97,0	202,0	97,0	1,73	56,0
4,60	56,0	82,0	56,0	2,93	19,0
4,80	40,0	84,0	40,0	3,13	13,0
5,00	76,0	123,0	76,0	3,87	20,0
5,20	45,0	103,0	45,0	3,00	15,0
5,40	45,0	90,0	45,0	2,47	18,0
5,60	186,0	223,0	186,0	13,80	13,0
5,80	65,0	272,0	65,0	7,33	9,0
6,00	300,0	410,0	300,0	9,33	32,0
6,20	380,0	520,0	380,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 404
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Marco dei Cavoti (BN)
- note : Cert. P001-21-404
- data : 11/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	3,20	49,0	103,0	49,0	4,00	12,0
0,40	----	----	--	1,33	----	3,40	38,0	98,0	38,0	4,13	9,0
0,60	15,0	35,0	15,0	1,60	9,0	3,60	48,0	110,0	48,0	4,87	10,0
0,80	16,0	40,0	16,0	1,33	12,0	3,80	67,0	140,0	67,0	5,67	12,0
1,00	16,0	36,0	16,0	2,67	6,0	**4,00**	71,0	156,0	71,0	5,27	13,0
1,20	68,0	108,0	68,0	1,33	51,0	4,20	38,0	117,0	38,0	2,60	15,0
1,40	59,0	79,0	59,0	3,00	20,0	4,40	25,0	64,0	25,0	1,20	21,0
1,60	100,0	145,0	100,0	4,13	24,0	4,60	24,0	42,0	24,0	1,40	17,0
1,80	23,0	85,0	23,0	1,07	22,0	4,80	29,0	50,0	29,0	3,27	9,0
2,00	17,0	33,0	17,0	1,53	11,0	**5,00**	36,0	85,0	36,0	2,07	17,0
2,20	42,0	65,0	42,0	2,33	18,0	5,20	45,0	76,0	45,0	3,00	15,0
2,40	41,0	76,0	41,0	2,20	19,0	5,40	48,0	93,0	48,0	2,33	21,0
2,60	19,0	52,0	19,0	0,40	47,0	5,60	48,0	83,0	48,0	8,40	6,0
2,80	59,0	65,0	59,0	2,27	26,0	5,80	126,0	252,0	126,0	8,00	16,0
3,00	39,0	73,0	39,0	3,60	11,0	**6,00**	240,0	360,0	240,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 405
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Marco dei Cavoti (BN)
- note : Cert. P001-21-405
- data : 15/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,40	28,0	56,0	28,0	1,93	14,0
0,40	----	----	--	0,33	----	2,60	29,0	58,0	29,0	1,33	22,0
0,60	10,0	15,0	10,0	0,27	37,0	2,80	35,0	55,0	35,0	1,40	25,0
0,80	12,0	16,0	12,0	0,40	30,0	**3,00**	66,0	87,0	66,0	1,80	37,0
1,00	10,0	16,0	10,0	0,27	37,0	3,20	65,0	92,0	65,0	4,07	16,0
1,20	12,0	16,0	12,0	0,93	13,0	3,40	127,0	188,0	127,0	2,00	64,0
1,40	58,0	72,0	58,0	1,73	33,0	3,60	80,0	110,0	80,0	2,33	34,0
1,60	96,0	122,0	96,0	1,60	60,0	3,80	92,0	127,0	92,0	1,27	73,0
1,80	75,0	99,0	75,0	2,93	26,0	**4,00**	47,0	66,0	47,0	4,00	12,0
2,00	38,0	82,0	38,0	4,00	10,0	4,20	180,0	240,0	180,0	4,67	39,0
2,20	39,0	99,0	39,0	1,87	21,0	4,40	250,0	320,0	250,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 407
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Marco dei Cavoti (BN)
- note : Cert. P001-21-407
- data : 17/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,53	----
0,60	8,0	16,0	8,0	0,47	17,0
0,80	15,0	22,0	15,0	1,20	12,0
1,00	27,0	45,0	27,0	0,80	34,0
1,20	30,0	42,0	30,0	1,67	18,0
1,40	31,0	56,0	31,0	1,13	27,0
1,60	38,0	55,0	38,0	0,93	41,0
1,80	38,0	52,0	38,0	2,33	16,0
2,00	21,0	56,0	21,0	1,53	14,0
2,20	56,0	79,0	56,0	2,20	25,0
2,40	71,0	104,0	71,0	4,00	18,0
2,60	55,0	115,0	55,0	2,87	19,0
2,80	60,0	103,0	60,0	4,07	15,0
3,00	58,0	119,0	58,0	3,00	19,0
3,20	85,0	130,0	85,0	1,80	47,0
3,40	78,0	105,0	78,0	2,67	29,0
3,60	60,0	100,0	60,0	3,13	19,0
3,80	60,0	107,0	60,0	2,33	26,0
4,00	134,0	169,0	134,0	6,60	20,0
4,20	103,0	202,0	103,0	5,73	18,0
4,40	102,0	188,0	102,0	4,13	25,0
4,60	128,0	190,0	128,0	9,47	14,0
4,80	182,0	324,0	182,0	1,73	105,0
5,00	180,0	206,0	180,0	5,13	35,0
5,20	250,0	327,0	250,0	6,53	38,0
5,40	132,0	230,0	132,0	5,73	23,0
5,60	83,0	169,0	83,0	5,27	16,0
5,80	61,0	140,0	61,0	4,53	13,0
6,00	136,0	204,0	136,0	5,93	23,0
6,20	135,0	224,0	135,0	4,73	29,0
6,40	175,0	246,0	175,0	6,53	27,0
6,60	150,0	248,0	150,0	6,20	24,0
6,80	110,0	203,0	110,0	3,27	34,0
7,00	170,0	219,0	170,0	4,87	35,0
7,20	70,0	143,0	70,0	3,47	20,0
7,40	63,0	115,0	63,0	3,73	17,0
7,60	97,0	153,0	97,0	6,13	16,0
7,80	89,0	181,0	89,0	4,87	18,0
8,00	97,0	170,0	97,0	3,87	25,0
8,20	192,0	250,0	192,0	5,00	38,0
8,40	168,0	243,0	168,0	7,00	24,0
8,60	70,0	175,0	70,0	6,60	11,0
8,80	71,0	170,0	71,0	2,20	32,0
9,00	148,0	181,0	148,0	7,40	20,0
9,20	145,0	256,0	145,0	7,87	18,0
9,40	242,0	360,0	242,0	14,67	16,0
9,60	300,0	520,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 408
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Marco dei Cavoti (BN)
- note : Cert. P001-21-408
- data : 17/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,60	----
0,60	17,0	26,0	17,0	1,27	13,0
0,80	16,0	35,0	16,0	1,07	15,0
1,00	15,0	31,0	15,0	0,87	17,0
1,20	19,0	32,0	19,0	1,07	18,0
1,40	22,0	38,0	22,0	1,07	21,0
1,60	19,0	35,0	19,0	1,20	16,0
1,80	18,0	36,0	18,0	1,13	16,0
2,00	19,0	36,0	19,0	1,20	16,0
2,20	20,0	38,0	20,0	1,13	18,0
2,40	23,0	40,0	23,0	1,13	20,0
2,60	23,0	40,0	23,0	1,47	16,0
2,80	32,0	54,0	32,0	1,27	25,0
3,00	40,0	59,0	40,0	4,47	9,0
3,20	120,0	187,0	120,0	7,87	15,0
3,40	230,0	348,0	230,0	1,60	144,0
3,60	83,0	107,0	83,0	1,60	52,0
3,80	108,0	132,0	108,0	5,60	19,0
4,00	35,0	119,0	35,0	3,33	11,0
4,20	40,0	90,0	40,0	3,53	11,0
4,40	40,0	93,0	40,0	2,93	14,0
4,60	60,0	104,0	60,0	3,60	17,0
4,80	56,0	110,0	56,0	4,93	11,0
5,00	62,0	136,0	62,0	5,07	12,0
5,20	69,0	145,0	69,0	4,93	14,0
5,40	91,0	165,0	91,0	6,73	14,0
5,60	85,0	186,0	85,0	7,00	12,0
5,80	230,0	335,0	230,0	4,73	49,0
6,00	115,0	186,0	115,0	5,67	20,0
6,20	95,0	180,0	95,0	8,00	12,0
6,40	67,0	187,0	67,0	5,87	11,0
6,60	75,0	163,0	75,0	5,20	14,0
6,80	75,0	153,0	75,0	7,93	9,0
7,00	85,0	204,0	85,0	4,53	19,0
7,20	107,0	175,0	107,0	4,67	23,0
7,40	106,0	176,0	106,0	5,73	18,0
7,60	87,0	173,0	87,0	4,67	19,0
7,80	96,0	166,0	96,0	11,40	8,0
8,00	125,0	296,0	125,0	4,67	27,0
8,20	230,0	300,0	230,0	9,00	26,0
8,40	165,0	300,0	165,0	12,00	14,0
8,60	280,0	460,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 409
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-409
- data : 17/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	15,0	25,0	15,0	0,80	19,0
0,80	16,0	28,0	16,0	0,87	18,0
1,00	17,0	30,0	17,0	0,87	20,0
1,20	15,0	28,0	15,0	0,80	19,0
1,40	20,0	32,0	20,0	1,00	20,0
1,60	30,0	45,0	30,0	1,33	22,0
1,80	55,0	75,0	55,0	2,13	26,0
2,00	60,0	92,0	60,0	3,93	15,0
2,20	29,0	88,0	29,0	3,73	8,0
2,40	31,0	87,0	31,0	1,47	21,0
2,60	36,0	58,0	36,0	1,00	36,0
2,80	77,0	92,0	77,0	1,33	58,0
3,00	80,0	100,0	80,0	2,87	28,0
3,20	55,0	98,0	55,0	0,80	69,0
3,40	62,0	74,0	62,0	1,60	39,0
3,60	78,0	102,0	78,0	2,20	35,0
3,80	91,0	124,0	91,0	3,67	25,0
4,00	45,0	100,0	45,0	2,67	17,0
4,20	58,0	98,0	58,0	1,67	35,0
4,40	77,0	102,0	77,0	2,27	34,0
4,60	67,0	101,0	67,0	2,60	26,0
4,80	135,0	174,0	135,0	3,60	38,0
5,00	150,0	204,0	150,0	2,53	59,0
5,20	160,0	198,0	160,0	2,73	59,0
5,40	86,0	127,0	86,0	4,27	20,0
5,60	88,0	152,0	88,0	2,60	34,0
5,80	127,0	166,0	127,0	2,07	61,0
6,00	124,0	155,0	124,0	7,20	17,0
6,20	180,0	288,0	180,0	7,33	25,0
6,40	220,0	330,0	220,0	8,00	28,0
6,60	280,0	400,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 410
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-410
- data : 18/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	4,20	72,0	153,0	72,0	2,80	26,0
0,40	----	----	--	0,73	----	4,40	40,0	82,0	40,0	1,00	40,0
0,60	10,0	21,0	10,0	0,67	15,0	4,60	92,0	107,0	92,0	3,20	29,0
0,80	13,0	23,0	13,0	1,40	9,0	4,80	39,0	87,0	39,0	1,07	37,0
1,00	18,0	39,0	18,0	1,53	12,0	**5,00**	78,0	94,0	78,0	4,20	19,0
1,20	18,0	41,0	18,0	2,53	7,0	5,20	42,0	105,0	42,0	4,40	10,0
1,40	24,0	62,0	24,0	10,00	2,0	5,40	42,0	108,0	42,0	4,87	9,0
1,60	80,0	230,0	80,0	6,27	13,0	5,60	67,0	140,0	67,0	4,67	14,0
1,80	102,0	196,0	102,0	6,47	16,0	5,80	46,0	116,0	46,0	4,53	10,0
2,00	32,0	129,0	32,0	1,53	21,0	**6,00**	40,0	108,0	40,0	4,53	9,0
2,20	26,0	49,0	26,0	1,47	18,0	6,20	48,0	116,0	48,0	4,73	10,0
2,40	26,0	48,0	26,0	1,80	14,0	6,40	49,0	120,0	49,0	4,53	11,0
2,60	44,0	71,0	44,0	5,67	8,0	6,60	50,0	118,0	50,0	4,80	10,0
2,80	32,0	117,0	32,0	6,87	5,0	6,80	55,0	127,0	55,0	4,60	12,0
3,00	131,0	234,0	131,0	6,13	21,0	**7,00**	53,0	122,0	53,0	4,60	12,0
3,20	37,0	129,0	37,0	2,33	16,0	7,20	58,0	127,0	58,0	4,80	12,0
3,40	37,0	72,0	37,0	10,07	4,0	7,40	70,0	142,0	70,0	8,60	8,0
3,60	89,0	240,0	89,0	5,93	15,0	7,60	85,0	214,0	85,0	9,80	9,0
3,80	59,0	148,0	59,0	4,00	15,0	7,80	153,0	300,0	153,0	13,33	11,0
4,00	53,0	113,0	53,0	5,40	10,0	**8,00**	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 411
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-411
- data : 18/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	5,20	26,0	54,0	26,0	2,40	11,0
0,40	----	----	--	1,13	----	5,40	26,0	62,0	26,0	2,93	9,0
0,60	10,0	27,0	10,0	1,27	8,0	5,60	32,0	76,0	32,0	2,53	13,0
0,80	12,0	31,0	12,0	1,47	8,0	5,80	48,0	86,0	48,0	4,07	12,0
1,00	16,0	38,0	16,0	1,07	15,0	**6,00**	69,0	130,0	69,0	4,53	15,0
1,20	20,0	36,0	20,0	1,53	13,0	6,20	38,0	106,0	38,0	3,27	12,0
1,40	25,0	48,0	25,0	1,27	20,0	6,40	66,0	115,0	66,0	3,40	19,0
1,60	33,0	52,0	33,0	1,93	17,0	6,60	44,0	95,0	44,0	3,47	13,0
1,80	28,0	57,0	28,0	2,33	12,0	6,80	34,0	86,0	34,0	2,53	13,0
2,00	26,0	61,0	26,0	1,73	15,0	**7,00**	42,0	80,0	42,0	2,93	14,0
2,20	34,0	60,0	34,0	2,27	15,0	7,20	46,0	90,0	46,0	3,00	15,0
2,40	25,0	59,0	25,0	2,27	11,0	7,40	48,0	93,0	48,0	2,13	22,0
2,60	28,0	62,0	28,0	2,07	14,0	7,60	40,0	72,0	40,0	1,87	21,0
2,80	28,0	59,0	28,0	2,07	14,0	7,80	32,0	60,0	32,0	2,53	13,0
3,00	48,0	79,0	48,0	2,27	21,0	**8,00**	28,0	66,0	28,0	1,53	18,0
3,20	28,0	62,0	28,0	1,93	14,0	8,20	44,0	67,0	44,0	3,27	13,0
3,40	35,0	64,0	35,0	2,53	14,0	8,40	140,0	189,0	140,0	5,00	28,0
3,60	45,0	83,0	45,0	2,40	19,0	8,60	66,0	141,0	66,0	2,33	28,0
3,80	50,0	86,0	50,0	3,73	13,0	8,80	67,0	102,0	67,0	3,13	21,0
4,00	42,0	98,0	42,0	3,00	14,0	**9,00**	189,0	236,0	189,0	3,80	50,0
4,20	55,0	100,0	55,0	3,33	17,0	9,20	58,0	115,0	58,0	2,60	22,0
4,40	50,0	100,0	50,0	2,40	21,0	9,40	50,0	89,0	50,0	3,07	16,0
4,60	40,0	76,0	40,0	2,47	16,0	9,60	62,0	108,0	62,0	2,47	25,0
4,80	51,0	88,0	51,0	1,67	31,0	9,80	176,0	213,0	176,0	3,20	55,0
5,00	35,0	60,0	35,0	1,87	19,0	**10,00**	110,0	158,0	110,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 412
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-412
- data : 18/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,07	----
0,60	9,0	25,0	9,0	0,87	10,0
0,80	12,0	25,0	12,0	1,40	9,0
1,00	13,0	34,0	13,0	2,00	6,0
1,20	14,0	44,0	14,0	2,00	7,0
1,40	16,0	46,0	16,0	1,47	11,0
1,60	23,0	45,0	23,0	1,40	16,0
1,80	35,0	56,0	35,0	2,33	15,0
2,00	33,0	68,0	33,0	0,93	35,0
2,20	59,0	73,0	59,0	2,20	27,0
2,40	31,0	64,0	31,0	1,47	21,0
2,60	44,0	66,0	44,0	3,53	12,0
2,80	40,0	93,0	40,0	2,40	17,0
3,00	41,0	77,0	41,0	2,67	15,0
3,20	40,0	80,0	40,0	3,40	12,0
3,40	30,0	81,0	30,0	1,93	16,0
3,60	37,0	66,0	37,0	3,13	12,0
3,80	35,0	82,0	35,0	3,60	10,0
4,00	46,0	100,0	46,0	2,33	20,0
4,20	36,0	71,0	36,0	2,80	13,0
4,40	32,0	74,0	32,0	1,93	17,0
4,60	41,0	70,0	41,0	1,80	23,0
4,80	33,0	60,0	33,0	2,60	13,0
5,00	29,0	68,0	29,0	2,73	11,0
5,20	26,0	67,0	26,0	2,73	10,0
5,40	30,0	71,0	30,0	3,27	9,0
5,60	41,0	90,0	41,0	4,07	10,0
5,80	34,0	95,0	34,0	2,73	12,0
6,00	59,0	100,0	59,0	3,67	16,0
6,20	98,0	153,0	98,0	4,87	20,0
6,40	57,0	130,0	57,0	4,53	13,0
6,60	40,0	108,0	40,0	2,27	18,0
6,80	86,0	120,0	86,0	4,27	20,0
7,00	42,0	106,0	42,0	5,47	8,0
7,20	130,0	212,0	130,0	5,40	24,0
7,40	59,0	140,0	59,0	4,73	12,0
7,60	86,0	157,0	86,0	4,67	18,0
7,80	70,0	140,0	70,0	2,13	33,0
8,00	46,0	78,0	46,0	2,07	22,0
8,20	59,0	90,0	59,0	1,27	47,0
8,40	59,0	78,0	59,0	2,33	25,0
8,60	54,0	89,0	54,0	6,40	8,0
8,80	40,0	136,0	40,0	7,73	5,0
9,00	184,0	300,0	184,0	9,33	20,0
9,20	260,0	400,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 413
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-413
- data : 19/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,87	----
0,60	27,0	40,0	27,0	0,60	45,0
0,80	26,0	35,0	26,0	1,07	24,0
1,00	76,0	92,0	76,0	3,00	25,0
1,20	18,0	63,0	18,0	4,40	4,0
1,40	66,0	132,0	66,0	3,93	17,0
1,60	43,0	102,0	43,0	2,60	17,0
1,80	27,0	66,0	27,0	4,33	6,0
2,00	170,0	235,0	170,0	2,27	75,0
2,20	69,0	103,0	69,0	3,07	23,0
2,40	33,0	79,0	33,0	2,27	15,0
2,60	27,0	61,0	27,0	1,67	16,0
2,80	30,0	55,0	30,0	2,60	12,0
3,00	70,0	109,0	70,0	3,33	21,0
3,20	36,0	86,0	36,0	1,93	19,0
3,40	27,0	56,0	27,0	7,33	4,0
3,60	220,0	330,0	220,0	2,13	103,0
3,80	86,0	118,0	86,0	2,73	31,0
4,00	34,0	75,0	34,0	2,00	17,0
4,20	35,0	65,0	35,0	2,40	15,0
4,40	35,0	71,0	35,0	3,20	11,0
4,60	37,0	85,0	37,0	2,60	14,0
4,80	39,0	78,0	39,0	2,67	15,0
5,00	48,0	88,0	48,0	2,47	19,0
5,20	49,0	86,0	49,0	3,27	15,0
5,40	53,0	102,0	53,0	4,60	12,0
5,60	42,0	111,0	42,0	2,80	15,0
5,80	75,0	117,0	75,0	5,80	13,0
6,00	47,0	134,0	47,0	1,67	28,0
6,20	74,0	99,0	74,0	6,07	12,0
6,40	52,0	143,0	52,0	5,67	9,0
6,60	60,0	145,0	60,0	5,87	10,0
6,80	52,0	140,0	52,0	6,20	8,0
7,00	51,0	144,0	51,0	6,80	7,0
7,20	63,0	165,0	63,0	5,47	12,0
7,40	62,0	144,0	62,0	3,67	17,0
7,60	67,0	122,0	67,0	4,20	16,0
7,80	74,0	137,0	74,0	5,20	14,0
8,00	78,0	156,0	78,0	4,53	17,0
8,20	95,0	163,0	95,0	1,00	95,0
8,40	220,0	235,0	220,0	10,00	22,0
8,60	350,0	500,0	350,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 414
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-414
- data : 19/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----	2,40	8,0	15,0	8,0	0,73	11,0
0,40	----	----	--	2,93	----	2,60	24,0	35,0	24,0	0,93	26,0
0,60	22,0	66,0	22,0	3,20	7,0	2,80	22,0	36,0	22,0	0,93	24,0
0,80	40,0	88,0	40,0	2,00	20,0	**3,00**	18,0	32,0	18,0	1,60	11,0
1,00	30,0	60,0	30,0	1,47	20,0	3,20	104,0	128,0	104,0	3,07	34,0
1,20	22,0	44,0	22,0	1,47	15,0	3,40	50,0	96,0	50,0	3,73	13,0
1,40	22,0	44,0	22,0	1,33	16,0	3,60	27,0	83,0	27,0	3,27	8,0
1,60	15,0	35,0	15,0	1,27	12,0	3,80	187,0	236,0	187,0	8,73	21,0
1,80	15,0	34,0	15,0	0,80	19,0	**4,00**	149,0	280,0	149,0	3,40	44,0
2,00	14,0	26,0	14,0	1,20	12,0	4,20	193,0	244,0	193,0	9,33	21,0
2,20	18,0	36,0	18,0	0,47	39,0	4,40	260,0	400,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 415
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Colle Sannita (BN)
- note : Cert. P001-21-415
- data : 19/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	36,0	76,0	36,0	3,13	11,0
0,40	----	----	--	1,13	----	5,40	39,0	86,0	39,0	2,40	16,0
0,60	6,0	23,0	6,0	0,73	8,0	5,60	27,0	63,0	27,0	0,73	37,0
0,80	12,0	23,0	12,0	1,07	11,0	5,80	36,0	47,0	36,0	1,27	28,0
1,00	15,0	31,0	15,0	0,87	17,0	**6,00**	35,0	54,0	35,0	1,53	23,0
1,20	20,0	33,0	20,0	1,53	13,0	6,20	28,0	51,0	28,0	1,27	22,0
1,40	22,0	45,0	22,0	1,87	12,0	6,40	30,0	49,0	30,0	1,53	20,0
1,60	18,0	46,0	18,0	1,67	11,0	6,60	28,0	51,0	28,0	0,93	30,0
1,80	21,0	46,0	21,0	3,00	7,0	6,80	28,0	42,0	28,0	1,53	18,0
2,00	40,0	85,0	40,0	1,20	33,0	**7,00**	59,0	82,0	59,0	2,87	21,0
2,20	33,0	51,0	33,0	1,33	25,0	7,20	37,0	80,0	37,0	3,27	11,0
2,40	50,0	70,0	50,0	1,67	30,0	7,40	37,0	86,0	37,0	3,73	10,0
2,60	27,0	52,0	27,0	1,73	16,0	7,60	61,0	117,0	61,0	2,60	23,0
2,80	82,0	108,0	82,0	5,00	16,0	7,80	41,0	80,0	41,0	3,00	14,0
3,00	43,0	118,0	43,0	2,73	16,0	**8,00**	92,0	137,0	92,0	3,07	30,0
3,20	25,0	66,0	25,0	2,13	12,0	8,20	76,0	122,0	76,0	3,13	24,0
3,40	26,0	58,0	26,0	2,40	11,0	8,40	74,0	121,0	74,0	3,13	24,0
3,60	21,0	57,0	21,0	0,93	22,0	8,60	54,0	101,0	54,0	1,93	28,0
3,80	25,0	39,0	25,0	1,20	21,0	8,80	64,0	93,0	64,0	3,67	17,0
4,00	22,0	40,0	22,0	0,87	25,0	**9,00**	58,0	113,0	58,0	3,00	19,0
4,20	33,0	46,0	33,0	1,40	24,0	9,20	55,0	100,0	55,0	3,07	18,0
4,40	44,0	65,0	44,0	5,00	9,0	9,40	260,0	306,0	260,0	7,20	36,0
4,60	83,0	158,0	83,0	2,13	39,0	9,60	77,0	185,0	77,0	4,13	19,0
4,80	46,0	78,0	46,0	1,33	34,0	9,80	58,0	120,0	58,0	3,27	18,0
5,00	53,0	73,0	53,0	2,67	20,0	**10,00**	61,0	110,0	61,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 416
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Casalduni (BN)
- note : Cert. P001-21-416
- data : 23/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,40	----
0,60	15,0	36,0	15,0	2,33	6,0
0,80	19,0	54,0	19,0	1,60	12,0
1,00	16,0	40,0	16,0	1,40	11,0
1,20	20,0	41,0	20,0	1,33	15,0
1,40	22,0	42,0	22,0	2,00	11,0
1,60	24,0	54,0	24,0	1,33	18,0
1,80	46,0	66,0	46,0	2,33	20,0
2,00	30,0	65,0	30,0	11,80	3,0
2,20	27,0	204,0	27,0	8,67	3,0
2,40	30,0	160,0	30,0	6,80	4,0
2,60	34,0	136,0	34,0	0,67	51,0
2,80	40,0	50,0	40,0	1,53	26,0
3,00	24,0	47,0	24,0	1,33	18,0
3,20	22,0	42,0	22,0	1,40	16,0
3,40	26,0	47,0	26,0	1,47	18,0
3,60	27,0	49,0	27,0	6,07	4,0
3,80	25,0	116,0	25,0	2,60	10,0
4,00	41,0	80,0	41,0	3,40	12,0
4,20	30,0	81,0	30,0	0,60	50,0
4,40	45,0	54,0	45,0	1,80	25,0
4,60	33,0	60,0	33,0	1,33	25,0
4,80	35,0	55,0	35,0	2,73	13,0
5,00	35,0	76,0	35,0	1,93	18,0
5,20	38,0	67,0	38,0	2,80	14,0
5,40	37,0	79,0	37,0	2,80	13,0
5,60	35,0	77,0	35,0	2,20	16,0
5,80	37,0	70,0	37,0	2,00	18,0
6,00	40,0	70,0	40,0	2,80	14,0
6,20	40,0	82,0	40,0	3,40	12,0
6,40	65,0	116,0	65,0	9,27	7,0
6,60	65,0	204,0	65,0	8,20	8,0
6,80	37,0	160,0	37,0	2,00	18,0
7,00	55,0	85,0	55,0	6,00	9,0
7,20	45,0	135,0	45,0	2,00	22,0
7,40	44,0	74,0	44,0	1,67	26,0
7,60	78,0	103,0	78,0	4,67	17,0
7,80	42,0	112,0	42,0	4,47	9,0
8,00	88,0	155,0	88,0	5,33	16,0
8,20	48,0	128,0	48,0	5,33	9,0
8,40	100,0	180,0	100,0	3,00	33,0
8,60	102,0	147,0	102,0	2,53	40,0
8,80	42,0	80,0	42,0	2,27	19,0
9,00	49,0	83,0	49,0	2,53	19,0
9,20	48,0	86,0	48,0	5,73	8,0
9,40	90,0	176,0	90,0	5,33	17,0
9,60	230,0	310,0	230,0	8,67	27,0
9,80	300,0	430,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 417
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Casalduni (BN)
- note : Cert. P001-21-417
- data : 23/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	1,60	----
0,60	10,0	34,0	10,0	1,07	9,0
0,80	14,0	30,0	14,0	1,07	13,0
1,00	12,0	28,0	12,0	0,80	15,0
1,20	8,0	20,0	8,0	0,73	11,0
1,40	10,0	21,0	10,0	0,40	25,0
1,60	14,0	20,0	14,0	1,40	10,0
1,80	22,0	43,0	22,0	1,40	16,0
2,00	15,0	36,0	15,0	1,60	9,0
2,20	48,0	72,0	48,0	2,40	20,0
2,40	28,0	64,0	28,0	2,13	13,0
2,60	25,0	57,0	25,0	2,20	11,0
2,80	32,0	65,0	32,0	2,47	13,0
3,00	28,0	65,0	28,0	2,20	13,0
3,20	33,0	66,0	33,0	2,27	15,0
3,40	33,0	67,0	33,0	2,73	12,0
3,60	39,0	80,0	39,0	2,80	14,0
3,80	69,0	111,0	69,0	3,67	19,0
4,00	53,0	108,0	53,0	2,20	24,0
4,20	72,0	105,0	72,0	3,80	19,0
4,40	59,0	116,0	59,0	3,53	17,0
4,60	48,0	101,0	48,0	4,47	11,0
4,80	63,0	130,0	63,0	3,53	18,0
5,00	61,0	114,0	61,0	3,87	16,0
5,20	68,0	126,0	68,0	5,73	12,0
5,40	70,0	156,0	70,0	3,27	21,0
5,60	150,0	199,0	150,0	4,47	34,0
5,80	153,0	220,0	153,0	5,87	26,0
6,00	139,0	227,0	139,0	6,27	22,0
6,20	98,0	192,0	98,0	7,33	13,0
6,40	180,0	290,0	180,0	8,53	21,0
6,60	189,0	317,0	189,0	5,53	34,0
6,80	220,0	303,0	220,0	8,40	26,0
7,00	176,0	302,0	176,0	6,67	26,0
7,20	300,0	400,0	300,0	9,33	32,0
7,40	210,0	350,0	210,0	8,67	24,0
7,60	300,0	430,0	300,0	9,60	31,0
7,80	296,0	440,0	296,0	5,53	53,0
8,00	317,0	400,0	317,0	12,00	26,0
8,20	280,0	460,0	280,0	10,53	27,0
8,40	302,0	460,0	302,0	9,87	31,0
8,60	352,0	500,0	352,0	9,33	38,0
8,80	360,0	500,0	360,0	11,33	32,0
9,00	380,0	550,0	380,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 418
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Casalduni (BN)
- note : Cert. P001-21-418
- data : 23/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,80	----
0,60	9,0	21,0	9,0	0,53	17,0
0,80	6,0	14,0	6,0	0,40	15,0
1,00	10,0	16,0	10,0	5,27	2,0
1,20	33,0	112,0	33,0	1,40	24,0
1,40	36,0	57,0	36,0	1,27	28,0
1,60	70,0	89,0	70,0	2,33	30,0
1,80	24,0	59,0	24,0	1,47	16,0
2,00	32,0	54,0	32,0	2,73	12,0
2,20	85,0	126,0	85,0	1,80	47,0
2,40	52,0	79,0	52,0	1,80	29,0
2,60	36,0	63,0	36,0	2,47	15,0
2,80	35,0	72,0	35,0	1,60	22,0
3,00	41,0	65,0	41,0	4,67	9,0
3,20	70,0	140,0	70,0	4,00	18,0
3,40	72,0	132,0	72,0	4,53	16,0
3,60	67,0	135,0	67,0	5,67	12,0
3,80	85,0	170,0	85,0	3,67	23,0
4,00	48,0	103,0	48,0	5,47	9,0
4,20	194,0	276,0	194,0	4,73	41,0
4,40	110,0	181,0	110,0	8,00	14,0
4,60	280,0	400,0	280,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 419
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Casalduni (BN)
- note : Cert. P001-21-419
- data : 24/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,80	----
0,60	17,0	29,0	17,0	0,87	20,0
0,80	19,0	32,0	19,0	1,00	19,0
1,00	15,0	30,0	15,0	0,80	19,0
1,20	14,0	26,0	14,0	0,67	21,0
1,40	16,0	26,0	16,0	0,80	20,0
1,60	18,0	30,0	18,0	0,80	22,0
1,80	20,0	32,0	20,0	1,20	17,0
2,00	19,0	37,0	19,0	1,33	14,0
2,20	20,0	40,0	20,0	1,00	20,0
2,40	36,0	51,0	36,0	2,20	16,0
2,60	31,0	64,0	31,0	1,80	17,0
2,80	29,0	56,0	29,0	2,40	12,0
3,00	75,0	111,0	75,0	3,47	22,0
3,20	37,0	89,0	37,0	2,20	17,0
3,40	39,0	72,0	39,0	2,80	14,0
3,60	44,0	86,0	44,0	2,13	21,0
3,80	39,0	71,0	39,0	2,20	18,0
4,00	30,0	63,0	30,0	2,33	13,0
4,20	32,0	67,0	32,0	4,73	7,0
4,40	34,0	105,0	34,0	4,07	8,0
4,60	36,0	97,0	36,0	3,73	10,0
4,80	54,0	110,0	54,0	4,80	11,0
5,00	90,0	162,0	90,0	4,80	19,0
5,20	64,0	136,0	64,0	4,53	14,0
5,40	54,0	122,0	54,0	6,07	9,0
5,60	49,0	140,0	49,0	4,73	10,0
5,80	45,0	116,0	45,0	3,33	14,0
6,00	112,0	162,0	112,0	8,00	14,0
6,20	220,0	340,0	220,0	5,33	41,0
6,40	280,0	360,0	280,0	13,33	21,0
6,60	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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PROVA PENETROMETRICA STATICA — CPT 420
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Casalduni (BN)
- note : Cert. P001-21-420
- data : 24/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,47	----
0,60	16,0	23,0	16,0	0,27	60,0
0,80	16,0	20,0	16,0	0,67	24,0
1,00	17,0	27,0	17,0	0,93	18,0
1,20	18,0	32,0	18,0	0,67	27,0
1,40	21,0	31,0	21,0	1,47	14,0
1,60	35,0	57,0	35,0	1,00	35,0
1,80	75,0	90,0	75,0	2,40	31,0
2,00	32,0	68,0	32,0	3,13	10,0
2,20	25,0	72,0	25,0	3,33	8,0
2,40	42,0	92,0	42,0	2,93	14,0
2,60	35,0	79,0	35,0	2,60	13,0
2,80	36,0	75,0	36,0	1,87	19,0
3,00	35,0	63,0	35,0	2,33	15,0
3,20	30,0	65,0	30,0	1,73	17,0
3,40	40,0	66,0	40,0	2,47	16,0
3,60	38,0	75,0	38,0	2,13	18,0
3,80	56,0	88,0	56,0	3,53	16,0
4,00	37,0	90,0	37,0	2,67	14,0
4,20	46,0	86,0	46,0	3,67	13,0
4,40	56,0	111,0	56,0	2,47	23,0
4,60	73,0	110,0	73,0	4,80	15,0
4,80	53,0	125,0	53,0	4,60	12,0
5,00	66,0	135,0	66,0	4,53	15,0
5,20	37,0	105,0	37,0	4,00	9,0
5,40	50,0	110,0	50,0	4,07	12,0
5,60	46,0	107,0	46,0	2,73	17,0
5,80	45,0	86,0	45,0	3,53	13,0
6,00	46,0	99,0	46,0	4,00	12,0
6,20	45,0	105,0	45,0	3,33	14,0
6,40	60,0	110,0	60,0	5,40	11,0
6,60	53,0	134,0	53,0	5,00	11,0
6,80	50,0	125,0	50,0	4,87	10,0
7,00	51,0	124,0	51,0	4,87	10,0
7,20	63,0	136,0	63,0	4,47	14,0
7,40	46,0	113,0	46,0	3,40	14,0
7,60	48,0	99,0	48,0	5,67	8,0
7,80	60,0	145,0	60,0	7,20	8,0
8,00	82,0	190,0	82,0	5,33	15,0
8,20	260,0	340,0	260,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

Rifer. 001-21

PROVA PENETROMETRICA STATICA — CPT 424
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lupo (BN)
- note : Cert. P001-21-424
- data : 26/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs	Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----	5,20	109,0	227,0	109,0	5,33	20,0
0,40	----	----	--	1,20	----	5,40	112,0	192,0	112,0	7,00	16,0
0,60	10,0	28,0	10,0	0,80	12,0	5,60	73,0	178,0	73,0	5,87	12,0
0,80	10,0	22,0	10,0	0,47	21,0	5,80	52,0	140,0	52,0	3,80	14,0
1,00	18,0	25,0	18,0	1,00	18,0	**6,00**	65,0	122,0	65,0	5,00	13,0
1,20	43,0	58,0	43,0	1,27	34,0	6,20	125,0	200,0	125,0	5,73	22,0
1,40	19,0	38,0	19,0	0,93	20,0	6,40	67,0	153,0	67,0	4,13	16,0
1,60	21,0	35,0	21,0	2,20	10,0	6,60	70,0	132,0	70,0	5,33	13,0
1,80	32,0	65,0	32,0	0,93	34,0	6,80	78,0	158,0	78,0	3,13	25,0
2,00	31,0	45,0	31,0	2,47	13,0	**7,00**	84,0	131,0	84,0	9,87	9,0
2,20	26,0	63,0	26,0	2,07	13,0	7,20	217,0	365,0	217,0	10,53	21,0
2,40	37,0	68,0	37,0	2,13	17,0	7,40	122,0	280,0	122,0	7,07	17,0
2,60	46,0	78,0	46,0	2,20	21,0	7,60	76,0	182,0	76,0	6,40	12,0
2,80	54,0	87,0	54,0	4,73	11,0	7,80	74,0	170,0	74,0	2,73	27,0
3,00	45,0	116,0	45,0	6,47	7,0	**8,00**	85,0	126,0	85,0	4,87	17,0
3,20	93,0	190,0	93,0	4,40	21,0	8,20	63,0	136,0	63,0	4,60	14,0
3,40	117,0	183,0	117,0	5,53	21,0	8,40	67,0	136,0	67,0	4,67	14,0
3,60	48,0	131,0	48,0	3,47	14,0	8,60	91,0	161,0	91,0	5,67	16,0
3,80	44,0	96,0	44,0	3,53	12,0	8,80	96,0	181,0	96,0	5,40	18,0
4,00	63,0	116,0	63,0	4,13	15,0	**9,00**	195,0	276,0	195,0	7,73	25,0
4,20	73,0	135,0	73,0	3,80	19,0	9,20	84,0	200,0	84,0	7,13	12,0
4,40	50,0	107,0	50,0	6,07	8,0	9,40	95,0	202,0	95,0	6,73	14,0
4,60	51,0	142,0	51,0	5,47	9,0	9,60	80,0	181,0	80,0	7,20	11,0
4,80	99,0	181,0	99,0	6,53	15,0	9,80	69,0	177,0	69,0	7,27	9,0
5,00	216,0	314,0	216,0	7,87	27,0	**10,00**	85,0	194,0	85,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 425
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : San Lorenzo Maggiore (BN)
- note : Cert. P001-21-425
- data : 26/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,67	----
0,60	14,0	24,0	14,0	0,67	21,0
0,80	17,0	27,0	17,0	1,07	16,0
1,00	19,0	35,0	19,0	1,13	17,0
1,20	20,0	37,0	20,0	1,40	14,0
1,40	59,0	80,0	59,0	2,87	21,0
1,60	34,0	77,0	34,0	7,73	4,0
1,80	34,0	150,0	34,0	3,00	11,0
2,00	65,0	110,0	65,0	2,53	26,0
2,20	65,0	103,0	65,0	3,07	21,0
2,40	49,0	95,0	49,0	12,67	4,0
2,60	230,0	420,0	230,0	12,00	19,0
2,80	250,0	430,0	250,0	14,67	17,0
3,00	260,0	480,0	260,0	10,67	24,0
3,20	280,0	440,0	280,0	11,33	25,0
3,40	280,0	450,0	280,0	12,00	23,0
3,60	290,0	470,0	290,0	13,33	22,0
3,80	300,0	500,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 426
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-429
- data : 29/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	Letture di campagna laterale	qc kg/cm²	fs kg/cm²	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,40	----
0,60	15,0	21,0	15,0	0,67	22,0
0,80	16,0	26,0	16,0	0,60	27,0
1,00	15,0	24,0	15,0	1,00	15,0
1,20	18,0	33,0	18,0	1,47	12,0
1,40	22,0	44,0	22,0	1,20	18,0
1,60	27,0	45,0	27,0	1,07	25,0
1,80	22,0	38,0	22,0	1,07	21,0
2,00	20,0	36,0	20,0	1,47	14,0
2,20	27,0	49,0	27,0	1,13	24,0
2,40	35,0	52,0	35,0	1,40	25,0
2,60	36,0	57,0	36,0	1,13	32,0
2,80	41,0	58,0	41,0	0,80	51,0
3,00	32,0	44,0	32,0	1,73	18,0
3,20	34,0	60,0	34,0	1,87	18,0
3,40	37,0	65,0	37,0	2,60	14,0
3,60	42,0	81,0	42,0	2,93	14,0
3,80	40,0	84,0	40,0	2,13	19,0
4,00	45,0	77,0	45,0	2,33	19,0
4,20	47,0	82,0	47,0	2,20	21,0
4,40	51,0	84,0	51,0	2,27	23,0
4,60	54,0	88,0	54,0	2,27	24,0
4,80	66,0	100,0	66,0	3,73	18,0
5,00	68,0	124,0	68,0	3,60	19,0
5,20	68,0	122,0	68,0	5,73	12,0
5,40	45,0	131,0	45,0	4,40	10,0
5,60	54,0	120,0	54,0	4,73	11,0
5,80	56,0	127,0	56,0	4,93	11,0
6,00	58,0	132,0	58,0	5,40	11,0
6,20	61,0	142,0	61,0	2,67	23,0
6,40	58,0	98,0	58,0	2,67	22,0
6,60	56,0	96,0	56,0	1,67	34,0
6,80	62,0	87,0	62,0	2,07	30,0
7,00	64,0	95,0	64,0	2,33	27,0
7,20	66,0	101,0	66,0	3,60	18,0
7,40	67,0	121,0	67,0	3,93	17,0
7,60	129,0	188,0	129,0	2,87	45,0
7,80	132,0	175,0	132,0	4,47	30,0
8,00	137,0	204,0	137,0	6,00	23,0
8,20	175,0	265,0	175,0	5,07	35,0
8,40	181,0	257,0	181,0	6,00	30,0
8,60	220,0	310,0	220,0	10,20	22,0
8,80	227,0	380,0	227,0	8,67	26,0
9,00	260,0	390,0	260,0	10,00	26,0
9,20	300,0	450,0	300,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

PROVA PENETROMETRICA STATICA — CPT 427
LETTURE DI CAMPAGNA / VALORI DI RESISTENZA

2.01PG05-096

- committente : VIANINI LAVORI Spa
- lavoro : Utilizzo idropotabile acque invaso Campolattaro
- località : Guardia Sanframondi (BN)
- note : Cert. P001-21-427
- data : 29/03/2021
- quota inizio : Piano Campagna
- prof. falda : Falda non rilevata
- pagina : 1

Prof. m	Letture di campagna punta	laterale	qc kg/cm²	fs	qc/fs
0,20	----	----	--	------	----
0,40	----	----	--	0,27	----
0,60	8,0	12,0	8,0	0,33	24,0
0,80	10,0	15,0	10,0	0,53	19,0
1,00	10,0	18,0	10,0	0,73	14,0
1,20	10,0	21,0	10,0	0,87	12,0
1,40	15,0	28,0	15,0	0,47	32,0
1,60	19,0	26,0	19,0	0,80	24,0
1,80	12,0	24,0	12,0	0,73	16,0
2,00	12,0	23,0	12,0	1,13	11,0
2,20	14,0	31,0	14,0	1,47	10,0
2,40	20,0	42,0	20,0	1,60	12,0
2,60	16,0	40,0	16,0	1,47	11,0
2,80	14,0	36,0	14,0	1,33	10,0
3,00	15,0	35,0	15,0	1,13	13,0
3,20	16,0	33,0	16,0	1,20	13,0
3,40	16,0	34,0	16,0	1,07	15,0
3,60	12,0	28,0	12,0	0,73	16,0
3,80	14,0	25,0	14,0	0,93	15,0
4,00	16,0	30,0	16,0	0,93	17,0
4,20	18,0	32,0	18,0	1,07	17,0
4,40	22,0	38,0	22,0	0,87	25,0
4,60	23,0	36,0	23,0	0,73	31,0
4,80	24,0	35,0	24,0	1,00	24,0
5,00	27,0	42,0	27,0	1,07	25,0
5,20	28,0	44,0	28,0	0,93	30,0
5,40	25,0	39,0	25,0	0,93	27,0
5,60	27,0	41,0	27,0	1,47	18,0
5,80	28,0	50,0	28,0	1,67	17,0
6,00	27,0	52,0	27,0	1,80	15,0
6,20	31,0	58,0	31,0	1,87	17,0
6,40	30,0	58,0	30,0	1,80	17,0
6,60	28,0	55,0	28,0	1,53	18,0
6,80	36,0	59,0	36,0	1,13	32,0
7,00	37,0	54,0	37,0	1,40	26,0
7,20	33,0	54,0	33,0	1,20	27,0
7,40	44,0	62,0	44,0	0,87	51,0
7,60	47,0	60,0	47,0	1,13	41,0
7,80	41,0	58,0	41,0	1,53	27,0
8,00	38,0	61,0	38,0	1,47	26,0
8,20	50,0	72,0	50,0	2,07	24,0
8,40	53,0	84,0	53,0	1,87	28,0
8,60	63,0	91,0	63,0	2,20	29,0
8,80	65,0	98,0	65,0	1,93	34,0
9,00	71,0	100,0	71,0	1,87	38,0
9,20	74,0	102,0	74,0	1,40	53,0
9,40	89,0	110,0	89,0	2,87	31,0
9,60	77,0	120,0	77,0	1,93	40,0
9,80	72,0	101,0	72,0	3,20	22,0
10,00	78,0	126,0	78,0	3,47	22,0
10,20	81,0	133,0	81,0	-----	----

- PENETROMETRO STATICO tipo PAGANI da 10/20t
- COSTANTE DI TRASFORMAZIONE Ct = 10 - Velocità Avanzamento punta 2 cm/s
- punta meccanica tipo Begemann ø = 35.7 mm (area punta 10 cm² - apertura 60°)
- manicotto laterale (superficie 150 cm²)

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

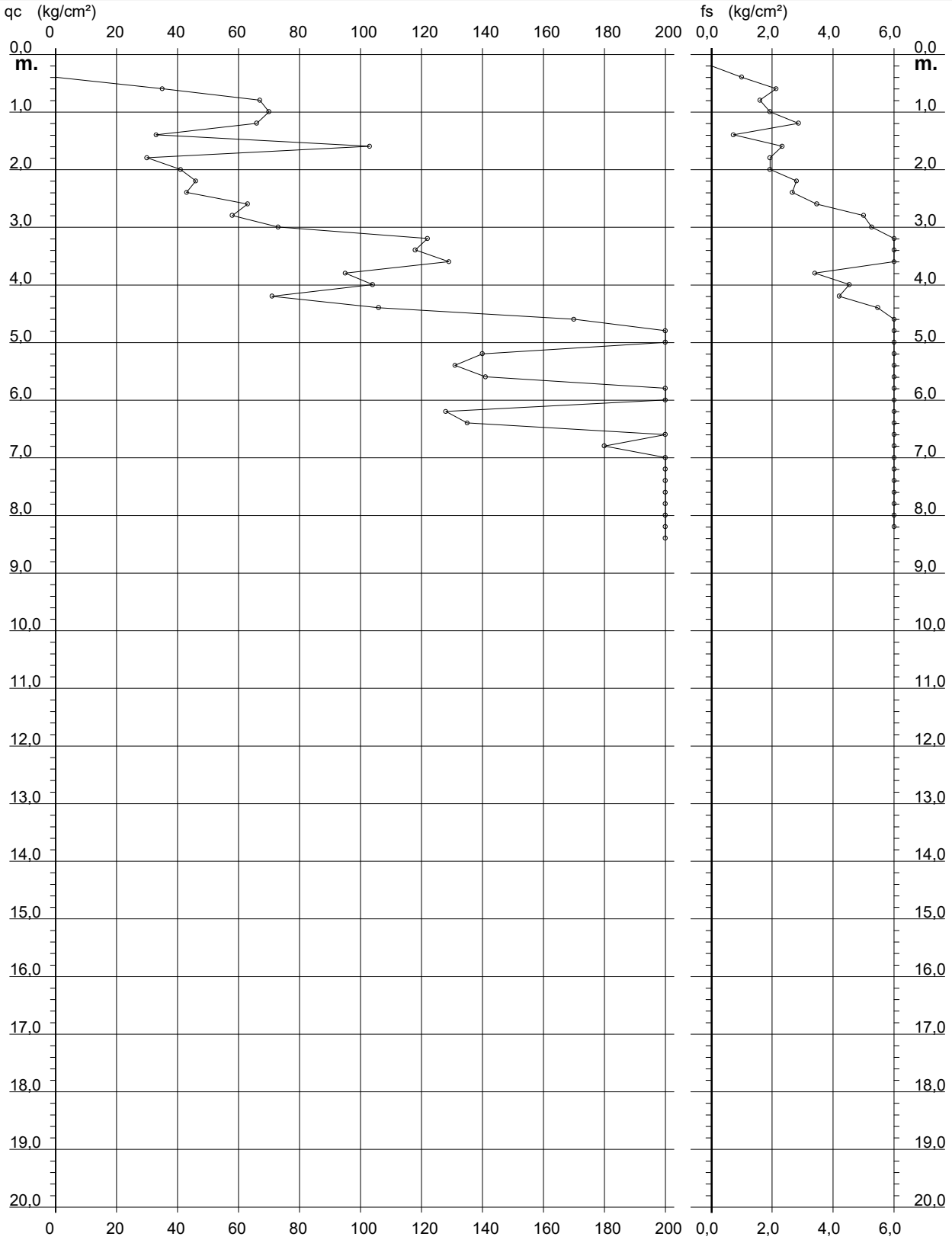
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 066

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-066	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

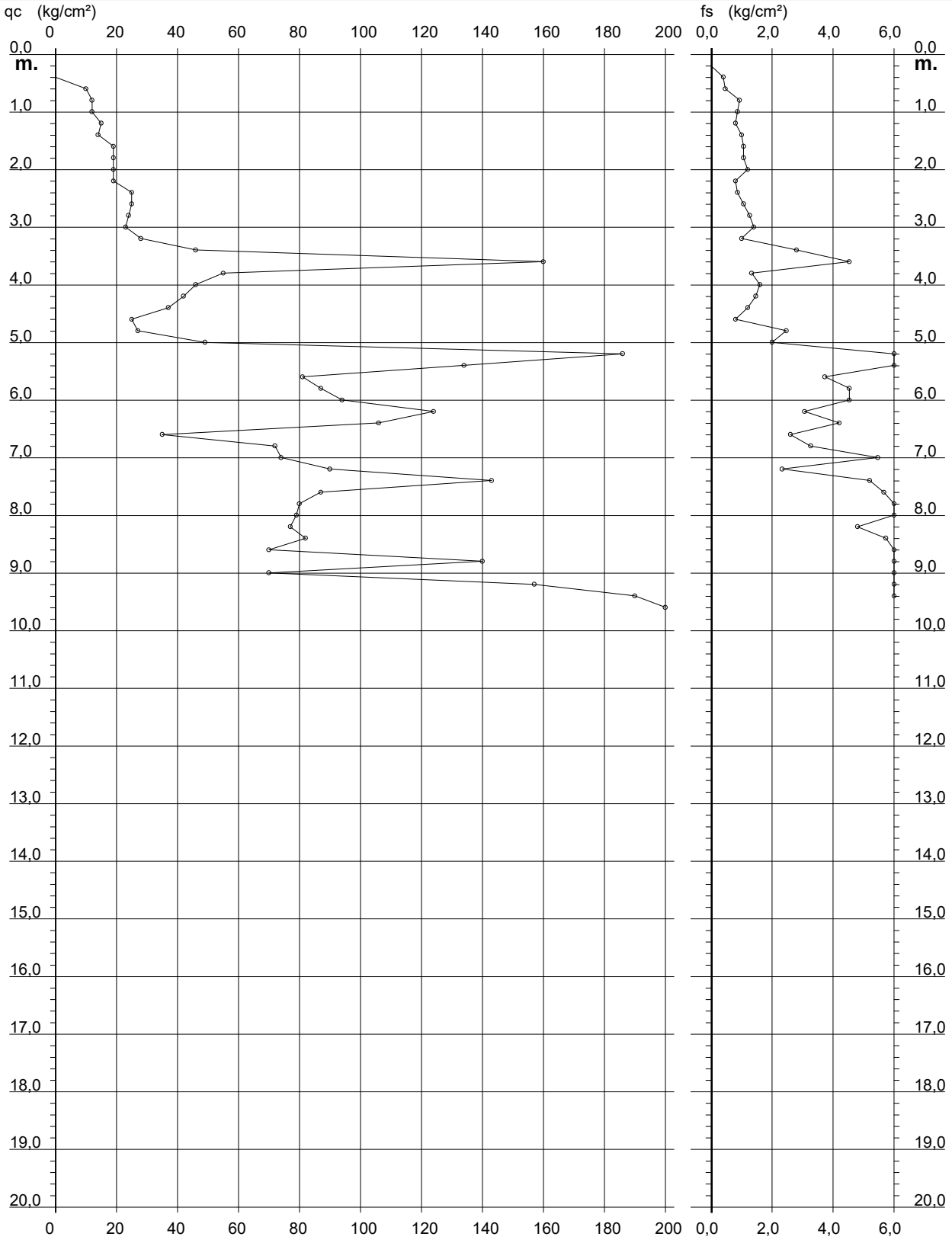
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 064

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-064	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

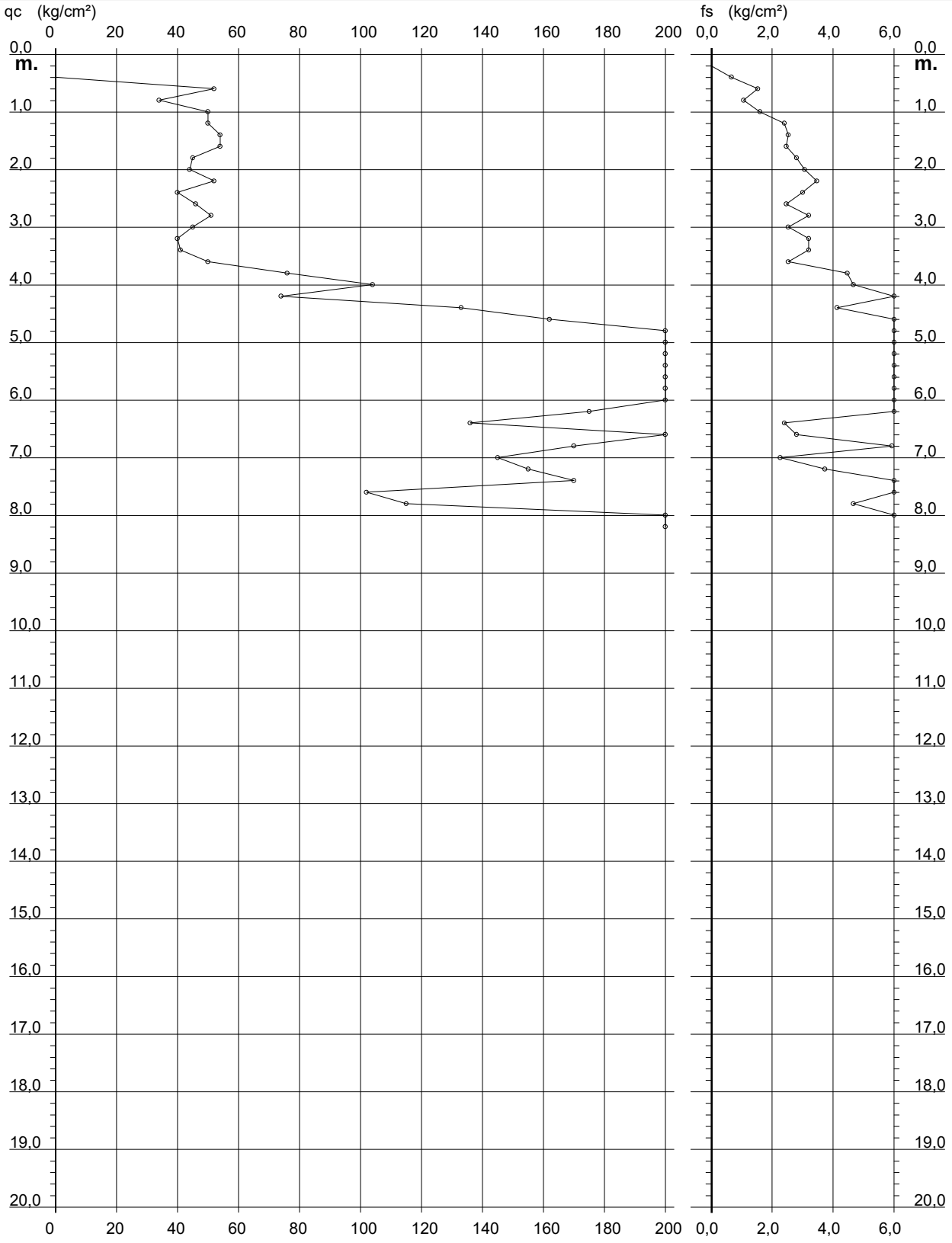
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 065

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-065	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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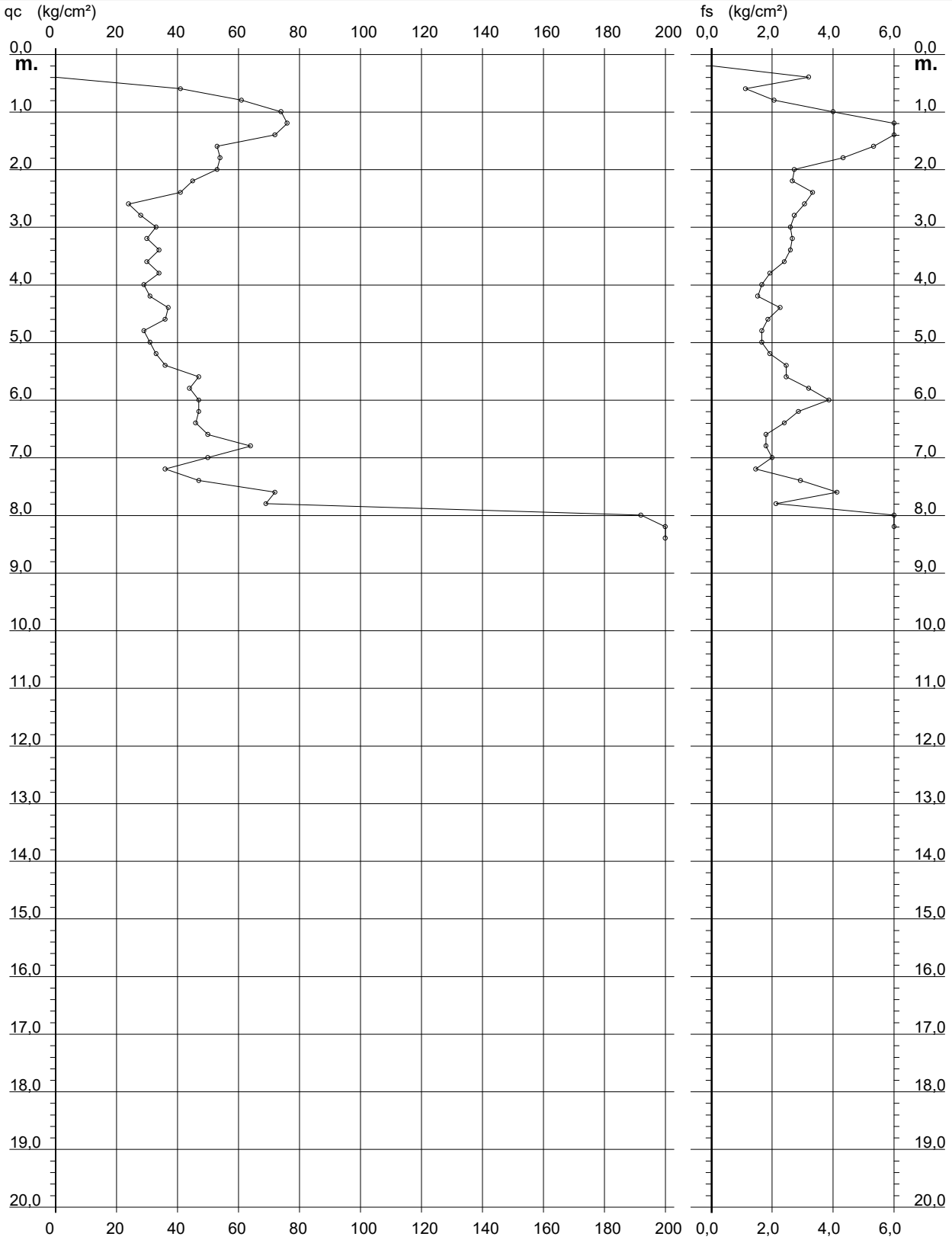
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 061

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-061	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

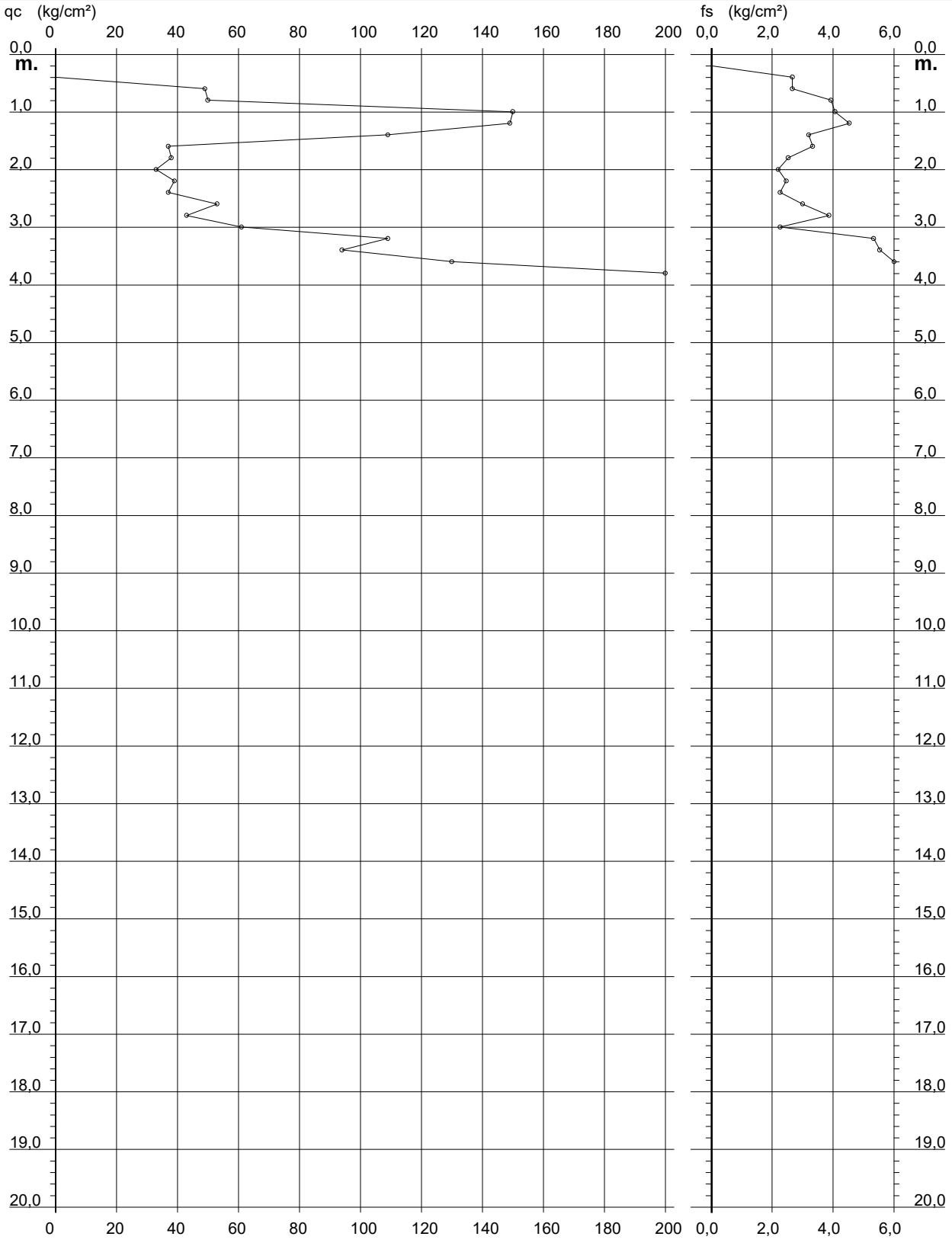
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 060

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-060	- scala vert.:	1 : 100



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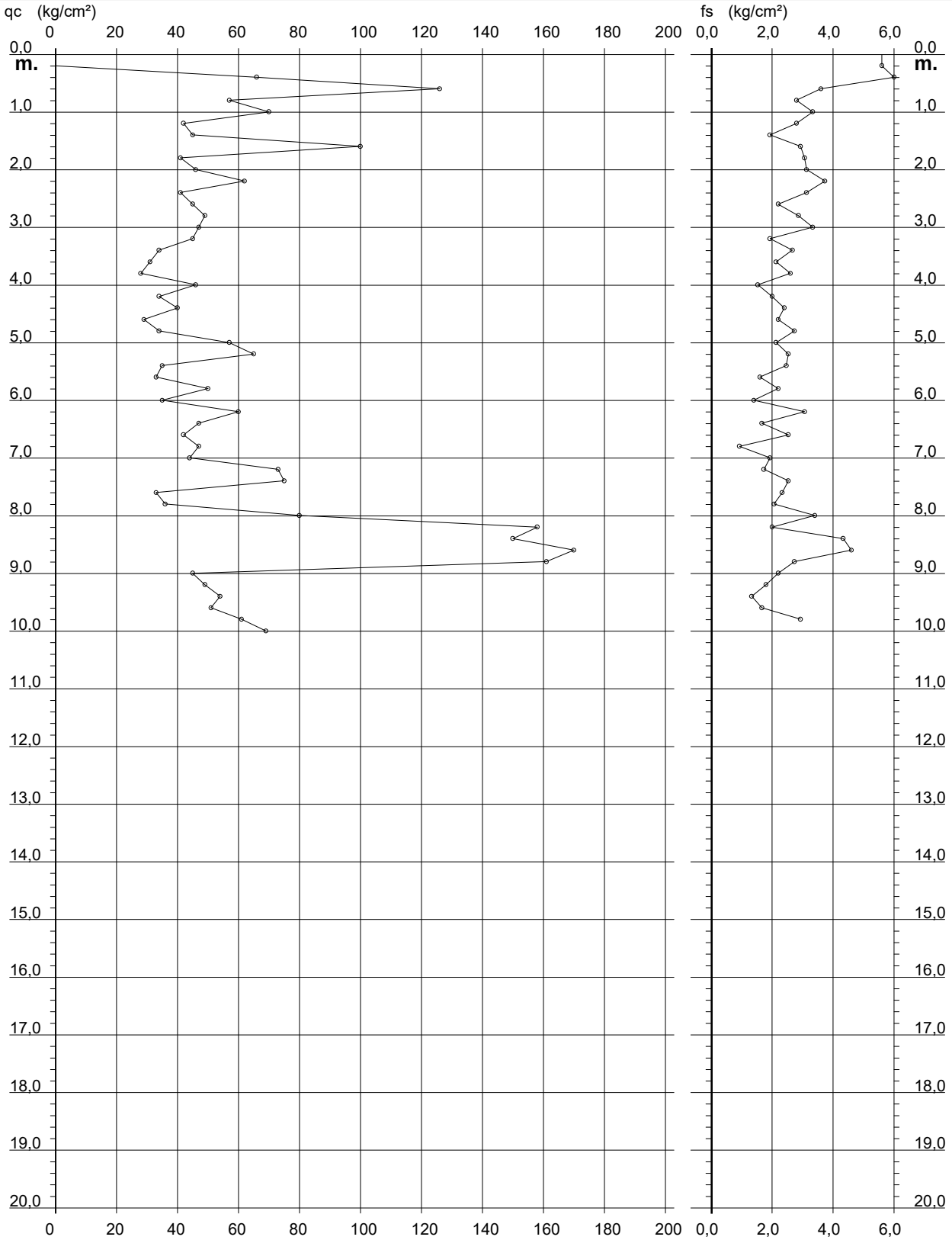
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 059

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-059	- scala vert.:	1 : 100



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Via V. Emanuele, 43 - 82010 Paolisi (BN)

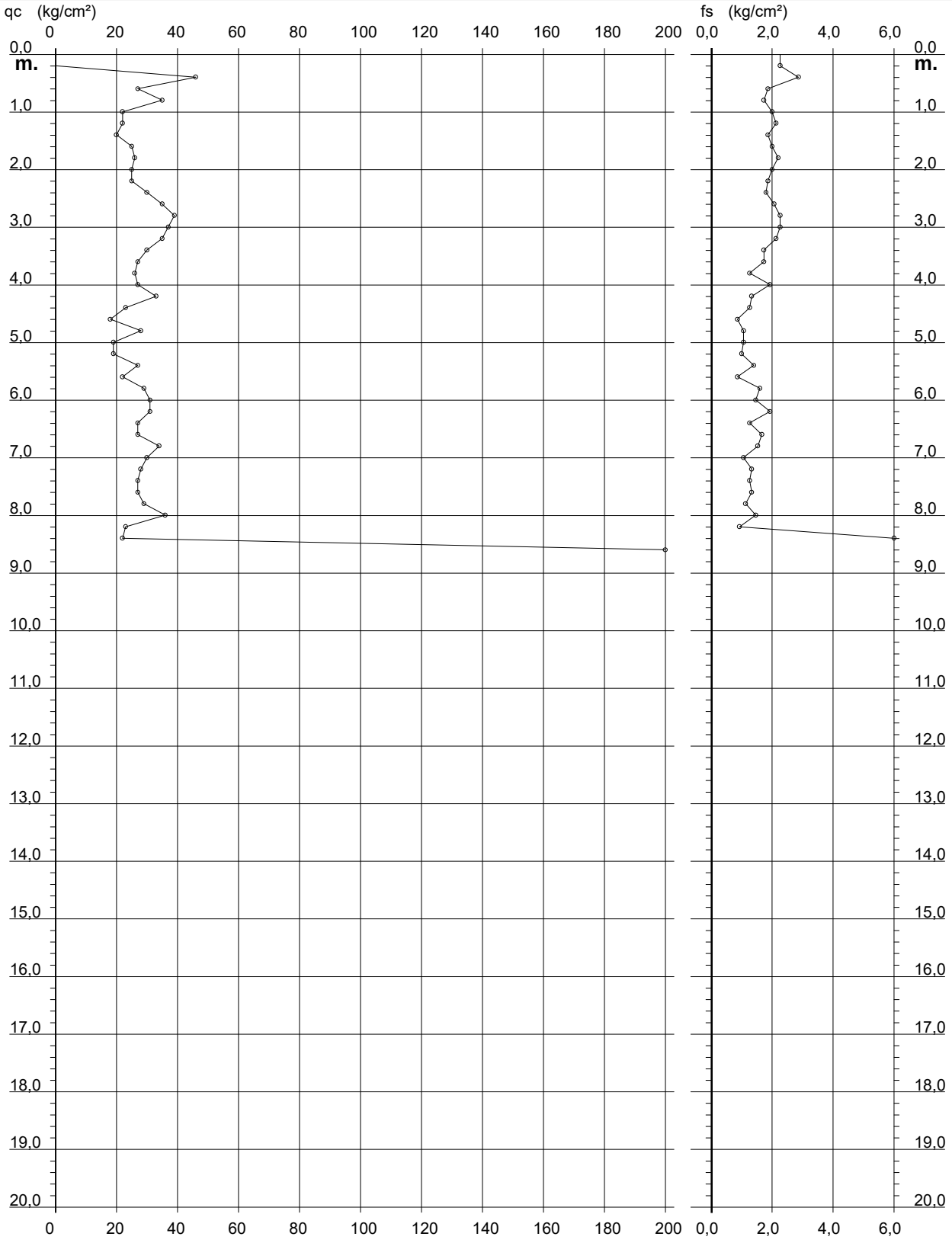
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 056

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-056	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

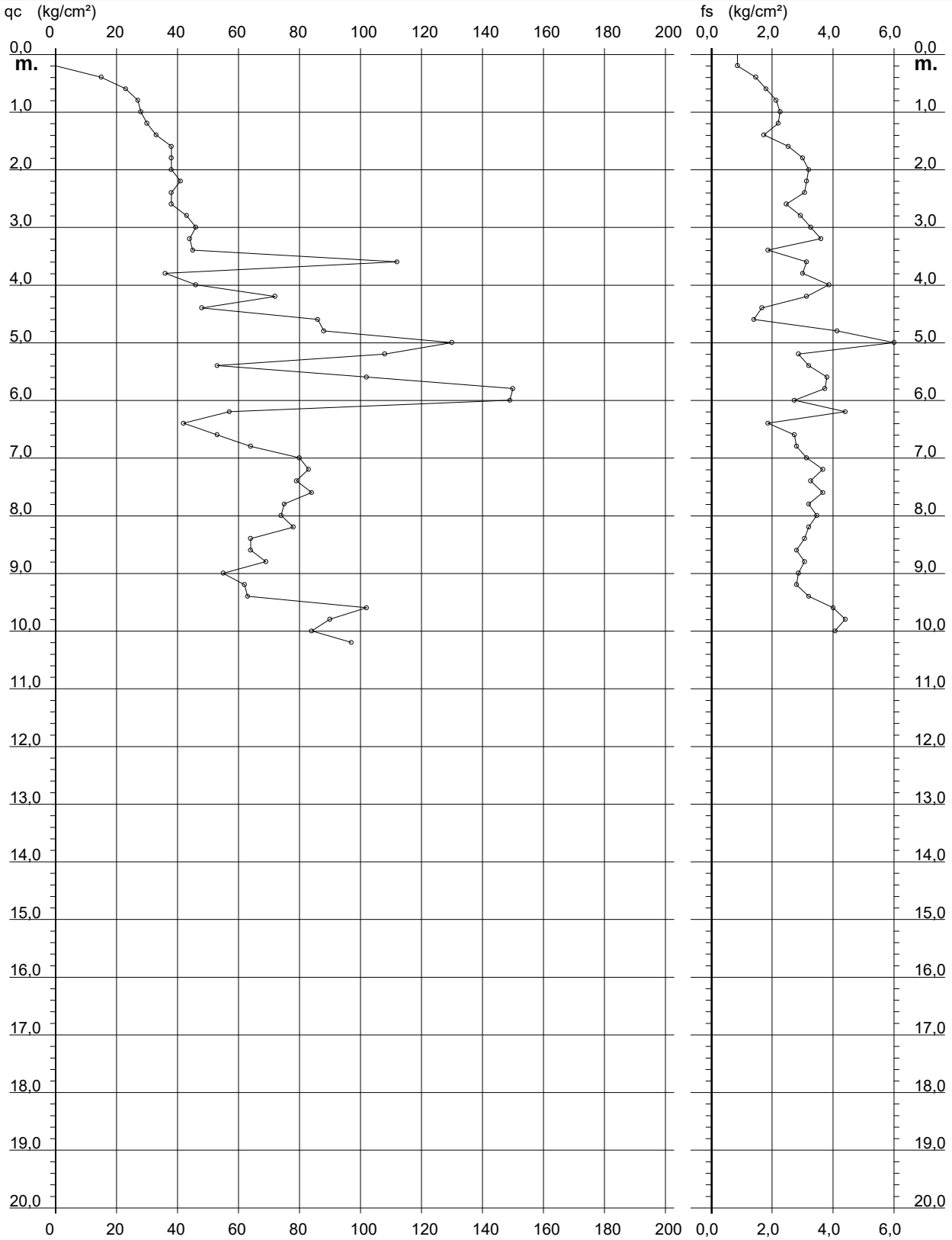
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 057

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	01/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-057	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

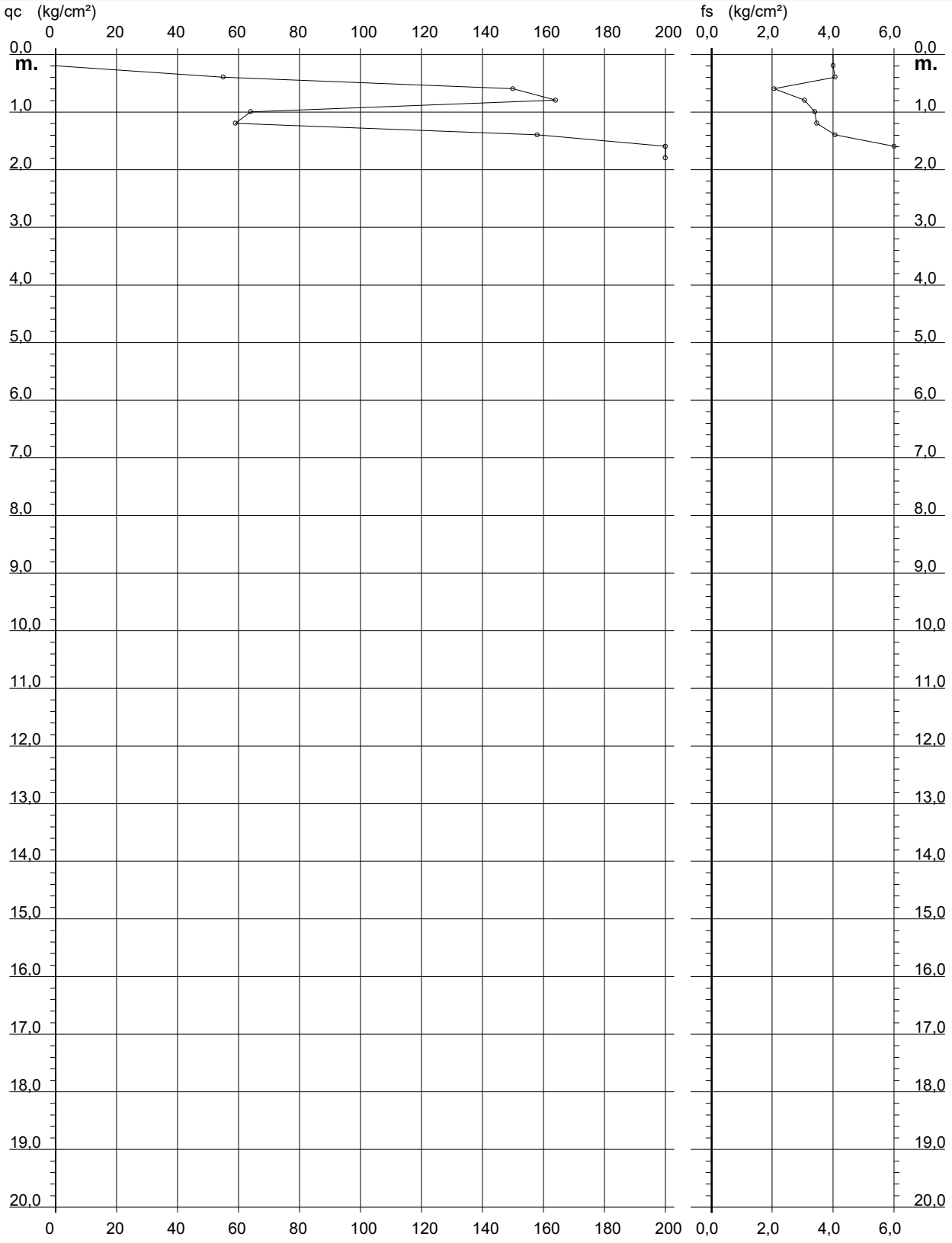
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 058

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	31/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-058	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

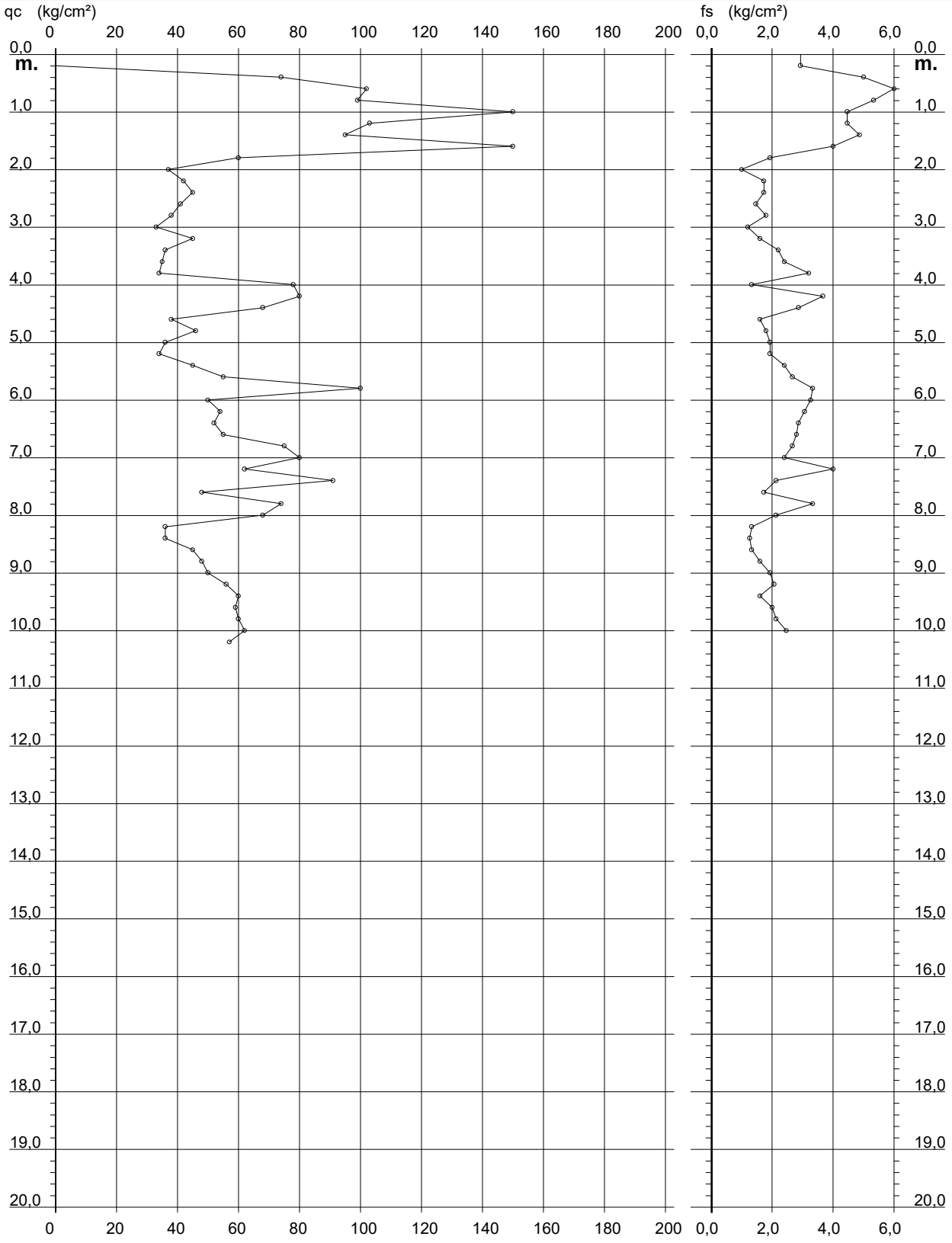
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 055

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	31/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-055	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

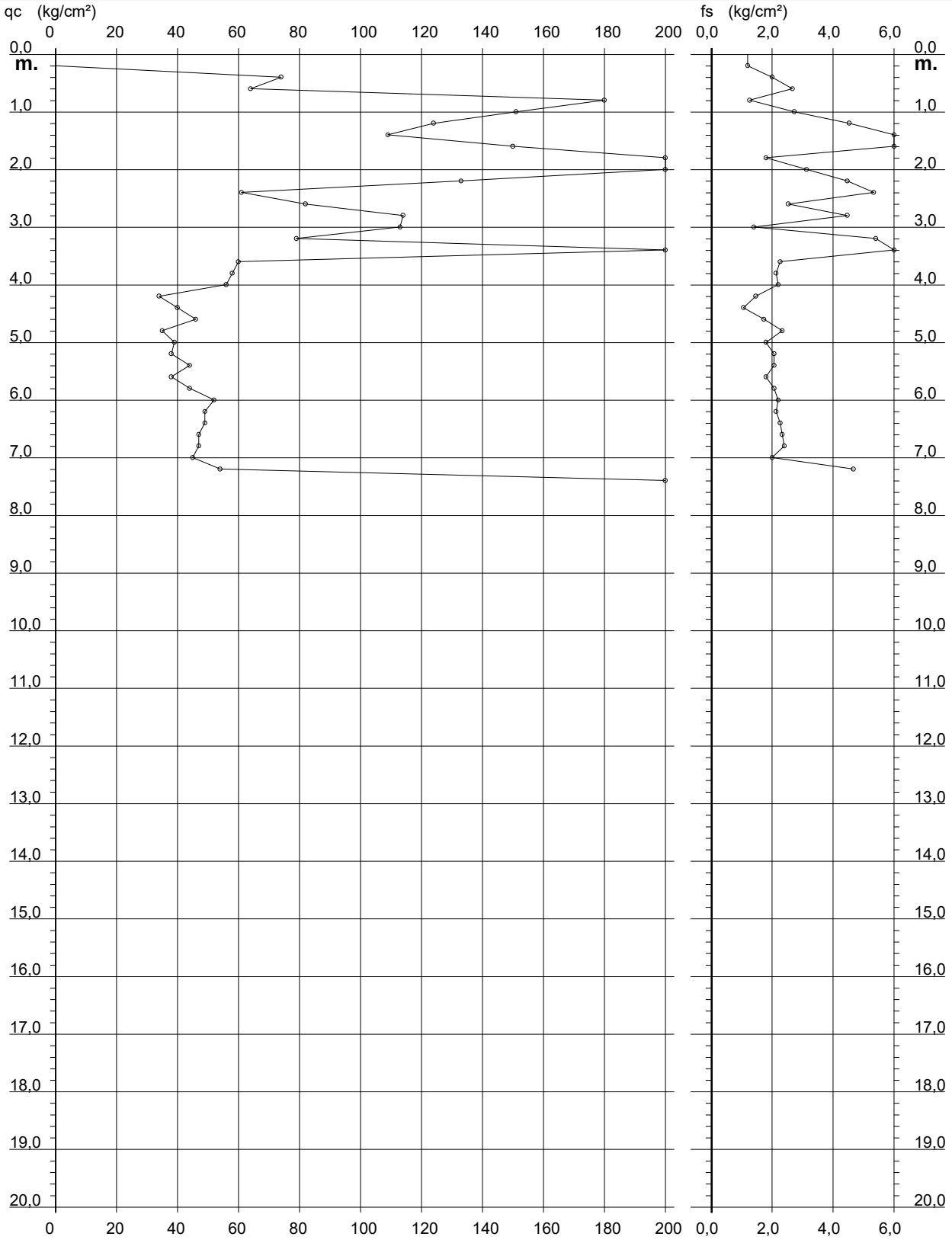
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 052

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	31/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-052	- scala vert.:	1 : 100



TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

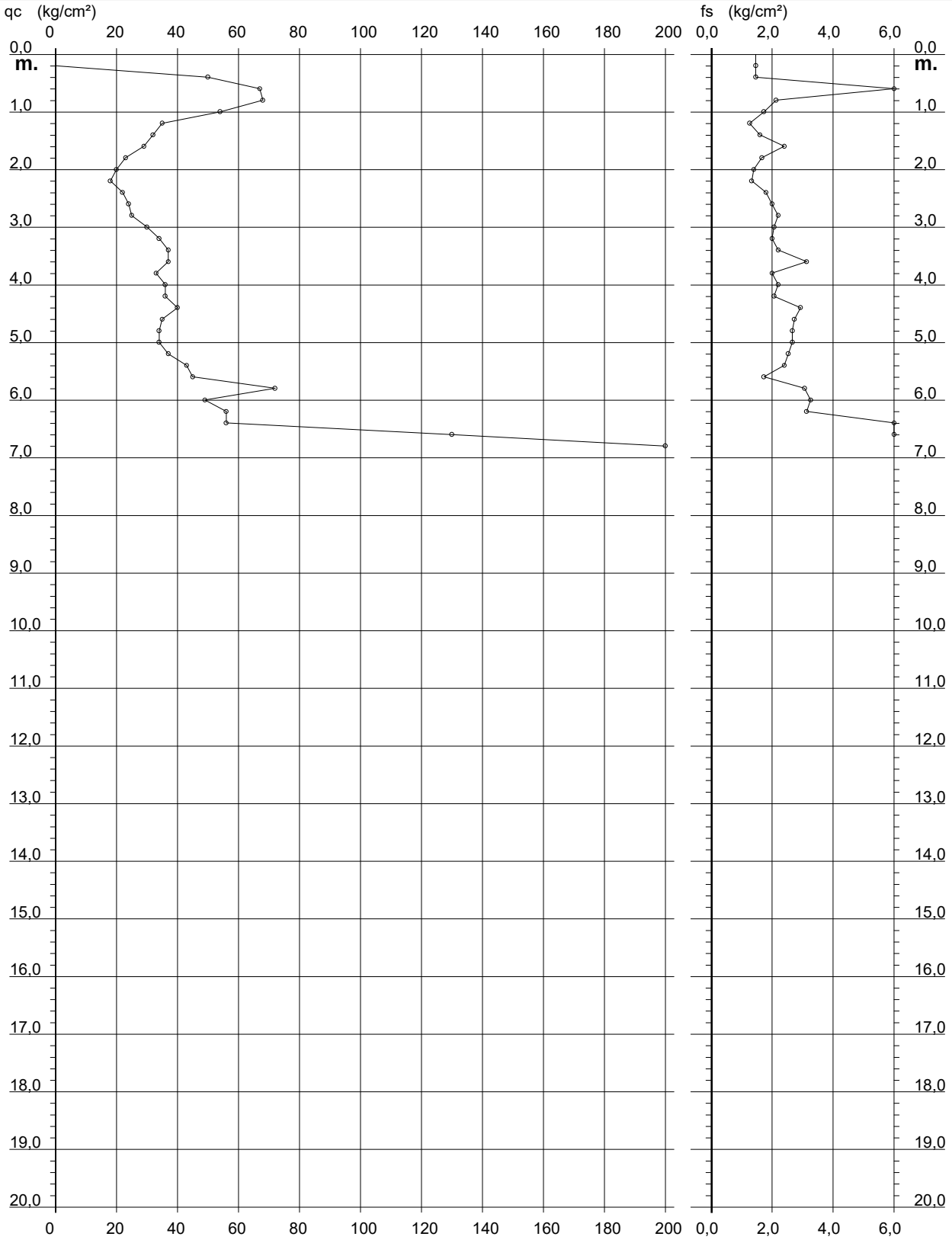
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 051

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	31/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-051	- scala vert.:	1 : 100



TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

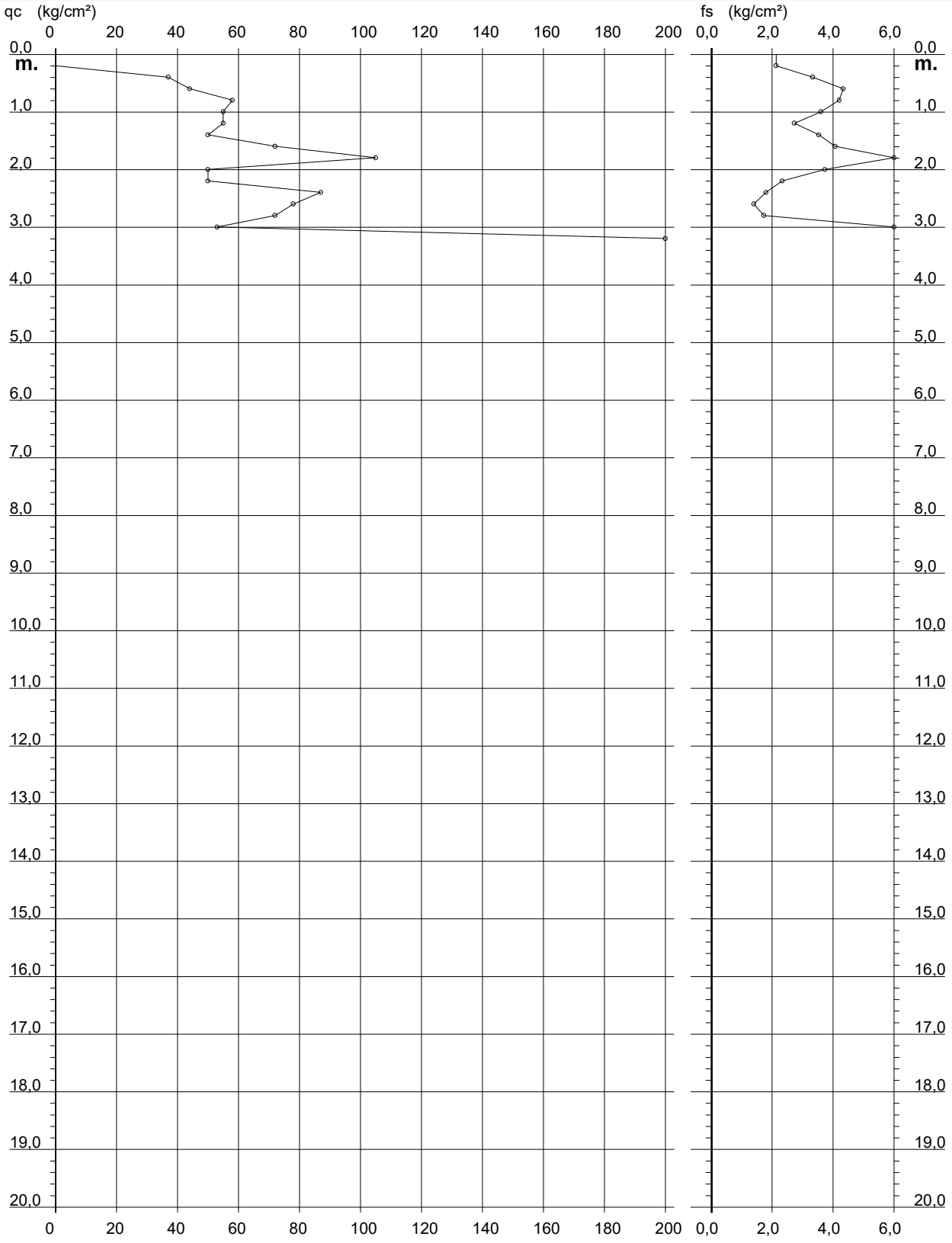
Rifer. 003-20

PROVA PENETROMETRICA STATICA DIAGRAMMA DI RESISTENZA

CPT 053

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	31/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-053	- scala vert.:	1 : 100



TECNOGEO S.r.l.
Indagini geologiche ed ambientali
Via V. Emanuele, 43 - 82010 Paolisi (BN)

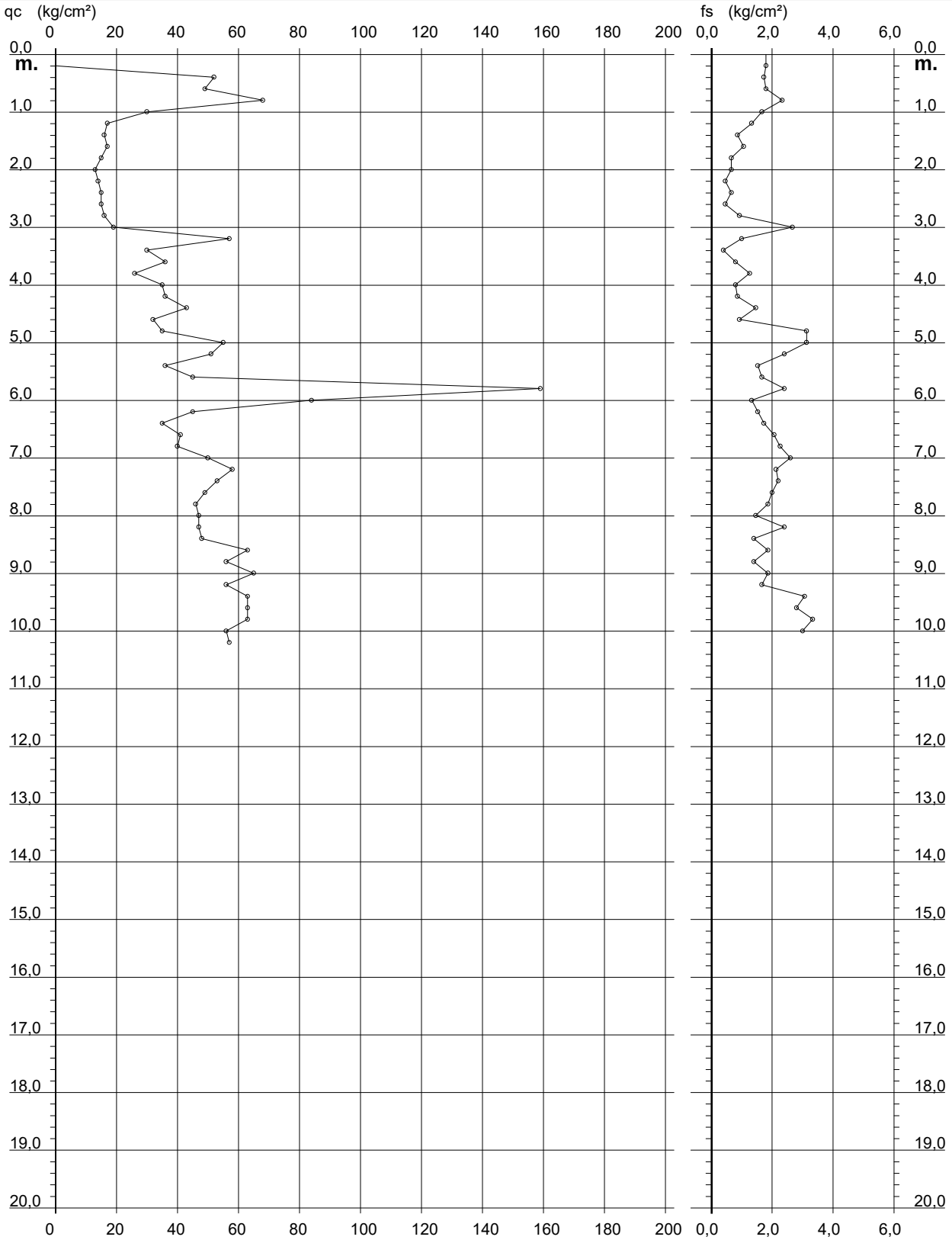
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 050

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	29/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-050	- scala vert.:	1 : 100



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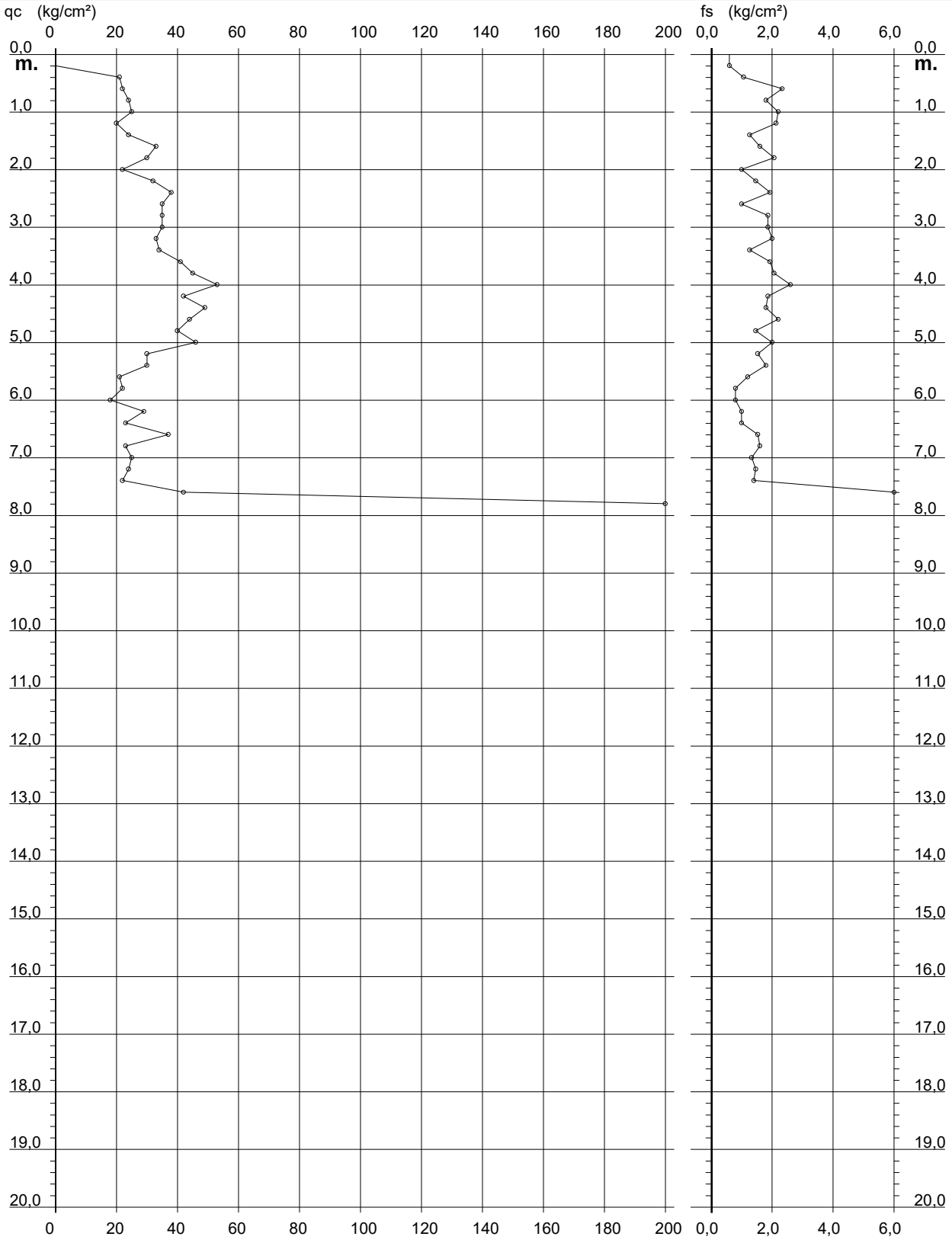
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 049

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	29/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-049	- scala vert.:	1 : 100



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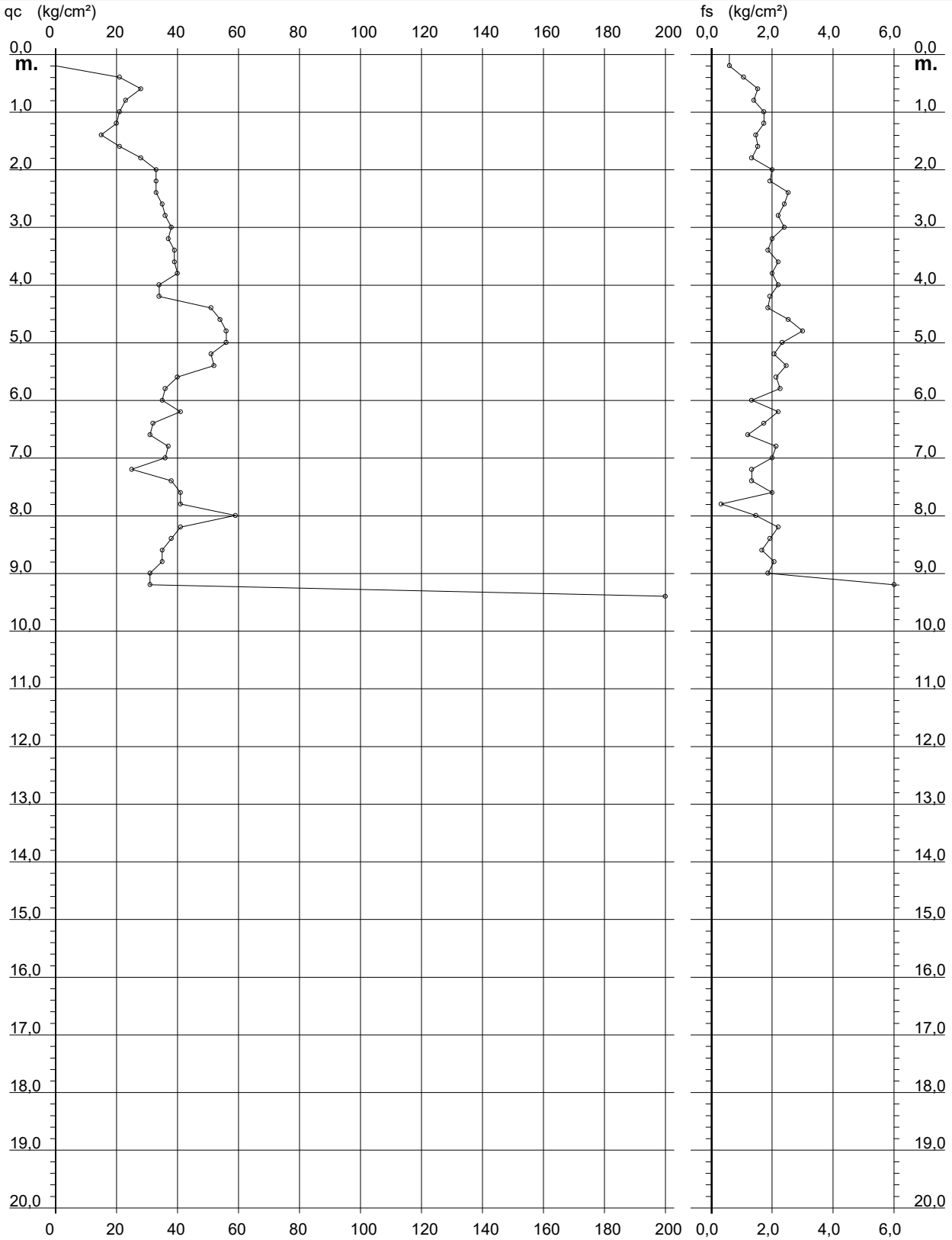
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 048

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	29/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-048	- scala vert.:	1 : 100



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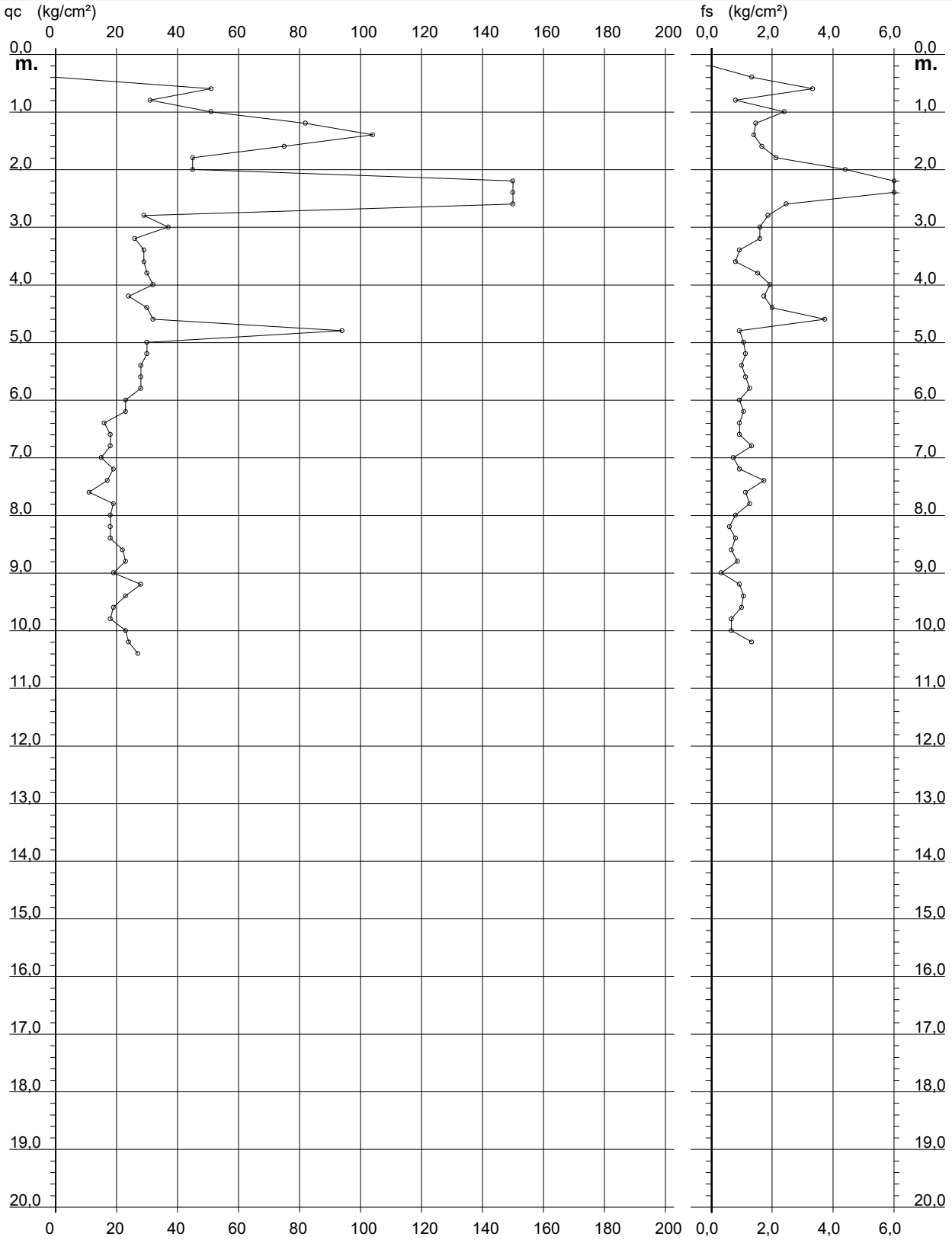
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 047

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	29/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-047	- scala vert.:	1 : 100



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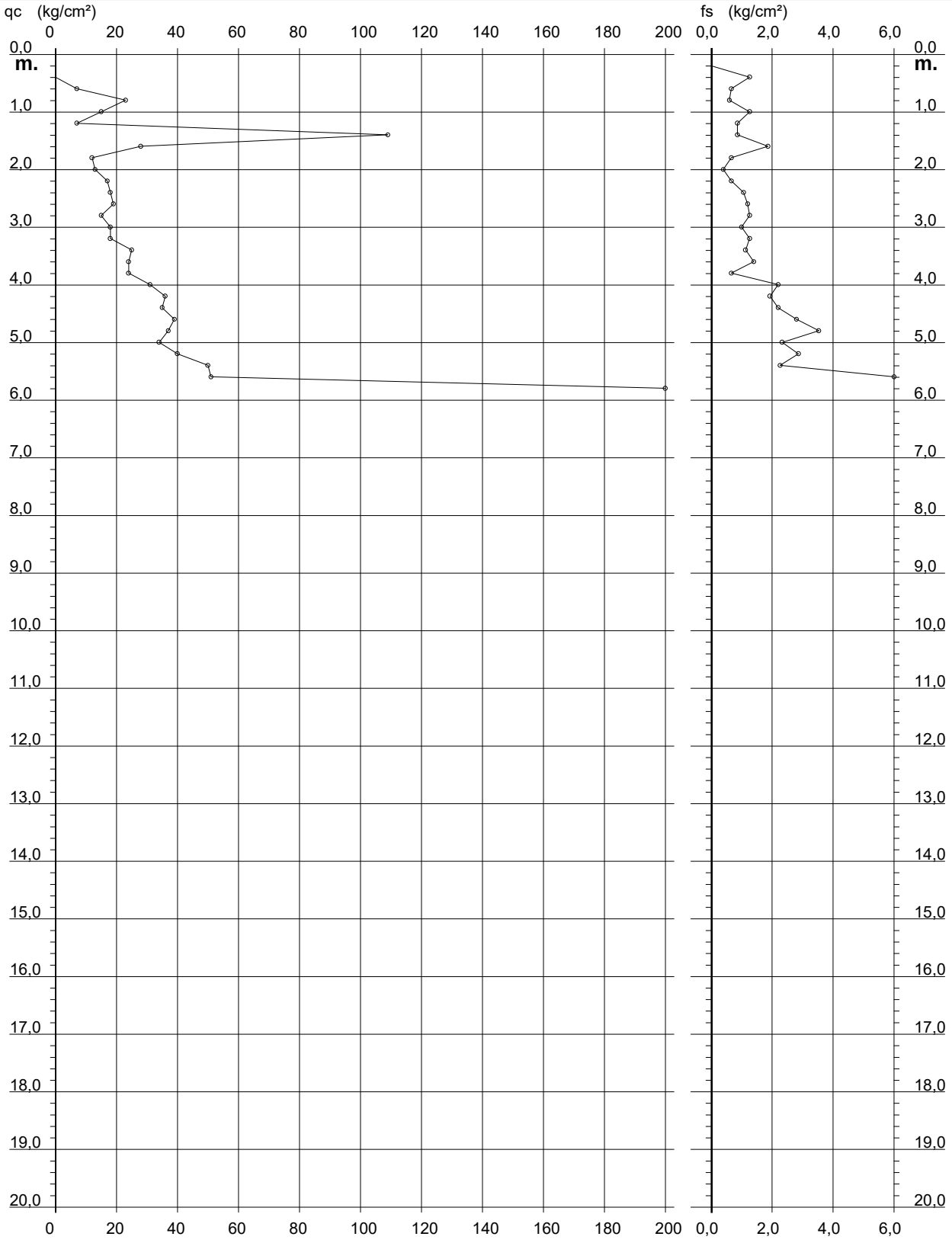
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 046

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	29/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-046	- scala vert.:	1 : 100



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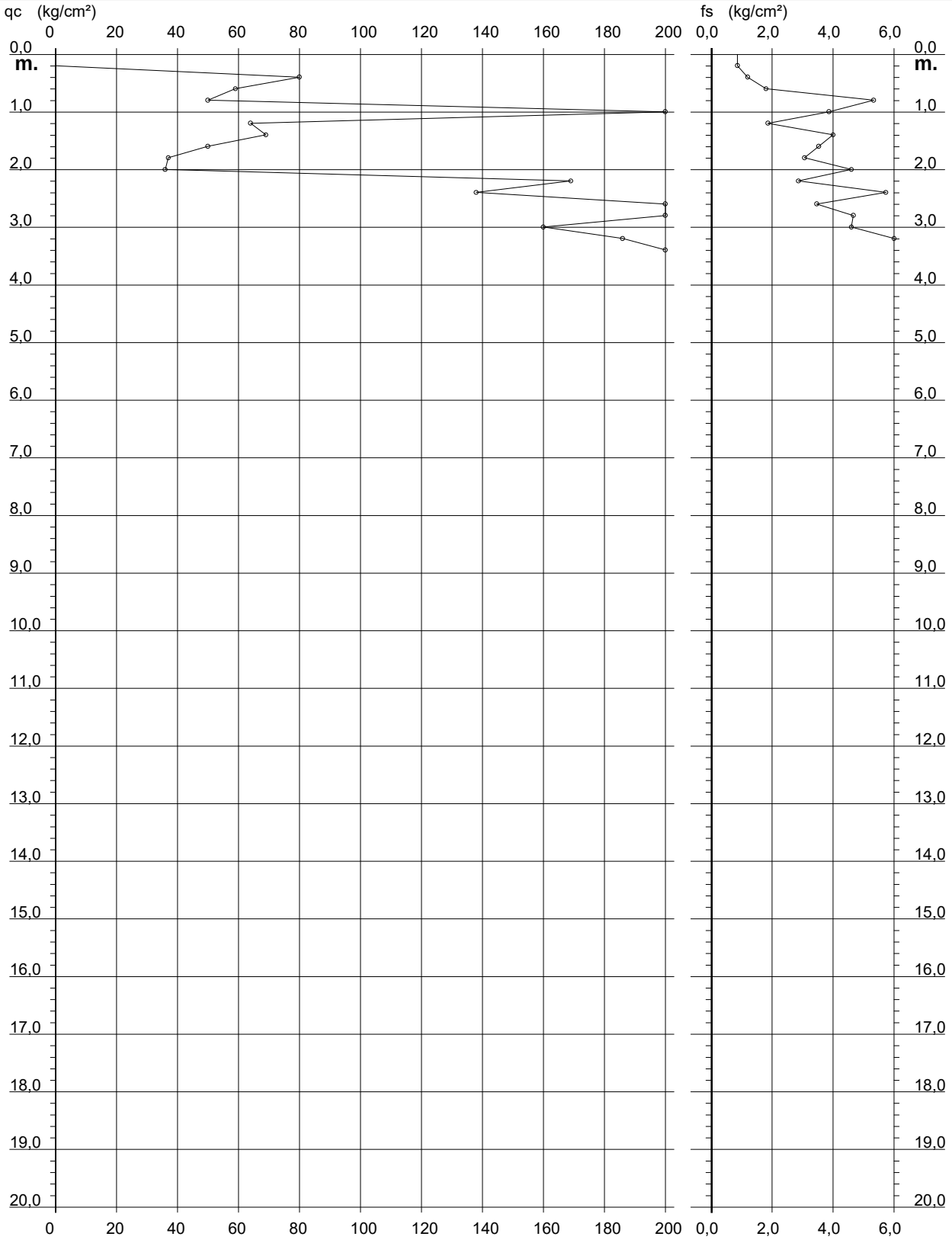
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 039

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	28/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-039	- scala vert.:	1 : 100



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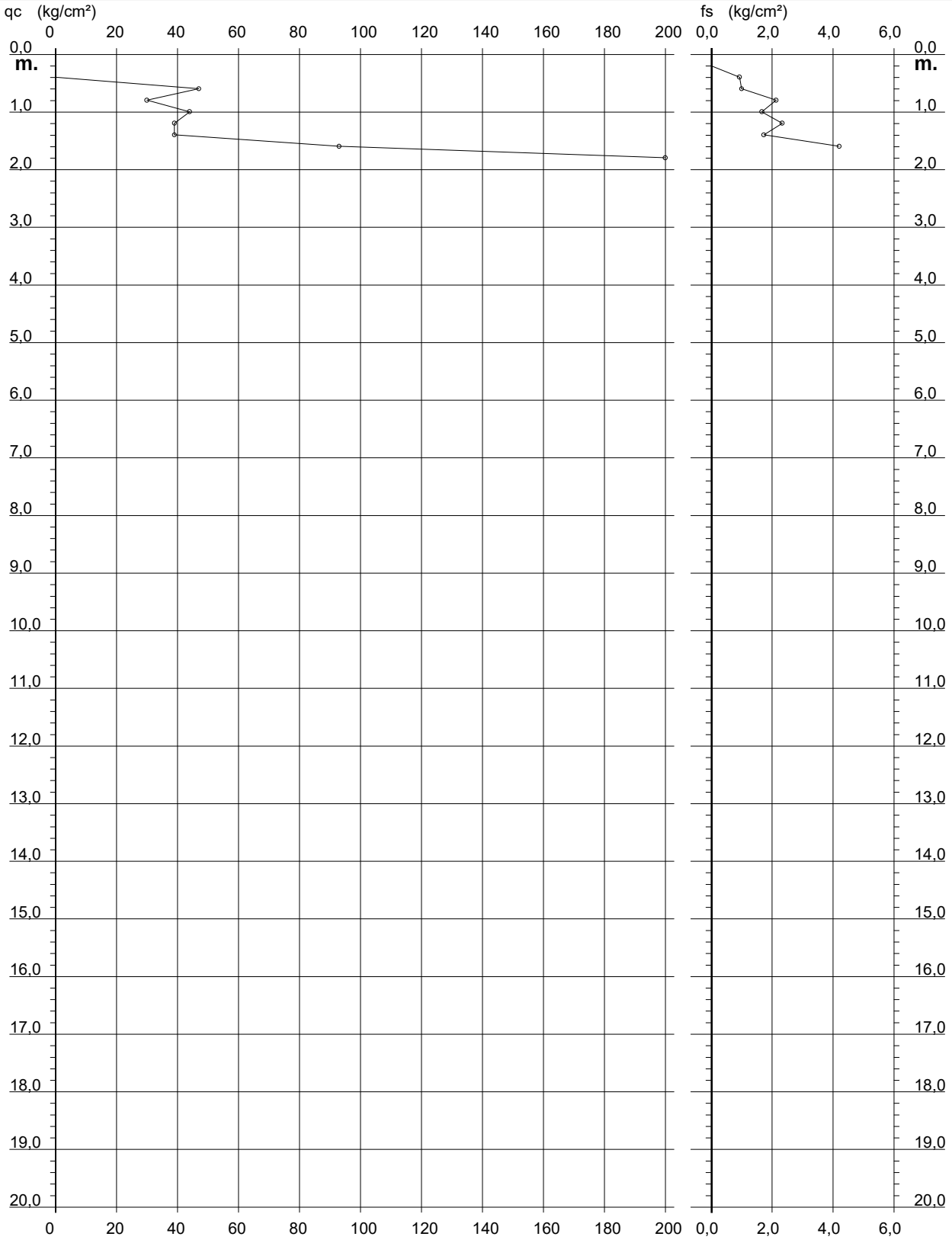
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 034

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	28/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-034	- scala vert.:	1 : 100



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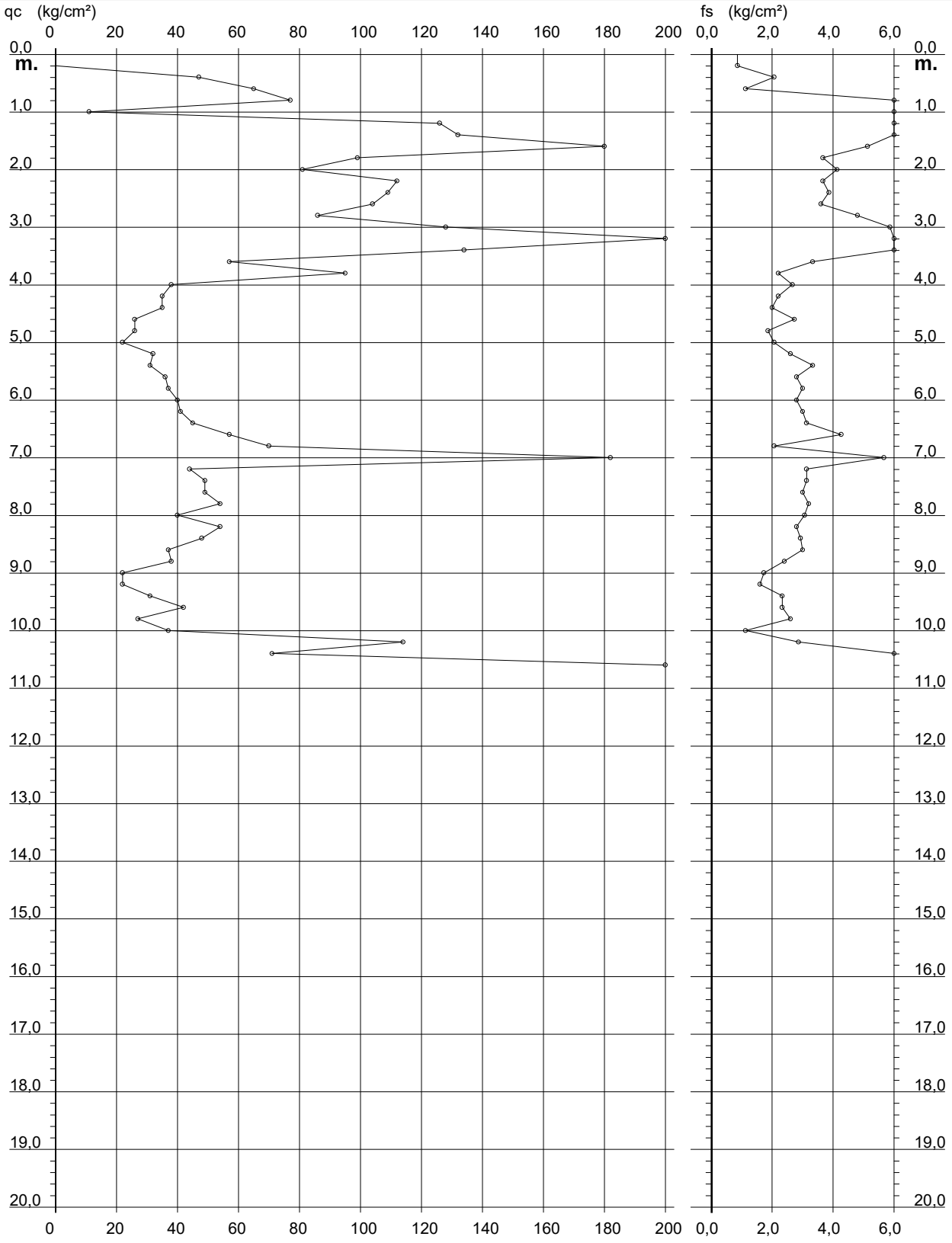
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 019

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-019	- scala vert.:	1 : 100



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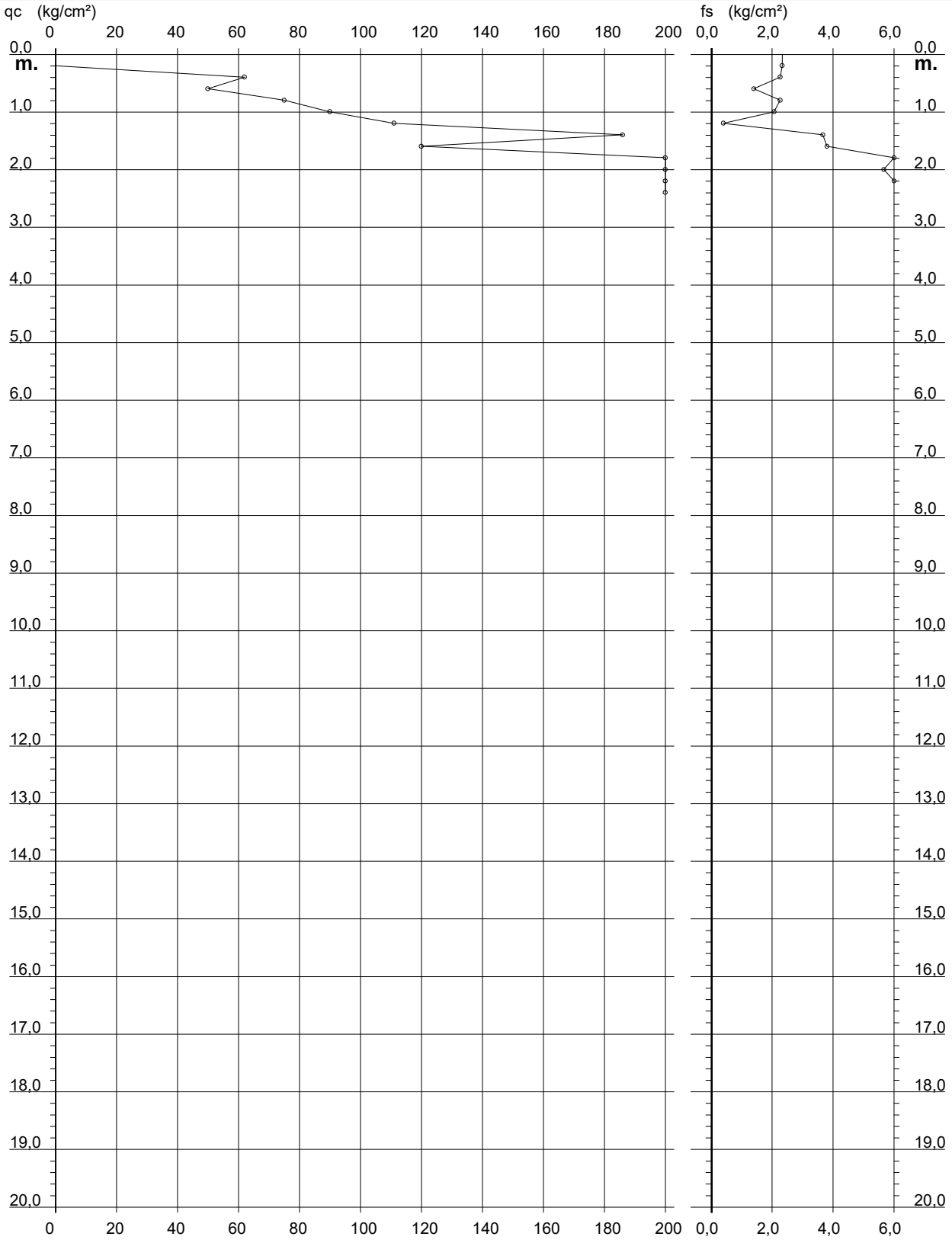
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 018

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-018	- scala vert.:	1 : 100



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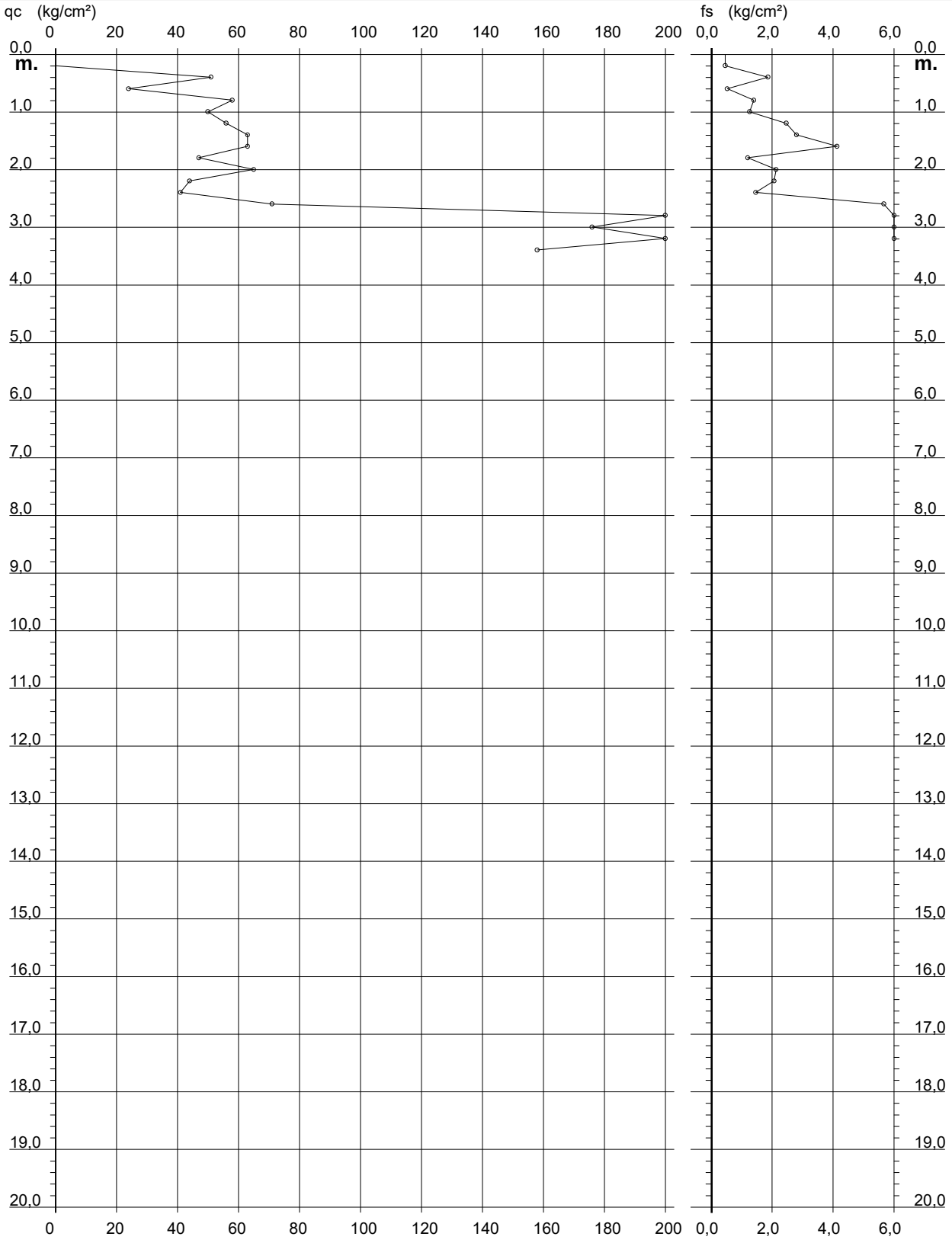
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 017

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-017	- scala vert.:	1 : 100



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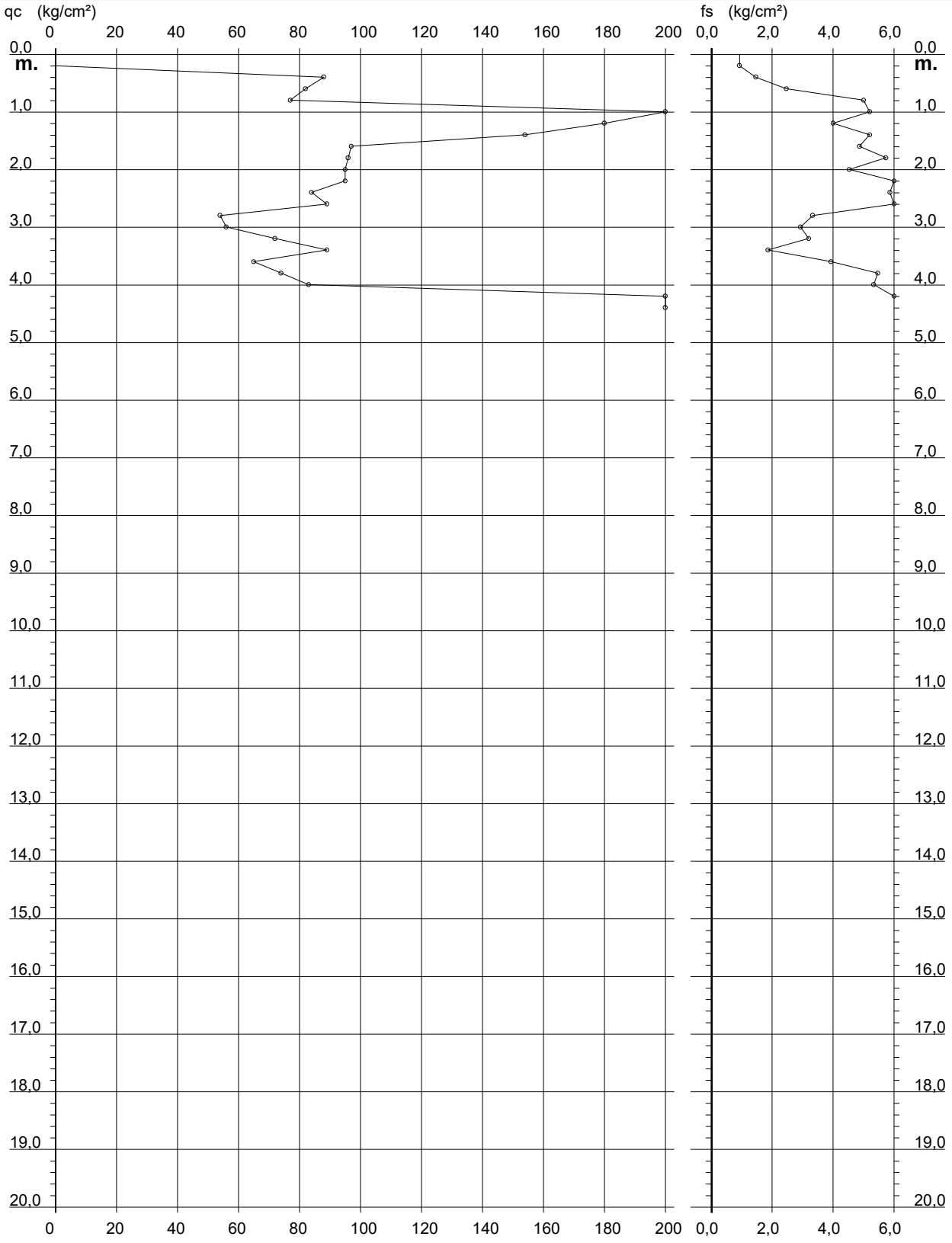
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 016

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Guardia Sanfromondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-016	- scala vert.:	1 : 100



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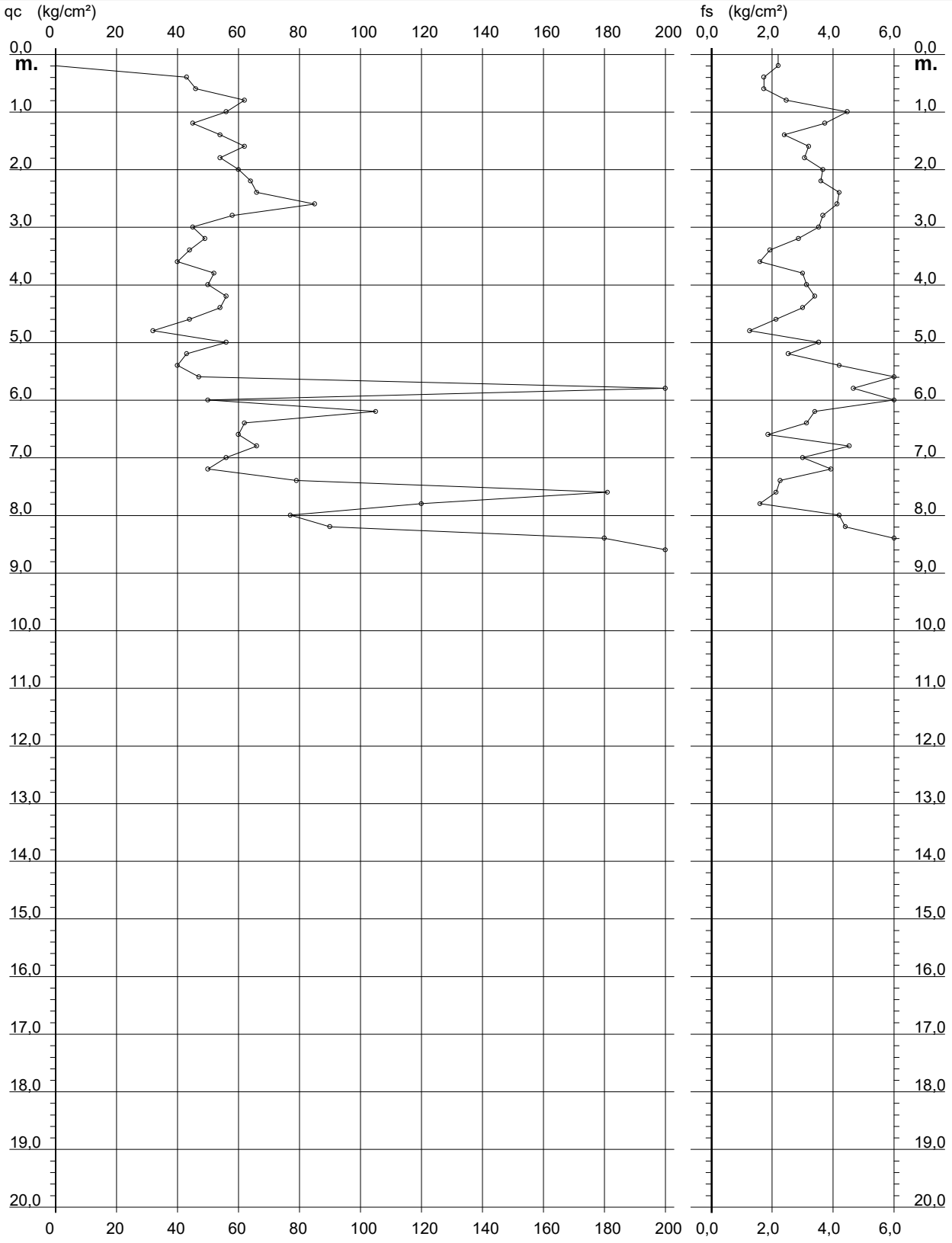
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 014

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	25/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-014	- scala vert.:	1 : 100



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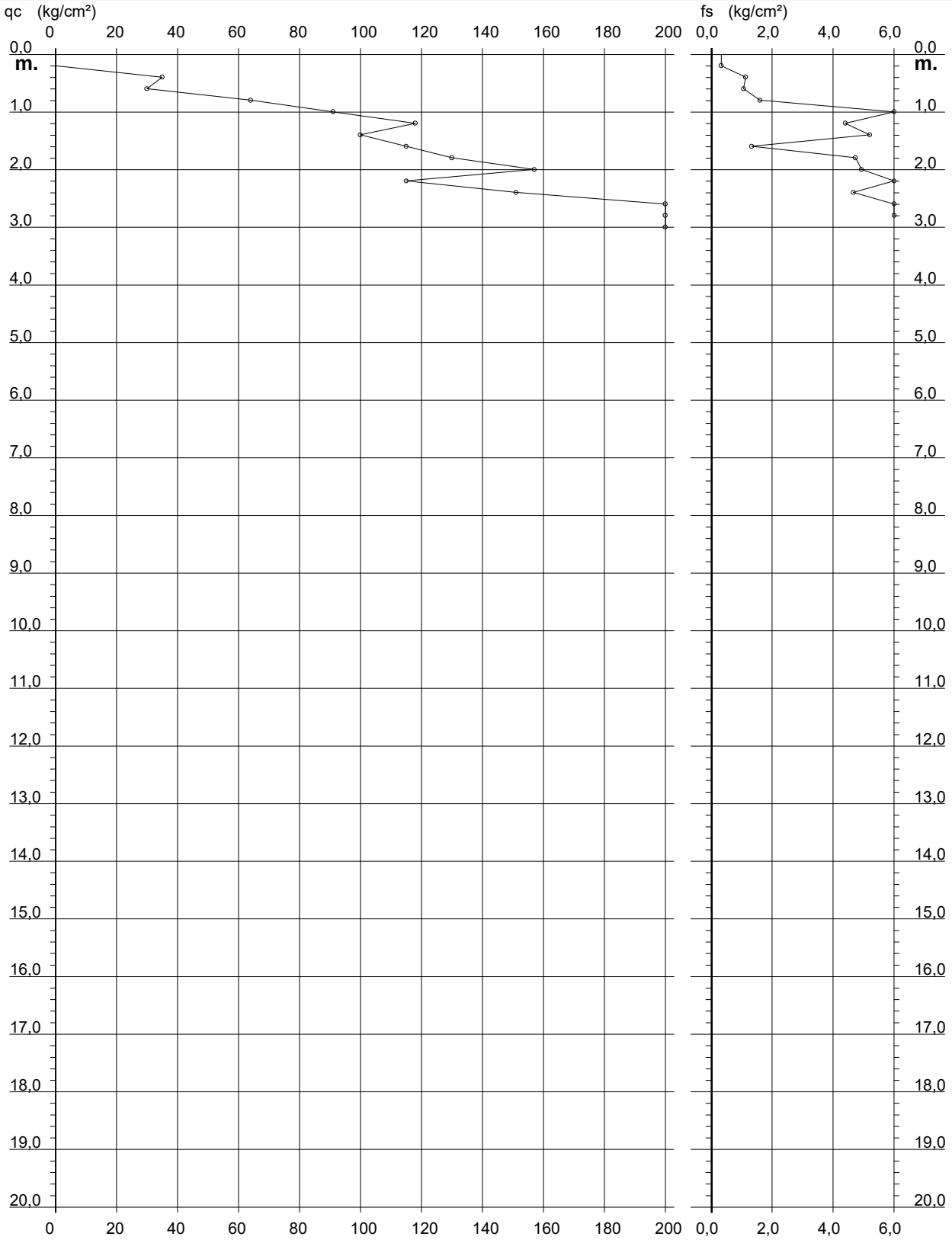
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 012

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	25/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-012	- scala vert.:	1 : 100



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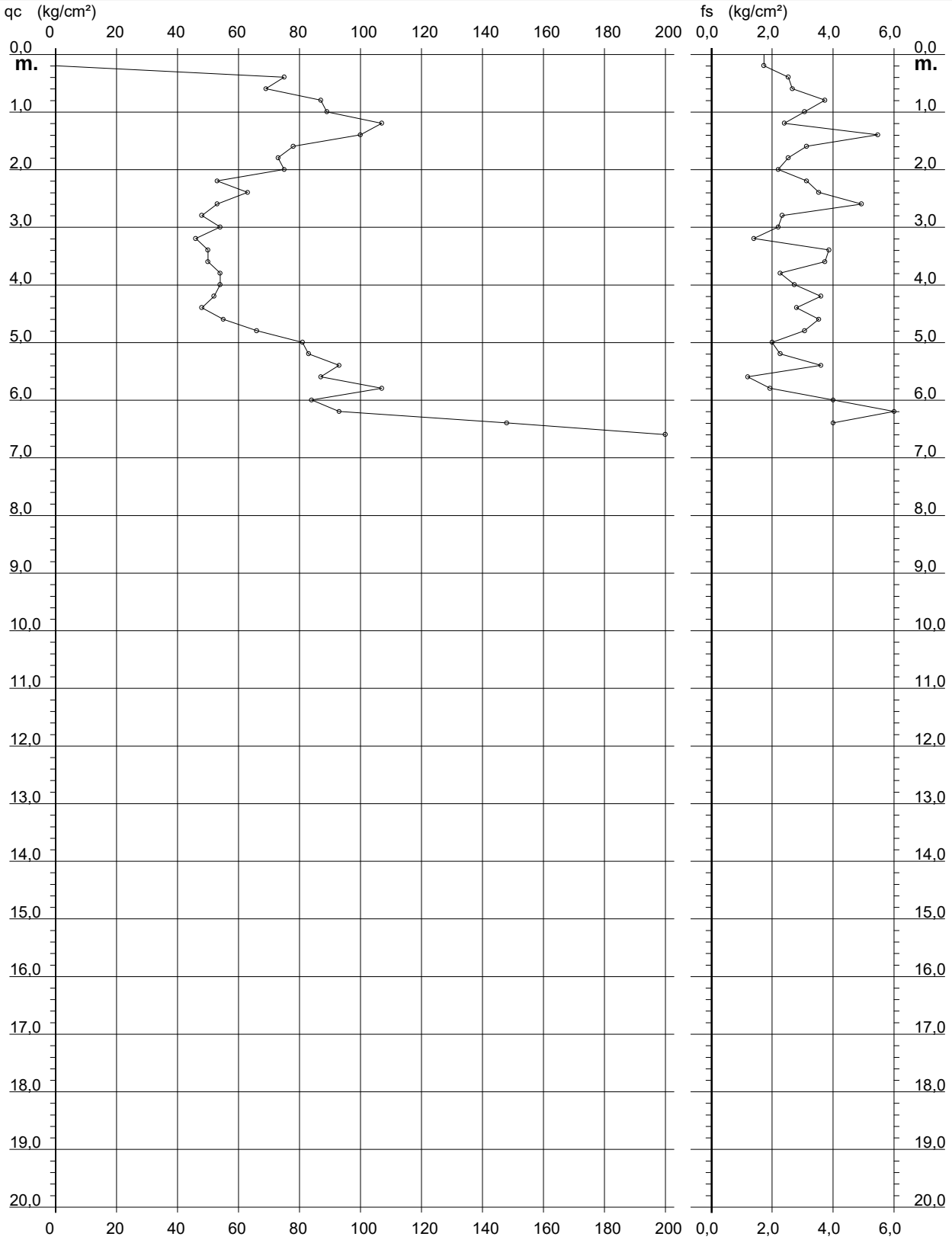
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 011

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	25/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-011	- scala vert.:	1 : 100



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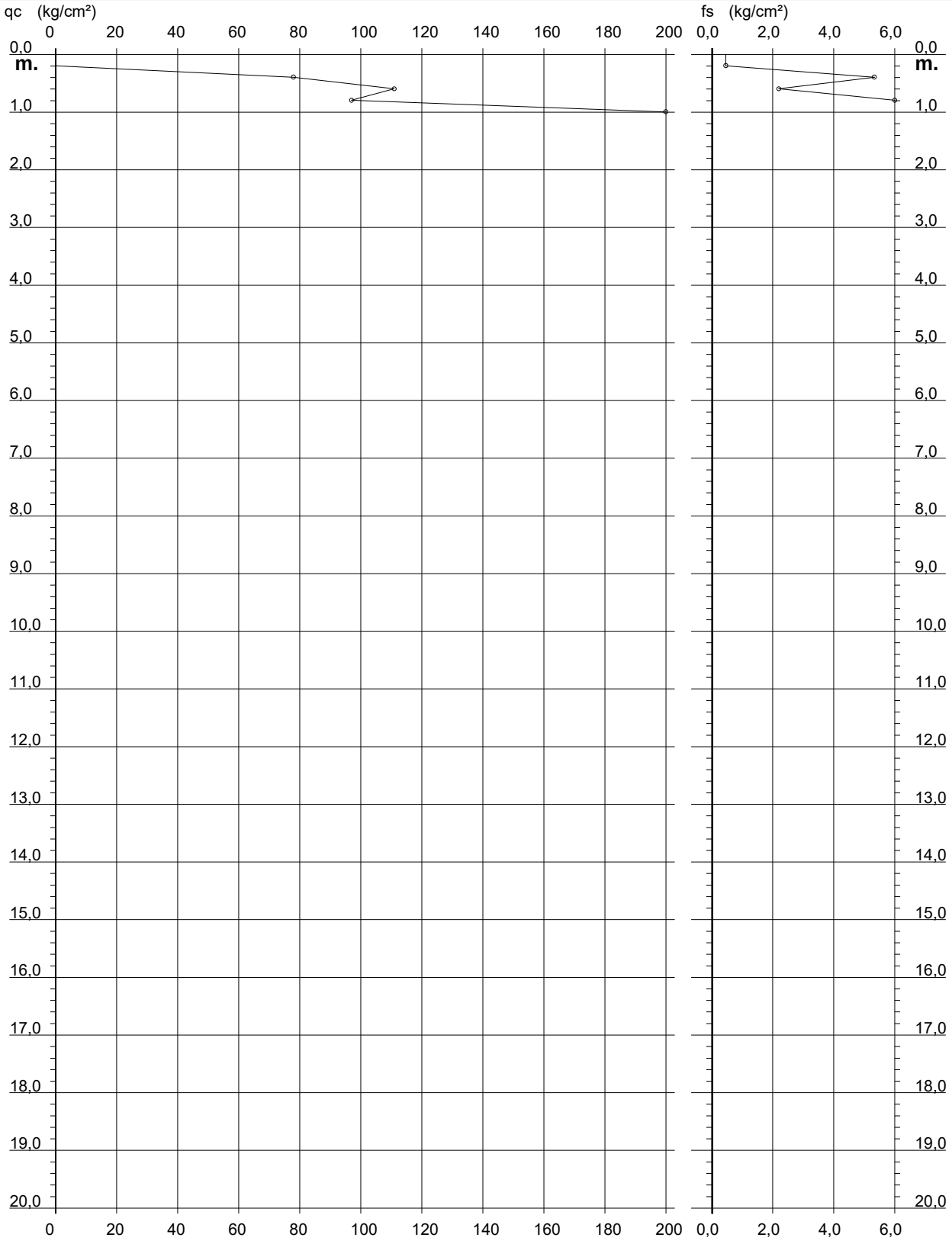
Rifer. 003-20

PROVA PENETROMETRICA STATICA DIAGRAMMA DI RESISTENZA

CPT 007

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-007	- scala vert.:	1 : 100



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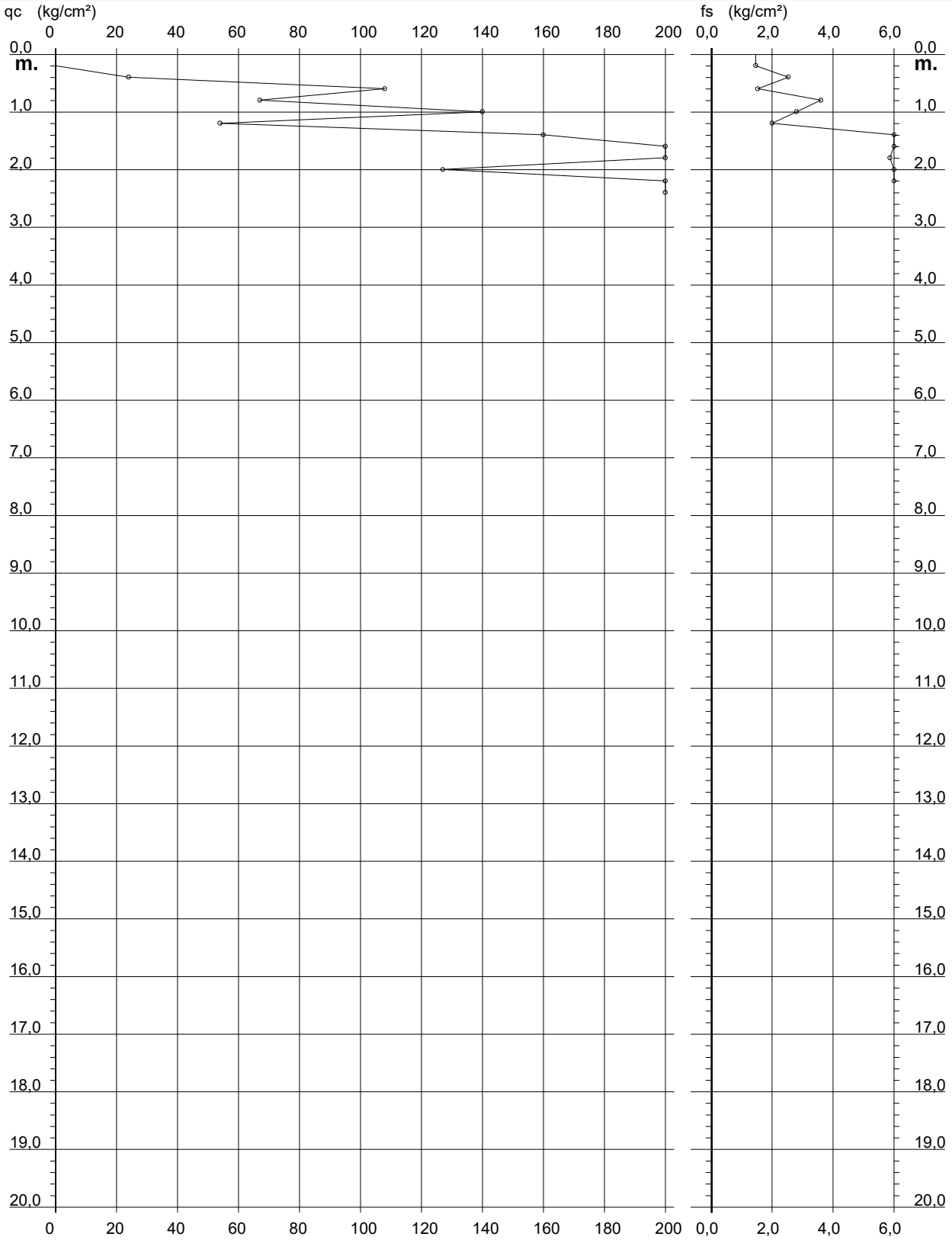
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 006

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-006	- scala vert.:	1 : 100



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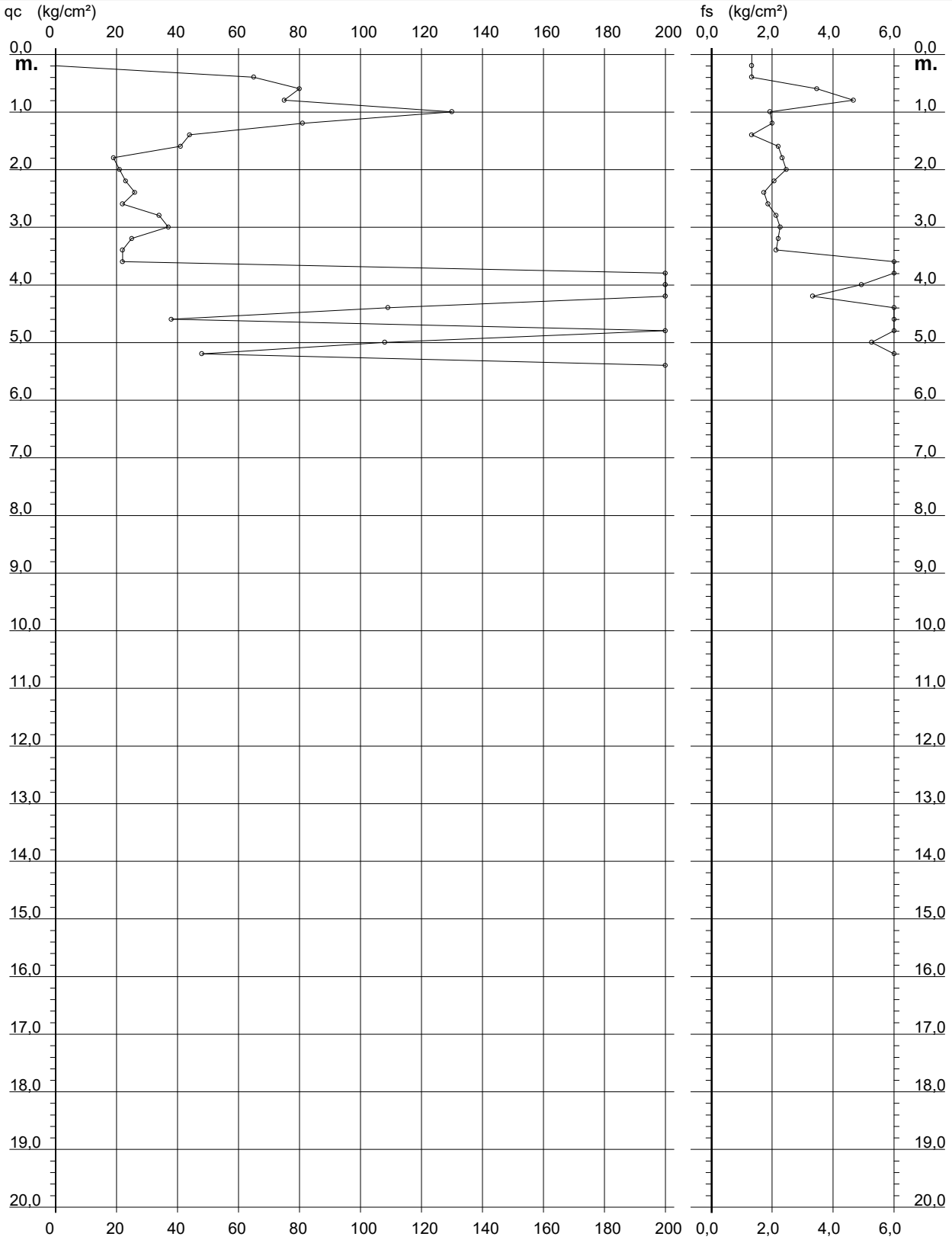
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 003

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-003	- scala vert.:	1 : 100



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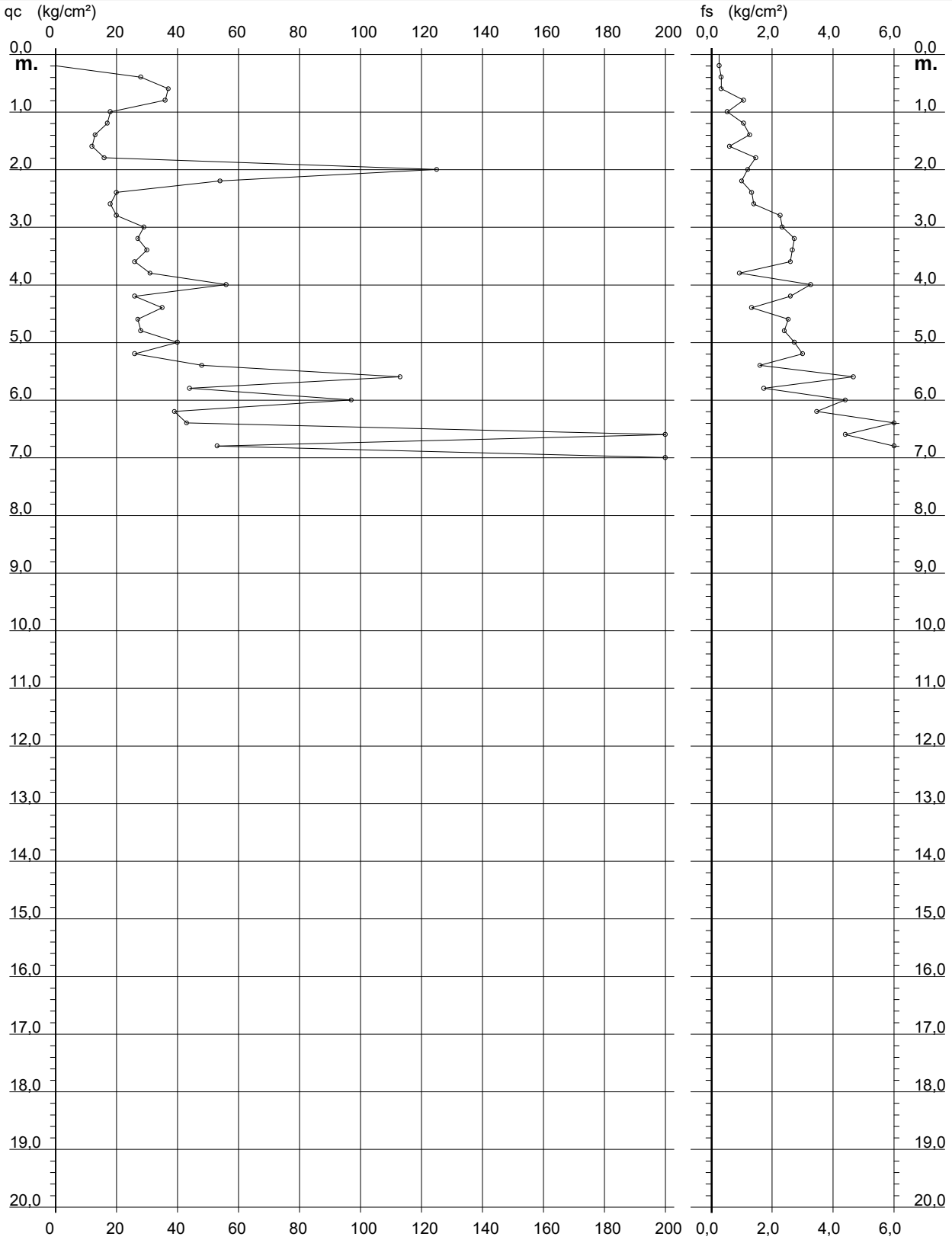
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 002

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/08/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-002	- scala vert.:	1 : 100



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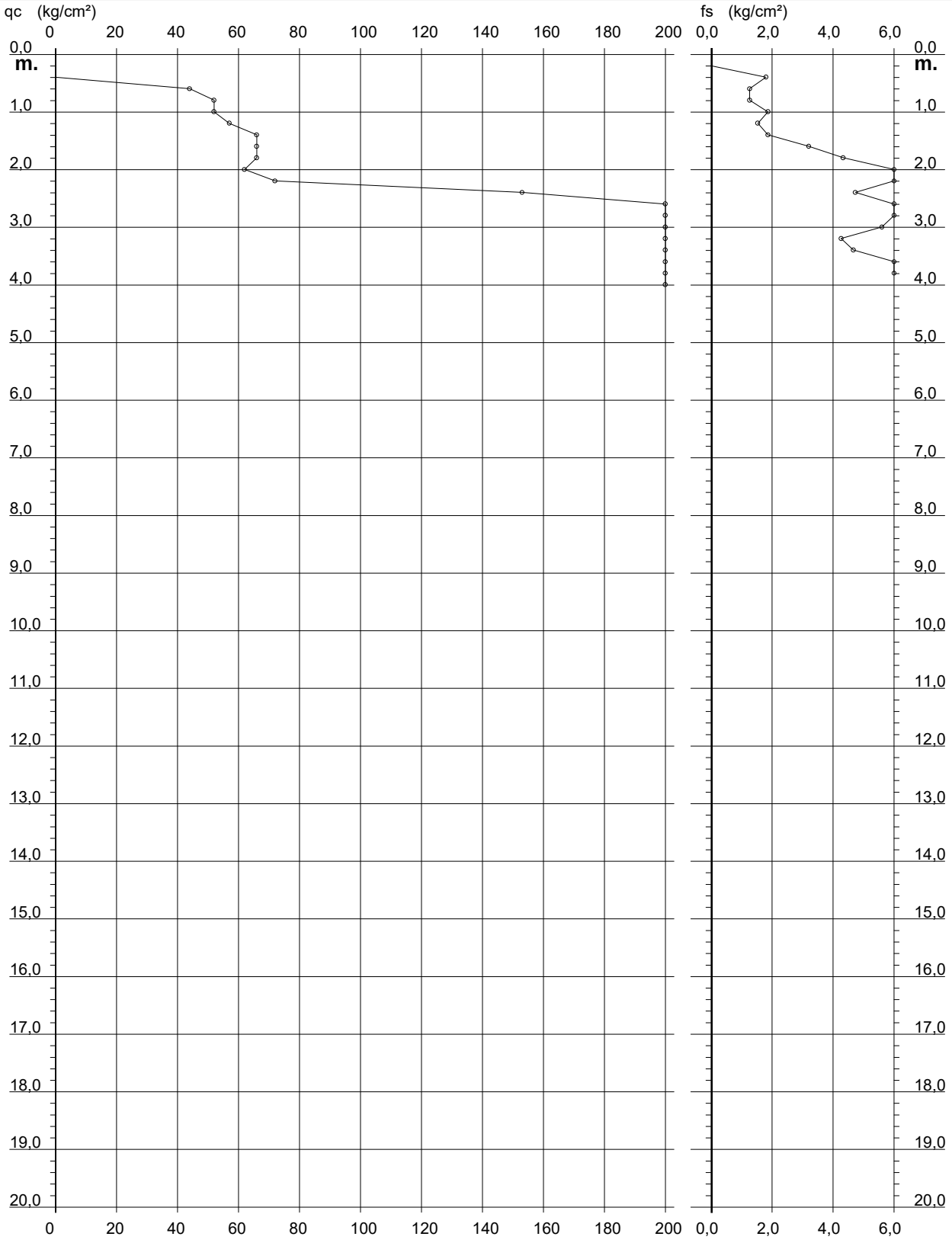
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 070

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-070	- scala vert.:	1 : 100



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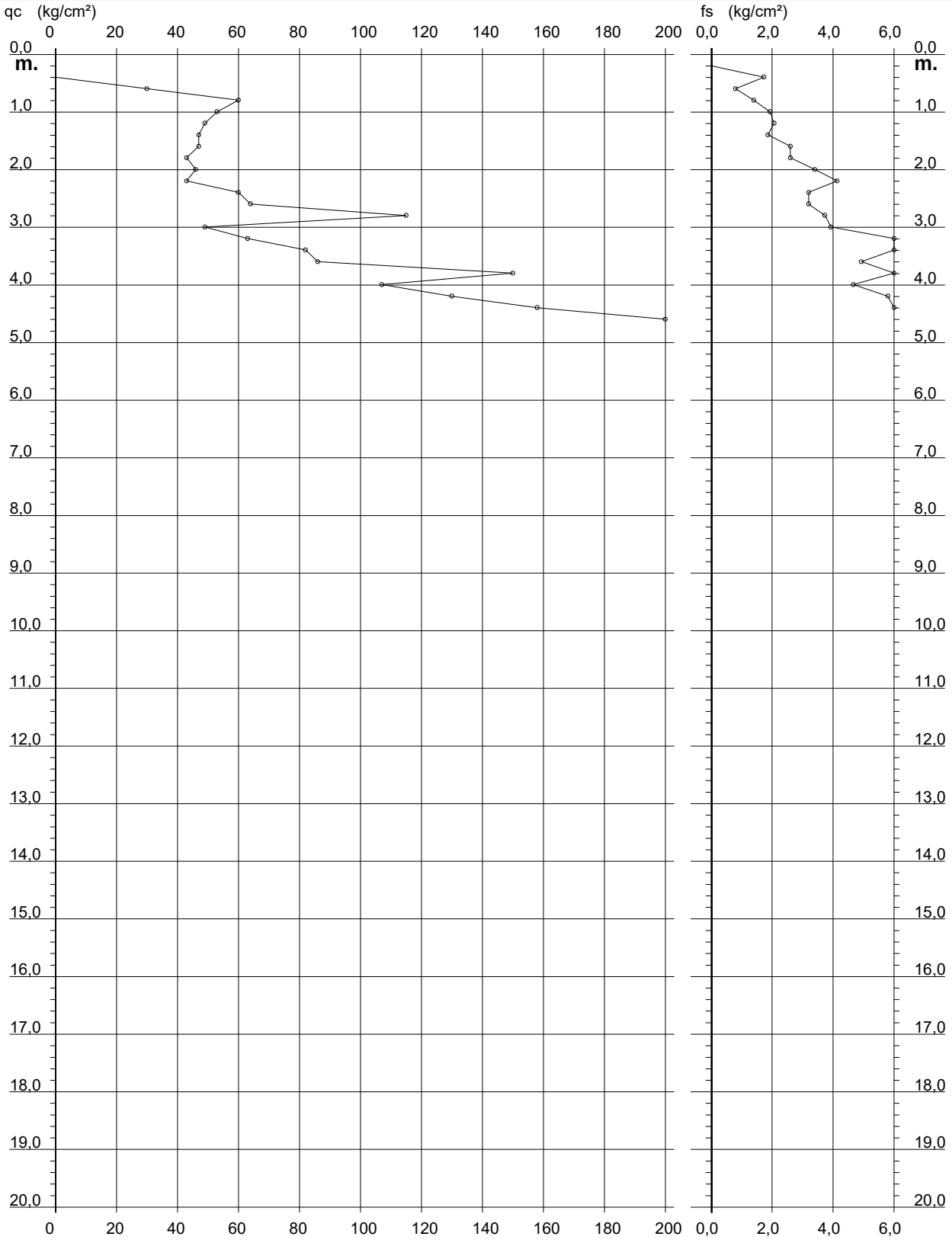
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 071

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-071	- scala vert.:	1 : 100



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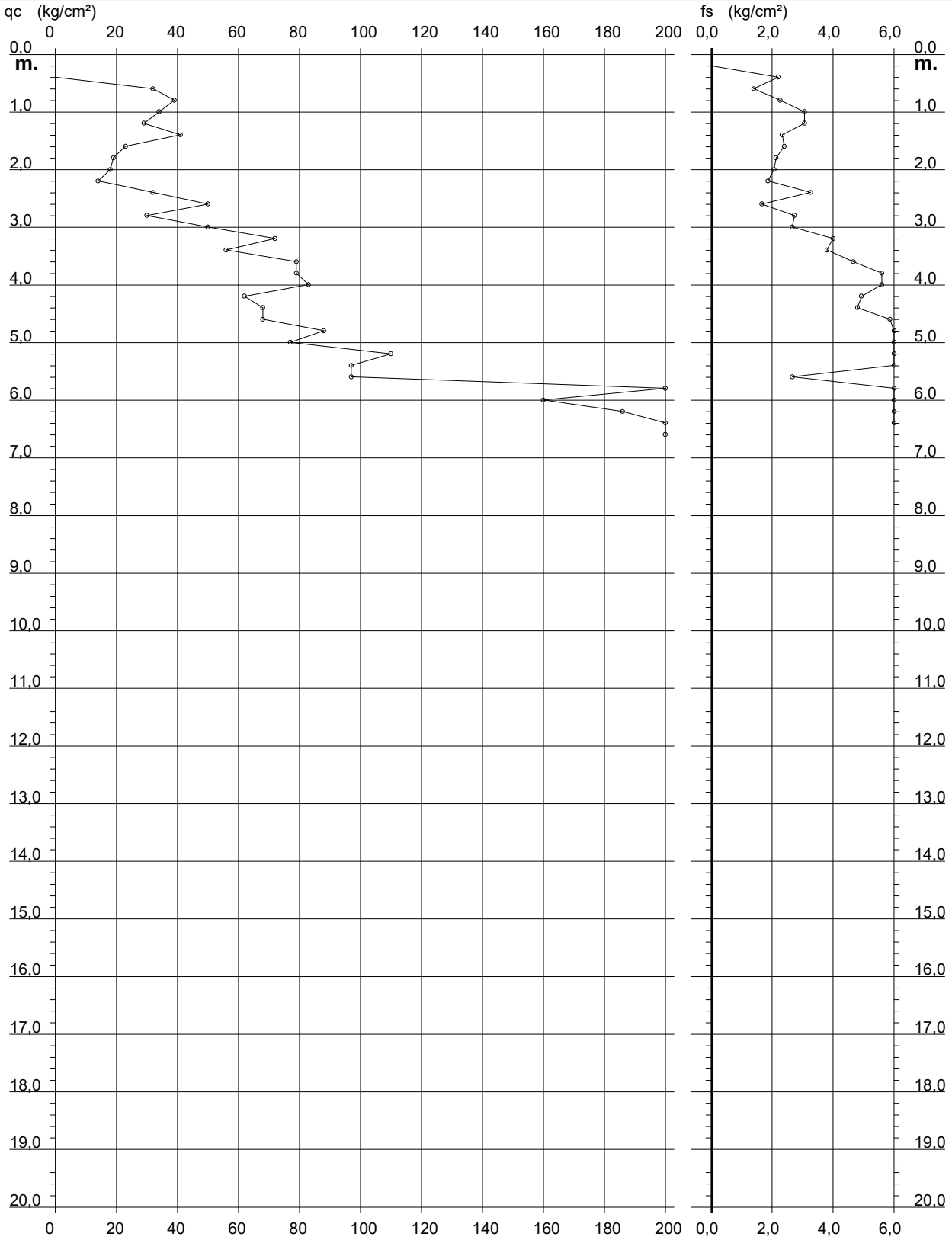
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 072

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-072	- scala vert.:	1 : 100



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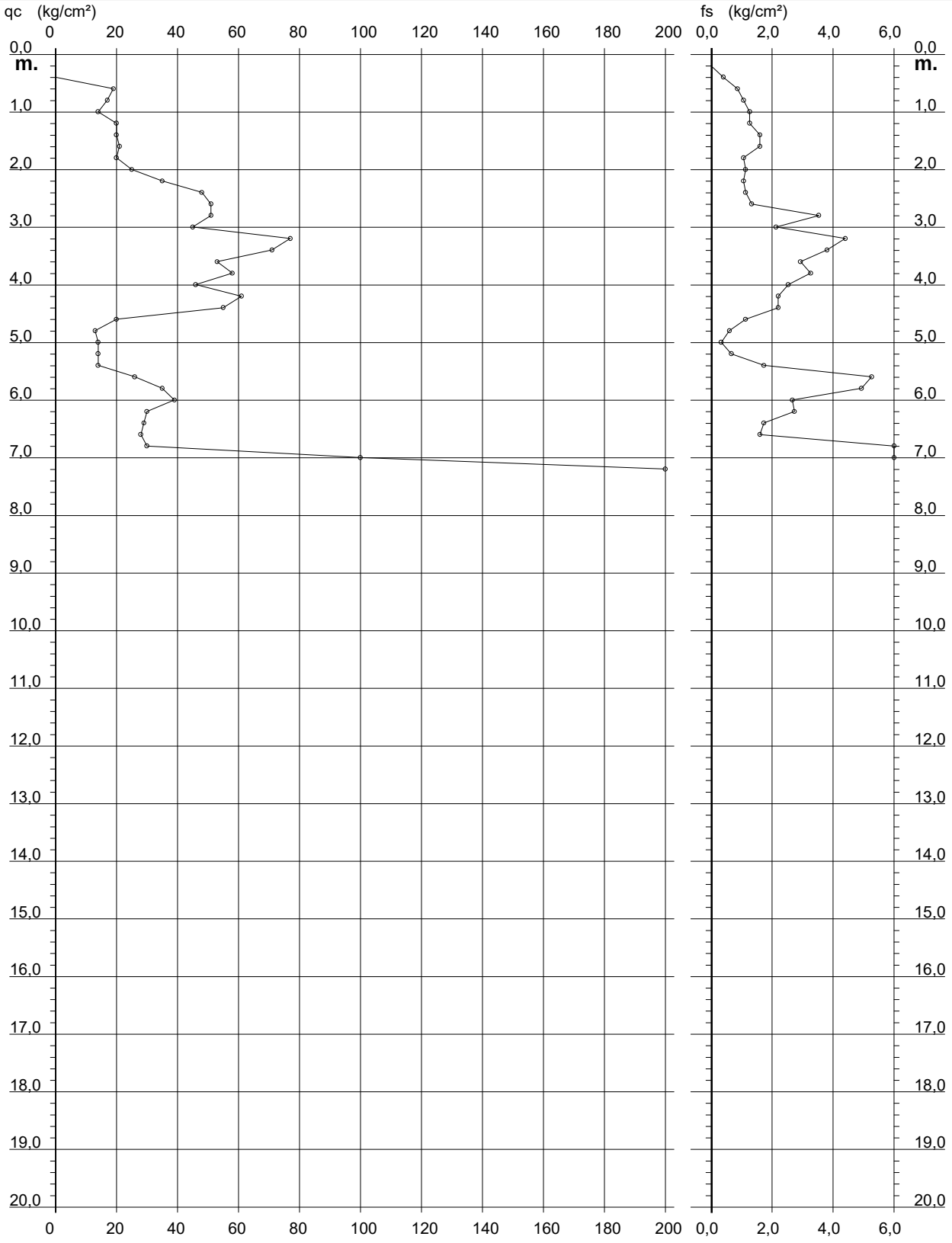
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 074

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-074	- scala vert.:	1 : 100



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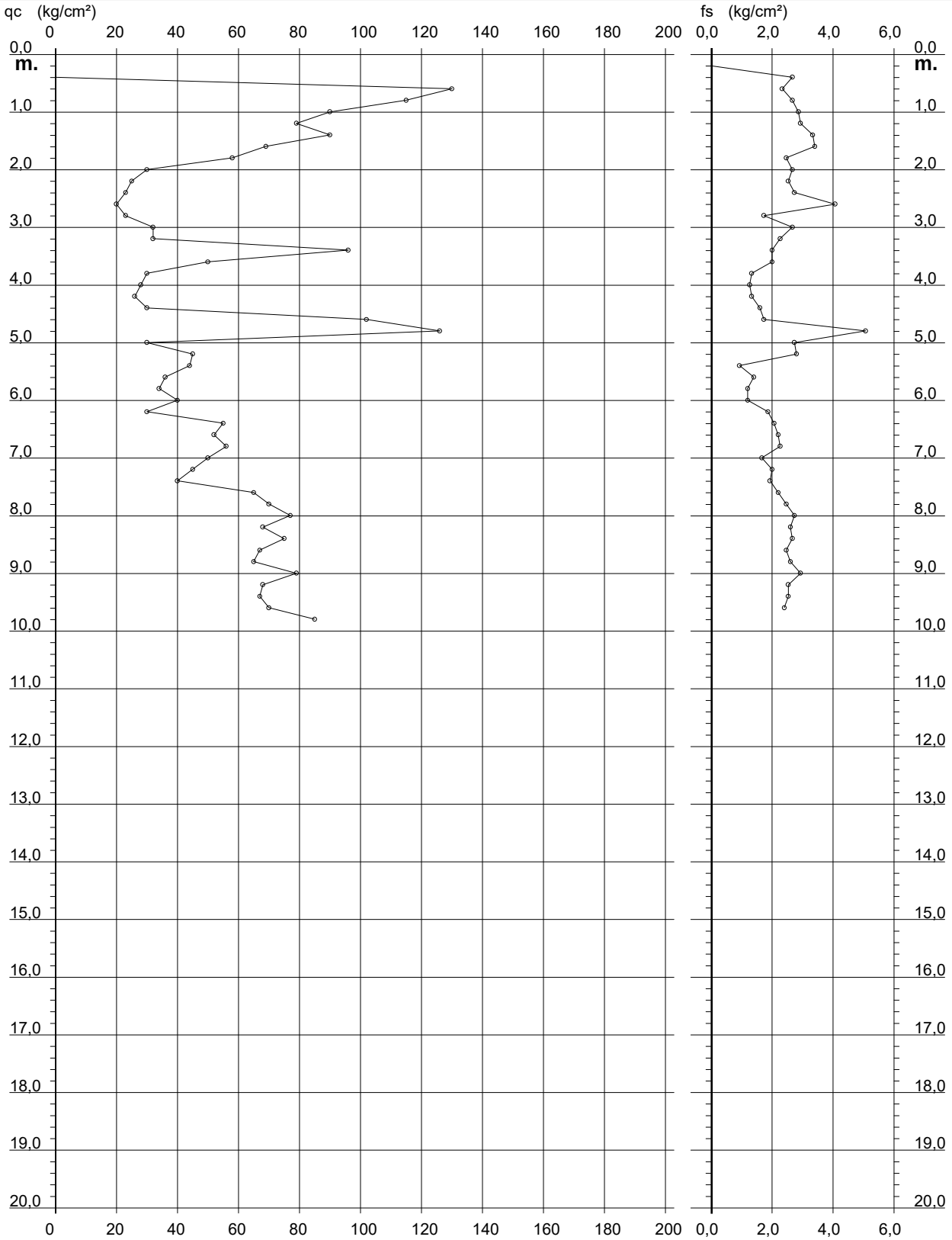
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 075

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-075	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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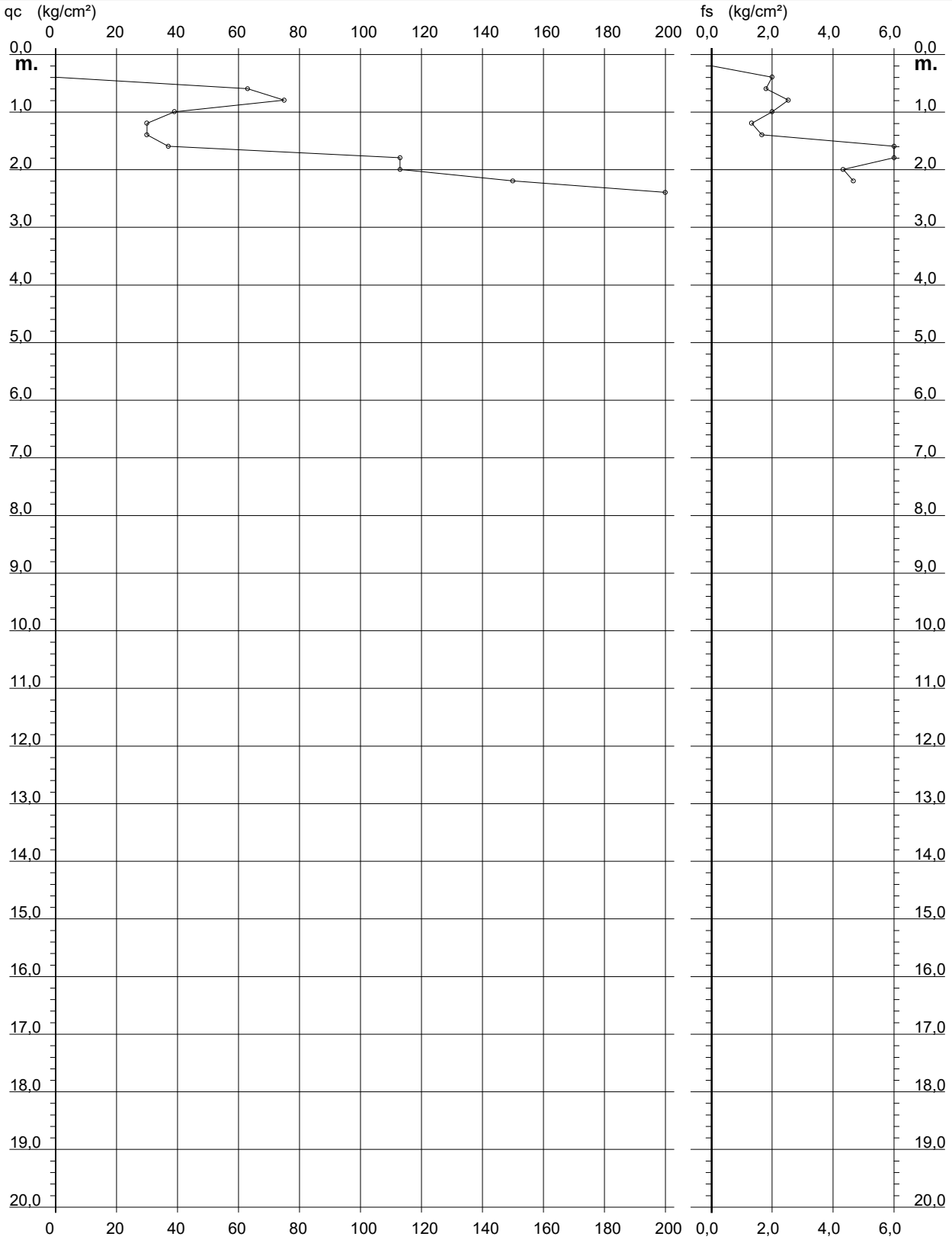
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 077

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-077	- scala vert.:	1 : 100



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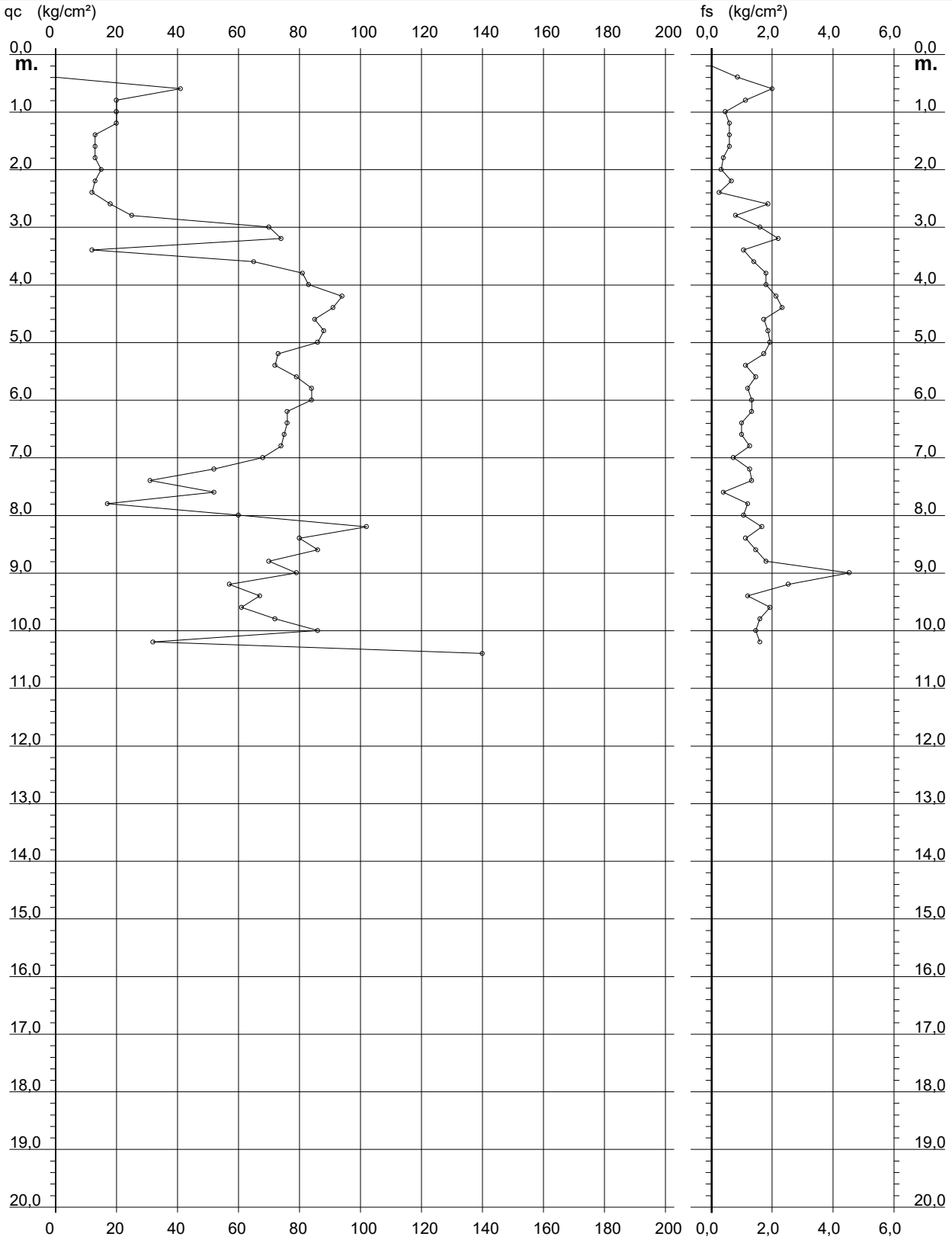
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 078

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	03/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-078	- scala vert.:	1 : 100



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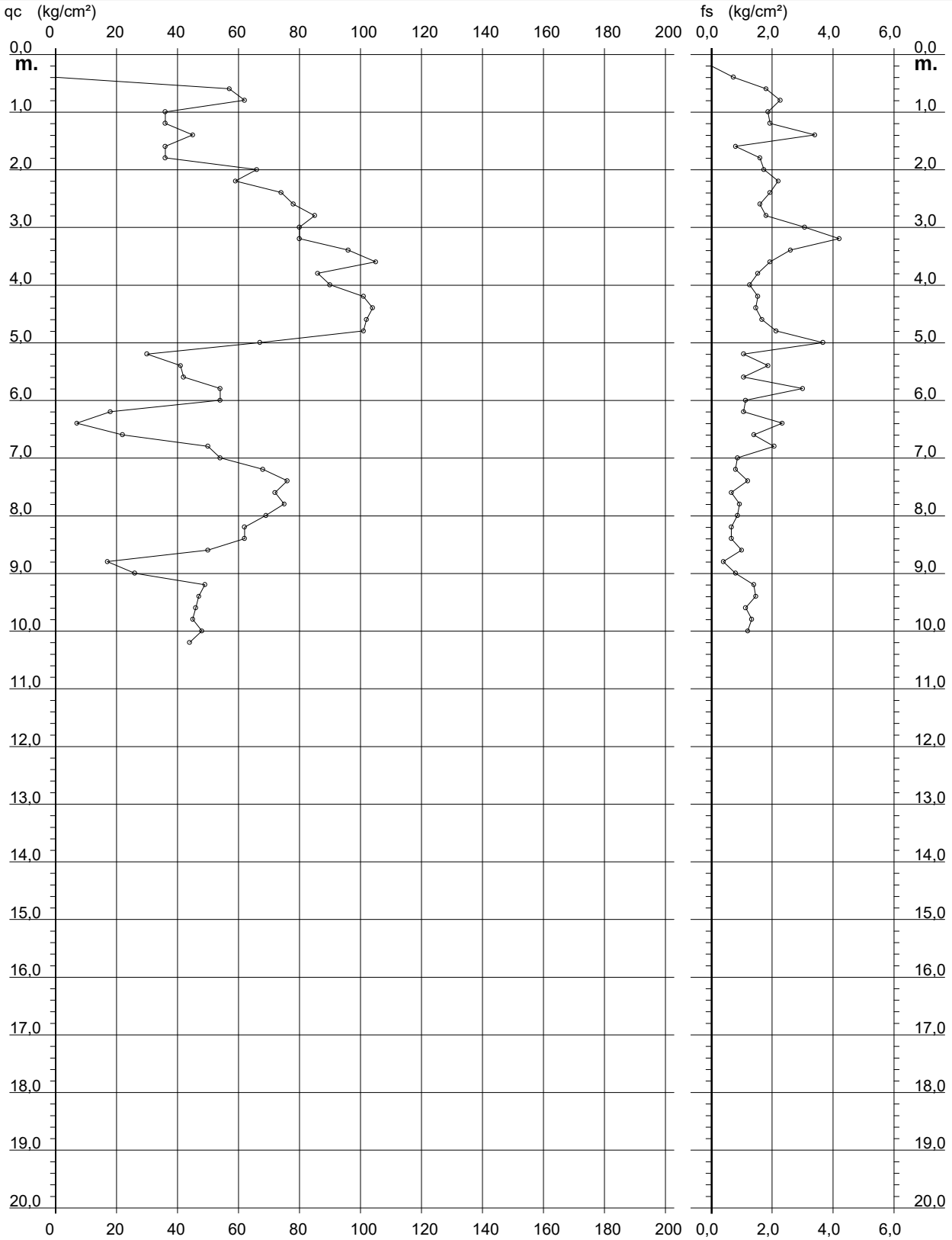
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 079

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	03/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-079	- scala vert.:	1 : 100



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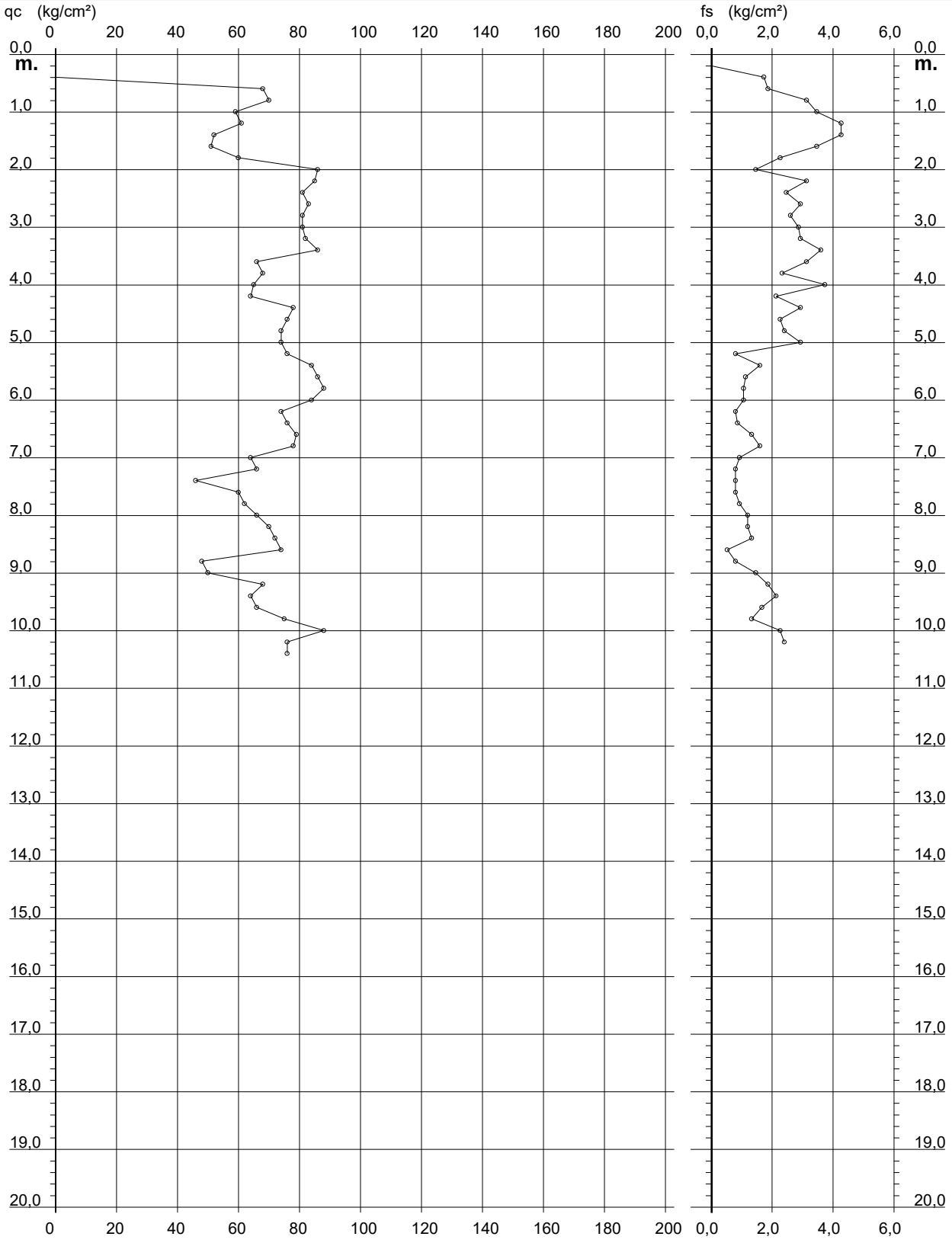
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 080

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	03/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-080.	- scala vert.:	1 : 100



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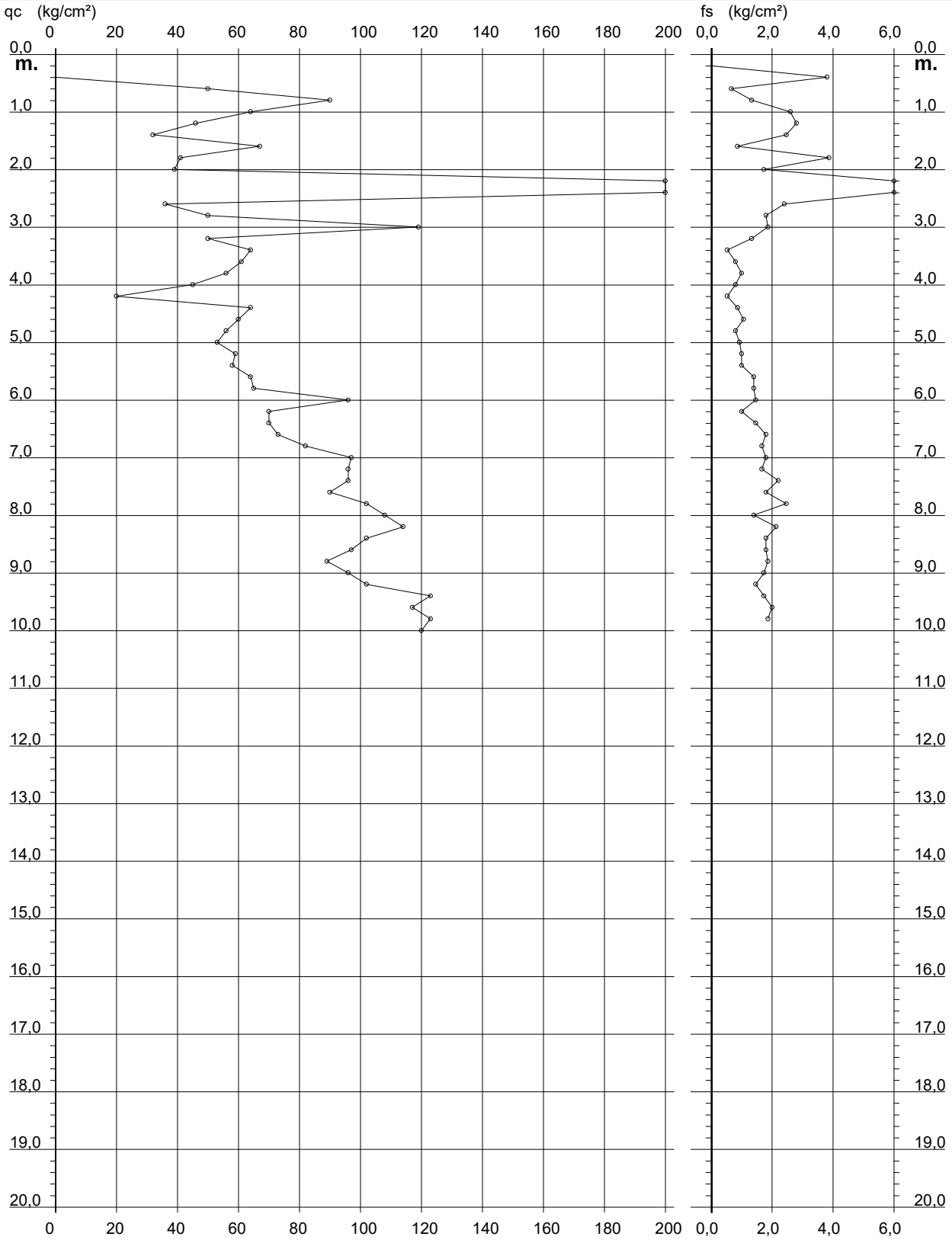
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 084

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	04/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-084	- scala vert.:	1 : 100



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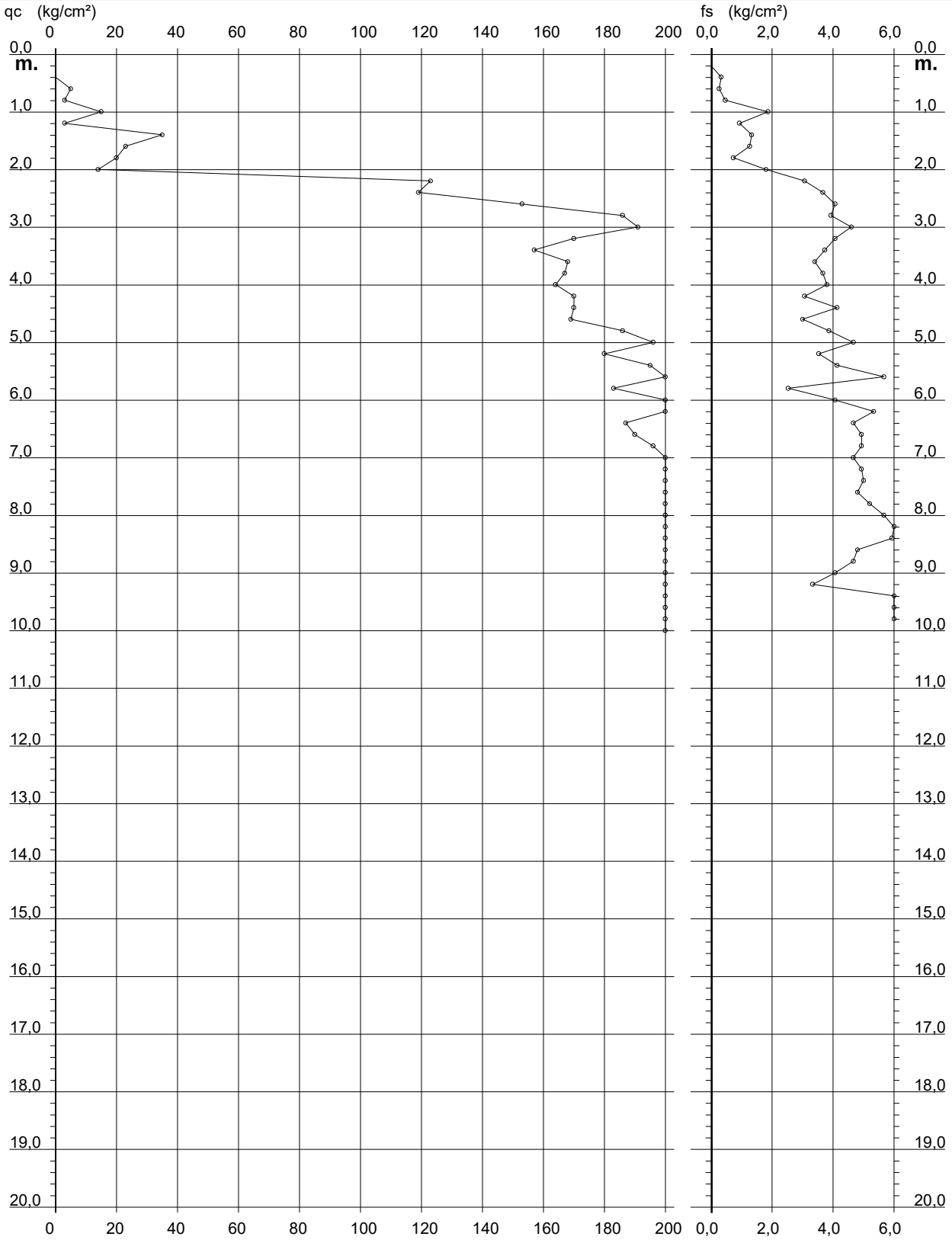
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 090

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	04/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-090	- scala vert.:	1 : 100



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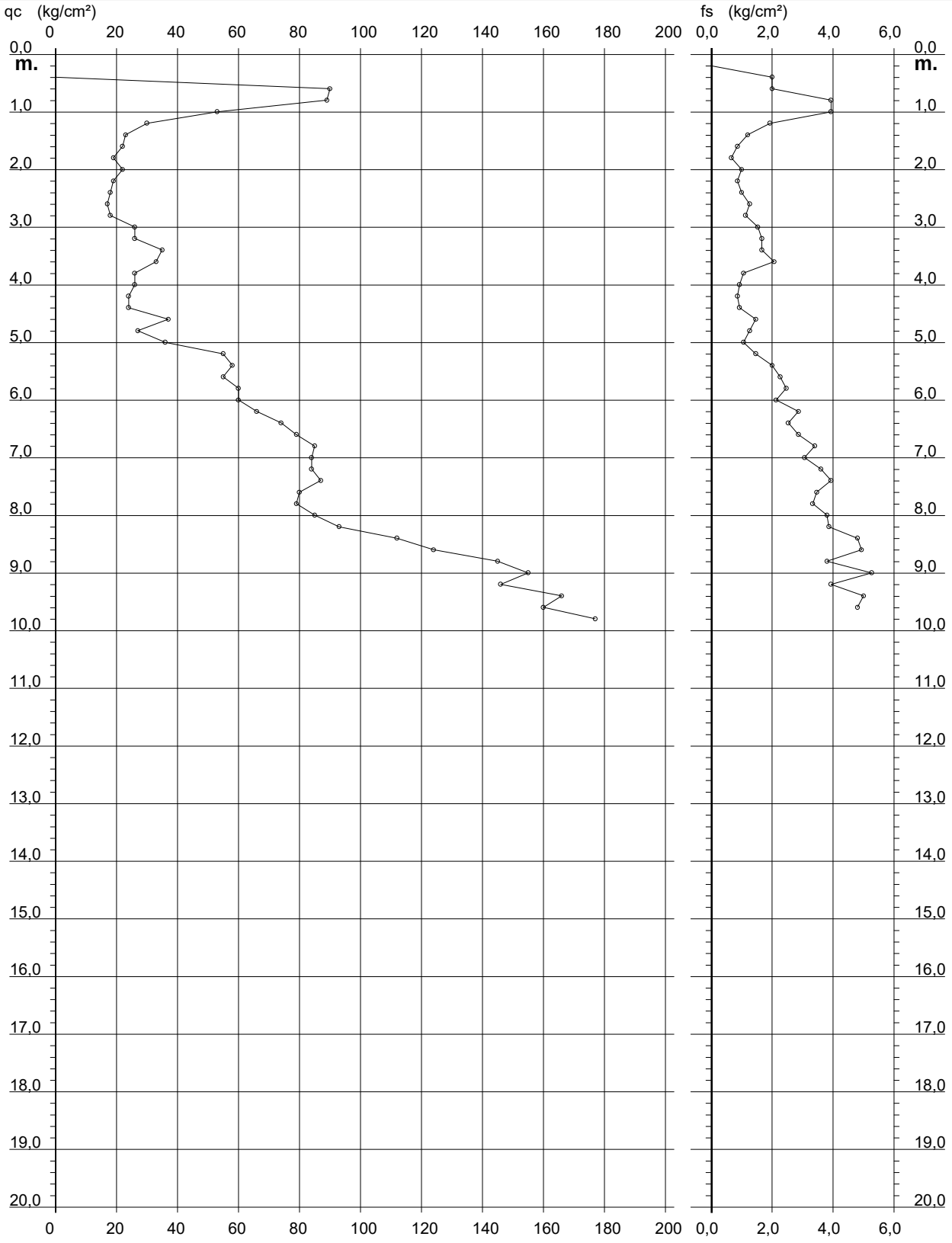
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 085

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	04/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-085	- scala vert.:	1 : 100



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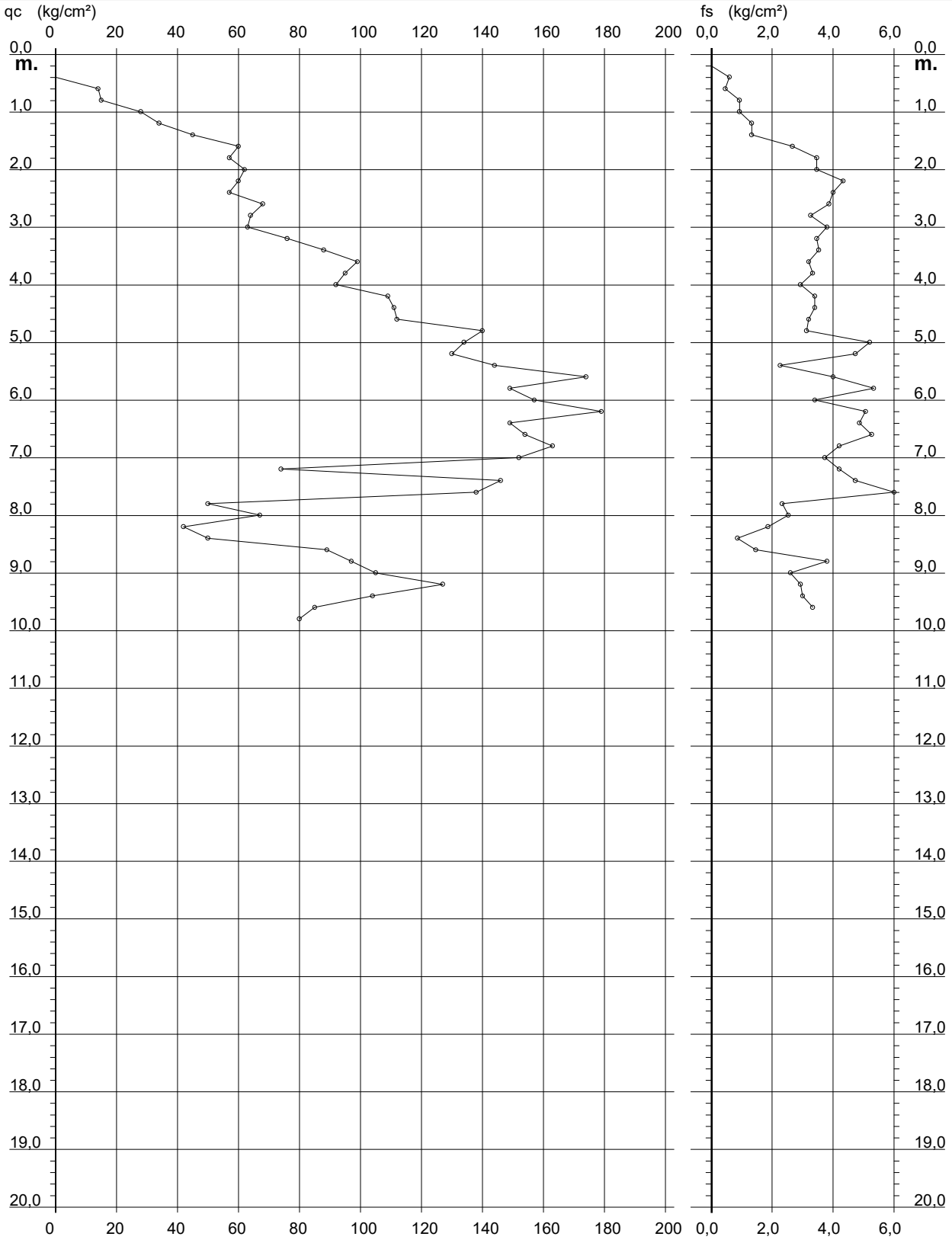
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 086

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	04/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-086	- scala vert.:	1 : 100



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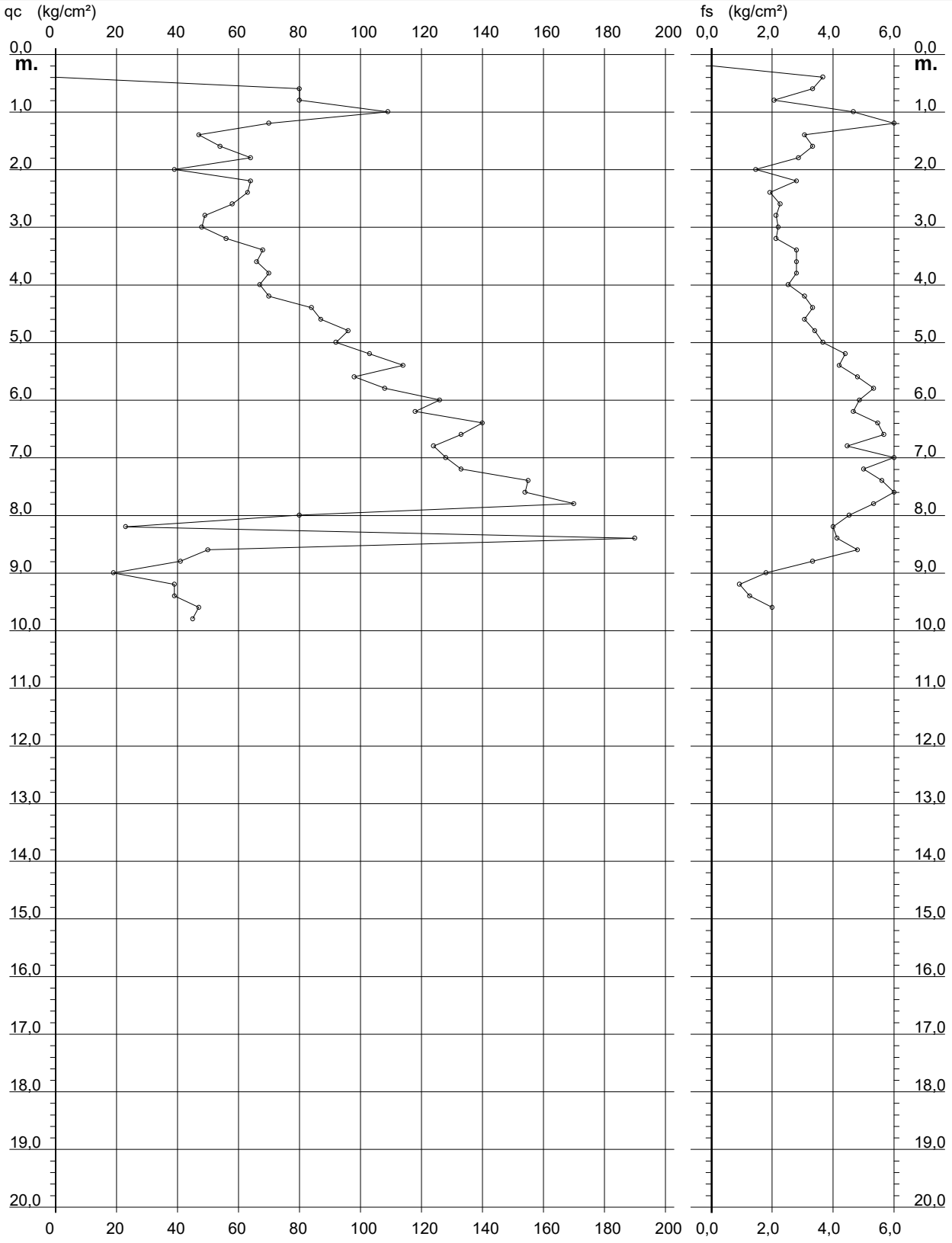
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 087

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	04/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-087	- scala vert.:	1 : 100



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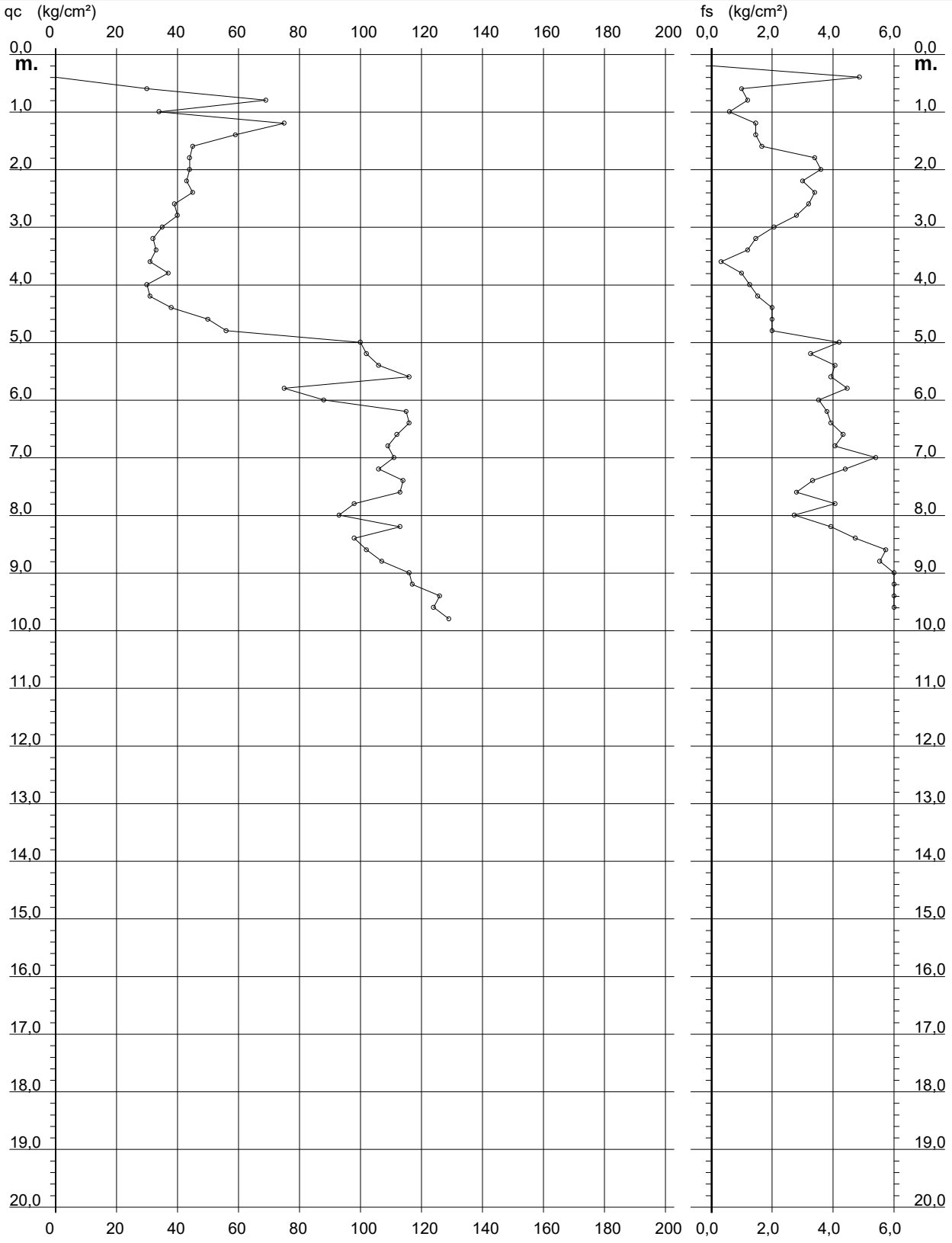
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 091

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-091	- scala vert.:	1 : 100



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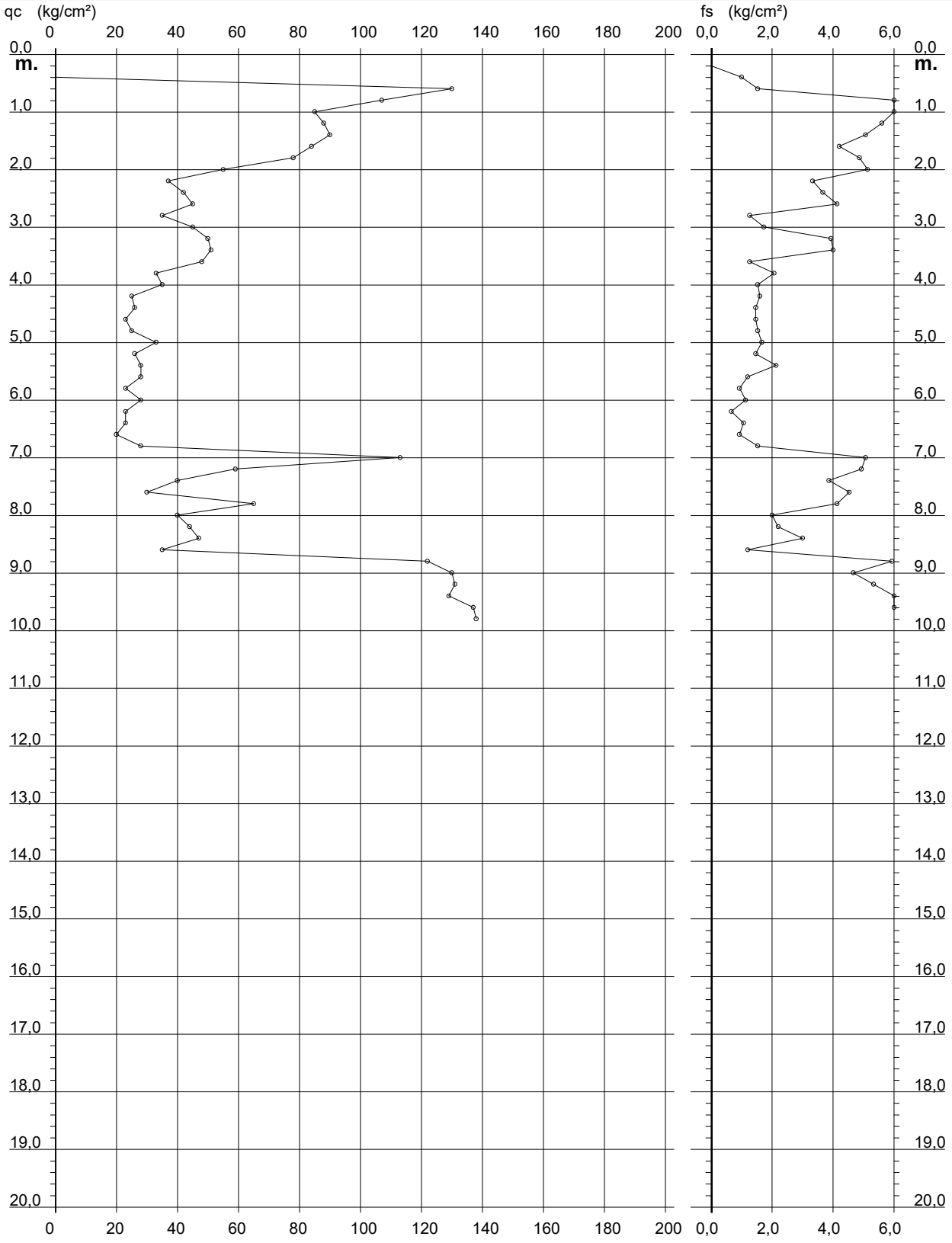
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 093

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-093	- scala vert.:	1 : 100



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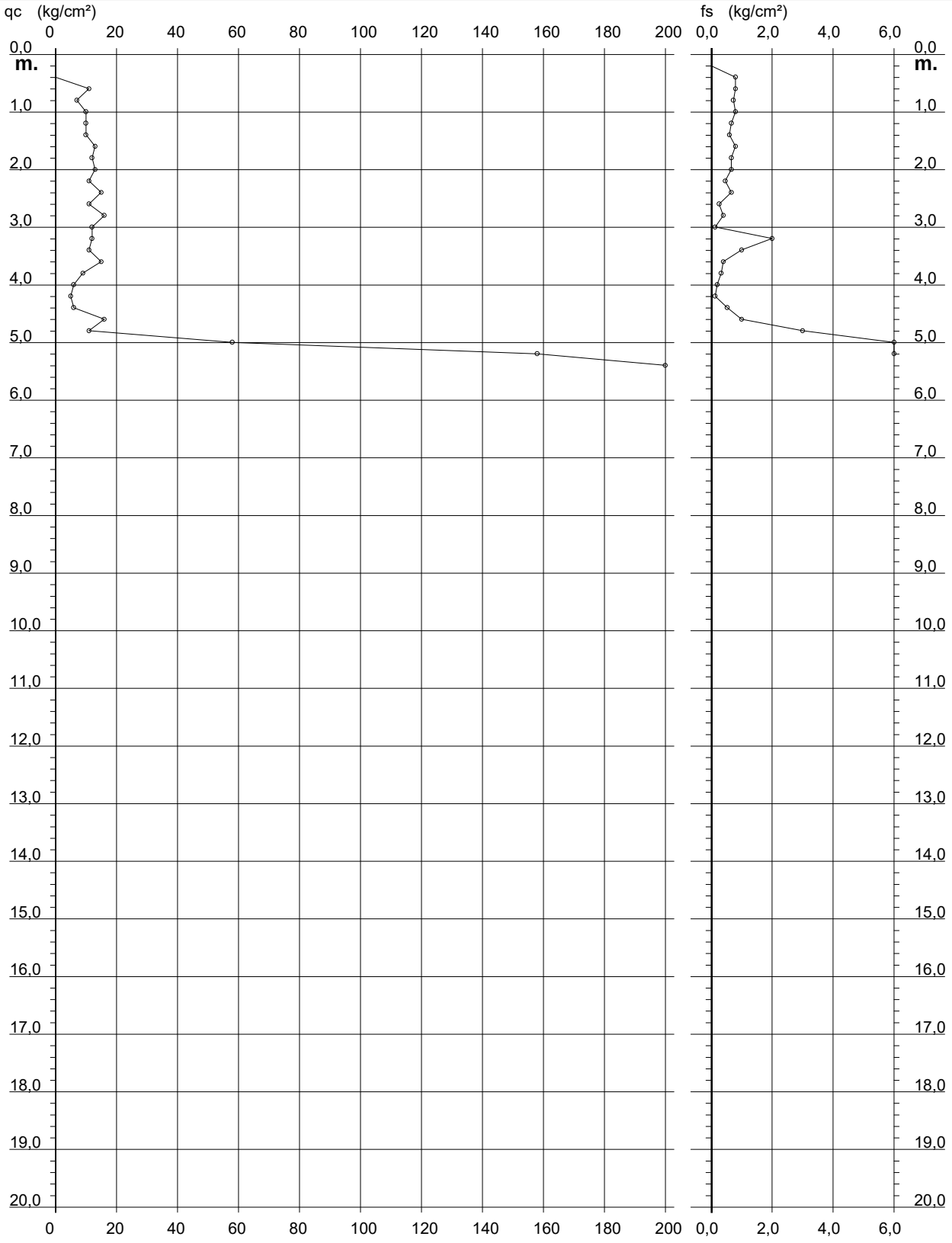
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 095

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/09/2020
- lavoro :	Intervento di utilizzo idropotabile acque invaso di	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-095	- scala vert.:	1 : 100



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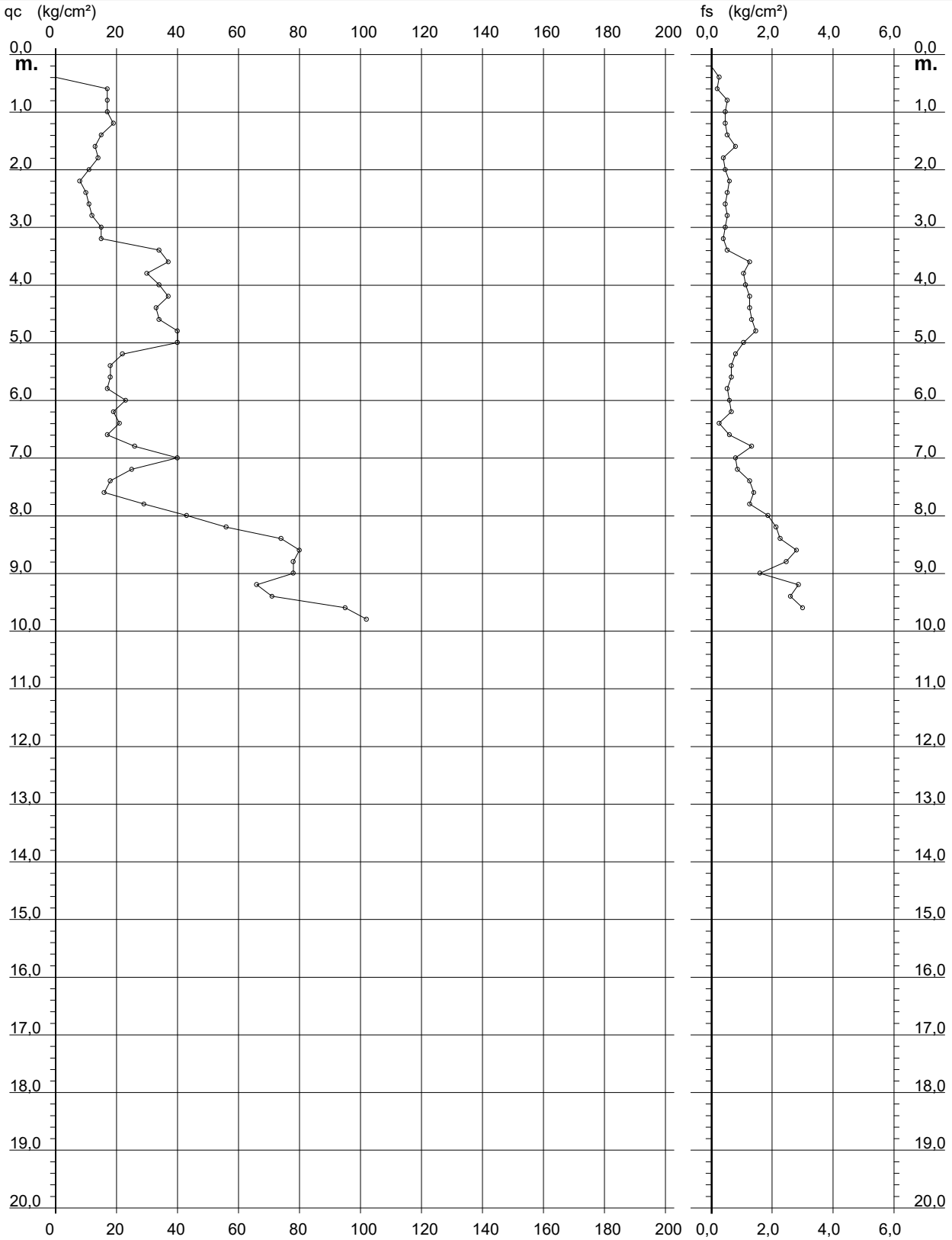
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 094

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-094	- scala vert.:	1 : 100



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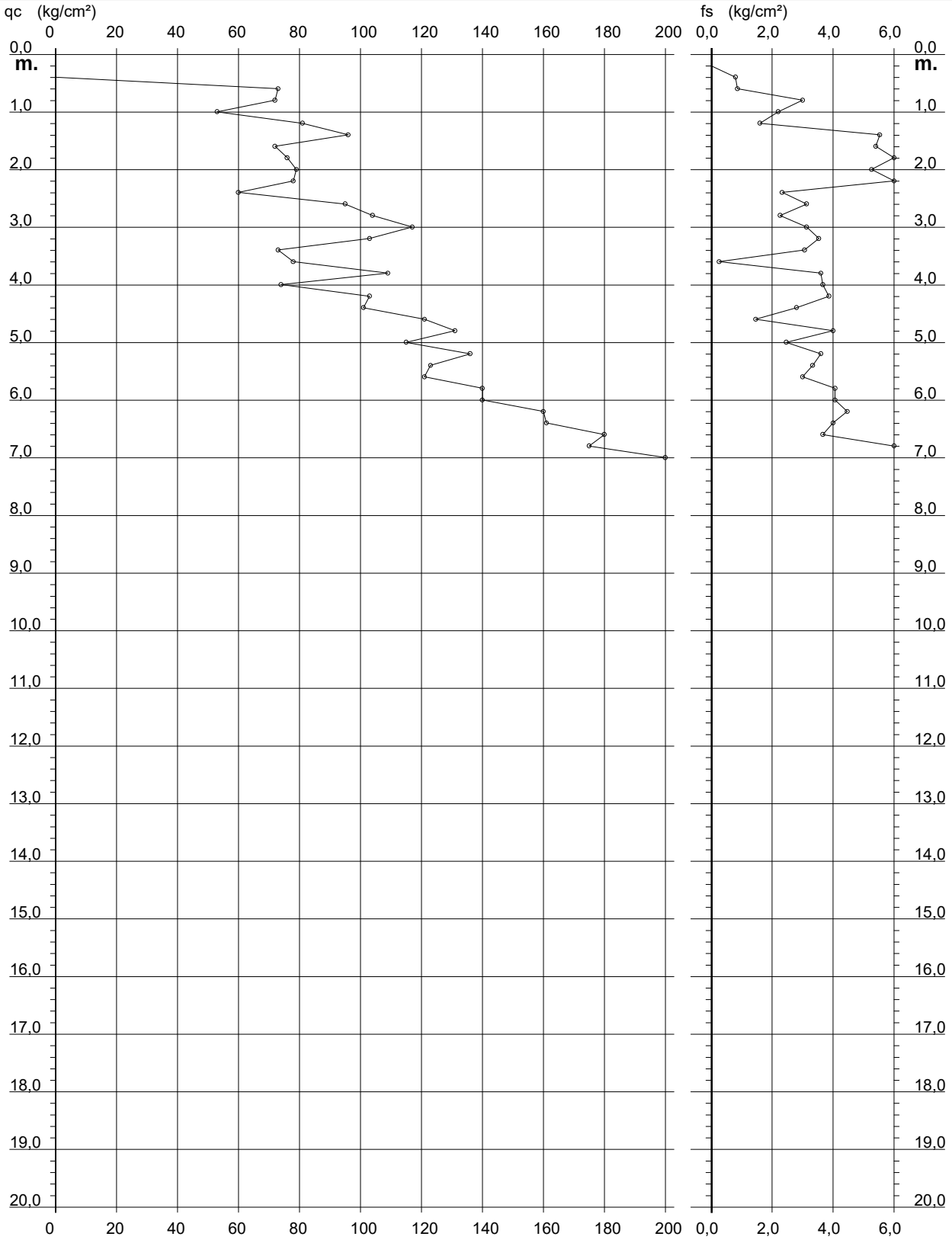
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 096

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-096	- scala vert.:	1 : 100



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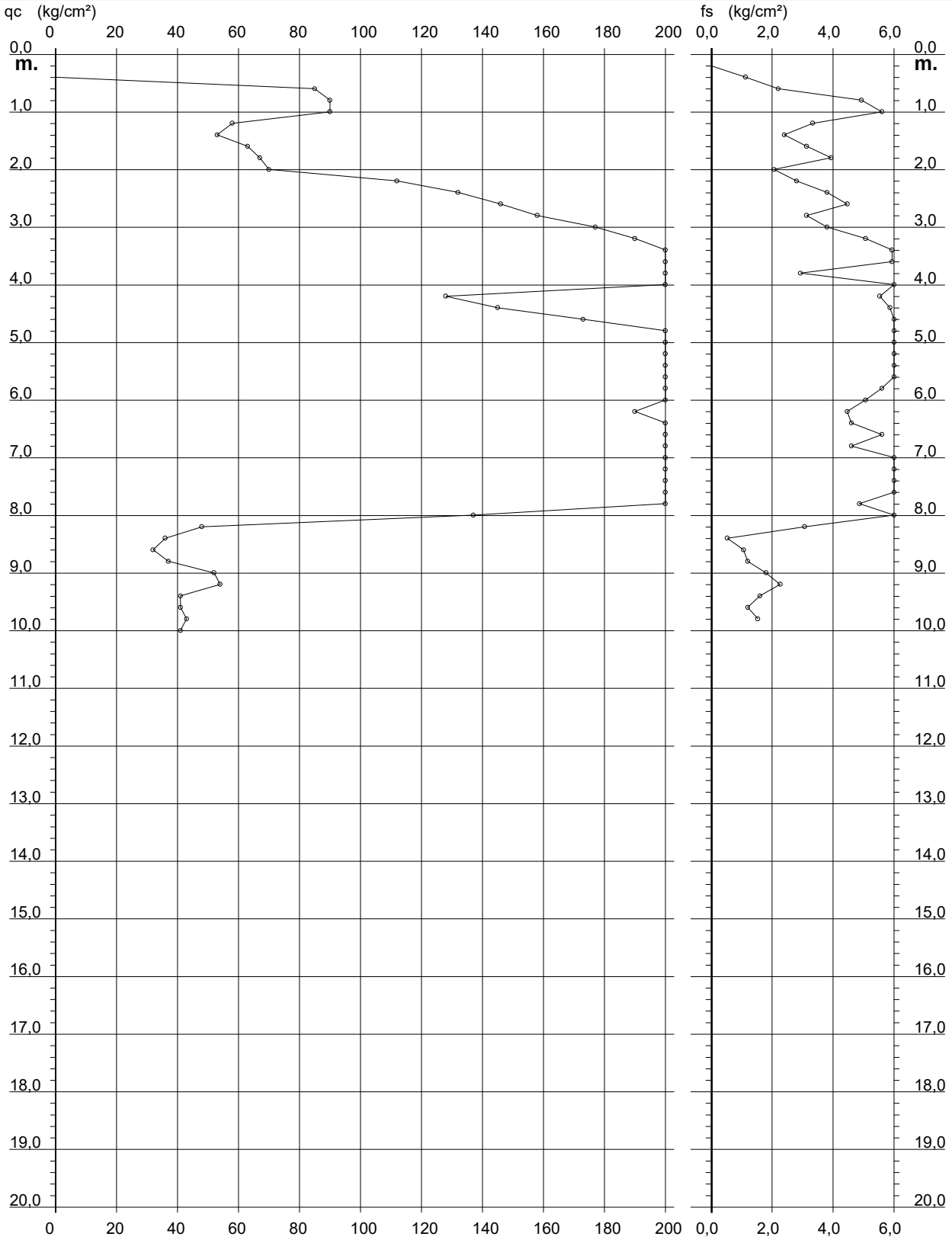
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 101

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-101	- scala vert.:	1 : 100



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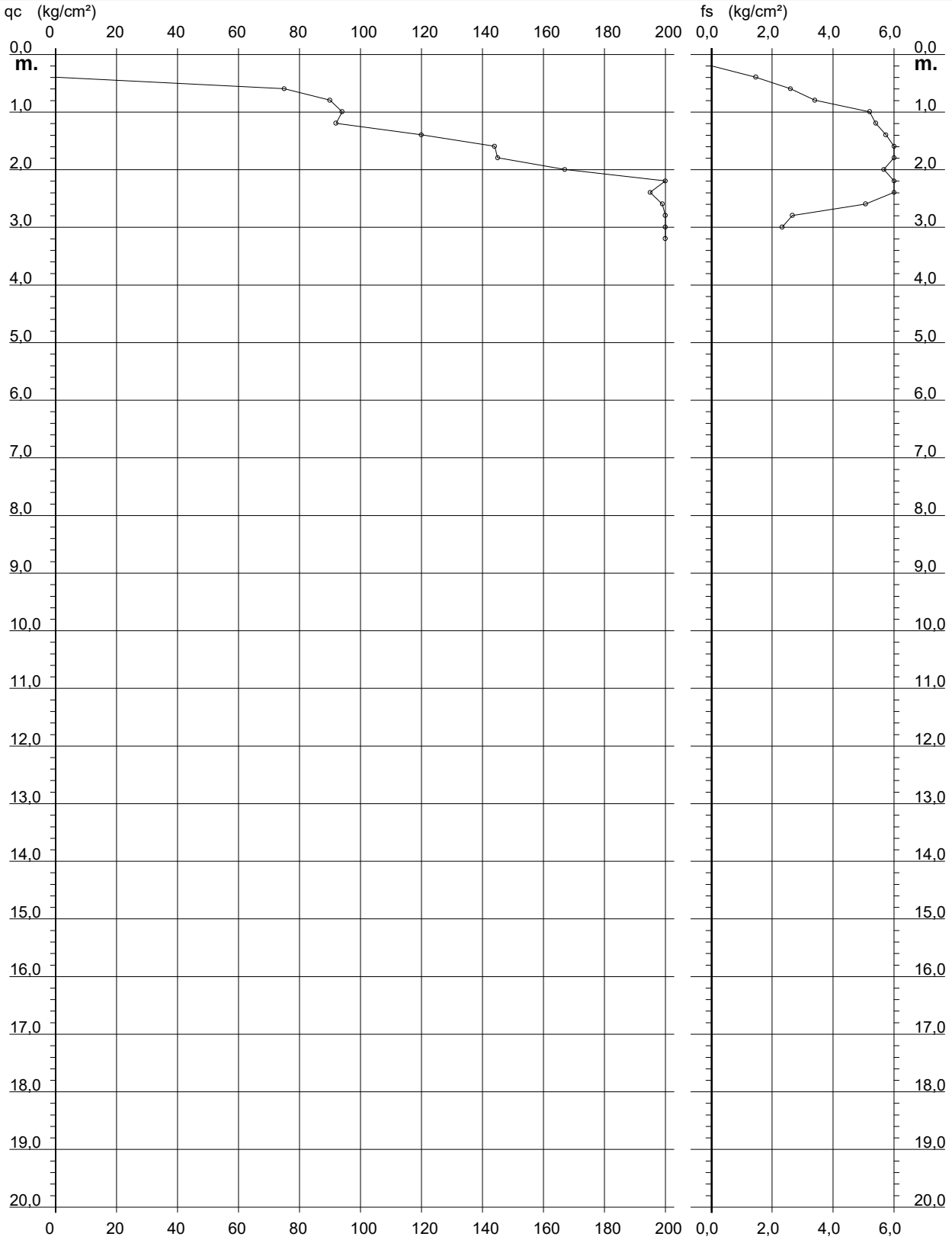
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 102

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-102	- scala vert.:	1 : 100



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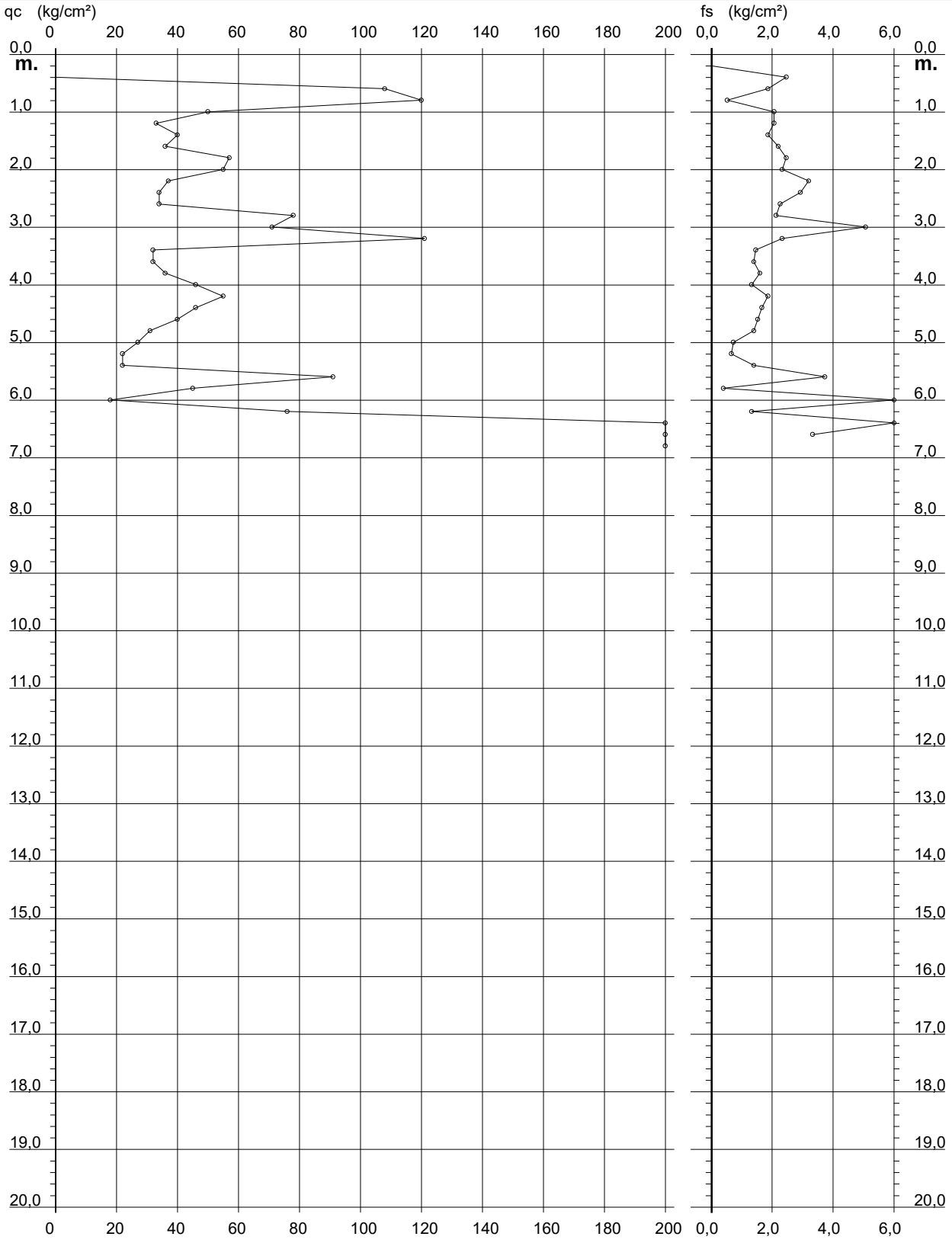
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 108

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-108	- scala vert.:	1 : 100



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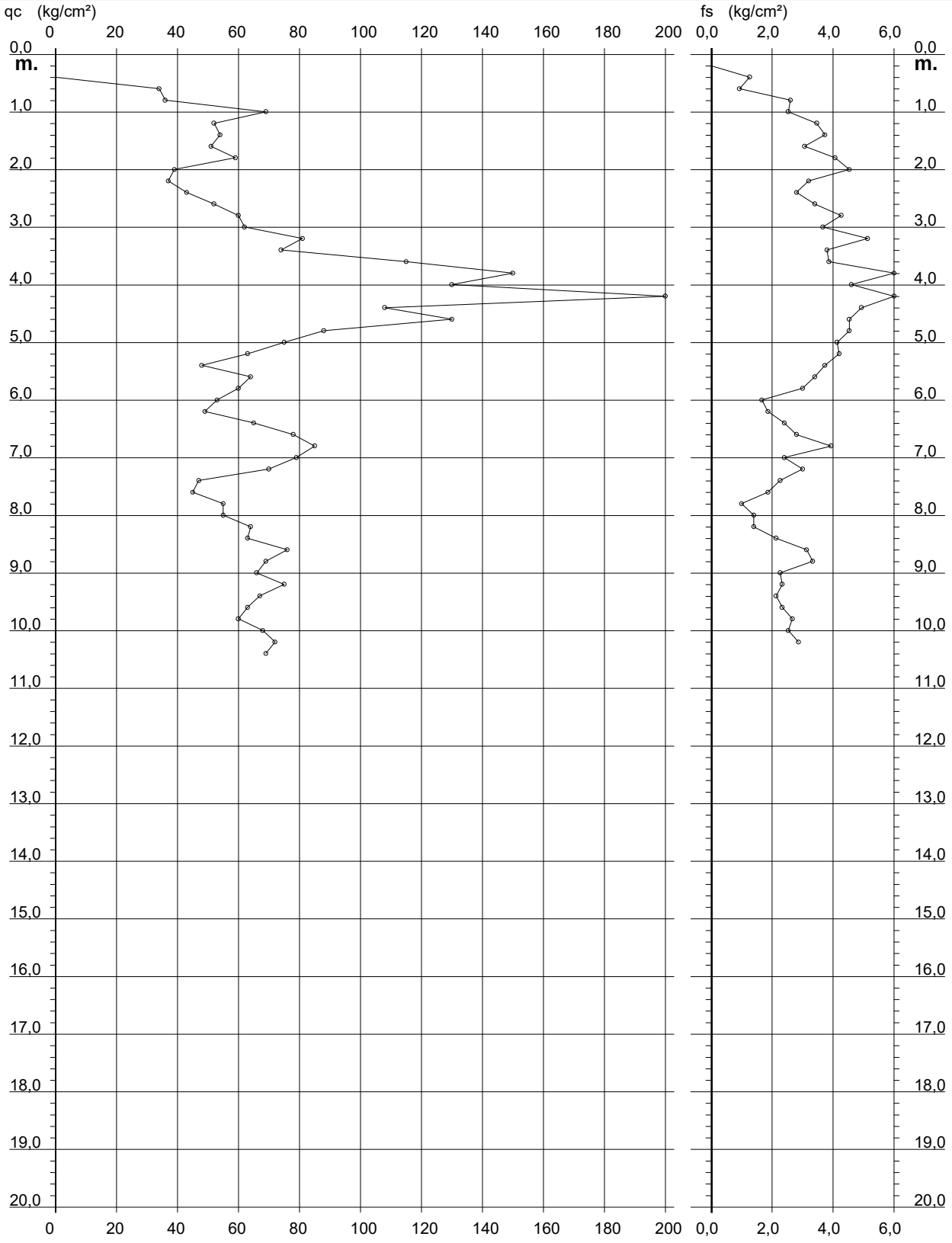
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 110

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-110	- scala vert.:	1 : 100



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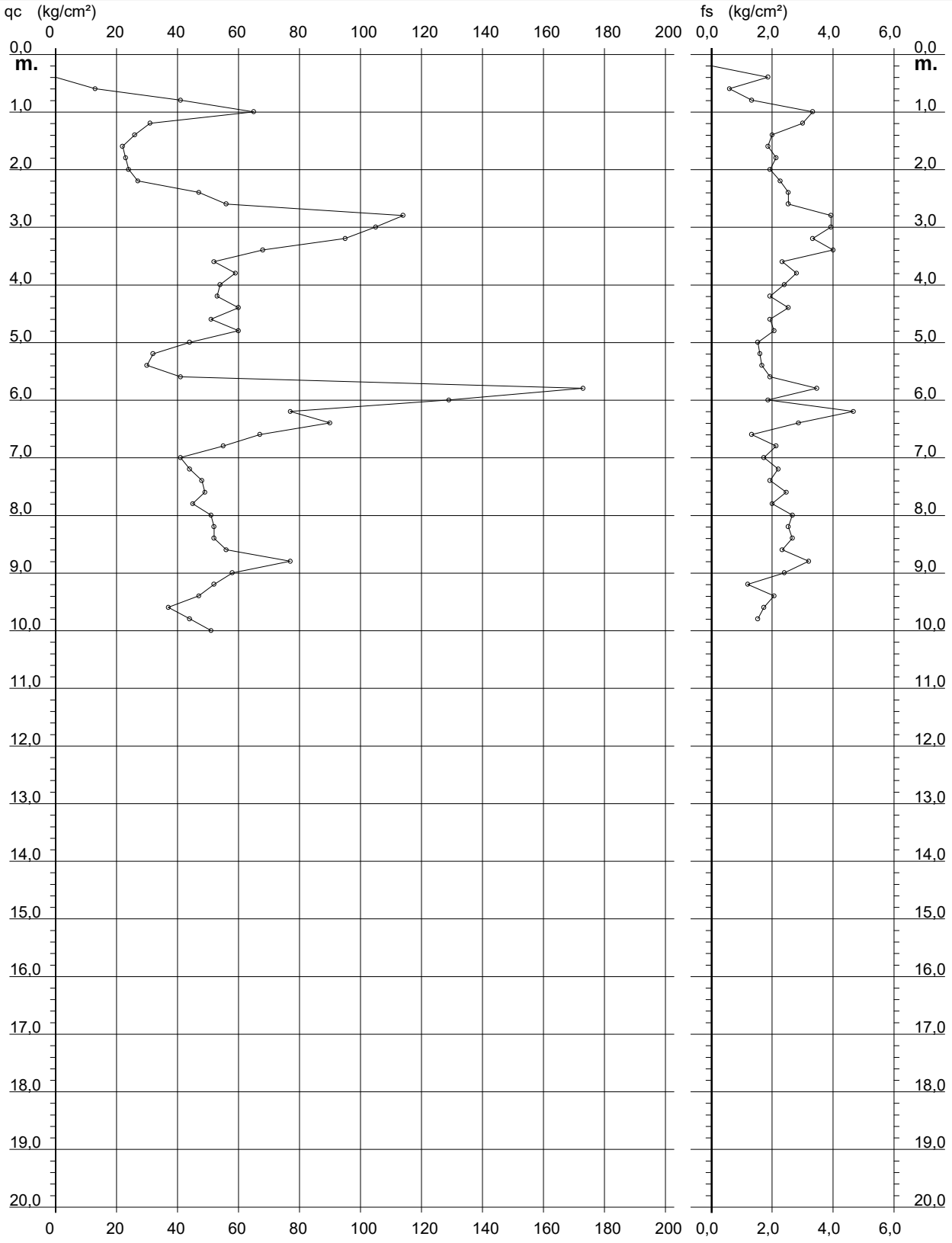
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 109

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-109	- scala vert.:	1 : 100



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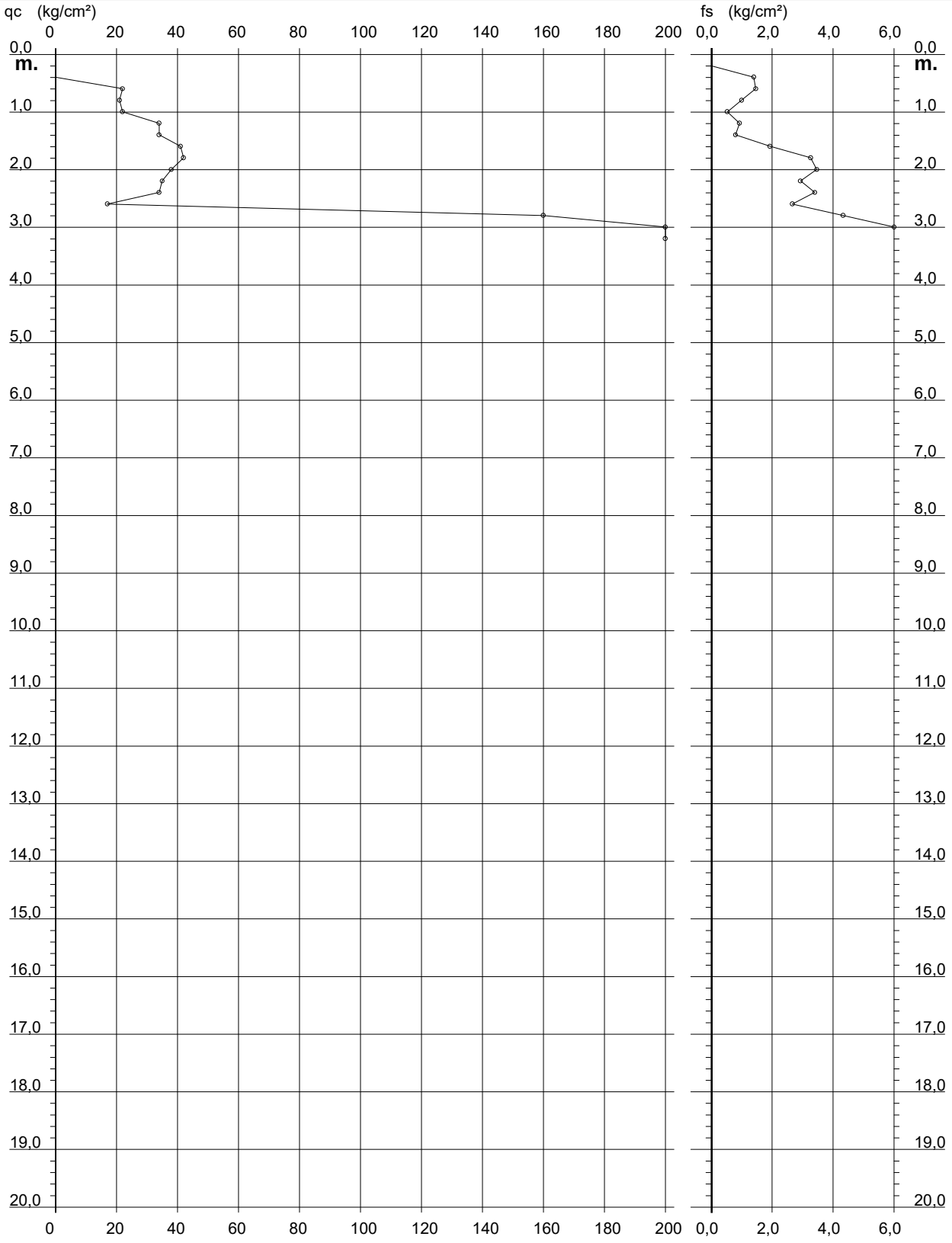
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 122

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-122	- scala vert.:	1 : 100



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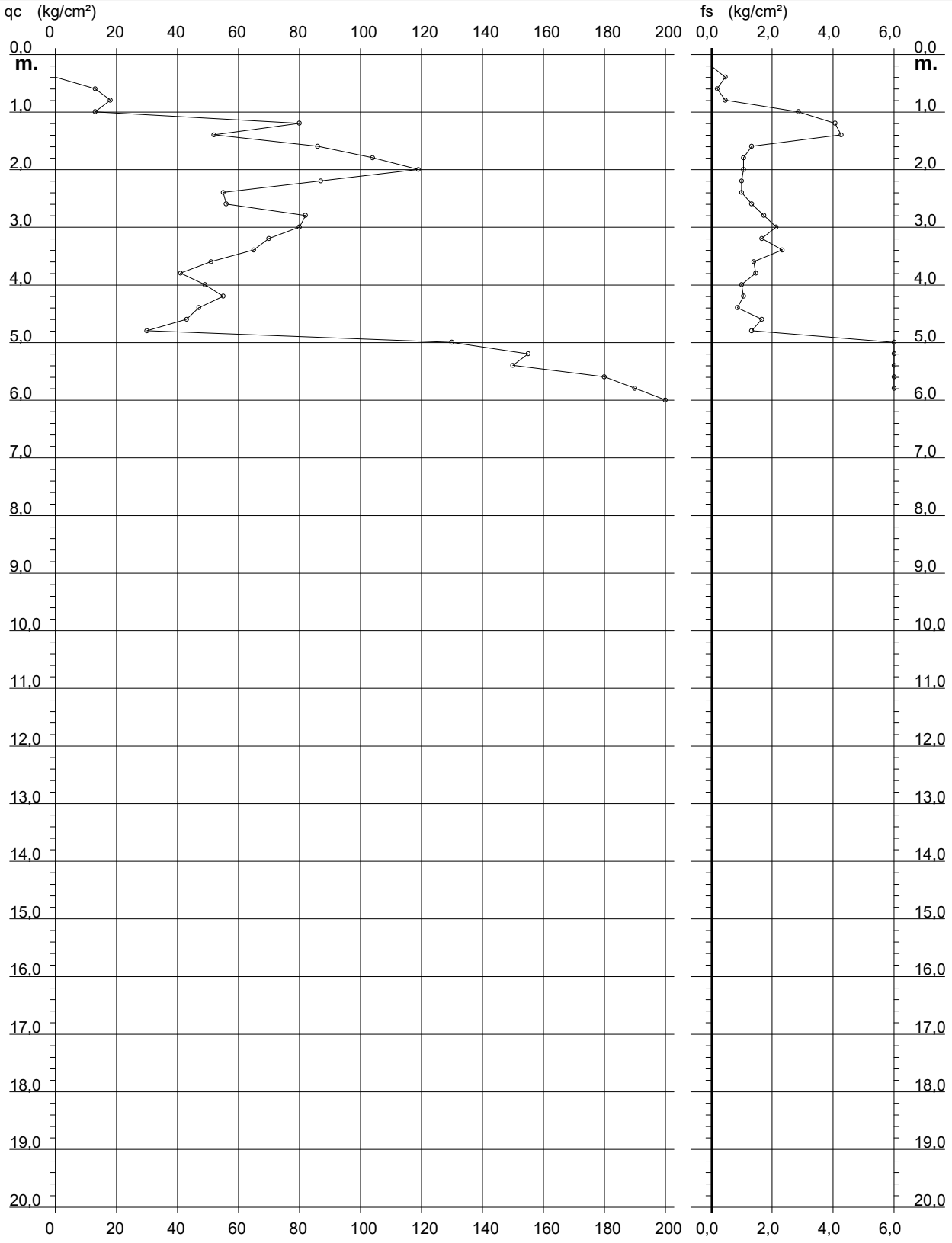
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 136

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/01/1997
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-136	- scala vert.:	1 : 100



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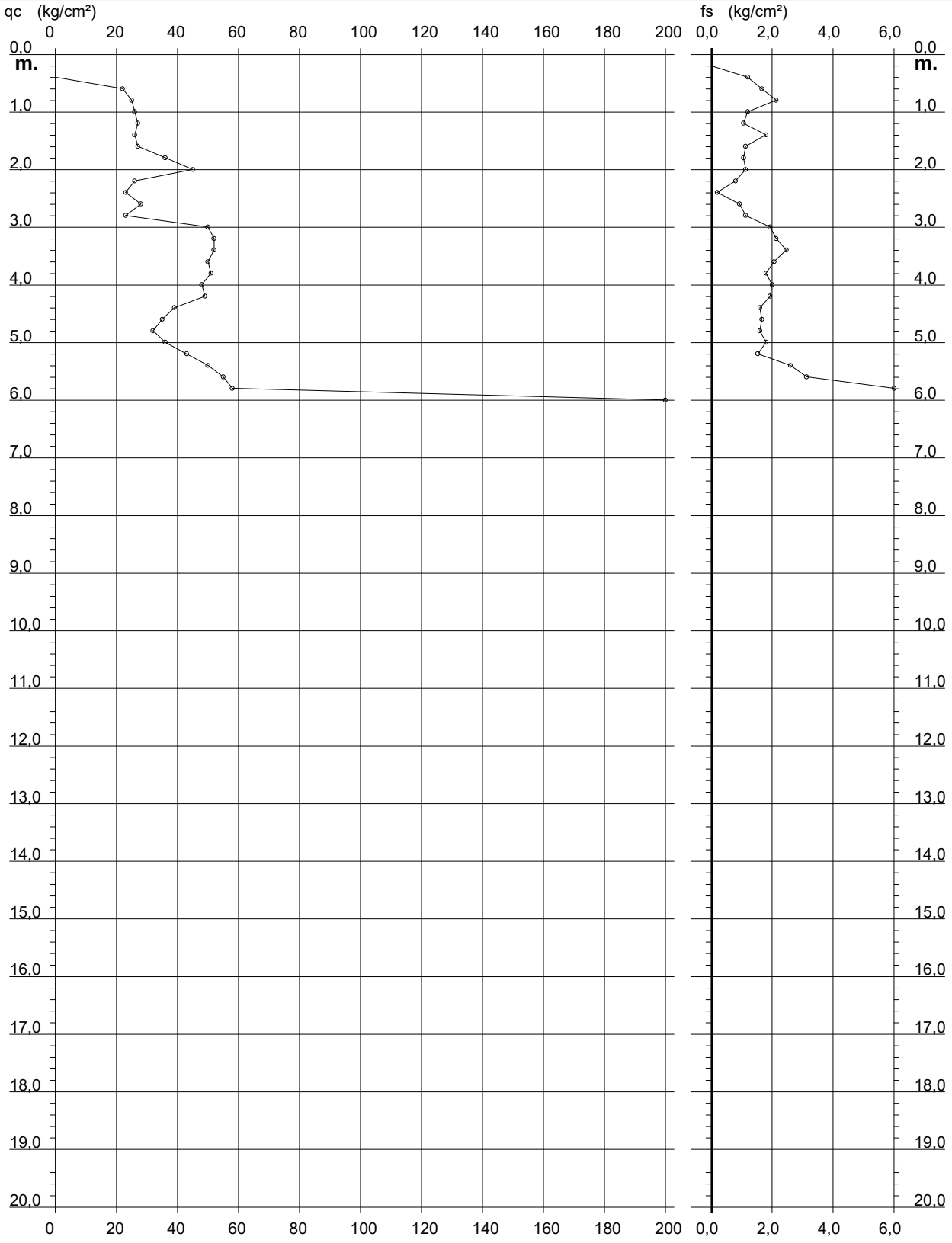
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 139

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-139	- scala vert.:	1 : 100



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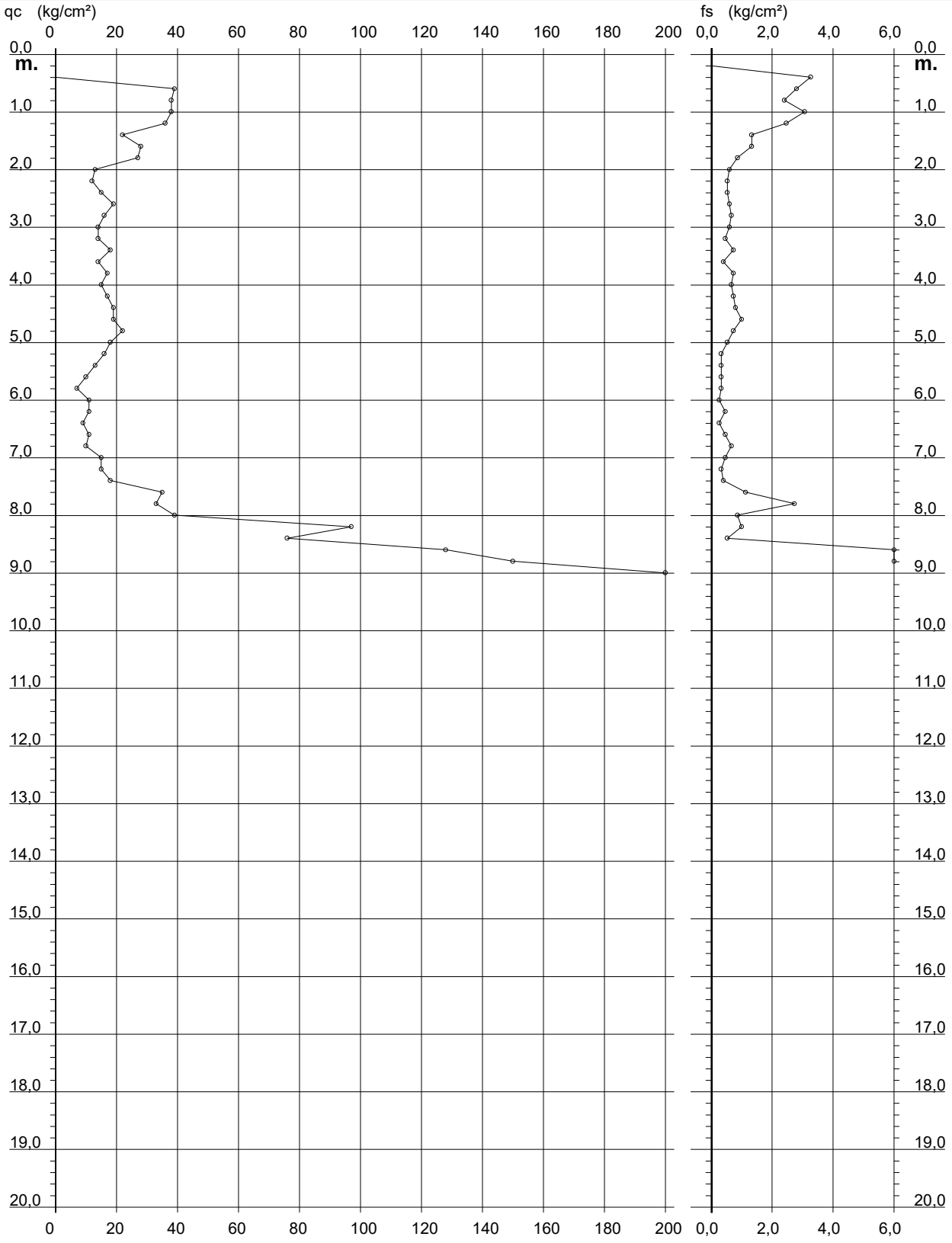
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 144

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-144	- scala vert.:	1 : 100



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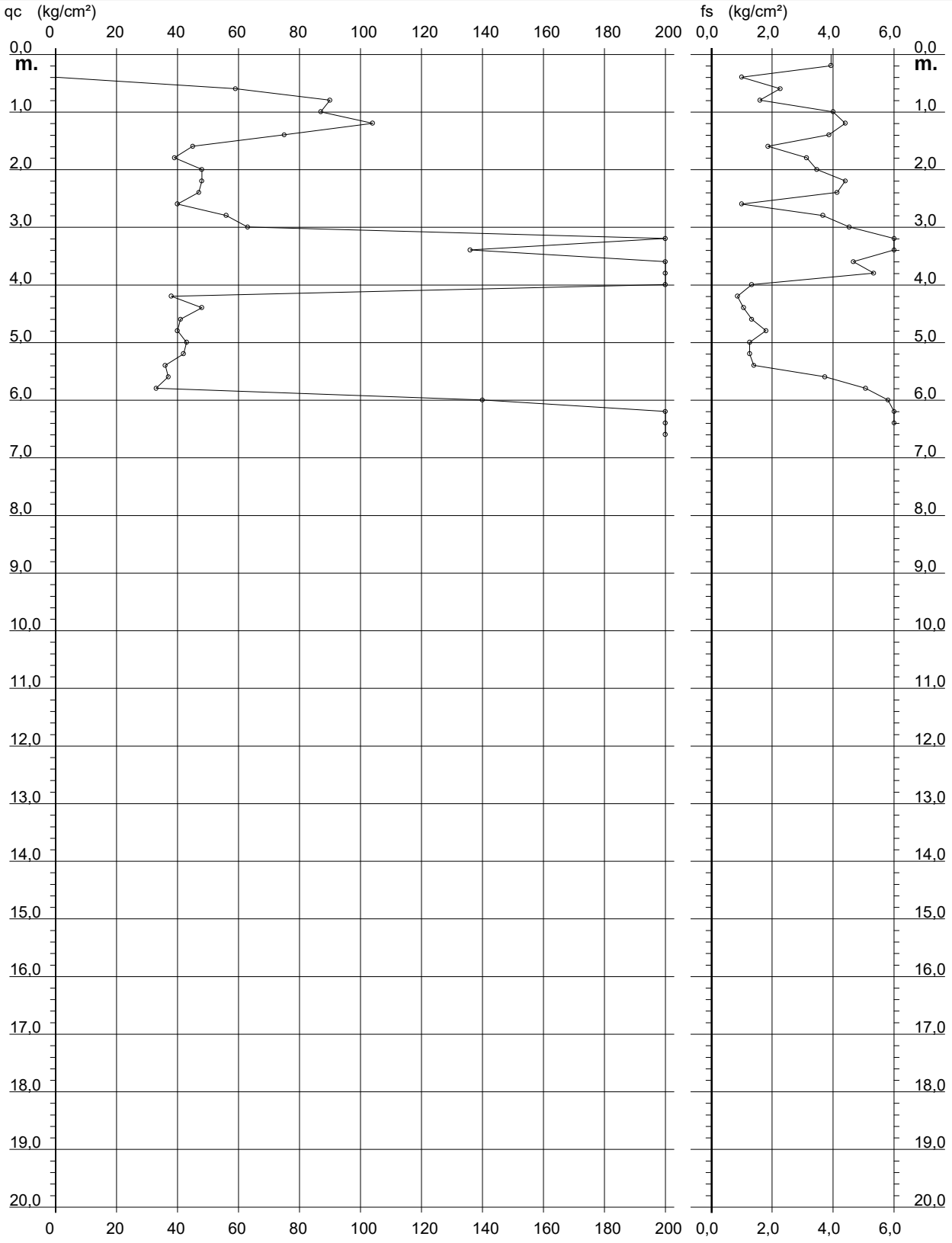
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 147

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-147	- scala vert.:	1 : 100



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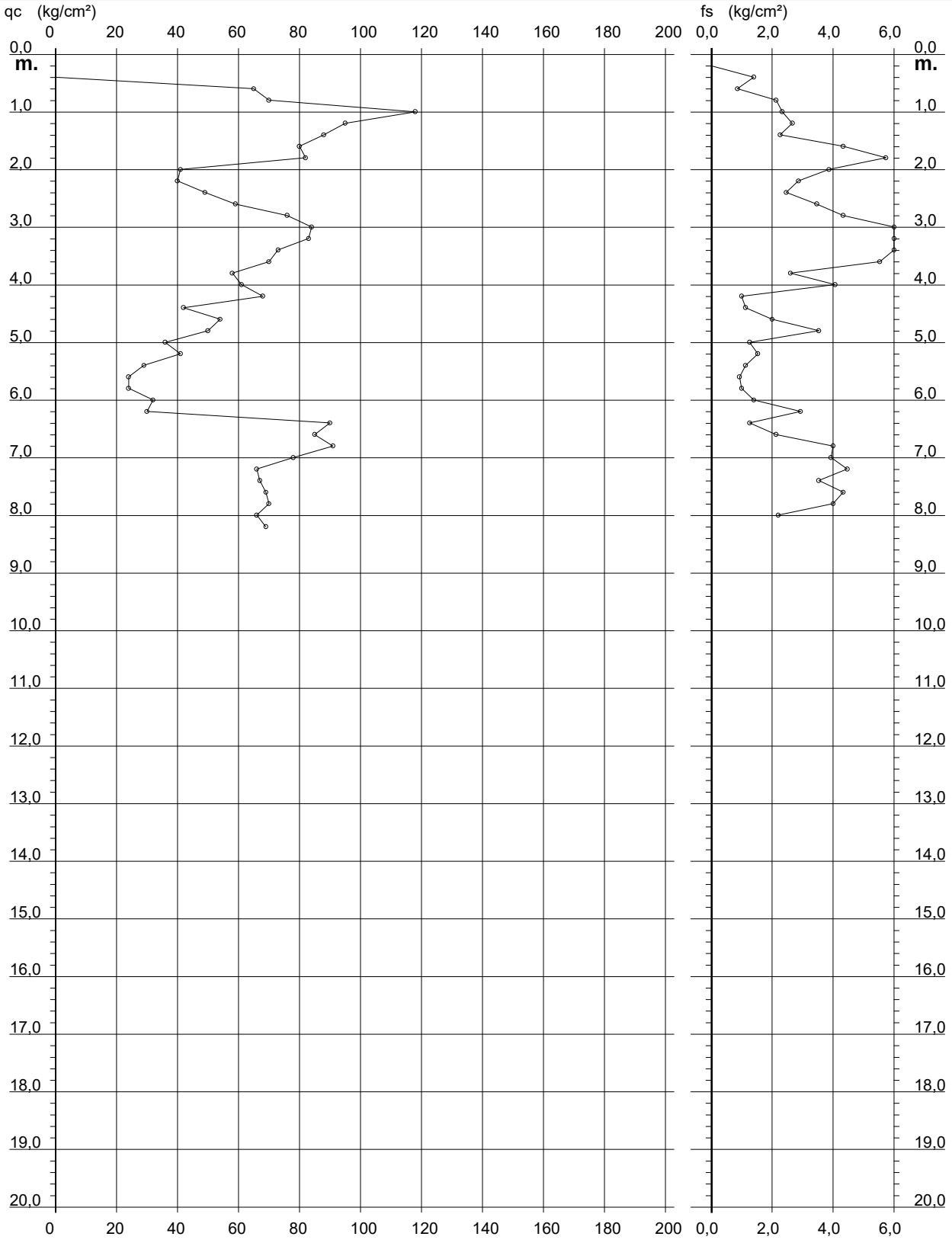
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 148

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-148	- scala vert.:	1 : 100



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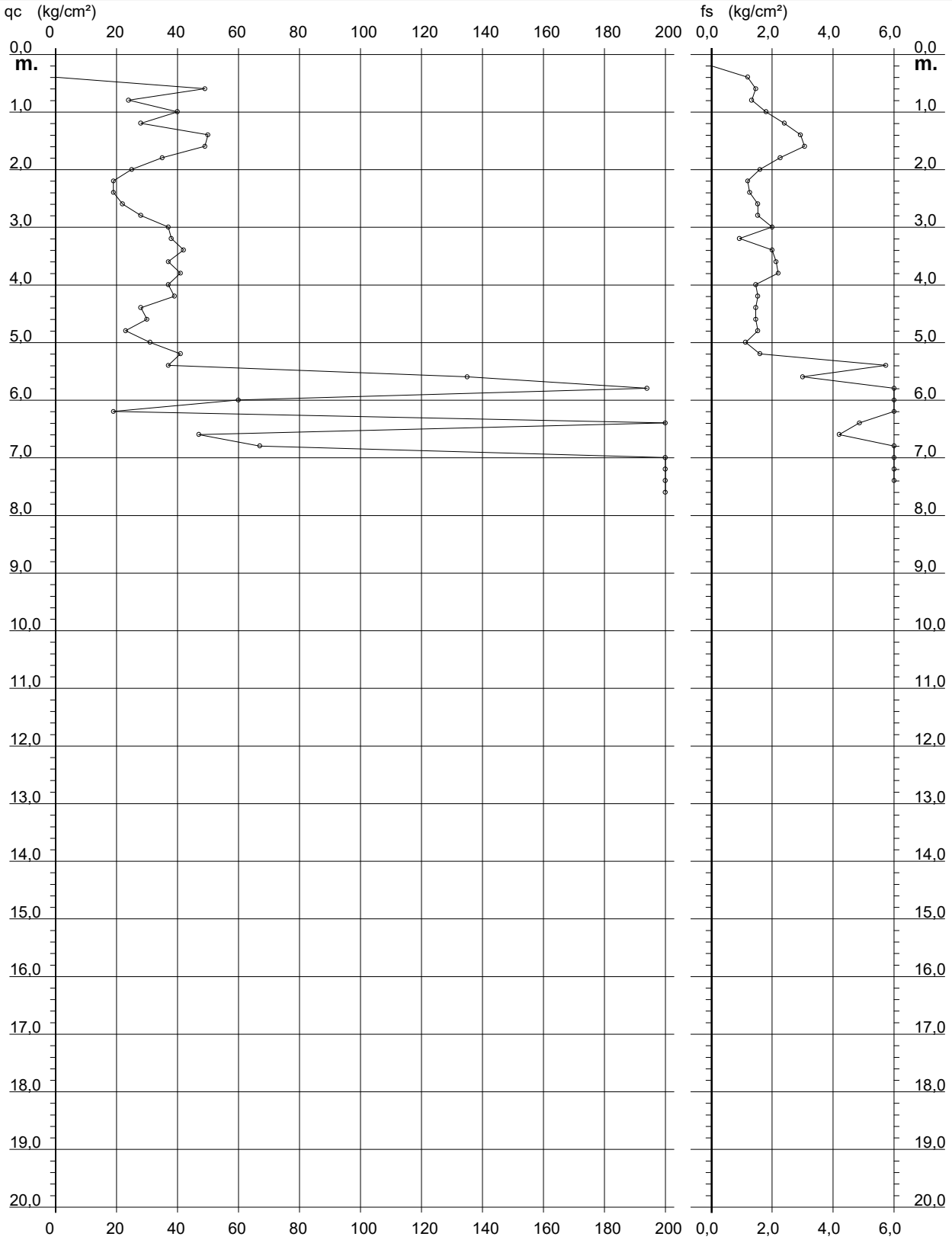
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 149

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-149	- scala vert.:	1 : 100



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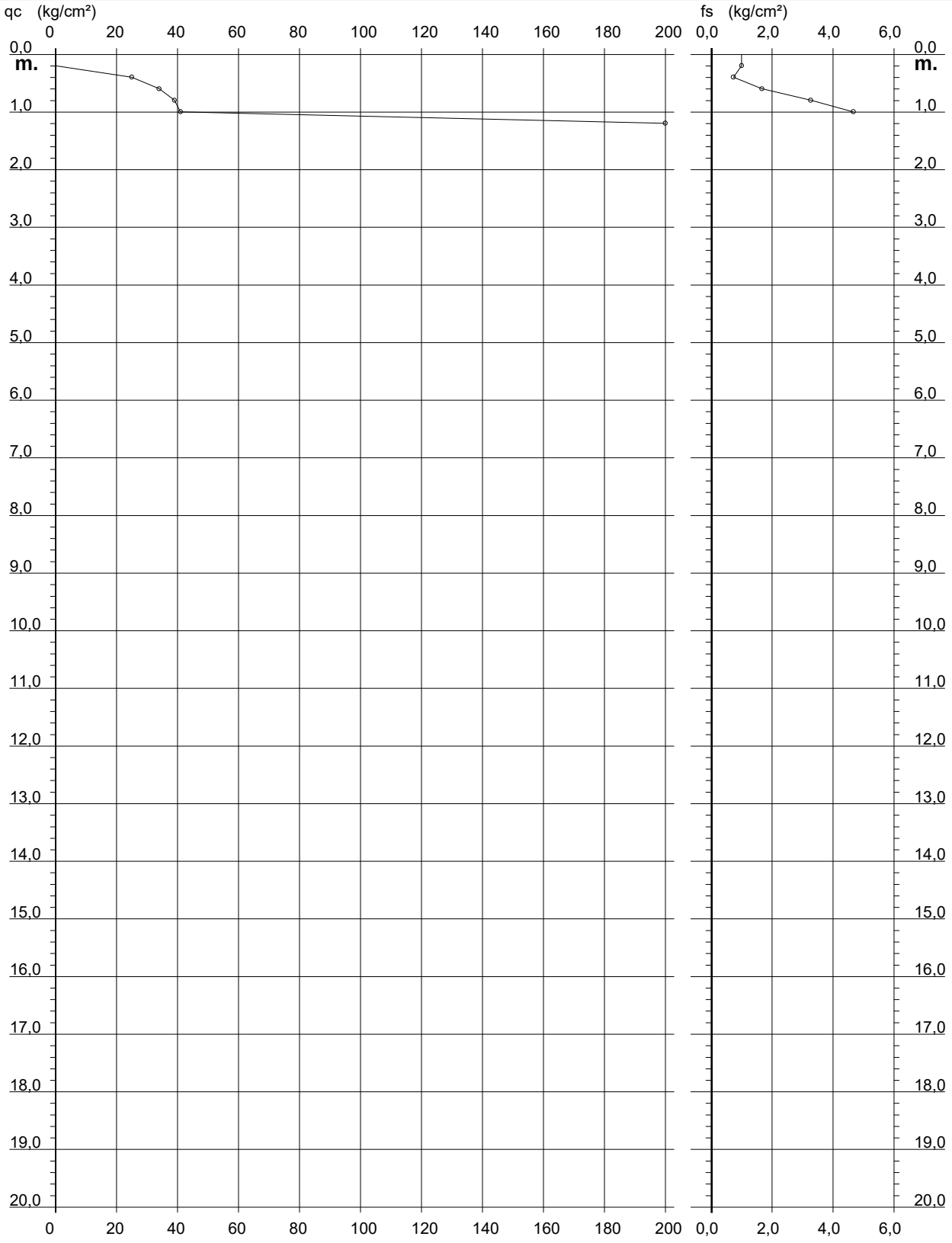
PROVA PENETROMETRICA STATICA DIAGRAMMA DI RESISTENZA

CPT 150

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P002-20-150	- scala vert.:	1 : 100



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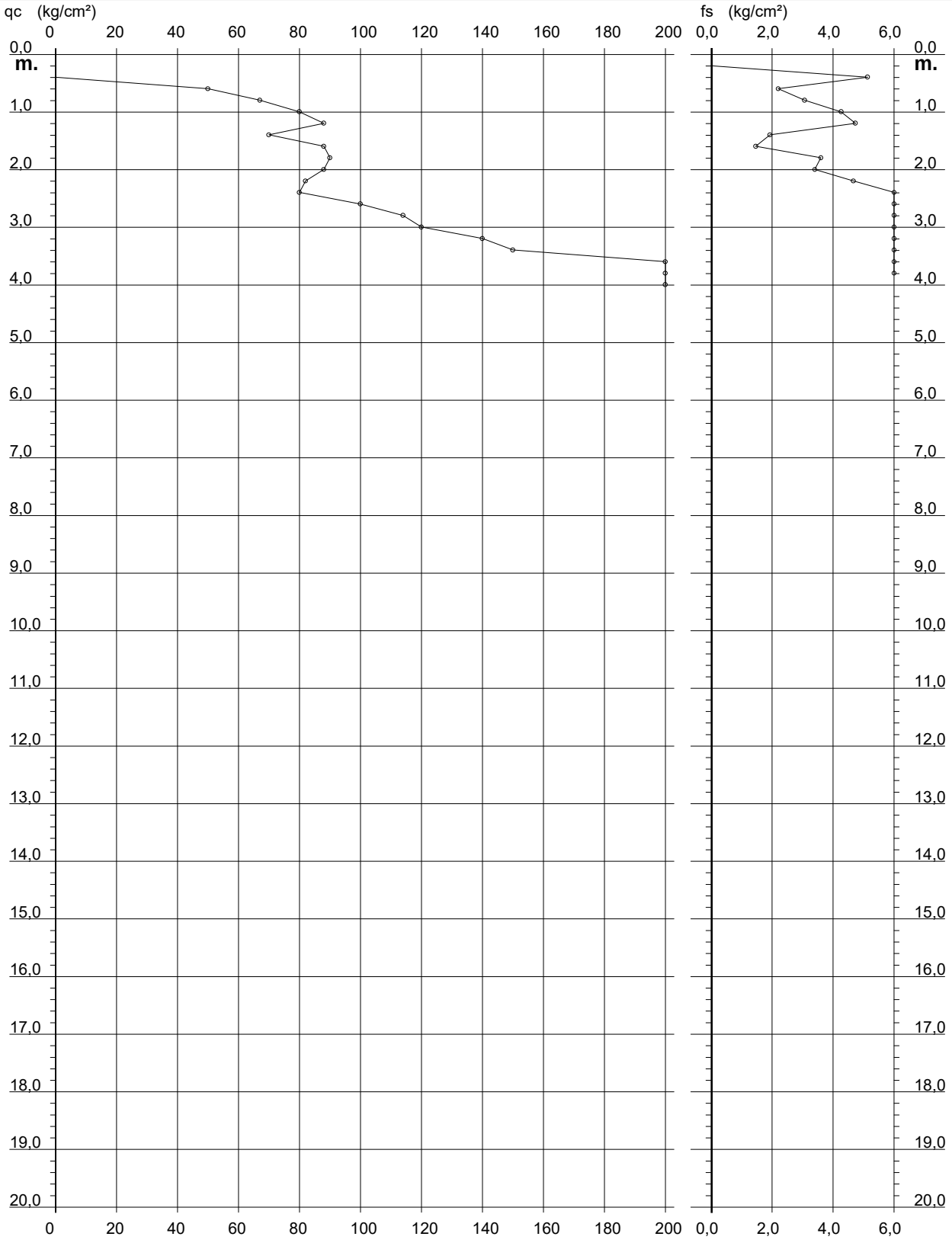
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 277

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-277	- scala vert.:	1 : 100



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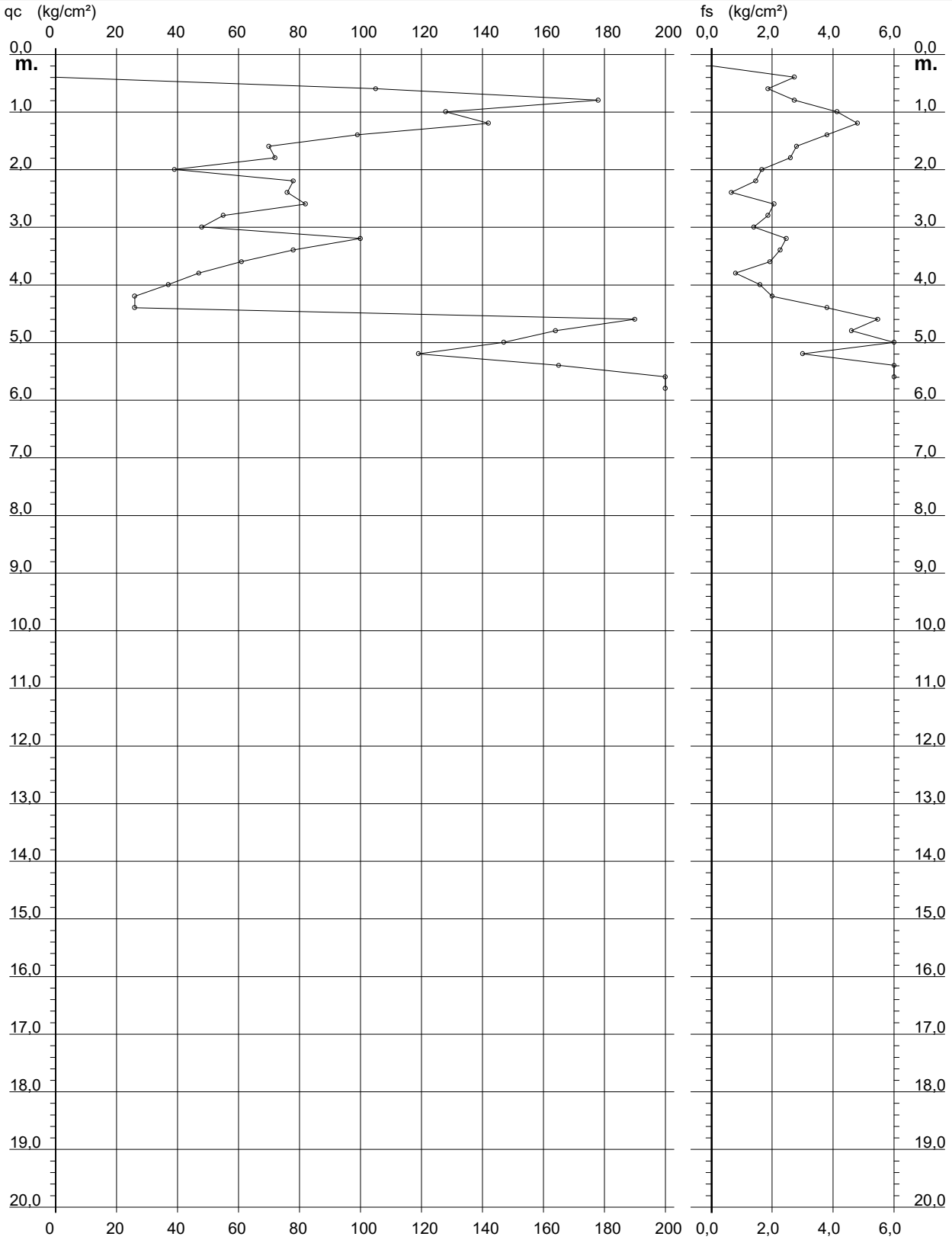
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 281

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-281	- scala vert.:	1 : 100



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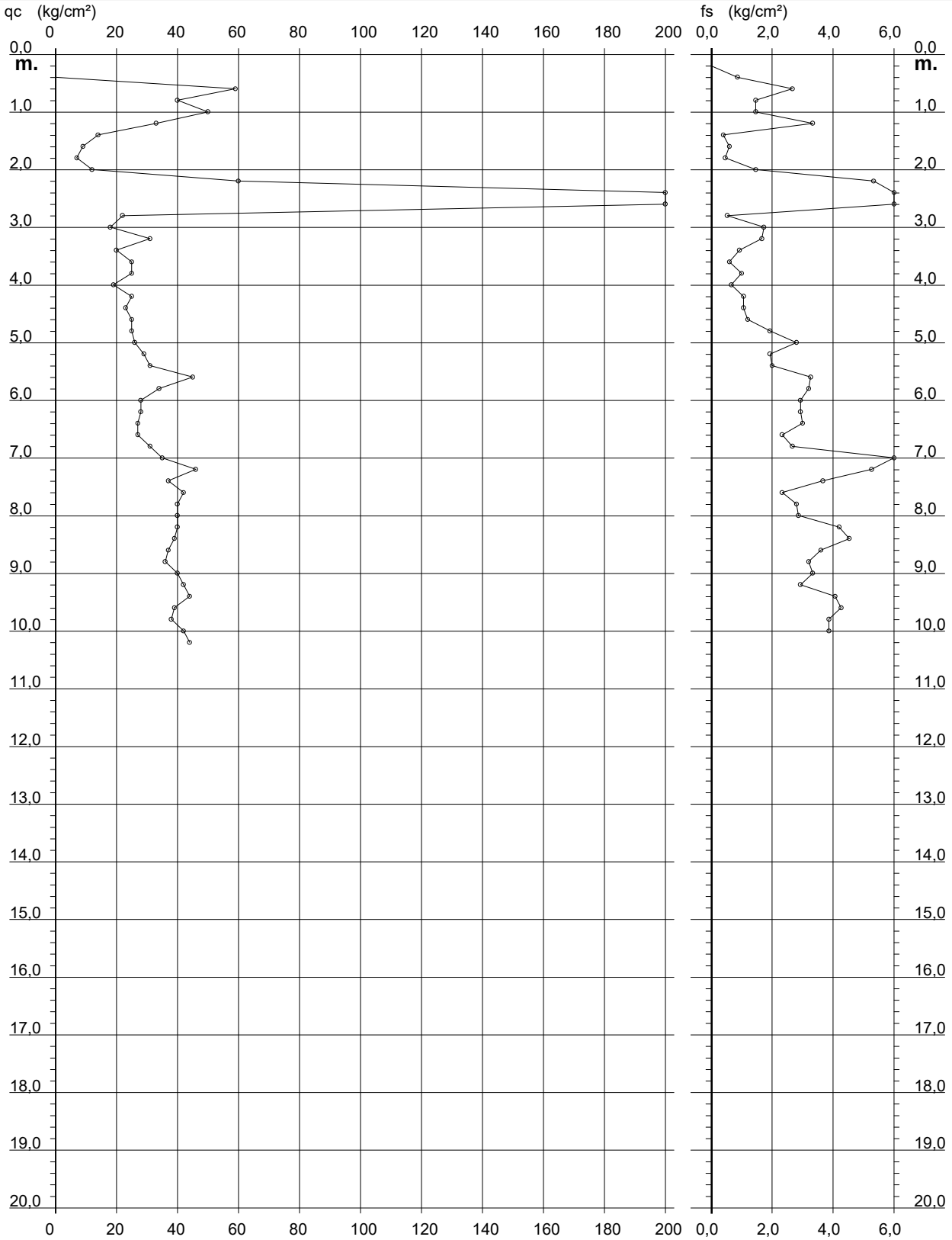
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 272

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-272	- scala vert.:	1 : 100



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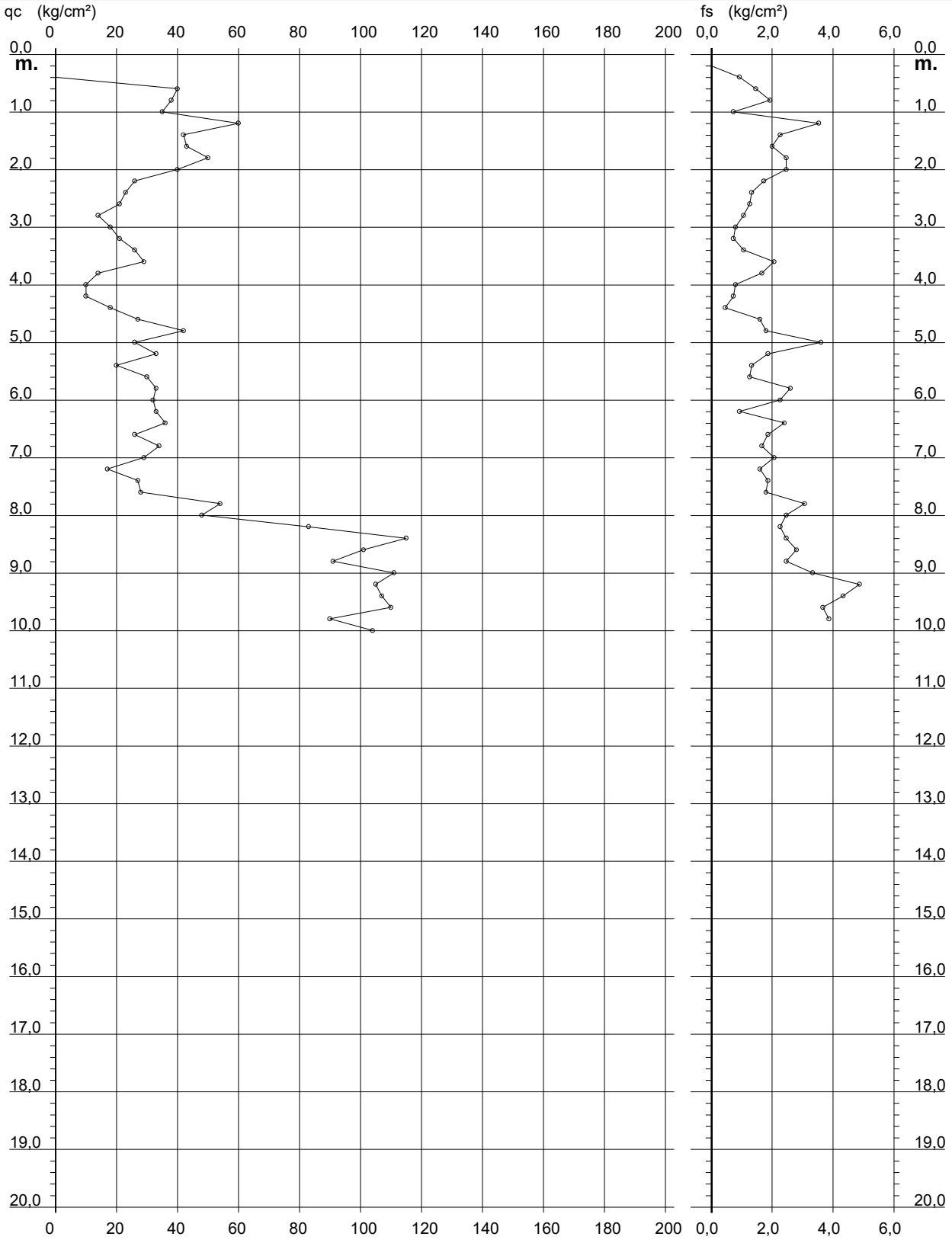
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 274

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-274	- scala vert.:	1 : 100



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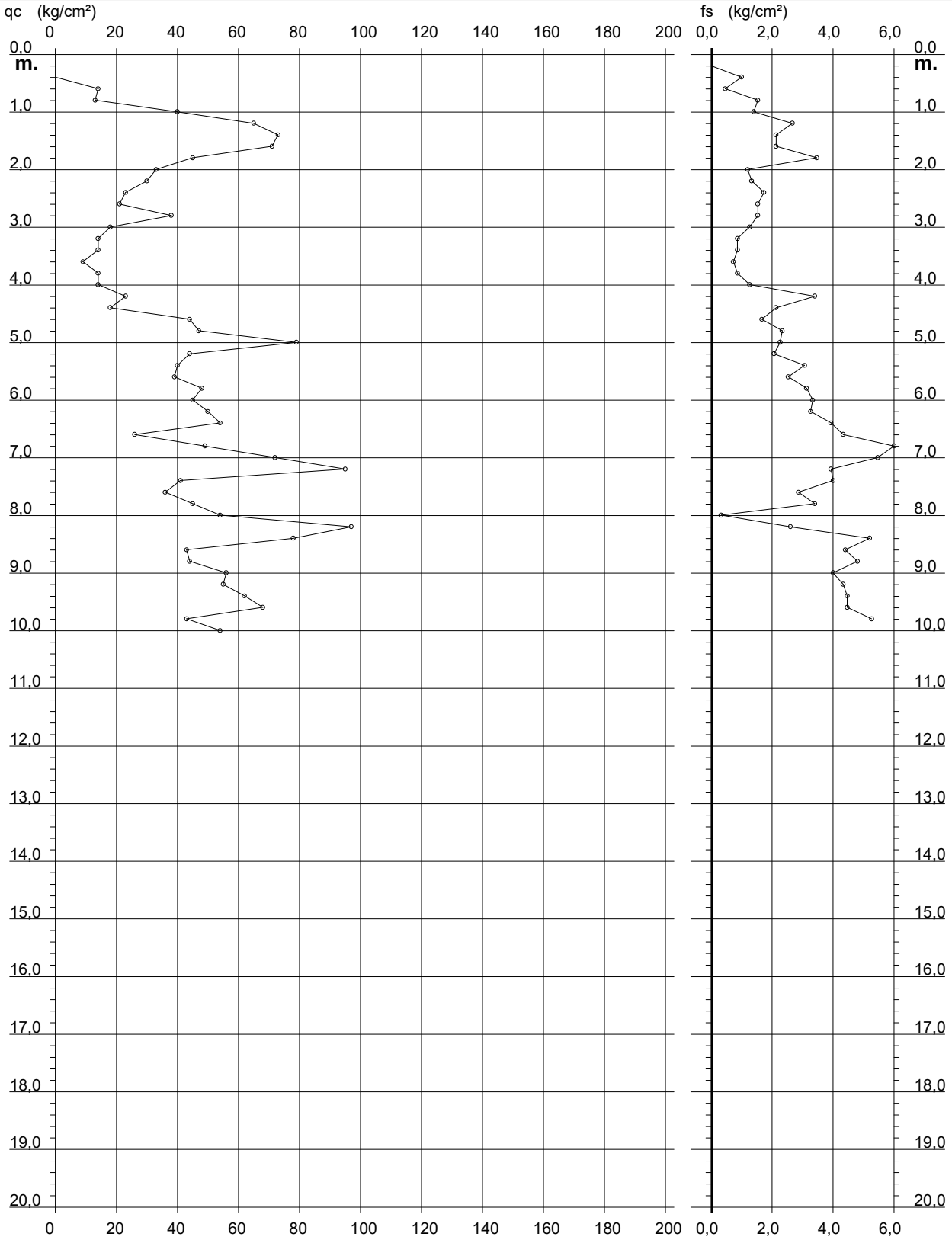
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 284

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	25/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-284	- scala vert.:	1 : 100



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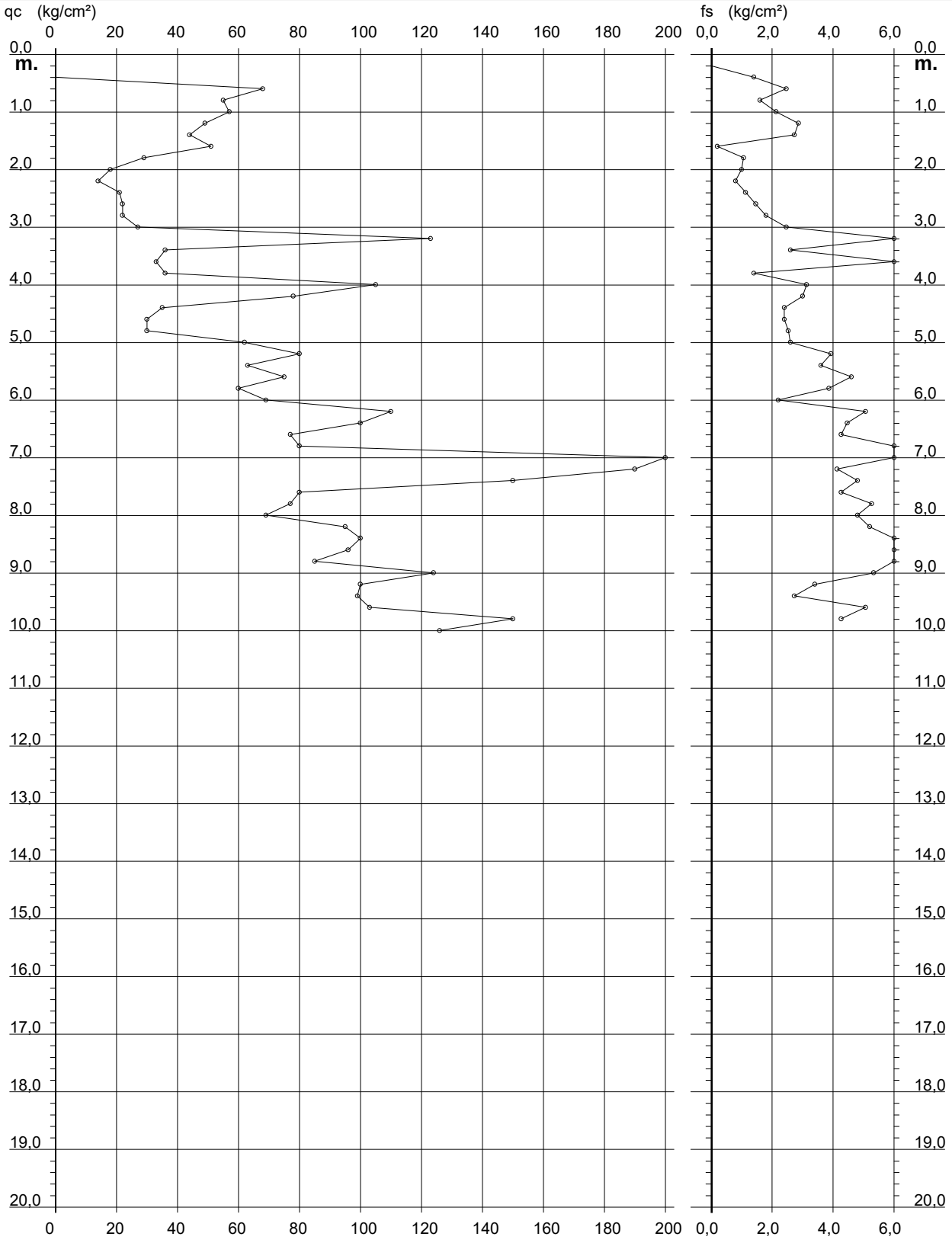
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 285

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	25/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-285	- scala vert.:	1 : 100



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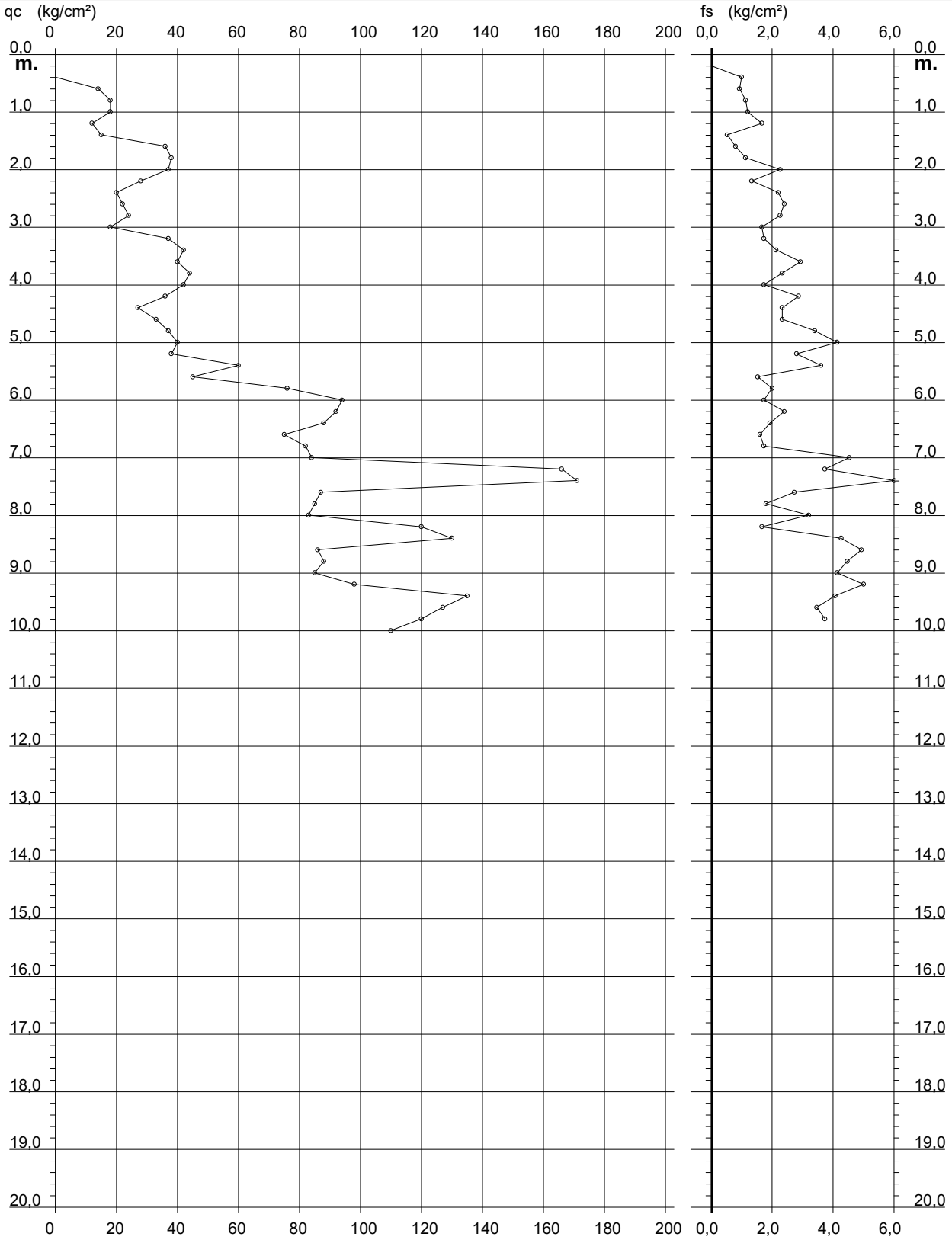
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 286

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	25/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-286	- scala vert.:	1 : 100



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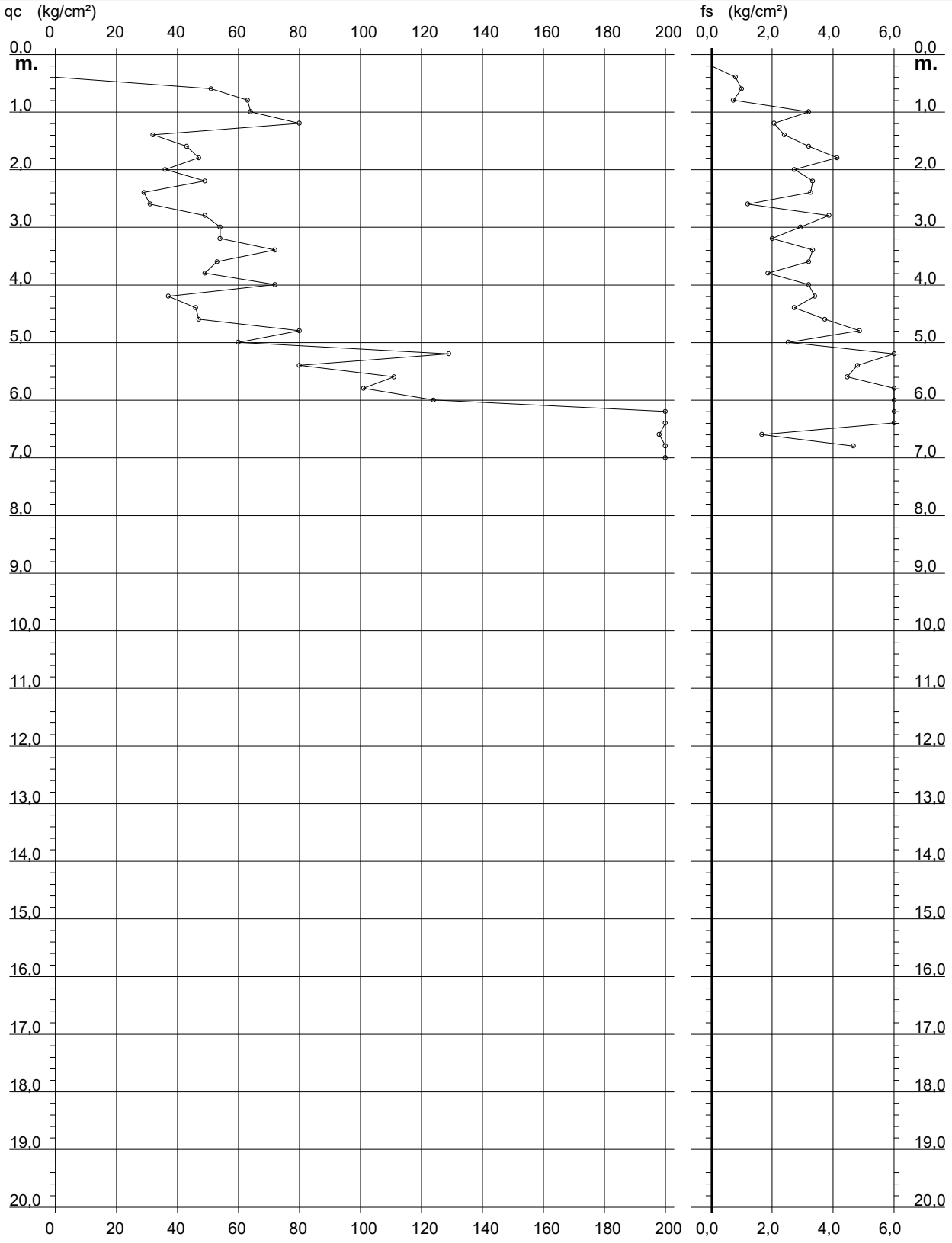
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 267

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-267	- scala vert.:	1 : 100



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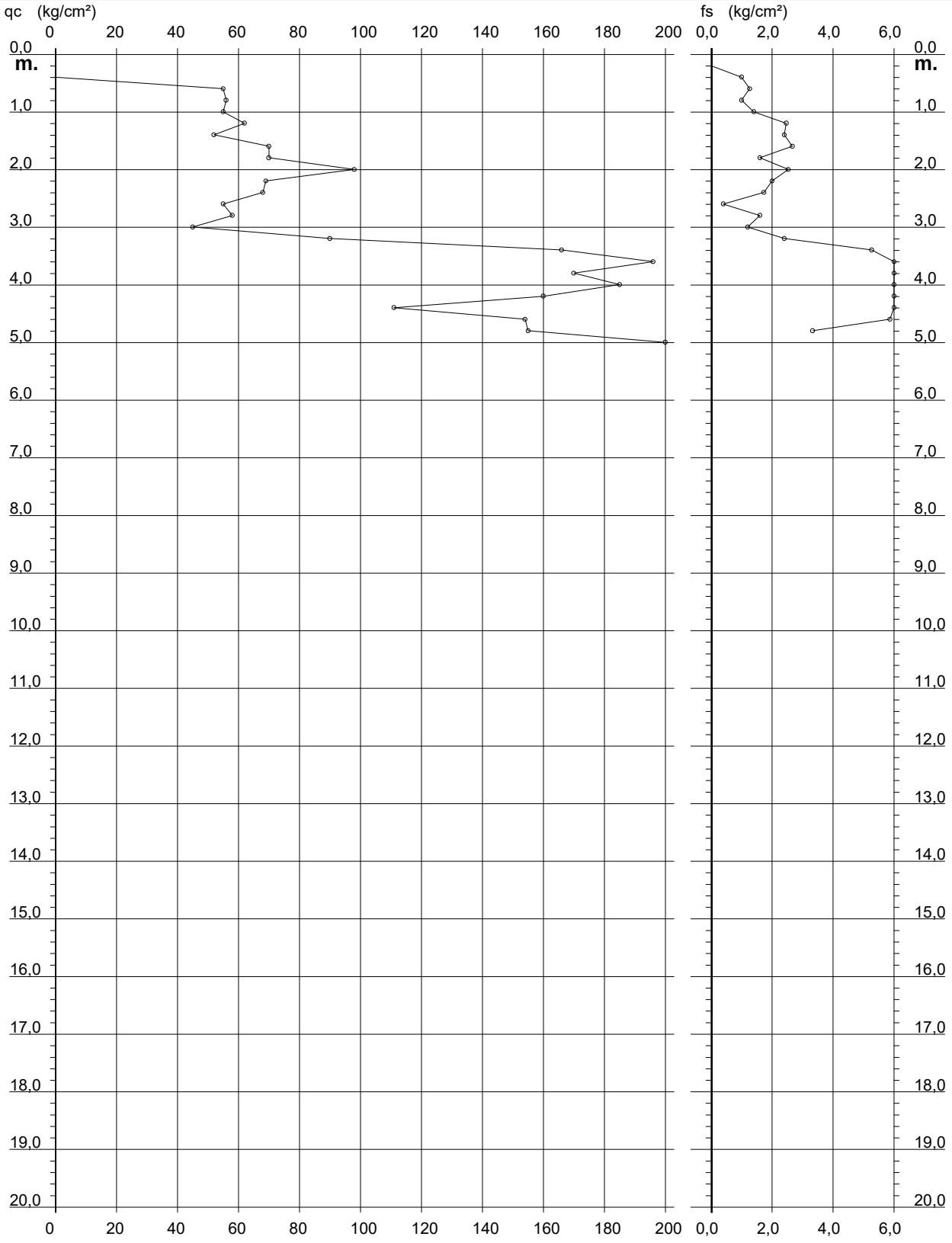
PROVA PENETROMETRICA STATICA DIAGRAMMA DI RESISTENZA

CPT 262

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-262	- scala vert.:	1 : 100



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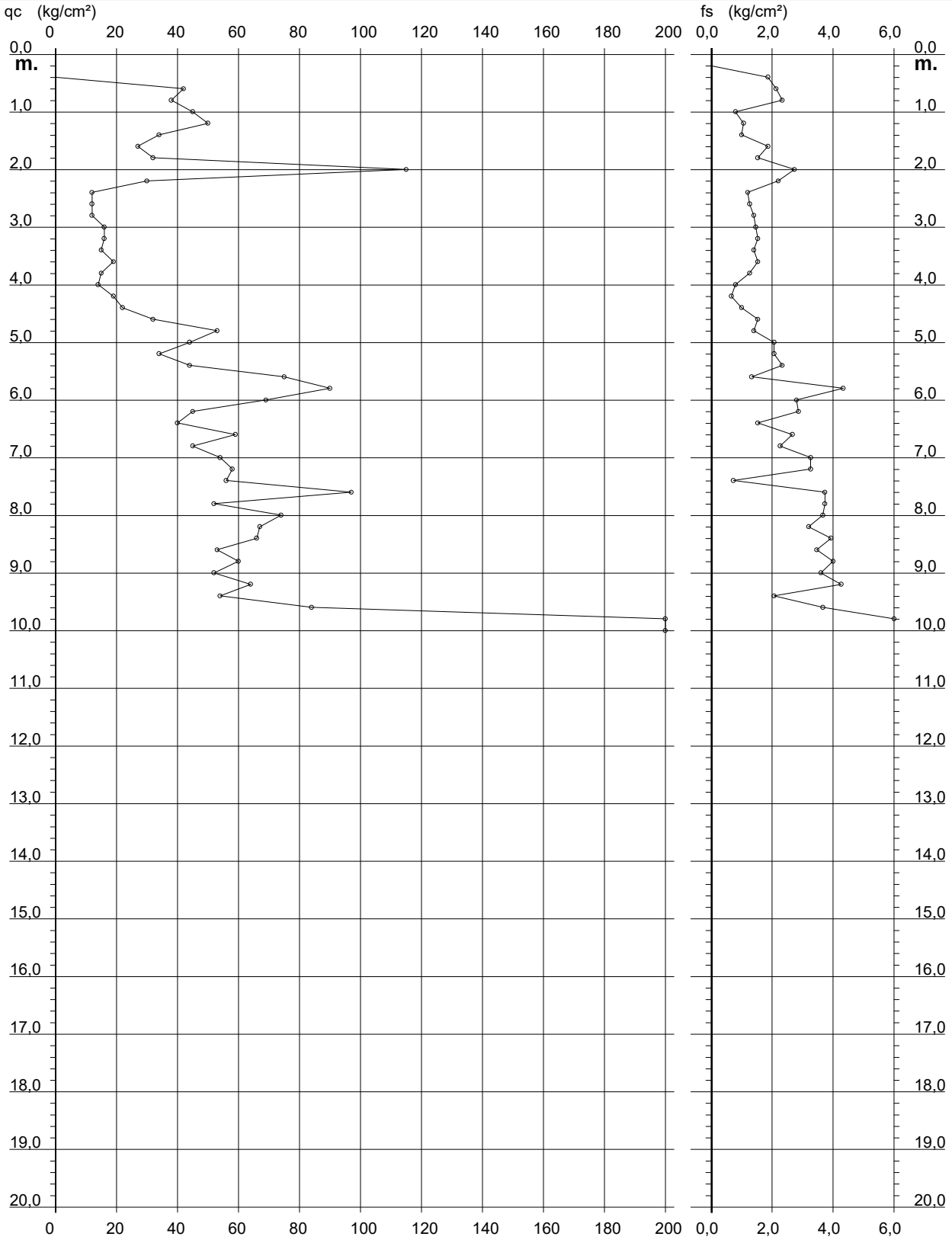
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 263

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-263	- scala vert.:	1 : 100



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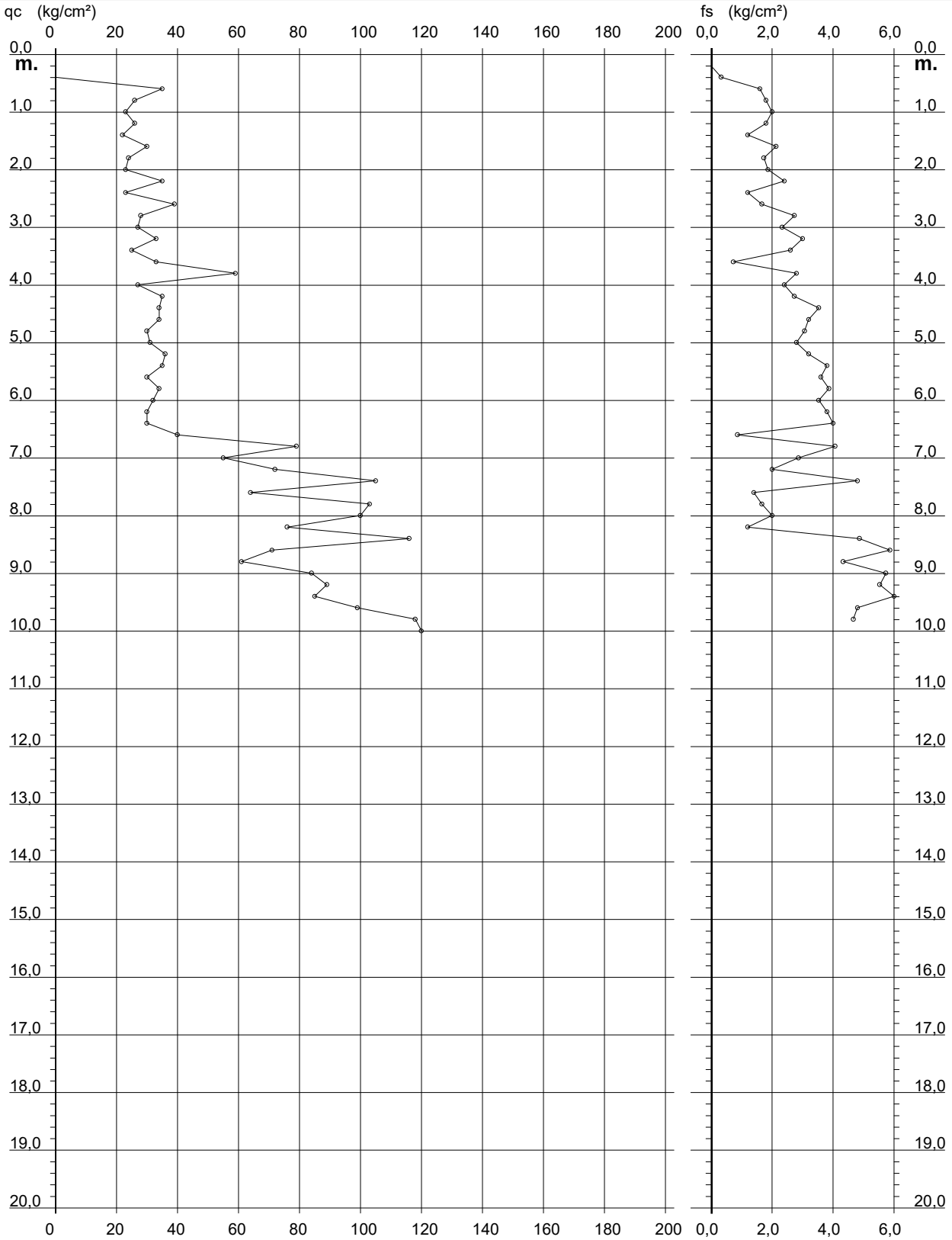
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 265

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-265	- scala vert.:	1 : 100



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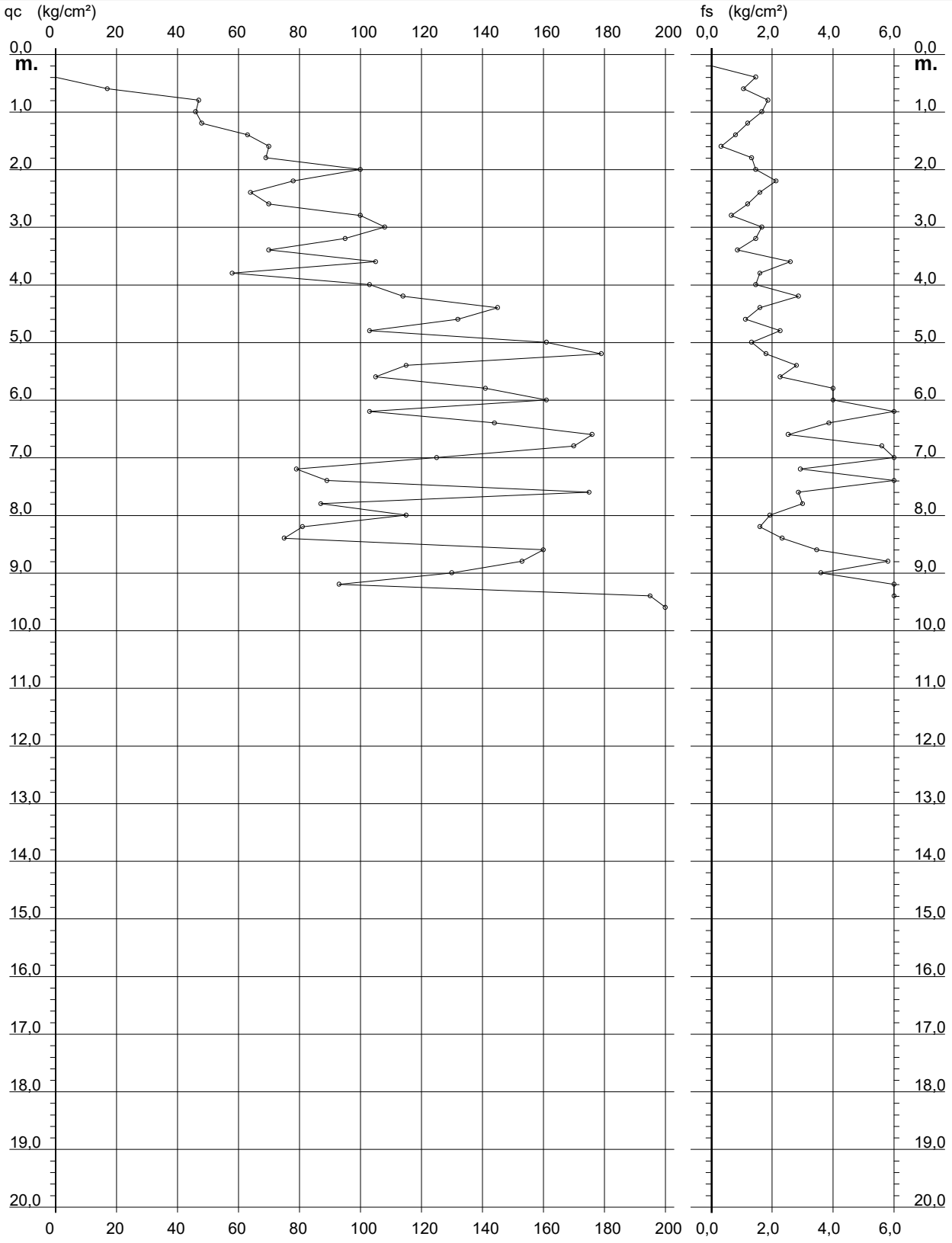
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 219

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-219	- scala vert.:	1 : 100



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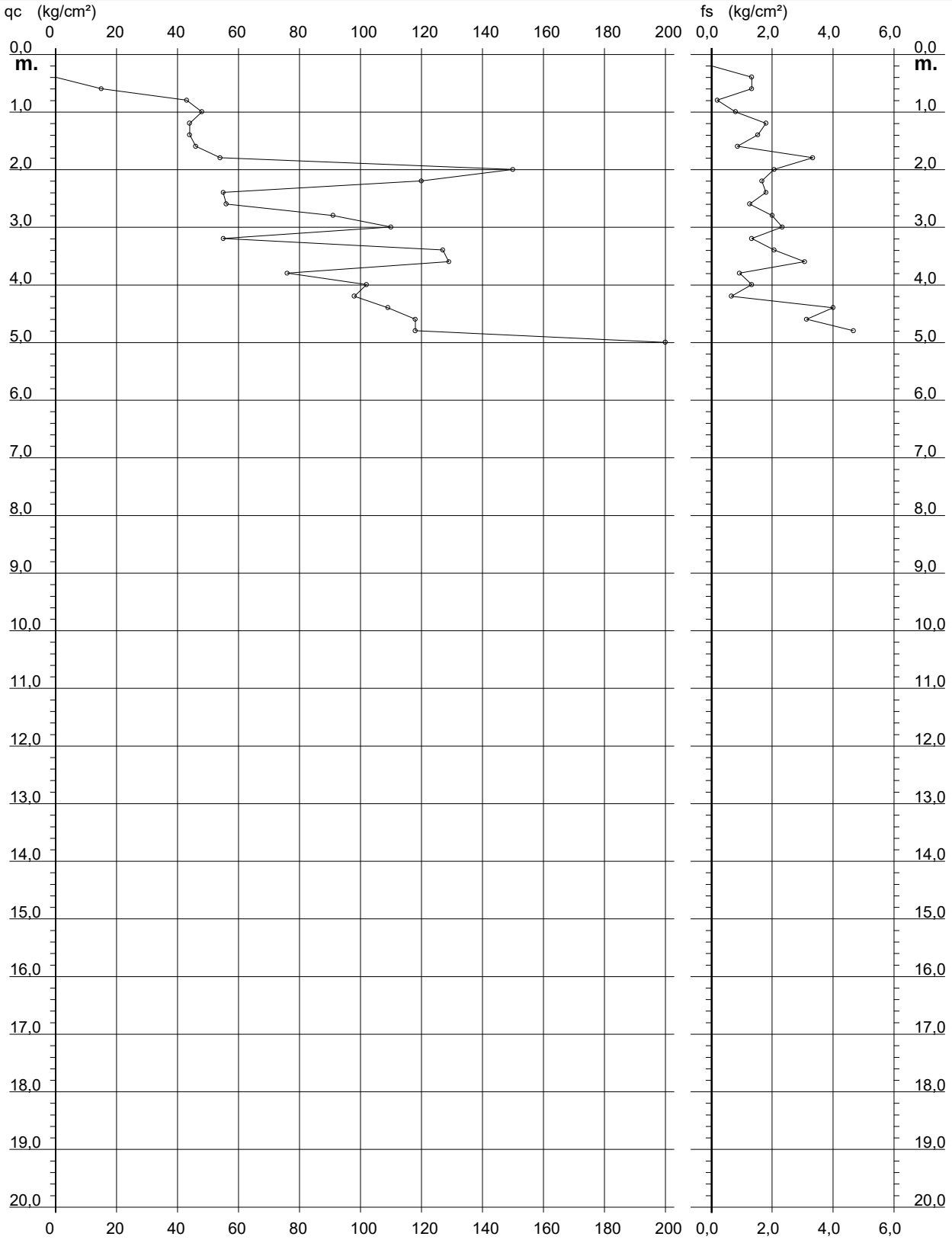
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 221

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-221	- scala vert.:	1 : 100



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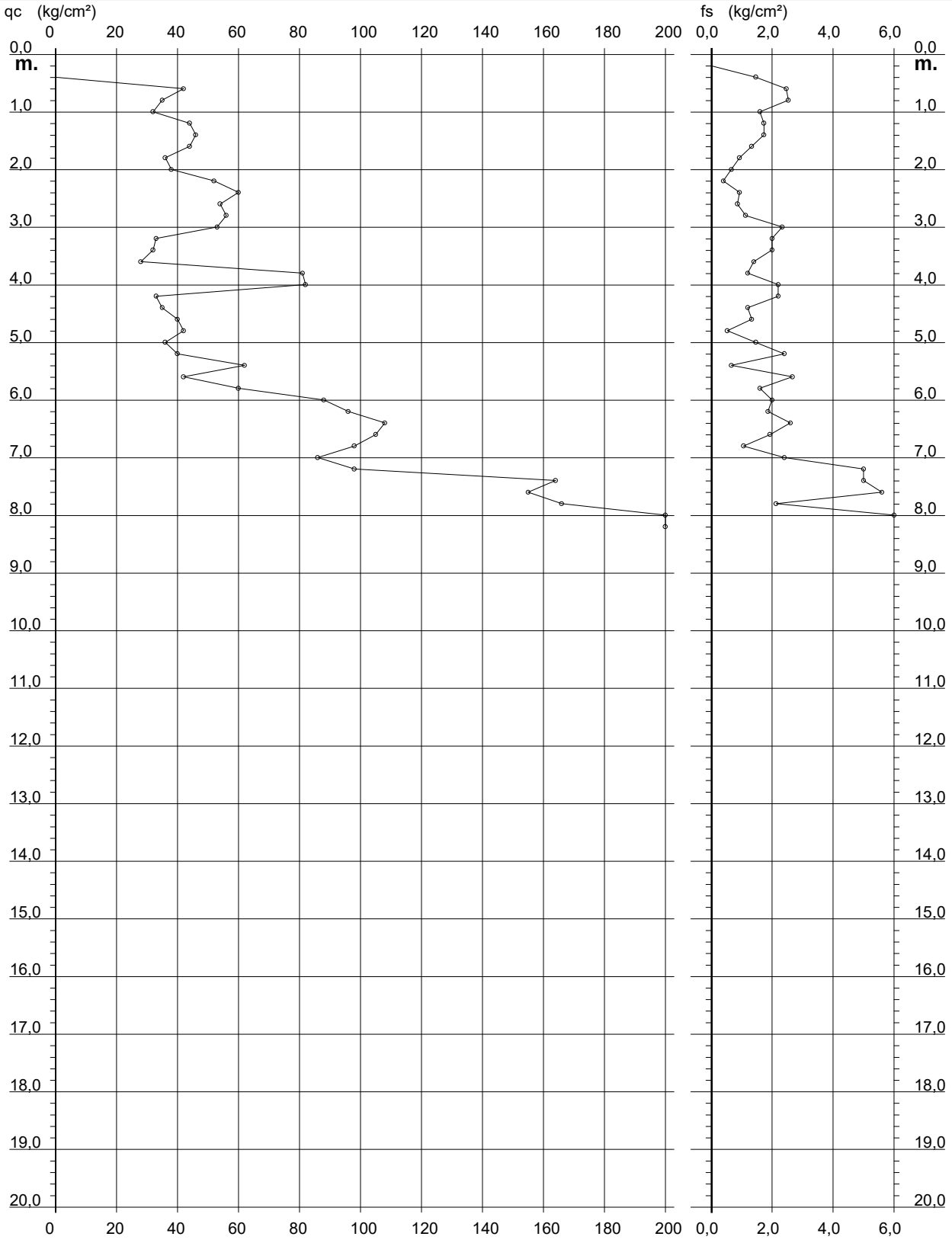
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 216

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	18/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-216	- scala vert.:	1 : 100



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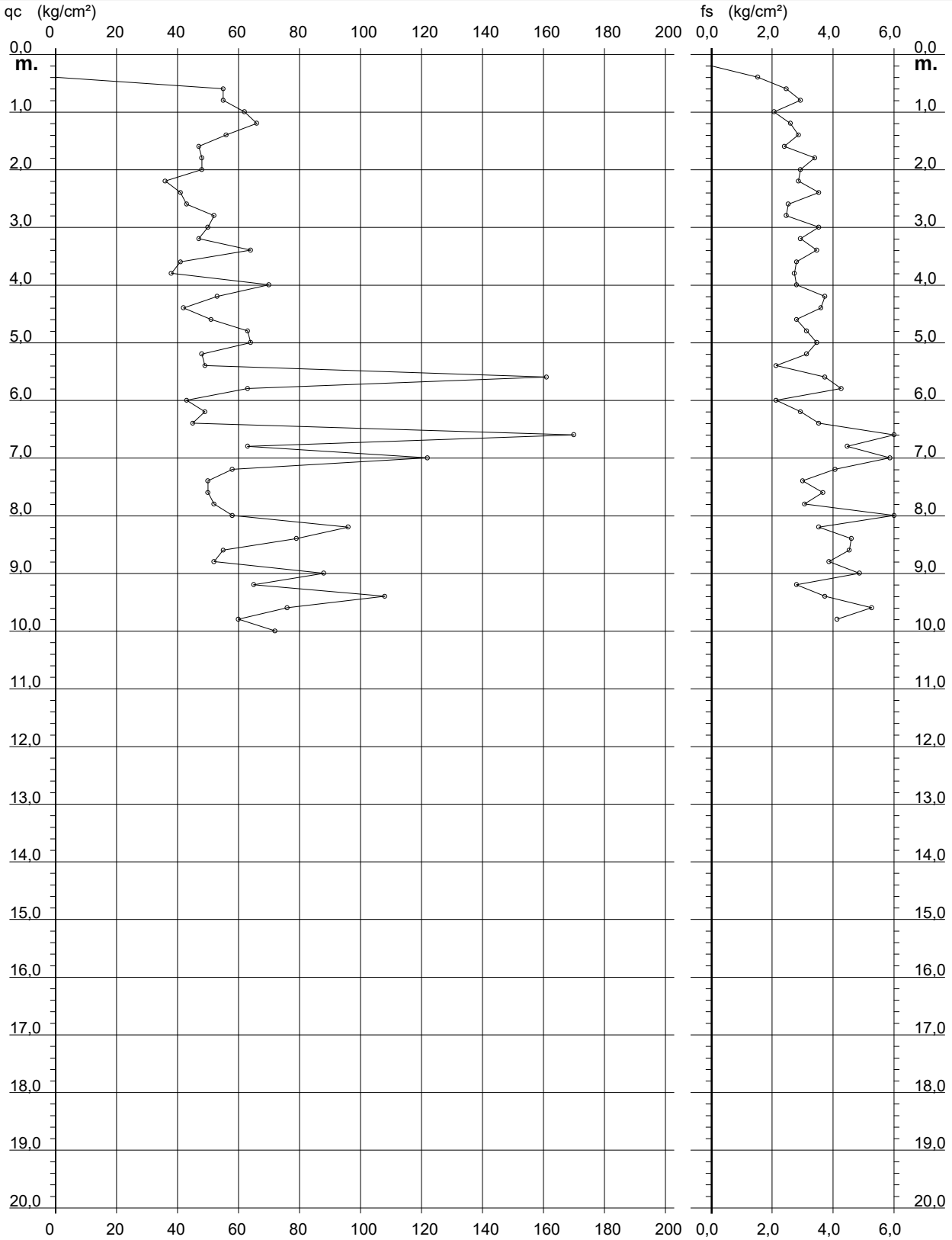
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 213

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	18/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-213	- scala vert.:	1 : 100



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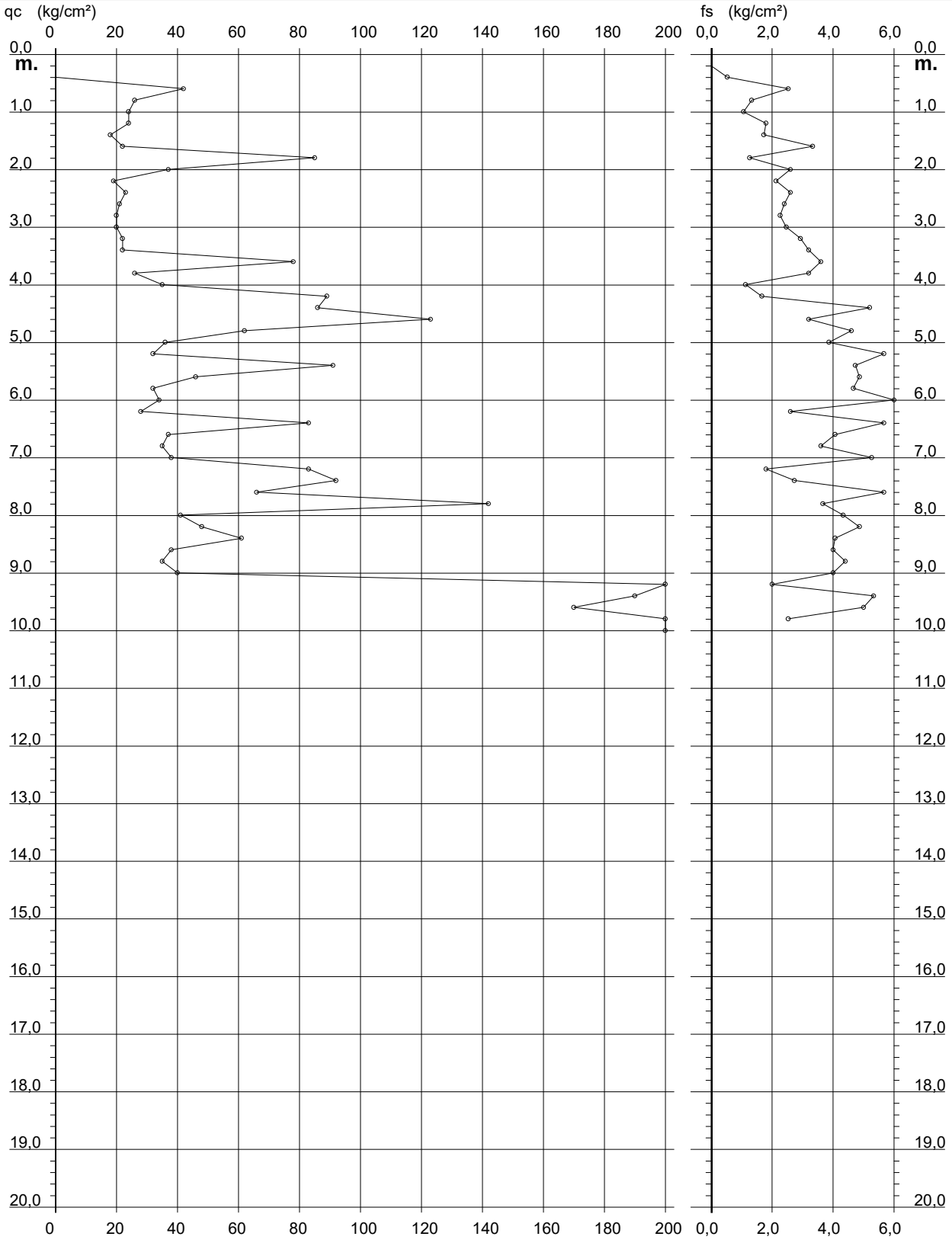
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 211

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-211	- scala vert.:	1 : 100



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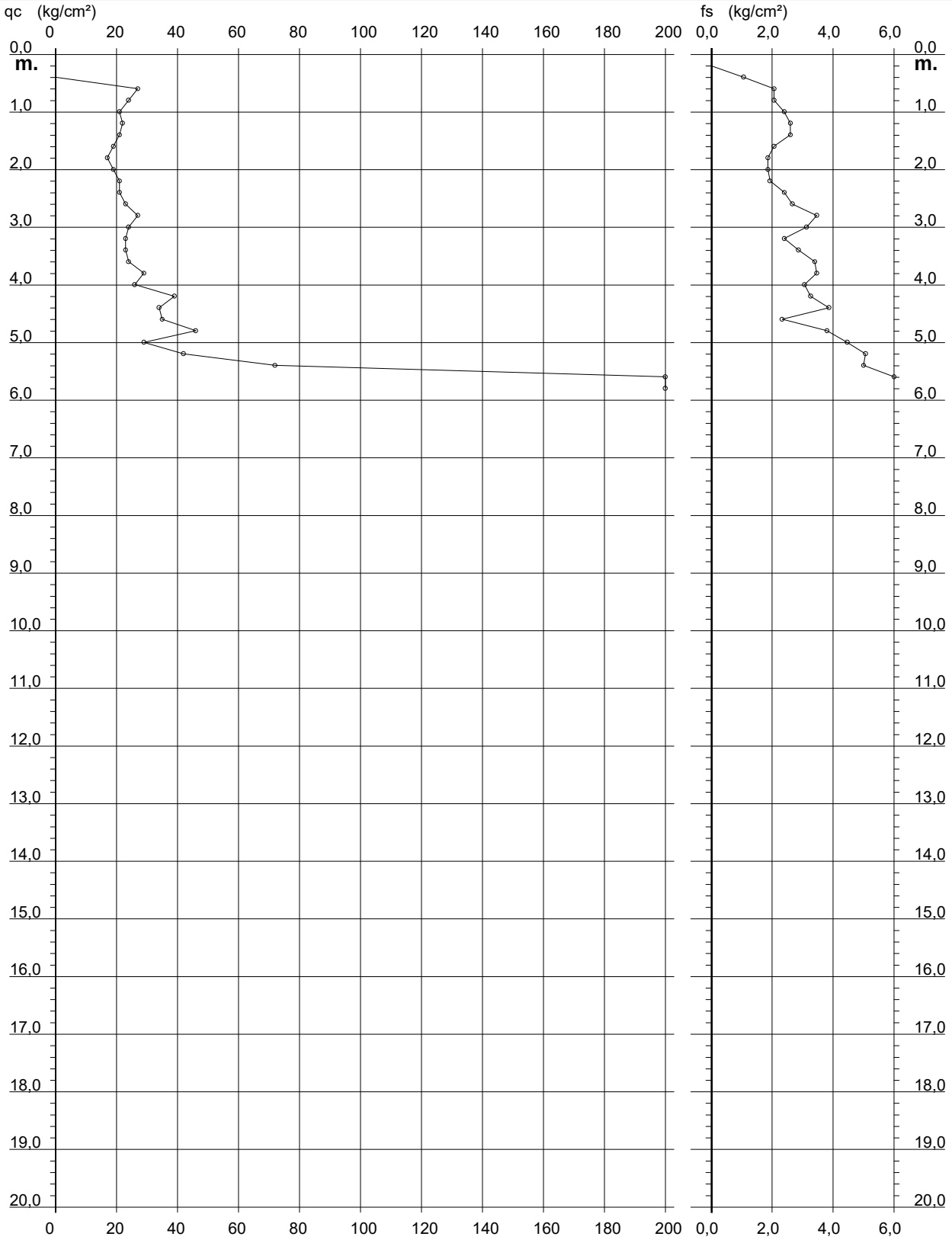
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 208

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-208	- scala vert.:	1 : 100



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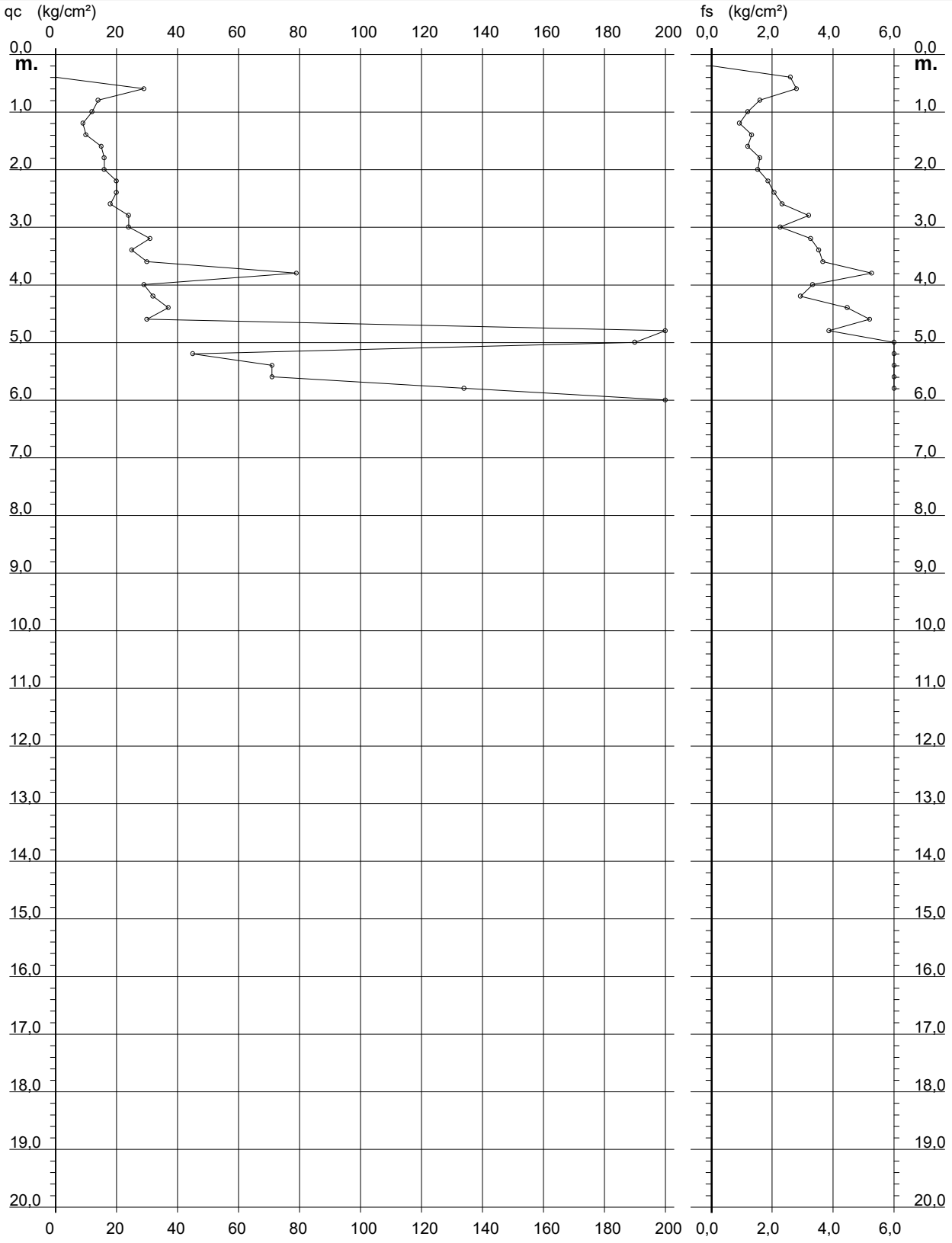
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 209

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-209	- scala vert.:	1 : 100



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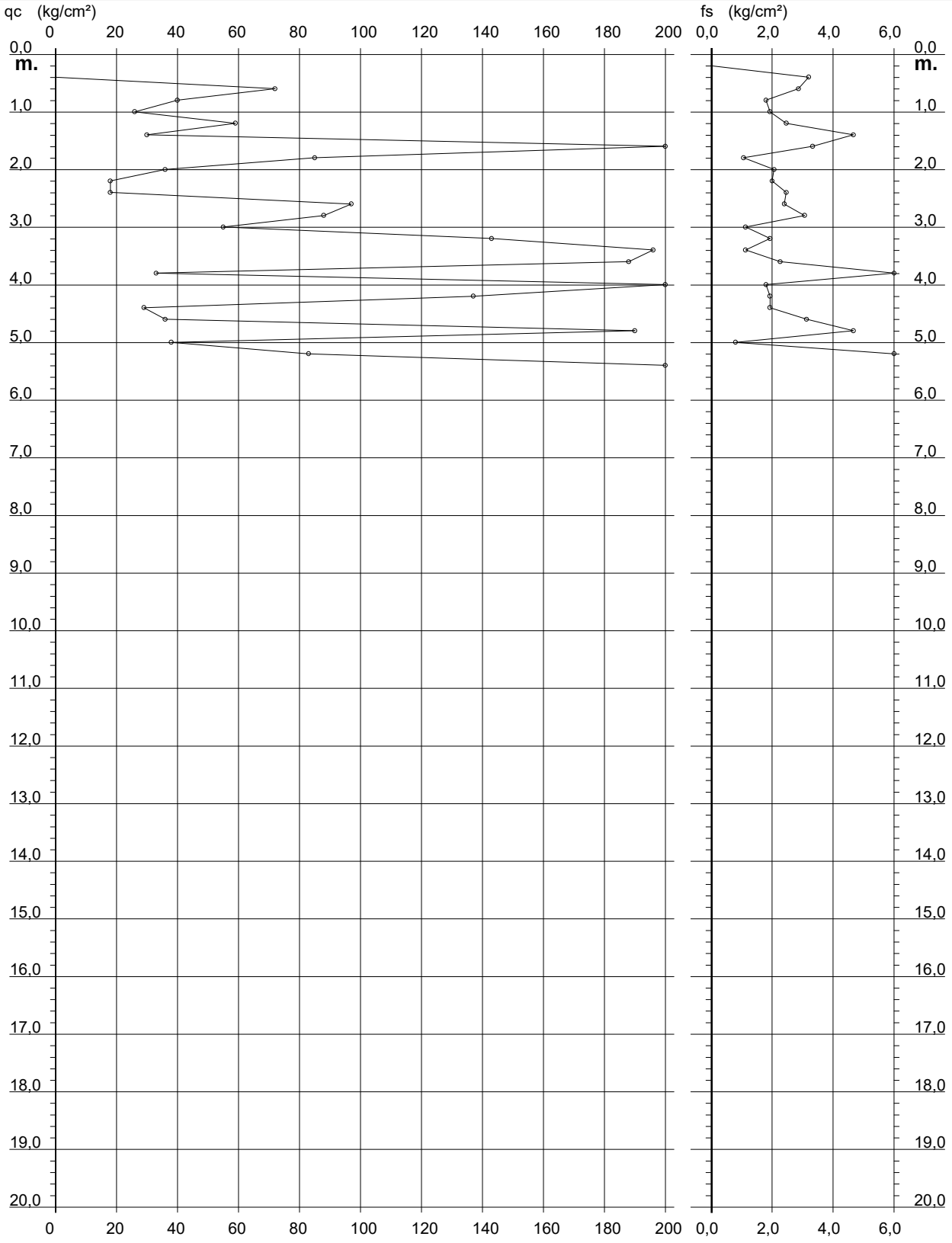
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 210

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-210	- scala vert.:	1 : 100



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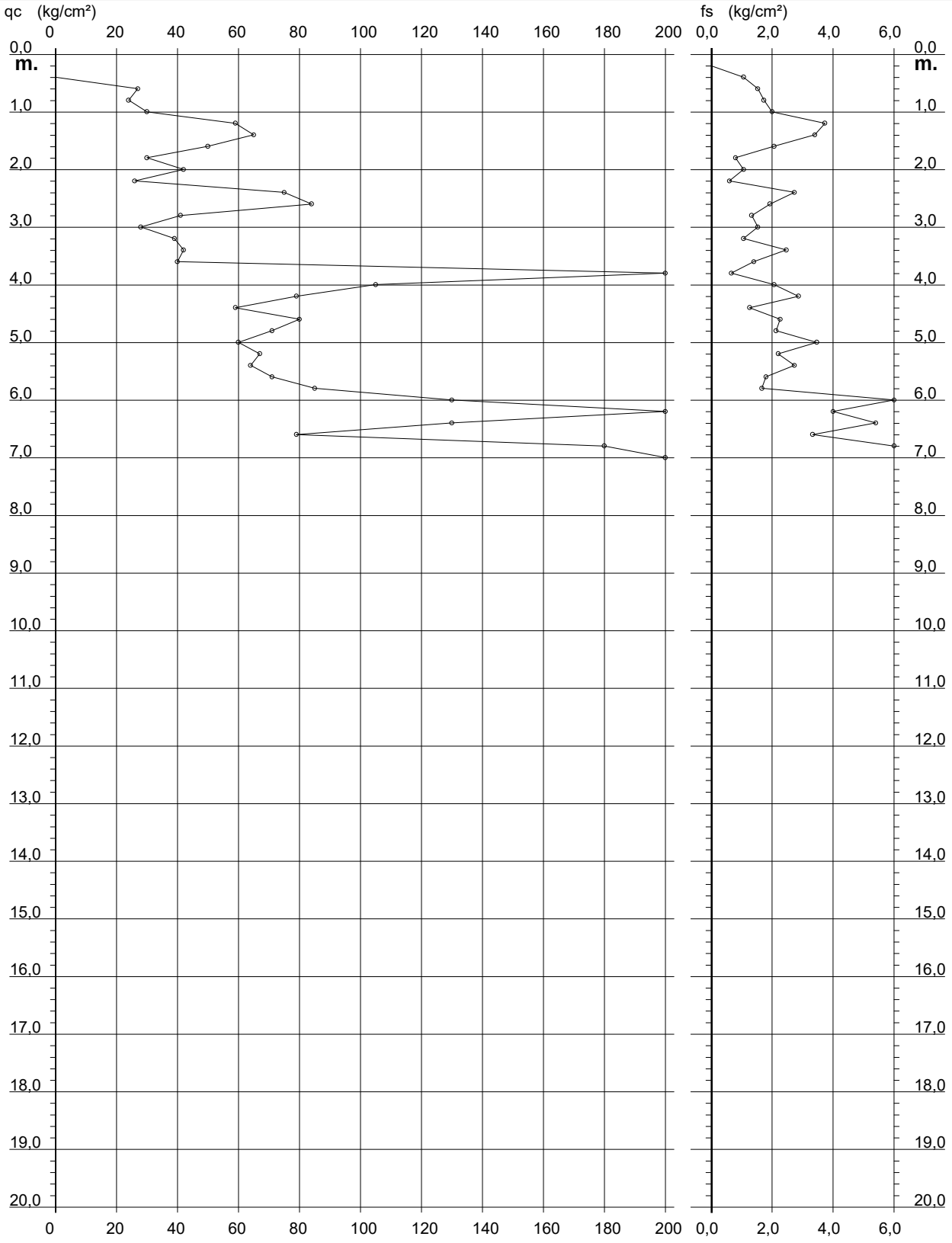
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 202

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-202	- scala vert.:	1 : 100



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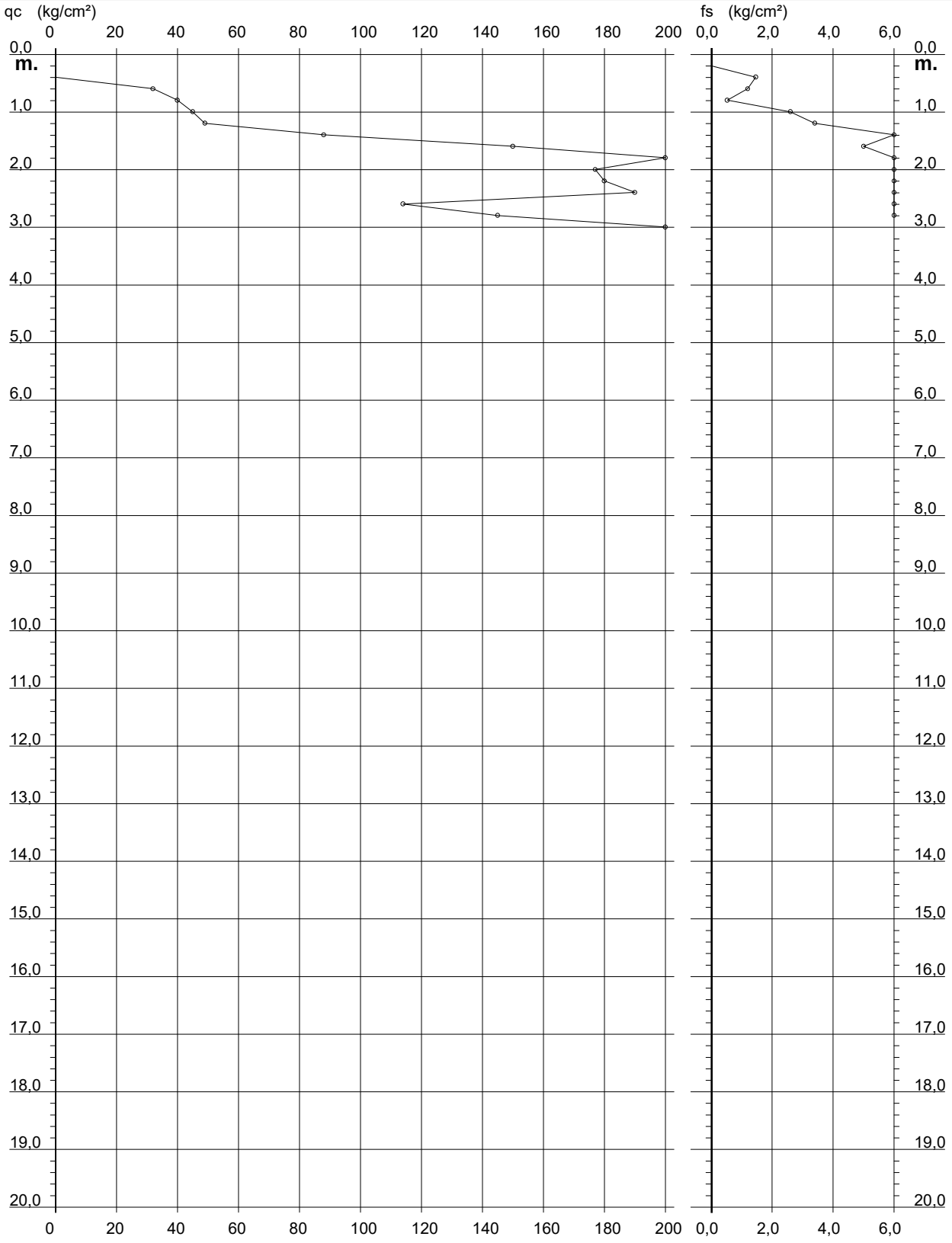
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 203

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-203	- scala vert.:	1 : 100



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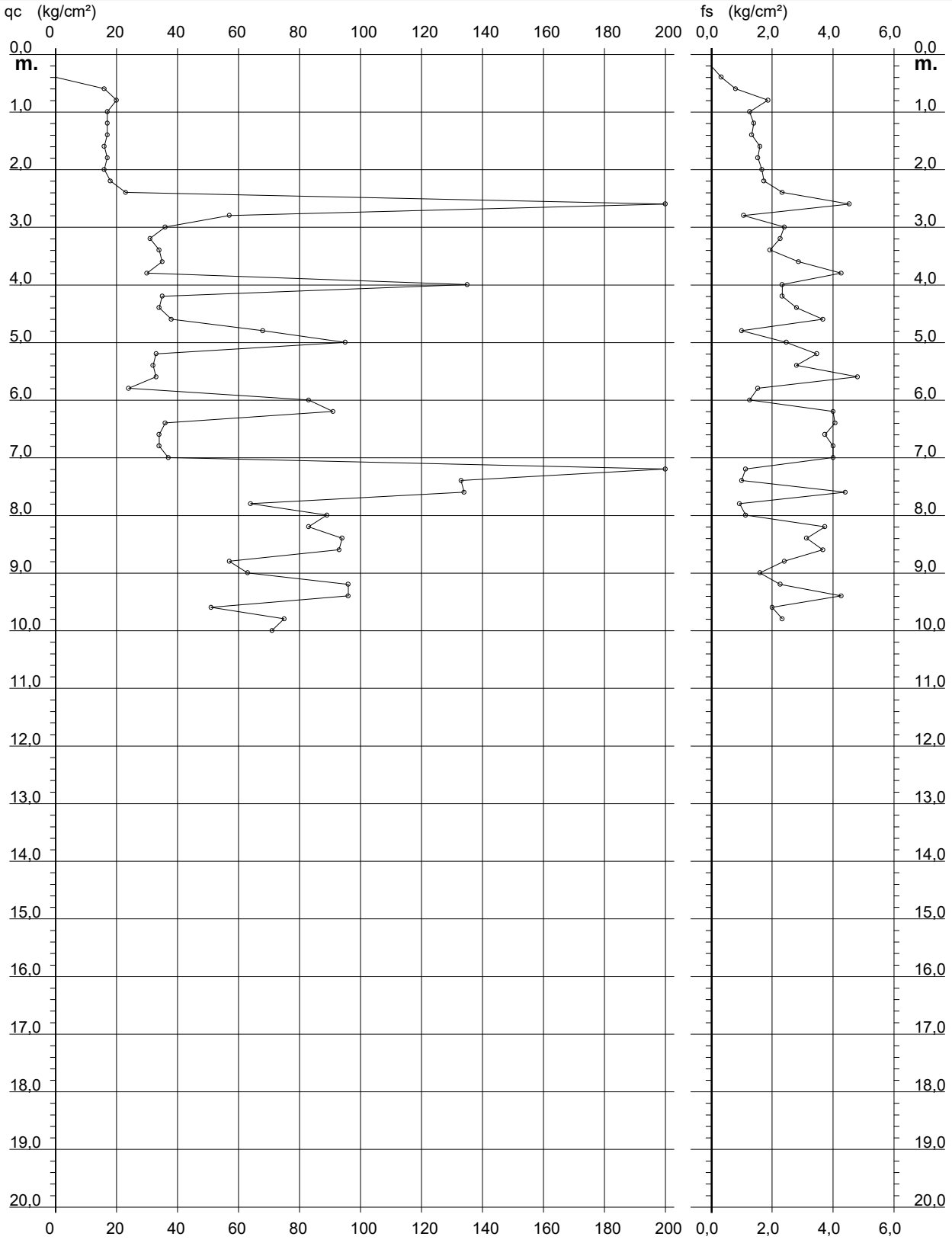
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 200

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	16/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-200	- scala vert.:	1 : 100



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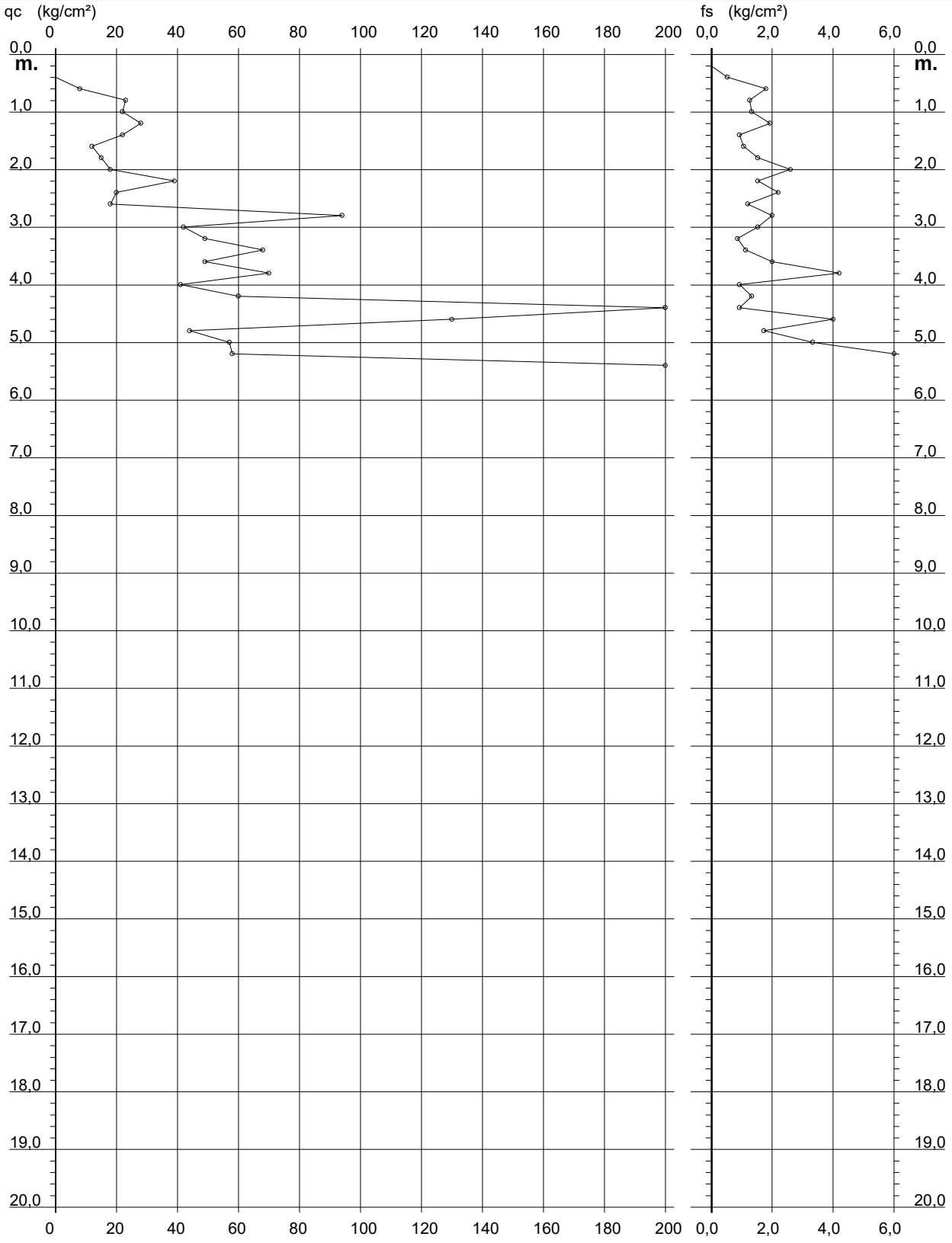
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 192

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	16/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-192	- scala vert.:	1 : 100



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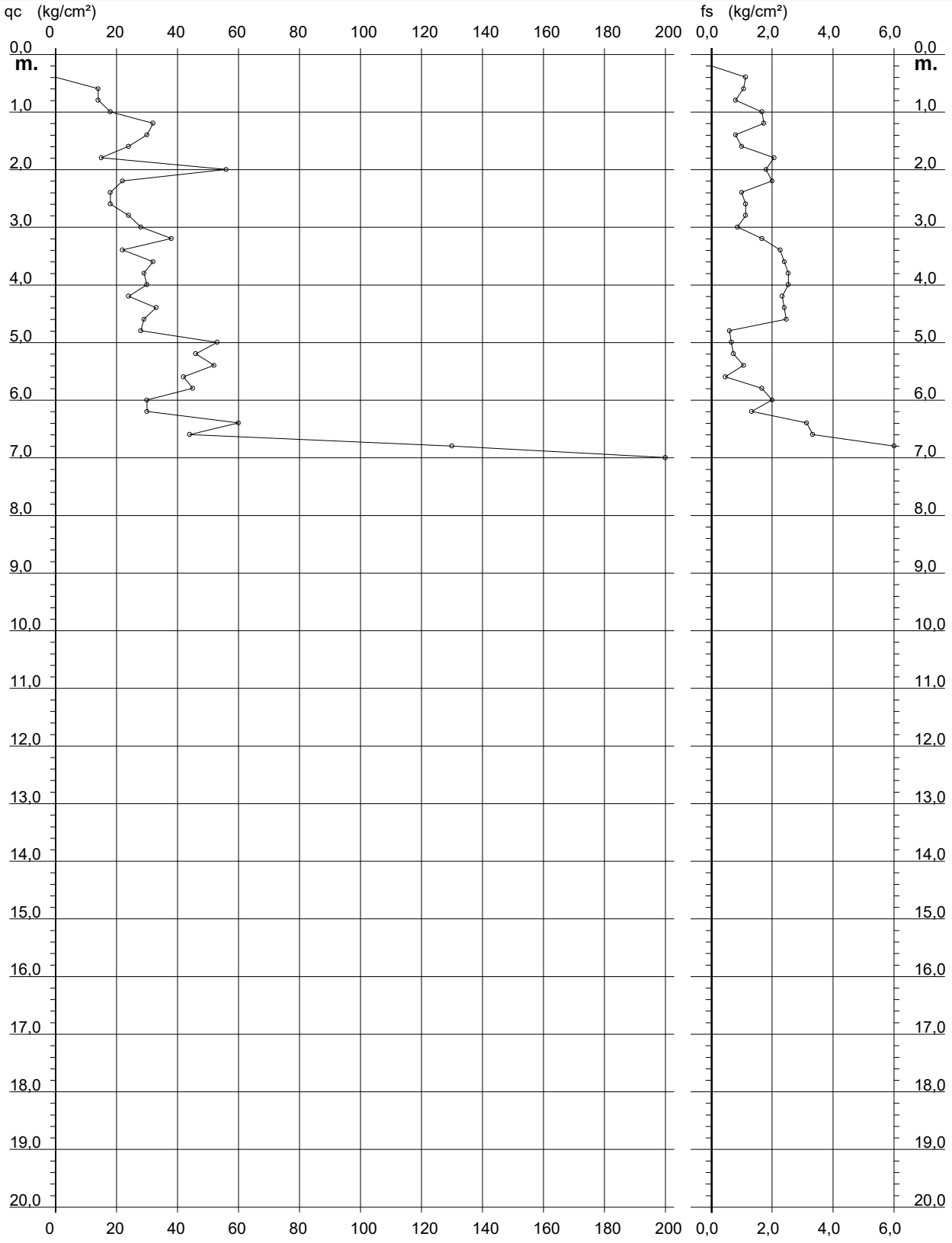
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 198

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	16/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-198	- scala vert.:	1 : 100



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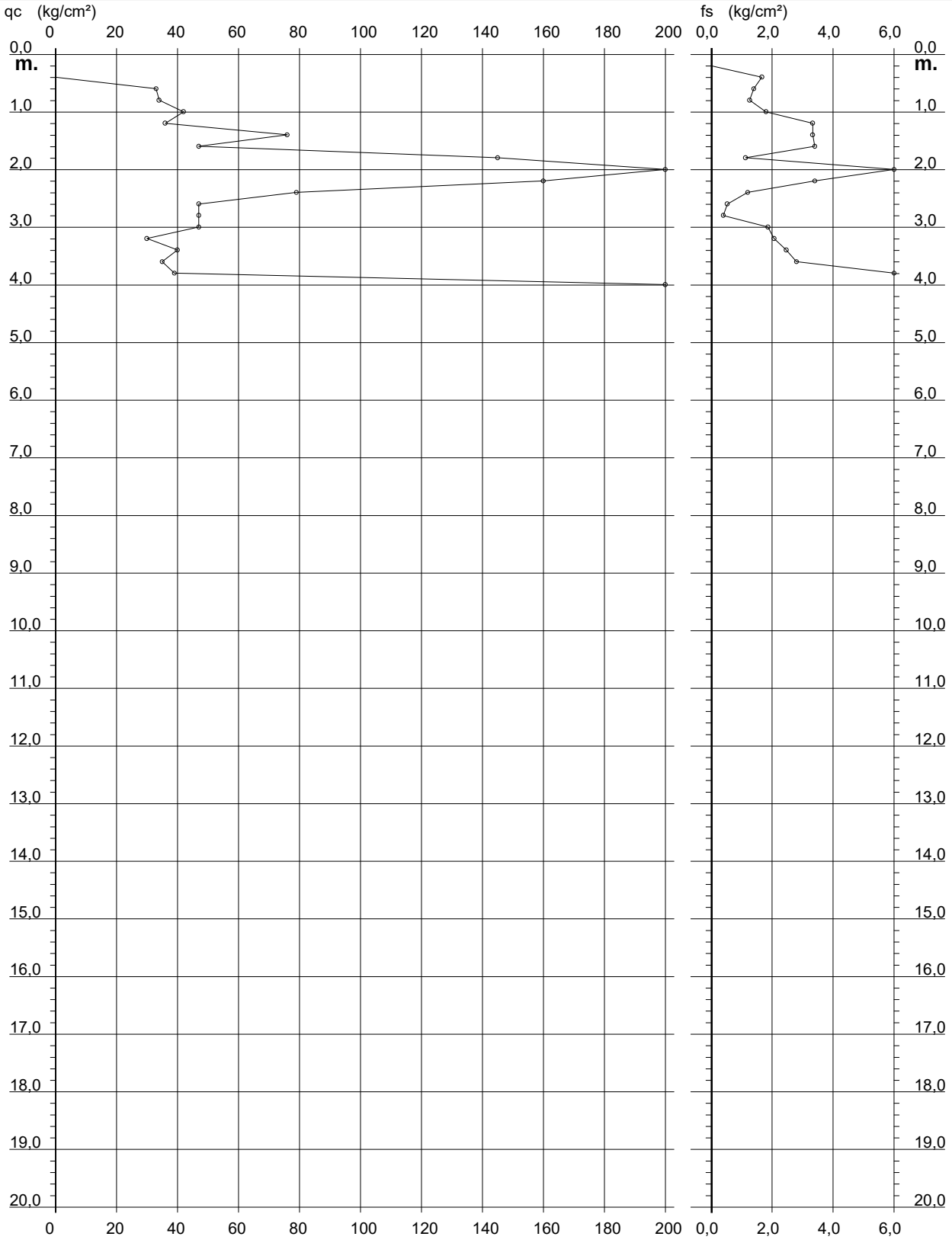
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 199

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	16/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-199	- scala vert.:	1 : 100



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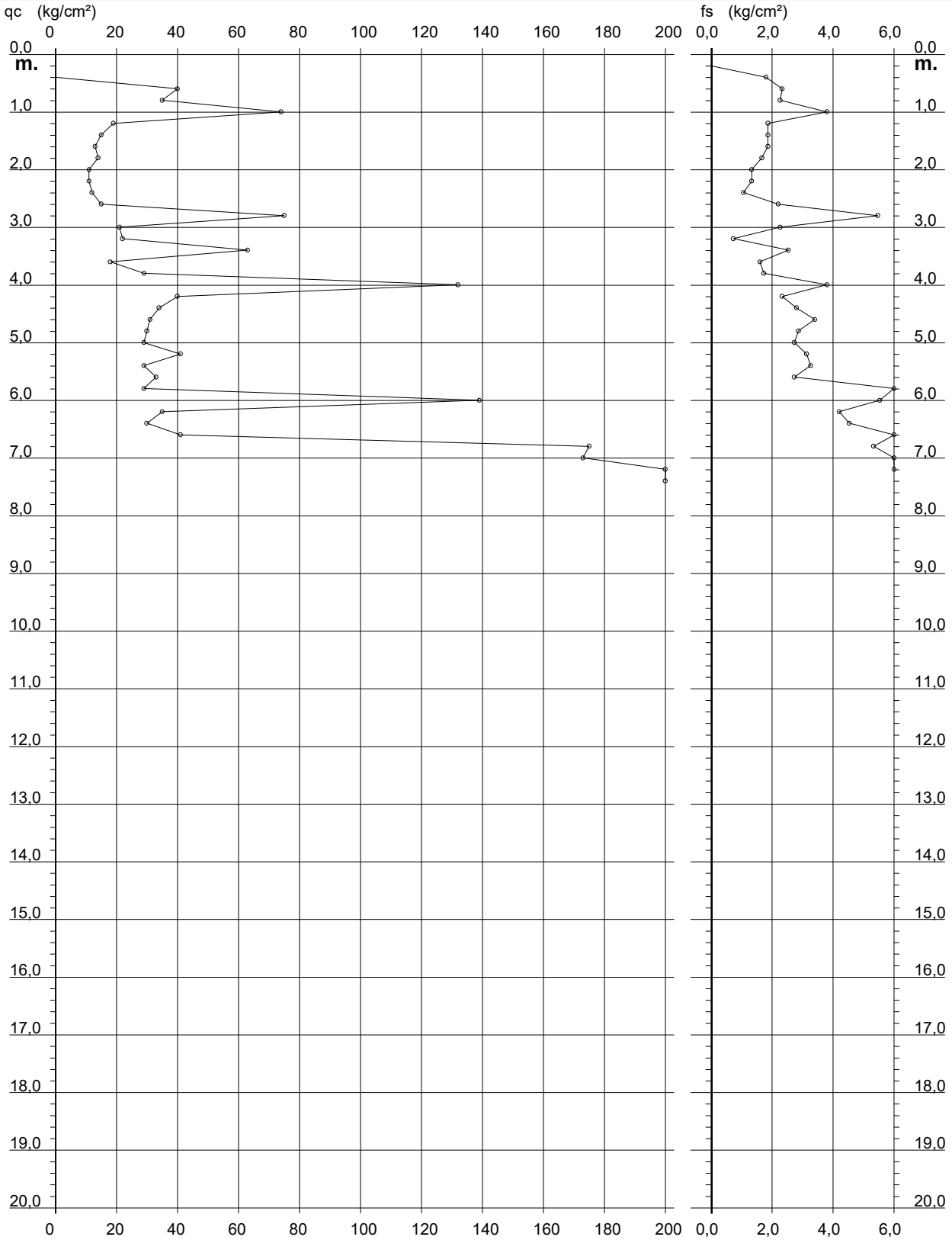
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 194

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-194	- scala vert.:	1 : 100



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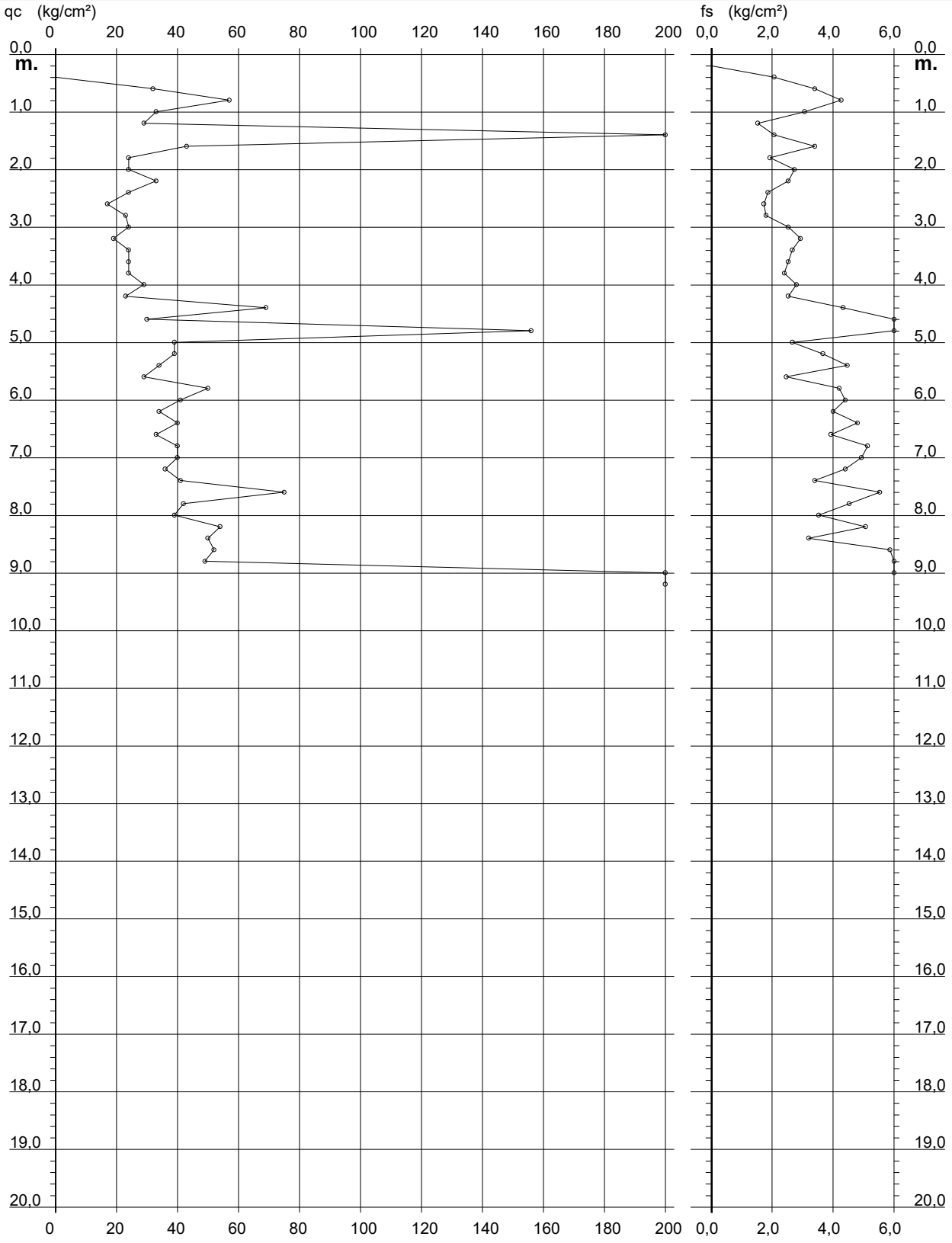
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 193

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-193	- scala vert.:	1 : 100



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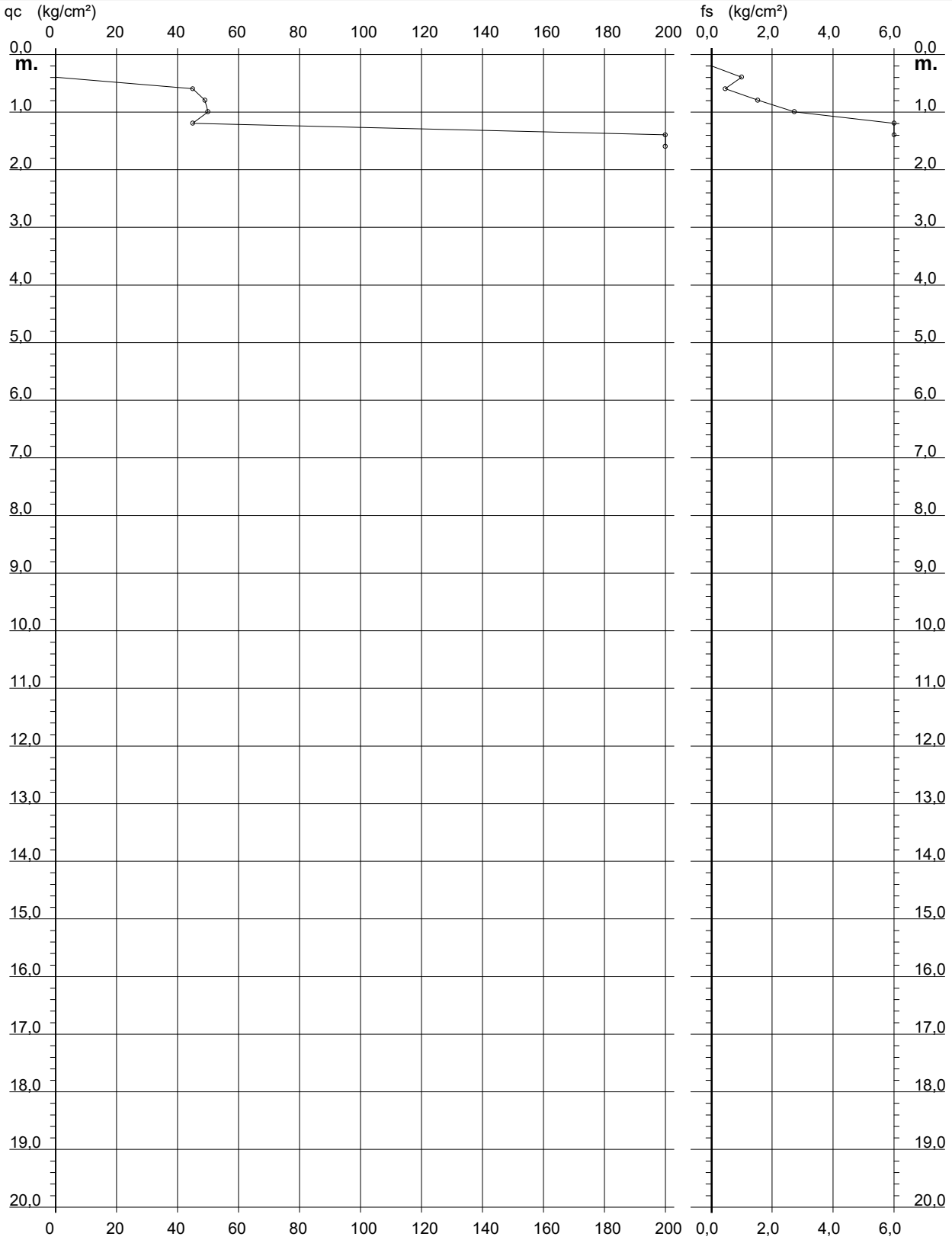
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 195

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-195	- scala vert.:	1 : 100



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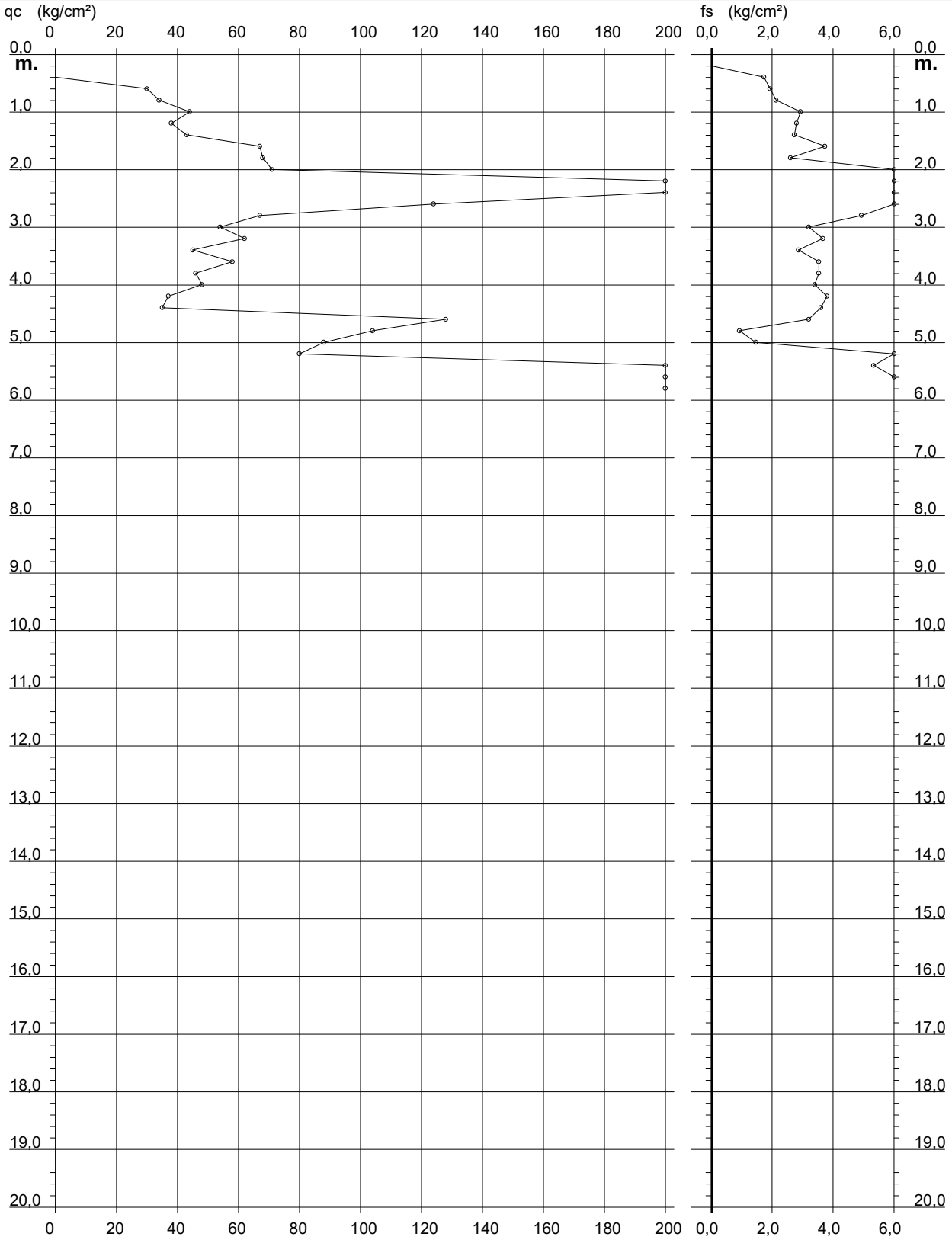
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 196

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-196	- scala vert.:	1 : 100



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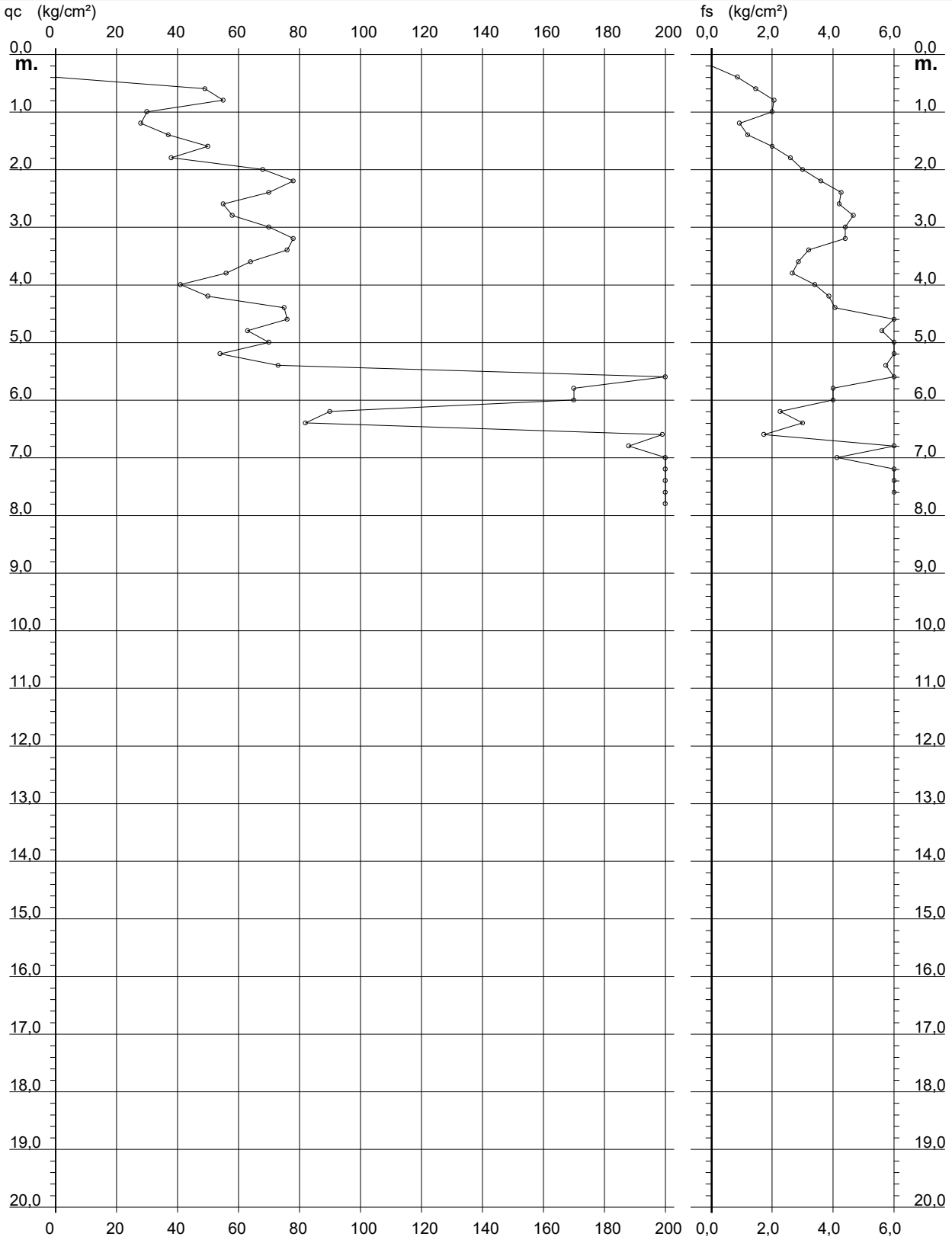
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 190

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-190	- scala vert.:	1 : 100



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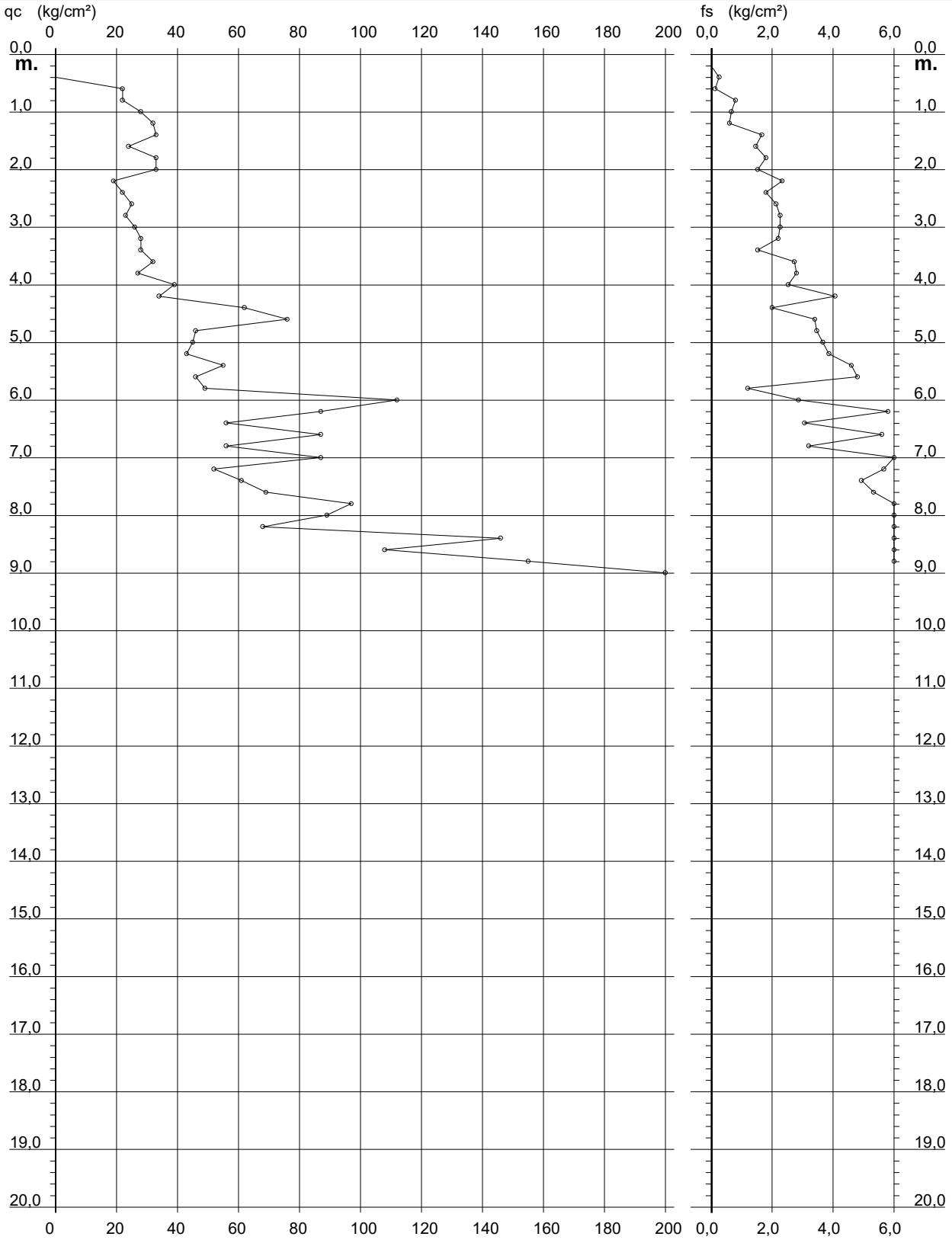
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 189

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-189	- scala vert.:	1 : 100



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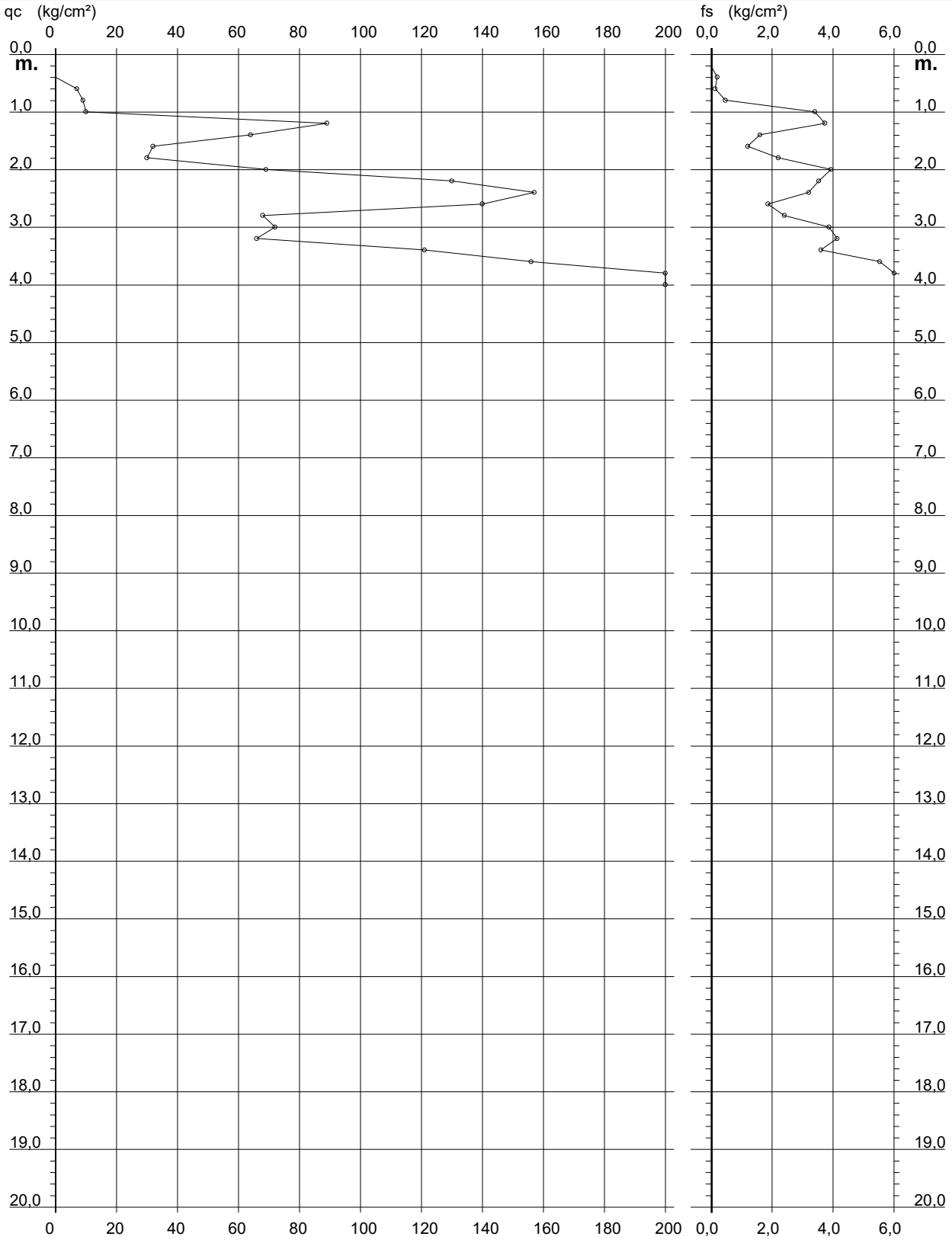
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 191

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-191	- scala vert.:	1 : 100



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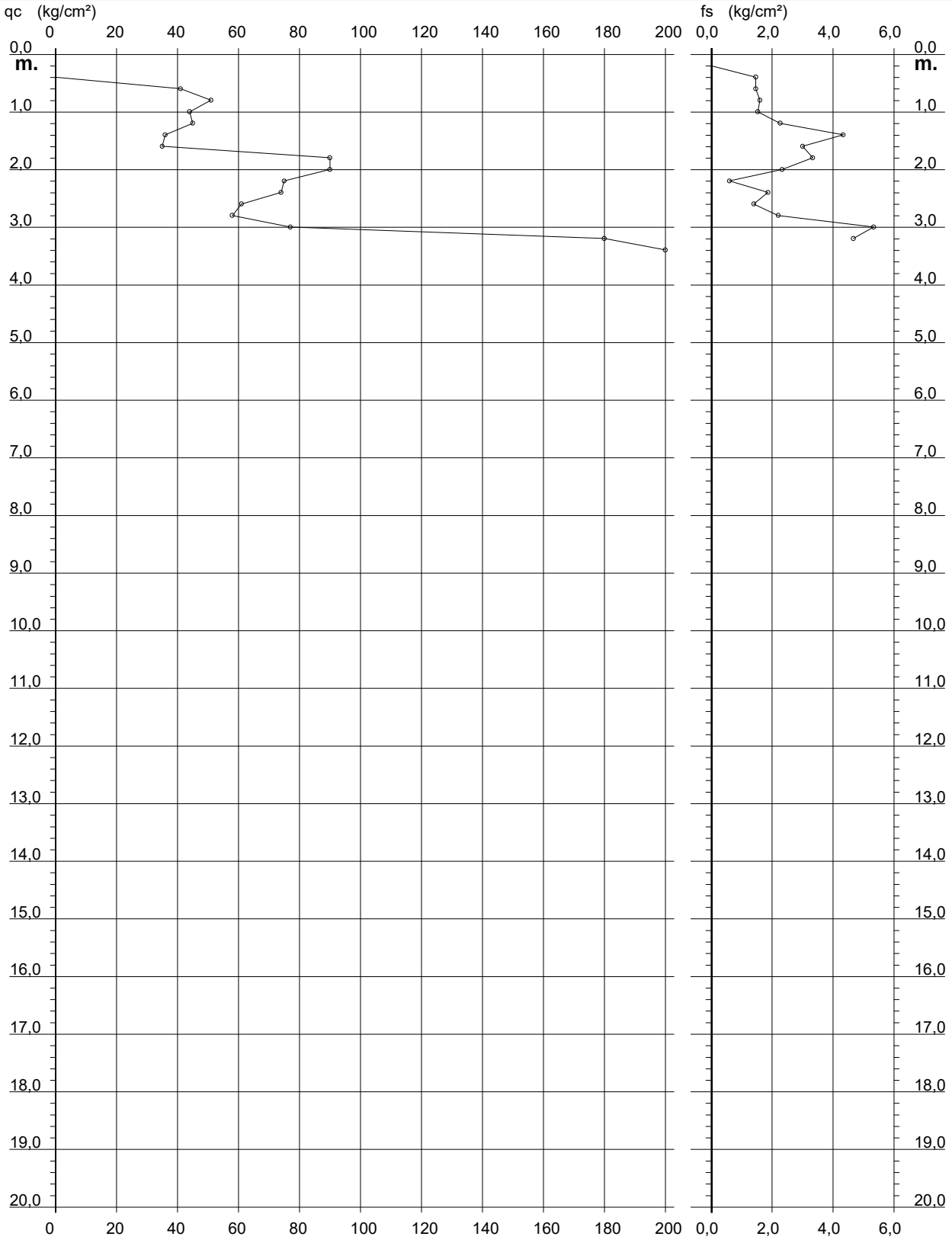
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 187

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-187	- scala vert.:	1 : 100



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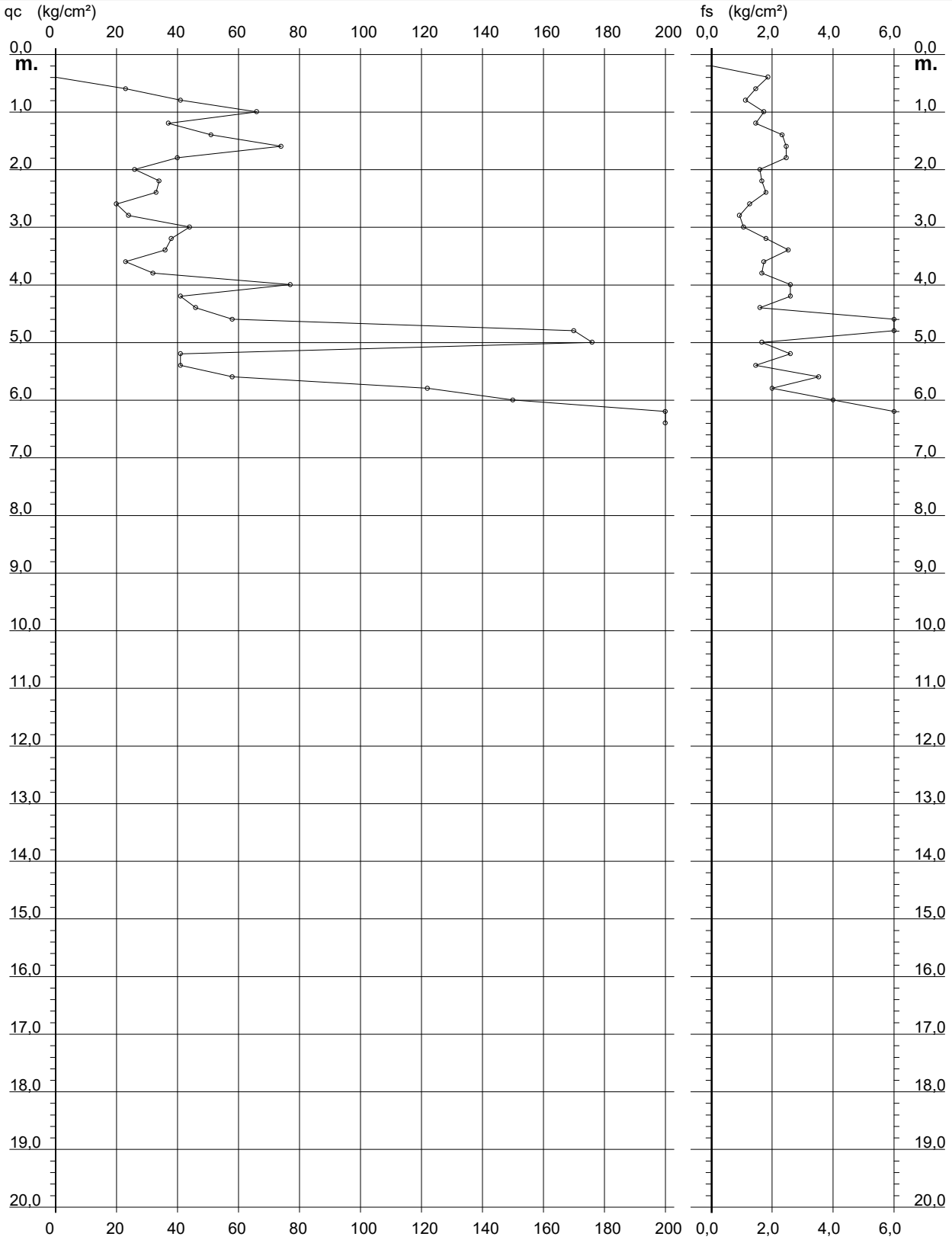
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 186

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-186	- scala vert.:	1 : 100



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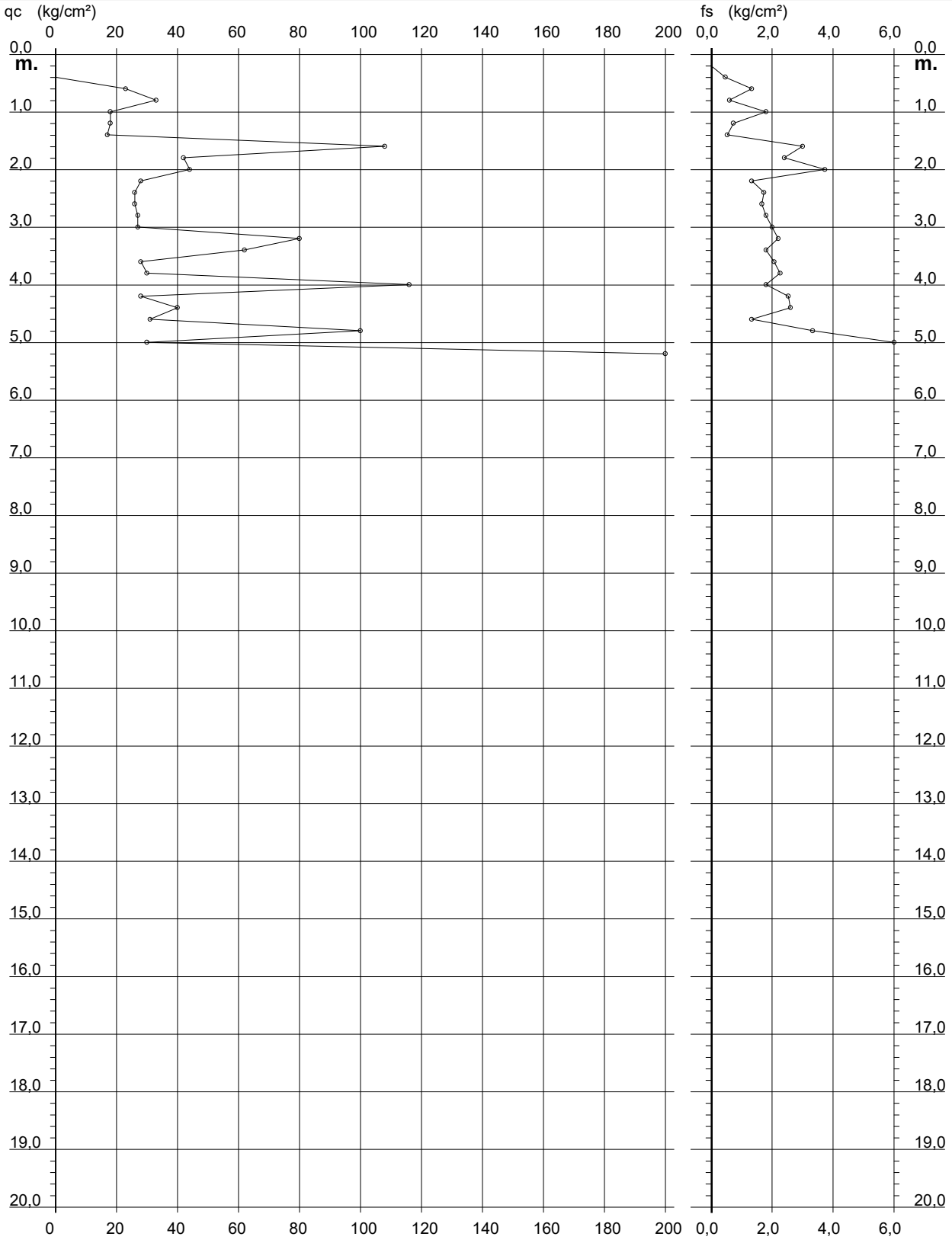
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 182

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-182	- scala vert.:	1 : 100



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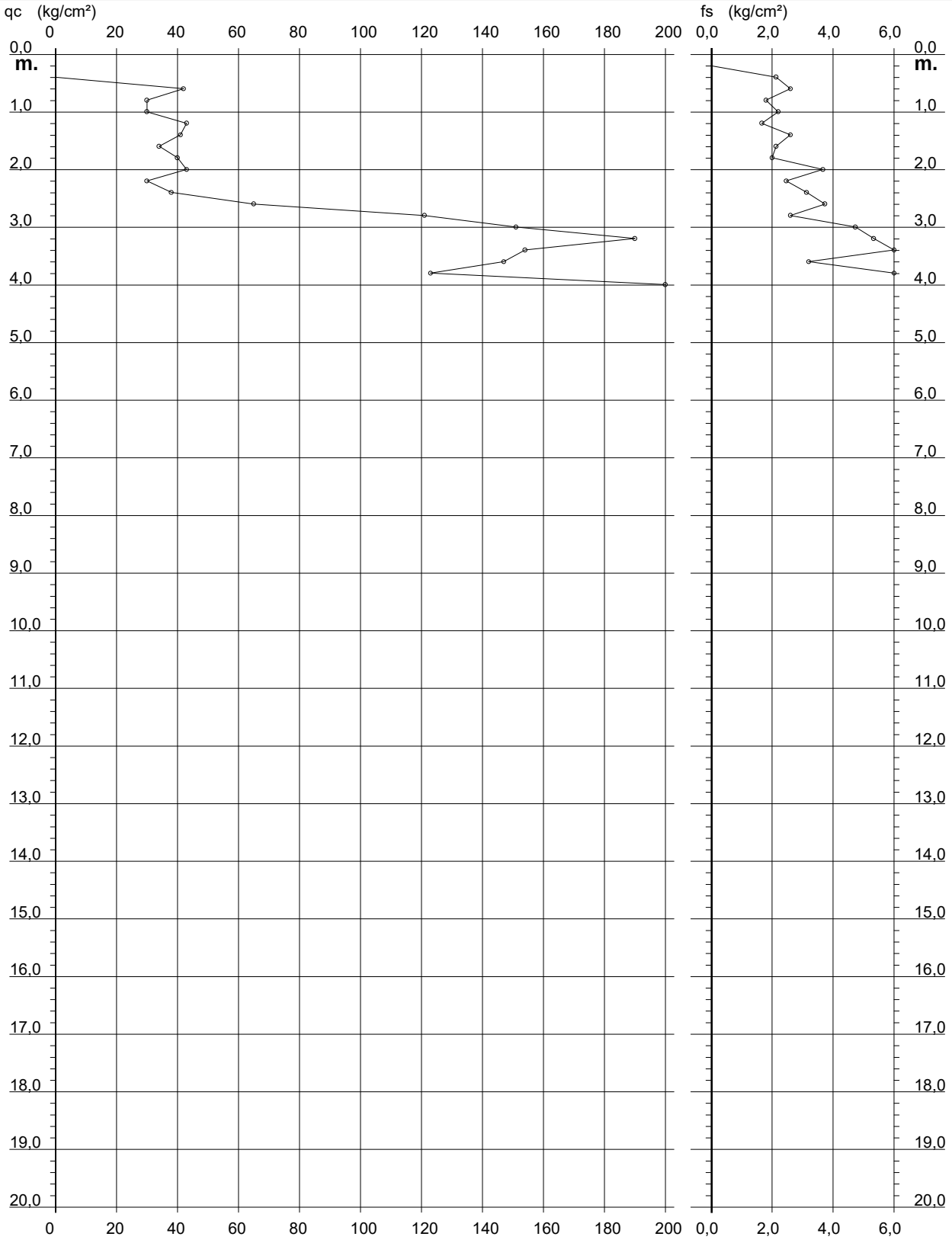
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 183

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-183	- scala vert.:	1 : 100



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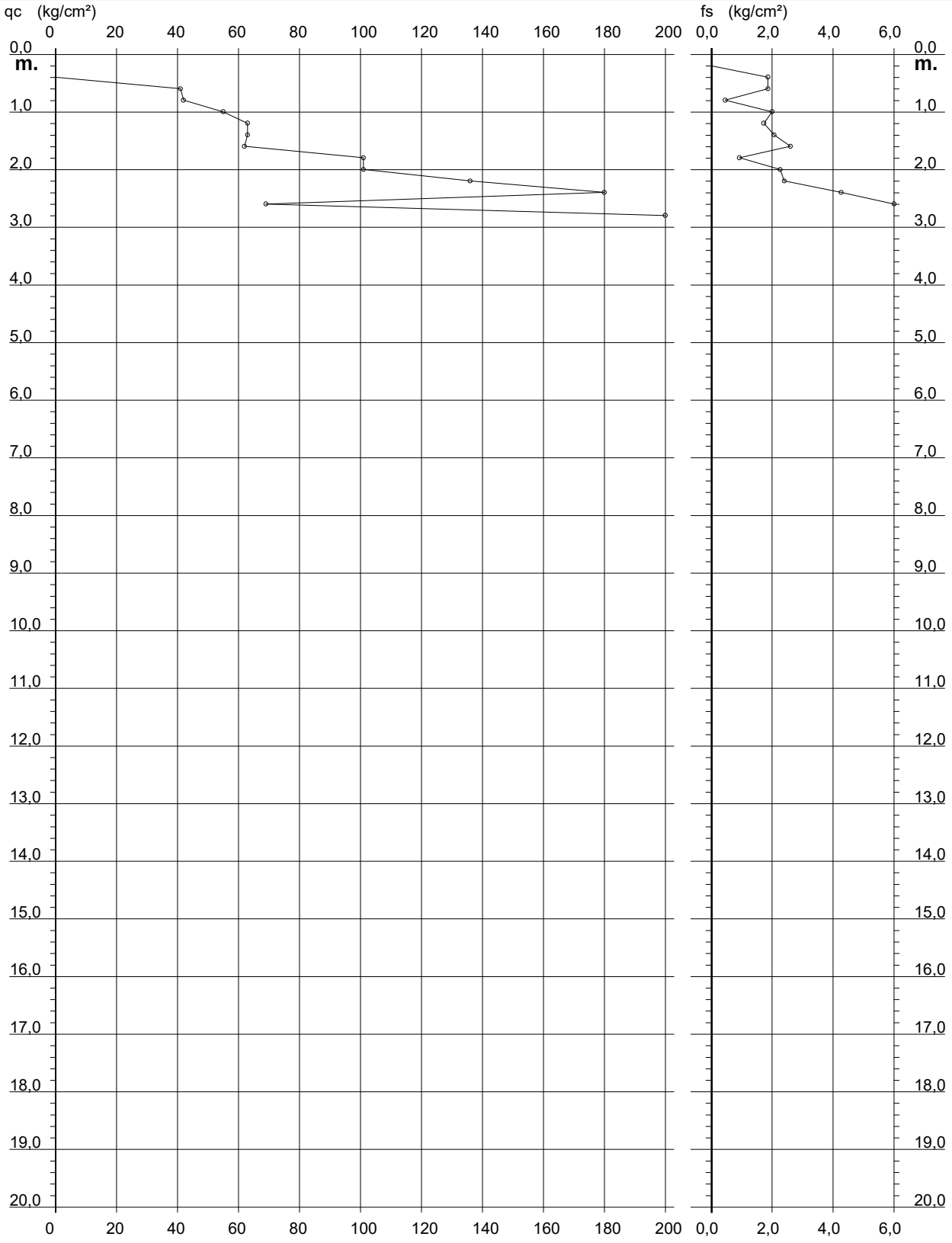
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 185

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-185	- scala vert.:	1 : 100



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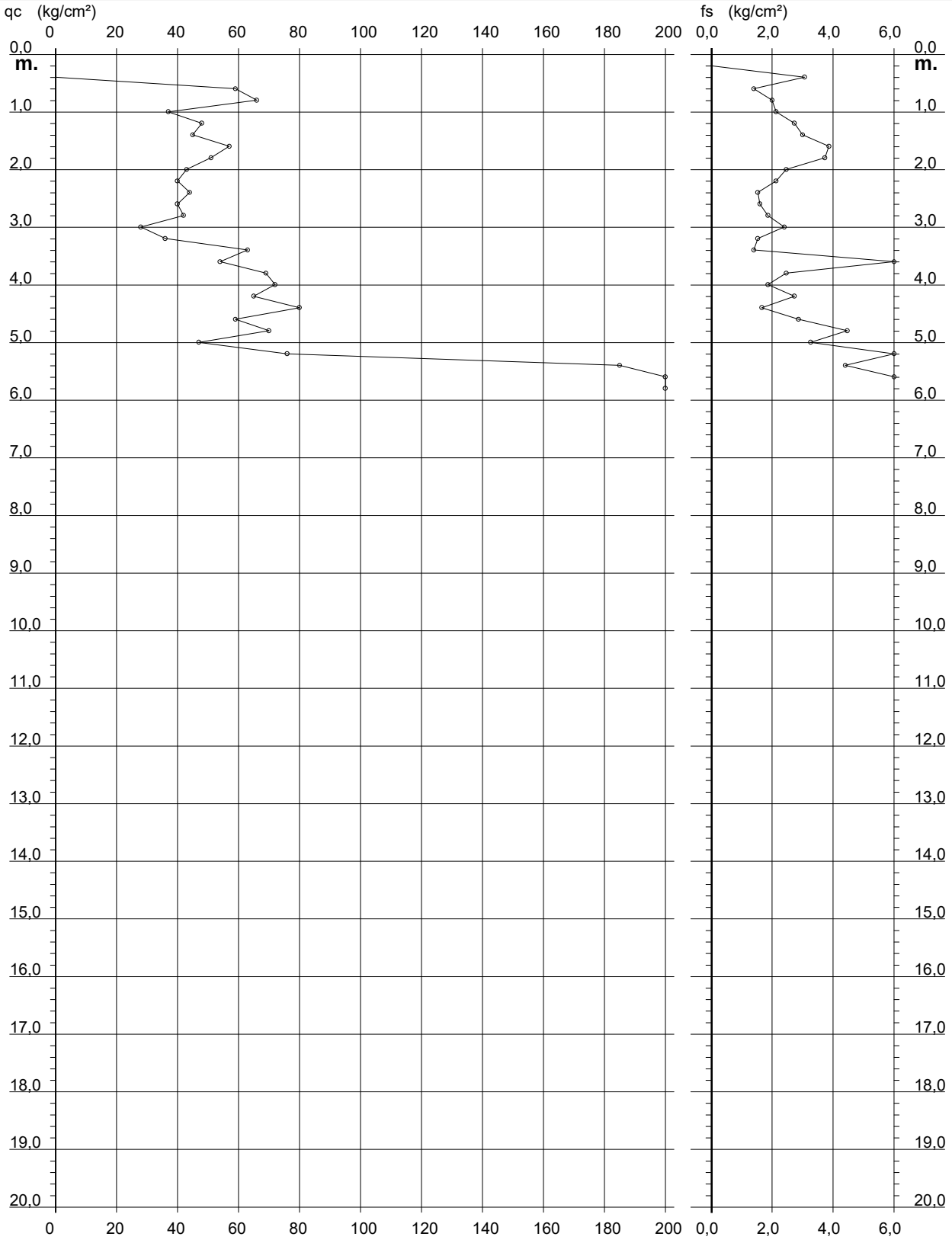
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 163

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-163	- scala vert.:	1 : 100



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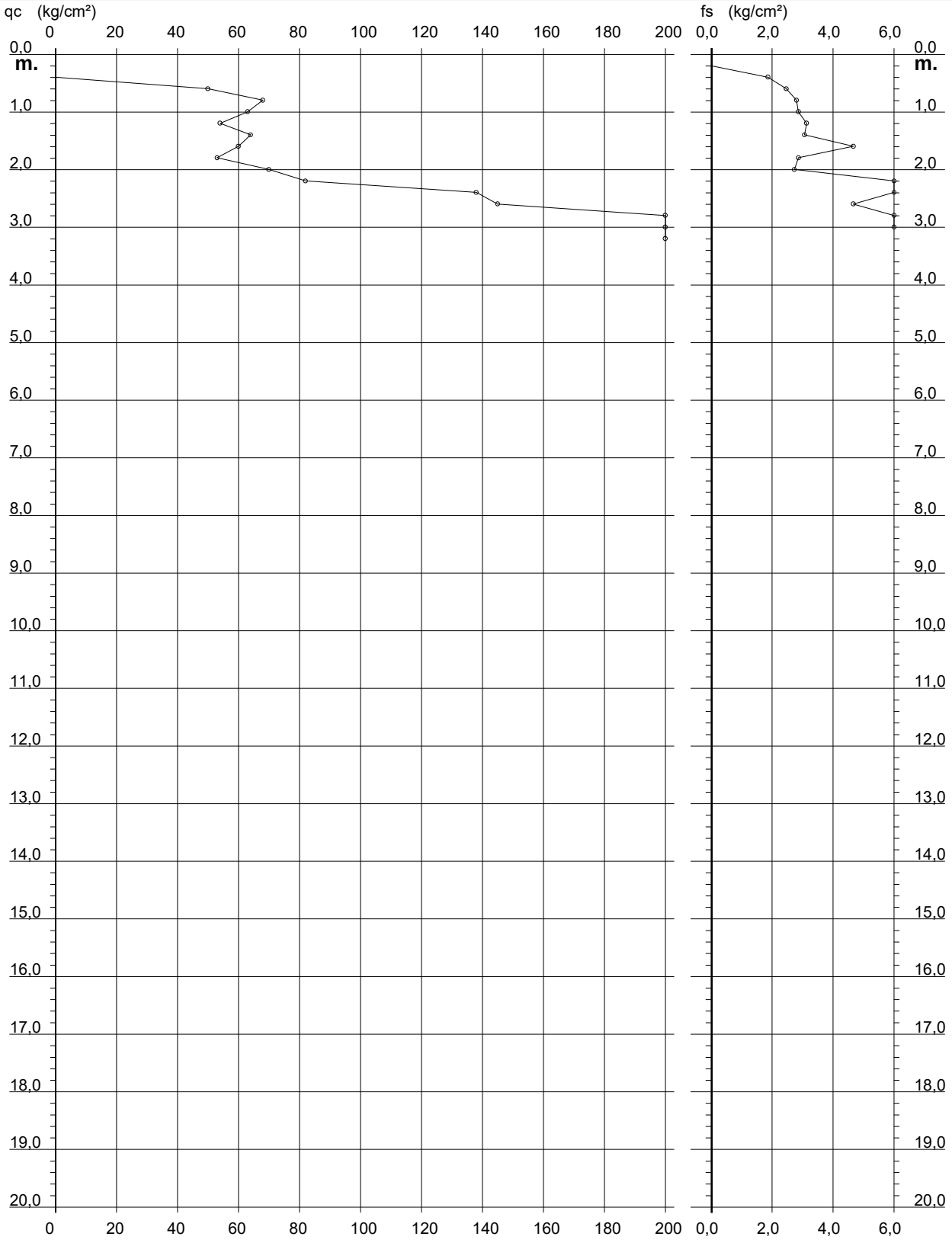
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 159

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-159	- scala vert.:	1 : 100



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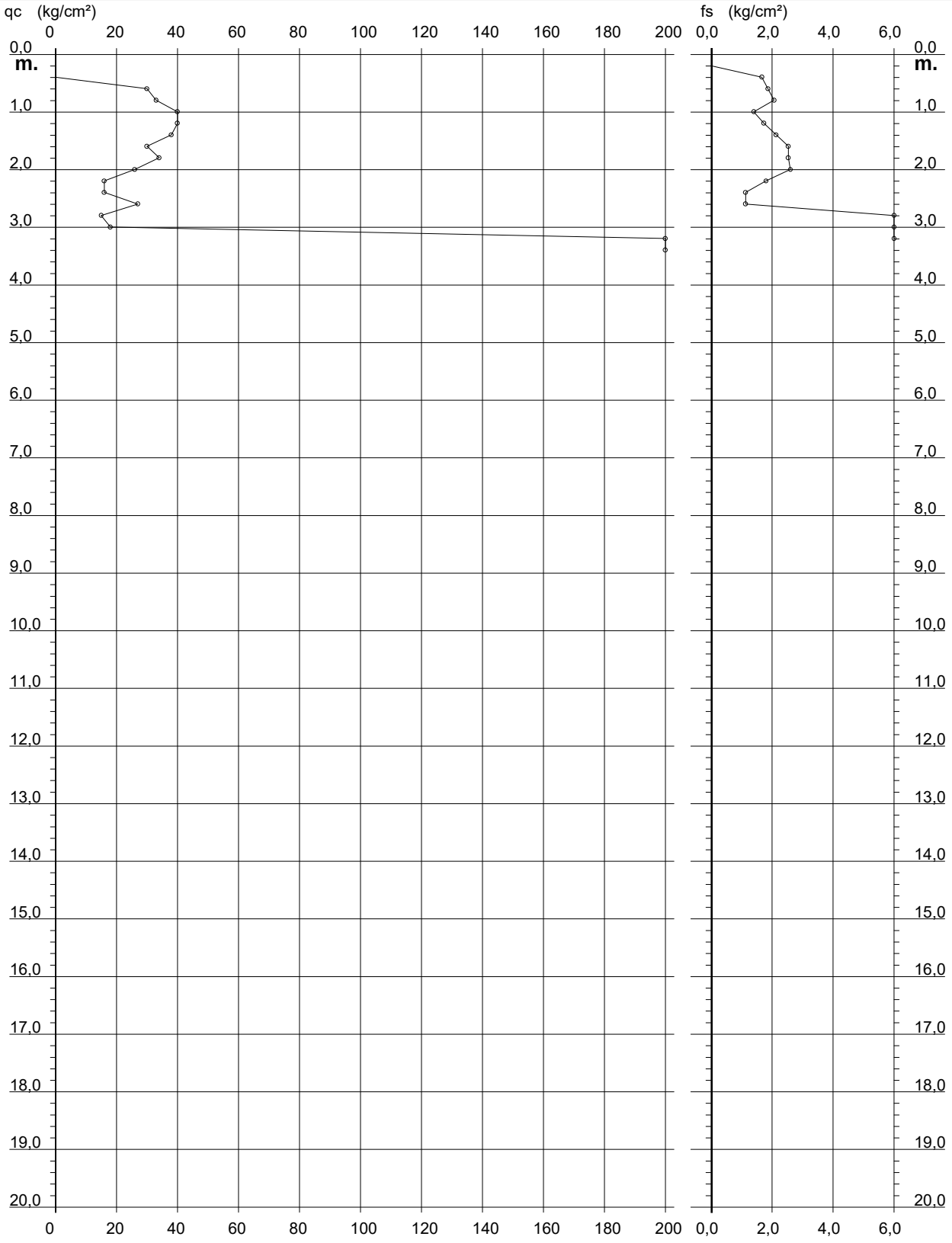
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 161

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-161	- scala vert.:	1 : 100



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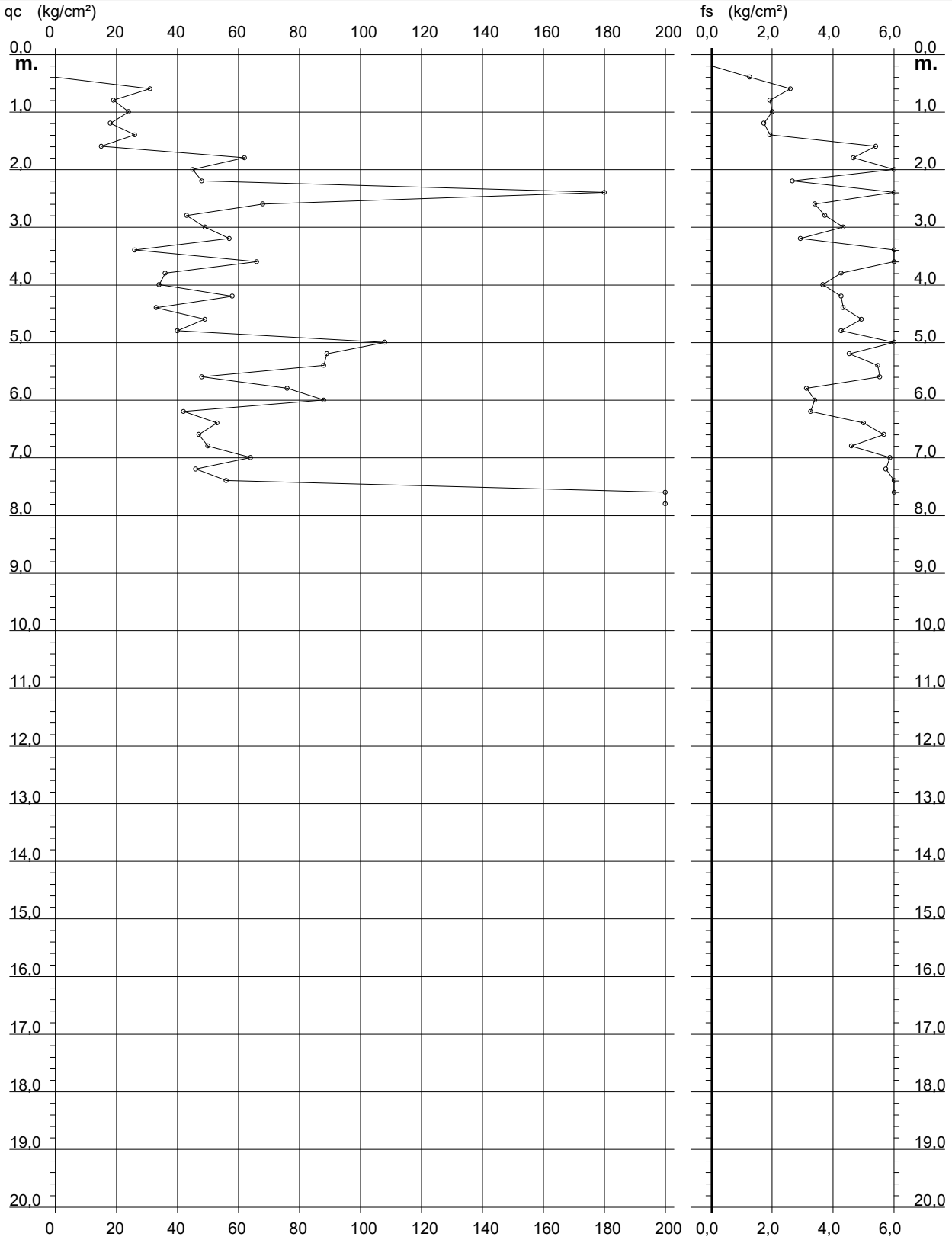
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 158

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-158	- scala vert.:	1 : 100



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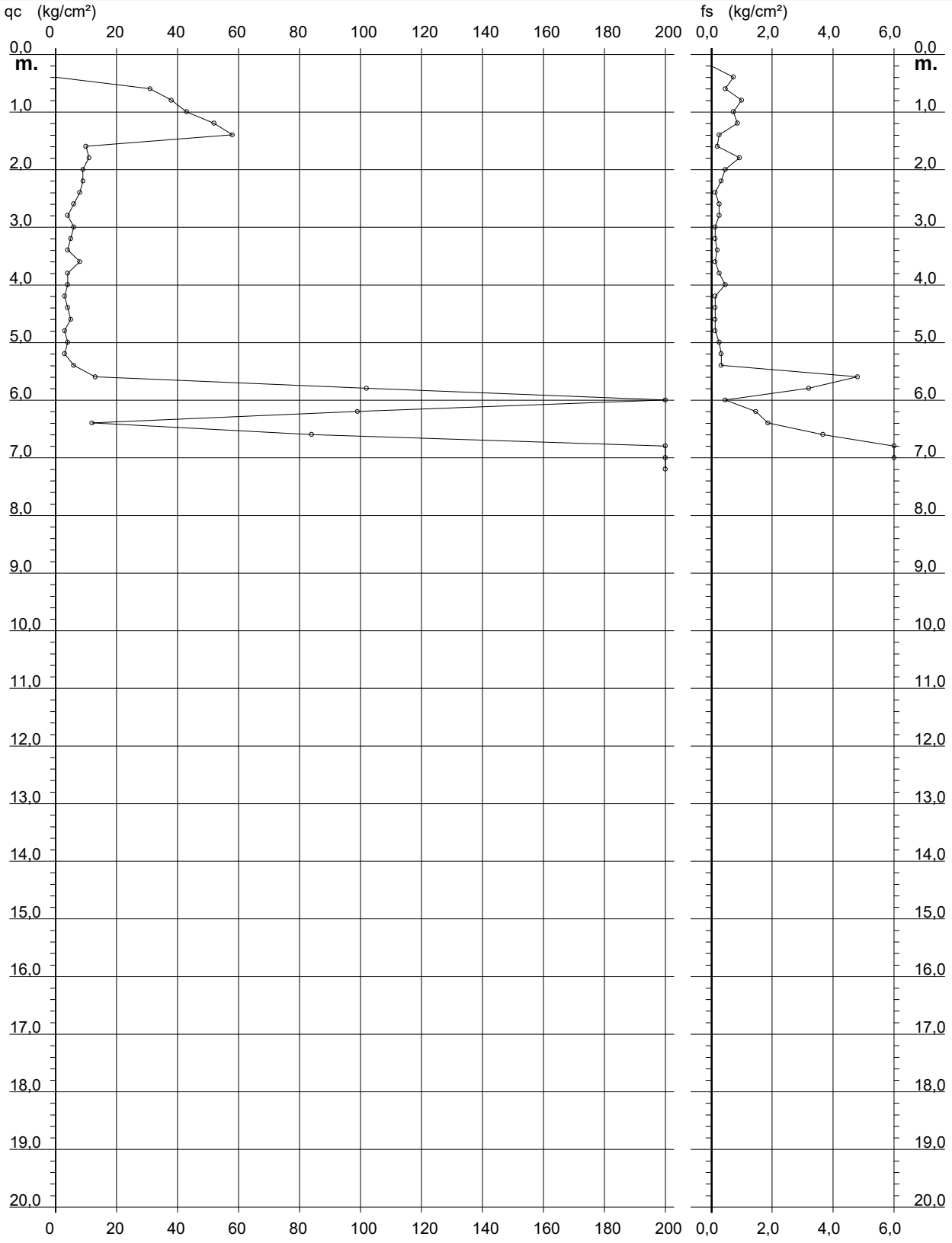
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 131

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-131	- scala vert.:	1 : 100



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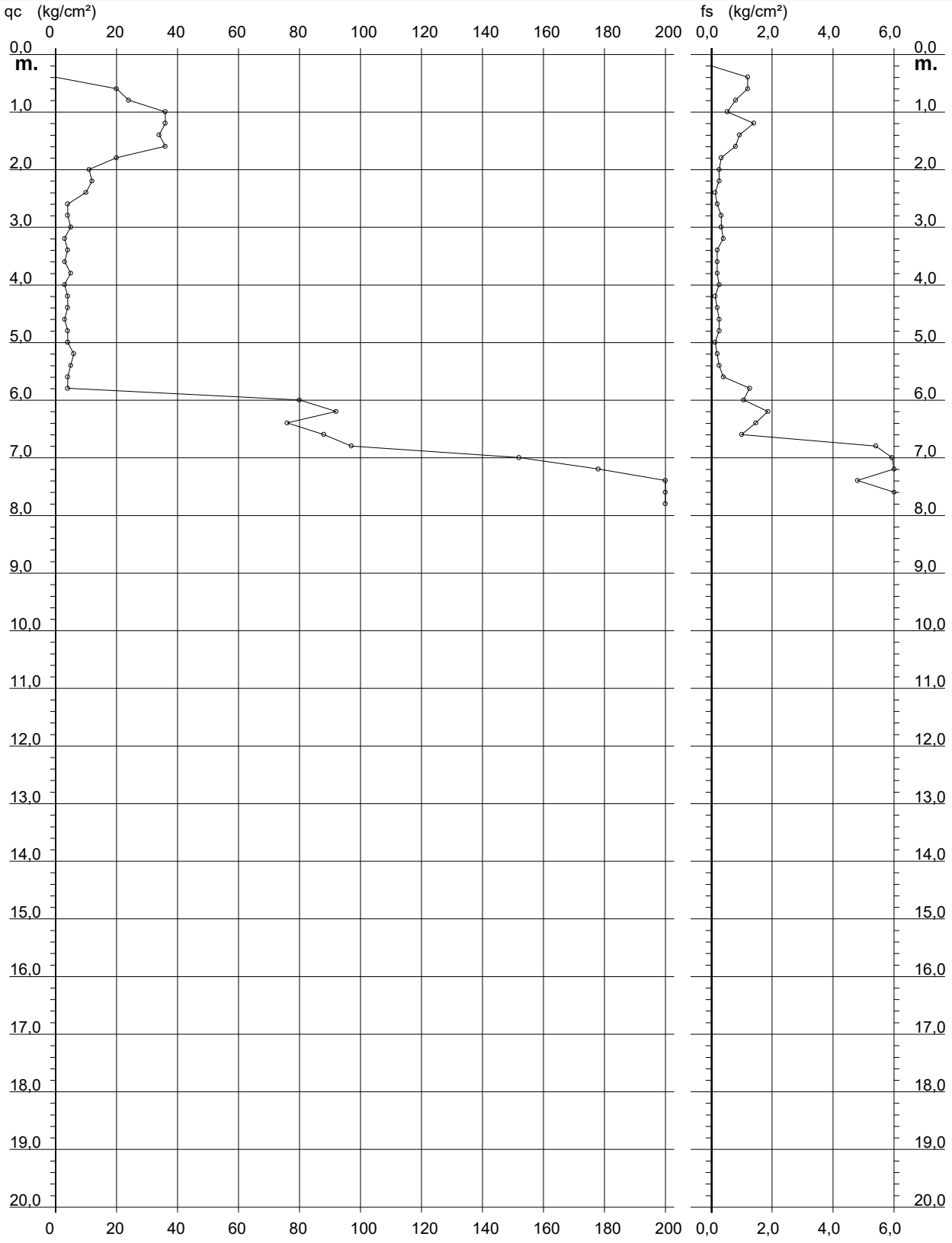
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 132

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-132	- scala vert.:	1 : 100



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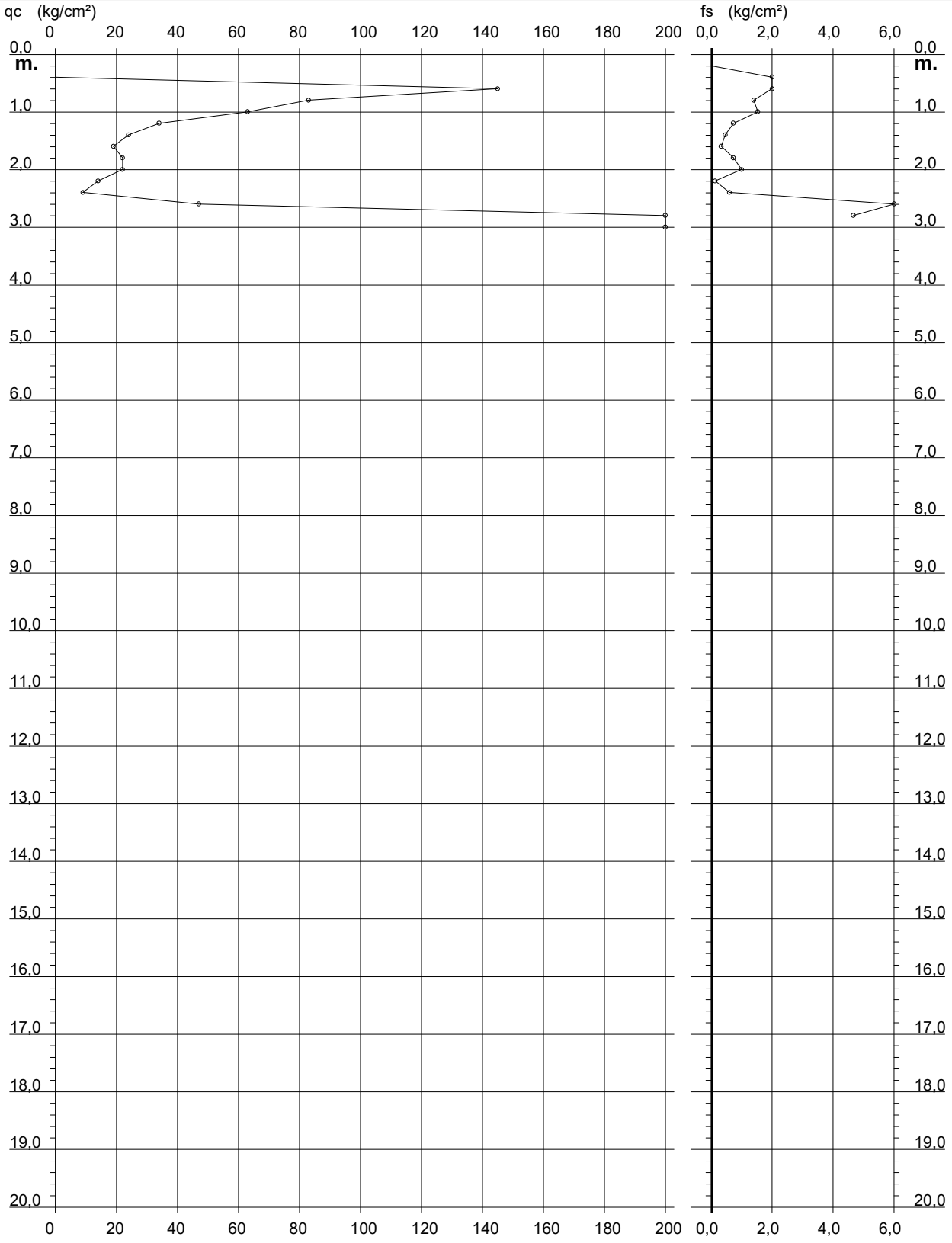
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 134

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/09/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-134	- scala vert.:	1 : 100



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Via V. Emanuele, 43 - 82010 Paolisi (BN)

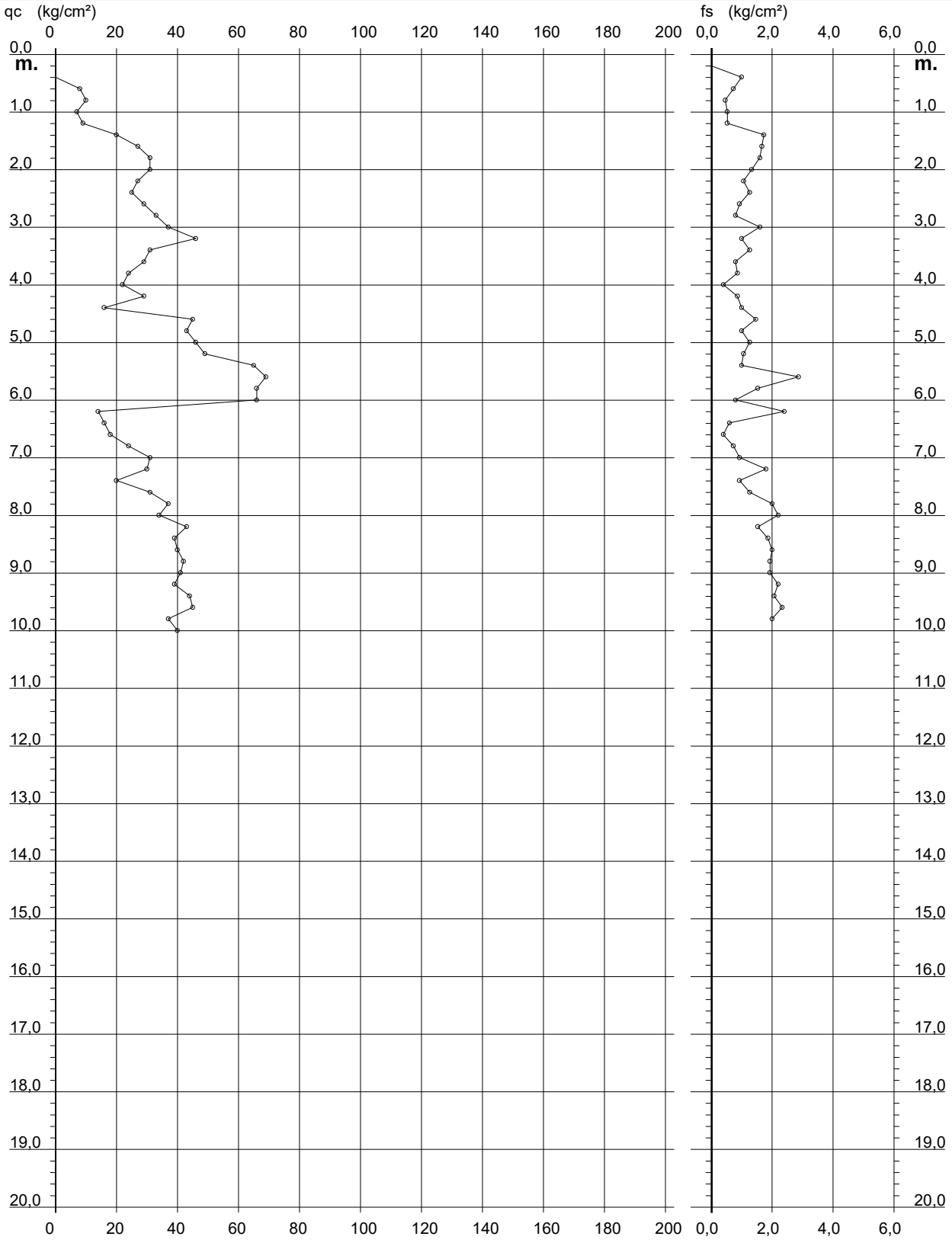
Rifer. 003-20

PROVA PENETROMETRICA STATICA DIAGRAMMA DI RESISTENZA

CPT 165

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	13/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-165	- scala vert.:	1 : 100



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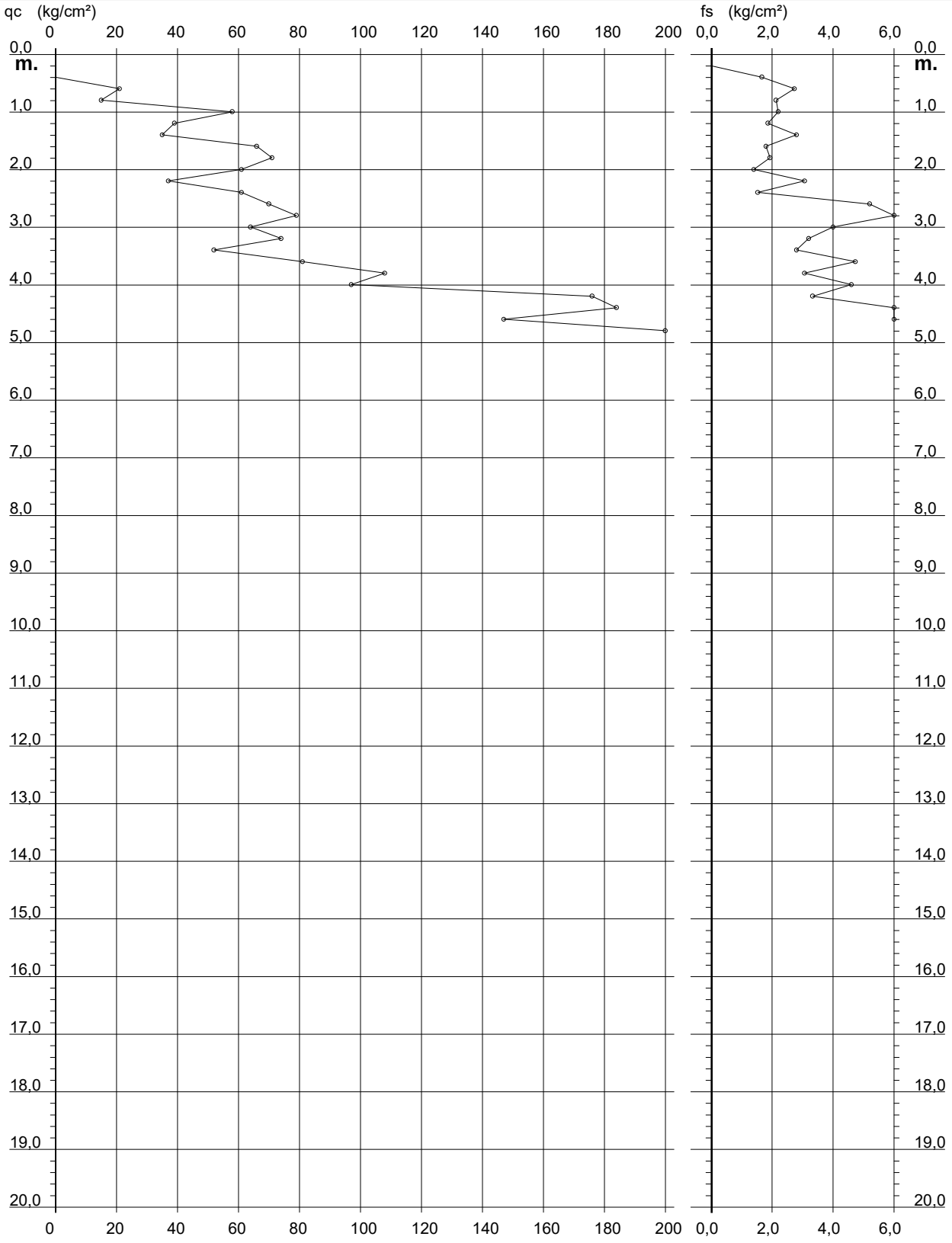
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 166

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	13/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-166	- scala vert.:	1 : 100



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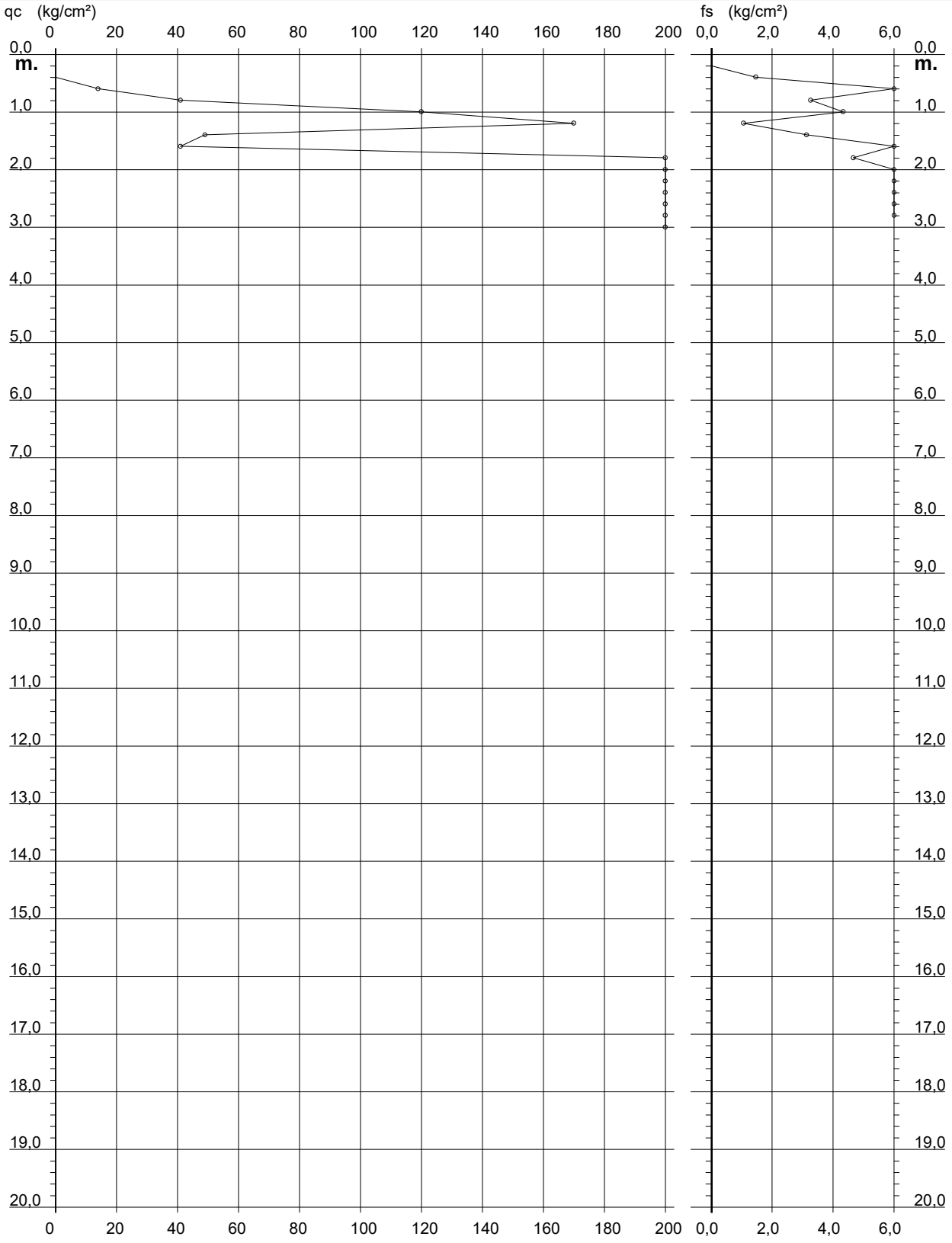
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 167

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	13/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-167	- scala vert.:	1 : 100



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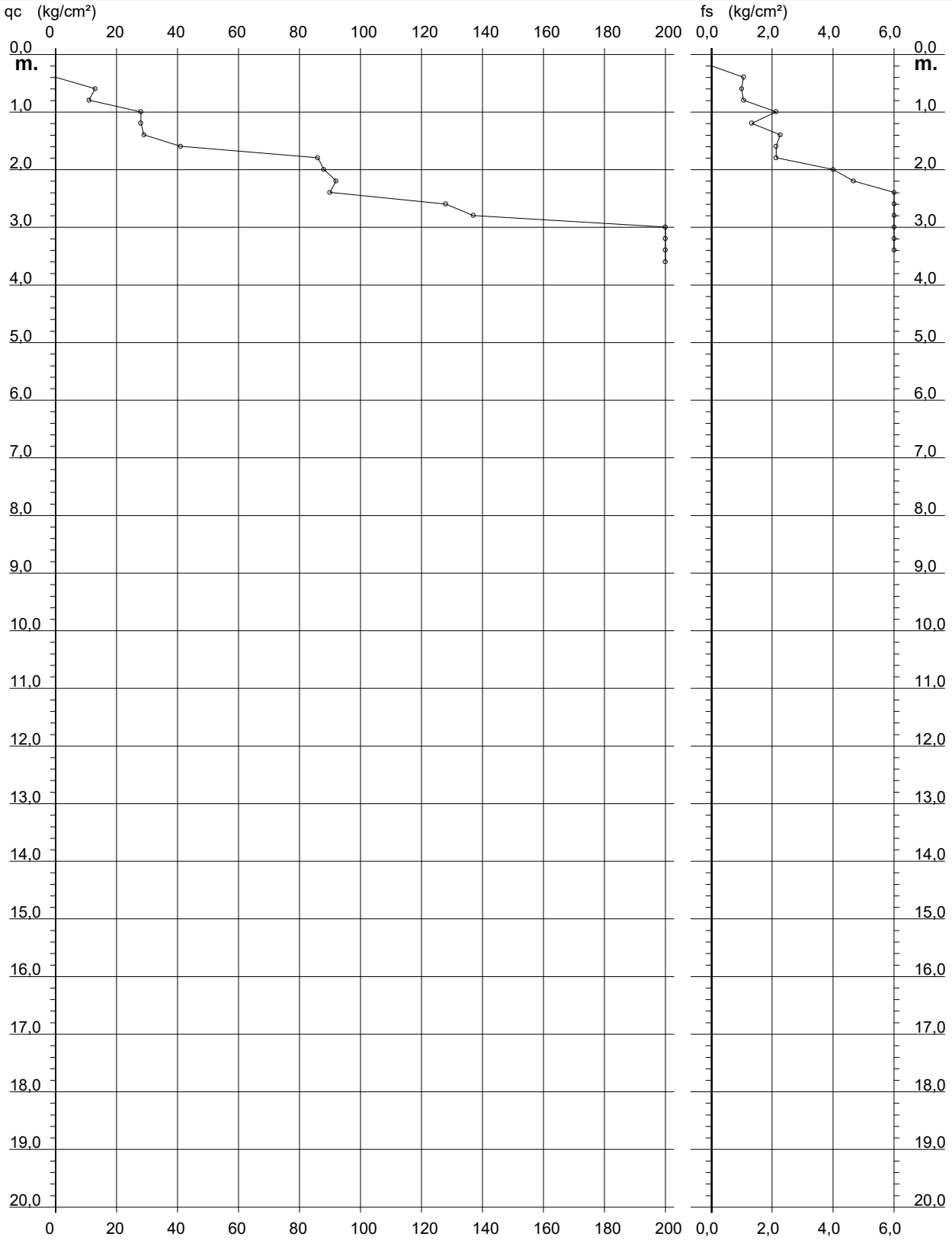
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 169

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	13/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-169	- scala vert.:	1 : 100



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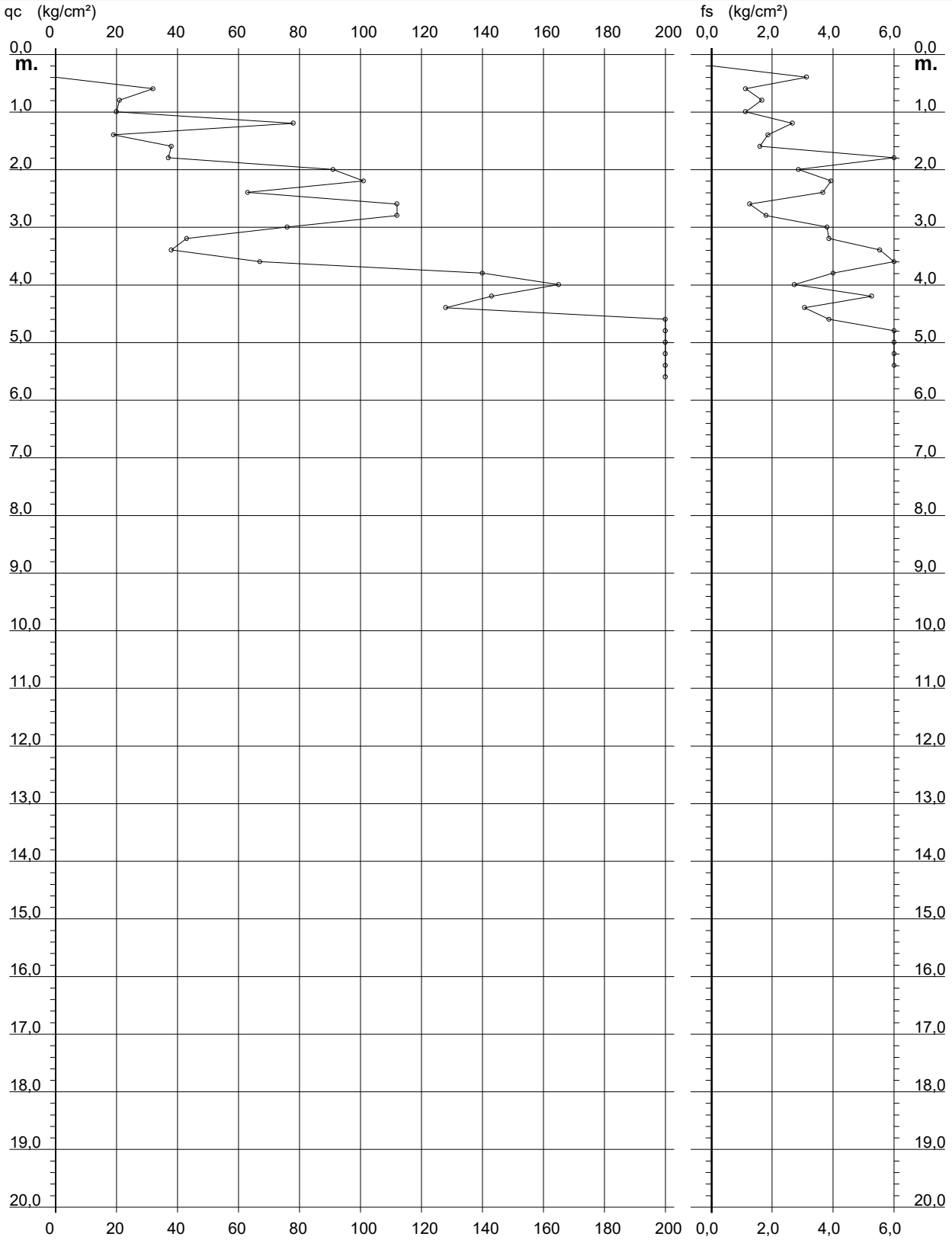
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 168

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	13/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-168	- scala vert.:	1 : 100



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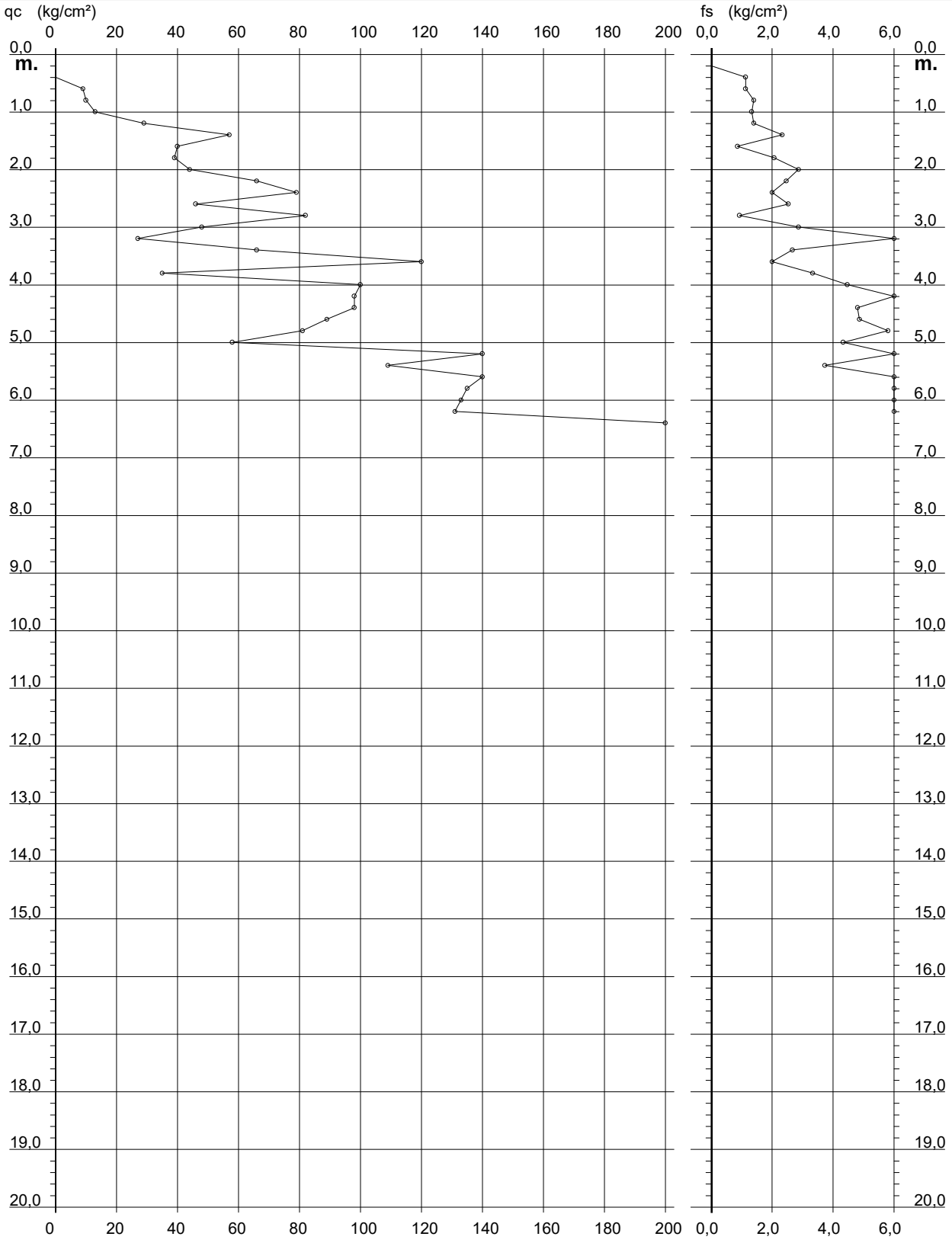
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 171

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-171	- scala vert.:	1 : 100



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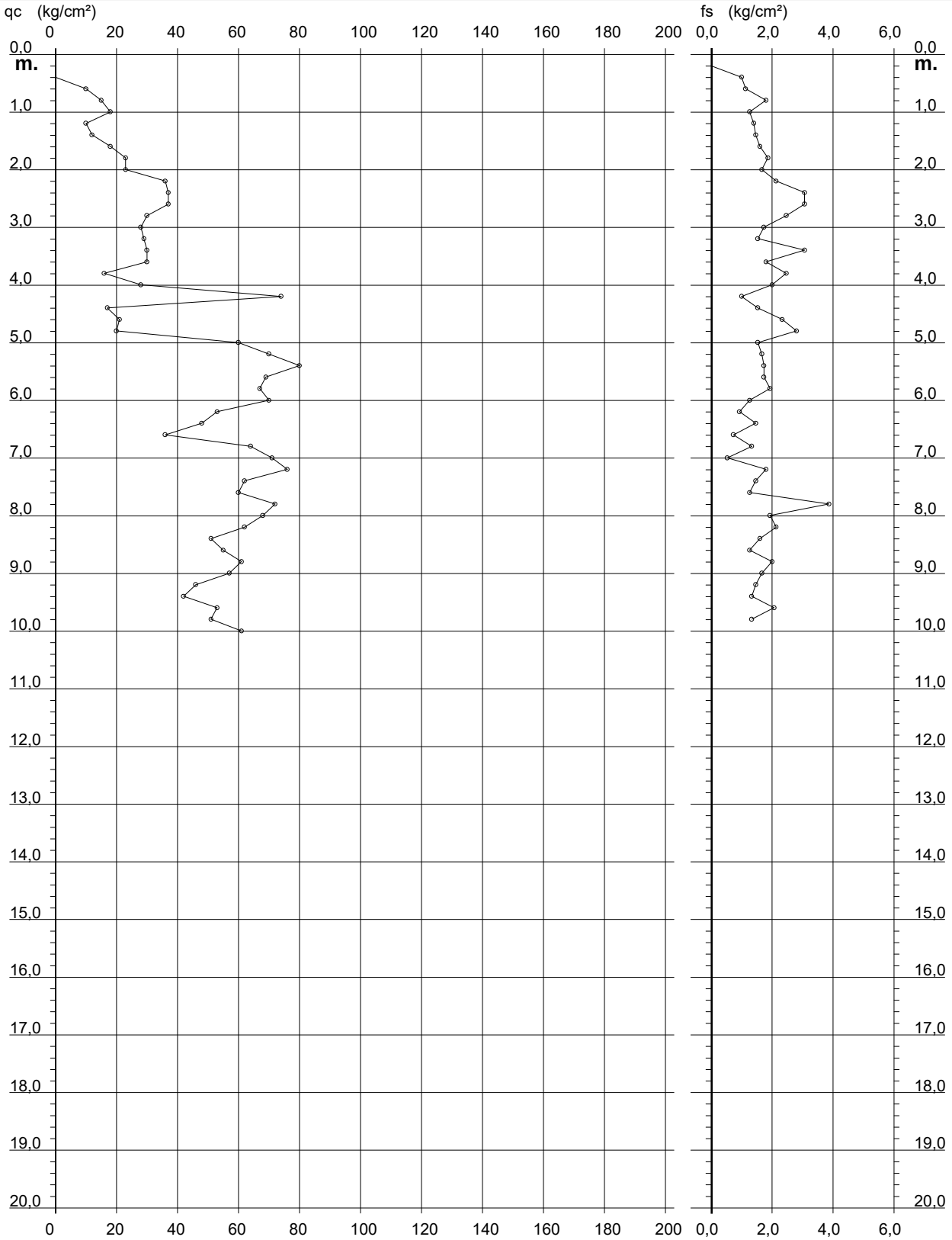
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 174

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-174	- scala vert.:	1 : 100



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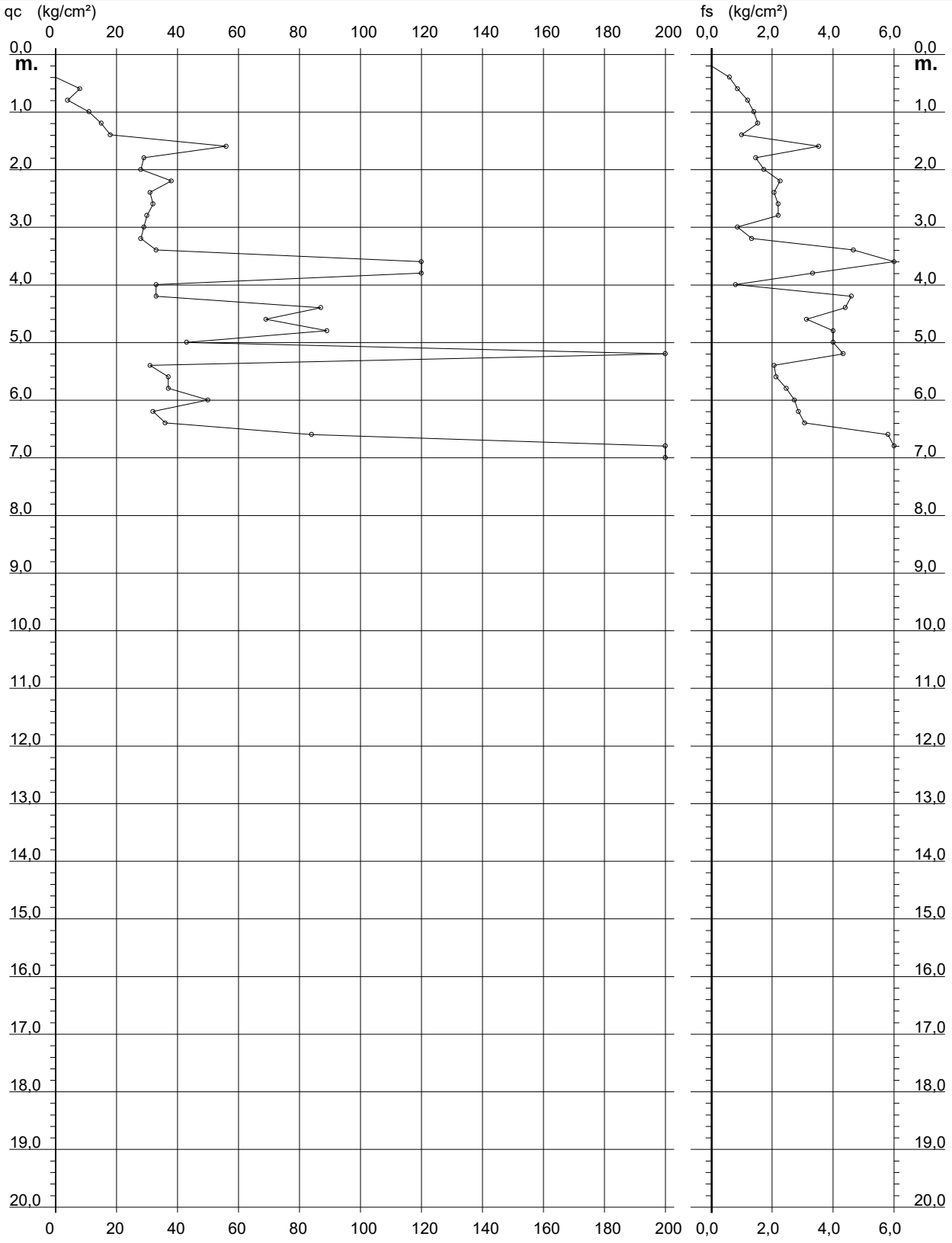
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 173

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-173	- scala vert.:	1 : 100



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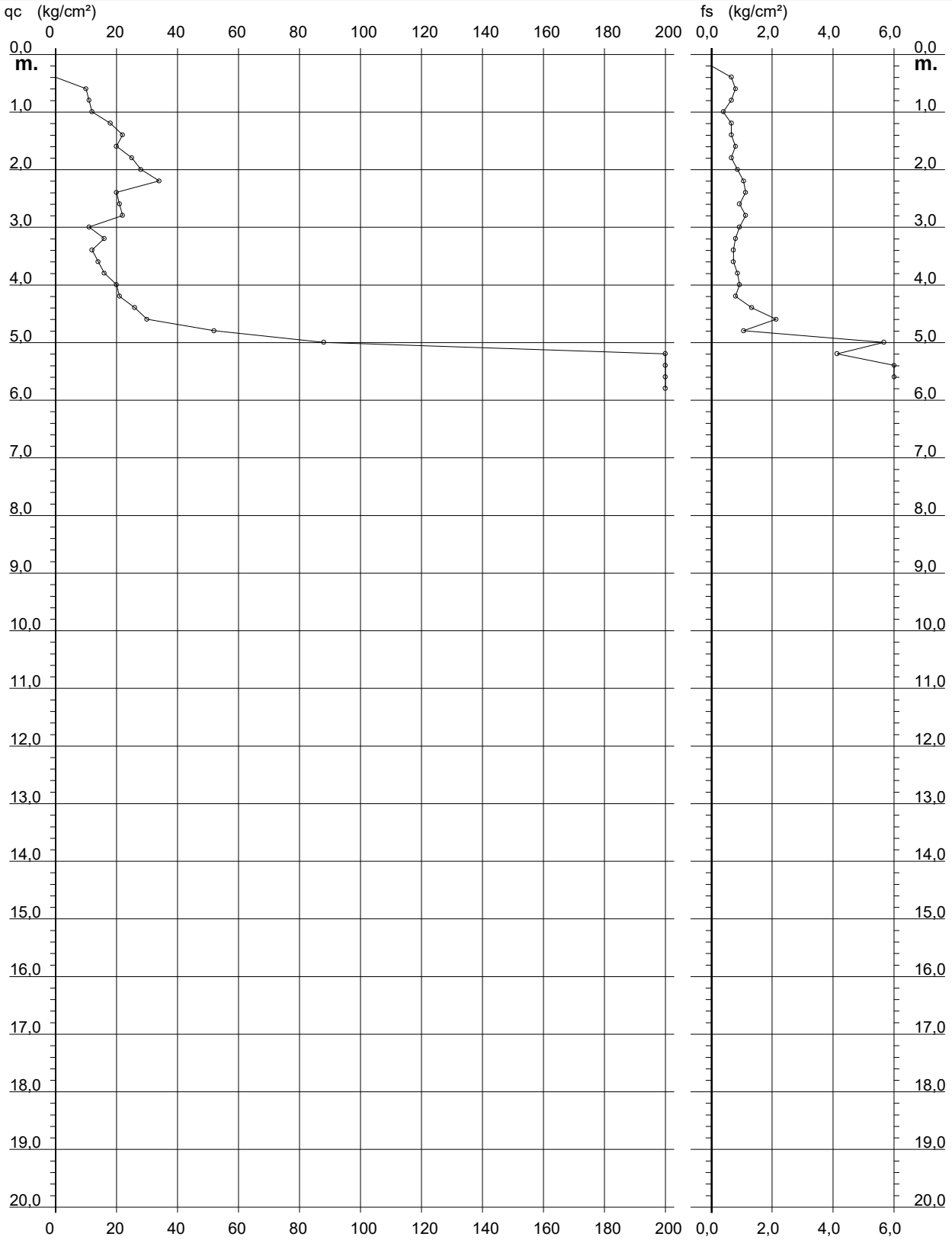
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 170

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-170	- scala vert.:	1 : 100



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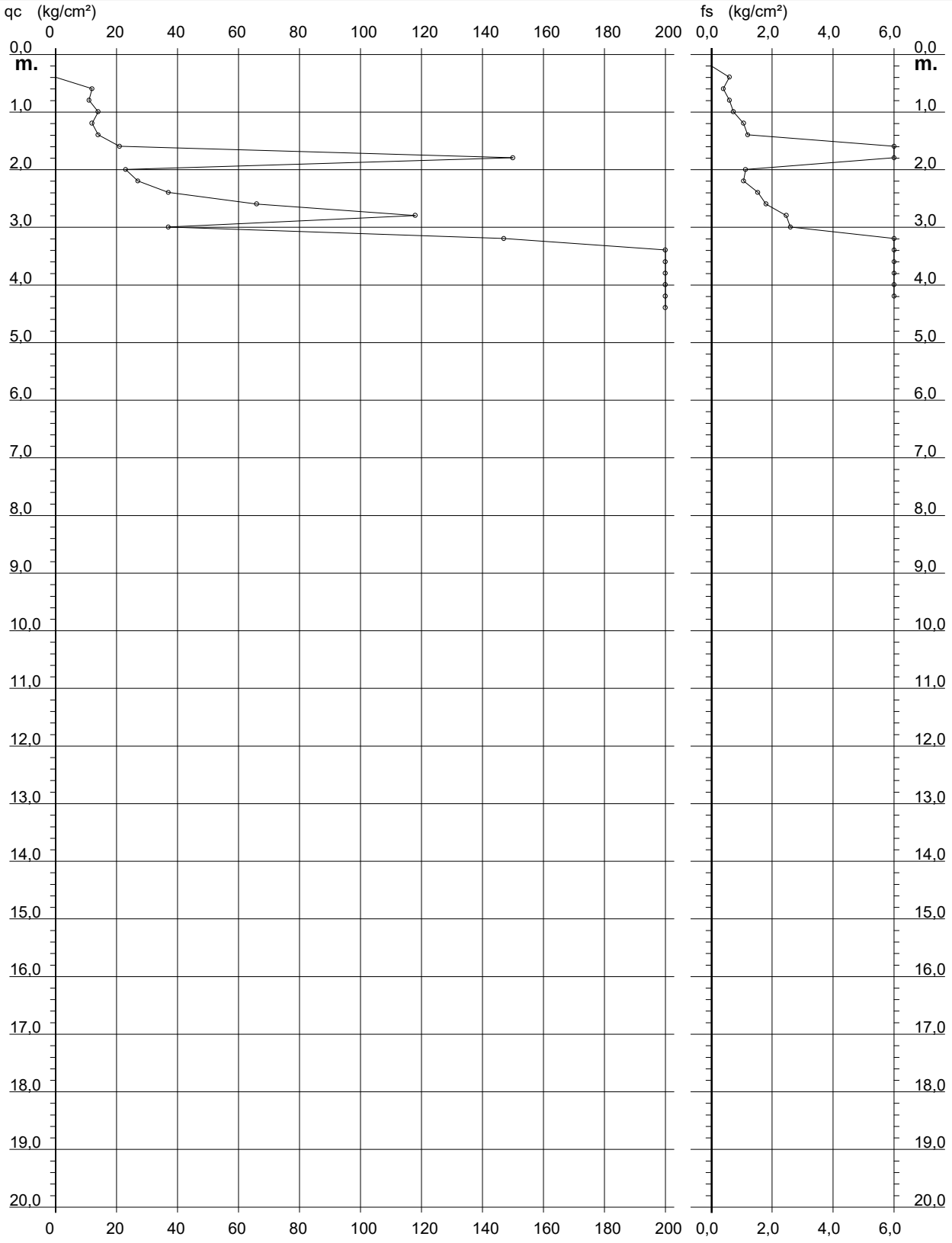
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 172

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-172	- scala vert.:	1 : 100



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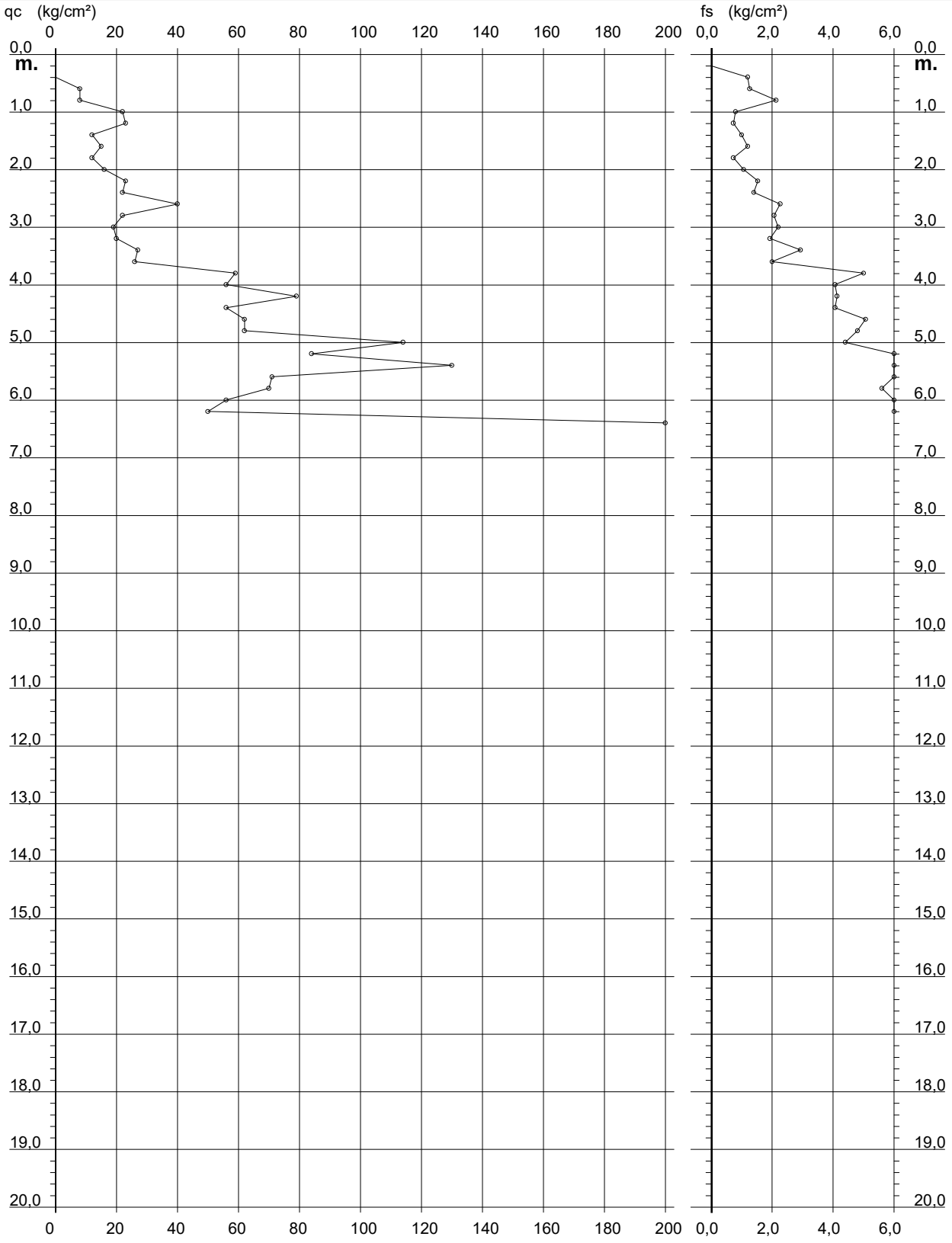
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 179

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-179	- scala vert.:	1 : 100



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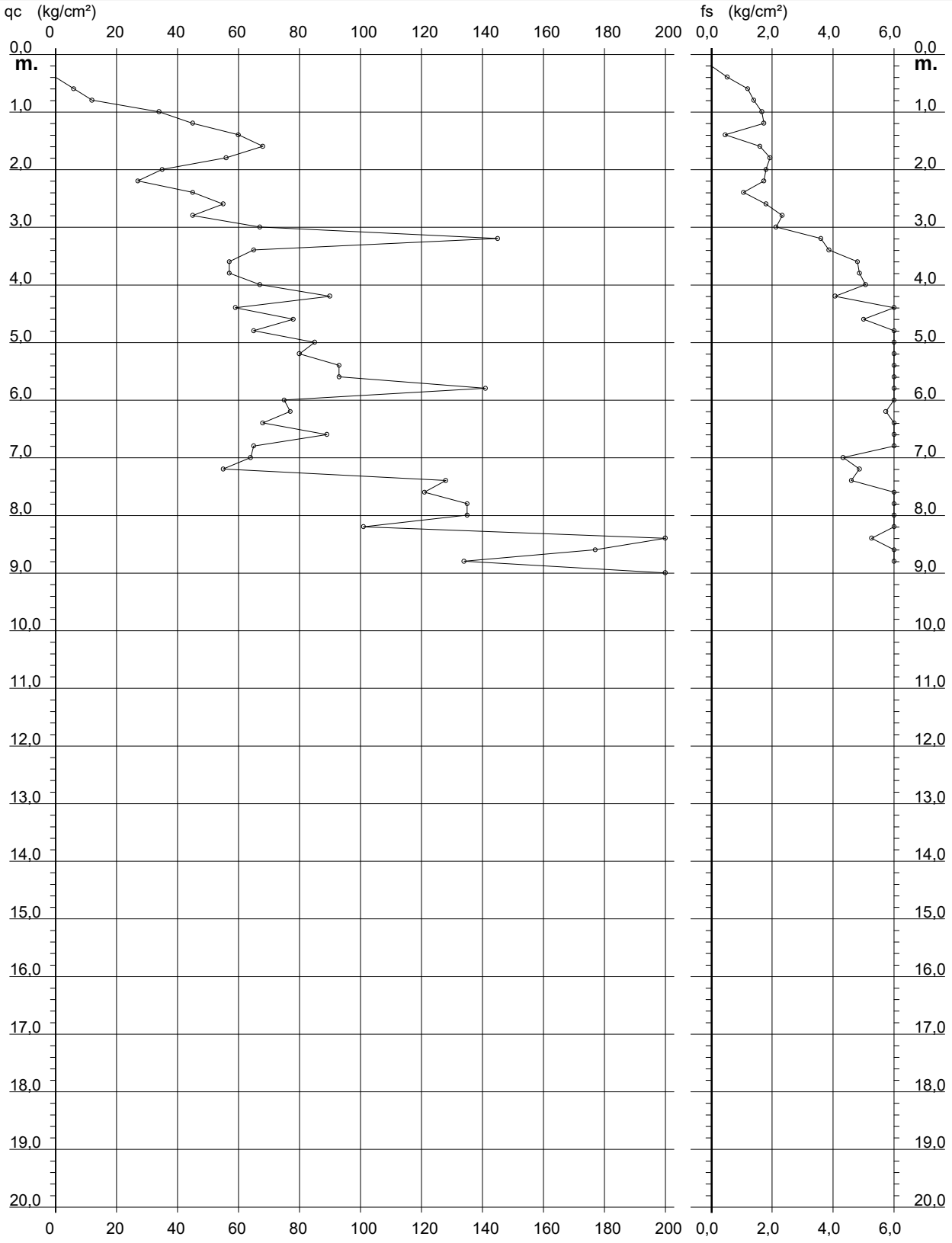
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 227

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	06/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-227	- scala vert.:	1 : 100



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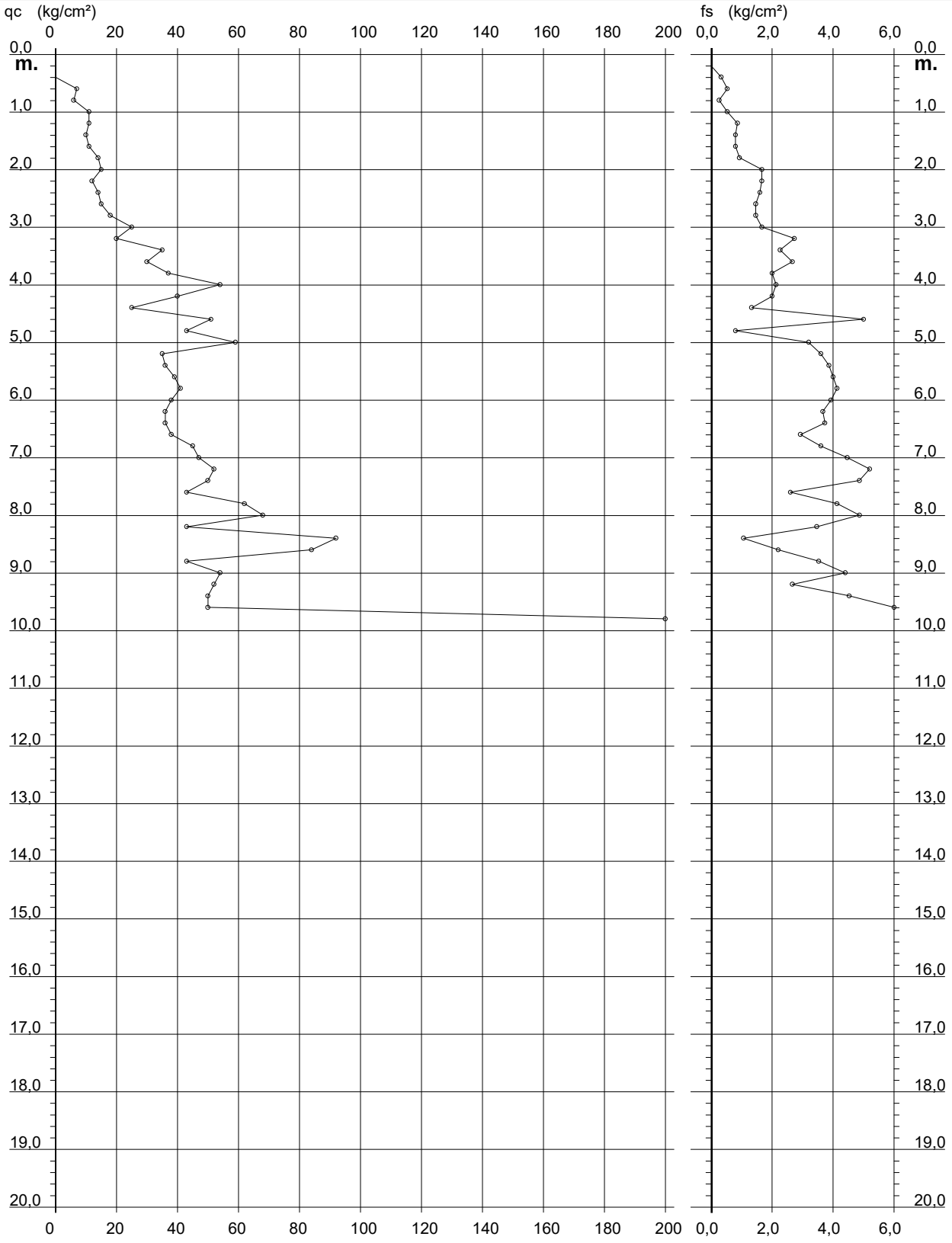
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 230

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	06/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-230	- scala vert.:	1 : 100



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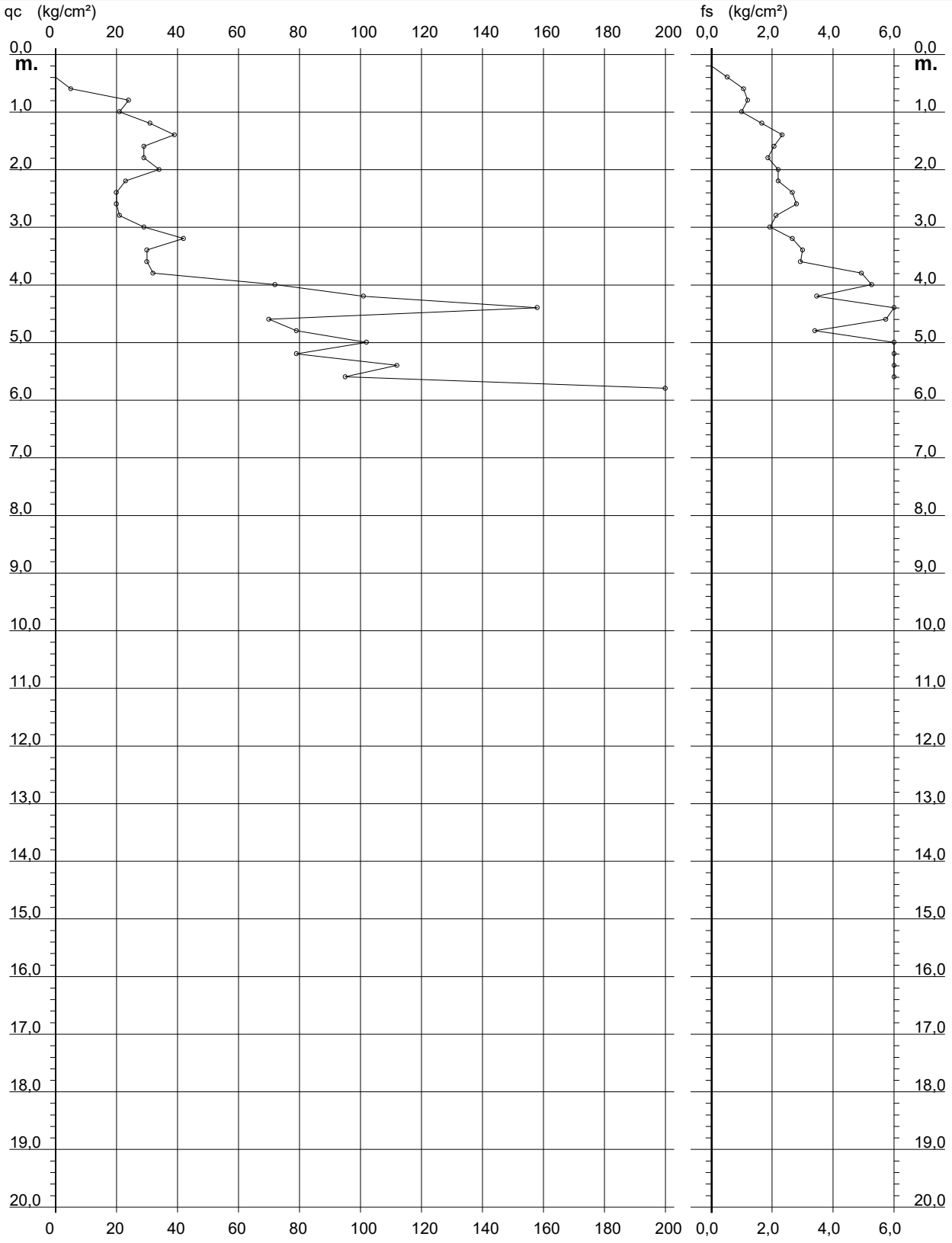
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 232

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	06/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-232	- scala vert.:	1 : 100



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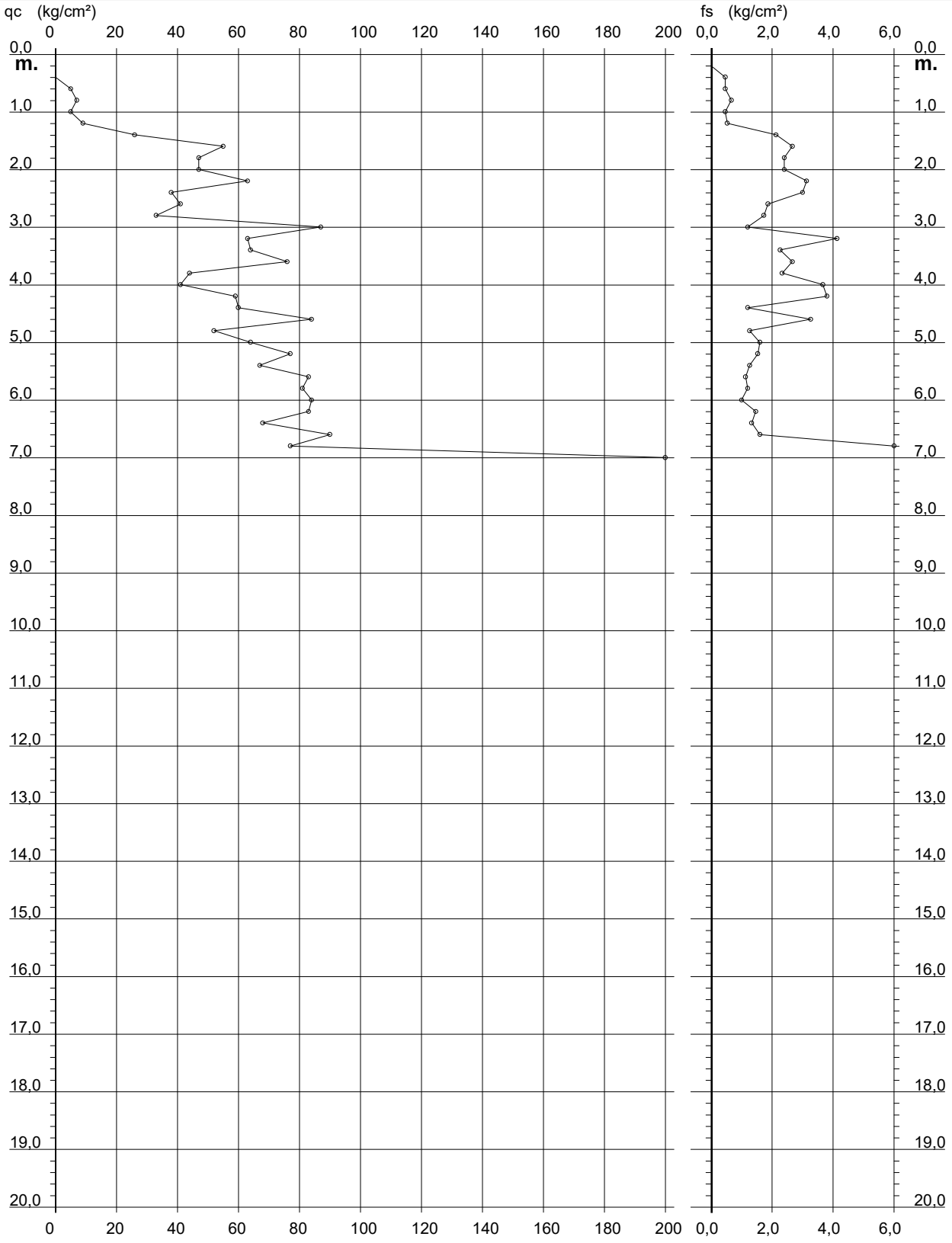
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 233

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	06/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-233	- scala vert.:	1 : 100



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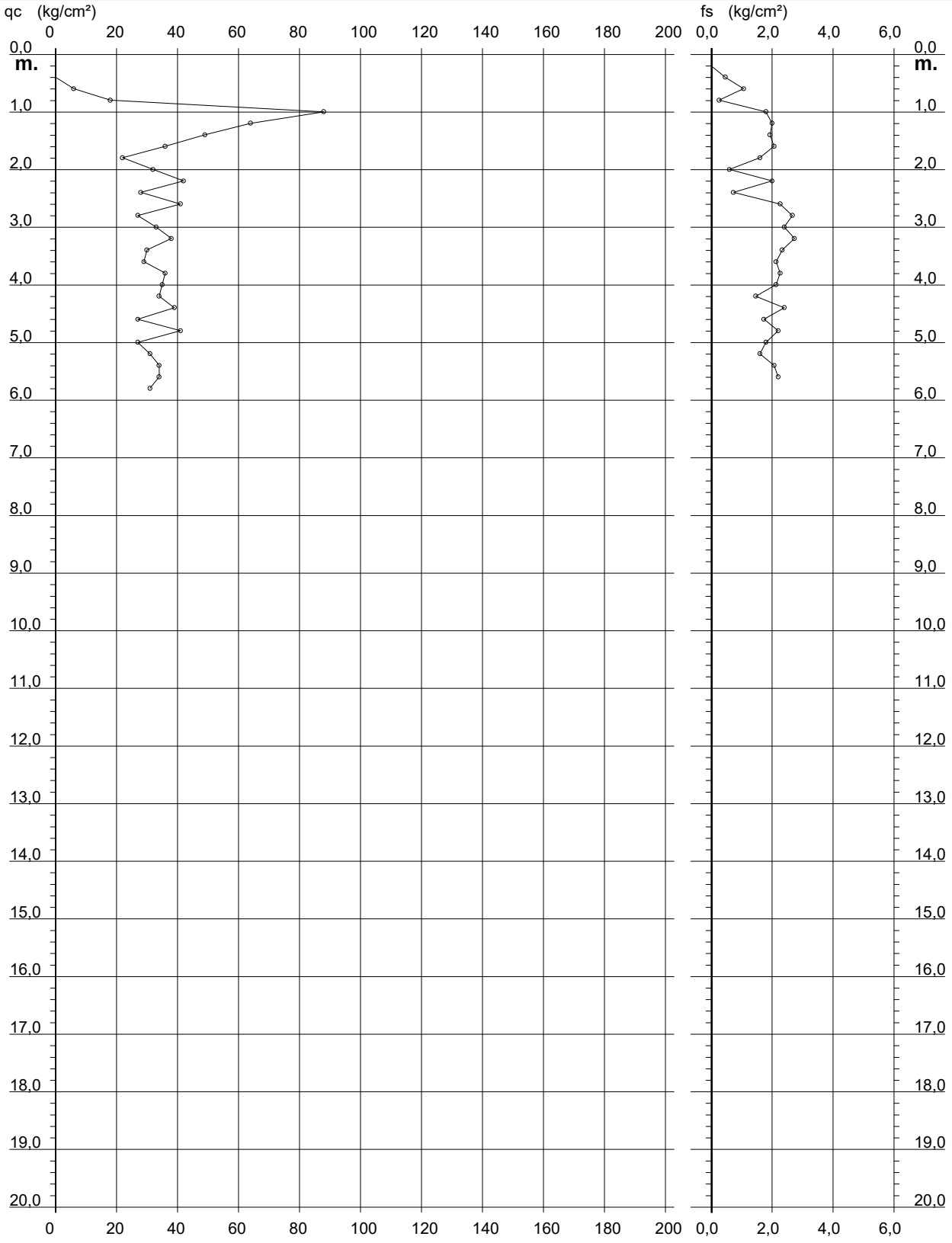
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 234

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	06/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-234	- scala vert.:	1 : 100



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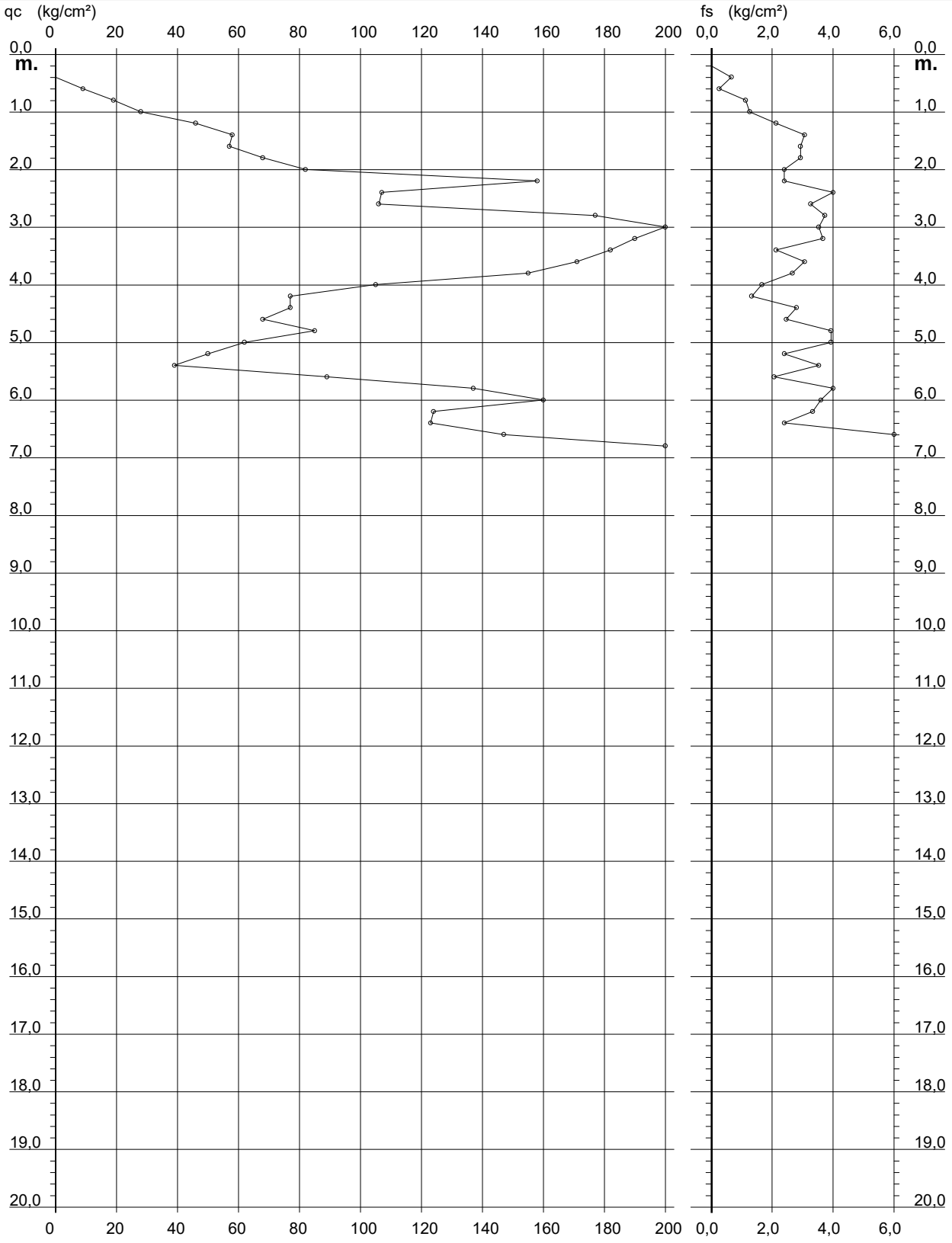
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 237

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-237	- scala vert.:	1 : 100



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Via V. Emanuele, 43 - 82010 Paolisi (BN)

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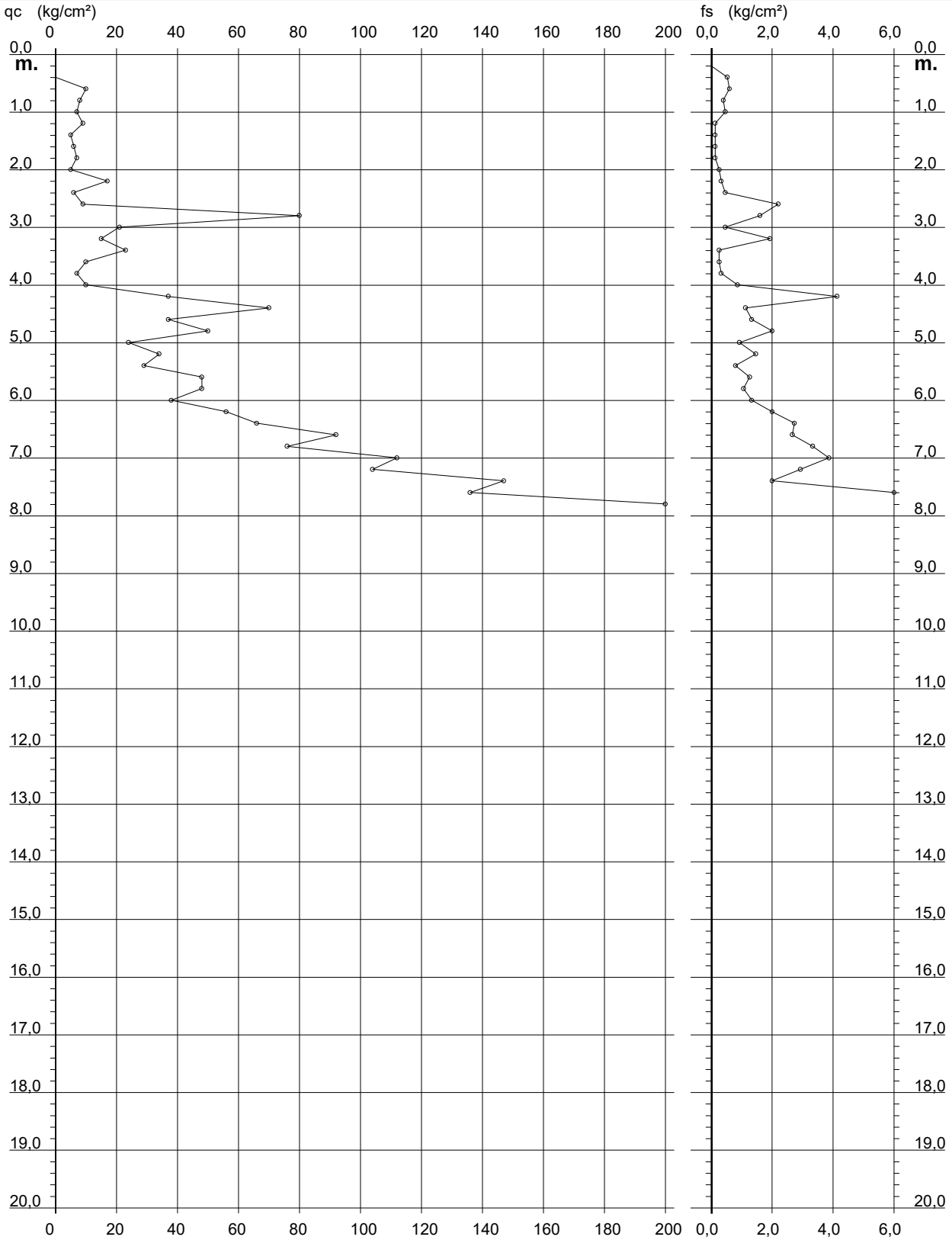
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 236

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-236	- scala vert.:	1 : 100



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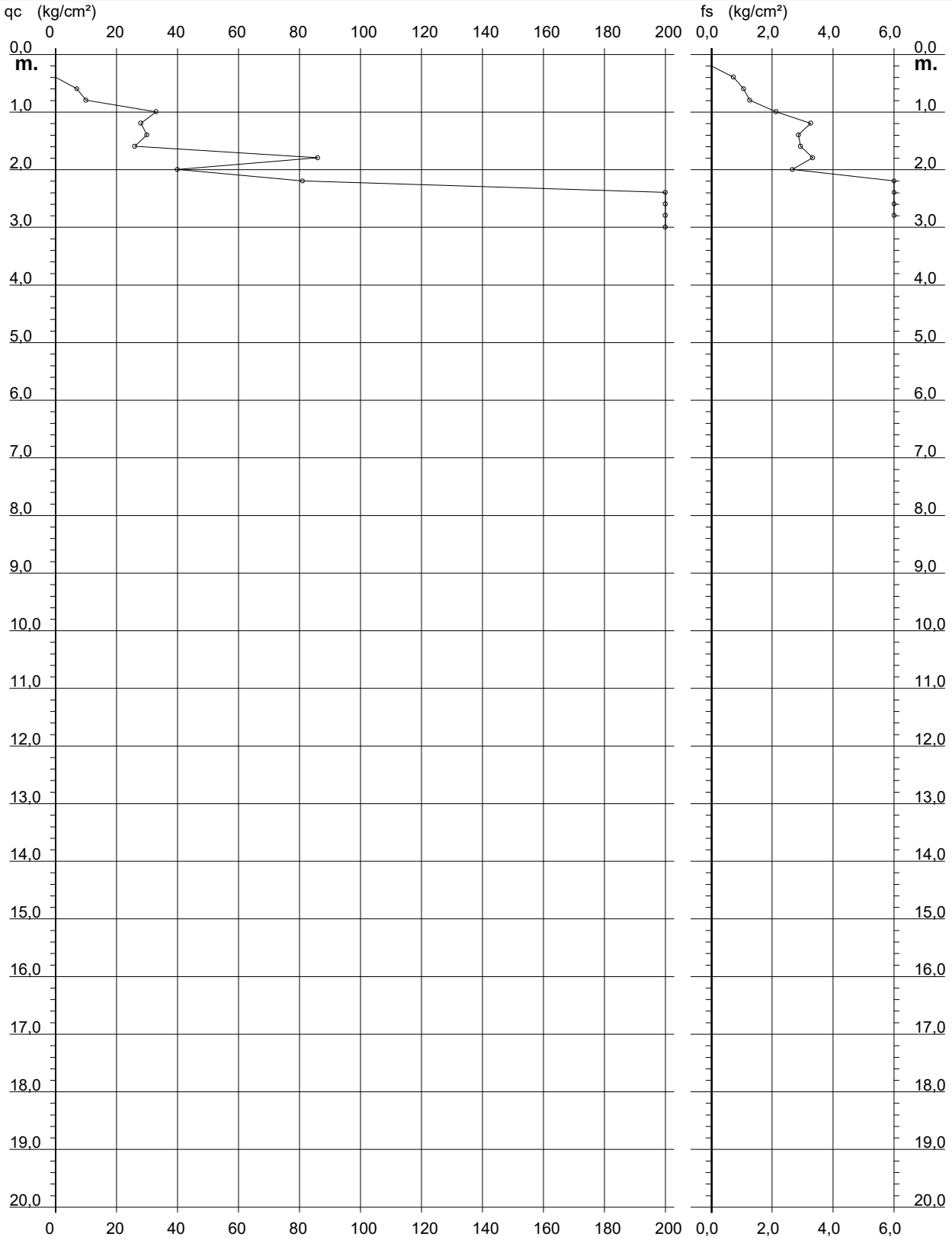
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 235

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-235	- scala vert.:	1 : 100



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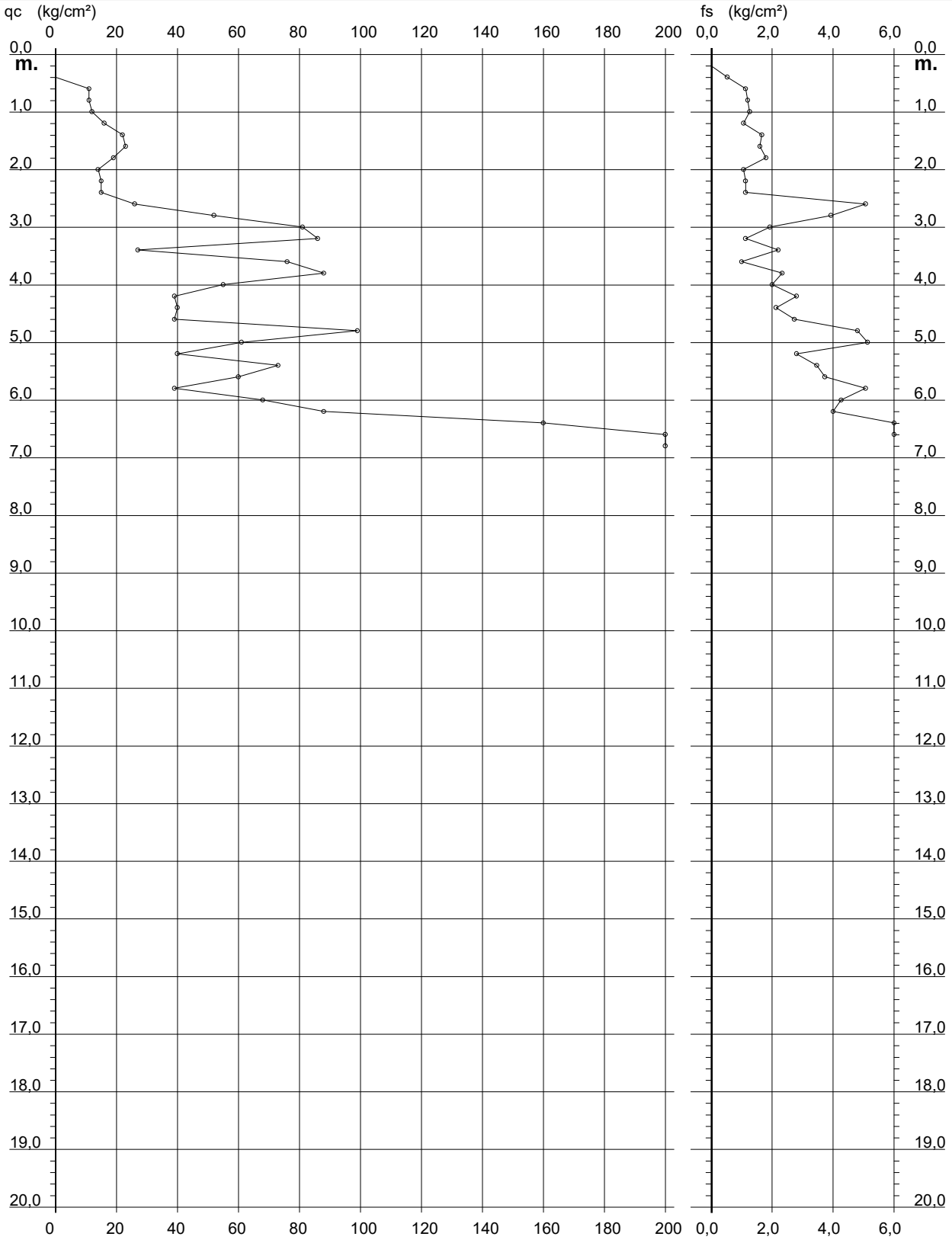
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 239

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-239	- scala vert.:	1 : 100



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Via V. Emanuele, 43 - 82010 Paolisi (BN)

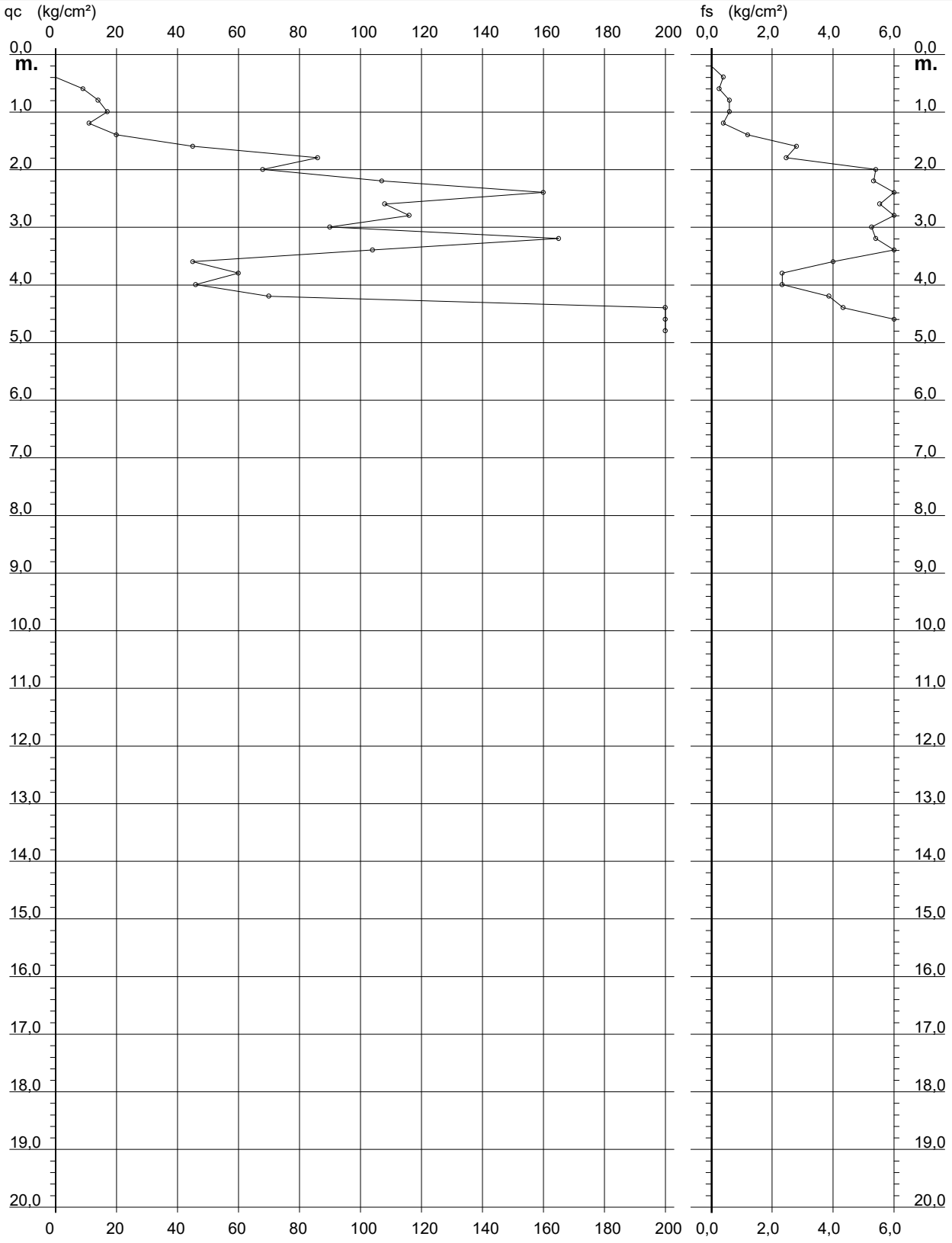
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 240

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-240	- scala vert.:	1 : 100



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Via V. Emanuele, 43 - 82010 Paolisi (BN)

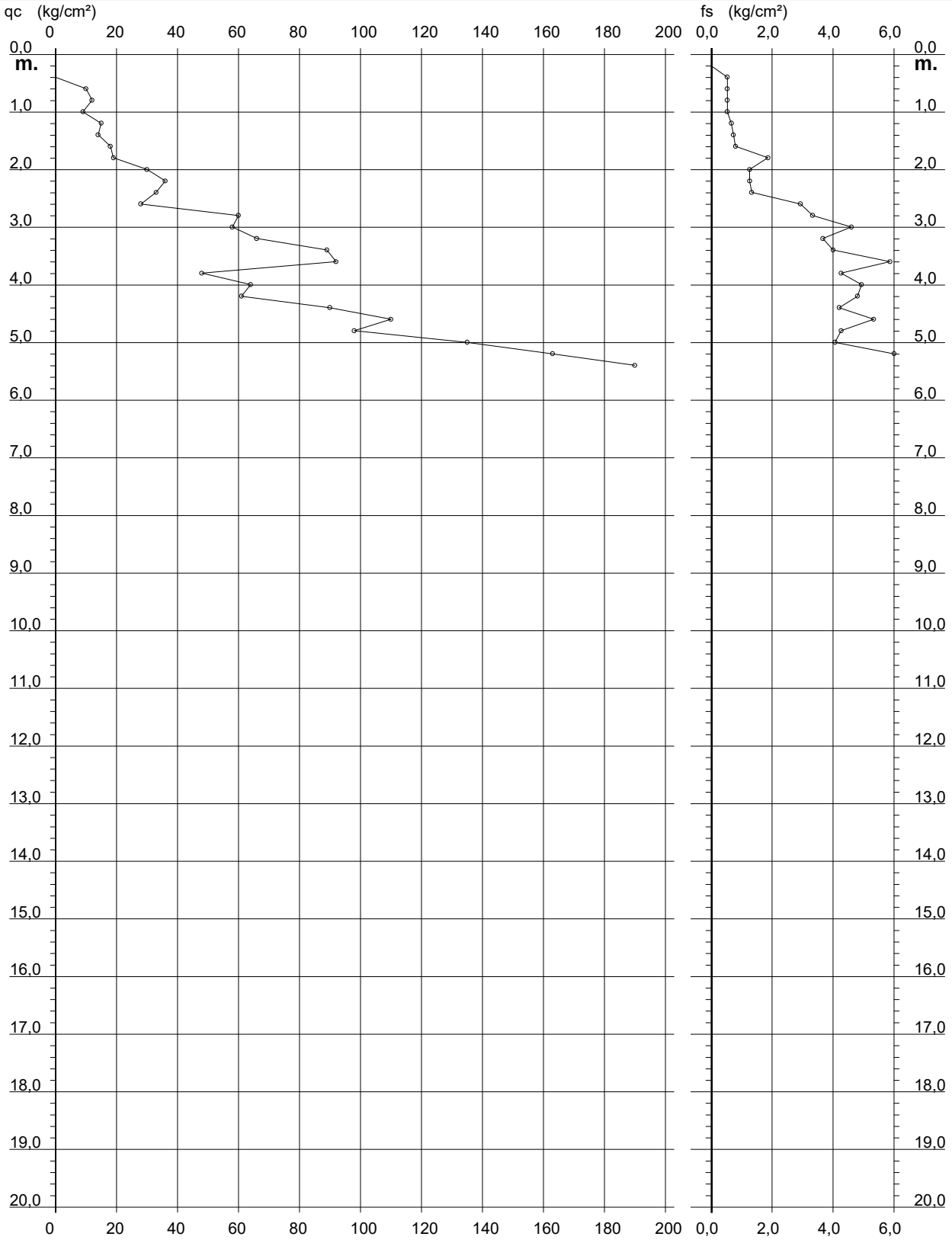
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 241

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-241	- scala vert.:	1 : 100



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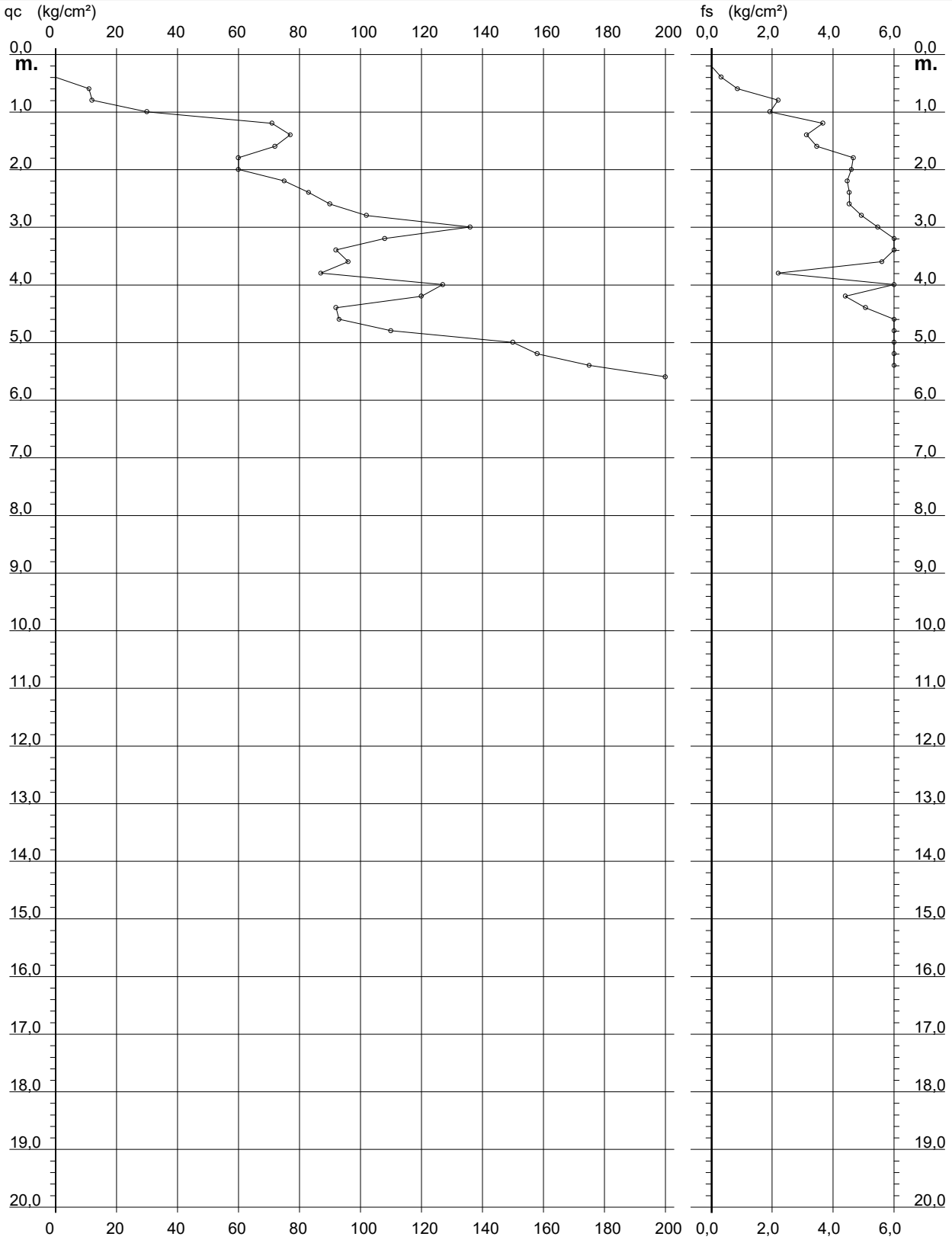
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 243

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-243	- scala vert.:	1 : 100



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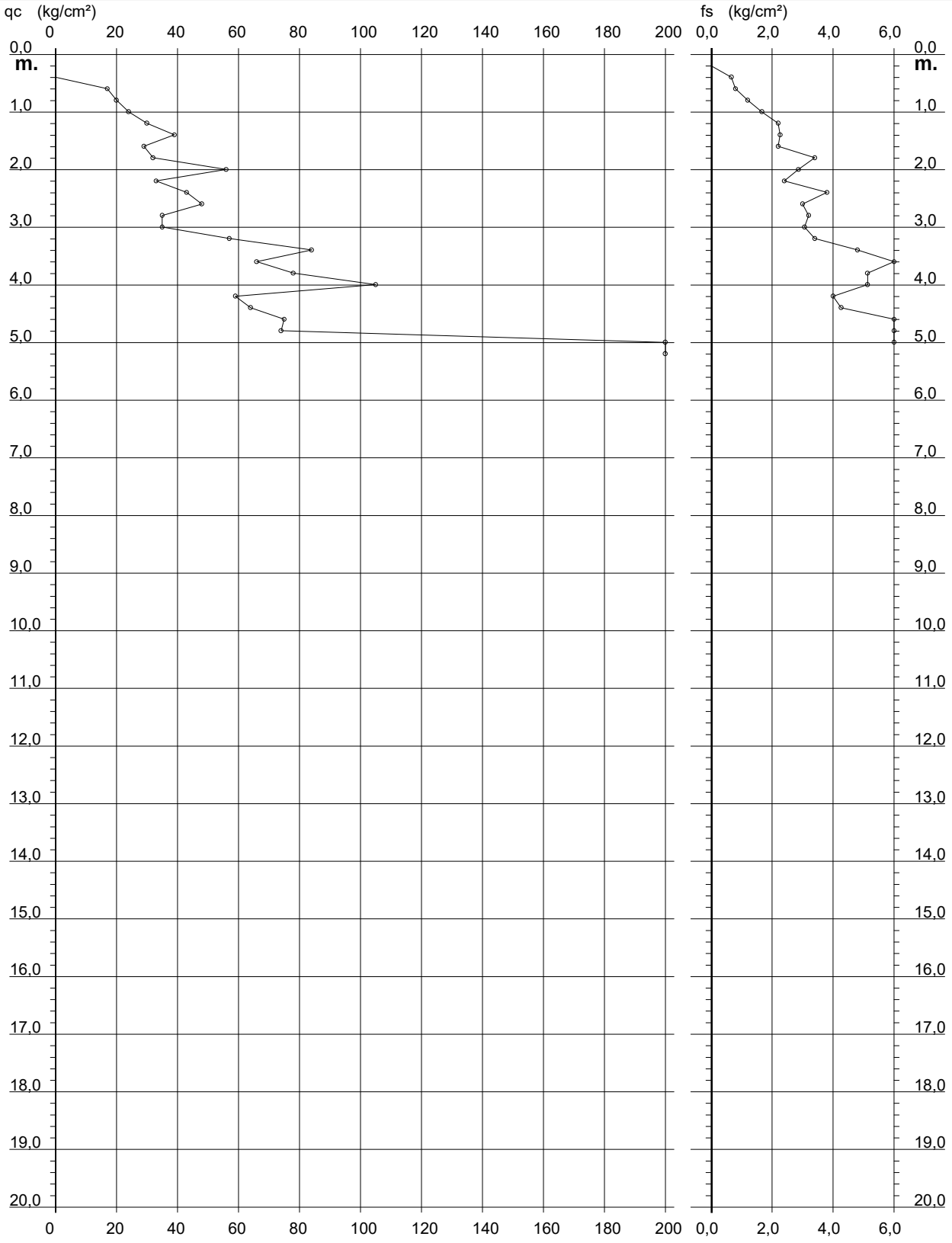
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 244

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-244	- scala vert.:	1 : 100



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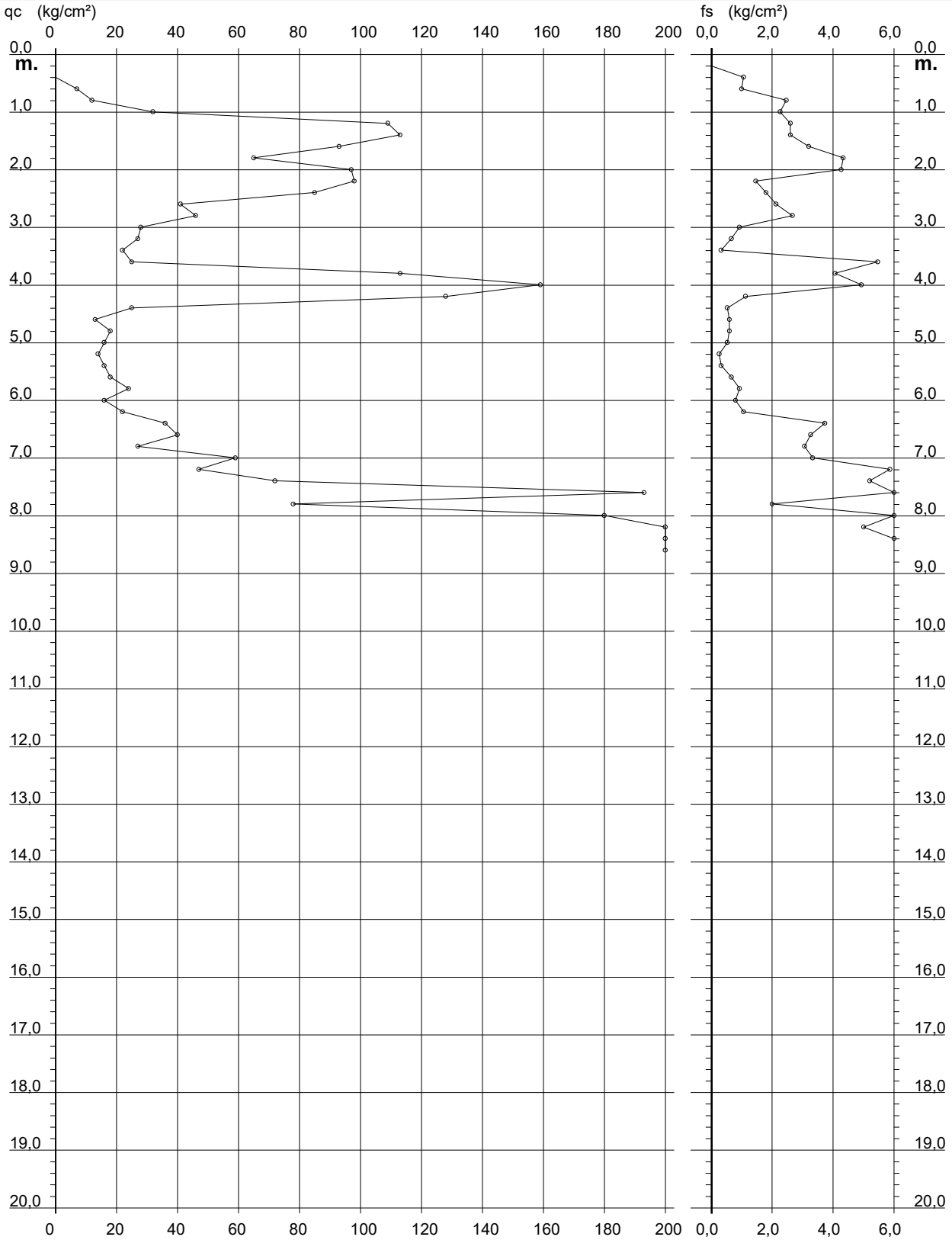
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 246

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-246	- scala vert.:	1 : 100



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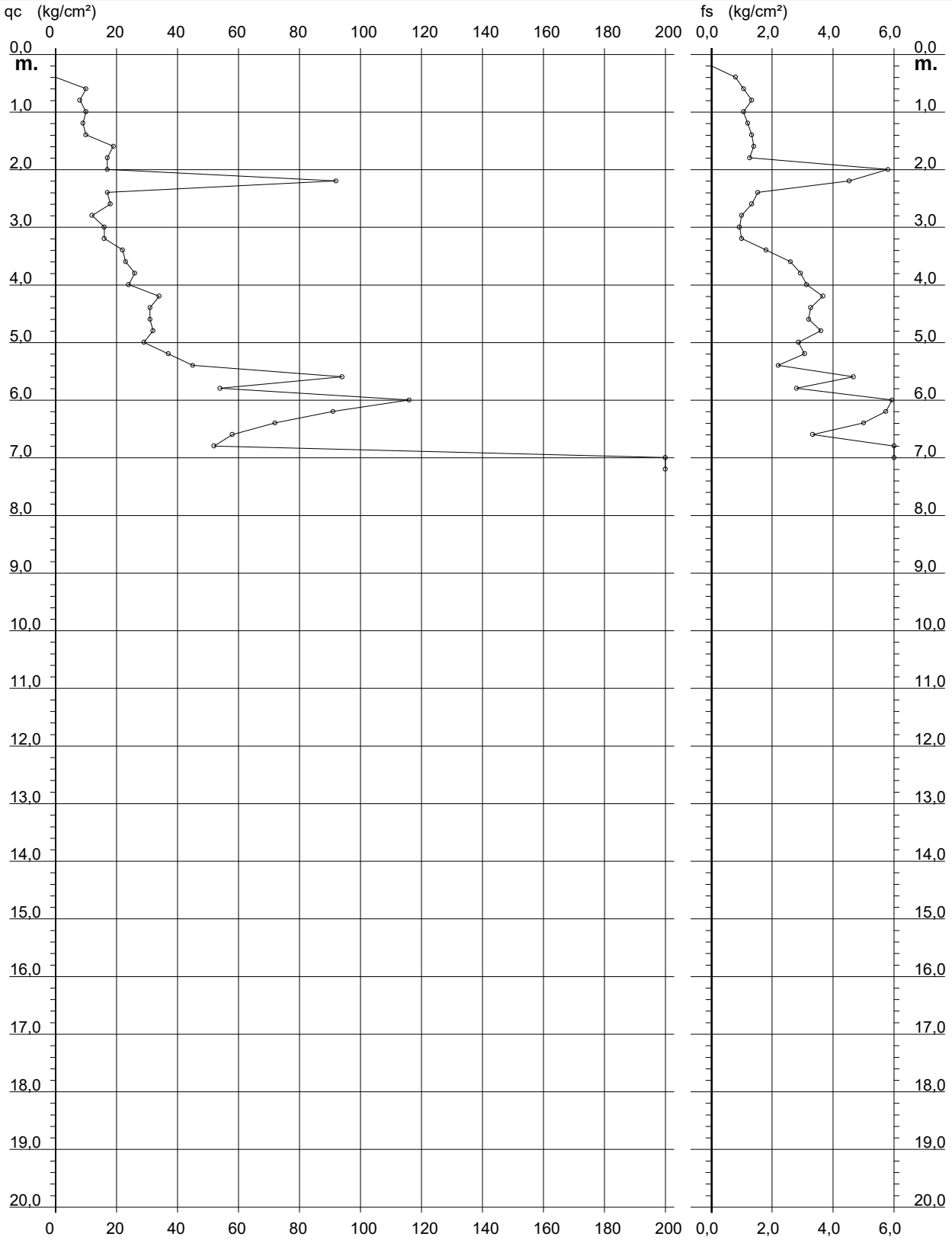
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 249

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-249	- scala vert.:	1 : 100



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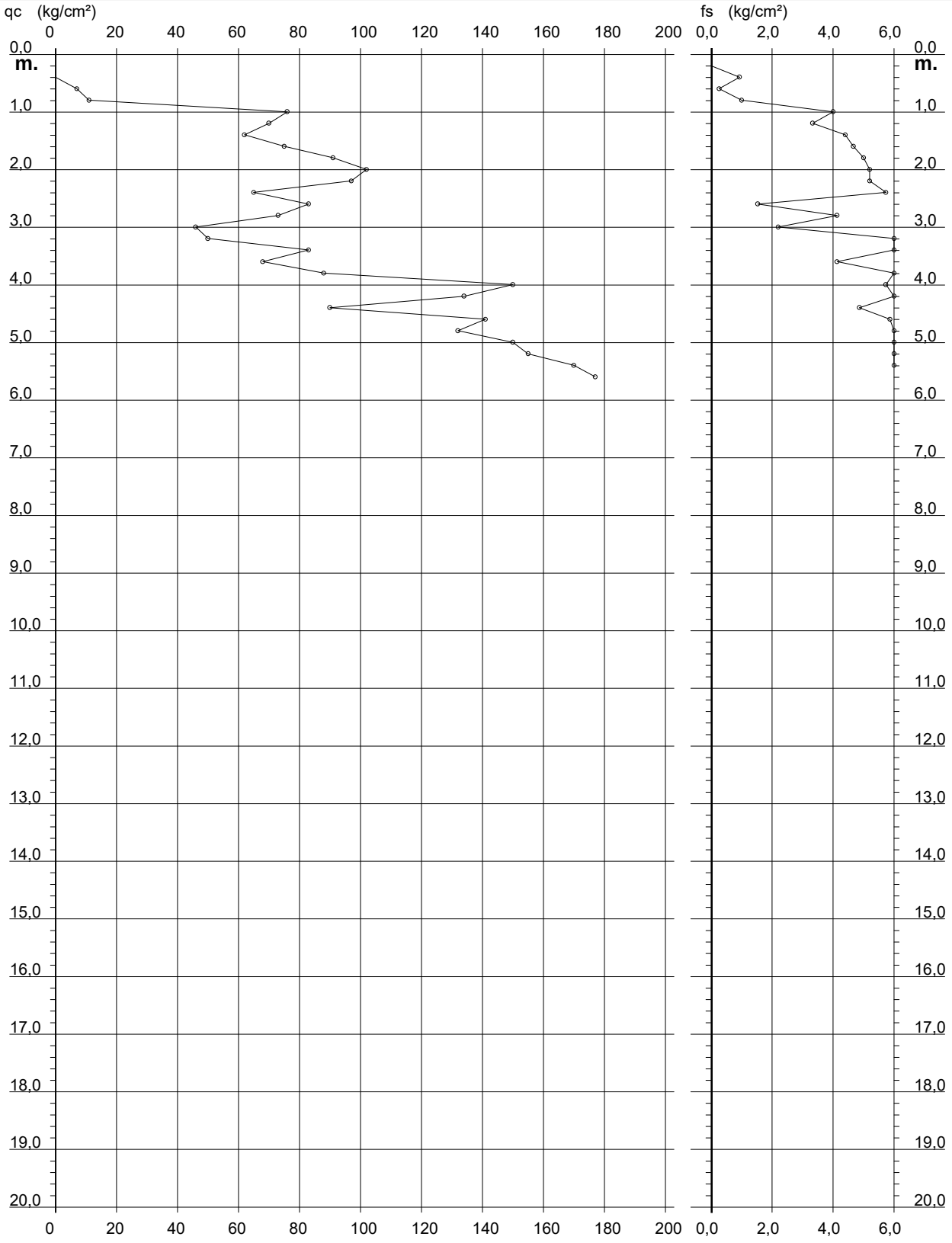
PROVA PENETROMETRICA STATICA DIAGRAMMA DI RESISTENZA

CPT 247

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-247	- scala vert.:	1 : 100



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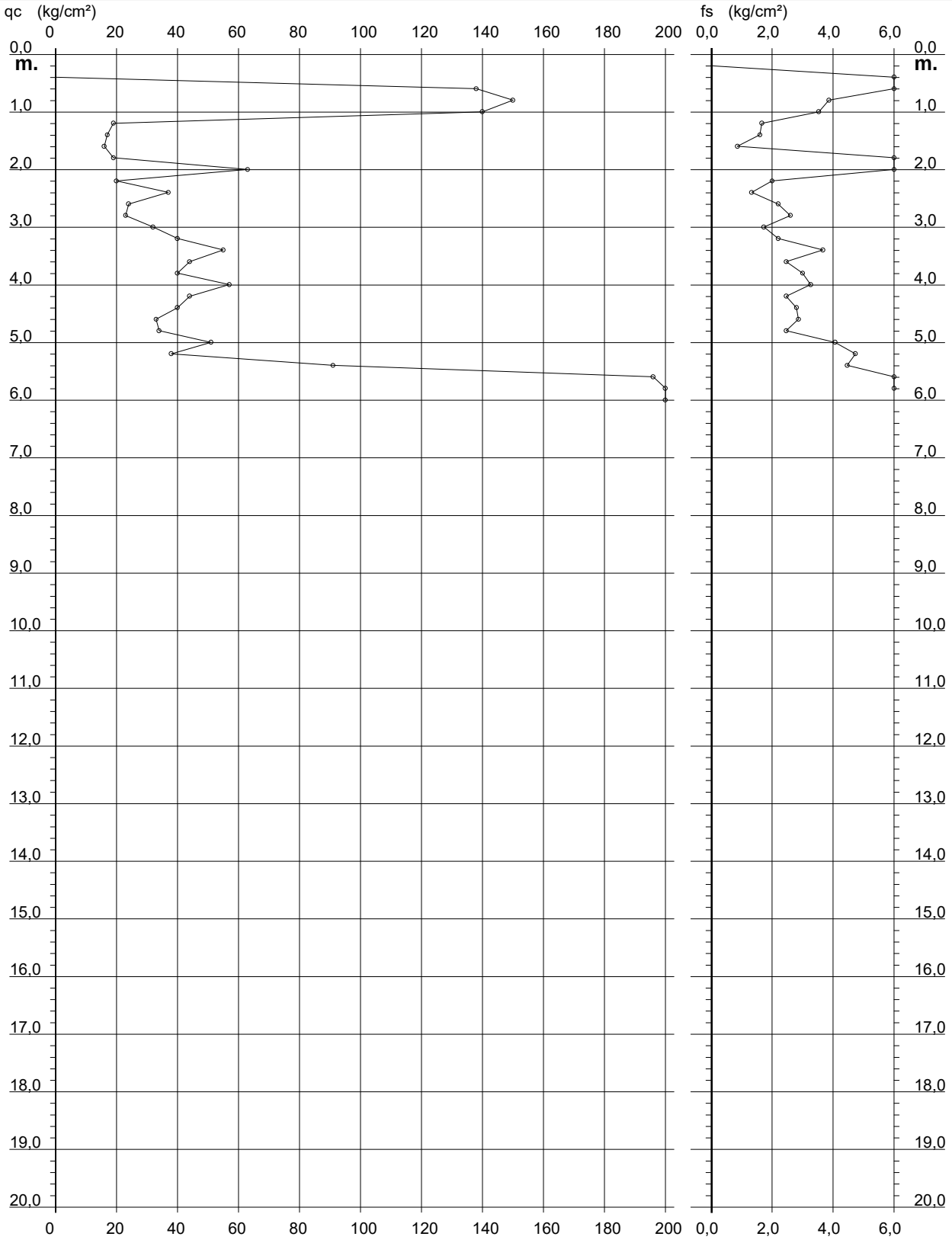
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 248

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-248	- scala vert.:	1 : 100



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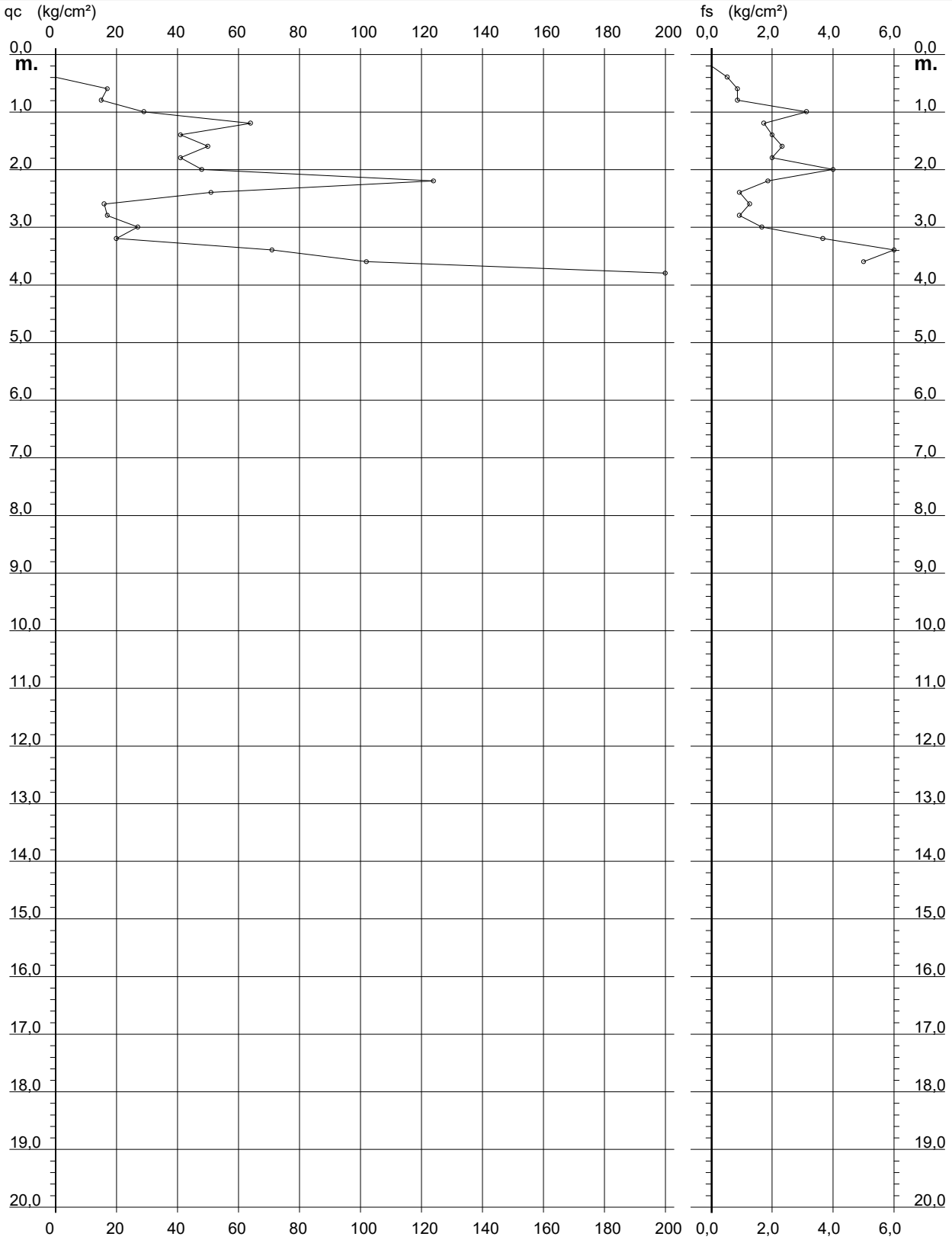
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 251

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-251	- scala vert.:	1 : 100



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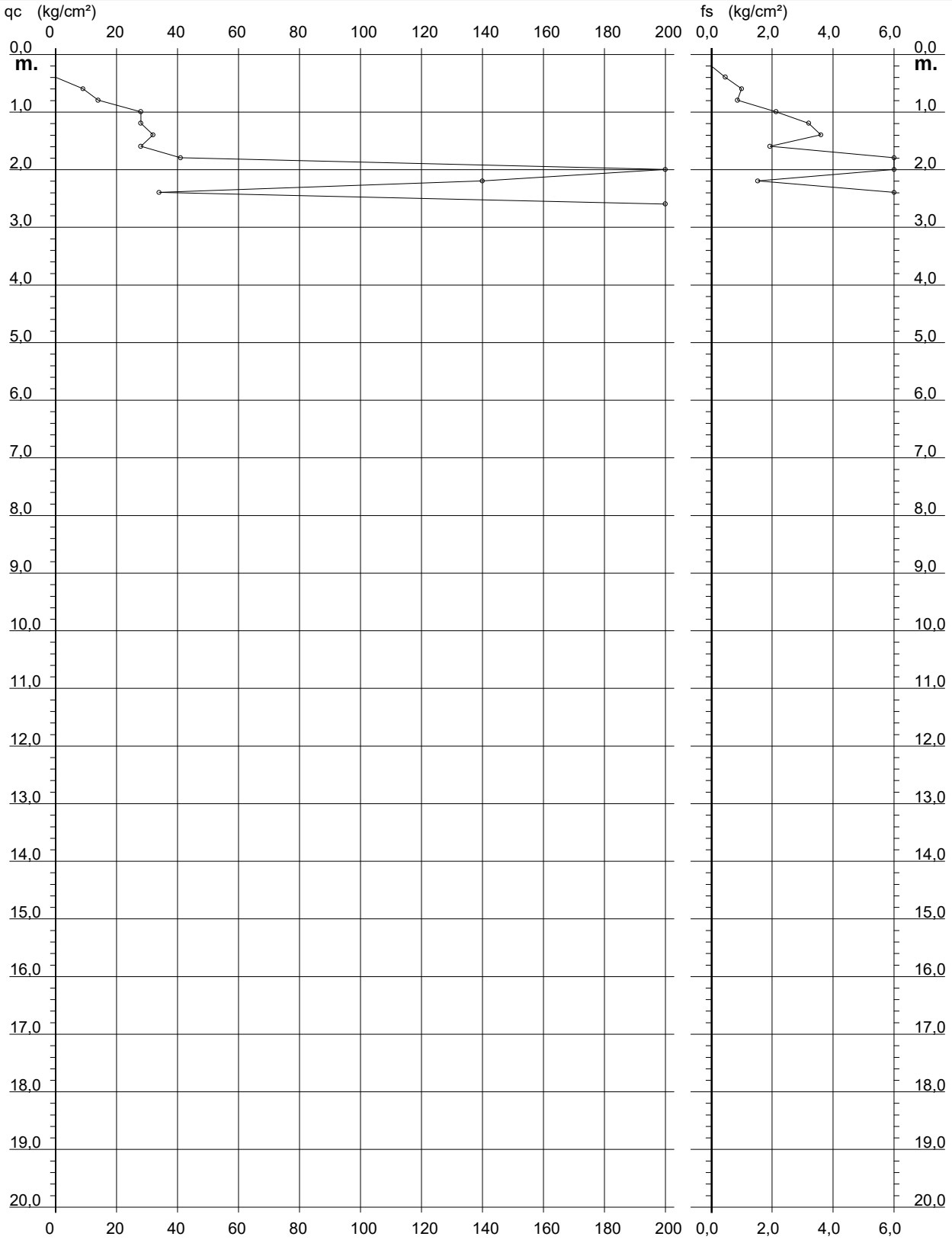
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 253

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-253	- scala vert.:	1 : 100



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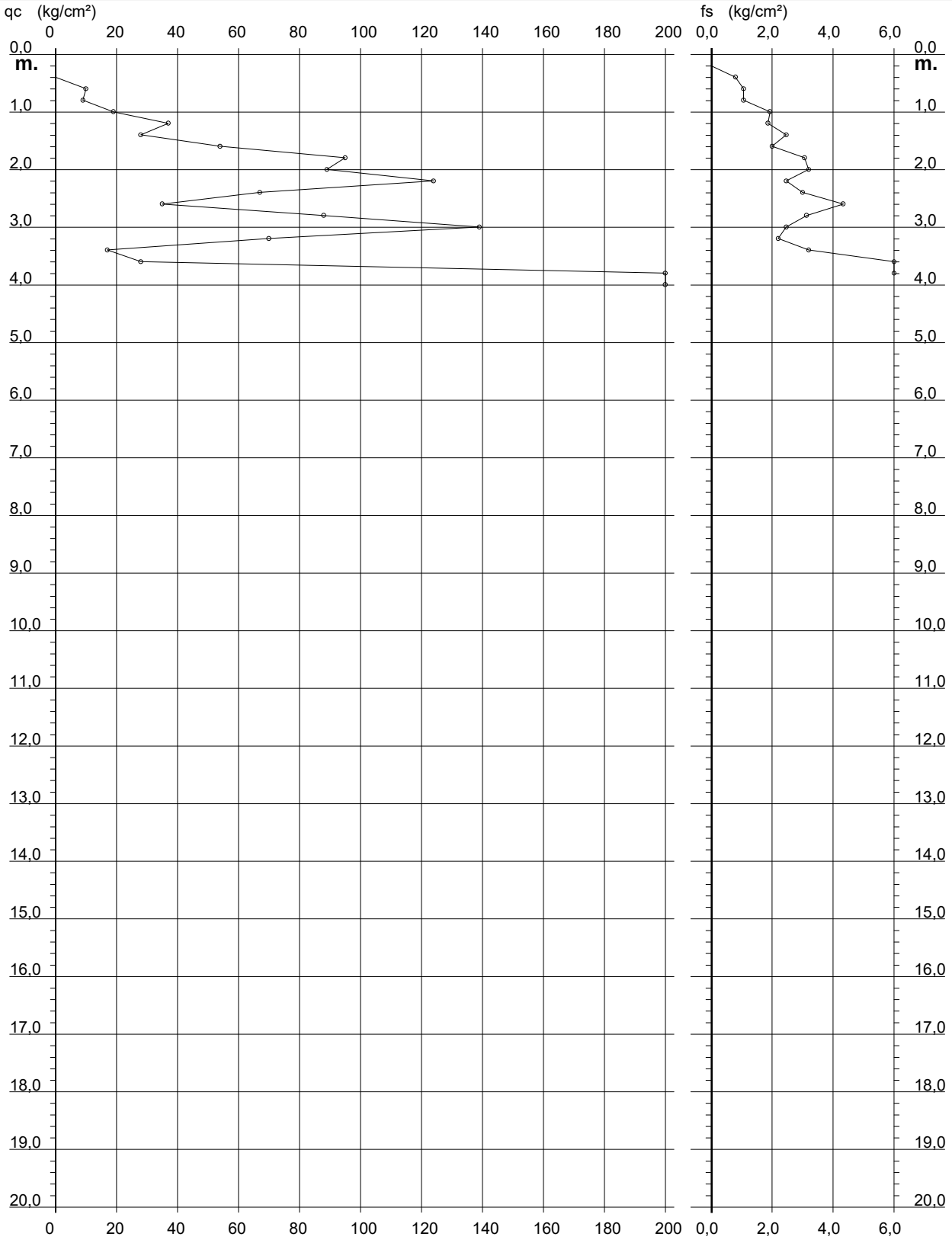
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 258

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-258	- scala vert.:	1 : 100



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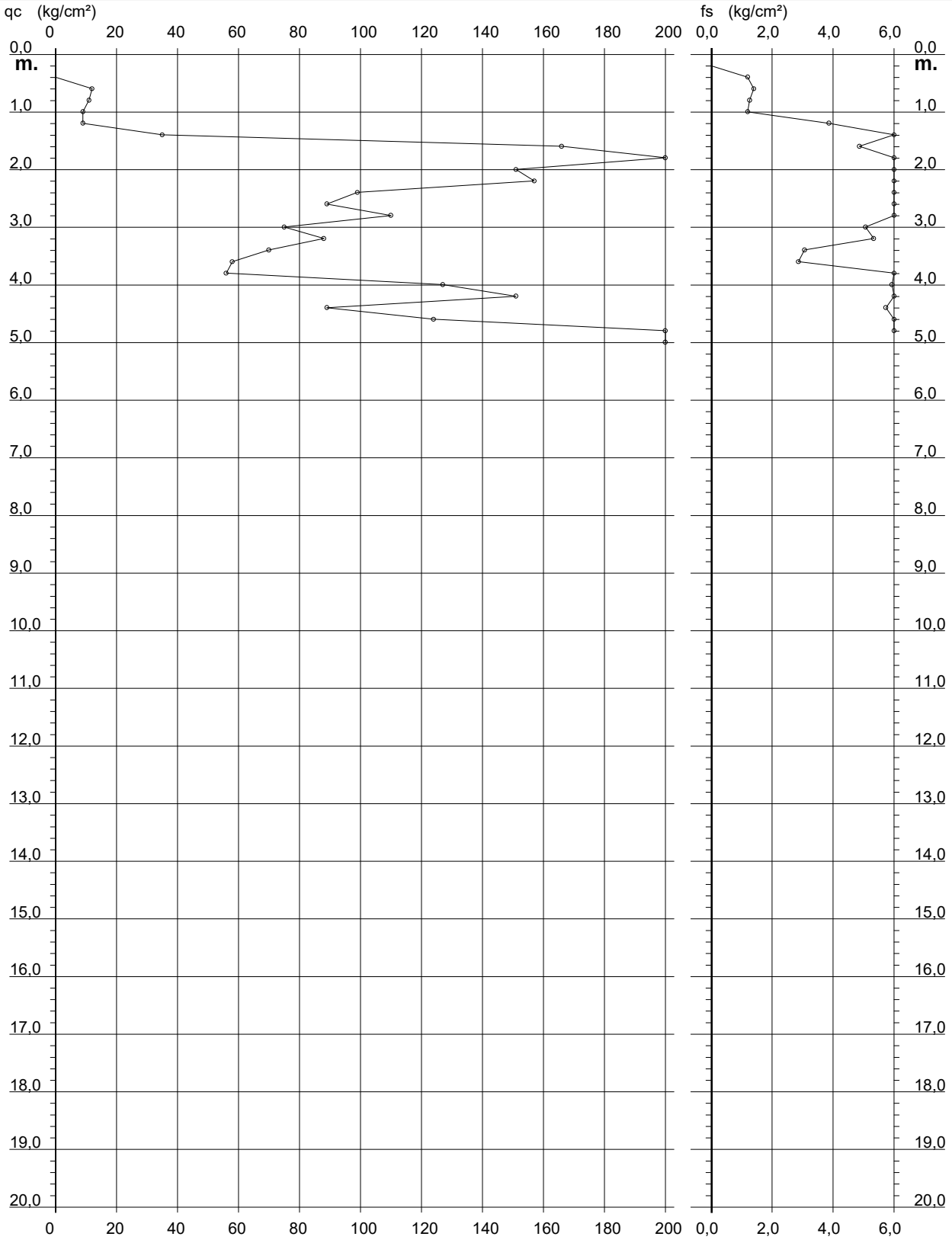
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 259

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-259	- scala vert.:	1 : 100



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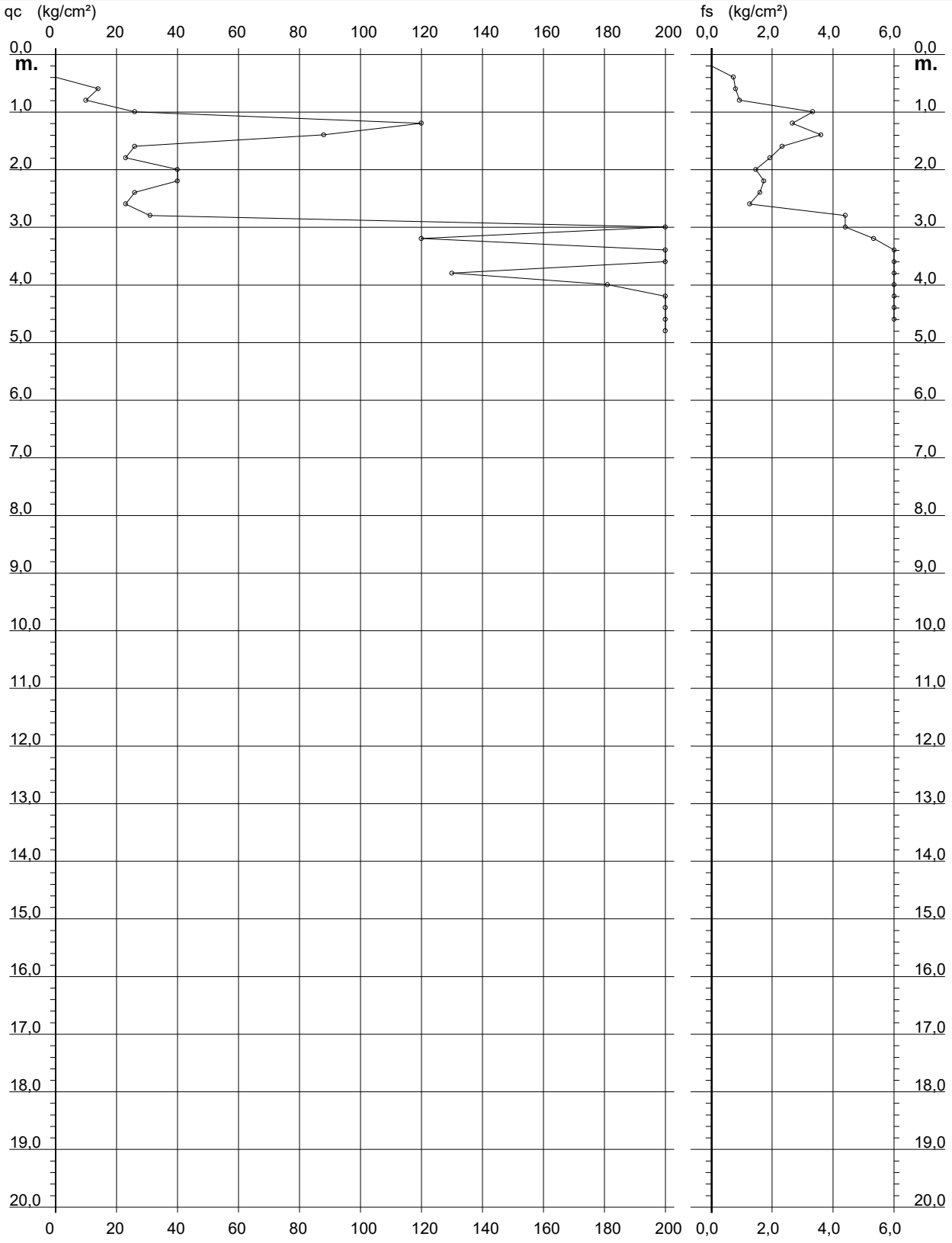
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 287

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-287	- scala vert.:	1 : 100



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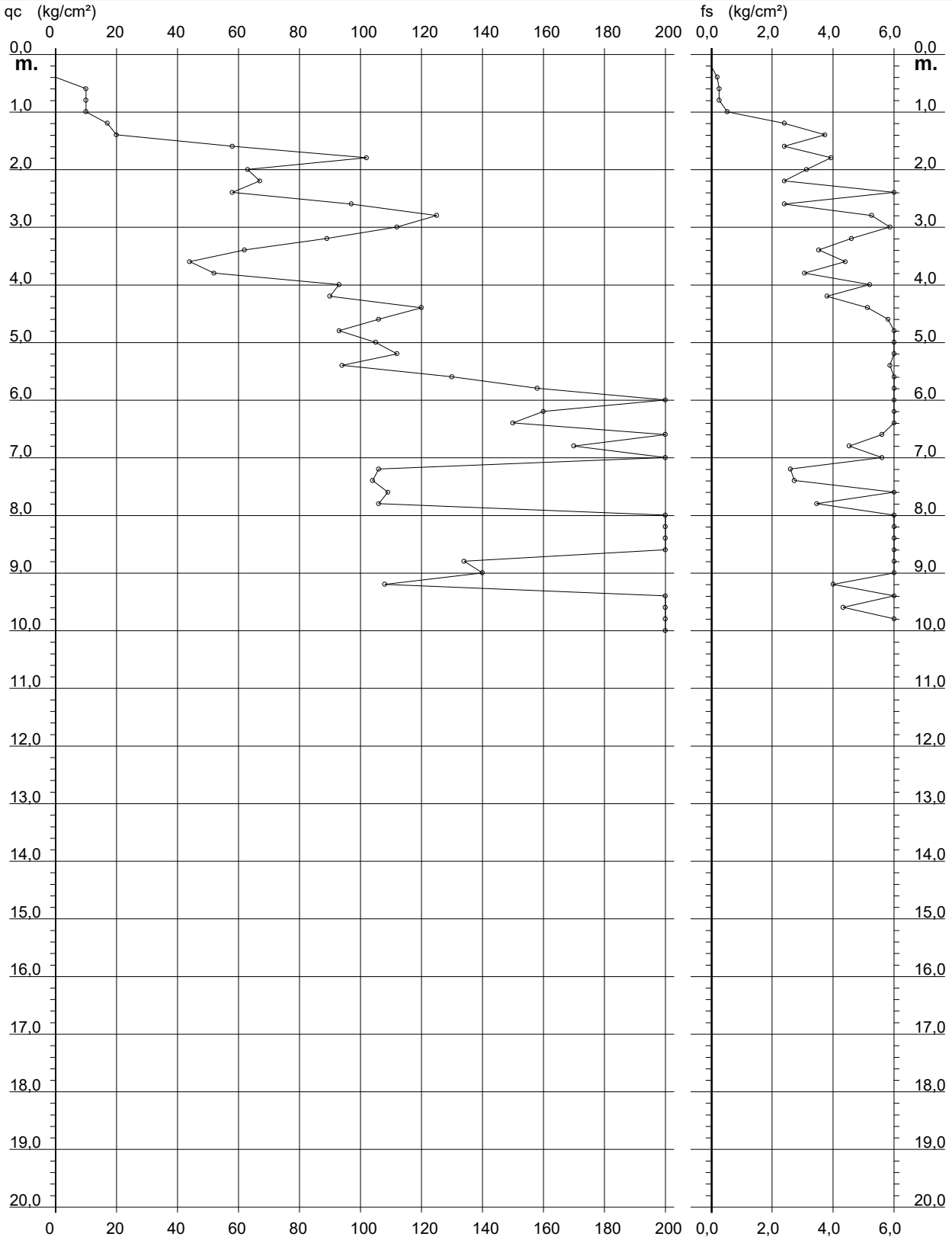
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 288

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-288	- scala vert.:	1 : 100



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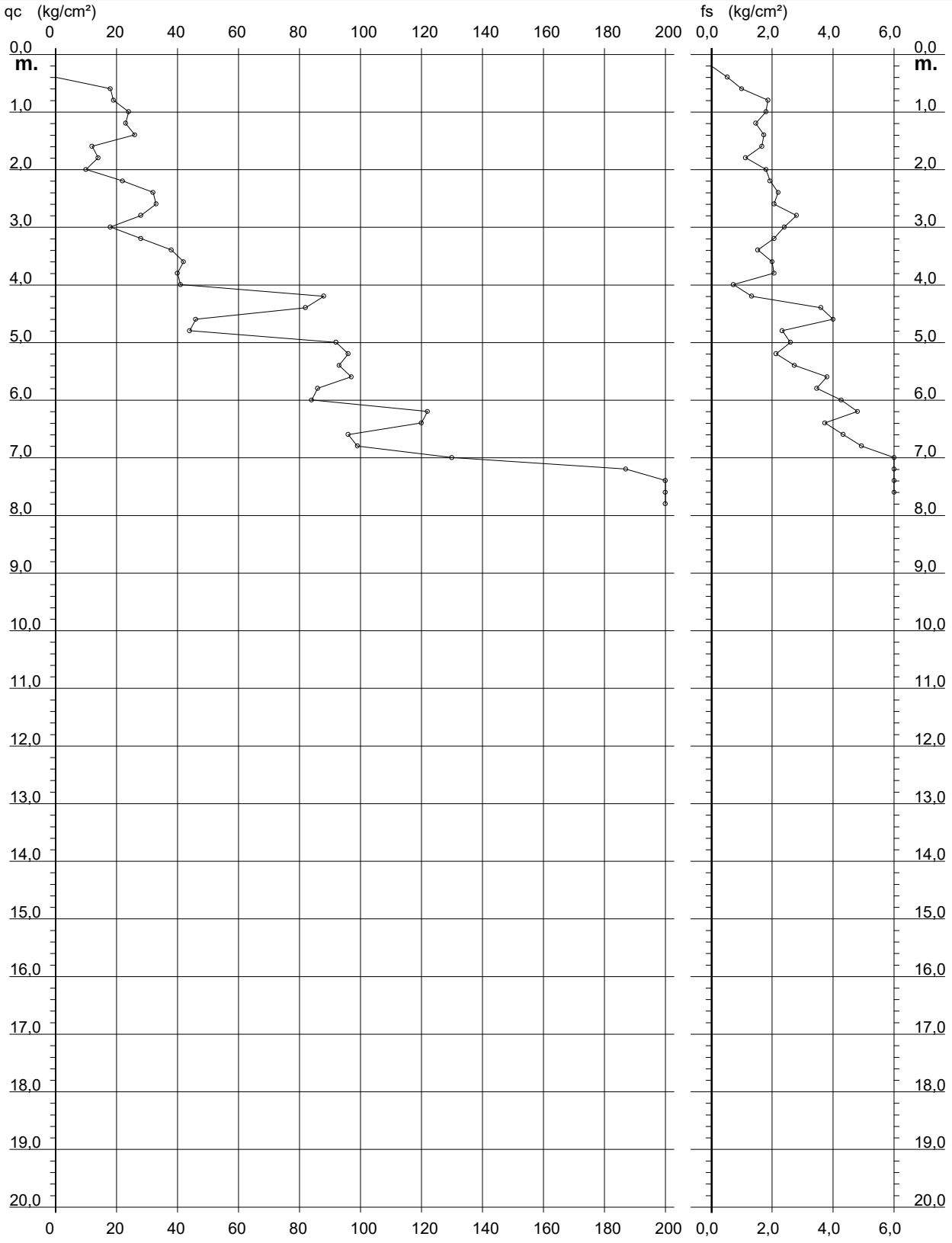
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 289

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-289	- scala vert.:	1 : 100



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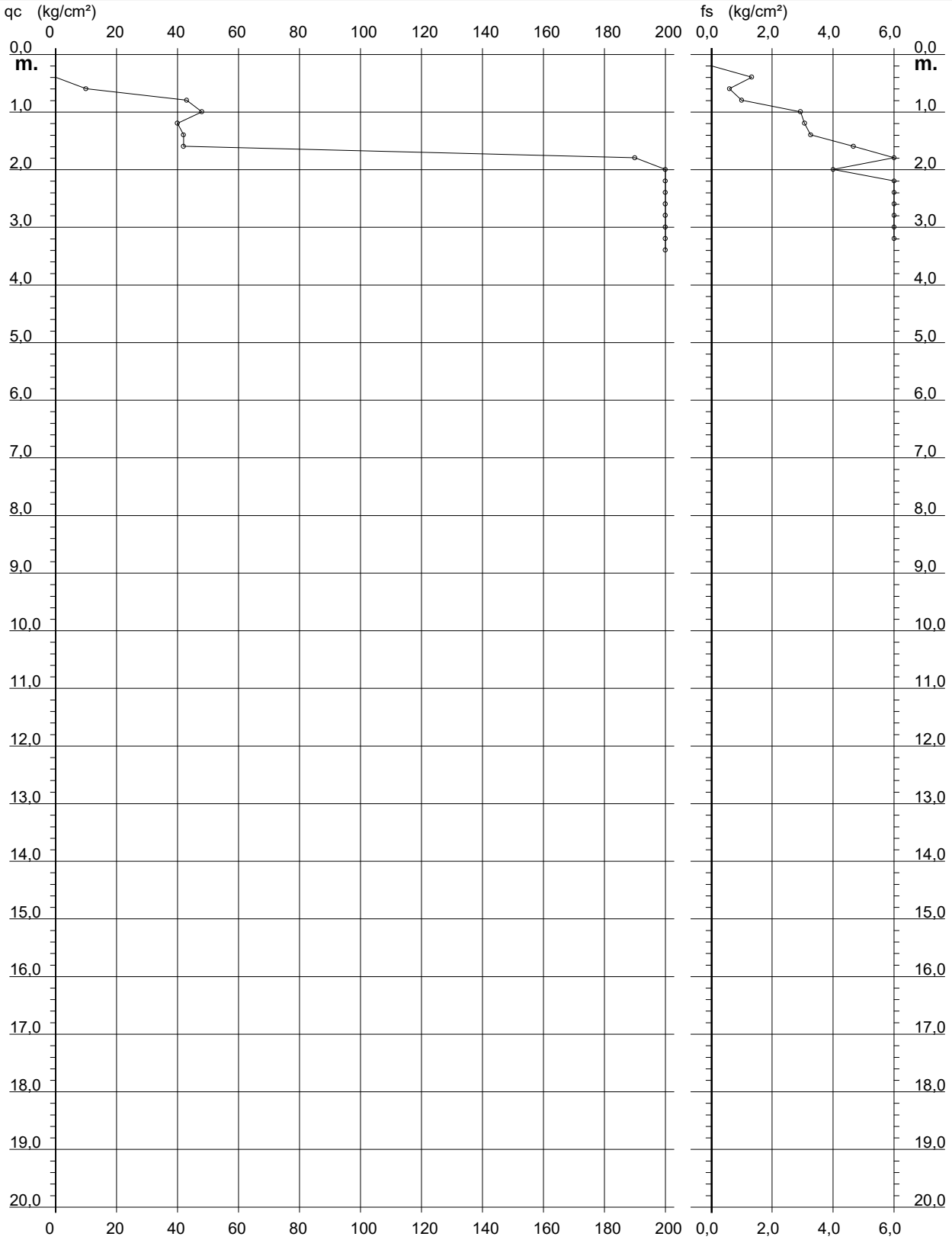
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 290

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-290	- scala vert.:	1 : 100



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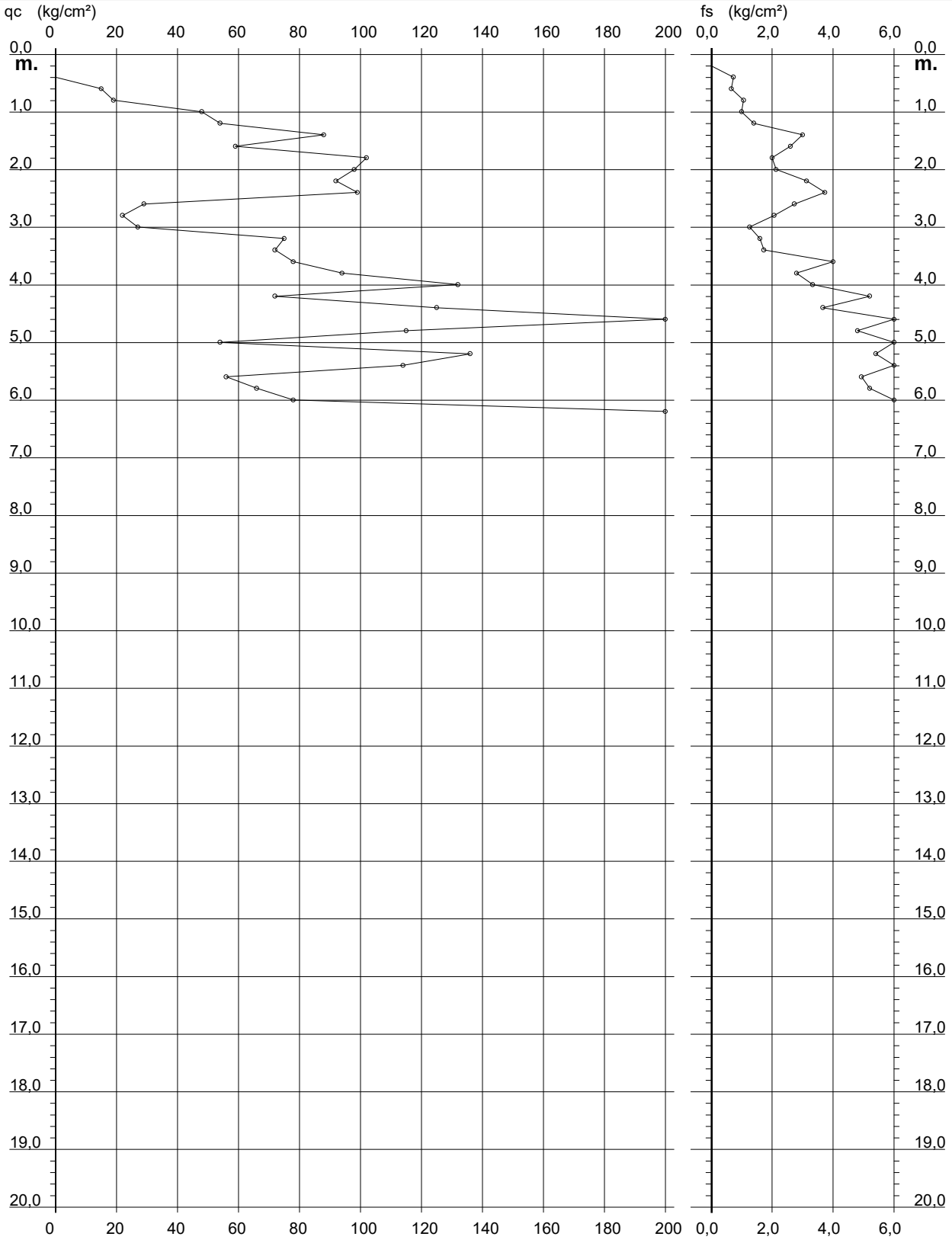
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 292

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-292	- scala vert.:	1 : 100



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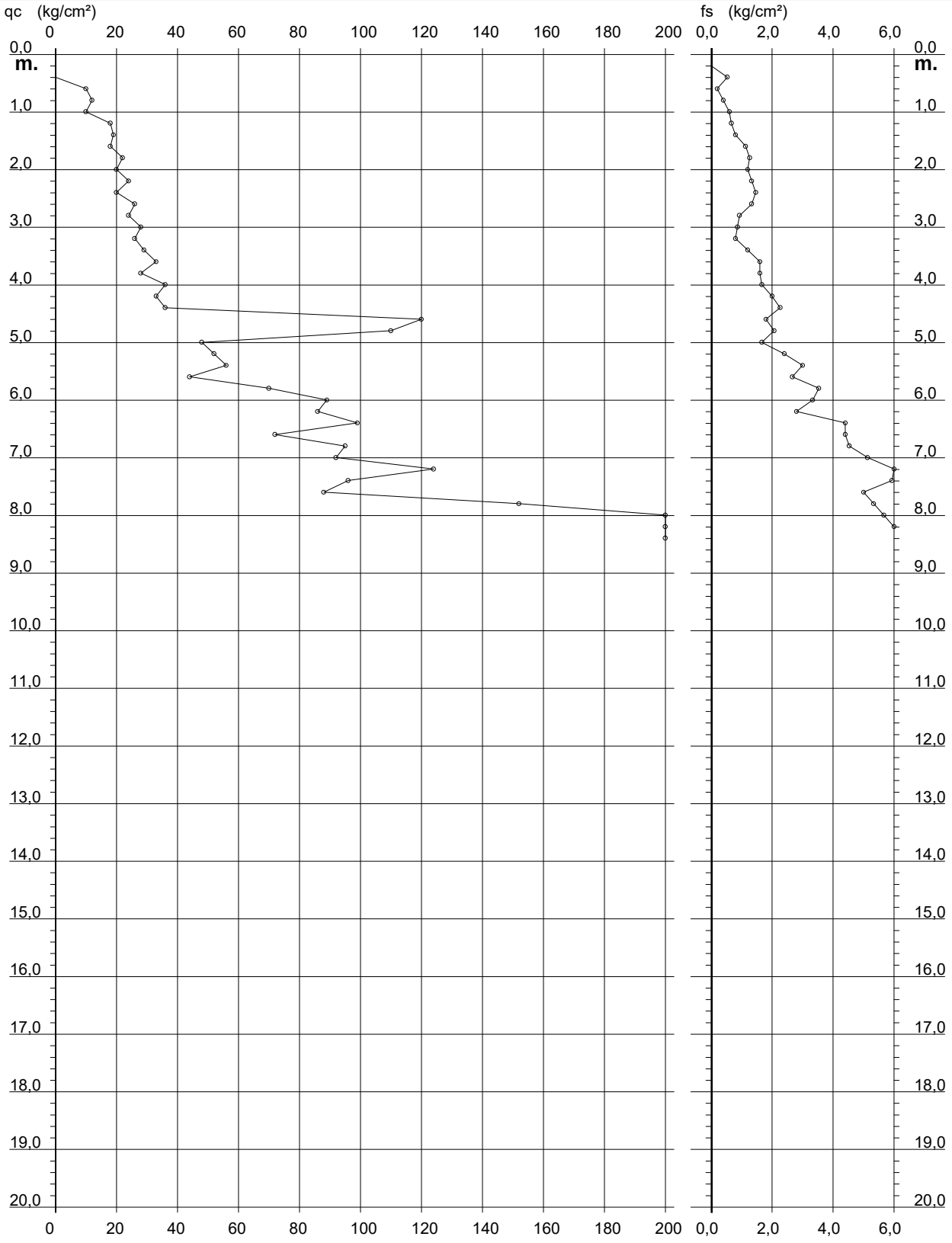
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 293

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	12/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-293	- scala vert.:	1 : 100



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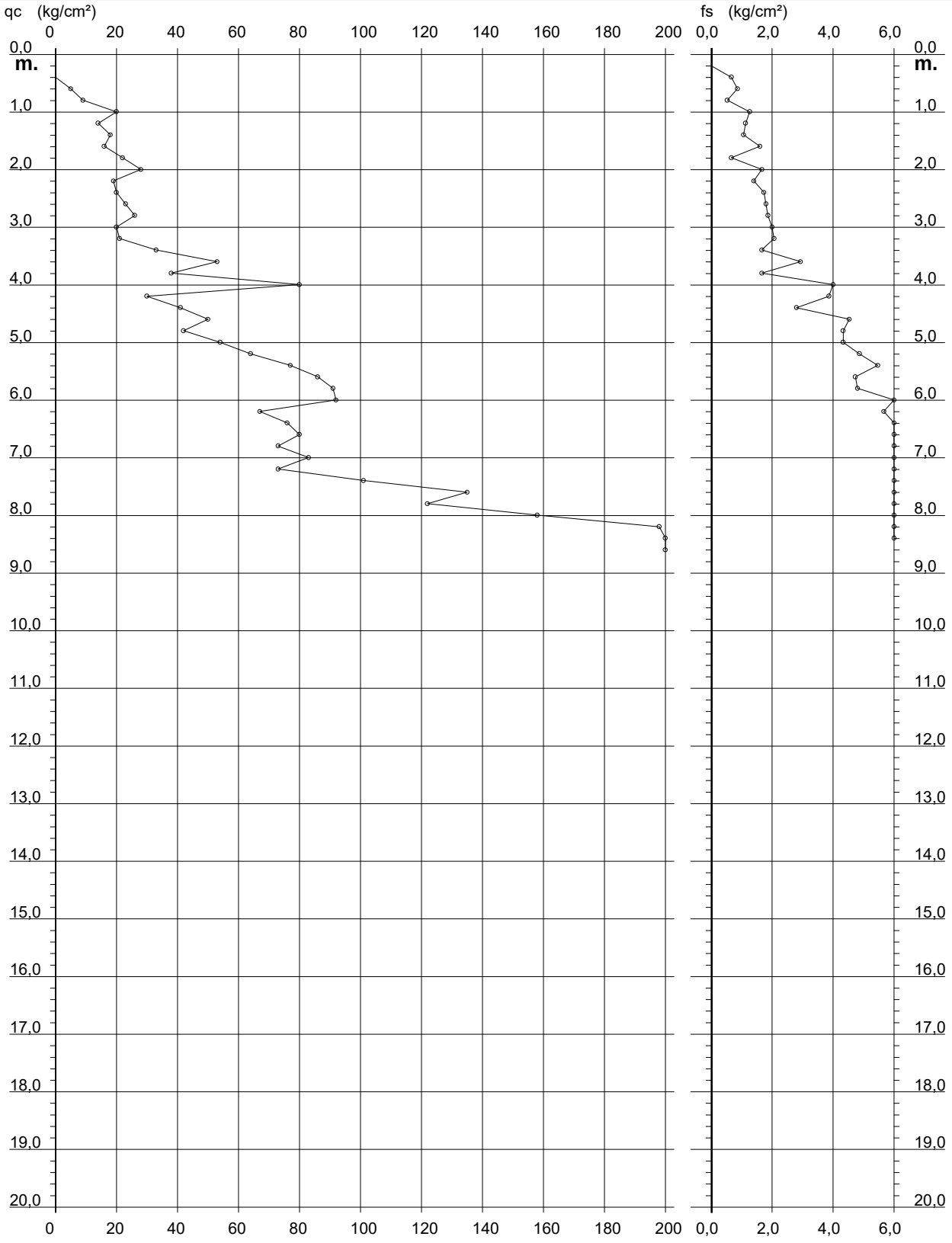
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 294

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	12/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-294	- scala vert.:	1 : 100



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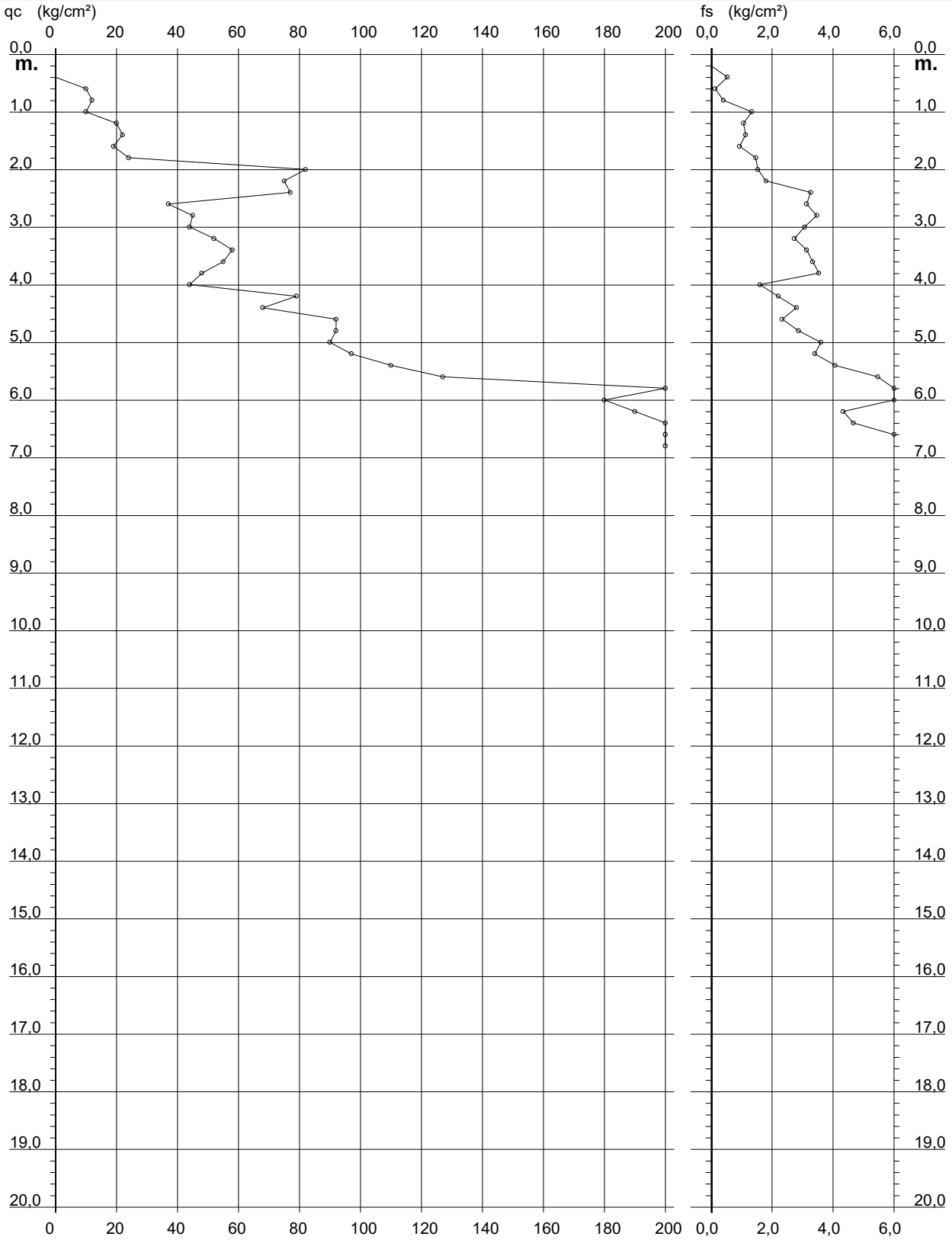
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 295

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	12/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-295	- scala vert.:	1 : 100



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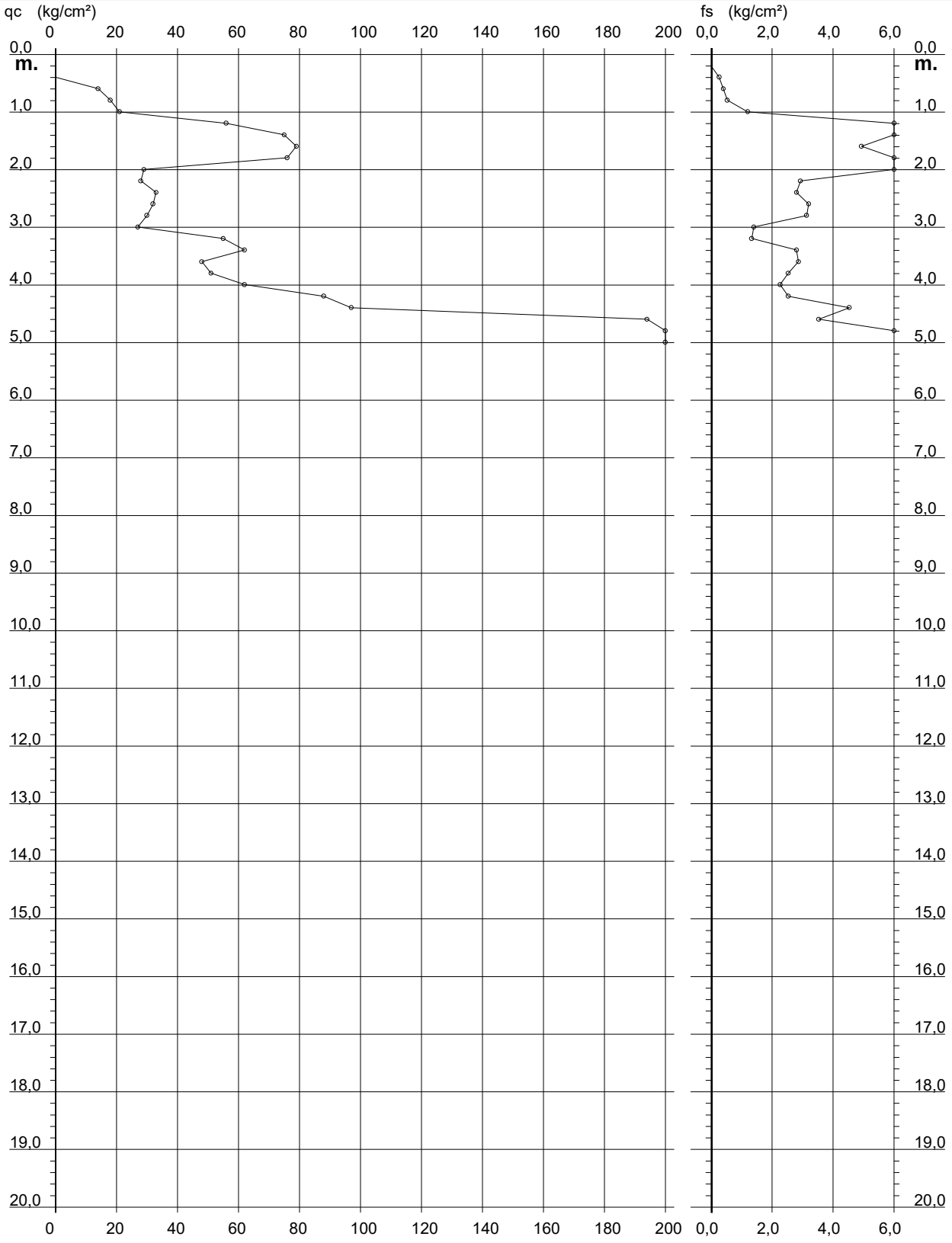
Rifer. 003-20

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 296

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	12/10/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P003-20-296	- scala vert.:	1 : 100



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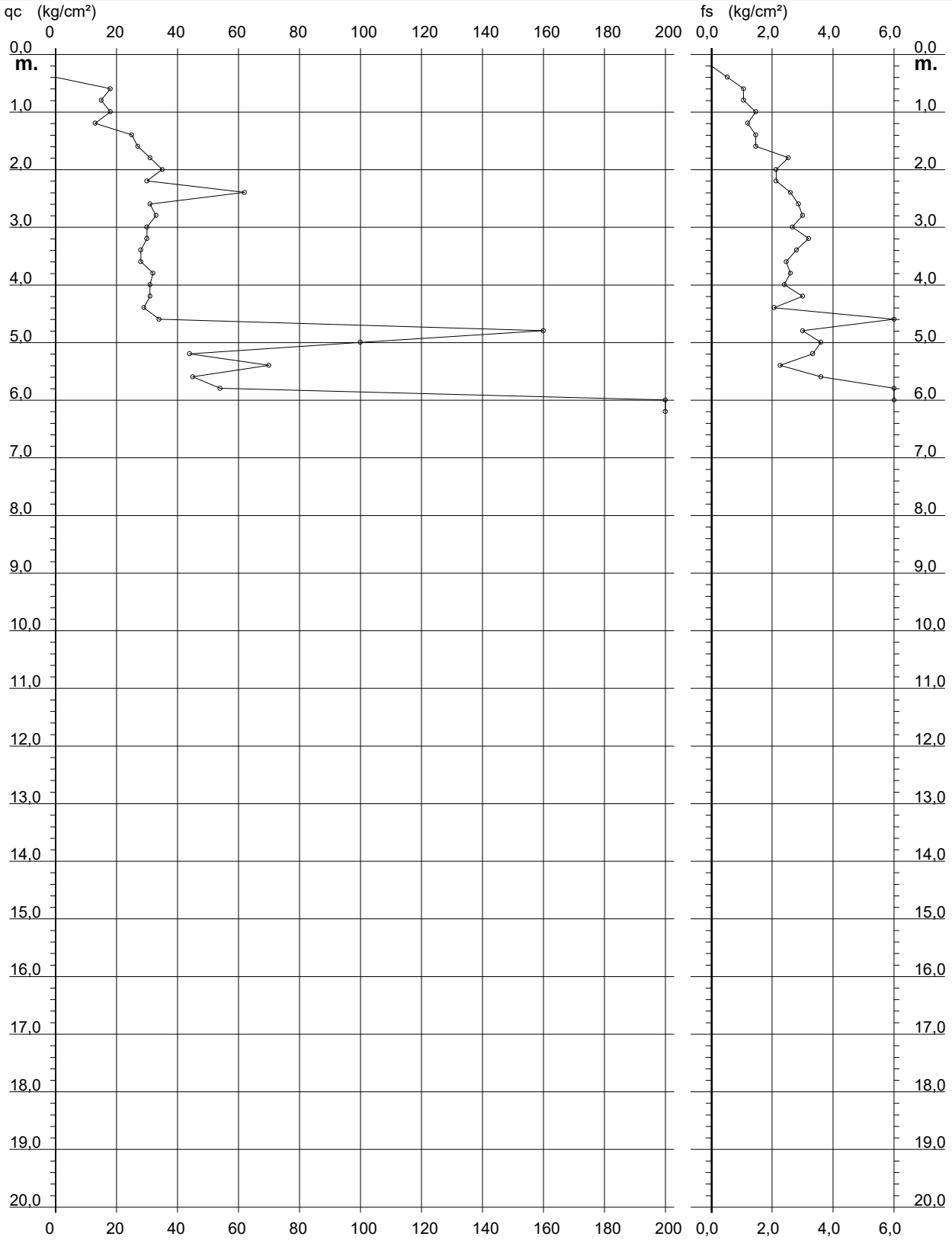
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 301

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-301	- scala vert.:	1 : 100



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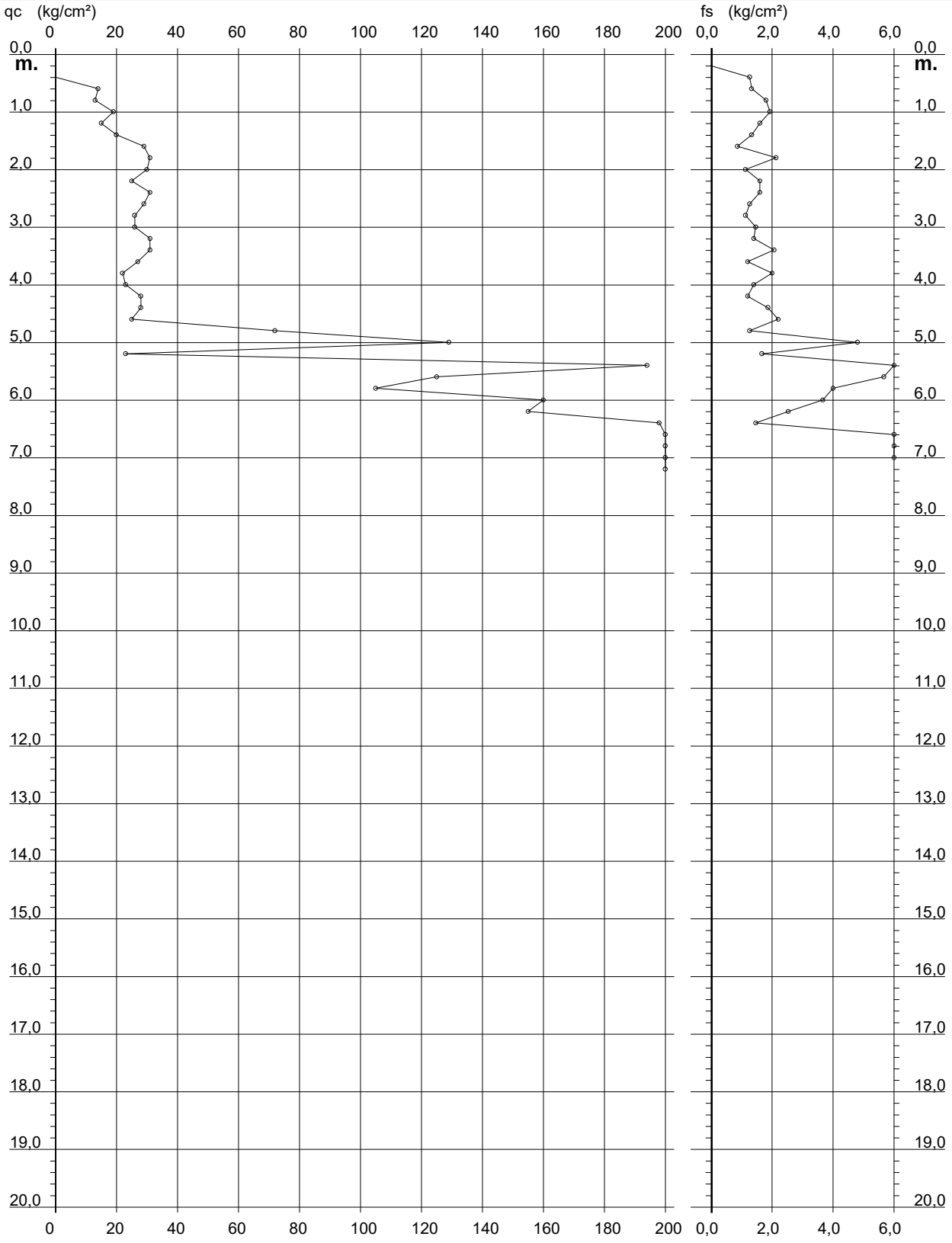
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 302

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-302	- scala vert.:	1 : 100



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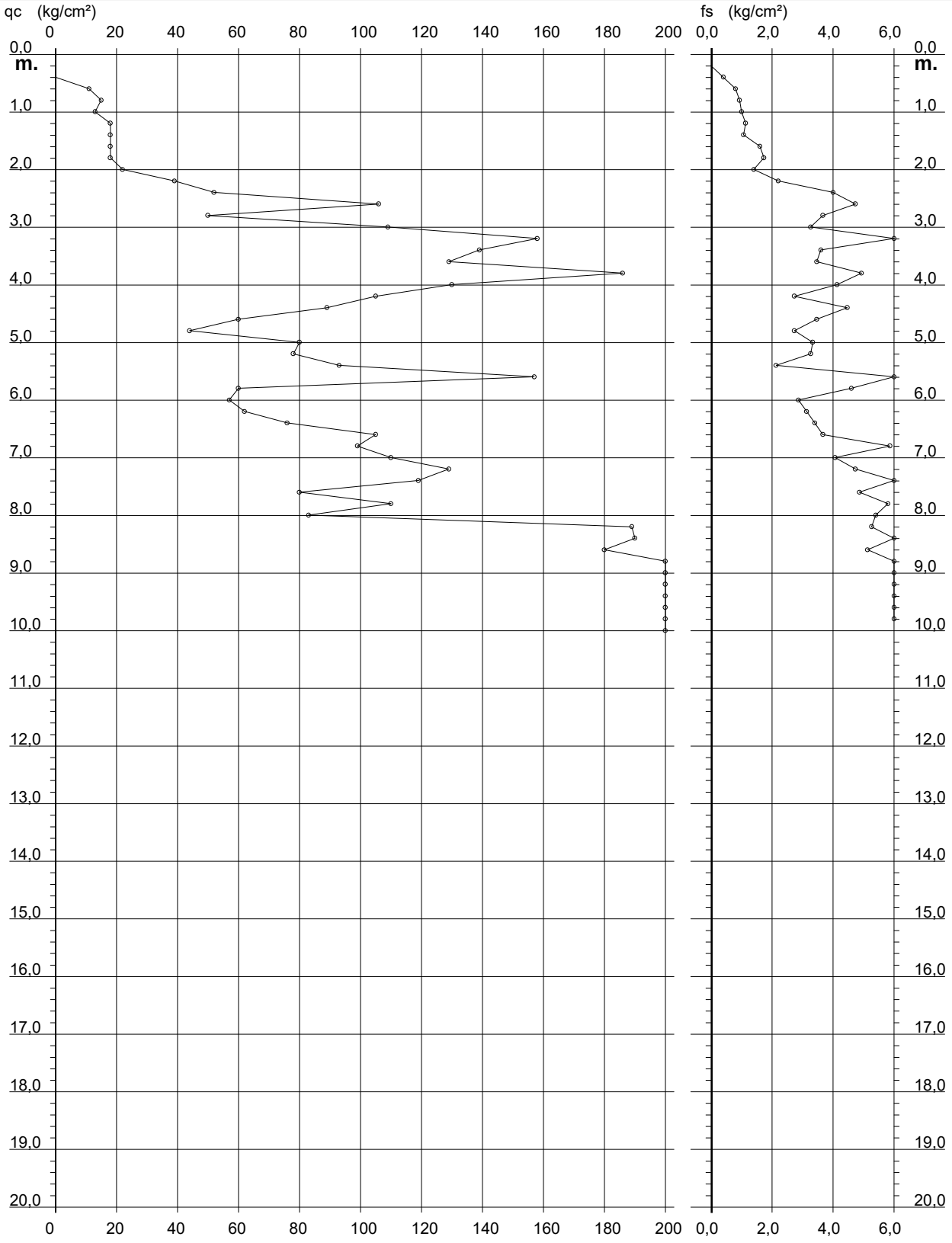
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 297

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-297	- scala vert.:	1 : 100



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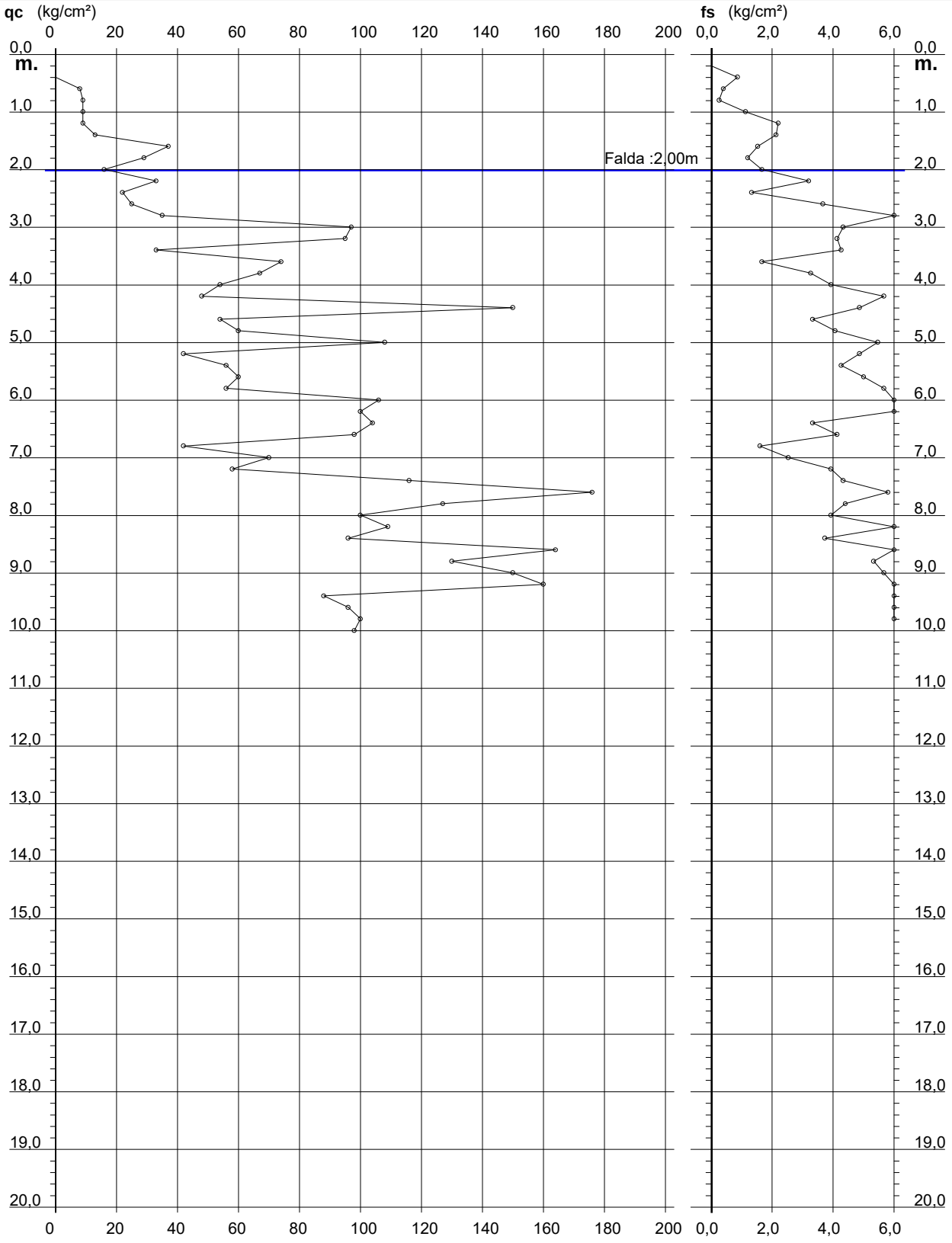
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 298

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	2,00 m da quota inizio
- note :	Cert. P001-21-298	- scala vert.:	1 : 100



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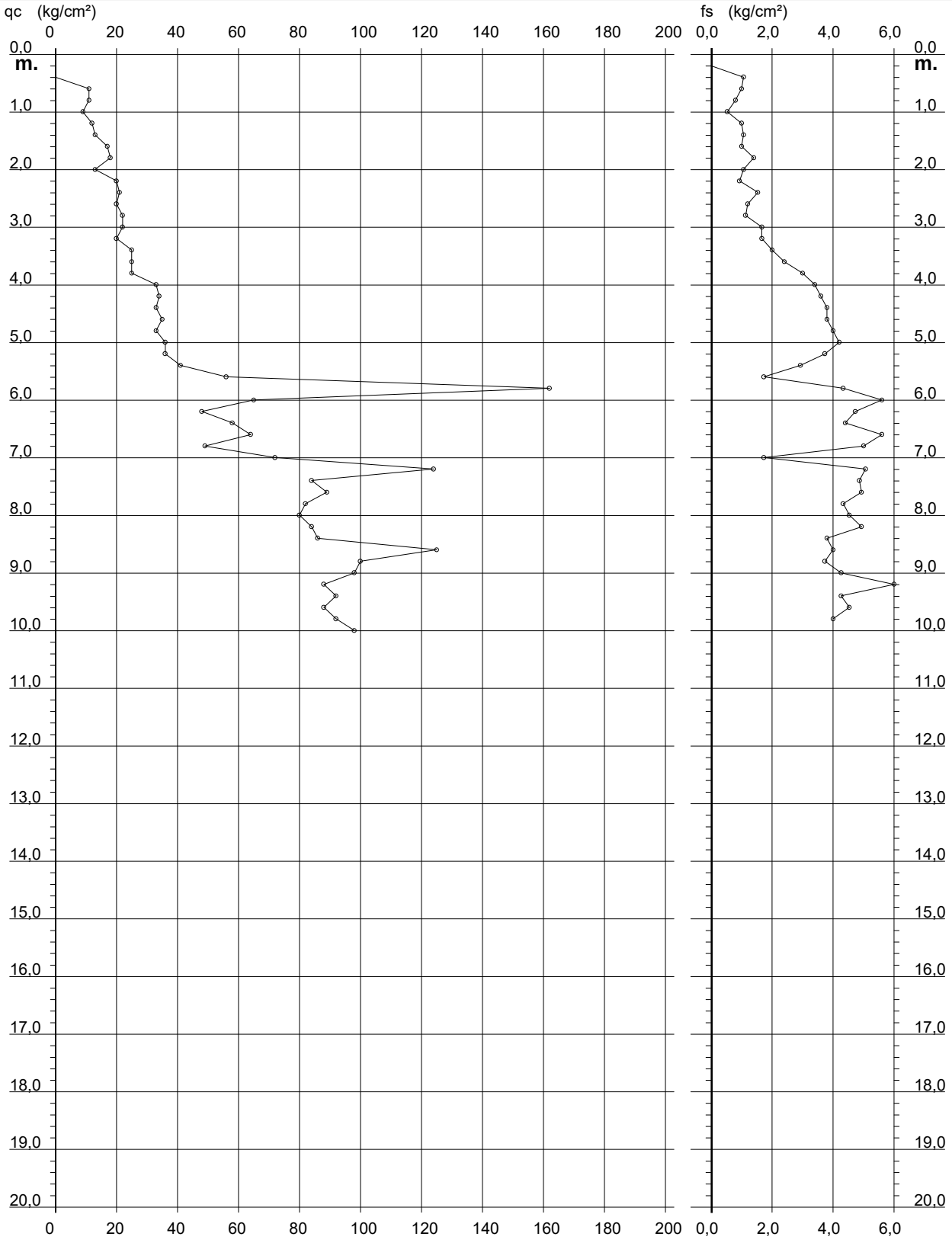
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 299

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-299	- scala vert.:	1 : 100



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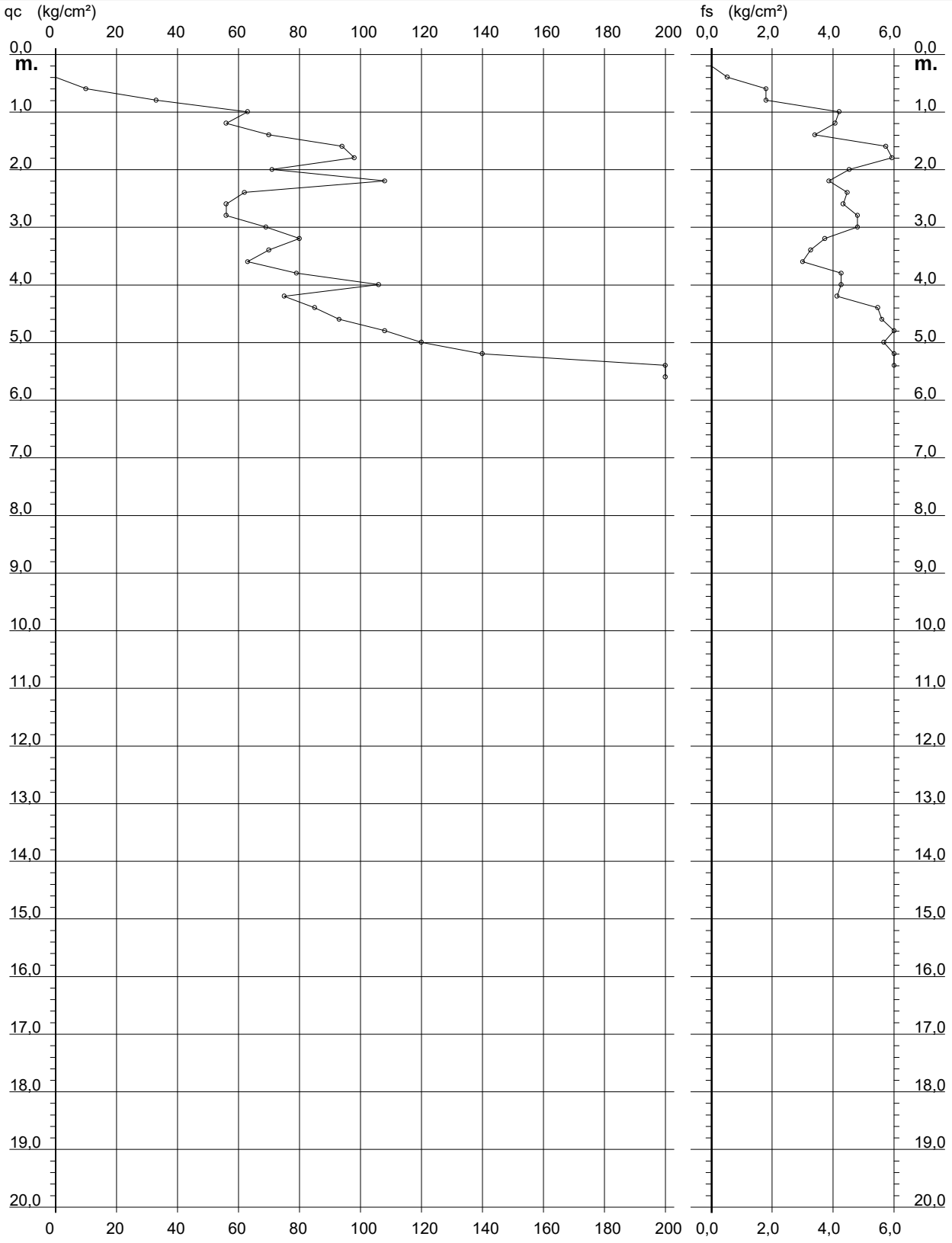
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 303

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-303	- scala vert.:	1 : 100



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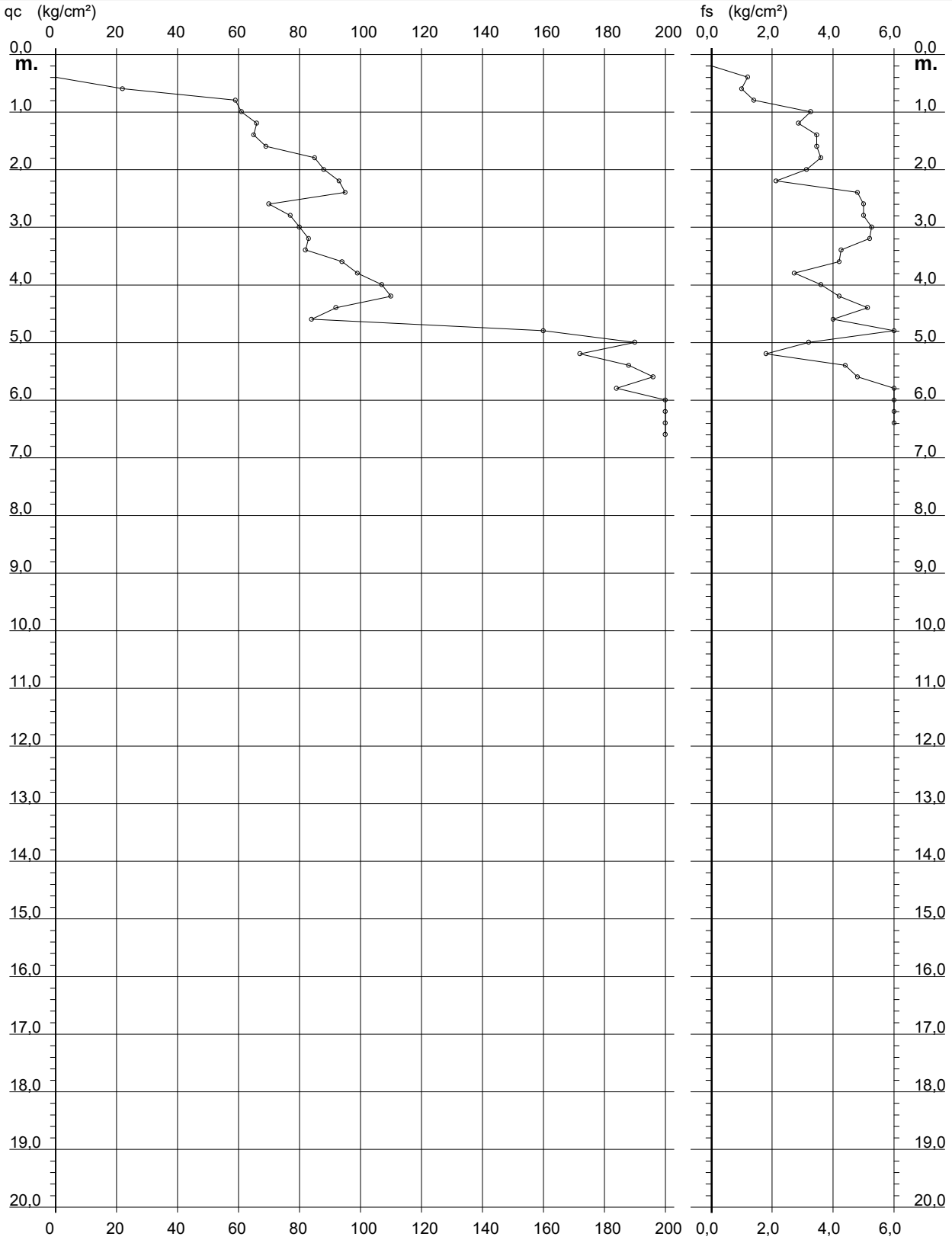
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 304

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-304	- scala vert.:	1 : 100



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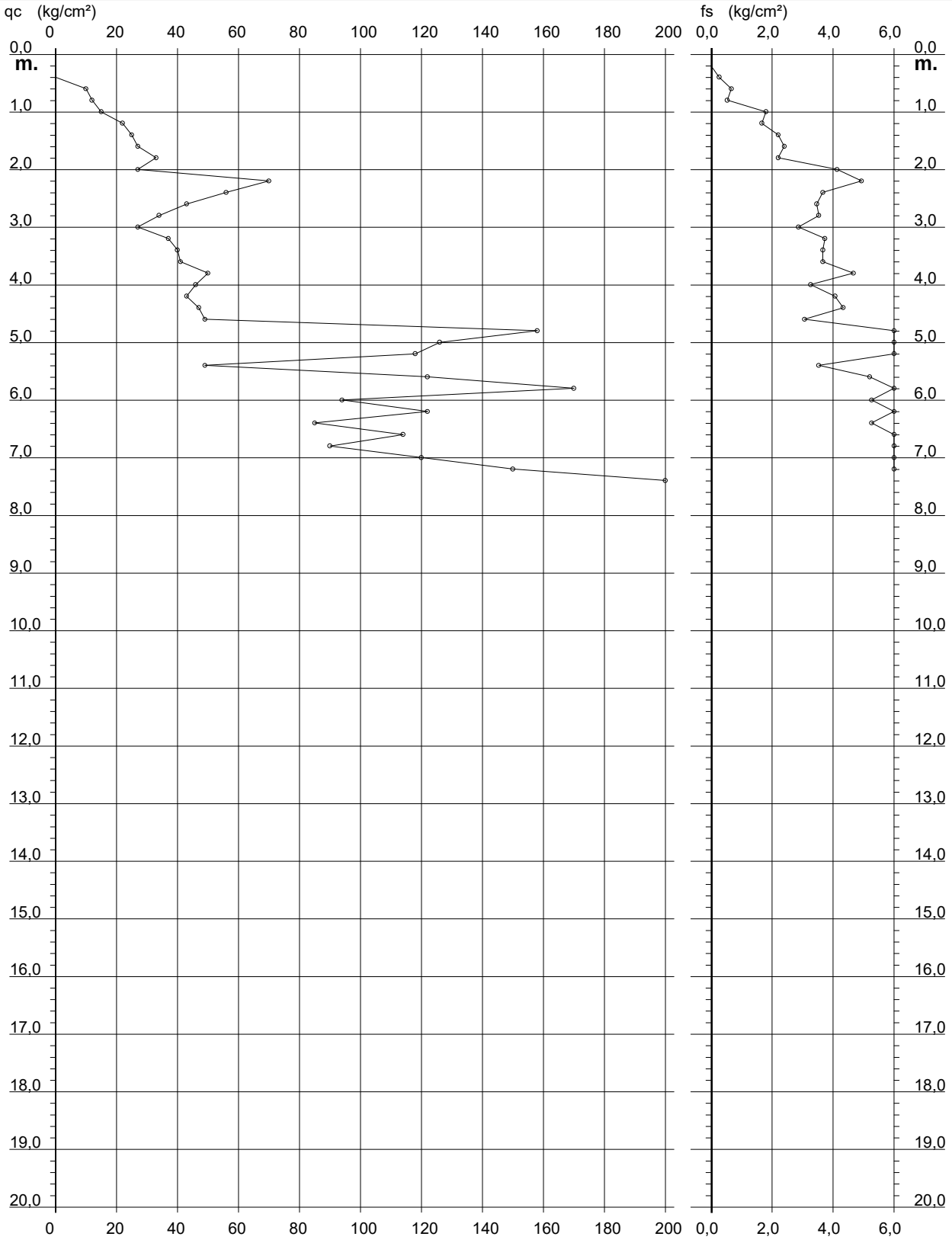
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 305

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-305	- scala vert.:	1 : 100



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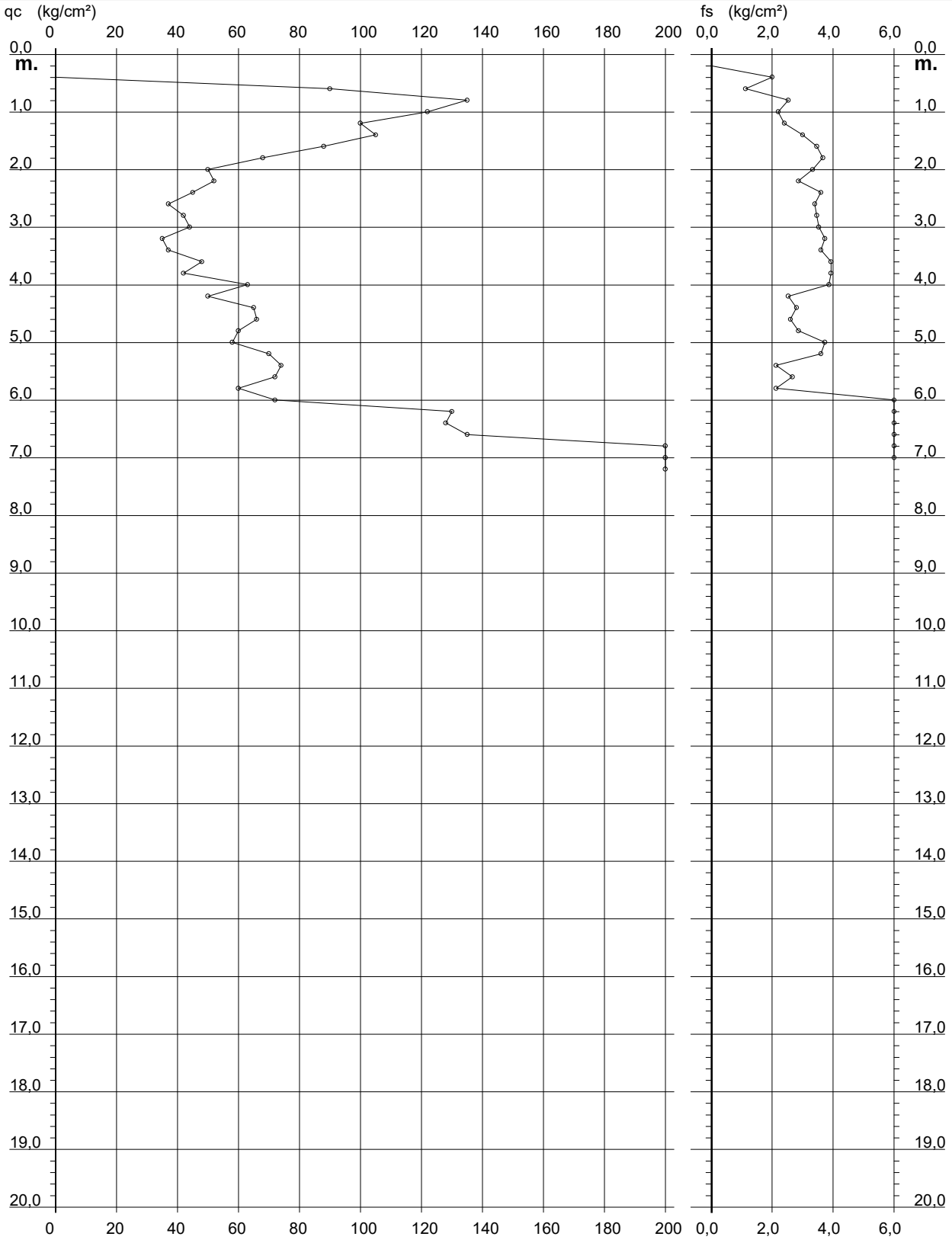
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 306

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-306	- scala vert.:	1 : 100



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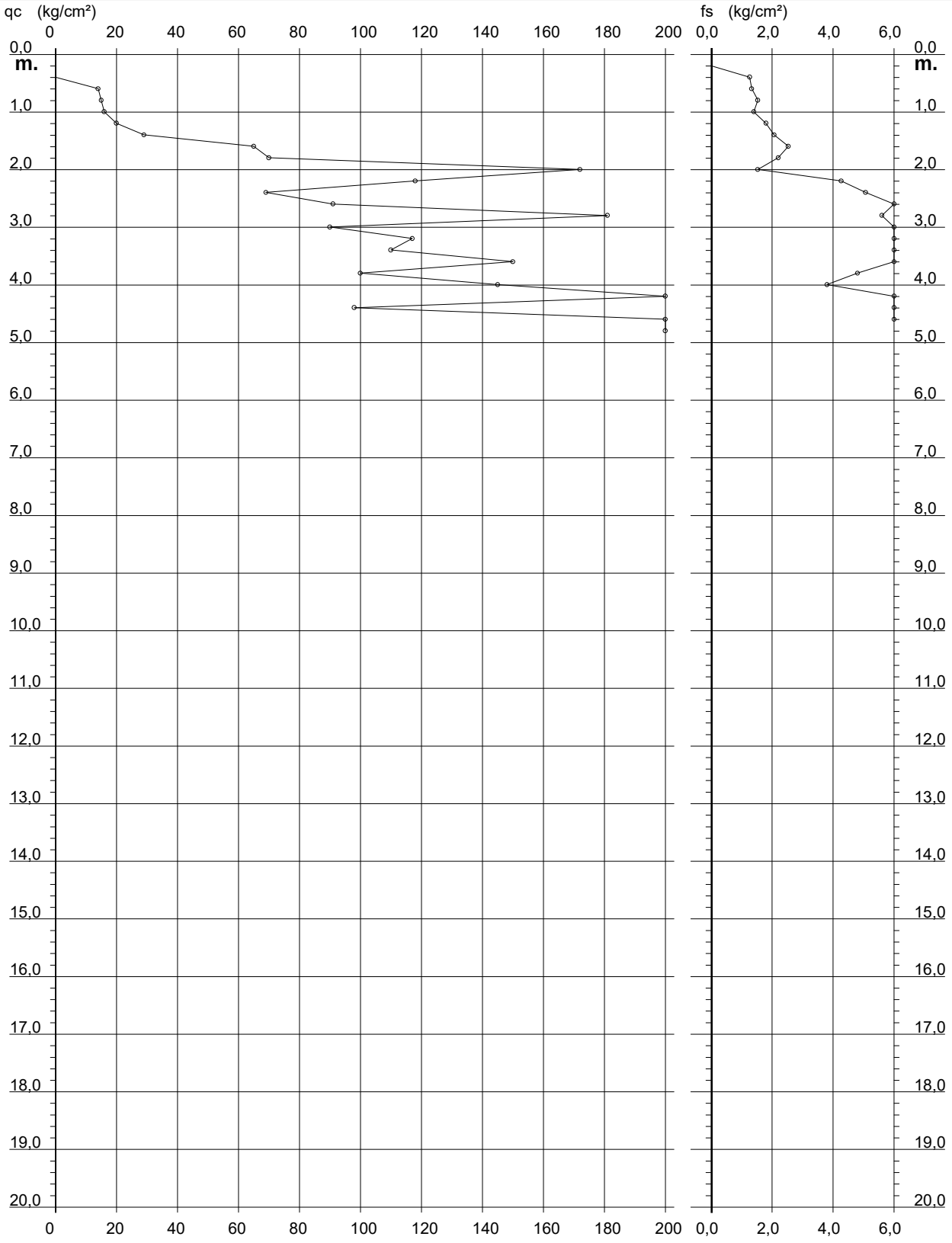
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 307

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	27/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-307	- scala vert.:	1 : 100



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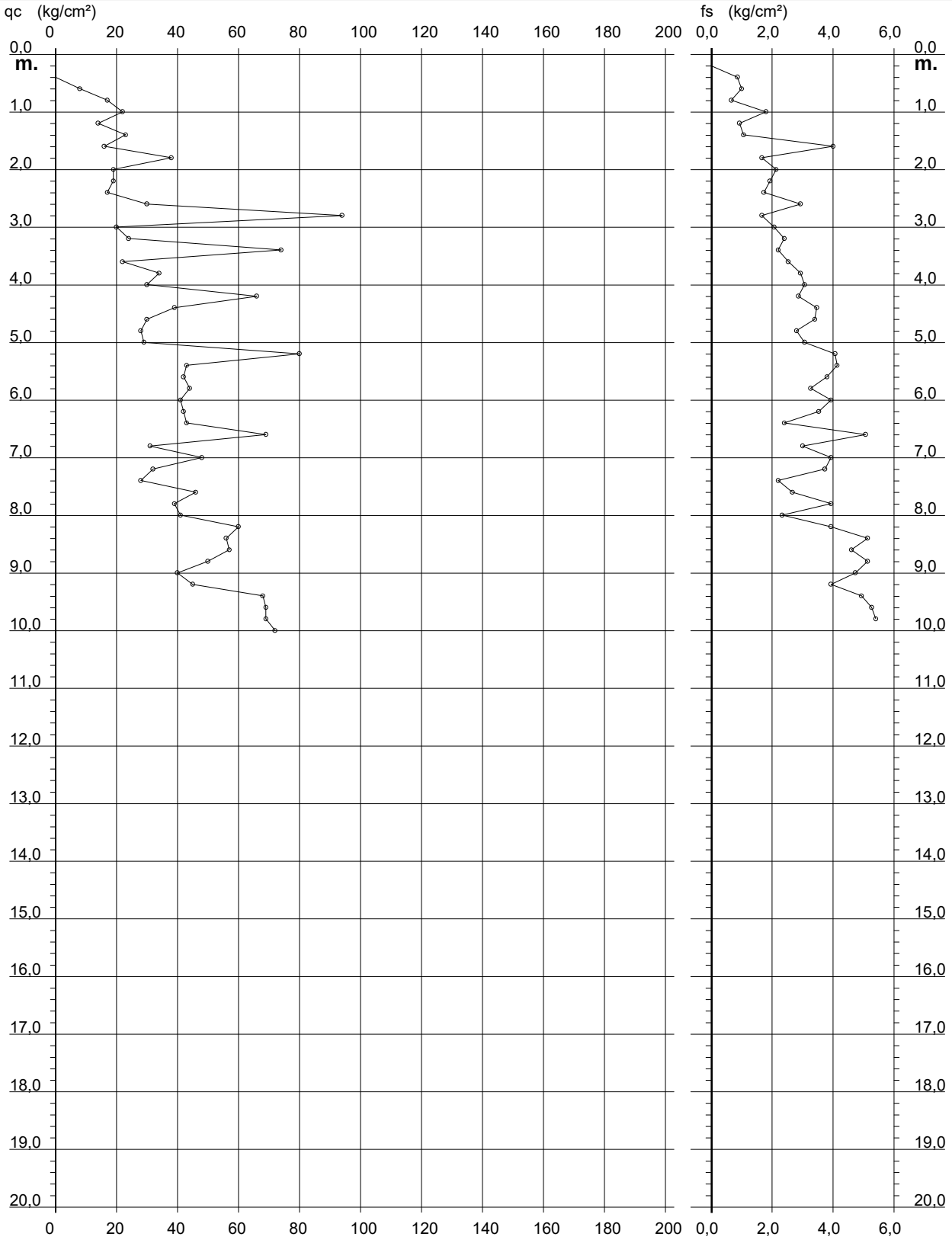
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 308

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	27/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-308	- scala vert.:	1 : 100



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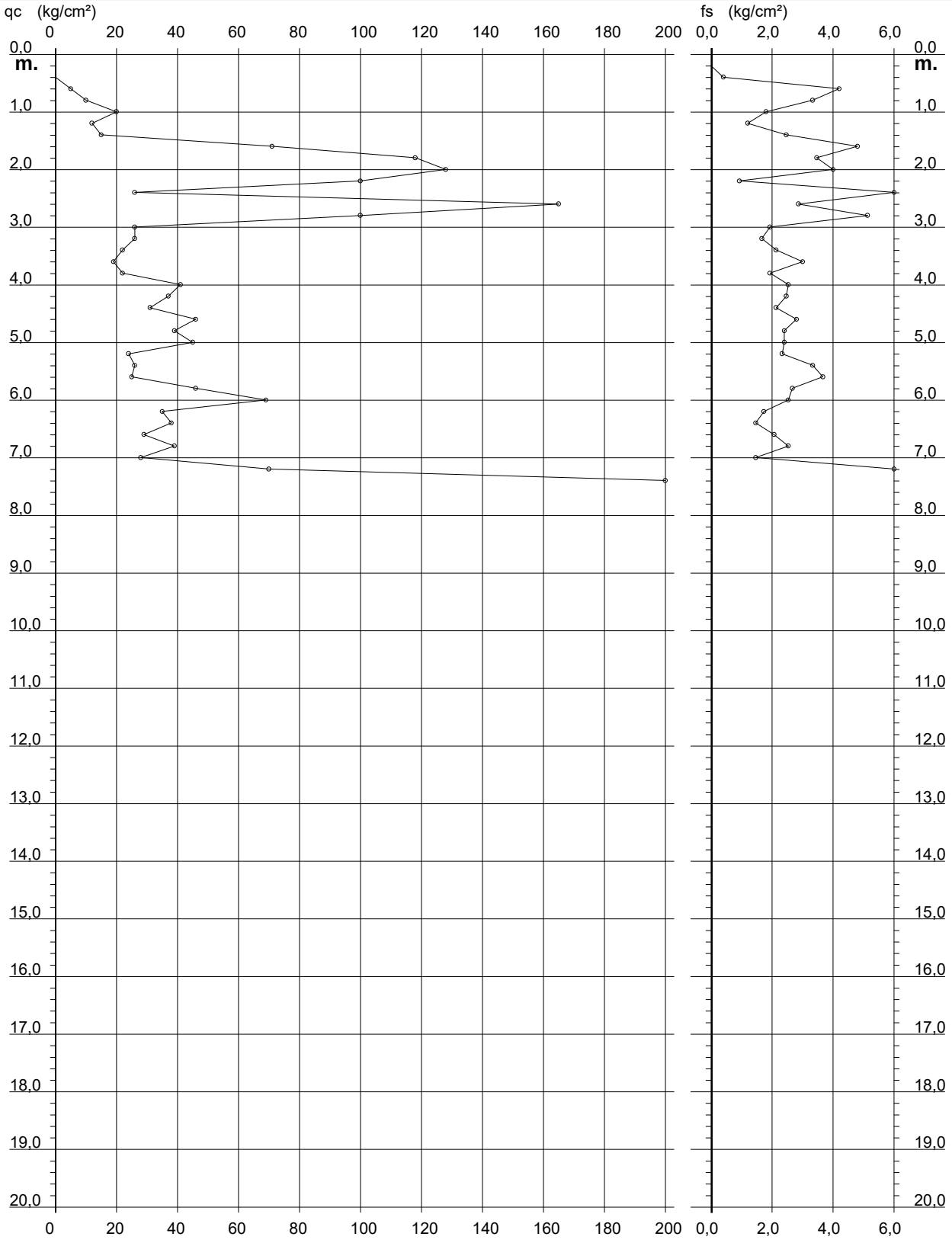
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 309

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	27/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-309	- scala vert.:	1 : 100



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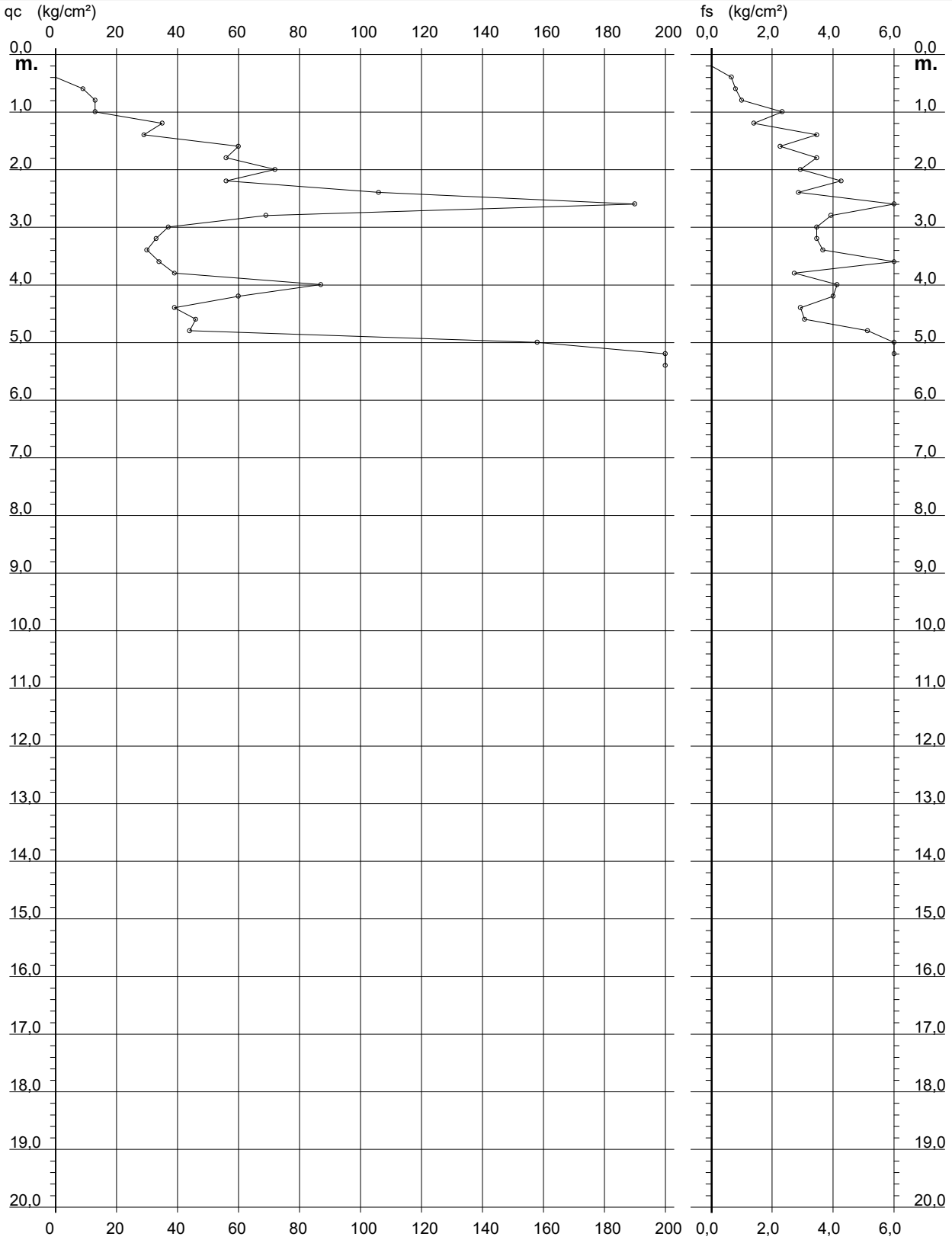
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 310

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	27/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-310	- scala vert.:	1 : 100



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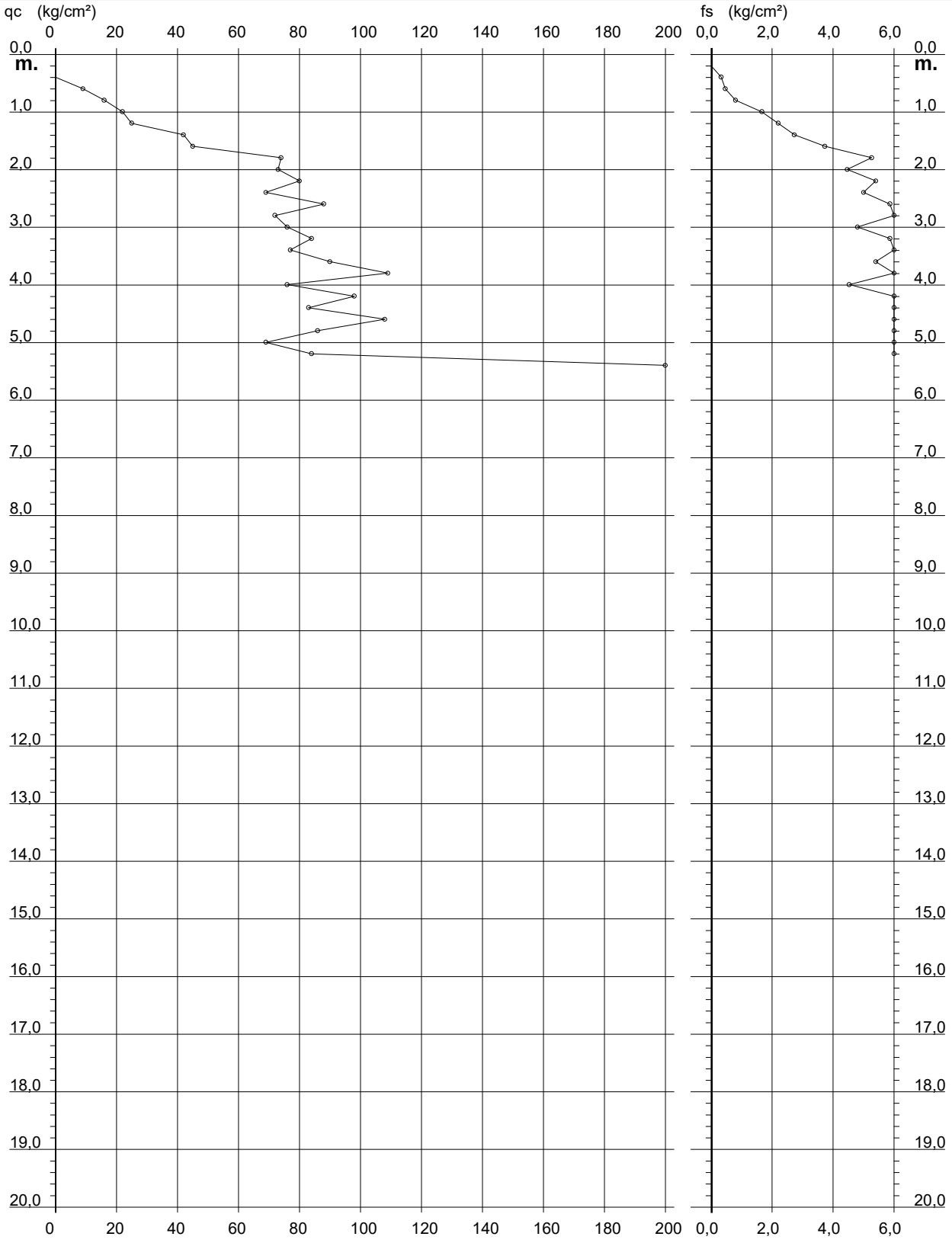
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 311

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	27/11/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-311	- scala vert.:	1 : 100



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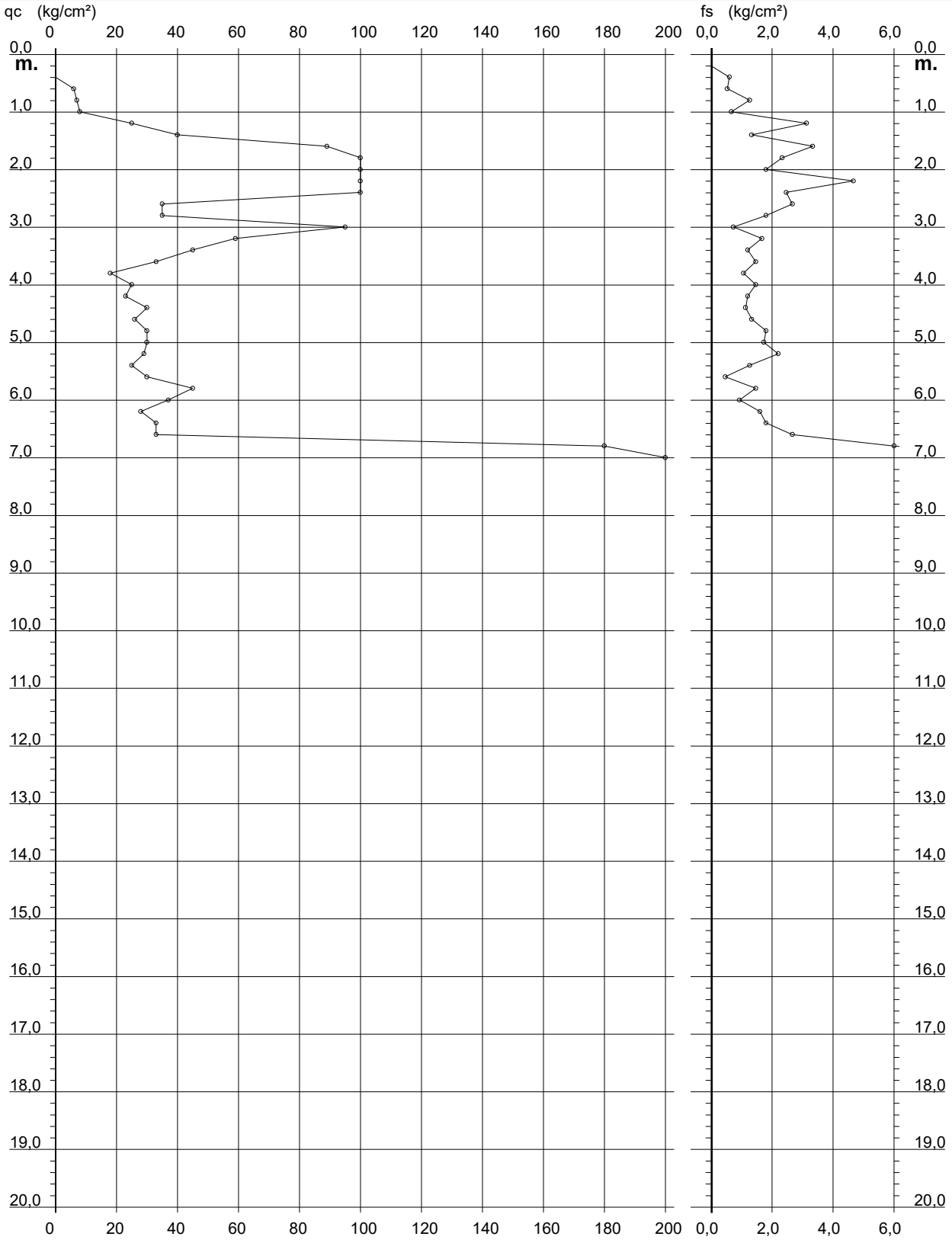
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 312

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-312	- scala vert.:	1 : 100



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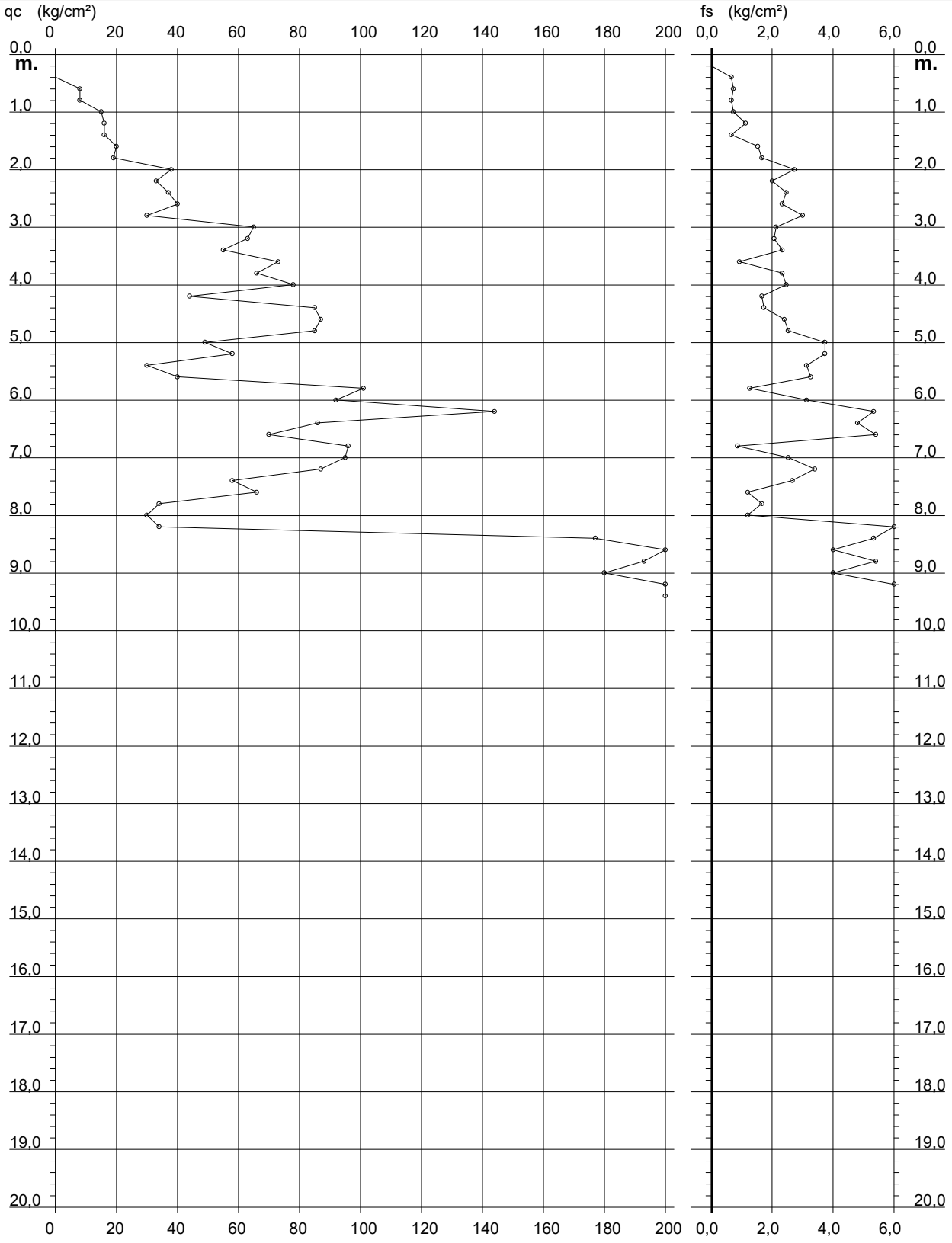
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 313

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	02/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-313	- scala vert.:	1 : 100



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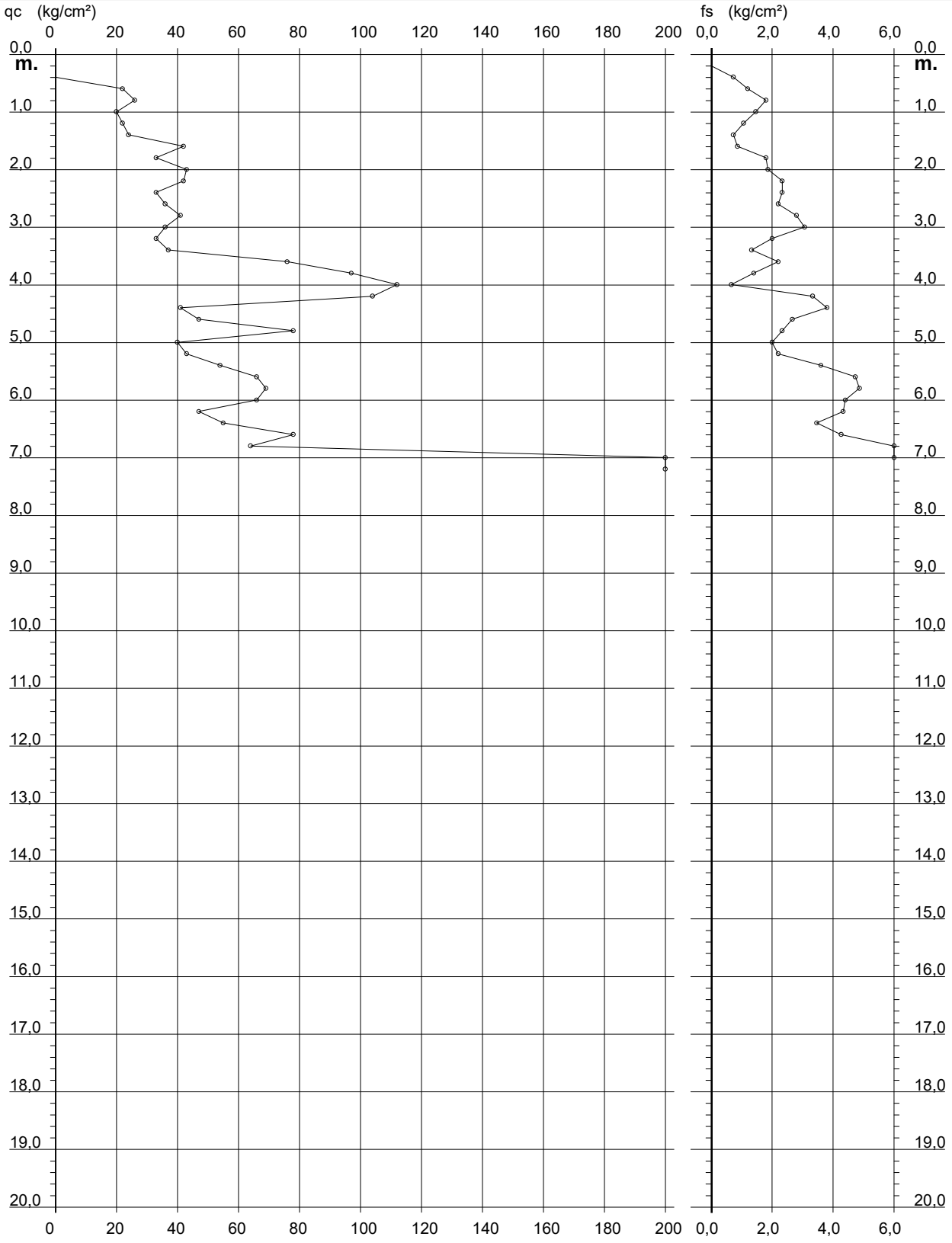
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 317

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-317	- scala vert.:	1 : 100



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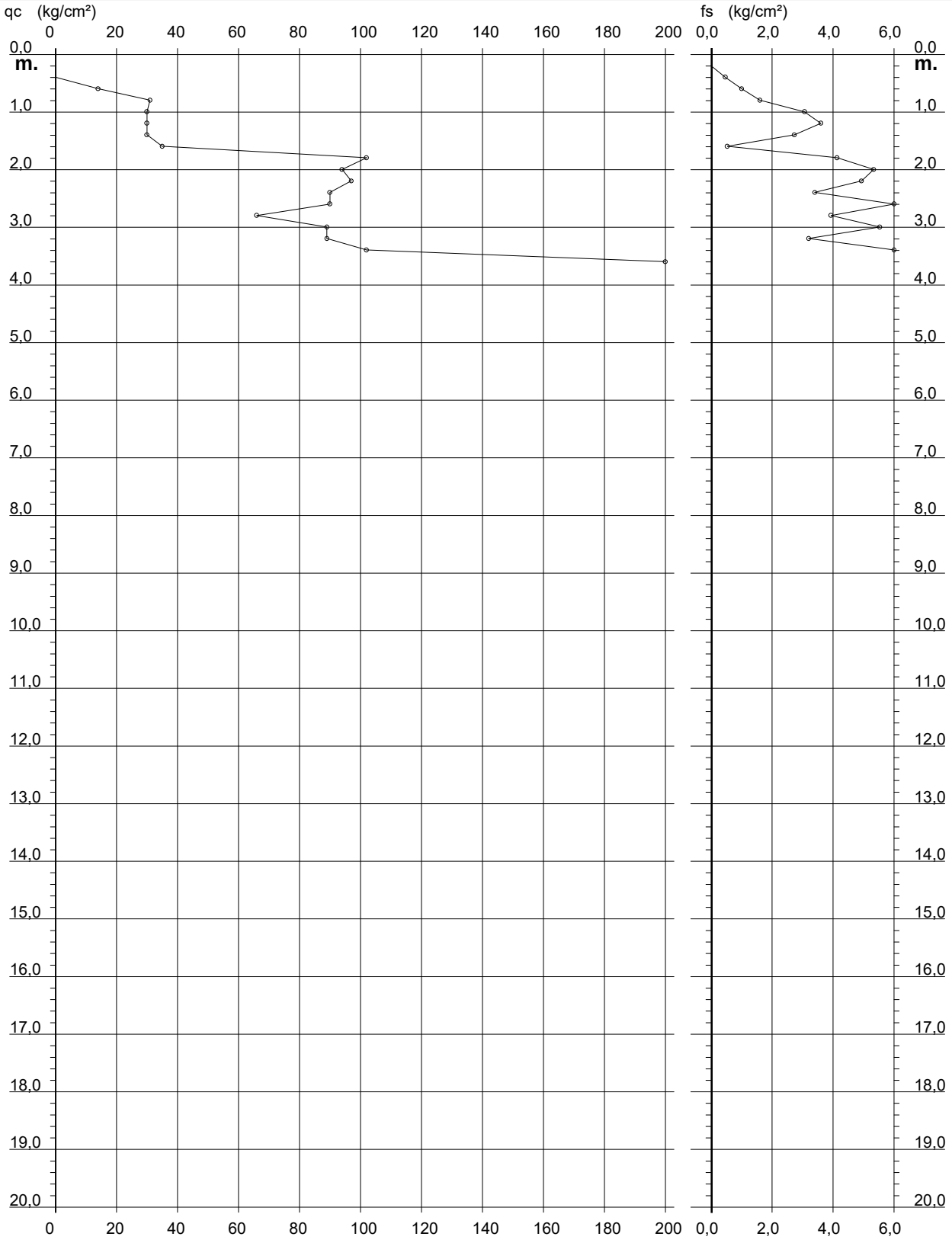
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 318

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-318	- scala vert.:	1 : 100



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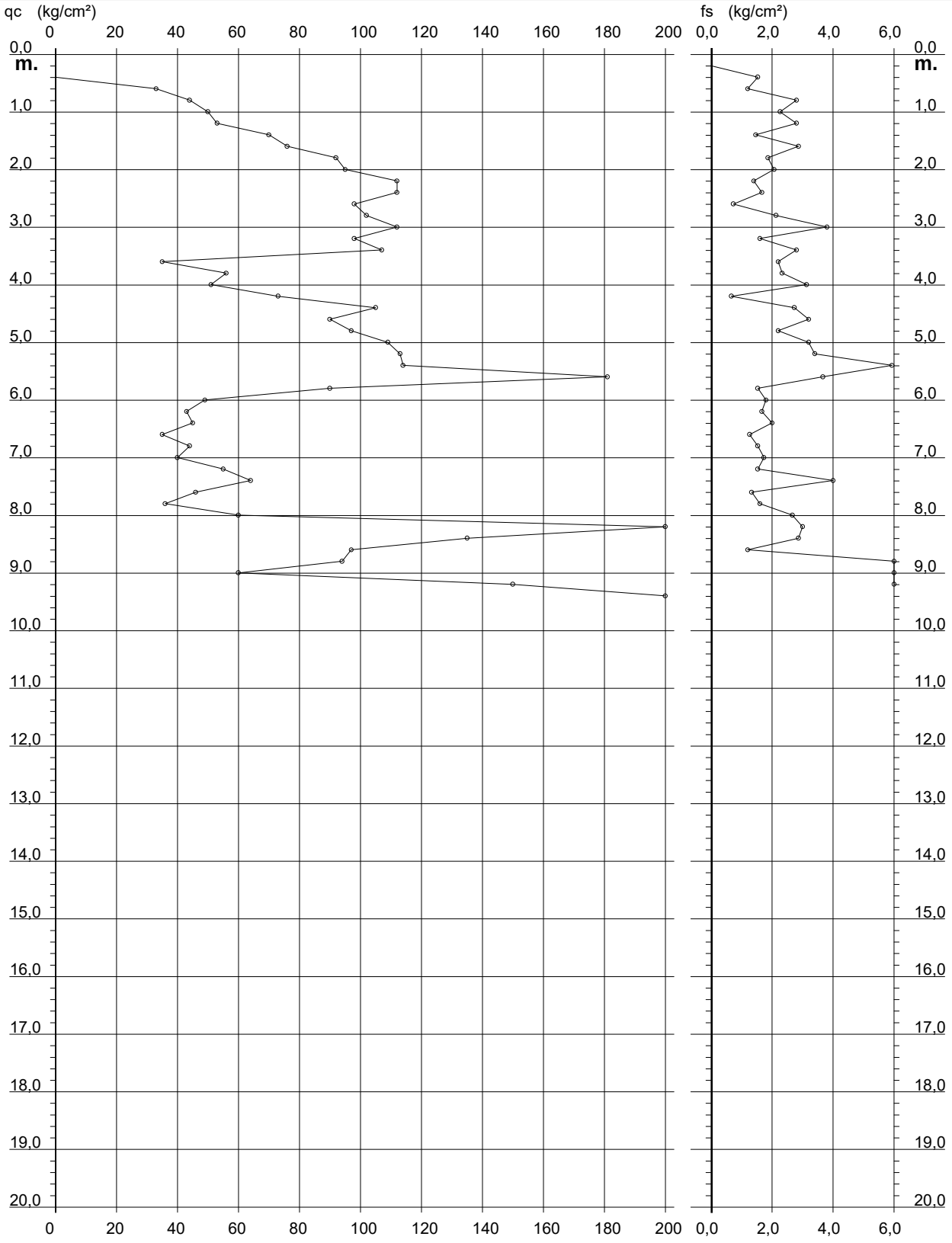
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 320

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-320	- scala vert.:	1 : 100



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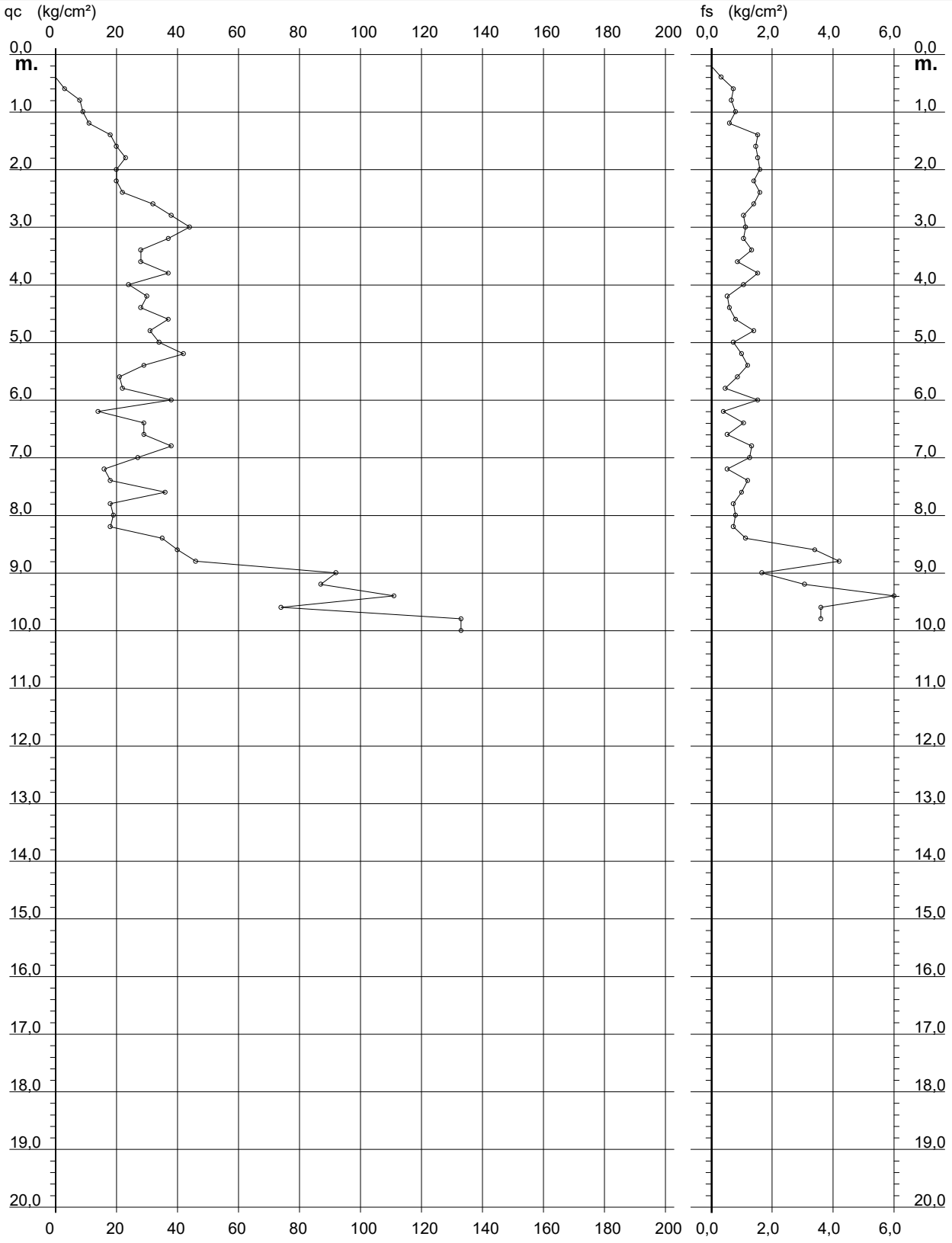
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 321

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-321	- scala vert.:	1 : 100



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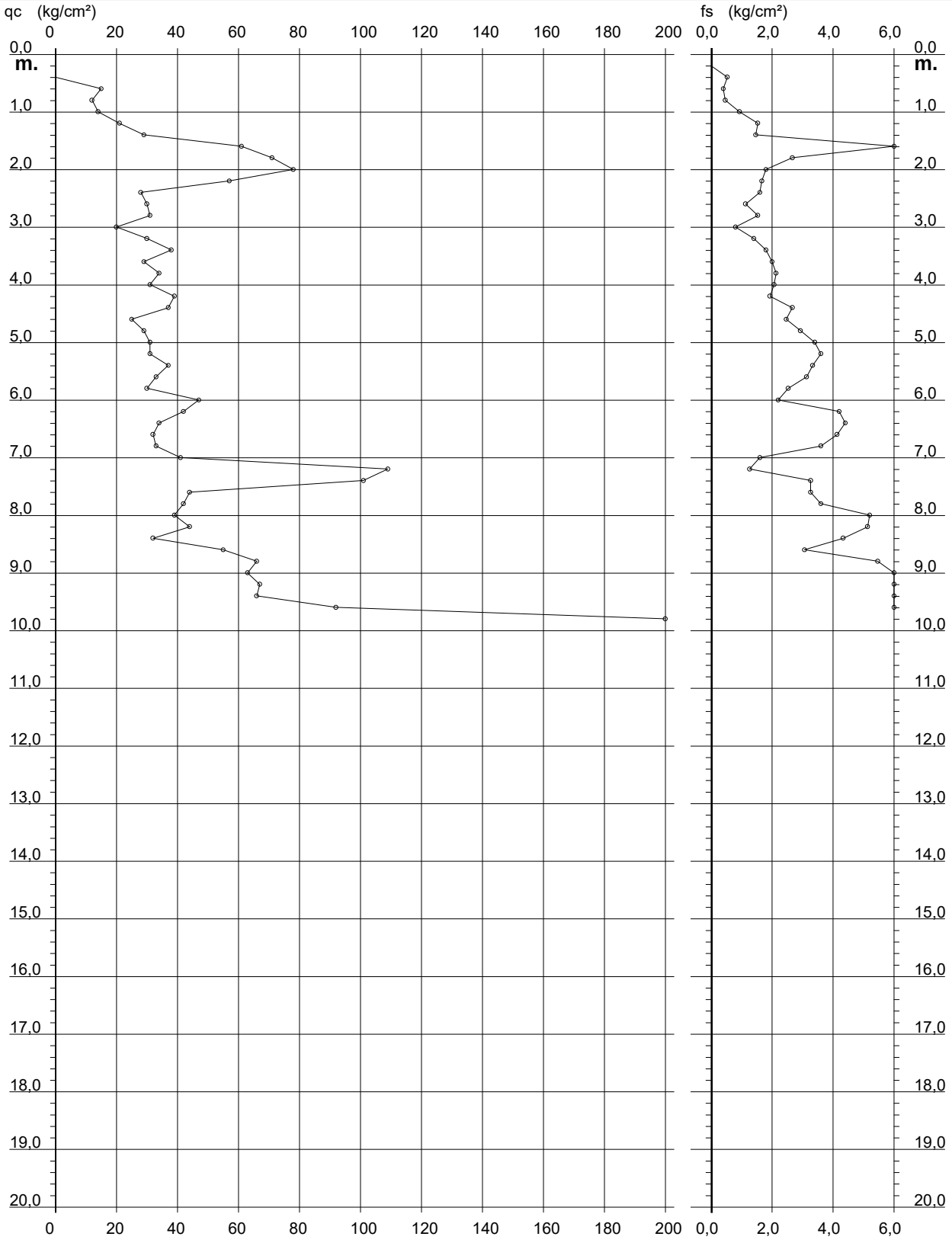
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 322

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-322	- scala vert.:	1 : 100



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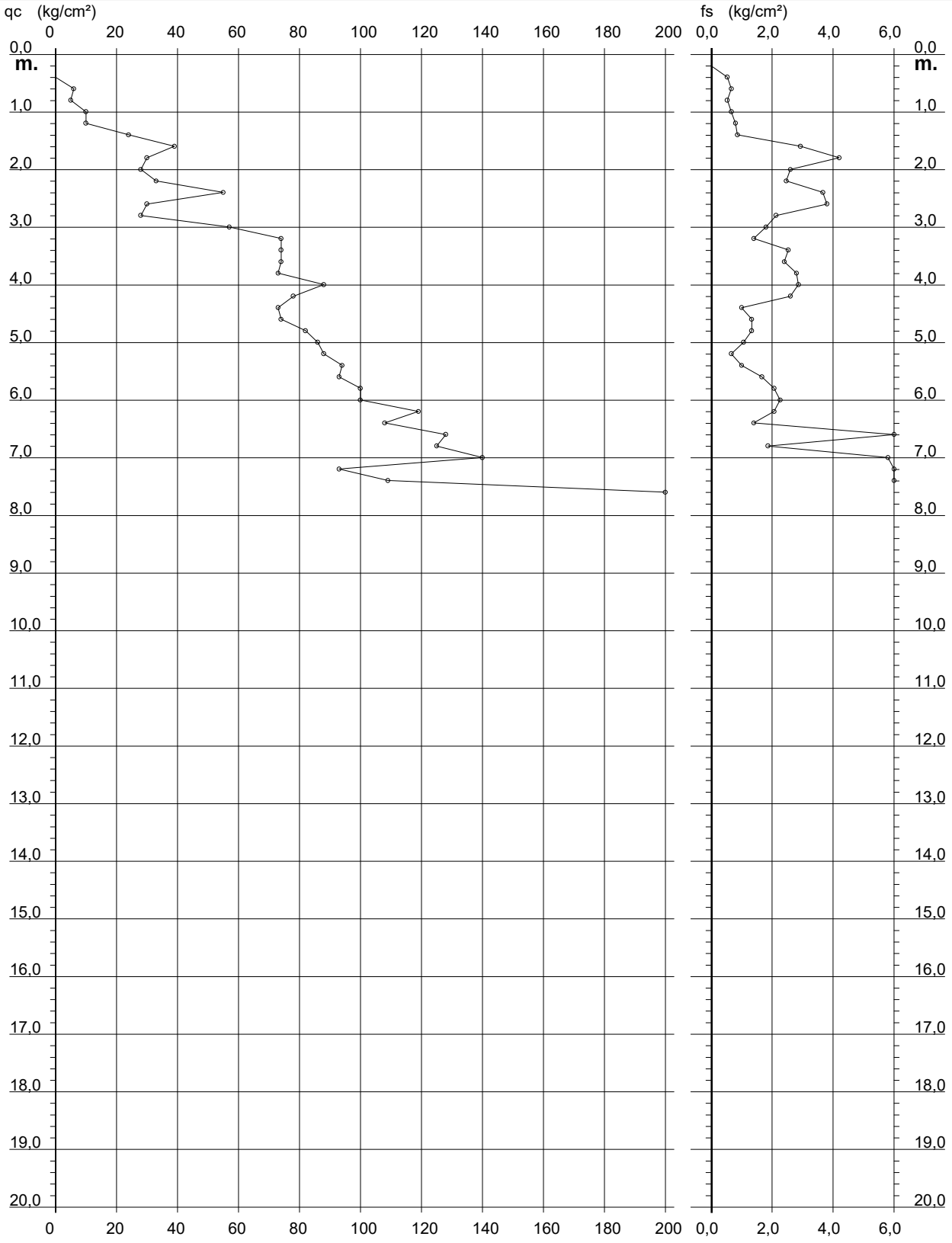
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 324

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-324	- scala vert.:	1 : 100



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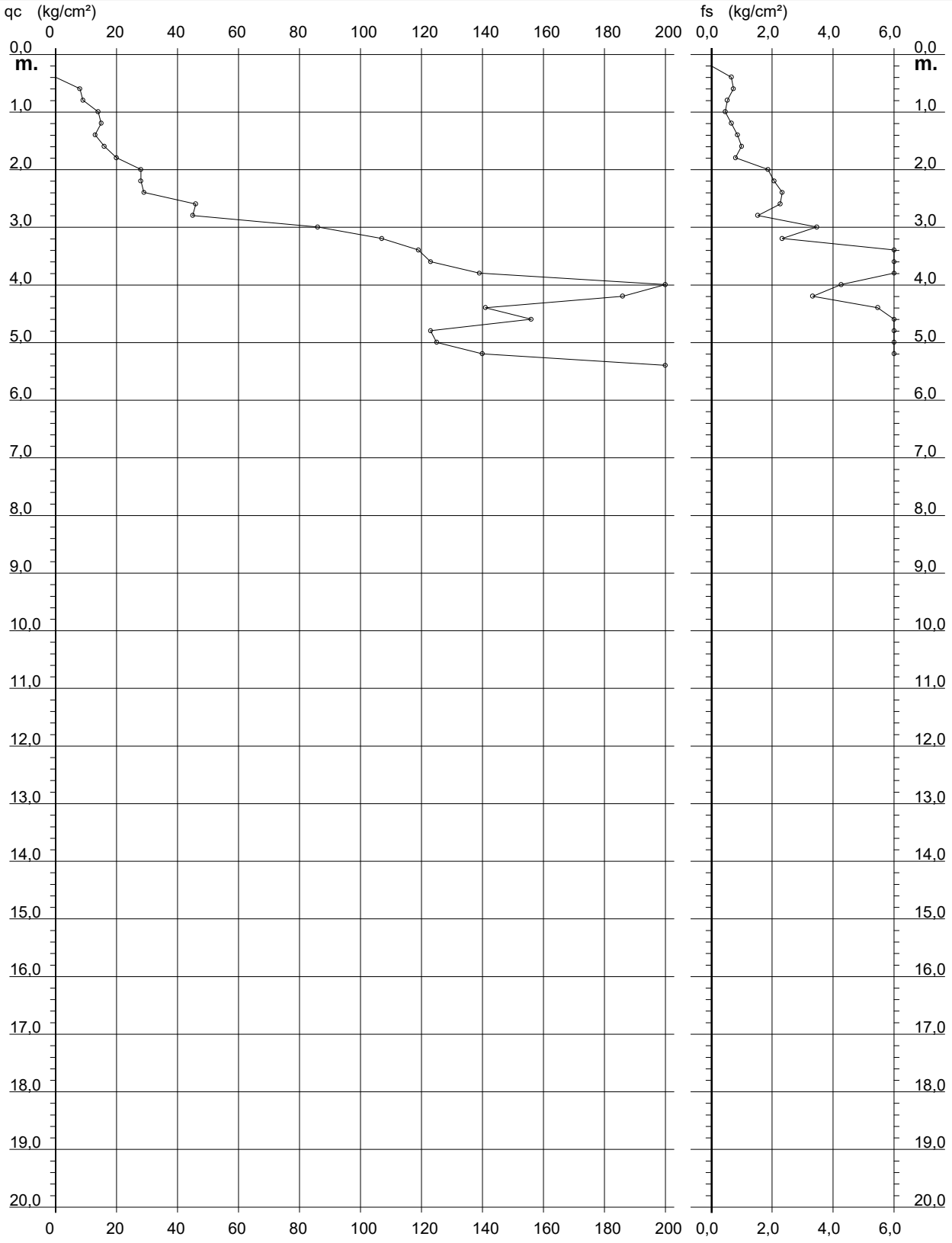
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 323

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-323	- scala vert.:	1 : 100



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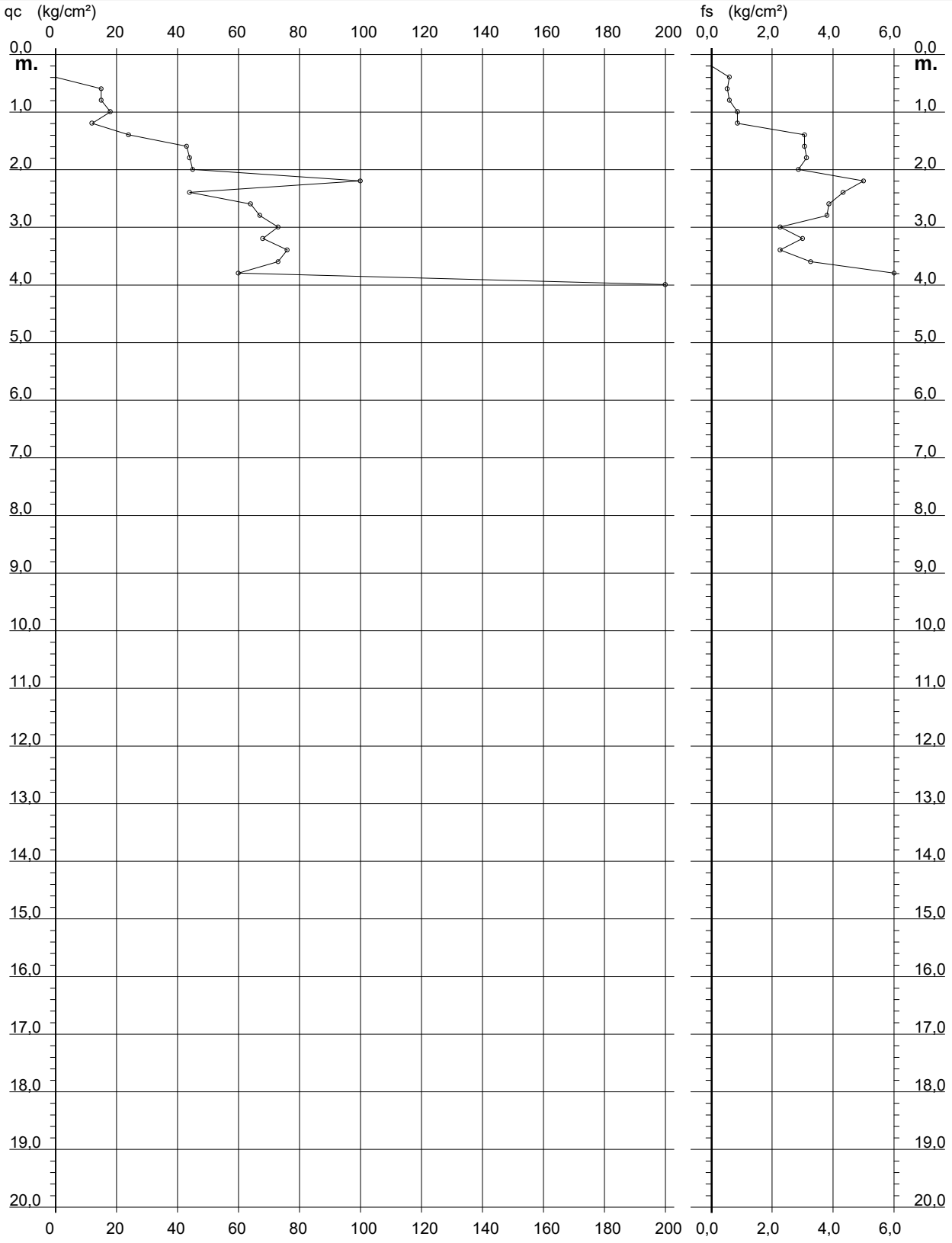
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 325

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	07/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-325	- scala vert.:	1 : 100



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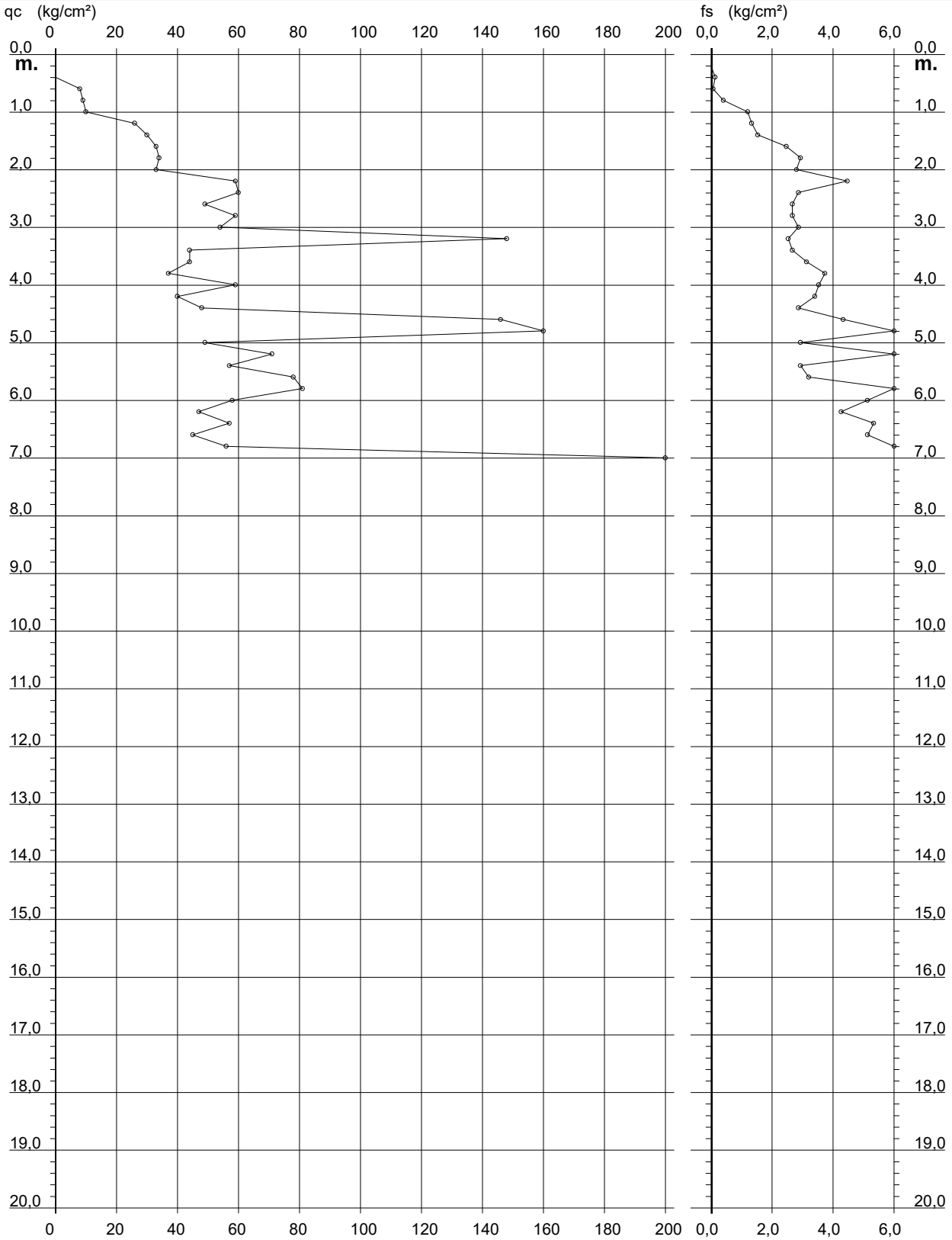
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 332

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-332	- scala vert.:	1 : 100



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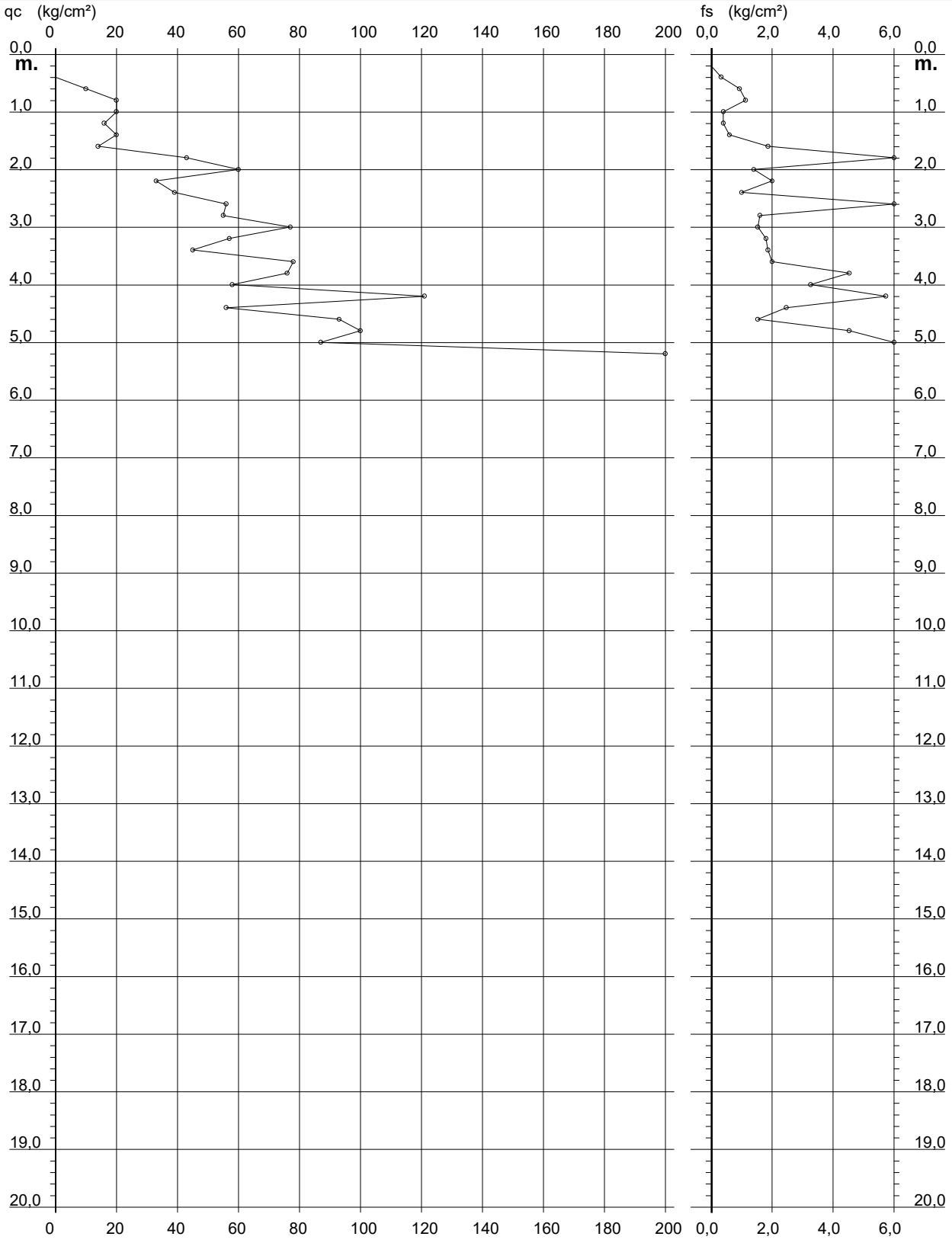
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 331

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	09/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-331	- scala vert.:	1 : 100



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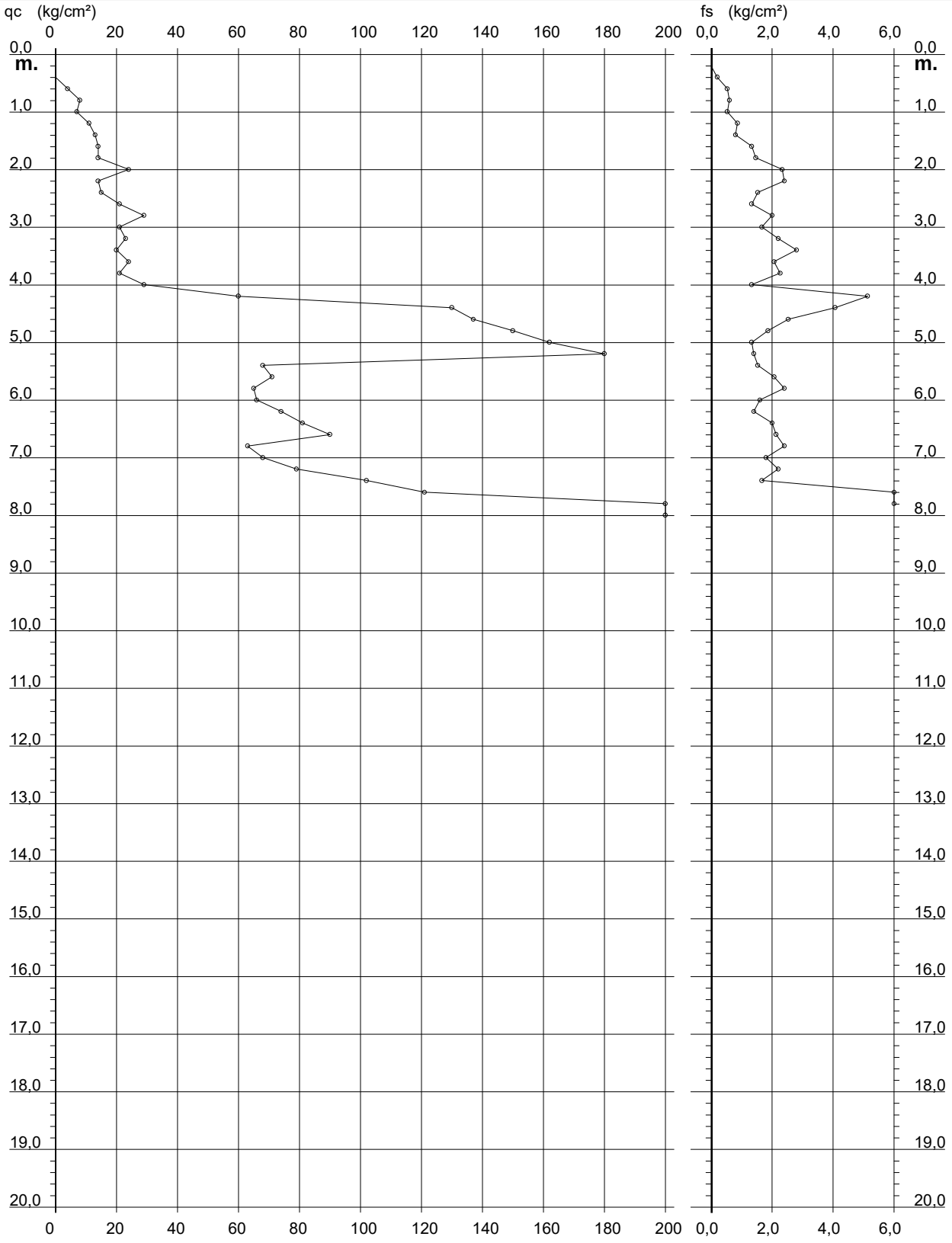
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 330

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-330	- scala vert.:	1 : 100



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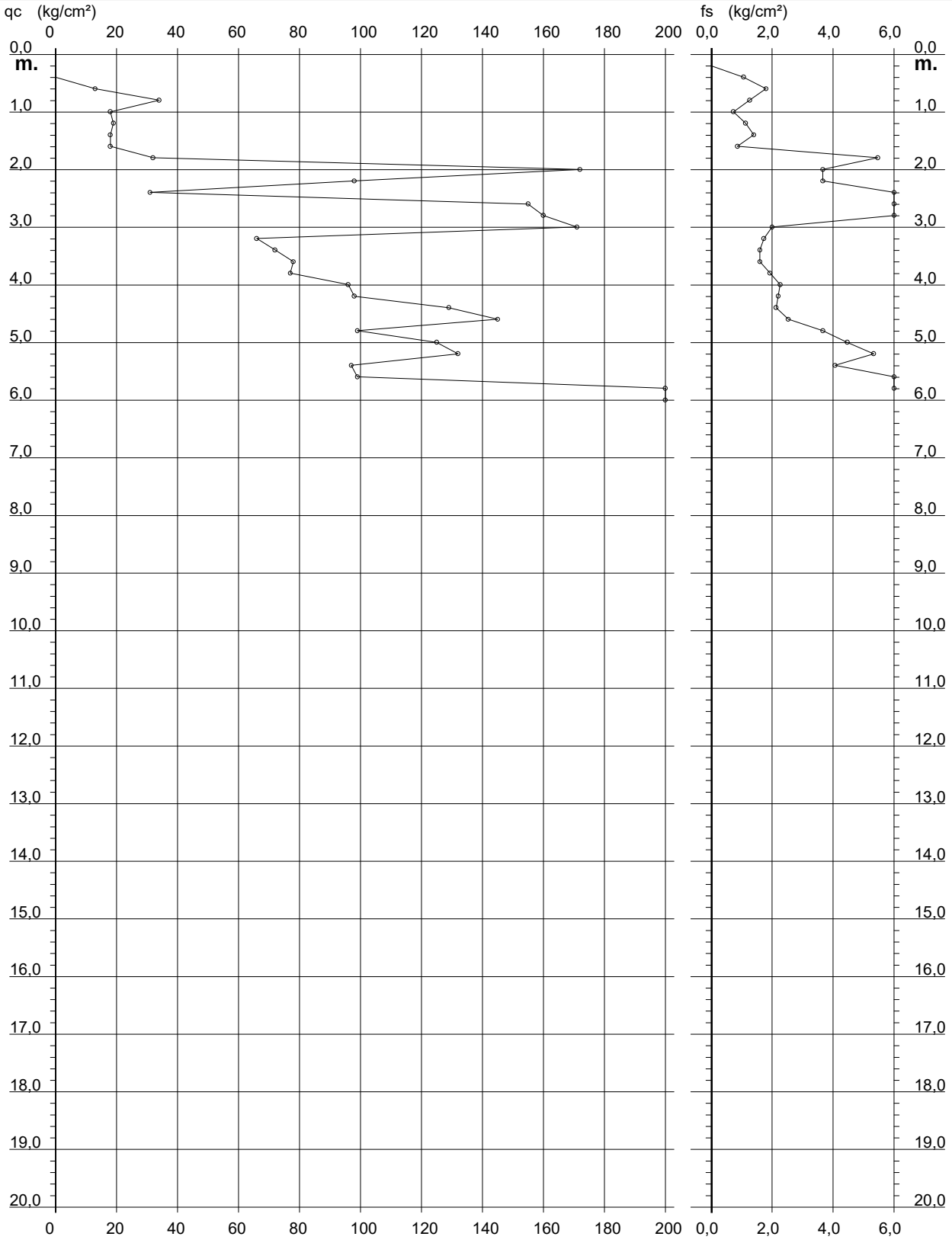
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 329

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-329	- scala vert.:	1 : 100



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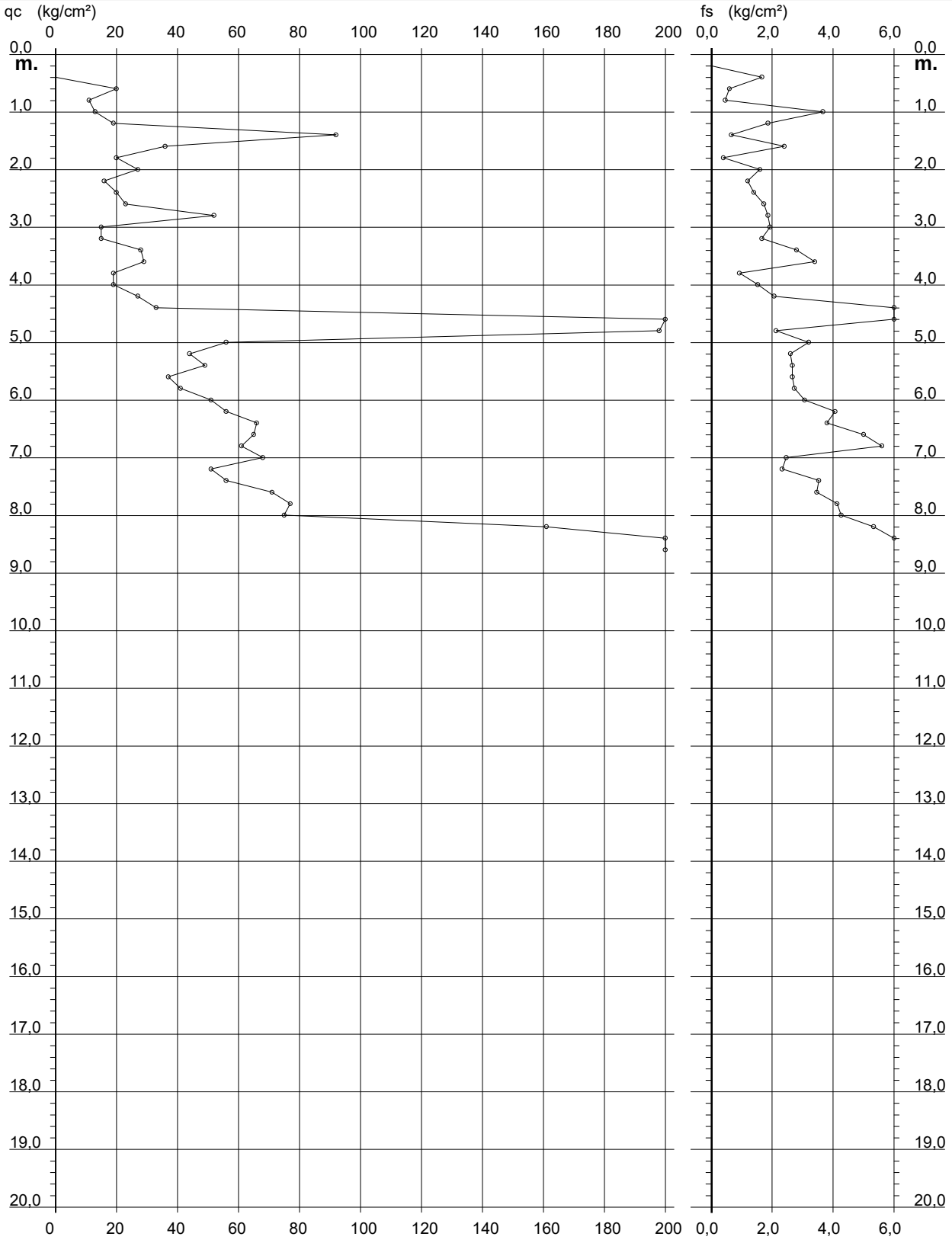
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 333

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-333	- scala vert.:	1 : 100



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Via V. Emanuele, 43 - 82010 Paolisi (BN)

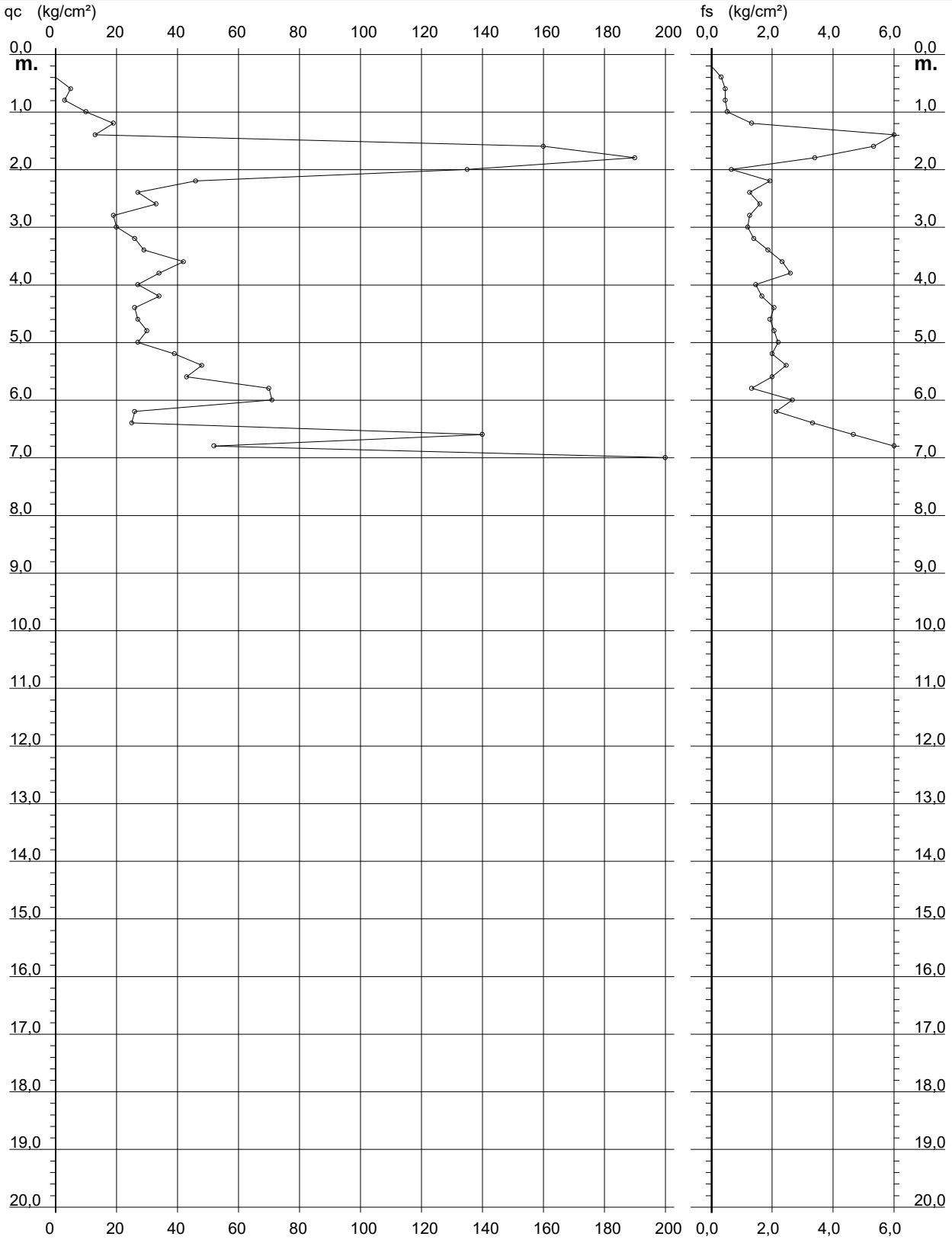
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 334

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-334	- scala vert.:	1 : 100



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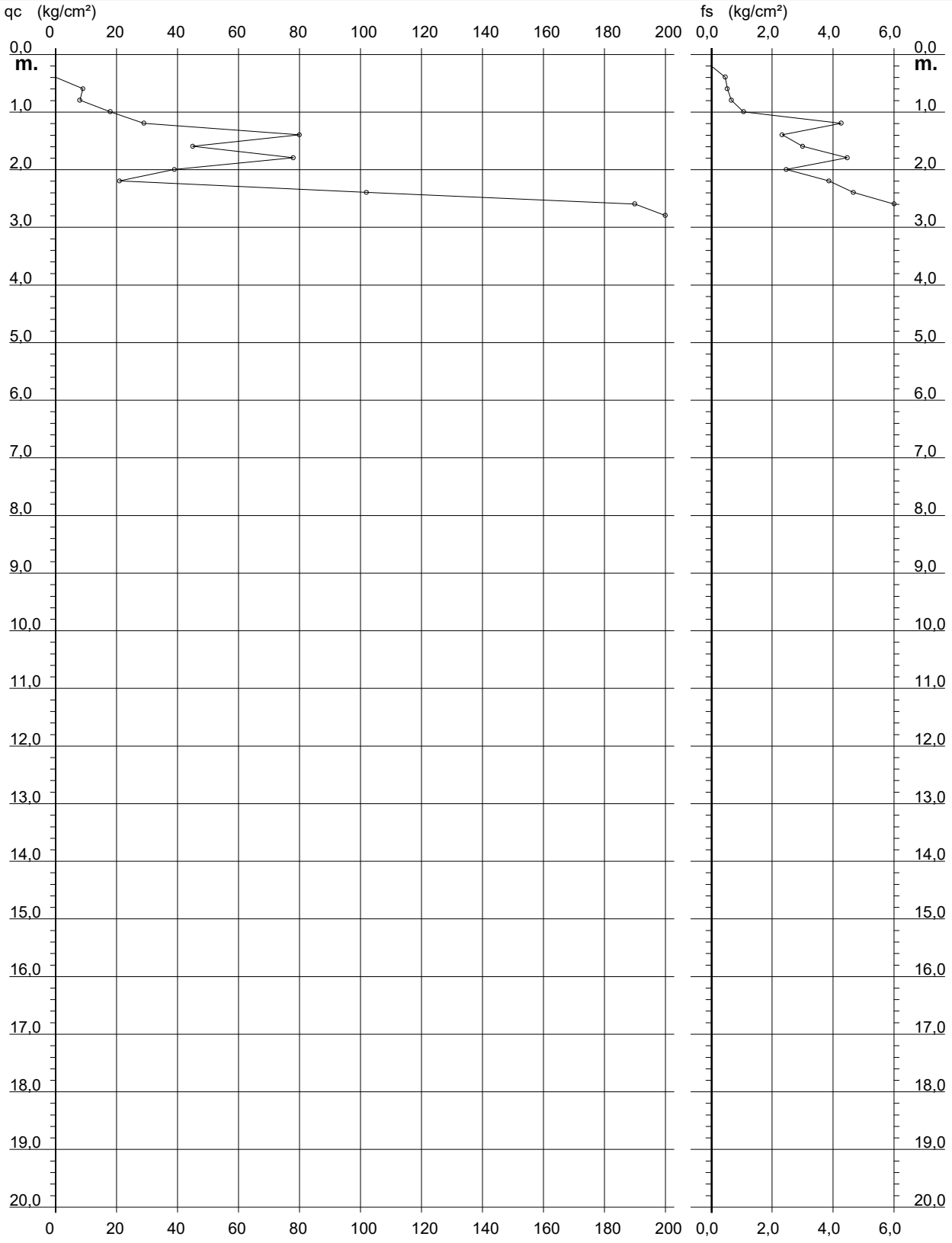
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 335

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-335	- scala vert.:	1 : 100



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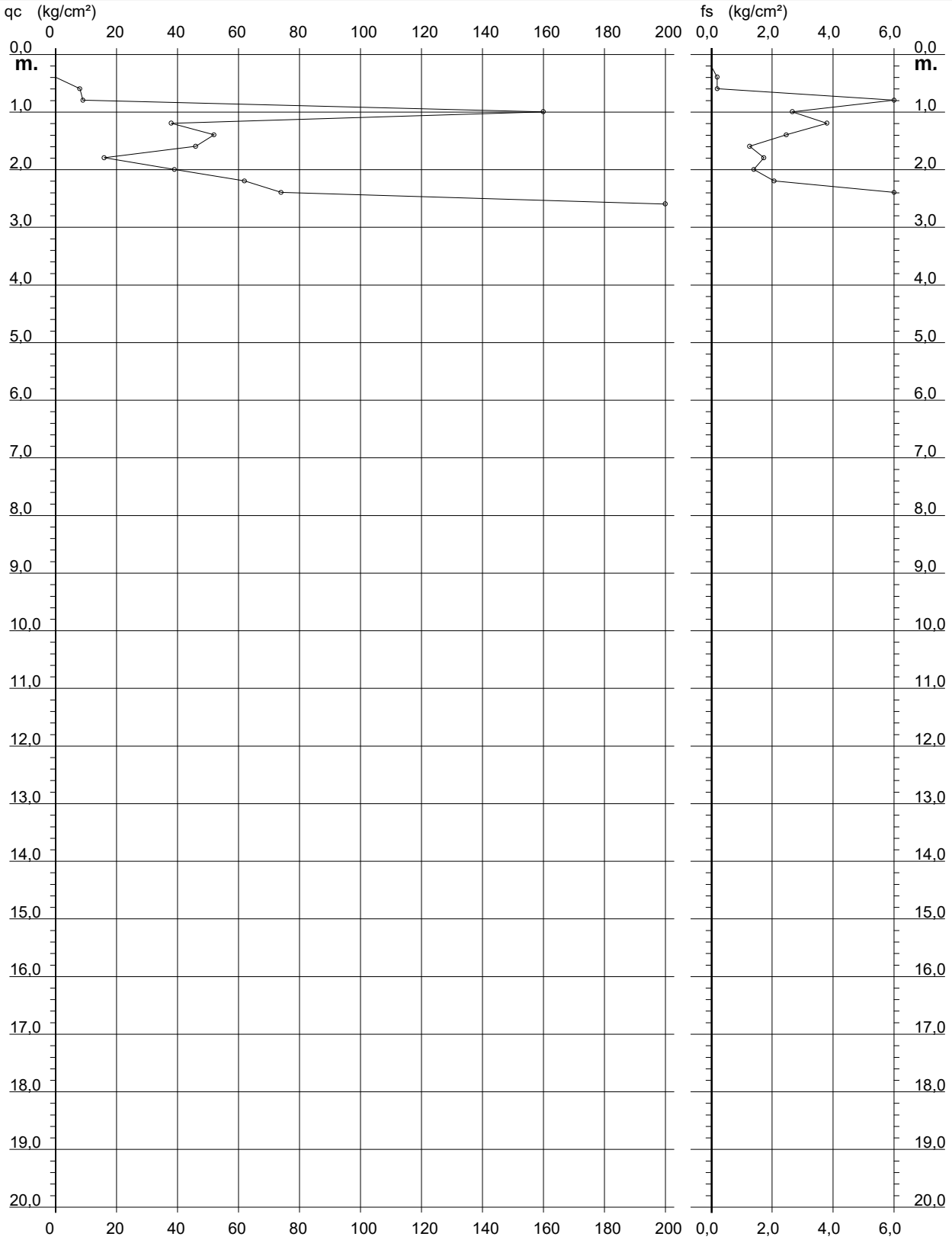
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 336

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-336	- scala vert.:	1 : 100



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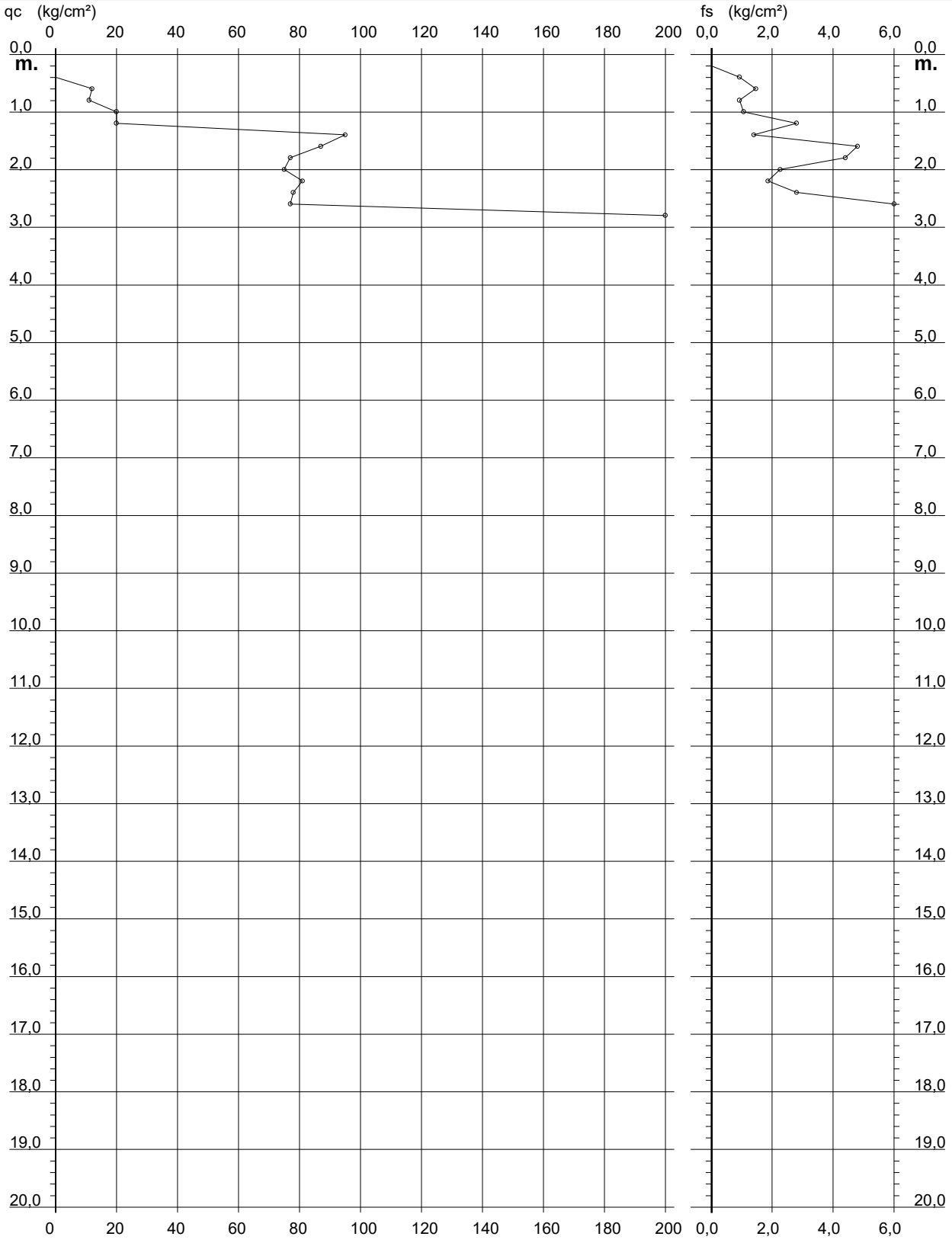
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 338

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	14/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-338	- scala vert.:	1 : 100



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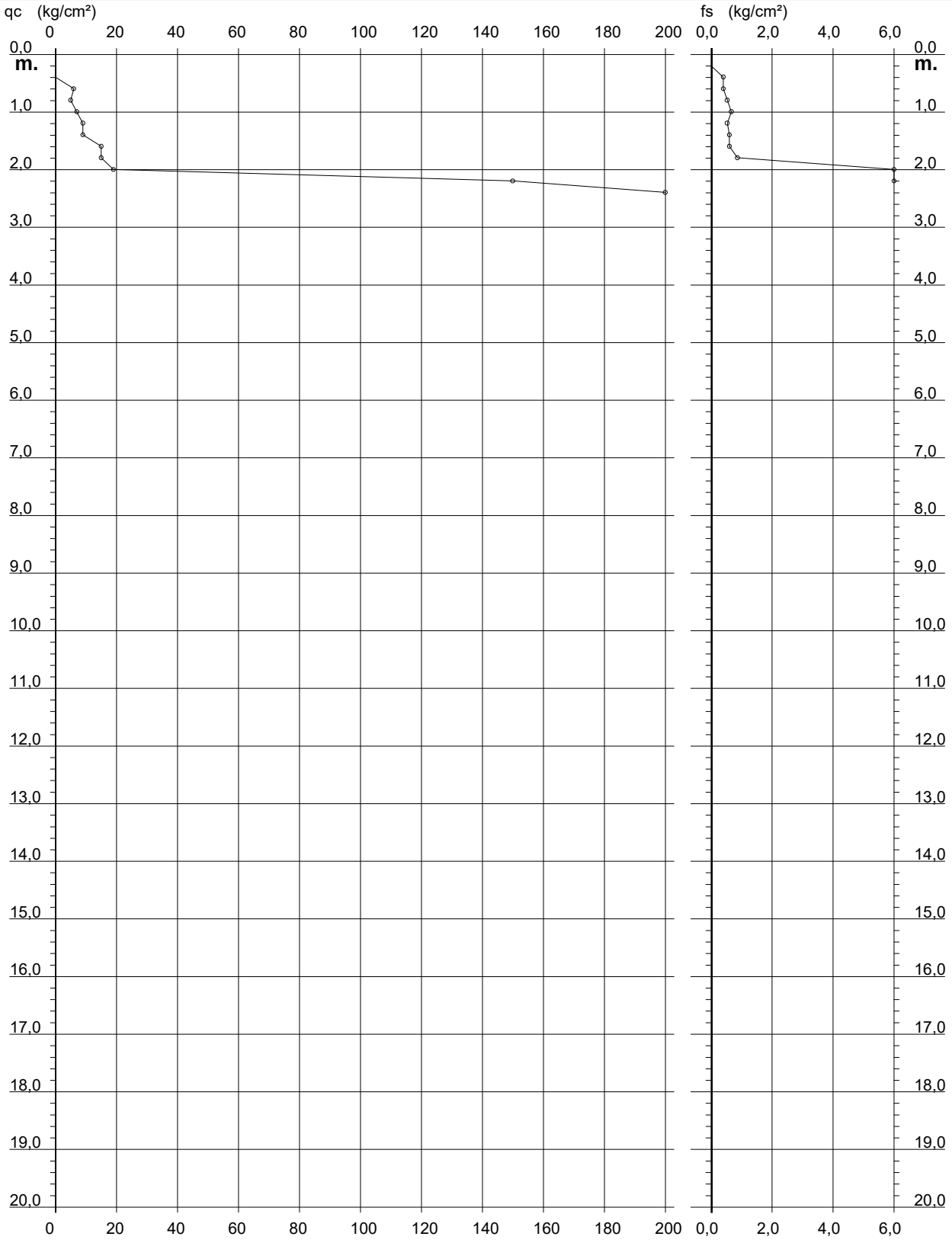
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 339

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	16/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-339	- scala vert.:	1 : 100



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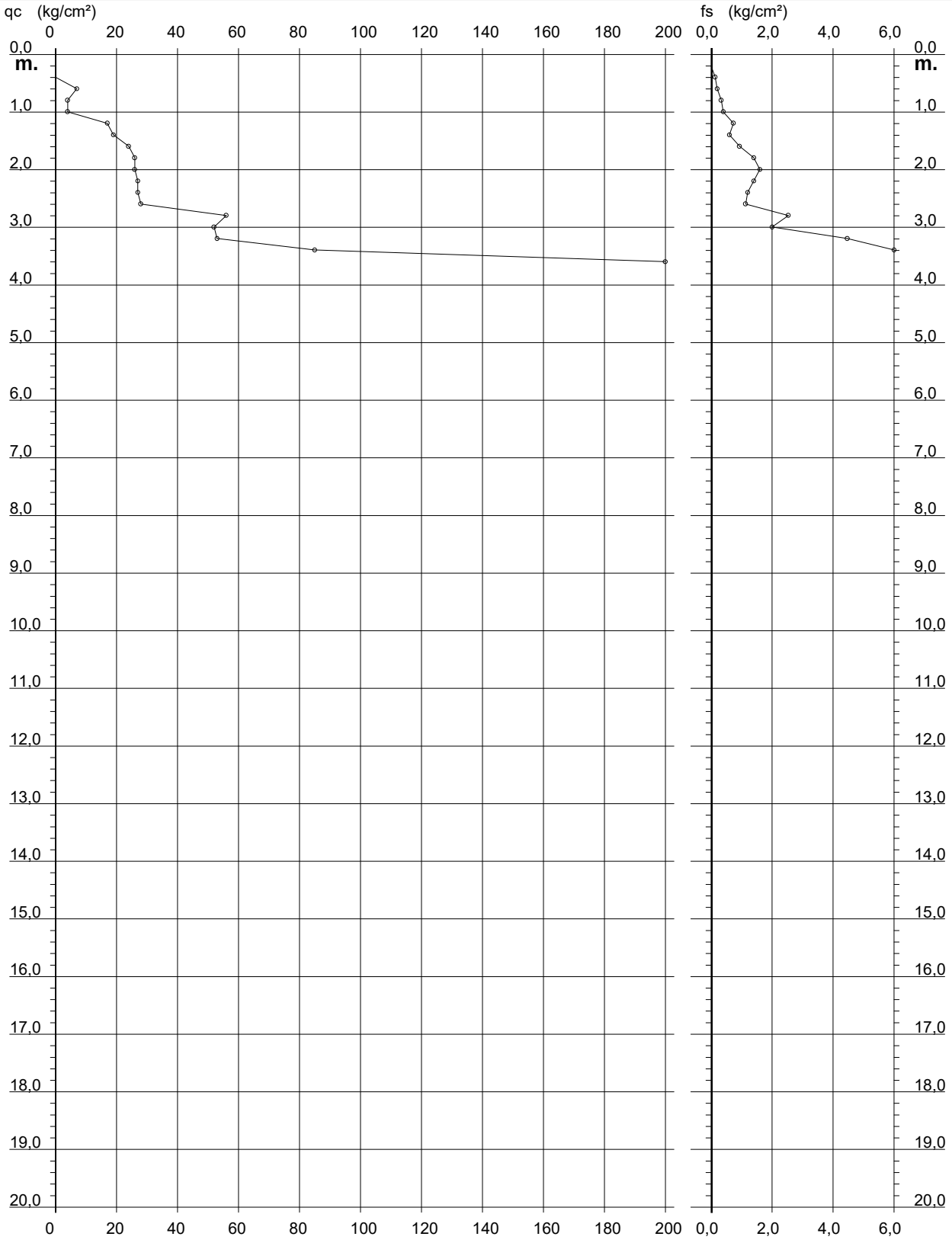
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 343

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	16/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-343	- scala vert.:	1 : 100



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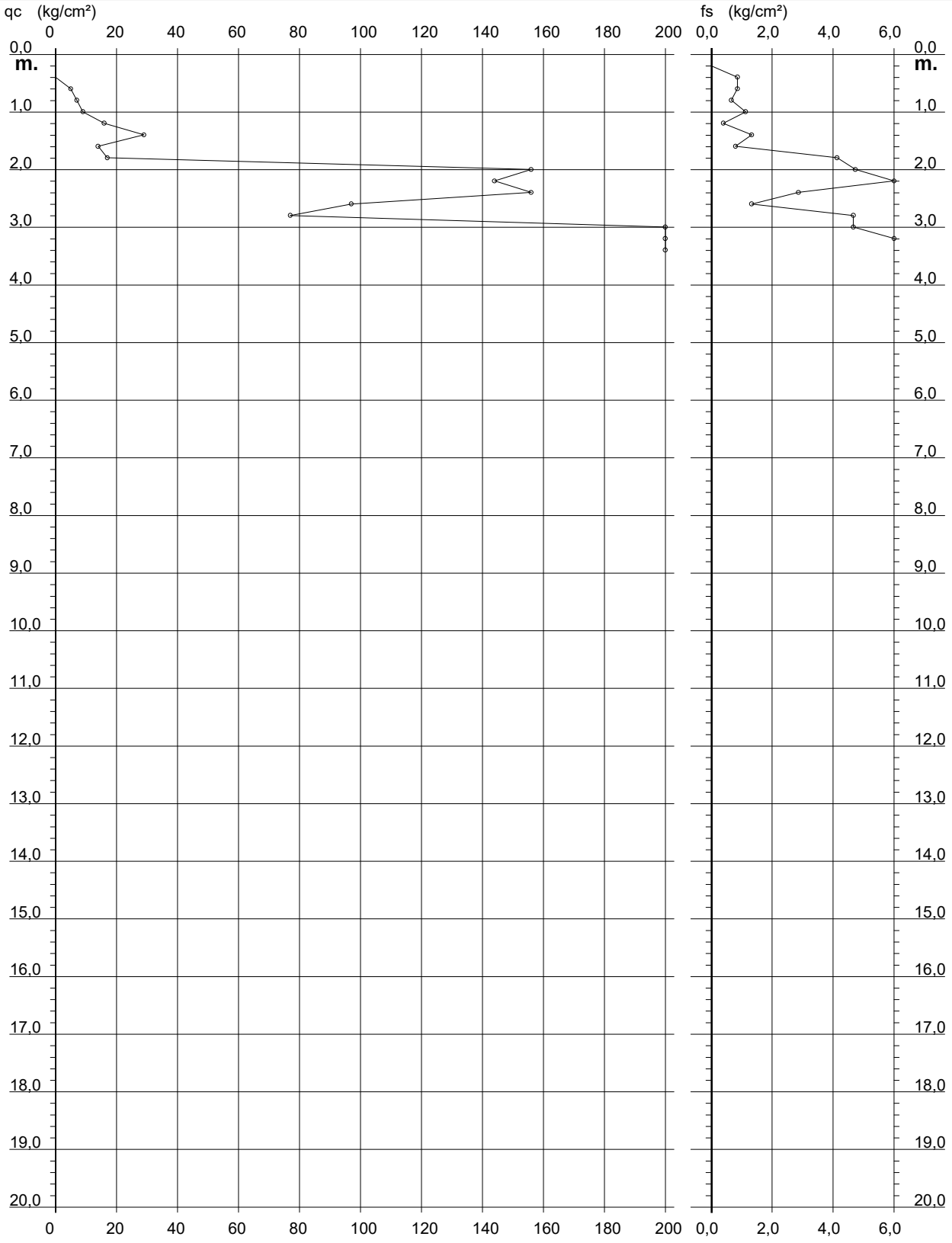
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 356

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-356	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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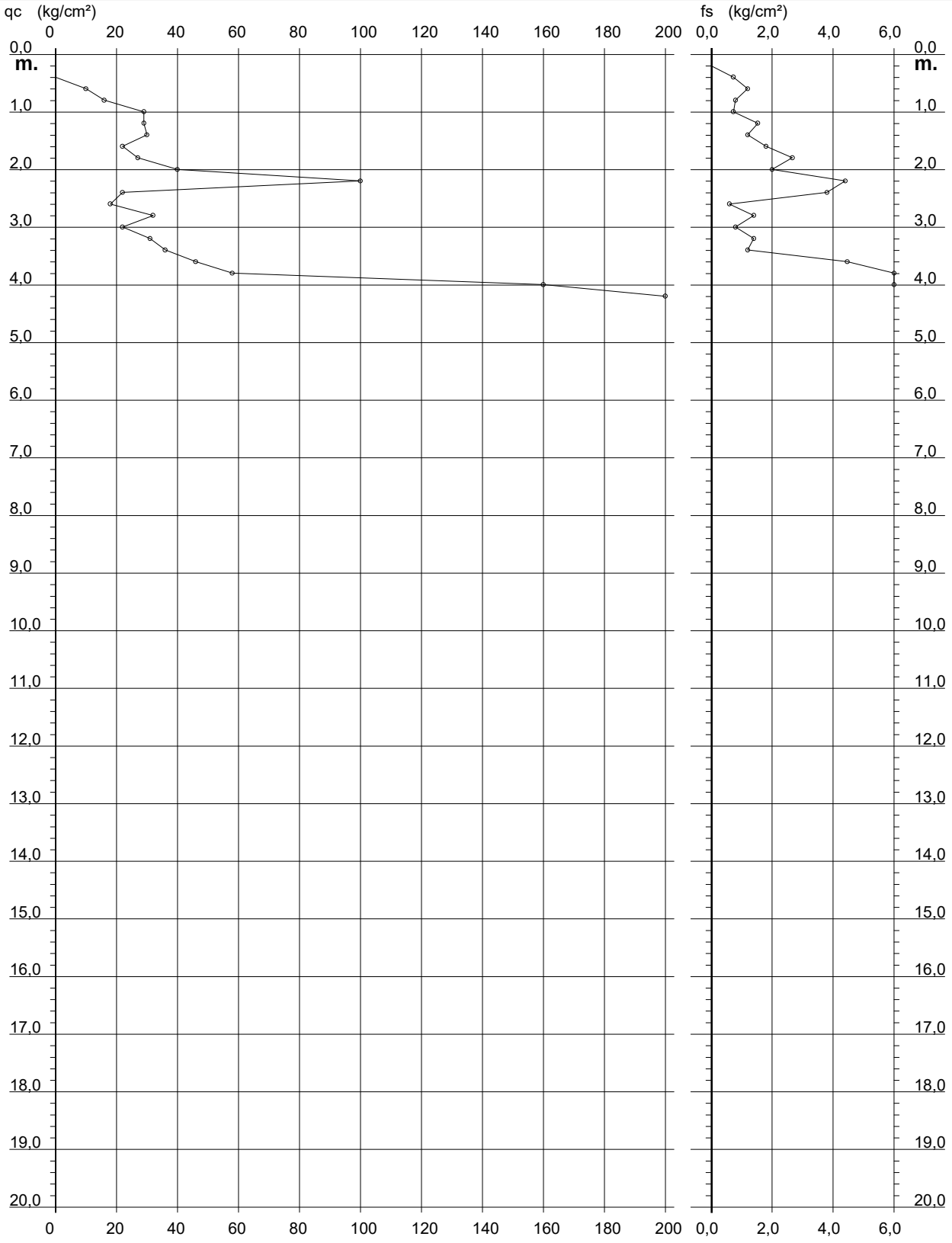
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 349

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-349	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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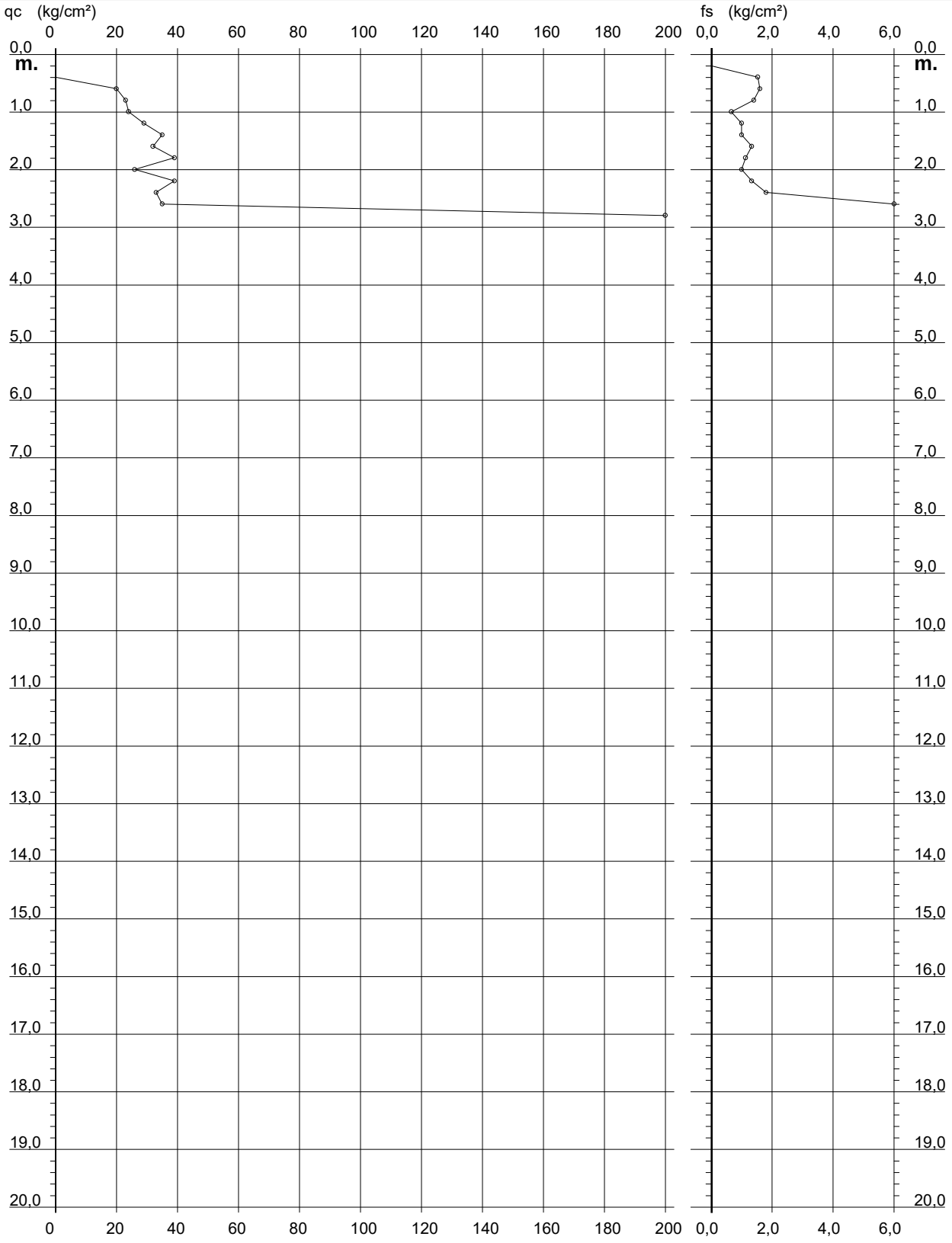
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 350

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-350	- scala vert.:	1 : 100



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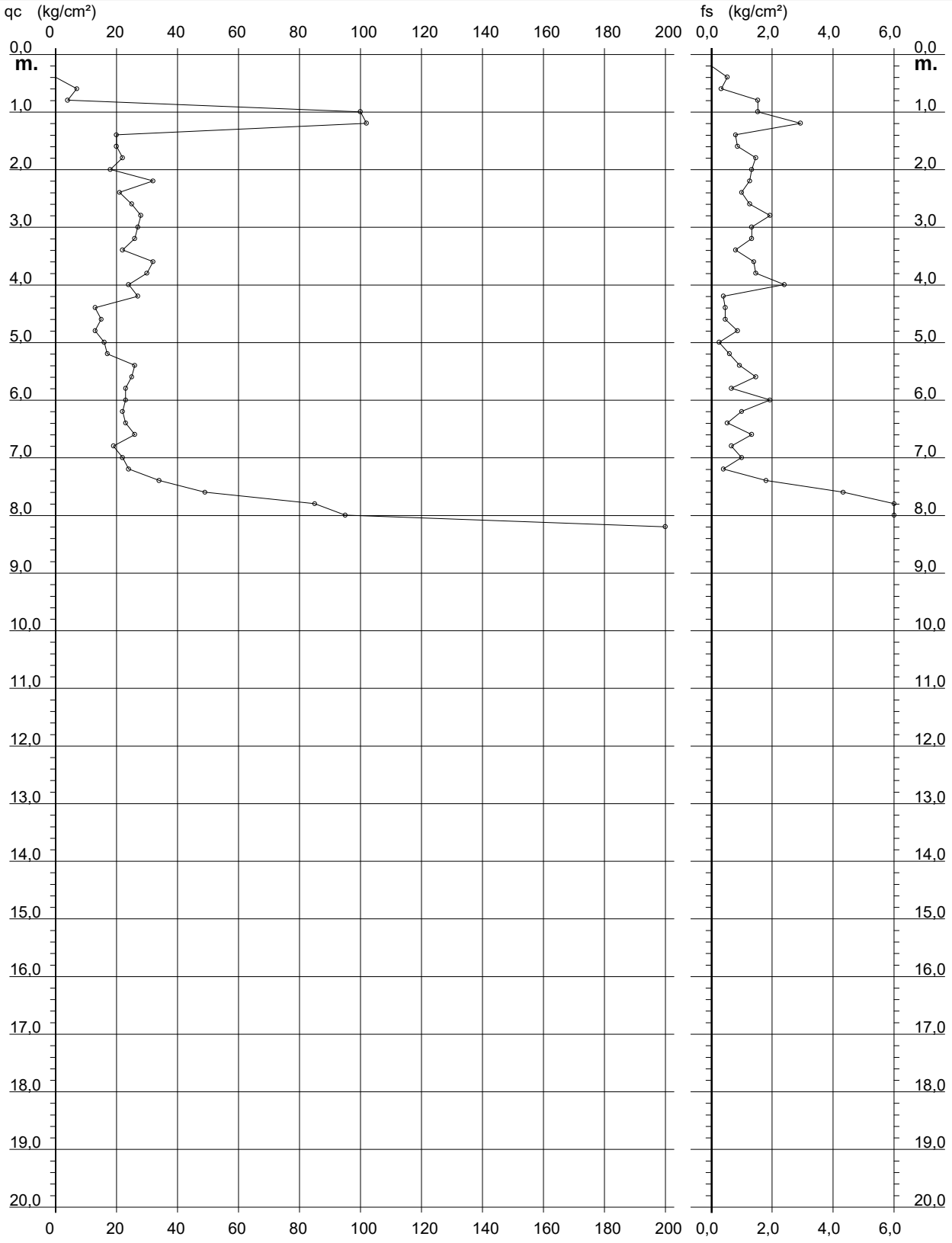
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 351

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-351	- scala vert.:	1 : 100



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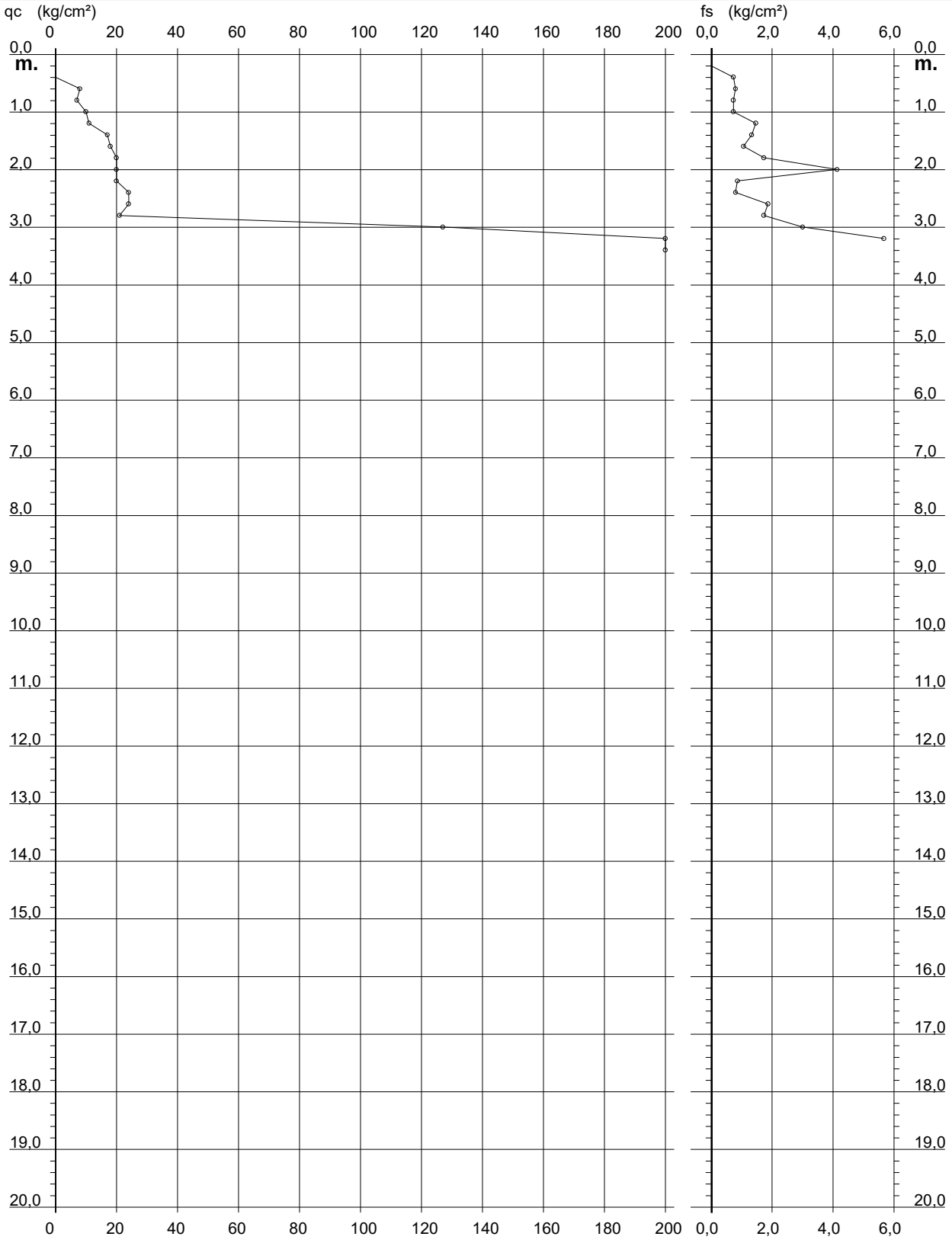
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 352

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-352	- scala vert.:	1 : 100



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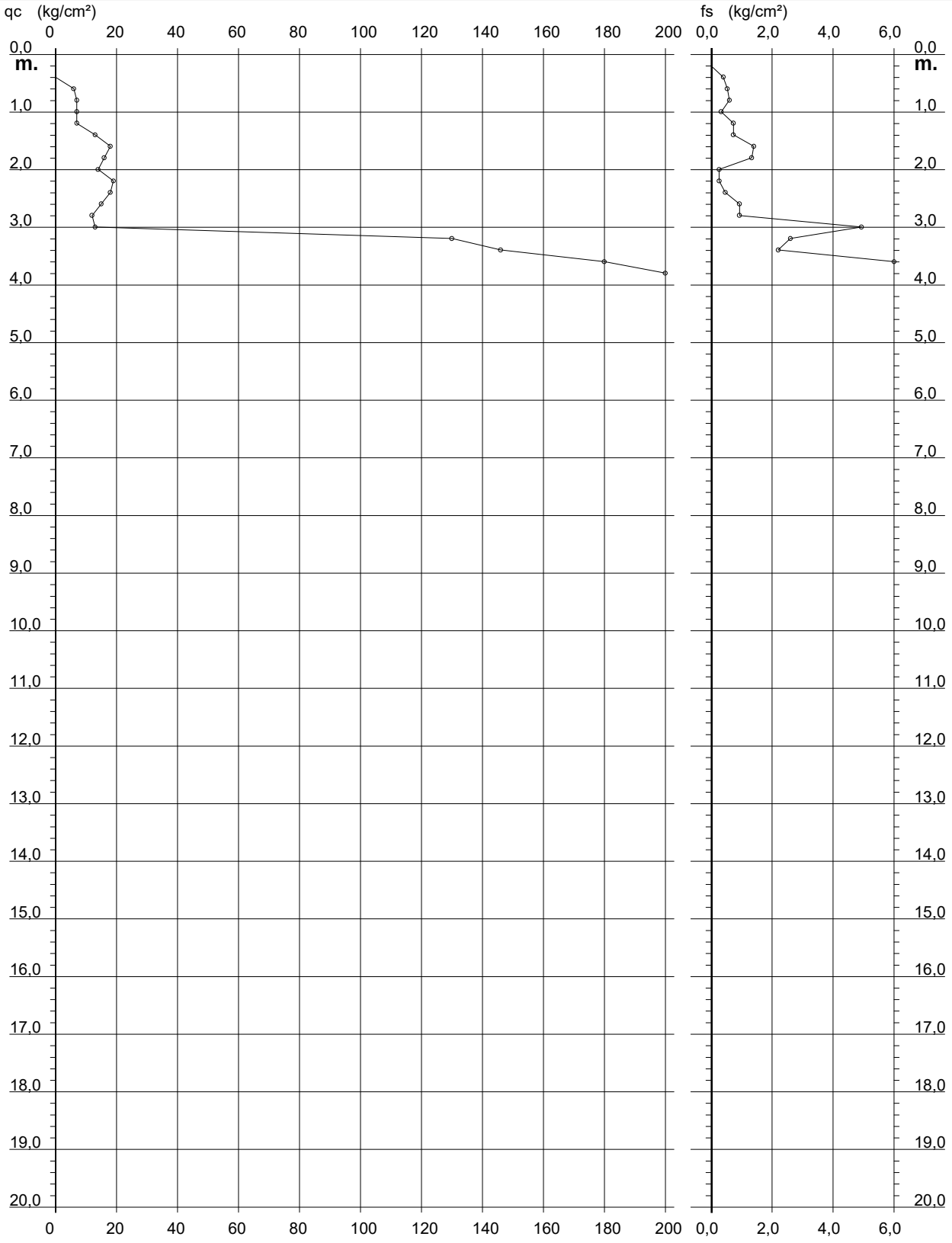
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 354

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-354	- scala vert.:	1 : 100



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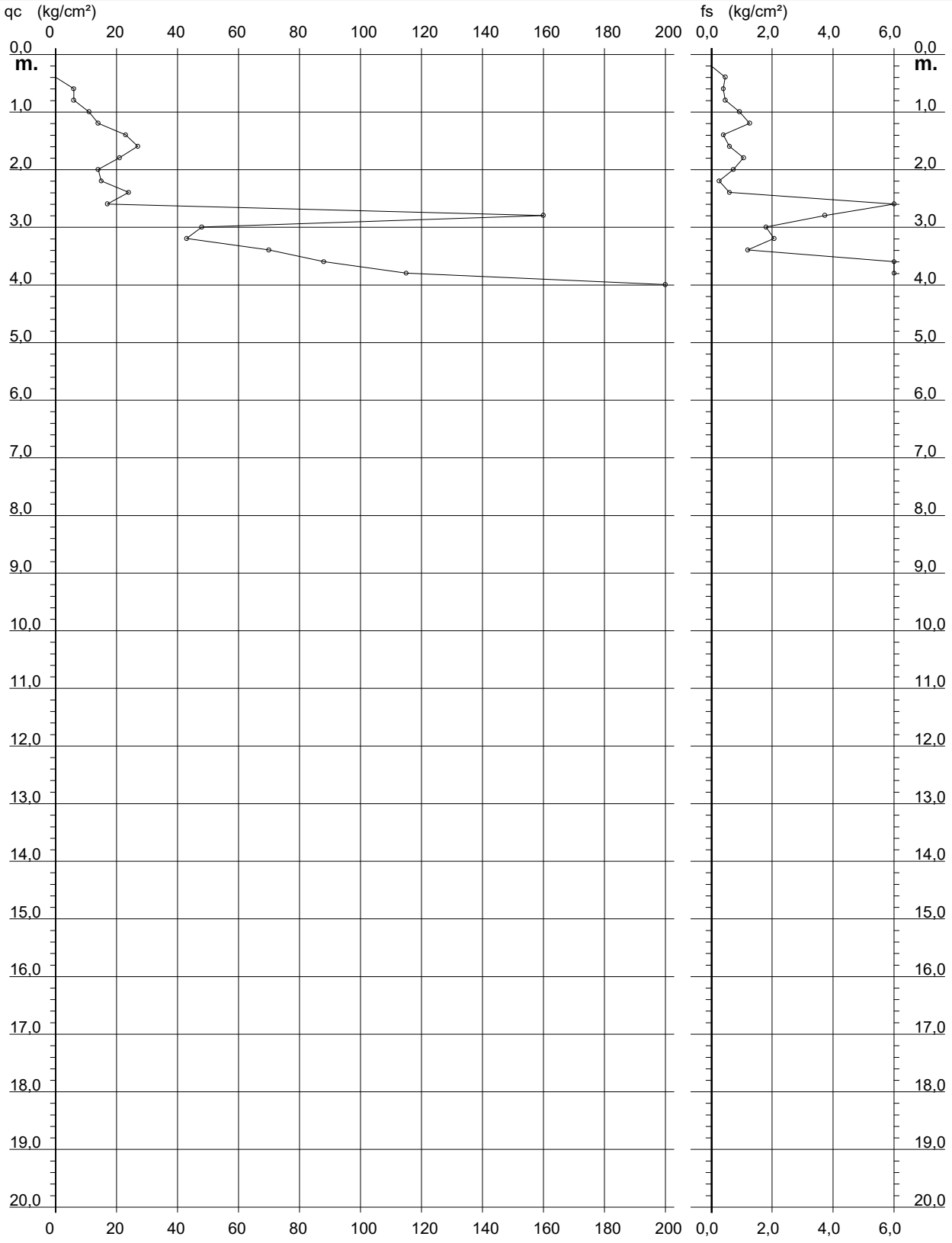
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 355

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-355	- scala vert.:	1 : 100



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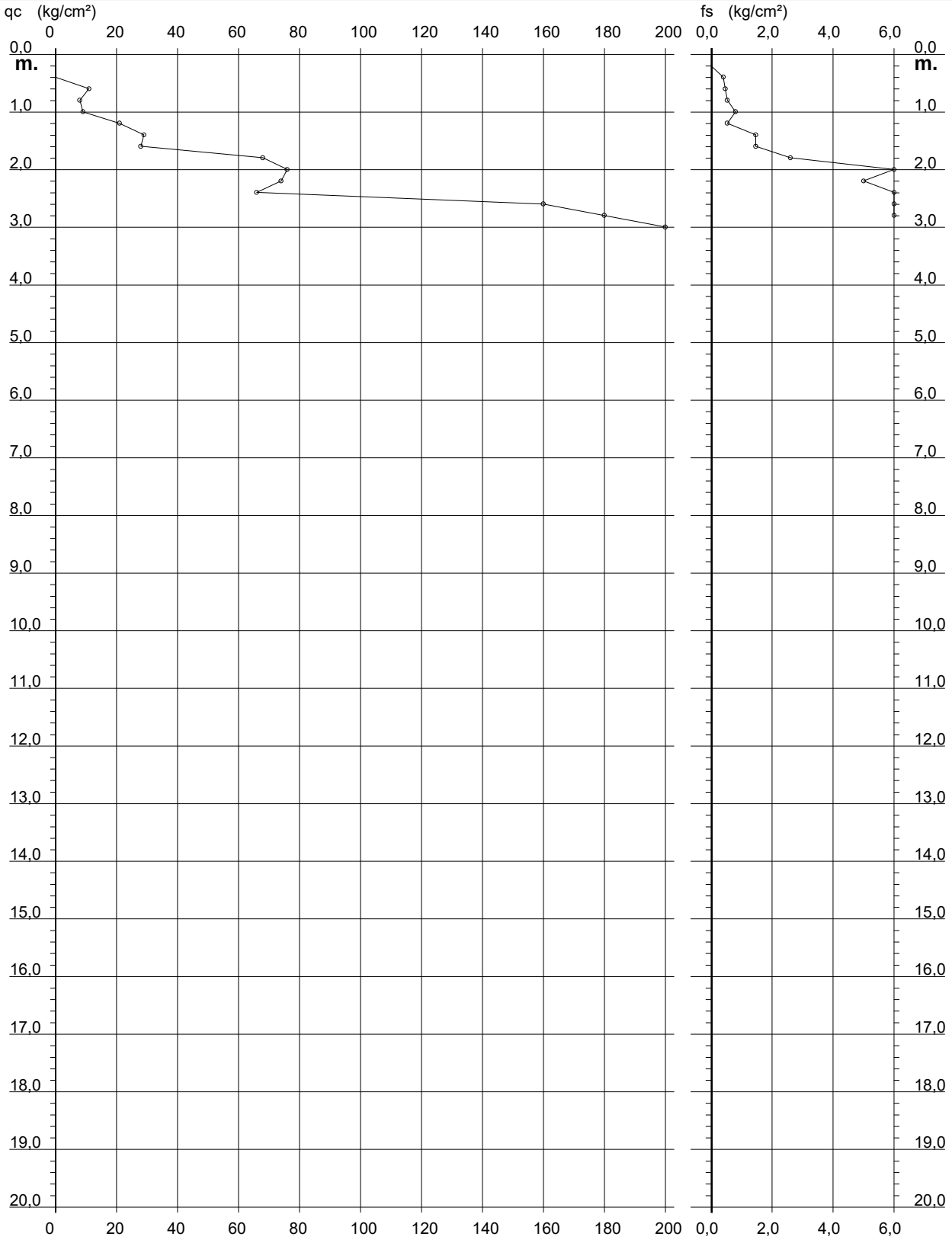
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 340

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-340	- scala vert.:	1 : 100



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Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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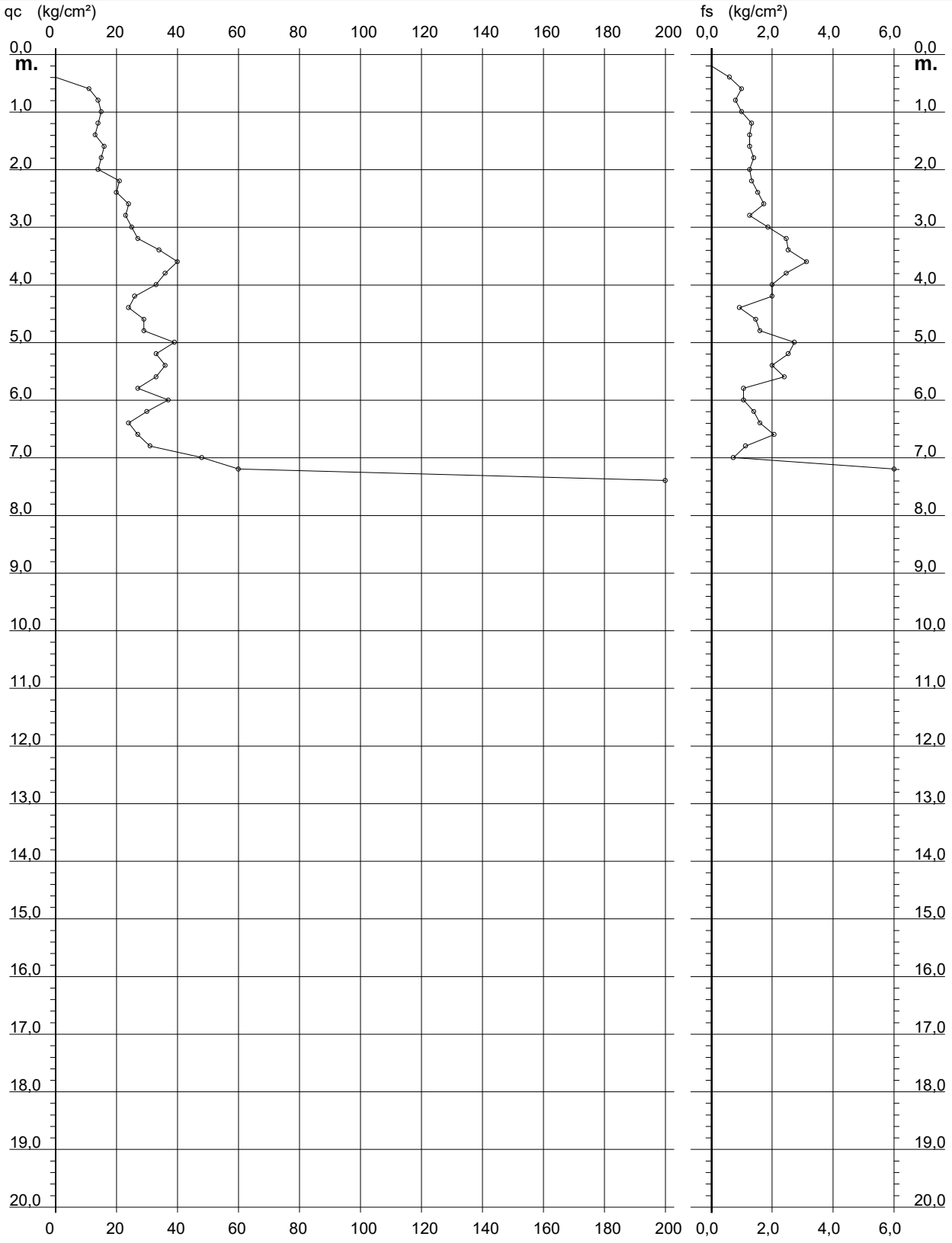
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 344

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-344	- scala vert.:	1 : 100



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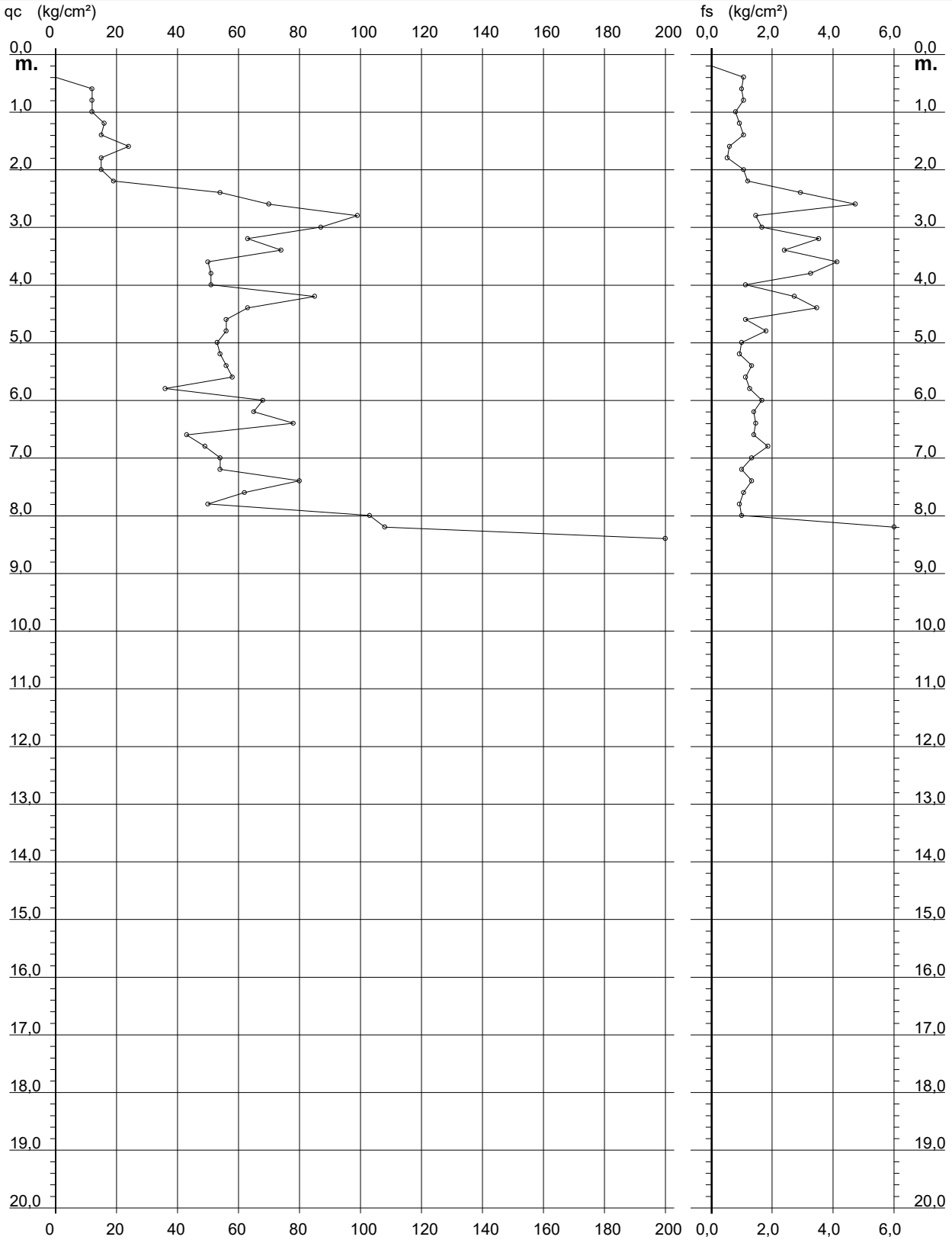
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 358

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-358	- scala vert.:	1 : 100



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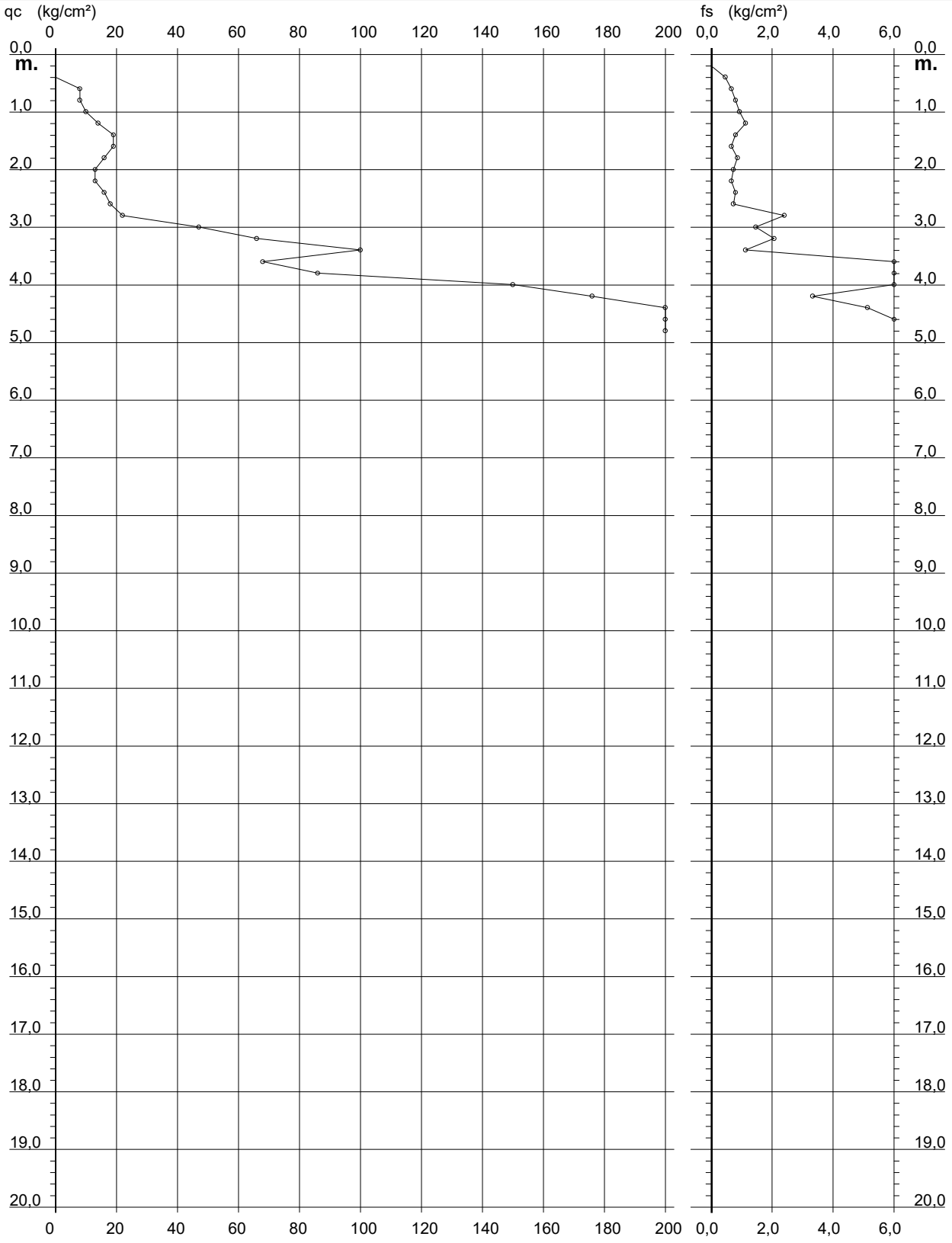
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 359

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	21/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-359	- scala vert.:	1 : 100



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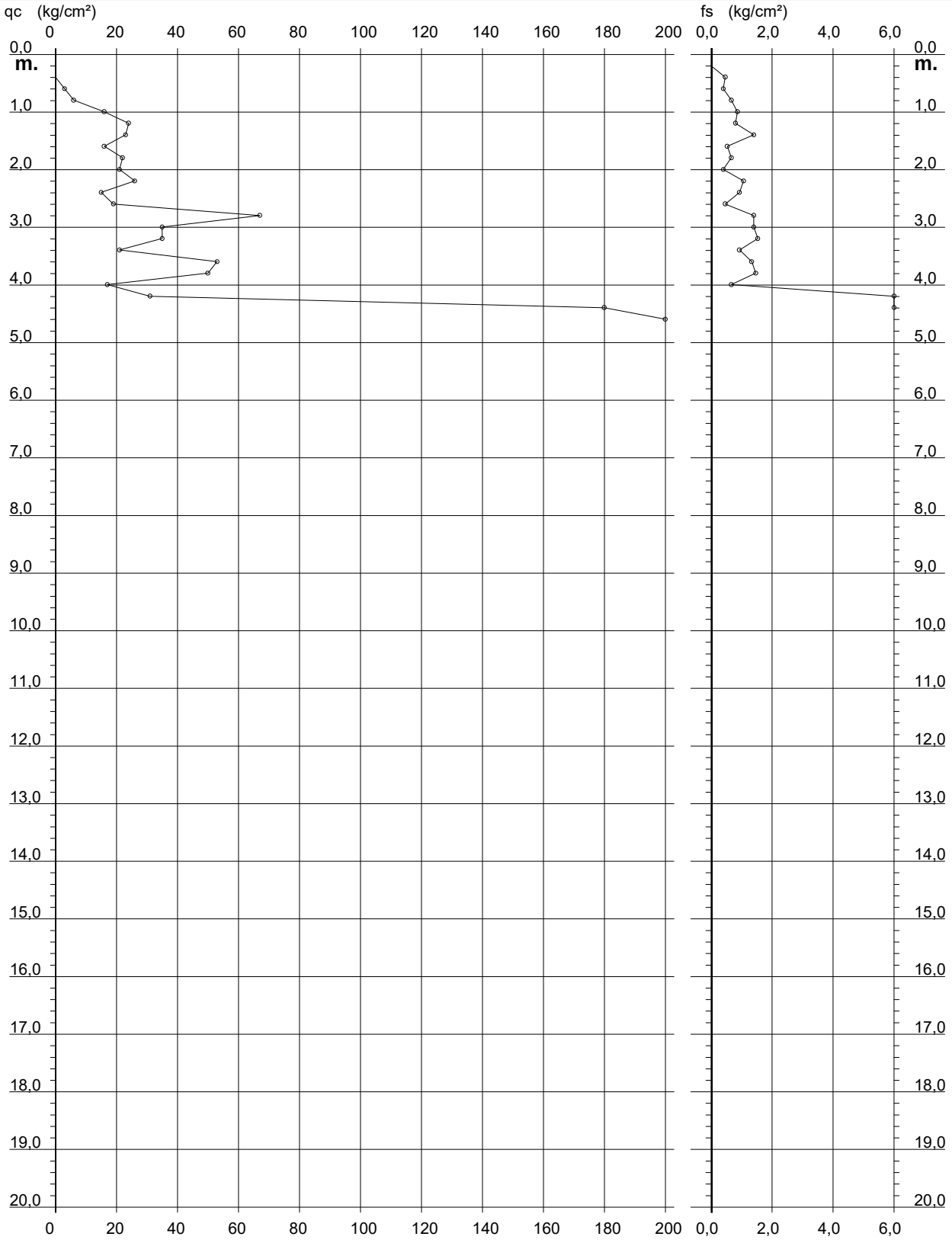
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 361

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	21/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-361	- scala vert.:	1 : 100



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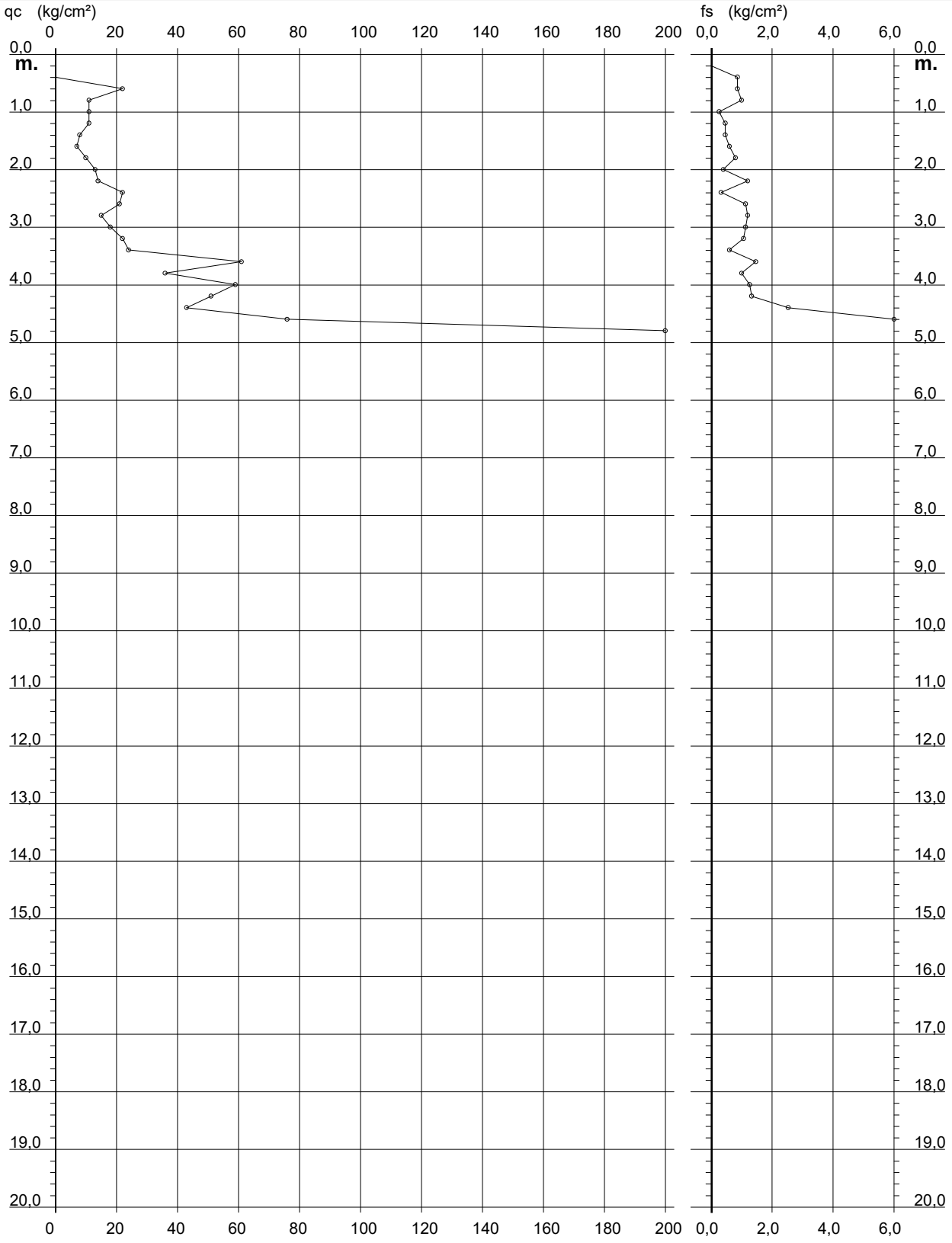
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 362

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	21/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-362	- scala vert.:	1 : 100



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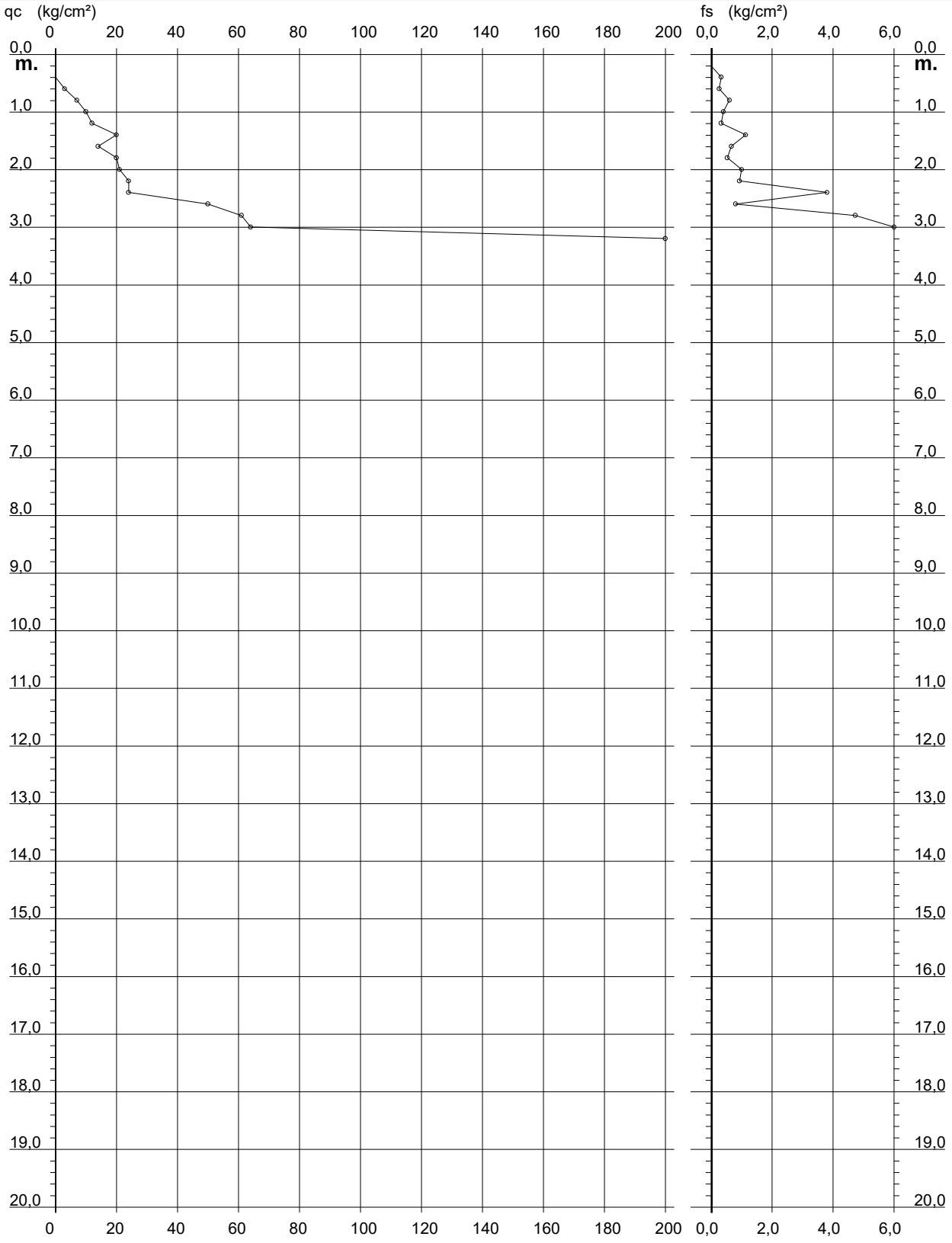
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 363

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	21/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-363	- scala vert.:	1 : 100



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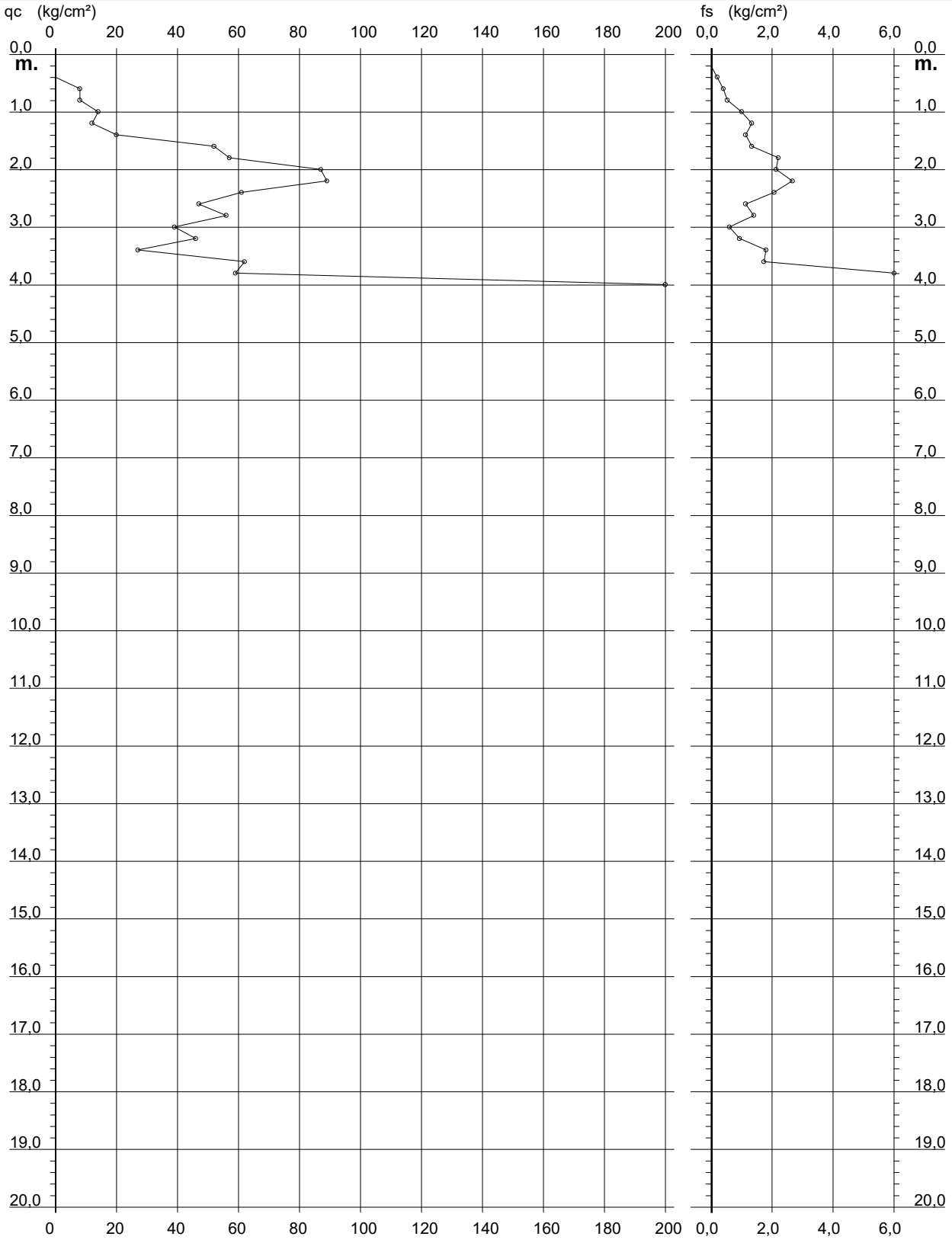
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 360

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	21/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-360	- scala vert.:	1 : 100



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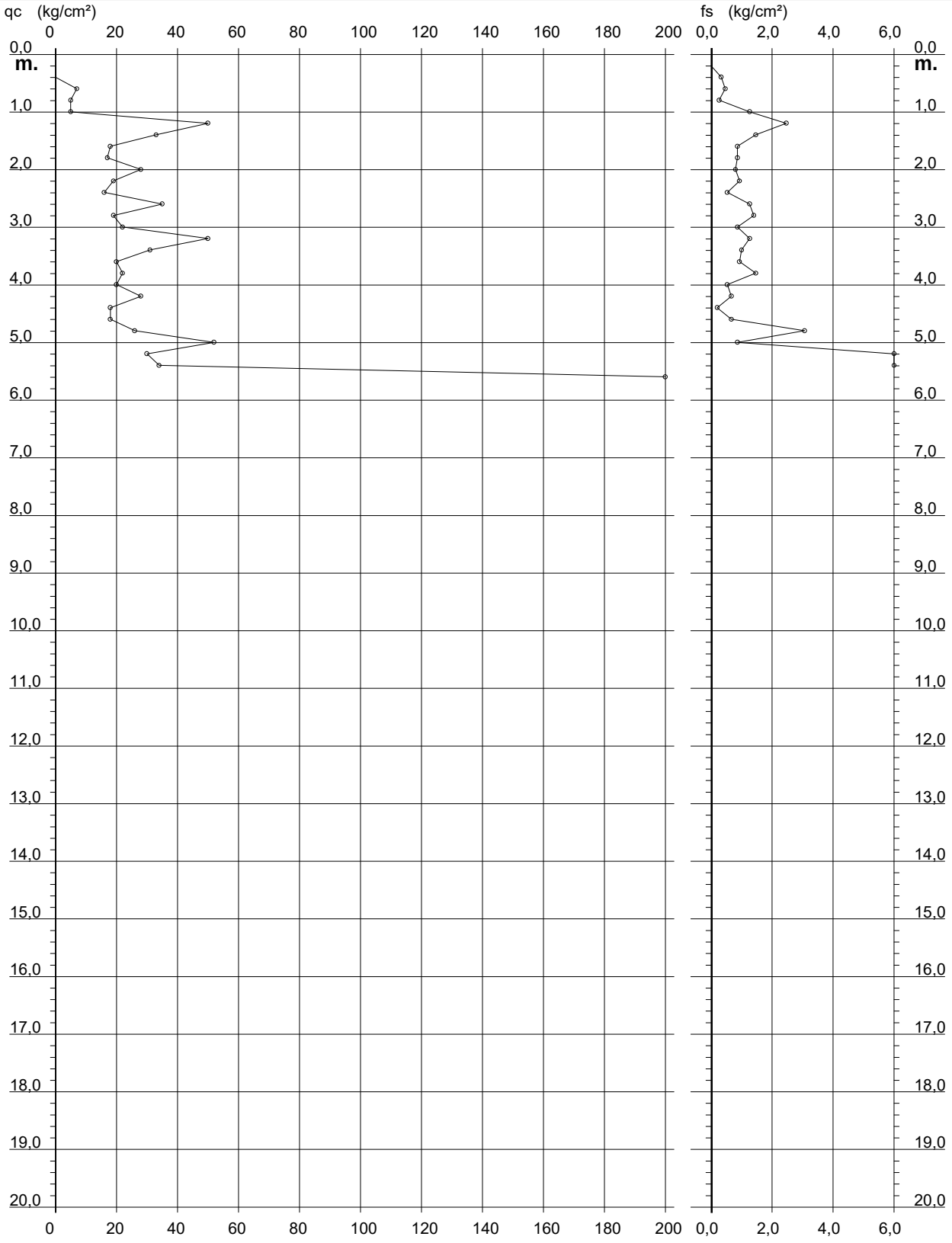
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 364

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	21/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-364	- scala vert.:	1 : 100



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Via V. Emanuele, 43 - 82010 Paolisi (BN)

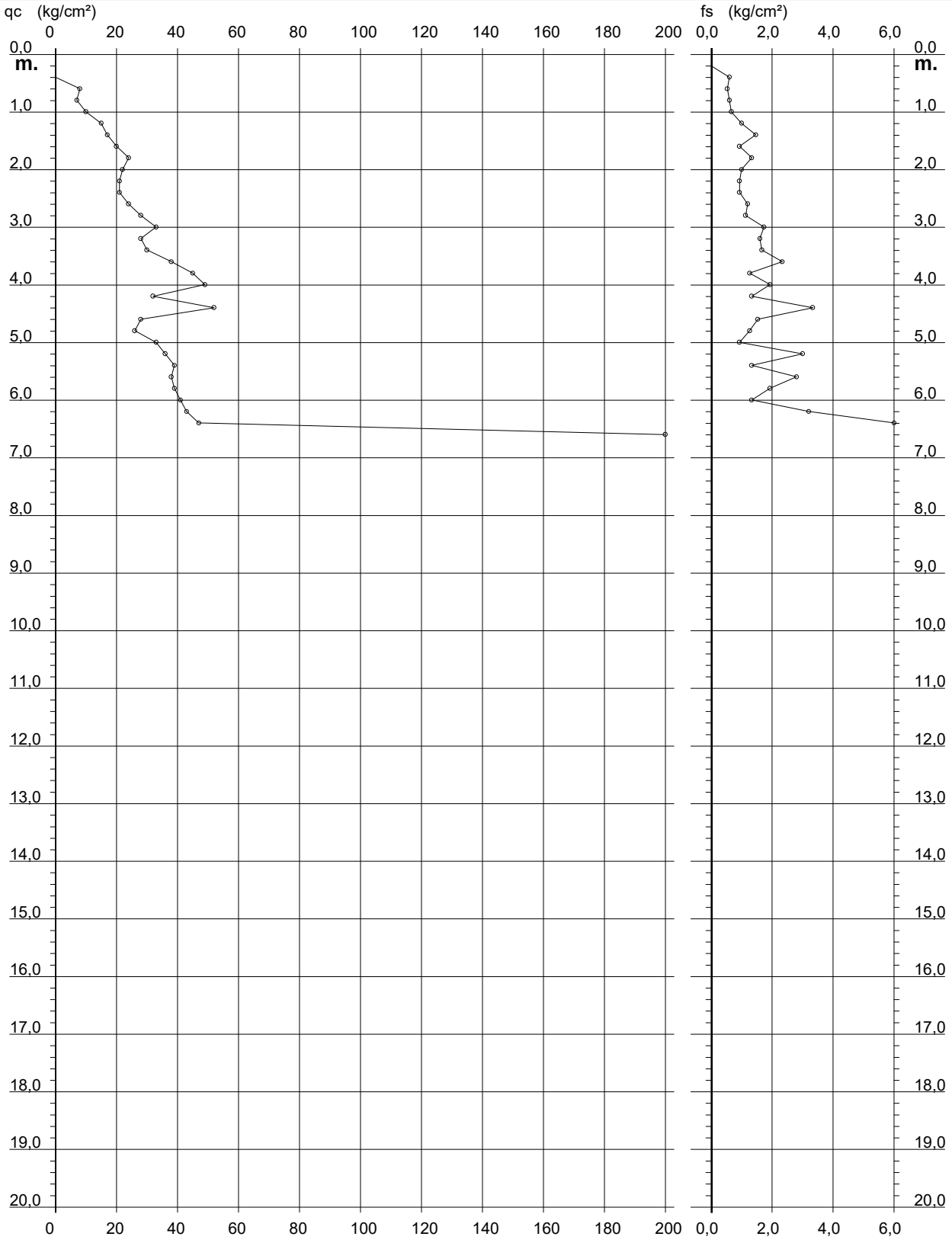
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 365

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	21/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-365	- scala vert.:	1 : 100



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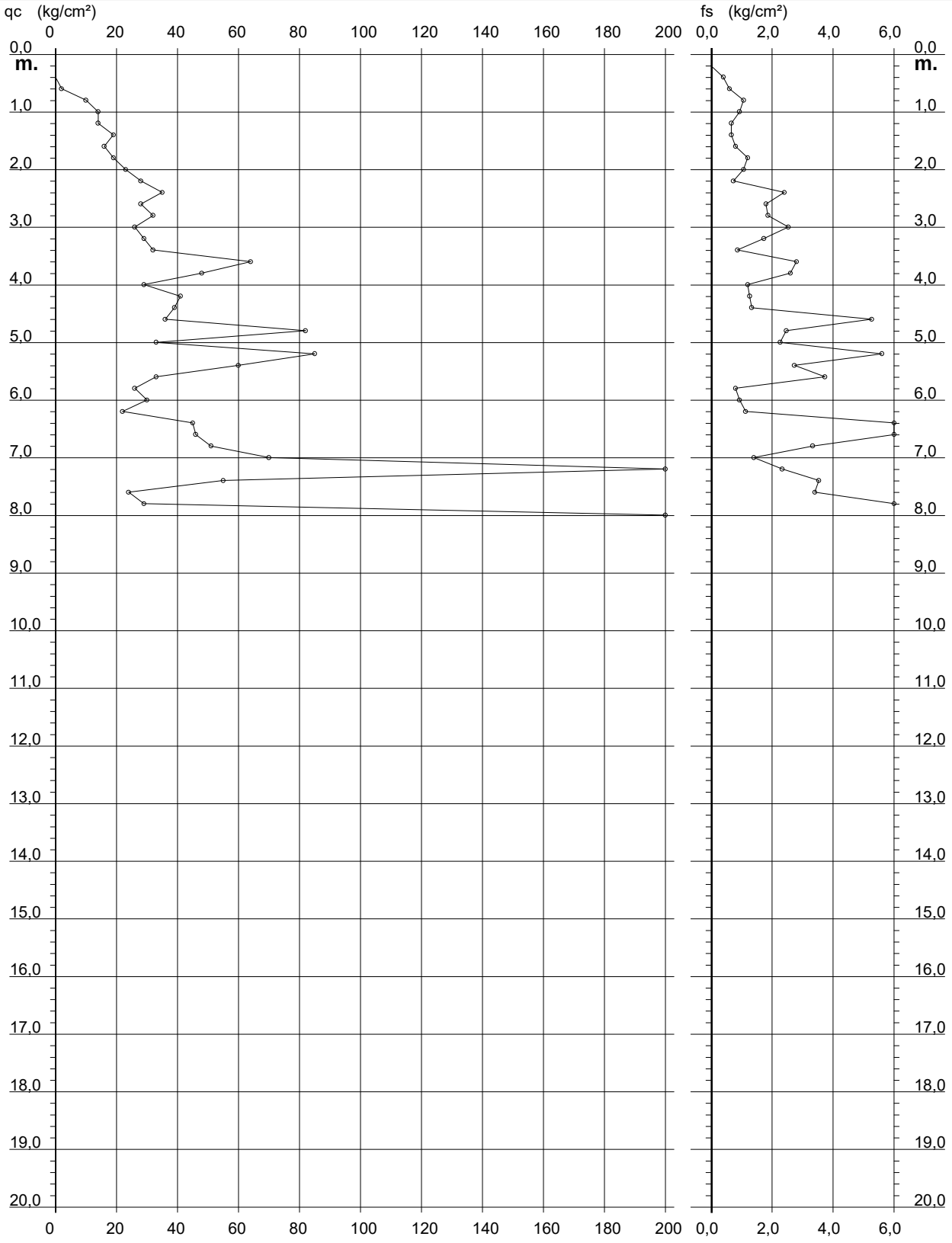
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 366

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-366	- scala vert.:	1 : 100



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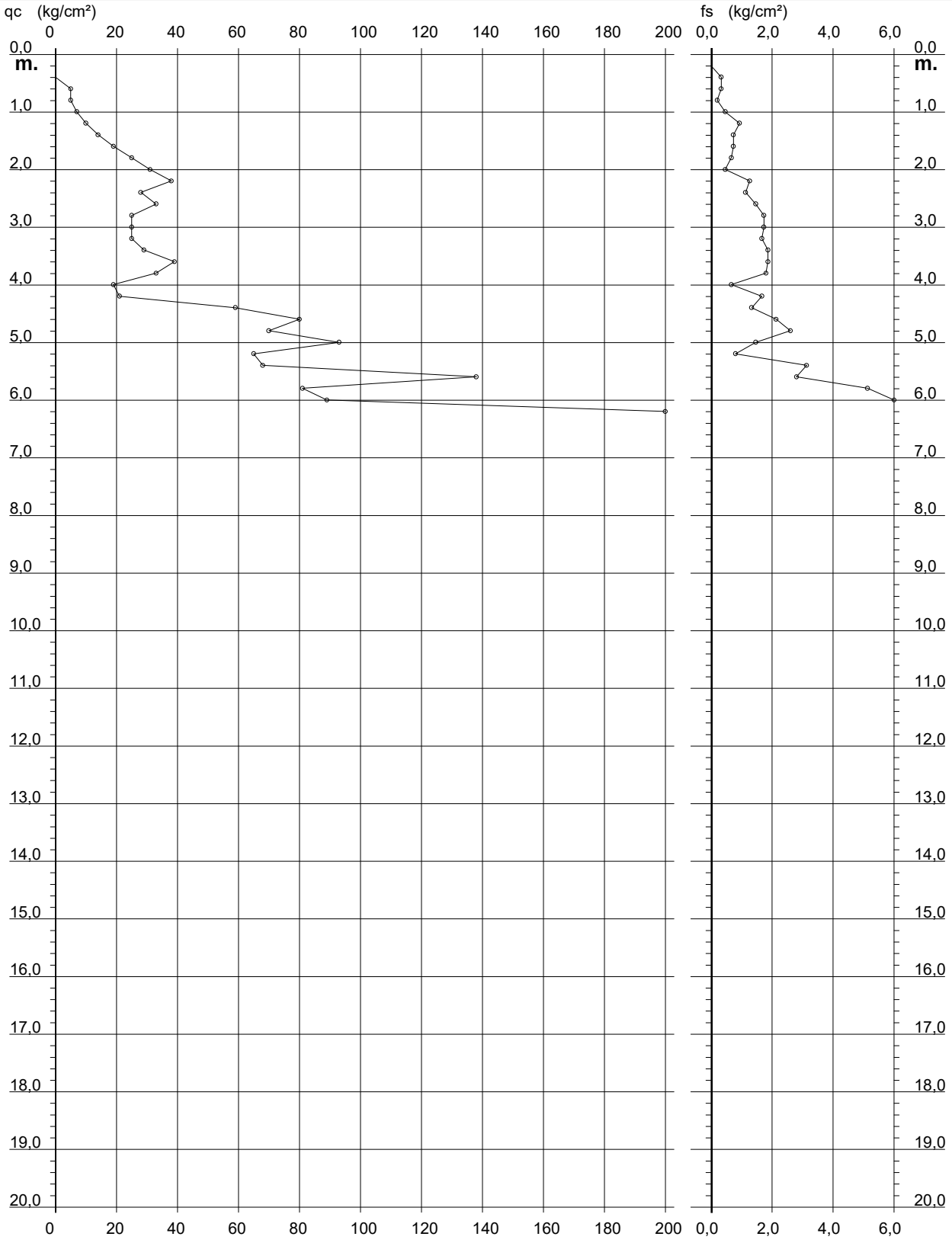
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 367

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-367	- scala vert.:	1 : 100



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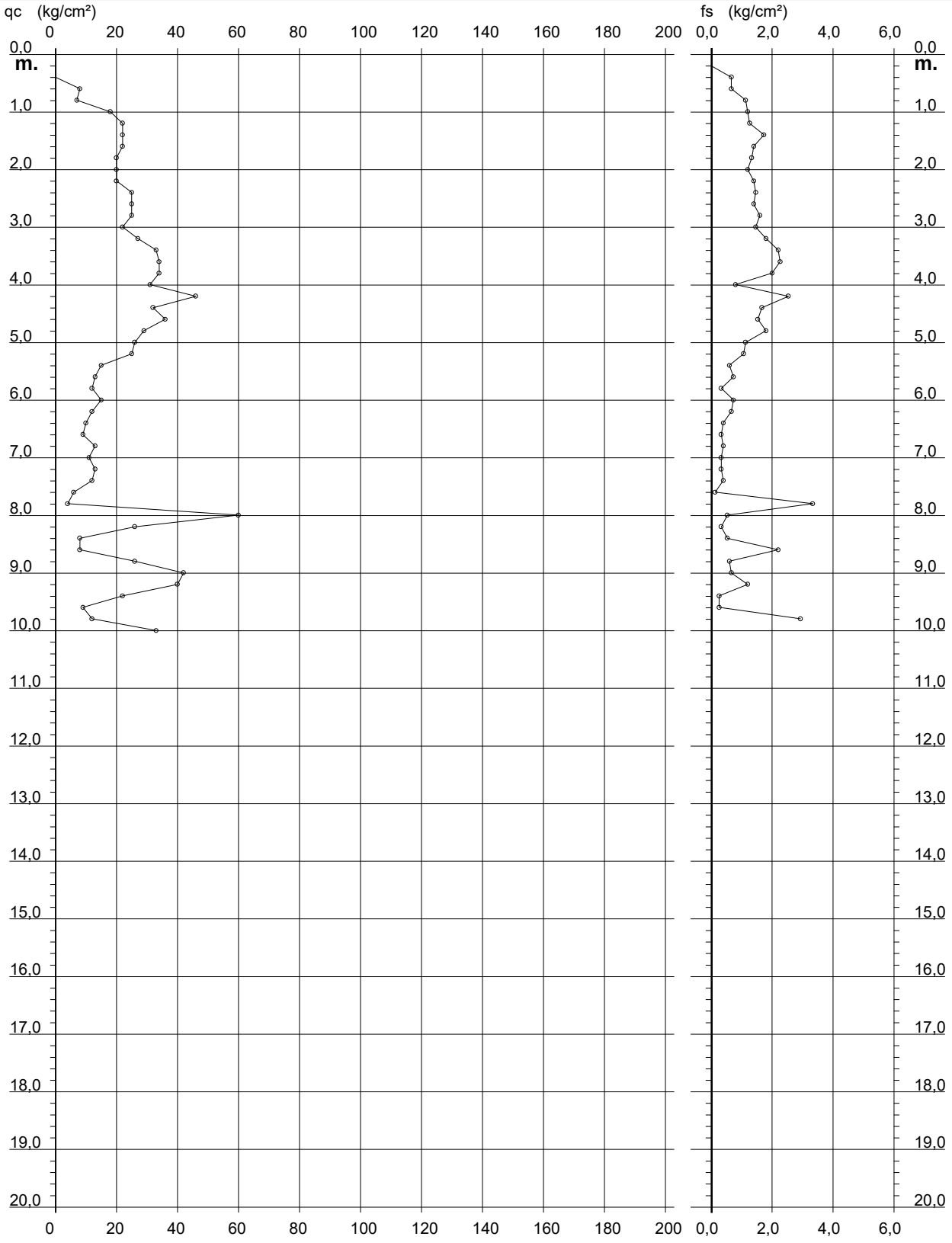
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 368

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-368	- scala vert.:	1 : 100



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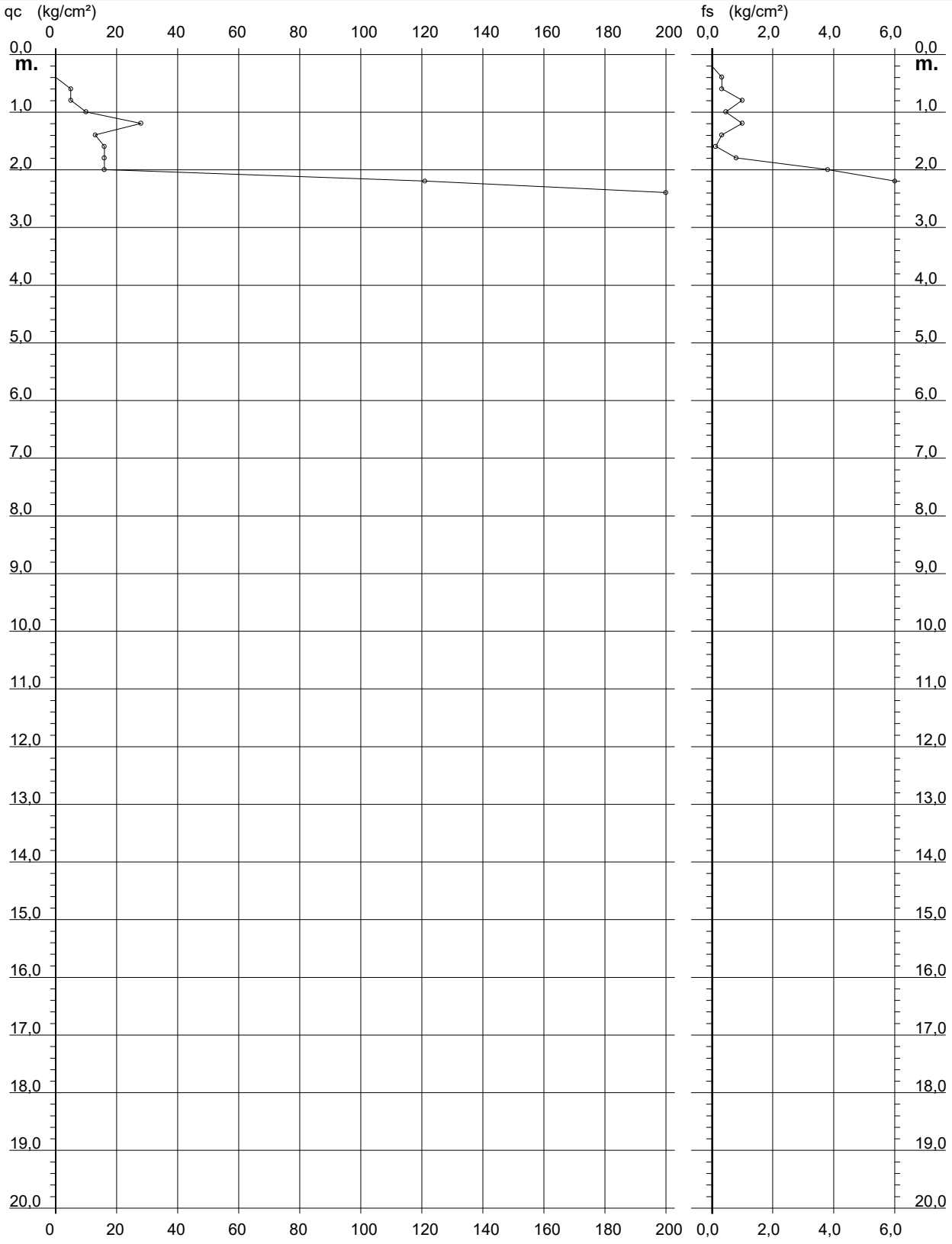
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 369

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-369	- scala vert.:	1 : 100



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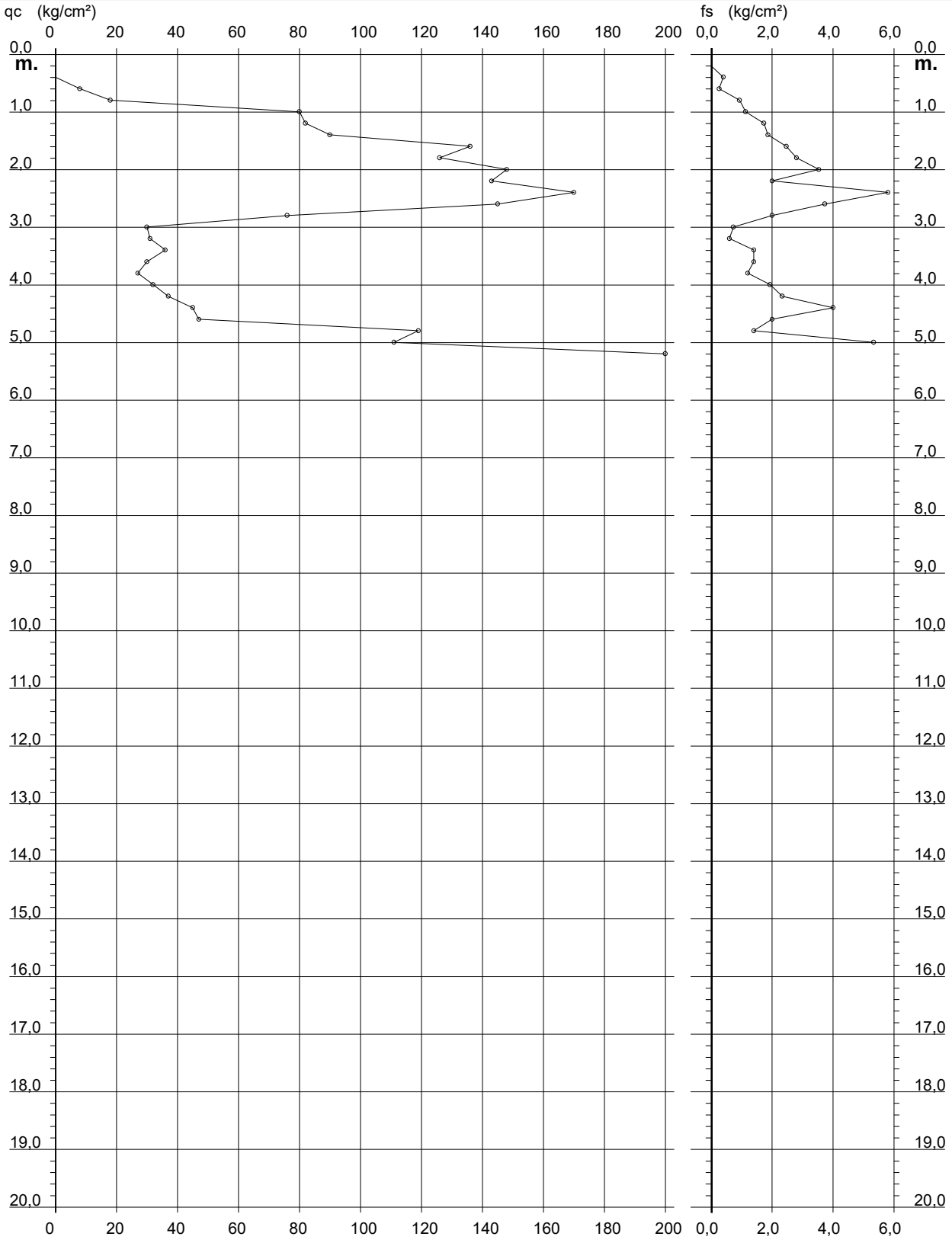
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 370

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-370	- scala vert.:	1 : 100



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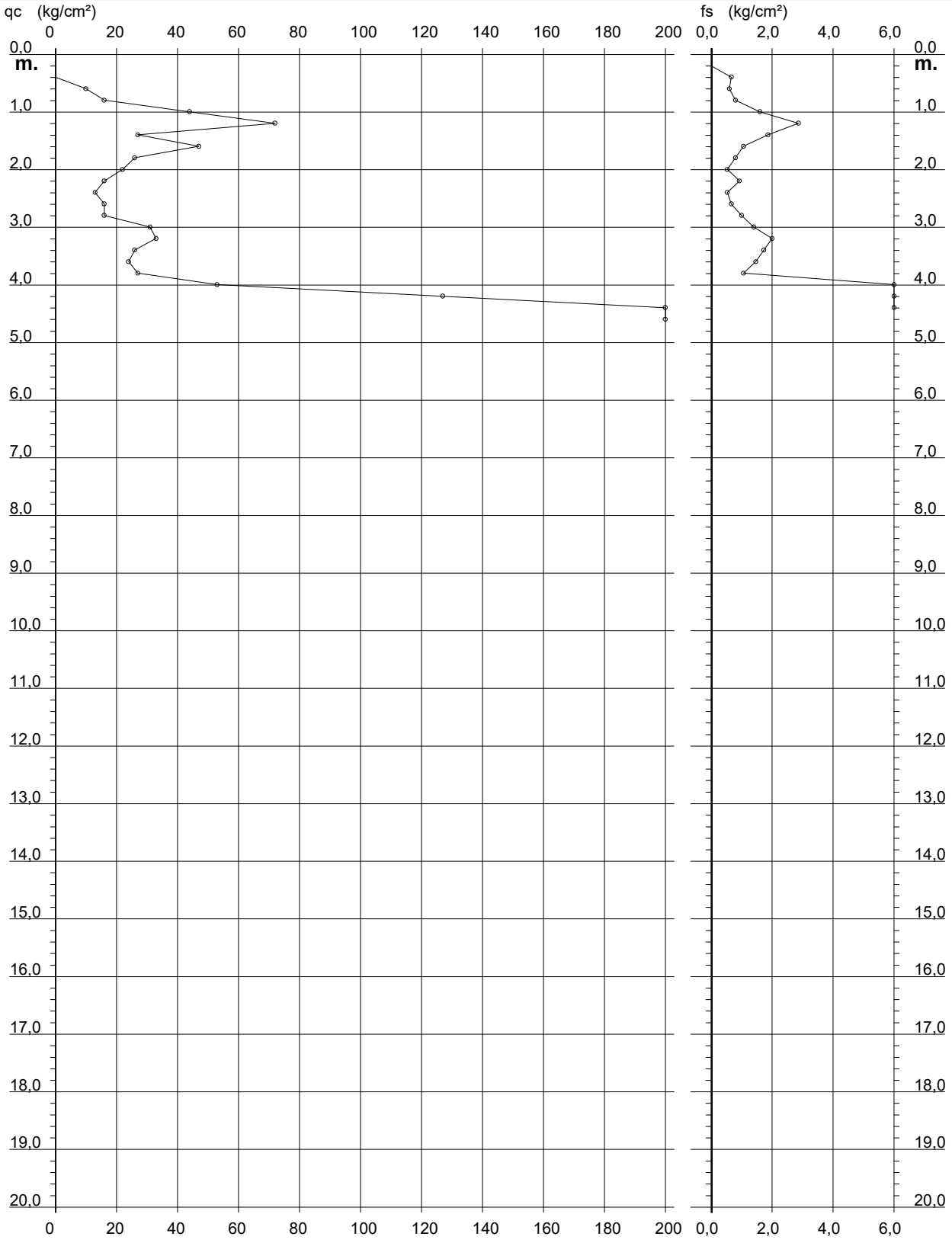
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 371

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-371	- scala vert.:	1 : 100



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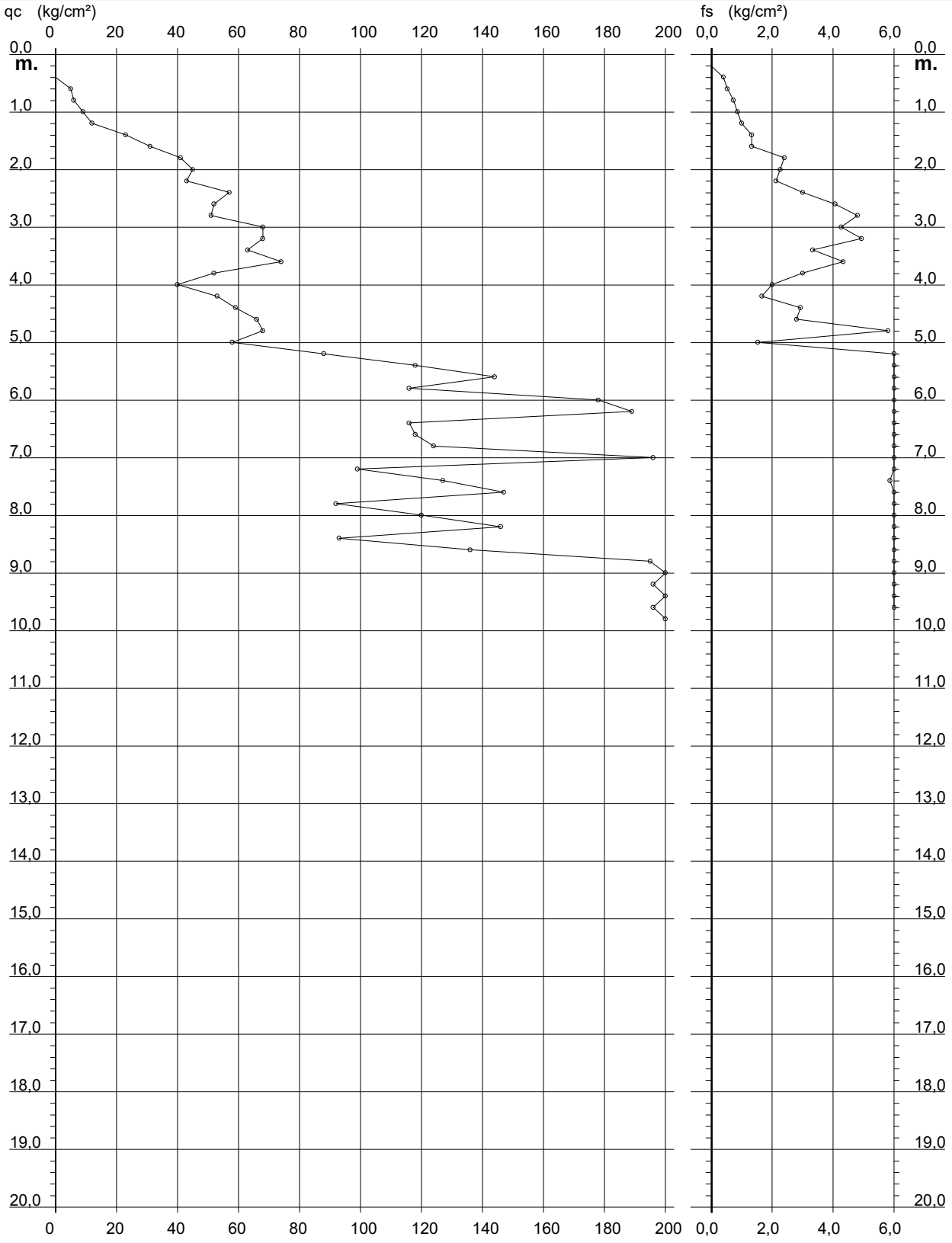
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 372

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-372	- scala vert.:	1 : 100



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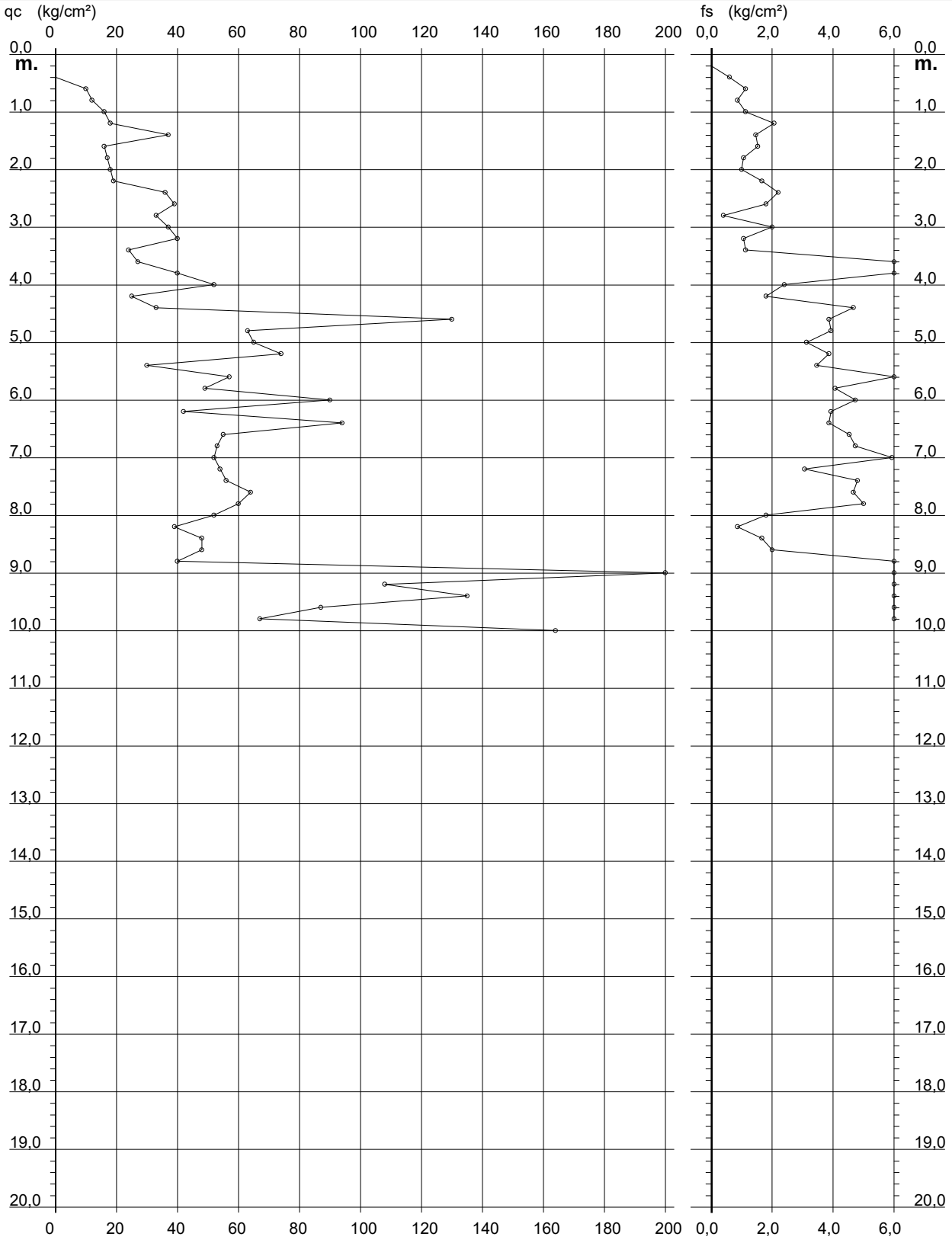
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 373

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-373	- scala vert.:	1 : 100



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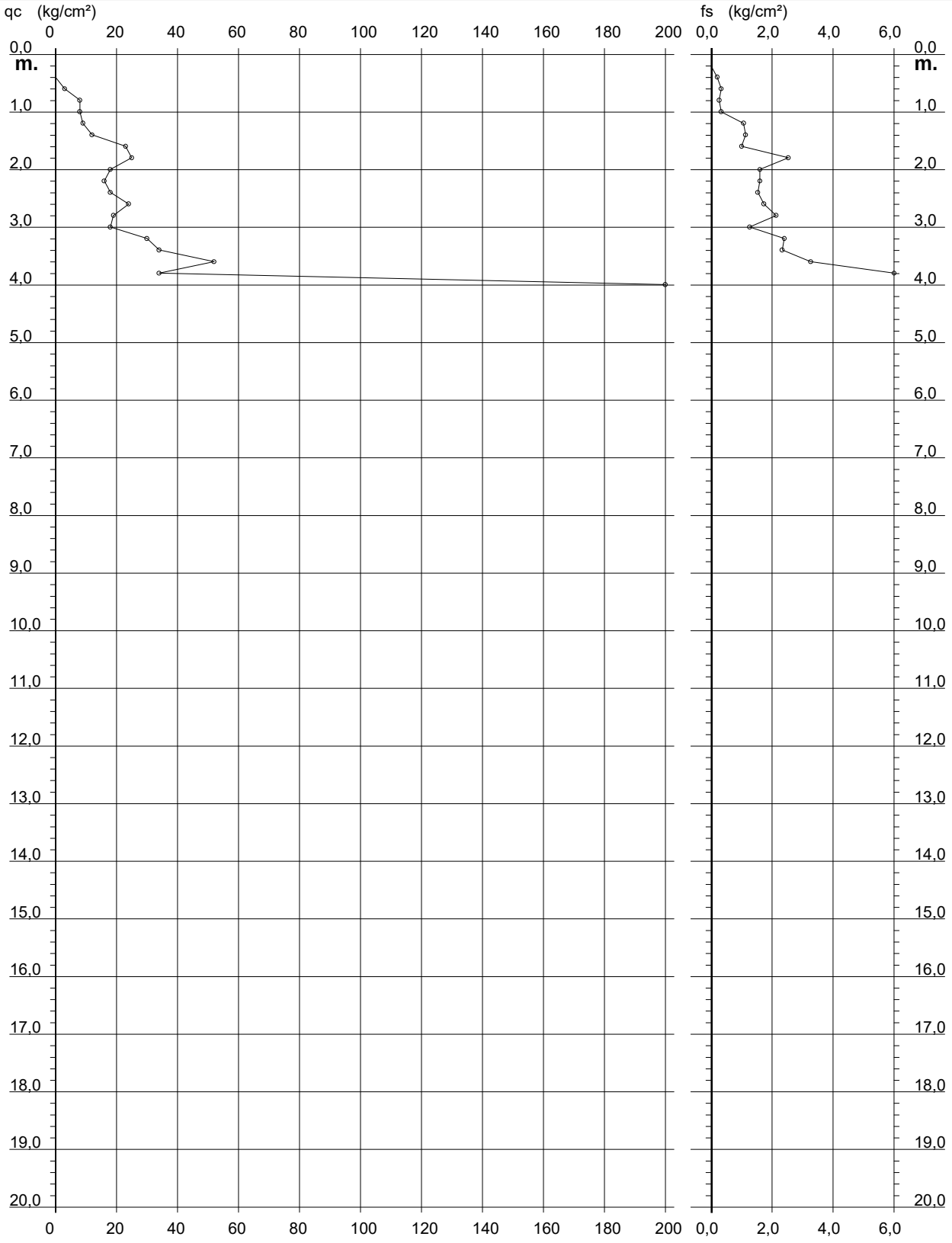
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 374

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-374	- scala vert.:	1 : 100



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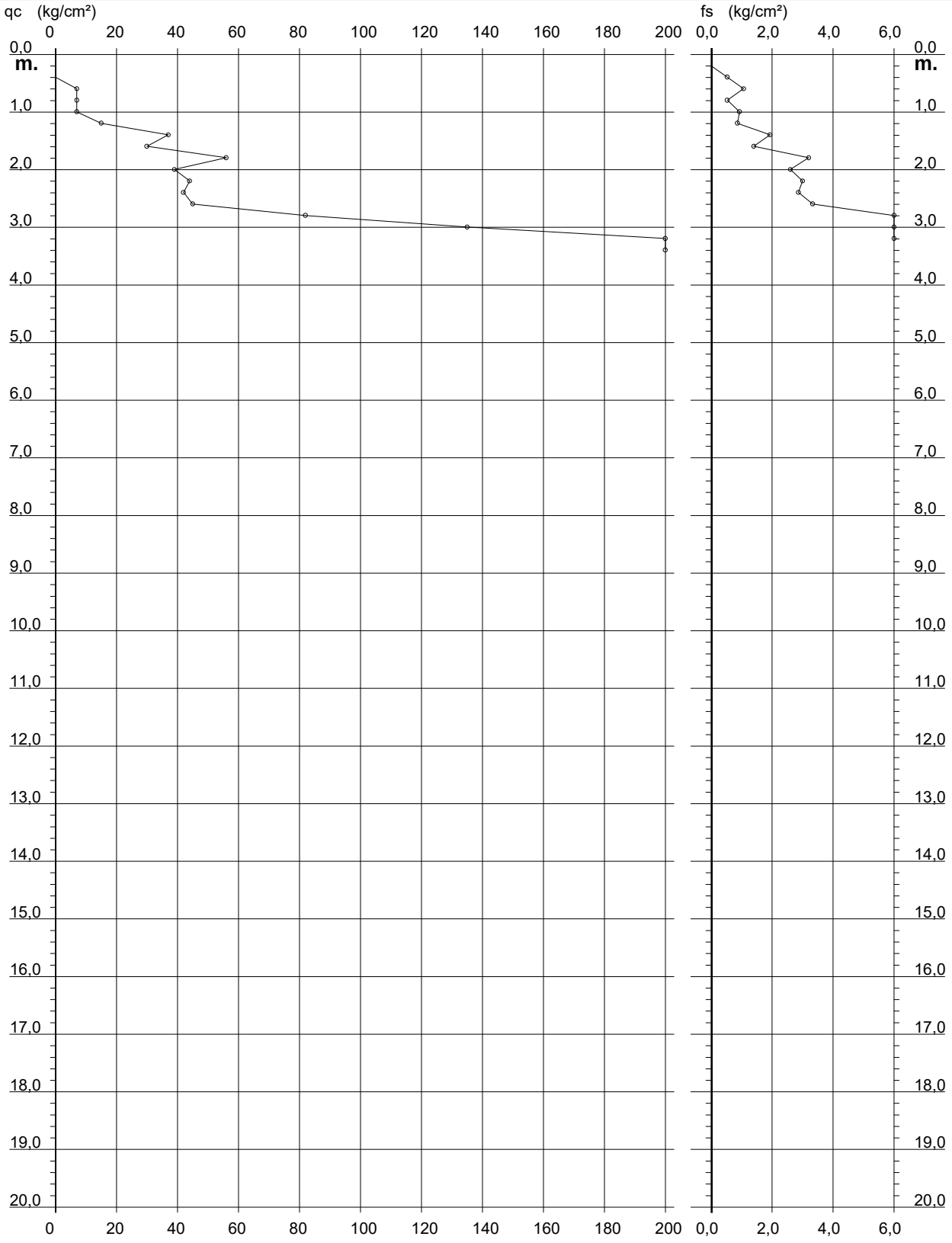
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 375

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-375	- scala vert.:	1 : 100



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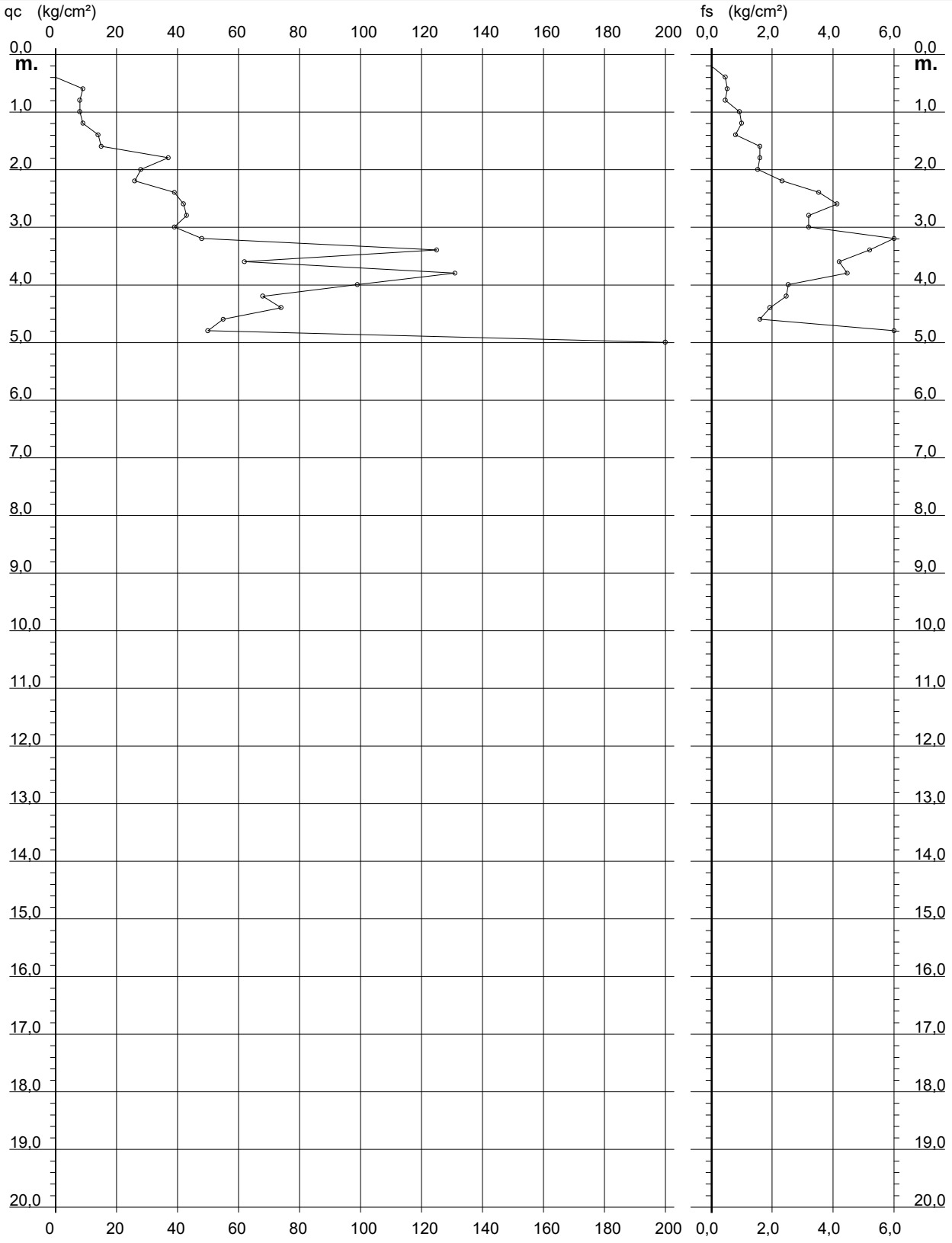
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 376

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/12/2020
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-376	- scala vert.:	1 : 100



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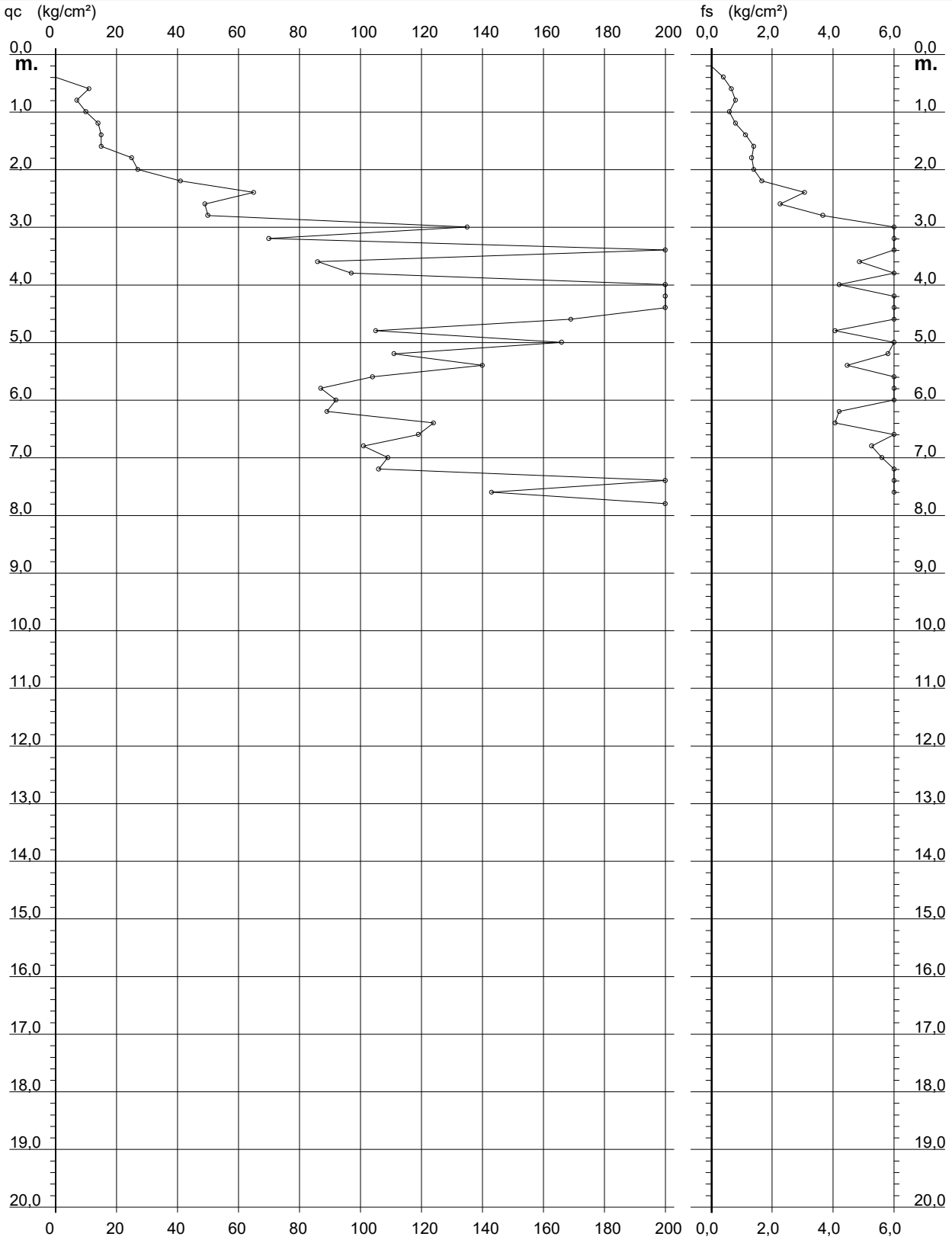
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 377

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-377	- scala vert.:	1 : 100



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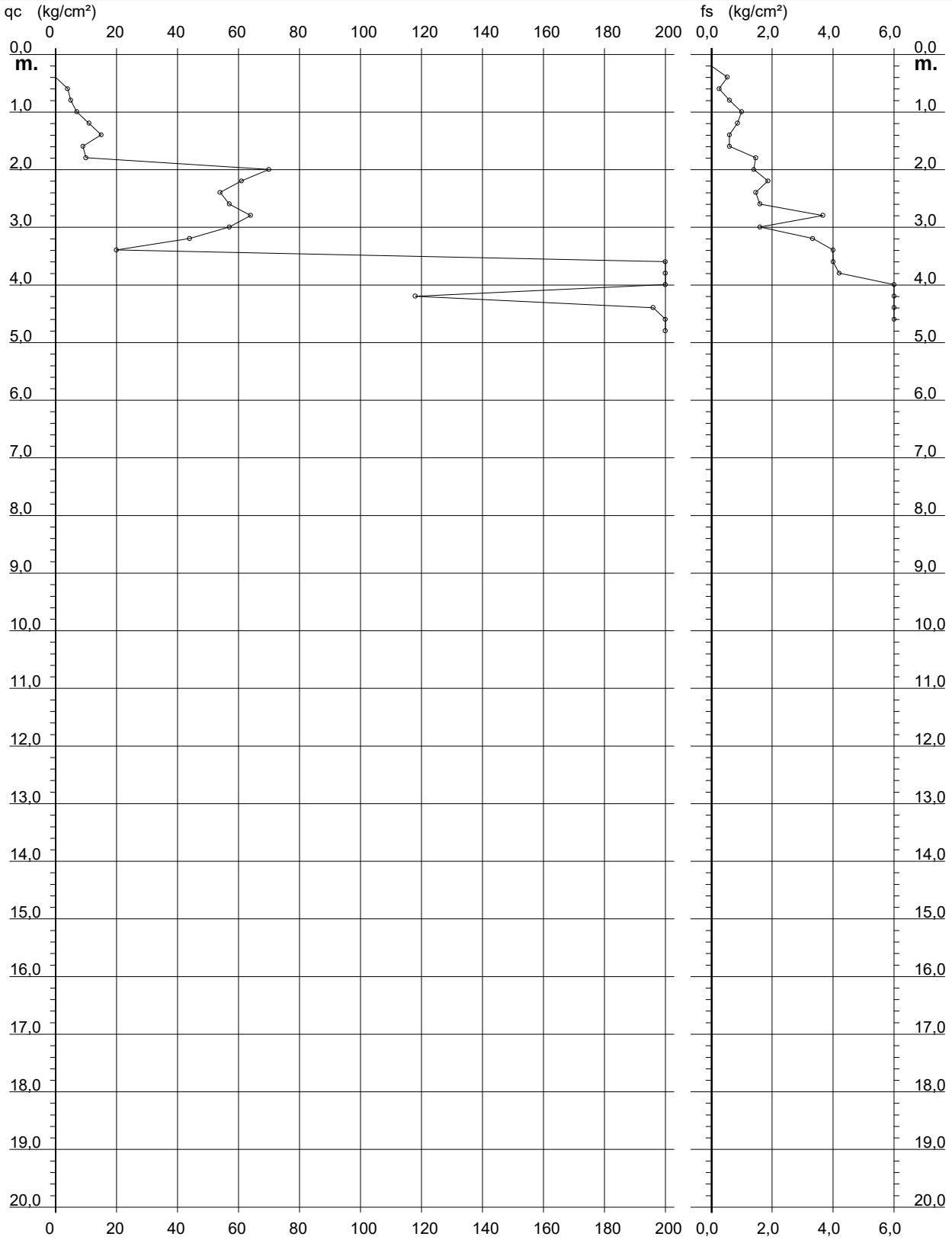
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 378

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-378	- scala vert.:	1 : 100



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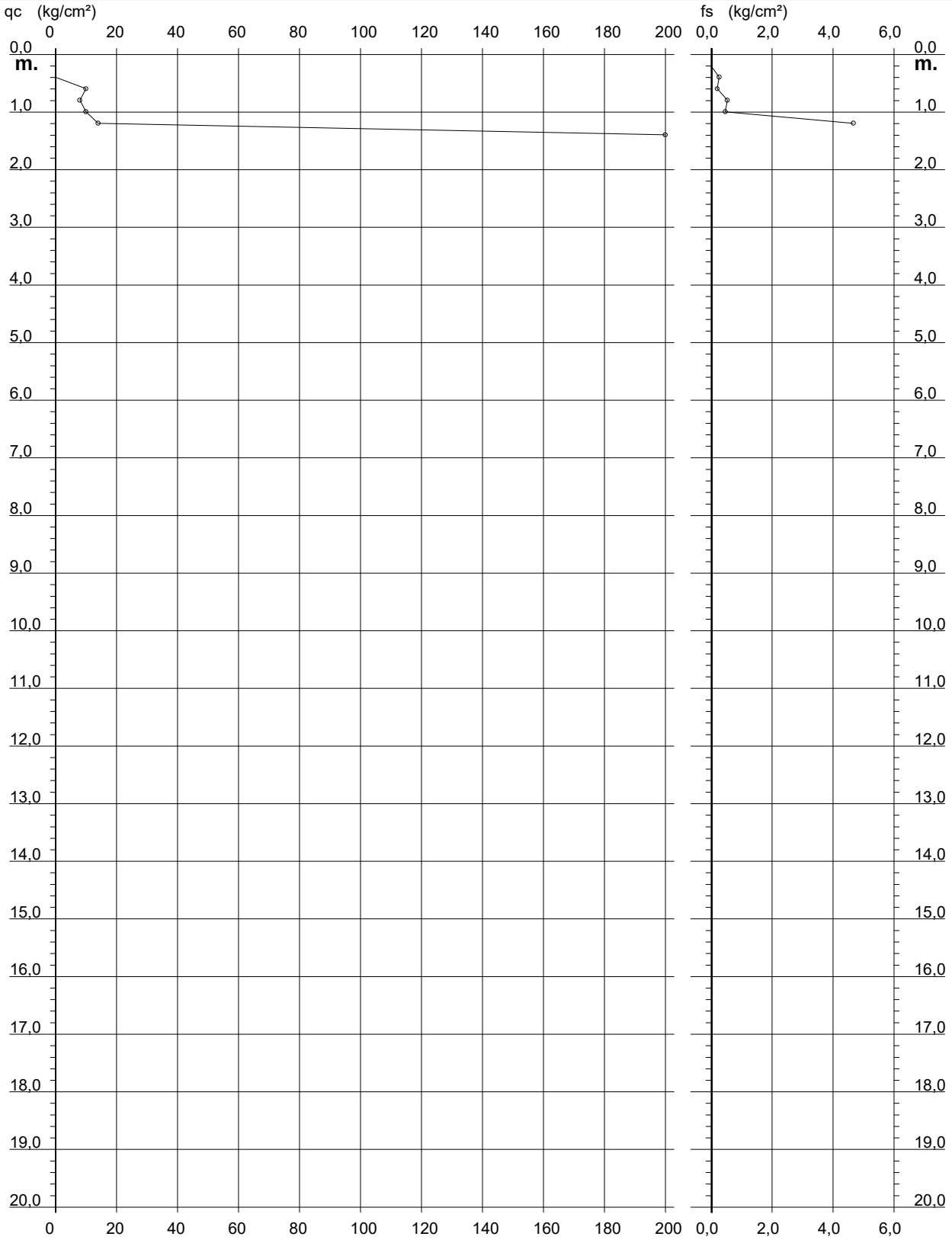
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 379

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-379	- scala vert.:	1 : 100



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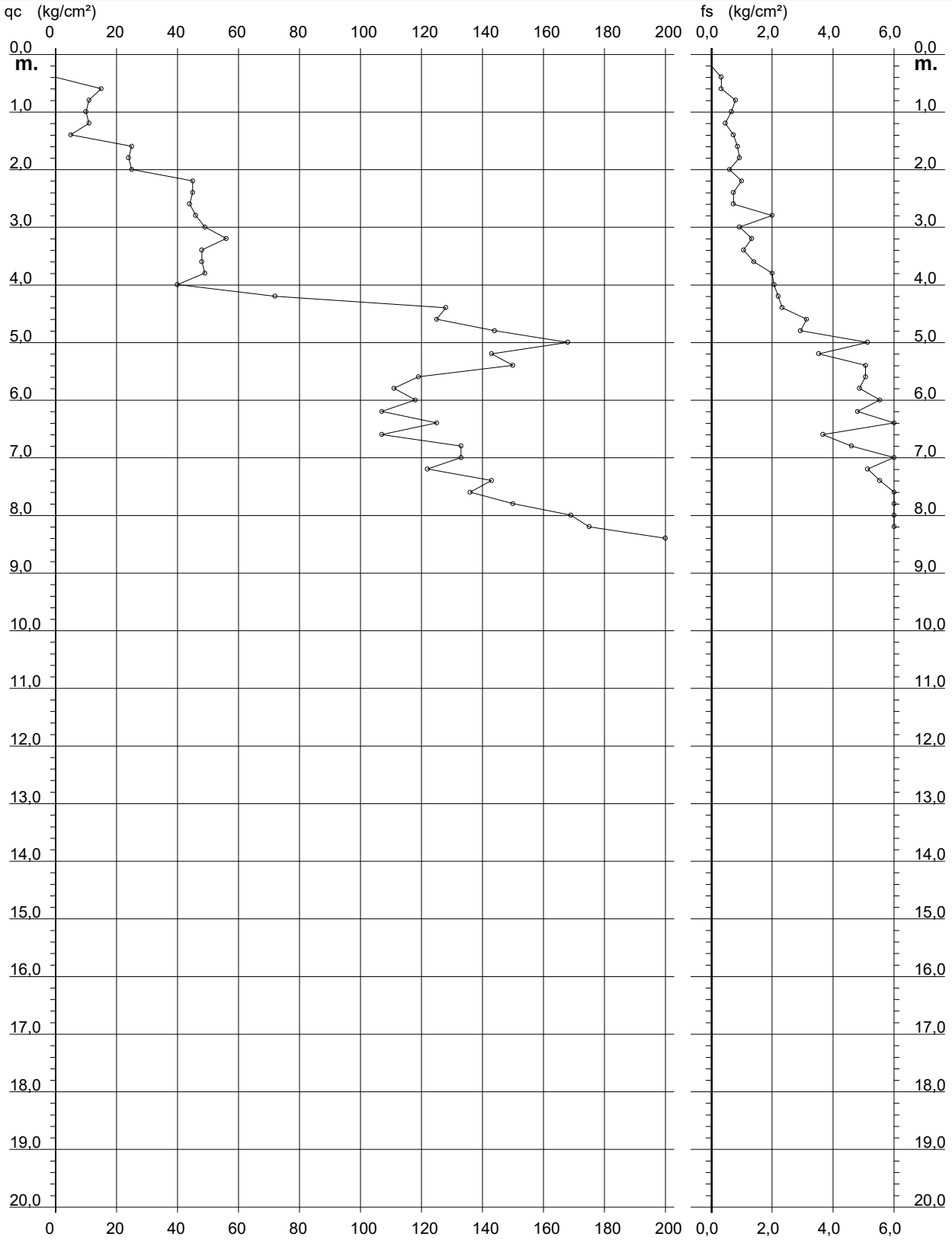
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 384

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-384	- scala vert.:	1 : 100



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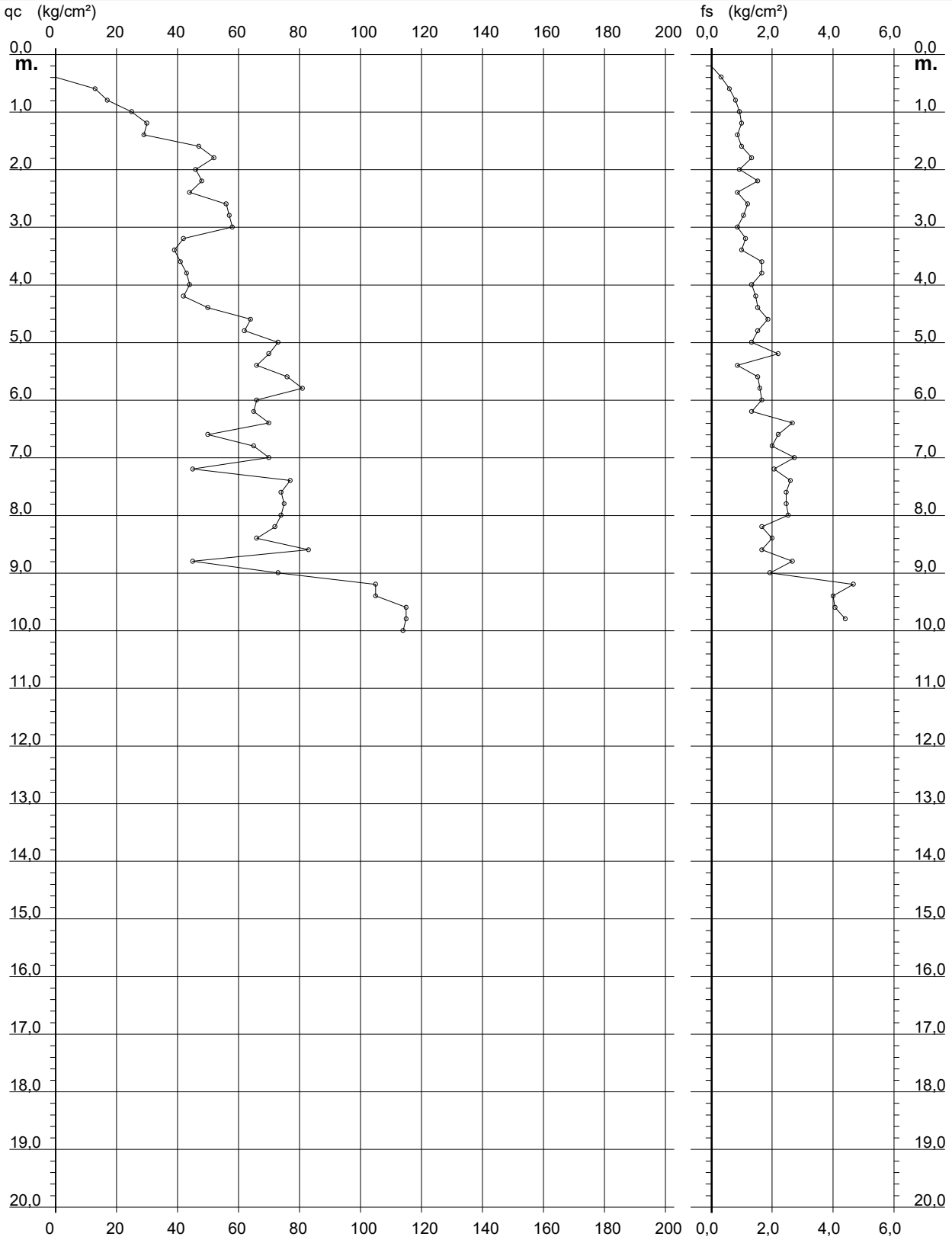
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 382

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-382	- scala vert.:	1 : 100



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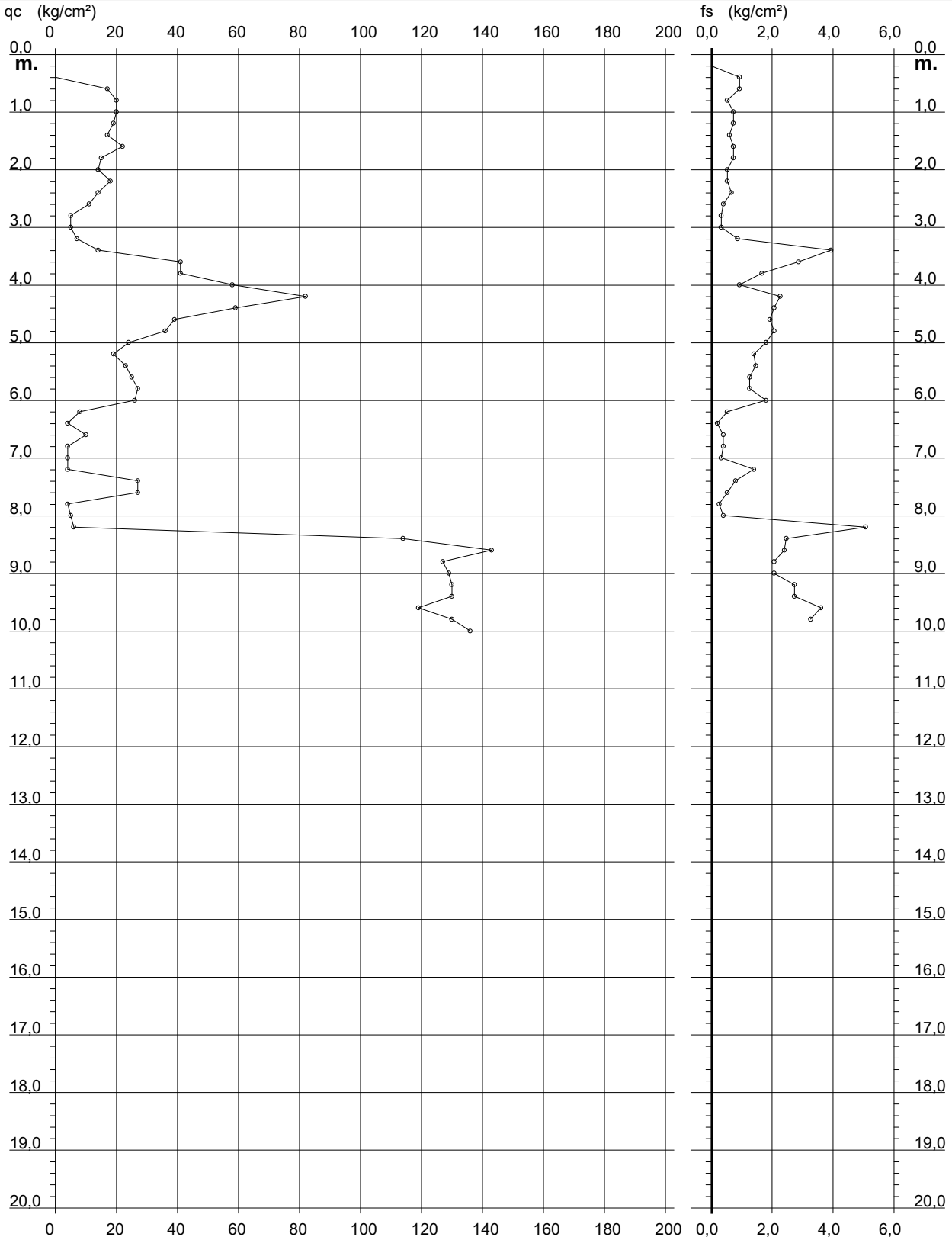
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 381

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-381	- scala vert.:	1 : 100



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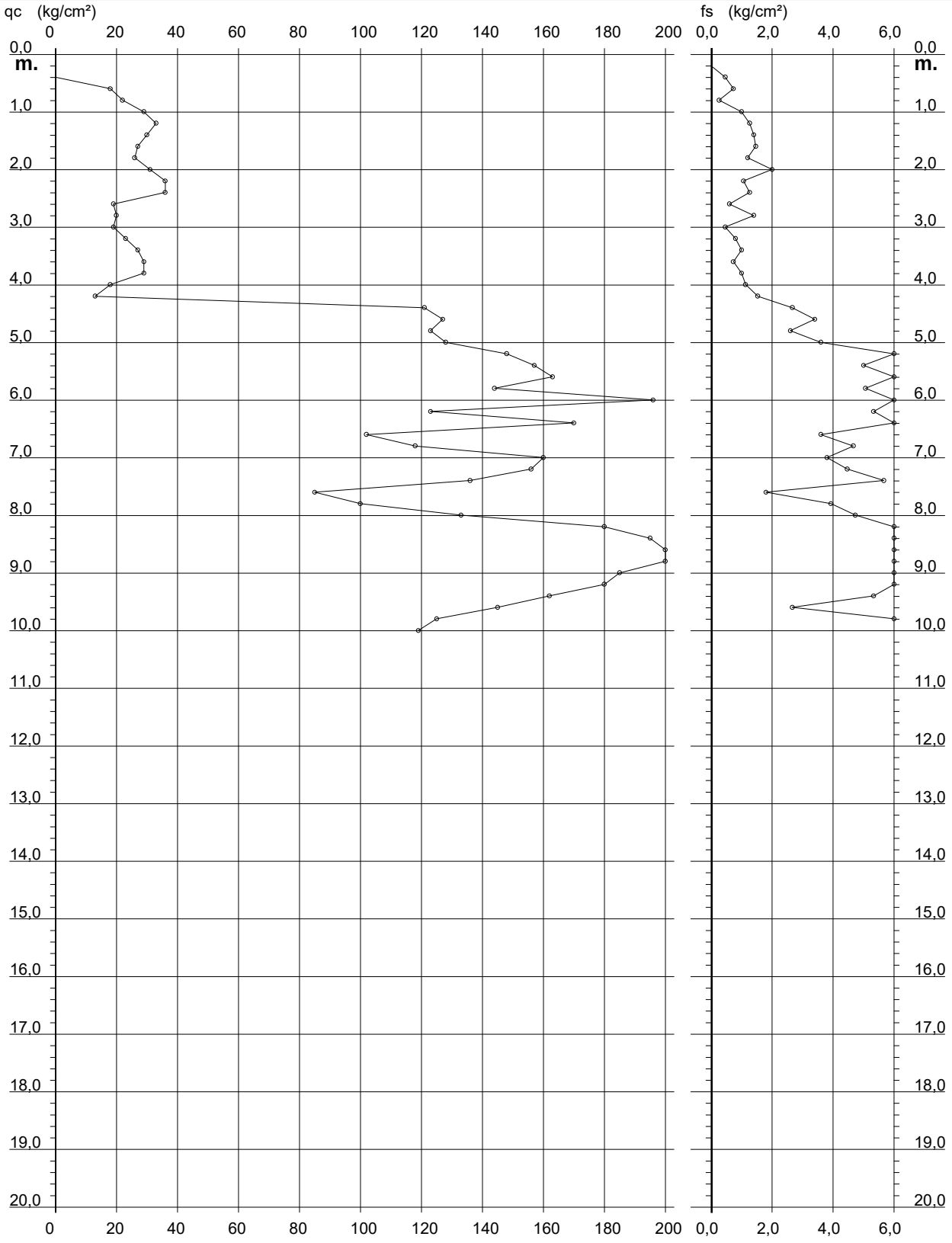
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 383

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-383	- scala vert.:	1 : 100



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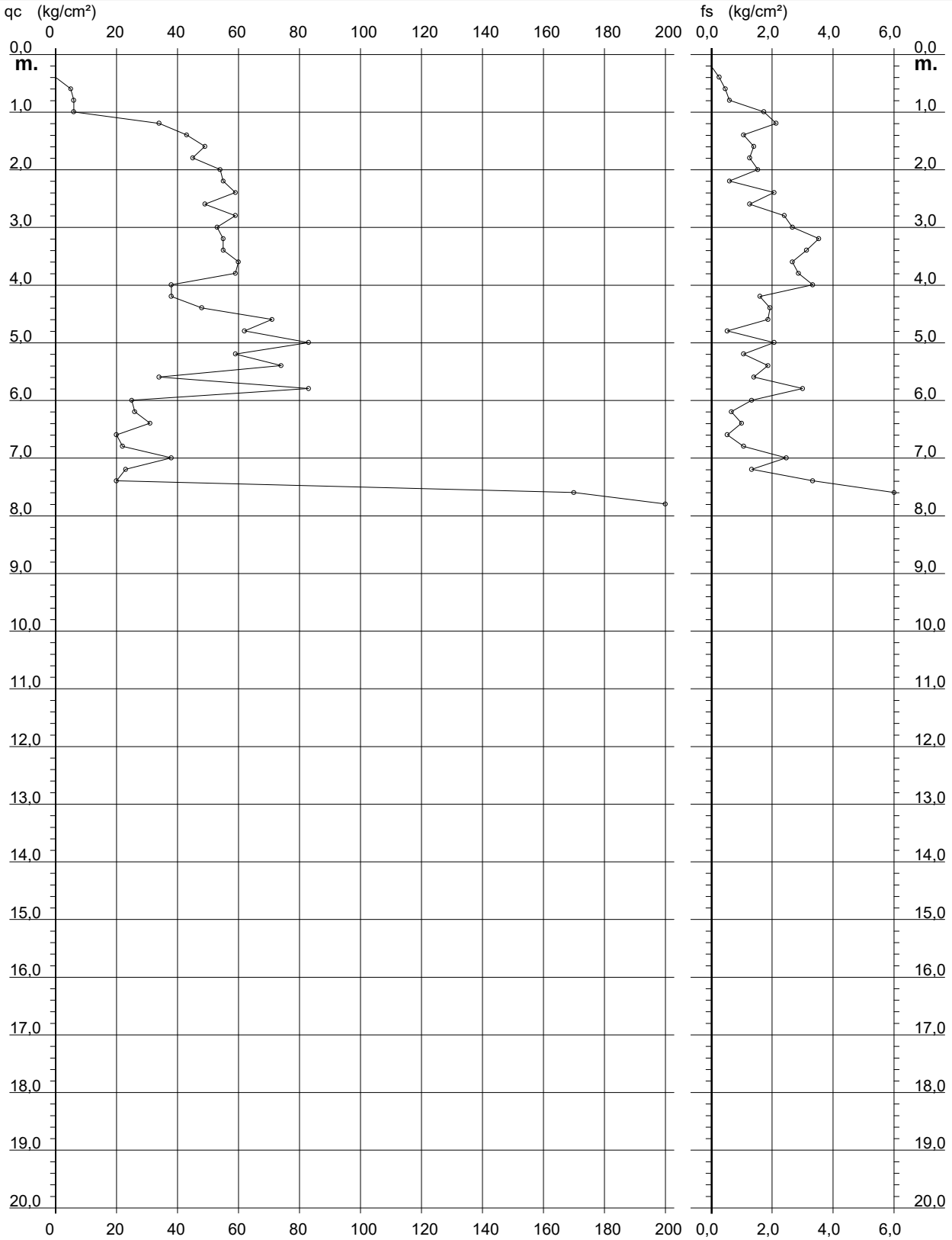
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 386

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-386	- scala vert.:	1 : 100



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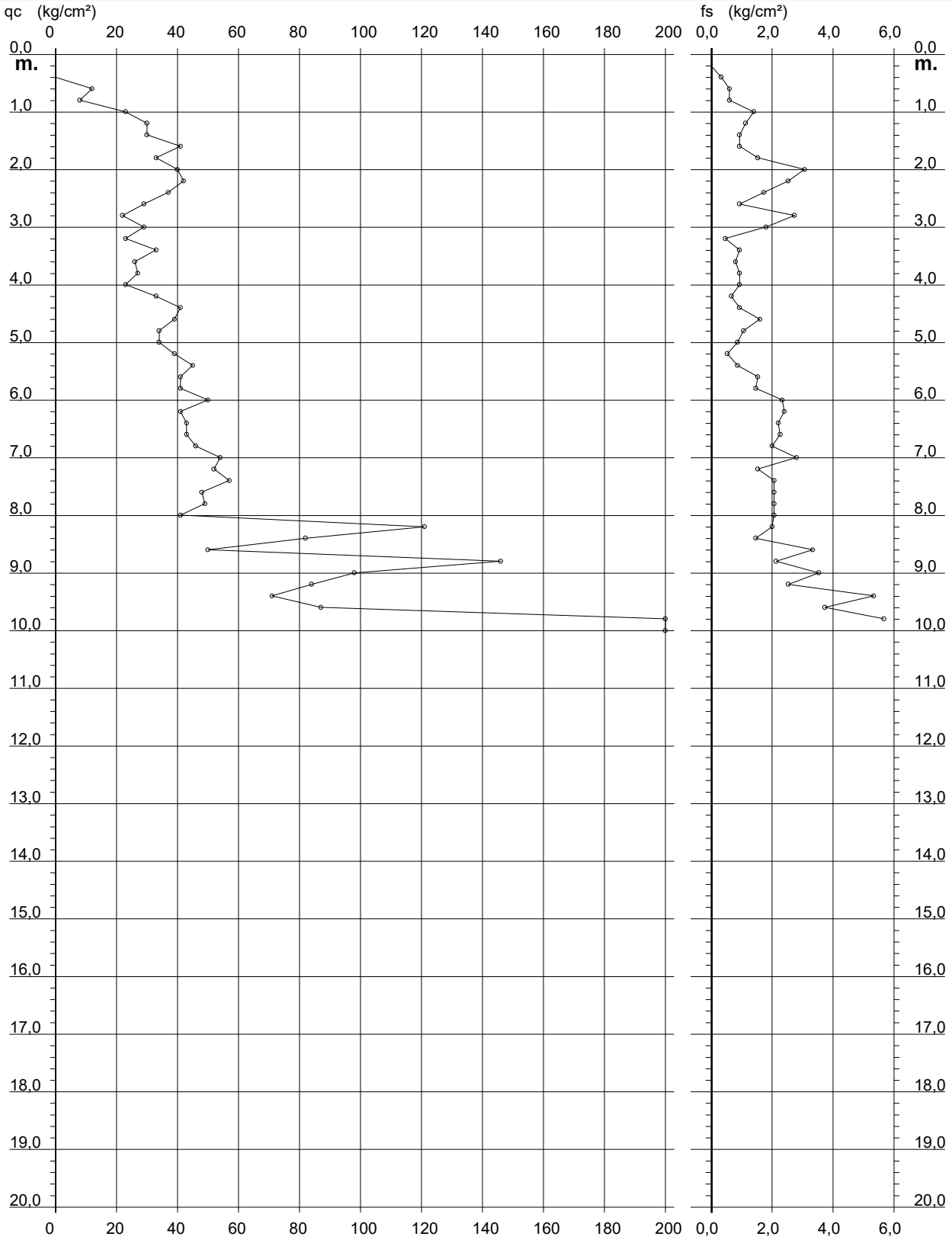
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 387

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-387	- scala vert.:	1 : 100



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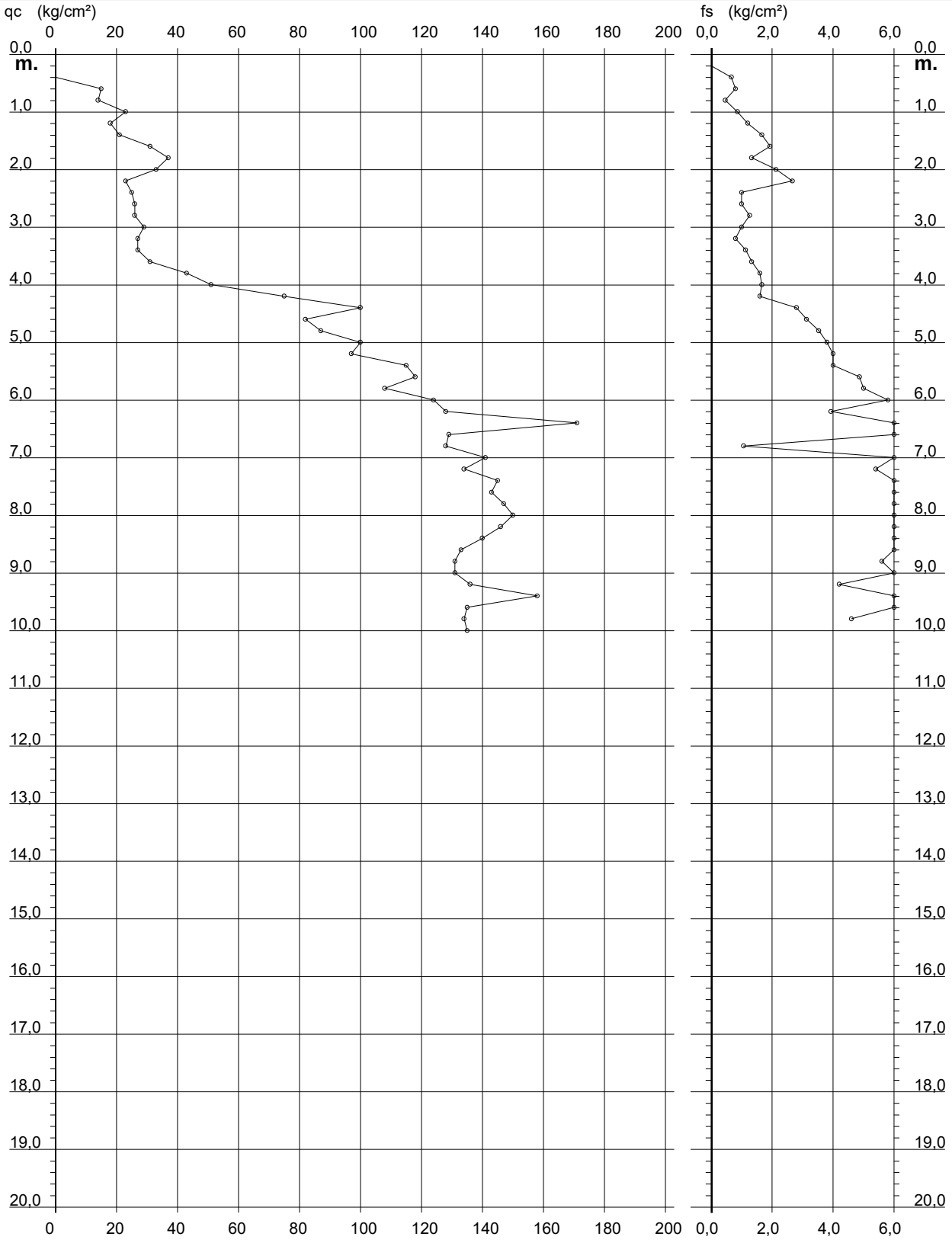
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 385

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/01/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-385	- scala vert.:	1 : 100



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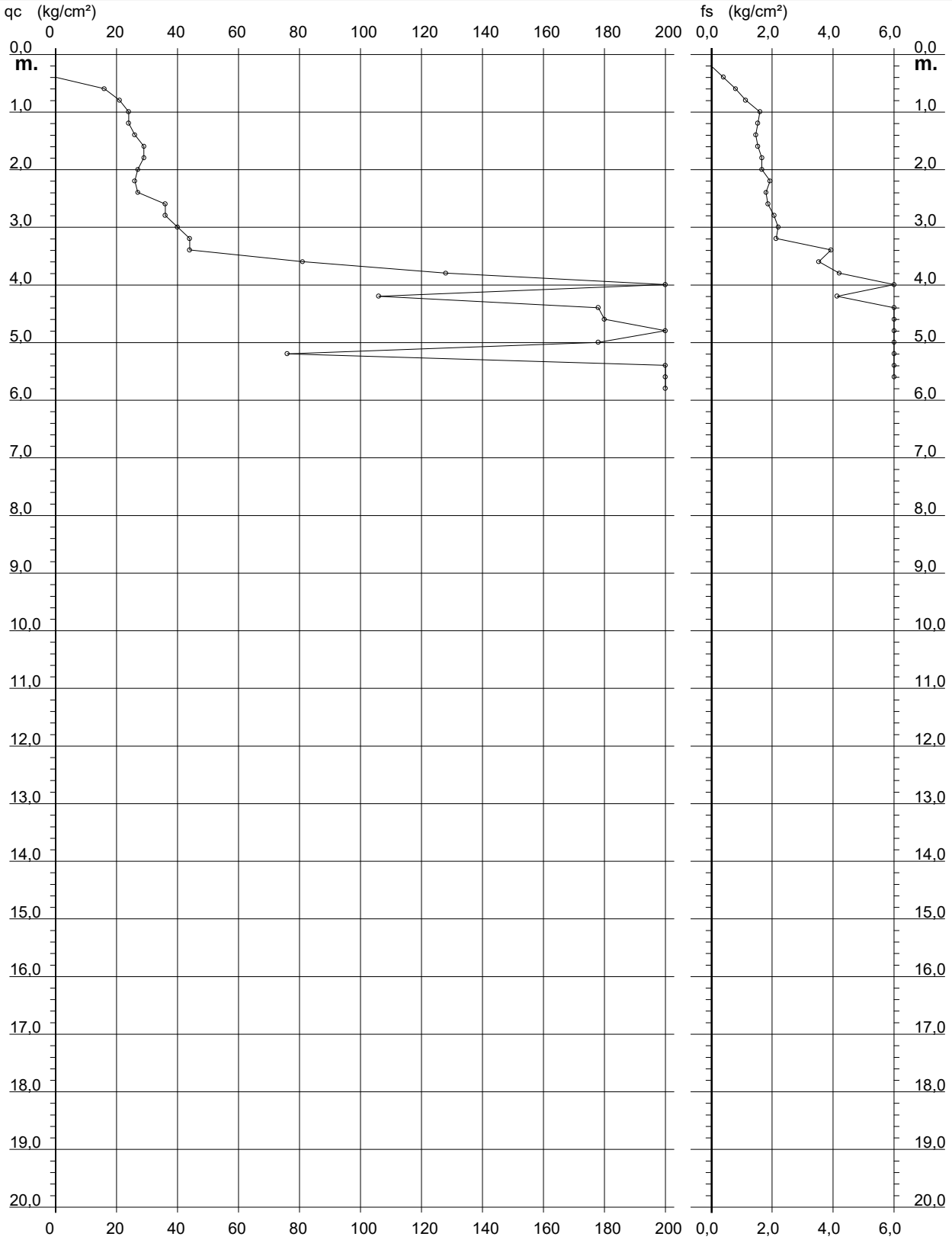
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 388

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/02/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-388	- scala vert.:	1 : 100



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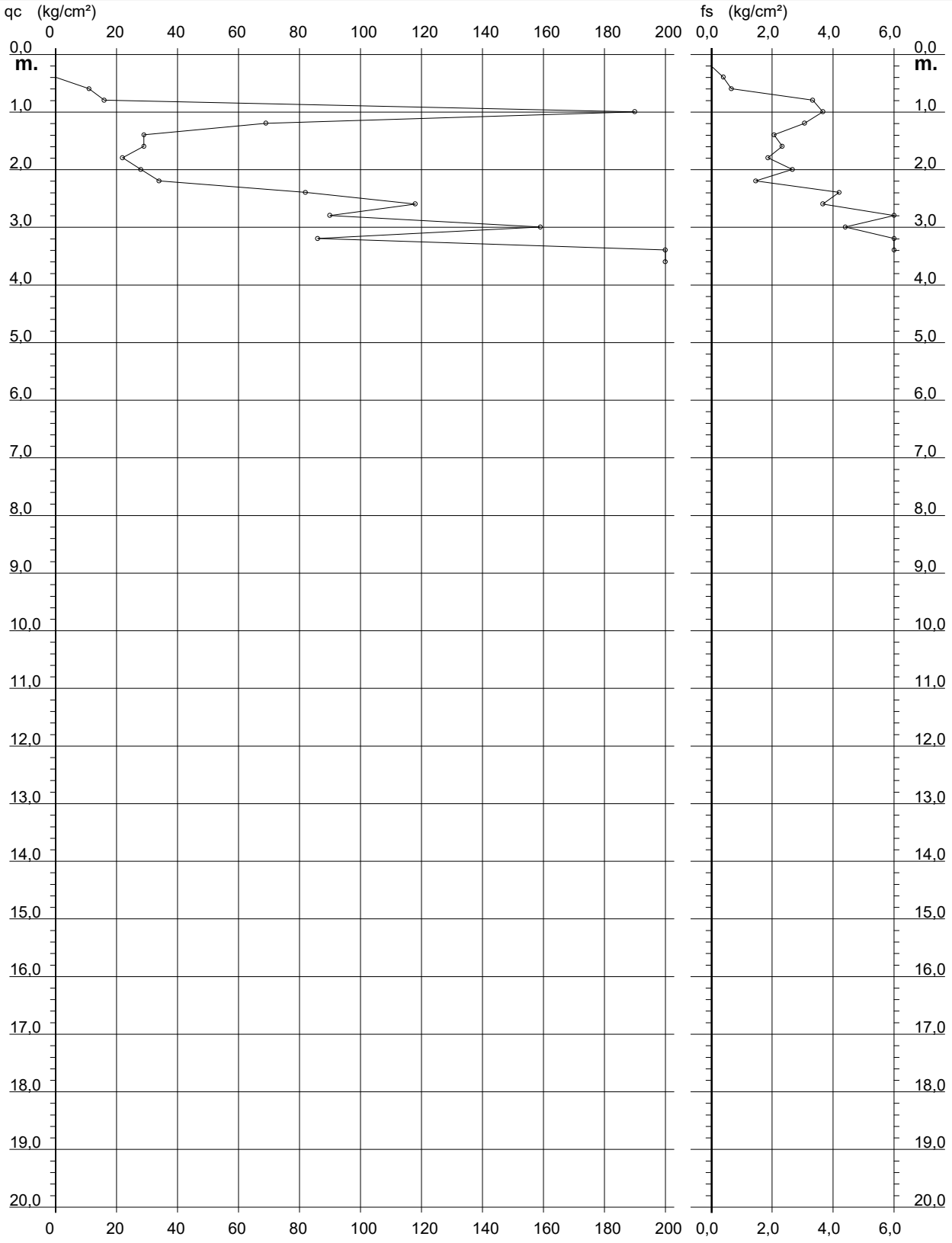
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 389

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/02/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-389	- scala vert.:	1 : 100



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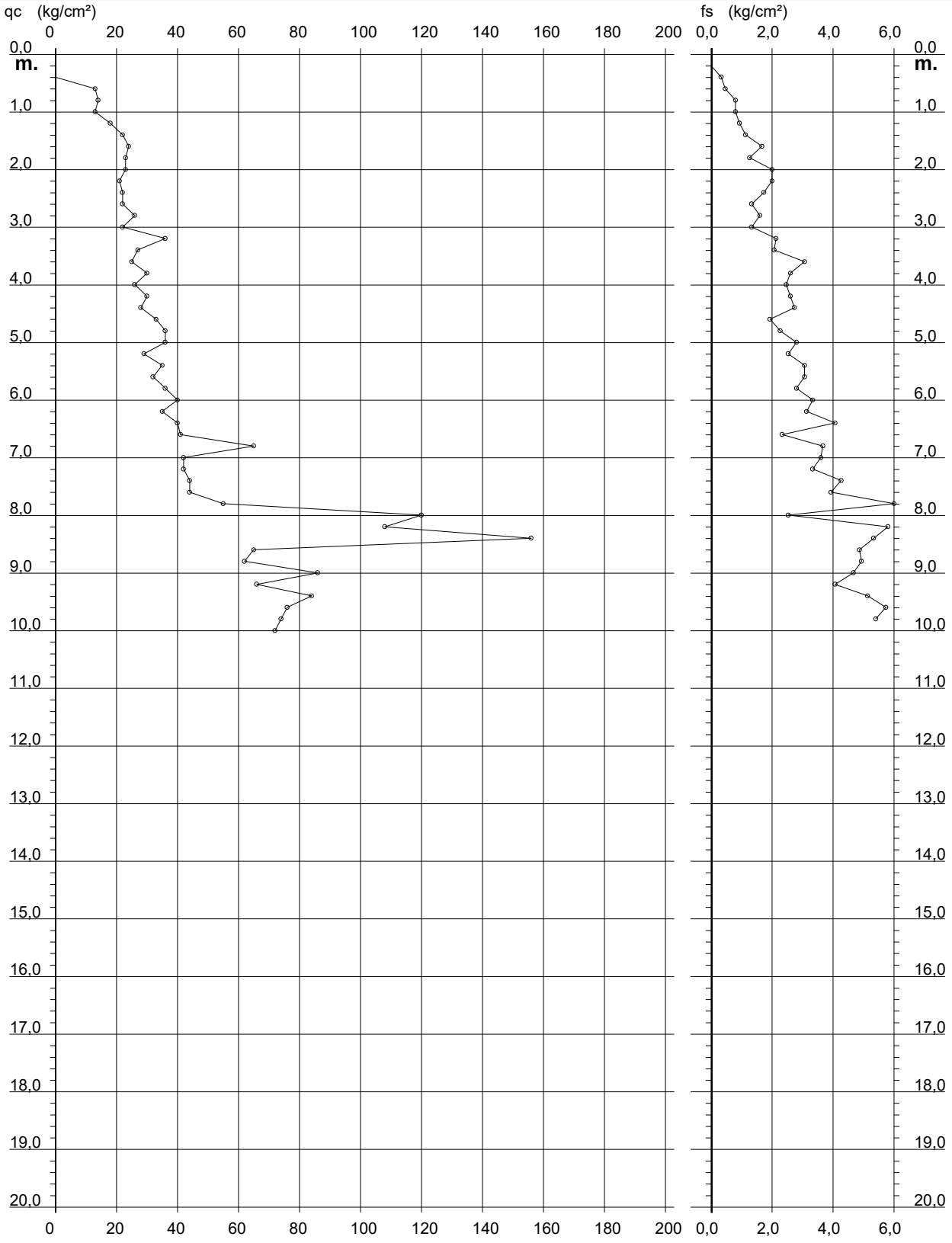
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 390

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	22/02/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto L'Abate (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-390	- scala vert.:	1 : 100



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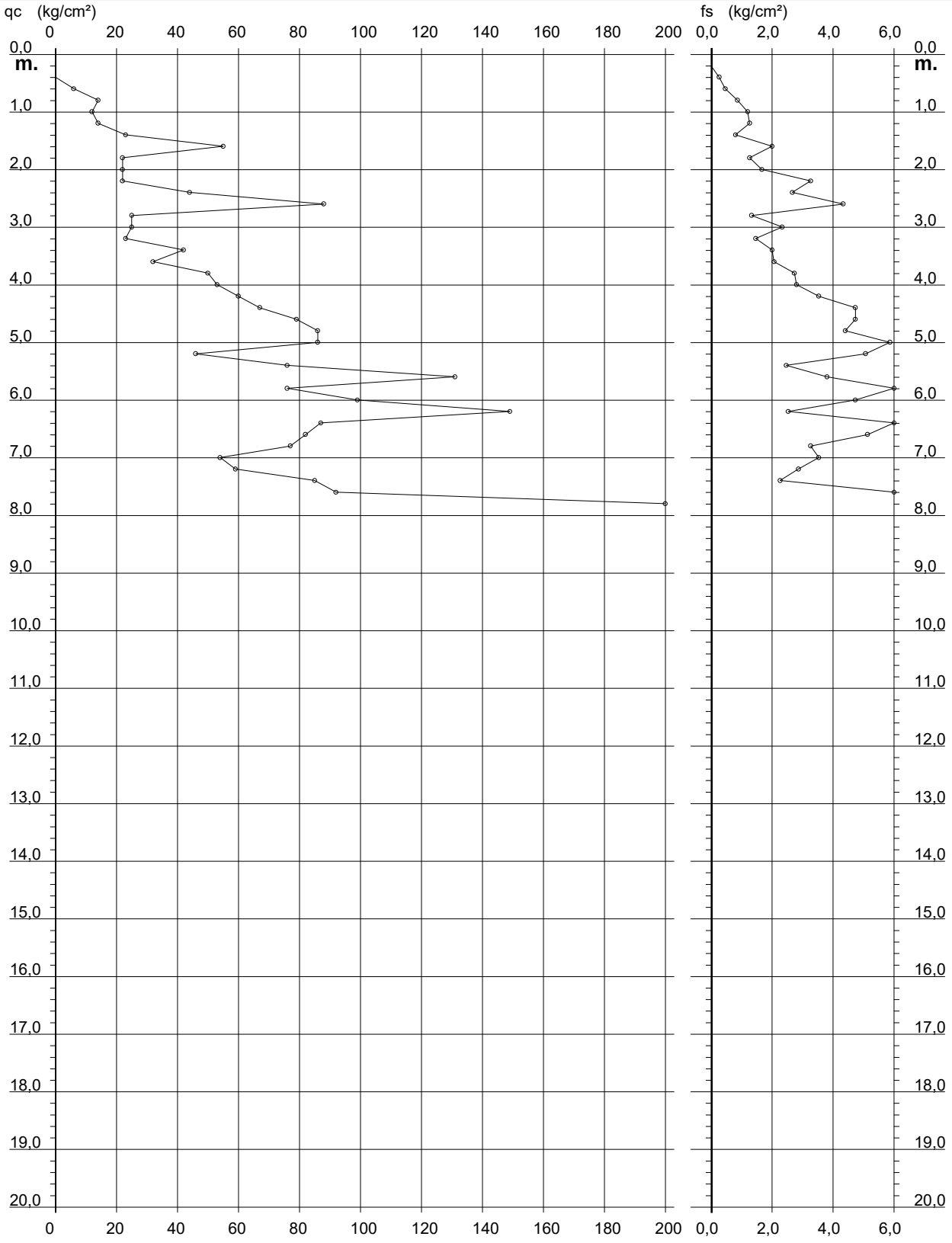
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 392

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Fragneto L'Abate (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-392	- scala vert.:	1 : 100



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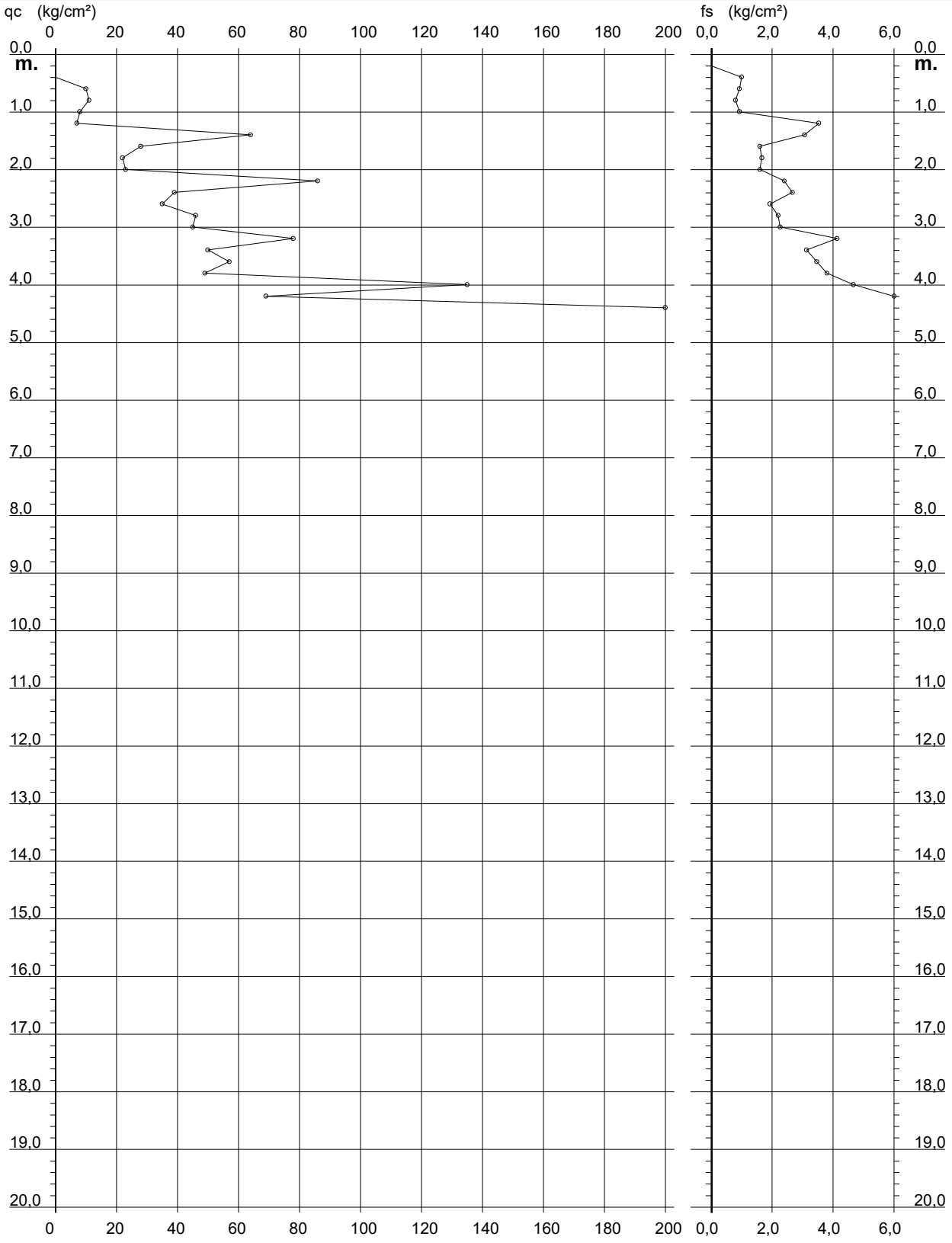
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 393

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pesco Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-393	- scala vert.:	1 : 100



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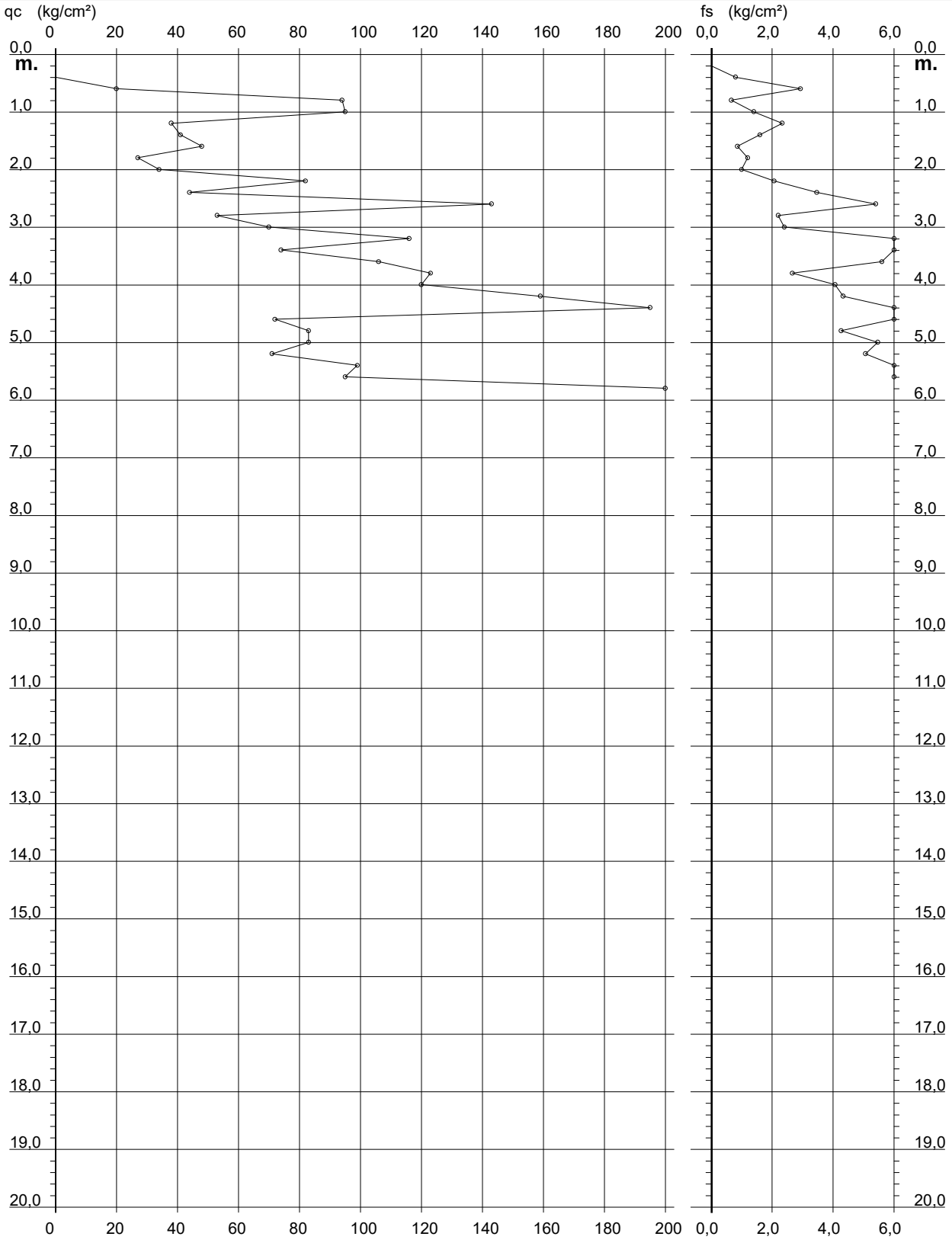
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 394

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	05/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pesco Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-394	- scala vert.:	1 : 100



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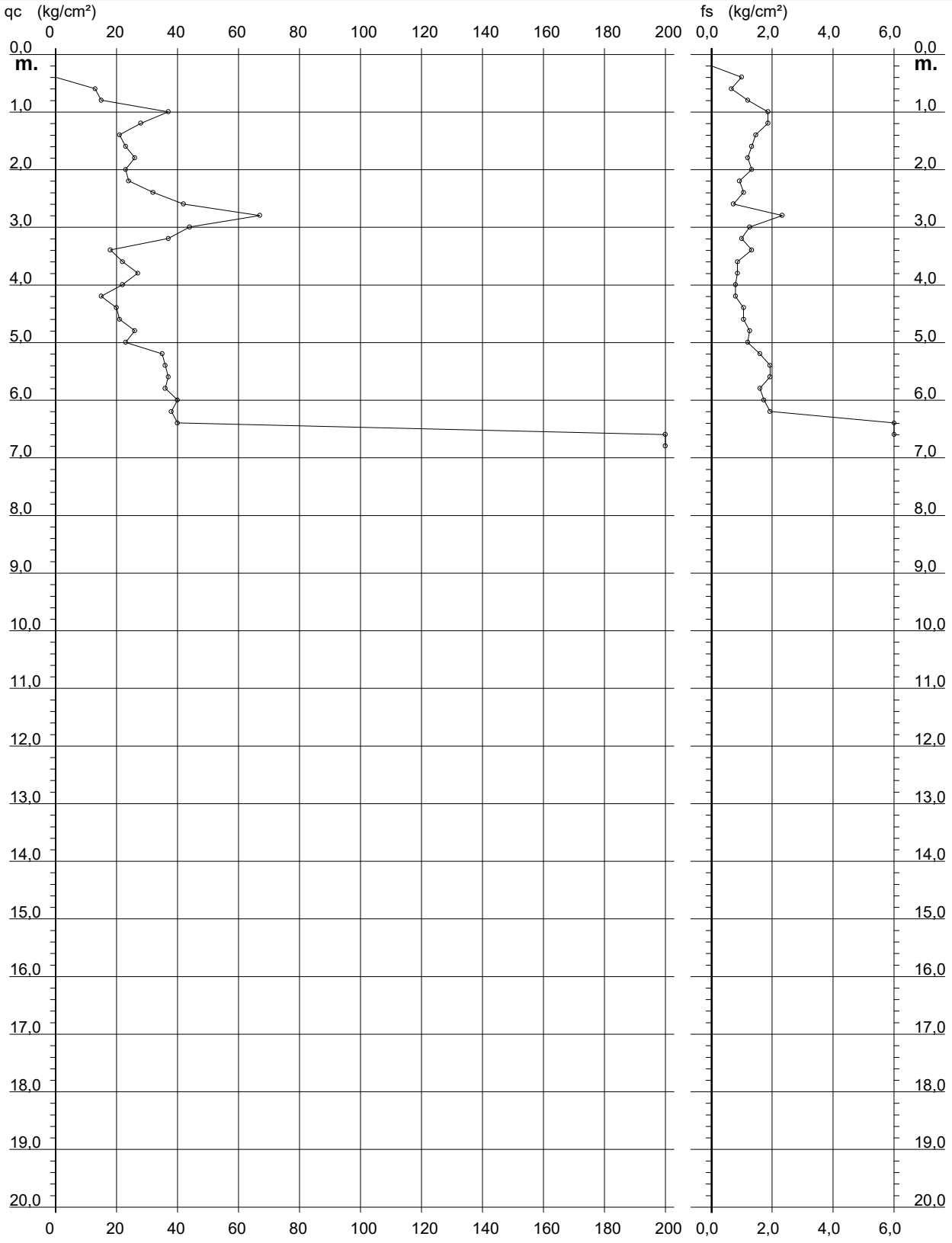
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 395

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pesco Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-395	- scala vert.:	1 : 100



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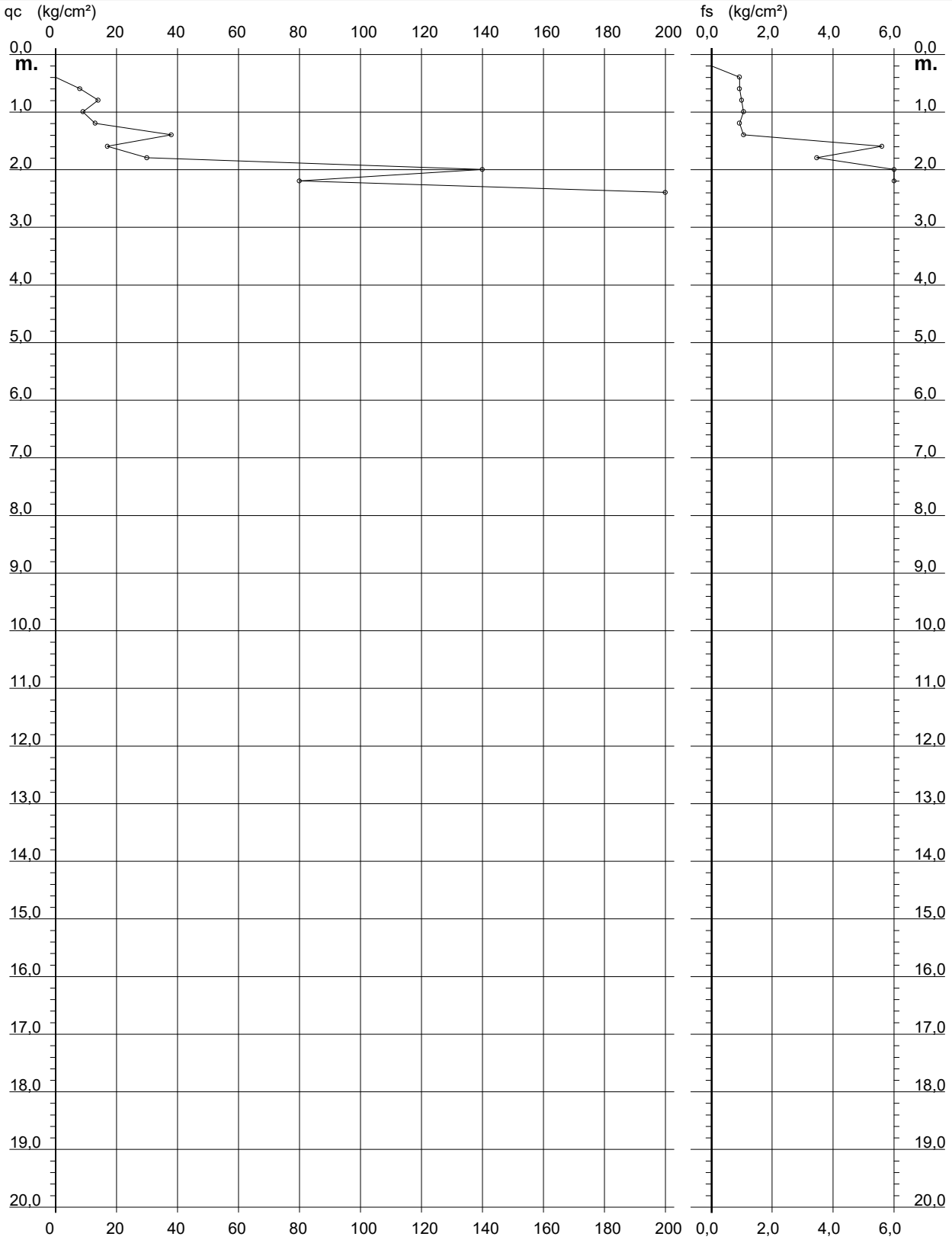
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 396

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pesco Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-396	- scala vert.:	1 : 100



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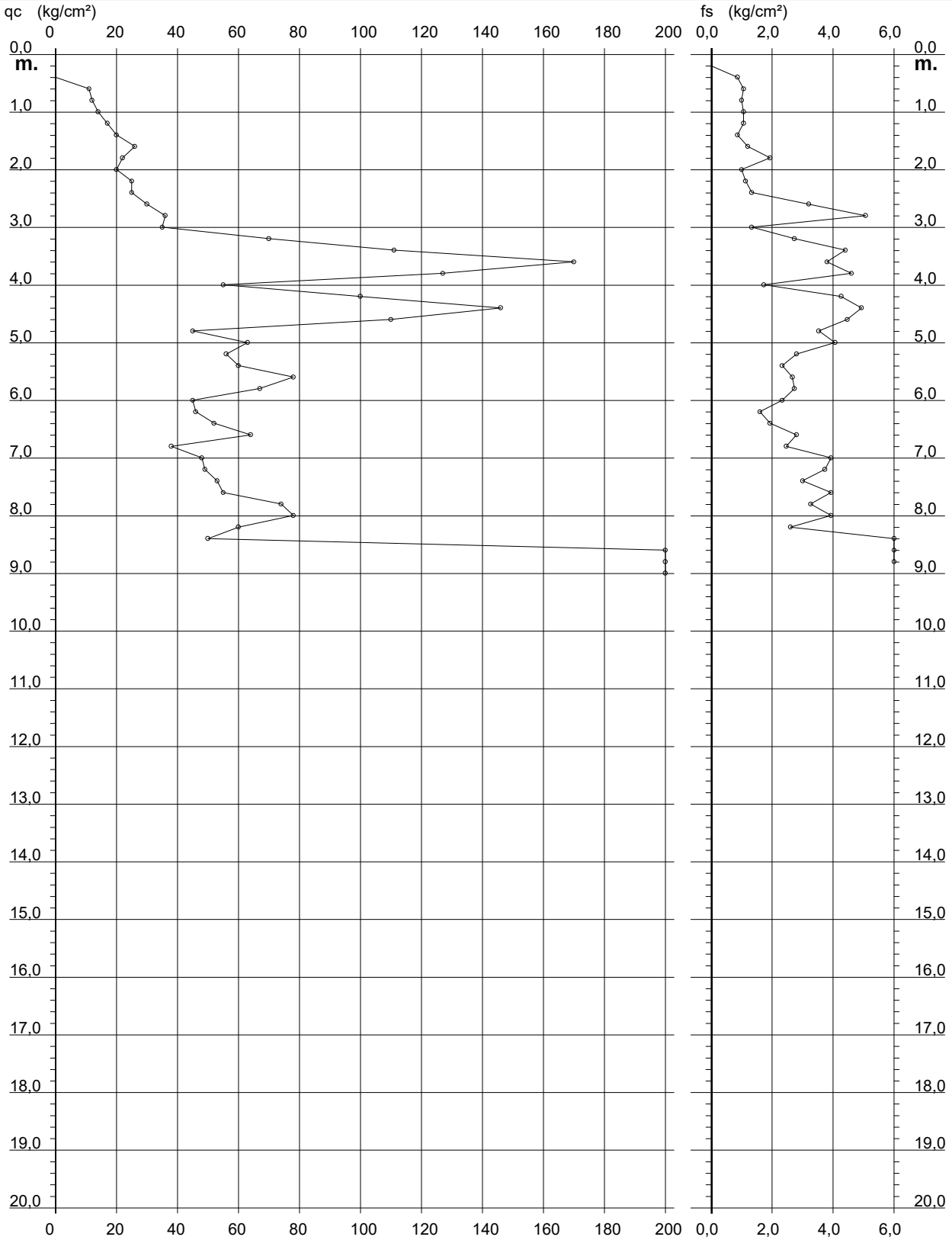
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 397

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	08/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pesco Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-397	- scala vert.:	1 : 100



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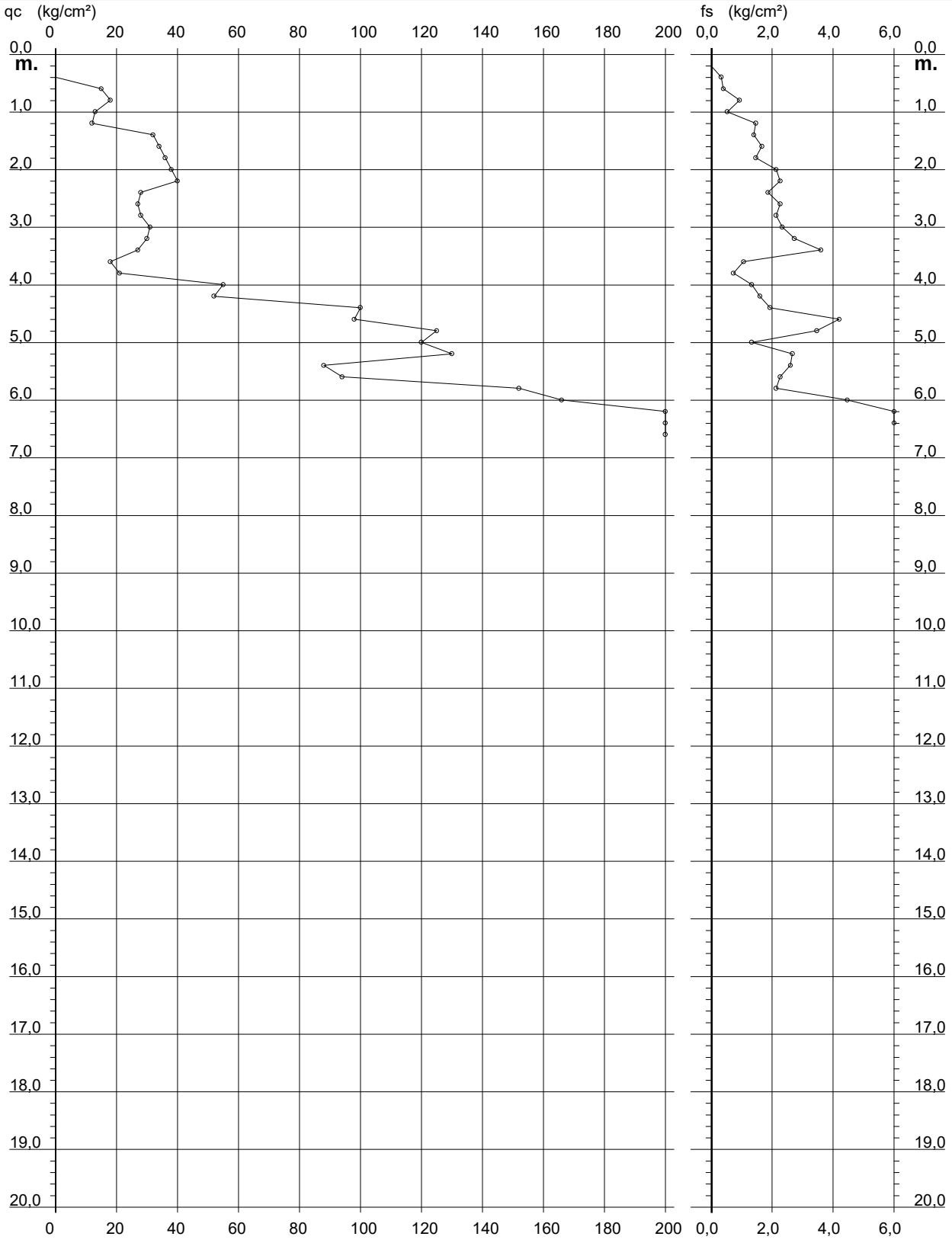
PROVA PENETROMETRICA STATICA DIAGRAMMA DI RESISTENZA

CPT 398

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pesco Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-398	- scala vert.:	1 : 100



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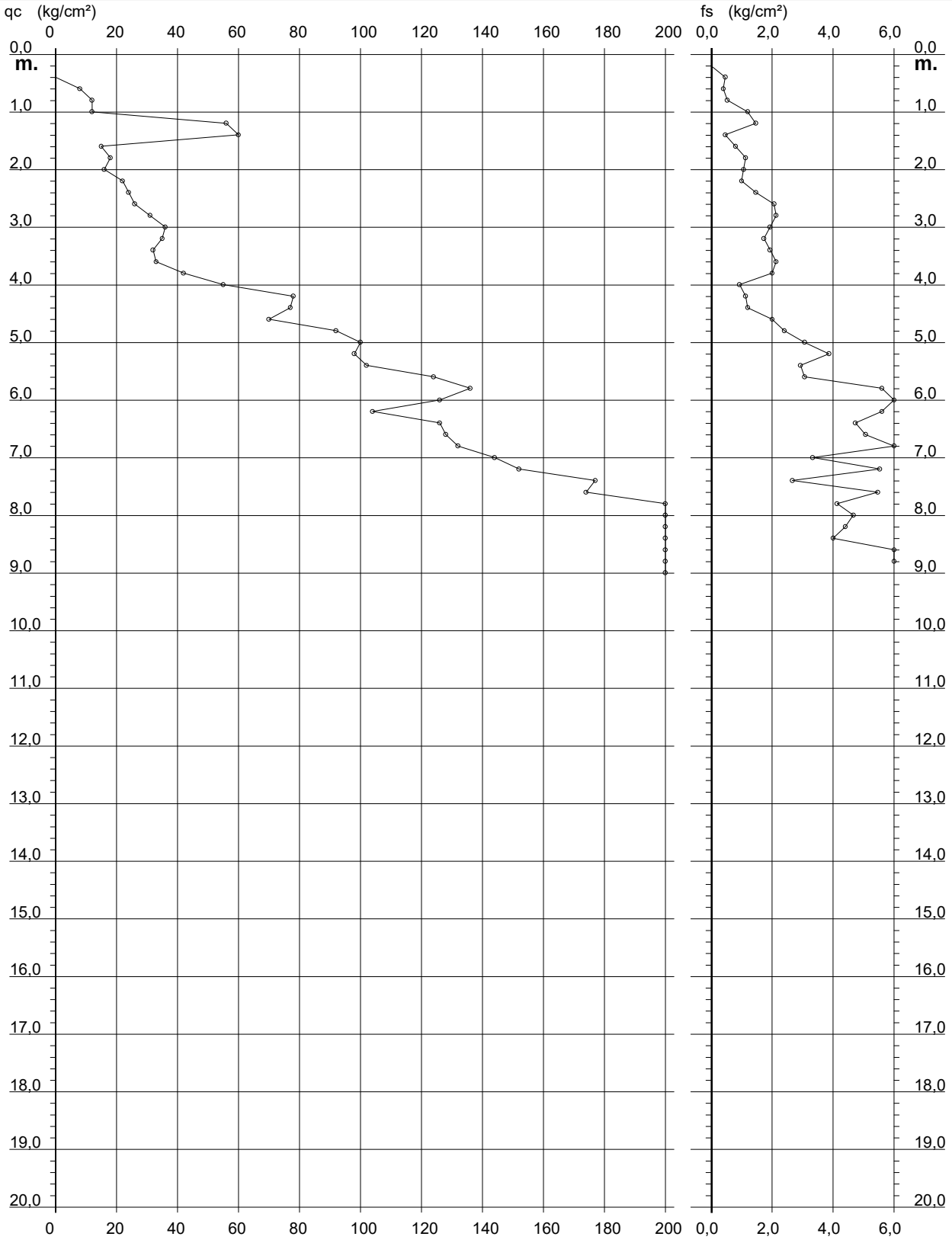
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 399

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Pesco Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-399	- scala vert.:	1 : 100



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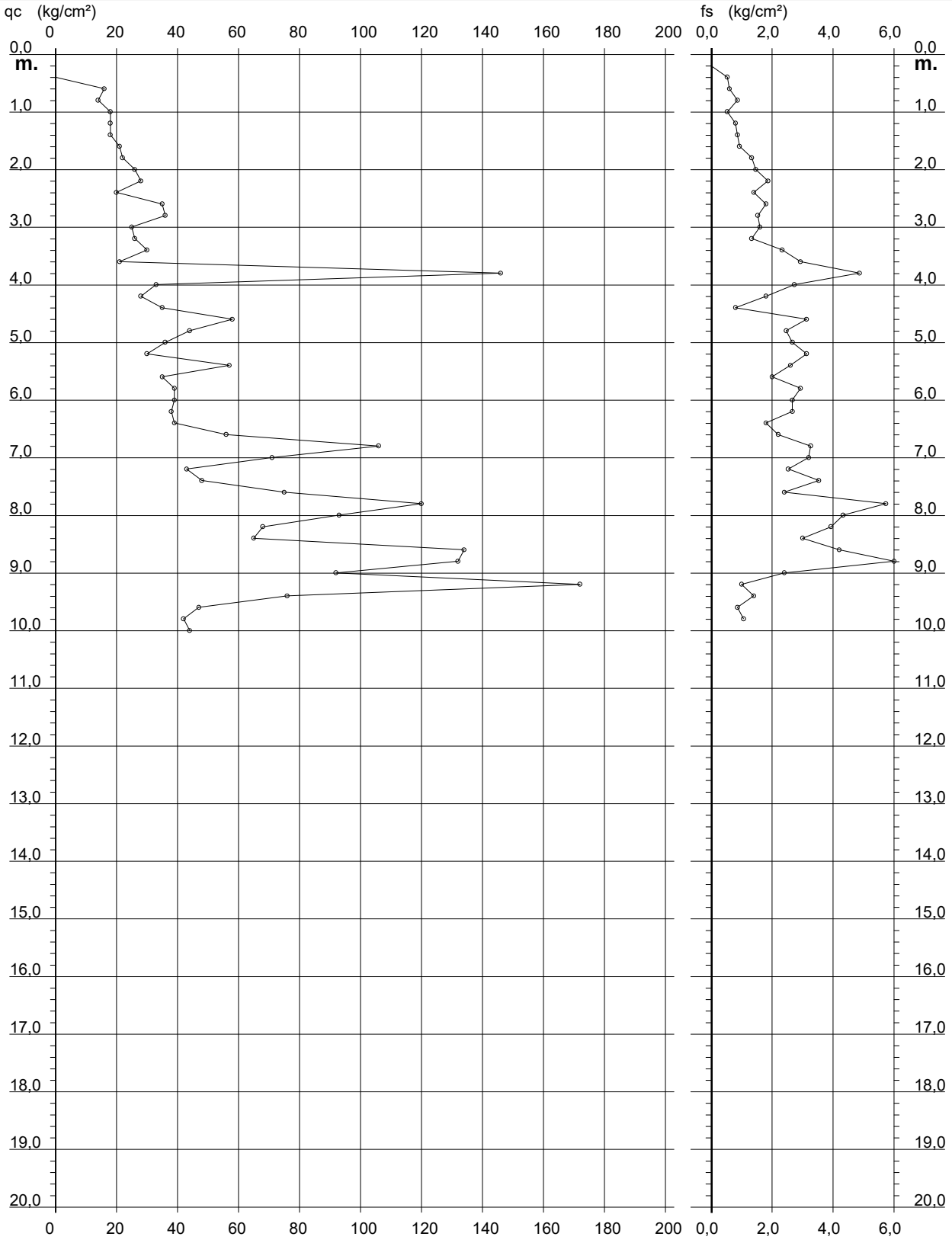
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 401

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	10/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-401	- scala vert.:	1 : 100



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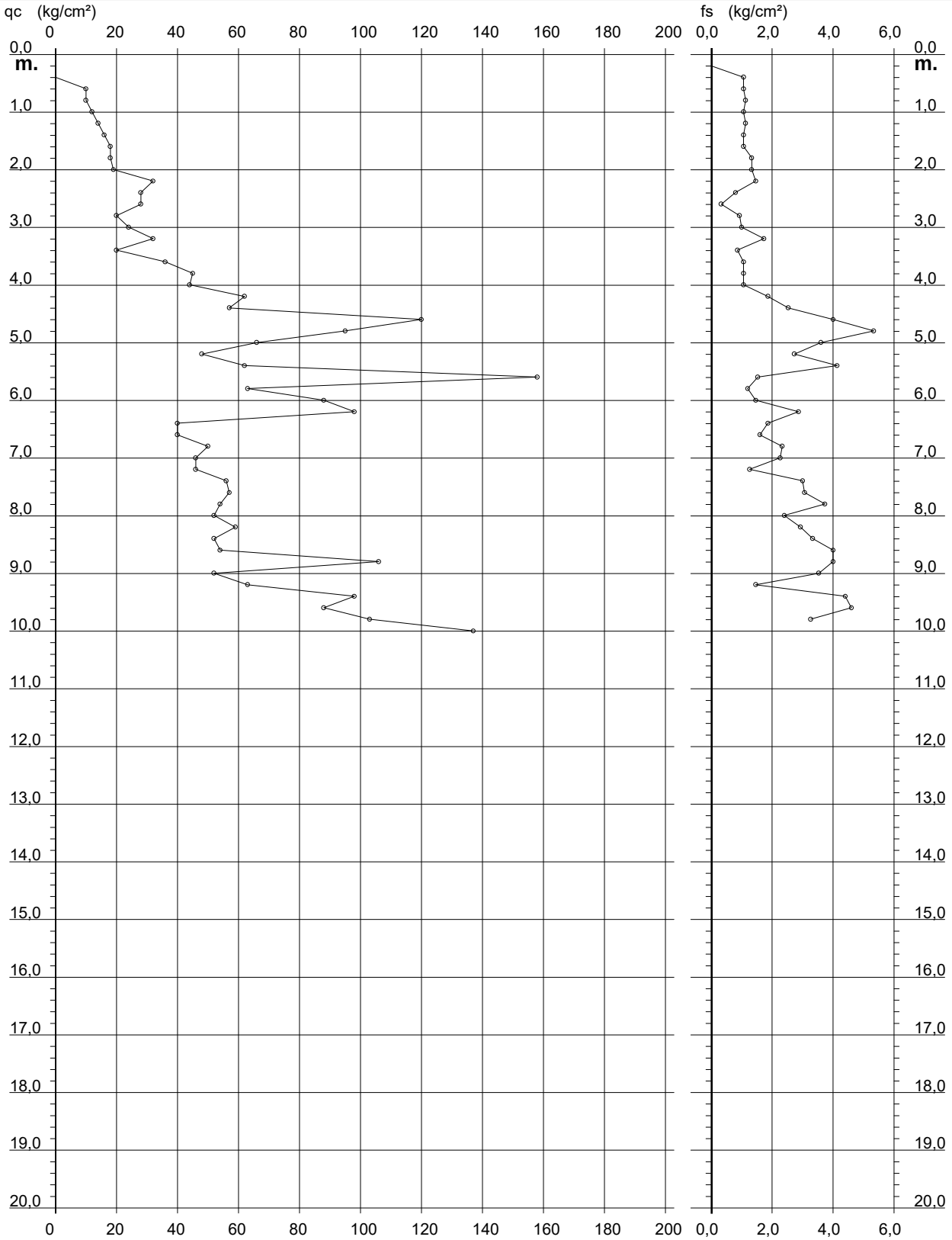
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 402

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-402	- scala vert.:	1 : 100



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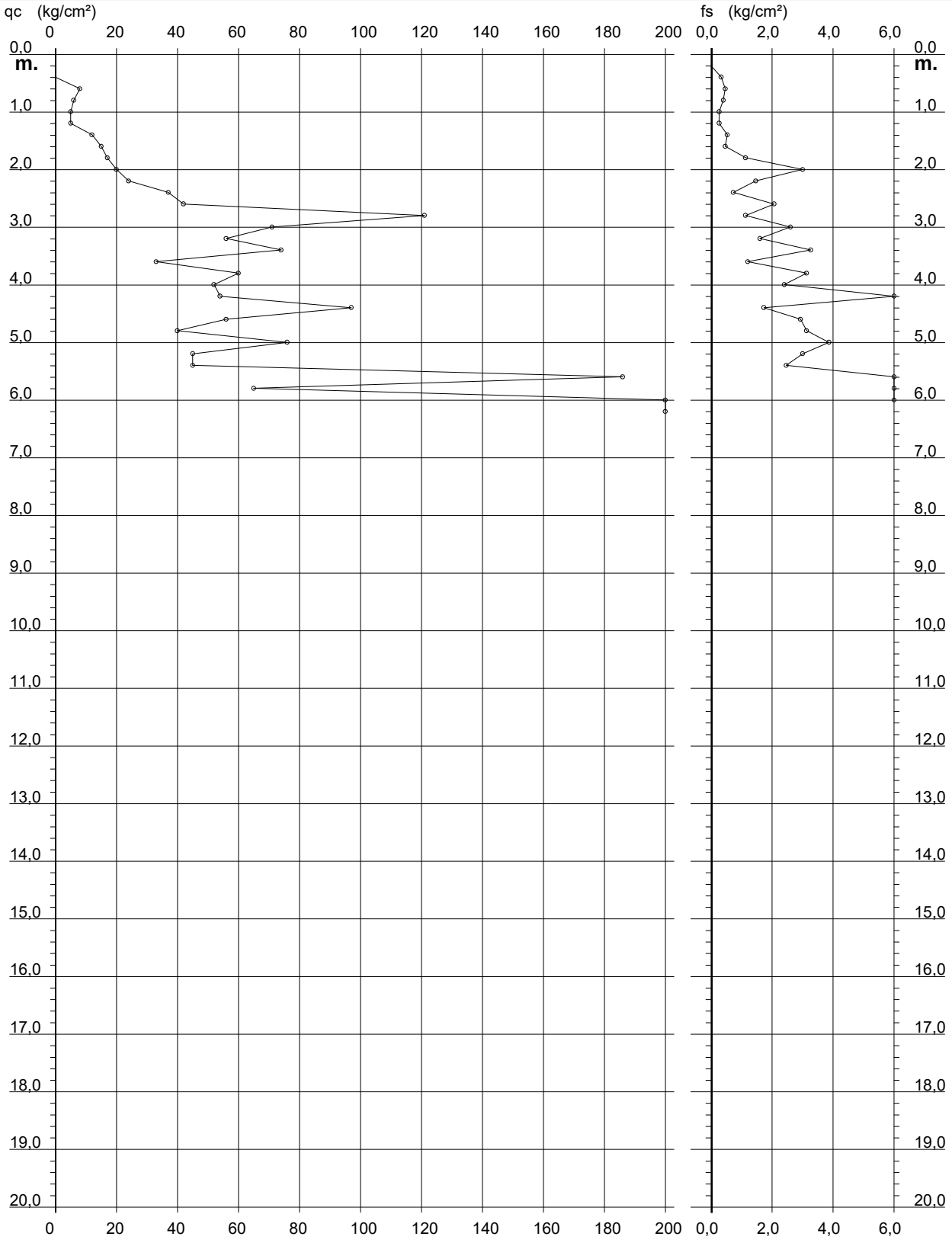
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 403

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-403	- scala vert.:	1 : 100



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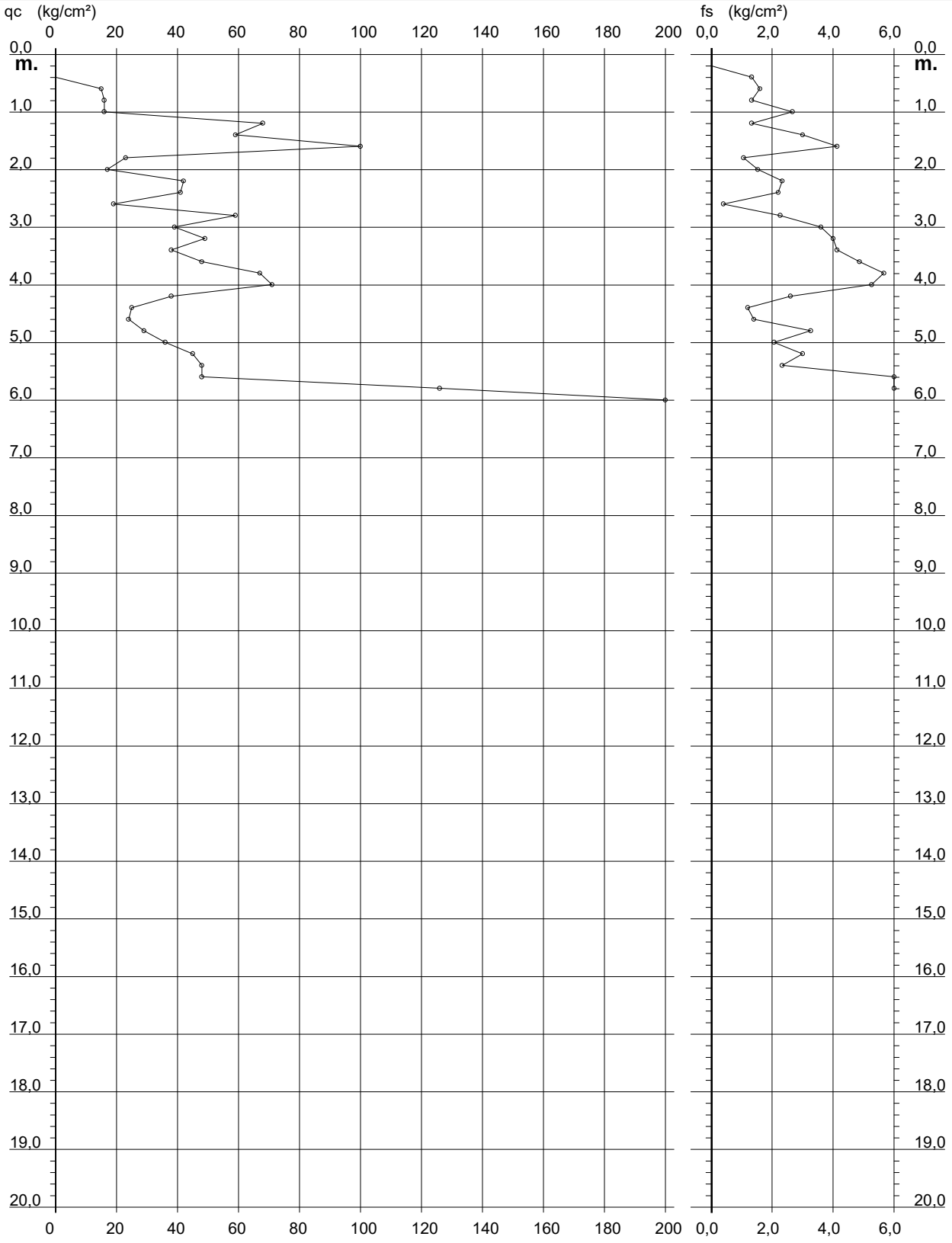
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 404

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	11/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-404	- scala vert.:	1 : 100



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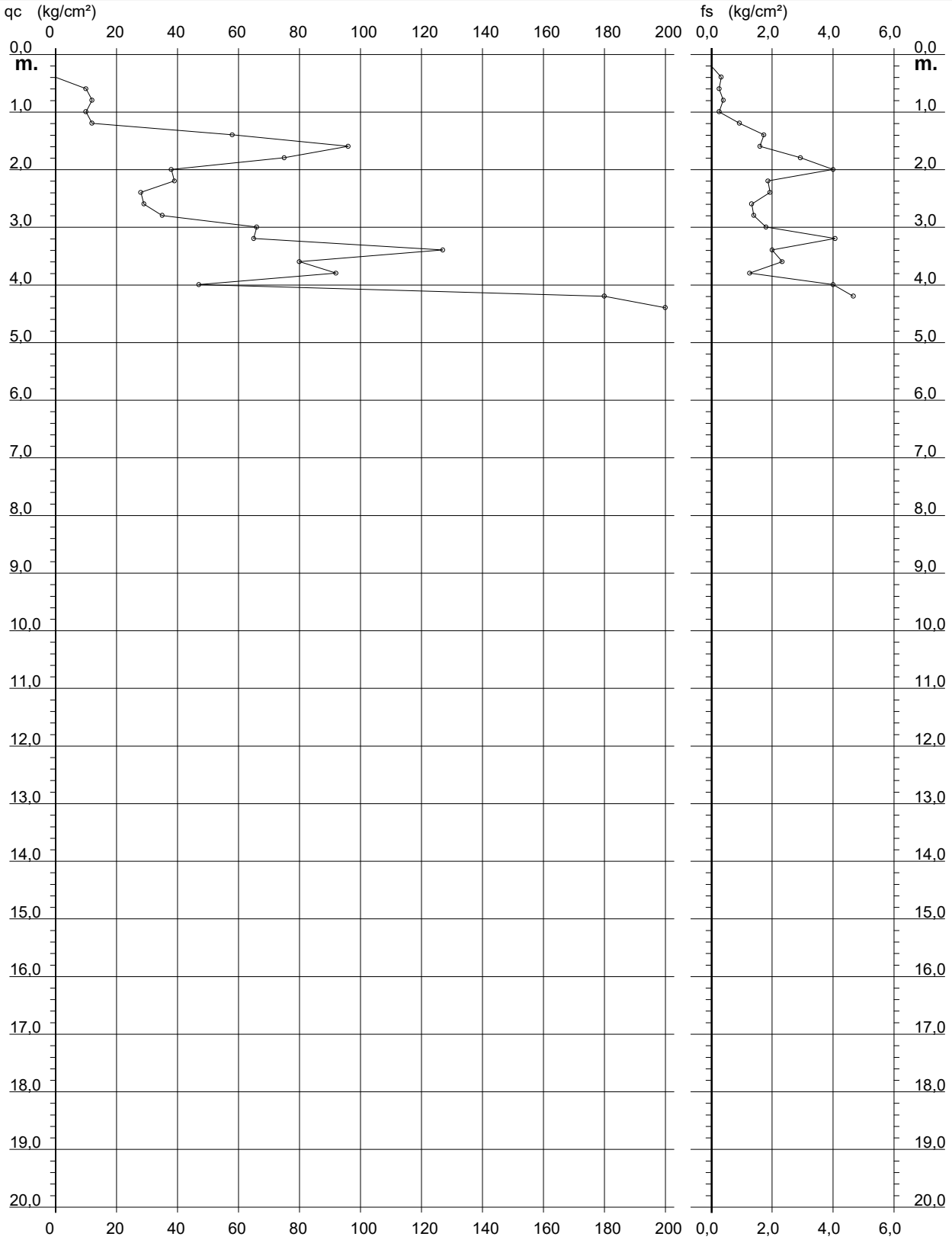
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 405

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	15/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-405	- scala vert.:	1 : 100



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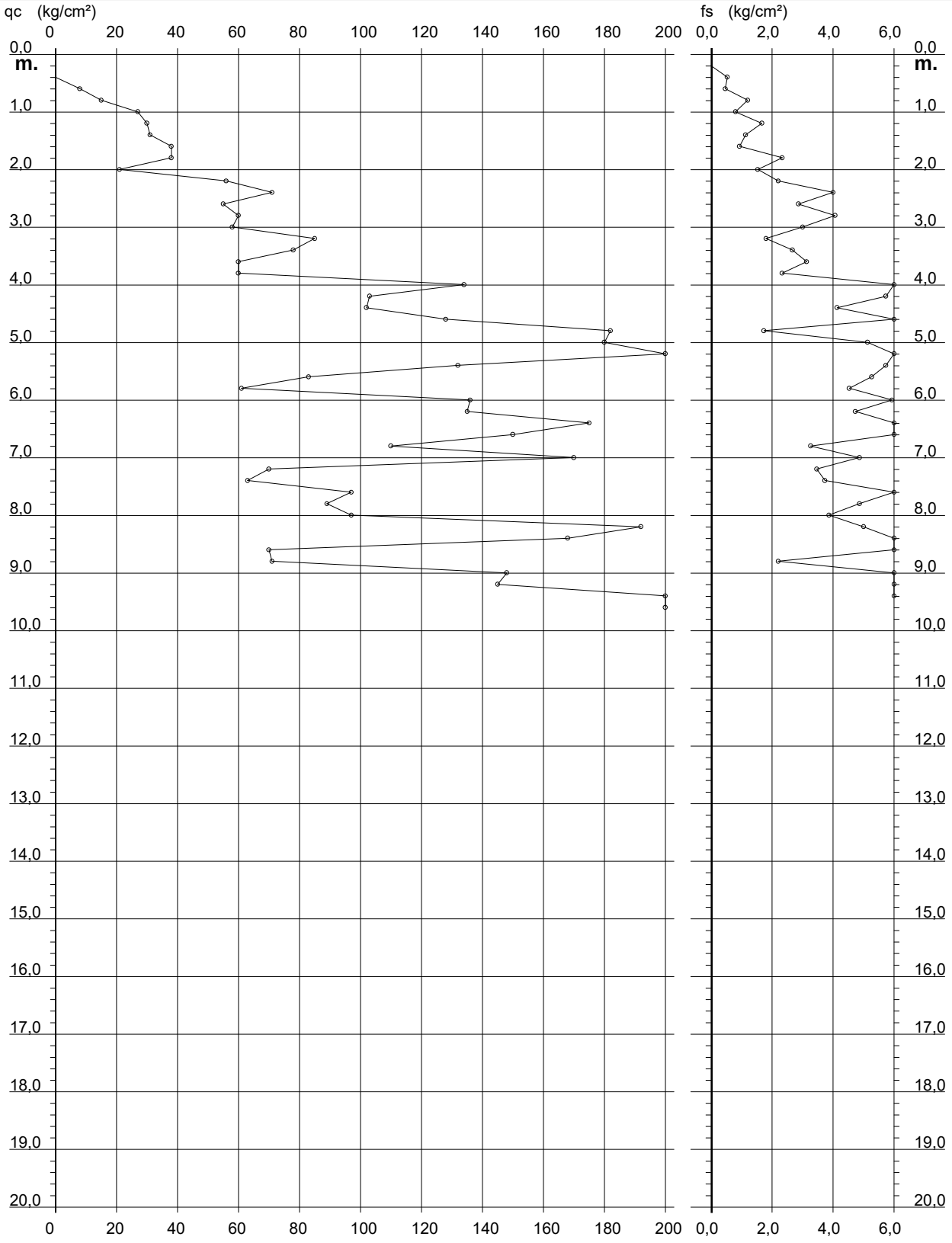
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 407

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-407	- scala vert.:	1 : 100



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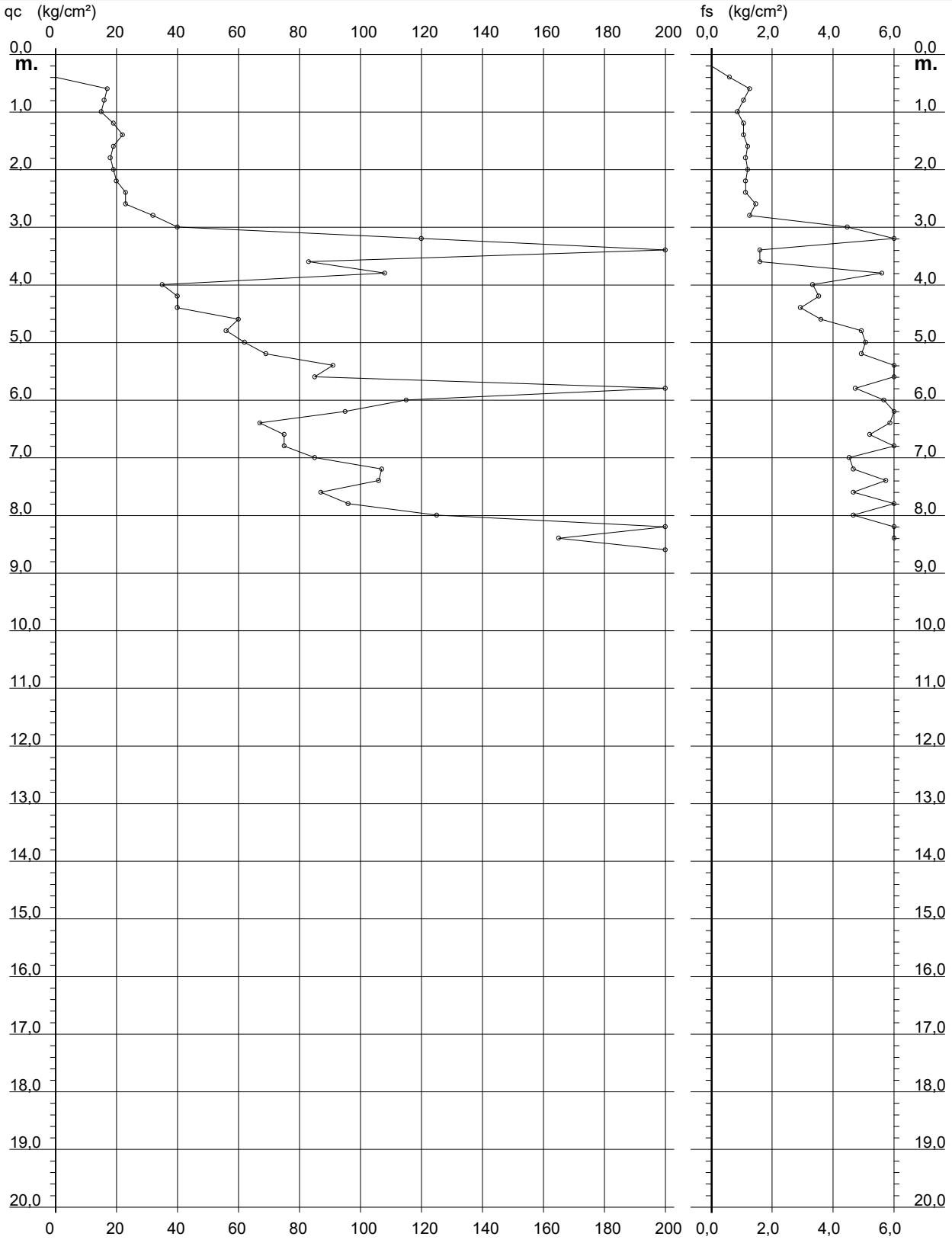
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 408

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-408	- scala vert.:	1 : 100



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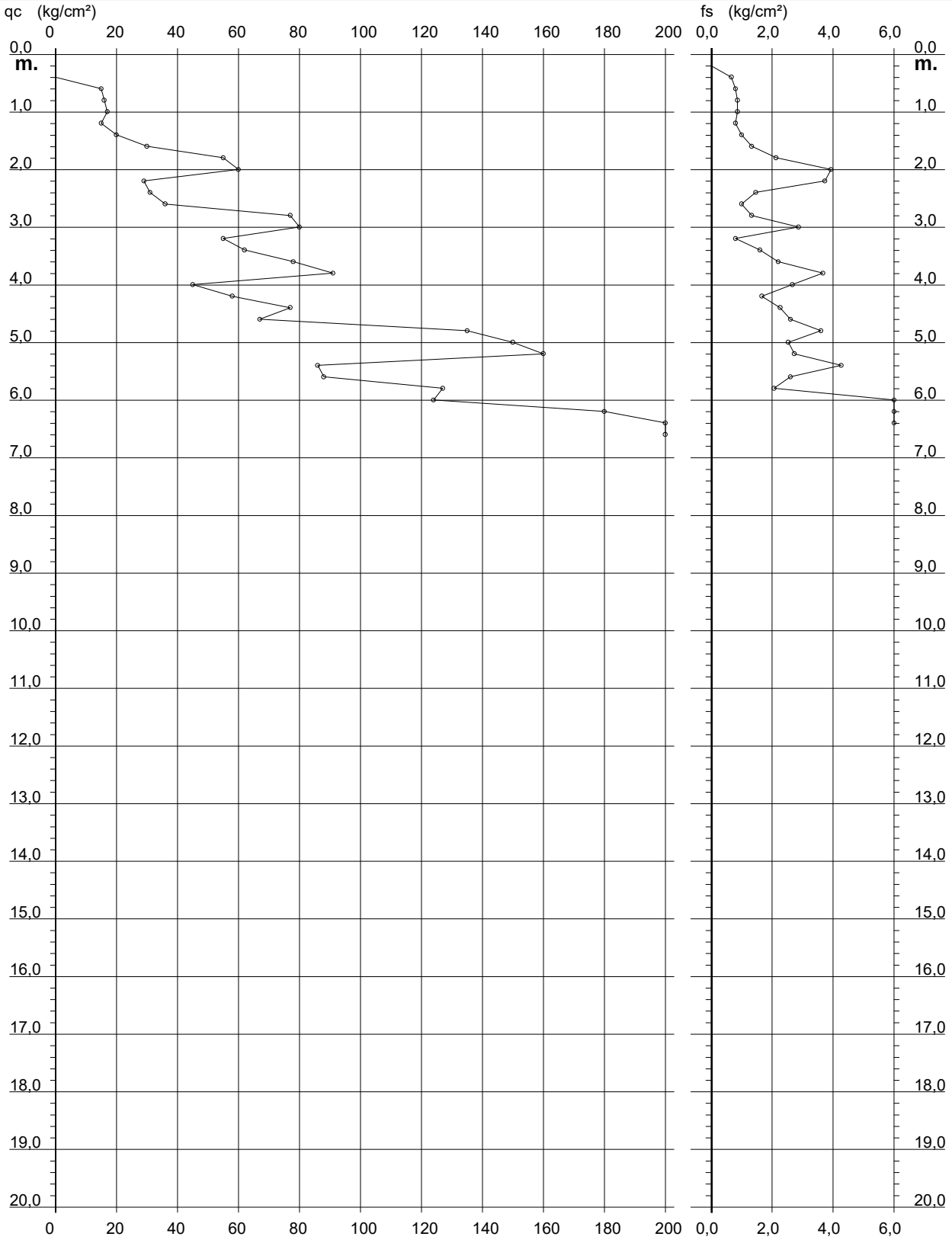
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 409

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	17/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-409	- scala vert.:	1 : 100



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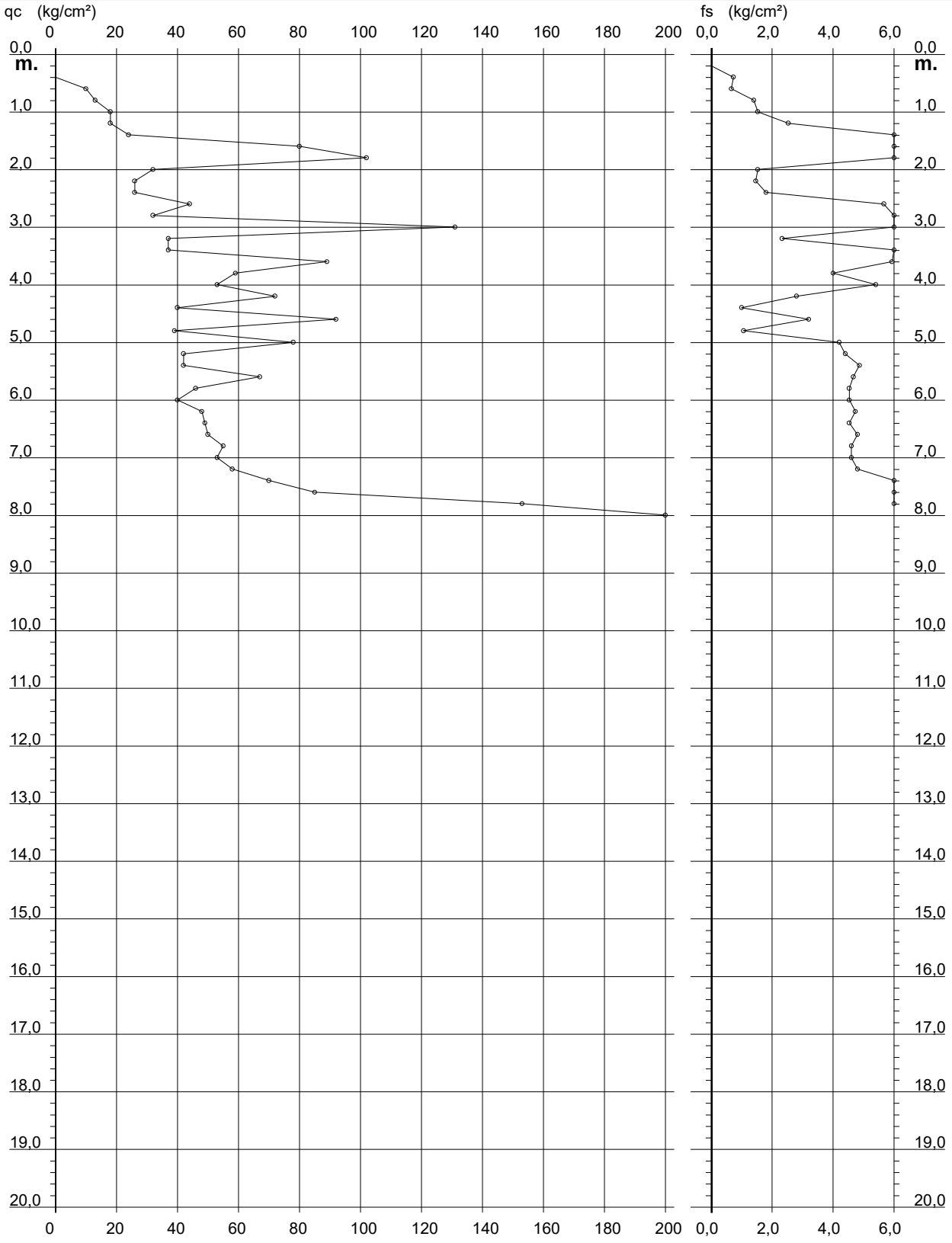
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 410

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	18/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-410	- scala vert.:	1 : 100



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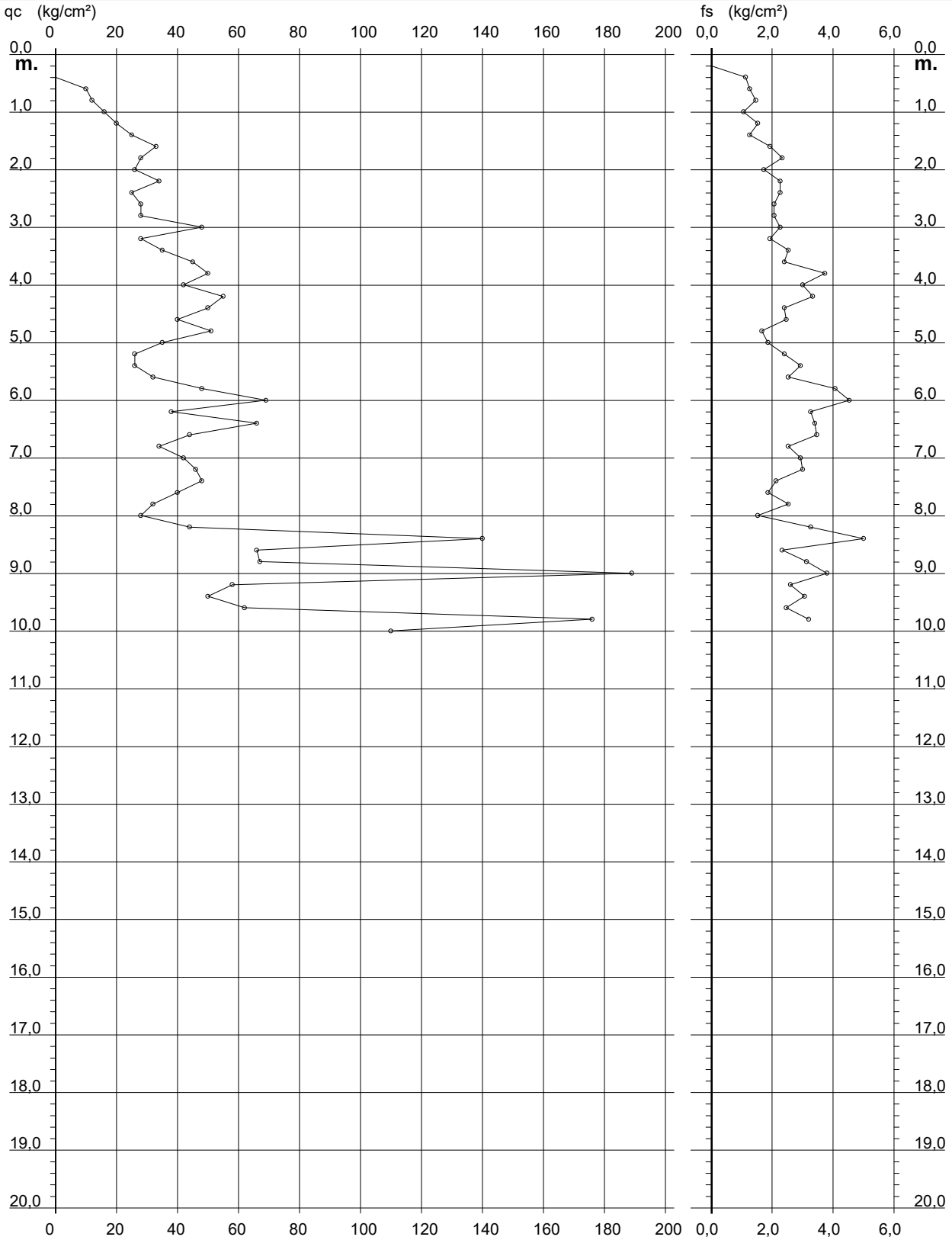
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 411

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	18/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-411	- scala vert.:	1 : 100



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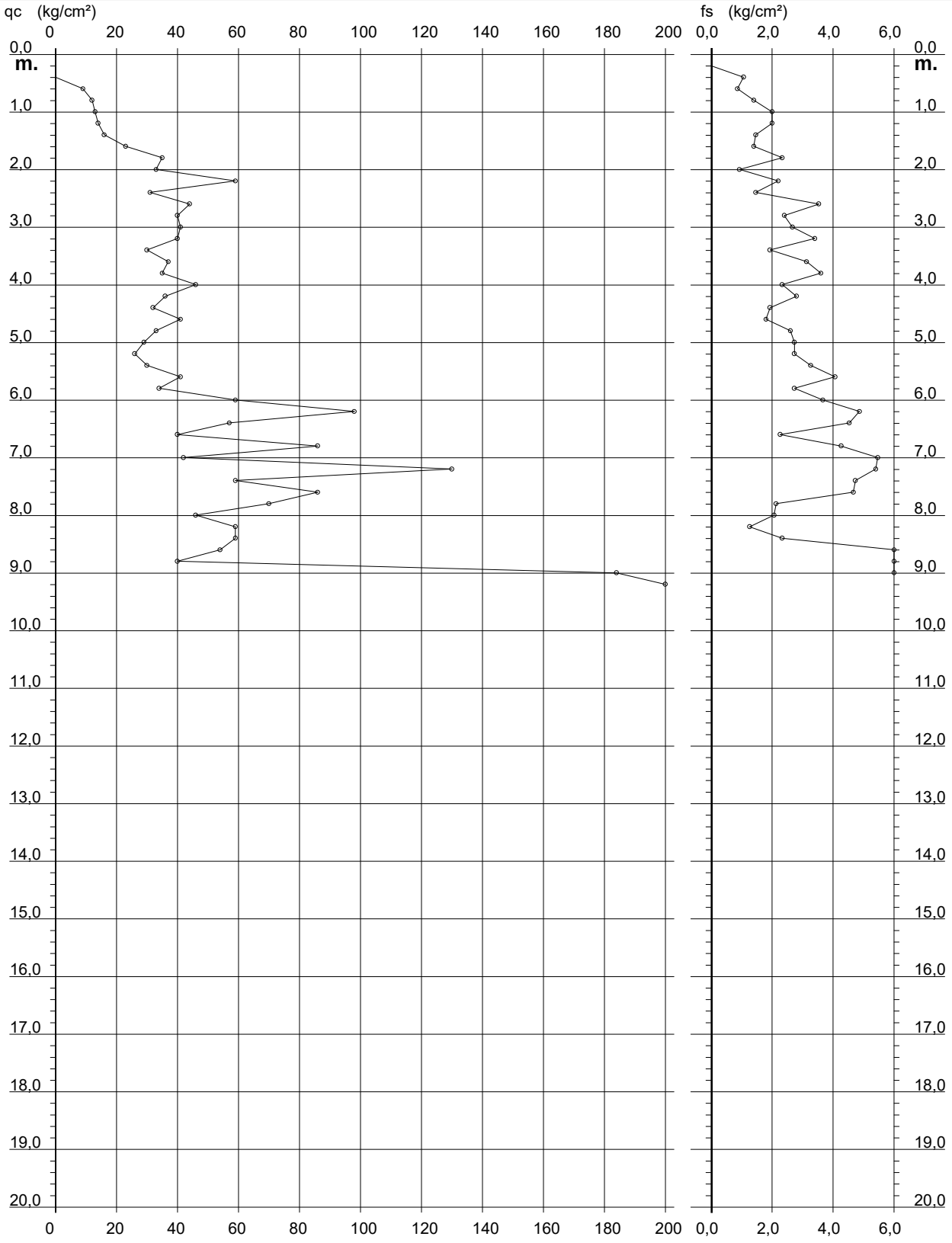
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 412

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	18/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-412	- scala vert.:	1 : 100



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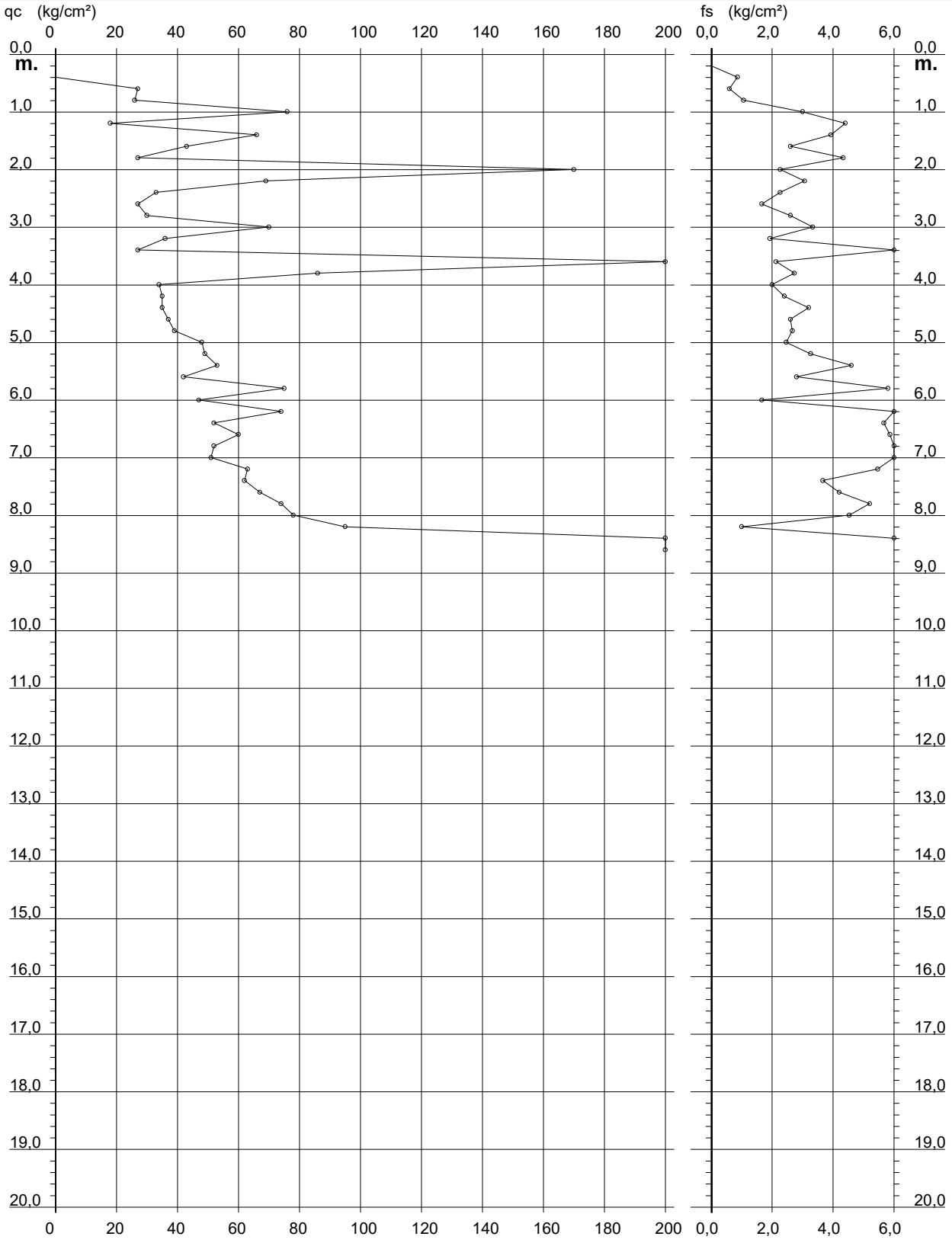
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 413

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-413	- scala vert.:	1 : 100



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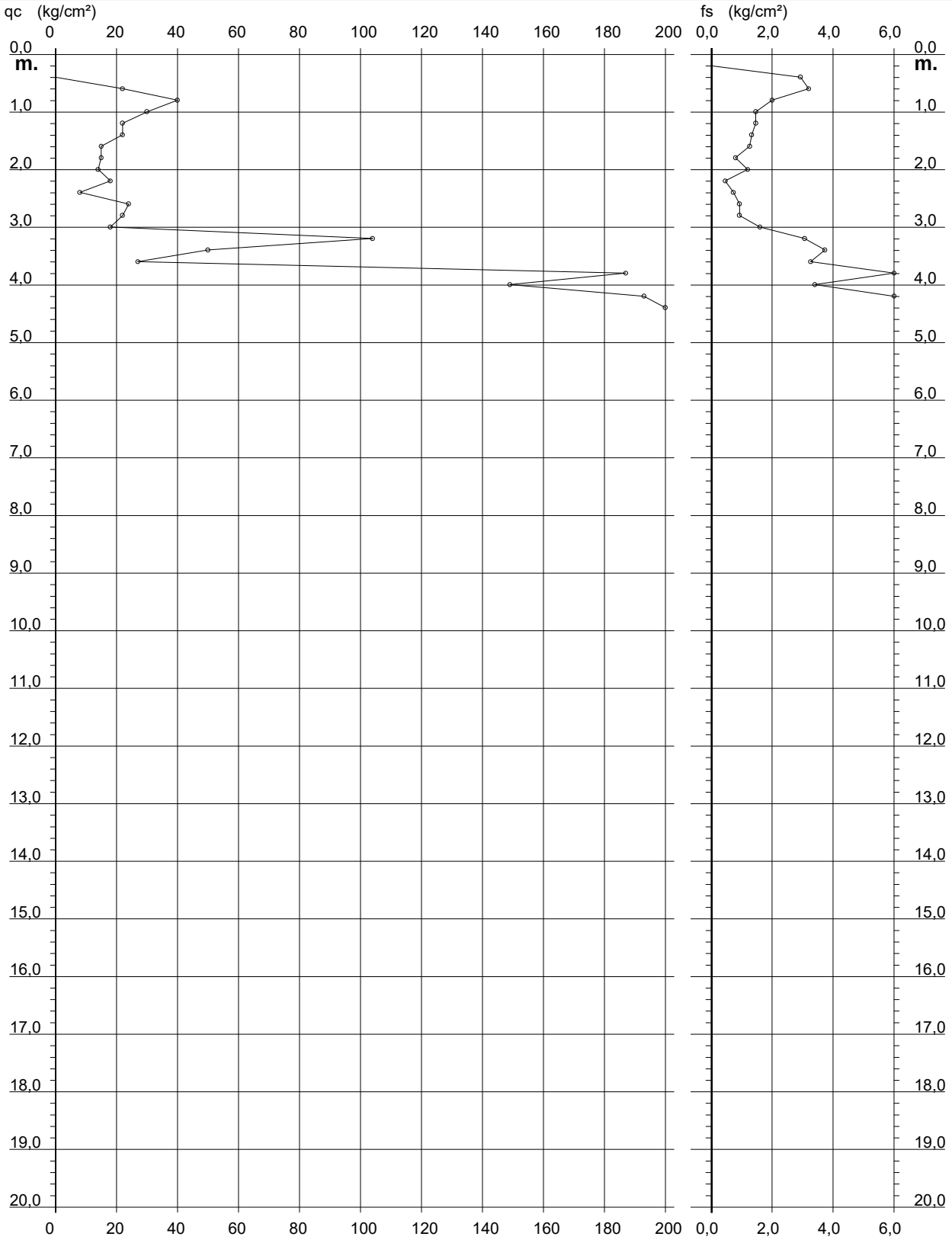
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 414

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-414	- scala vert.:	1 : 100



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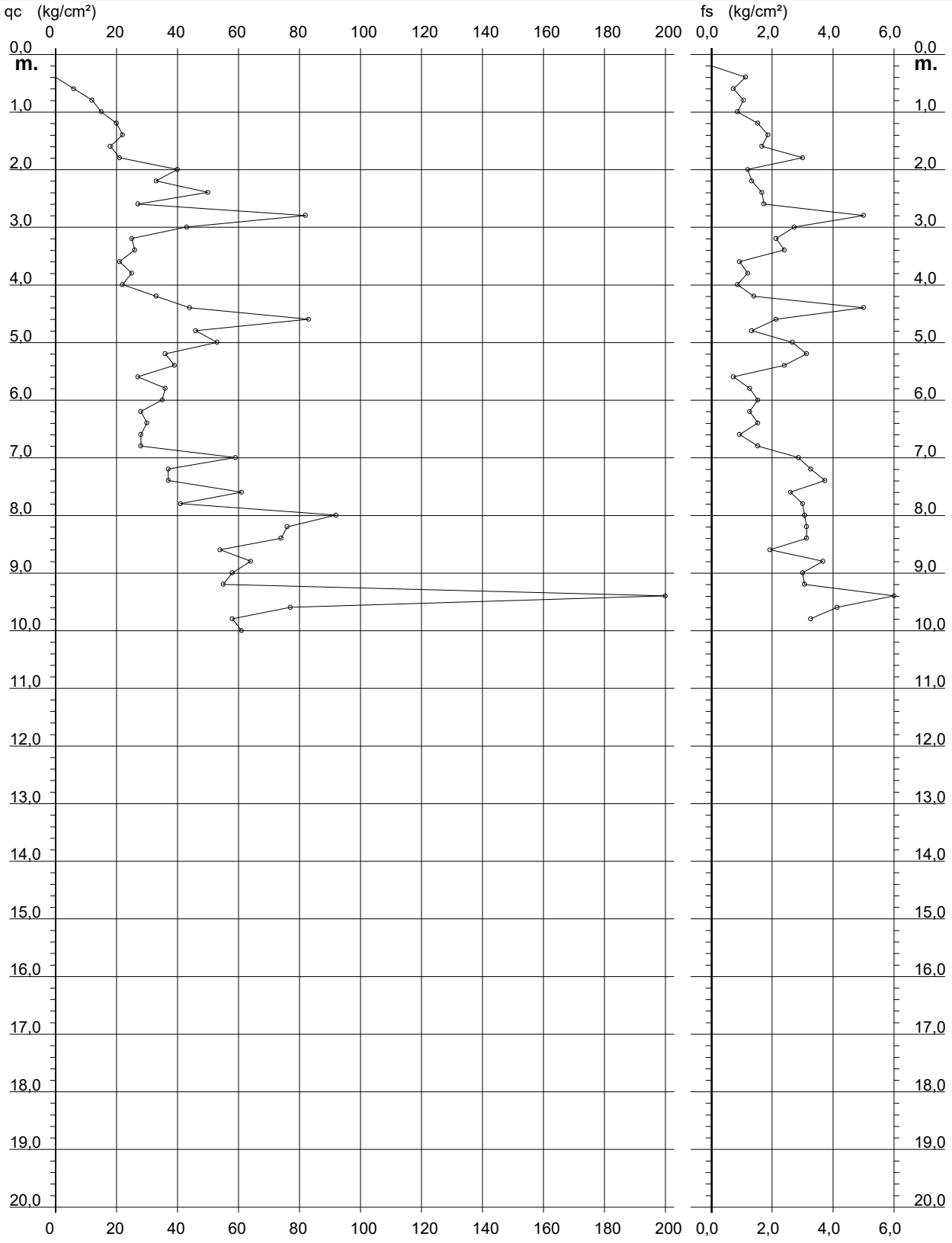
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 415

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	19/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-415	- scala vert.:	1 : 100



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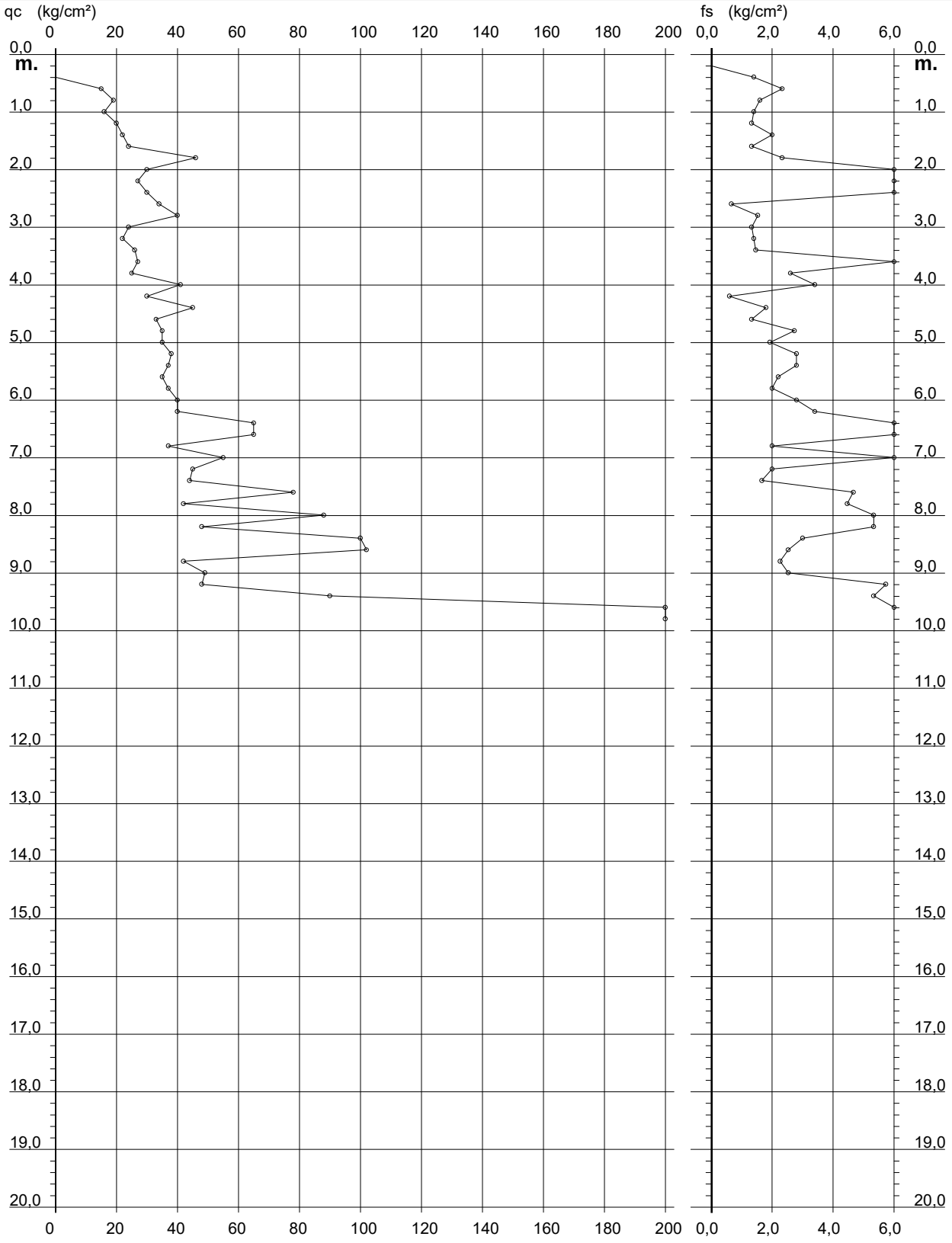
PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 416

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-416	- scala vert.:	1 : 100



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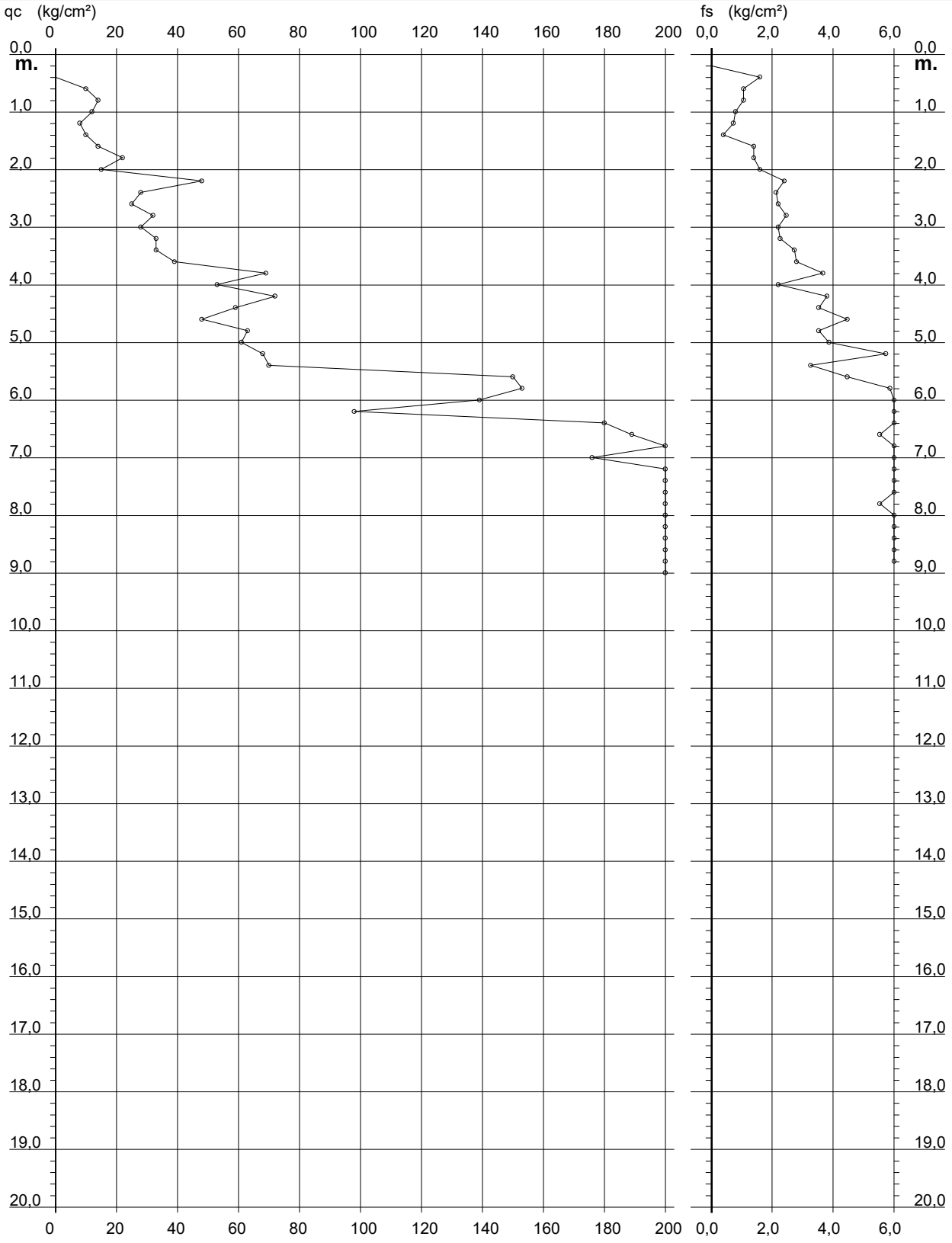
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 417

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-417	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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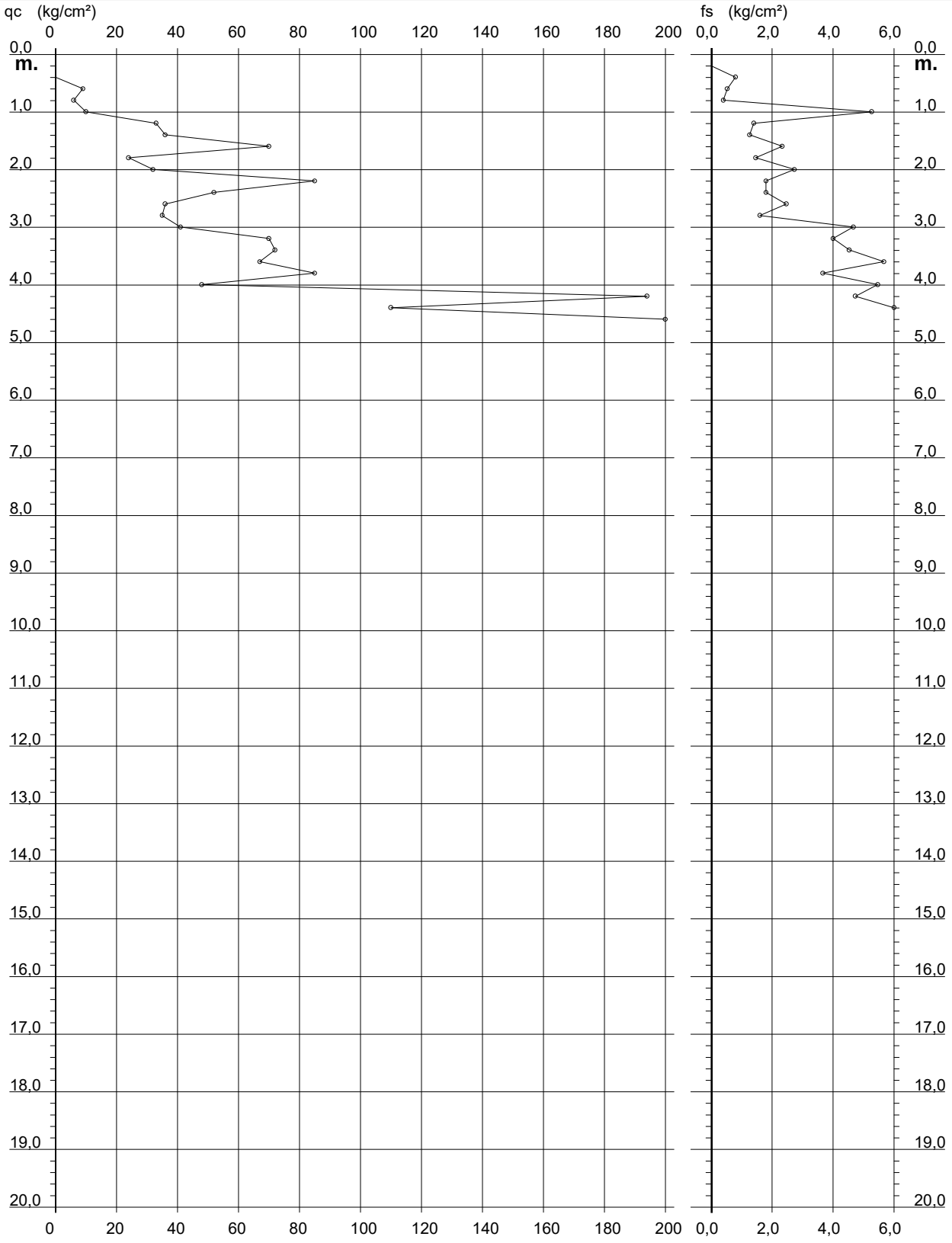
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 418

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	23/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-418	- scala vert.:	1 : 100



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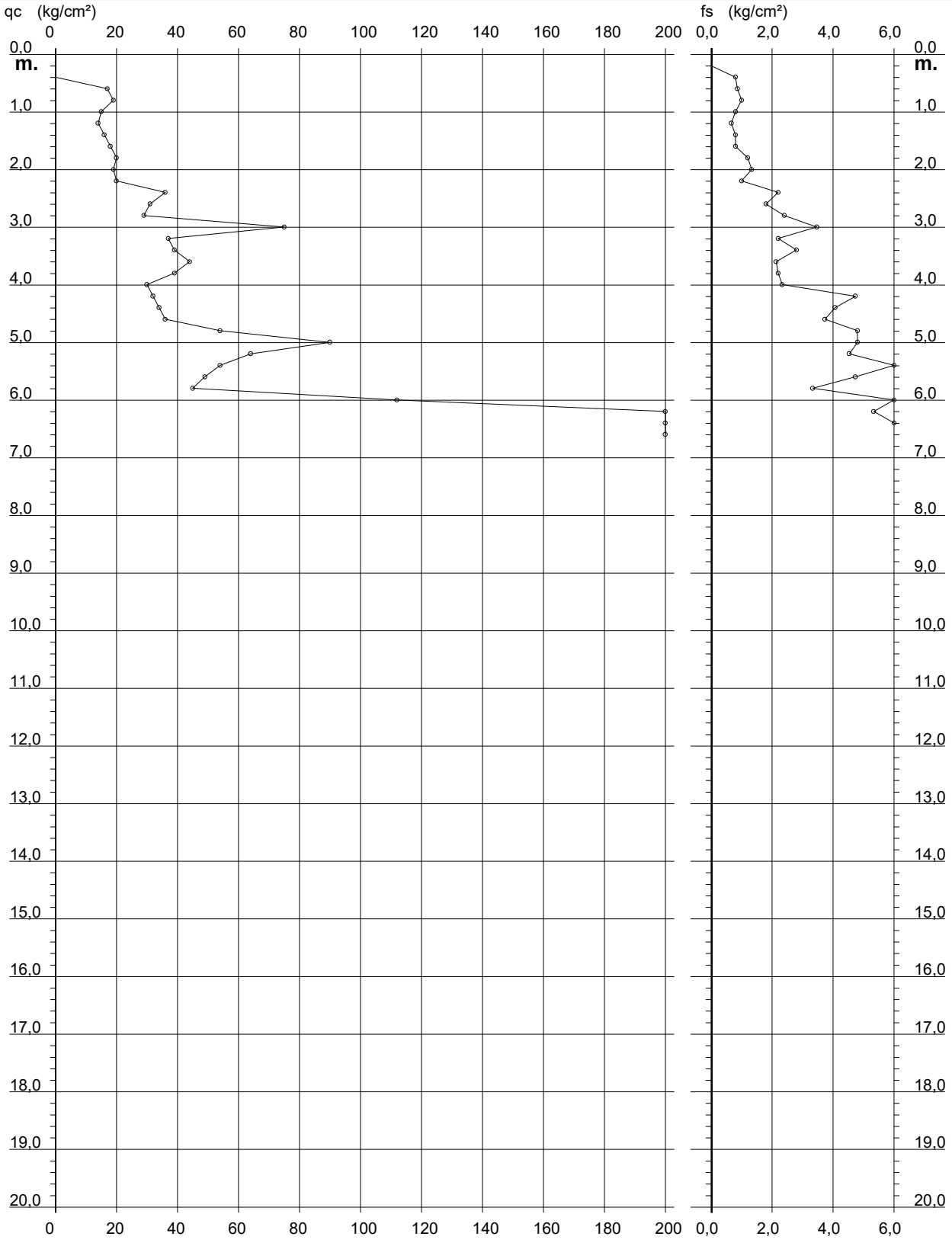
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 419

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-419	- scala vert.:	1 : 100



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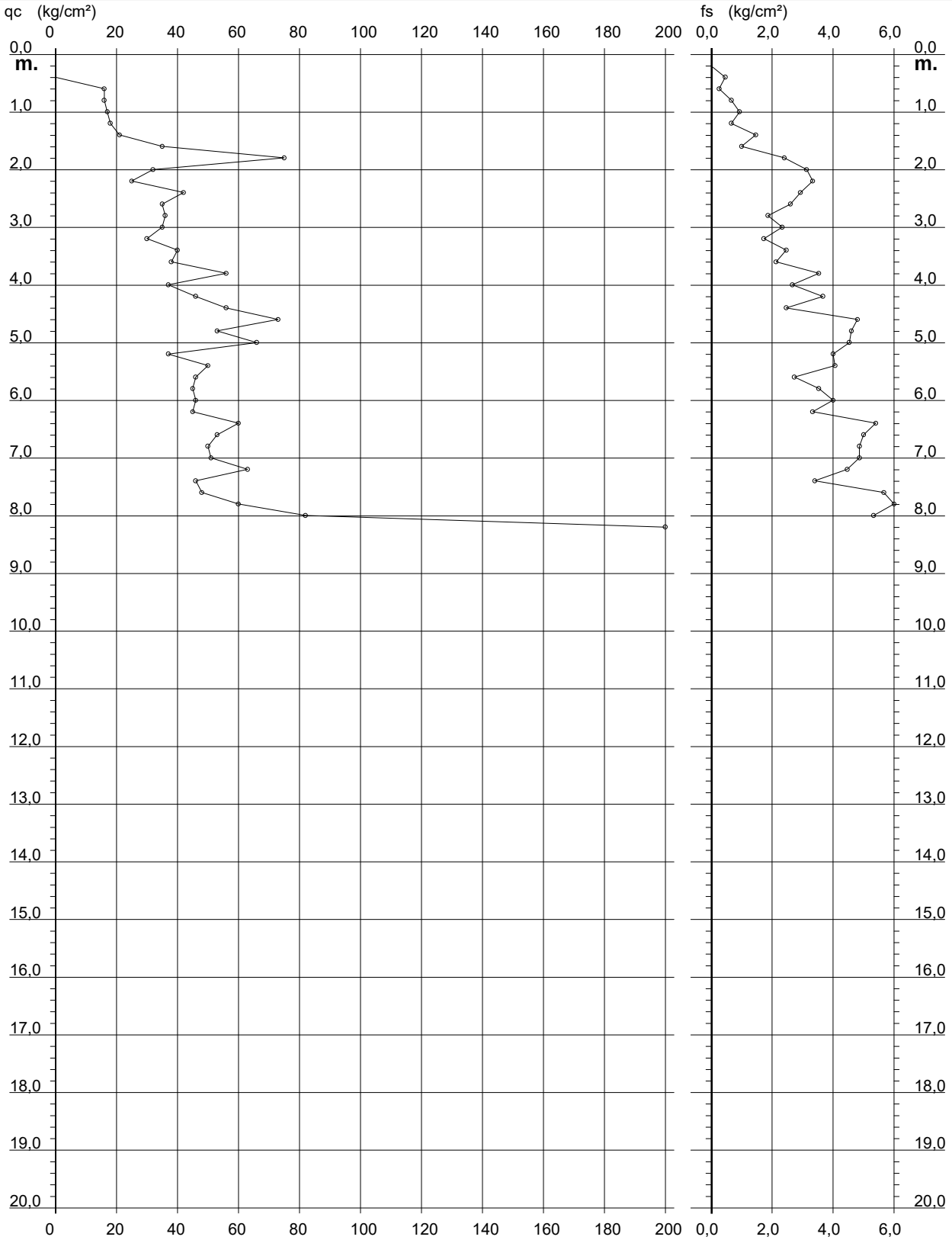
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 420

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	24/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-420	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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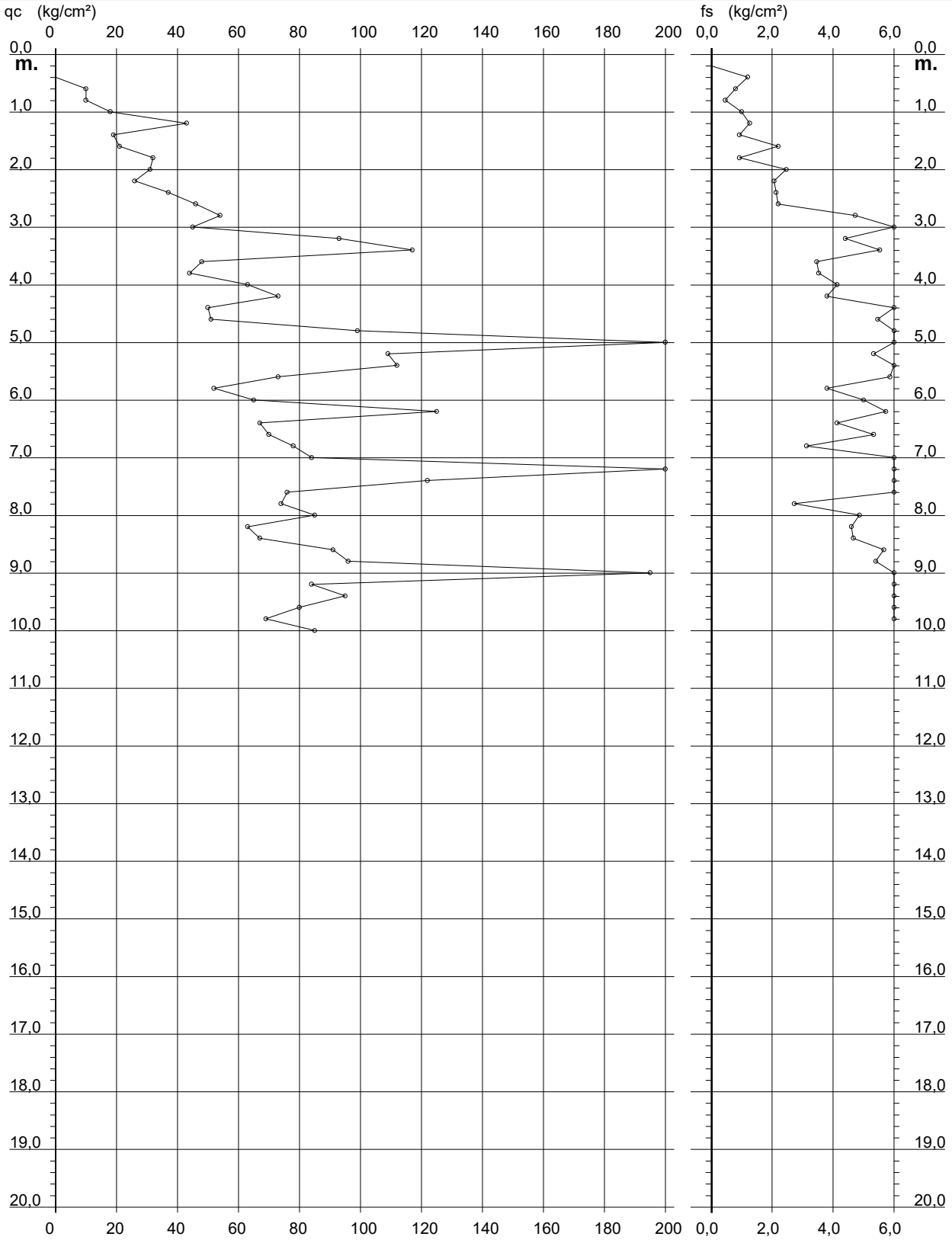
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 424

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-424	- scala vert.:	1 : 100



Software by: Dr.D.MERLIN - 0425/840820

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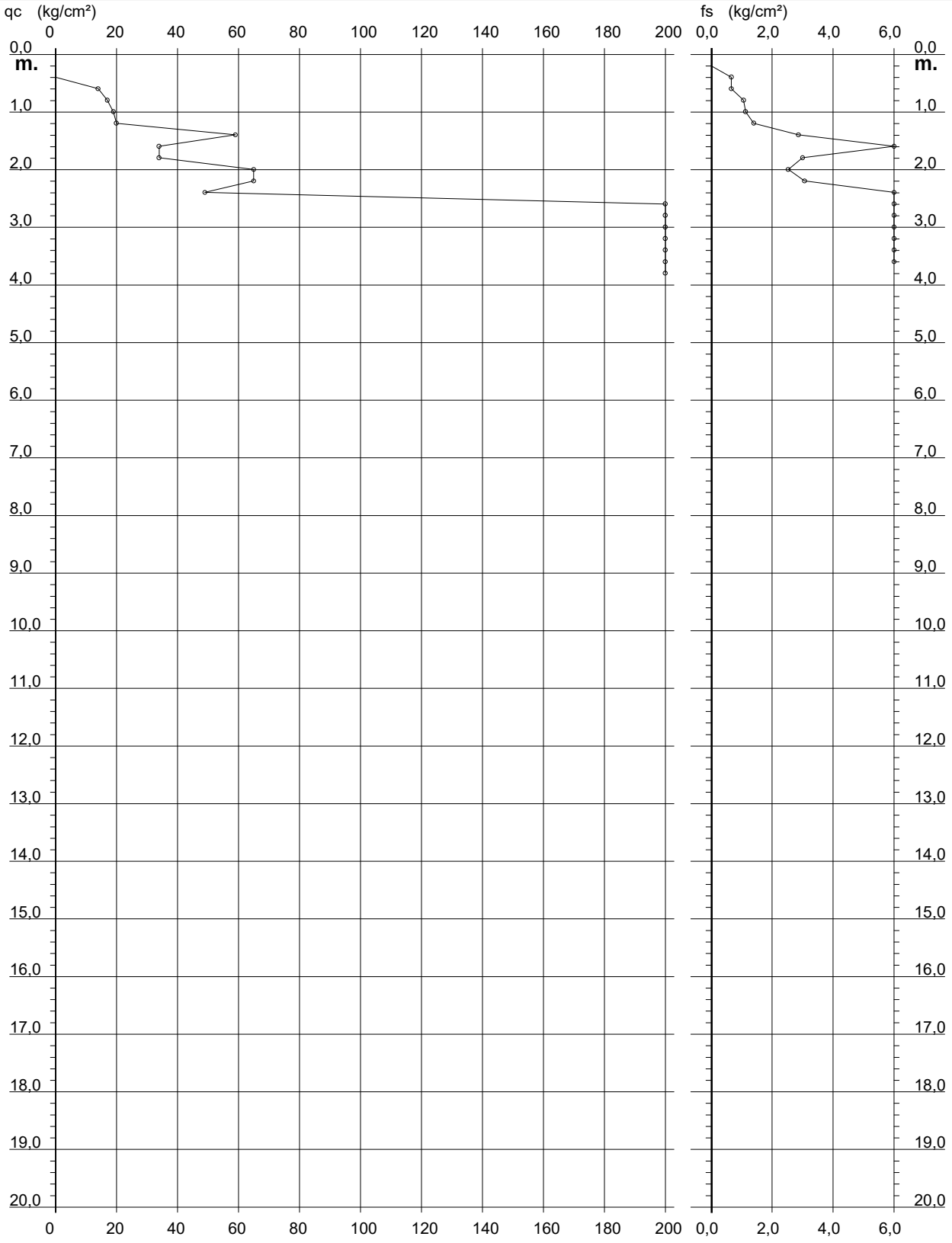
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 425

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	26/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-425	- scala vert.:	1 : 100



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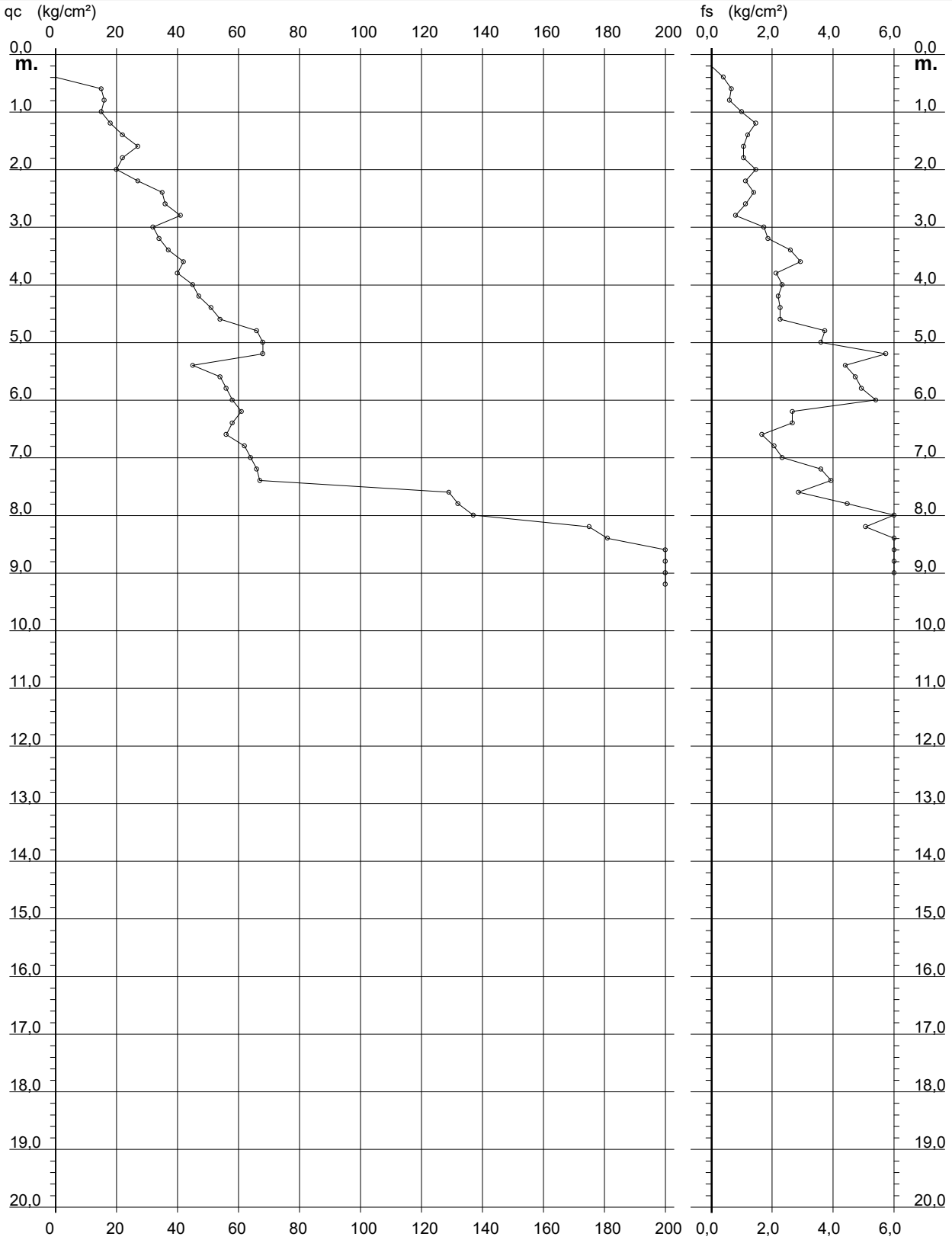
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 426

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	29/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-429	- scala vert.:	1 : 100



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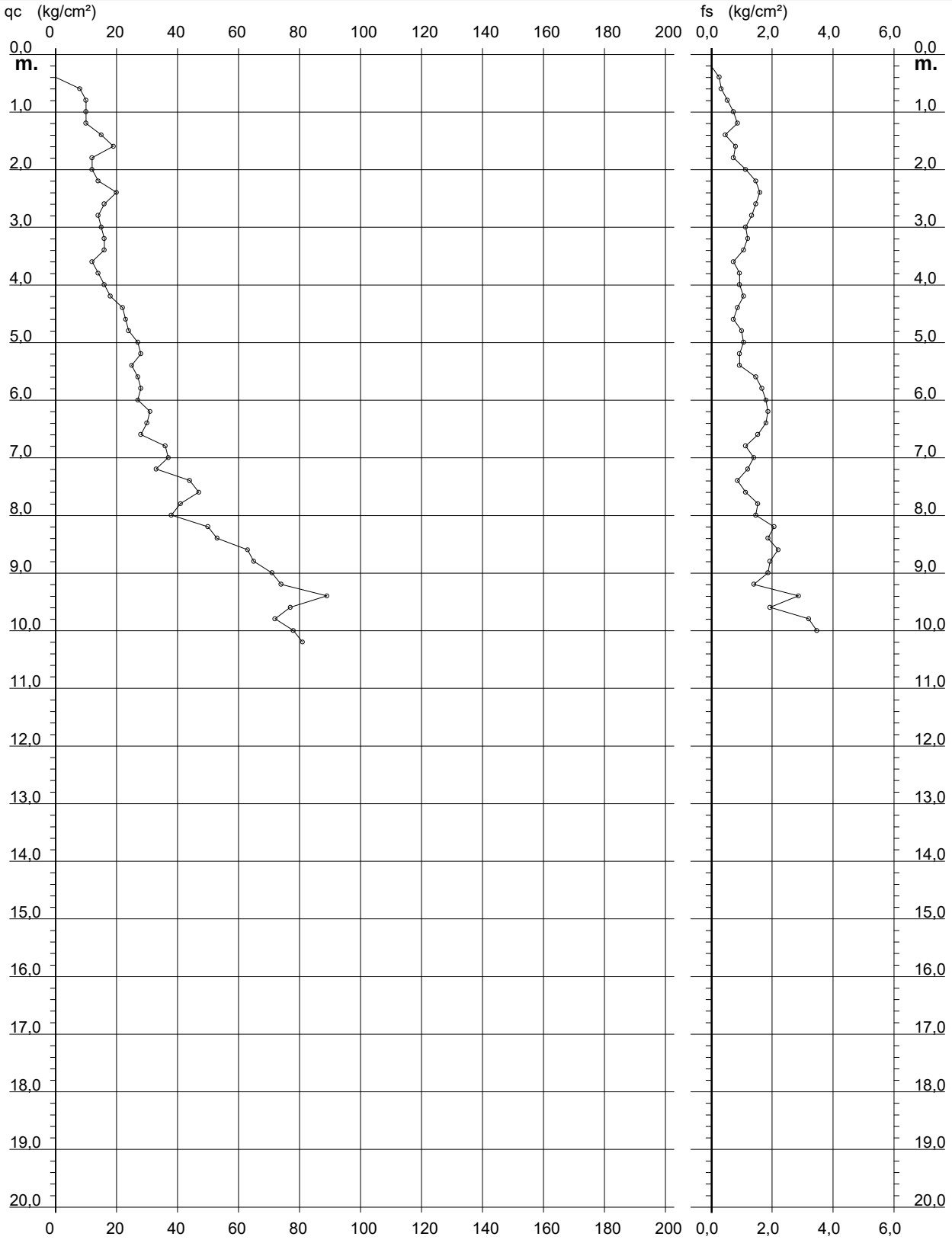
Rifer. 001-21

PROVA PENETROMETRICA STATICA
DIAGRAMMA DI RESISTENZA

CPT 427

2.01PG05-096

- committente :	VIANINI LAVORI Spa	- data :	29/03/2021
- lavoro :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Piano Campagna
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Cert. P001-21-427	- scala vert.:	1 : 100



PENETROMETRO DINAMICO IN USO : **PaganiTG63-200**

Classificazione ISSMFE (1988) dei penetrometri dinamici		
TIPO	Sigla riferimento	Peso Massa Battente M (kg)
Leggero	DPL (Light)	$M \leq 10$
Medio	DPM (Medium)	$10 < M < 40$
Pesante	DPH (Heavy)	$40 \leq M < 60$
Super pesante	DPSH (Super Heavy)	$M \geq 60$

CARATTERISTICHE TECNICHE : PaganiTG63-200

PESO MASSA BATTENTE	M	=	63,50 kg
ALTEZZA CADUTA LIBERA	H	=	0,75 m
PESO SISTEMA BATTUTA	Ms	=	0,63 kg
DIAMETRO PUNTA CONICA	D	=	51,00 mm
AREA BASE PUNTA CONICA	A	=	20,43 cm²
ANGOLO APERTURA PUNTA	α	=	90 °
LUNGHEZZA DELLE ASTE	La	=	1,00 m
PESO ASTE PER METRO	Ma	=	6,31 kg
PROF. GIUNZIONE 1ª ASTA	P1	=	0,20 m
AVANZAMENTO PUNTA	δ	=	0,20 m
NUMERO DI COLPI PUNTA	N	=	N(20) $\Rightarrow$ Relativo ad un avanzamento di 20 cm
RIVESTIMENTO / FANGHI	NO		
ENERGIA SPECIFICA x COLPO	Q	=	(MH)/(Aδ) = 11,66 kg/cm²(prova SPT : Qspt = 7.83 kg/cm²)
COEFF.TEORICO DI ENERGIA	βt	=	Q/Qspt = 1,489 (teoricamente : Nspt = βt N)

Valutazione resistenza dinamica alla punta Rpd [funzione del numero di colpi N] (FORMULA OLANDESE) :

$$Rpd = M^2 H / [A e (M+P)] = M^2 H N / [A \delta (M+P)]$$

Rpd = resistenza dinamica punta [area A]
e = infissione per colpo = δ / N
M = peso massa battente (altezza caduta H)
P = peso totale aste e sistema battuta

UNITA' di MISURA (conversioni)
1 kg/cm² = 0.098067 MPa 1 MPa = 1 MN/m² = 10.197 kg/cm² 1 bar = 1.0197 kg/cm² = 0.1 MPa 1 kN = 0.001 MN = 101.97 kg

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 001
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori Spa	- data :	24/08/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert 100-20-001
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	3,40 - 3,60	4	30,9	----	5
0,20 - 0,40	6	57,9	----	2	3,60 - 3,80	6	46,4	----	5
0,40 - 0,60	5	48,2	----	2	3,80 - 4,00	5	38,7	----	5
0,60 - 0,80	8	77,1	----	2	4,00 - 4,20	6	46,4	----	5
0,80 - 1,00	6	57,9	----	2	4,20 - 4,40	5	36,3	----	6
1,00 - 1,20	5	48,2	----	2	4,40 - 4,60	6	43,5	----	6
1,20 - 1,40	5	44,6	----	3	4,60 - 4,80	6	43,5	----	6
1,40 - 1,60	6	53,5	----	3	4,80 - 5,00	7	50,8	----	6
1,60 - 1,80	6	53,5	----	3	5,00 - 5,20	5	36,3	----	6
1,80 - 2,00	11	98,0	----	3	5,20 - 5,40	8	54,7	----	7
2,00 - 2,20	12	106,9	----	3	5,40 - 5,60	6	41,0	----	7
2,20 - 2,40	4	33,1	----	4	5,60 - 5,80	10	68,3	----	7
2,40 - 2,60	4	33,1	----	4	5,80 - 6,00	8	54,7	----	7
2,60 - 2,80	4	33,1	----	4	6,00 - 6,20	7	47,8	----	7
2,80 - 3,00	5	41,4	----	4	6,20 - 6,40	6	38,7	----	8
3,00 - 3,20	4	33,1	----	4	6,40 - 6,60	30	193,7	----	8
3,20 - 3,40	4	30,9	----	5	6,60 - 6,80	55	355,2	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 004
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	24/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-004
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	9	94,6	----	1	1,20 - 1,40	20	178,2	----	3
0,20 - 0,40	7	67,5	----	2	1,40 - 1,60	27	240,6	----	3
0,40 - 0,60	16	154,3	----	2	1,60 - 1,80	38	338,6	----	3
0,60 - 0,80	18	173,6	----	2	1,80 - 2,00	60	534,7	----	3
0,80 - 1,00	24	231,4	----	2	2,00 - 2,20	80	712,9	----	3
1,00 - 1,20	13	125,4	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 005
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	24/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-005
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	1,60 - 1,80	3	26,7	----	3
0,20 - 0,40	5	48,2	----	2	1,80 - 2,00	3	26,7	----	3
0,40 - 0,60	4	38,6	----	2	2,00 - 2,20	9	80,2	----	3
0,60 - 0,80	3	28,9	----	2	2,20 - 2,40	11	91,1	----	4
0,80 - 1,00	7	67,5	----	2	2,40 - 2,60	21	173,9	----	4
1,00 - 1,20	6	57,9	----	2	2,60 - 2,80	43	356,1	----	4
1,20 - 1,40	3	26,7	----	3	2,80 - 3,00	48	397,5	----	4
1,40 - 1,60	3	26,7	----	3	3,00 - 3,20	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 008
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	24/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-008
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	4,40 - 4,60	4	29,0	----	6
0,20 - 0,40	7	67,5	----	2	4,60 - 4,80	3	21,8	----	6
0,40 - 0,60	4	38,6	----	2	4,80 - 5,00	4	29,0	----	6
0,60 - 0,80	3	28,9	----	2	5,00 - 5,20	9	65,3	----	6
0,80 - 1,00	6	57,9	----	2	5,20 - 5,40	22	150,4	----	7
1,00 - 1,20	5	48,2	----	2	5,40 - 5,60	20	136,7	----	7
1,20 - 1,40	5	44,6	----	3	5,60 - 5,80	14	95,7	----	7
1,40 - 1,60	5	44,6	----	3	5,80 - 6,00	5	34,2	----	7
1,60 - 1,80	5	44,6	----	3	6,00 - 6,20	4	27,3	----	7
1,80 - 2,00	5	44,6	----	3	6,20 - 6,40	6	38,7	----	8
2,00 - 2,20	12	106,9	----	3	6,40 - 6,60	5	32,3	----	8
2,20 - 2,40	10	82,8	----	4	6,60 - 6,80	4	25,8	----	8
2,40 - 2,60	5	41,4	----	4	6,80 - 7,00	4	25,8	----	8
2,60 - 2,80	4	33,1	----	4	7,00 - 7,20	4	25,8	----	8
2,80 - 3,00	6	49,7	----	4	7,20 - 7,40	4	24,5	----	9
3,00 - 3,20	10	82,8	----	4	7,40 - 7,60	4	24,5	----	9
3,20 - 3,40	6	46,4	----	5	7,60 - 7,80	6	36,7	----	9
3,40 - 3,60	4	30,9	----	5	7,80 - 8,00	5	30,6	----	9
3,60 - 3,80	4	30,9	----	5	8,00 - 8,20	9	55,1	----	9
3,80 - 4,00	10	77,4	----	5	8,20 - 8,40	10	58,2	----	10
4,00 - 4,20	5	38,7	----	5	8,40 - 8,60	60	349,0	----	10
4,20 - 4,40	5	36,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 009
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-009
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	1,80 - 2,00	9	80,2	----	3
0,20 - 0,40	8	77,1	----	2	2,00 - 2,20	10	89,1	----	3
0,40 - 0,60	8	77,1	----	2	2,20 - 2,40	13	107,7	----	4
0,60 - 0,80	16	154,3	----	2	2,40 - 2,60	19	157,4	----	4
0,80 - 1,00	22	212,2	----	2	2,60 - 2,80	23	190,5	----	4
1,00 - 1,20	19	183,2	----	2	2,80 - 3,00	21	173,9	----	4
1,20 - 1,40	13	115,8	----	3	3,00 - 3,20	35	289,9	----	4
1,40 - 1,60	13	115,8	----	3	3,20 - 3,40	42	324,9	----	5
1,60 - 1,80	10	89,1	----	3	3,40 - 3,60	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 010
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-010
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	8	84,1	----	1	0,60 - 0,80	13	125,4	----	2
0,20 - 0,40	11	106,1	----	2	0,80 - 1,00	48	462,9	----	2
0,40 - 0,60	10	96,4	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 013
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-013
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	1,40 - 1,60	13	115,8	----	3
0,20 - 0,40	8	77,1	----	2	1,60 - 1,80	12	106,9	----	3
0,40 - 0,60	18	173,6	----	2	1,80 - 2,00	12	106,9	----	3
0,60 - 0,80	17	163,9	----	2	2,00 - 2,20	50	445,5	----	3
0,80 - 1,00	12	115,7	----	2	2,20 - 2,40	15	124,2	----	4
1,00 - 1,20	16	154,3	----	2	2,40 - 2,60	15	124,2	----	4
1,20 - 1,40	21	187,1	----	3	2,60 - 2,80	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 015
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-015
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	14	147,1	----	1	5,20 - 5,40	20	136,7	----	7
0,20 - 0,40	11	106,1	----	2	5,40 - 5,60	18	123,0	----	7
0,40 - 0,60	13	125,4	----	2	5,60 - 5,80	21	143,5	----	7
0,60 - 0,80	30	289,3	----	2	5,80 - 6,00	15	102,5	----	7
0,80 - 1,00	23	221,8	----	2	6,00 - 6,20	4	27,3	----	7
1,00 - 1,20	21	202,5	----	2	6,20 - 6,40	3	19,4	----	8
1,20 - 1,40	4	35,6	----	3	6,40 - 6,60	8	51,7	----	8
1,40 - 1,60	4	35,6	----	3	6,60 - 6,80	11	71,0	----	8
1,60 - 1,80	3	26,7	----	3	6,80 - 7,00	7	45,2	----	8
1,80 - 2,00	5	44,6	----	3	7,00 - 7,20	10	64,6	----	8
2,00 - 2,20	4	35,6	----	3	7,20 - 7,40	13	79,6	----	9
2,20 - 2,40	5	41,4	----	4	7,40 - 7,60	16	97,9	----	9
2,40 - 2,60	9	74,5	----	4	7,60 - 7,80	17	104,1	----	9
2,60 - 2,80	7	58,0	----	4	7,80 - 8,00	22	134,7	----	9
2,80 - 3,00	6	49,7	----	4	8,00 - 8,20	16	97,9	----	9
3,00 - 3,20	11	91,1	----	4	8,20 - 8,40	13	75,6	----	10
3,20 - 3,40	10	77,4	----	5	8,40 - 8,60	16	93,1	----	10
3,40 - 3,60	7	54,1	----	5	8,60 - 8,80	15	87,3	----	10
3,60 - 3,80	4	30,9	----	5	8,80 - 9,00	14	81,4	----	10
3,80 - 4,00	6	46,4	----	5	9,00 - 9,20	13	75,6	----	10
4,00 - 4,20	14	108,3	----	5	9,20 - 9,40	10	55,4	----	11
4,20 - 4,40	12	87,1	----	6	9,40 - 9,60	11	61,0	----	11
4,40 - 4,60	11	79,8	----	6	9,60 - 9,80	19	105,3	----	11
4,60 - 4,80	21	152,4	----	6	9,80 - 10,00	26	144,1	----	11
4,80 - 5,00	14	101,6	----	6	10,00 - 10,20	40	221,7	----	11
5,00 - 5,20	11	79,8	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 020
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	26/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-020
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	0,80 - 1,00	23	221,8	----	2
0,20 - 0,40	10	96,4	----	2	1,00 - 1,20	23	221,8	----	2
0,40 - 0,60	14	135,0	----	2	1,20 - 1,40	24	213,9	----	3
0,60 - 0,80	19	183,2	----	2	1,40 - 1,60	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 021
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-021
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,60 - 1,80	15	133,7	----	3
0,20 - 0,40	3	28,9	----	2	1,80 - 2,00	14	124,8	----	3
0,40 - 0,60	3	28,9	----	2	2,00 - 2,20	19	169,3	----	3
0,60 - 0,80	9	86,8	----	2	2,20 - 2,40	22	182,2	----	4
0,80 - 1,00	14	135,0	----	2	2,40 - 2,60	35	289,9	----	4
1,00 - 1,20	13	125,4	----	2	2,60 - 2,80	30	248,5	----	4
1,20 - 1,40	20	178,2	----	3	2,80 - 3,00	48	397,5	----	4
1,40 - 1,60	16	142,6	----	3	3,00 - 3,20	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 022
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-022
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	3,60 - 3,80	8	61,9	----	5
0,20 - 0,40	5	48,2	----	2	3,80 - 4,00	8	61,9	----	5
0,40 - 0,60	7	67,5	----	2	4,00 - 4,20	8	61,9	----	5
0,60 - 0,80	8	77,1	----	2	4,20 - 4,40	8	58,1	----	6
0,80 - 1,00	7	67,5	----	2	4,40 - 4,60	8	58,1	----	6
1,00 - 1,20	6	57,9	----	2	4,60 - 4,80	9	65,3	----	6
1,20 - 1,40	16	142,6	----	3	4,80 - 5,00	9	65,3	----	6
1,40 - 1,60	9	80,2	----	3	5,00 - 5,20	8	58,1	----	6
1,60 - 1,80	9	80,2	----	3	5,20 - 5,40	8	54,7	----	7
1,80 - 2,00	8	71,3	----	3	5,40 - 5,60	11	75,2	----	7
2,00 - 2,20	9	80,2	----	3	5,60 - 5,80	11	75,2	----	7
2,20 - 2,40	10	82,8	----	4	5,80 - 6,00	11	75,2	----	7
2,40 - 2,60	10	82,8	----	4	6,00 - 6,20	14	95,7	----	7
2,60 - 2,80	10	82,8	----	4	6,20 - 6,40	18	116,2	----	8
2,80 - 3,00	10	82,8	----	4	6,40 - 6,60	27	174,4	----	8
3,00 - 3,20	8	66,3	----	4	6,60 - 6,80	29	187,3	----	8
3,20 - 3,40	9	69,6	----	5	6,80 - 7,00	45	290,6	----	8
3,40 - 3,60	8	61,9	----	5	7,00 - 7,20	60	387,5	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 023
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-023
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,40 - 1,60	6	53,5	----	3
0,20 - 0,40	9	86,8	----	2	1,60 - 1,80	7	62,4	----	3
0,40 - 0,60	7	67,5	----	2	1,80 - 2,00	8	71,3	----	3
0,60 - 0,80	10	96,4	----	2	2,00 - 2,20	8	71,3	----	3
0,80 - 1,00	8	77,1	----	2	2,20 - 2,40	40	331,3	----	4
1,00 - 1,20	10	96,4	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	9	80,2	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 024
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-024
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	2,00 - 2,20	10	89,1	----	3
0,20 - 0,40	5	48,2	----	2	2,20 - 2,40	16	132,5	----	4
0,40 - 0,60	6	57,9	----	2	2,40 - 2,60	7	58,0	----	4
0,60 - 0,80	6	57,9	----	2	2,60 - 2,80	7	58,0	----	4
0,80 - 1,00	7	67,5	----	2	2,80 - 3,00	10	82,8	----	4
1,00 - 1,20	9	86,8	----	2	3,00 - 3,20	18	149,1	----	4
1,20 - 1,40	12	106,9	----	3	3,20 - 3,40	28	216,6	----	5
1,40 - 1,60	9	80,2	----	3	3,40 - 3,60	35	270,7	----	5
1,60 - 1,80	9	80,2	----	3	3,60 - 3,80	48	371,3	----	5
1,80 - 2,00	10	89,1	----	3	3,80 - 4,00	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 025
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-025
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	0,40 - 0,60	50	482,2	----	2
0,20 - 0,40	30	289,3	----	2	0,60 - 0,80	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 026
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-026
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	3,60 - 3,80	8	61,9	----	5
0,20 - 0,40	6	57,9	----	2	3,80 - 4,00	8	61,9	----	5
0,40 - 0,60	5	48,2	----	2	4,00 - 4,20	9	69,6	----	5
0,60 - 0,80	5	48,2	----	2	4,20 - 4,40	8	58,1	----	6
0,80 - 1,00	14	135,0	----	2	4,40 - 4,60	7	50,8	----	6
1,00 - 1,20	13	125,4	----	2	4,60 - 4,80	8	58,1	----	6
1,20 - 1,40	8	71,3	----	3	4,80 - 5,00	14	101,6	----	6
1,40 - 1,60	9	80,2	----	3	5,00 - 5,20	35	254,0	----	6
1,60 - 1,80	10	89,1	----	3	5,20 - 5,40	21	143,5	----	7
1,80 - 2,00	10	89,1	----	3	5,40 - 5,60	12	82,0	----	7
2,00 - 2,20	9	80,2	----	3	5,60 - 5,80	9	61,5	----	7
2,20 - 2,40	8	66,3	----	4	5,80 - 6,00	8	54,7	----	7
2,40 - 2,60	11	91,1	----	4	6,00 - 6,20	8	54,7	----	7
2,60 - 2,80	10	82,8	----	4	6,20 - 6,40	8	51,7	----	8
2,80 - 3,00	8	66,3	----	4	6,40 - 6,60	9	58,1	----	8
3,00 - 3,20	9	74,5	----	4	6,60 - 6,80	11	71,0	----	8
3,20 - 3,40	8	61,9	----	5	6,80 - 7,00	33	213,1	----	8
3,40 - 3,60	7	54,1	----	5	7,00 - 7,20	60	387,5	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 027
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-027
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	24	252,2	----	1	0,60 - 0,80	22	212,2	----	2
0,20 - 0,40	31	298,9	----	2	0,80 - 1,00	48	462,9	----	2
0,40 - 0,60	31	298,9	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 028
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-028
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	5,20 - 5,40	8	54,7	----	7
0,20 - 0,40	3	28,9	----	2	5,40 - 5,60	7	47,8	----	7
0,40 - 0,60	4	38,6	----	2	5,60 - 5,80	7	47,8	----	7
0,60 - 0,80	4	38,6	----	2	5,80 - 6,00	7	47,8	----	7
0,80 - 1,00	4	38,6	----	2	6,00 - 6,20	7	47,8	----	7
1,00 - 1,20	4	38,6	----	2	6,20 - 6,40	7	45,2	----	8
1,20 - 1,40	3	26,7	----	3	6,40 - 6,60	7	45,2	----	8
1,40 - 1,60	4	35,6	----	3	6,60 - 6,80	6	38,7	----	8
1,60 - 1,80	6	53,5	----	3	6,80 - 7,00	5	32,3	----	8
1,80 - 2,00	7	62,4	----	3	7,00 - 7,20	6	38,7	----	8
2,00 - 2,20	5	44,6	----	3	7,20 - 7,40	5	30,6	----	9
2,20 - 2,40	5	41,4	----	4	7,40 - 7,60	5	30,6	----	9
2,40 - 2,60	5	41,4	----	4	7,60 - 7,80	5	30,6	----	9
2,60 - 2,80	4	33,1	----	4	7,80 - 8,00	5	30,6	----	9
2,80 - 3,00	4	33,1	----	4	8,00 - 8,20	6	36,7	----	9
3,00 - 3,20	4	33,1	----	4	8,20 - 8,40	5	29,1	----	10
3,20 - 3,40	3	23,2	----	5	8,40 - 8,60	5	29,1	----	10
3,40 - 3,60	4	30,9	----	5	8,60 - 8,80	5	29,1	----	10
3,60 - 3,80	4	30,9	----	5	8,80 - 9,00	6	34,9	----	10
3,80 - 4,00	6	46,4	----	5	9,00 - 9,20	6	34,9	----	10
4,00 - 4,20	6	46,4	----	5	9,20 - 9,40	6	33,3	----	11
4,20 - 4,40	6	43,5	----	6	9,40 - 9,60	6	33,3	----	11
4,40 - 4,60	5	36,3	----	6	9,60 - 9,80	6	33,3	----	11
4,60 - 4,80	5	36,3	----	6	9,80 - 10,00	6	33,3	----	11
4,80 - 5,00	7	50,8	----	6	10,00 - 10,20	6	33,3	----	11
5,00 - 5,20	8	58,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 029
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-029
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	1,20 - 1,40	12	106,9	----	3
0,20 - 0,40	12	115,7	----	2	1,40 - 1,60	7	62,4	----	3
0,40 - 0,60	16	154,3	----	2	1,60 - 1,80	7	62,4	----	3
0,60 - 0,80	24	231,4	----	2	1,80 - 2,00	25	222,8	----	3
0,80 - 1,00	22	212,2	----	2	2,00 - 2,20	37	329,7	----	3
1,00 - 1,20	18	173,6	----	2	2,20 - 2,40	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 030
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-030
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	11	115,6	----	1	0,60 - 0,80	19	183,2	----	2
0,20 - 0,40	28	270,0	----	2	0,80 - 1,00	26	250,7	----	2
0,40 - 0,60	22	212,2	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 031
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-031
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	1,20 - 1,40	3	26,7	----	3
0,20 - 0,40	4	38,6	----	2	1,40 - 1,60	5	44,6	----	3
0,40 - 0,60	4	38,6	----	2	1,60 - 1,80	10	89,1	----	3
0,60 - 0,80	6	57,9	----	2	1,80 - 2,00	30	267,3	----	3
0,80 - 1,00	5	48,2	----	2	2,00 - 2,20	44	392,1	----	3
1,00 - 1,20	5	48,2	----	2	2,20 - 2,40	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 032
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-032
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	5,00 - 5,20	13	94,3	----	6
0,20 - 0,40	7	67,5	----	2	5,20 - 5,40	12	82,0	----	7
0,40 - 0,60	8	77,1	----	2	5,40 - 5,60	13	88,8	----	7
0,60 - 0,80	8	77,1	----	2	5,60 - 5,80	13	88,8	----	7
0,80 - 1,00	10	96,4	----	2	5,80 - 6,00	13	88,8	----	7
1,00 - 1,20	22	212,2	----	2	6,00 - 6,20	12	82,0	----	7
1,20 - 1,40	19	169,3	----	3	6,20 - 6,40	12	77,5	----	8
1,40 - 1,60	32	285,1	----	3	6,40 - 6,60	16	103,3	----	8
1,60 - 1,80	43	383,2	----	3	6,60 - 6,80	18	116,2	----	8
1,80 - 2,00	43	383,2	----	3	6,80 - 7,00	16	103,3	----	8
2,00 - 2,20	37	329,7	----	3	7,00 - 7,20	19	122,7	----	8
2,20 - 2,40	17	140,8	----	4	7,20 - 7,40	16	97,9	----	9
2,40 - 2,60	10	82,8	----	4	7,40 - 7,60	16	97,9	----	9
2,60 - 2,80	12	99,4	----	4	7,60 - 7,80	16	97,9	----	9
2,80 - 3,00	16	132,5	----	4	7,80 - 8,00	19	116,3	----	9
3,00 - 3,20	22	182,2	----	4	8,00 - 8,20	24	146,9	----	9
3,20 - 3,40	21	162,4	----	5	8,20 - 8,40	20	116,3	----	10
3,40 - 3,60	16	123,8	----	5	8,40 - 8,60	20	116,3	----	10
3,60 - 3,80	16	123,8	----	5	8,60 - 8,80	35	203,6	----	10
3,80 - 4,00	16	123,8	----	5	8,80 - 9,00	21	122,2	----	10
4,00 - 4,20	16	123,8	----	5	9,00 - 9,20	15	87,3	----	10
4,20 - 4,40	14	101,6	----	6	9,20 - 9,40	21	116,4	----	11
4,40 - 4,60	12	87,1	----	6	9,40 - 9,60	22	121,9	----	11
4,60 - 4,80	14	101,6	----	6	9,60 - 9,80	60	332,5	----	11
4,80 - 5,00	15	108,9	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 033
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-033
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	3,20 - 3,40	27	208,9	----	5
0,20 - 0,40	20	192,9	----	2	3,40 - 3,60	29	224,3	----	5
0,40 - 0,60	12	115,7	----	2	3,60 - 3,80	9	69,6	----	5
0,60 - 0,80	12	115,7	----	2	3,80 - 4,00	8	61,9	----	5
0,80 - 1,00	13	125,4	----	2	4,00 - 4,20	10	77,4	----	5
1,00 - 1,20	13	125,4	----	2	4,20 - 4,40	9	65,3	----	6
1,20 - 1,40	14	124,8	----	3	4,40 - 4,60	12	87,1	----	6
1,40 - 1,60	15	133,7	----	3	4,60 - 4,80	15	108,9	----	6
1,60 - 1,80	10	89,1	----	3	4,80 - 5,00	20	145,1	----	6
1,80 - 2,00	10	89,1	----	3	5,00 - 5,20	21	152,4	----	6
2,00 - 2,20	6	53,5	----	3	5,20 - 5,40	23	157,2	----	7
2,20 - 2,40	5	41,4	----	4	5,40 - 5,60	27	184,5	----	7
2,40 - 2,60	4	33,1	----	4	5,60 - 5,80	46	314,4	----	7
2,60 - 2,80	4	33,1	----	4	5,80 - 6,00	51	348,5	----	7
2,80 - 3,00	5	41,4	----	4	6,00 - 6,20	60	410,0	----	7
3,00 - 3,20	16	132,5	----	4					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 035
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-035
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	13	136,6	----	1	0,60 - 0,80	50	482,2	----	2
0,20 - 0,40	19	183,2	----	2	0,80 - 1,00	60	578,6	----	2
0,40 - 0,60	44	424,3	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 036
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-036
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	13	136,6	----	1	1,20 - 1,40	8	71,3	----	3
0,20 - 0,40	7	67,5	----	2	1,40 - 1,60	9	80,2	----	3
0,40 - 0,60	25	241,1	----	2	1,60 - 1,80	16	142,6	----	3
0,60 - 0,80	25	241,1	----	2	1,80 - 2,00	20	178,2	----	3
0,80 - 1,00	16	154,3	----	2	2,00 - 2,20	16	142,6	----	3
1,00 - 1,20	9	86,8	----	2	2,20 - 2,40	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 042
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-042
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	5,20 - 5,40	7	47,8	----	7
0,20 - 0,40	10	96,4	----	2	5,40 - 5,60	5	34,2	----	7
0,40 - 0,60	12	115,7	----	2	5,60 - 5,80	7	47,8	----	7
0,60 - 0,80	8	77,1	----	2	5,80 - 6,00	6	41,0	----	7
0,80 - 1,00	8	77,1	----	2	6,00 - 6,20	7	47,8	----	7
1,00 - 1,20	7	67,5	----	2	6,20 - 6,40	3	19,4	----	8
1,20 - 1,40	8	71,3	----	3	6,40 - 6,60	2	12,9	----	8
1,40 - 1,60	9	80,2	----	3	6,60 - 6,80	4	25,8	----	8
1,60 - 1,80	12	106,9	----	3	6,80 - 7,00	6	38,7	----	8
1,80 - 2,00	13	115,8	----	3	7,00 - 7,20	9	58,1	----	8
2,00 - 2,20	11	98,0	----	3	7,20 - 7,40	10	61,2	----	9
2,20 - 2,40	8	66,3	----	4	7,40 - 7,60	10	61,2	----	9
2,40 - 2,60	16	132,5	----	4	7,60 - 7,80	8	49,0	----	9
2,60 - 2,80	11	91,1	----	4	7,80 - 8,00	9	55,1	----	9
2,80 - 3,00	7	58,0	----	4	8,00 - 8,20	12	73,5	----	9
3,00 - 3,20	6	49,7	----	4	8,20 - 8,40	12	69,8	----	10
3,20 - 3,40	5	38,7	----	5	8,40 - 8,60	11	64,0	----	10
3,40 - 3,60	4	30,9	----	5	8,60 - 8,80	19	110,5	----	10
3,60 - 3,80	4	30,9	----	5	8,80 - 9,00	16	93,1	----	10
3,80 - 4,00	9	69,6	----	5	9,00 - 9,20	16	93,1	----	10
4,00 - 4,20	8	61,9	----	5	9,20 - 9,40	16	88,7	----	11
4,20 - 4,40	6	43,5	----	6	9,40 - 9,60	19	105,3	----	11
4,40 - 4,60	6	43,5	----	6	9,60 - 9,80	23	127,5	----	11
4,60 - 4,80	7	50,8	----	6	9,80 - 10,00	26	144,1	----	11
4,80 - 5,00	8	58,1	----	6	10,00 - 10,20	33	182,9	----	11
5,00 - 5,20	10	72,6	----	6	10,20 - 10,40	35	185,2	----	12

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 037
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-037
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	11	115,6	----	1	5,20 - 5,40	7	47,8	----	7
0,20 - 0,40	16	154,3	----	2	5,40 - 5,60	6	41,0	----	7
0,40 - 0,60	15	144,7	----	2	5,60 - 5,80	6	41,0	----	7
0,60 - 0,80	12	115,7	----	2	5,80 - 6,00	8	54,7	----	7
0,80 - 1,00	10	96,4	----	2	6,00 - 6,20	7	47,8	----	7
1,00 - 1,20	8	77,1	----	2	6,20 - 6,40	6	38,7	----	8
1,20 - 1,40	8	71,3	----	3	6,40 - 6,60	6	38,7	----	8
1,40 - 1,60	6	53,5	----	3	6,60 - 6,80	8	51,7	----	8
1,60 - 1,80	6	53,5	----	3	6,80 - 7,00	6	38,7	----	8
1,80 - 2,00	8	71,3	----	3	7,00 - 7,20	8	51,7	----	8
2,00 - 2,20	10	89,1	----	3	7,20 - 7,40	7	42,8	----	9
2,20 - 2,40	10	82,8	----	4	7,40 - 7,60	7	42,8	----	9
2,40 - 2,60	13	107,7	----	4	7,60 - 7,80	7	42,8	----	9
2,60 - 2,80	12	99,4	----	4	7,80 - 8,00	7	42,8	----	9
2,80 - 3,00	14	115,9	----	4	8,00 - 8,20	8	49,0	----	9
3,00 - 3,20	10	82,8	----	4	8,20 - 8,40	7	40,7	----	10
3,20 - 3,40	8	61,9	----	5	8,40 - 8,60	8	46,5	----	10
3,40 - 3,60	6	46,4	----	5	8,60 - 8,80	9	52,4	----	10
3,60 - 3,80	8	61,9	----	5	8,80 - 9,00	9	52,4	----	10
3,80 - 4,00	10	77,4	----	5	9,00 - 9,20	9	52,4	----	10
4,00 - 4,20	10	77,4	----	5	9,20 - 9,40	8	44,3	----	11
4,20 - 4,40	6	43,5	----	6	9,40 - 9,60	9	49,9	----	11
4,40 - 4,60	6	43,5	----	6	9,60 - 9,80	8	44,3	----	11
4,60 - 4,80	5	36,3	----	6	9,80 - 10,00	9	49,9	----	11
4,80 - 5,00	6	43,5	----	6	10,00 - 10,20	10	55,4	----	11
5,00 - 5,20	7	50,8	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 040
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-040
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	22	231,2	----	1	4,80 - 5,00	21	152,4	----	6
0,20 - 0,40	12	115,7	----	2	5,00 - 5,20	20	145,1	----	6
0,40 - 0,60	8	77,1	----	2	5,20 - 5,40	23	157,2	----	7
0,60 - 0,80	8	77,1	----	2	5,40 - 5,60	23	157,2	----	7
0,80 - 1,00	8	77,1	----	2	5,60 - 5,80	21	143,5	----	7
1,00 - 1,20	10	96,4	----	2	5,80 - 6,00	19	129,8	----	7
1,20 - 1,40	8	71,3	----	3	6,00 - 6,20	16	109,3	----	7
1,40 - 1,60	10	89,1	----	3	6,20 - 6,40	13	84,0	----	8
1,60 - 1,80	8	71,3	----	3	6,40 - 6,60	6	38,7	----	8
1,80 - 2,00	6	53,5	----	3	6,60 - 6,80	6	38,7	----	8
2,00 - 2,20	6	53,5	----	3	6,80 - 7,00	7	45,2	----	8
2,20 - 2,40	8	66,3	----	4	7,00 - 7,20	7	45,2	----	8
2,40 - 2,60	9	74,5	----	4	7,20 - 7,40	7	42,8	----	9
2,60 - 2,80	10	82,8	----	4	7,40 - 7,60	7	42,8	----	9
2,80 - 3,00	16	132,5	----	4	7,60 - 7,80	8	49,0	----	9
3,00 - 3,20	16	132,5	----	4	7,80 - 8,00	8	49,0	----	9
3,20 - 3,40	16	123,8	----	5	8,00 - 8,20	9	55,1	----	9
3,40 - 3,60	25	193,4	----	5	8,20 - 8,40	16	93,1	----	10
3,60 - 3,80	34	263,0	----	5	8,40 - 8,60	16	93,1	----	10
3,80 - 4,00	24	185,7	----	5	8,60 - 8,80	18	104,7	----	10
4,00 - 4,20	14	108,3	----	5	8,80 - 9,00	11	64,0	----	10
4,20 - 4,40	15	108,9	----	6	9,00 - 9,20	21	122,2	----	10
4,40 - 4,60	18	130,6	----	6	9,20 - 9,40	34	188,4	----	11
4,60 - 4,80	21	152,4	----	6	9,40 - 9,60	60	332,5	----	11

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 041
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-041
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	0,60 - 0,80	7	67,5	----	2
0,20 - 0,40	4	38,6	----	2	0,80 - 1,00	11	106,1	----	2
0,40 - 0,60	5	48,2	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 043
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-043
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	5,20 - 5,40	6	41,0	----	7
0,20 - 0,40	4	38,6	----	2	5,40 - 5,60	4	27,3	----	7
0,40 - 0,60	4	38,6	----	2	5,60 - 5,80	4	27,3	----	7
0,60 - 0,80	4	38,6	----	2	5,80 - 6,00	4	27,3	----	7
0,80 - 1,00	4	38,6	----	2	6,00 - 6,20	5	34,2	----	7
1,00 - 1,20	4	38,6	----	2	6,20 - 6,40	7	45,2	----	8
1,20 - 1,40	1	8,9	----	3	6,40 - 6,60	7	45,2	----	8
1,40 - 1,60	1	8,9	----	3	6,60 - 6,80	9	58,1	----	8
1,60 - 1,80	1	8,9	----	3	6,80 - 7,00	10	64,6	----	8
1,80 - 2,00	1	8,9	----	3	7,00 - 7,20	12	77,5	----	8
2,00 - 2,20	5	44,6	----	3	7,20 - 7,40	11	67,3	----	9
2,20 - 2,40	3	24,8	----	4	7,40 - 7,60	16	97,9	----	9
2,40 - 2,60	3	24,8	----	4	7,60 - 7,80	16	97,9	----	9
2,60 - 2,80	3	24,8	----	4	7,80 - 8,00	16	97,9	----	9
2,80 - 3,00	4	33,1	----	4	8,00 - 8,20	21	128,5	----	9
3,00 - 3,20	3	24,8	----	4	8,20 - 8,40	27	157,1	----	10
3,20 - 3,40	4	30,9	----	5	8,40 - 8,60	33	192,0	----	10
3,40 - 3,60	5	38,7	----	5	8,60 - 8,80	18	104,7	----	10
3,60 - 3,80	5	38,7	----	5	8,80 - 9,00	18	104,7	----	10
3,80 - 4,00	5	38,7	----	5	9,00 - 9,20	24	139,6	----	10
4,00 - 4,20	5	38,7	----	5	9,20 - 9,40	26	144,1	----	11
4,20 - 4,40	5	36,3	----	6	9,40 - 9,60	36	199,5	----	11
4,40 - 4,60	4	29,0	----	6	9,60 - 9,80	41	227,2	----	11
4,60 - 4,80	5	36,3	----	6	9,80 - 10,00	31	171,8	----	11
4,80 - 5,00	5	36,3	----	6	10,00 - 10,20	30	166,3	----	11
5,00 - 5,20	6	43,5	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 044
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-044
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	5,20 - 5,40	4	27,3	----	7
0,20 - 0,40	14	135,0	----	2	5,40 - 5,60	4	27,3	----	7
0,40 - 0,60	14	135,0	----	2	5,60 - 5,80	4	27,3	----	7
0,60 - 0,80	14	135,0	----	2	5,80 - 6,00	4	27,3	----	7
0,80 - 1,00	19	183,2	----	2	6,00 - 6,20	4	27,3	----	7
1,00 - 1,20	15	144,7	----	2	6,20 - 6,40	3	19,4	----	8
1,20 - 1,40	10	89,1	----	3	6,40 - 6,60	4	25,8	----	8
1,40 - 1,60	7	62,4	----	3	6,60 - 6,80	5	32,3	----	8
1,60 - 1,80	5	44,6	----	3	6,80 - 7,00	7	45,2	----	8
1,80 - 2,00	5	44,6	----	3	7,00 - 7,20	9	58,1	----	8
2,00 - 2,20	6	53,5	----	3	7,20 - 7,40	7	42,8	----	9
2,20 - 2,40	4	33,1	----	4	7,40 - 7,60	7	42,8	----	9
2,40 - 2,60	4	33,1	----	4	7,60 - 7,80	9	55,1	----	9
2,60 - 2,80	4	33,1	----	4	7,80 - 8,00	9	55,1	----	9
2,80 - 3,00	4	33,1	----	4	8,00 - 8,20	7	42,8	----	9
3,00 - 3,20	3	24,8	----	4	8,20 - 8,40	7	40,7	----	10
3,20 - 3,40	4	30,9	----	5	8,40 - 8,60	7	40,7	----	10
3,40 - 3,60	7	54,1	----	5	8,60 - 8,80	9	52,4	----	10
3,60 - 3,80	6	46,4	----	5	8,80 - 9,00	9	52,4	----	10
3,80 - 4,00	4	30,9	----	5	9,00 - 9,20	9	52,4	----	10
4,00 - 4,20	11	85,1	----	5	9,20 - 9,40	10	55,4	----	11
4,20 - 4,40	8	58,1	----	6	9,40 - 9,60	10	55,4	----	11
4,40 - 4,60	9	65,3	----	6	9,60 - 9,80	10	55,4	----	11
4,60 - 4,80	7	50,8	----	6	9,80 - 10,00	11	61,0	----	11
4,80 - 5,00	8	58,1	----	6	10,00 - 10,20	11	61,0	----	11
5,00 - 5,20	7	50,8	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 045
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-045
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	15	157,6	----	1	0,80 - 1,00	25	241,1	----	2
0,20 - 0,40	11	106,1	----	2	1,00 - 1,20	45	434,0	----	2
0,40 - 0,60	25	241,1	----	2	1,20 - 1,40	60	534,7	----	3
0,60 - 0,80	16	154,3	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 054
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	31/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-054
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	2,20 - 2,40	12	99,4	----	4
0,20 - 0,40	9	86,8	----	2	2,40 - 2,60	36	298,1	----	4
0,40 - 0,60	8	77,1	----	2	2,60 - 2,80	24	198,8	----	4
0,60 - 0,80	9	86,8	----	2	2,80 - 3,00	25	207,0	----	4
0,80 - 1,00	15	144,7	----	2	3,00 - 3,20	28	231,9	----	4
1,00 - 1,20	19	183,2	----	2	3,20 - 3,40	30	232,1	----	5
1,20 - 1,40	21	187,1	----	3	3,40 - 3,60	14	108,3	----	5
1,40 - 1,60	16	142,6	----	3	3,60 - 3,80	17	131,5	----	5
1,60 - 1,80	17	151,5	----	3	3,80 - 4,00	24	185,7	----	5
1,80 - 2,00	17	151,5	----	3	4,00 - 4,20	24	185,7	----	5
2,00 - 2,20	16	142,6	----	3	4,20 - 4,40	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 062
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	01/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-062
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	2,40 - 2,60	27	223,6	----	4
0,20 - 0,40	8	77,1	----	2	2,60 - 2,80	28	231,9	----	4
0,40 - 0,60	12	115,7	----	2	2,80 - 3,00	23	190,5	----	4
0,60 - 0,80	12	115,7	----	2	3,00 - 3,20	26	215,3	----	4
0,80 - 1,00	12	115,7	----	2	3,20 - 3,40	20	154,7	----	5
1,00 - 1,20	12	115,7	----	2	3,40 - 3,60	16	123,8	----	5
1,20 - 1,40	12	106,9	----	3	3,60 - 3,80	31	239,8	----	5
1,40 - 1,60	14	124,8	----	3	3,80 - 4,00	23	177,9	----	5
1,60 - 1,80	13	115,8	----	3	4,00 - 4,20	24	185,7	----	5
1,80 - 2,00	13	115,8	----	3	4,20 - 4,40	16	116,1	----	6
2,00 - 2,20	16	142,6	----	3	4,40 - 4,60	19	137,9	----	6
2,20 - 2,40	15	124,2	----	4	4,60 - 4,80	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 063
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	01/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-063
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	2,60 - 2,80	4	33,1	----	4
0,20 - 0,40	18	173,6	----	2	2,80 - 3,00	3	24,8	----	4
0,40 - 0,60	17	163,9	----	2	3,00 - 3,20	4	33,1	----	4
0,60 - 0,80	7	67,5	----	2	3,20 - 3,40	3	23,2	----	5
0,80 - 1,00	7	67,5	----	2	3,40 - 3,60	3	23,2	----	5
1,00 - 1,20	6	57,9	----	2	3,60 - 3,80	5	38,7	----	5
1,20 - 1,40	6	53,5	----	3	3,80 - 4,00	7	54,1	----	5
1,40 - 1,60	4	35,6	----	3	4,00 - 4,20	6	46,4	----	5
1,60 - 1,80	4	35,6	----	3	4,20 - 4,40	10	72,6	----	6
1,80 - 2,00	6	53,5	----	3	4,40 - 4,60	10	72,6	----	6
2,00 - 2,20	4	35,6	----	3	4,60 - 4,80	24	174,2	----	6
2,20 - 2,40	4	33,1	----	4	4,80 - 5,00	23	166,9	----	6
2,40 - 2,60	4	33,1	----	4	5,00 - 5,20	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 067
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-067
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	15	157,6	----	1	1,40 - 1,60	19	169,3	----	3
0,20 - 0,40	11	106,1	----	2	1,60 - 1,80	18	160,4	----	3
0,40 - 0,60	13	125,4	----	2	1,80 - 2,00	22	196,0	----	3
0,60 - 0,80	12	115,7	----	2	2,00 - 2,20	27	240,6	----	3
0,80 - 1,00	15	144,7	----	2	2,20 - 2,40	35	289,9	----	4
1,00 - 1,20	15	144,7	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	18	160,4	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 068
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-068
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	3,60 - 3,80	17	131,5	----	5
0,20 - 0,40	12	115,7	----	2	3,80 - 4,00	15	116,0	----	5
0,40 - 0,60	12	115,7	----	2	4,00 - 4,20	30	232,1	----	5
0,60 - 0,80	14	135,0	----	2	4,20 - 4,40	29	210,5	----	6
0,80 - 1,00	17	163,9	----	2	4,40 - 4,60	20	145,1	----	6
1,00 - 1,20	14	135,0	----	2	4,60 - 4,80	14	101,6	----	6
1,20 - 1,40	15	133,7	----	3	4,80 - 5,00	12	87,1	----	6
1,40 - 1,60	15	133,7	----	3	5,00 - 5,20	13	94,3	----	6
1,60 - 1,80	14	124,8	----	3	5,20 - 5,40	13	88,8	----	7
1,80 - 2,00	14	124,8	----	3	5,40 - 5,60	13	88,8	----	7
2,00 - 2,20	9	80,2	----	3	5,60 - 5,80	14	95,7	----	7
2,20 - 2,40	6	49,7	----	4	5,80 - 6,00	20	136,7	----	7
2,40 - 2,60	8	66,3	----	4	6,00 - 6,20	24	164,0	----	7
2,60 - 2,80	8	66,3	----	4	6,20 - 6,40	24	155,0	----	8
2,80 - 3,00	7	58,0	----	4	6,40 - 6,60	22	142,1	----	8
3,00 - 3,20	10	82,8	----	4	6,60 - 6,80	40	258,3	----	8
3,20 - 3,40	24	185,7	----	5	6,80 - 7,00	40	258,3	----	8
3,40 - 3,60	22	170,2	----	5	7,00 - 7,20	60	387,5	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 069
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-069
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	11	115,6	----	1	2,80 - 3,00	8	66,3	----	4
0,20 - 0,40	10	96,4	----	2	3,00 - 3,20	9	74,5	----	4
0,40 - 0,60	20	192,9	----	2	3,20 - 3,40	8	61,9	----	5
0,60 - 0,80	10	96,4	----	2	3,40 - 3,60	8	61,9	----	5
0,80 - 1,00	12	115,7	----	2	3,60 - 3,80	11	85,1	----	5
1,00 - 1,20	11	106,1	----	2	3,80 - 4,00	22	170,2	----	5
1,20 - 1,40	10	89,1	----	3	4,00 - 4,20	10	77,4	----	5
1,40 - 1,60	8	71,3	----	3	4,20 - 4,40	15	108,9	----	6
1,60 - 1,80	7	62,4	----	3	4,40 - 4,60	18	130,6	----	6
1,80 - 2,00	8	71,3	----	3	4,60 - 4,80	19	137,9	----	6
2,00 - 2,20	6	53,5	----	3	4,80 - 5,00	22	159,7	----	6
2,20 - 2,40	8	66,3	----	4	5,00 - 5,20	14	101,6	----	6
2,40 - 2,60	7	58,0	----	4	5,20 - 5,40	14	95,7	----	7
2,60 - 2,80	8	66,3	----	4	5,40 - 5,60	60	410,0	----	7

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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PROVA PENETROMETRICA DINAMICA n° 073
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-073
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	23	241,7	----	1	3,00 - 3,20	10	82,8	----	4
0,20 - 0,40	15	144,7	----	2	3,20 - 3,40	10	77,4	----	5
0,40 - 0,60	11	106,1	----	2	3,40 - 3,60	10	77,4	----	5
0,60 - 0,80	7	67,5	----	2	3,60 - 3,80	10	77,4	----	5
0,80 - 1,00	8	77,1	----	2	3,80 - 4,00	11	85,1	----	5
1,00 - 1,20	8	77,1	----	2	4,00 - 4,20	10	77,4	----	5
1,20 - 1,40	9	80,2	----	3	4,20 - 4,40	10	72,6	----	6
1,40 - 1,60	11	98,0	----	3	4,40 - 4,60	10	72,6	----	6
1,60 - 1,80	12	106,9	----	3	4,60 - 4,80	10	72,6	----	6
1,80 - 2,00	12	106,9	----	3	4,80 - 5,00	9	65,3	----	6
2,00 - 2,20	14	124,8	----	3	5,00 - 5,20	9	65,3	----	6
2,20 - 2,40	11	91,1	----	4	5,20 - 5,40	11	75,2	----	7
2,40 - 2,60	13	107,7	----	4	5,40 - 5,60	23	157,2	----	7
2,60 - 2,80	12	99,4	----	4	5,60 - 5,80	60	410,0	----	7
2,80 - 3,00	11	91,1	----	4					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 076
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	03/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-076
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	26	273,2	----	1	5,20 - 5,40	9	61,5	----	7
0,20 - 0,40	14	135,0	----	2	5,40 - 5,60	8	54,7	----	7
0,40 - 0,60	15	144,7	----	2	5,60 - 5,80	10	68,3	----	7
0,60 - 0,80	13	125,4	----	2	5,80 - 6,00	10	68,3	----	7
0,80 - 1,00	12	115,7	----	2	6,00 - 6,20	11	75,2	----	7
1,00 - 1,20	8	77,1	----	2	6,20 - 6,40	9	58,1	----	8
1,20 - 1,40	2	17,8	----	3	6,40 - 6,60	10	64,6	----	8
1,40 - 1,60	2	17,8	----	3	6,60 - 6,80	11	71,0	----	8
1,60 - 1,80	2	17,8	----	3	6,80 - 7,00	9	58,1	----	8
1,80 - 2,00	2	17,8	----	3	7,00 - 7,20	10	64,6	----	8
2,00 - 2,20	2	17,8	----	3	7,20 - 7,40	8	49,0	----	9
2,20 - 2,40	3	24,8	----	4	7,40 - 7,60	8	49,0	----	9
2,40 - 2,60	2	16,6	----	4	7,60 - 7,80	8	49,0	----	9
2,60 - 2,80	9	74,5	----	4	7,80 - 8,00	9	55,1	----	9
2,80 - 3,00	8	66,3	----	4	8,00 - 8,20	10	61,2	----	9
3,00 - 3,20	7	58,0	----	4	8,20 - 8,40	8	46,5	----	10
3,20 - 3,40	6	46,4	----	5	8,40 - 8,60	8	46,5	----	10
3,40 - 3,60	3	23,2	----	5	8,60 - 8,80	9	52,4	----	10
3,60 - 3,80	2	15,5	----	5	8,80 - 9,00	9	52,4	----	10
3,80 - 4,00	2	15,5	----	5	9,00 - 9,20	9	52,4	----	10
4,00 - 4,20	2	15,5	----	5	9,20 - 9,40	9	49,9	----	11
4,20 - 4,40	9	65,3	----	6	9,40 - 9,60	8	44,3	----	11
4,40 - 4,60	10	72,6	----	6	9,60 - 9,80	8	44,3	----	11
4,60 - 4,80	15	108,9	----	6	9,80 - 10,00	9	49,9	----	11
4,80 - 5,00	13	94,3	----	6	10,00 - 10,20	9	49,9	----	11
5,00 - 5,20	11	79,8	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 083
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-083
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	5,20 - 5,40	12	82,0	----	7
0,20 - 0,40	12	115,7	----	2	5,40 - 5,60	8	54,7	----	7
0,40 - 0,60	10	96,4	----	2	5,60 - 5,80	8	54,7	----	7
0,60 - 0,80	6	57,9	----	2	5,80 - 6,00	7	47,8	----	7
0,80 - 1,00	6	57,9	----	2	6,00 - 6,20	6	41,0	----	7
1,00 - 1,20	8	77,1	----	2	6,20 - 6,40	6	38,7	----	8
1,20 - 1,40	8	71,3	----	3	6,40 - 6,60	7	45,2	----	8
1,40 - 1,60	4	35,6	----	3	6,60 - 6,80	8	51,7	----	8
1,60 - 1,80	3	26,7	----	3	6,80 - 7,00	7	45,2	----	8
1,80 - 2,00	3	26,7	----	3	7,00 - 7,20	8	51,7	----	8
2,00 - 2,20	3	26,7	----	3	7,20 - 7,40	10	61,2	----	9
2,20 - 2,40	3	24,8	----	4	7,40 - 7,60	12	73,5	----	9
2,40 - 2,60	3	24,8	----	4	7,60 - 7,80	11	67,3	----	9
2,60 - 2,80	3	24,8	----	4	7,80 - 8,00	12	73,5	----	9
2,80 - 3,00	4	33,1	----	4	8,00 - 8,20	12	73,5	----	9
3,00 - 3,20	4	33,1	----	4	8,20 - 8,40	13	75,6	----	10
3,20 - 3,40	4	30,9	----	5	8,40 - 8,60	13	75,6	----	10
3,40 - 3,60	4	30,9	----	5	8,60 - 8,80	14	81,4	----	10
3,60 - 3,80	3	23,2	----	5	8,80 - 9,00	12	69,8	----	10
3,80 - 4,00	4	30,9	----	5	9,00 - 9,20	11	64,0	----	10
4,00 - 4,20	4	30,9	----	5	9,20 - 9,40	10	55,4	----	11
4,20 - 4,40	3	21,8	----	6	9,40 - 9,60	12	66,5	----	11
4,40 - 4,60	3	21,8	----	6	9,60 - 9,80	11	61,0	----	11
4,60 - 4,80	2	14,5	----	6	9,80 - 10,00	10	55,4	----	11
4,80 - 5,00	10	72,6	----	6	10,00 - 10,20	12	66,5	----	11
5,00 - 5,20	18	130,6	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 082
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-082
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	5,00 - 5,20	3	21,8	----	6
0,20 - 0,40	17	163,9	----	2	5,20 - 5,40	5	34,2	----	7
0,40 - 0,60	9	86,8	----	2	5,40 - 5,60	10	68,3	----	7
0,60 - 0,80	12	115,7	----	2	5,60 - 5,80	12	82,0	----	7
0,80 - 1,00	14	135,0	----	2	5,80 - 6,00	14	95,7	----	7
1,00 - 1,20	15	144,7	----	2	6,00 - 6,20	11	75,2	----	7
1,20 - 1,40	12	106,9	----	3	6,20 - 6,40	11	71,0	----	8
1,40 - 1,60	17	151,5	----	3	6,40 - 6,60	11	71,0	----	8
1,60 - 1,80	5	44,6	----	3	6,60 - 6,80	10	64,6	----	8
1,80 - 2,00	3	26,7	----	3	6,80 - 7,00	9	58,1	----	8
2,00 - 2,20	3	26,7	----	3	7,00 - 7,20	10	64,6	----	8
2,20 - 2,40	3	24,8	----	4	7,20 - 7,40	9	55,1	----	9
2,40 - 2,60	2	16,6	----	4	7,40 - 7,60	10	61,2	----	9
2,60 - 2,80	2	16,6	----	4	7,60 - 7,80	10	61,2	----	9
2,80 - 3,00	2	16,6	----	4	7,80 - 8,00	10	61,2	----	9
3,00 - 3,20	2	16,6	----	4	8,00 - 8,20	11	67,3	----	9
3,20 - 3,40	2	15,5	----	5	8,20 - 8,40	10	58,2	----	10
3,40 - 3,60	2	15,5	----	5	8,40 - 8,60	9	52,4	----	10
3,60 - 3,80	2	15,5	----	5	8,60 - 8,80	11	64,0	----	10
3,80 - 4,00	2	15,5	----	5	8,80 - 9,00	10	58,2	----	10
4,00 - 4,20	2	15,5	----	5	9,00 - 9,20	10	58,2	----	10
4,20 - 4,40	2	14,5	----	6	9,20 - 9,40	10	55,4	----	11
4,40 - 4,60	3	21,8	----	6	9,40 - 9,60	13	72,1	----	11
4,60 - 4,80	4	29,0	----	6	9,60 - 9,80	14	77,6	----	11
4,80 - 5,00	3	21,8	----	6	9,80 - 10,00	13	72,1	----	11

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 088
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-088
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	15	157,6	----	1	0,80 - 1,00	31	298,9	----	2
0,20 - 0,40	18	173,6	----	2	1,00 - 1,20	45	434,0	----	2
0,40 - 0,60	24	231,4	----	2	1,20 - 1,40	60	534,7	----	3
0,60 - 0,80	27	260,4	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 089
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-089
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	2,80 - 3,00	3	24,8	----	4
0,20 - 0,40	11	106,1	----	2	3,00 - 3,20	3	24,8	----	4
0,40 - 0,60	10	96,4	----	2	3,20 - 3,40	3	23,2	----	5
0,60 - 0,80	10	96,4	----	2	3,40 - 3,60	3	23,2	----	5
0,80 - 1,00	5	48,2	----	2	3,60 - 3,80	2	15,5	----	5
1,00 - 1,20	3	28,9	----	2	3,80 - 4,00	2	15,5	----	5
1,20 - 1,40	3	26,7	----	3	4,00 - 4,20	2	15,5	----	5
1,40 - 1,60	5	44,6	----	3	4,20 - 4,40	6	43,5	----	6
1,60 - 1,80	4	35,6	----	3	4,40 - 4,60	14	101,6	----	6
1,80 - 2,00	3	26,7	----	3	4,60 - 4,80	11	79,8	----	6
2,00 - 2,20	4	35,6	----	3	4,80 - 5,00	17	123,4	----	6
2,20 - 2,40	3	24,8	----	4	5,00 - 5,20	13	94,3	----	6
2,40 - 2,60	3	24,8	----	4	5,20 - 5,40	10	68,3	----	7
2,60 - 2,80	3	24,8	----	4	5,40 - 5,60	60	410,0	----	7

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 092
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	05/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-092
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	20	210,1	----	1	5,20 - 5,40	9	61,5	----	7
0,20 - 0,40	13	125,4	----	2	5,40 - 5,60	9	61,5	----	7
0,40 - 0,60	11	106,1	----	2	5,60 - 5,80	9	61,5	----	7
0,60 - 0,80	8	77,1	----	2	5,80 - 6,00	9	61,5	----	7
0,80 - 1,00	8	77,1	----	2	6,00 - 6,20	8	54,7	----	7
1,00 - 1,20	8	77,1	----	2	6,20 - 6,40	8	51,7	----	8
1,20 - 1,40	7	62,4	----	3	6,40 - 6,60	9	58,1	----	8
1,40 - 1,60	6	53,5	----	3	6,60 - 6,80	9	58,1	----	8
1,60 - 1,80	6	53,5	----	3	6,80 - 7,00	10	64,6	----	8
1,80 - 2,00	6	53,5	----	3	7,00 - 7,20	8	51,7	----	8
2,00 - 2,20	5	44,6	----	3	7,20 - 7,40	9	55,1	----	9
2,20 - 2,40	6	49,7	----	4	7,40 - 7,60	11	67,3	----	9
2,40 - 2,60	9	74,5	----	4	7,60 - 7,80	10	61,2	----	9
2,60 - 2,80	9	74,5	----	4	7,80 - 8,00	10	61,2	----	9
2,80 - 3,00	11	91,1	----	4	8,00 - 8,20	11	67,3	----	9
3,00 - 3,20	9	74,5	----	4	8,20 - 8,40	10	58,2	----	10
3,20 - 3,40	9	69,6	----	5	8,40 - 8,60	10	58,2	----	10
3,40 - 3,60	10	77,4	----	5	8,60 - 8,80	13	75,6	----	10
3,60 - 3,80	9	69,6	----	5	8,80 - 9,00	14	81,4	----	10
3,80 - 4,00	9	69,6	----	5	9,00 - 9,20	13	75,6	----	10
4,00 - 4,20	10	77,4	----	5	9,20 - 9,40	13	72,1	----	11
4,20 - 4,40	8	58,1	----	6	9,40 - 9,60	15	83,1	----	11
4,40 - 4,60	9	65,3	----	6	9,60 - 9,80	14	77,6	----	11
4,60 - 4,80	9	65,3	----	6	9,80 - 10,00	14	77,6	----	11
4,80 - 5,00	9	65,3	----	6	10,00 - 10,20	13	72,1	----	11
5,00 - 5,20	10	72,6	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 097
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-097
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	5,20 - 5,40	22	150,4	----	7
0,20 - 0,40	10	96,4	----	2	5,40 - 5,60	20	136,7	----	7
0,40 - 0,60	9	86,8	----	2	5,60 - 5,80	15	102,5	----	7
0,60 - 0,80	9	86,8	----	2	5,80 - 6,00	14	95,7	----	7
0,80 - 1,00	8	77,1	----	2	6,00 - 6,20	17	116,2	----	7
1,00 - 1,20	9	86,8	----	2	6,20 - 6,40	18	116,2	----	8
1,20 - 1,40	7	62,4	----	3	6,40 - 6,60	15	96,9	----	8
1,40 - 1,60	7	62,4	----	3	6,60 - 6,80	15	96,9	----	8
1,60 - 1,80	7	62,4	----	3	6,80 - 7,00	17	109,8	----	8
1,80 - 2,00	7	62,4	----	3	7,00 - 7,20	18	116,2	----	8
2,00 - 2,20	9	80,2	----	3	7,20 - 7,40	18	110,2	----	9
2,20 - 2,40	9	74,5	----	4	7,40 - 7,60	10	61,2	----	9
2,40 - 2,60	9	74,5	----	4	7,60 - 7,80	5	30,6	----	9
2,60 - 2,80	11	91,1	----	4	7,80 - 8,00	4	24,5	----	9
2,80 - 3,00	11	91,1	----	4	8,00 - 8,20	3	18,4	----	9
3,00 - 3,20	10	82,8	----	4	8,20 - 8,40	3	17,5	----	10
3,20 - 3,40	10	77,4	----	5	8,40 - 8,60	4	23,3	----	10
3,40 - 3,60	10	77,4	----	5	8,60 - 8,80	9	52,4	----	10
3,60 - 3,80	10	77,4	----	5	8,80 - 9,00	10	58,2	----	10
3,80 - 4,00	9	69,6	----	5	9,00 - 9,20	11	64,0	----	10
4,00 - 4,20	10	77,4	----	5	9,20 - 9,40	12	66,5	----	11
4,20 - 4,40	10	72,6	----	6	9,40 - 9,60	14	77,6	----	11
4,40 - 4,60	12	87,1	----	6	9,60 - 9,80	17	94,2	----	11
4,60 - 4,80	14	101,6	----	6	9,80 - 10,00	12	66,5	----	11
4,80 - 5,00	19	137,9	----	6	10,00 - 10,20	13	72,1	----	11
5,00 - 5,20	20	145,1	----	6	10,20 - 10,40	12	63,5	----	12

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 100
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-100
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	5,20 - 5,40	12	82,0	----	7
0,20 - 0,40	2	19,3	----	2	5,40 - 5,60	8	54,7	----	7
0,40 - 0,60	15	144,7	----	2	5,60 - 5,80	16	109,3	----	7
0,60 - 0,80	19	183,2	----	2	5,80 - 6,00	22	150,4	----	7
0,80 - 1,00	20	192,9	----	2	6,00 - 6,20	21	143,5	----	7
1,00 - 1,20	26	250,7	----	2	6,20 - 6,40	16	103,3	----	8
1,20 - 1,40	29	258,4	----	3	6,40 - 6,60	43	277,7	----	8
1,40 - 1,60	28	249,5	----	3	6,60 - 6,80	34	219,6	----	8
1,60 - 1,80	25	222,8	----	3	6,80 - 7,00	18	116,2	----	8
1,80 - 2,00	27	240,6	----	3	7,00 - 7,20	8	51,7	----	8
2,00 - 2,20	25	222,8	----	3	7,20 - 7,40	7	42,8	----	9
2,20 - 2,40	24	198,8	----	4	7,40 - 7,60	6	36,7	----	9
2,40 - 2,60	24	198,8	----	4	7,60 - 7,80	5	30,6	----	9
2,60 - 2,80	13	107,7	----	4	7,80 - 8,00	7	42,8	----	9
2,80 - 3,00	4	33,1	----	4	8,00 - 8,20	7	42,8	----	9
3,00 - 3,20	5	41,4	----	4	8,20 - 8,40	7	40,7	----	10
3,20 - 3,40	6	46,4	----	5	8,40 - 8,60	6	34,9	----	10
3,40 - 3,60	6	46,4	----	5	8,60 - 8,80	8	46,5	----	10
3,60 - 3,80	6	46,4	----	5	8,80 - 9,00	9	52,4	----	10
3,80 - 4,00	6	46,4	----	5	9,00 - 9,20	10	58,2	----	10
4,00 - 4,20	5	38,7	----	5	9,20 - 9,40	10	55,4	----	11
4,20 - 4,40	6	43,5	----	6	9,40 - 9,60	12	66,5	----	11
4,40 - 4,60	6	43,5	----	6	9,60 - 9,80	18	99,8	----	11
4,60 - 4,80	5	36,3	----	6	9,80 - 10,00	14	77,6	----	11
4,80 - 5,00	4	29,0	----	6	10,00 - 10,20	13	72,1	----	11
5,00 - 5,20	12	87,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 081
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-081
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	3,20 - 3,40	3	23,2	----	5
0,20 - 0,40	9	86,8	----	2	3,40 - 3,60	2	15,5	----	5
0,40 - 0,60	13	125,4	----	2	3,60 - 3,80	2	15,5	----	5
0,60 - 0,80	10	96,4	----	2	3,80 - 4,00	2	15,5	----	5
0,80 - 1,00	11	106,1	----	2	4,00 - 4,20	2	15,5	----	5
1,00 - 1,20	9	86,8	----	2	4,20 - 4,40	4	29,0	----	6
1,20 - 1,40	7	62,4	----	3	4,40 - 4,60	3	21,8	----	6
1,40 - 1,60	5	44,6	----	3	4,60 - 4,80	3	21,8	----	6
1,60 - 1,80	5	44,6	----	3	4,80 - 5,00	10	72,6	----	6
1,80 - 2,00	6	53,5	----	3	5,00 - 5,20	14	101,6	----	6
2,00 - 2,20	6	53,5	----	3	5,20 - 5,40	10	68,3	----	7
2,20 - 2,40	8	66,3	----	4	5,40 - 5,60	12	82,0	----	7
2,40 - 2,60	8	66,3	----	4	5,60 - 5,80	12	82,0	----	7
2,60 - 2,80	6	49,7	----	4	5,80 - 6,00	13	88,8	----	7
2,80 - 3,00	3	24,8	----	4	6,00 - 6,20	14	95,7	----	7
3,00 - 3,20	3	24,8	----	4	6,20 - 6,40	60	387,5	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 103
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-103
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	2,40 - 2,60	7	58,0	----	4
0,20 - 0,40	7	67,5	----	2	2,60 - 2,80	7	58,0	----	4
0,40 - 0,60	8	77,1	----	2	2,80 - 3,00	7	58,0	----	4
0,60 - 0,80	17	163,9	----	2	3,00 - 3,20	7	58,0	----	4
0,80 - 1,00	15	144,7	----	2	3,20 - 3,40	10	77,4	----	5
1,00 - 1,20	6	57,9	----	2	3,40 - 3,60	18	139,2	----	5
1,20 - 1,40	5	44,6	----	3	3,60 - 3,80	37	286,2	----	5
1,40 - 1,60	13	115,8	----	3	3,80 - 4,00	46	355,8	----	5
1,60 - 1,80	15	133,7	----	3	4,00 - 4,20	36	278,5	----	5
1,80 - 2,00	12	106,9	----	3	4,20 - 4,40	44	319,3	----	6
2,00 - 2,20	10	89,1	----	3	4,40 - 4,60	60	435,4	----	6
2,20 - 2,40	7	58,0	----	4					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 104
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-104
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	18	189,1	----	1	5,20 - 5,40	5	34,2	----	7
0,20 - 0,40	10	96,4	----	2	5,40 - 5,60	5	34,2	----	7
0,40 - 0,60	16	154,3	----	2	5,60 - 5,80	7	47,8	----	7
0,60 - 0,80	5	48,2	----	2	5,80 - 6,00	9	61,5	----	7
0,80 - 1,00	4	38,6	----	2	6,00 - 6,20	9	61,5	----	7
1,00 - 1,20	4	38,6	----	2	6,20 - 6,40	9	58,1	----	8
1,20 - 1,40	4	35,6	----	3	6,40 - 6,60	8	51,7	----	8
1,40 - 1,60	6	53,5	----	3	6,60 - 6,80	8	51,7	----	8
1,60 - 1,80	5	44,6	----	3	6,80 - 7,00	10	64,6	----	8
1,80 - 2,00	6	53,5	----	3	7,00 - 7,20	10	64,6	----	8
2,00 - 2,20	10	89,1	----	3	7,20 - 7,40	10	61,2	----	9
2,20 - 2,40	15	124,2	----	4	7,40 - 7,60	8	49,0	----	9
2,40 - 2,60	13	107,7	----	4	7,60 - 7,80	9	55,1	----	9
2,60 - 2,80	12	99,4	----	4	7,80 - 8,00	8	49,0	----	9
2,80 - 3,00	11	91,1	----	4	8,00 - 8,20	8	49,0	----	9
3,00 - 3,20	15	124,2	----	4	8,20 - 8,40	9	52,4	----	10
3,20 - 3,40	10	77,4	----	5	8,40 - 8,60	8	46,5	----	10
3,40 - 3,60	7	54,1	----	5	8,60 - 8,80	9	52,4	----	10
3,60 - 3,80	7	54,1	----	5	8,80 - 9,00	10	58,2	----	10
3,80 - 4,00	8	61,9	----	5	9,00 - 9,20	10	58,2	----	10
4,00 - 4,20	6	46,4	----	5	9,20 - 9,40	9	49,9	----	11
4,20 - 4,40	5	36,3	----	6	9,40 - 9,60	11	61,0	----	11
4,40 - 4,60	4	29,0	----	6	9,60 - 9,80	10	55,4	----	11
4,60 - 4,80	5	36,3	----	6	9,80 - 10,00	10	55,4	----	11
4,80 - 5,00	5	36,3	----	6	10,00 - 10,20	11	61,0	----	11
5,00 - 5,20	5	36,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 105
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-105
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	5,20 - 5,40	4	27,3	----	7
0,20 - 0,40	10	96,4	----	2	5,40 - 5,60	5	34,2	----	7
0,40 - 0,60	13	125,4	----	2	5,60 - 5,80	7	47,8	----	7
0,60 - 0,80	11	106,1	----	2	5,80 - 6,00	6	41,0	----	7
0,80 - 1,00	12	115,7	----	2	6,00 - 6,20	5	34,2	----	7
1,00 - 1,20	10	96,4	----	2	6,20 - 6,40	7	45,2	----	8
1,20 - 1,40	9	80,2	----	3	6,40 - 6,60	7	45,2	----	8
1,40 - 1,60	12	106,9	----	3	6,60 - 6,80	7	45,2	----	8
1,60 - 1,80	16	142,6	----	3	6,80 - 7,00	7	45,2	----	8
1,80 - 2,00	16	142,6	----	3	7,00 - 7,20	7	45,2	----	8
2,00 - 2,20	14	124,8	----	3	7,20 - 7,40	7	42,8	----	9
2,20 - 2,40	14	115,9	----	4	7,40 - 7,60	7	42,8	----	9
2,40 - 2,60	12	99,4	----	4	7,60 - 7,80	6	36,7	----	9
2,60 - 2,80	10	82,8	----	4	7,80 - 8,00	7	42,8	----	9
2,80 - 3,00	10	82,8	----	4	8,00 - 8,20	7	42,8	----	9
3,00 - 3,20	7	58,0	----	4	8,20 - 8,40	7	40,7	----	10
3,20 - 3,40	7	54,1	----	5	8,40 - 8,60	8	46,5	----	10
3,40 - 3,60	5	38,7	----	5	8,60 - 8,80	6	34,9	----	10
3,60 - 3,80	5	38,7	----	5	8,80 - 9,00	8	46,5	----	10
3,80 - 4,00	5	38,7	----	5	9,00 - 9,20	8	46,5	----	10
4,00 - 4,20	5	38,7	----	5	9,20 - 9,40	7	38,8	----	11
4,20 - 4,40	5	36,3	----	6	9,40 - 9,60	8	44,3	----	11
4,40 - 4,60	5	36,3	----	6	9,60 - 9,80	8	44,3	----	11
4,60 - 4,80	6	43,5	----	6	9,80 - 10,00	7	38,8	----	11
4,80 - 5,00	4	29,0	----	6	10,00 - 10,20	8	44,3	----	11
5,00 - 5,20	5	36,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 098
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-098
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	9	94,6	----	1	5,20 - 5,40	16	109,3	----	7
0,20 - 0,40	10	96,4	----	2	5,40 - 5,60	15	102,5	----	7
0,40 - 0,60	11	106,1	----	2	5,60 - 5,80	16	109,3	----	7
0,60 - 0,80	10	96,4	----	2	5,80 - 6,00	16	109,3	----	7
0,80 - 1,00	10	96,4	----	2	6,00 - 6,20	20	136,7	----	7
1,00 - 1,20	8	77,1	----	2	6,20 - 6,40	24	155,0	----	8
1,20 - 1,40	6	53,5	----	3	6,40 - 6,60	25	161,4	----	8
1,40 - 1,60	7	62,4	----	3	6,60 - 6,80	30	193,7	----	8
1,60 - 1,80	8	71,3	----	3	6,80 - 7,00	32	206,7	----	8
1,80 - 2,00	6	53,5	----	3	7,00 - 7,20	30	193,7	----	8
2,00 - 2,20	8	71,3	----	3	7,20 - 7,40	17	104,1	----	9
2,20 - 2,40	6	49,7	----	4	7,40 - 7,60	5	30,6	----	9
2,40 - 2,60	8	66,3	----	4	7,60 - 7,80	3	18,4	----	9
2,60 - 2,80	8	66,3	----	4	7,80 - 8,00	4	24,5	----	9
2,80 - 3,00	9	74,5	----	4	8,00 - 8,20	4	24,5	----	9
3,00 - 3,20	10	82,8	----	4	8,20 - 8,40	3	17,5	----	10
3,20 - 3,40	11	85,1	----	5	8,40 - 8,60	4	23,3	----	10
3,40 - 3,60	13	100,6	----	5	8,60 - 8,80	6	34,9	----	10
3,60 - 3,80	9	69,6	----	5	8,80 - 9,00	6	34,9	----	10
3,80 - 4,00	7	54,1	----	5	9,00 - 9,20	6	34,9	----	10
4,00 - 4,20	8	61,9	----	5	9,20 - 9,40	6	33,3	----	11
4,20 - 4,40	10	72,6	----	6	9,40 - 9,60	5	27,7	----	11
4,40 - 4,60	12	87,1	----	6	9,60 - 9,80	5	27,7	----	11
4,60 - 4,80	14	101,6	----	6	9,80 - 10,00	6	33,3	----	11
4,80 - 5,00	16	116,1	----	6	10,00 - 10,20	6	33,3	----	11
5,00 - 5,20	18	130,6	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 099
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-099
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	5,20 - 5,40	7	47,8	----	7
0,20 - 0,40	6	57,9	----	2	5,40 - 5,60	5	34,2	----	7
0,40 - 0,60	6	57,9	----	2	5,60 - 5,80	8	54,7	----	7
0,60 - 0,80	7	67,5	----	2	5,80 - 6,00	7	47,8	----	7
0,80 - 1,00	4	38,6	----	2	6,00 - 6,20	6	41,0	----	7
1,00 - 1,20	5	48,2	----	2	6,20 - 6,40	4	25,8	----	8
1,20 - 1,40	2	17,8	----	3	6,40 - 6,60	7	45,2	----	8
1,40 - 1,60	3	26,7	----	3	6,60 - 6,80	7	45,2	----	8
1,60 - 1,80	2	17,8	----	3	6,80 - 7,00	7	45,2	----	8
1,80 - 2,00	4	35,6	----	3	7,00 - 7,20	10	64,6	----	8
2,00 - 2,20	3	26,7	----	3	7,20 - 7,40	10	61,2	----	9
2,20 - 2,40	2	16,6	----	4	7,40 - 7,60	29	177,5	----	9
2,40 - 2,60	9	74,5	----	4	7,60 - 7,80	11	67,3	----	9
2,60 - 2,80	22	182,2	----	4	7,80 - 8,00	8	49,0	----	9
2,80 - 3,00	22	182,2	----	4	8,00 - 8,20	7	42,8	----	9
3,00 - 3,20	31	256,7	----	4	8,20 - 8,40	8	46,5	----	10
3,20 - 3,40	30	232,1	----	5	8,40 - 8,60	11	64,0	----	10
3,40 - 3,60	37	286,2	----	5	8,60 - 8,80	9	52,4	----	10
3,60 - 3,80	41	317,2	----	5	8,80 - 9,00	10	58,2	----	10
3,80 - 4,00	33	255,3	----	5	9,00 - 9,20	10	58,2	----	10
4,00 - 4,20	15	116,0	----	5	9,20 - 9,40	9	49,9	----	11
4,20 - 4,40	2	14,5	----	6	9,40 - 9,60	10	55,4	----	11
4,40 - 4,60	2	14,5	----	6	9,60 - 9,80	11	61,0	----	11
4,60 - 4,80	2	14,5	----	6	9,80 - 10,00	11	61,0	----	11
4,80 - 5,00	4	29,0	----	6	10,00 - 10,20	13	72,1	----	11
5,00 - 5,20	6	43,5	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 112
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-112
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	5,20 - 5,40	11	75,2	----	7
0,20 - 0,40	19	183,2	----	2	5,40 - 5,60	9	61,5	----	7
0,40 - 0,60	20	192,9	----	2	5,60 - 5,80	9	61,5	----	7
0,60 - 0,80	16	154,3	----	2	5,80 - 6,00	8	54,7	----	7
0,80 - 1,00	13	125,4	----	2	6,00 - 6,20	8	54,7	----	7
1,00 - 1,20	11	106,1	----	2	6,20 - 6,40	10	64,6	----	8
1,20 - 1,40	4	35,6	----	3	6,40 - 6,60	13	84,0	----	8
1,40 - 1,60	11	98,0	----	3	6,60 - 6,80	9	58,1	----	8
1,60 - 1,80	6	53,5	----	3	6,80 - 7,00	10	64,6	----	8
1,80 - 2,00	5	44,6	----	3	7,00 - 7,20	11	71,0	----	8
2,00 - 2,20	12	106,9	----	3	7,20 - 7,40	9	55,1	----	9
2,20 - 2,40	13	107,7	----	4	7,40 - 7,60	12	73,5	----	9
2,40 - 2,60	15	124,2	----	4	7,60 - 7,80	11	67,3	----	9
2,60 - 2,80	15	124,2	----	4	7,80 - 8,00	10	61,2	----	9
2,80 - 3,00	11	91,1	----	4	8,00 - 8,20	11	67,3	----	9
3,00 - 3,20	14	115,9	----	4	8,20 - 8,40	17	98,9	----	10
3,20 - 3,40	12	92,8	----	5	8,40 - 8,60	13	75,6	----	10
3,40 - 3,60	10	77,4	----	5	8,60 - 8,80	8	46,5	----	10
3,60 - 3,80	13	100,6	----	5	8,80 - 9,00	18	104,7	----	10
3,80 - 4,00	16	123,8	----	5	9,00 - 9,20	25	145,4	----	10
4,00 - 4,20	18	139,2	----	5	9,20 - 9,40	28	155,2	----	11
4,20 - 4,40	15	108,9	----	6	9,40 - 9,60	14	77,6	----	11
4,40 - 4,60	11	79,8	----	6	9,60 - 9,80	12	66,5	----	11
4,60 - 4,80	11	79,8	----	6	9,80 - 10,00	18	99,8	----	11
4,80 - 5,00	17	123,4	----	6	10,00 - 10,20	19	105,3	----	11
5,00 - 5,20	16	116,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 113
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-113
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	3,00 - 3,20	8	66,3	----	4
0,20 - 0,40	19	183,2	----	2	3,20 - 3,40	5	38,7	----	5
0,40 - 0,60	19	183,2	----	2	3,40 - 3,60	7	54,1	----	5
0,60 - 0,80	16	154,3	----	2	3,60 - 3,80	7	54,1	----	5
0,80 - 1,00	10	96,4	----	2	3,80 - 4,00	9	69,6	----	5
1,00 - 1,20	10	96,4	----	2	4,00 - 4,20	6	46,4	----	5
1,20 - 1,40	4	35,6	----	3	4,20 - 4,40	24	174,2	----	6
1,40 - 1,60	4	35,6	----	3	4,40 - 4,60	11	79,8	----	6
1,60 - 1,80	8	71,3	----	3	4,60 - 4,80	8	58,1	----	6
1,80 - 2,00	9	80,2	----	3	4,80 - 5,00	12	87,1	----	6
2,00 - 2,20	6	53,5	----	3	5,00 - 5,20	7	50,8	----	6
2,20 - 2,40	15	124,2	----	4	5,20 - 5,40	6	41,0	----	7
2,40 - 2,60	10	82,8	----	4	5,40 - 5,60	6	41,0	----	7
2,60 - 2,80	8	66,3	----	4	5,60 - 5,80	8	54,7	----	7
2,80 - 3,00	8	66,3	----	4	5,80 - 6,00	60	410,0	----	7

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 111
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-111
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	1,00 - 1,20	19	183,2	----	2
0,20 - 0,40	9	86,8	----	2	1,20 - 1,40	18	160,4	----	3
0,40 - 0,60	10	96,4	----	2	1,40 - 1,60	16	142,6	----	3
0,60 - 0,80	12	115,7	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	18	173,6	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 114
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-114
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	35	367,8	----	1	2,20 - 2,40	4	33,1	----	4
0,20 - 0,40	33	318,2	----	2	2,40 - 2,60	5	41,4	----	4
0,40 - 0,60	48	462,9	----	2	2,60 - 2,80	14	115,9	----	4
0,60 - 0,80	28	270,0	----	2	2,80 - 3,00	15	124,2	----	4
0,80 - 1,00	10	96,4	----	2	3,00 - 3,20	12	99,4	----	4
1,00 - 1,20	6	57,9	----	2	3,20 - 3,40	11	85,1	----	5
1,20 - 1,40	6	53,5	----	3	3,40 - 3,60	16	123,8	----	5
1,40 - 1,60	4	35,6	----	3	3,60 - 3,80	10	77,4	----	5
1,60 - 1,80	5	44,6	----	3	3,80 - 4,00	14	108,3	----	5
1,80 - 2,00	5	44,6	----	3	4,00 - 4,20	60	464,1	----	5
2,00 - 2,20	5	44,6	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 106
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-106
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	5,20 - 5,40	6	41,0	----	7
0,20 - 0,40	5	48,2	----	2	5,40 - 5,60	13	88,8	----	7
0,40 - 0,60	8	77,1	----	2	5,60 - 5,80	9	61,5	----	7
0,60 - 0,80	9	86,8	----	2	5,80 - 6,00	11	75,2	----	7
0,80 - 1,00	15	144,7	----	2	6,00 - 6,20	11	75,2	----	7
1,00 - 1,20	14	135,0	----	2	6,20 - 6,40	11	71,0	----	8
1,20 - 1,40	9	80,2	----	3	6,40 - 6,60	10	64,6	----	8
1,40 - 1,60	8	71,3	----	3	6,60 - 6,80	13	84,0	----	8
1,60 - 1,80	8	71,3	----	3	6,80 - 7,00	13	84,0	----	8
1,80 - 2,00	9	80,2	----	3	7,00 - 7,20	12	77,5	----	8
2,00 - 2,20	8	71,3	----	3	7,20 - 7,40	11	67,3	----	9
2,20 - 2,40	5	41,4	----	4	7,40 - 7,60	12	73,5	----	9
2,40 - 2,60	3	24,8	----	4	7,60 - 7,80	13	79,6	----	9
2,60 - 2,80	3	24,8	----	4	7,80 - 8,00	13	79,6	----	9
2,80 - 3,00	3	24,8	----	4	8,00 - 8,20	14	85,7	----	9
3,00 - 3,20	2	16,6	----	4	8,20 - 8,40	16	93,1	----	10
3,20 - 3,40	2	15,5	----	5	8,40 - 8,60	17	98,9	----	10
3,40 - 3,60	3	23,2	----	5	8,60 - 8,80	15	87,3	----	10
3,60 - 3,80	5	38,7	----	5	8,80 - 9,00	15	87,3	----	10
3,80 - 4,00	6	46,4	----	5	9,00 - 9,20	14	81,4	----	10
4,00 - 4,20	8	61,9	----	5	9,20 - 9,40	15	83,1	----	11
4,20 - 4,40	10	72,6	----	6	9,40 - 9,60	15	83,1	----	11
4,40 - 4,60	7	50,8	----	6	9,60 - 9,80	16	88,7	----	11
4,60 - 4,80	7	50,8	----	6	9,80 - 10,00	15	83,1	----	11
4,80 - 5,00	7	50,8	----	6	10,00 - 10,20	14	77,6	----	11
5,00 - 5,20	6	43,5	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 107
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-107
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	14	147,1	----	1	5,20 - 5,40	6	41,0	----	7
0,20 - 0,40	11	106,1	----	2	5,40 - 5,60	12	82,0	----	7
0,40 - 0,60	11	106,1	----	2	5,60 - 5,80	11	75,2	----	7
0,60 - 0,80	10	96,4	----	2	5,80 - 6,00	11	75,2	----	7
0,80 - 1,00	8	77,1	----	2	6,00 - 6,20	12	82,0	----	7
1,00 - 1,20	5	48,2	----	2	6,20 - 6,40	13	84,0	----	8
1,20 - 1,40	5	44,6	----	3	6,40 - 6,60	11	71,0	----	8
1,40 - 1,60	5	44,6	----	3	6,60 - 6,80	11	71,0	----	8
1,60 - 1,80	9	80,2	----	3	6,80 - 7,00	10	64,6	----	8
1,80 - 2,00	9	80,2	----	3	7,00 - 7,20	7	45,2	----	8
2,00 - 2,20	10	89,1	----	3	7,20 - 7,40	9	55,1	----	9
2,20 - 2,40	11	91,1	----	4	7,40 - 7,60	7	42,8	----	9
2,40 - 2,60	12	99,4	----	4	7,60 - 7,80	7	42,8	----	9
2,60 - 2,80	15	124,2	----	4	7,80 - 8,00	5	30,6	----	9
2,80 - 3,00	17	140,8	----	4	8,00 - 8,20	5	30,6	----	9
3,00 - 3,20	19	157,4	----	4	8,20 - 8,40	4	23,3	----	10
3,20 - 3,40	20	154,7	----	5	8,40 - 8,60	3	17,5	----	10
3,40 - 3,60	17	131,5	----	5	8,60 - 8,80	4	23,3	----	10
3,60 - 3,80	7	54,1	----	5	8,80 - 9,00	5	29,1	----	10
3,80 - 4,00	3	23,2	----	5	9,00 - 9,20	6	34,9	----	10
4,00 - 4,20	3	23,2	----	5	9,20 - 9,40	8	44,3	----	11
4,20 - 4,40	3	21,8	----	6	9,40 - 9,60	7	38,8	----	11
4,40 - 4,60	4	29,0	----	6	9,60 - 9,80	12	66,5	----	11
4,60 - 4,80	3	21,8	----	6	9,80 - 10,00	13	72,1	----	11
4,80 - 5,00	4	29,0	----	6	10,00 - 10,20	12	66,5	----	11
5,00 - 5,20	5	36,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 115
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-115
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	21	220,7	----	1	1,00 - 1,20	36	347,2	----	2
0,20 - 0,40	30	289,3	----	2	1,20 - 1,40	33	294,1	----	3
0,40 - 0,60	35	337,5	----	2	1,40 - 1,60	25	222,8	----	3
0,60 - 0,80	37	356,8	----	2	1,60 - 1,80	38	338,6	----	3
0,80 - 1,00	30	289,3	----	2	1,80 - 2,00	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 116
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-116
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	18	189,1	----	1	1,00 - 1,20	25	241,1	----	2
0,20 - 0,40	15	144,7	----	2	1,20 - 1,40	26	231,7	----	3
0,40 - 0,60	12	115,7	----	2	1,40 - 1,60	24	213,9	----	3
0,60 - 0,80	8	77,1	----	2	1,60 - 1,80	41	365,3	----	3
0,80 - 1,00	11	106,1	----	2	1,80 - 2,00	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 117
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-117
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,00 - 1,20	23	221,8	----	2
0,20 - 0,40	10	96,4	----	2	1,20 - 1,40	33	294,1	----	3
0,40 - 0,60	12	115,7	----	2	1,40 - 1,60	40	356,4	----	3
0,60 - 0,80	19	183,2	----	2	1,60 - 1,80	45	401,0	----	3
0,80 - 1,00	28	270,0	----	2	1,80 - 2,00	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 118
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-118
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	0,80 - 1,00	38	366,5	----	2
0,20 - 0,40	10	96,4	----	2	1,00 - 1,20	44	424,3	----	2
0,40 - 0,60	10	96,4	----	2	1,20 - 1,40	48	427,7	----	3
0,60 - 0,80	35	337,5	----	2	1,40 - 1,60	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 119
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-119
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	1,80 - 2,00	17	151,5	----	3
0,20 - 0,40	10	96,4	----	2	2,00 - 2,20	26	231,7	----	3
0,40 - 0,60	15	144,7	----	2	2,20 - 2,40	32	265,0	----	4
0,60 - 0,80	24	231,4	----	2	2,40 - 2,60	22	182,2	----	4
0,80 - 1,00	3	28,9	----	2	2,60 - 2,80	20	165,6	----	4
1,00 - 1,20	4	38,6	----	2	2,80 - 3,00	22	182,2	----	4
1,20 - 1,40	3	26,7	----	3	3,00 - 3,20	18	149,1	----	4
1,40 - 1,60	3	26,7	----	3	3,20 - 3,40	32	247,5	----	5
1,60 - 1,80	8	71,3	----	3	3,40 - 3,60	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 120
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-120
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	15	157,6	----	1	0,80 - 1,00	28	270,0	----	2
0,20 - 0,40	23	221,8	----	2	1,00 - 1,20	43	414,7	----	2
0,40 - 0,60	17	163,9	----	2	1,20 - 1,40	60	534,7	----	3
0,60 - 0,80	27	260,4	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 126
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-126
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	0,80 - 1,00	24	231,4	----	2
0,20 - 0,40	3	28,9	----	2	1,00 - 1,20	38	366,5	----	2
0,40 - 0,60	8	77,1	----	2	1,20 - 1,40	45	401,0	----	3
0,60 - 0,80	16	154,3	----	2	1,40 - 1,60	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 127
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-127
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	1,20 - 1,40	29	258,4	----	3
0,20 - 0,40	6	57,9	----	2	1,40 - 1,60	33	294,1	----	3
0,40 - 0,60	6	57,9	----	2	1,60 - 1,80	35	311,9	----	3
0,60 - 0,80	4	38,6	----	2	1,80 - 2,00	37	329,7	----	3
0,80 - 1,00	15	144,7	----	2	2,00 - 2,20	48	427,7	----	3
1,00 - 1,20	28	270,0	----	2	2,20 - 2,40	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 121
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-121
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	1,20 - 1,40	11	98,0	----	3
0,20 - 0,40	25	241,1	----	2	1,40 - 1,60	23	204,9	----	3
0,40 - 0,60	9	86,8	----	2	1,60 - 1,80	26	231,7	----	3
0,60 - 0,80	3	28,9	----	2	1,80 - 2,00	48	427,7	----	3
0,80 - 1,00	4	38,6	----	2	2,00 - 2,20	60	534,7	----	3
1,00 - 1,20	6	57,9	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 125
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-125
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	1,80 - 2,00	3	26,7	----	3
0,20 - 0,40	10	96,4	----	2	2,00 - 2,20	11	98,0	----	3
0,40 - 0,60	8	77,1	----	2	2,20 - 2,40	20	165,6	----	4
0,60 - 0,80	8	77,1	----	2	2,40 - 2,60	19	157,4	----	4
0,80 - 1,00	8	77,1	----	2	2,60 - 2,80	25	207,0	----	4
1,00 - 1,20	8	77,1	----	2	2,80 - 3,00	33	273,3	----	4
1,20 - 1,40	9	80,2	----	3	3,00 - 3,20	44	364,4	----	4
1,40 - 1,60	8	71,3	----	3	3,20 - 3,40	60	464,1	----	5
1,60 - 1,80	4	35,6	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 123
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-123
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	1,80 - 2,00	21	187,1	----	3
0,20 - 0,40	2	19,3	----	2	2,00 - 2,20	23	204,9	----	3
0,40 - 0,60	3	28,9	----	2	2,20 - 2,40	16	132,5	----	4
0,60 - 0,80	7	67,5	----	2	2,40 - 2,60	26	215,3	----	4
0,80 - 1,00	12	115,7	----	2	2,60 - 2,80	33	273,3	----	4
1,00 - 1,20	20	192,9	----	2	2,80 - 3,00	60	496,9	----	4
1,20 - 1,40	36	320,8	----	3	3,00 - 3,20	58	480,3	----	4
1,40 - 1,60	36	320,8	----	3	3,20 - 3,40	60	464,1	----	5
1,60 - 1,80	25	222,8	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 124
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-124
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	2,80 - 3,00	14	115,9	----	4
0,20 - 0,40	15	144,7	----	2	3,00 - 3,20	12	99,4	----	4
0,40 - 0,60	21	202,5	----	2	3,20 - 3,40	15	116,0	----	5
0,60 - 0,80	19	183,2	----	2	3,40 - 3,60	36	278,5	----	5
0,80 - 1,00	34	327,9	----	2	3,60 - 3,80	53	410,0	----	5
1,00 - 1,20	50	482,2	----	2	3,80 - 4,00	22	170,2	----	5
1,20 - 1,40	52	463,4	----	3	4,00 - 4,20	12	92,8	----	5
1,40 - 1,60	43	383,2	----	3	4,20 - 4,40	13	94,3	----	6
1,60 - 1,80	39	347,5	----	3	4,40 - 4,60	16	116,1	----	6
1,80 - 2,00	38	338,6	----	3	4,60 - 4,80	18	130,6	----	6
2,00 - 2,20	26	231,7	----	3	4,80 - 5,00	18	130,6	----	6
2,20 - 2,40	46	381,0	----	4	5,00 - 5,20	51	370,1	----	6
2,40 - 2,60	25	207,0	----	4	5,20 - 5,40	54	369,0	----	7
2,60 - 2,80	16	132,5	----	4	5,40 - 5,60	60	410,0	----	7

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 129
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-129
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	9	94,6	----	1	5,20 - 5,40	8	54,7	----	7
0,20 - 0,40	9	86,8	----	2	5,40 - 5,60	6	41,0	----	7
0,40 - 0,60	11	106,1	----	2	5,60 - 5,80	9	61,5	----	7
0,60 - 0,80	11	106,1	----	2	5,80 - 6,00	10	68,3	----	7
0,80 - 1,00	12	115,7	----	2	6,00 - 6,20	7	47,8	----	7
1,00 - 1,20	13	125,4	----	2	6,20 - 6,40	3	19,4	----	8
1,20 - 1,40	12	106,9	----	3	6,40 - 6,60	5	32,3	----	8
1,40 - 1,60	14	124,8	----	3	6,60 - 6,80	4	25,8	----	8
1,60 - 1,80	13	115,8	----	3	6,80 - 7,00	4	25,8	----	8
1,80 - 2,00	13	115,8	----	3	7,00 - 7,20	3	19,4	----	8
2,00 - 2,20	12	106,9	----	3	7,20 - 7,40	3	18,4	----	9
2,20 - 2,40	10	82,8	----	4	7,40 - 7,60	3	18,4	----	9
2,40 - 2,60	9	74,5	----	4	7,60 - 7,80	6	36,7	----	9
2,60 - 2,80	10	82,8	----	4	7,80 - 8,00	8	49,0	----	9
2,80 - 3,00	10	82,8	----	4	8,00 - 8,20	8	49,0	----	9
3,00 - 3,20	12	99,4	----	4	8,20 - 8,40	6	34,9	----	10
3,20 - 3,40	12	92,8	----	5	8,40 - 8,60	8	46,5	----	10
3,40 - 3,60	11	85,1	----	5	8,60 - 8,80	7	40,7	----	10
3,60 - 3,80	12	92,8	----	5	8,80 - 9,00	7	40,7	----	10
3,80 - 4,00	16	123,8	----	5	9,00 - 9,20	9	52,4	----	10
4,00 - 4,20	19	147,0	----	5	9,20 - 9,40	9	49,9	----	11
4,20 - 4,40	15	108,9	----	6	9,40 - 9,60	12	66,5	----	11
4,40 - 4,60	15	108,9	----	6	9,60 - 9,80	14	77,6	----	11
4,60 - 4,80	15	108,9	----	6	9,80 - 10,00	14	77,6	----	11
4,80 - 5,00	14	101,6	----	6	10,00 - 10,20	15	83,1	----	11
5,00 - 5,20	12	87,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 130
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-130
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	5,20 - 5,40	4	27,3	----	7
0,20 - 0,40	15	144,7	----	2	5,40 - 5,60	5	34,2	----	7
0,40 - 0,60	12	115,7	----	2	5,60 - 5,80	6	41,0	----	7
0,60 - 0,80	10	96,4	----	2	5,80 - 6,00	6	41,0	----	7
0,80 - 1,00	7	67,5	----	2	6,00 - 6,20	6	41,0	----	7
1,00 - 1,20	6	57,9	----	2	6,20 - 6,40	6	38,7	----	8
1,20 - 1,40	6	53,5	----	3	6,40 - 6,60	8	51,7	----	8
1,40 - 1,60	5	44,6	----	3	6,60 - 6,80	9	58,1	----	8
1,60 - 1,80	6	53,5	----	3	6,80 - 7,00	9	58,1	----	8
1,80 - 2,00	7	62,4	----	3	7,00 - 7,20	11	71,0	----	8
2,00 - 2,20	8	71,3	----	3	7,20 - 7,40	12	73,5	----	9
2,20 - 2,40	7	58,0	----	4	7,40 - 7,60	14	85,7	----	9
2,40 - 2,60	7	58,0	----	4	7,60 - 7,80	15	91,8	----	9
2,60 - 2,80	7	58,0	----	4	7,80 - 8,00	16	97,9	----	9
2,80 - 3,00	6	49,7	----	4	8,00 - 8,20	16	97,9	----	9
3,00 - 3,20	4	33,1	----	4	8,20 - 8,40	18	104,7	----	10
3,20 - 3,40	4	30,9	----	5	8,40 - 8,60	17	98,9	----	10
3,40 - 3,60	7	54,1	----	5	8,60 - 8,80	19	110,5	----	10
3,60 - 3,80	7	54,1	----	5	8,80 - 9,00	17	98,9	----	10
3,80 - 4,00	7	54,1	----	5	9,00 - 9,20	16	93,1	----	10
4,00 - 4,20	9	69,6	----	5	9,20 - 9,40	16	88,7	----	11
4,20 - 4,40	9	65,3	----	6	9,40 - 9,60	17	94,2	----	11
4,40 - 4,60	9	65,3	----	6	9,60 - 9,80	15	83,1	----	11
4,60 - 4,80	9	65,3	----	6	9,80 - 10,00	18	99,8	----	11
4,80 - 5,00	9	65,3	----	6	10,00 - 10,20	17	94,2	----	11
5,00 - 5,20	8	58,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 128
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-128
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	1,20 - 1,40	8	71,3	----	3
0,20 - 0,40	9	86,8	----	2	1,40 - 1,60	6	53,5	----	3
0,40 - 0,60	17	163,9	----	2	1,60 - 1,80	8	71,3	----	3
0,60 - 0,80	10	96,4	----	2	1,80 - 2,00	8	71,3	----	3
0,80 - 1,00	12	115,7	----	2	2,00 - 2,20	18	160,4	----	3
1,00 - 1,20	9	86,8	----	2	2,20 - 2,40	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 135
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-135
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	5,20 - 5,40	6	41,0	----	7
0,20 - 0,40	5	48,2	----	2	5,40 - 5,60	3	20,5	----	7
0,40 - 0,60	4	38,6	----	2	5,60 - 5,80	2	13,7	----	7
0,60 - 0,80	3	28,9	----	2	5,80 - 6,00	4	27,3	----	7
0,80 - 1,00	2	19,3	----	2	6,00 - 6,20	6	41,0	----	7
1,00 - 1,20	2	19,3	----	2	6,20 - 6,40	9	58,1	----	8
1,20 - 1,40	3	26,7	----	3	6,40 - 6,60	14	90,4	----	8
1,40 - 1,60	4	35,6	----	3	6,60 - 6,80	21	135,6	----	8
1,60 - 1,80	6	53,5	----	3	6,80 - 7,00	15	96,9	----	8
1,80 - 2,00	9	80,2	----	3	7,00 - 7,20	15	96,9	----	8
2,00 - 2,20	8	71,3	----	3	7,20 - 7,40	12	73,5	----	9
2,20 - 2,40	7	58,0	----	4	7,40 - 7,60	16	97,9	----	9
2,40 - 2,60	10	82,8	----	4	7,60 - 7,80	21	128,5	----	9
2,60 - 2,80	11	91,1	----	4	7,80 - 8,00	22	134,7	----	9
2,80 - 3,00	10	82,8	----	4	8,00 - 8,20	20	122,4	----	9
3,00 - 3,20	10	82,8	----	4	8,20 - 8,40	20	116,3	----	10
3,20 - 3,40	12	92,8	----	5	8,40 - 8,60	20	116,3	----	10
3,40 - 3,60	14	108,3	----	5	8,60 - 8,80	21	122,2	----	10
3,60 - 3,80	13	100,6	----	5	8,80 - 9,00	21	122,2	----	10
3,80 - 4,00	11	85,1	----	5	9,00 - 9,20	21	122,2	----	10
4,00 - 4,20	10	77,4	----	5	9,20 - 9,40	20	110,8	----	11
4,20 - 4,40	8	58,1	----	6	9,40 - 9,60	21	116,4	----	11
4,40 - 4,60	10	72,6	----	6	9,60 - 9,80	22	121,9	----	11
4,60 - 4,80	9	65,3	----	6	9,80 - 10,00	19	105,3	----	11
4,80 - 5,00	7	50,8	----	6	10,00 - 10,20	21	116,4	----	11
5,00 - 5,20	9	65,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 133
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-133
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	8	84,1	----	1	4,80 - 5,00	2	14,5	----	6
0,20 - 0,40	9	86,8	----	2	5,00 - 5,20	7	50,8	----	6
0,40 - 0,60	13	125,4	----	2	5,20 - 5,40	22	150,4	----	7
0,60 - 0,80	10	96,4	----	2	5,40 - 5,60	13	88,8	----	7
0,80 - 1,00	8	77,1	----	2	5,60 - 5,80	7	47,8	----	7
1,00 - 1,20	9	86,8	----	2	5,80 - 6,00	7	47,8	----	7
1,20 - 1,40	5	44,6	----	3	6,00 - 6,20	11	75,2	----	7
1,40 - 1,60	4	35,6	----	3	6,20 - 6,40	13	84,0	----	8
1,60 - 1,80	3	26,7	----	3	6,40 - 6,60	18	116,2	----	8
1,80 - 2,00	2	17,8	----	3	6,60 - 6,80	17	109,8	----	8
2,00 - 2,20	2	17,8	----	3	6,80 - 7,00	11	71,0	----	8
2,20 - 2,40	2	16,6	----	4	7,00 - 7,20	5	32,3	----	8
2,40 - 2,60	2	16,6	----	4	7,20 - 7,40	5	30,6	----	9
2,60 - 2,80	3	24,8	----	4	7,40 - 7,60	6	36,7	----	9
2,80 - 3,00	11	91,1	----	4	7,60 - 7,80	12	73,5	----	9
3,00 - 3,20	10	82,8	----	4	7,80 - 8,00	11	67,3	----	9
3,20 - 3,40	6	46,4	----	5	8,00 - 8,20	14	85,7	----	9
3,40 - 3,60	11	85,1	----	5	8,20 - 8,40	11	64,0	----	10
3,60 - 3,80	11	85,1	----	5	8,40 - 8,60	10	58,2	----	10
3,80 - 4,00	3	23,2	----	5	8,60 - 8,80	6	34,9	----	10
4,00 - 4,20	2	15,5	----	5	8,80 - 9,00	7	40,7	----	10
4,20 - 4,40	2	14,5	----	6	9,00 - 9,20	7	40,7	----	10
4,40 - 4,60	2	14,5	----	6	9,20 - 9,40	13	72,1	----	11
4,60 - 4,80	2	14,5	----	6	9,40 - 9,60	60	332,5	----	11

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 134
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-134
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	4,60 - 4,80	14	101,6	----	6
0,20 - 0,40	13	125,4	----	2	4,80 - 5,00	10	72,6	----	6
0,40 - 0,60	11	106,1	----	2	5,00 - 5,20	14	101,6	----	6
0,60 - 0,80	12	115,7	----	2	5,20 - 5,40	12	82,0	----	7
0,80 - 1,00	8	77,1	----	2	5,40 - 5,60	8	54,7	----	7
1,00 - 1,20	4	38,6	----	2	5,60 - 5,80	6	41,0	----	7
1,20 - 1,40	3	26,7	----	3	5,80 - 6,00	12	82,0	----	7
1,40 - 1,60	2	17,8	----	3	6,00 - 6,20	11	75,2	----	7
1,60 - 1,80	2	17,8	----	3	6,20 - 6,40	8	51,7	----	8
1,80 - 2,00	2	17,8	----	3	6,40 - 6,60	7	45,2	----	8
2,00 - 2,20	2	17,8	----	3	6,60 - 6,80	11	71,0	----	8
2,20 - 2,40	2	16,6	----	4	6,80 - 7,00	14	90,4	----	8
2,40 - 2,60	2	16,6	----	4	7,00 - 7,20	13	84,0	----	8
2,60 - 2,80	12	99,4	----	4	7,20 - 7,40	13	79,6	----	9
2,80 - 3,00	14	115,9	----	4	7,40 - 7,60	13	79,6	----	9
3,00 - 3,20	15	124,2	----	4	7,60 - 7,80	12	73,5	----	9
3,20 - 3,40	17	131,5	----	5	7,80 - 8,00	12	73,5	----	9
3,40 - 3,60	11	85,1	----	5	8,00 - 8,20	12	73,5	----	9
3,60 - 3,80	15	116,0	----	5	8,20 - 8,40	16	93,1	----	10
3,80 - 4,00	5	38,7	----	5	8,40 - 8,60	23	133,8	----	10
4,00 - 4,20	4	30,9	----	5	8,60 - 8,80	29	168,7	----	10
4,20 - 4,40	8	58,1	----	6	8,80 - 9,00	60	349,0	----	10
4,40 - 4,60	12	87,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 137
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-137
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,20 - 1,40	2	17,8	----	3
0,20 - 0,40	3	28,9	----	2	1,40 - 1,60	6	53,5	----	3
0,40 - 0,60	5	48,2	----	2	1,60 - 1,80	45	401,0	----	3
0,60 - 0,80	3	28,9	----	2	1,80 - 2,00	63	561,4	----	3
0,80 - 1,00	2	19,3	----	2	2,00 - 2,20	42	374,3	----	3
1,00 - 1,20	2	19,3	----	2	2,20 - 2,40	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 138
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-138
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	5,20 - 5,40	7	47,8	----	7
0,20 - 0,40	6	57,9	----	2	5,40 - 5,60	6	41,0	----	7
0,40 - 0,60	7	67,5	----	2	5,60 - 5,80	7	47,8	----	7
0,60 - 0,80	6	57,9	----	2	5,80 - 6,00	7	47,8	----	7
0,80 - 1,00	5	48,2	----	2	6,00 - 6,20	7	47,8	----	7
1,00 - 1,20	5	48,2	----	2	6,20 - 6,40	7	45,2	----	8
1,20 - 1,40	4	35,6	----	3	6,40 - 6,60	7	45,2	----	8
1,40 - 1,60	4	35,6	----	3	6,60 - 6,80	7	45,2	----	8
1,60 - 1,80	4	35,6	----	3	6,80 - 7,00	7	45,2	----	8
1,80 - 2,00	2	17,8	----	3	7,00 - 7,20	7	45,2	----	8
2,00 - 2,20	2	17,8	----	3	7,20 - 7,40	6	36,7	----	9
2,20 - 2,40	2	16,6	----	4	7,40 - 7,60	8	49,0	----	9
2,40 - 2,60	4	33,1	----	4	7,60 - 7,80	6	36,7	----	9
2,60 - 2,80	4	33,1	----	4	7,80 - 8,00	6	36,7	----	9
2,80 - 3,00	6	49,7	----	4	8,00 - 8,20	5	30,6	----	9
3,00 - 3,20	6	49,7	----	4	8,20 - 8,40	5	29,1	----	10
3,20 - 3,40	6	46,4	----	5	8,40 - 8,60	5	29,1	----	10
3,40 - 3,60	8	61,9	----	5	8,60 - 8,80	6	34,9	----	10
3,60 - 3,80	8	61,9	----	5	8,80 - 9,00	6	34,9	----	10
3,80 - 4,00	3	23,2	----	5	9,00 - 9,20	5	29,1	----	10
4,00 - 4,20	2	15,5	----	5	9,20 - 9,40	5	27,7	----	11
4,20 - 4,40	3	21,8	----	6	9,40 - 9,60	5	27,7	----	11
4,40 - 4,60	5	36,3	----	6	9,60 - 9,80	5	27,7	----	11
4,60 - 4,80	7	50,8	----	6	9,80 - 10,00	6	33,3	----	11
4,80 - 5,00	7	50,8	----	6	10,00 - 10,20	5	27,7	----	11
5,00 - 5,20	7	50,8	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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PROVA PENETROMETRICA DINAMICA n° 140
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-140
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	16	168,1	----	1	1,40 - 1,60	7	62,4	----	3
0,20 - 0,40	11	106,1	----	2	1,60 - 1,80	5	44,6	----	3
0,40 - 0,60	16	154,3	----	2	1,80 - 2,00	9	80,2	----	3
0,60 - 0,80	12	115,7	----	2	2,00 - 2,20	17	151,5	----	3
0,80 - 1,00	11	106,1	----	2	2,20 - 2,40	45	372,7	----	4
1,00 - 1,20	9	86,8	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	6	53,5	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 141
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-141
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	11	115,6	----	1	1,80 - 2,00	21	187,1	----	3
0,20 - 0,40	4	38,6	----	2	2,00 - 2,20	17	151,5	----	3
0,40 - 0,60	4	38,6	----	2	2,20 - 2,40	16	132,5	----	4
0,60 - 0,80	10	96,4	----	2	2,40 - 2,60	19	157,4	----	4
0,80 - 1,00	10	96,4	----	2	2,60 - 2,80	28	231,9	----	4
1,00 - 1,20	17	163,9	----	2	2,80 - 3,00	25	207,0	----	4
1,20 - 1,40	29	258,4	----	3	3,00 - 3,20	39	323,0	----	4
1,40 - 1,60	18	160,4	----	3	3,20 - 3,40	60	464,1	----	5
1,60 - 1,80	28	249,5	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 142
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-142
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	16	168,1	----	1	1,60 - 1,80	17	151,5	----	3
0,20 - 0,40	14	135,0	----	2	1,80 - 2,00	21	187,1	----	3
0,40 - 0,60	11	106,1	----	2	2,00 - 2,20	20	178,2	----	3
0,60 - 0,80	8	77,1	----	2	2,20 - 2,40	24	198,8	----	4
0,80 - 1,00	8	77,1	----	2	2,40 - 2,60	34	281,6	----	4
1,00 - 1,20	11	106,1	----	2	2,60 - 2,80	37	306,4	----	4
1,20 - 1,40	14	124,8	----	3	2,80 - 3,00	50	414,1	----	4
1,40 - 1,60	14	124,8	----	3	3,00 - 3,20	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 143
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-143
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	16	168,1	----	1	2,40 - 2,60	5	41,4	----	4
0,20 - 0,40	12	115,7	----	2	2,60 - 2,80	5	41,4	----	4
0,40 - 0,60	8	77,1	----	2	2,80 - 3,00	5	41,4	----	4
0,60 - 0,80	7	67,5	----	2	3,00 - 3,20	7	58,0	----	4
0,80 - 1,00	5	48,2	----	2	3,20 - 3,40	5	38,7	----	5
1,00 - 1,20	7	67,5	----	2	3,40 - 3,60	5	38,7	----	5
1,20 - 1,40	4	35,6	----	3	3,60 - 3,80	8	61,9	----	5
1,40 - 1,60	7	62,4	----	3	3,80 - 4,00	5	38,7	----	5
1,60 - 1,80	4	35,6	----	3	4,00 - 4,20	7	54,1	----	5
1,80 - 2,00	4	35,6	----	3	4,20 - 4,40	10	72,6	----	6
2,00 - 2,20	5	44,6	----	3	4,40 - 4,60	50	362,8	----	6
2,20 - 2,40	5	41,4	----	4	4,60 - 4,80	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 145
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-145
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	32	336,2	----	1	0,80 - 1,00	40	385,7	----	2
0,20 - 0,40	20	192,9	----	2	1,00 - 1,20	65	626,8	----	2
0,40 - 0,60	20	192,9	----	2	1,20 - 1,40	70	623,8	----	3
0,60 - 0,80	27	260,4	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 146
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-146
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	18	189,1	----	1	2,60 - 2,80	23	190,5	----	4
0,20 - 0,40	18	173,6	----	2	2,80 - 3,00	18	149,1	----	4
0,40 - 0,60	11	106,1	----	2	3,00 - 3,20	18	149,1	----	4
0,60 - 0,80	7	67,5	----	2	3,20 - 3,40	13	100,6	----	5
0,80 - 1,00	8	77,1	----	2	3,40 - 3,60	13	100,6	----	5
1,00 - 1,20	8	77,1	----	2	3,60 - 3,80	15	116,0	----	5
1,20 - 1,40	7	62,4	----	3	3,80 - 4,00	18	139,2	----	5
1,40 - 1,60	9	80,2	----	3	4,00 - 4,20	17	131,5	----	5
1,60 - 1,80	8	71,3	----	3	4,20 - 4,40	27	195,9	----	6
1,80 - 2,00	10	89,1	----	3	4,40 - 4,60	28	203,2	----	6
2,00 - 2,20	11	98,0	----	3	4,60 - 4,80	27	195,9	----	6
2,20 - 2,40	11	91,1	----	4	4,80 - 5,00	34	246,7	----	6
2,40 - 2,60	16	132,5	----	4	5,00 - 5,20	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 151
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-151
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	8	84,1	----	1	1,20 - 1,40	7	62,4	----	3
0,20 - 0,40	18	173,6	----	2	1,40 - 1,60	6	53,5	----	3
0,40 - 0,60	11	106,1	----	2	1,60 - 1,80	17	151,5	----	3
0,60 - 0,80	7	67,5	----	2	1,80 - 2,00	42	374,3	----	3
0,80 - 1,00	5	48,2	----	2	2,00 - 2,20	60	534,7	----	3
1,00 - 1,20	5	48,2	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 152
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-152
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	0,60 - 0,80	8	77,1	----	2
0,20 - 0,40	6	57,9	----	2	0,80 - 1,00	16	154,3	----	2
0,40 - 0,60	5	48,2	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 153
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-153
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	1,60 - 1,80	6	53,5	----	3
0,20 - 0,40	7	67,5	----	2	1,80 - 2,00	6	53,5	----	3
0,40 - 0,60	12	115,7	----	2	2,00 - 2,20	5	44,6	----	3
0,60 - 0,80	16	154,3	----	2	2,20 - 2,40	8	66,3	----	4
0,80 - 1,00	14	135,0	----	2	2,40 - 2,60	3	24,8	----	4
1,00 - 1,20	10	96,4	----	2	2,60 - 2,80	4	33,1	----	4
1,20 - 1,40	8	71,3	----	3	2,80 - 3,00	38	314,7	----	4
1,40 - 1,60	6	53,5	----	3	3,00 - 3,20	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 154
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-154
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	9	94,6	----	1	3,40 - 3,60	8	61,9	----	5
0,20 - 0,40	17	163,9	----	2	3,60 - 3,80	11	85,1	----	5
0,40 - 0,60	16	154,3	----	2	3,80 - 4,00	14	108,3	----	5
0,60 - 0,80	13	125,4	----	2	4,00 - 4,20	21	162,4	----	5
0,80 - 1,00	11	106,1	----	2	4,20 - 4,40	23	166,9	----	6
1,00 - 1,20	10	96,4	----	2	4,40 - 4,60	26	188,7	----	6
1,20 - 1,40	10	89,1	----	3	4,60 - 4,80	24	174,2	----	6
1,40 - 1,60	9	80,2	----	3	4,80 - 5,00	24	174,2	----	6
1,60 - 1,80	9	80,2	----	3	5,00 - 5,20	28	203,2	----	6
1,80 - 2,00	8	71,3	----	3	5,20 - 5,40	23	157,2	----	7
2,00 - 2,20	10	89,1	----	3	5,40 - 5,60	24	164,0	----	7
2,20 - 2,40	10	82,8	----	4	5,60 - 5,80	24	164,0	----	7
2,40 - 2,60	8	66,3	----	4	5,80 - 6,00	22	150,4	----	7
2,60 - 2,80	10	82,8	----	4	6,00 - 6,20	24	164,0	----	7
2,80 - 3,00	14	115,9	----	4	6,20 - 6,40	24	155,0	----	8
3,00 - 3,20	7	58,0	----	4	6,40 - 6,60	28	180,8	----	8
3,20 - 3,40	10	77,4	----	5	6,60 - 6,80	26	167,9	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 155
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-155
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	17	178,6	----	1	5,20 - 5,40	11	75,2	----	7
0,20 - 0,40	15	144,7	----	2	5,40 - 5,60	12	82,0	----	7
0,40 - 0,60	22	212,2	----	2	5,60 - 5,80	11	75,2	----	7
0,60 - 0,80	24	231,4	----	2	5,80 - 6,00	13	88,8	----	7
0,80 - 1,00	29	279,7	----	2	6,00 - 6,20	17	116,2	----	7
1,00 - 1,20	24	231,4	----	2	6,20 - 6,40	16	103,3	----	8
1,20 - 1,40	15	133,7	----	3	6,40 - 6,60	17	109,8	----	8
1,40 - 1,60	11	98,0	----	3	6,60 - 6,80	17	109,8	----	8
1,60 - 1,80	10	89,1	----	3	6,80 - 7,00	17	109,8	----	8
1,80 - 2,00	10	89,1	----	3	7,00 - 7,20	16	103,3	----	8
2,00 - 2,20	9	80,2	----	3	7,20 - 7,40	17	104,1	----	9
2,20 - 2,40	9	74,5	----	4	7,40 - 7,60	17	104,1	----	9
2,40 - 2,60	11	91,1	----	4	7,60 - 7,80	20	122,4	----	9
2,60 - 2,80	10	82,8	----	4	7,80 - 8,00	23	140,8	----	9
2,80 - 3,00	8	66,3	----	4	8,00 - 8,20	23	140,8	----	9
3,00 - 3,20	9	74,5	----	4	8,20 - 8,40	21	122,2	----	10
3,20 - 3,40	6	46,4	----	5	8,40 - 8,60	22	128,0	----	10
3,40 - 3,60	8	61,9	----	5	8,60 - 8,80	23	133,8	----	10
3,60 - 3,80	9	69,6	----	5	8,80 - 9,00	22	128,0	----	10
3,80 - 4,00	8	61,9	----	5	9,00 - 9,20	24	139,6	----	10
4,00 - 4,20	8	61,9	----	5	9,20 - 9,40	24	133,0	----	11
4,20 - 4,40	10	72,6	----	6	9,40 - 9,60	24	133,0	----	11
4,40 - 4,60	8	58,1	----	6	9,60 - 9,80	25	138,6	----	11
4,60 - 4,80	11	79,8	----	6	9,80 - 10,00	25	138,6	----	11
4,80 - 5,00	10	72,6	----	6	10,00 - 10,20	24	133,0	----	11
5,00 - 5,20	10	72,6	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 156
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-156
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	11	115,6	----	1	5,20 - 5,40	10	68,3	----	7
0,20 - 0,40	12	115,7	----	2	5,40 - 5,60	9	61,5	----	7
0,40 - 0,60	10	96,4	----	2	5,60 - 5,80	12	82,0	----	7
0,60 - 0,80	8	77,1	----	2	5,80 - 6,00	12	82,0	----	7
0,80 - 1,00	7	67,5	----	2	6,00 - 6,20	14	95,7	----	7
1,00 - 1,20	6	57,9	----	2	6,20 - 6,40	14	90,4	----	8
1,20 - 1,40	3	26,7	----	3	6,40 - 6,60	12	77,5	----	8
1,40 - 1,60	4	35,6	----	3	6,60 - 6,80	15	96,9	----	8
1,60 - 1,80	8	71,3	----	3	6,80 - 7,00	15	96,9	----	8
1,80 - 2,00	9	80,2	----	3	7,00 - 7,20	15	96,9	----	8
2,00 - 2,20	12	106,9	----	3	7,20 - 7,40	13	79,6	----	9
2,20 - 2,40	23	190,5	----	4	7,40 - 7,60	14	85,7	----	9
2,40 - 2,60	25	207,0	----	4	7,60 - 7,80	16	97,9	----	9
2,60 - 2,80	21	173,9	----	4	7,80 - 8,00	14	85,7	----	9
2,80 - 3,00	11	91,1	----	4	8,00 - 8,20	14	85,7	----	9
3,00 - 3,20	9	74,5	----	4	8,20 - 8,40	12	69,8	----	10
3,20 - 3,40	7	54,1	----	5	8,40 - 8,60	13	75,6	----	10
3,40 - 3,60	8	61,9	----	5	8,60 - 8,80	13	75,6	----	10
3,60 - 3,80	13	100,6	----	5	8,80 - 9,00	13	75,6	----	10
3,80 - 4,00	15	116,0	----	5	9,00 - 9,20	12	69,8	----	10
4,00 - 4,20	9	69,6	----	5	9,20 - 9,40	11	61,0	----	11
4,20 - 4,40	6	43,5	----	6	9,40 - 9,60	18	99,8	----	11
4,40 - 4,60	9	65,3	----	6	9,60 - 9,80	17	94,2	----	11
4,60 - 4,80	8	58,1	----	6	9,80 - 10,00	20	110,8	----	11
4,80 - 5,00	10	72,6	----	6	10,00 - 10,20	60	332,5	----	11
5,00 - 5,20	14	101,6	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 157
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-157
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,80 - 2,00	8	71,3	----	3
0,20 - 0,40	7	67,5	----	2	2,00 - 2,20	8	71,3	----	3
0,40 - 0,60	5	48,2	----	2	2,20 - 2,40	15	124,2	----	4
0,60 - 0,80	35	337,5	----	2	2,40 - 2,60	17	140,8	----	4
0,80 - 1,00	7	67,5	----	2	2,60 - 2,80	21	173,9	----	4
1,00 - 1,20	11	106,1	----	2	2,80 - 3,00	26	215,3	----	4
1,20 - 1,40	16	142,6	----	3	3,00 - 3,20	32	265,0	----	4
1,40 - 1,60	12	106,9	----	3	3,20 - 3,40	60	464,1	----	5
1,60 - 1,80	8	71,3	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 160
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-160
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	8	84,1	----	1	1,60 - 1,80	29	258,4	----	3
0,20 - 0,40	14	135,0	----	2	1,80 - 2,00	29	258,4	----	3
0,40 - 0,60	17	163,9	----	2	2,00 - 2,20	31	276,2	----	3
0,60 - 0,80	18	173,6	----	2	2,20 - 2,40	31	256,7	----	4
0,80 - 1,00	19	183,2	----	2	2,40 - 2,60	33	273,3	----	4
1,00 - 1,20	25	241,1	----	2	2,60 - 2,80	38	314,7	----	4
1,20 - 1,40	25	222,8	----	3	2,80 - 3,00	60	496,9	----	4
1,40 - 1,60	28	249,5	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 162
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-162
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	8	84,1	----	1	5,20 - 5,40	12	82,0	----	7
0,20 - 0,40	6	57,9	----	2	5,40 - 5,60	12	82,0	----	7
0,40 - 0,60	8	77,1	----	2	5,60 - 5,80	10	68,3	----	7
0,60 - 0,80	9	86,8	----	2	5,80 - 6,00	9	61,5	----	7
0,80 - 1,00	9	86,8	----	2	6,00 - 6,20	10	68,3	----	7
1,00 - 1,20	11	106,1	----	2	6,20 - 6,40	8	51,7	----	8
1,20 - 1,40	11	98,0	----	3	6,40 - 6,60	6	38,7	----	8
1,40 - 1,60	11	98,0	----	3	6,60 - 6,80	6	38,7	----	8
1,60 - 1,80	9	80,2	----	3	6,80 - 7,00	9	58,1	----	8
1,80 - 2,00	8	71,3	----	3	7,00 - 7,20	10	64,6	----	8
2,00 - 2,20	10	89,1	----	3	7,20 - 7,40	10	61,2	----	9
2,20 - 2,40	10	82,8	----	4	7,40 - 7,60	9	55,1	----	9
2,40 - 2,60	16	132,5	----	4	7,60 - 7,80	9	55,1	----	9
2,60 - 2,80	17	140,8	----	4	7,80 - 8,00	12	73,5	----	9
2,80 - 3,00	13	107,7	----	4	8,00 - 8,20	12	73,5	----	9
3,00 - 3,20	12	99,4	----	4	8,20 - 8,40	13	75,6	----	10
3,20 - 3,40	12	92,8	----	5	8,40 - 8,60	12	69,8	----	10
3,40 - 3,60	10	77,4	----	5	8,60 - 8,80	10	58,2	----	10
3,60 - 3,80	11	85,1	----	5	8,80 - 9,00	9	52,4	----	10
3,80 - 4,00	9	69,6	----	5	9,00 - 9,20	9	52,4	----	10
4,00 - 4,20	9	69,6	----	5	9,20 - 9,40	12	66,5	----	11
4,20 - 4,40	9	65,3	----	6	9,40 - 9,60	12	66,5	----	11
4,40 - 4,60	12	87,1	----	6	9,60 - 9,80	12	66,5	----	11
4,60 - 4,80	10	72,6	----	6	9,80 - 10,00	13	72,1	----	11
4,80 - 5,00	12	87,1	----	6	10,00 - 10,20	10	55,4	----	11
5,00 - 5,20	13	94,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 164
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-164
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	29	304,7	----	1	1,00 - 1,20	29	279,7	----	2
0,20 - 0,40	28	270,0	----	2	1,20 - 1,40	33	294,1	----	3
0,40 - 0,60	27	260,4	----	2	1,40 - 1,60	35	311,9	----	3
0,60 - 0,80	27	260,4	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	25	241,1	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 184
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-184
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	0,60 - 0,80	17	163,9	----	2
0,20 - 0,40	7	67,5	----	2	0,80 - 1,00	60	578,6	----	2
0,40 - 0,60	9	86,8	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 188
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	15/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-188
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	0,80 - 1,00	16	154,3	----	2
0,20 - 0,40	16	154,3	----	2	1,00 - 1,20	60	578,6	----	2
0,40 - 0,60	18	173,6	----	2	1,20 - 1,40	70	623,8	----	3
0,60 - 0,80	22	212,2	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 197
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	15/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-197
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	0,80 - 1,00	27	260,4	----	2
0,20 - 0,40	6	57,9	----	2	1,00 - 1,20	38	366,5	----	2
0,40 - 0,60	18	173,6	----	2	1,20 - 1,40	60	534,7	----	3
0,60 - 0,80	24	231,4	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 204
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-204
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	14	147,1	----	1	2,00 - 2,20	25	222,8	----	3
0,20 - 0,40	12	115,7	----	2	2,20 - 2,40	16	132,5	----	4
0,40 - 0,60	9	86,8	----	2	2,40 - 2,60	11	91,1	----	4
0,60 - 0,80	9	86,8	----	2	2,60 - 2,80	11	91,1	----	4
0,80 - 1,00	8	77,1	----	2	2,80 - 3,00	40	331,3	----	4
1,00 - 1,20	9	86,8	----	2	3,00 - 3,20	55	455,5	----	4
1,20 - 1,40	7	62,4	----	3	3,20 - 3,40	37	286,2	----	5
1,40 - 1,60	6	53,5	----	3	3,40 - 3,60	50	386,8	----	5
1,60 - 1,80	6	53,5	----	3	3,60 - 3,80	60	464,1	----	5
1,80 - 2,00	6	53,5	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 205
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-205
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	4,20 - 4,40	9	65,3	----	6
0,20 - 0,40	11	106,1	----	2	4,40 - 4,60	11	79,8	----	6
0,40 - 0,60	11	106,1	----	2	4,60 - 4,80	9	65,3	----	6
0,60 - 0,80	15	144,7	----	2	4,80 - 5,00	9	65,3	----	6
0,80 - 1,00	13	125,4	----	2	5,00 - 5,20	34	246,7	----	6
1,00 - 1,20	18	173,6	----	2	5,20 - 5,40	22	150,4	----	7
1,20 - 1,40	10	89,1	----	3	5,40 - 5,60	12	82,0	----	7
1,40 - 1,60	10	89,1	----	3	5,60 - 5,80	12	82,0	----	7
1,60 - 1,80	8	71,3	----	3	5,80 - 6,00	11	75,2	----	7
1,80 - 2,00	20	178,2	----	3	6,00 - 6,20	10	68,3	----	7
2,00 - 2,20	20	178,2	----	3	6,20 - 6,40	10	64,6	----	8
2,20 - 2,40	13	107,7	----	4	6,40 - 6,60	13	84,0	----	8
2,40 - 2,60	17	140,8	----	4	6,60 - 6,80	13	84,0	----	8
2,60 - 2,80	13	107,7	----	4	6,80 - 7,00	13	84,0	----	8
2,80 - 3,00	16	132,5	----	4	7,00 - 7,20	15	96,9	----	8
3,00 - 3,20	14	115,9	----	4	7,20 - 7,40	12	73,5	----	9
3,20 - 3,40	15	116,0	----	5	7,40 - 7,60	15	91,8	----	9
3,40 - 3,60	30	232,1	----	5	7,60 - 7,80	13	79,6	----	9
3,60 - 3,80	14	108,3	----	5	7,80 - 8,00	13	79,6	----	9
3,80 - 4,00	15	116,0	----	5	8,00 - 8,20	60	367,3	----	9
4,00 - 4,20	9	69,6	----	5					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 206
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-206
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	5,20 - 5,40	6	41,0	----	7
0,20 - 0,40	4	38,6	----	2	5,40 - 5,60	9	61,5	----	7
0,40 - 0,60	6	57,9	----	2	5,60 - 5,80	10	68,3	----	7
0,60 - 0,80	5	48,2	----	2	5,80 - 6,00	9	61,5	----	7
0,80 - 1,00	6	57,9	----	2	6,00 - 6,20	9	61,5	----	7
1,00 - 1,20	6	57,9	----	2	6,20 - 6,40	8	51,7	----	8
1,20 - 1,40	5	44,6	----	3	6,40 - 6,60	8	51,7	----	8
1,40 - 1,60	19	169,3	----	3	6,60 - 6,80	10	64,6	----	8
1,60 - 1,80	19	169,3	----	3	6,80 - 7,00	9	58,1	----	8
1,80 - 2,00	13	115,8	----	3	7,00 - 7,20	10	64,6	----	8
2,00 - 2,20	9	80,2	----	3	7,20 - 7,40	8	49,0	----	9
2,20 - 2,40	8	66,3	----	4	7,40 - 7,60	9	55,1	----	9
2,40 - 2,60	8	66,3	----	4	7,60 - 7,80	8	49,0	----	9
2,60 - 2,80	8	66,3	----	4	7,80 - 8,00	9	55,1	----	9
2,80 - 3,00	9	74,5	----	4	8,00 - 8,20	9	55,1	----	9
3,00 - 3,20	7	58,0	----	4	8,20 - 8,40	9	52,4	----	10
3,20 - 3,40	10	77,4	----	5	8,40 - 8,60	11	64,0	----	10
3,40 - 3,60	10	77,4	----	5	8,60 - 8,80	36	209,4	----	10
3,60 - 3,80	8	61,9	----	5	8,80 - 9,00	26	151,2	----	10
3,80 - 4,00	8	61,9	----	5	9,00 - 9,20	13	75,6	----	10
4,00 - 4,20	9	69,6	----	5	9,20 - 9,40	11	61,0	----	11
4,20 - 4,40	7	50,8	----	6	9,40 - 9,60	10	55,4	----	11
4,40 - 4,60	6	43,5	----	6	9,60 - 9,80	10	55,4	----	11
4,60 - 4,80	7	50,8	----	6	9,80 - 10,00	10	55,4	----	11
4,80 - 5,00	11	79,8	----	6	10,00 - 10,20	12	66,5	----	11
5,00 - 5,20	8	58,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 207
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-207
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	6	63,0	----	1	0,60 - 0,80	6	57,9	----	2
0,20 - 0,40	9	86,8	----	2	0,80 - 1,00	36	347,2	----	2
0,40 - 0,60	5	48,2	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 212
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	18/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-212
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	4,40 - 4,60	4	29,0	----	6
0,20 - 0,40	11	106,1	----	2	4,60 - 4,80	4	29,0	----	6
0,40 - 0,60	16	154,3	----	2	4,80 - 5,00	4	29,0	----	6
0,60 - 0,80	10	96,4	----	2	5,00 - 5,20	5	36,3	----	6
0,80 - 1,00	20	192,9	----	2	5,20 - 5,40	6	41,0	----	7
1,00 - 1,20	26	250,7	----	2	5,40 - 5,60	7	47,8	----	7
1,20 - 1,40	22	196,0	----	3	5,60 - 5,80	8	54,7	----	7
1,40 - 1,60	18	160,4	----	3	5,80 - 6,00	6	41,0	----	7
1,60 - 1,80	5	44,6	----	3	6,00 - 6,20	11	75,2	----	7
1,80 - 2,00	4	35,6	----	3	6,20 - 6,40	16	103,3	----	8
2,00 - 2,20	4	35,6	----	3	6,40 - 6,60	13	84,0	----	8
2,20 - 2,40	4	33,1	----	4	6,60 - 6,80	17	109,8	----	8
2,40 - 2,60	3	24,8	----	4	6,80 - 7,00	12	77,5	----	8
2,60 - 2,80	3	24,8	----	4	7,00 - 7,20	16	103,3	----	8
2,80 - 3,00	4	33,1	----	4	7,20 - 7,40	15	91,8	----	9
3,00 - 3,20	3	24,8	----	4	7,40 - 7,60	11	67,3	----	9
3,20 - 3,40	4	30,9	----	5	7,60 - 7,80	9	55,1	----	9
3,40 - 3,60	4	30,9	----	5	7,80 - 8,00	37	226,5	----	9
3,60 - 3,80	5	38,7	----	5	8,00 - 8,20	43	263,2	----	9
3,80 - 4,00	6	46,4	----	5	8,20 - 8,40	42	244,3	----	10
4,00 - 4,20	5	38,7	----	5	8,40 - 8,60	60	349,0	----	10
4,20 - 4,40	5	36,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 214
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	18/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-214
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,40 - 1,60	27	240,6	----	3
0,20 - 0,40	15	144,7	----	2	1,60 - 1,80	29	258,4	----	3
0,40 - 0,60	11	106,1	----	2	1,80 - 2,00	27	240,6	----	3
0,60 - 0,80	15	144,7	----	2	2,00 - 2,20	28	249,5	----	3
0,80 - 1,00	7	67,5	----	2	2,20 - 2,40	35	289,9	----	4
1,00 - 1,20	8	77,1	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	25	222,8	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 215
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	18/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-215
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	2,40 - 2,60	6	49,7	----	4
0,20 - 0,40	13	125,4	----	2	2,60 - 2,80	6	49,7	----	4
0,40 - 0,60	25	241,1	----	2	2,80 - 3,00	5	41,4	----	4
0,60 - 0,80	16	154,3	----	2	3,00 - 3,20	6	49,7	----	4
0,80 - 1,00	13	125,4	----	2	3,20 - 3,40	10	77,4	----	5
1,00 - 1,20	17	163,9	----	2	3,40 - 3,60	8	61,9	----	5
1,20 - 1,40	14	124,8	----	3	3,60 - 3,80	11	85,1	----	5
1,40 - 1,60	8	71,3	----	3	3,80 - 4,00	13	100,6	----	5
1,60 - 1,80	5	44,6	----	3	4,00 - 4,20	8	61,9	----	5
1,80 - 2,00	5	44,6	----	3	4,20 - 4,40	12	87,1	----	6
2,00 - 2,20	5	44,6	----	3	4,40 - 4,60	60	435,4	----	6
2,20 - 2,40	5	41,4	----	4					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 217
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-217
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	5,00 - 5,20	16	116,1	----	6
0,20 - 0,40	5	48,2	----	2	5,20 - 5,40	16	109,3	----	7
0,40 - 0,60	4	38,6	----	2	5,40 - 5,60	24	164,0	----	7
0,60 - 0,80	5	48,2	----	2	5,60 - 5,80	23	157,2	----	7
0,80 - 1,00	6	57,9	----	2	5,80 - 6,00	30	205,0	----	7
1,00 - 1,20	7	67,5	----	2	6,00 - 6,20	24	164,0	----	7
1,20 - 1,40	6	53,5	----	3	6,20 - 6,40	22	142,1	----	8
1,40 - 1,60	5	44,6	----	3	6,40 - 6,60	12	77,5	----	8
1,60 - 1,80	5	44,6	----	3	6,60 - 6,80	14	90,4	----	8
1,80 - 2,00	5	44,6	----	3	6,80 - 7,00	12	77,5	----	8
2,00 - 2,20	5	44,6	----	3	7,00 - 7,20	10	64,6	----	8
2,20 - 2,40	6	49,7	----	4	7,20 - 7,40	9	55,1	----	9
2,40 - 2,60	9	74,5	----	4	7,40 - 7,60	12	73,5	----	9
2,60 - 2,80	9	74,5	----	4	7,60 - 7,80	13	79,6	----	9
2,80 - 3,00	9	74,5	----	4	7,80 - 8,00	15	91,8	----	9
3,00 - 3,20	20	165,6	----	4	8,00 - 8,20	24	146,9	----	9
3,20 - 3,40	16	123,8	----	5	8,20 - 8,40	19	110,5	----	10
3,40 - 3,60	17	131,5	----	5	8,40 - 8,60	15	87,3	----	10
3,60 - 3,80	15	116,0	----	5	8,60 - 8,80	12	69,8	----	10
3,80 - 4,00	21	162,4	----	5	8,80 - 9,00	18	104,7	----	10
4,00 - 4,20	22	170,2	----	5	9,00 - 9,20	24	139,6	----	10
4,20 - 4,40	18	130,6	----	6	9,20 - 9,40	20	110,8	----	11
4,40 - 4,60	15	108,9	----	6	9,40 - 9,60	19	105,3	----	11
4,60 - 4,80	19	137,9	----	6	9,60 - 9,80	26	144,1	----	11
4,80 - 5,00	22	159,7	----	6	9,80 - 10,00	25	138,6	----	11

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 220
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-220
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	3,80 - 4,00	8	61,9	----	5
0,20 - 0,40	5	48,2	----	2	4,00 - 4,20	10	77,4	----	5
0,40 - 0,60	10	96,4	----	2	4,20 - 4,40	8	58,1	----	6
0,60 - 0,80	12	115,7	----	2	4,40 - 4,60	10	72,6	----	6
0,80 - 1,00	8	77,1	----	2	4,60 - 4,80	25	181,4	----	6
1,00 - 1,20	8	77,1	----	2	4,80 - 5,00	32	232,2	----	6
1,20 - 1,40	7	62,4	----	3	5,00 - 5,20	26	188,7	----	6
1,40 - 1,60	6	53,5	----	3	5,20 - 5,40	11	75,2	----	7
1,60 - 1,80	4	35,6	----	3	5,40 - 5,60	12	82,0	----	7
1,80 - 2,00	4	35,6	----	3	5,60 - 5,80	22	150,4	----	7
2,00 - 2,20	5	44,6	----	3	5,80 - 6,00	20	136,7	----	7
2,20 - 2,40	4	33,1	----	4	6,00 - 6,20	18	123,0	----	7
2,40 - 2,60	4	33,1	----	4	6,20 - 6,40	14	90,4	----	8
2,60 - 2,80	6	49,7	----	4	6,40 - 6,60	16	103,3	----	8
2,80 - 3,00	6	49,7	----	4	6,60 - 6,80	14	90,4	----	8
3,00 - 3,20	7	58,0	----	4	6,80 - 7,00	10	64,6	----	8
3,20 - 3,40	7	54,1	----	5	7,00 - 7,20	14	90,4	----	8
3,40 - 3,60	8	61,9	----	5	7,20 - 7,40	60	367,3	----	9
3,60 - 3,80	8	61,9	----	5					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 222
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-222
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	12	126,1	----	1	5,20 - 5,40	8	54,7	----	7
0,20 - 0,40	12	115,7	----	2	5,40 - 5,60	7	47,8	----	7
0,40 - 0,60	10	96,4	----	2	5,60 - 5,80	8	54,7	----	7
0,60 - 0,80	10	96,4	----	2	5,80 - 6,00	10	68,3	----	7
0,80 - 1,00	10	96,4	----	2	6,00 - 6,20	19	129,8	----	7
1,00 - 1,20	9	86,8	----	2	6,20 - 6,40	24	155,0	----	8
1,20 - 1,40	4	35,6	----	3	6,40 - 6,60	17	109,8	----	8
1,40 - 1,60	3	26,7	----	3	6,60 - 6,80	20	129,2	----	8
1,60 - 1,80	2	17,8	----	3	6,80 - 7,00	18	116,2	----	8
1,80 - 2,00	2	17,8	----	3	7,00 - 7,20	13	84,0	----	8
2,00 - 2,20	4	35,6	----	3	7,20 - 7,40	12	73,5	----	9
2,20 - 2,40	3	24,8	----	4	7,40 - 7,60	11	67,3	----	9
2,40 - 2,60	2	16,6	----	4	7,60 - 7,80	12	73,5	----	9
2,60 - 2,80	2	16,6	----	4	7,80 - 8,00	11	67,3	----	9
2,80 - 3,00	3	24,8	----	4	8,00 - 8,20	15	91,8	----	9
3,00 - 3,20	4	33,1	----	4	8,20 - 8,40	13	75,6	----	10
3,20 - 3,40	3	23,2	----	5	8,40 - 8,60	16	93,1	----	10
3,40 - 3,60	4	30,9	----	5	8,60 - 8,80	19	110,5	----	10
3,60 - 3,80	3	23,2	----	5	8,80 - 9,00	20	116,3	----	10
3,80 - 4,00	4	30,9	----	5	9,00 - 9,20	15	87,3	----	10
4,00 - 4,20	5	38,7	----	5	9,20 - 9,40	18	99,8	----	11
4,20 - 4,40	4	29,0	----	6	9,40 - 9,60	18	99,8	----	11
4,40 - 4,60	4	29,0	----	6	9,60 - 9,80	13	72,1	----	11
4,60 - 4,80	6	43,5	----	6	9,80 - 10,00	12	66,5	----	11
4,80 - 5,00	6	43,5	----	6	10,00 - 10,20	16	88,7	----	11
5,00 - 5,20	7	50,8	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 264
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-264
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	11	115,6	----	1	5,20 - 5,40	6	41,0	----	7
0,20 - 0,40	9	86,8	----	2	5,40 - 5,60	8	54,7	----	7
0,40 - 0,60	6	57,9	----	2	5,60 - 5,80	8	54,7	----	7
0,60 - 0,80	4	38,6	----	2	5,80 - 6,00	8	54,7	----	7
0,80 - 1,00	4	38,6	----	2	6,00 - 6,20	10	68,3	----	7
1,00 - 1,20	6	57,9	----	2	6,20 - 6,40	37	238,9	----	8
1,20 - 1,40	5	44,6	----	3	6,40 - 6,60	28	180,8	----	8
1,40 - 1,60	8	71,3	----	3	6,60 - 6,80	23	148,5	----	8
1,60 - 1,80	7	62,4	----	3	6,80 - 7,00	13	84,0	----	8
1,80 - 2,00	7	62,4	----	3	7,00 - 7,20	10	64,6	----	8
2,00 - 2,20	7	62,4	----	3	7,20 - 7,40	9	55,1	----	9
2,20 - 2,40	7	58,0	----	4	7,40 - 7,60	12	73,5	----	9
2,40 - 2,60	6	49,7	----	4	7,60 - 7,80	14	85,7	----	9
2,60 - 2,80	8	66,3	----	4	7,80 - 8,00	30	183,6	----	9
2,80 - 3,00	7	58,0	----	4	8,00 - 8,20	16	97,9	----	9
3,00 - 3,20	6	49,7	----	4	8,20 - 8,40	24	139,6	----	10
3,20 - 3,40	6	46,4	----	5	8,40 - 8,60	11	64,0	----	10
3,40 - 3,60	7	54,1	----	5	8,60 - 8,80	20	116,3	----	10
3,60 - 3,80	7	54,1	----	5	8,80 - 9,00	20	116,3	----	10
3,80 - 4,00	10	77,4	----	5	9,00 - 9,20	14	81,4	----	10
4,00 - 4,20	6	46,4	----	5	9,20 - 9,40	14	77,6	----	11
4,20 - 4,40	5	36,3	----	6	9,40 - 9,60	20	110,8	----	11
4,40 - 4,60	5	36,3	----	6	9,60 - 9,80	18	99,8	----	11
4,60 - 4,80	6	43,5	----	6	9,80 - 10,00	19	105,3	----	11
4,80 - 5,00	7	50,8	----	6	10,00 - 10,20	19	105,3	----	11
5,00 - 5,20	8	58,1	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 261
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-261
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,40 - 1,60	14	124,8	----	3
0,20 - 0,40	4	38,6	----	2	1,60 - 1,80	9	80,2	----	3
0,40 - 0,60	8	77,1	----	2	1,80 - 2,00	11	98,0	----	3
0,60 - 0,80	16	154,3	----	2	2,00 - 2,20	10	89,1	----	3
0,80 - 1,00	24	231,4	----	2	2,20 - 2,40	15	124,2	----	4
1,00 - 1,20	46	443,6	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	24	213,9	----	3	2,60 - 2,80	70	579,7	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 266
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-266
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	3,20 - 3,40	6	46,4	----	5
0,20 - 0,40	3	28,9	----	2	3,40 - 3,60	5	38,7	----	5
0,40 - 0,60	4	38,6	----	2	3,60 - 3,80	6	46,4	----	5
0,60 - 0,80	5	48,2	----	2	3,80 - 4,00	7	54,1	----	5
0,80 - 1,00	7	67,5	----	2	4,00 - 4,20	6	46,4	----	5
1,00 - 1,20	23	221,8	----	2	4,20 - 4,40	10	72,6	----	6
1,20 - 1,40	13	115,8	----	3	4,40 - 4,60	11	79,8	----	6
1,40 - 1,60	8	71,3	----	3	4,60 - 4,80	12	87,1	----	6
1,60 - 1,80	14	124,8	----	3	4,80 - 5,00	10	72,6	----	6
1,80 - 2,00	14	124,8	----	3	5,00 - 5,20	9	65,3	----	6
2,00 - 2,20	24	213,9	----	3	5,20 - 5,40	10	68,3	----	7
2,20 - 2,40	10	82,8	----	4	5,40 - 5,60	10	68,3	----	7
2,40 - 2,60	11	91,1	----	4	5,60 - 5,80	45	307,5	----	7
2,60 - 2,80	7	58,0	----	4	5,80 - 6,00	46	314,4	----	7
2,80 - 3,00	7	58,0	----	4	6,00 - 6,20	50	341,7	----	7
3,00 - 3,20	7	58,0	----	4	6,20 - 6,40	60	387,5	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 268
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-268
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	4,80 - 5,00	7	50,8	----	6
0,20 - 0,40	13	125,4	----	2	5,00 - 5,20	10	72,6	----	6
0,40 - 0,60	7	67,5	----	2	5,20 - 5,40	9	61,5	----	7
0,60 - 0,80	7	67,5	----	2	5,40 - 5,60	13	88,8	----	7
0,80 - 1,00	7	67,5	----	2	5,60 - 5,80	9	61,5	----	7
1,00 - 1,20	8	77,1	----	2	5,80 - 6,00	9	61,5	----	7
1,20 - 1,40	13	115,8	----	3	6,00 - 6,20	11	75,2	----	7
1,40 - 1,60	9	80,2	----	3	6,20 - 6,40	16	103,3	----	8
1,60 - 1,80	6	53,5	----	3	6,40 - 6,60	15	96,9	----	8
1,80 - 2,00	5	44,6	----	3	6,60 - 6,80	12	77,5	----	8
2,00 - 2,20	3	26,7	----	3	6,80 - 7,00	19	122,7	----	8
2,20 - 2,40	4	33,1	----	4	7,00 - 7,20	20	129,2	----	8
2,40 - 2,60	4	33,1	----	4	7,20 - 7,40	17	104,1	----	9
2,60 - 2,80	4	33,1	----	4	7,40 - 7,60	15	91,8	----	9
2,80 - 3,00	4	33,1	----	4	7,60 - 7,80	16	97,9	----	9
3,00 - 3,20	6	49,7	----	4	7,80 - 8,00	18	110,2	----	9
3,20 - 3,40	4	30,9	----	5	8,00 - 8,20	24	146,9	----	9
3,40 - 3,60	4	30,9	----	5	8,20 - 8,40	22	128,0	----	10
3,60 - 3,80	6	46,4	----	5	8,40 - 8,60	17	98,9	----	10
3,80 - 4,00	4	30,9	----	5	8,60 - 8,80	24	139,6	----	10
4,00 - 4,20	10	77,4	----	5	8,80 - 9,00	21	122,2	----	10
4,20 - 4,40	41	297,5	----	6	9,00 - 9,20	18	104,7	----	10
4,40 - 4,60	10	72,6	----	6	9,20 - 9,40	60	332,5	----	11
4,60 - 4,80	9	65,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 269
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-269
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	17	178,6	----	1	4,60 - 4,80	24	174,2	----	6
0,20 - 0,40	35	337,5	----	2	4,80 - 5,00	15	108,9	----	6
0,40 - 0,60	20	192,9	----	2	5,00 - 5,20	11	79,8	----	6
0,60 - 0,80	22	212,2	----	2	5,20 - 5,40	8	54,7	----	7
0,80 - 1,00	21	202,5	----	2	5,40 - 5,60	7	47,8	----	7
1,00 - 1,20	17	163,9	----	2	5,60 - 5,80	5	34,2	----	7
1,20 - 1,40	13	115,8	----	3	5,80 - 6,00	8	54,7	----	7
1,40 - 1,60	12	106,9	----	3	6,00 - 6,20	11	75,2	----	7
1,60 - 1,80	24	213,9	----	3	6,20 - 6,40	8	51,7	----	8
1,80 - 2,00	17	151,5	----	3	6,40 - 6,60	7	45,2	----	8
2,00 - 2,20	25	222,8	----	3	6,60 - 6,80	7	45,2	----	8
2,20 - 2,40	16	132,5	----	4	6,80 - 7,00	11	71,0	----	8
2,40 - 2,60	7	58,0	----	4	7,00 - 7,20	12	77,5	----	8
2,60 - 2,80	9	74,5	----	4	7,20 - 7,40	11	67,3	----	9
2,80 - 3,00	22	182,2	----	4	7,40 - 7,60	16	97,9	----	9
3,00 - 3,20	9	74,5	----	4	7,60 - 7,80	21	128,5	----	9
3,20 - 3,40	8	61,9	----	5	7,80 - 8,00	21	128,5	----	9
3,40 - 3,60	8	61,9	----	5	8,00 - 8,20	29	177,5	----	9
3,60 - 3,80	6	46,4	----	5	8,20 - 8,40	25	145,4	----	10
3,80 - 4,00	6	46,4	----	5	8,40 - 8,60	22	128,0	----	10
4,00 - 4,20	7	54,1	----	5	8,60 - 8,80	39	226,9	----	10
4,20 - 4,40	9	65,3	----	6	8,80 - 9,00	60	349,0	----	10
4,40 - 4,60	13	94,3	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 270
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-270
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	1,20 - 1,40	16	142,6	----	3
0,20 - 0,40	6	57,9	----	2	1,40 - 1,60	12	106,9	----	3
0,40 - 0,60	6	57,9	----	2	1,60 - 1,80	16	142,6	----	3
0,60 - 0,80	8	77,1	----	2	1,80 - 2,00	16	142,6	----	3
0,80 - 1,00	9	86,8	----	2	2,00 - 2,20	60	534,7	----	3
1,00 - 1,20	15	144,7	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 271
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-271
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	5,00 - 5,20	8	58,1	----	6
0,20 - 0,40	12	115,7	----	2	5,20 - 5,40	8	54,7	----	7
0,40 - 0,60	12	115,7	----	2	5,40 - 5,60	11	75,2	----	7
0,60 - 0,80	10	96,4	----	2	5,60 - 5,80	12	82,0	----	7
0,80 - 1,00	12	115,7	----	2	5,80 - 6,00	13	88,8	----	7
1,00 - 1,20	17	163,9	----	2	6,00 - 6,20	9	61,5	----	7
1,20 - 1,40	12	106,9	----	3	6,20 - 6,40	10	64,6	----	8
1,40 - 1,60	23	204,9	----	3	6,40 - 6,60	14	90,4	----	8
1,60 - 1,80	22	196,0	----	3	6,60 - 6,80	18	116,2	----	8
1,80 - 2,00	10	89,1	----	3	6,80 - 7,00	16	103,3	----	8
2,00 - 2,20	12	106,9	----	3	7,00 - 7,20	14	90,4	----	8
2,20 - 2,40	13	107,7	----	4	7,20 - 7,40	12	73,5	----	9
2,40 - 2,60	11	91,1	----	4	7,40 - 7,60	13	79,6	----	9
2,60 - 2,80	16	132,5	----	4	7,60 - 7,80	17	104,1	----	9
2,80 - 3,00	13	107,7	----	4	7,80 - 8,00	20	122,4	----	9
3,00 - 3,20	9	74,5	----	4	8,00 - 8,20	18	110,2	----	9
3,20 - 3,40	8	61,9	----	5	8,20 - 8,40	16	93,1	----	10
3,40 - 3,60	6	46,4	----	5	8,40 - 8,60	21	122,2	----	10
3,60 - 3,80	7	54,1	----	5	8,60 - 8,80	28	162,9	----	10
3,80 - 4,00	5	38,7	----	5	8,80 - 9,00	42	244,3	----	10
4,00 - 4,20	5	38,7	----	5	9,00 - 9,20	43	250,1	----	10
4,20 - 4,40	5	36,3	----	6	9,20 - 9,40	41	227,2	----	11
4,40 - 4,60	6	43,5	----	6	9,40 - 9,60	46	255,0	----	11
4,60 - 4,80	7	50,8	----	6	9,60 - 9,80	37	205,1	----	11
4,80 - 5,00	8	58,1	----	6	9,80 - 10,00	31	171,8	----	11

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 273
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	23/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-273
- località :	Circello (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	40	420,3	----	1	2,40 - 2,60	6	49,7	----	4
0,20 - 0,40	30	289,3	----	2	2,60 - 2,80	5	41,4	----	4
0,40 - 0,60	20	192,9	----	2	2,80 - 3,00	6	49,7	----	4
0,60 - 0,80	8	77,1	----	2	3,00 - 3,20	6	49,7	----	4
0,80 - 1,00	8	77,1	----	2	3,20 - 3,40	5	38,7	----	5
1,00 - 1,20	5	48,2	----	2	3,40 - 3,60	4	30,9	----	5
1,20 - 1,40	4	35,6	----	3	3,60 - 3,80	10	77,4	----	5
1,40 - 1,60	4	35,6	----	3	3,80 - 4,00	20	154,7	----	5
1,60 - 1,80	4	35,6	----	3	4,00 - 4,20	25	193,4	----	5
1,80 - 2,00	5	44,6	----	3	4,20 - 4,40	28	203,2	----	6
2,00 - 2,20	10	89,1	----	3	4,40 - 4,60	60	435,4	----	6
2,20 - 2,40	4	33,1	----	4					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 275
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	23/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-275
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	8	84,1	----	1	3,20 - 3,40	11	85,1	----	5
0,20 - 0,40	7	67,5	----	2	3,40 - 3,60	12	92,8	----	5
0,40 - 0,60	8	77,1	----	2	3,60 - 3,80	12	92,8	----	5
0,60 - 0,80	9	86,8	----	2	3,80 - 4,00	11	85,1	----	5
0,80 - 1,00	8	77,1	----	2	4,00 - 4,20	10	77,4	----	5
1,00 - 1,20	10	96,4	----	2	4,20 - 4,40	17	123,4	----	6
1,20 - 1,40	8	71,3	----	3	4,40 - 4,60	17	123,4	----	6
1,40 - 1,60	7	62,4	----	3	4,60 - 4,80	16	116,1	----	6
1,60 - 1,80	8	71,3	----	3	4,80 - 5,00	16	116,1	----	6
1,80 - 2,00	18	160,4	----	3	5,00 - 5,20	18	130,6	----	6
2,00 - 2,20	14	124,8	----	3	5,20 - 5,40	20	136,7	----	7
2,20 - 2,40	9	74,5	----	4	5,40 - 5,60	20	136,7	----	7
2,40 - 2,60	10	82,8	----	4	5,60 - 5,80	17	116,2	----	7
2,60 - 2,80	8	66,3	----	4	5,80 - 6,00	16	109,3	----	7
2,80 - 3,00	8	66,3	----	4	6,00 - 6,20	60	410,0	----	7
3,00 - 3,20	9	74,5	----	4					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 276
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	23/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-276
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	2,00 - 2,20	27	240,6	----	3
0,20 - 0,40	6	57,9	----	2	2,20 - 2,40	26	215,3	----	4
0,40 - 0,60	7	67,5	----	2	2,40 - 2,60	10	82,8	----	4
0,60 - 0,80	7	67,5	----	2	2,60 - 2,80	11	91,1	----	4
0,80 - 1,00	7	67,5	----	2	2,80 - 3,00	15	124,2	----	4
1,00 - 1,20	8	77,1	----	2	3,00 - 3,20	18	149,1	----	4
1,20 - 1,40	16	142,6	----	3	3,20 - 3,40	13	100,6	----	5
1,40 - 1,60	24	213,9	----	3	3,40 - 3,60	40	309,4	----	5
1,60 - 1,80	28	249,5	----	3	3,60 - 3,80	60	464,1	----	5
1,80 - 2,00	24	213,9	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 278
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-278
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	1,00 - 1,20	20	192,9	----	2
0,20 - 0,40	7	67,5	----	2	1,20 - 1,40	25	222,8	----	3
0,40 - 0,60	10	96,4	----	2	1,40 - 1,60	38	338,6	----	3
0,60 - 0,80	10	96,4	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	9	86,8	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 279
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-279
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	10	105,1	----	1	0,80 - 1,00	24	231,4	----	2
0,20 - 0,40	15	144,7	----	2	1,00 - 1,20	28	270,0	----	2
0,40 - 0,60	25	241,1	----	2	1,20 - 1,40	42	374,3	----	3
0,60 - 0,80	24	231,4	----	2	1,40 - 1,60	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 280
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-280
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,20 - 1,40	25	222,8	----	3
0,20 - 0,40	6	57,9	----	2	1,40 - 1,60	35	311,9	----	3
0,40 - 0,60	8	77,1	----	2	1,60 - 1,80	41	365,3	----	3
0,60 - 0,80	6	57,9	----	2	1,80 - 2,00	48	427,7	----	3
0,80 - 1,00	5	48,2	----	2	2,00 - 2,20	60	534,7	----	3
1,00 - 1,20	18	173,6	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 282
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-282
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	8	84,1	----	1
0,20 - 0,40	8	77,1	----	2
0,40 - 0,60	11	106,1	----	2
0,60 - 0,80	12	115,7	----	2
0,80 - 1,00	10	96,4	----	2
1,00 - 1,20	8	77,1	----	2
1,20 - 1,40	5	44,6	----	3
1,40 - 1,60	4	35,6	----	3
1,60 - 1,80	4	35,6	----	3
1,80 - 2,00	5	44,6	----	3
2,00 - 2,20	4	35,6	----	3
2,20 - 2,40	4	33,1	----	4
2,40 - 2,60	4	33,1	----	4
2,60 - 2,80	4	33,1	----	4
2,80 - 3,00	5	41,4	----	4
3,00 - 3,20	4	33,1	----	4
3,20 - 3,40	4	30,9	----	5
3,40 - 3,60	4	30,9	----	5
3,60 - 3,80	4	30,9	----	5
3,80 - 4,00	6	46,4	----	5
4,00 - 4,20	5	38,7	----	5
4,20 - 4,40	5	36,3	----	6
4,40 - 4,60	5	36,3	----	6
4,60 - 4,80	6	43,5	----	6
4,80 - 5,00	6	43,5	----	6
5,00 - 5,20	6	43,5	----	6
5,20 - 5,40	6	41,0	----	7
5,40 - 5,60	6	41,0	----	7
5,60 - 5,80	7	47,8	----	7
5,80 - 6,00	6	41,0	----	7
6,00 - 6,20	5	34,2	----	7
6,20 - 6,40	6	38,7	----	8
6,40 - 6,60	6	38,7	----	8
6,60 - 6,80	6	38,7	----	8
6,80 - 7,00	6	38,7	----	8
7,00 - 7,20	5	32,3	----	8
7,20 - 7,40	7	42,8	----	9
7,40 - 7,60	7	42,8	----	9
7,60 - 7,80	7	42,8	----	9
7,80 - 8,00	6	36,7	----	9
8,00 - 8,20	7	42,8	----	9
8,20 - 8,40	8	46,5	----	10
8,40 - 8,60	60	349,0	----	10

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 283
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	25/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-283
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	4,00 - 4,20	7	54,1	----	5
0,20 - 0,40	20	192,9	----	2	4,20 - 4,40	6	43,5	----	6
0,40 - 0,60	10	96,4	----	2	4,40 - 4,60	8	58,1	----	6
0,60 - 0,80	10	96,4	----	2	4,60 - 4,80	8	58,1	----	6
0,80 - 1,00	11	106,1	----	2	4,80 - 5,00	6	43,5	----	6
1,00 - 1,20	9	86,8	----	2	5,00 - 5,20	5	36,3	----	6
1,20 - 1,40	7	62,4	----	3	5,20 - 5,40	4	27,3	----	7
1,40 - 1,60	5	44,6	----	3	5,40 - 5,60	8	54,7	----	7
1,60 - 1,80	5	44,6	----	3	5,60 - 5,80	7	47,8	----	7
1,80 - 2,00	4	35,6	----	3	5,80 - 6,00	8	54,7	----	7
2,00 - 2,20	5	44,6	----	3	6,00 - 6,20	8	54,7	----	7
2,20 - 2,40	6	49,7	----	4	6,20 - 6,40	7	45,2	----	8
2,40 - 2,60	5	41,4	----	4	6,40 - 6,60	9	58,1	----	8
2,60 - 2,80	6	49,7	----	4	6,60 - 6,80	10	64,6	----	8
2,80 - 3,00	6	49,7	----	4	6,80 - 7,00	8	51,7	----	8
3,00 - 3,20	5	41,4	----	4	7,00 - 7,20	7	45,2	----	8
3,20 - 3,40	5	38,7	----	5	7,20 - 7,40	6	36,7	----	9
3,40 - 3,60	18	139,2	----	5	7,40 - 7,60	25	153,0	----	9
3,60 - 3,80	15	116,0	----	5	7,60 - 7,80	60	367,3	----	9
3,80 - 4,00	8	61,9	----	5					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 291
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-291
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	23	241,7	----	1	4,00 - 4,20	7	54,1	----	5
0,20 - 0,40	22	212,2	----	2	4,20 - 4,40	13	94,3	----	6
0,40 - 0,60	12	115,7	----	2	4,40 - 4,60	12	87,1	----	6
0,60 - 0,80	8	77,1	----	2	4,60 - 4,80	14	101,6	----	6
0,80 - 1,00	4	38,6	----	2	4,80 - 5,00	12	87,1	----	6
1,00 - 1,20	4	38,6	----	2	5,00 - 5,20	10	72,6	----	6
1,20 - 1,40	3	26,7	----	3	5,20 - 5,40	8	54,7	----	7
1,40 - 1,60	4	35,6	----	3	5,40 - 5,60	8	54,7	----	7
1,60 - 1,80	7	62,4	----	3	5,60 - 5,80	8	54,7	----	7
1,80 - 2,00	5	44,6	----	3	5,80 - 6,00	10	68,3	----	7
2,00 - 2,20	6	53,5	----	3	6,00 - 6,20	8	54,7	----	7
2,20 - 2,40	6	49,7	----	4	6,20 - 6,40	8	51,7	----	8
2,40 - 2,60	4	33,1	----	4	6,40 - 6,60	15	96,9	----	8
2,60 - 2,80	5	41,4	----	4	6,60 - 6,80	26	167,9	----	8
2,80 - 3,00	5	41,4	----	4	6,80 - 7,00	17	109,8	----	8
3,00 - 3,20	5	41,4	----	4	7,00 - 7,20	10	64,6	----	8
3,20 - 3,40	4	30,9	----	5	7,20 - 7,40	12	73,5	----	9
3,40 - 3,60	4	30,9	----	5	7,40 - 7,60	16	97,9	----	9
3,60 - 3,80	3	23,2	----	5	7,60 - 7,80	60	367,3	----	9
3,80 - 4,00	5	38,7	----	5					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 260
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	12/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-260
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	2,20 - 2,40	23	190,5	----	4
0,20 - 0,40	5	48,2	----	2	2,40 - 2,60	22	182,2	----	4
0,40 - 0,60	7	67,5	----	2	2,60 - 2,80	20	165,6	----	4
0,60 - 0,80	8	77,1	----	2	2,80 - 3,00	22	182,2	----	4
0,80 - 1,00	10	96,4	----	2	3,00 - 3,20	20	165,6	----	4
1,00 - 1,20	12	115,7	----	2	3,20 - 3,40	27	208,9	----	5
1,20 - 1,40	13	115,8	----	3	3,40 - 3,60	23	177,9	----	5
1,40 - 1,60	16	142,6	----	3	3,60 - 3,80	28	216,6	----	5
1,60 - 1,80	20	178,2	----	3	3,80 - 4,00	33	255,3	----	5
1,80 - 2,00	20	178,2	----	3	4,00 - 4,20	60	464,1	----	5
2,00 - 2,20	22	196,0	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 257
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	12/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-257
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	5,20 - 5,40	8	54,7	----	7
0,20 - 0,40	12	115,7	----	2	5,40 - 5,60	9	61,5	----	7
0,40 - 0,60	12	115,7	----	2	5,60 - 5,80	7	47,8	----	7
0,60 - 0,80	13	125,4	----	2	5,80 - 6,00	7	47,8	----	7
0,80 - 1,00	13	125,4	----	2	6,00 - 6,20	6	41,0	----	7
1,00 - 1,20	3	28,9	----	2	6,20 - 6,40	6	38,7	----	8
1,20 - 1,40	3	26,7	----	3	6,40 - 6,60	7	45,2	----	8
1,40 - 1,60	2	17,8	----	3	6,60 - 6,80	6	38,7	----	8
1,60 - 1,80	3	26,7	----	3	6,80 - 7,00	7	45,2	----	8
1,80 - 2,00	3	26,7	----	3	7,00 - 7,20	5	32,3	----	8
2,00 - 2,20	5	44,6	----	3	7,20 - 7,40	8	49,0	----	9
2,20 - 2,40	4	33,1	----	4	7,40 - 7,60	7	42,8	----	9
2,40 - 2,60	4	33,1	----	4	7,60 - 7,80	6	36,7	----	9
2,60 - 2,80	4	33,1	----	4	7,80 - 8,00	6	36,7	----	9
2,80 - 3,00	3	24,8	----	4	8,00 - 8,20	10	61,2	----	9
3,00 - 3,20	7	58,0	----	4	8,20 - 8,40	10	58,2	----	10
3,20 - 3,40	5	38,7	----	5	8,40 - 8,60	9	52,4	----	10
3,40 - 3,60	3	23,2	----	5	8,60 - 8,80	9	52,4	----	10
3,60 - 3,80	5	38,7	----	5	8,80 - 9,00	8	46,5	----	10
3,80 - 4,00	23	177,9	----	5	9,00 - 9,20	20	116,3	----	10
4,00 - 4,20	12	92,8	----	5	9,20 - 9,40	15	83,1	----	11
4,20 - 4,40	16	116,1	----	6	9,40 - 9,60	16	88,7	----	11
4,40 - 4,60	8	58,1	----	6	9,60 - 9,80	10	55,4	----	11
4,60 - 4,80	8	58,1	----	6	9,80 - 10,00	12	66,5	----	11
4,80 - 5,00	7	50,8	----	6	10,00 - 10,20	13	72,1	----	11
5,00 - 5,20	6	43,5	----	6					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 256
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	12/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-256
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	1,40 - 1,60	27	240,6	----	3
0,20 - 0,40	2	19,3	----	2	1,60 - 1,80	29	258,4	----	3
0,40 - 0,60	3	28,9	----	2	1,80 - 2,00	38	338,6	----	3
0,60 - 0,80	2	19,3	----	2	2,00 - 2,20	38	338,6	----	3
0,80 - 1,00	3	28,9	----	2	2,20 - 2,40	37	306,4	----	4
1,00 - 1,20	10	96,4	----	2	2,40 - 2,60	47	389,2	----	4
1,20 - 1,40	20	178,2	----	3	2,60 - 2,80	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 255
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-255
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	2,80 - 3,00	14	115,9	----	4
0,20 - 0,40	2	19,3	----	2	3,00 - 3,20	26	215,3	----	4
0,40 - 0,60	4	38,6	----	2	3,20 - 3,40	41	317,2	----	5
0,60 - 0,80	7	67,5	----	2	3,40 - 3,60	20	154,7	----	5
0,80 - 1,00	9	86,8	----	2	3,60 - 3,80	19	147,0	----	5
1,00 - 1,20	6	57,9	----	2	3,80 - 4,00	19	147,0	----	5
1,20 - 1,40	3	26,7	----	3	4,00 - 4,20	15	116,0	----	5
1,40 - 1,60	9	80,2	----	3	4,20 - 4,40	20	145,1	----	6
1,60 - 1,80	15	133,7	----	3	4,40 - 4,60	34	246,7	----	6
1,80 - 2,00	9	80,2	----	3	4,60 - 4,80	33	239,5	----	6
2,00 - 2,20	11	98,0	----	3	4,80 - 5,00	44	319,3	----	6
2,20 - 2,40	18	149,1	----	4	5,00 - 5,20	44	319,3	----	6
2,40 - 2,60	17	140,8	----	4	5,20 - 5,40	60	410,0	----	7
2,60 - 2,80	8	66,3	----	4					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 254
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-254
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,00 - 1,20	16	154,3	----	2
0,20 - 0,40	11	106,1	----	2	1,20 - 1,40	13	115,8	----	3
0,40 - 0,60	17	163,9	----	2	1,40 - 1,60	20	178,2	----	3
0,60 - 0,80	7	67,5	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	4	38,6	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 252
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	10/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-252
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,80 - 2,00	15	133,7	----	3
0,20 - 0,40	2	19,3	----	2	2,00 - 2,20	9	80,2	----	3
0,40 - 0,60	3	28,9	----	2	2,20 - 2,40	4	33,1	----	4
0,60 - 0,80	4	38,6	----	2	2,40 - 2,60	4	33,1	----	4
0,80 - 1,00	5	48,2	----	2	2,60 - 2,80	8	66,3	----	4
1,00 - 1,20	4	38,6	----	2	2,80 - 3,00	17	140,8	----	4
1,20 - 1,40	3	26,7	----	3	3,00 - 3,20	18	149,1	----	4
1,40 - 1,60	6	53,5	----	3	3,20 - 3,40	13	100,6	----	5
1,60 - 1,80	20	178,2	----	3	3,40 - 3,60	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 250
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-250
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	3,20 - 3,40	23	177,9	----	5
0,20 - 0,40	2	19,3	----	2	3,40 - 3,60	42	324,9	----	5
0,40 - 0,60	2	19,3	----	2	3,60 - 3,80	20	154,7	----	5
0,60 - 0,80	3	28,9	----	2	3,80 - 4,00	17	131,5	----	5
0,80 - 1,00	5	48,2	----	2	4,00 - 4,20	10	77,4	----	5
1,00 - 1,20	5	48,2	----	2	4,20 - 4,40	8	58,1	----	6
1,20 - 1,40	6	53,5	----	3	4,40 - 4,60	11	79,8	----	6
1,40 - 1,60	8	71,3	----	3	4,60 - 4,80	10	72,6	----	6
1,60 - 1,80	7	62,4	----	3	4,80 - 5,00	10	72,6	----	6
1,80 - 2,00	5	44,6	----	3	5,00 - 5,20	16	116,1	----	6
2,00 - 2,20	5	44,6	----	3	5,20 - 5,40	17	116,2	----	7
2,20 - 2,40	6	49,7	----	4	5,40 - 5,60	14	95,7	----	7
2,40 - 2,60	10	82,8	----	4	5,60 - 5,80	12	82,0	----	7
2,60 - 2,80	30	248,5	----	4	5,80 - 6,00	18	123,0	----	7
2,80 - 3,00	24	198,8	----	4	6,00 - 6,20	16	109,3	----	7
3,00 - 3,20	21	173,9	----	4	6,20 - 6,40	60	387,5	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 245
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	09/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-245
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	2,20 - 2,40	4	33,1	----	4
0,20 - 0,40	5	48,2	----	2	2,40 - 2,60	4	33,1	----	4
0,40 - 0,60	8	77,1	----	2	2,60 - 2,80	3	24,8	----	4
0,60 - 0,80	10	96,4	----	2	2,80 - 3,00	28	231,9	----	4
0,80 - 1,00	10	96,4	----	2	3,00 - 3,20	28	231,9	----	4
1,00 - 1,20	4	38,6	----	2	3,20 - 3,40	27	208,9	----	5
1,20 - 1,40	4	35,6	----	3	3,40 - 3,60	29	224,3	----	5
1,40 - 1,60	5	44,6	----	3	3,60 - 3,80	32	247,5	----	5
1,60 - 1,80	5	44,6	----	3	3,80 - 4,00	29	224,3	----	5
1,80 - 2,00	4	35,6	----	3	4,00 - 4,20	33	255,3	----	5
2,00 - 2,20	4	35,6	----	3	4,20 - 4,40	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 242
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	05/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-242
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	2,20 - 2,40	19	157,4	----	4
0,20 - 0,40	11	106,1	----	2	2,40 - 2,60	19	157,4	----	4
0,40 - 0,60	5	48,2	----	2	2,60 - 2,80	28	231,9	----	4
0,60 - 0,80	6	57,9	----	2	2,80 - 3,00	23	190,5	----	4
0,80 - 1,00	11	106,1	----	2	3,00 - 3,20	30	248,5	----	4
1,00 - 1,20	12	115,7	----	2	3,20 - 3,40	23	177,9	----	5
1,20 - 1,40	19	169,3	----	3	3,40 - 3,60	23	177,9	----	5
1,40 - 1,60	17	151,5	----	3	3,60 - 3,80	27	208,9	----	5
1,60 - 1,80	28	249,5	----	3	3,80 - 4,00	38	293,9	----	5
1,80 - 2,00	28	249,5	----	3	4,00 - 4,20	60	464,1	----	5
2,00 - 2,20	25	222,8	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 238
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	05/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-238
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,80 - 2,00	21	187,1	----	3
0,20 - 0,40	2	19,3	----	2	2,00 - 2,20	24	213,9	----	3
0,40 - 0,60	8	77,1	----	2	2,20 - 2,40	26	215,3	----	4
0,60 - 0,80	10	96,4	----	2	2,40 - 2,60	28	231,9	----	4
0,80 - 1,00	10	96,4	----	2	2,60 - 2,80	28	231,9	----	4
1,00 - 1,20	8	77,1	----	2	2,80 - 3,00	32	265,0	----	4
1,20 - 1,40	5	44,6	----	3	3,00 - 3,20	36	298,1	----	4
1,40 - 1,60	20	178,2	----	3	3,20 - 3,40	60	464,1	----	5
1,60 - 1,80	22	196,0	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 231
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-231
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,00 - 2,20	7	62,4	----	3
0,20 - 0,40	1	9,6	----	2	2,20 - 2,40	7	58,0	----	4
0,40 - 0,60	3	28,9	----	2	2,40 - 2,60	16	132,5	----	4
0,60 - 0,80	6	57,9	----	2	2,60 - 2,80	17	140,8	----	4
0,80 - 1,00	8	77,1	----	2	2,80 - 3,00	9	74,5	----	4
1,00 - 1,20	13	125,4	----	2	3,00 - 3,20	32	265,0	----	4
1,20 - 1,40	11	98,0	----	3	3,20 - 3,40	20	154,7	----	5
1,40 - 1,60	13	115,8	----	3	3,40 - 3,60	43	332,6	----	5
1,60 - 1,80	13	115,8	----	3	3,60 - 3,80	60	464,1	----	5
1,80 - 2,00	9	80,2	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 223
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-223
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,00 - 2,20	11	98,0	----	3
0,20 - 0,40	1	9,6	----	2	2,20 - 2,40	8	66,3	----	4
0,40 - 0,60	7	67,5	----	2	2,40 - 2,60	10	82,8	----	4
0,60 - 0,80	9	86,8	----	2	2,60 - 2,80	9	74,5	----	4
0,80 - 1,00	12	115,7	----	2	2,80 - 3,00	10	82,8	----	4
1,00 - 1,20	10	96,4	----	2	3,00 - 3,20	11	91,1	----	4
1,20 - 1,40	9	80,2	----	3	3,20 - 3,40	7	54,1	----	5
1,40 - 1,60	9	80,2	----	3	3,40 - 3,60	9	69,6	----	5
1,60 - 1,80	9	80,2	----	3	3,60 - 3,80	13	100,6	----	5
1,80 - 2,00	9	80,2	----	3	3,80 - 4,00	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 229
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-229
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,20 - 1,40	18	160,4	----	3
0,20 - 0,40	1	9,6	----	2	1,40 - 1,60	16	142,6	----	3
0,40 - 0,60	2	19,3	----	2	1,60 - 1,80	16	142,6	----	3
0,60 - 0,80	6	57,9	----	2	1,80 - 2,00	14	124,8	----	3
0,80 - 1,00	12	115,7	----	2	2,00 - 2,20	60	534,7	----	3
1,00 - 1,20	21	202,5	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 228
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-228
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	3,60 - 3,80	11	85,1	----	5
0,20 - 0,40	9	86,8	----	2	3,80 - 4,00	12	92,8	----	5
0,40 - 0,60	10	96,4	----	2	4,00 - 4,20	13	100,6	----	5
0,60 - 0,80	8	77,1	----	2	4,20 - 4,40	11	79,8	----	6
0,80 - 1,00	10	96,4	----	2	4,40 - 4,60	10	72,6	----	6
1,00 - 1,20	5	48,2	----	2	4,60 - 4,80	11	79,8	----	6
1,20 - 1,40	5	44,6	----	3	4,80 - 5,00	15	108,9	----	6
1,40 - 1,60	6	53,5	----	3	5,00 - 5,20	16	116,1	----	6
1,60 - 1,80	6	53,5	----	3	5,20 - 5,40	19	129,8	----	7
1,80 - 2,00	5	44,6	----	3	5,40 - 5,60	16	109,3	----	7
2,00 - 2,20	6	53,5	----	3	5,60 - 5,80	16	109,3	----	7
2,20 - 2,40	7	58,0	----	4	5,80 - 6,00	17	116,2	----	7
2,40 - 2,60	8	66,3	----	4	6,00 - 6,20	18	123,0	----	7
2,60 - 2,80	6	49,7	----	4	6,20 - 6,40	21	135,6	----	8
2,80 - 3,00	9	74,5	----	4	6,40 - 6,60	25	161,4	----	8
3,00 - 3,20	8	66,3	----	4	6,60 - 6,80	34	219,6	----	8
3,20 - 3,40	8	61,9	----	5	6,80 - 7,00	39	251,9	----	8
3,40 - 3,60	11	85,1	----	5	7,00 - 7,20	60	387,5	----	8

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 226
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-226
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,80 - 2,00	10	89,1	----	3
0,20 - 0,40	2	19,3	----	2	2,00 - 2,20	11	98,0	----	3
0,40 - 0,60	6	57,9	----	2	2,20 - 2,40	12	99,4	----	4
0,60 - 0,80	22	212,2	----	2	2,40 - 2,60	11	91,1	----	4
0,80 - 1,00	16	154,3	----	2	2,60 - 2,80	13	107,7	----	4
1,00 - 1,20	14	135,0	----	2	2,80 - 3,00	12	99,4	----	4
1,20 - 1,40	24	213,9	----	3	3,00 - 3,20	10	82,8	----	4
1,40 - 1,60	13	115,8	----	3	3,20 - 3,40	53	410,0	----	5
1,60 - 1,80	11	98,0	----	3	3,40 - 3,60	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 225
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-225
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	7	73,6	----	1	1,60 - 1,80	15	133,7	----	3
0,20 - 0,40	12	115,7	----	2	1,80 - 2,00	15	133,7	----	3
0,40 - 0,60	16	154,3	----	2	2,00 - 2,20	34	303,0	----	3
0,60 - 0,80	14	135,0	----	2	2,20 - 2,40	32	265,0	----	4
0,80 - 1,00	16	154,3	----	2	2,40 - 2,60	41	339,5	----	4
1,00 - 1,20	27	260,4	----	2	2,60 - 2,80	43	356,1	----	4
1,20 - 1,40	24	213,9	----	3	2,80 - 3,00	60	496,9	----	4
1,40 - 1,60	15	133,7	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 224
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-224
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	5,00 - 5,20	20	145,1	----	6
0,20 - 0,40	2	19,3	----	2	5,20 - 5,40	11	75,2	----	7
0,40 - 0,60	10	96,4	----	2	5,40 - 5,60	11	75,2	----	7
0,60 - 0,80	18	173,6	----	2	5,60 - 5,80	16	109,3	----	7
0,80 - 1,00	10	96,4	----	2	5,80 - 6,00	30	205,0	----	7
1,00 - 1,20	6	57,9	----	2	6,00 - 6,20	27	184,5	----	7
1,20 - 1,40	11	98,0	----	3	6,20 - 6,40	20	129,2	----	8
1,40 - 1,60	16	142,6	----	3	6,40 - 6,60	18	116,2	----	8
1,60 - 1,80	12	106,9	----	3	6,60 - 6,80	17	109,8	----	8
1,80 - 2,00	9	80,2	----	3	6,80 - 7,00	15	96,9	----	8
2,00 - 2,20	6	53,5	----	3	7,00 - 7,20	10	64,6	----	8
2,20 - 2,40	5	41,4	----	4	7,20 - 7,40	12	73,5	----	9
2,40 - 2,60	5	41,4	----	4	7,40 - 7,60	14	85,7	----	9
2,60 - 2,80	13	107,7	----	4	7,60 - 7,80	16	97,9	----	9
2,80 - 3,00	12	99,4	----	4	7,80 - 8,00	12	73,5	----	9
3,00 - 3,20	7	58,0	----	4	8,00 - 8,20	14	85,7	----	9
3,20 - 3,40	9	69,6	----	5	8,20 - 8,40	10	58,2	----	10
3,40 - 3,60	12	92,8	----	5	8,40 - 8,60	15	87,3	----	10
3,60 - 3,80	8	61,9	----	5	8,60 - 8,80	14	81,4	----	10
3,80 - 4,00	7	54,1	----	5	8,80 - 9,00	12	69,8	----	10
4,00 - 4,20	8	61,9	----	5	9,00 - 9,20	9	52,4	----	10
4,20 - 4,40	5	36,3	----	6	9,20 - 9,40	13	72,1	----	11
4,40 - 4,60	6	43,5	----	6	9,40 - 9,60	12	66,5	----	11
4,60 - 4,80	8	58,1	----	6	9,60 - 9,80	12	66,5	----	11
4,80 - 5,00	10	72,6	----	6	9,80 - 10,00	15	83,1	----	11

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 218
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-218
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	9	94,6	----	1	1,20 - 1,40	14	124,8	----	3
0,20 - 0,40	10	96,4	----	2	1,40 - 1,60	14	124,8	----	3
0,40 - 0,60	16	154,3	----	2	1,60 - 1,80	9	80,2	----	3
0,60 - 0,80	20	192,9	----	2	1,80 - 2,00	4	35,6	----	3
0,80 - 1,00	17	163,9	----	2	2,00 - 2,20	47	418,8	----	3
1,00 - 1,20	25	241,1	----	2	2,20 - 2,40	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 201
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	16/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-201
- località :	Caampolattaro (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,40 - 1,60	3	26,7	----	3
0,20 - 0,40	3	28,9	----	2	1,60 - 1,80	2	17,8	----	3
0,40 - 0,60	3	28,9	----	2	1,80 - 2,00	14	124,8	----	3
0,60 - 0,80	3	28,9	----	2	2,00 - 2,20	30	267,3	----	3
0,80 - 1,00	6	57,9	----	2	2,20 - 2,40	30	248,5	----	4
1,00 - 1,20	3	28,9	----	2	2,40 - 2,60	42	347,8	----	4
1,20 - 1,40	2	17,8	----	3	2,60 - 2,80	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 181
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	20/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-181
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	0,80 - 1,00	6	57,9	----	2
0,20 - 0,40	6	57,9	----	2	1,00 - 1,20	44	424,3	----	2
0,40 - 0,60	4	38,6	----	2	1,20 - 1,40	60	534,7	----	3
0,60 - 0,80	5	48,2	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 180
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	20/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-180
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,80 - 2,00	14	124,8	----	3
0,20 - 0,40	3	28,9	----	2	2,00 - 2,20	15	133,7	----	3
0,40 - 0,60	4	38,6	----	2	2,20 - 2,40	16	132,5	----	4
0,60 - 0,80	5	48,2	----	2	2,40 - 2,60	18	149,1	----	4
0,80 - 1,00	4	38,6	----	2	2,60 - 2,80	27	223,6	----	4
1,00 - 1,20	5	48,2	----	2	2,80 - 3,00	28	231,9	----	4
1,20 - 1,40	4	35,6	----	3	3,00 - 3,20	45	372,7	----	4
1,40 - 1,60	5	44,6	----	3	3,20 - 3,40	60	464,1	----	5
1,60 - 1,80	14	124,8	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 178
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	19/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-178
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	4	42,0	----	1	1,00 - 1,20	28	270,0	----	2
0,20 - 0,40	4	38,6	----	2	1,20 - 1,40	32	285,1	----	3
0,40 - 0,60	16	154,3	----	2	1,40 - 1,60	39	347,5	----	3
0,60 - 0,80	18	173,6	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	17	163,9	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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PROVA PENETROMETRICA DINAMICA n° 177
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	19/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-177
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	1,40 - 1,60	18	160,4	----	3
0,20 - 0,40	4	38,6	----	2	1,60 - 1,80	27	240,6	----	3
0,40 - 0,60	12	115,7	----	2	1,80 - 2,00	33	294,1	----	3
0,60 - 0,80	16	154,3	----	2	2,00 - 2,20	38	338,6	----	3
0,80 - 1,00	13	125,4	----	2	2,20 - 2,40	44	364,4	----	4
1,00 - 1,20	16	154,3	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	17	151,5	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 176
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	19/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-176
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	1,60 - 1,80	38	338,6	----	3
0,20 - 0,40	4	38,6	----	2	1,80 - 2,00	38	338,6	----	3
0,40 - 0,60	4	38,6	----	2	2,00 - 2,20	38	338,6	----	3
0,60 - 0,80	8	77,1	----	2	2,20 - 2,40	42	347,8	----	4
0,80 - 1,00	10	96,4	----	2	2,40 - 2,60	45	372,7	----	4
1,00 - 1,20	24	231,4	----	2	2,60 - 2,80	47	389,2	----	4
1,20 - 1,40	27	240,6	----	3	2,80 - 3,00	60	496,9	----	4
1,40 - 1,60	29	258,4	----	3					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 175
TABELLE VALORI DI RESISTENZA

- indagine :	VIANINI LAVORI Spa	- data :	17/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-175
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata
- note :	Aut. Ministeriale Sett C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	0,80 - 1,00	11	106,1	----	2
0,20 - 0,40	3	28,9	----	2	1,00 - 1,20	13	125,4	----	2
0,40 - 0,60	2	19,3	----	2	1,20 - 1,40	50	445,5	----	3
0,60 - 0,80	4	38,6	----	2					

- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 300
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	11/11/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-300
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	0,80 - 1,00	28	270,0	----	2
0,20 - 0,40	4	42,0	----	1	1,00 - 1,20	28	270,0	----	2
0,40 - 0,60	23	221,8	----	2	1,20 - 1,40	47	453,2	----	2
0,60 - 0,80	25	241,1	----	2	1,40 - 1,60	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 314
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	02/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-314
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	0,60 - 0,80	28	270,0	----	2
0,20 - 0,40	7	73,6	----	1	0,80 - 1,00	50	482,2	----	2
0,40 - 0,60	20	192,9	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 315
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	02/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-315
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	0,60 - 0,80	1	9,6	----	2
0,20 - 0,40	1	10,5	----	1	0,80 - 1,00	30	289,3	----	2
0,40 - 0,60	2	19,3	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 316
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	05/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-316
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,00 - 1,20	17	163,9	----	2
0,20 - 0,40	1	10,5	----	1	1,20 - 1,40	15	144,7	----	2
0,40 - 0,60	1	9,6	----	2	1,40 - 1,60	40	356,4	----	3
0,60 - 0,80	2	19,3	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	3	28,9	----	2					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 317
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	05/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-317
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	0,60 - 0,80	19	183,2	----	2
0,20 - 0,40	2	21,0	----	1	0,80 - 1,00	40	385,7	----	2
0,40 - 0,60	7	67,5	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 327
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	09/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-327
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,00 - 1,20	30	289,3	----	2
0,20 - 0,40	6	63,0	----	1	1,20 - 1,40	45	434,0	----	2
0,40 - 0,60	14	135,0	----	2	1,40 - 1,60	17	151,5	----	3
0,60 - 0,80	34	327,9	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	35	337,5	----	2					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 328
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	09/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-328
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,20 - 2,40	7	62,4	----	3
0,20 - 0,40	1	10,5	----	1	2,40 - 2,60	7	58,0	----	4
0,40 - 0,60	1	9,6	----	2	2,60 - 2,80	7	58,0	----	4
0,60 - 0,80	1	9,6	----	2	2,80 - 3,00	6	49,7	----	4
0,80 - 1,00	2	19,3	----	2	3,00 - 3,20	16	132,5	----	4
1,00 - 1,20	7	67,5	----	2	3,20 - 3,40	8	66,3	----	4
1,20 - 1,40	16	154,3	----	2	3,40 - 3,60	12	92,8	----	5
1,40 - 1,60	41	365,3	----	3	3,60 - 3,80	13	100,6	----	5
1,60 - 1,80	31	276,2	----	3	3,80 - 4,00	18	139,2	----	5
1,80 - 2,00	26	231,7	----	3	4,00 - 4,20	39	301,7	----	5
2,00 - 2,20	8	71,3	----	3	4,20 - 4,40	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 335
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-335
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,00 - 2,20	16	142,6	----	3
0,20 - 0,40	1	10,5	----	1	2,20 - 2,40	22	196,0	----	3
0,40 - 0,60	1	9,6	----	2	2,40 - 2,60	23	190,5	----	4
0,60 - 0,80	1	9,6	----	2	2,60 - 2,80	22	182,2	----	4
0,80 - 1,00	2	19,3	----	2	2,80 - 3,00	19	157,4	----	4
1,00 - 1,20	5	48,2	----	2	3,00 - 3,20	15	124,2	----	4
1,20 - 1,40	4	38,6	----	2	3,20 - 3,40	23	190,5	----	4
1,40 - 1,60	5	44,6	----	3	3,40 - 3,60	30	232,1	----	5
1,60 - 1,80	18	160,4	----	3	3,60 - 3,80	60	464,1	----	5
1,80 - 2,00	17	151,5	----	3					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 336
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-336
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,60 - 1,80	4	35,6	----	3
0,20 - 0,40	1	10,5	----	1	1,80 - 2,00	8	71,3	----	3
0,40 - 0,60	1	9,6	----	2	2,00 - 2,20	8	71,3	----	3
0,60 - 0,80	2	19,3	----	2	2,20 - 2,40	6	53,5	----	3
0,80 - 1,00	3	28,9	----	2	2,40 - 2,60	6	49,7	----	4
1,00 - 1,20	2	19,3	----	2	2,60 - 2,80	26	215,3	----	4
1,20 - 1,40	4	38,6	----	2	2,80 - 3,00	34	281,6	----	4
1,40 - 1,60	1	8,9	----	3	3,00 - 3,20	60	496,9	----	4

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 337
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-337
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1
0,20 - 0,40	2	21,0	----	1
0,40 - 0,60	5	48,2	----	2
0,60 - 0,80	5	48,2	----	2
0,80 - 1,00	5	48,2	----	2
1,00 - 1,20	3	28,9	----	2
1,20 - 1,40	4	38,6	----	2
1,40 - 1,60	3	26,7	----	3
1,60 - 1,80	4	35,6	----	3
1,80 - 2,00	4	35,6	----	3
2,00 - 2,20	3	26,7	----	3
2,20 - 2,40	3	26,7	----	3
2,40 - 2,60	3	24,8	----	4
2,60 - 2,80	10	82,8	----	4
2,80 - 3,00	14	115,9	----	4
3,00 - 3,20	8	66,3	----	4
3,20 - 3,40	9	74,5	----	4
3,40 - 3,60	8	61,9	----	5
3,60 - 3,80	7	54,1	----	5
3,80 - 4,00	11	85,1	----	5
4,00 - 4,20	20	154,7	----	5
4,20 - 4,40	15	116,0	----	5
4,40 - 4,60	18	130,6	----	6
4,60 - 4,80	18	130,6	----	6
4,80 - 5,00	17	123,4	----	6
5,00 - 5,20	34	246,7	----	6
5,20 - 5,40	24	174,2	----	6
5,40 - 5,60	19	129,8	----	7
5,60 - 5,80	18	123,0	----	7
5,80 - 6,00	20	136,7	----	7
6,00 - 6,20	32	218,7	----	7
6,20 - 6,40	34	232,4	----	7
6,40 - 6,60	31	200,2	----	8
6,60 - 6,80	21	135,6	----	8
6,80 - 7,00	19	122,7	----	8
7,00 - 7,20	20	129,2	----	8
7,20 - 7,40	24	155,0	----	8
7,40 - 7,60	24	146,9	----	9
7,60 - 7,80	25	153,0	----	9
7,80 - 8,00	21	128,5	----	9
8,00 - 8,20	19	116,3	----	9
8,20 - 8,40	28	171,4	----	9
8,40 - 8,60	60	349,0	----	10

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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PROVA PENETROMETRICA DINAMICA n° 338
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-338
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,40 - 1,60	7	62,4	----	3
0,20 - 0,40	1	10,5	----	1	1,60 - 1,80	8	71,3	----	3
0,40 - 0,60	1	9,6	----	2	1,80 - 2,00	7	62,4	----	3
0,60 - 0,80	2	19,3	----	2	2,00 - 2,20	8	71,3	----	3
0,80 - 1,00	4	38,6	----	2	2,20 - 2,40	16	142,6	----	3
1,00 - 1,20	8	77,1	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	8	77,1	----	2					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 344
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-344
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,40 - 2,60	12	99,4	----	4
0,20 - 0,40	1	10,5	----	1	2,60 - 2,80	15	124,2	----	4
0,40 - 0,60	1	9,6	----	2	2,80 - 3,00	30	248,5	----	4
0,60 - 0,80	1	9,6	----	2	3,00 - 3,20	30	248,5	----	4
0,80 - 1,00	16	154,3	----	2	3,20 - 3,40	14	115,9	----	4
1,00 - 1,20	15	144,7	----	2	3,40 - 3,60	14	108,3	----	5
1,20 - 1,40	16	154,3	----	2	3,60 - 3,80	15	116,0	----	5
1,40 - 1,60	19	169,3	----	3	3,80 - 4,00	15	116,0	----	5
1,60 - 1,80	15	133,7	----	3	4,00 - 4,20	13	100,6	----	5
1,80 - 2,00	9	80,2	----	3	4,20 - 4,40	37	286,2	----	5
2,00 - 2,20	11	98,0	----	3	4,40 - 4,60	60	435,4	----	6
2,20 - 2,40	15	133,7	----	3					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 339
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-339
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,60 - 1,80	3	26,7	----	3
0,20 - 0,40	1	10,5	----	1	1,80 - 2,00	6	53,5	----	3
0,40 - 0,60	1	9,6	----	2	2,00 - 2,20	32	285,1	----	3
0,60 - 0,80	1	9,6	----	2	2,20 - 2,40	21	187,1	----	3
0,80 - 1,00	2	19,3	----	2	2,40 - 2,60	37	306,4	----	4
1,00 - 1,20	1	9,6	----	2	2,60 - 2,80	25	207,0	----	4
1,20 - 1,40	2	19,3	----	2	2,80 - 3,00	60	496,9	----	4
1,40 - 1,60	2	17,8	----	3					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 340
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-340
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,40 - 1,60	25	222,8	----	3
0,20 - 0,40	1	10,5	----	1	1,60 - 1,80	42	374,3	----	3
0,40 - 0,60	3	28,9	----	2	1,80 - 2,00	41	365,3	----	3
0,60 - 0,80	3	28,9	----	2	2,00 - 2,20	33	294,1	----	3
0,80 - 1,00	4	38,6	----	2	2,20 - 2,40	27	240,6	----	3
1,00 - 1,20	3	28,9	----	2	2,40 - 2,60	60	496,9	----	4
1,20 - 1,40	3	28,9	----	2					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 341
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-341
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,20 - 2,40	3	26,7	----	3
0,20 - 0,40	12	126,1	----	1	2,40 - 2,60	3	24,8	----	4
0,40 - 0,60	4	38,6	----	2	2,60 - 2,80	15	124,2	----	4
0,60 - 0,80	2	19,3	----	2	2,80 - 3,00	41	339,5	----	4
0,80 - 1,00	2	19,3	----	2	3,00 - 3,20	43	356,1	----	4
1,00 - 1,20	2	19,3	----	2	3,20 - 3,40	23	190,5	----	4
1,20 - 1,40	3	28,9	----	2	3,40 - 3,60	24	185,7	----	5
1,40 - 1,60	4	35,6	----	3	3,60 - 3,80	18	139,2	----	5
1,60 - 1,80	4	35,6	----	3	3,80 - 4,00	8	61,9	----	5
1,80 - 2,00	5	44,6	----	3	4,00 - 4,20	38	293,9	----	5
2,00 - 2,20	4	35,6	----	3	4,20 - 4,40	60	464,1	----	5

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 342
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-342
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	3	31,5	----	1	2,40 - 2,60	4	33,1	----	4
0,20 - 0,40	3	31,5	----	1	2,60 - 2,80	6	49,7	----	4
0,40 - 0,60	3	28,9	----	2	2,80 - 3,00	7	58,0	----	4
0,60 - 0,80	4	38,6	----	2	3,00 - 3,20	5	41,4	----	4
0,80 - 1,00	2	19,3	----	2	3,20 - 3,40	5	41,4	----	4
1,00 - 1,20	2	19,3	----	2	3,40 - 3,60	3	23,2	----	5
1,20 - 1,40	2	19,3	----	2	3,60 - 3,80	4	30,9	----	5
1,40 - 1,60	4	35,6	----	3	3,80 - 4,00	10	77,4	----	5
1,60 - 1,80	3	26,7	----	3	4,00 - 4,20	41	317,2	----	5
1,80 - 2,00	4	35,6	----	3	4,20 - 4,40	33	255,3	----	5
2,00 - 2,20	3	26,7	----	3	4,40 - 4,60	60	435,4	----	6
2,20 - 2,40	4	35,6	----	3					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 353
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	17/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-353
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,40 - 2,60	7	58,0	----	4
0,20 - 0,40	1	10,5	----	1	2,60 - 2,80	7	58,0	----	4
0,40 - 0,60	1	9,6	----	2	2,80 - 3,00	6	49,7	----	4
0,60 - 0,80	6	57,9	----	2	3,00 - 3,20	6	49,7	----	4
0,80 - 1,00	9	86,8	----	2	3,20 - 3,40	8	66,3	----	4
1,00 - 1,20	9	86,8	----	2	3,40 - 3,60	5	38,7	----	5
1,20 - 1,40	8	77,1	----	2	3,60 - 3,80	5	38,7	----	5
1,40 - 1,60	9	80,2	----	3	3,80 - 4,00	4	30,9	----	5
1,60 - 1,80	9	80,2	----	3	4,00 - 4,20	3	23,2	----	5
1,80 - 2,00	9	80,2	----	3	4,20 - 4,40	3	23,2	----	5
2,00 - 2,20	9	80,2	----	3	4,40 - 4,60	17	123,4	----	6
2,20 - 2,40	6	53,5	----	3	4,60 - 4,80	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 357
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	19/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-357
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,00 - 1,20	3	28,9	----	2
0,20 - 0,40	1	10,5	----	1	1,20 - 1,40	3	28,9	----	2
0,40 - 0,60	1	9,6	----	2	1,40 - 1,60	18	160,4	----	3
0,60 - 0,80	2	19,3	----	2	1,60 - 1,80	60	534,7	----	3
0,80 - 1,00	3	28,9	----	2					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 346
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	19/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-346
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,20 - 1,40	9	86,8	----	2
0,20 - 0,40	1	10,5	----	1	1,40 - 1,60	13	115,8	----	3
0,40 - 0,60	2	19,3	----	2	1,60 - 1,80	12	106,9	----	3
0,60 - 0,80	2	19,3	----	2	1,80 - 2,00	6	53,5	----	3
0,80 - 1,00	6	57,9	----	2	2,00 - 2,20	60	534,7	----	3
1,00 - 1,20	21	202,5	----	2					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 379
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	08/01/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-379
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	2,80 - 3,00	7	58,0	----	4
0,20 - 0,40	1	10,5	----	1	3,00 - 3,20	7	58,0	----	4
0,40 - 0,60	1	9,6	----	2	3,20 - 3,40	8	66,3	----	4
0,60 - 0,80	1	9,6	----	2	3,40 - 3,60	7	54,1	----	5
0,80 - 1,00	1	9,6	----	2	3,60 - 3,80	8	61,9	----	5
1,00 - 1,20	2	19,3	----	2	3,80 - 4,00	8	61,9	----	5
1,20 - 1,40	3	28,9	----	2	4,00 - 4,20	18	139,2	----	5
1,40 - 1,60	6	53,5	----	3	4,20 - 4,40	27	208,9	----	5
1,60 - 1,80	6	53,5	----	3	4,40 - 4,60	40	290,3	----	6
1,80 - 2,00	5	44,6	----	3	4,60 - 4,80	18	130,6	----	6
2,00 - 2,20	6	53,5	----	3	4,80 - 5,00	27	195,9	----	6
2,20 - 2,40	5	44,6	----	3	5,00 - 5,20	20	145,1	----	6
2,40 - 2,60	4	33,1	----	4	5,20 - 5,40	60	435,4	----	6
2,60 - 2,80	5	41,4	----	4					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 380
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	08/01/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-380
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	0,60 - 0,80	6	57,9	----	2
0,20 - 0,40	2	21,0	----	1	0,80 - 1,00	12	115,7	----	2
0,40 - 0,60	5	48,2	----	2	1,00 - 1,20	60	578,6	----	2

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 406a
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	17/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-406a
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,20 - 1,40	9	86,8	----	2
0,20 - 0,40	2	21,0	----	1	1,40 - 1,60	18	160,4	----	3
0,40 - 0,60	7	67,5	----	2	1,60 - 1,80	22	196,0	----	3
0,60 - 0,80	10	96,4	----	2	1,80 - 2,00	27	240,6	----	3
0,80 - 1,00	15	144,7	----	2	2,00 - 2,20	60	534,7	----	3
1,00 - 1,20	18	173,6	----	2					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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PROVA PENETROMETRICA DINAMICA n° 406b
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	17/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-406b
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	1,20 - 1,40	15	144,7	----	2
0,20 - 0,40	1	10,5	----	1	1,40 - 1,60	18	160,4	----	3
0,40 - 0,60	2	19,3	----	2	1,60 - 1,80	21	187,1	----	3
0,60 - 0,80	7	67,5	----	2	1,80 - 2,00	23	204,9	----	3
0,80 - 1,00	8	77,1	----	2	2,00 - 2,20	25	222,8	----	3
1,00 - 1,20	15	144,7	----	2	2,20 - 2,40	60	534,7	----	3

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 387a
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-387a
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1
0,20 - 0,40	1	10,5	----	1
0,40 - 0,60	2	19,3	----	2
0,60 - 0,80	1	9,6	----	2
0,80 - 1,00	3	28,9	----	2
1,00 - 1,20	3	28,9	----	2
1,20 - 1,40	2	19,3	----	2
1,40 - 1,60	3	26,7	----	3
1,60 - 1,80	3	26,7	----	3
1,80 - 2,00	3	26,7	----	3
2,00 - 2,20	3	26,7	----	3
2,20 - 2,40	4	35,6	----	3
2,40 - 2,60	4	33,1	----	4
2,60 - 2,80	3	24,8	----	4
2,80 - 3,00	7	58,0	----	4
3,00 - 3,20	18	149,1	----	4
3,20 - 3,40	7	58,0	----	4
3,40 - 3,60	5	38,7	----	5
3,60 - 3,80	5	38,7	----	5
3,80 - 4,00	5	38,7	----	5
4,00 - 4,20	5	38,7	----	5
4,20 - 4,40	6	46,4	----	5
4,40 - 4,60	6	43,5	----	6
4,60 - 4,80	6	43,5	----	6
4,80 - 5,00	6	43,5	----	6
5,00 - 5,20	6	43,5	----	6
5,20 - 5,40	6	43,5	----	6
5,40 - 5,60	7	47,8	----	7
5,60 - 5,80	7	47,8	----	7
5,80 - 6,00	6	41,0	----	7
6,00 - 6,20	7	47,8	----	7
6,20 - 6,40	6	41,0	----	7
6,40 - 6,60	7	45,2	----	8
6,60 - 6,80	7	45,2	----	8
6,80 - 7,00	7	45,2	----	8
7,00 - 7,20	6	38,7	----	8
7,20 - 7,40	6	38,7	----	8
7,40 - 7,60	7	42,8	----	9
7,60 - 7,80	8	49,0	----	9
7,80 - 8,00	10	61,2	----	9
8,00 - 8,20	10	61,2	----	9
8,20 - 8,40	8	49,0	----	9
8,40 - 8,60	9	52,4	----	10
8,60 - 8,80	8	46,5	----	10
8,80 - 9,00	8	46,5	----	10
9,00 - 9,20	8	46,5	----	10
9,20 - 9,40	9	52,4	----	10
9,40 - 9,60	8	44,3	----	11
9,60 - 9,80	9	49,9	----	11
9,80 - 10,00	8	44,3	----	11
10,00 - 10,20	9	49,9	----	11
10,20 - 10,40	10	55,4	----	11
10,40 - 10,60	10	52,9	----	12
10,60 - 10,80	10	52,9	----	12
10,80 - 11,00	9	47,6	----	12
11,00 - 11,20	9	47,6	----	12
11,20 - 11,40	8	42,3	----	12
11,40 - 11,60	9	45,6	----	13
11,60 - 11,80	10	50,6	----	13
11,80 - 12,00	10	50,6	----	13
12,00 - 12,20	12	60,8	----	13
12,20 - 12,40	12	60,8	----	13
12,40 - 12,60	13	63,1	----	14
12,60 - 12,80	12	58,3	----	14
12,80 - 13,00	11	53,4	----	14
13,00 - 13,20	10	48,5	----	14
13,20 - 13,40	13	63,1	----	14
13,40 - 13,60	12	55,9	----	15
13,60 - 13,80	12	55,9	----	15
13,80 - 14,00	11	51,3	----	15
14,00 - 14,20	13	60,6	----	15
14,20 - 14,40	18	83,9	----	15
14,40 - 14,60	17	76,2	----	16
14,60 - 14,80	18	80,7	----	16
14,80 - 15,00	18	80,7	----	16
15,00 - 15,20	17	76,2	----	16
15,20 - 15,40	19	85,2	----	16
15,40 - 15,60	22	95,0	----	17
15,60 - 15,80	60	259,1	----	17

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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PROVA PENETROMETRICA DINAMICA n° 387b
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-387b
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	9,40 - 9,60	8	44,3	----	11
0,20 - 0,40	1	10,5	----	1	9,60 - 9,80	8	44,3	----	11
0,40 - 0,60	1	9,6	----	2	9,80 - 10,00	9	49,9	----	11
0,60 - 0,80	1	9,6	----	2	10,00 - 10,20	9	49,9	----	11
0,80 - 1,00	1	9,6	----	2	10,20 - 10,40	9	49,9	----	11
1,00 - 1,20	4	38,6	----	2	10,40 - 10,60	10	52,9	----	12
1,20 - 1,40	3	28,9	----	2	10,60 - 10,80	9	47,6	----	12
1,40 - 1,60	4	35,6	----	3	10,80 - 11,00	9	47,6	----	12
1,60 - 1,80	4	35,6	----	3	11,00 - 11,20	10	52,9	----	12
1,80 - 2,00	4	35,6	----	3	11,20 - 11,40	11	58,2	----	12
2,00 - 2,20	4	35,6	----	3	11,40 - 11,60	9	45,6	----	13
2,20 - 2,40	3	26,7	----	3	11,60 - 11,80	10	50,6	----	13
2,40 - 2,60	5	41,4	----	4	11,80 - 12,00	11	55,7	----	13
2,60 - 2,80	6	49,7	----	4	12,00 - 12,20	12	60,8	----	13
2,80 - 3,00	6	49,7	----	4	12,20 - 12,40	11	55,7	----	13
3,00 - 3,20	5	41,4	----	4	12,40 - 12,60	10	48,5	----	14
3,20 - 3,40	5	41,4	----	4	12,60 - 12,80	10	48,5	----	14
3,40 - 3,60	4	30,9	----	5	12,80 - 13,00	9	43,7	----	14
3,60 - 3,80	4	30,9	----	5	13,00 - 13,20	9	43,7	----	14
3,80 - 4,00	4	30,9	----	5	13,20 - 13,40	11	53,4	----	14
4,00 - 4,20	5	38,7	----	5	13,40 - 13,60	12	55,9	----	15
4,20 - 4,40	4	30,9	----	5	13,60 - 13,80	12	55,9	----	15
4,40 - 4,60	4	29,0	----	6	13,80 - 14,00	10	46,6	----	15
4,60 - 4,80	5	36,3	----	6	14,00 - 14,20	11	51,3	----	15
4,80 - 5,00	9	65,3	----	6	14,20 - 14,40	10	46,6	----	15
5,00 - 5,20	5	36,3	----	6	14,40 - 14,60	12	53,8	----	16
5,20 - 5,40	5	36,3	----	6	14,60 - 14,80	11	49,3	----	16
5,40 - 5,60	10	68,3	----	7	14,80 - 15,00	10	44,8	----	16
5,60 - 5,80	9	61,5	----	7	15,00 - 15,20	9	40,3	----	16
5,80 - 6,00	5	34,2	----	7	15,20 - 15,40	12	53,8	----	16
6,00 - 6,20	6	41,0	----	7	15,40 - 15,60	13	56,1	----	17
6,20 - 6,40	7	47,8	----	7	15,60 - 15,80	12	51,8	----	17
6,40 - 6,60	6	38,7	----	8	15,80 - 16,00	12	51,8	----	17
6,60 - 6,80	8	51,7	----	8	16,00 - 16,20	13	56,1	----	17
6,80 - 7,00	11	71,0	----	8	16,20 - 16,40	12	51,8	----	17
7,00 - 7,20	13	84,0	----	8	16,40 - 16,60	13	54,1	----	18
7,20 - 7,40	13	84,0	----	8	16,60 - 16,80	11	45,8	----	18
7,40 - 7,60	12	73,5	----	9	16,80 - 17,00	12	50,0	----	18
7,60 - 7,80	12	73,5	----	9	17,00 - 17,20	13	54,1	----	18
7,80 - 8,00	11	67,3	----	9	17,20 - 17,40	15	62,5	----	18
8,00 - 8,20	11	67,3	----	9	17,40 - 17,60	12	48,3	----	19
8,20 - 8,40	8	49,0	----	9	17,60 - 17,80	19	76,4	----	19
8,40 - 8,60	15	87,3	----	10	17,80 - 18,00	24	96,5	----	19
8,60 - 8,80	13	75,6	----	10	18,00 - 18,20	28	112,6	----	19
8,80 - 9,00	9	52,4	----	10	18,20 - 18,40	36	144,8	----	19
9,00 - 9,20	7	40,7	----	10	18,40 - 18,60	33	128,3	----	20
9,20 - 9,40	7	40,7	----	10	18,60 - 18,80	60	233,3	----	20

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 391
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-391
- località :	Fragneto L'Abate (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	5,00 - 5,20	11	79,8	----	6
0,20 - 0,40	1	10,5	----	1	5,20 - 5,40	8	58,1	----	6
0,40 - 0,60	1	9,6	----	2	5,40 - 5,60	8	54,7	----	7
0,60 - 0,80	1	9,6	----	2	5,60 - 5,80	13	88,8	----	7
0,80 - 1,00	1	9,6	----	2	5,80 - 6,00	11	75,2	----	7
1,00 - 1,20	2	19,3	----	2	6,00 - 6,20	10	68,3	----	7
1,20 - 1,40	4	38,6	----	2	6,20 - 6,40	10	68,3	----	7
1,40 - 1,60	6	53,5	----	3	6,40 - 6,60	10	64,6	----	8
1,60 - 1,80	7	62,4	----	3	6,60 - 6,80	13	84,0	----	8
1,80 - 2,00	6	53,5	----	3	6,80 - 7,00	18	116,2	----	8
2,00 - 2,20	6	53,5	----	3	7,00 - 7,20	17	109,8	----	8
2,20 - 2,40	7	62,4	----	3	7,20 - 7,40	15	96,9	----	8
2,40 - 2,60	8	66,3	----	4	7,40 - 7,60	16	97,9	----	9
2,60 - 2,80	11	91,1	----	4	7,60 - 7,80	16	97,9	----	9
2,80 - 3,00	12	99,4	----	4	7,80 - 8,00	19	116,3	----	9
3,00 - 3,20	13	107,7	----	4	8,00 - 8,20	30	183,6	----	9
3,20 - 3,40	12	99,4	----	4	8,20 - 8,40	23	140,8	----	9
3,40 - 3,60	14	108,3	----	5	8,40 - 8,60	21	122,2	----	10
3,60 - 3,80	15	116,0	----	5	8,60 - 8,80	15	87,3	----	10
3,80 - 4,00	17	131,5	----	5	8,80 - 9,00	21	122,2	----	10
4,00 - 4,20	20	154,7	----	5	9,00 - 9,20	21	122,2	----	10
4,20 - 4,40	20	154,7	----	5	9,20 - 9,40	20	116,3	----	10
4,40 - 4,60	22	159,7	----	6	9,40 - 9,60	18	99,8	----	11
4,60 - 4,80	23	166,9	----	6	9,60 - 9,80	19	105,3	----	11
4,80 - 5,00	14	101,6	----	6	9,80 - 10,00	21	116,4	----	11

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 400a
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-400a
- località :	Reino (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	4,00 - 4,20	5	38,7	----	5
0,20 - 0,40	1	10,5	----	1	4,20 - 4,40	6	46,4	----	5
0,40 - 0,60	2	19,3	----	2	4,40 - 4,60	6	43,5	----	6
0,60 - 0,80	2	19,3	----	2	4,60 - 4,80	14	101,6	----	6
0,80 - 1,00	3	28,9	----	2	4,80 - 5,00	20	145,1	----	6
1,00 - 1,20	4	38,6	----	2	5,00 - 5,20	19	137,9	----	6
1,20 - 1,40	3	28,9	----	2	5,20 - 5,40	12	87,1	----	6
1,40 - 1,60	4	35,6	----	3	5,40 - 5,60	11	75,2	----	7
1,60 - 1,80	5	44,6	----	3	5,60 - 5,80	13	88,8	----	7
1,80 - 2,00	4	35,6	----	3	5,80 - 6,00	12	82,0	----	7
2,00 - 2,20	5	44,6	----	3	6,00 - 6,20	20	136,7	----	7
2,20 - 2,40	4	35,6	----	3	6,20 - 6,40	18	123,0	----	7
2,40 - 2,60	6	49,7	----	4	6,40 - 6,60	12	77,5	----	8
2,60 - 2,80	7	58,0	----	4	6,60 - 6,80	16	103,3	----	8
2,80 - 3,00	8	66,3	----	4	6,80 - 7,00	23	148,5	----	8
3,00 - 3,20	8	66,3	----	4	7,00 - 7,20	12	77,5	----	8
3,20 - 3,40	4	33,1	----	4	7,20 - 7,40	23	148,5	----	8
3,40 - 3,60	7	54,1	----	5	7,40 - 7,60	32	195,9	----	9
3,60 - 3,80	8	61,9	----	5	7,60 - 7,80	46	281,6	----	9
3,80 - 4,00	6	46,4	----	5	7,80 - 8,00	60	367,3	----	9

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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PROVA PENETROMETRICA DINAMICA n° 400b
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-400b
- località :	Reino (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	1	10,5	----	1	3,20 - 3,40	5	41,4	----	4
0,20 - 0,40	1	10,5	----	1	3,40 - 3,60	5	38,7	----	5
0,40 - 0,60	2	19,3	----	2	3,60 - 3,80	6	46,4	----	5
0,60 - 0,80	2	19,3	----	2	3,80 - 4,00	5	38,7	----	5
0,80 - 1,00	3	28,9	----	2	4,00 - 4,20	4	30,9	----	5
1,00 - 1,20	4	38,6	----	2	4,20 - 4,40	4	30,9	----	5
1,20 - 1,40	3	28,9	----	2	4,40 - 4,60	4	29,0	----	6
1,40 - 1,60	5	44,6	----	3	4,60 - 4,80	4	29,0	----	6
1,60 - 1,80	7	62,4	----	3	4,80 - 5,00	5	36,3	----	6
1,80 - 2,00	7	62,4	----	3	5,00 - 5,20	8	58,1	----	6
2,00 - 2,20	6	53,5	----	3	5,20 - 5,40	11	79,8	----	6
2,20 - 2,40	8	71,3	----	3	5,40 - 5,60	14	95,7	----	7
2,40 - 2,60	5	41,4	----	4	5,60 - 5,80	8	54,7	----	7
2,60 - 2,80	5	41,4	----	4	5,80 - 6,00	37	252,9	----	7
2,80 - 3,00	5	41,4	----	4	6,00 - 6,20	60	410,0	----	7
3,00 - 3,20	5	41,4	----	4					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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PROVA PENETROMETRICA DINAMICA n° 422
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	24/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-422
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	1,60 - 1,80	24	213,9	----	3
0,20 - 0,40	7	73,6	----	1	1,80 - 2,00	26	231,7	----	3
0,40 - 0,60	19	183,2	----	2	2,00 - 2,20	28	249,5	----	3
0,60 - 0,80	17	163,9	----	2	2,20 - 2,40	29	258,4	----	3
0,80 - 1,00	16	154,3	----	2	2,40 - 2,60	27	223,6	----	4
1,00 - 1,20	9	86,8	----	2	2,60 - 2,80	46	381,0	----	4
1,20 - 1,40	10	96,4	----	2	2,80 - 3,00	60	496,9	----	4
1,40 - 1,60	25	222,8	----	3					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 423
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	26/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-423
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	2	21,0	----	1	4,40 - 4,60	6	43,5	----	6
0,20 - 0,40	2	21,0	----	1	4,60 - 4,80	5	36,3	----	6
0,40 - 0,60	3	28,9	----	2	4,80 - 5,00	6	43,5	----	6
0,60 - 0,80	6	57,9	----	2	5,00 - 5,20	8	58,1	----	6
0,80 - 1,00	5	48,2	----	2	5,20 - 5,40	7	50,8	----	6
1,00 - 1,20	3	28,9	----	2	5,40 - 5,60	6	41,0	----	7
1,20 - 1,40	17	163,9	----	2	5,60 - 5,80	4	27,3	----	7
1,40 - 1,60	17	151,5	----	3	5,80 - 6,00	10	68,3	----	7
1,60 - 1,80	11	98,0	----	3	6,00 - 6,20	7	47,8	----	7
1,80 - 2,00	8	71,3	----	3	6,20 - 6,40	6	41,0	----	7
2,00 - 2,20	6	53,5	----	3	6,40 - 6,60	5	32,3	----	8
2,20 - 2,40	4	35,6	----	3	6,60 - 6,80	6	38,7	----	8
2,40 - 2,60	8	66,3	----	4	6,80 - 7,00	10	64,6	----	8
2,60 - 2,80	8	66,3	----	4	7,00 - 7,20	18	116,2	----	8
2,80 - 3,00	6	49,7	----	4	7,20 - 7,40	18	116,2	----	8
3,00 - 3,20	11	91,1	----	4	7,40 - 7,60	19	116,3	----	9
3,20 - 3,40	6	49,7	----	4	7,60 - 7,80	17	104,1	----	9
3,40 - 3,60	5	38,7	----	5	7,80 - 8,00	19	116,3	----	9
3,60 - 3,80	5	38,7	----	5	8,00 - 8,20	21	128,5	----	9
3,80 - 4,00	8	61,9	----	5	8,20 - 8,40	27	165,3	----	9
4,00 - 4,20	7	54,1	----	5	8,40 - 8,60	60	349,0	----	10
4,20 - 4,40	7	54,1	----	5					

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 421
TABELLE VALORI DI RESISTENZA

- indagine :	Vianini Lavori S.p.a.	- data :	29/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-421
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata
- note :	Aut. Min. Settore C n°157 del 19/04/2011	- pagina :	1

Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta	Prof.(m)	N(colpi p)	Rpd(kg/cm²)	N(colpi r)	asta
0,00 - 0,20	5	52,5	----	1	2,40 - 2,60	19	157,4	----	4
0,20 - 0,40	5	52,5	----	1	2,60 - 2,80	13	107,7	----	4
0,40 - 0,60	18	173,6	----	2	2,80 - 3,00	14	115,9	----	4
0,60 - 0,80	22	212,2	----	2	3,00 - 3,20	12	99,4	----	4
0,80 - 1,00	25	241,1	----	2	3,20 - 3,40	13	107,7	----	4
1,00 - 1,20	33	318,2	----	2	3,40 - 3,60	14	108,3	----	5
1,20 - 1,40	31	298,9	----	2	3,60 - 3,80	27	208,9	----	5
1,40 - 1,60	31	276,2	----	3	3,80 - 4,00	28	216,6	----	5
1,60 - 1,80	20	178,2	----	3	4,00 - 4,20	31	239,8	----	5
1,80 - 2,00	15	133,7	----	3	4,20 - 4,40	39	301,7	----	5
2,00 - 2,20	19	169,3	----	3	4,40 - 4,60	37	268,5	----	6
2,20 - 2,40	16	142,6	----	3	4,60 - 4,80	60	435,4	----	6

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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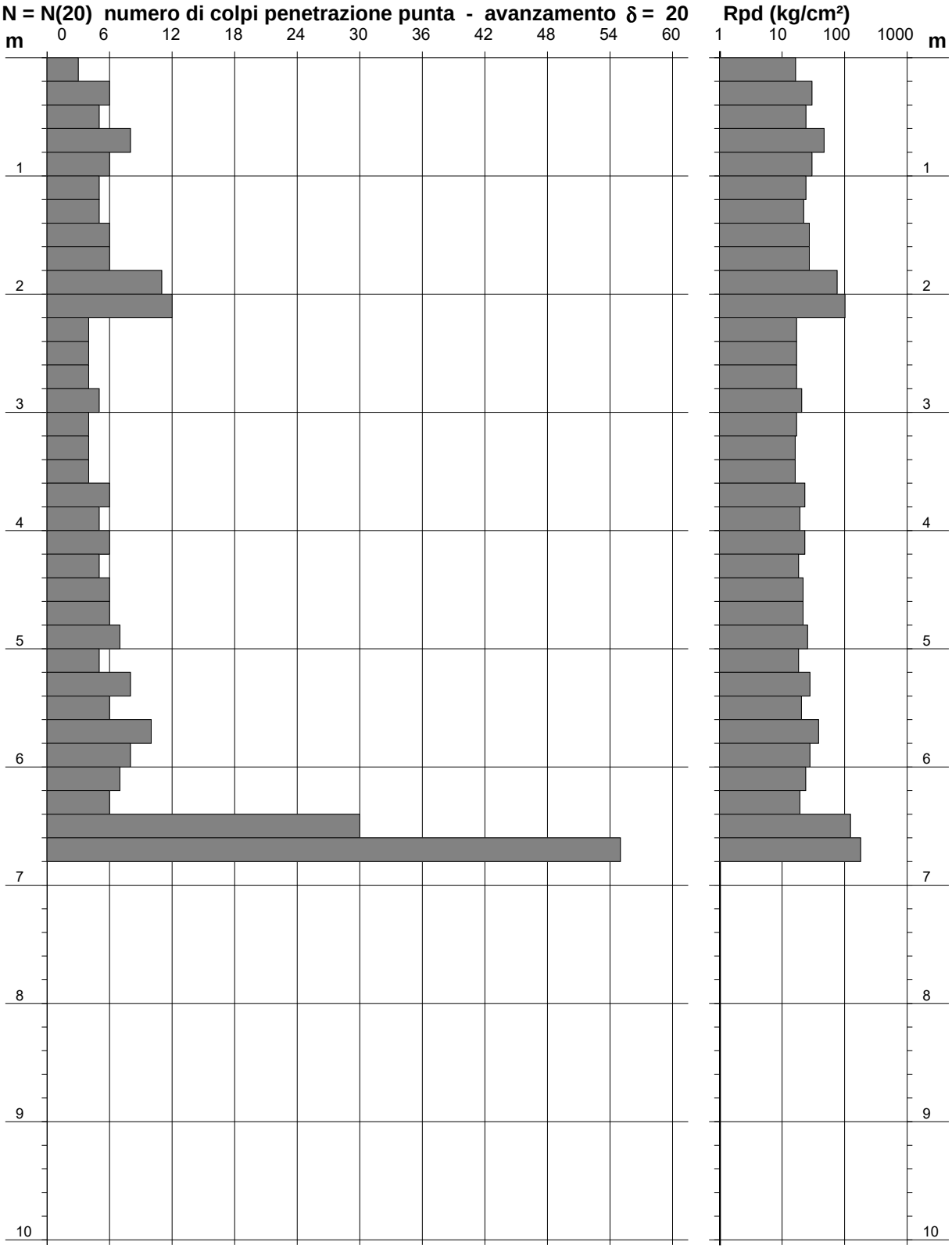
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 001
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori Spa	- data :	24/08/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert 100-20-001
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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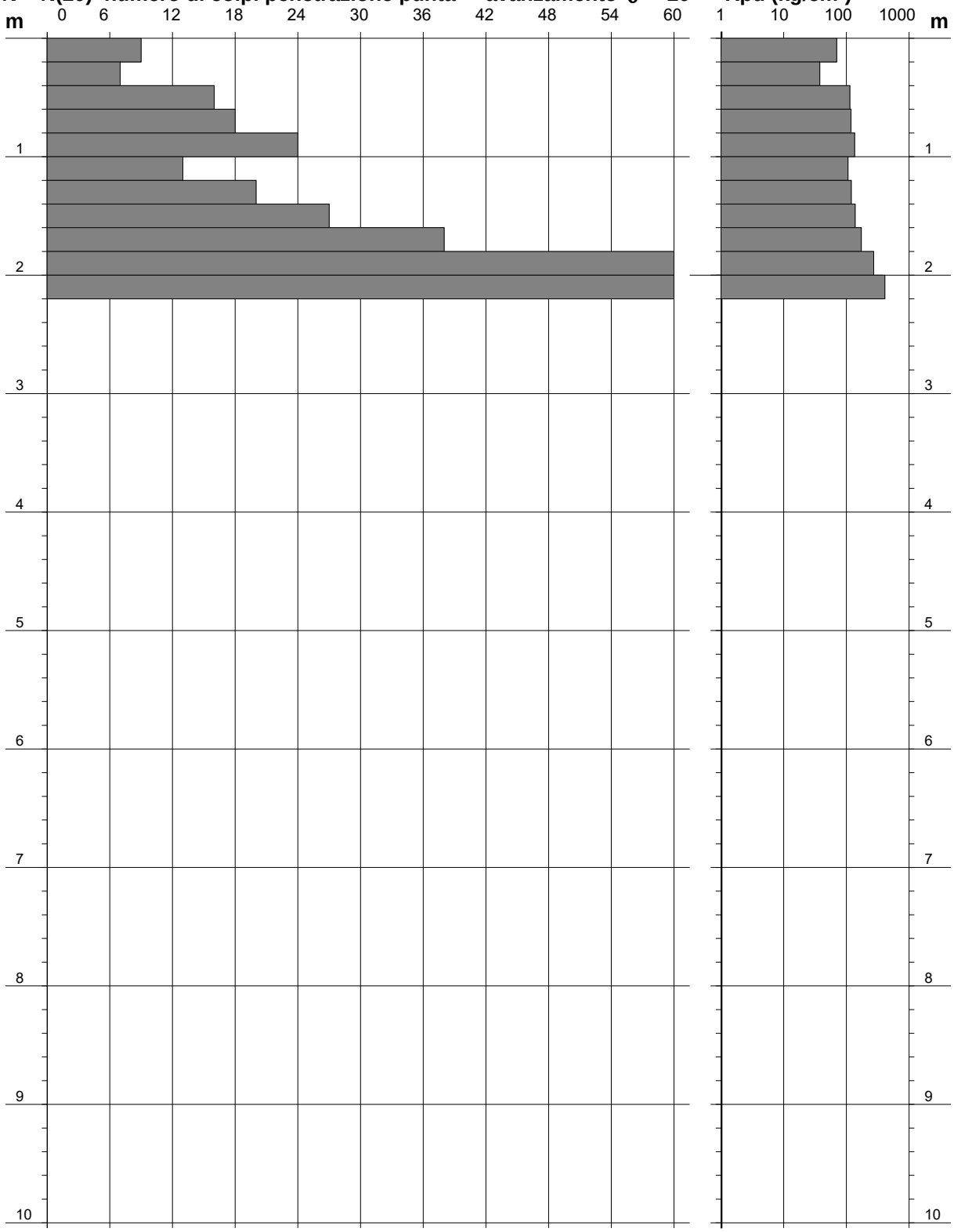
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 004
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	24/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-004
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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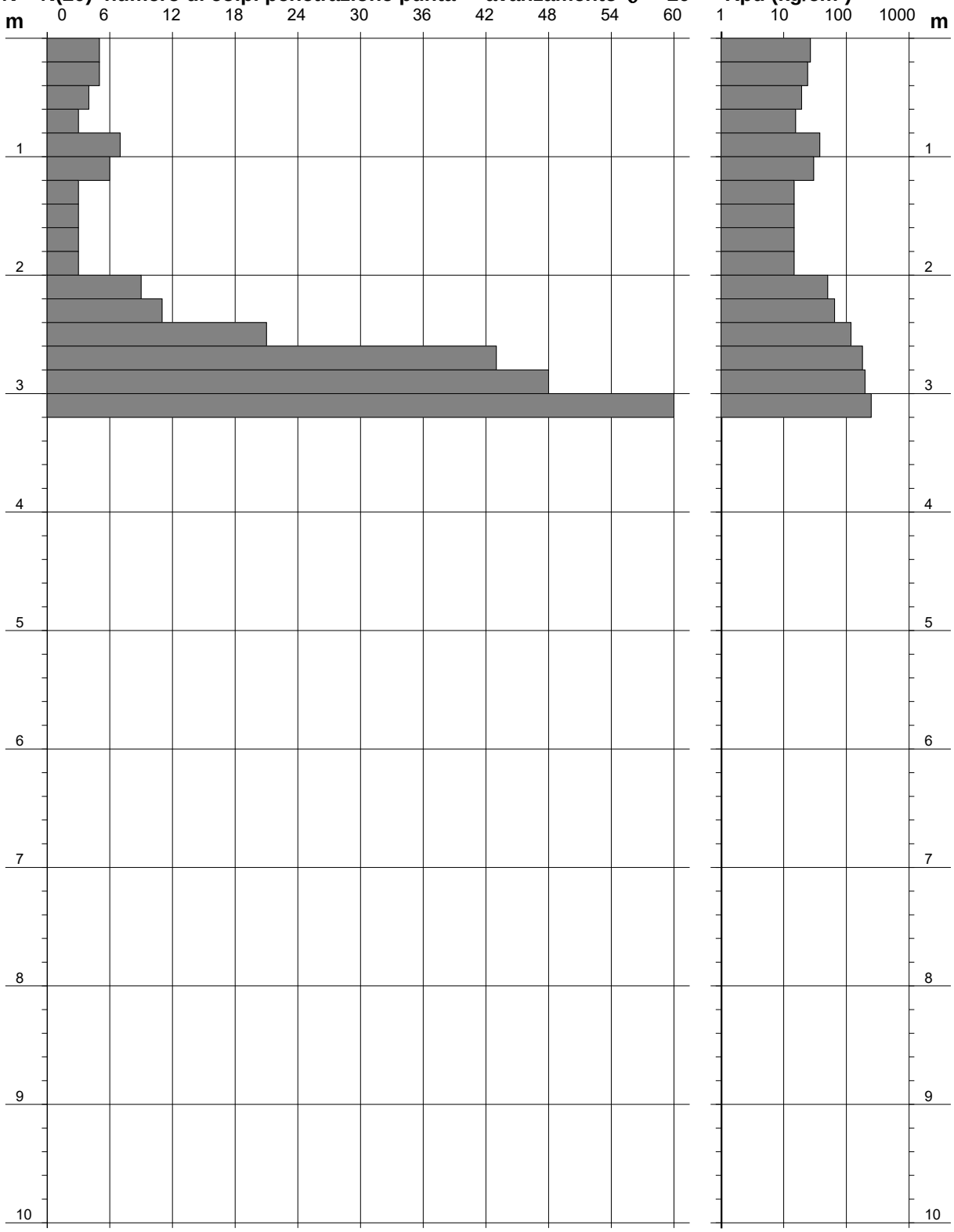
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 005
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	24/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-005
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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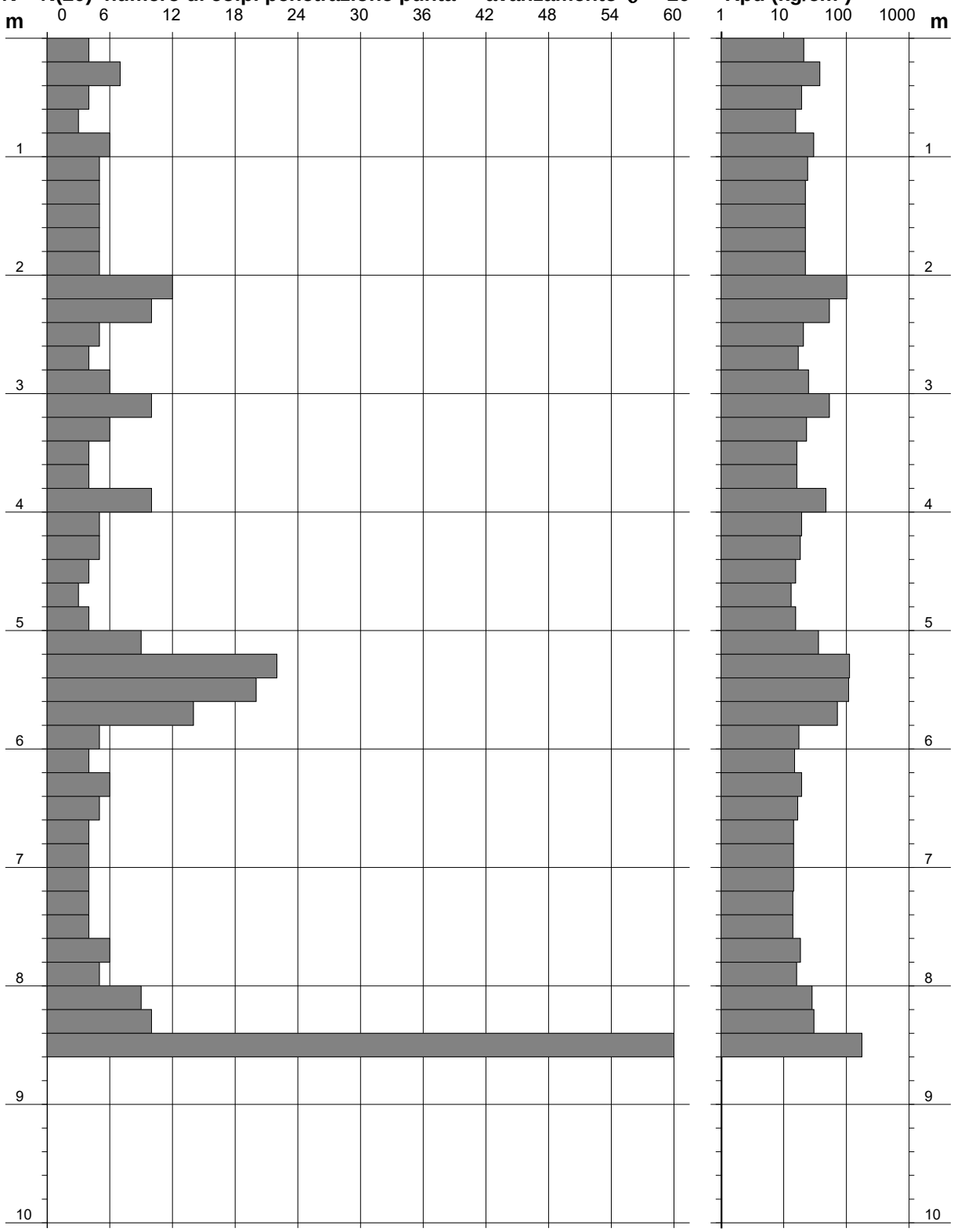
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 008
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	24/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-008
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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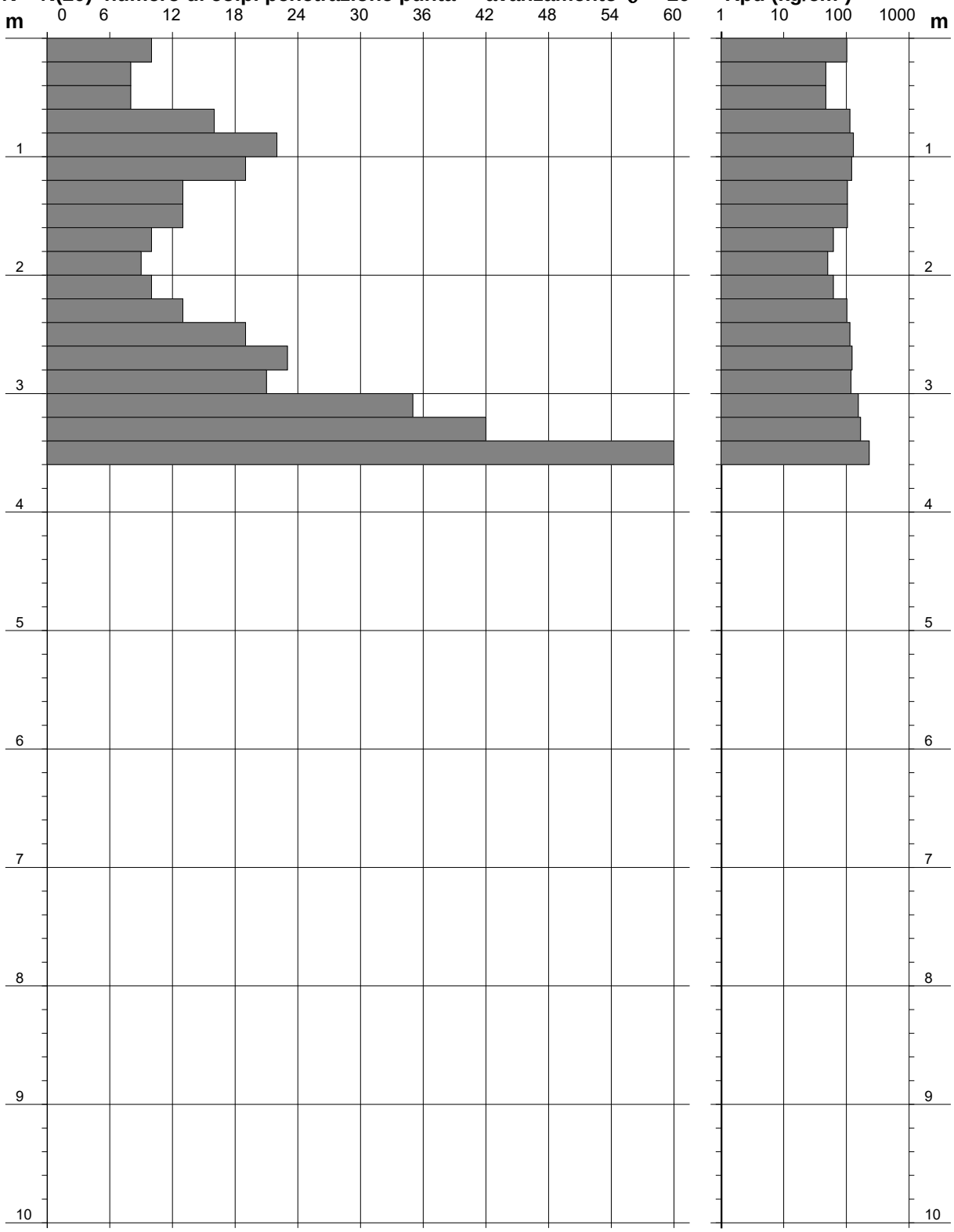
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 009
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-009
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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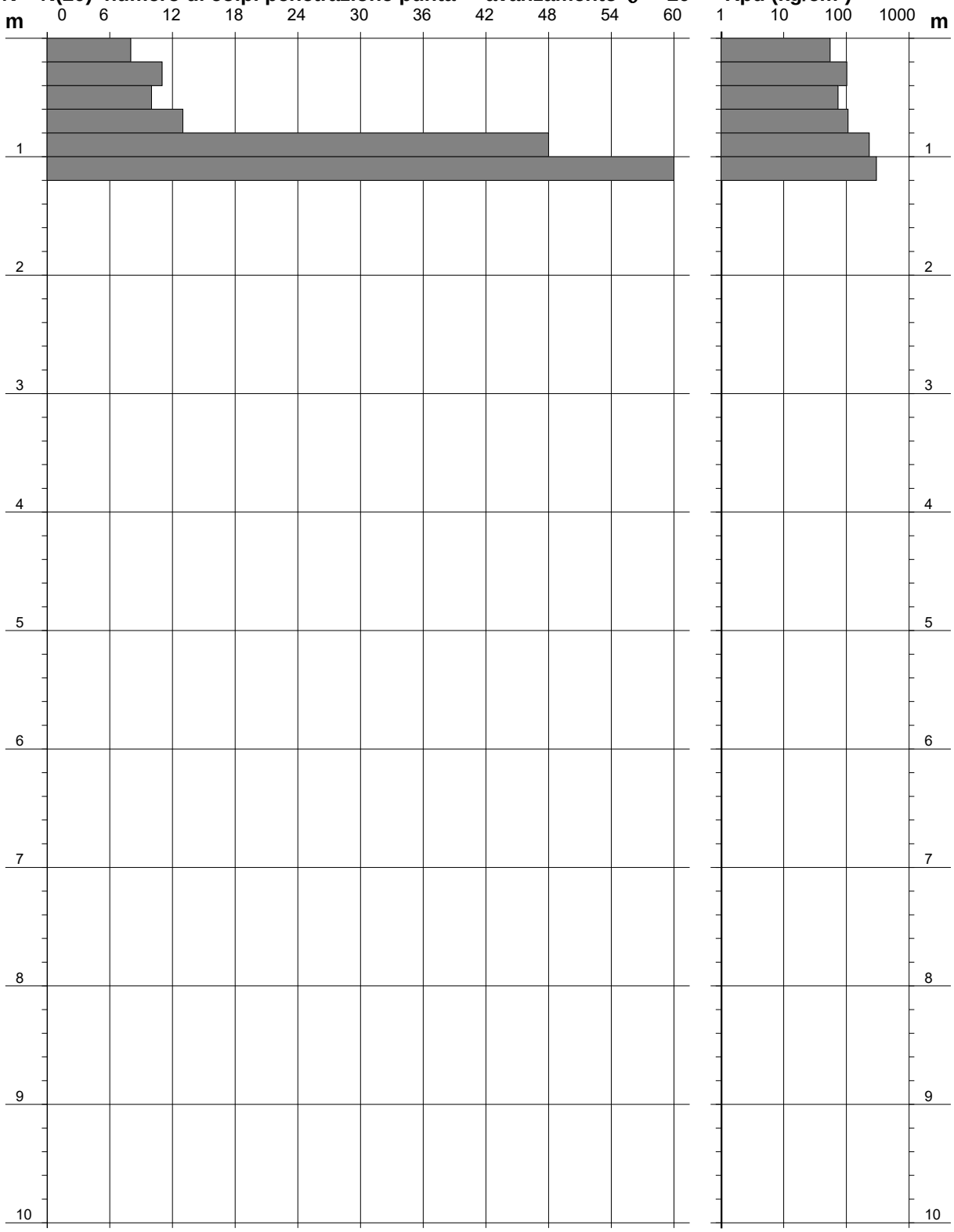
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 010
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-010
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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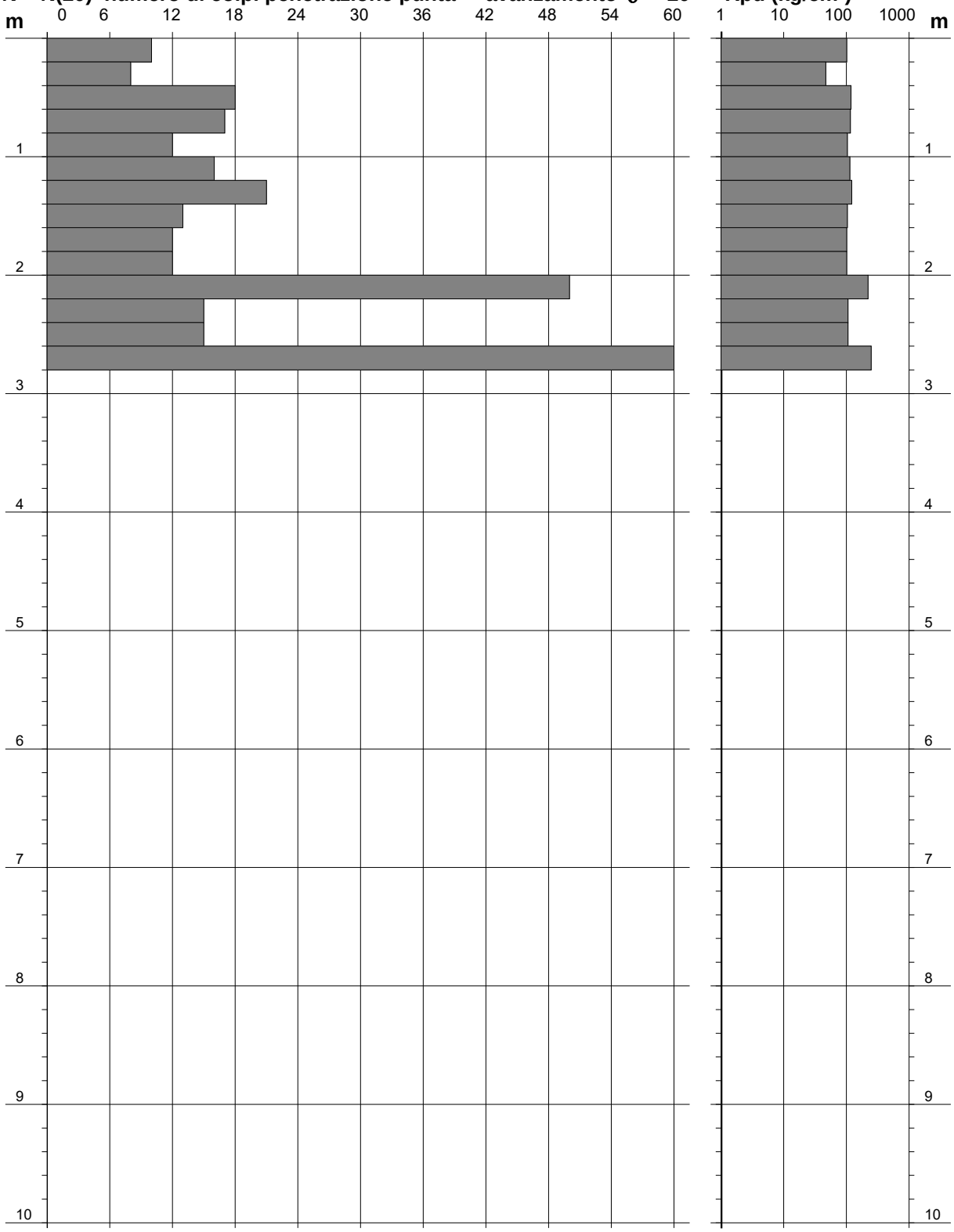
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 013
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-013
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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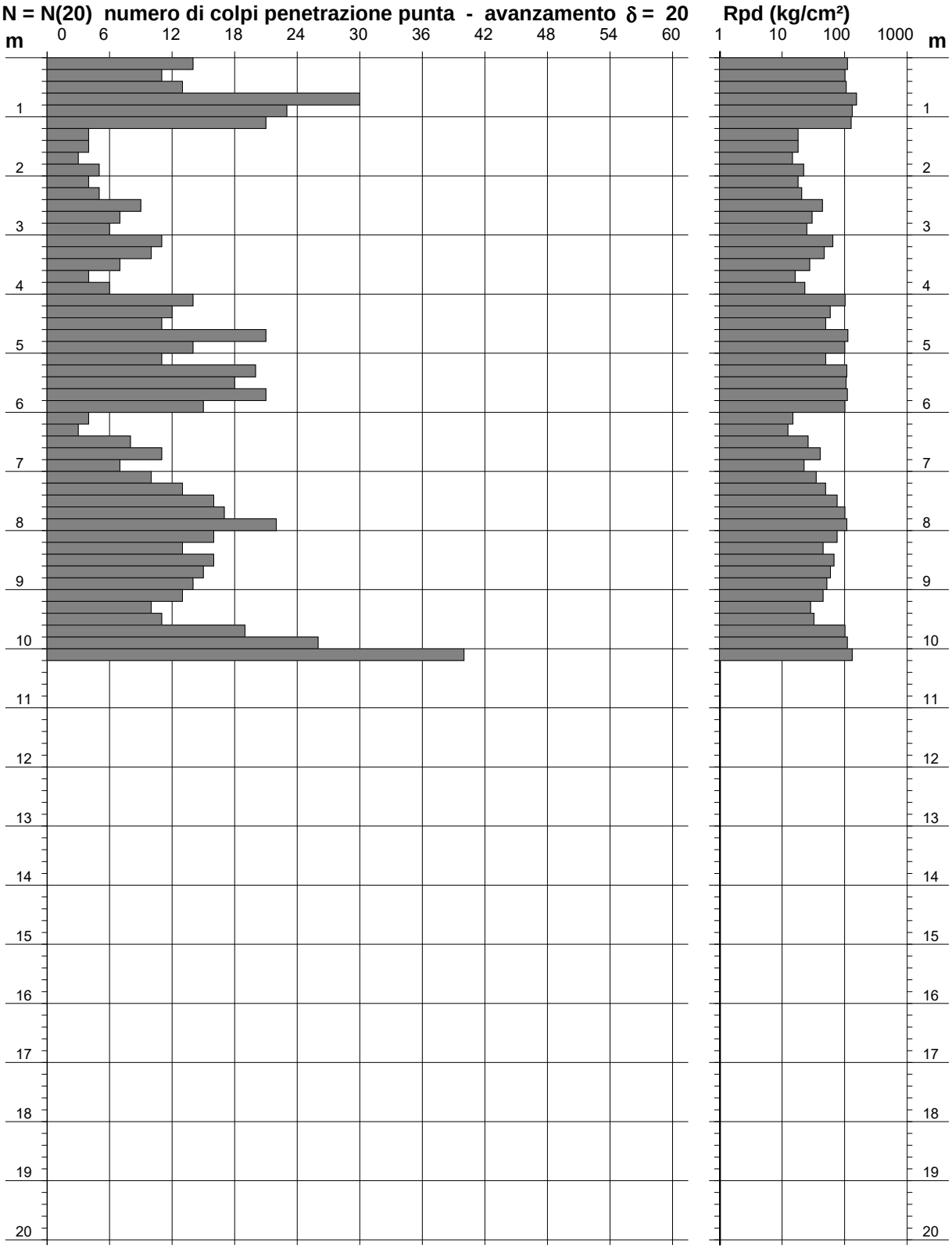
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 015
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	25/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-015
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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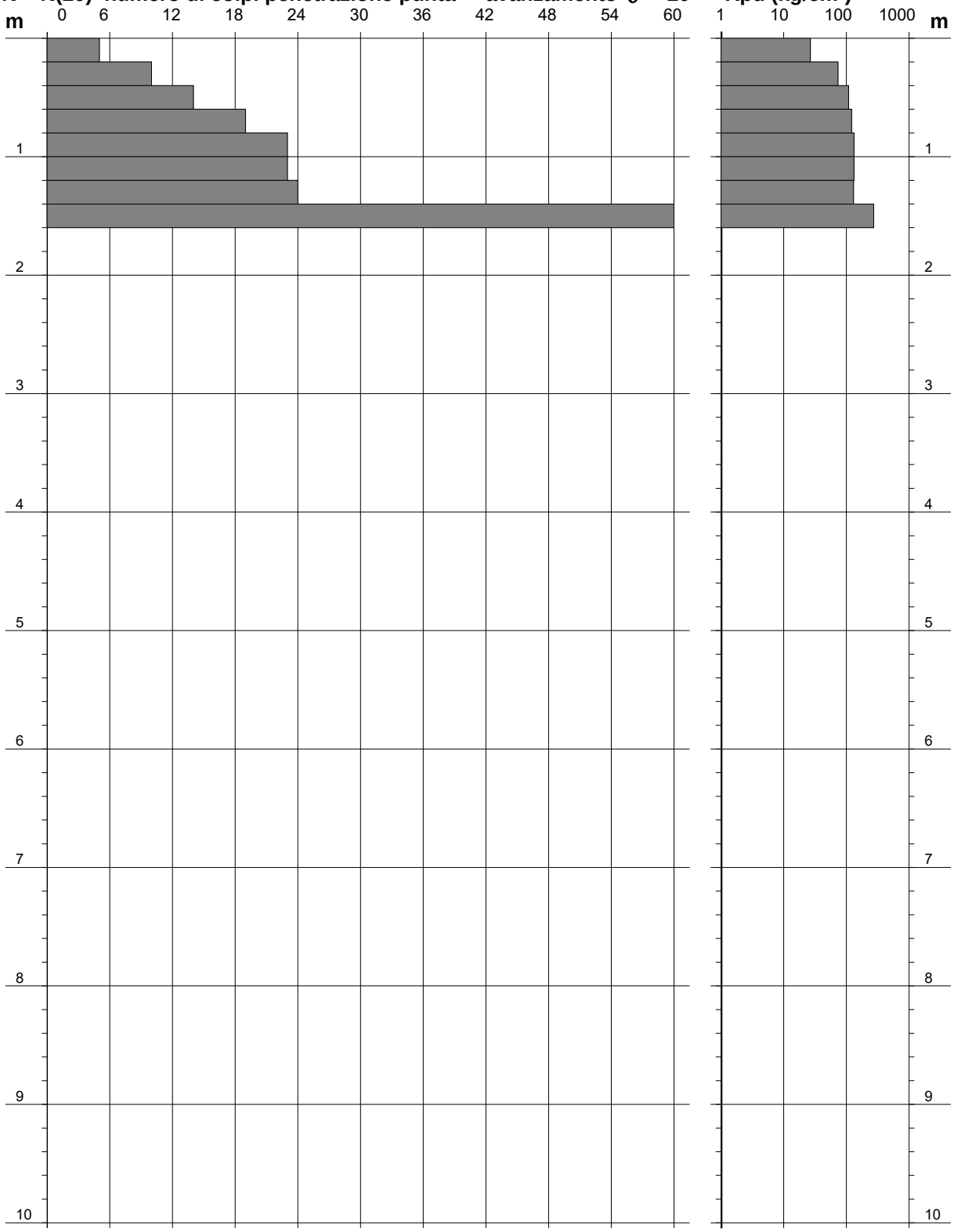
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 020
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	26/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-020
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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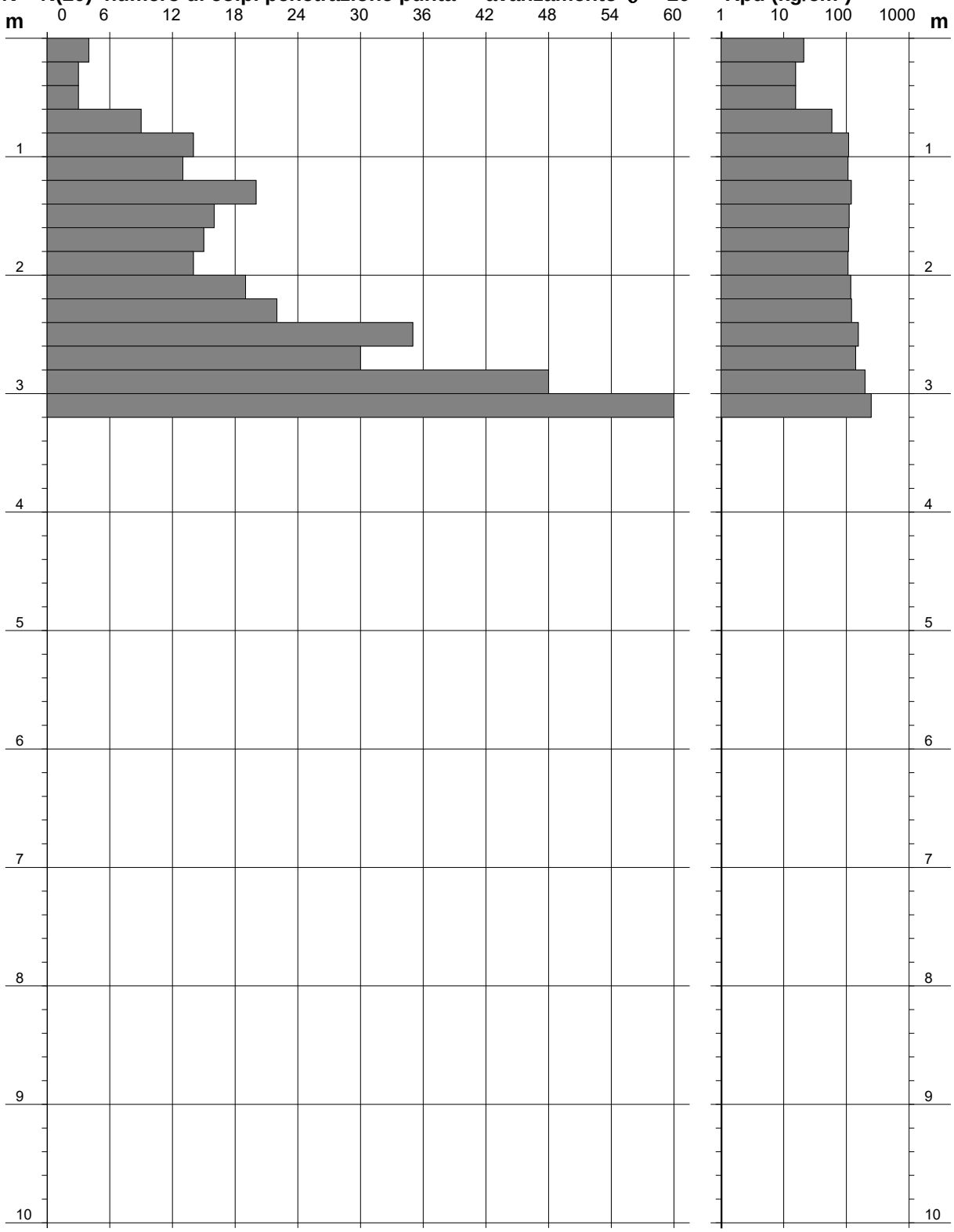
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 021
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-021
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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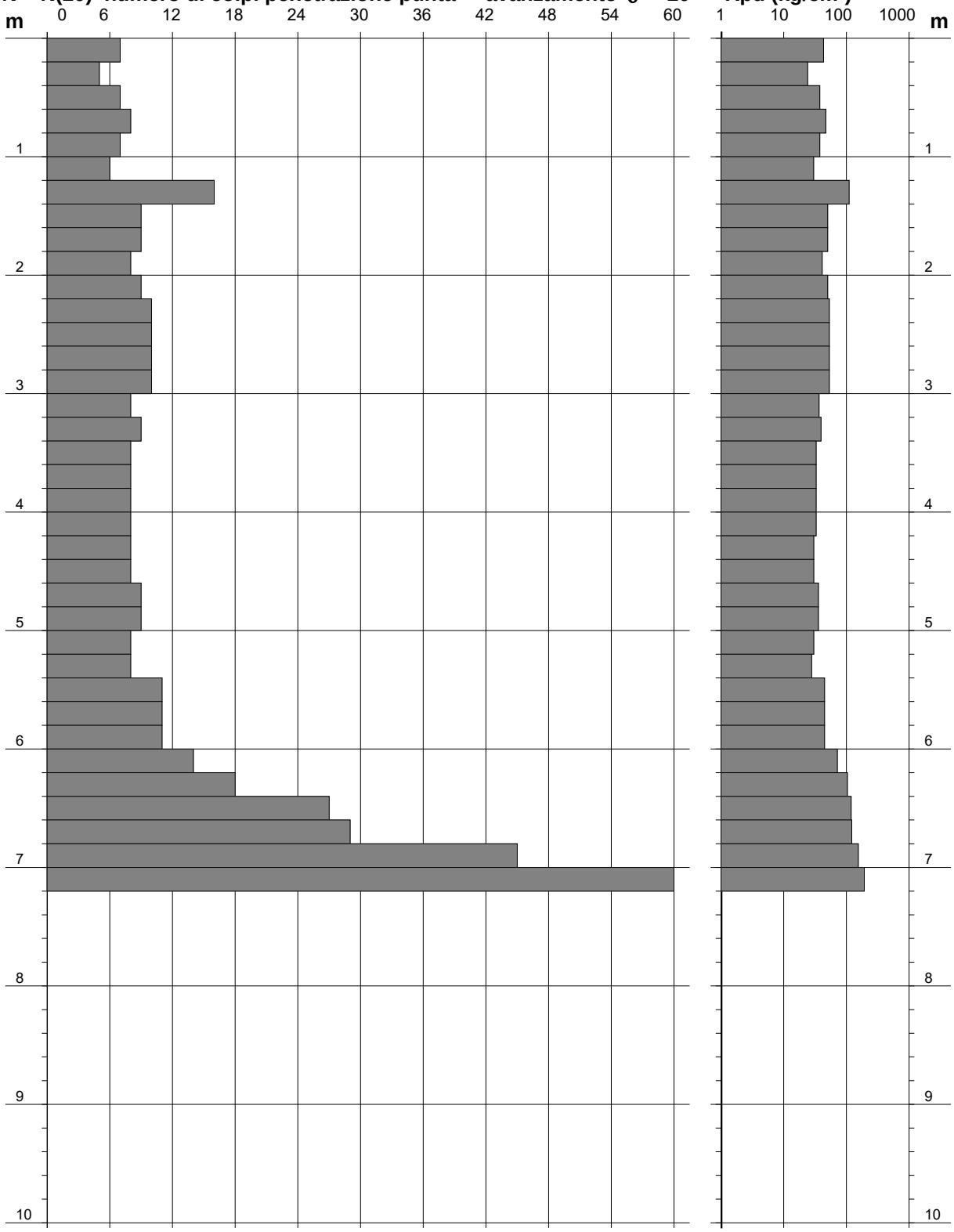
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 022
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-022
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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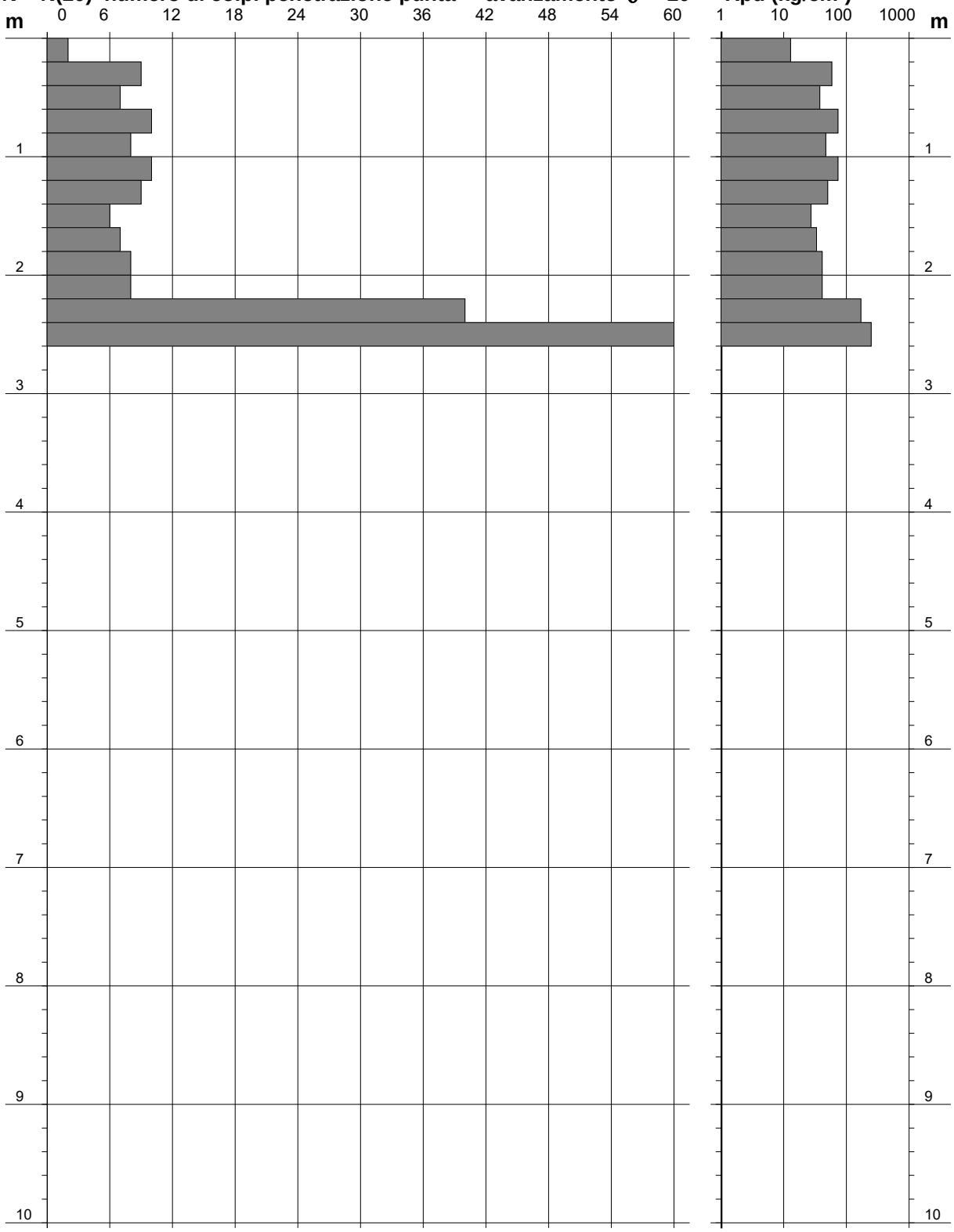
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 023
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-023
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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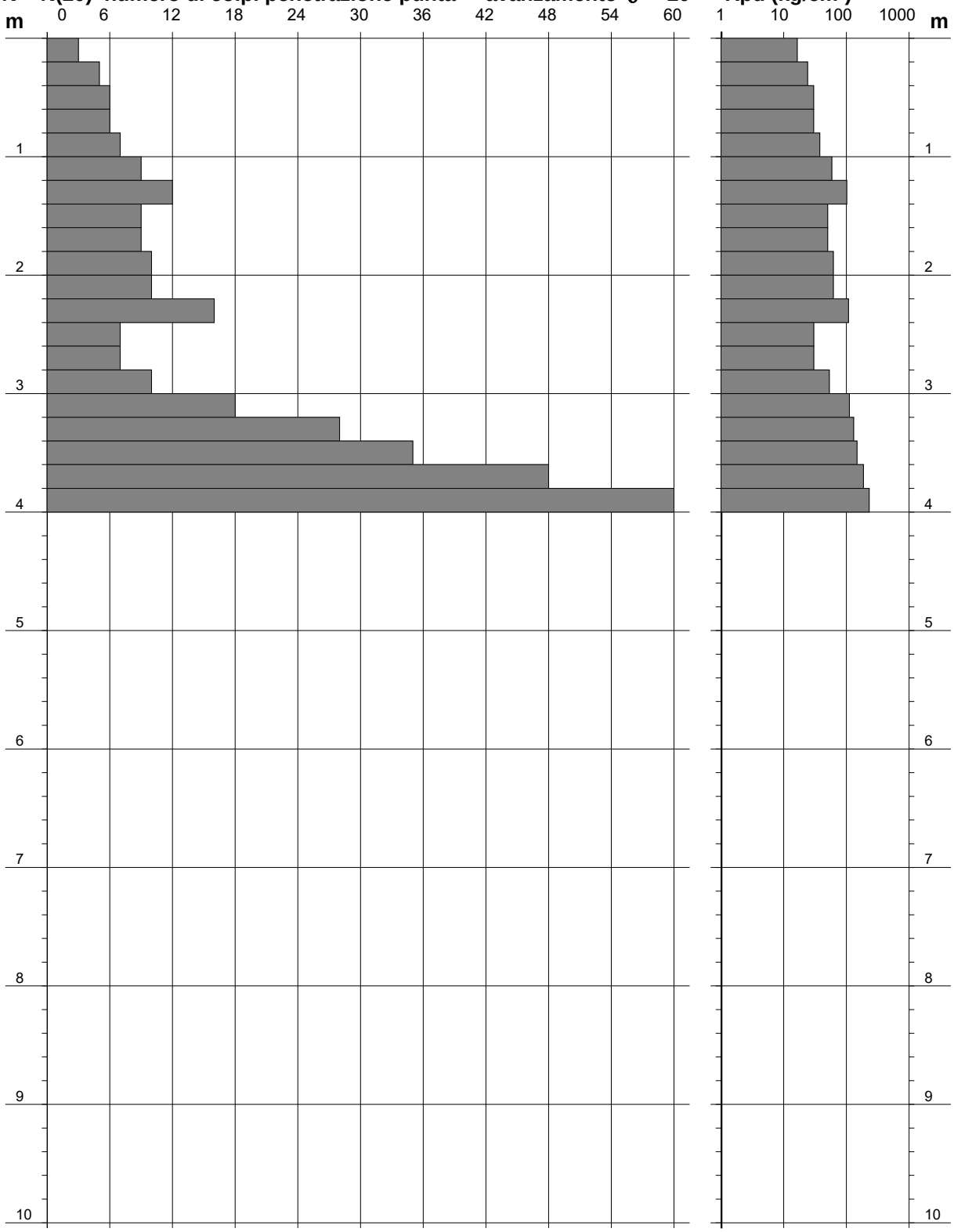
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 024
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-024
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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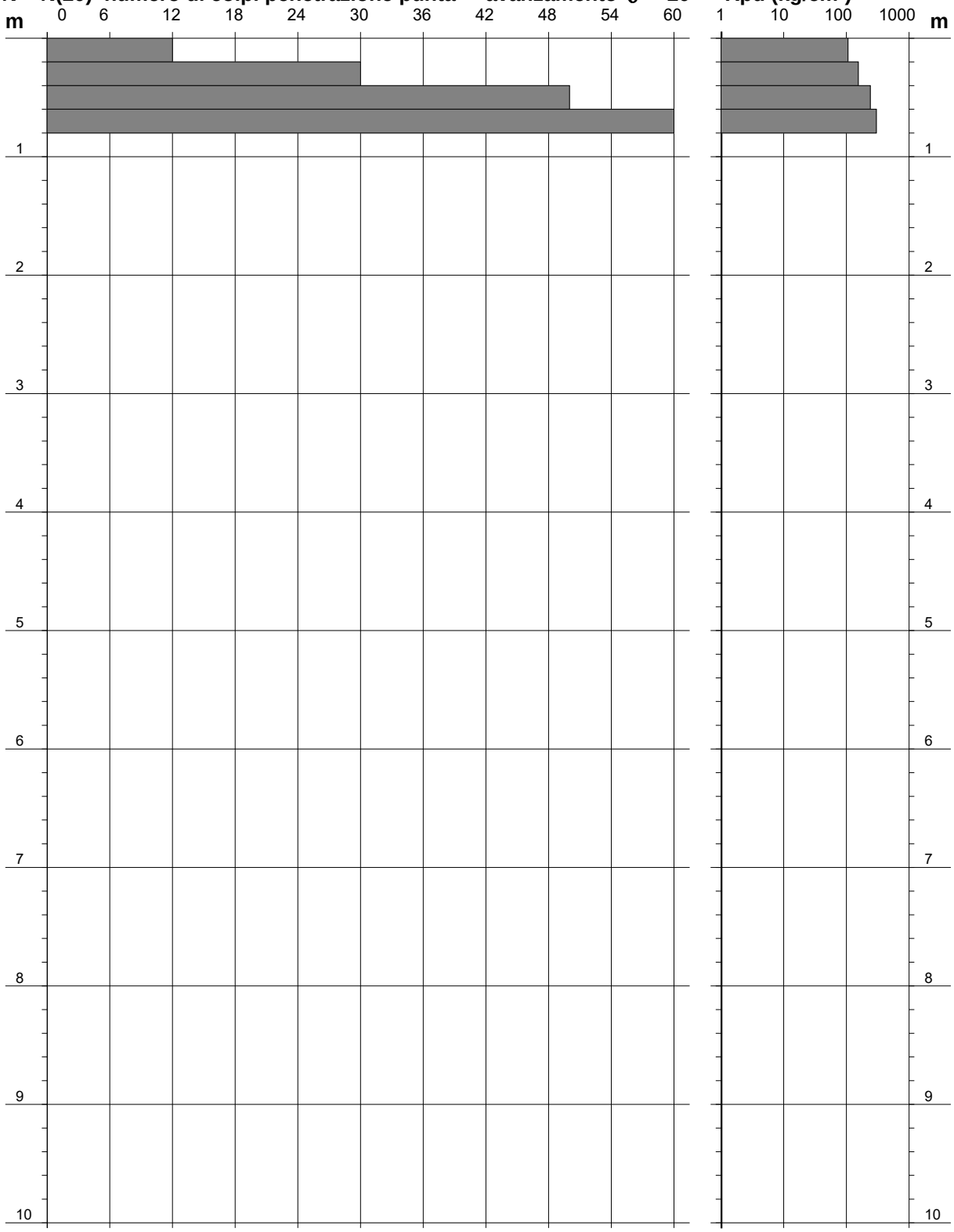
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 025
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-025
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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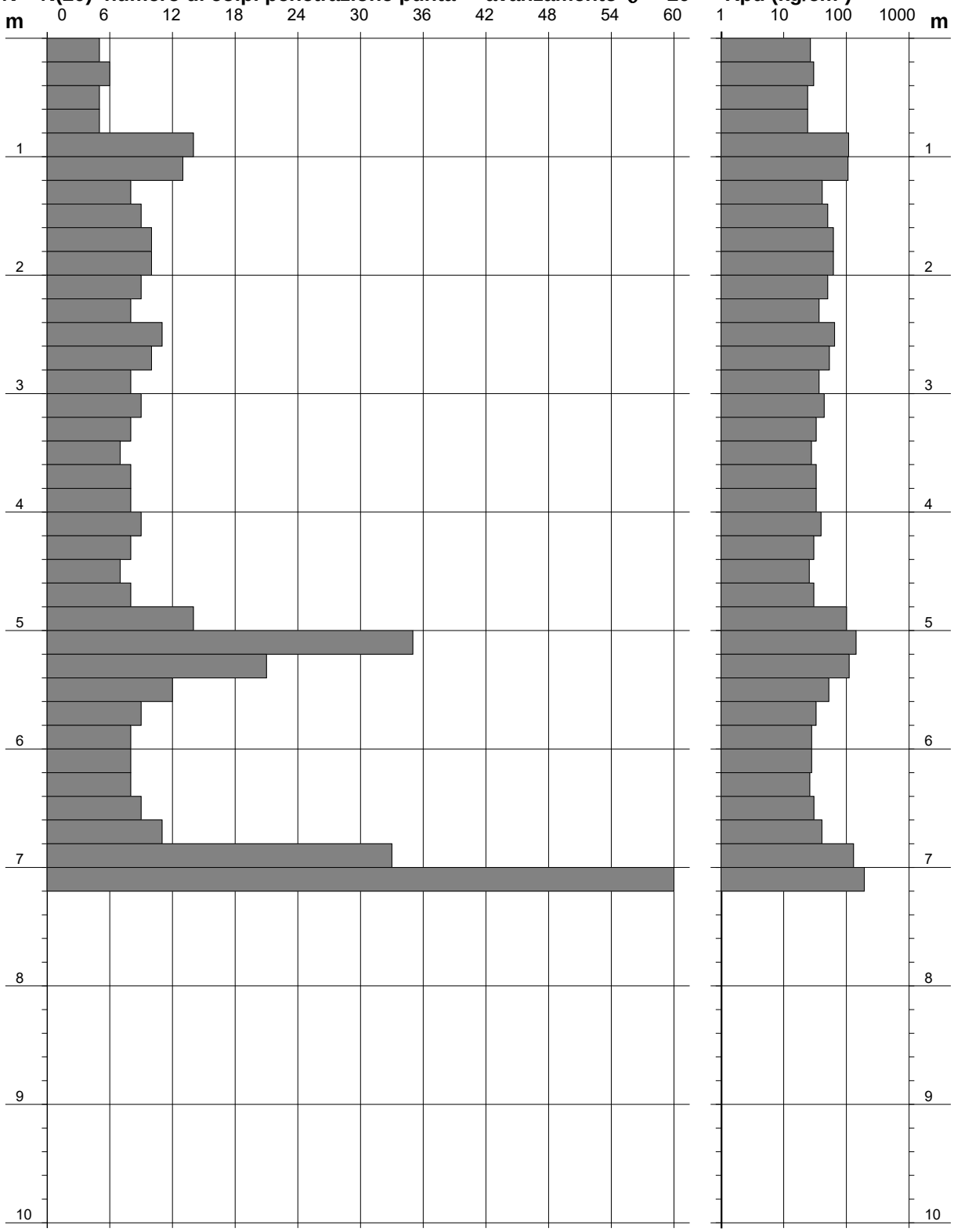
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 026
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-026
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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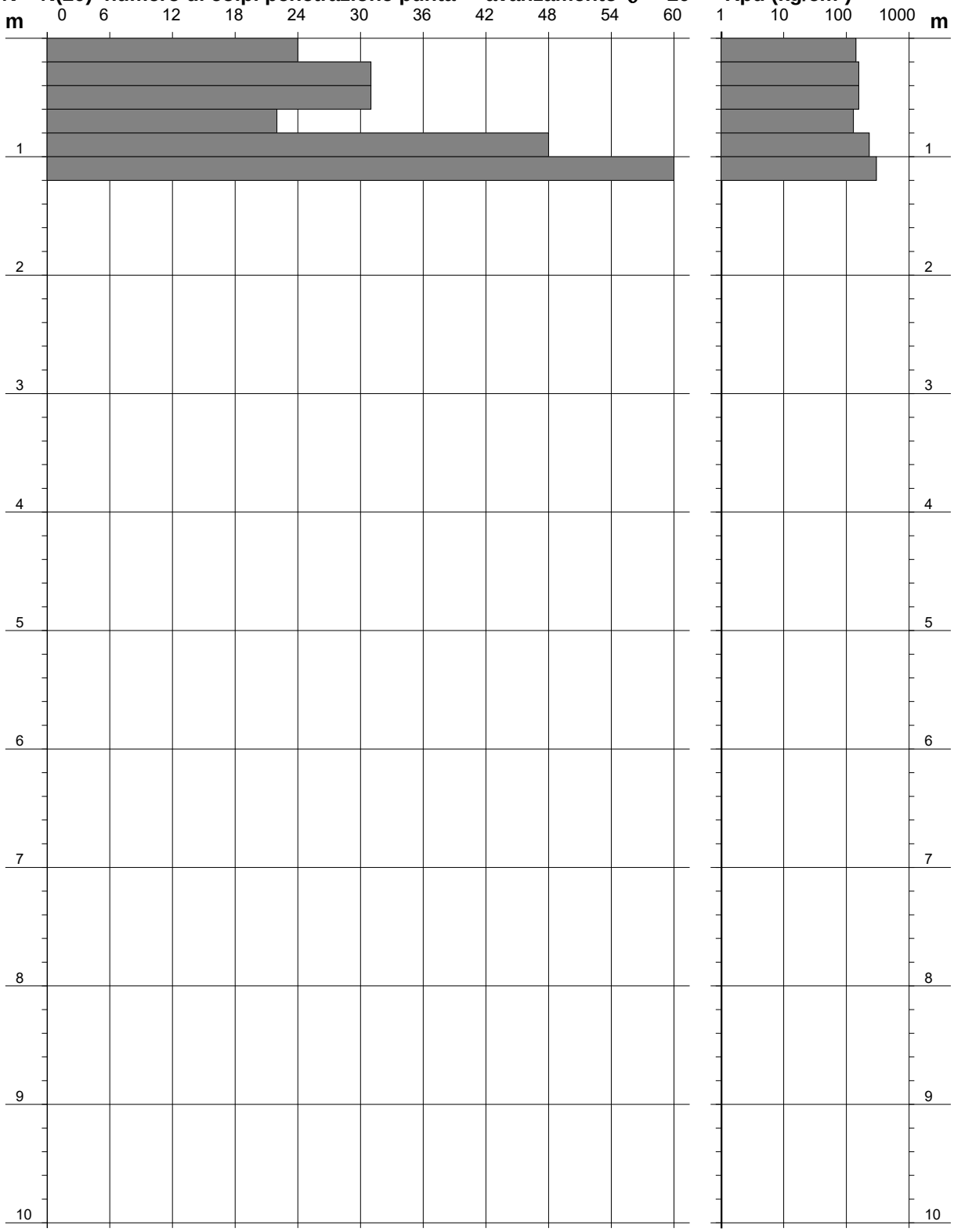
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 027
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-027
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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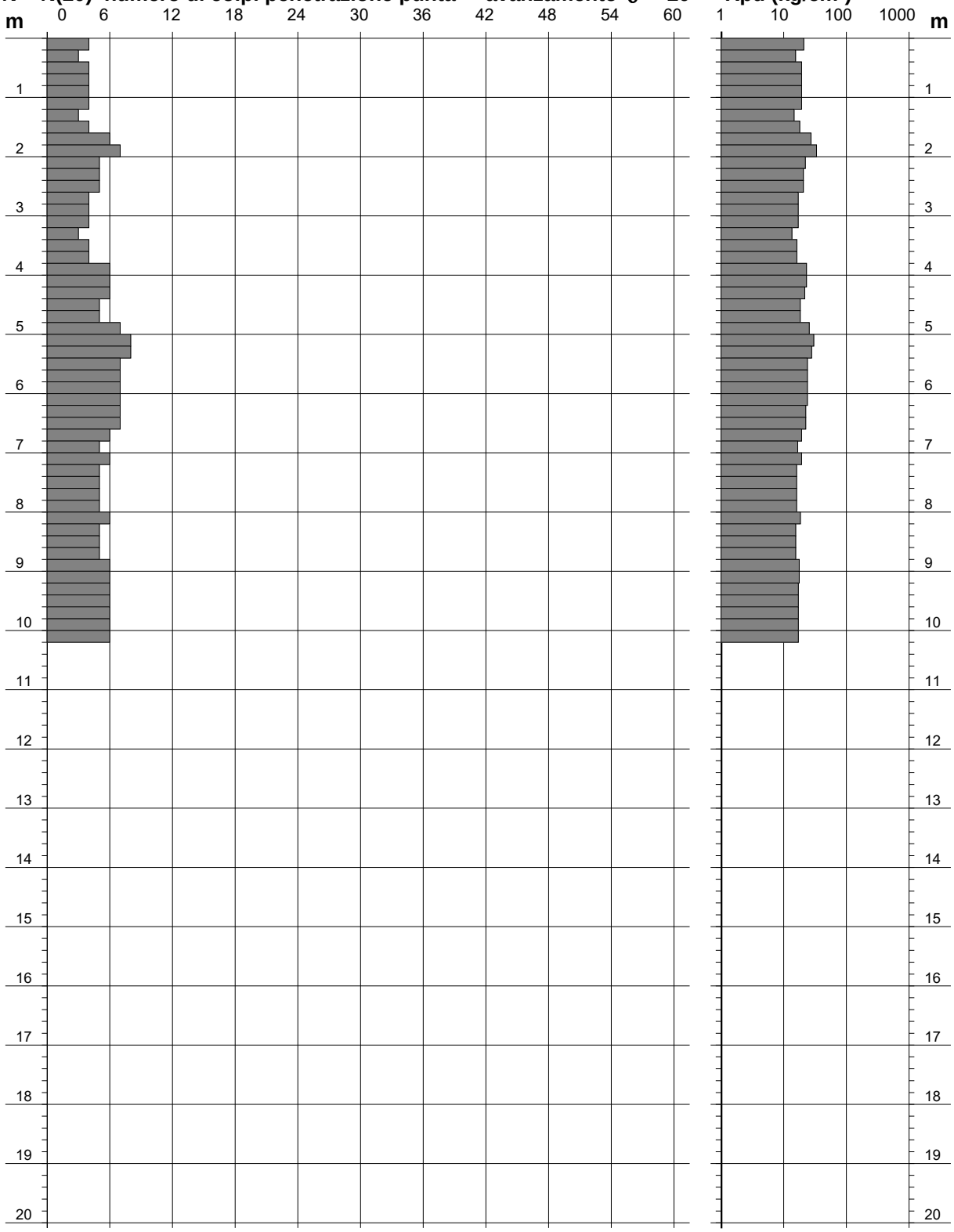
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 028
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-028
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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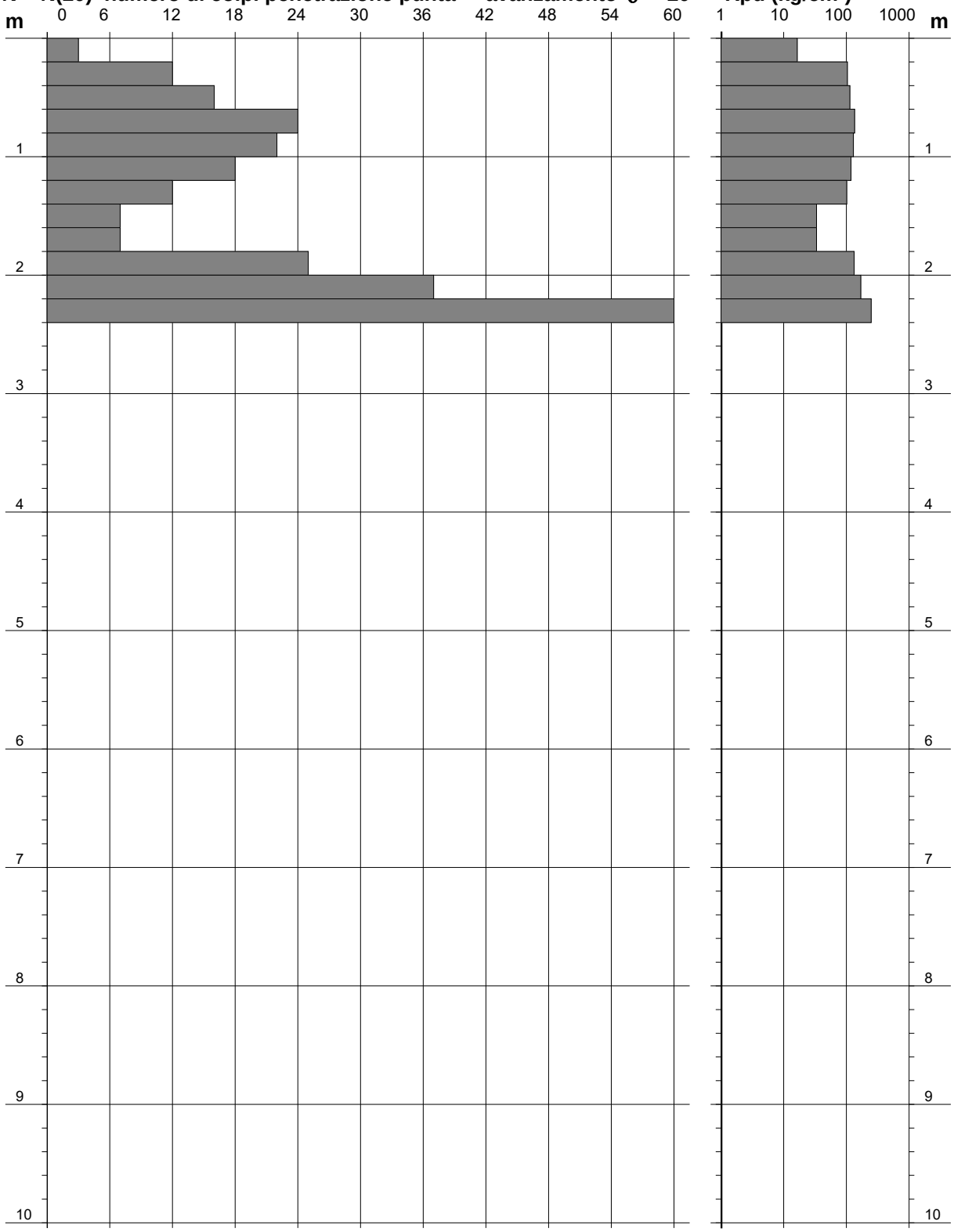
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 029
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-029
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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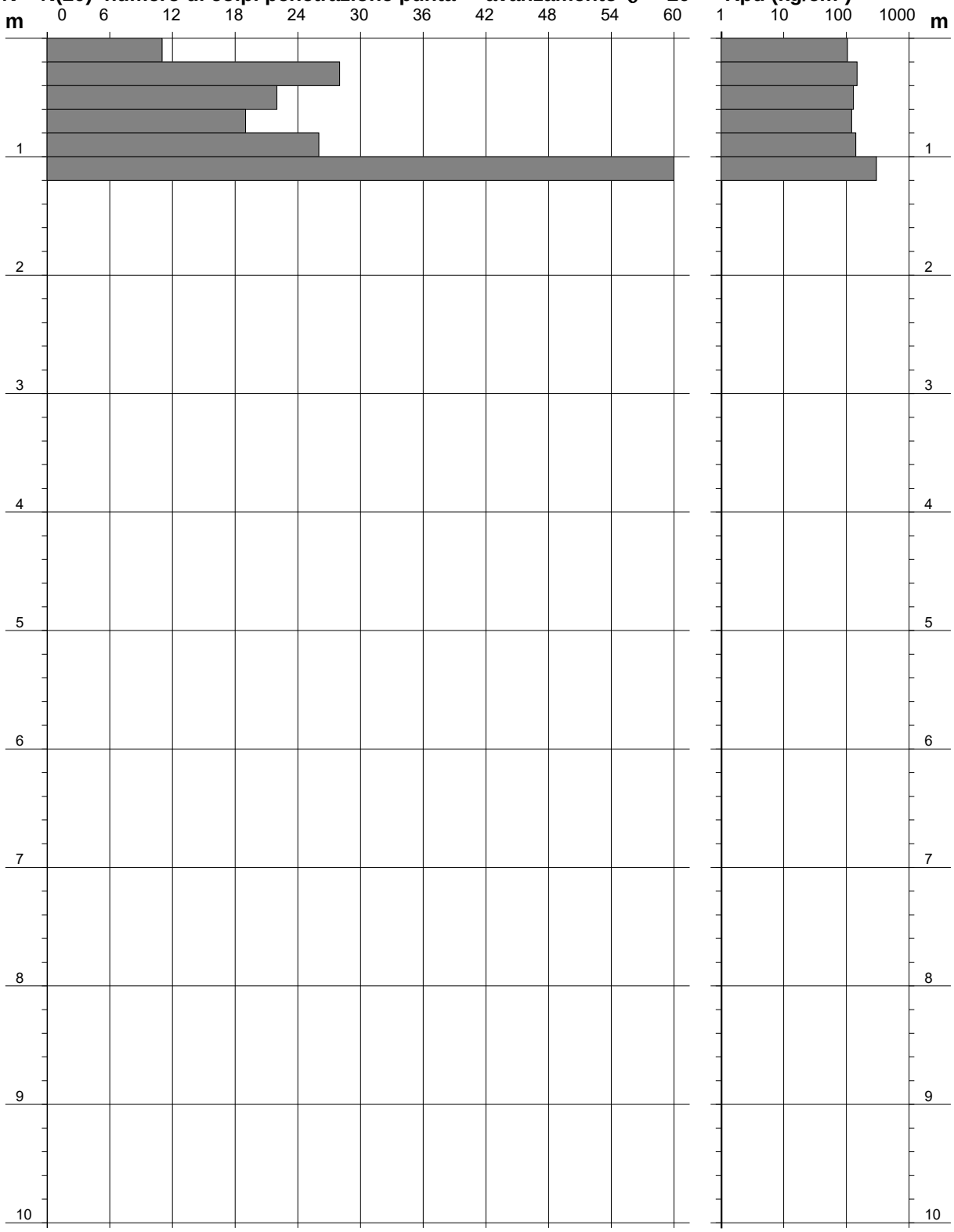
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 030
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-030
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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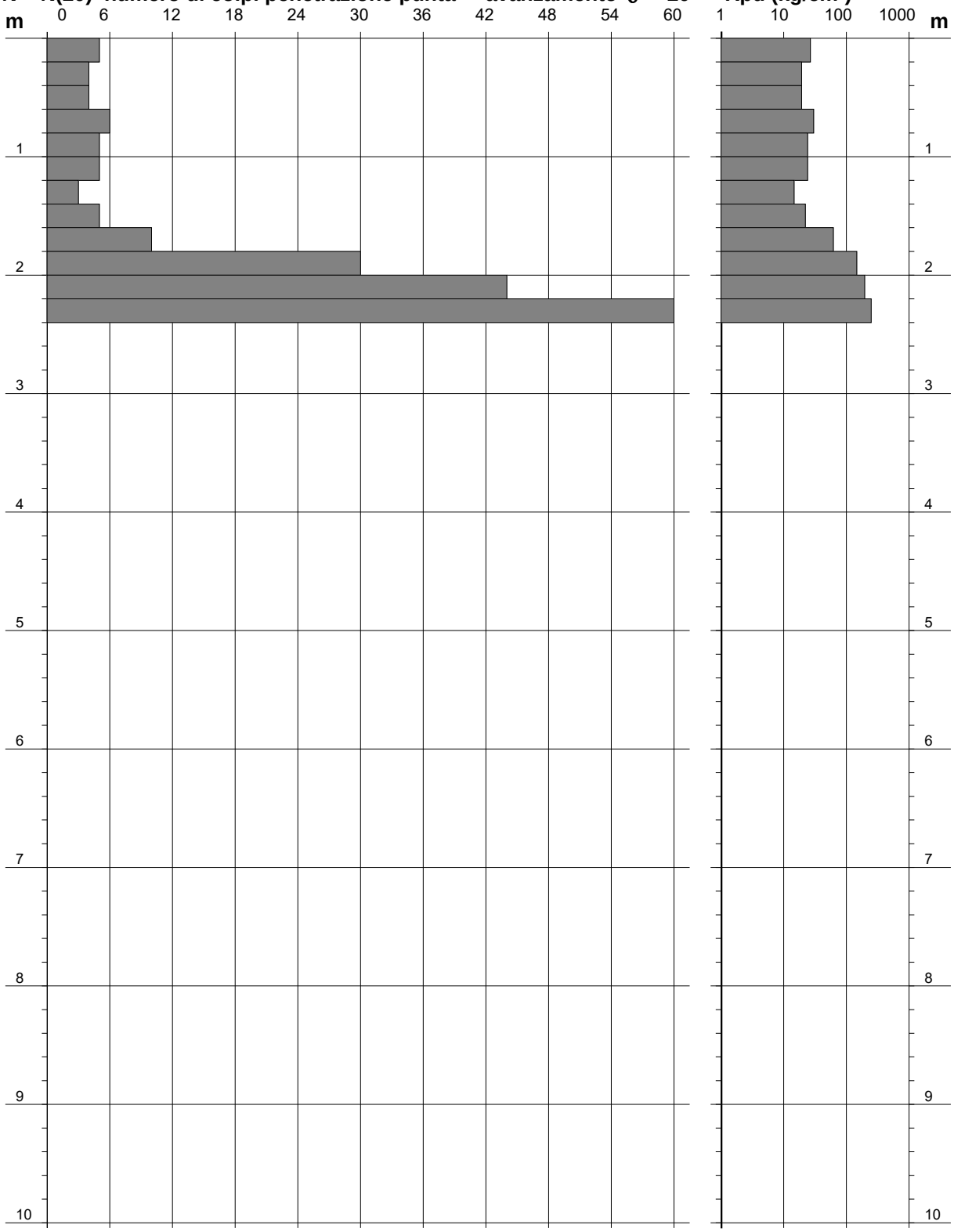
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 031
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-031
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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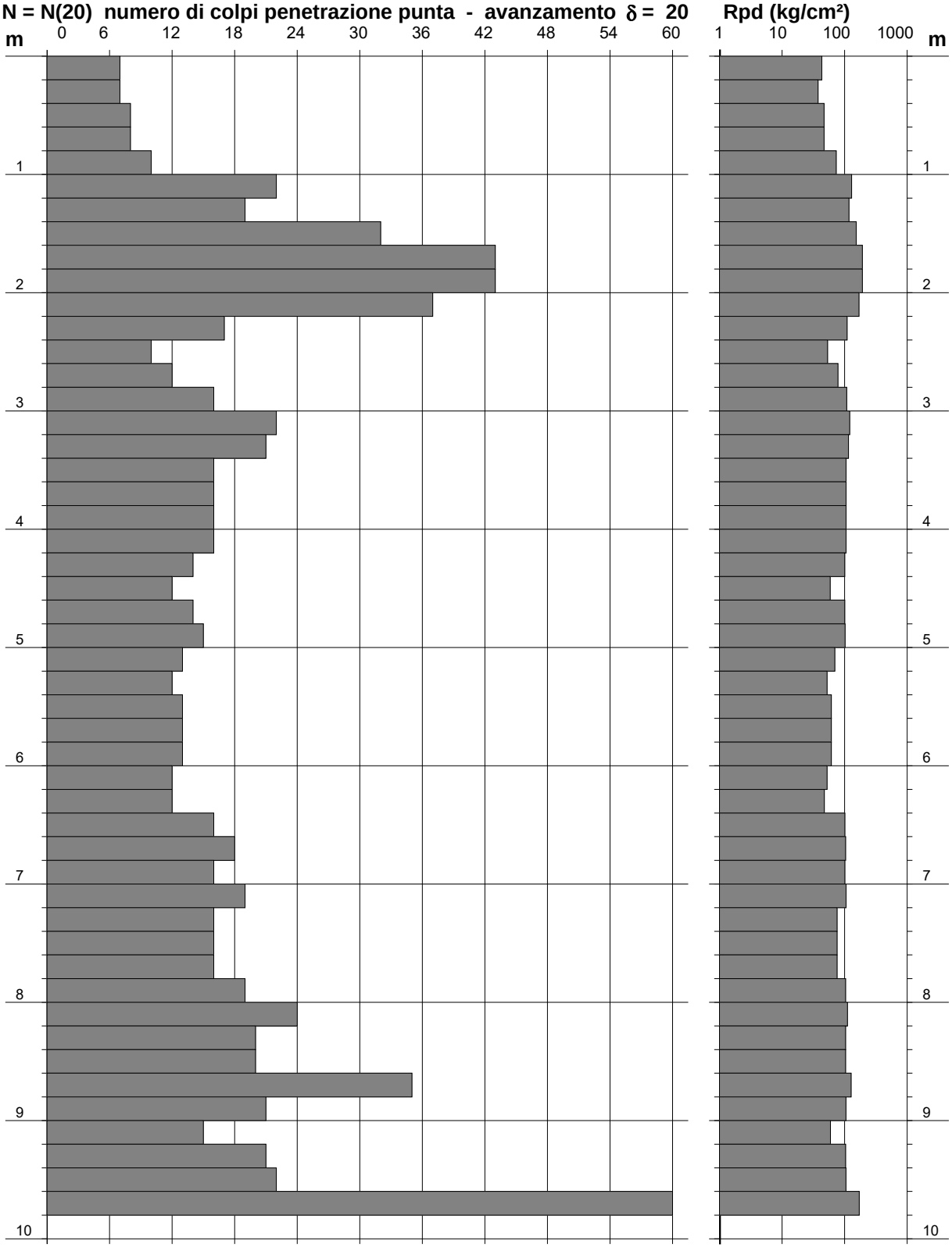
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 032
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-032
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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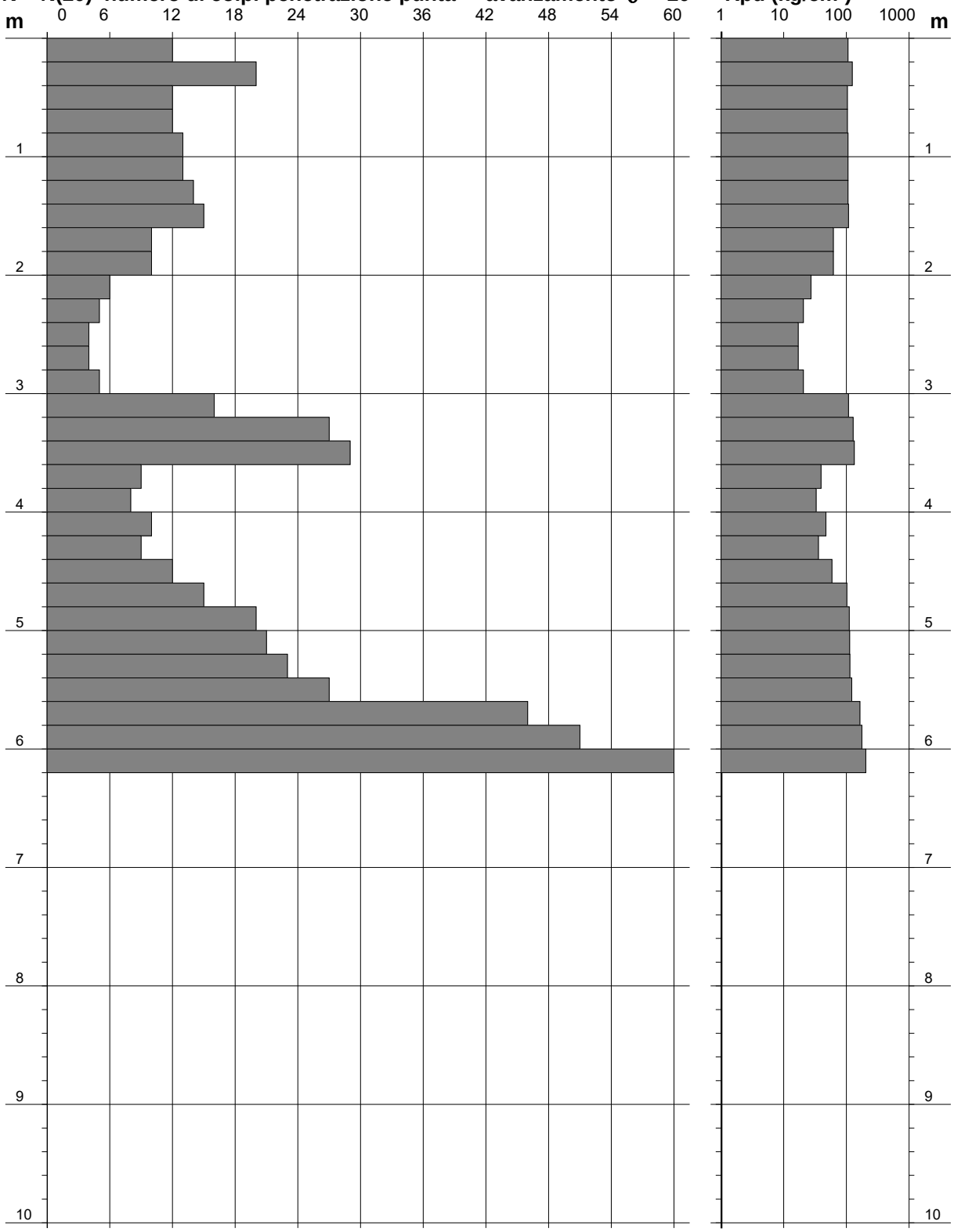
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 033
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	27/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-033
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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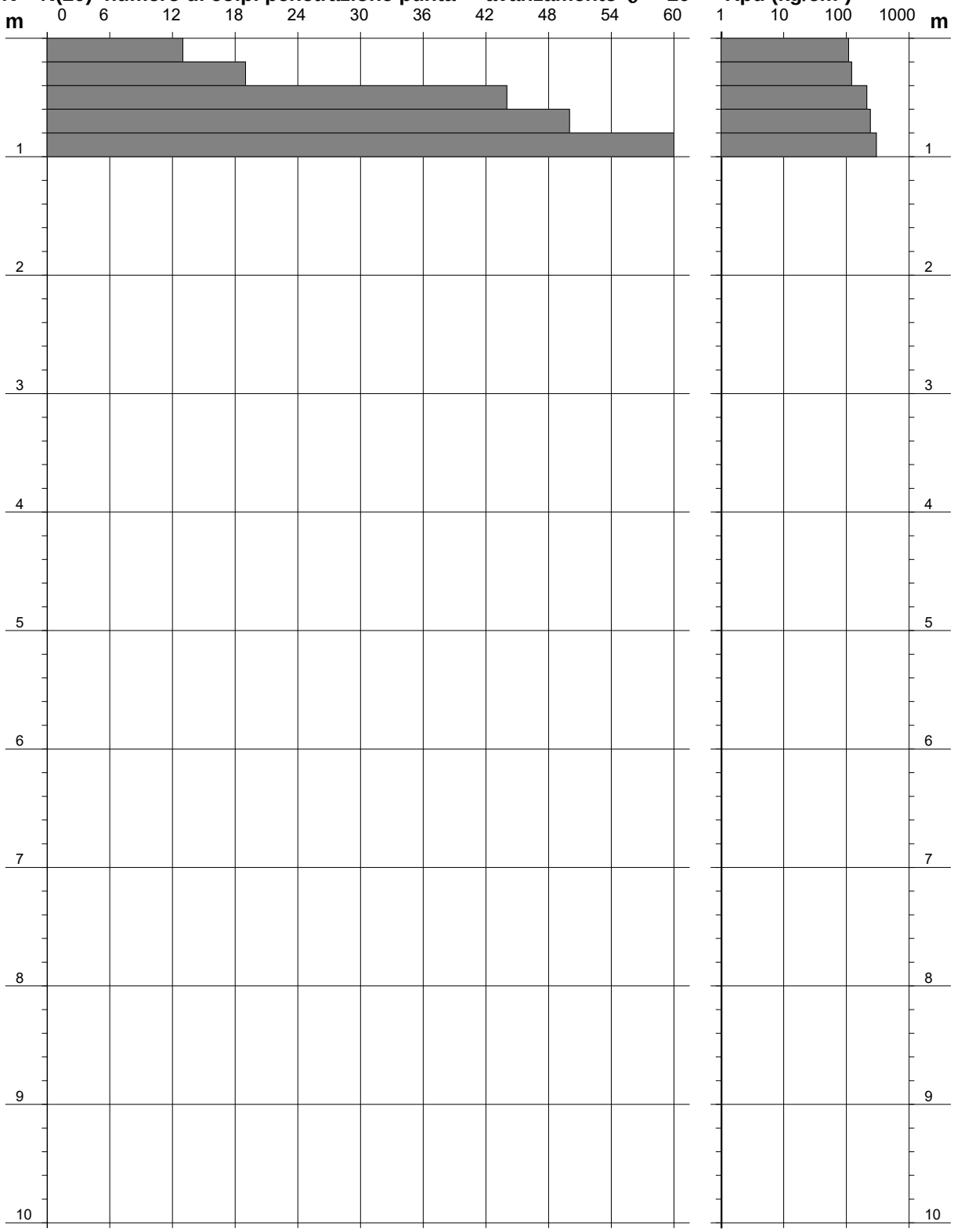
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 035
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-035
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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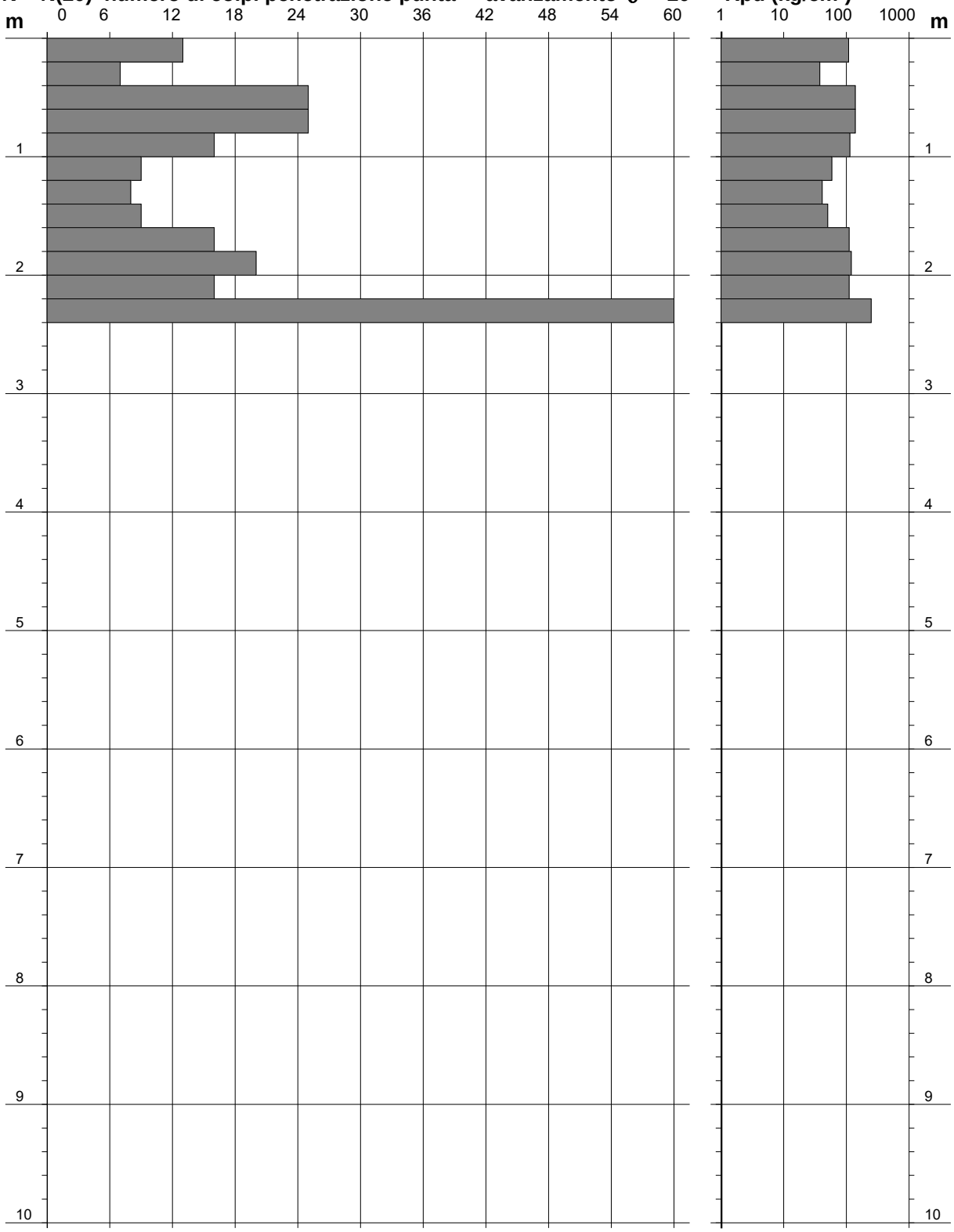
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 036
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-036
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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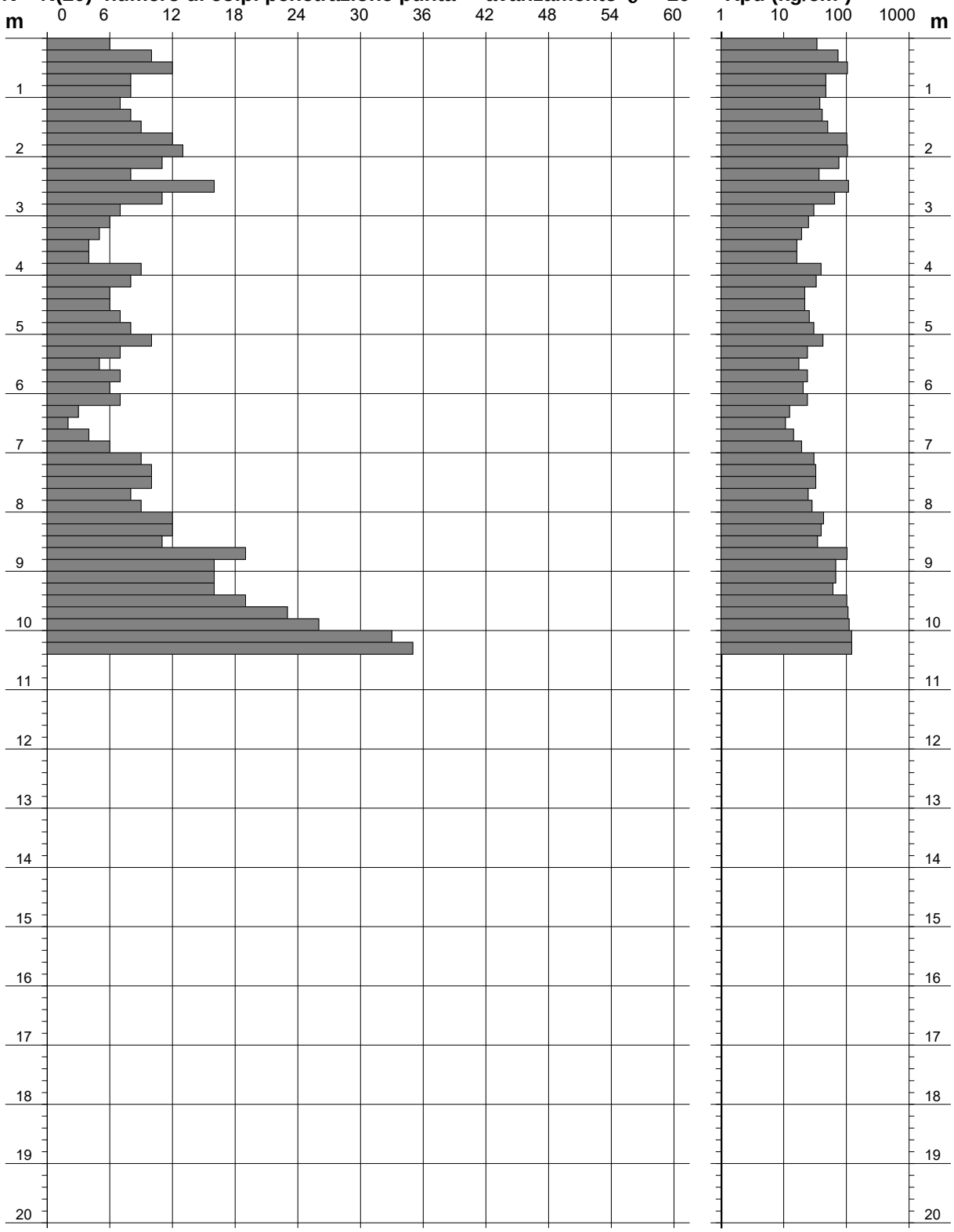
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 042
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-042
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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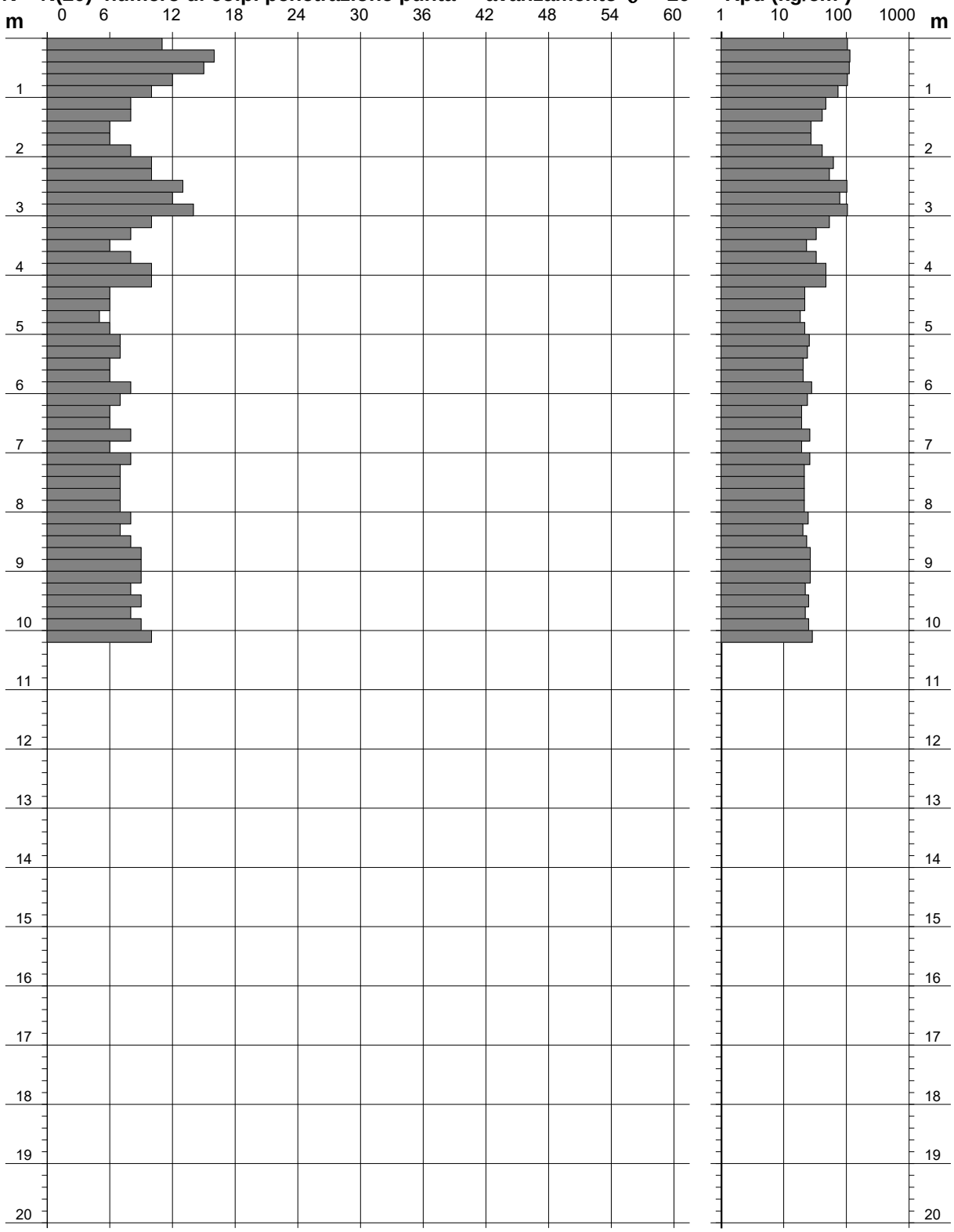
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 037
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-037
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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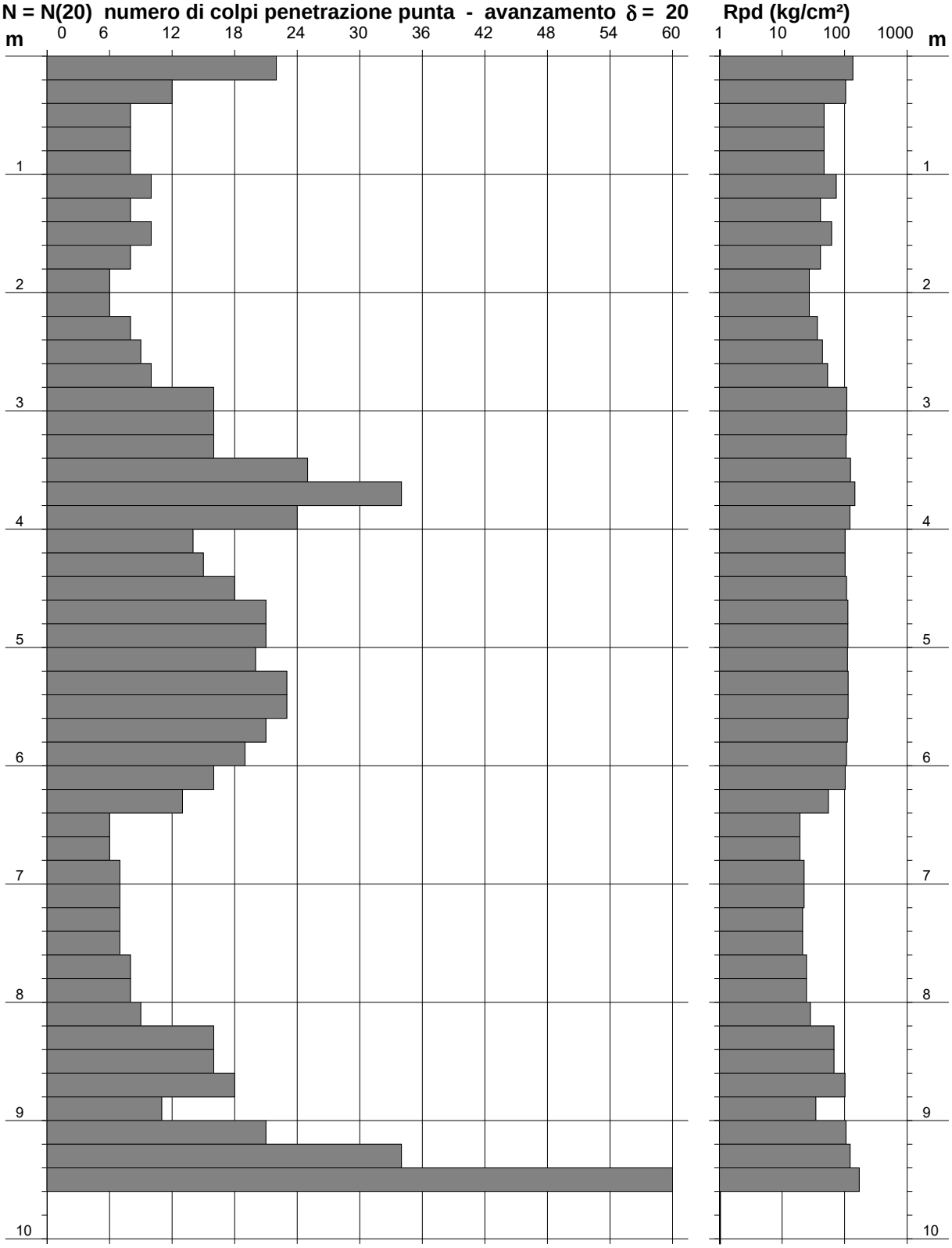
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 040
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-040
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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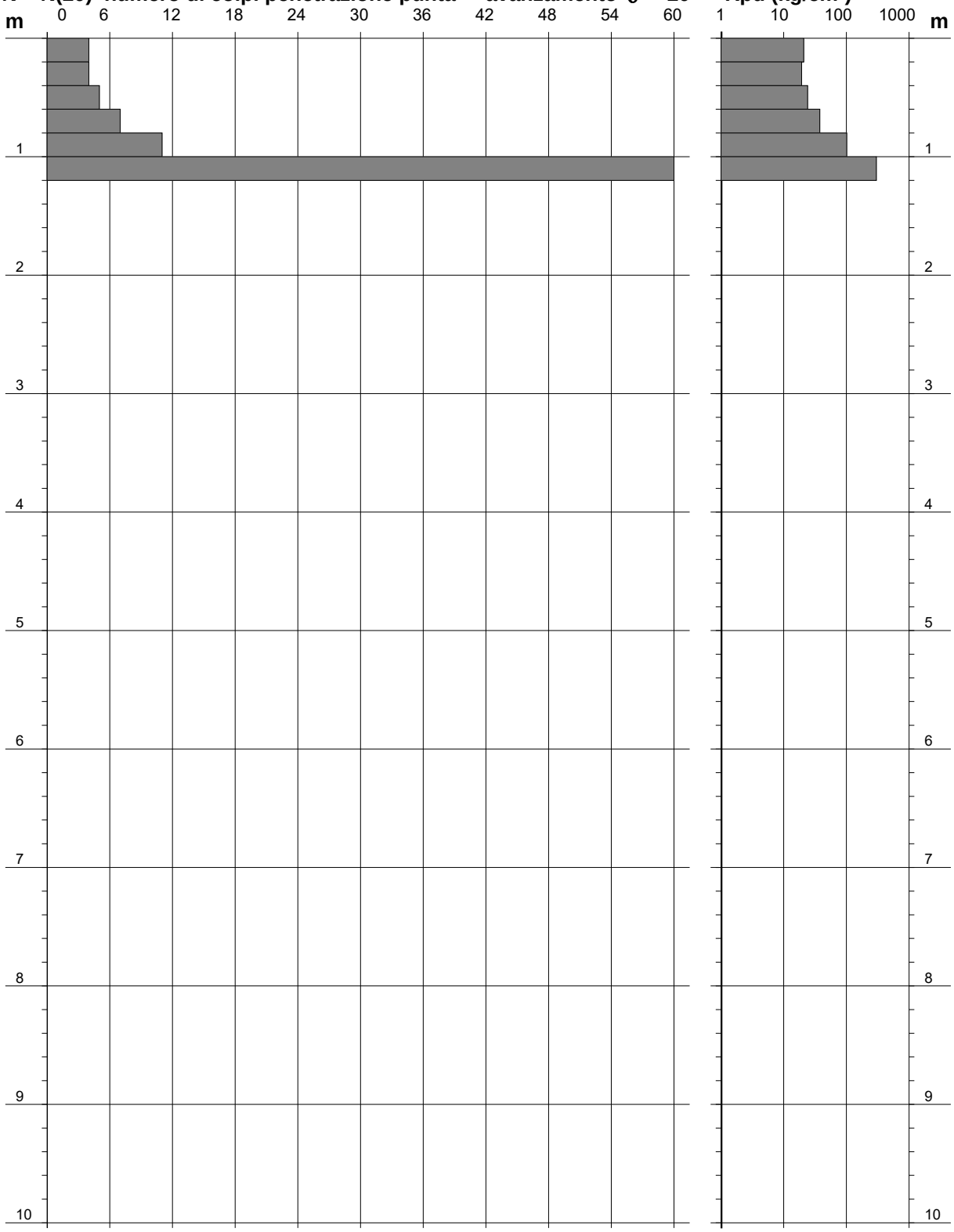
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 041
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-041
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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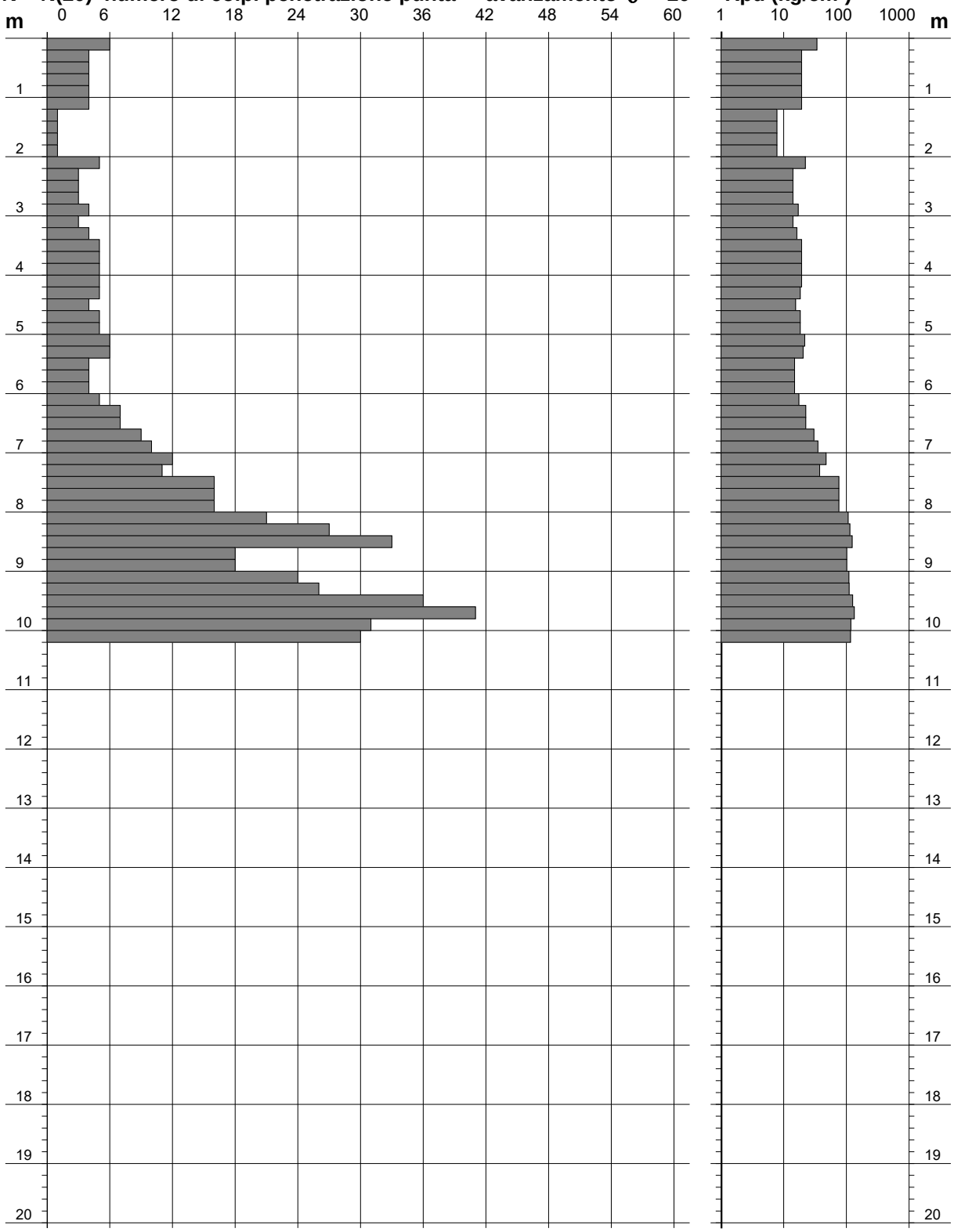
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 043
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-043
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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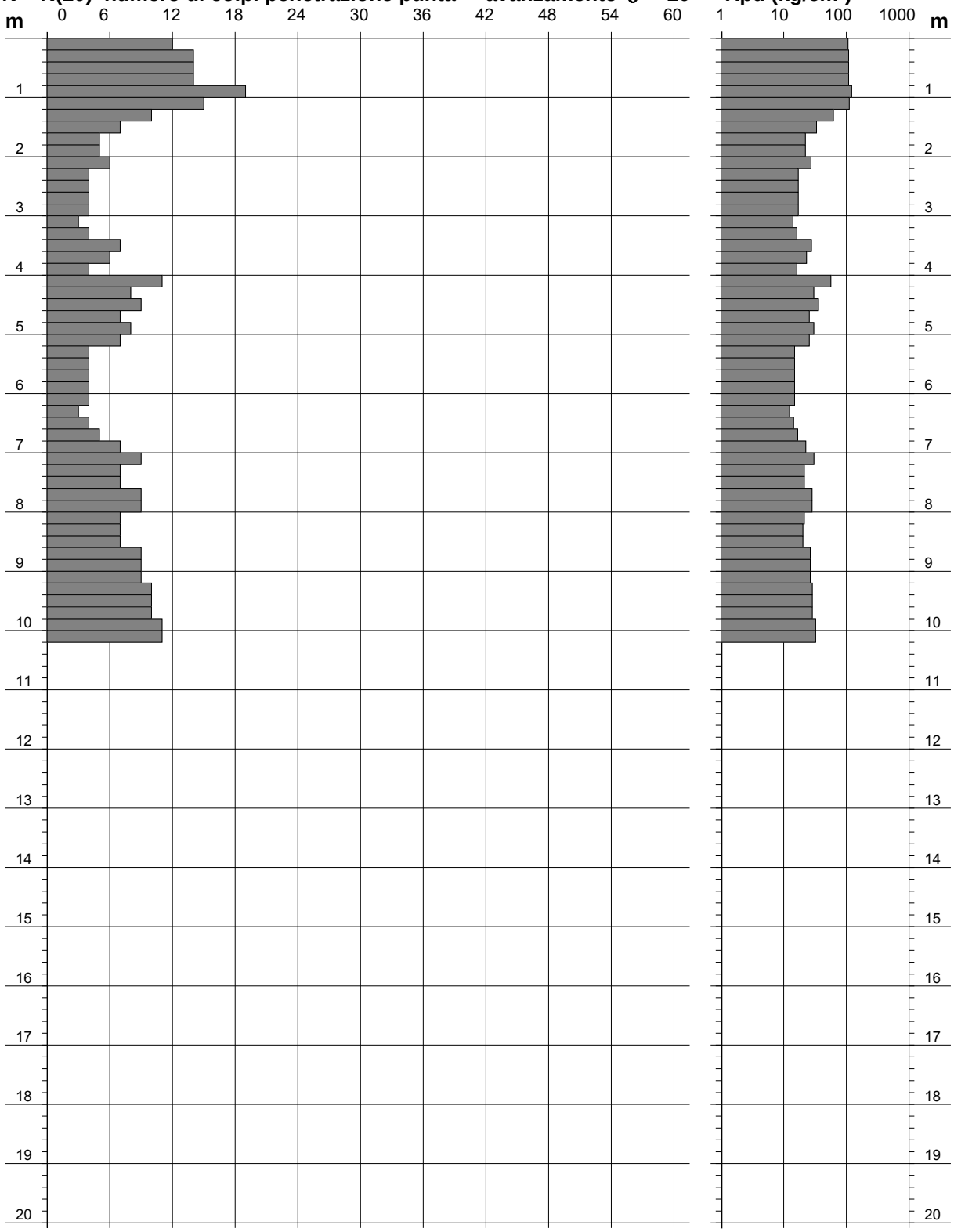
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 044
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-044
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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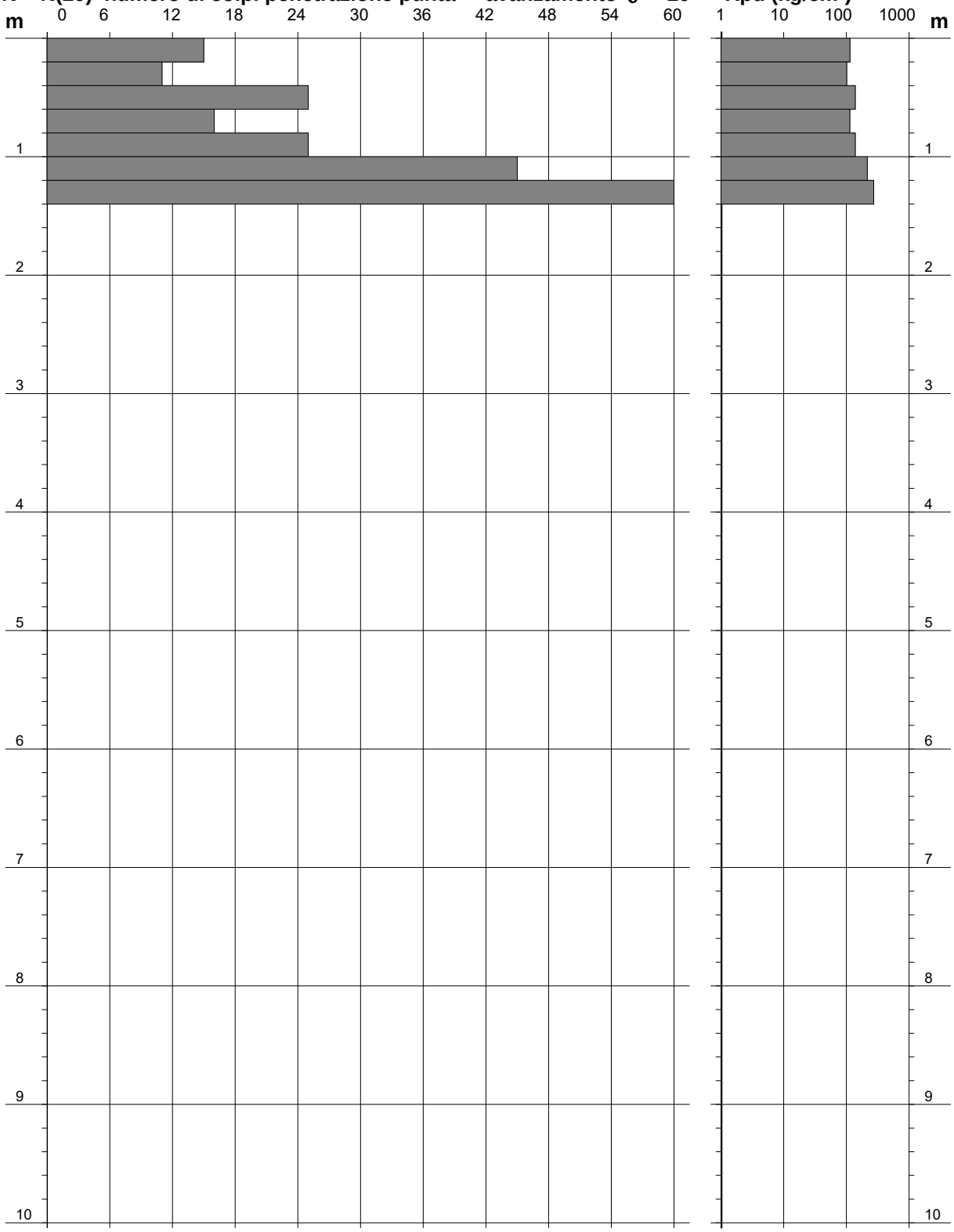
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 045
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-045
- località :	Guardia Sanframondi (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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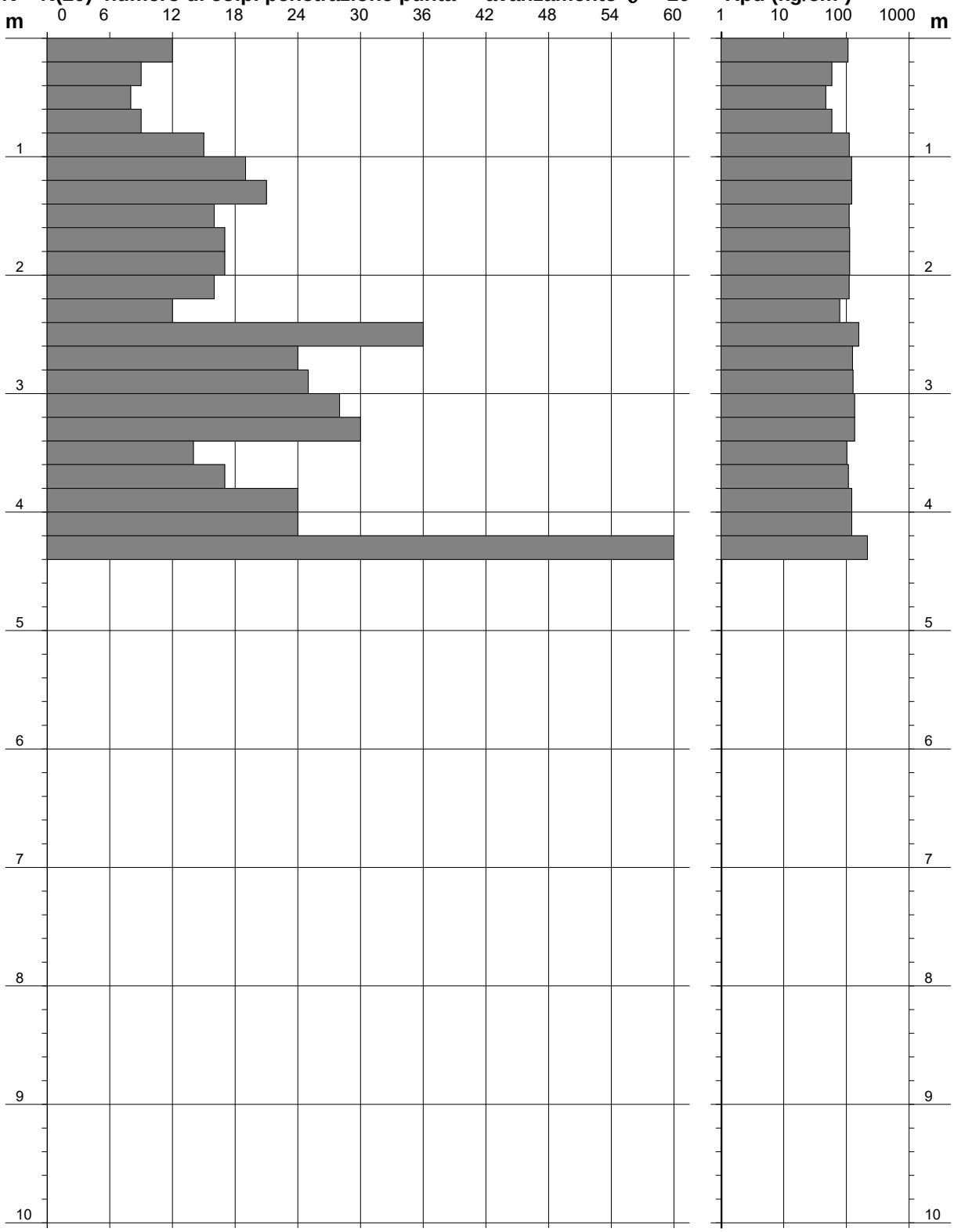
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 054
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	31/08/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-054
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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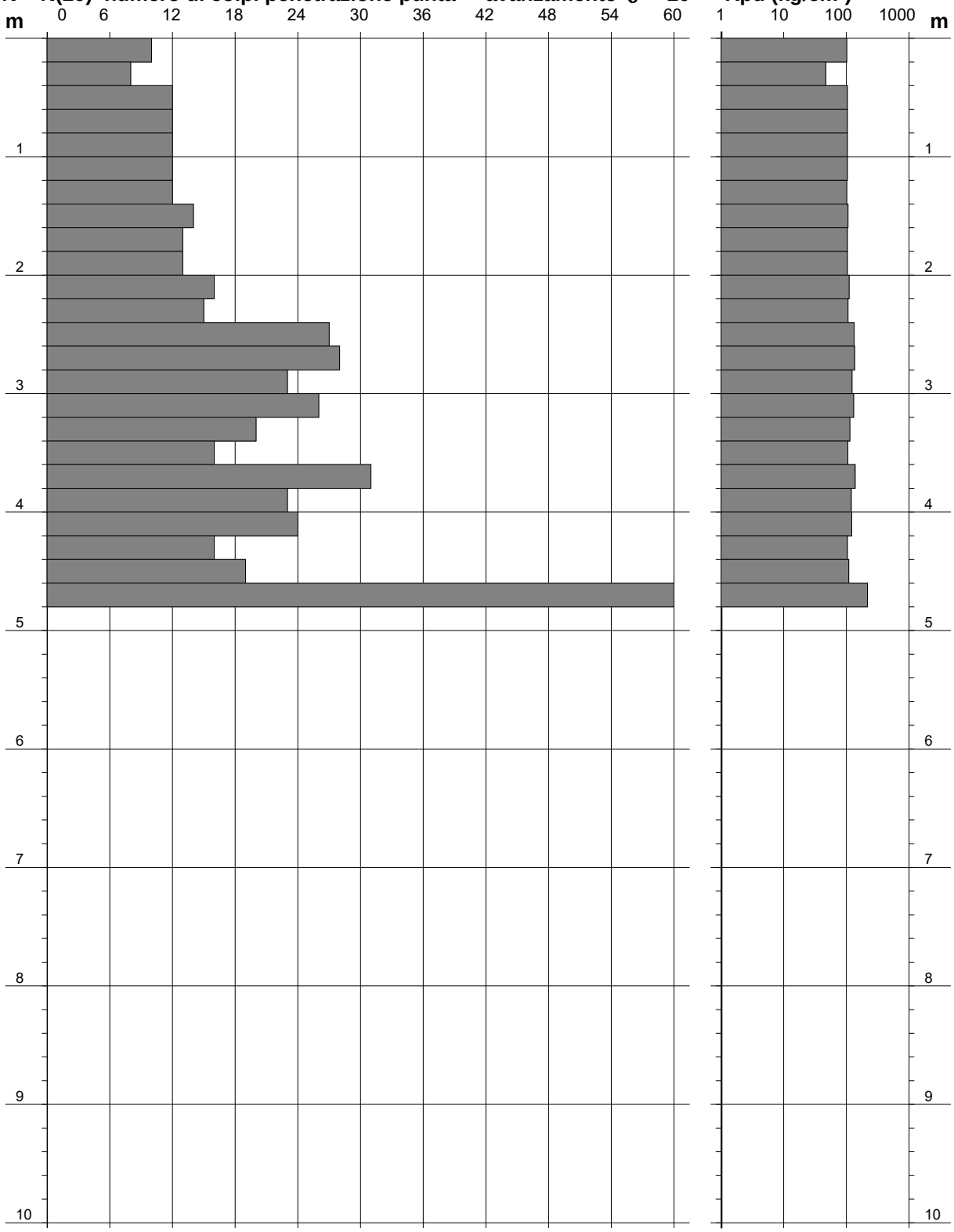
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 062
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	01/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-062
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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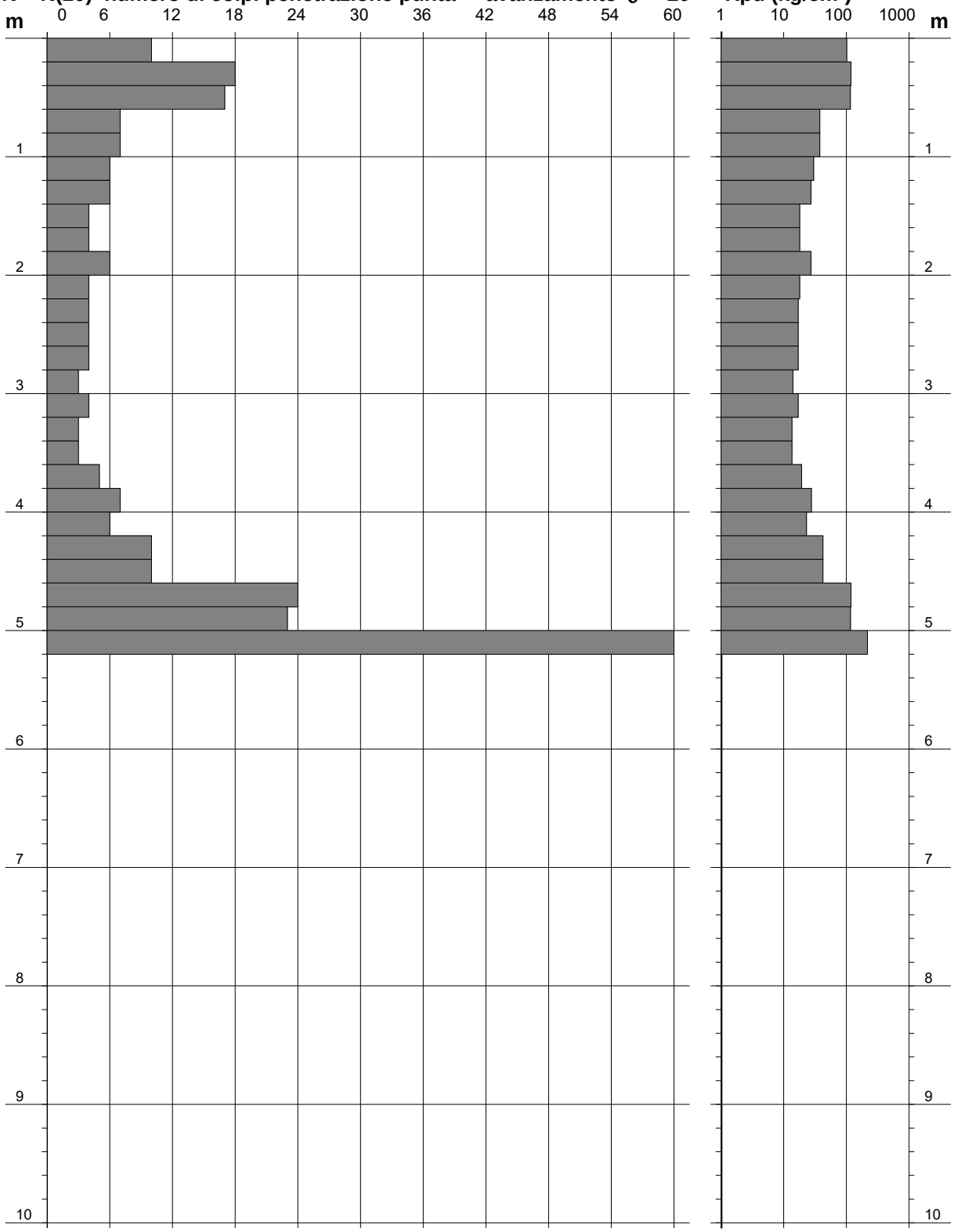
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 063
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	01/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-063
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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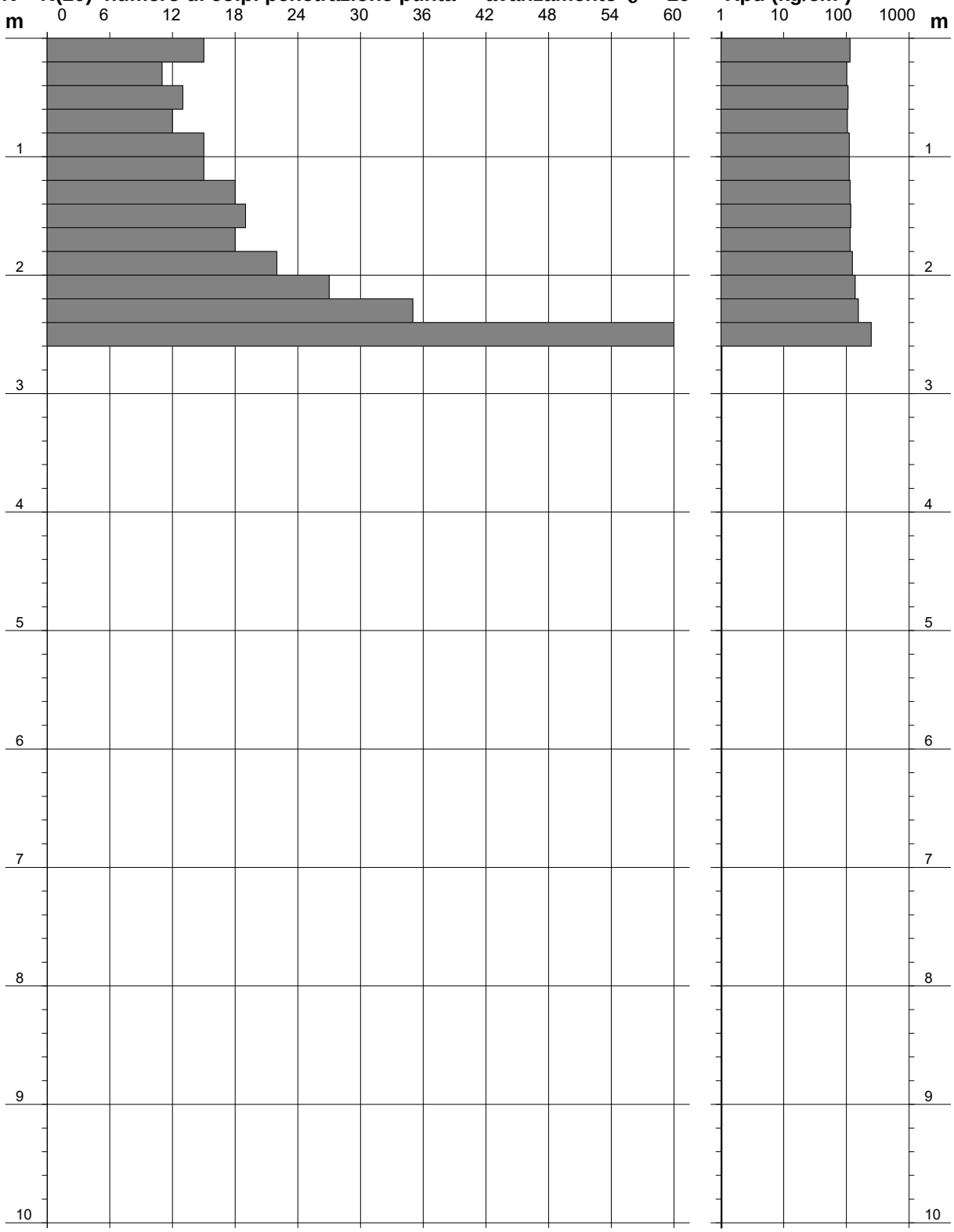
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 067
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-067
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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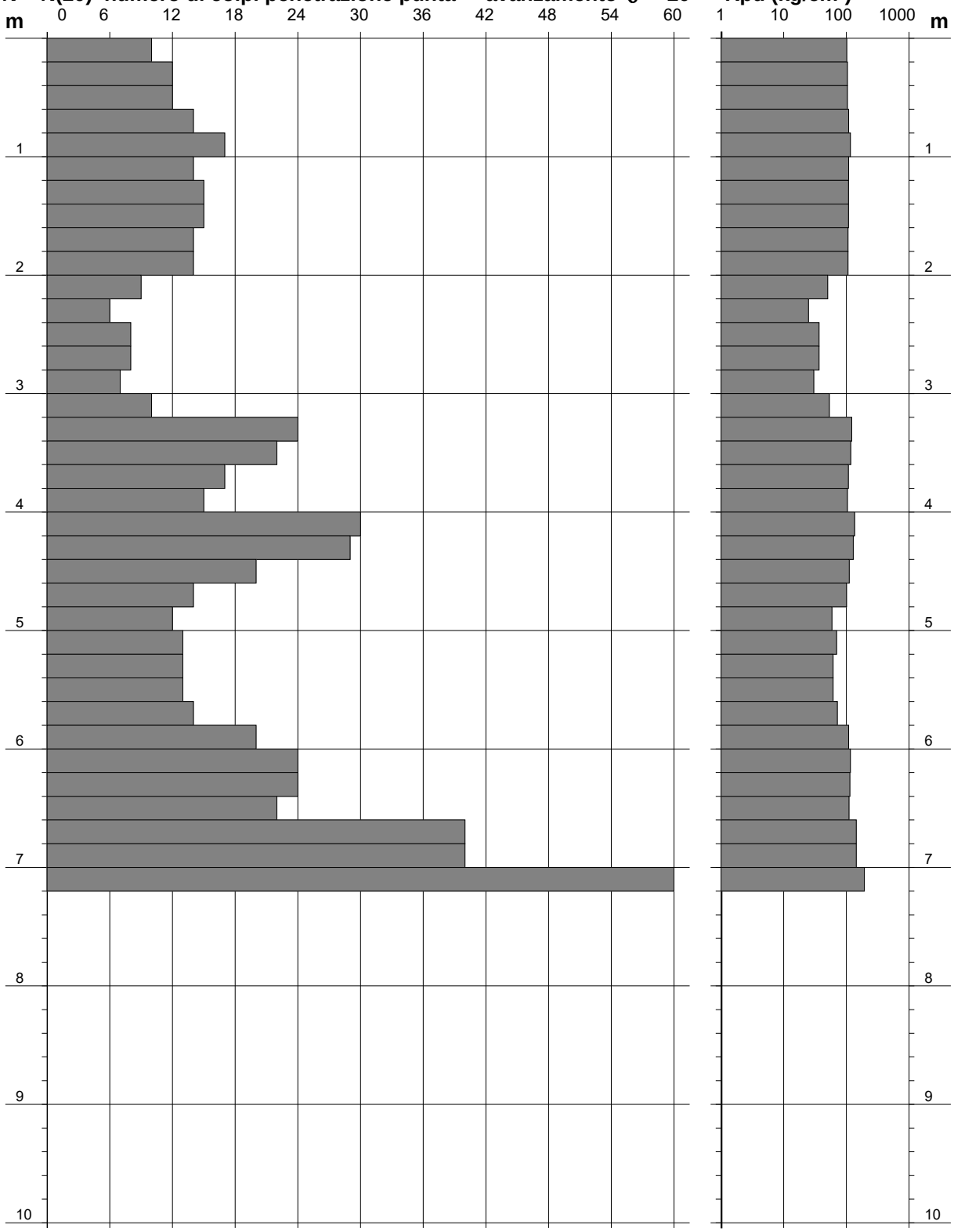
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 068
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-068
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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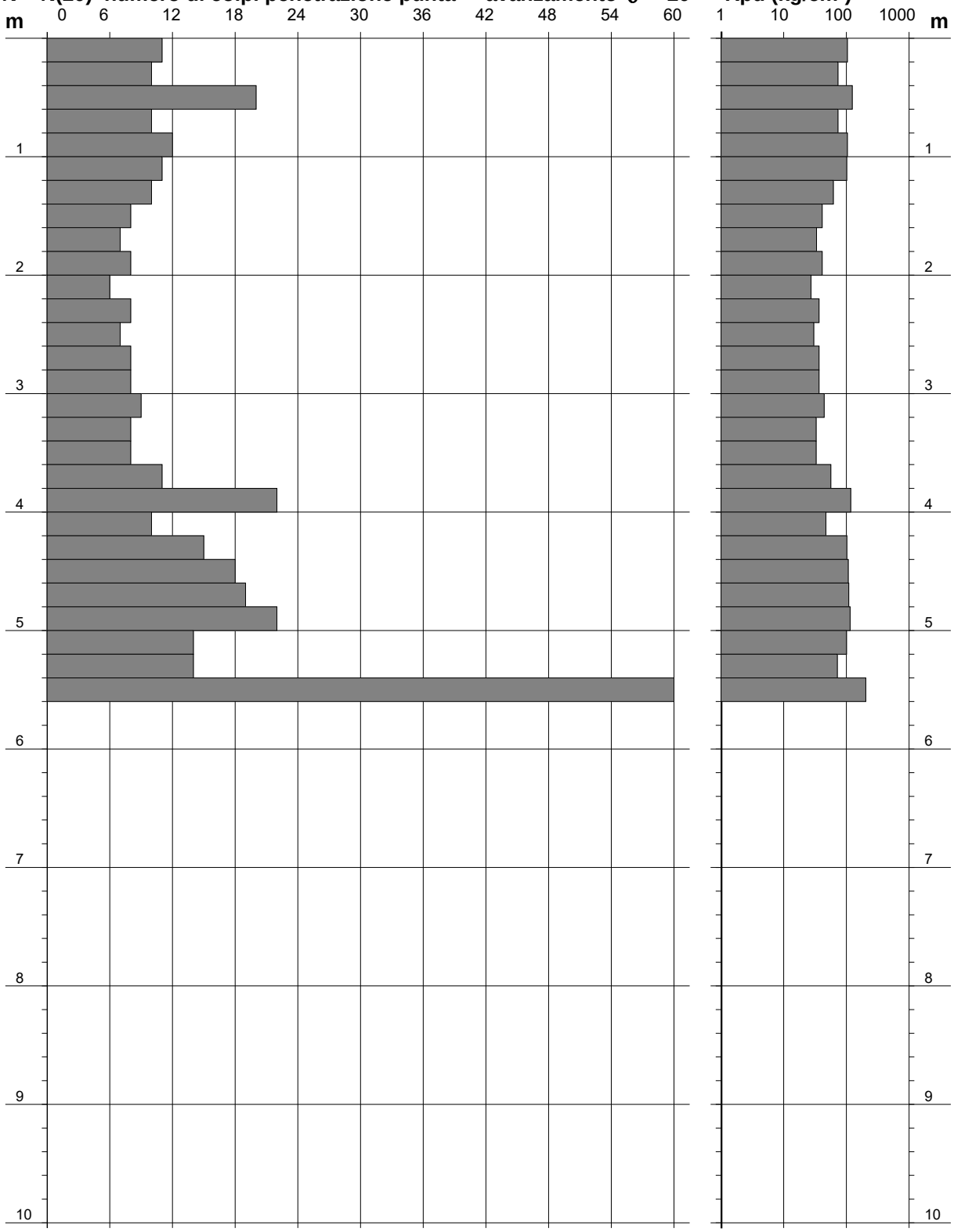
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 069
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-069
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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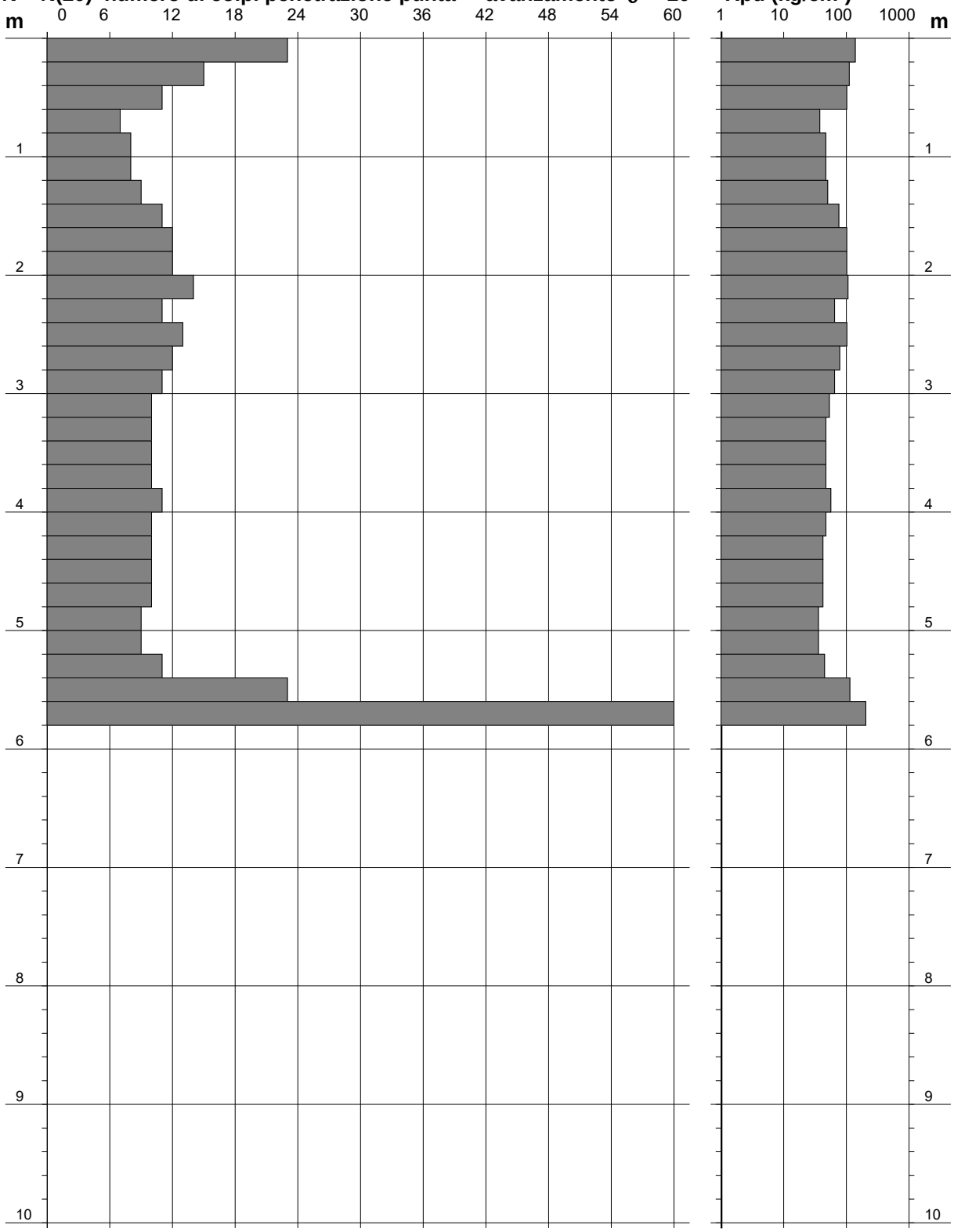
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 073
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	02/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-073
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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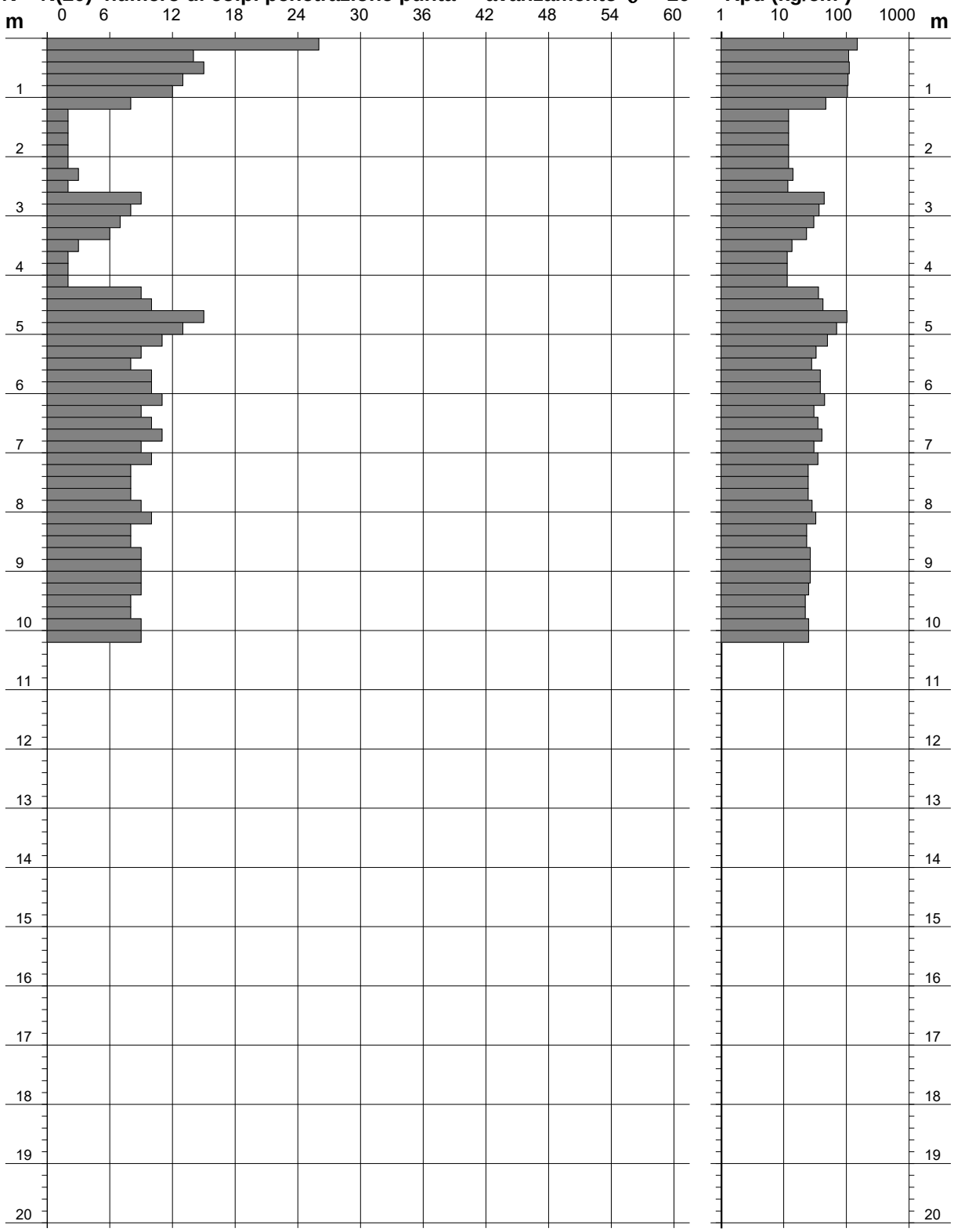
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 076
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	03/09/2020
- cantiere :	Interv. utilizzo idropotabile acque invaso Campola	- quota inizio :	Cert 100-20-076
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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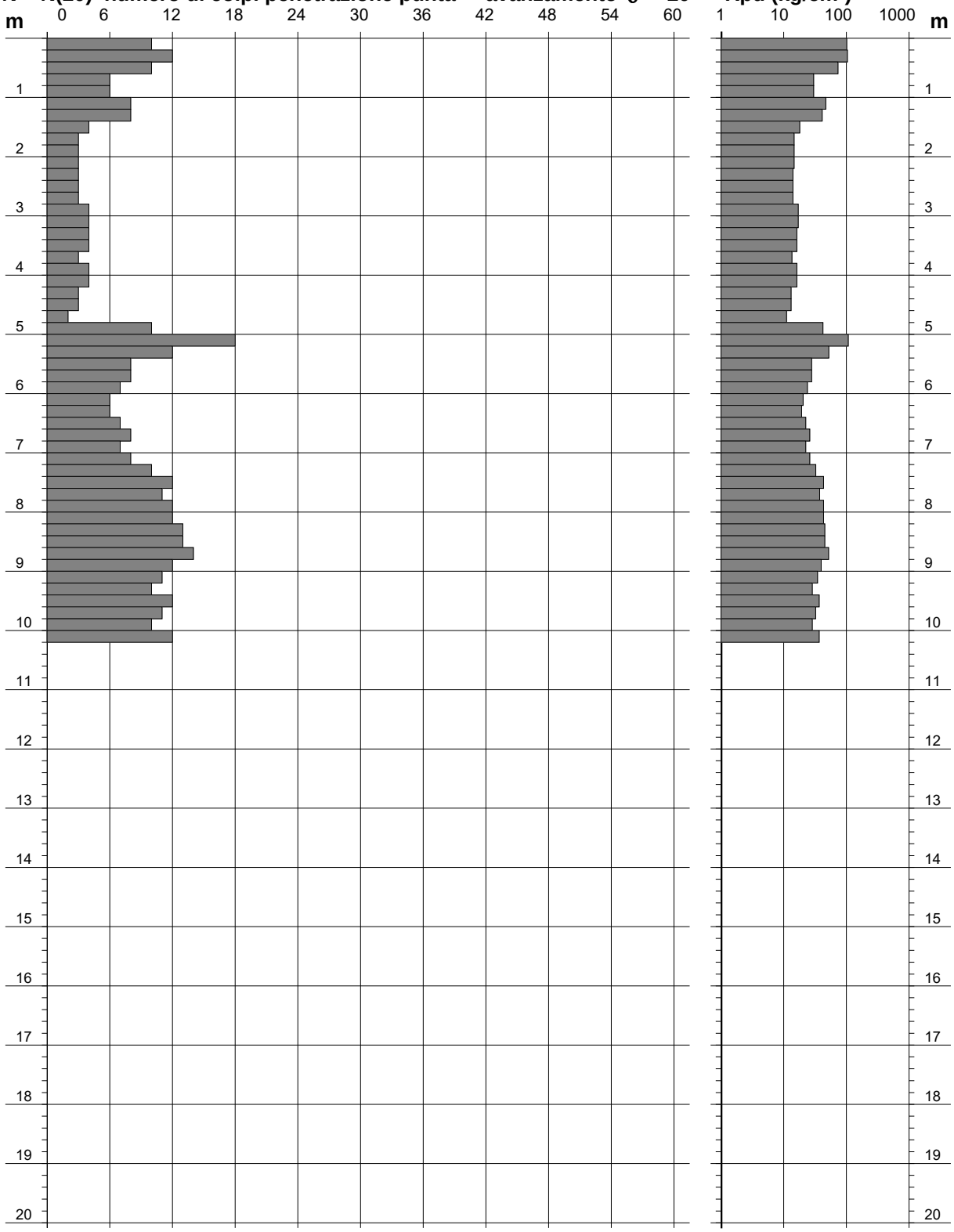
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 083
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-083
- località :	San Salvatore Telesino (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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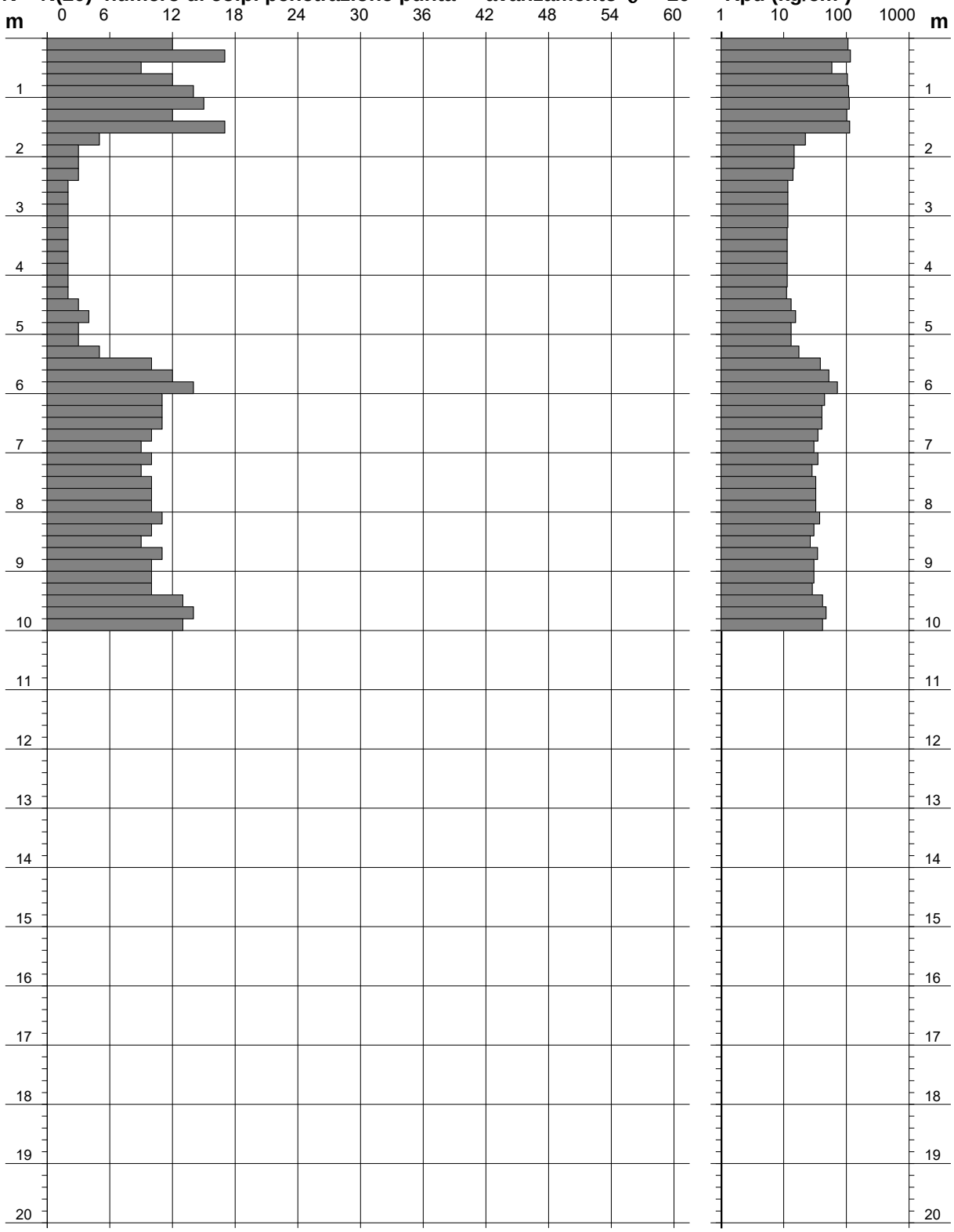
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 082
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-082
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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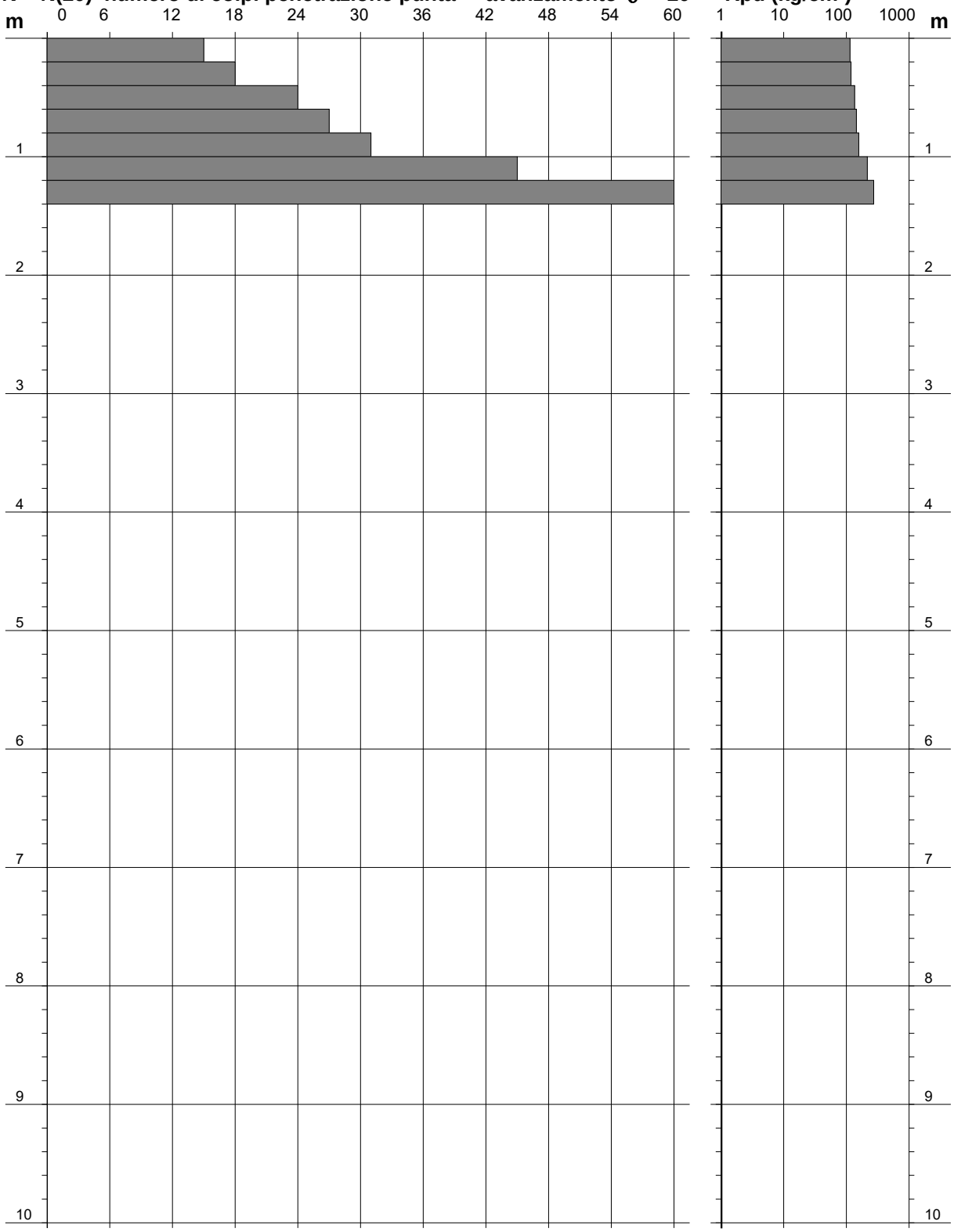
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 088
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-088
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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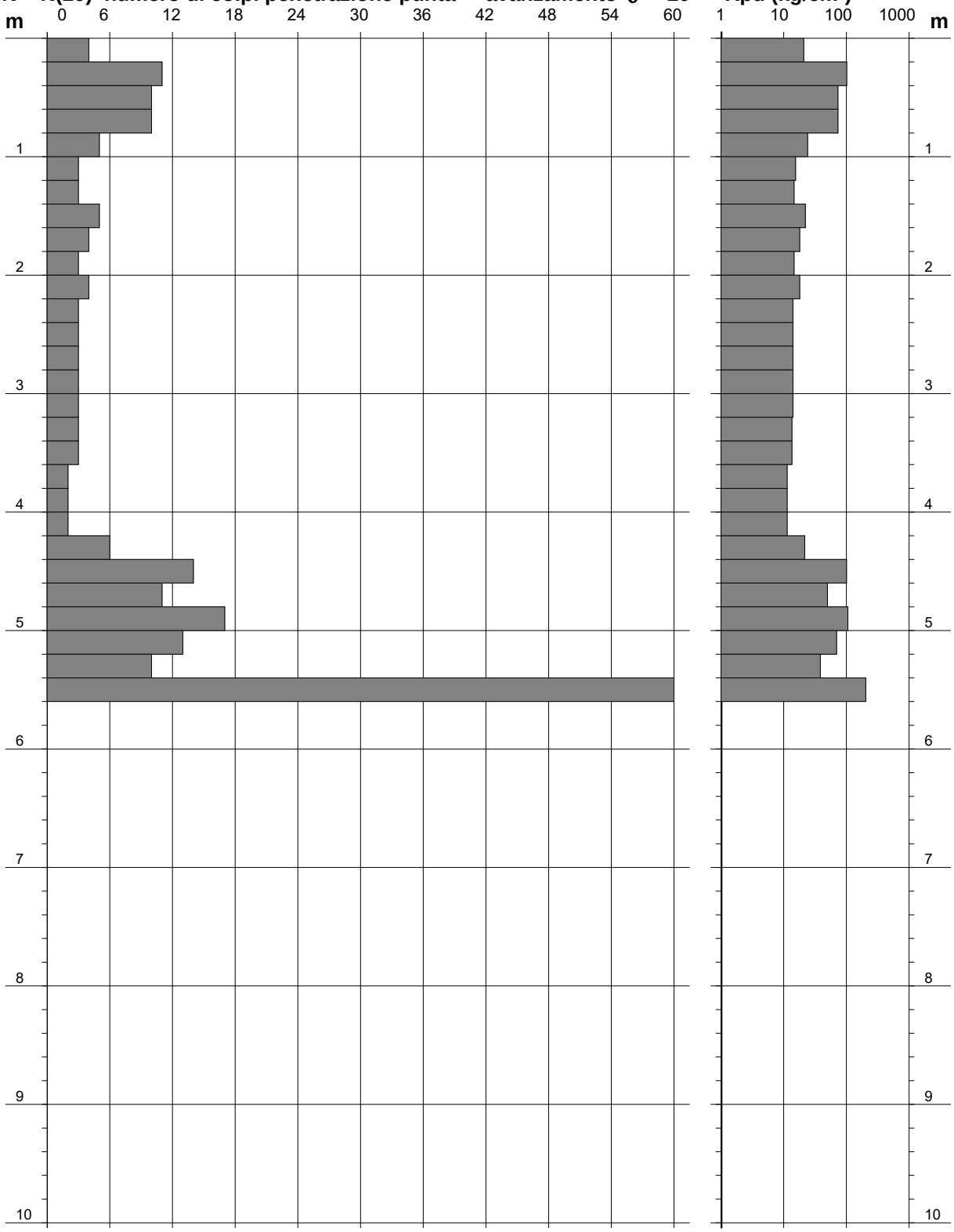
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 089
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	04/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-089
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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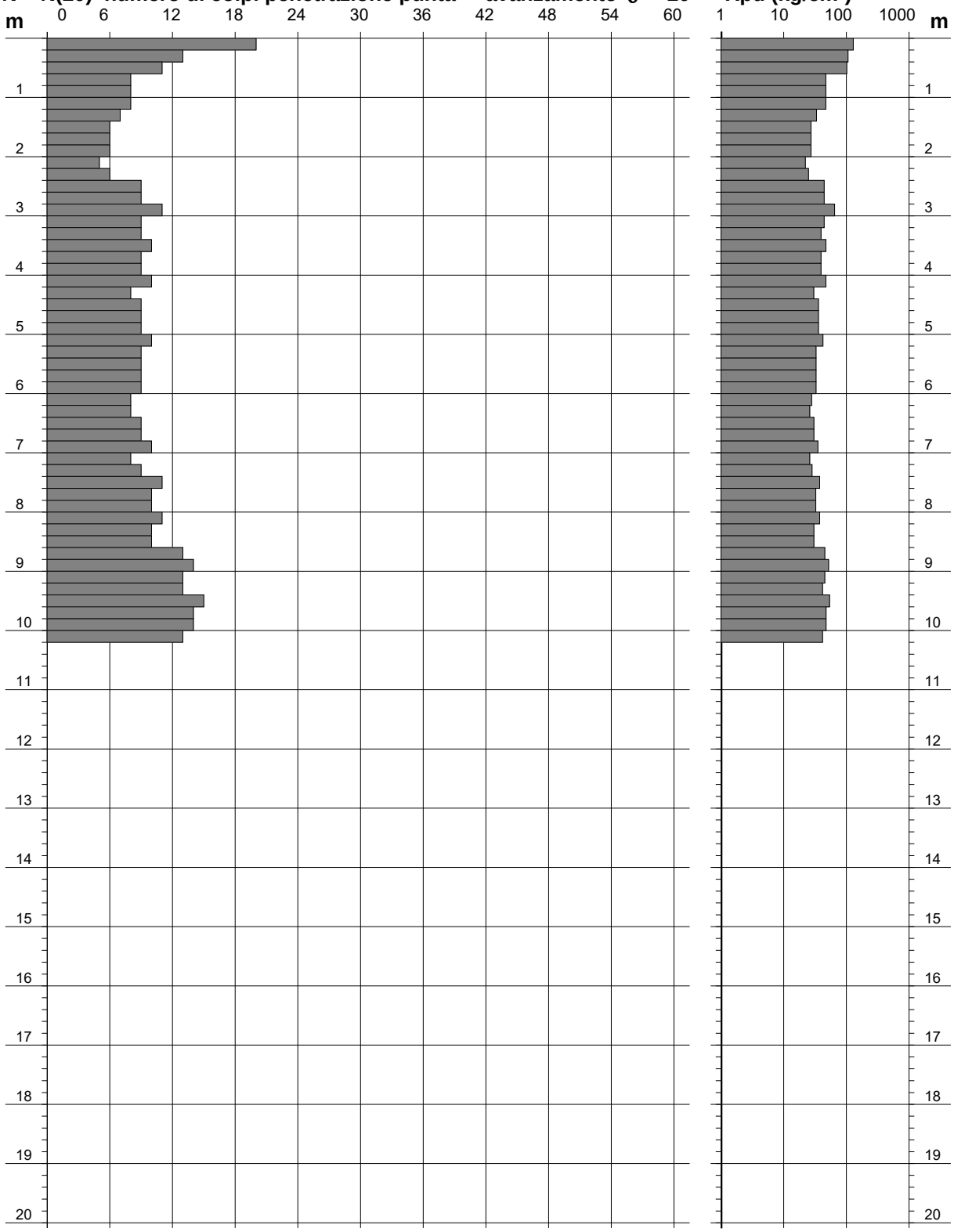
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 092
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	05/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-092
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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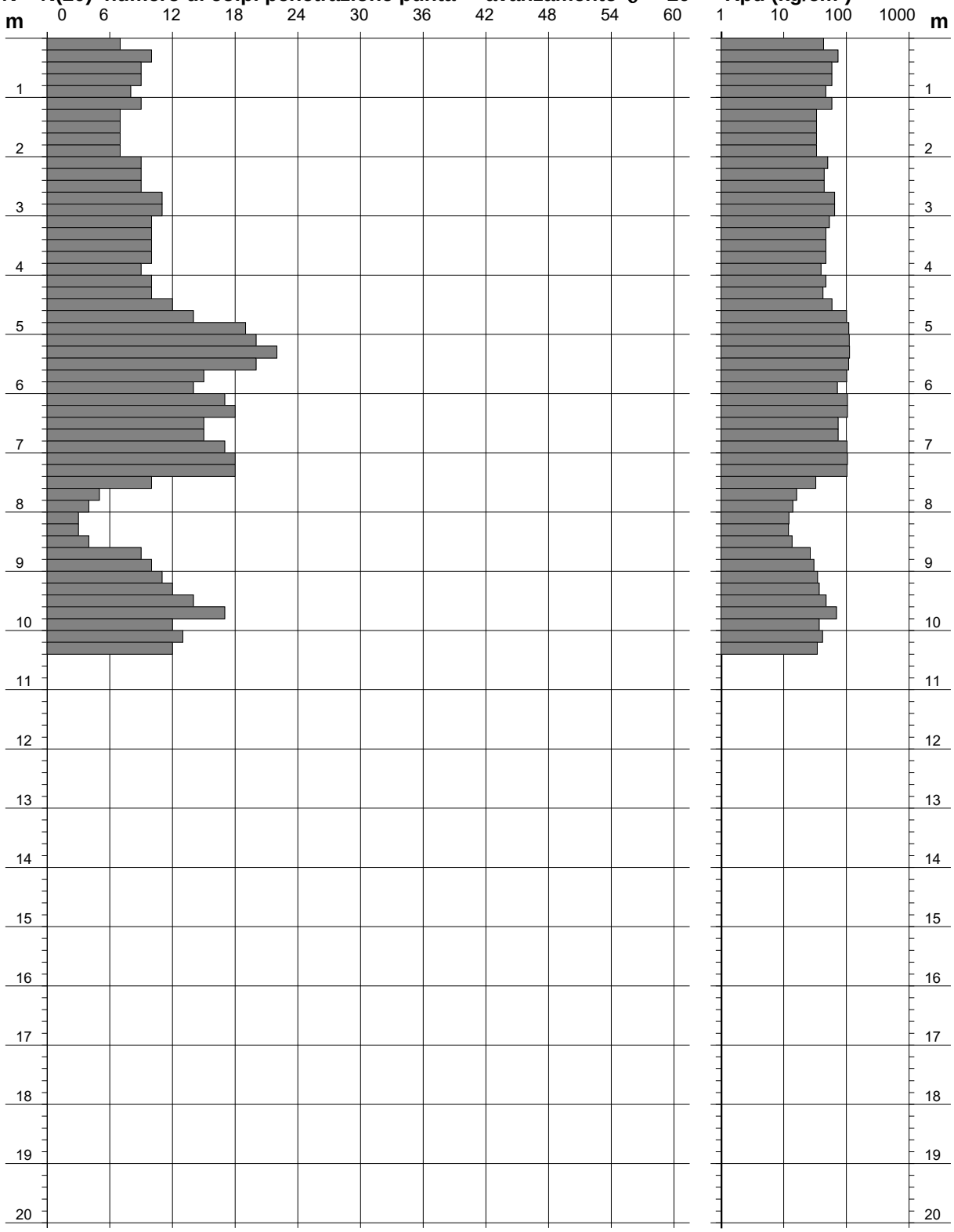
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 097
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-097
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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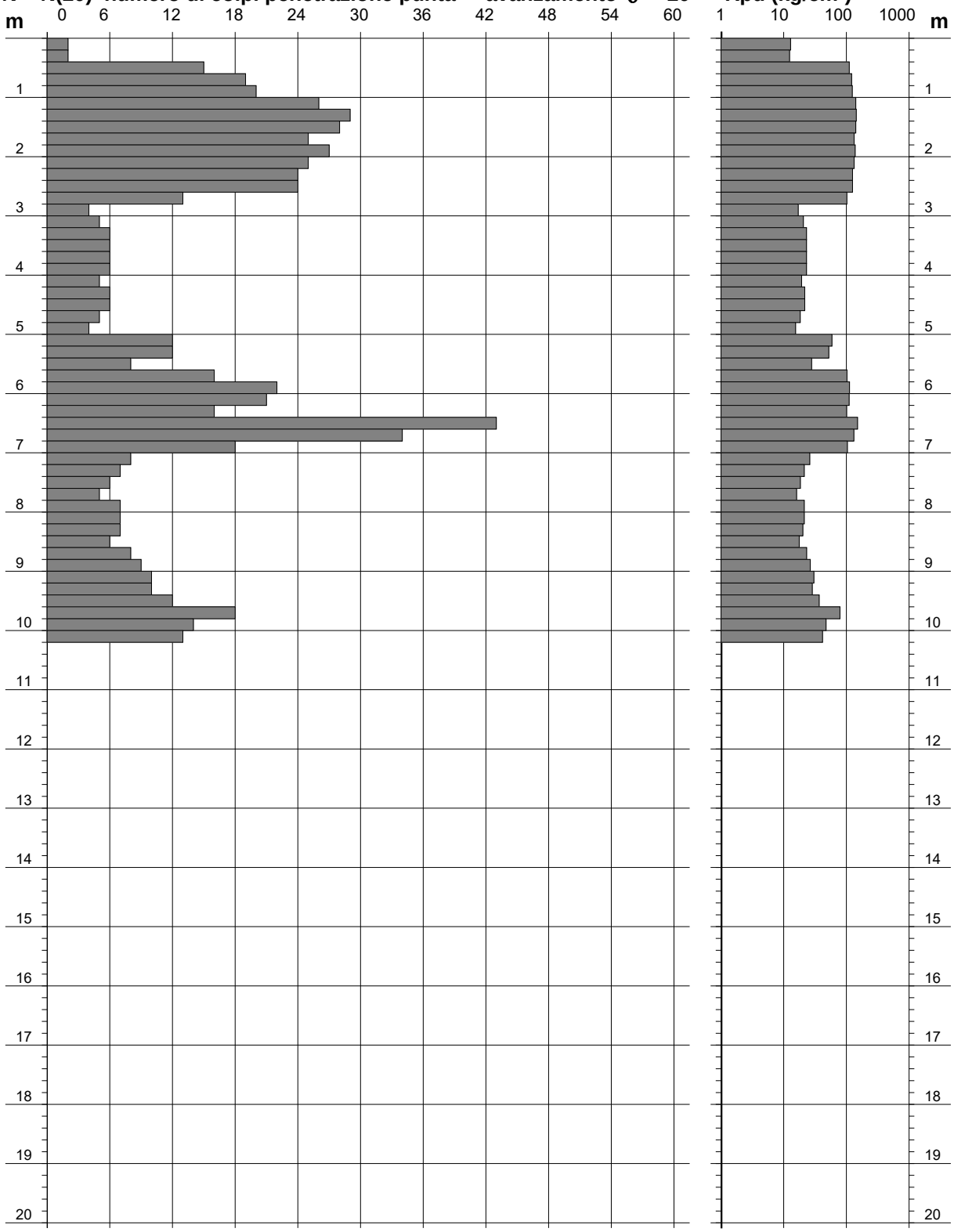
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 100
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-100
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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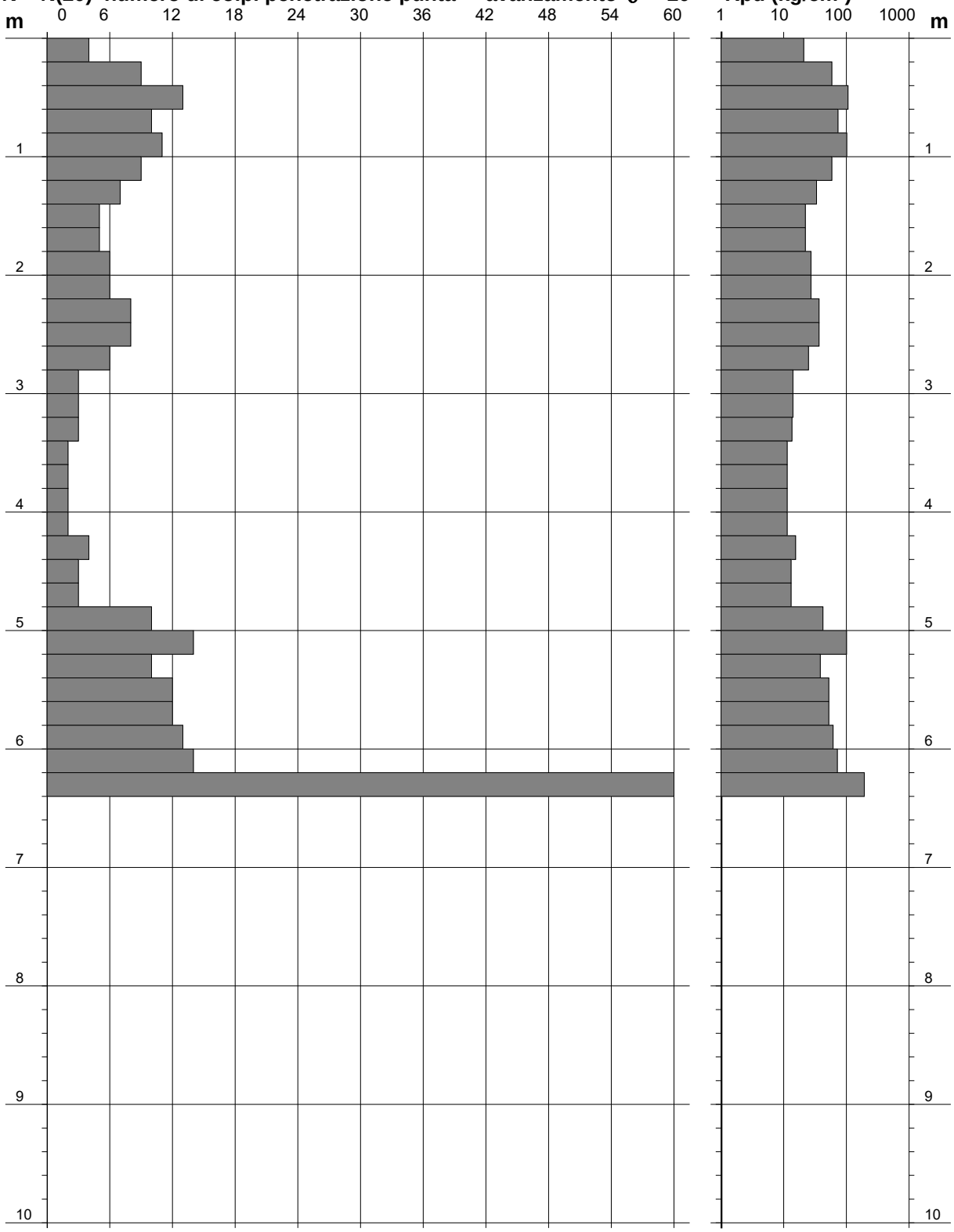
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 081
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-081
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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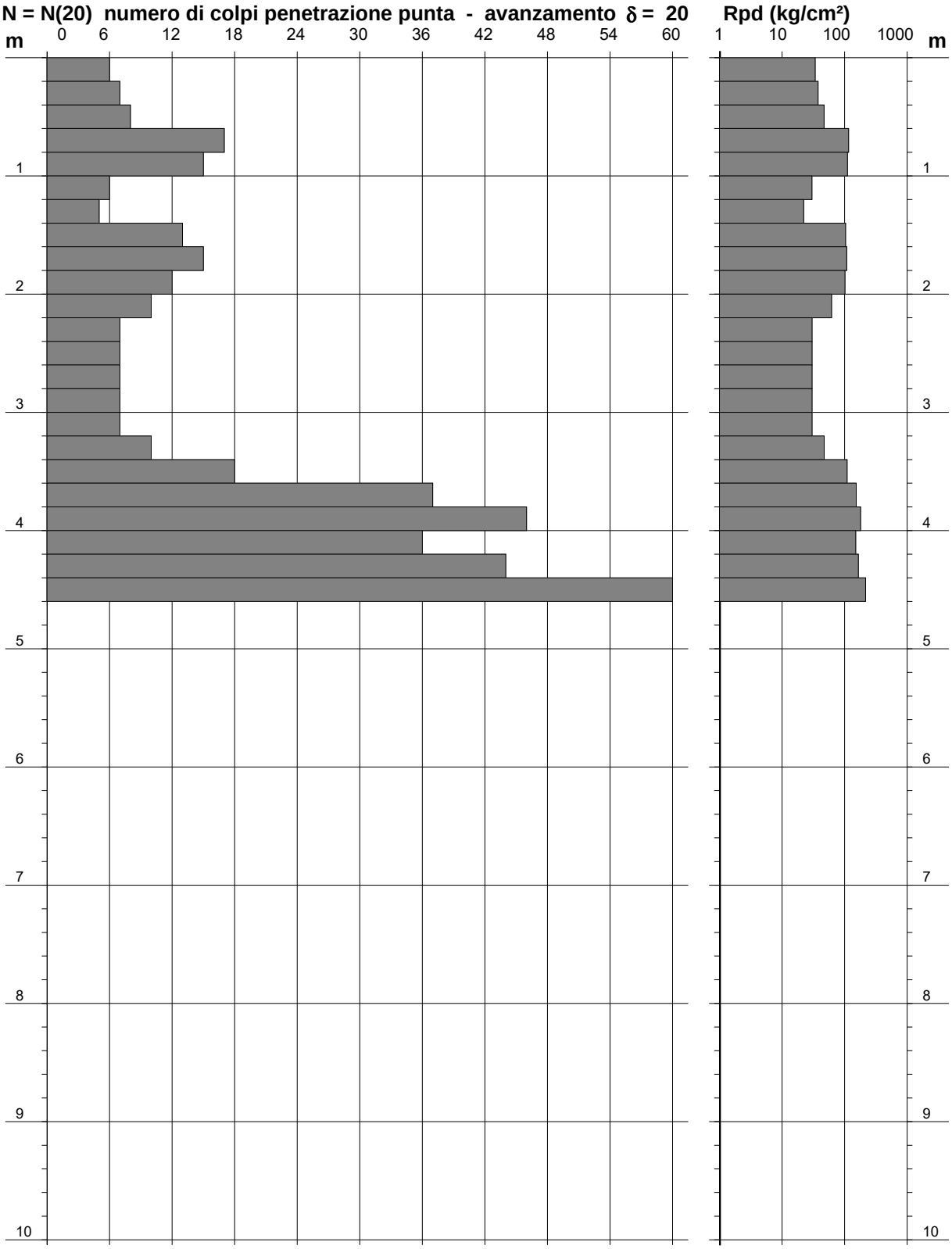
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 103
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-103
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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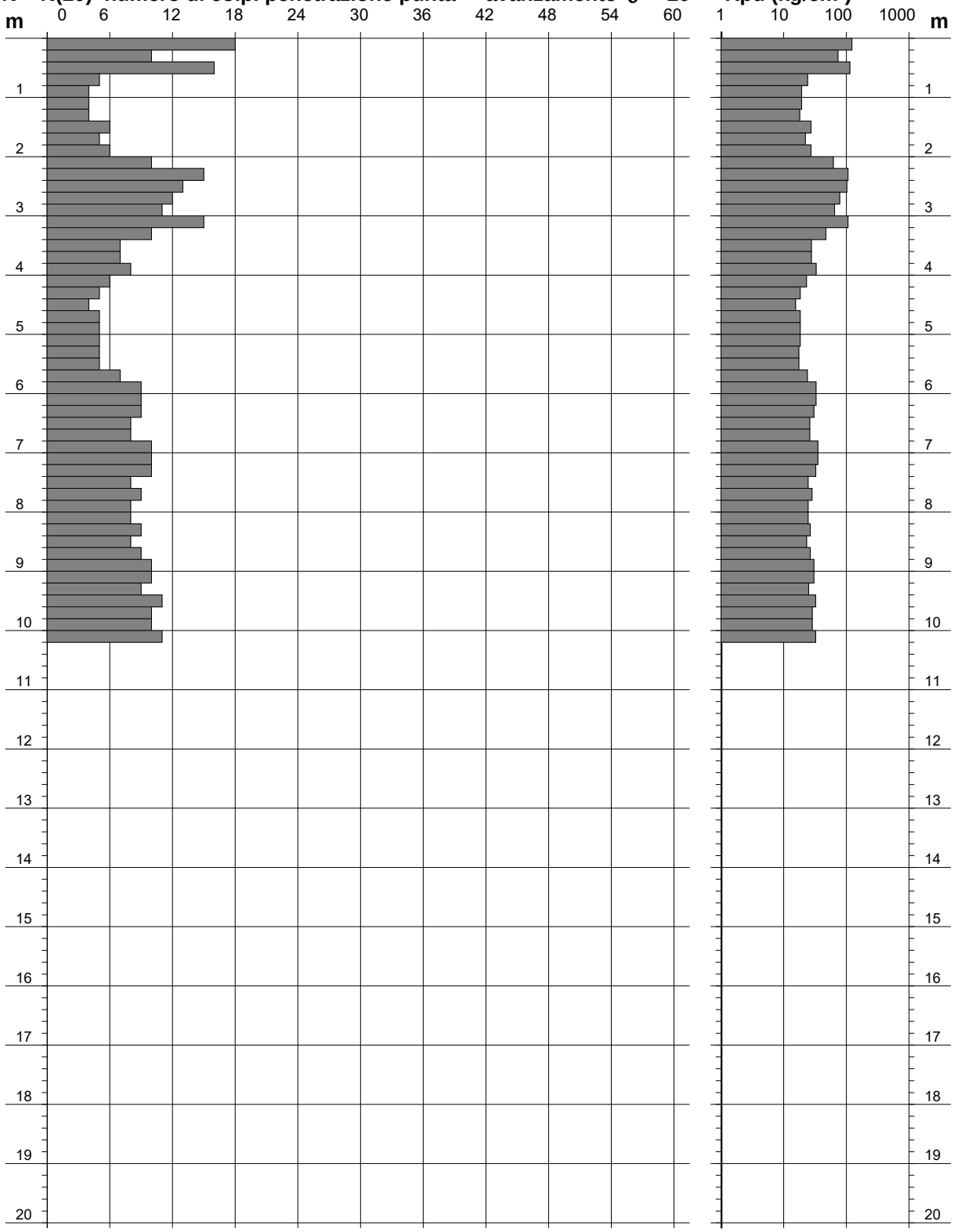
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 104
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-104
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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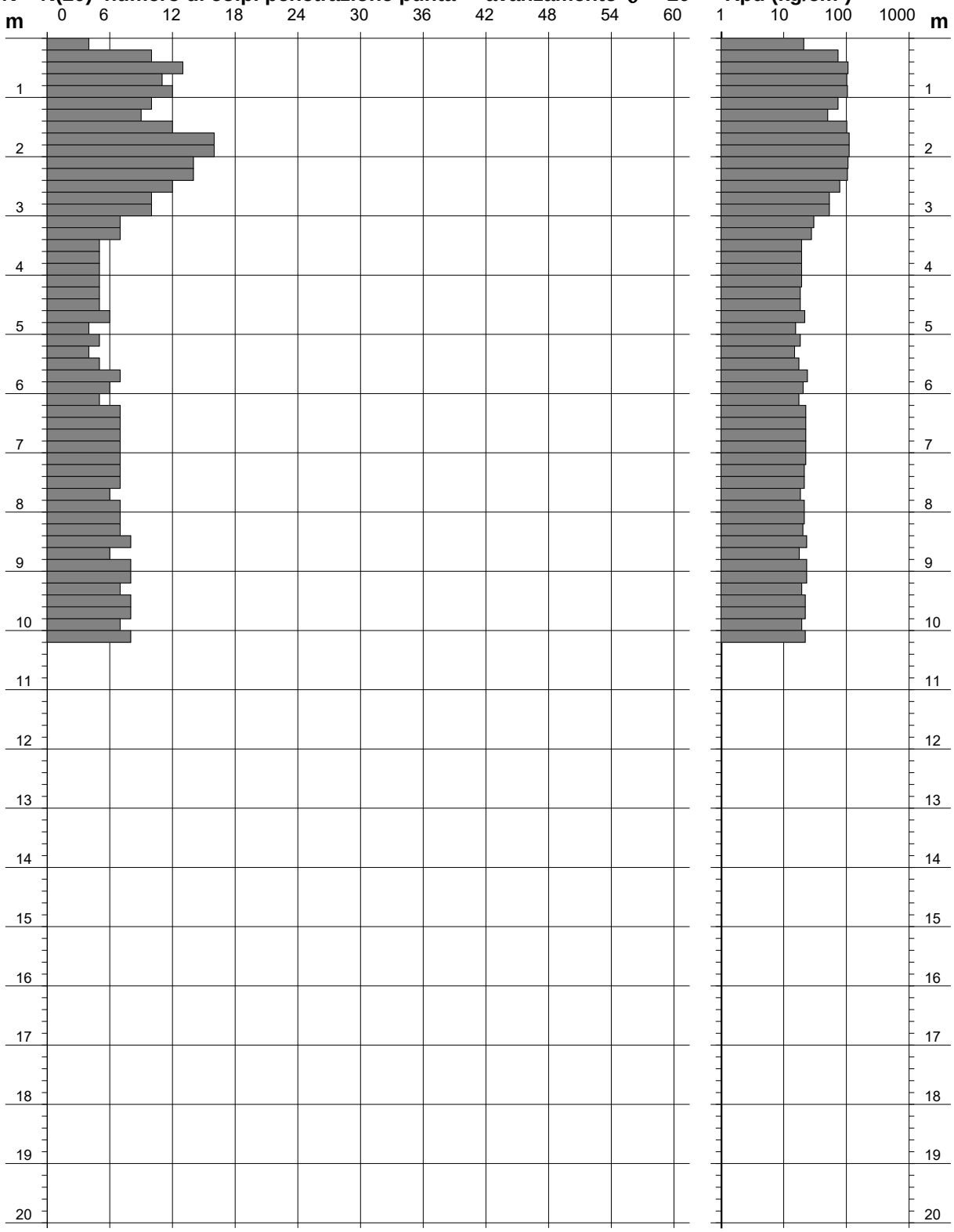
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 105
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	07/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-105
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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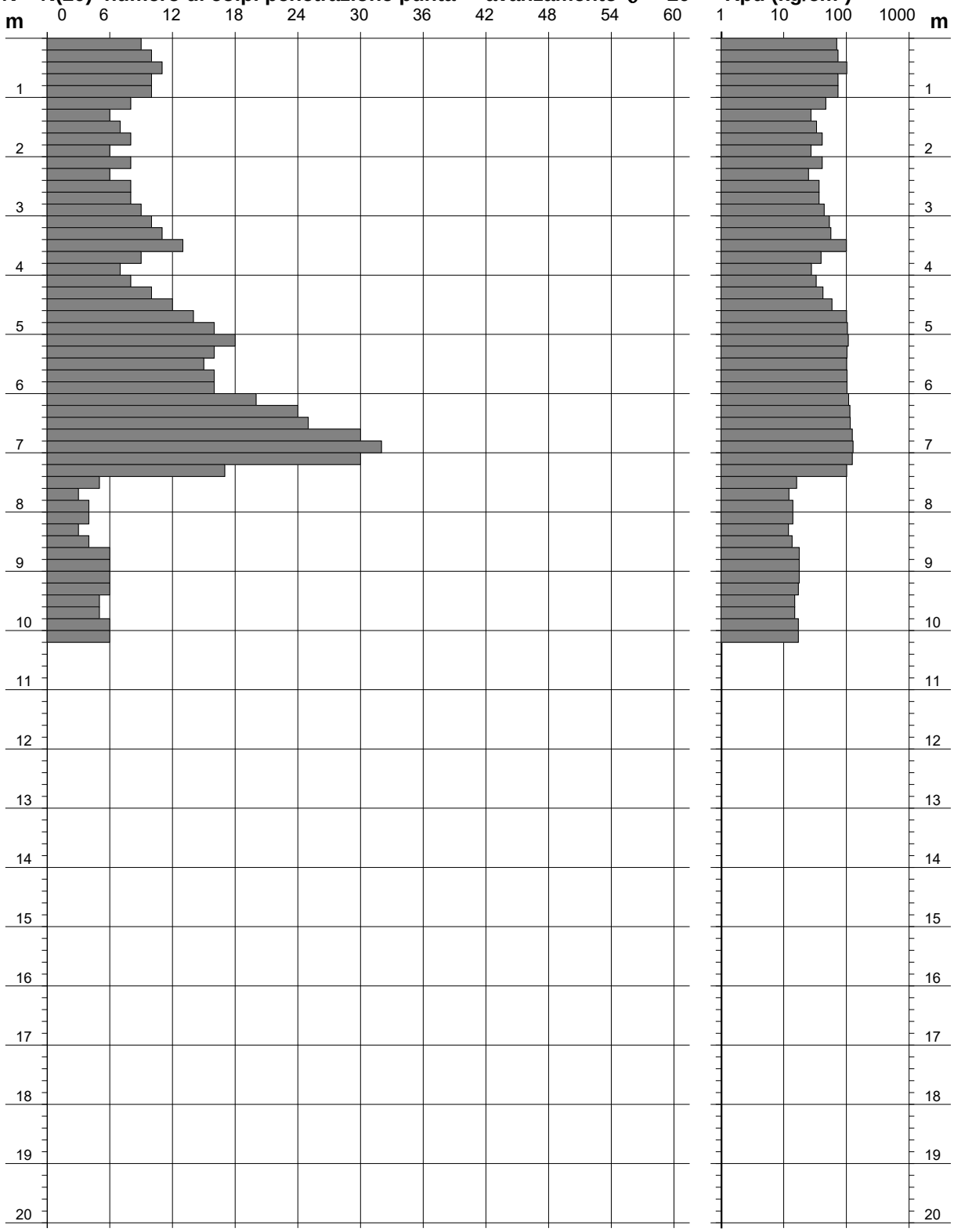
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 098
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-098
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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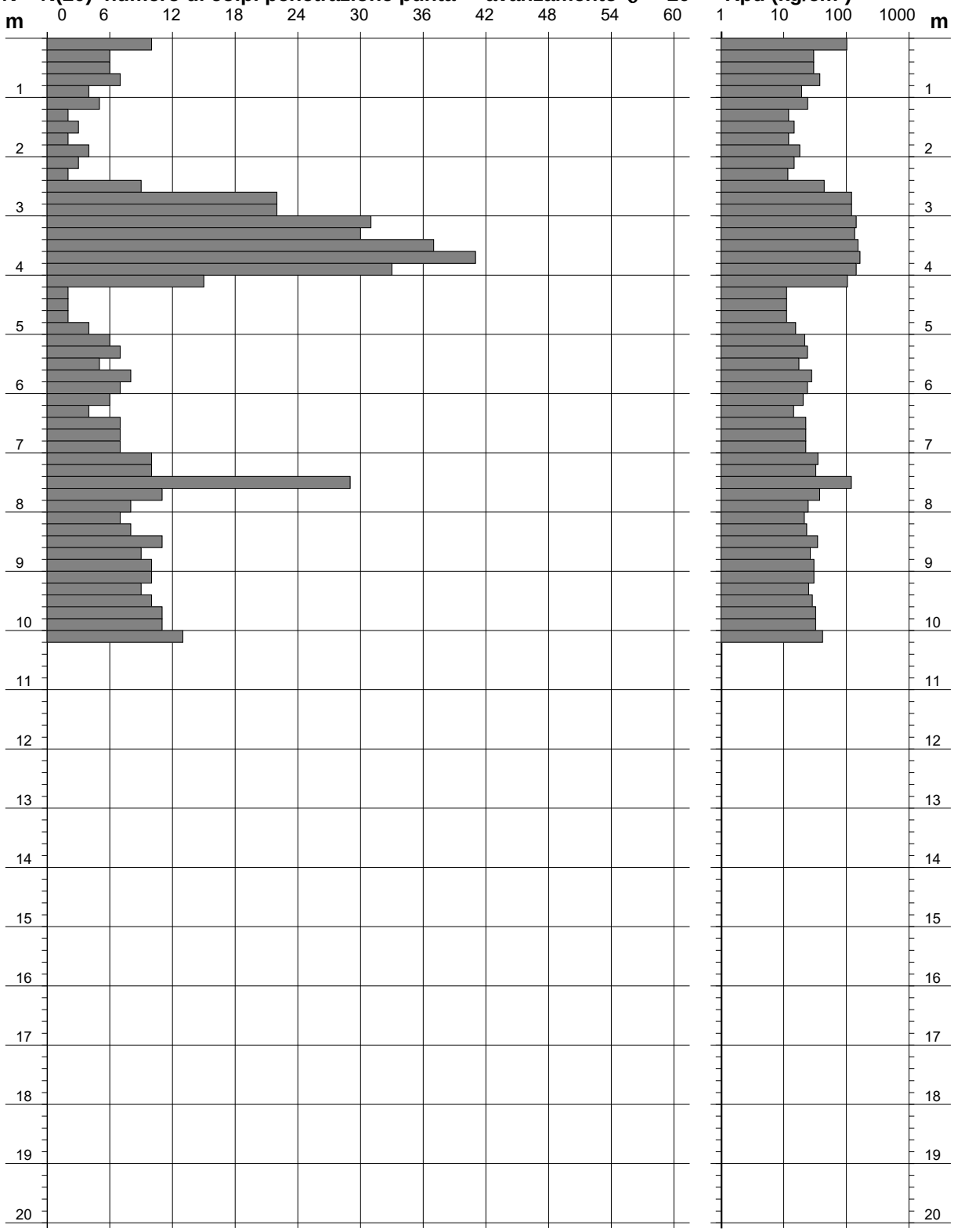
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 099
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-099
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

Tel. 0823 950360 - E-mail: tecnogeo@libero.it

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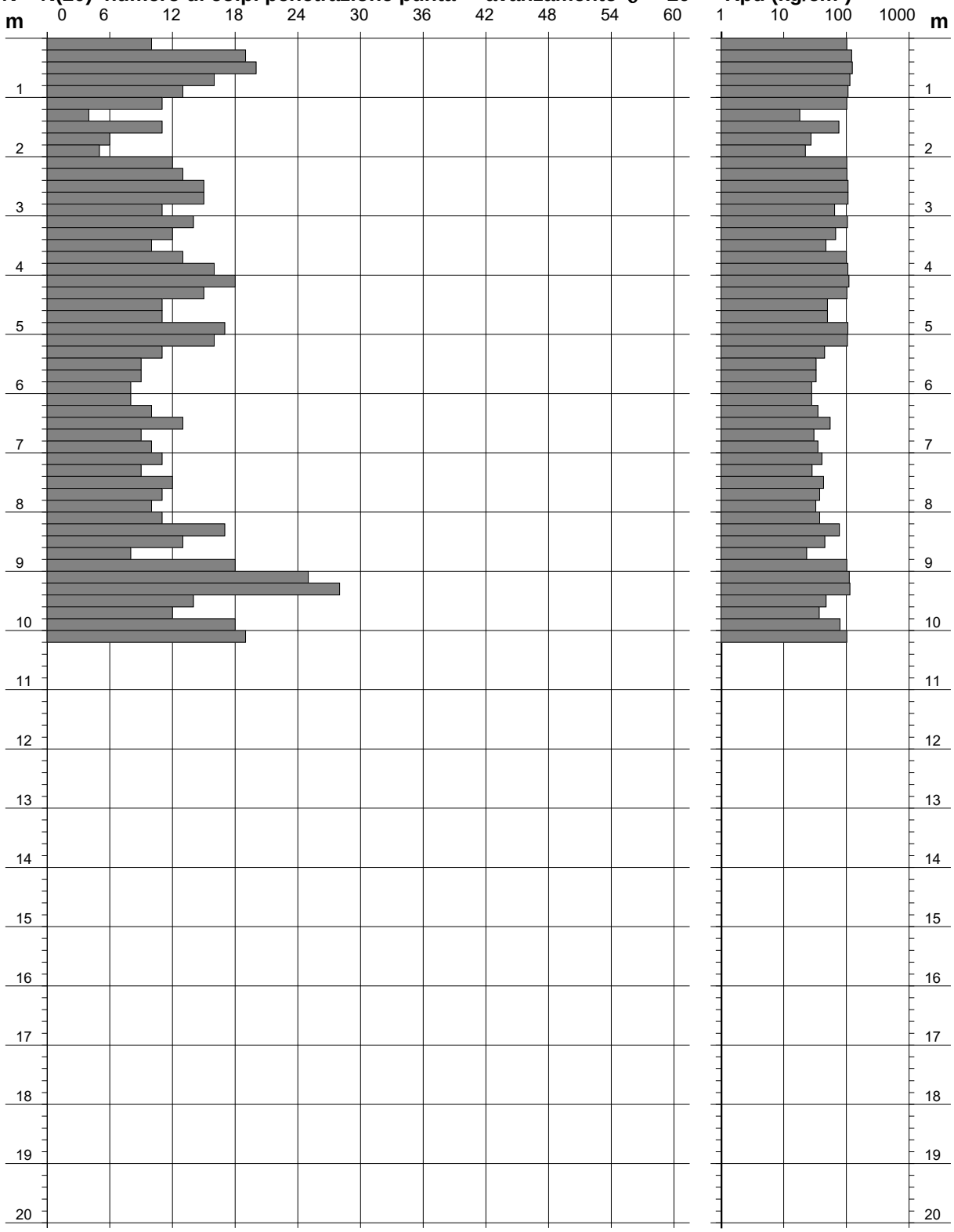
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 112
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-112
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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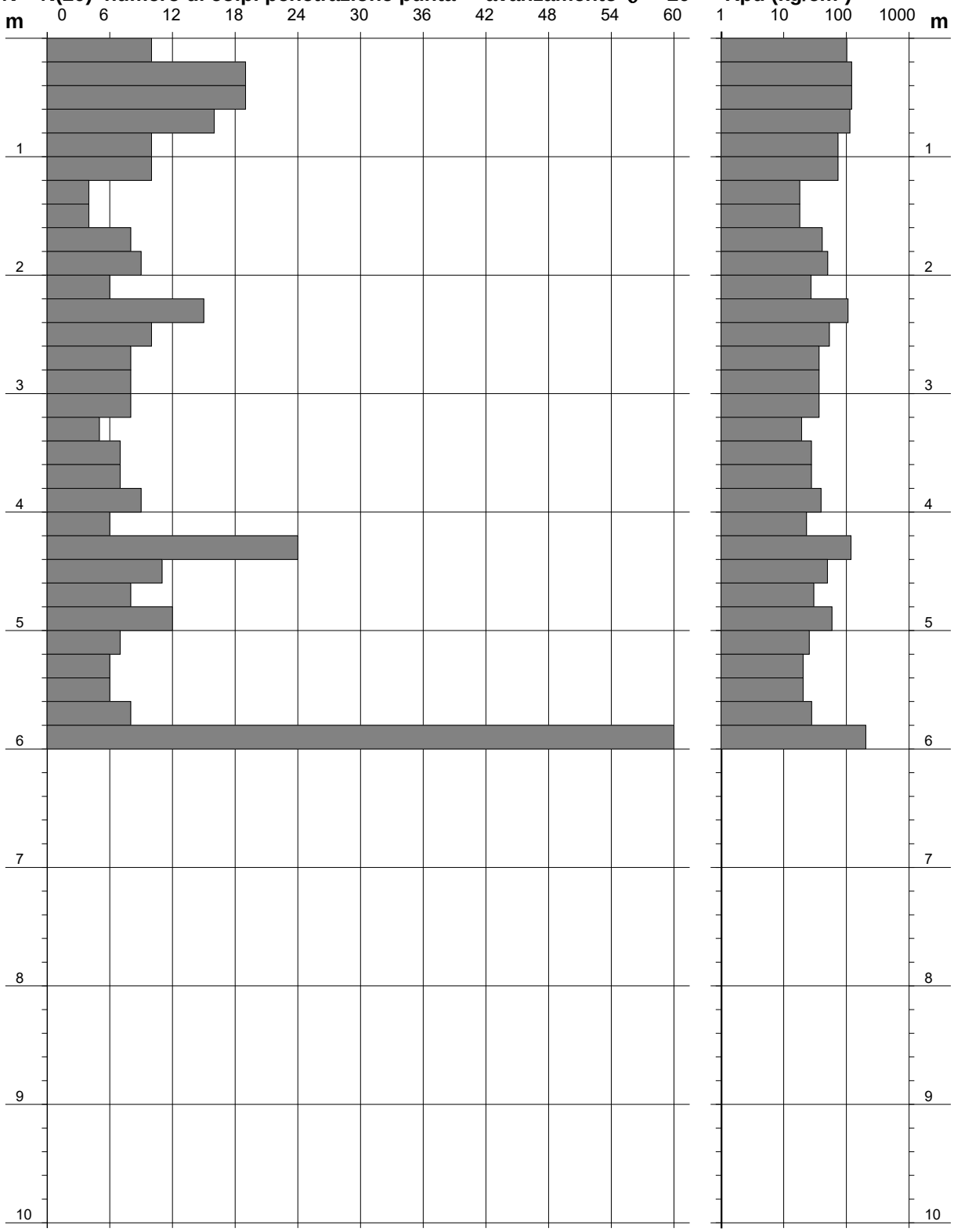
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 113
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-113
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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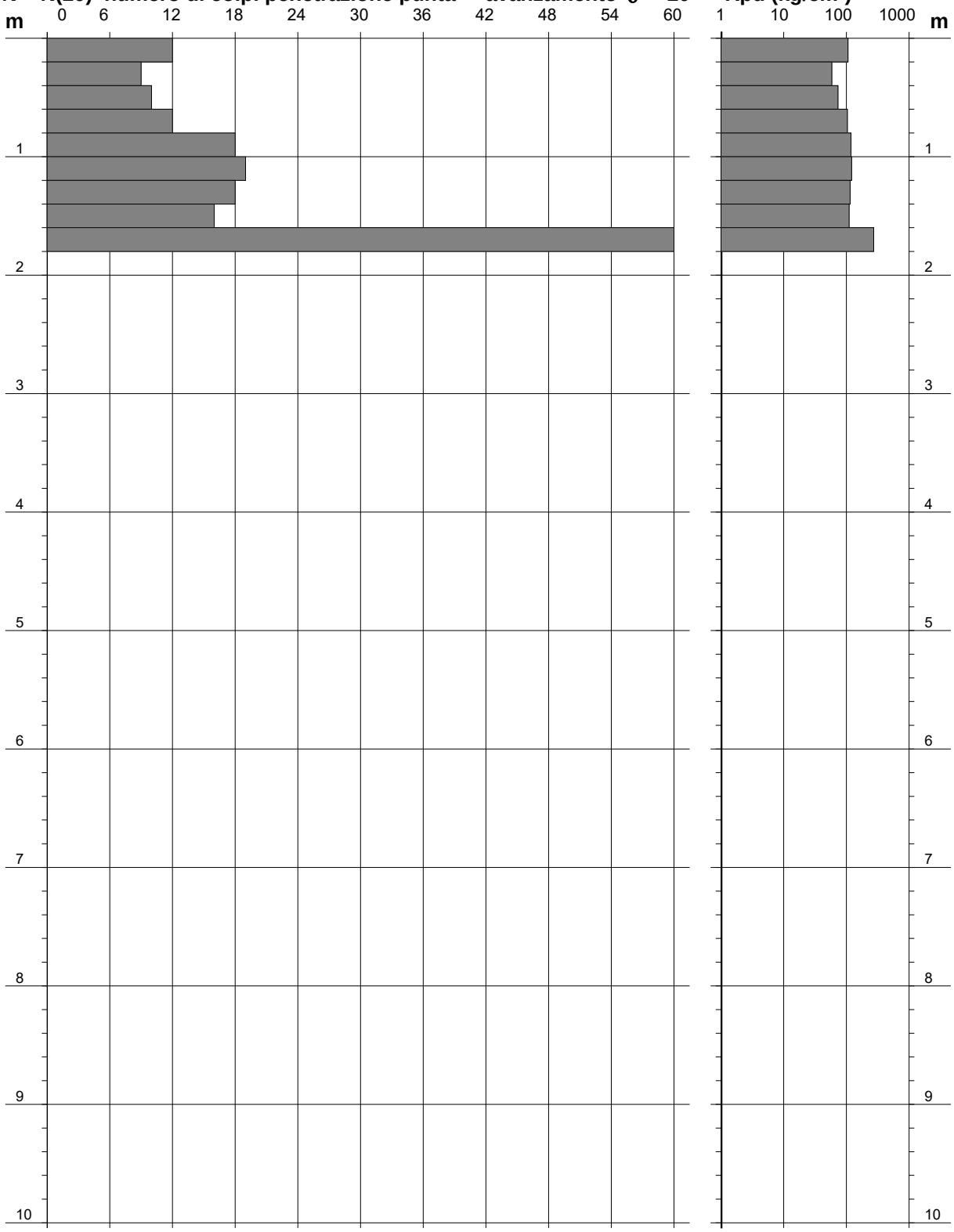
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 111
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-111
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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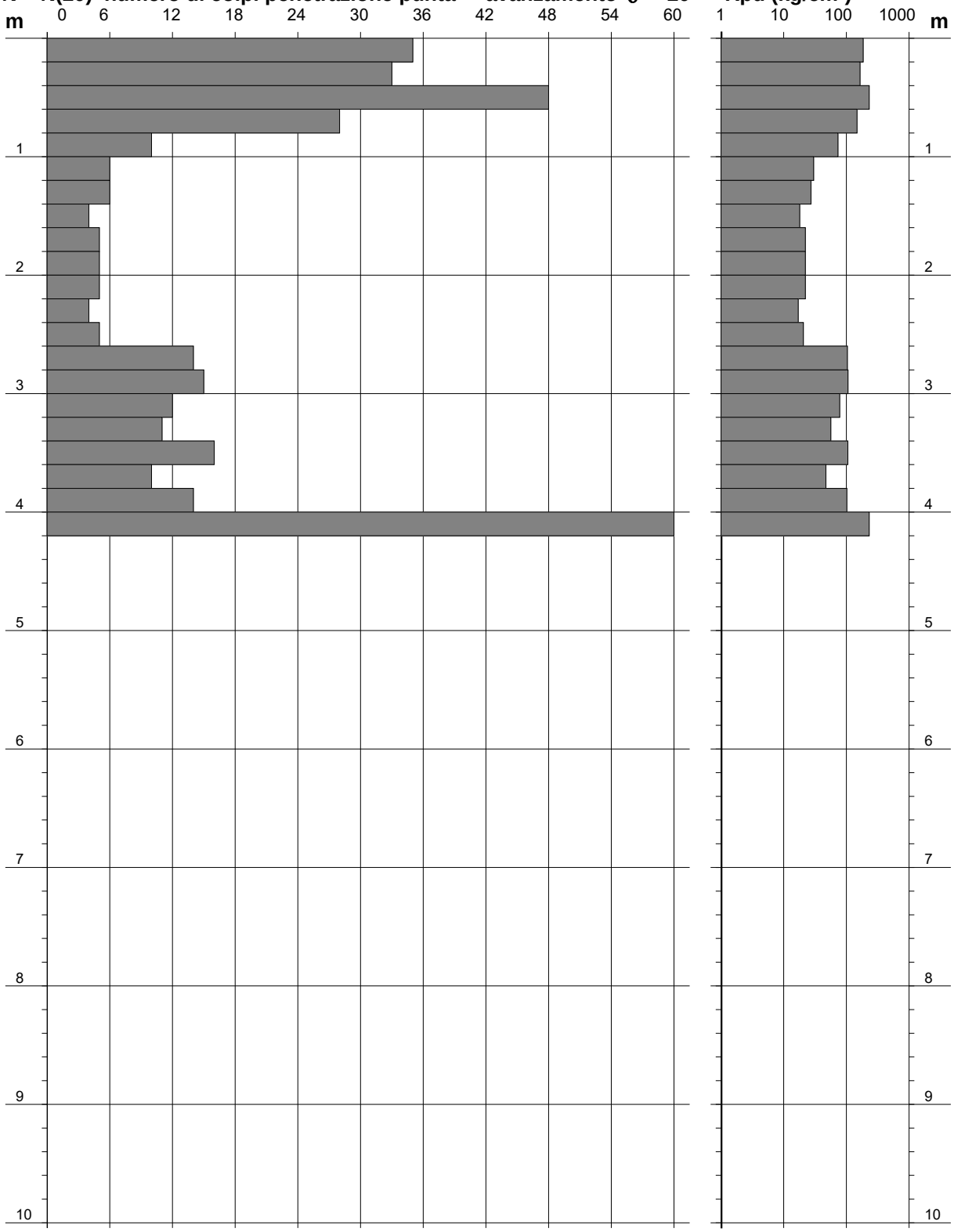
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 114
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-114
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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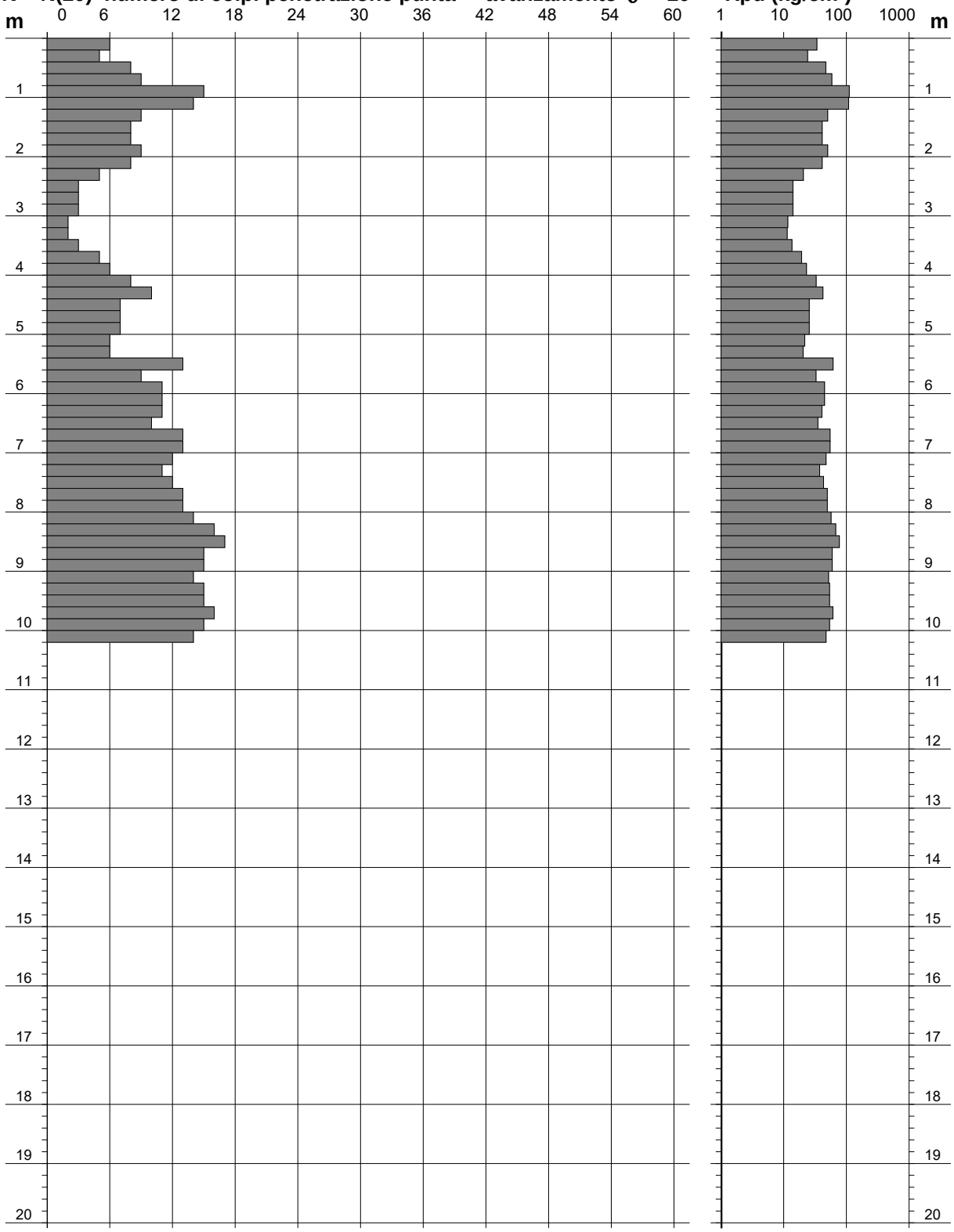
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 106
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-106
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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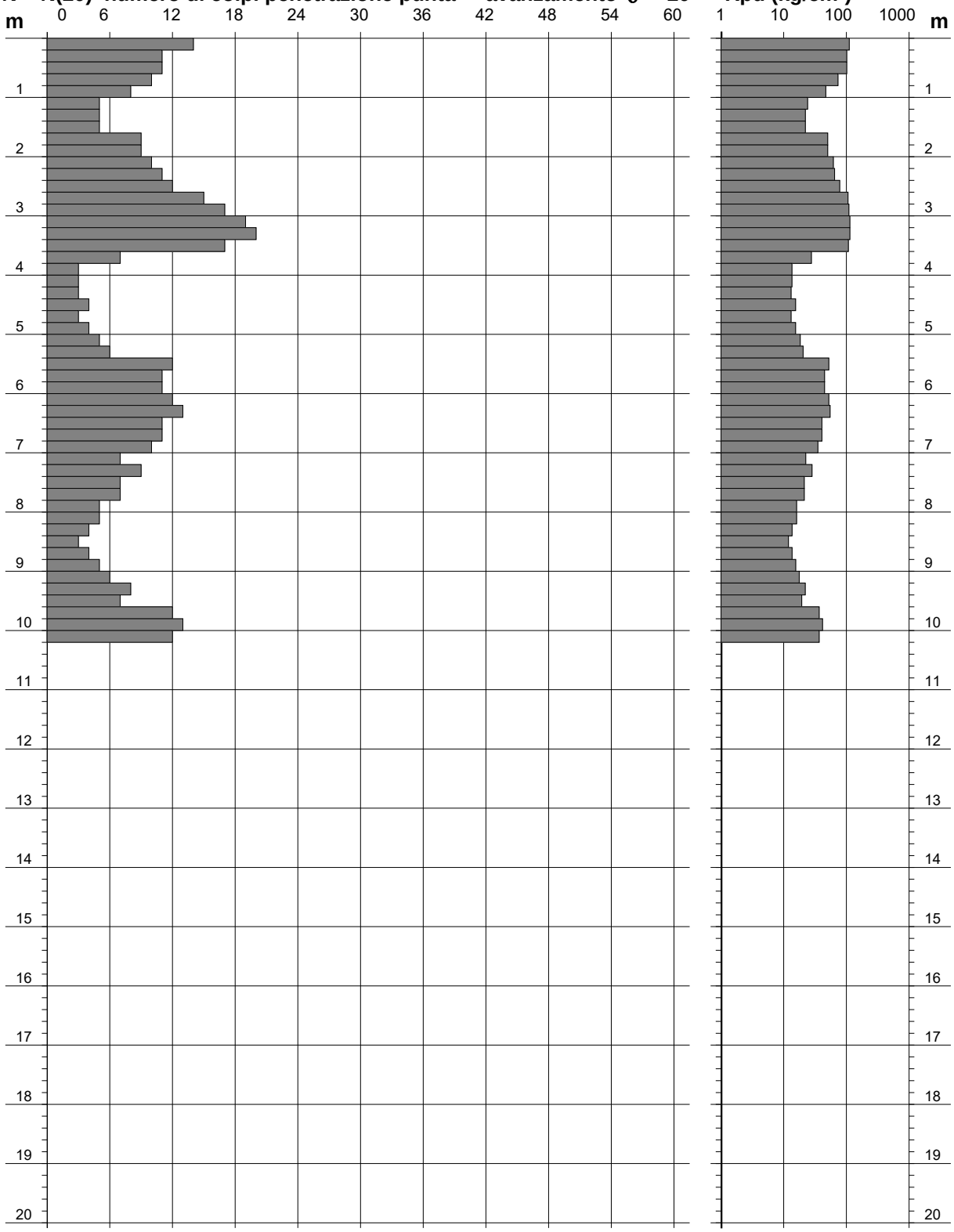
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 107
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	08/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-107
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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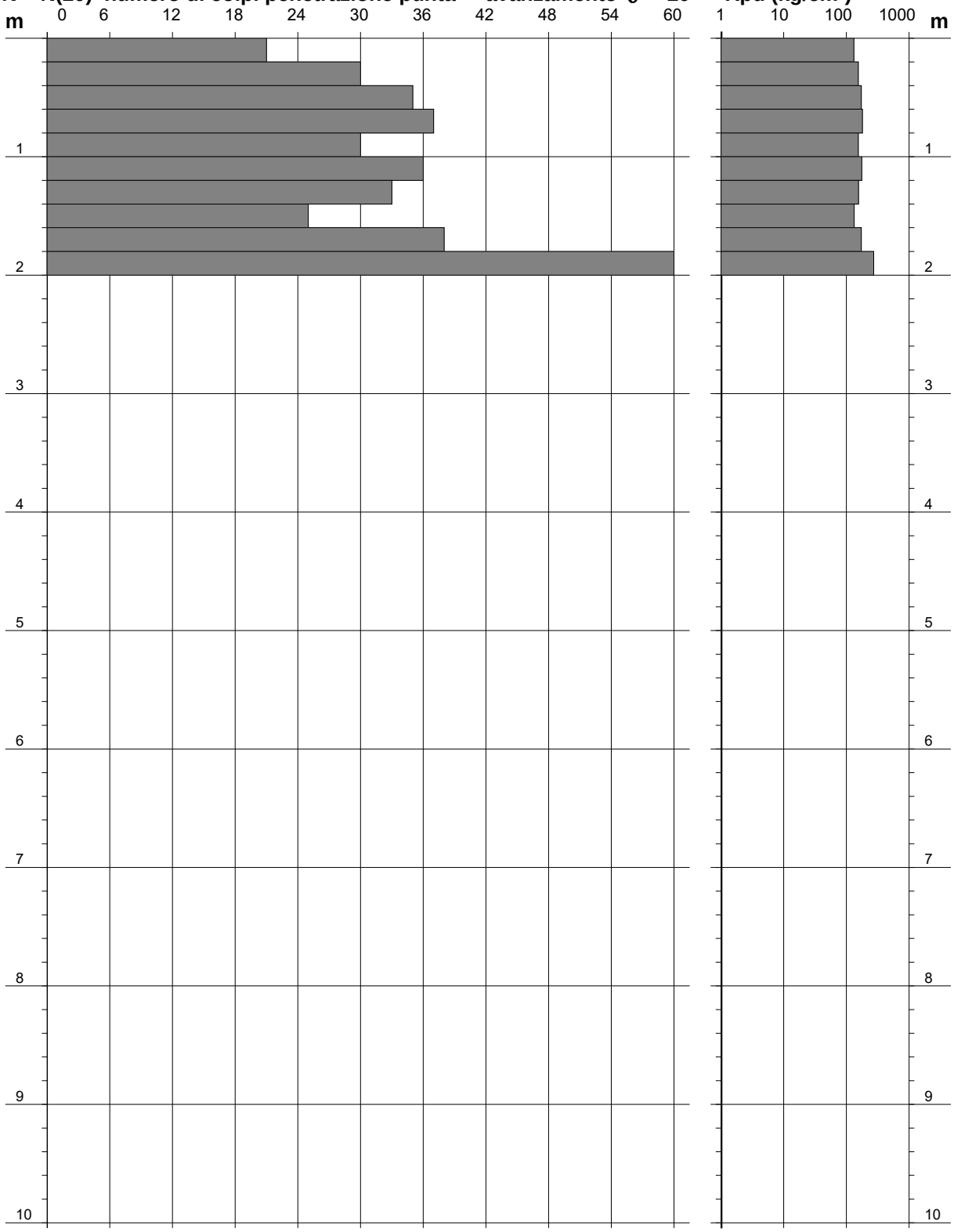
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 115
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-115
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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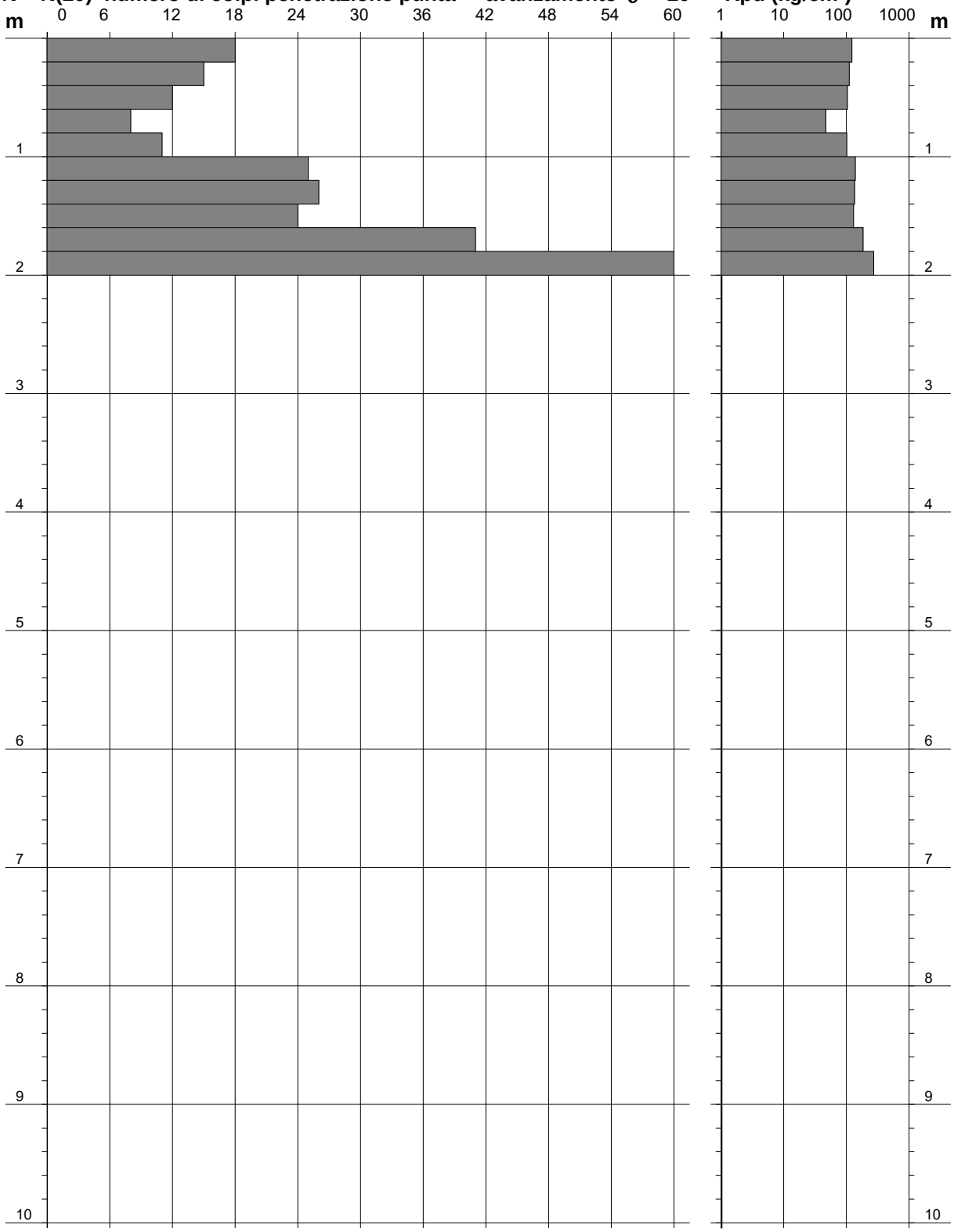
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 116
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-116
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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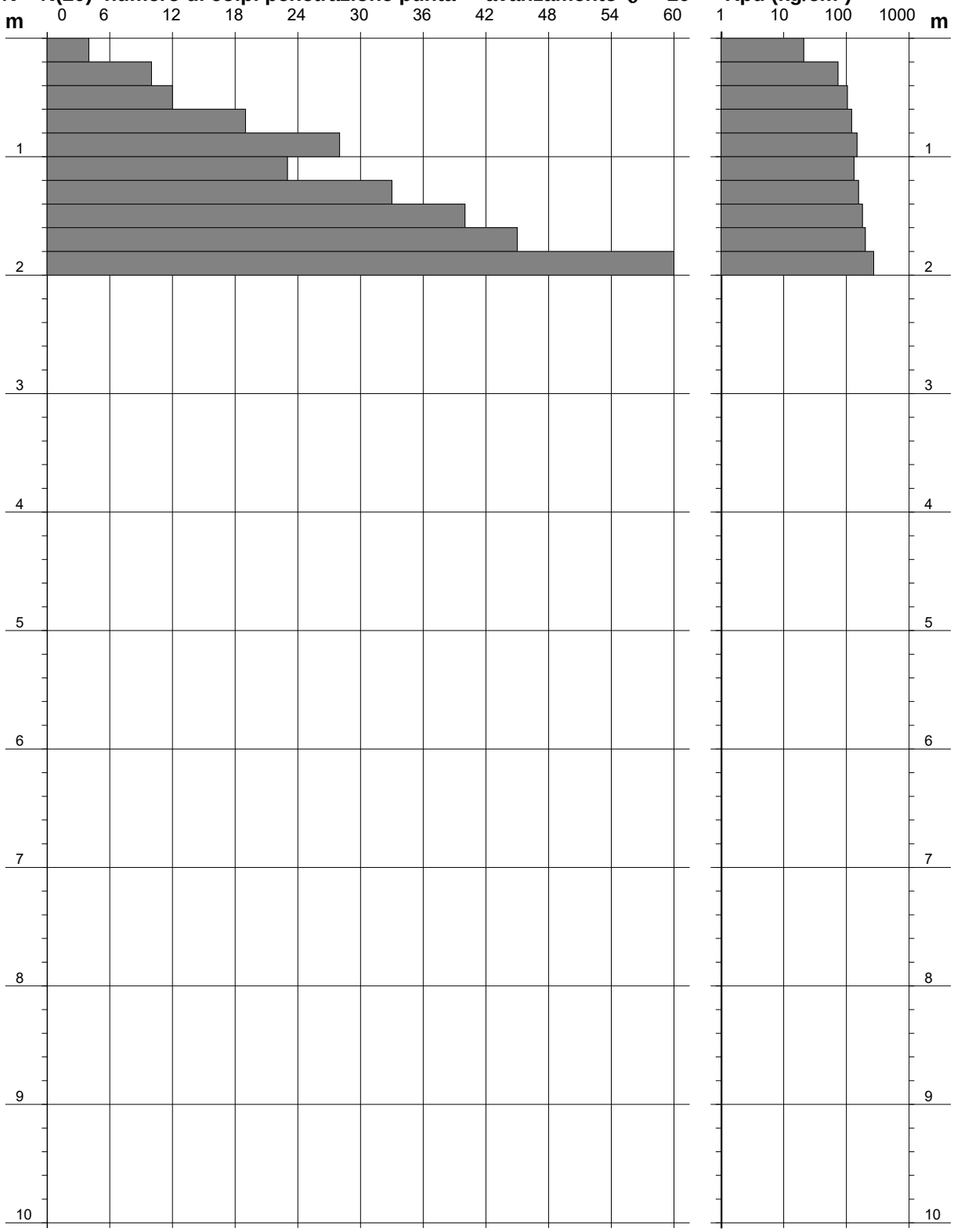
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 117
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-117
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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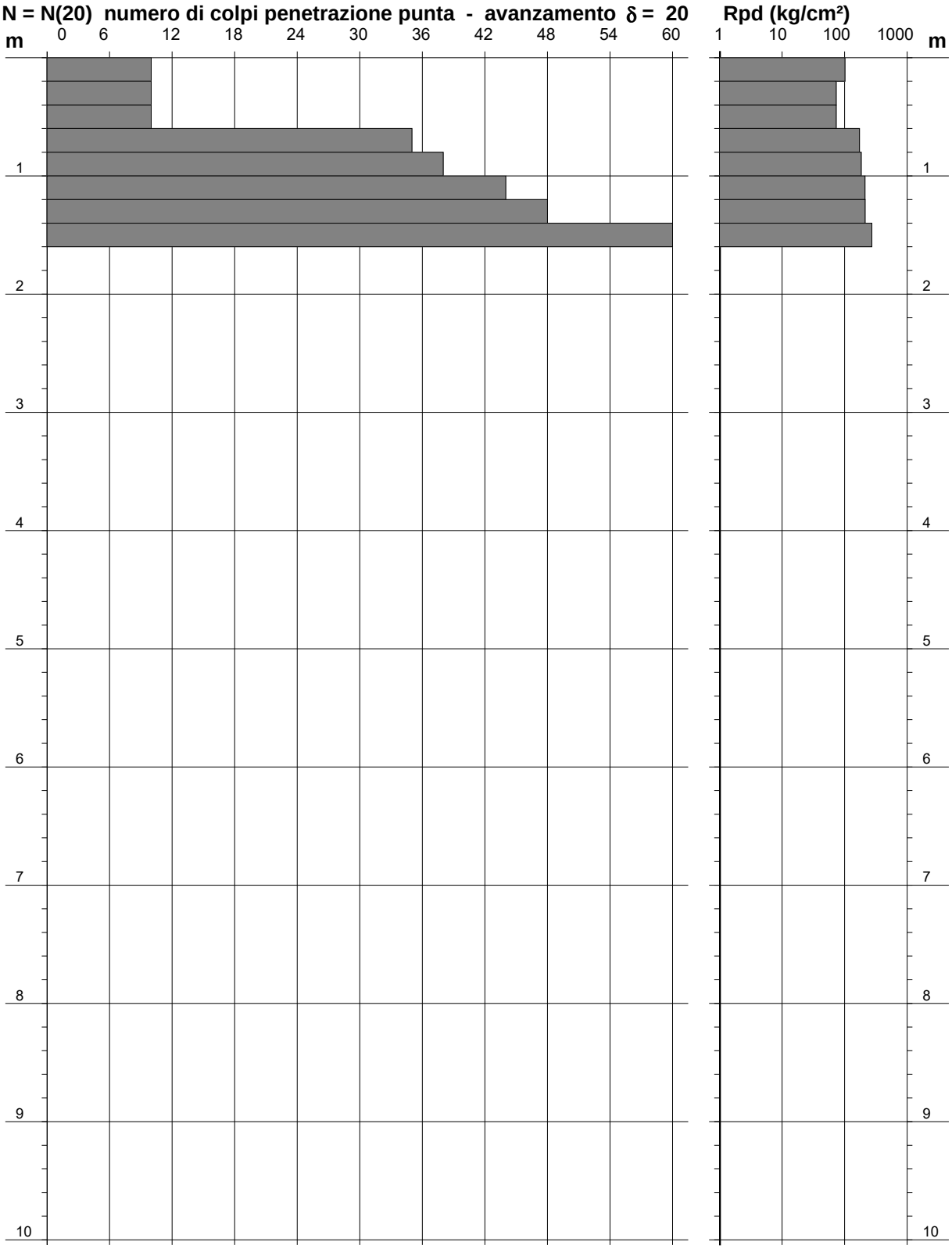
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 118
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-118
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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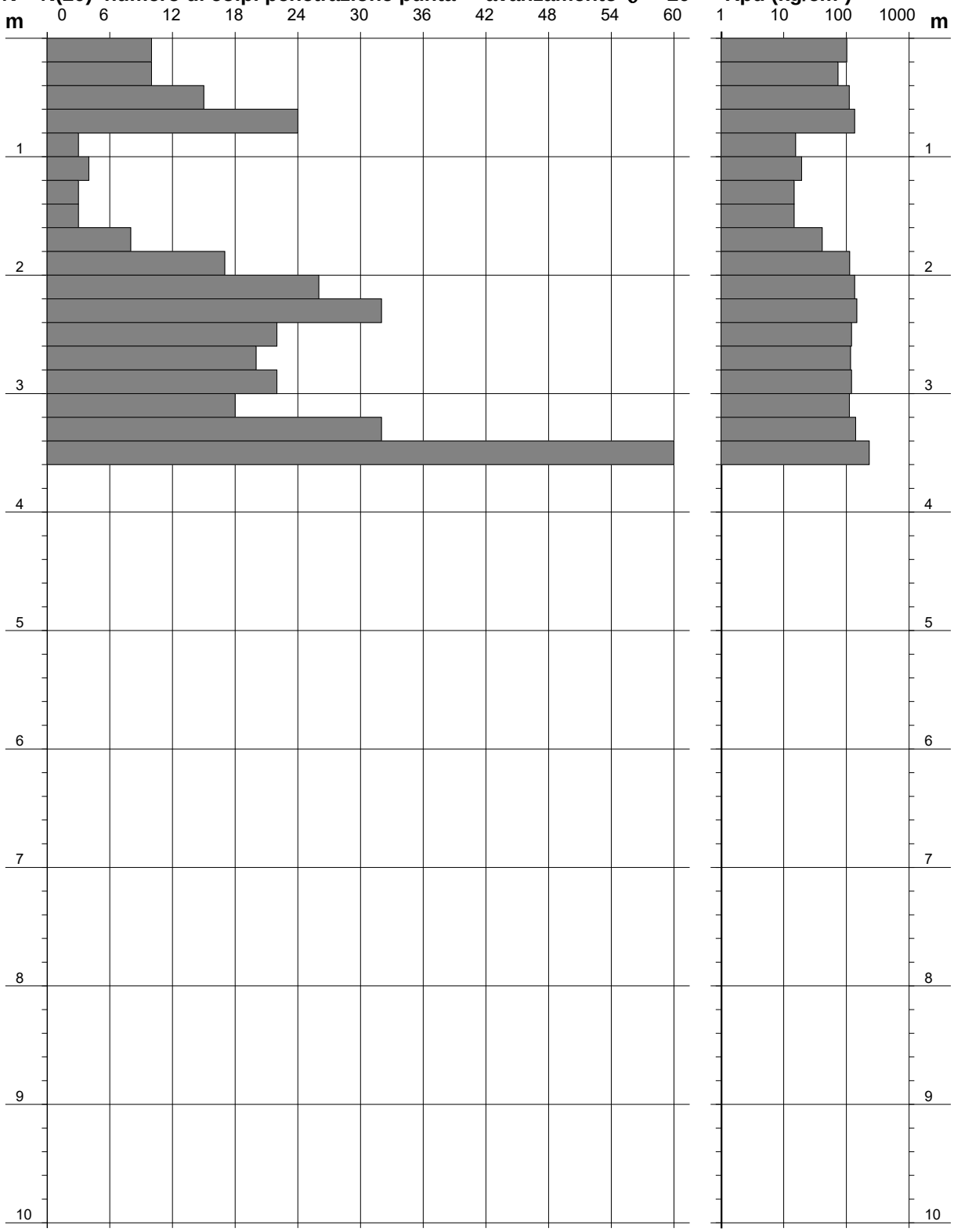
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 119
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-119
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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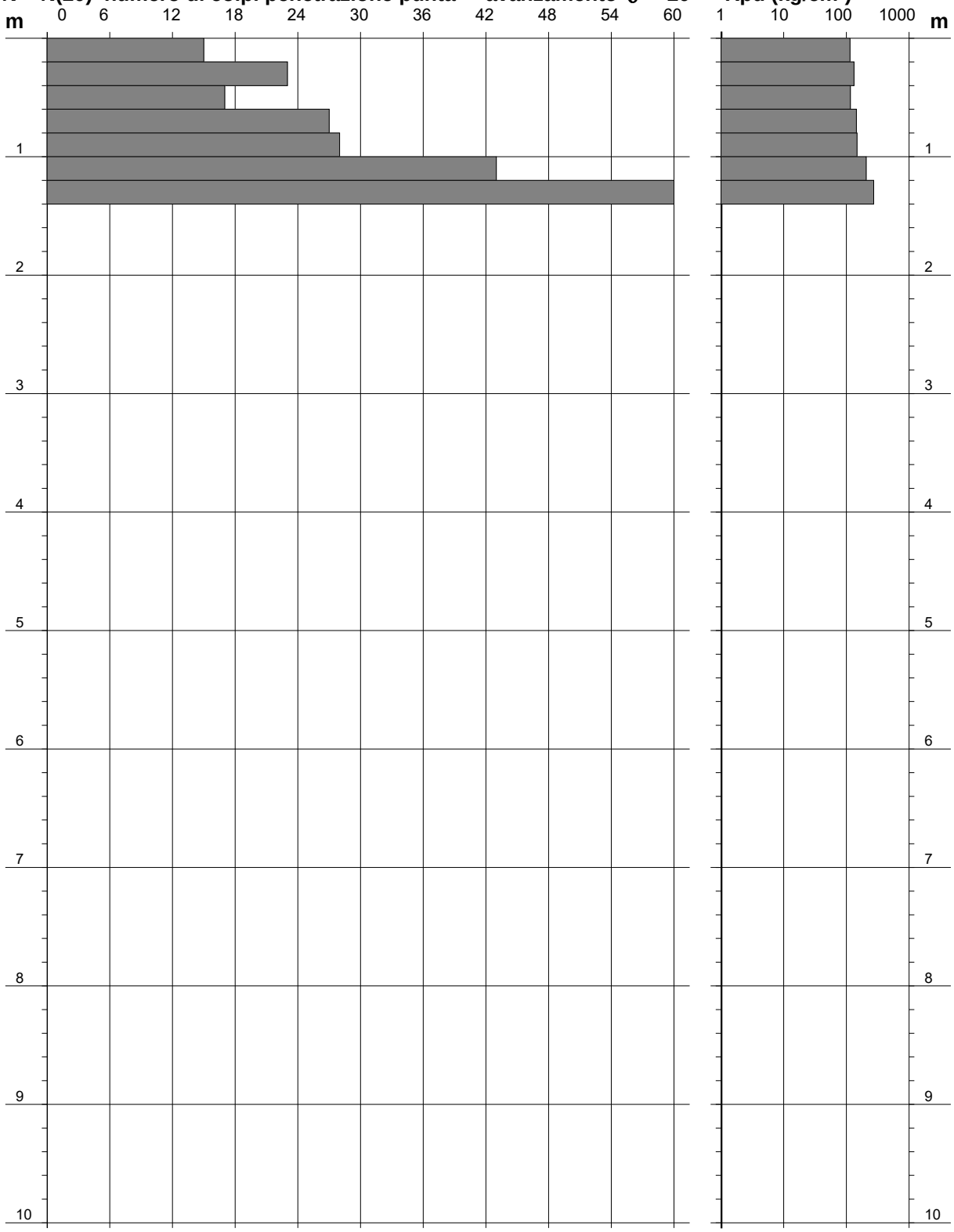
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 120
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-120
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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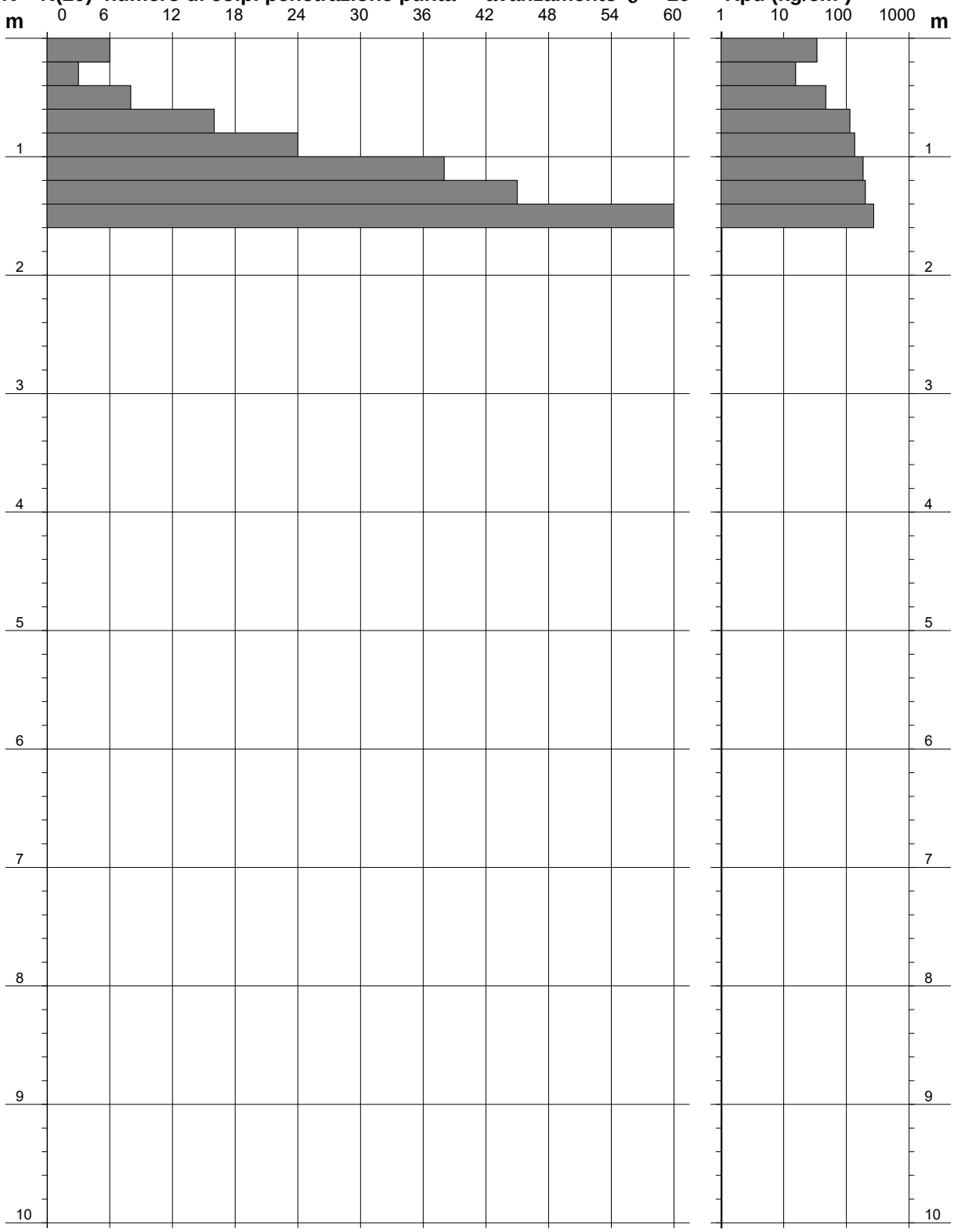
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 126
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-126
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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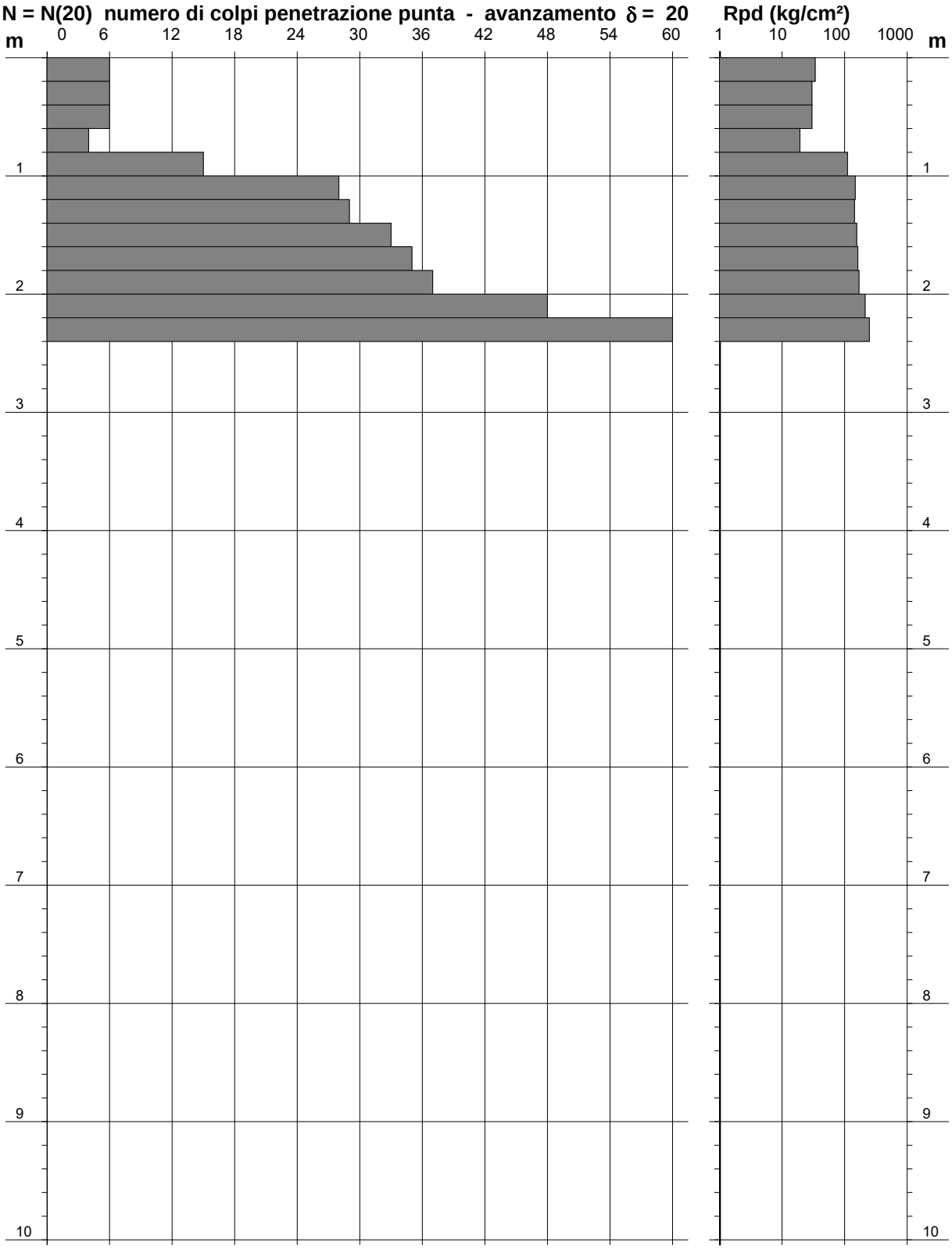
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 127
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-127
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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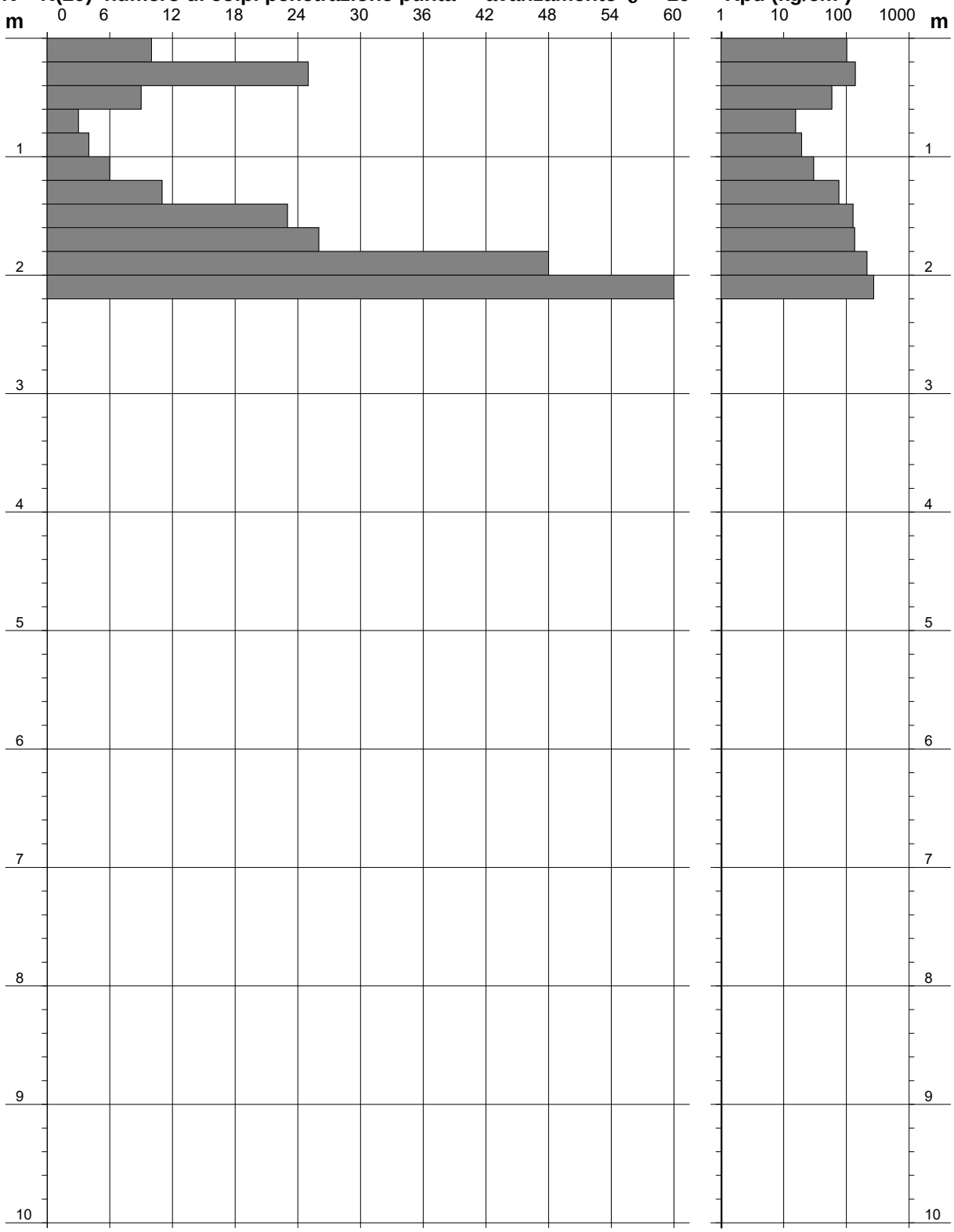
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 121
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-121
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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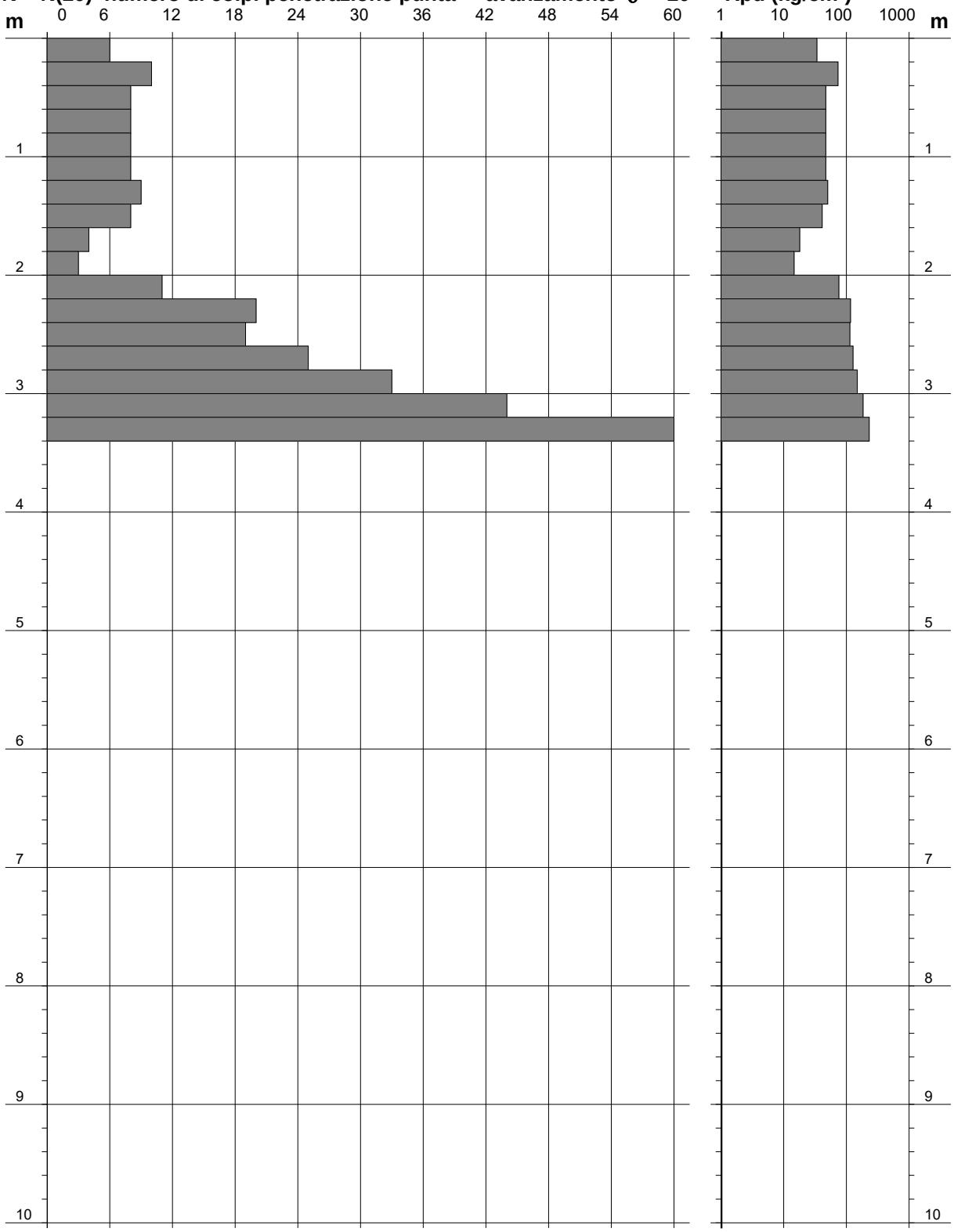
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 125
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-125
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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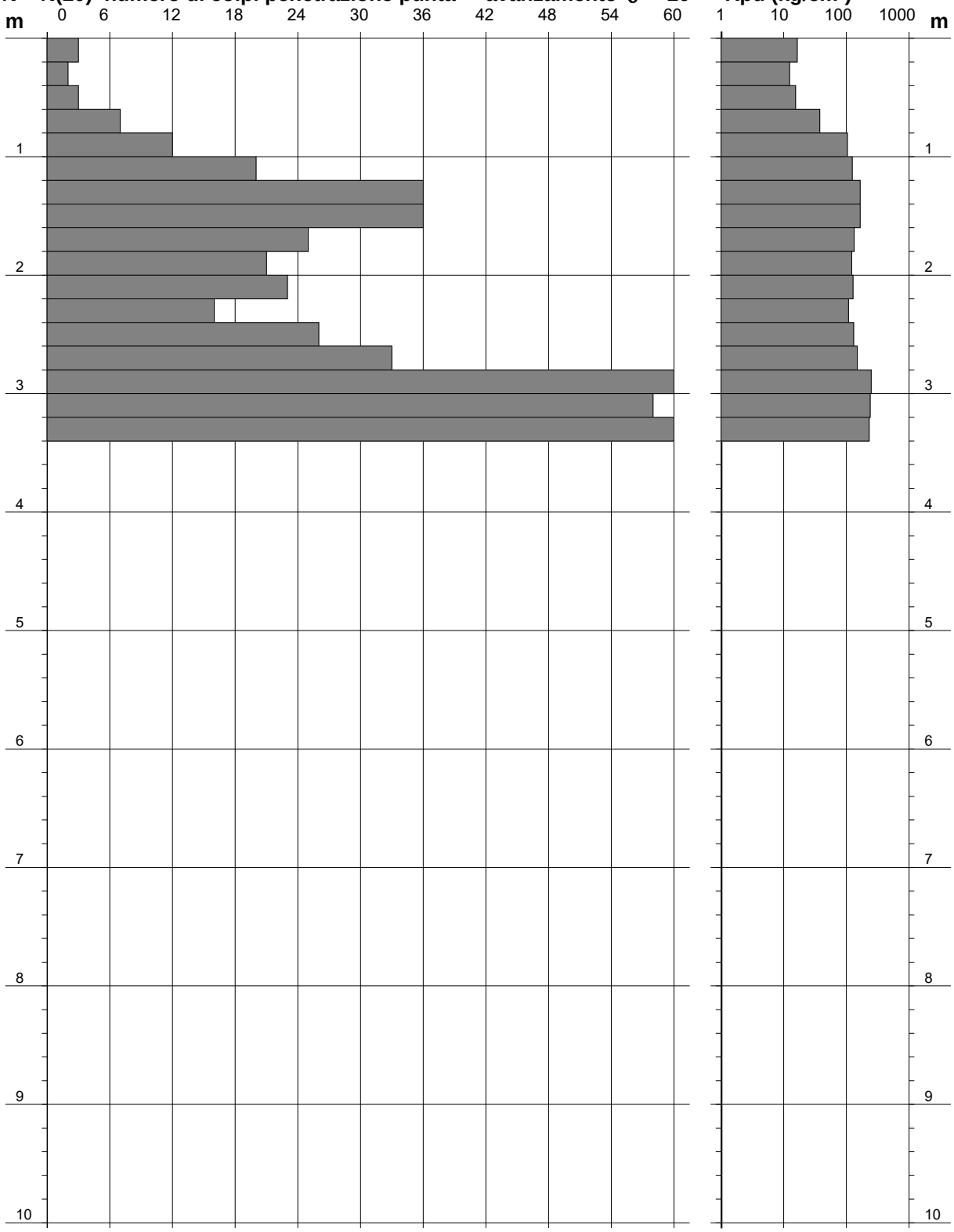
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 123
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-123
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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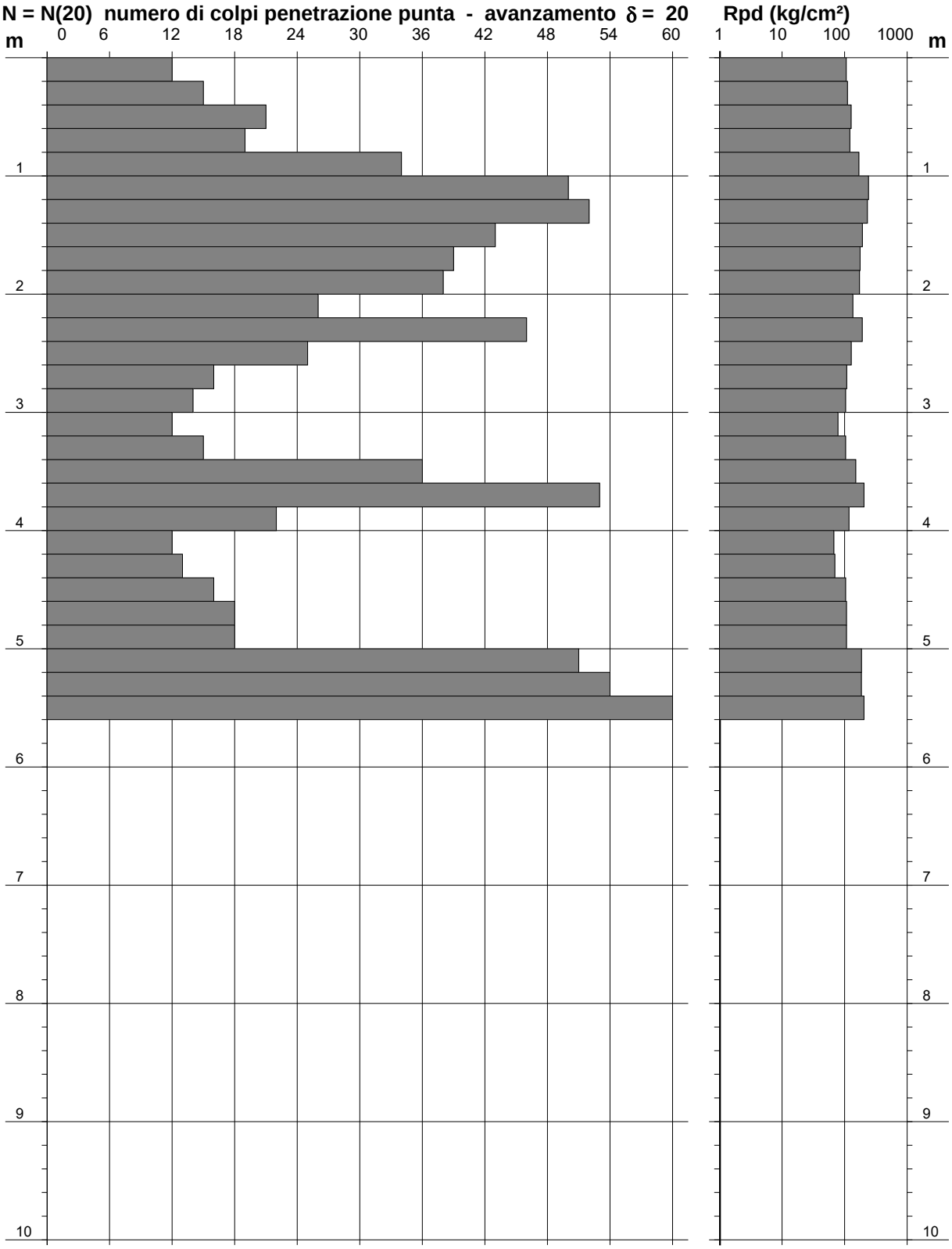
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 124
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-124
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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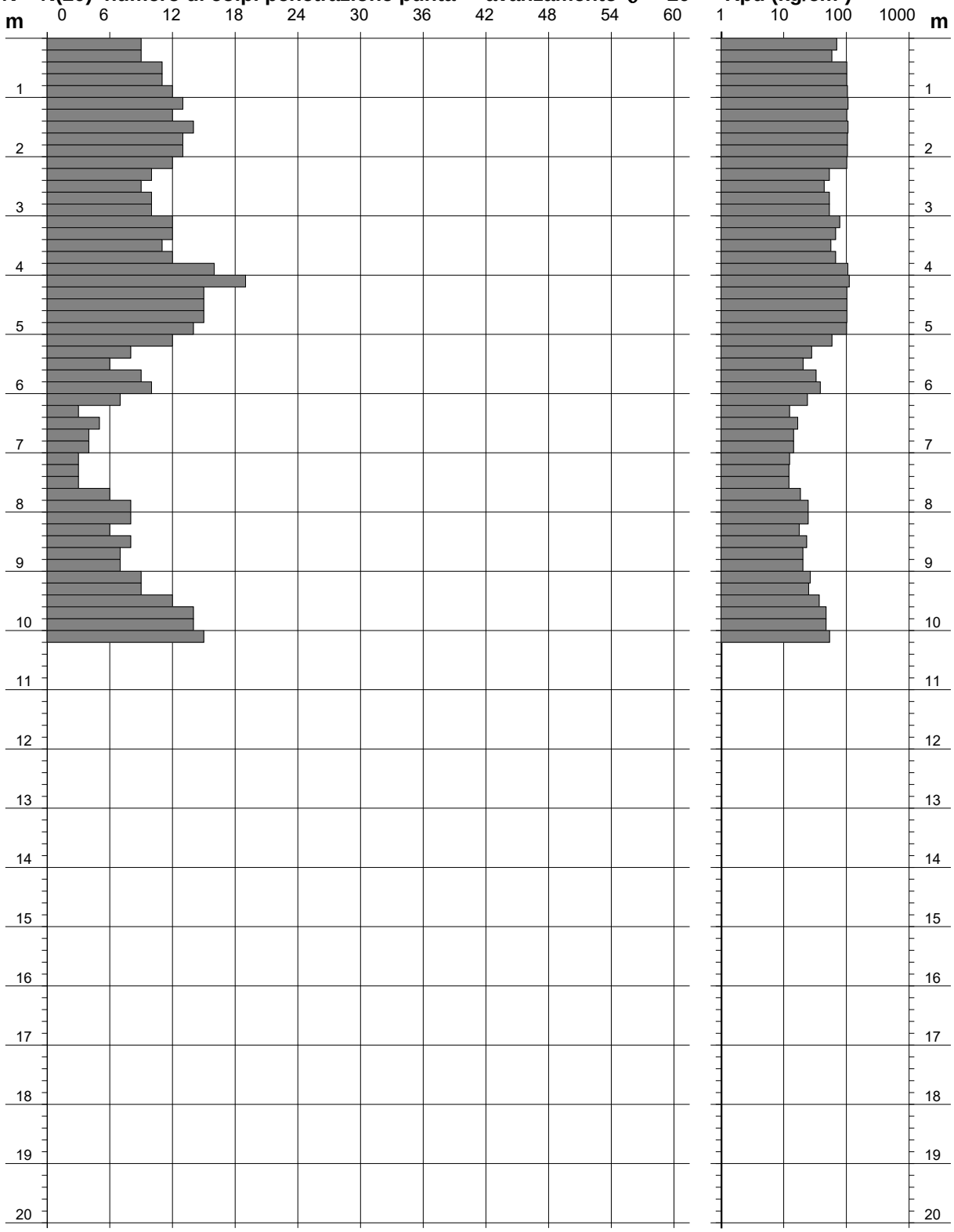
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 129
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	09/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-129
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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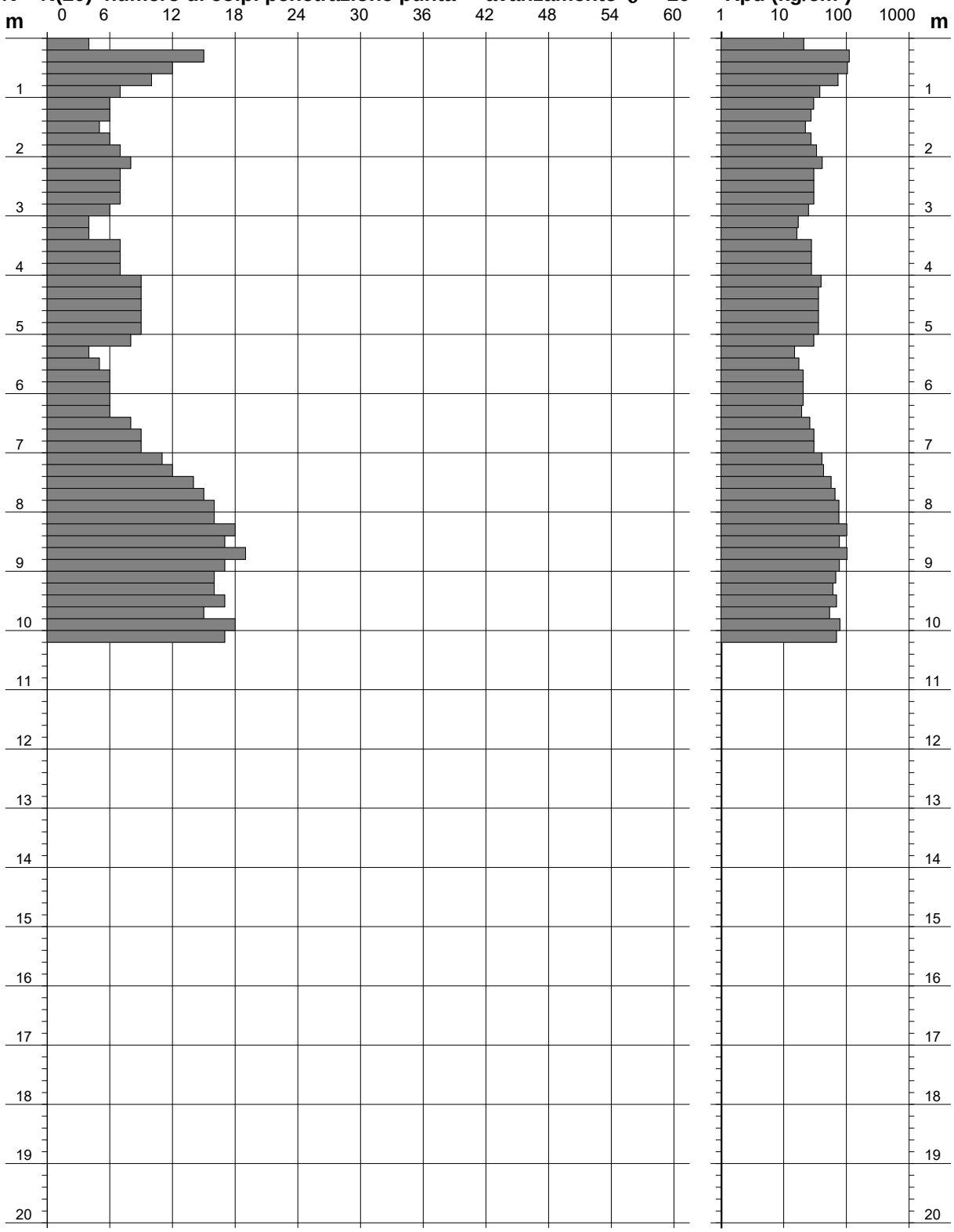
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 130
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-130
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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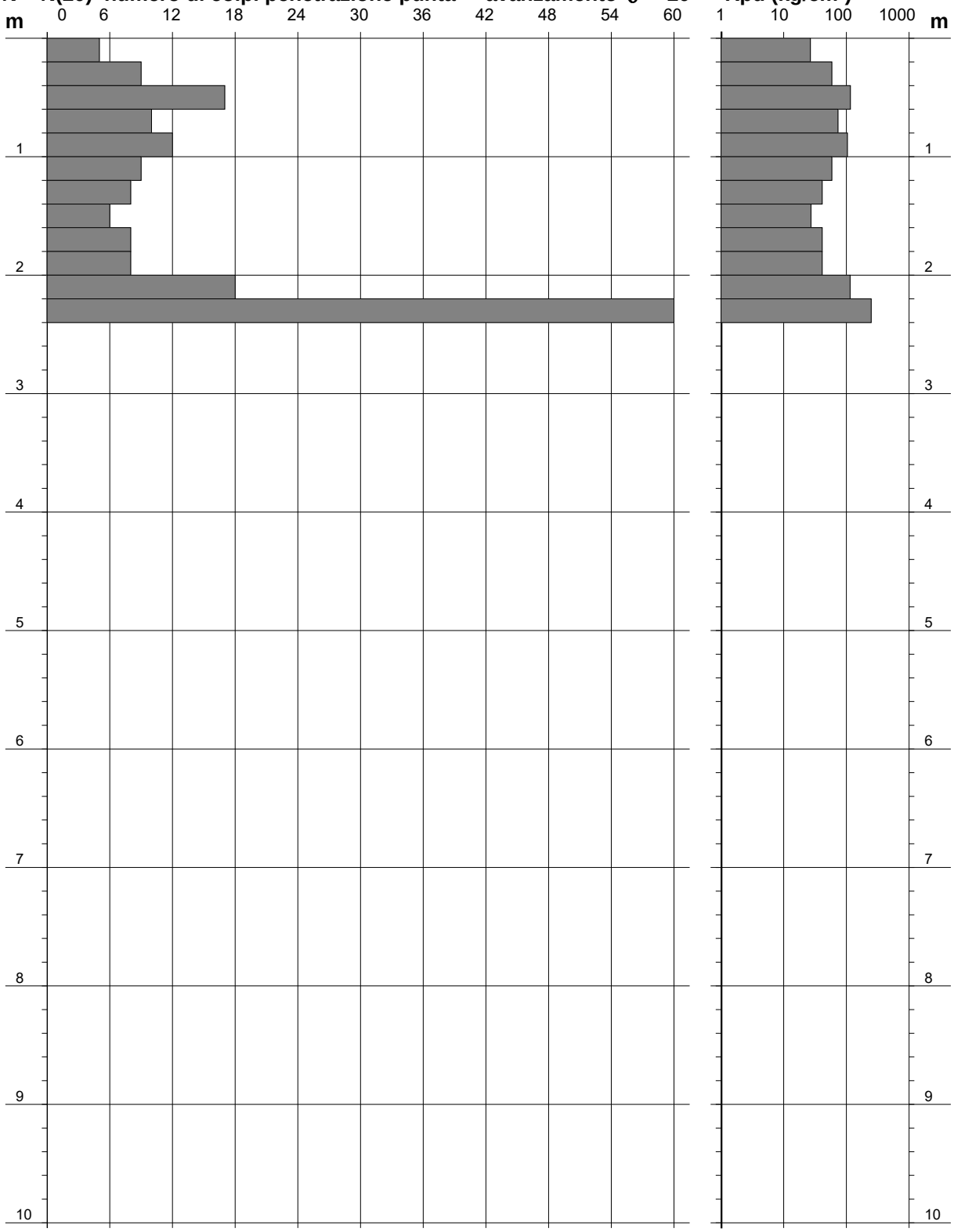
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 128
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-128
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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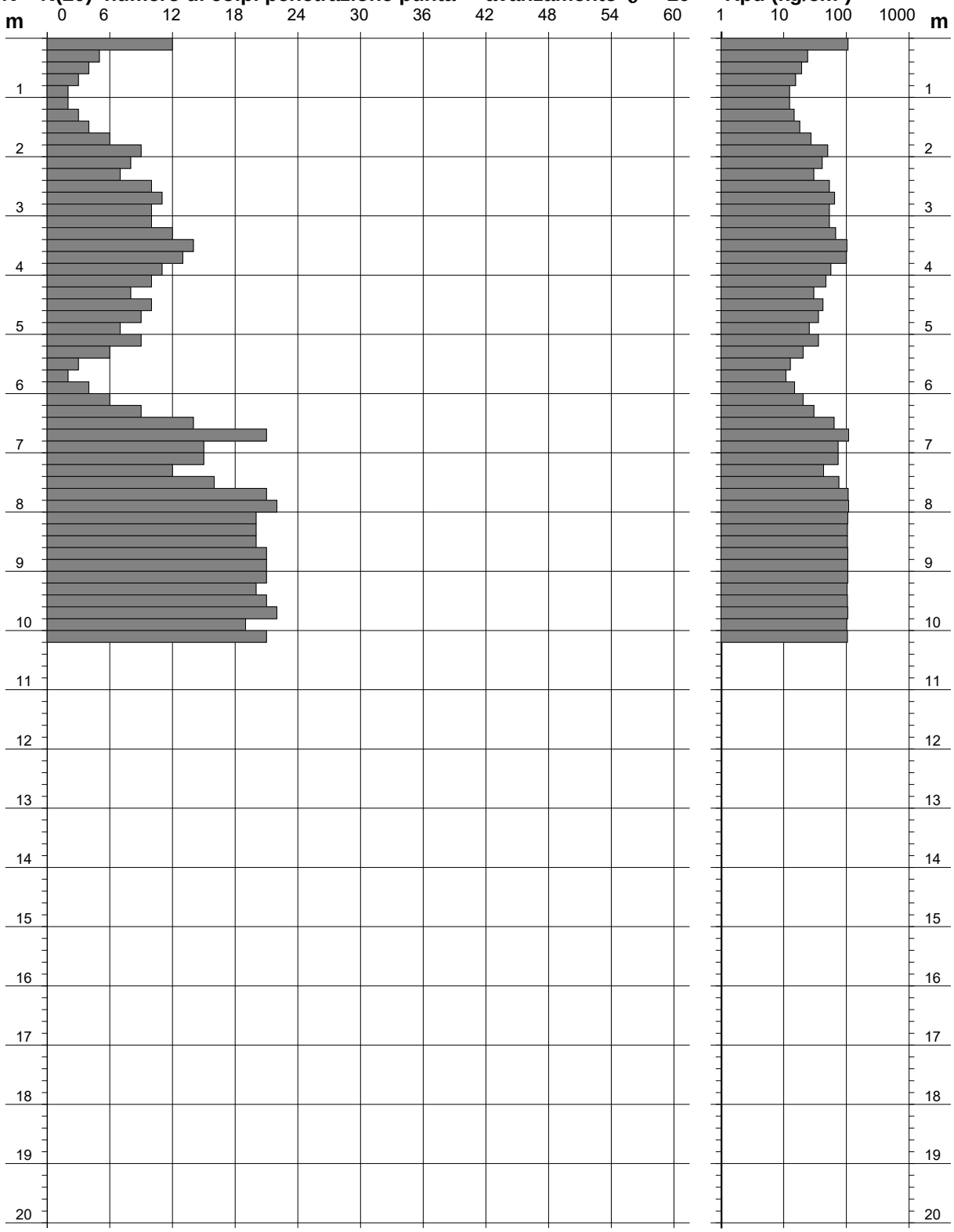
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 135
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-135
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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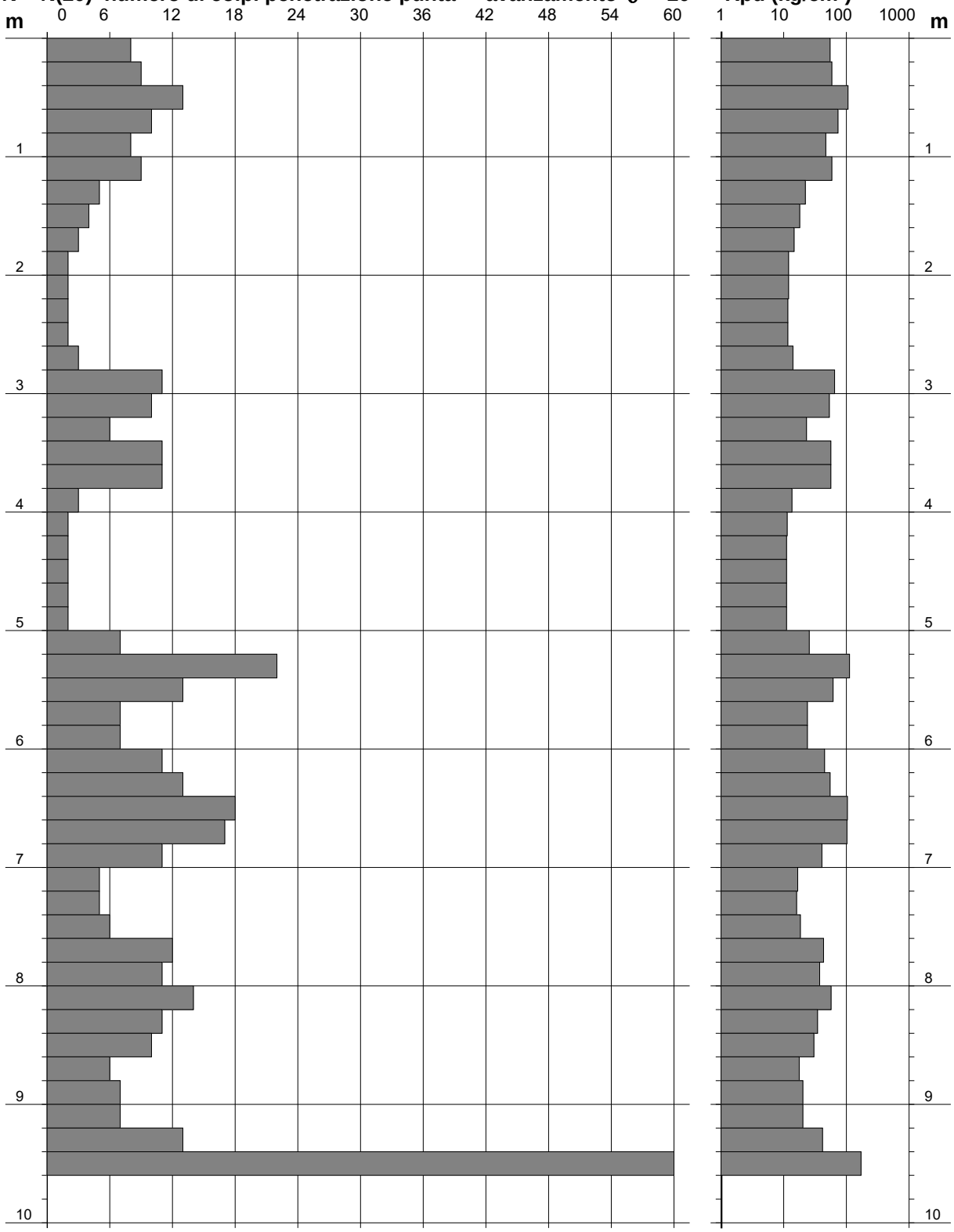
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 133
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-133
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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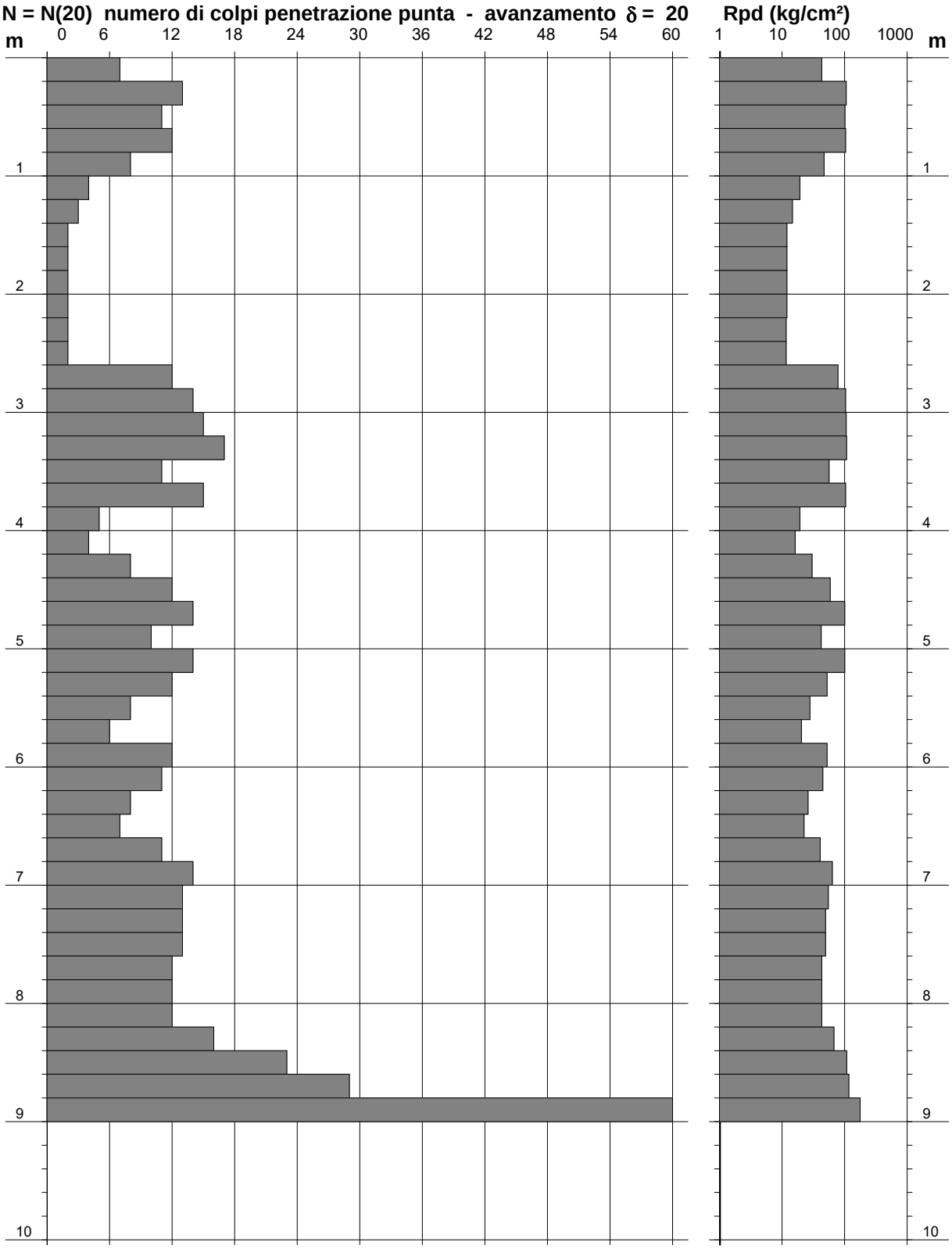
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 134
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-134
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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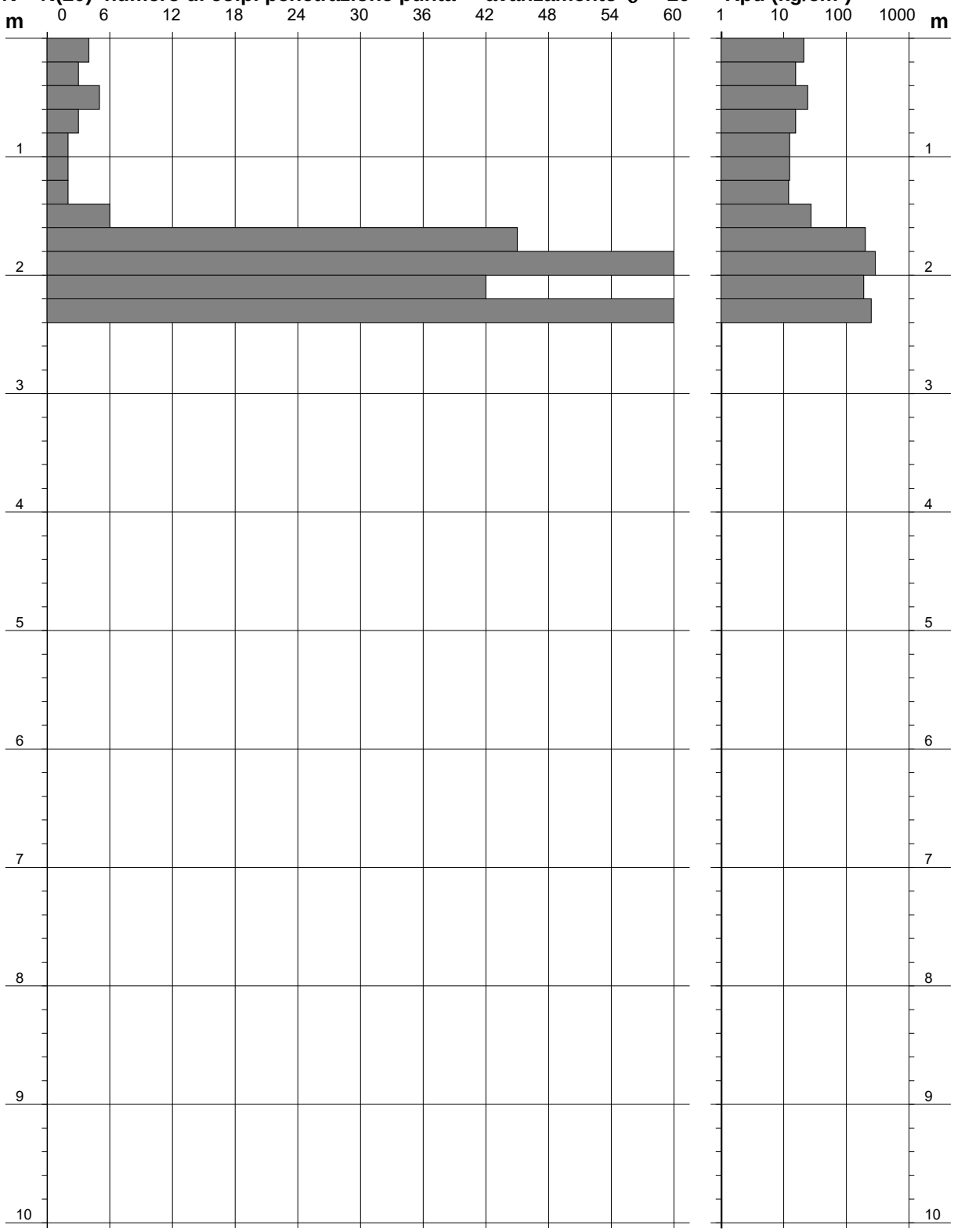
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 137
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-137
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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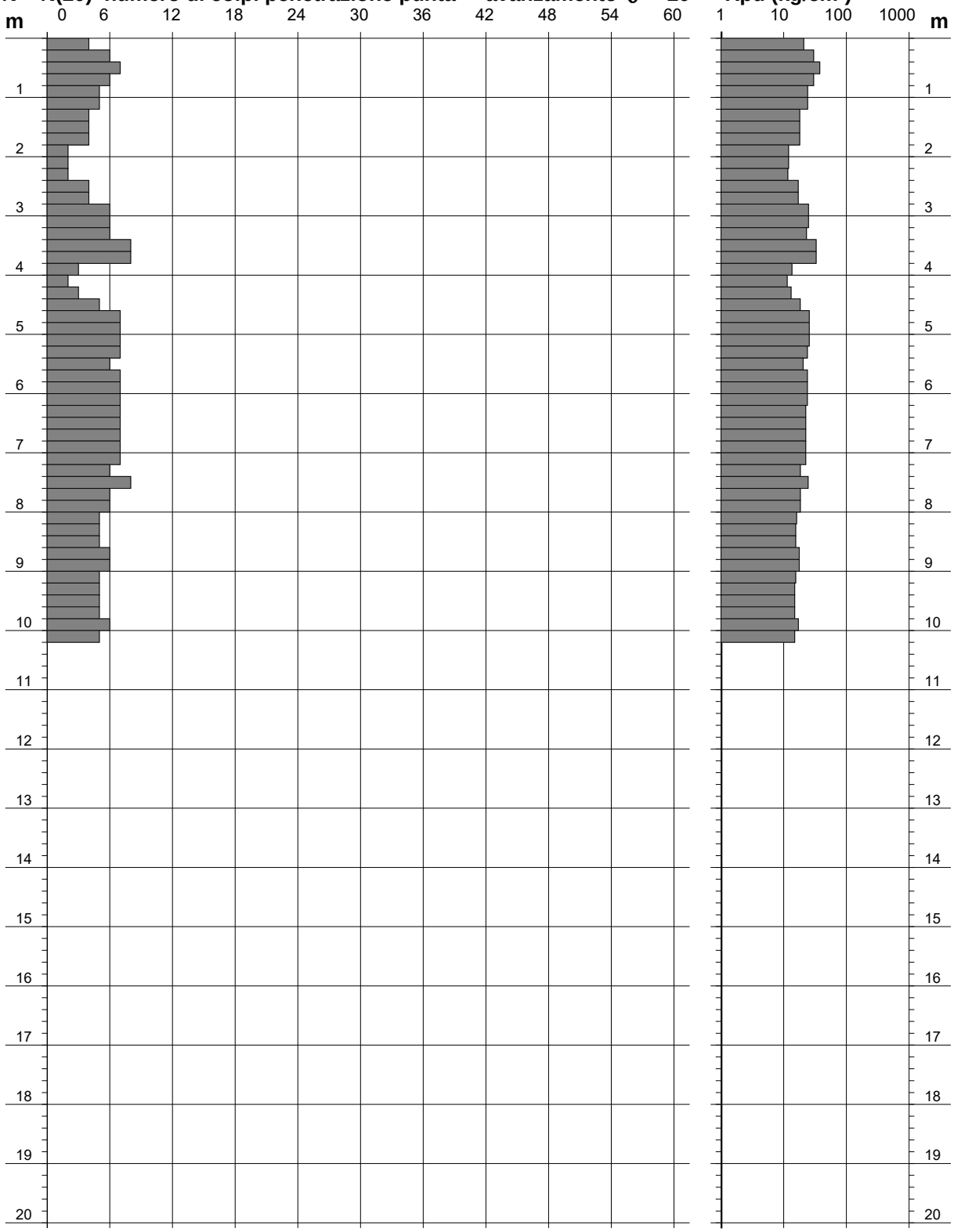
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 138
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-138
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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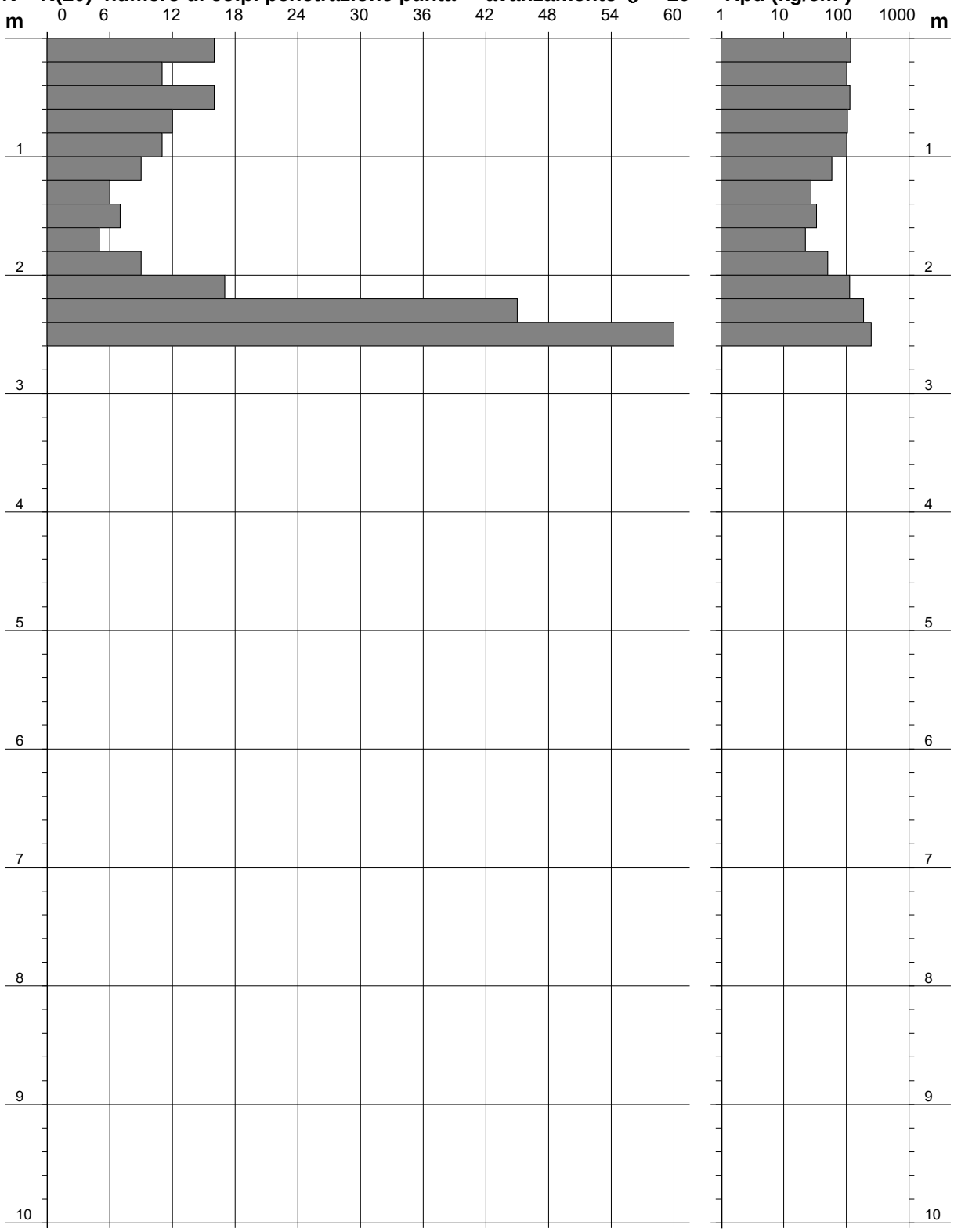
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 140
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-140
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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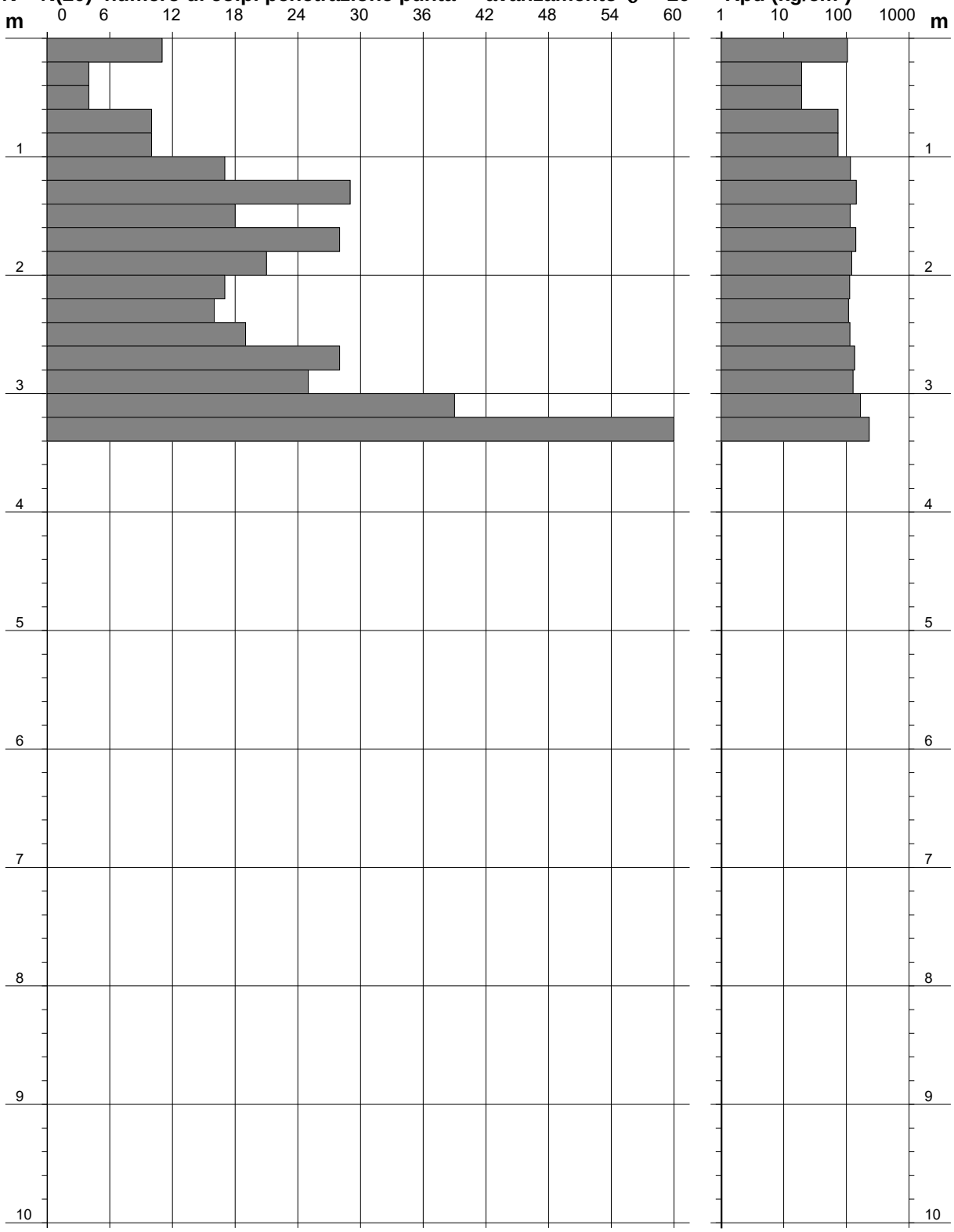
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 141
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	10/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-141
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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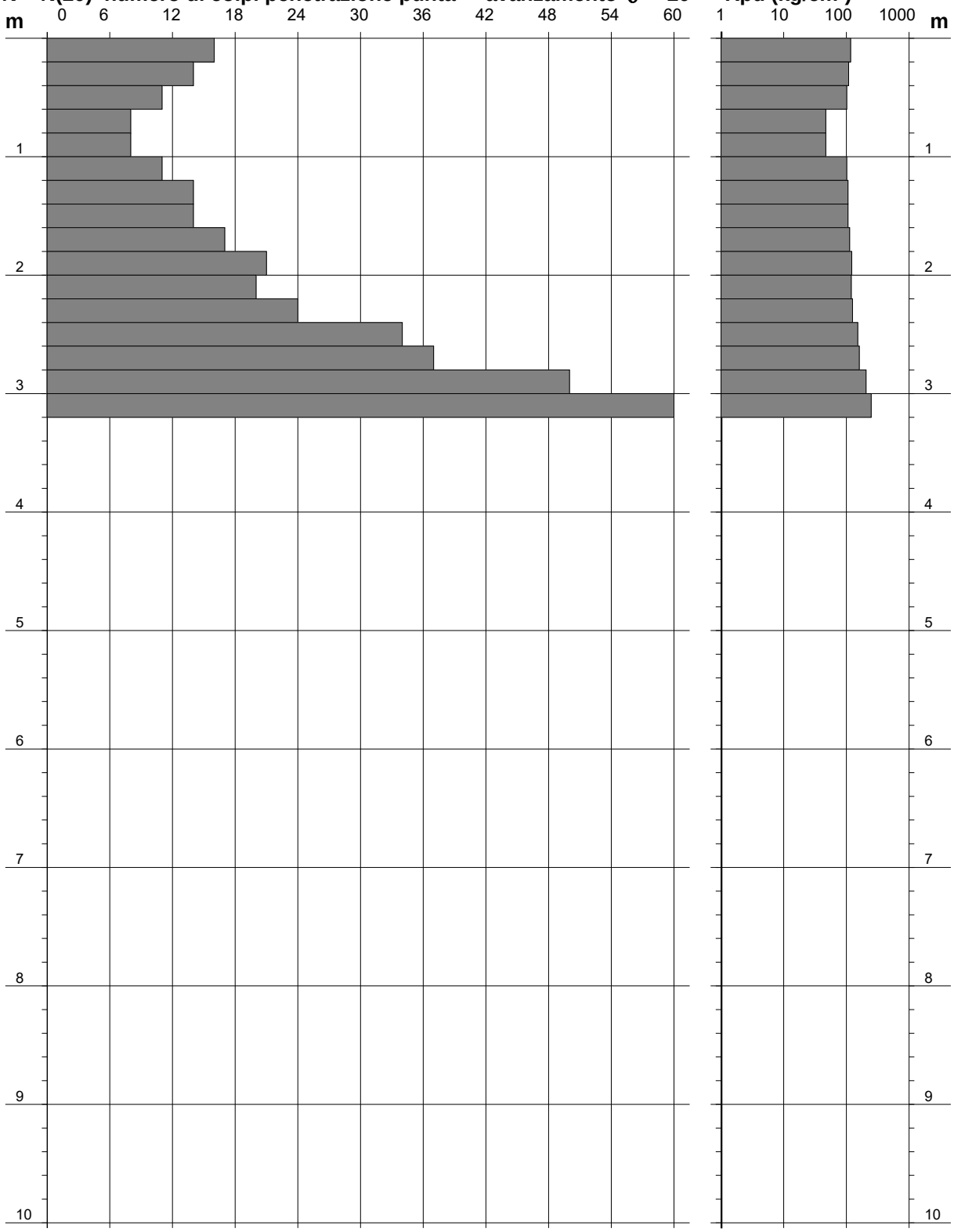
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 142
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-142
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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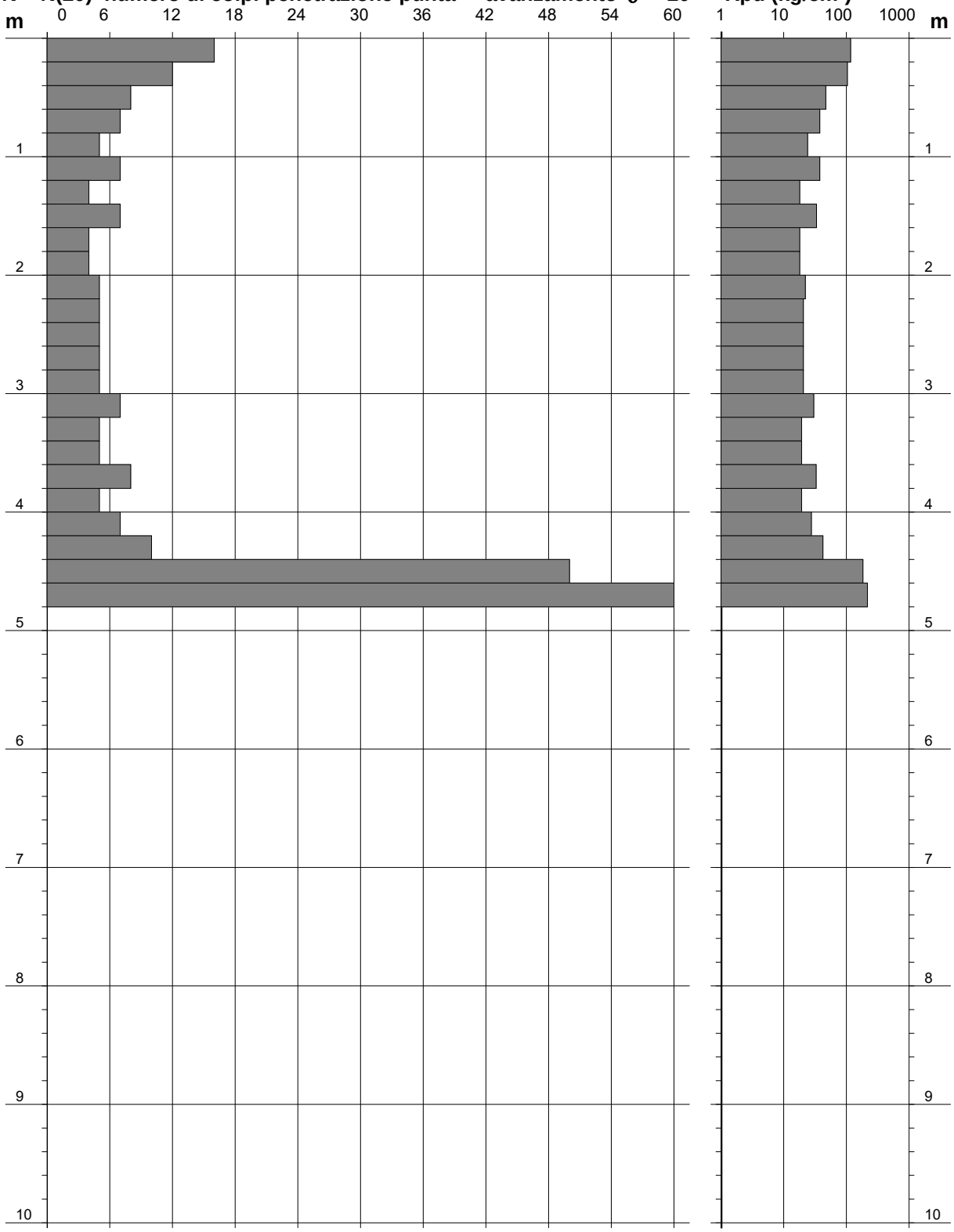
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 143
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-143
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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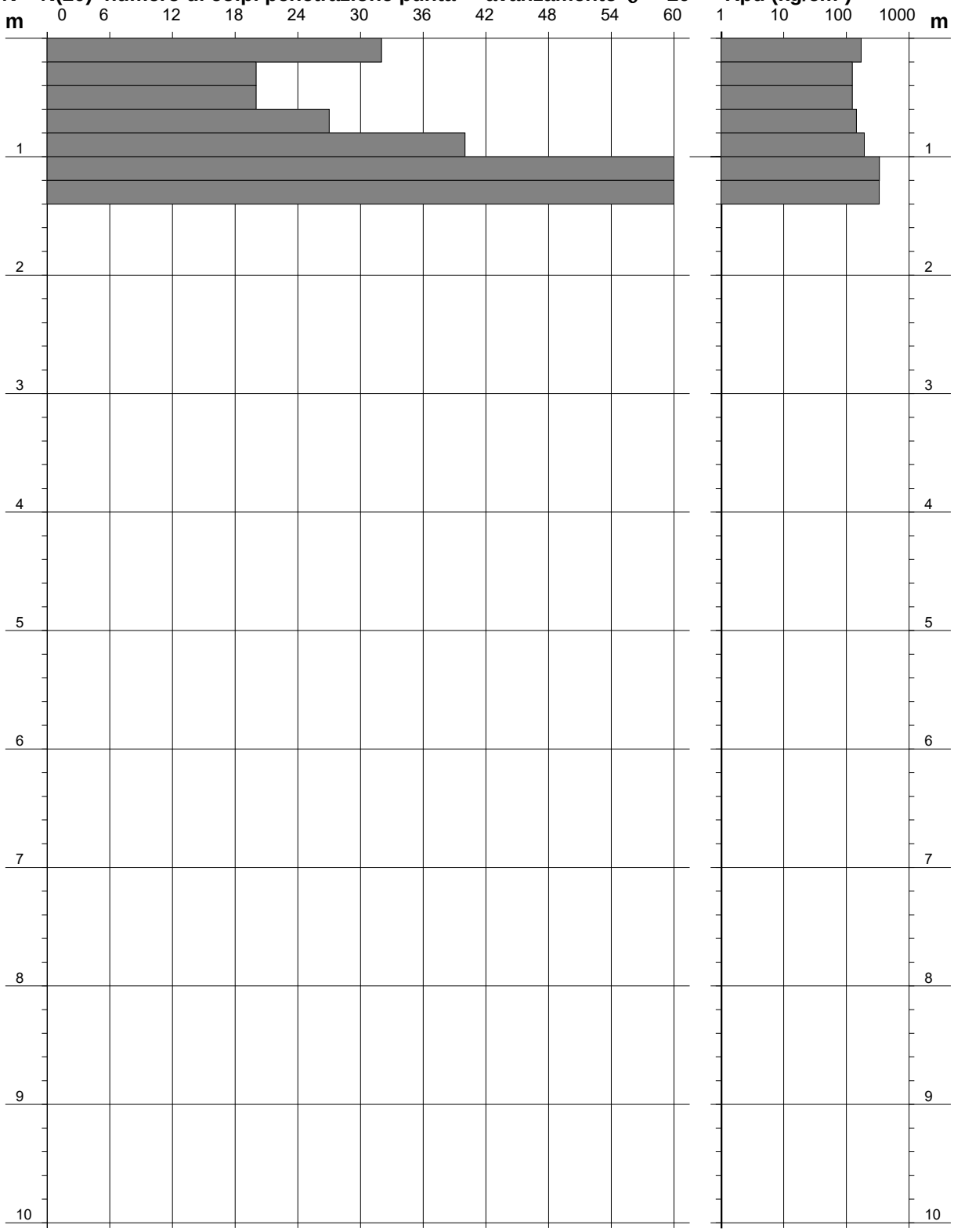
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 145
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-145
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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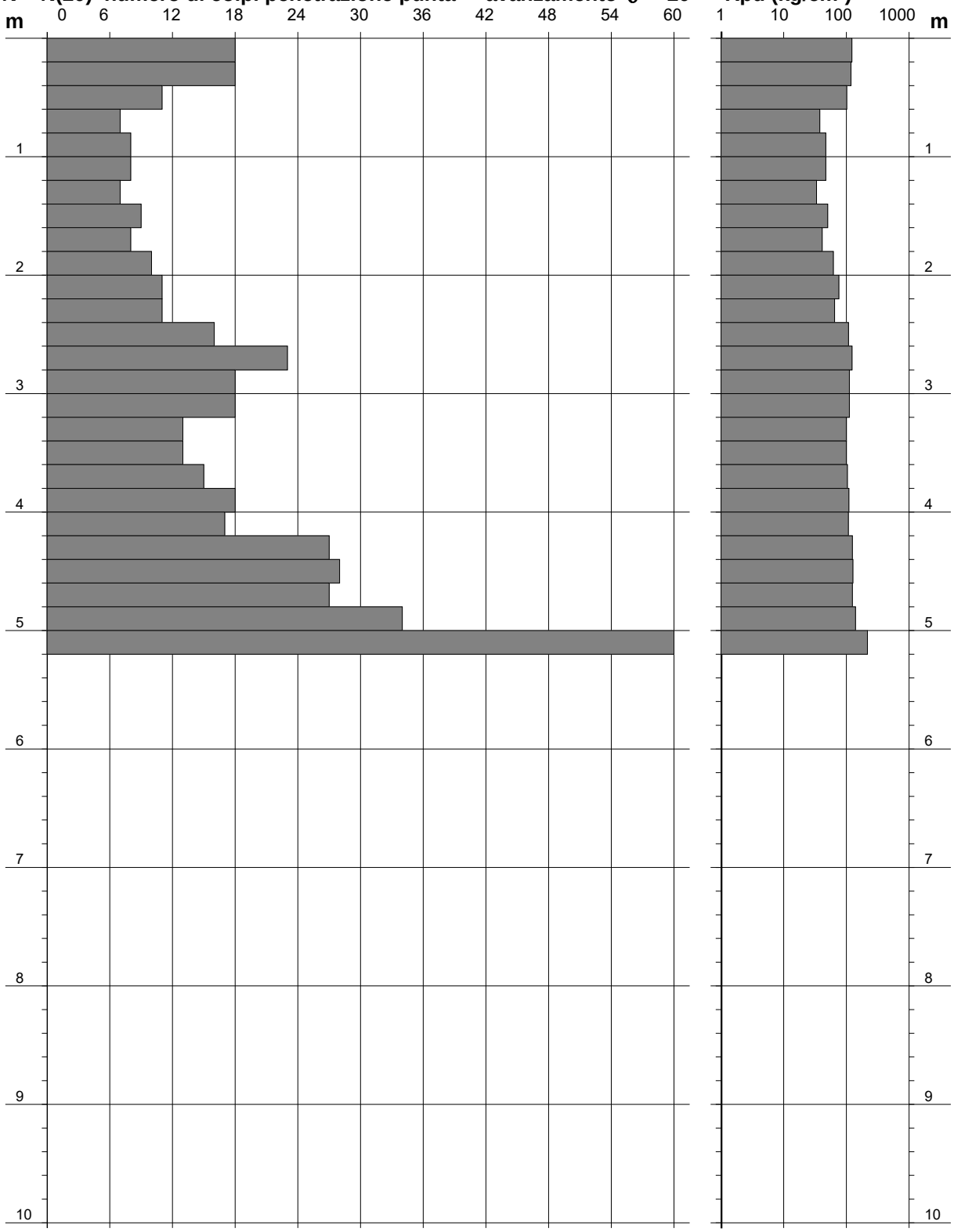
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 146
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	11/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-146
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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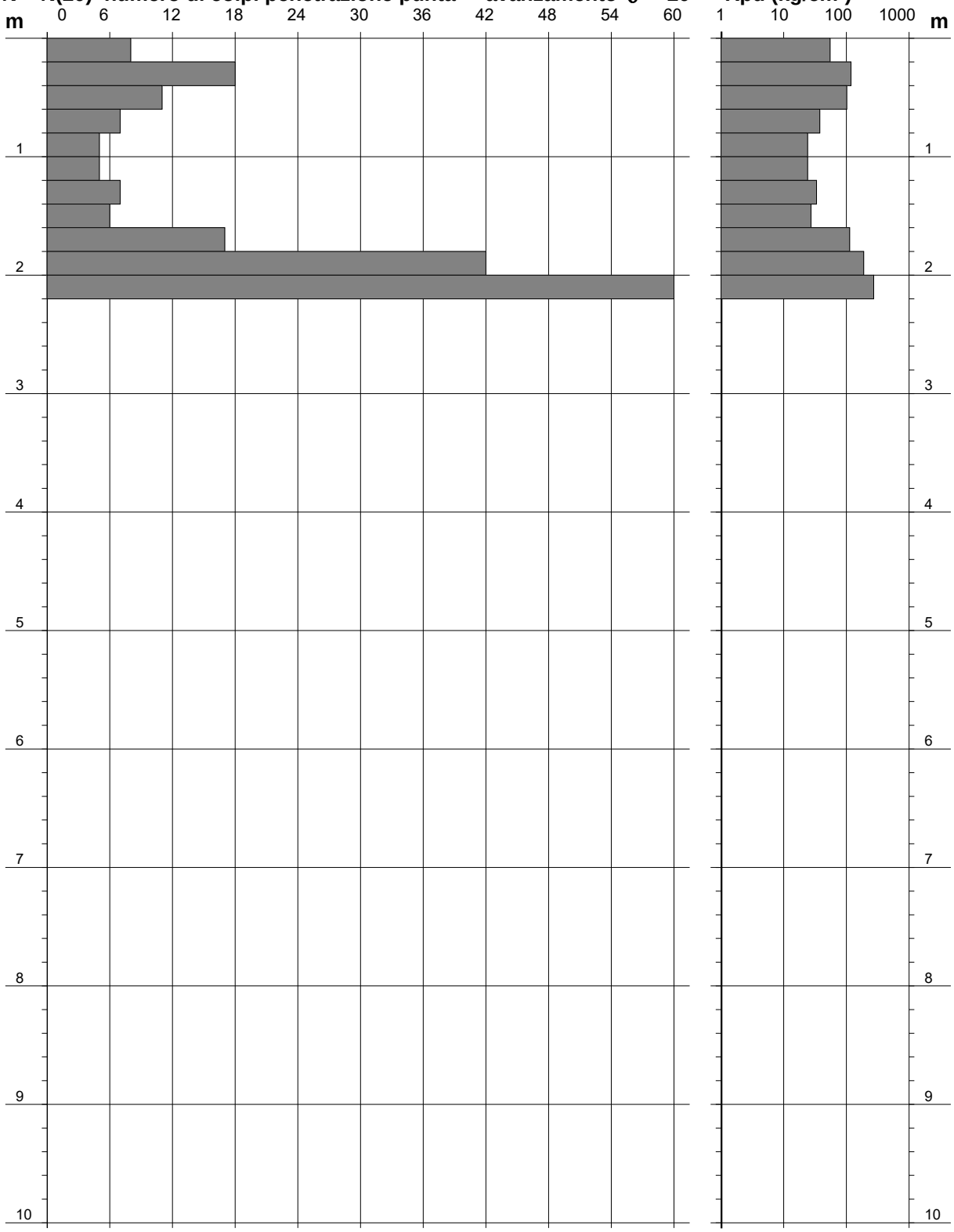
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 151
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-151
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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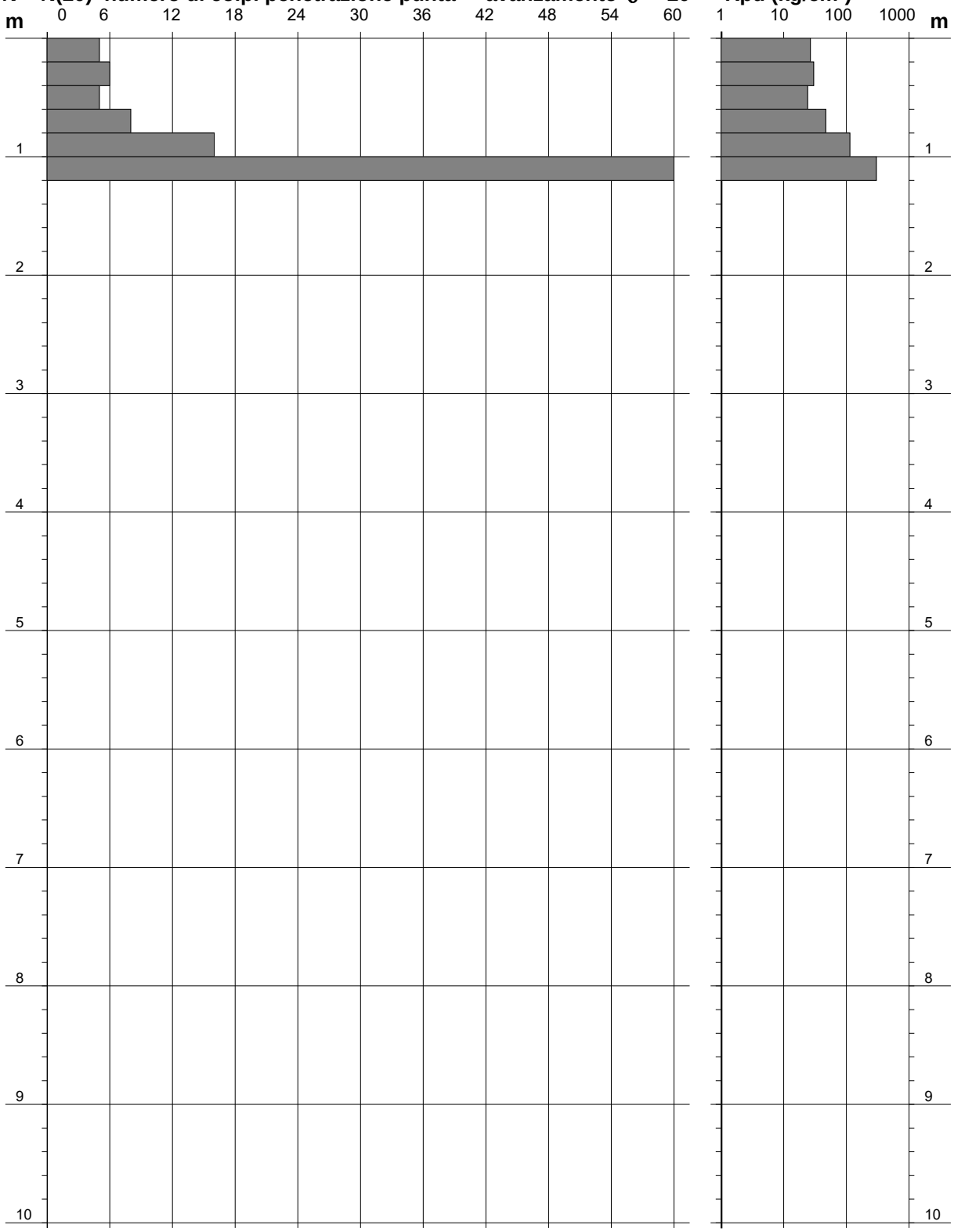
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 152
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-152
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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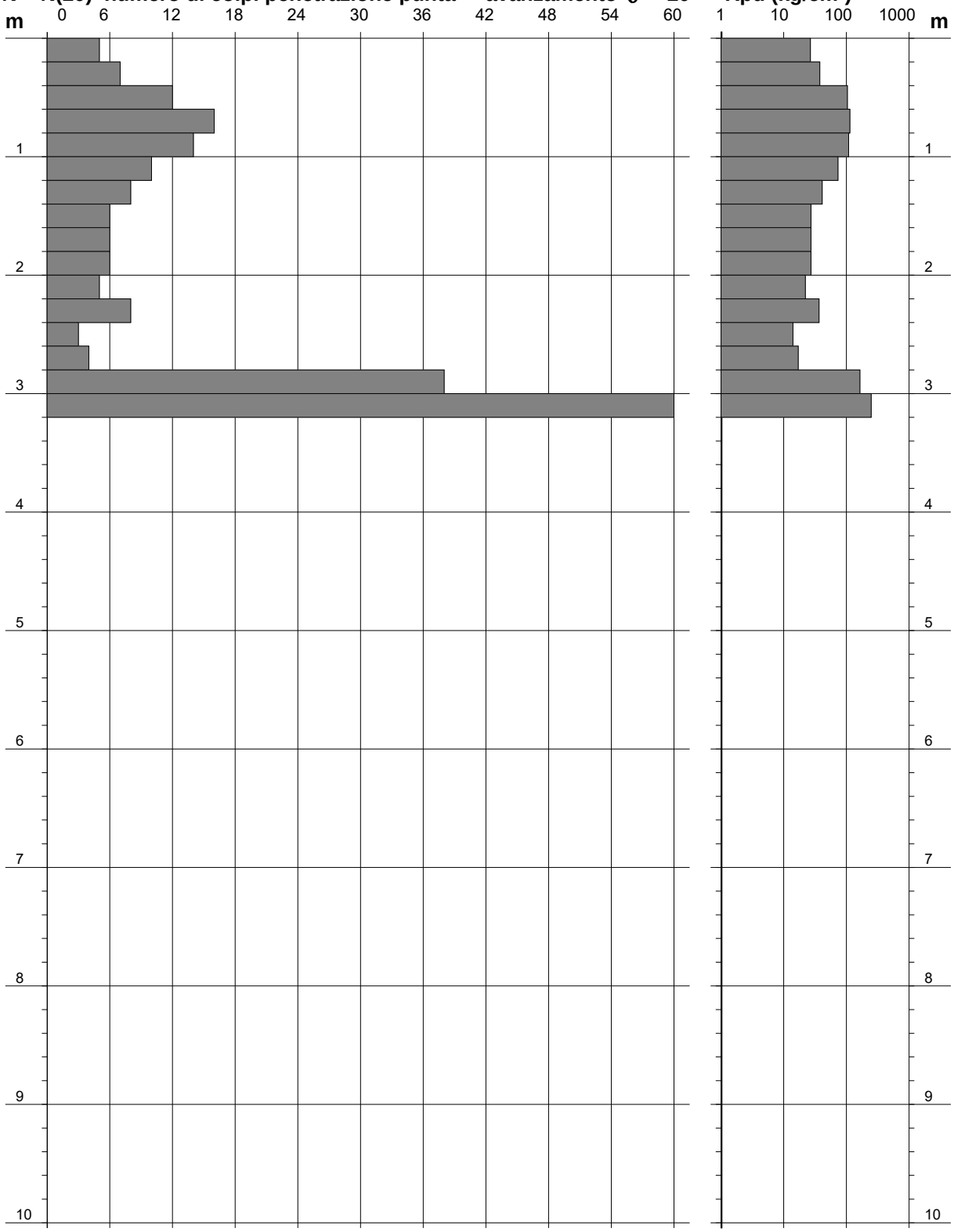
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 153
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-153
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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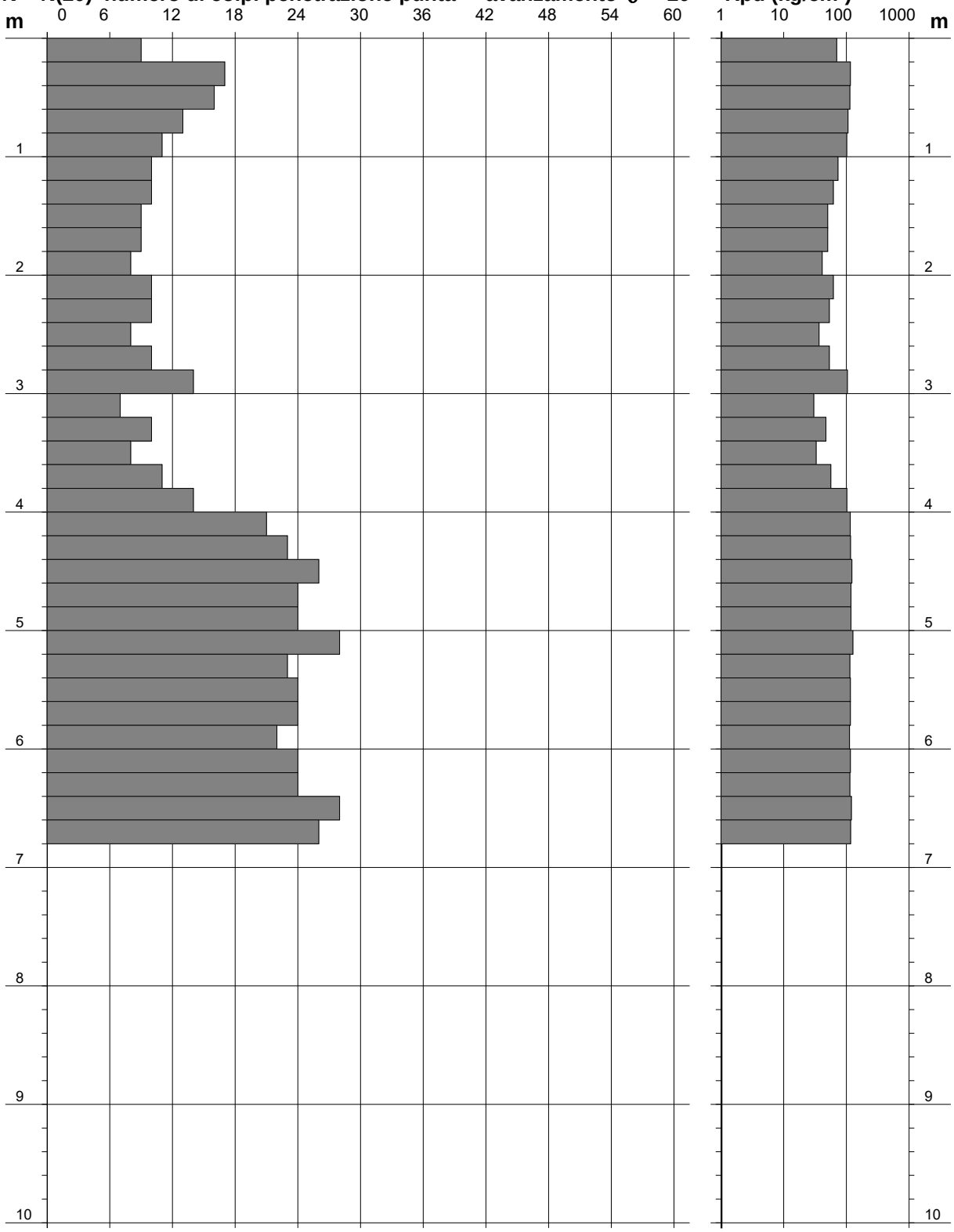
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 154
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-154
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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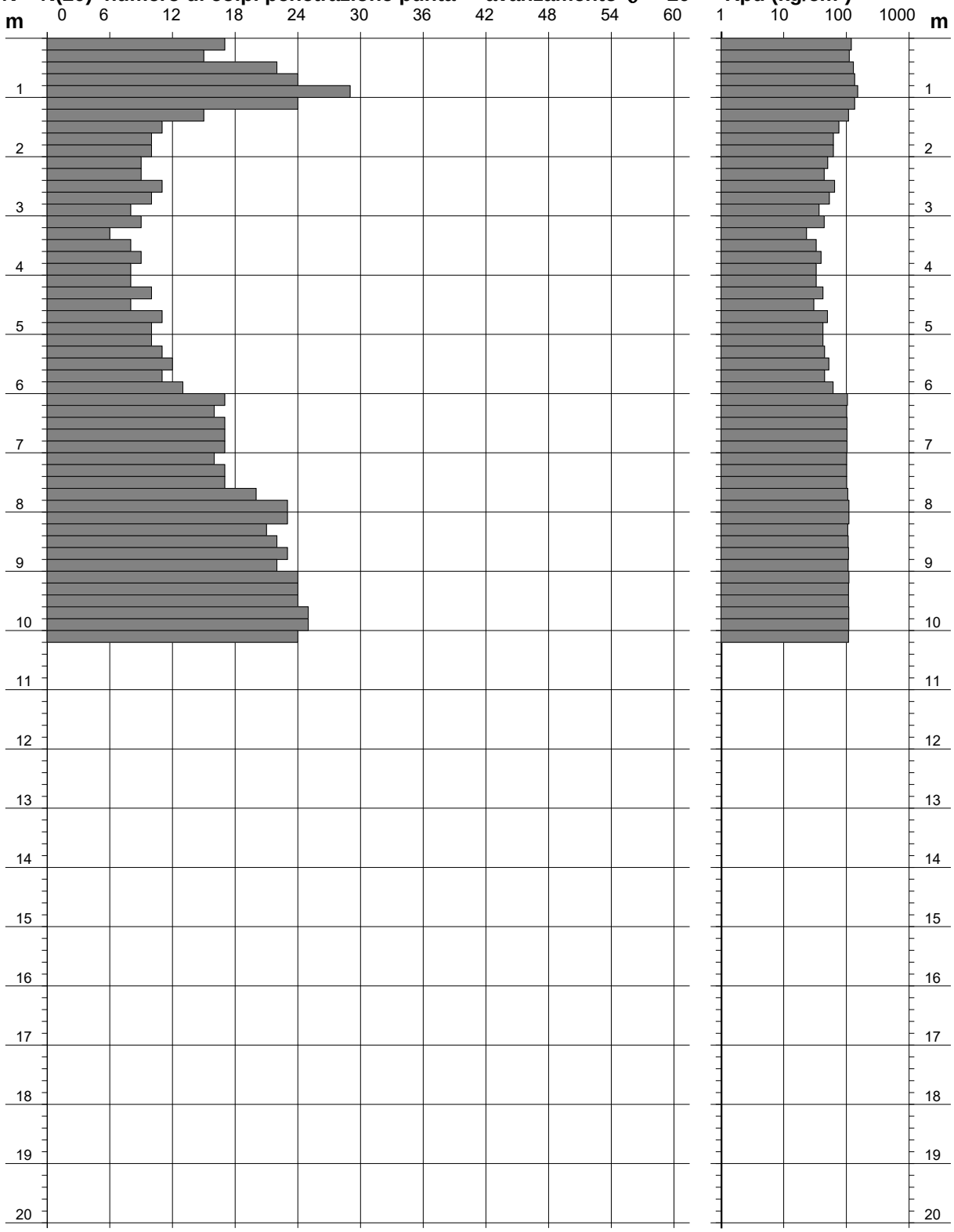
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 155
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-155
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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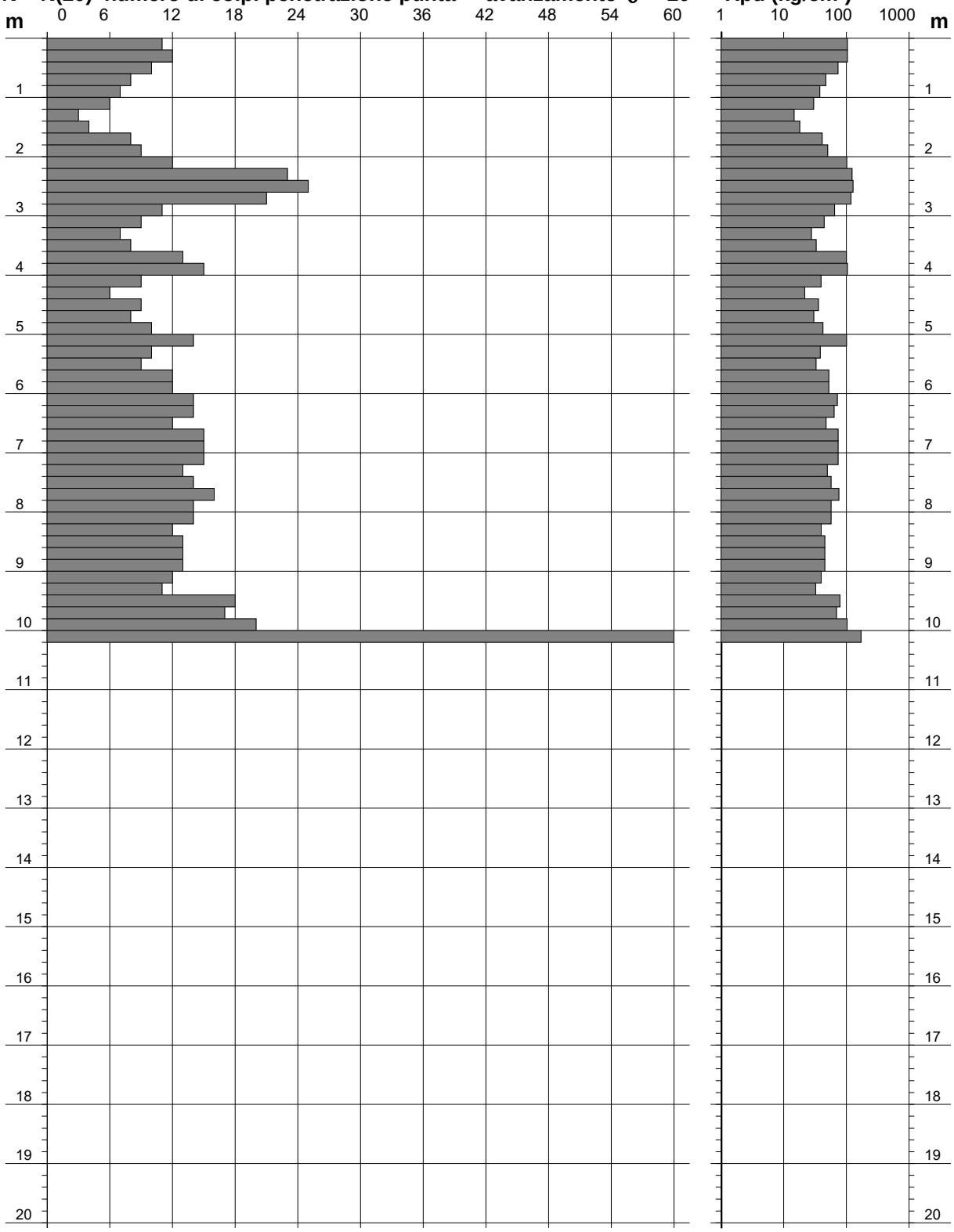
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 156
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-156
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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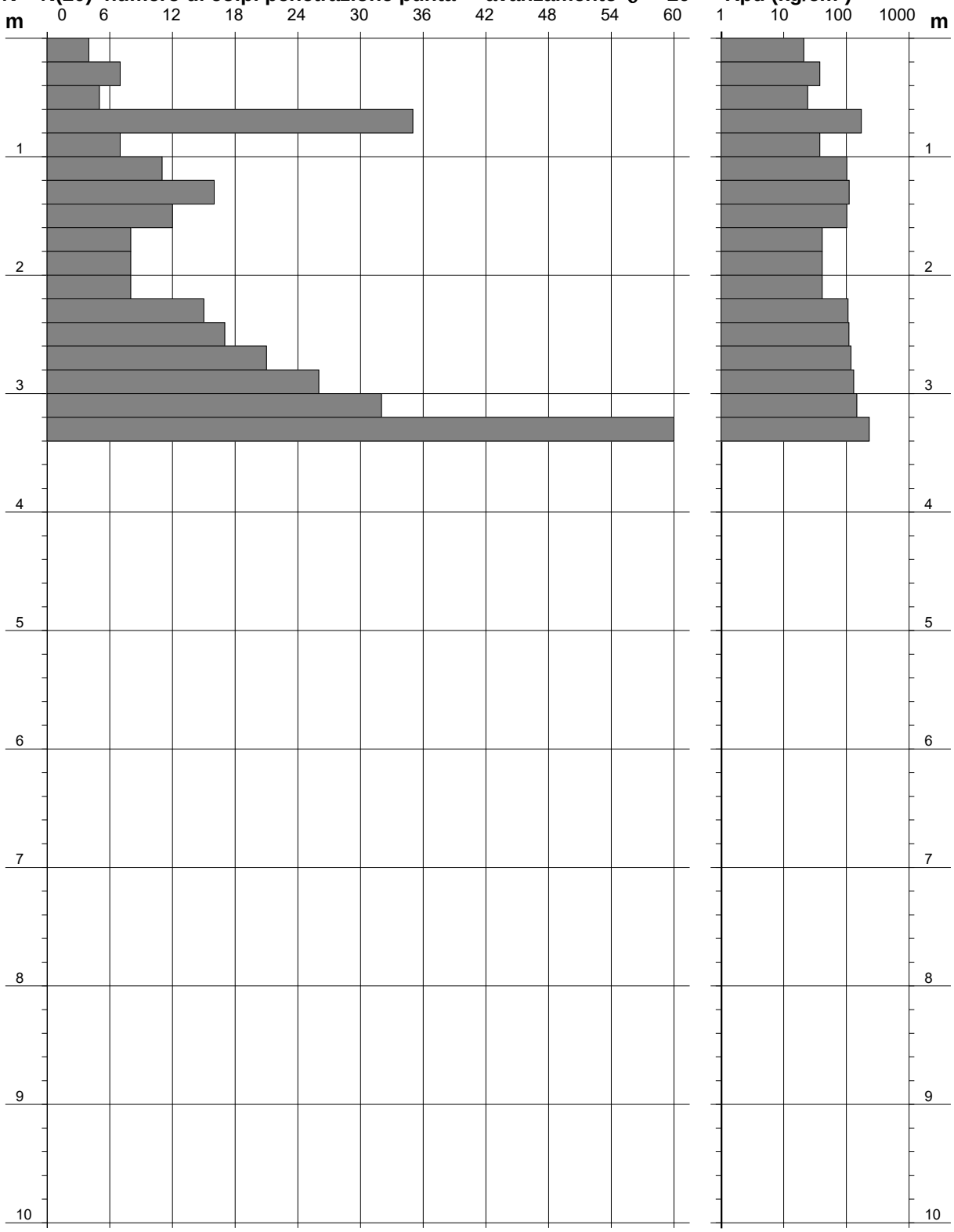
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 157
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-157
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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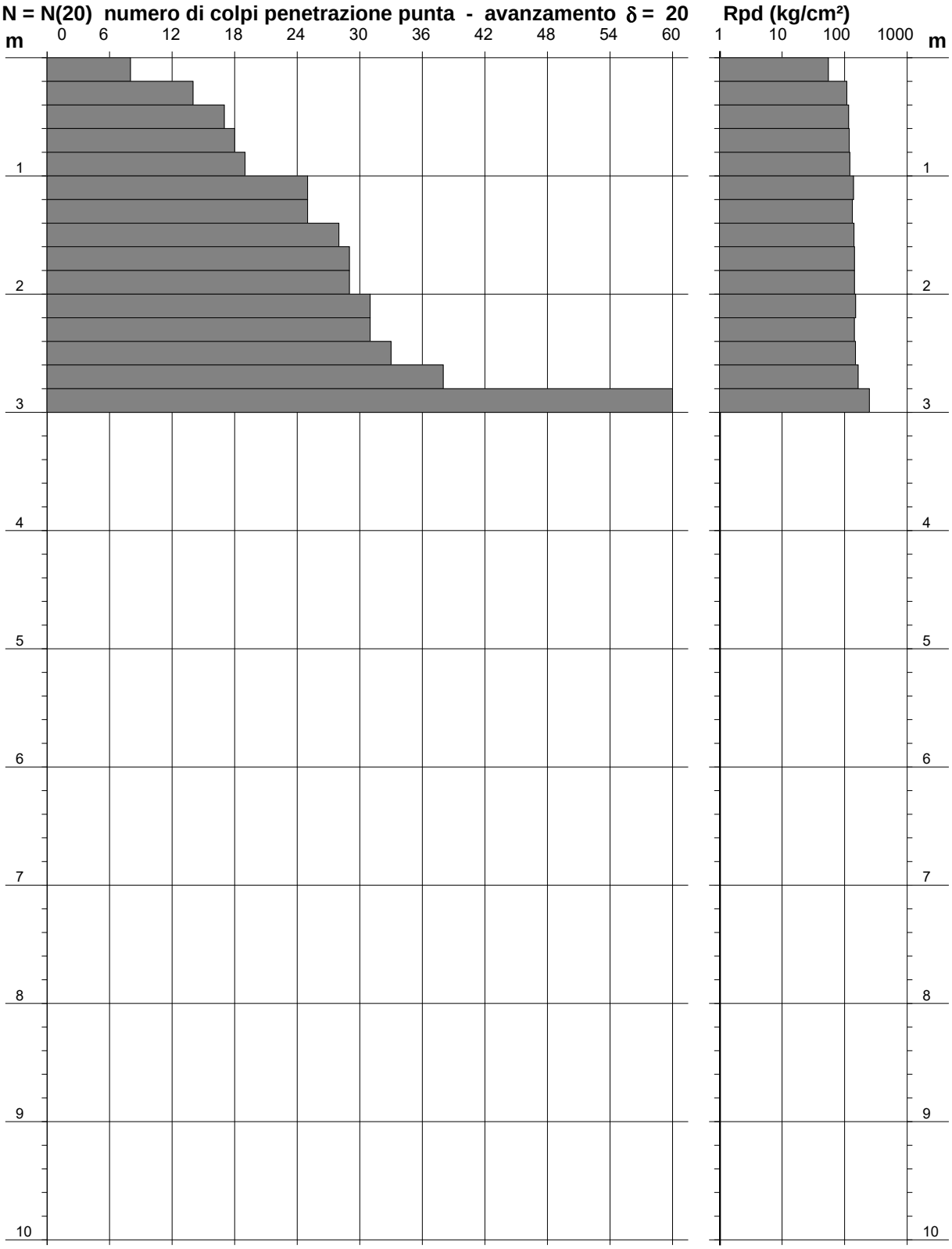
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 160
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-160
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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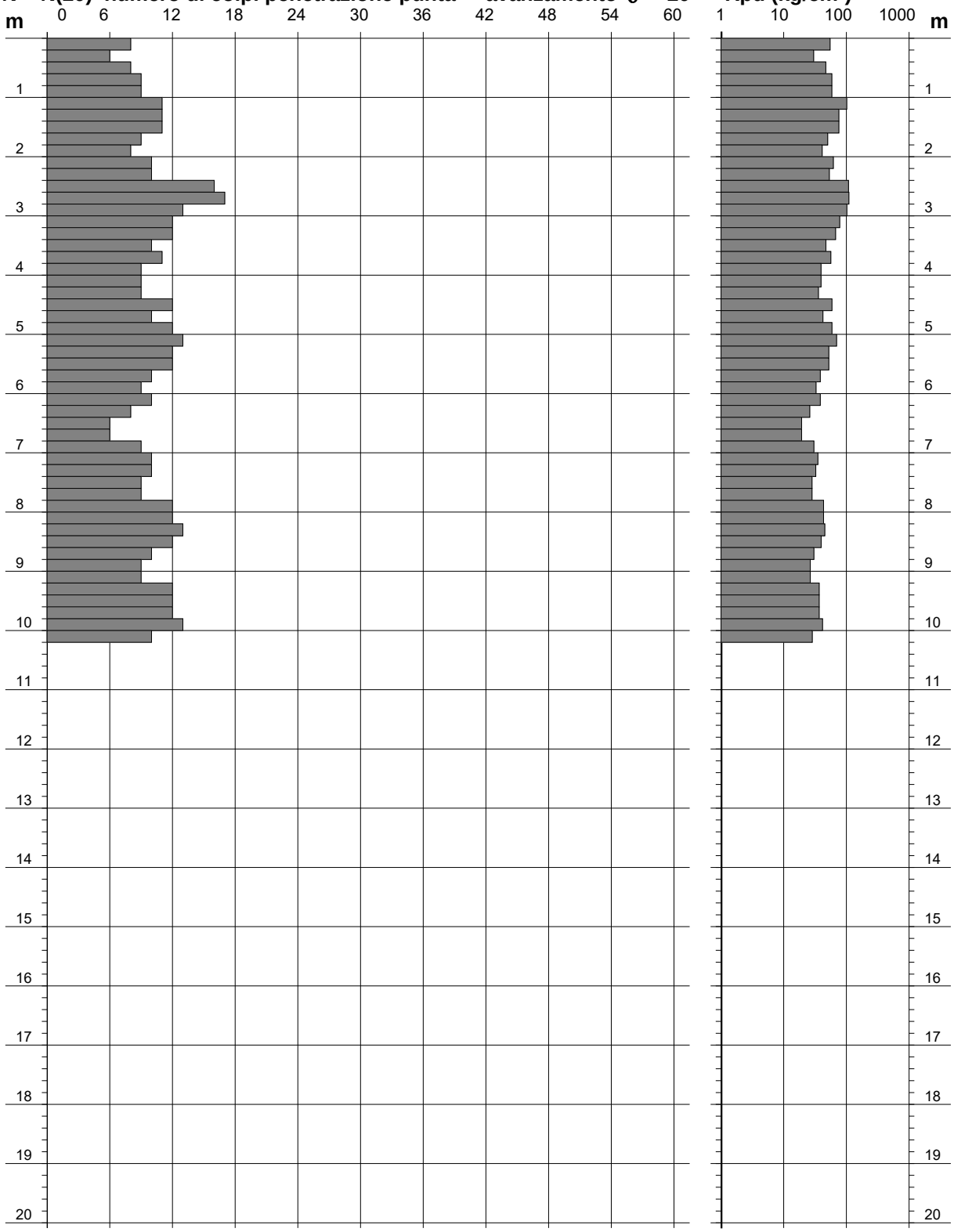
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 162
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	21/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-162
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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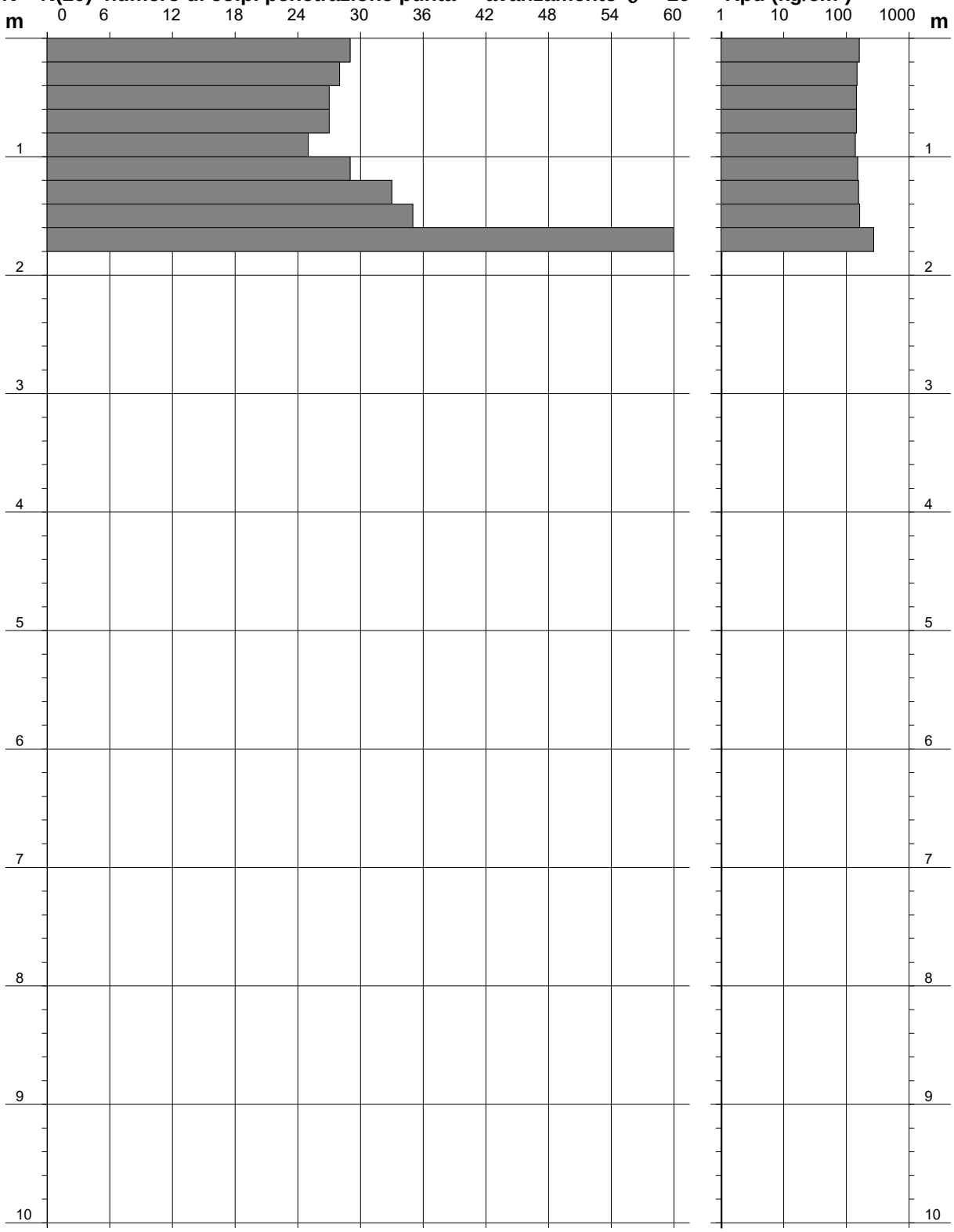
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 164
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-164
- località :	Faicchio (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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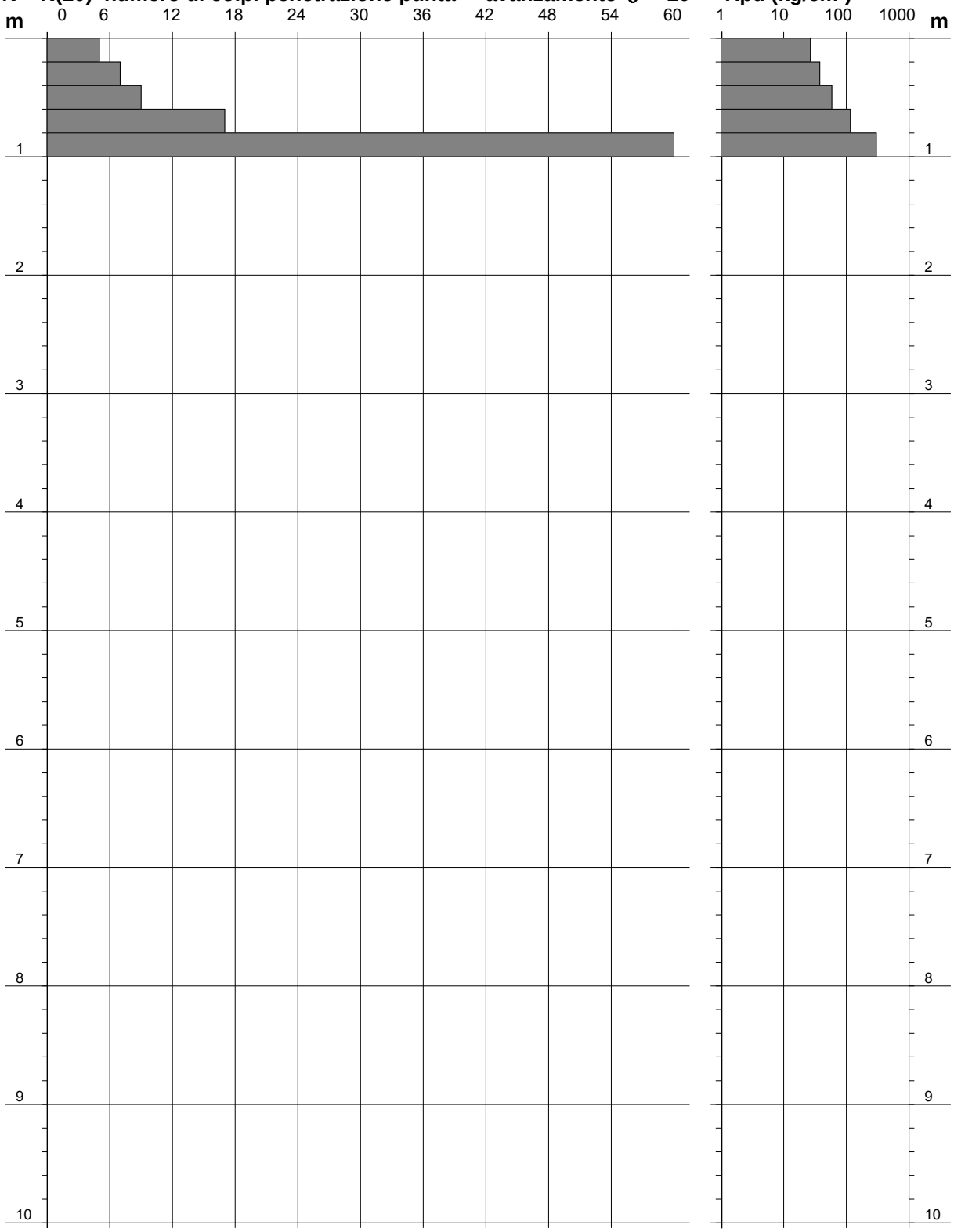
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 184
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	14/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-184
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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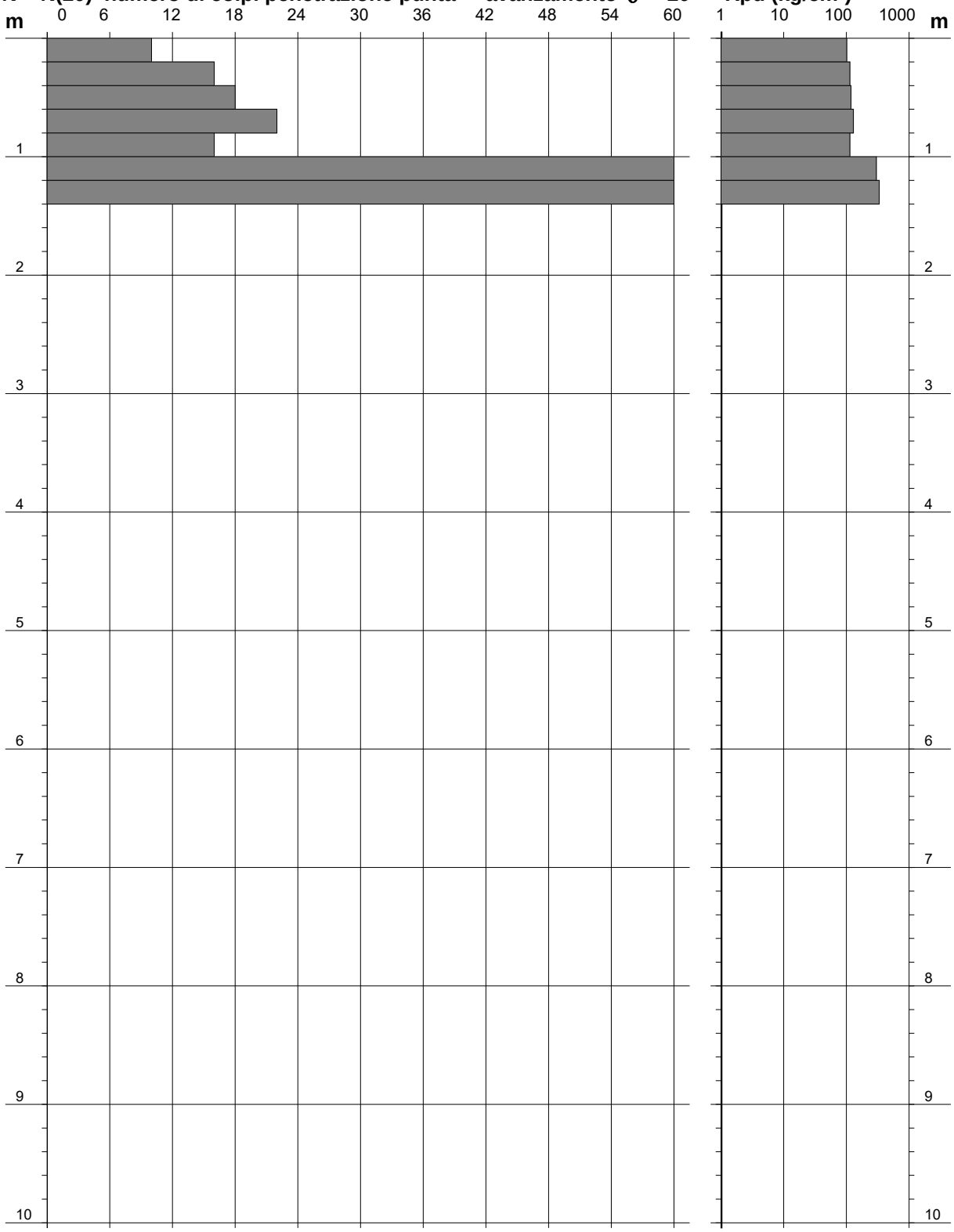
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 188
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	15/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-188
- località :	Casalduni (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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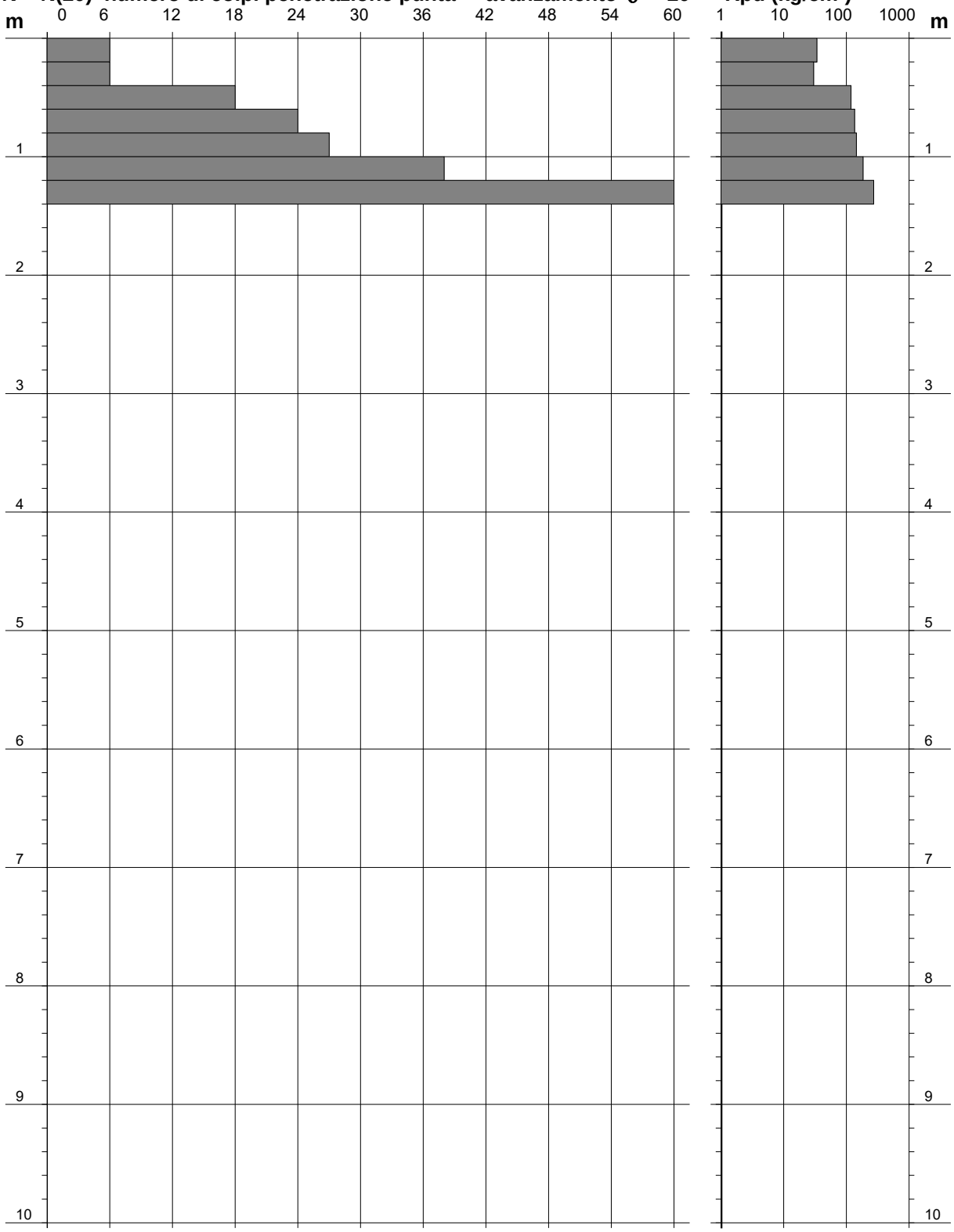
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 197
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	15/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-197
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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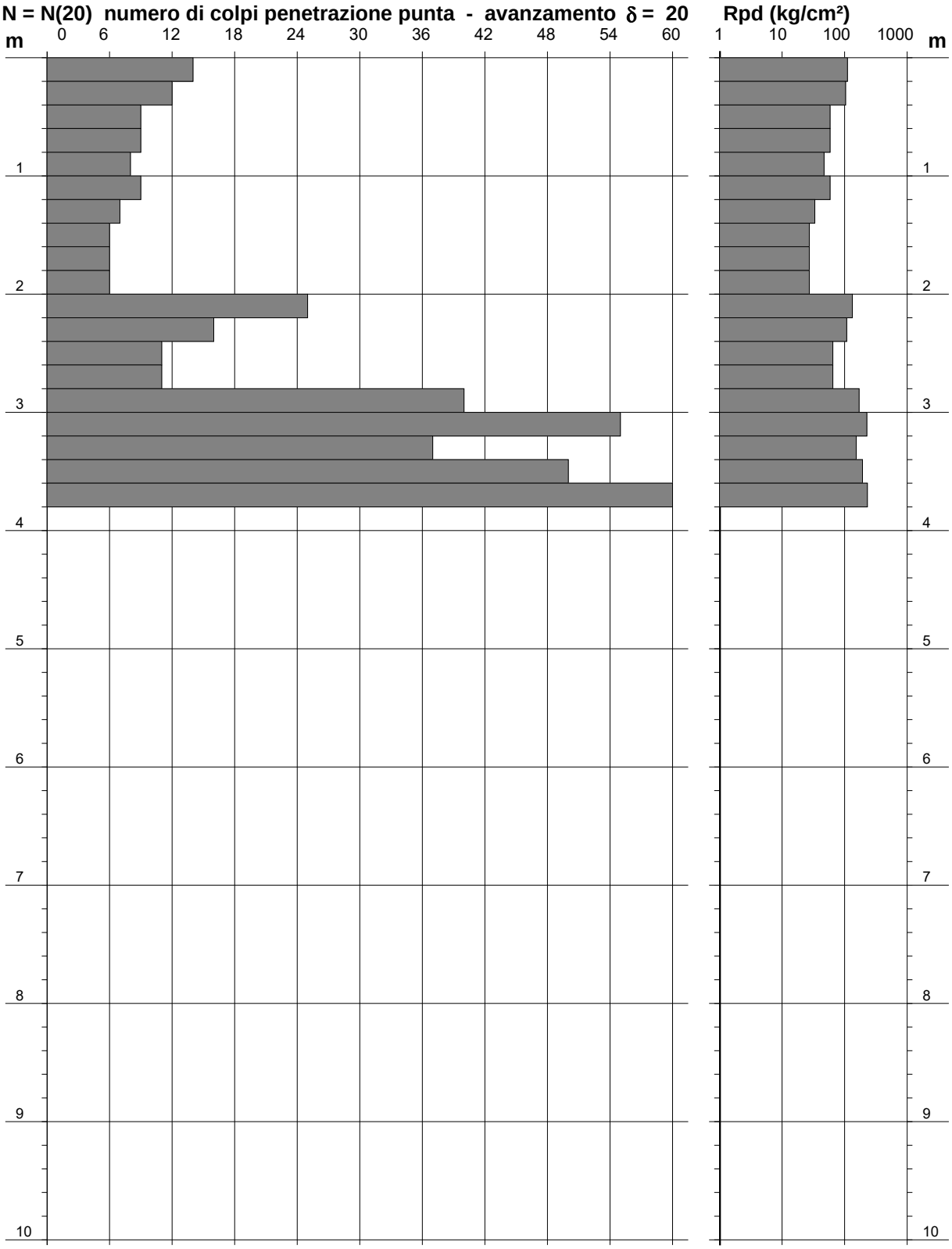
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 204
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-204
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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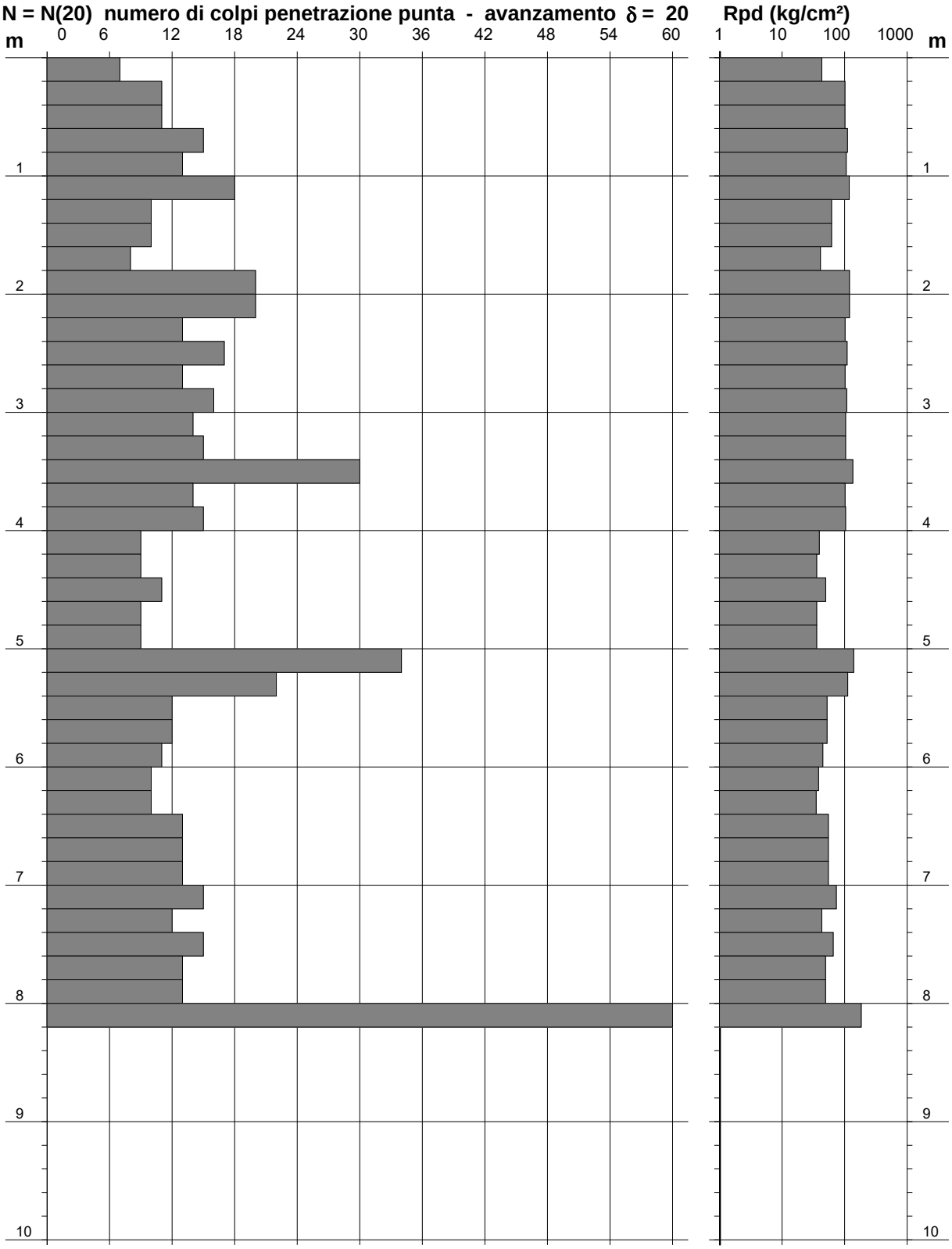
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 205
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-205
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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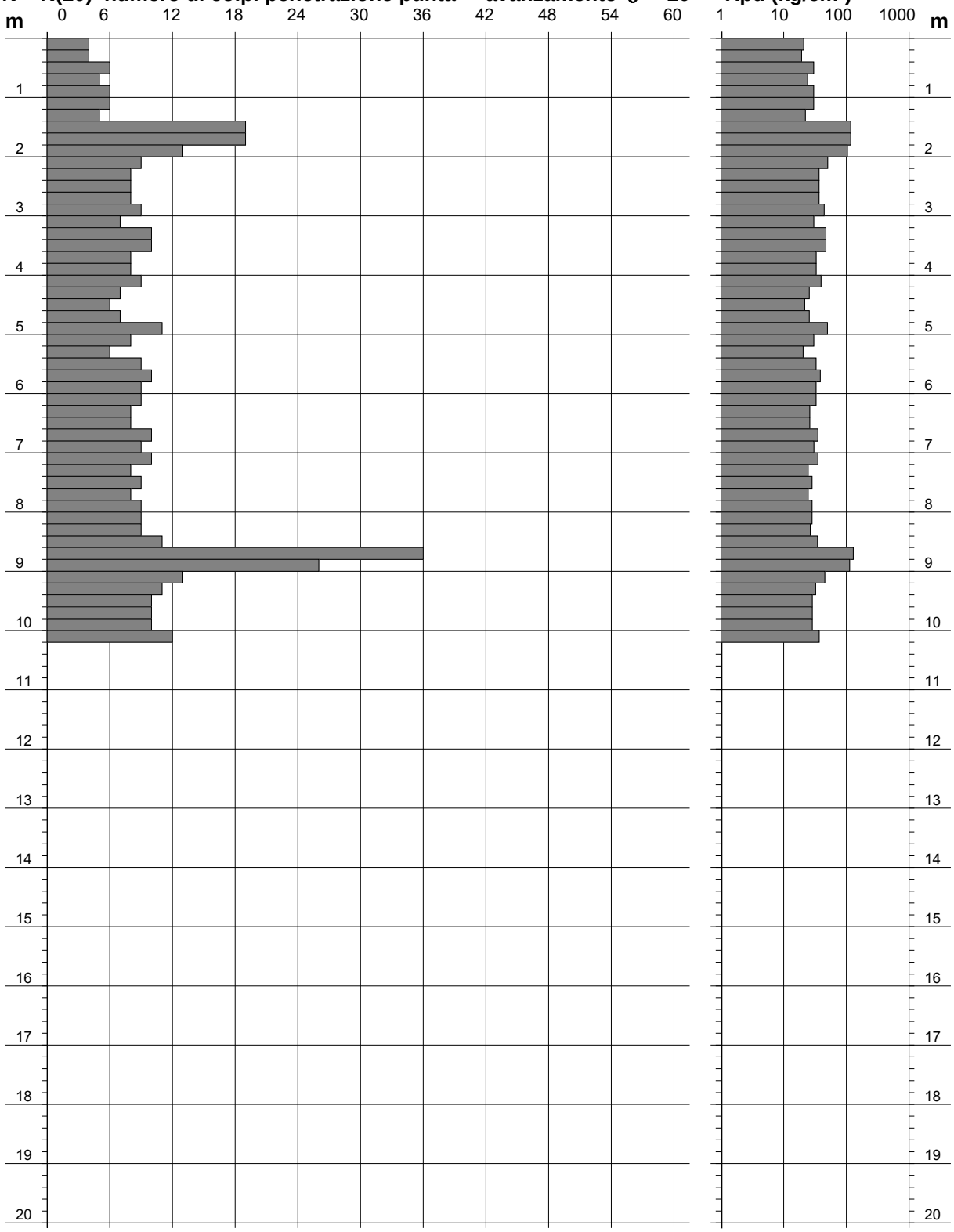
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 206
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-206
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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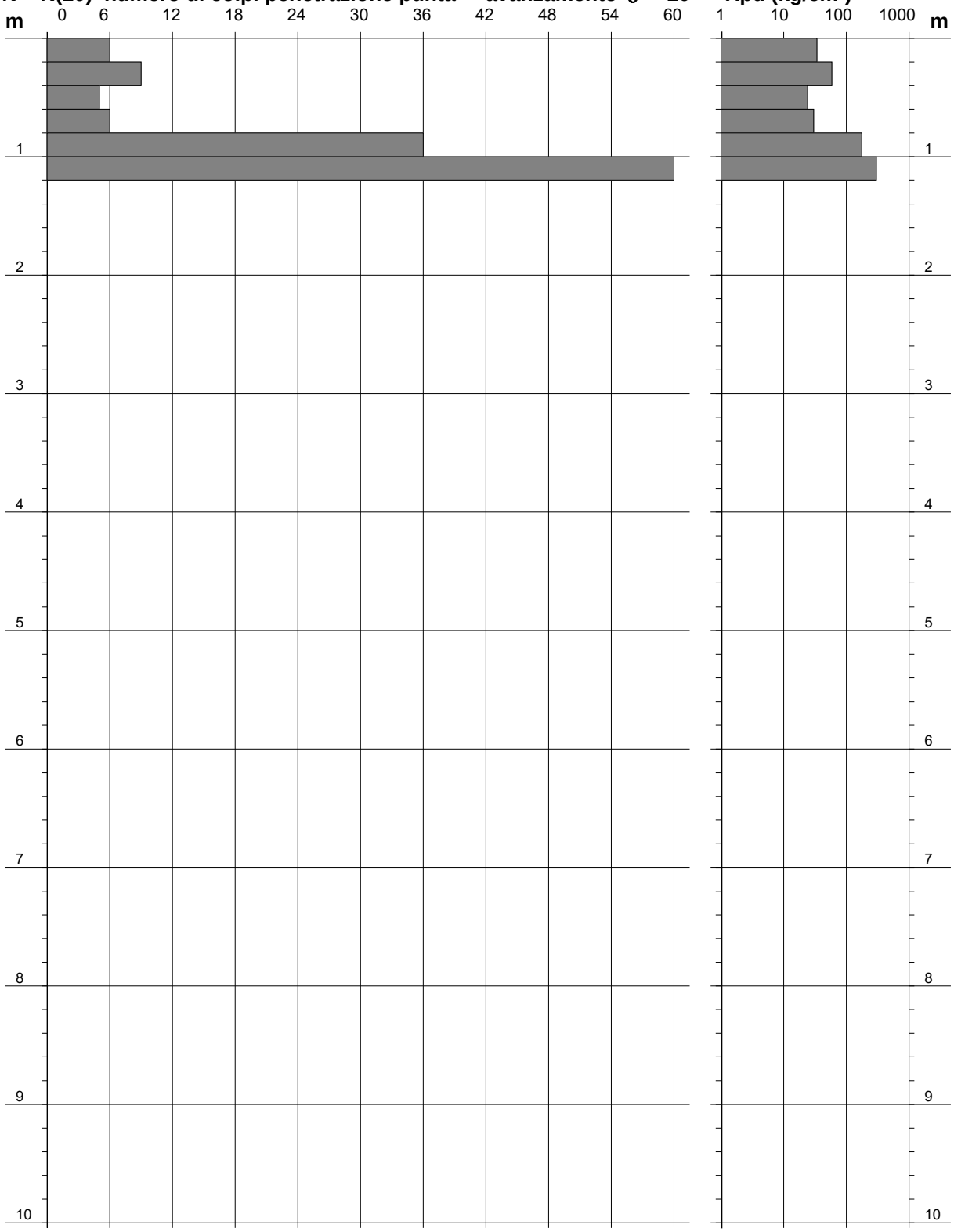
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 207
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	17/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-207
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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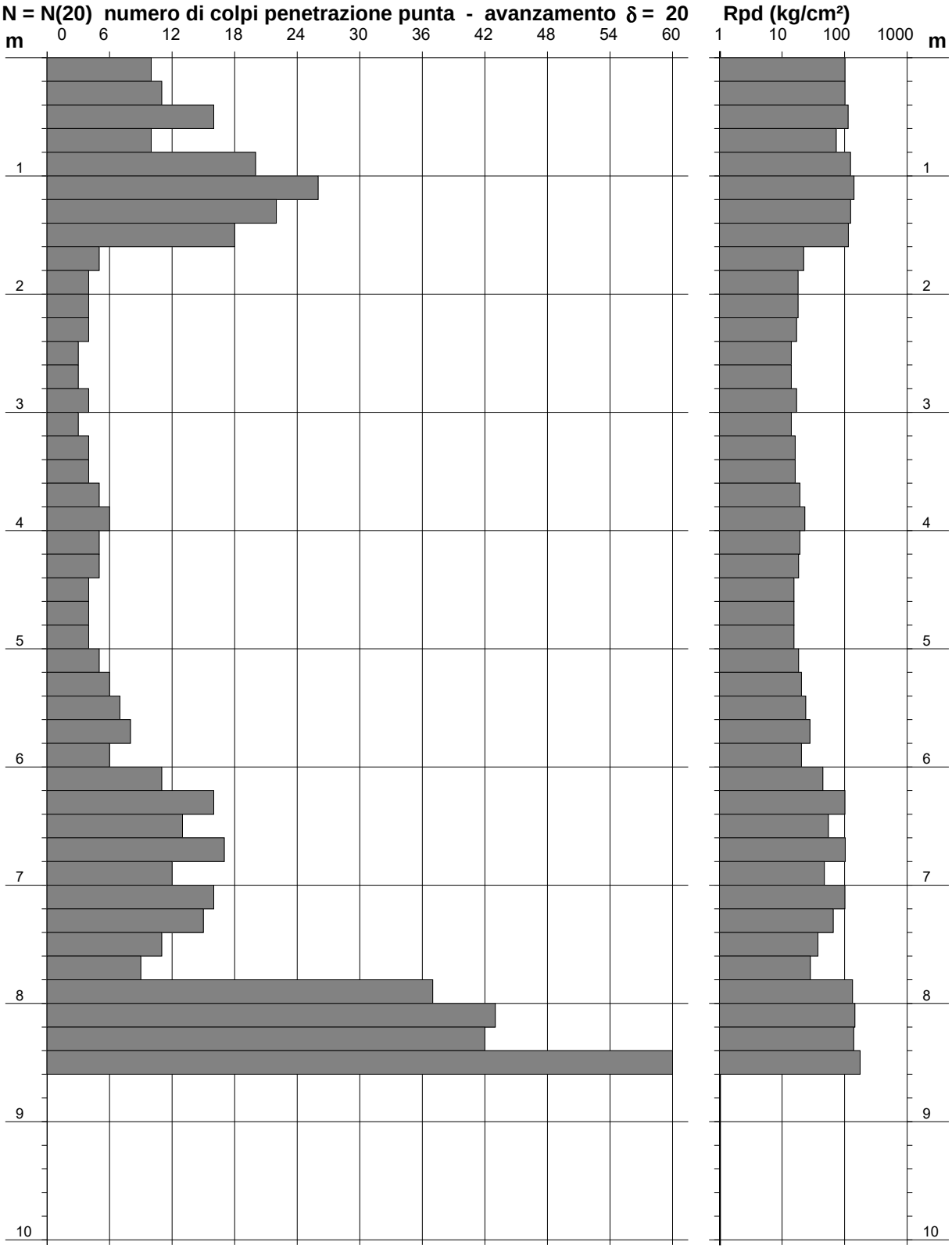
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 212
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	18/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-212
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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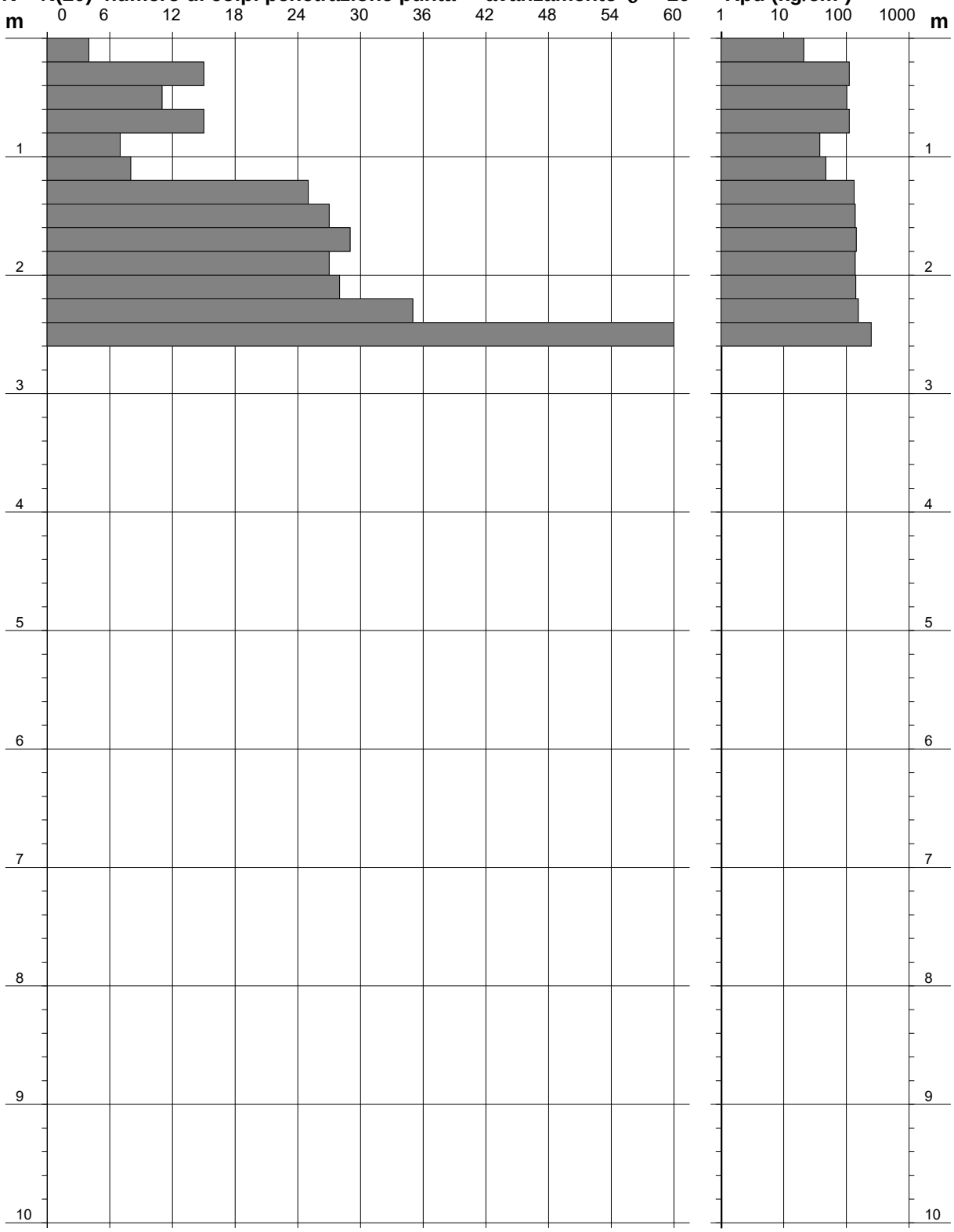
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 214
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	18/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-214
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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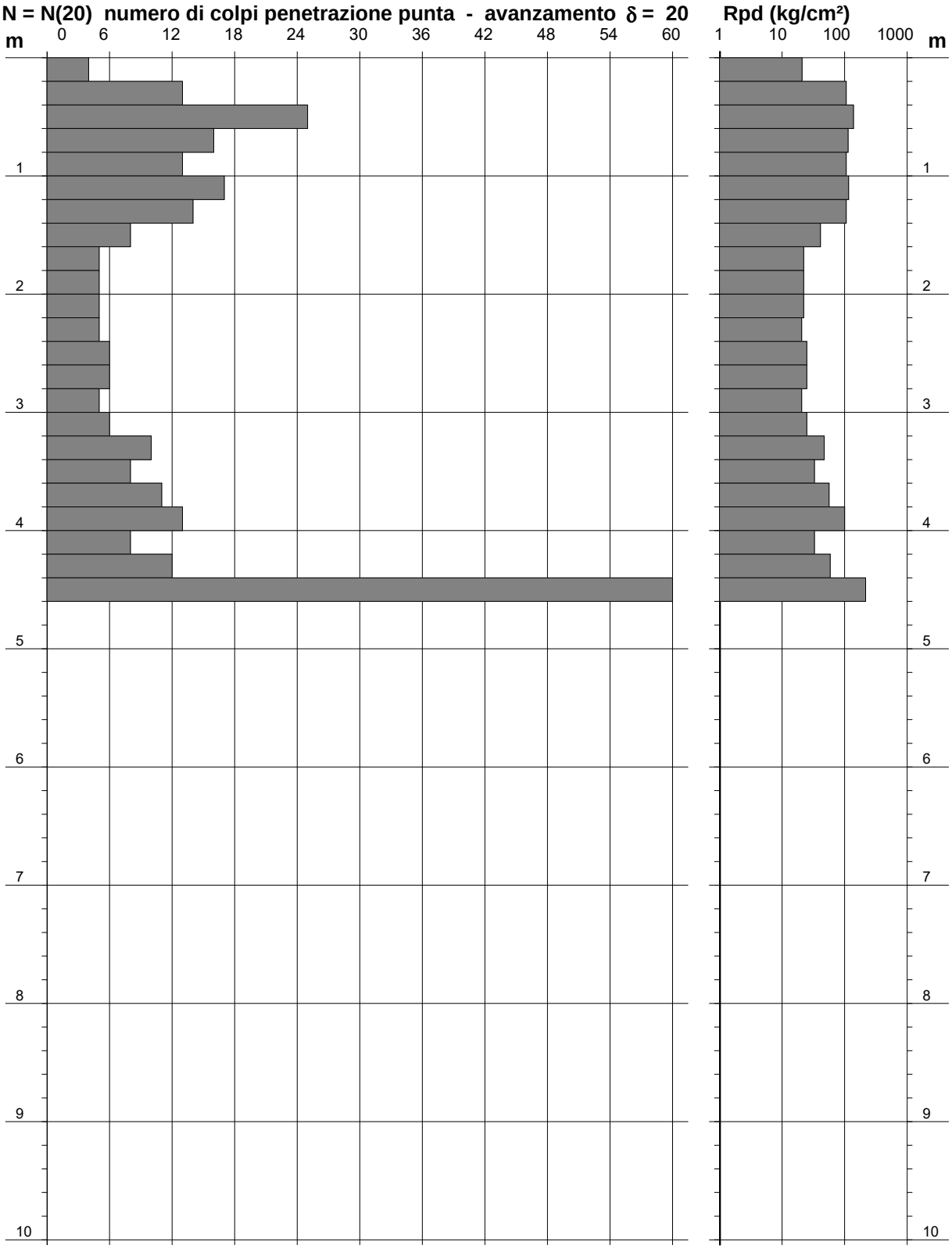
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 215
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	18/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-215
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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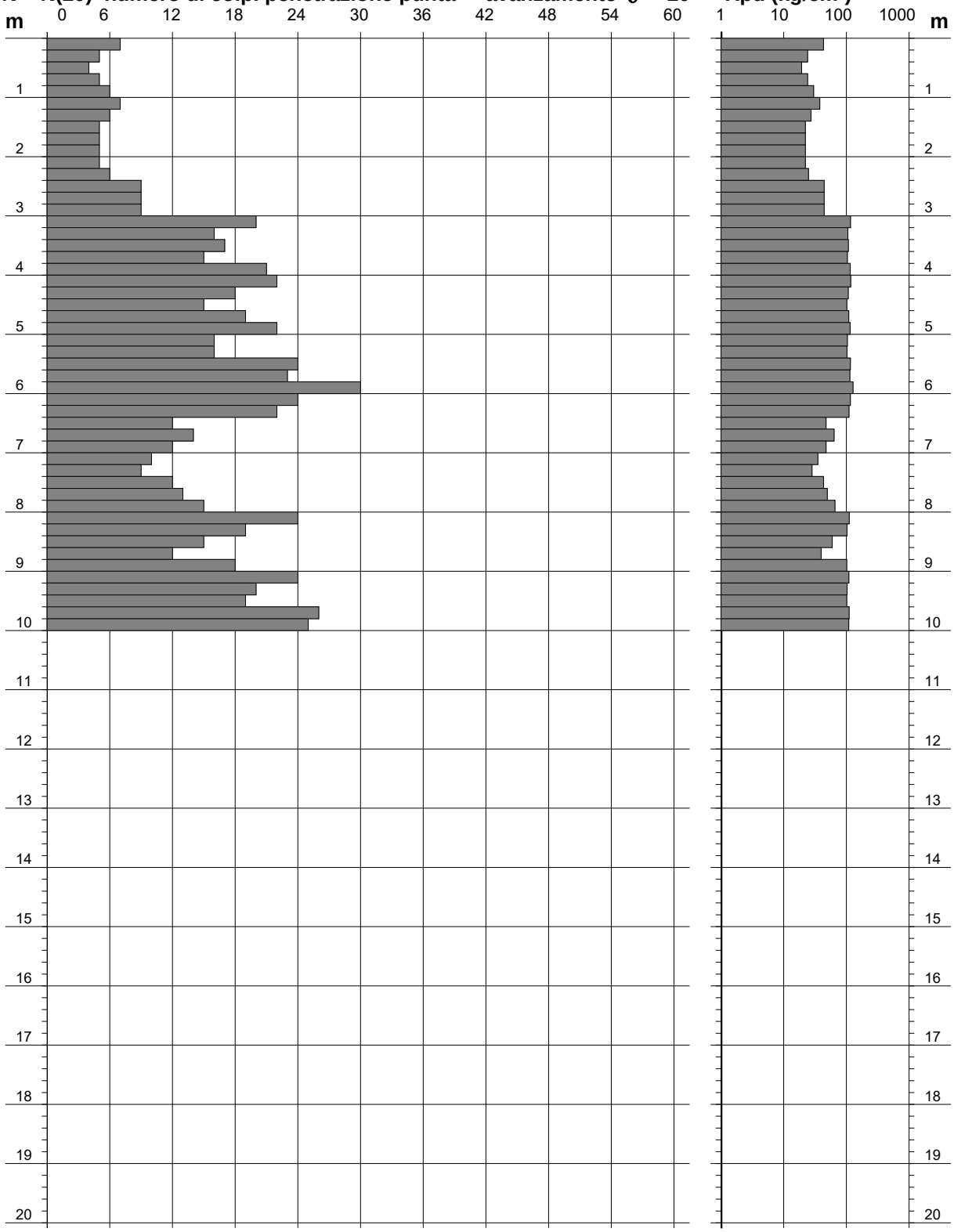
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 217
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-217
- località :	Pontelandolfo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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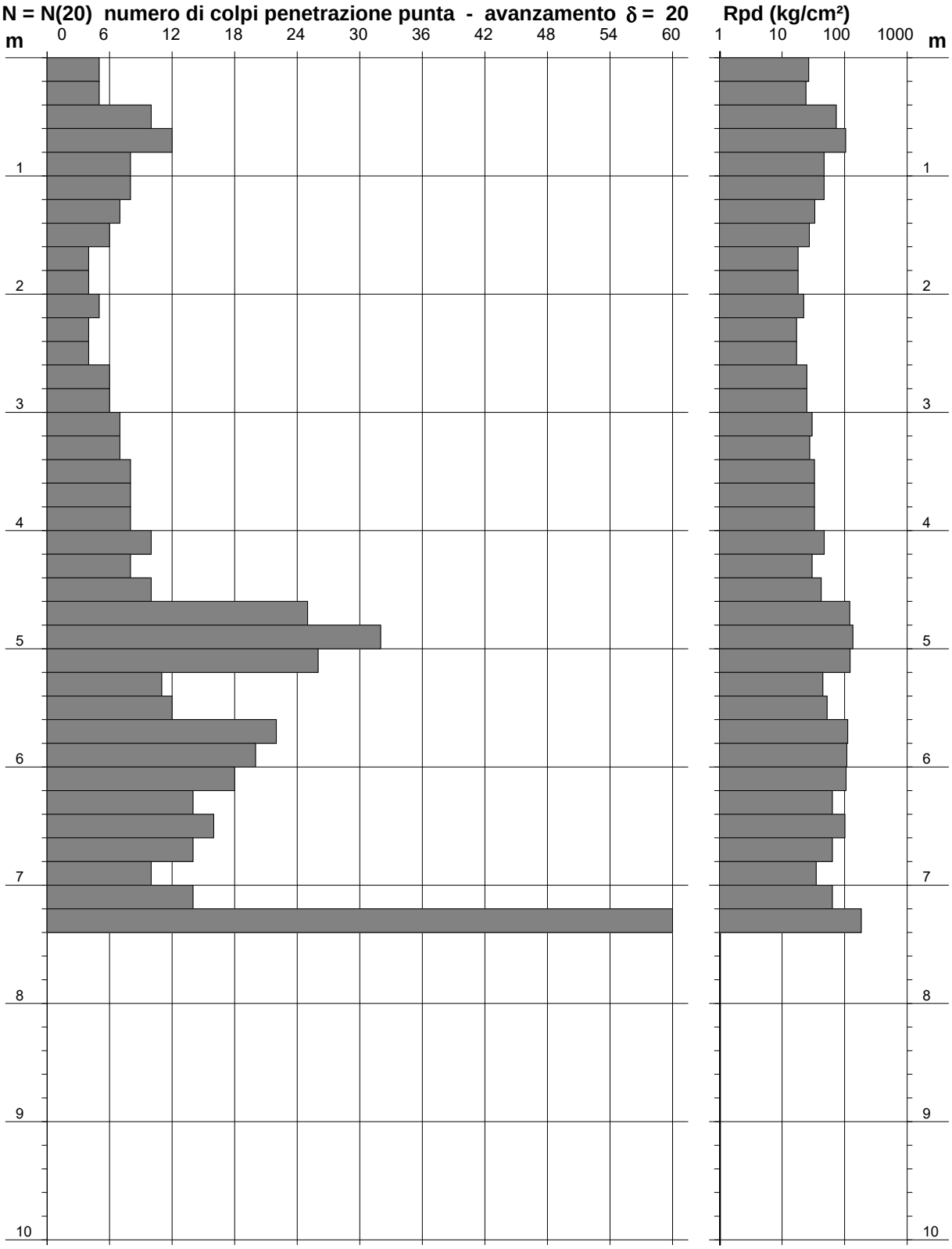
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 220
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-220
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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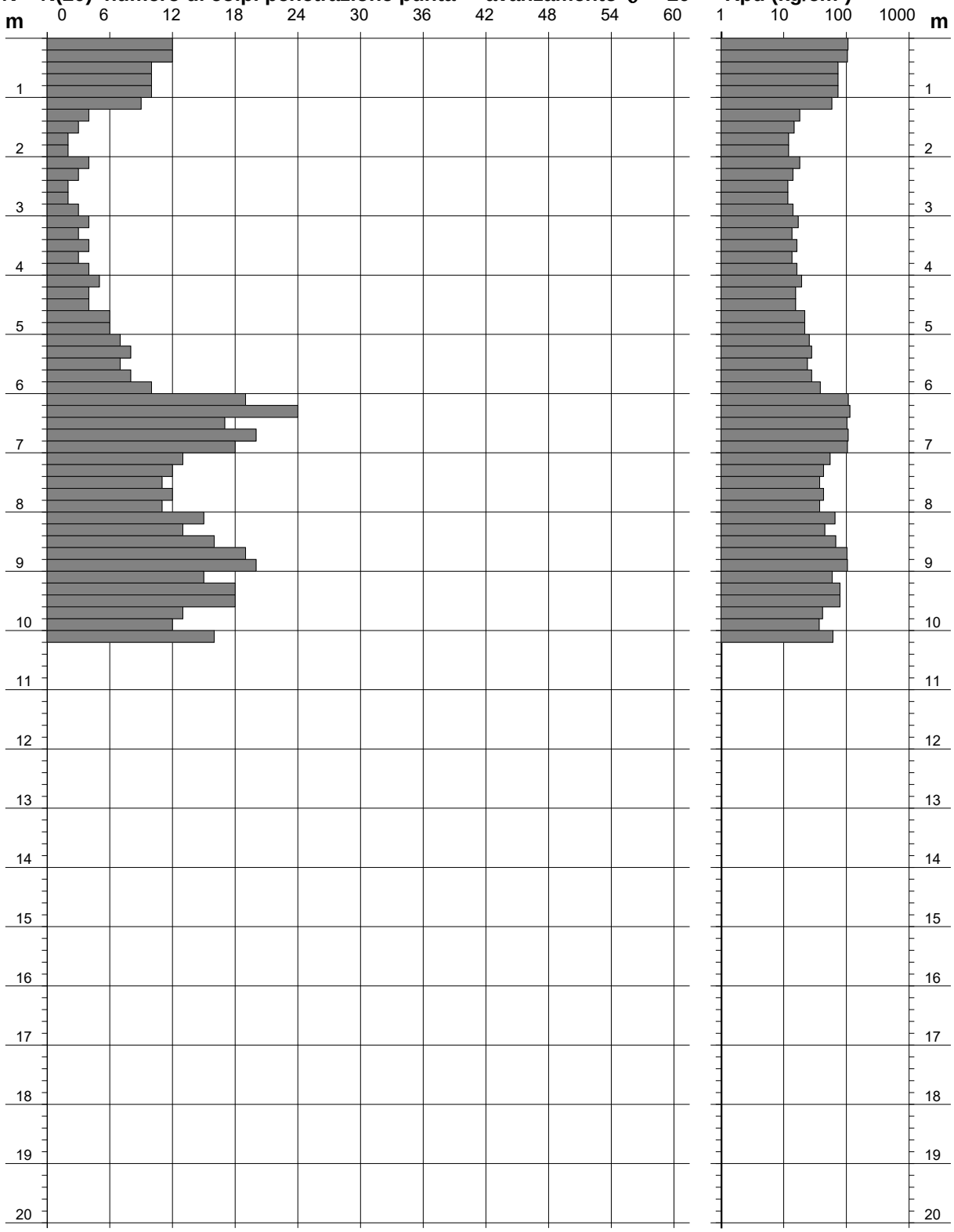
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 222
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-222
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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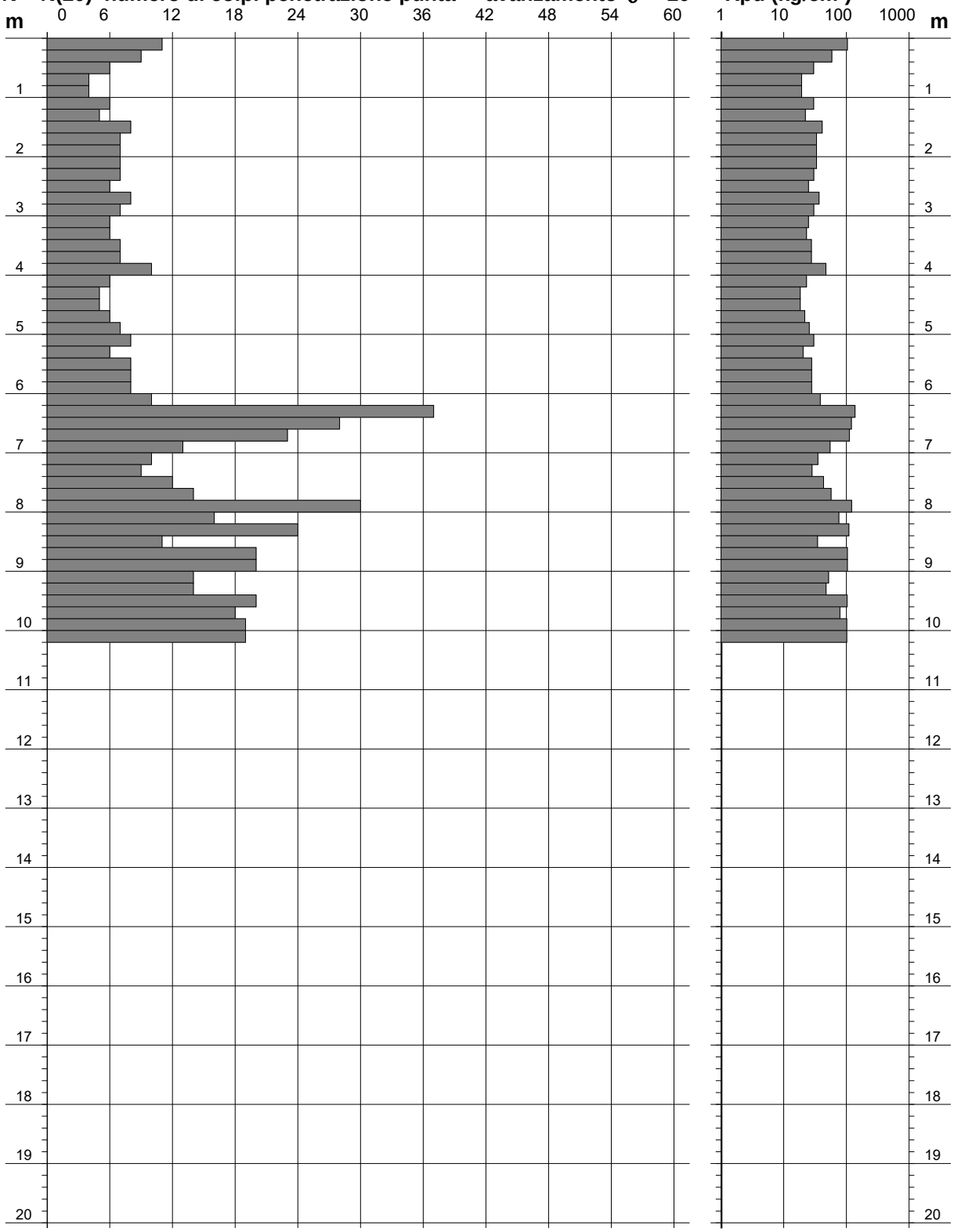
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 264
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-264
- località :	Circello (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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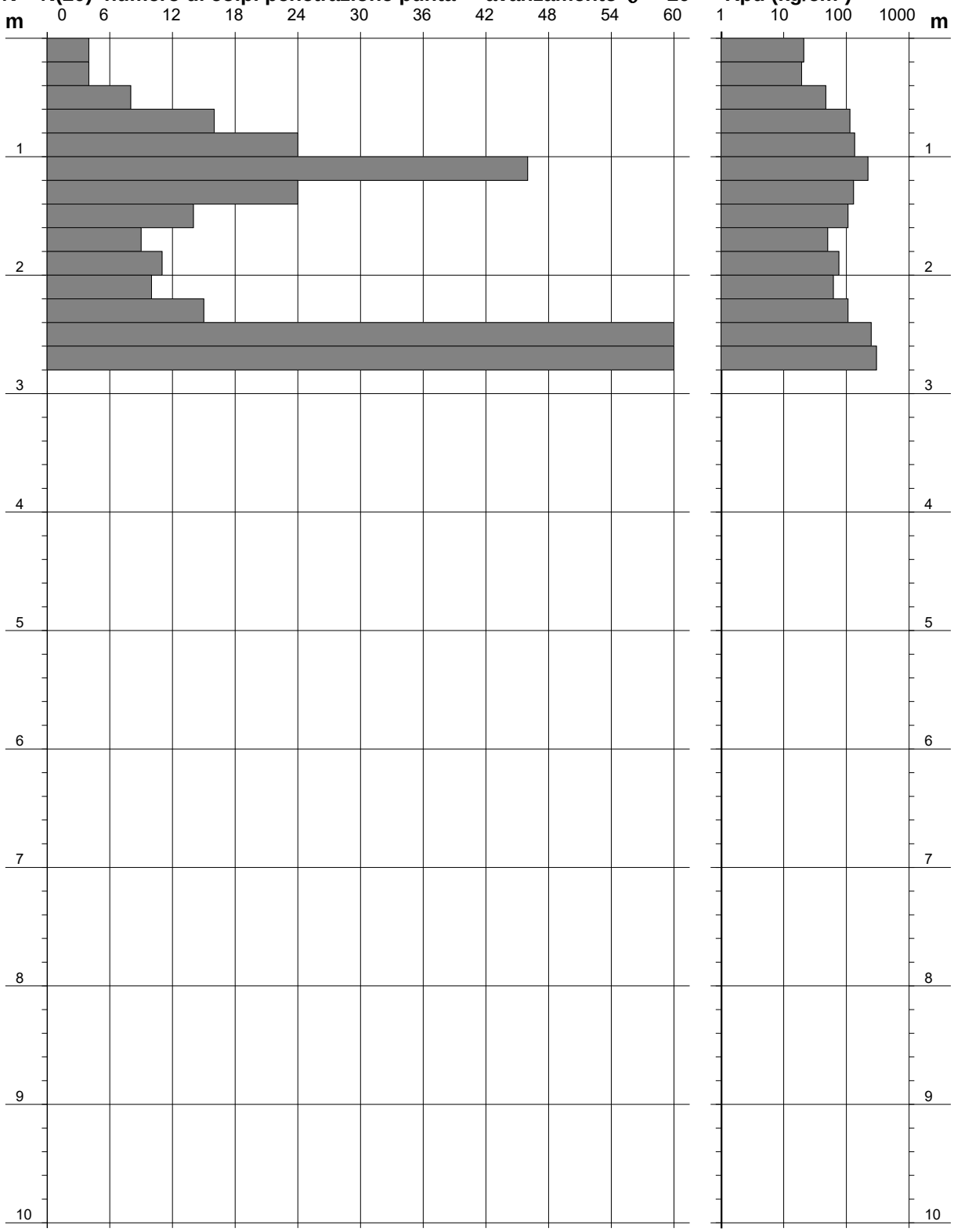
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 261
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-261
- località :	Circello (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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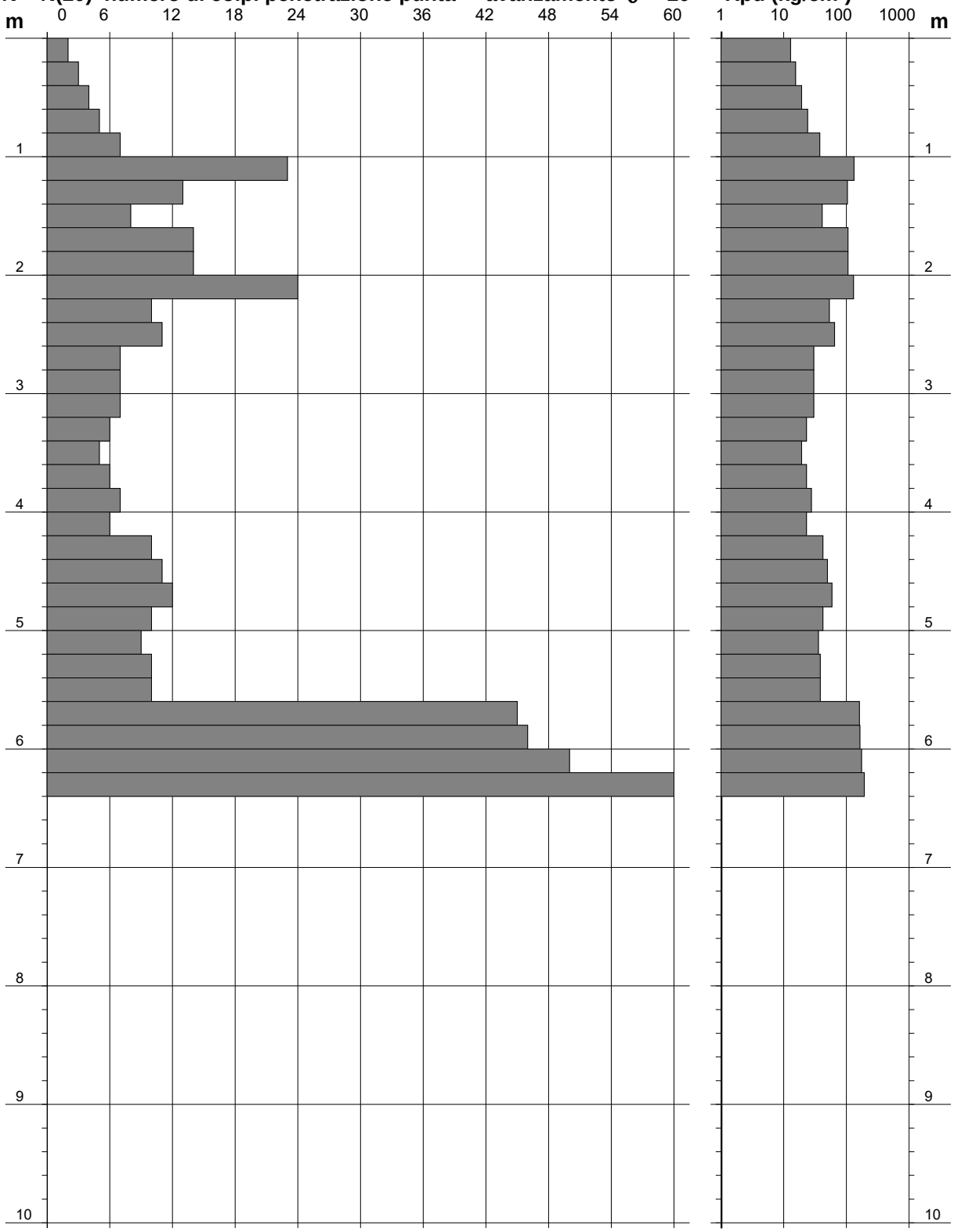
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 266
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-266
- località :	Circello (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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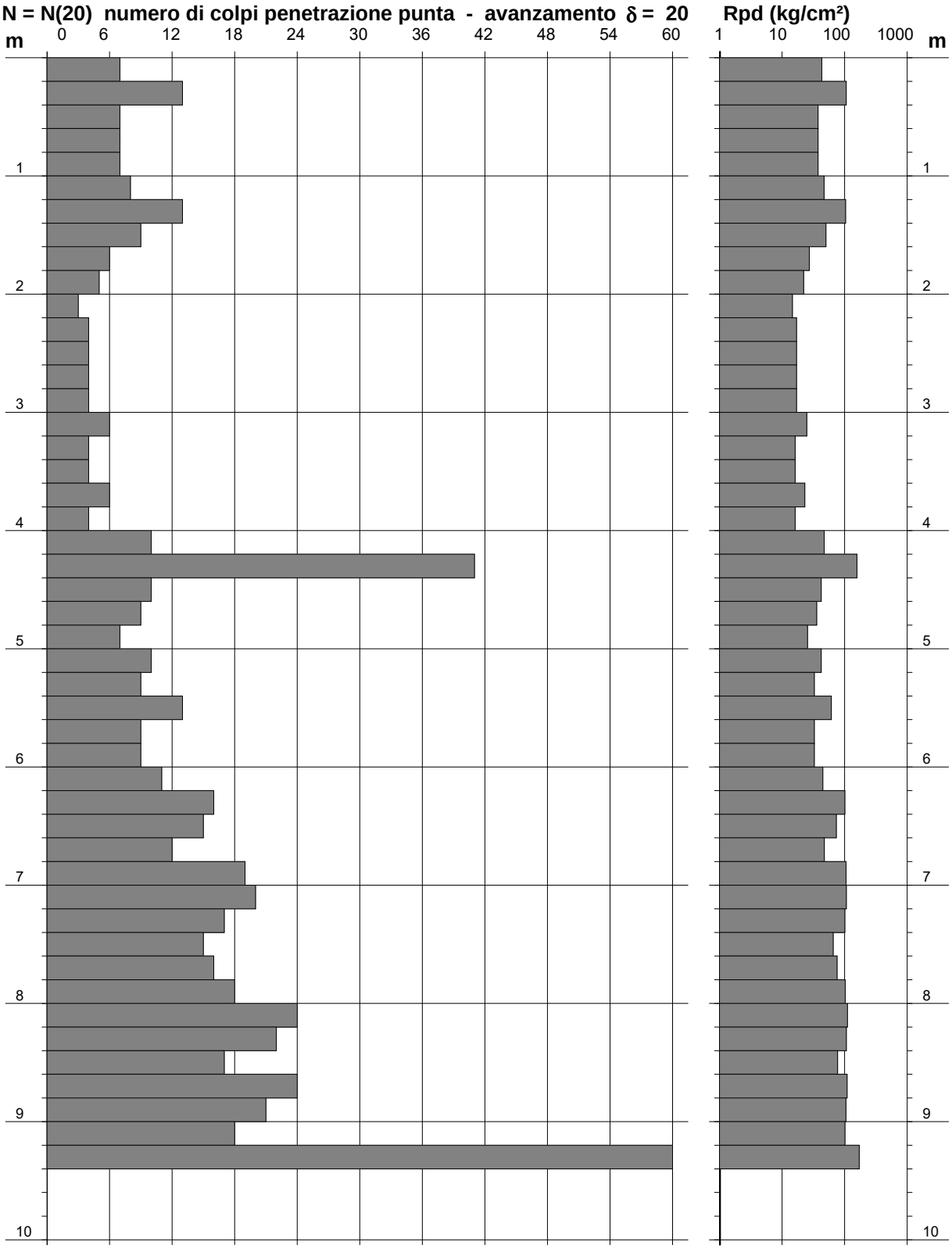
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 268
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-268
- località :	Circello (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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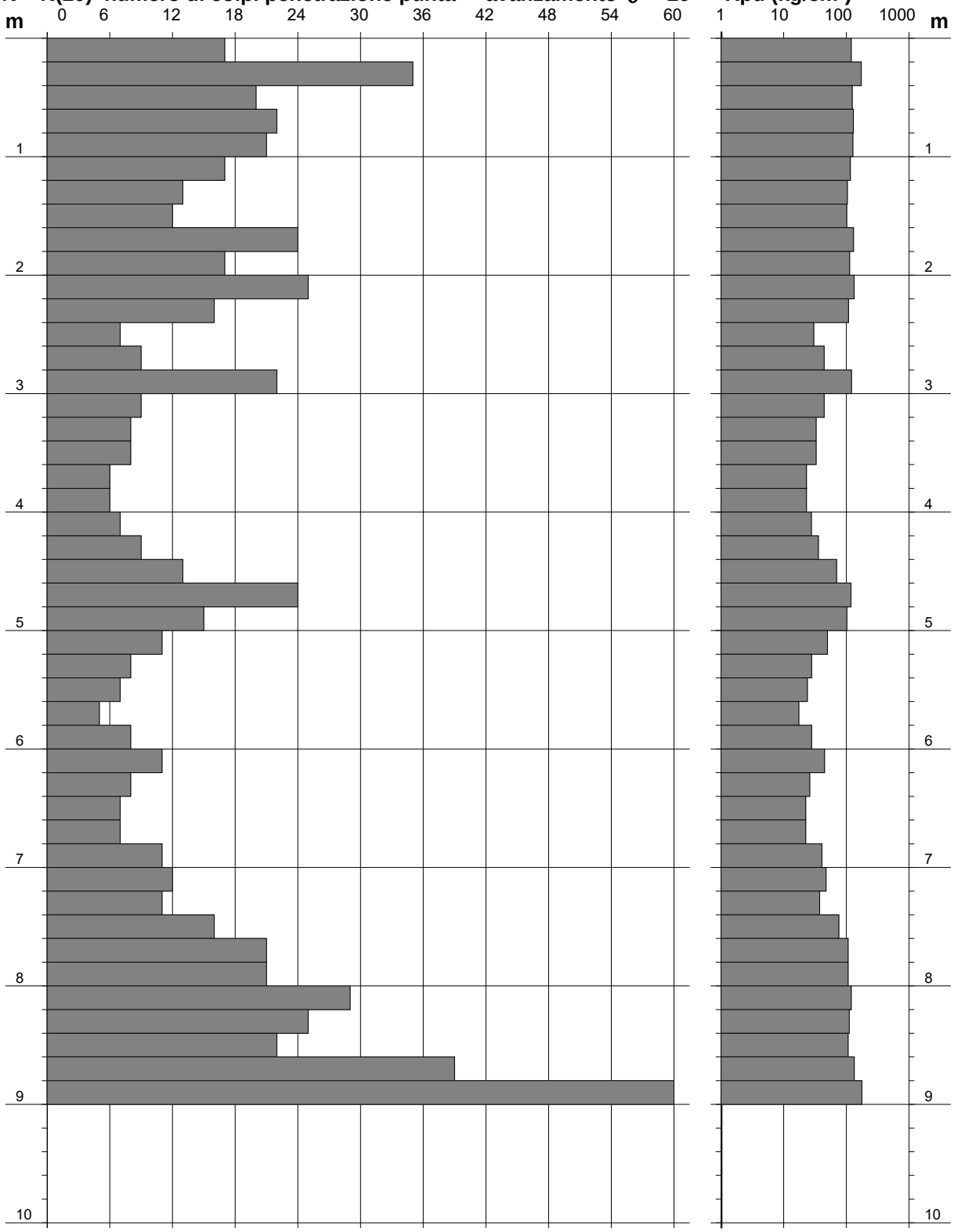
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 269
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-269
- località :	Circello (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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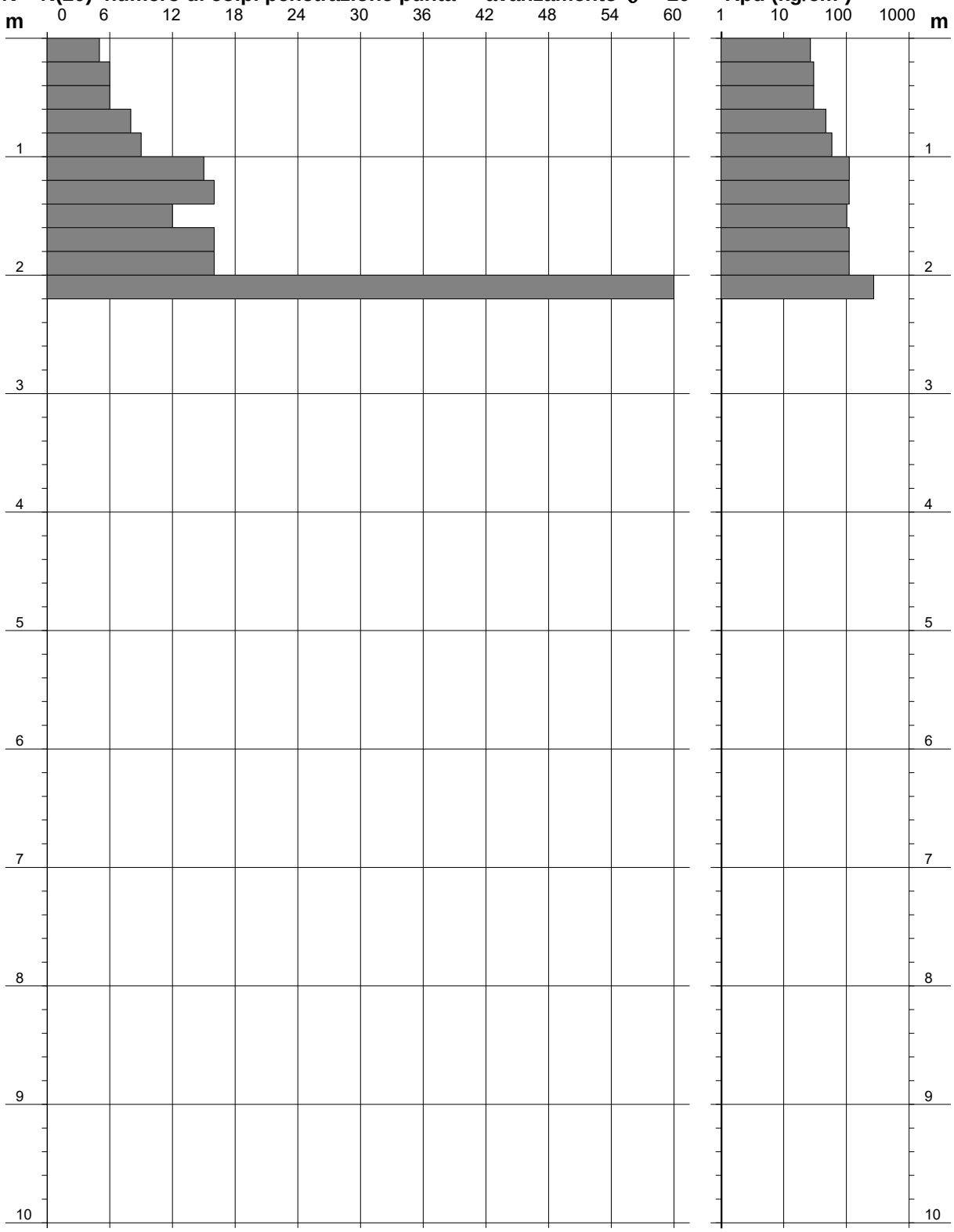
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 270
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-270
- località :	Circello (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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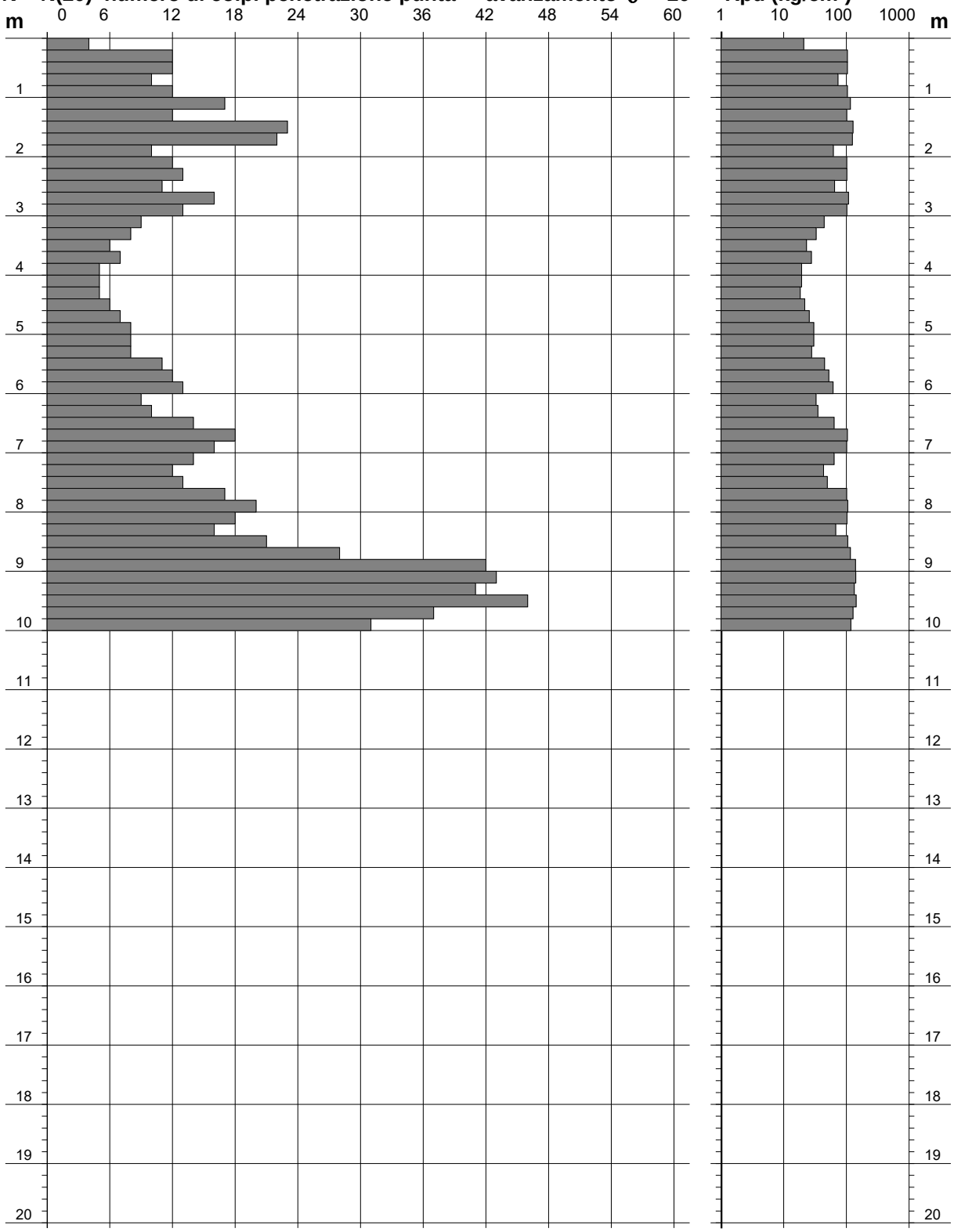
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 271
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	22/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-271
- località :	Circello (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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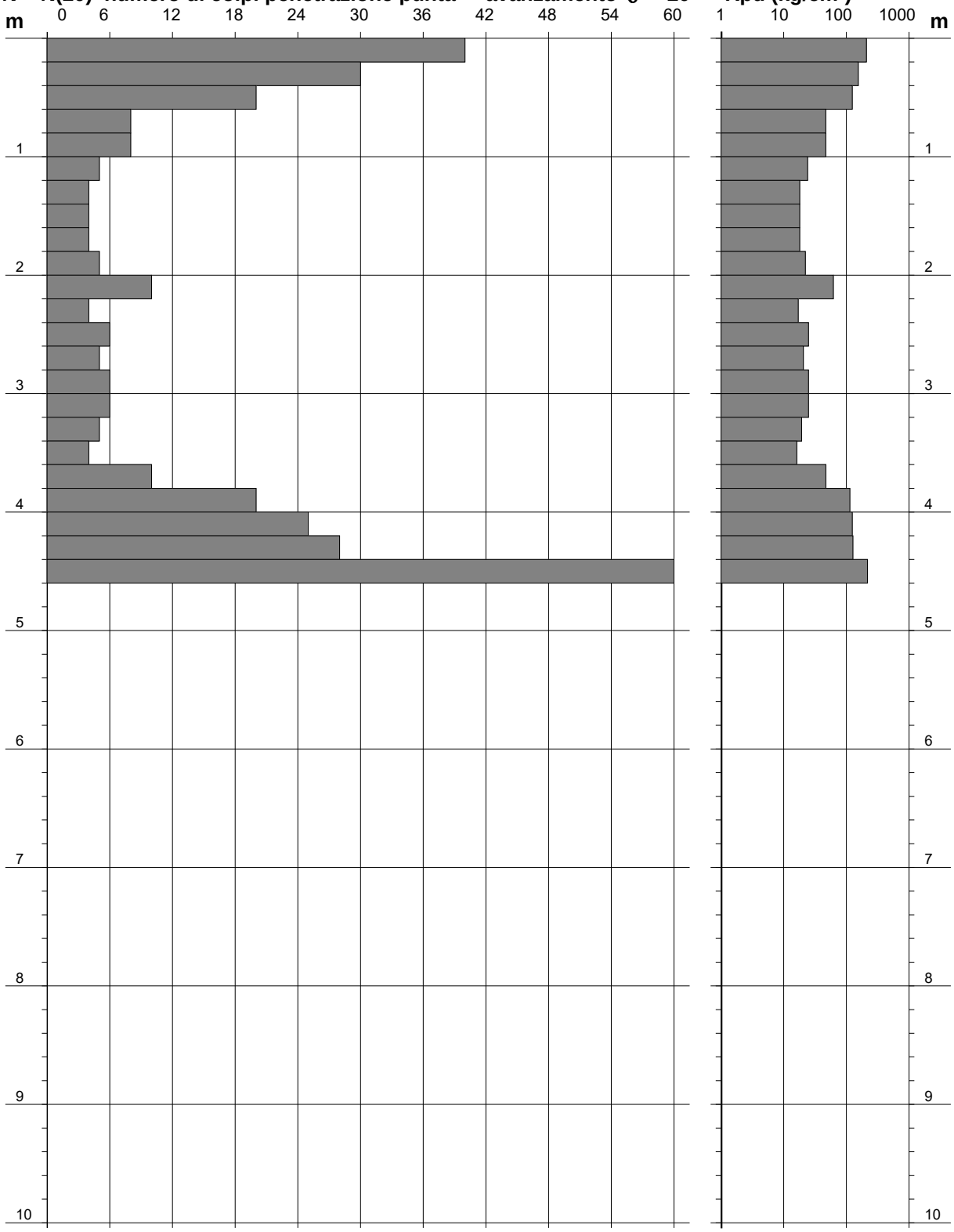
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 273
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	23/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-273
- località :	Circello (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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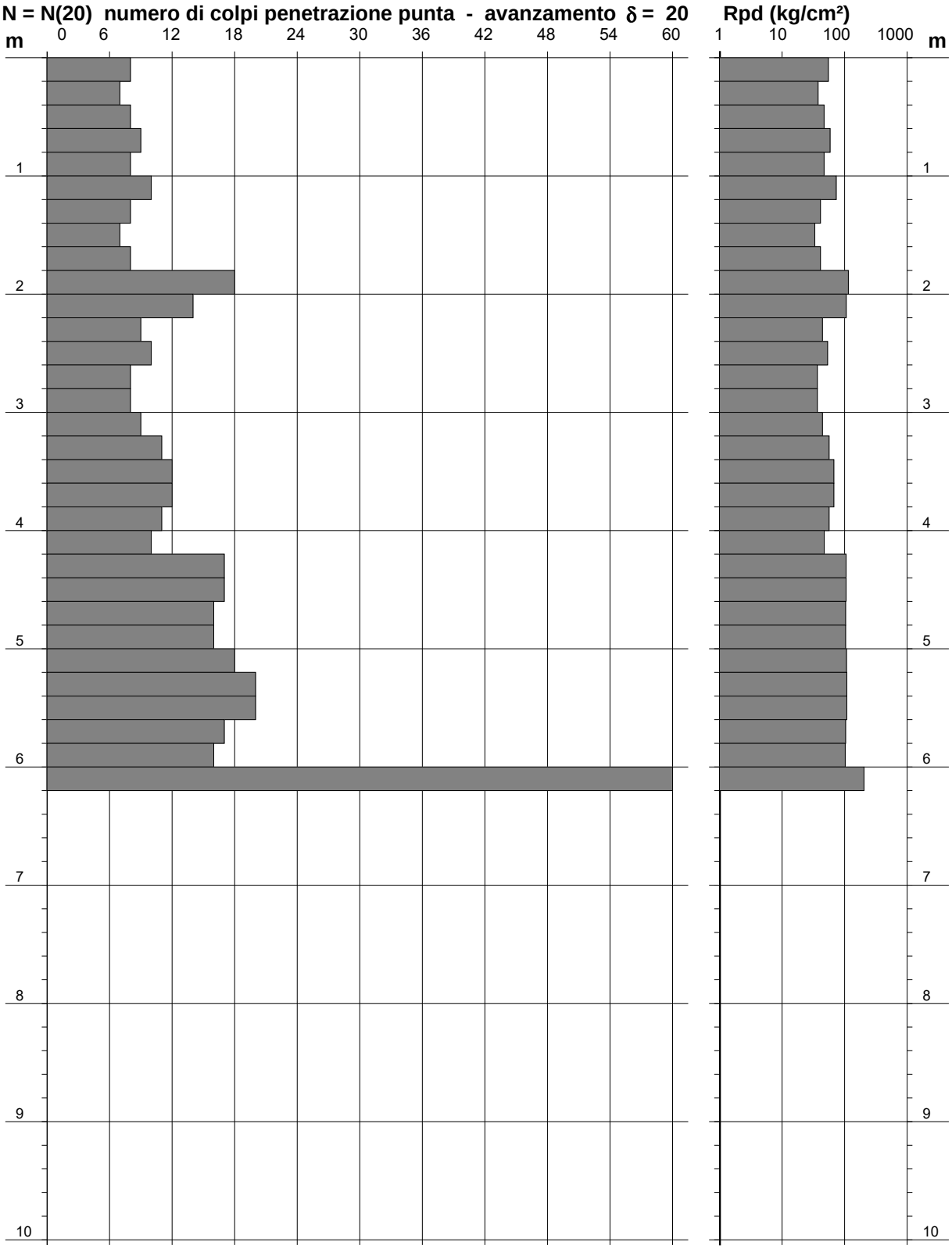
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 275
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	23/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-275
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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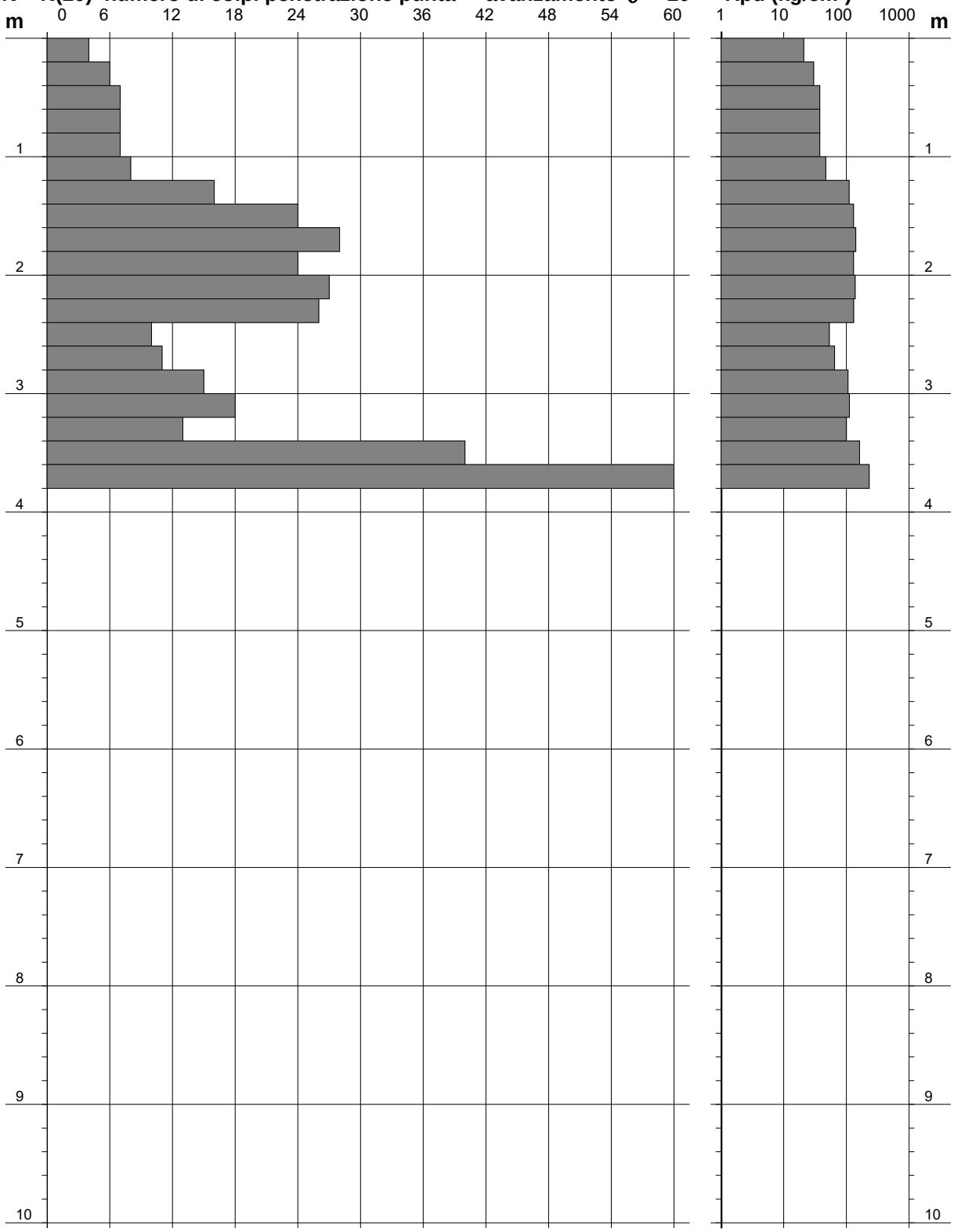
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 276
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	23/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-276
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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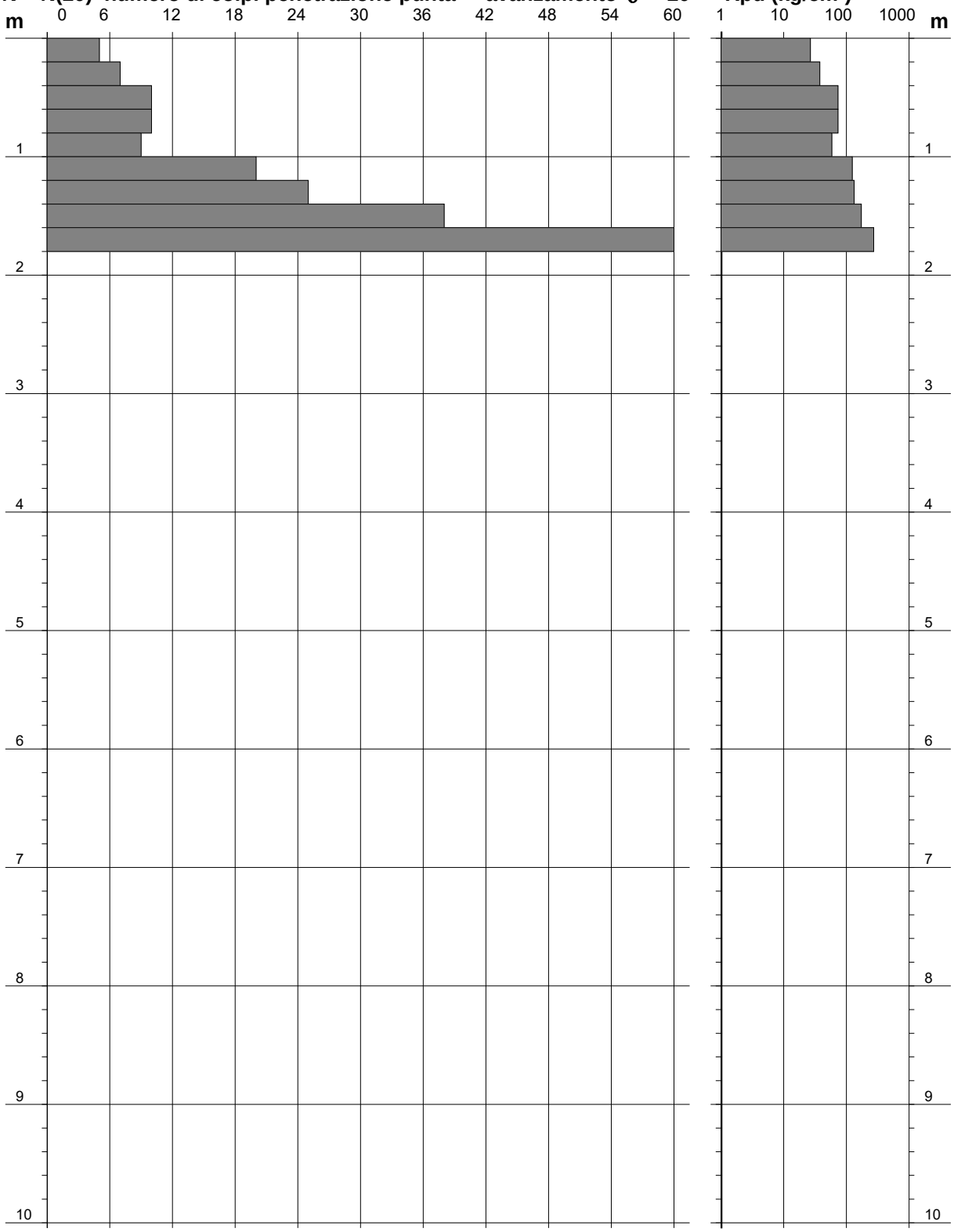
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 278
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-278
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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Via V. Emanuele, 43 - 82010 Paolisi (BN)

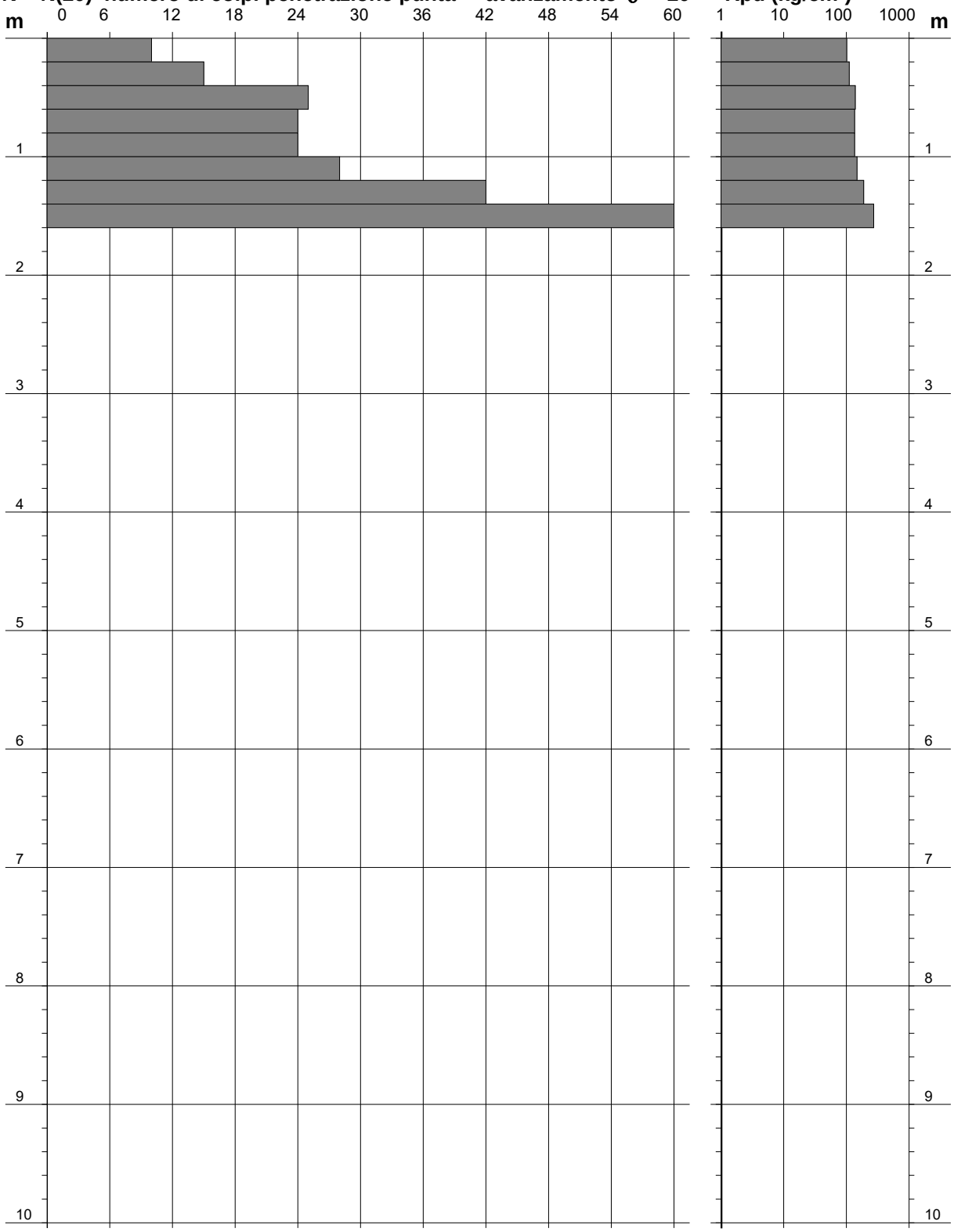
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 279
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-279
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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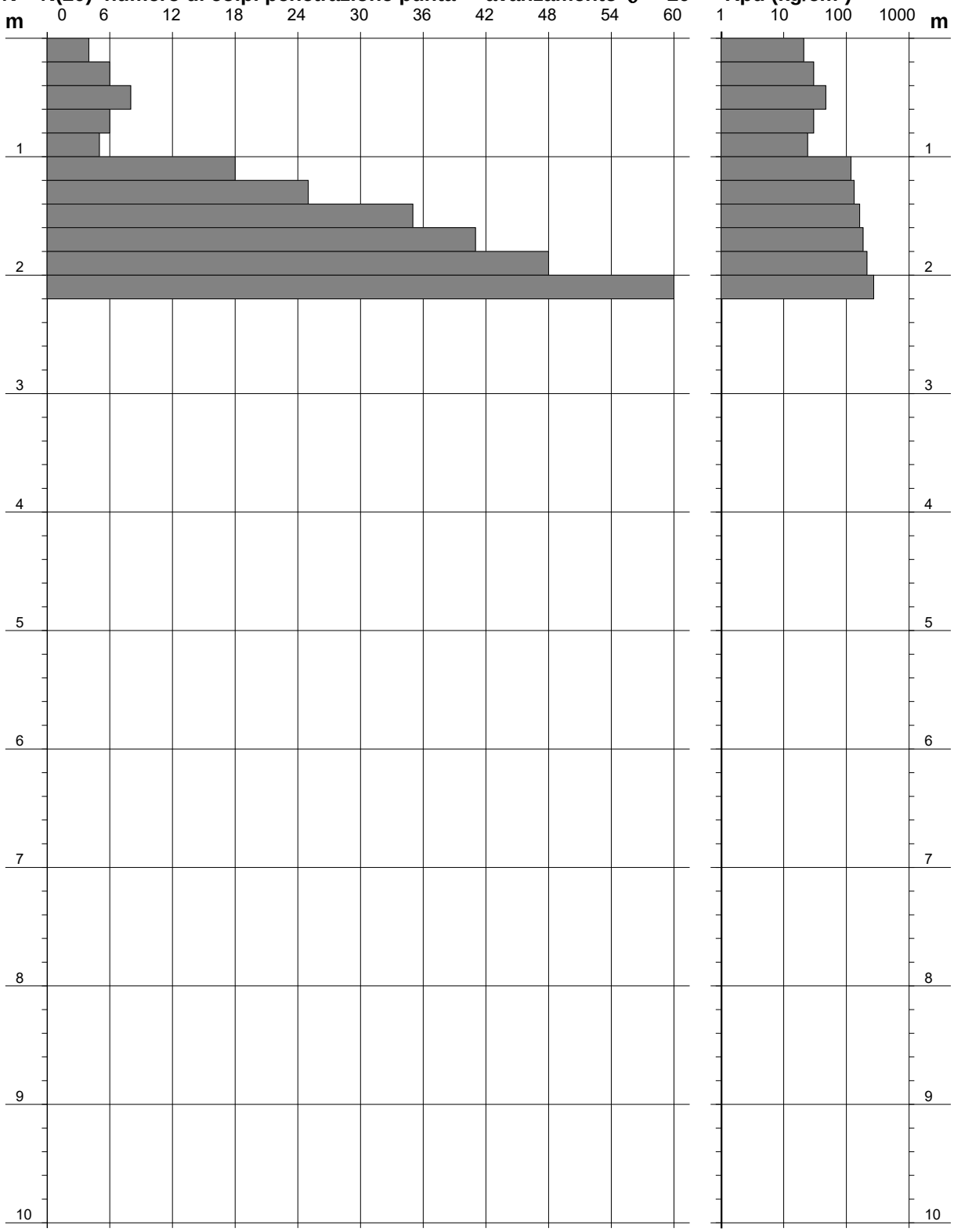
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 280
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-280
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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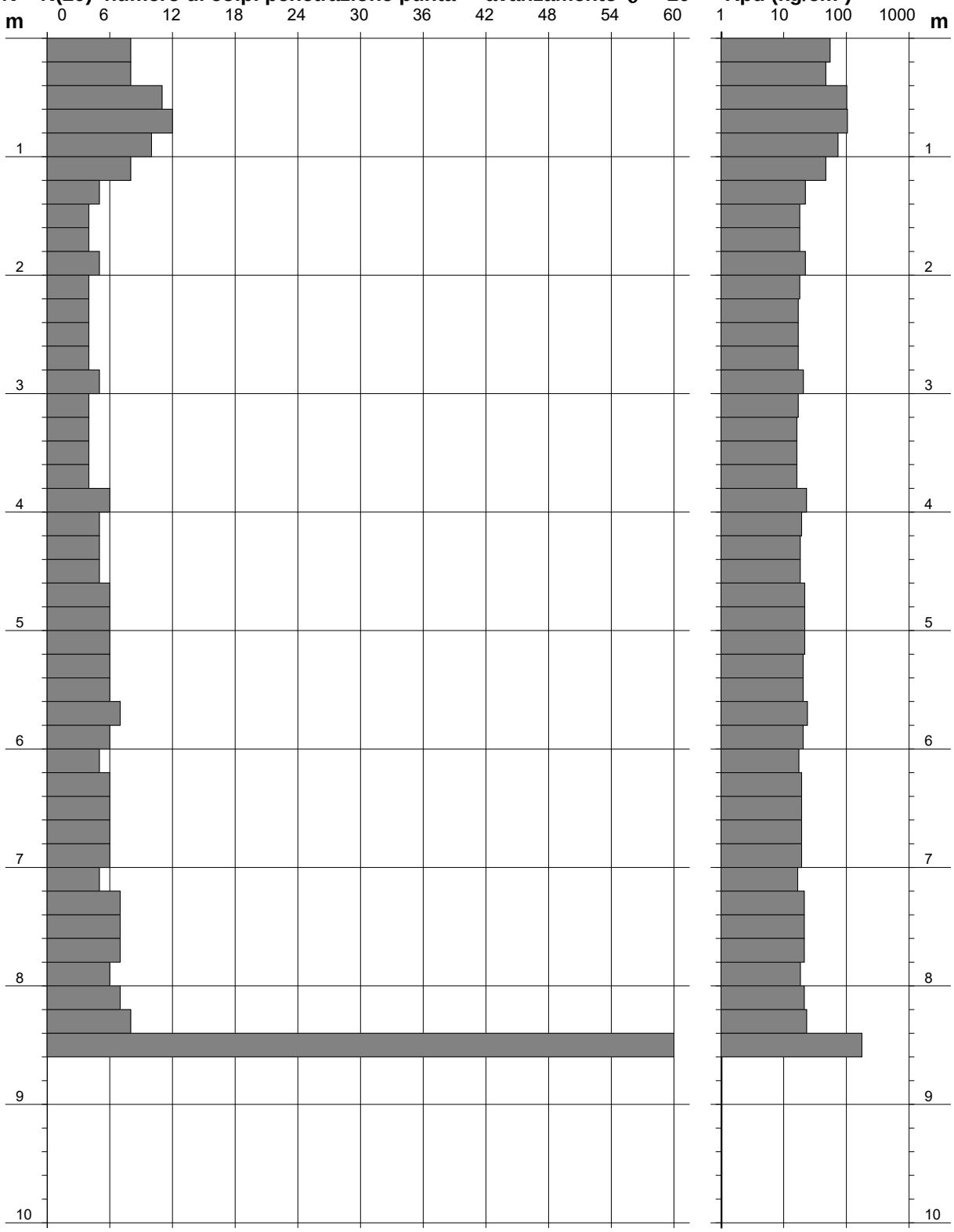
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 282
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	24/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-282
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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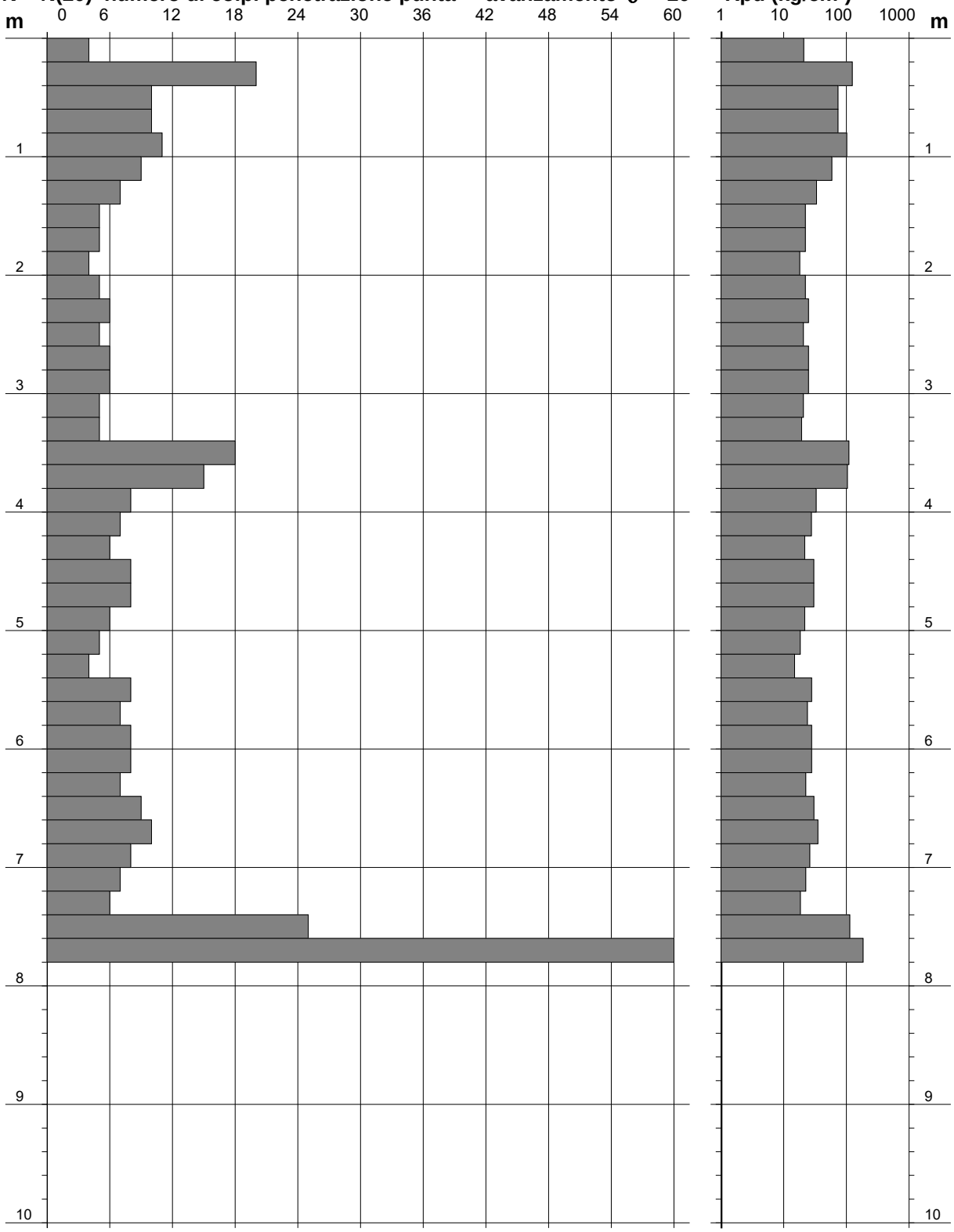
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 283
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	25/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-283
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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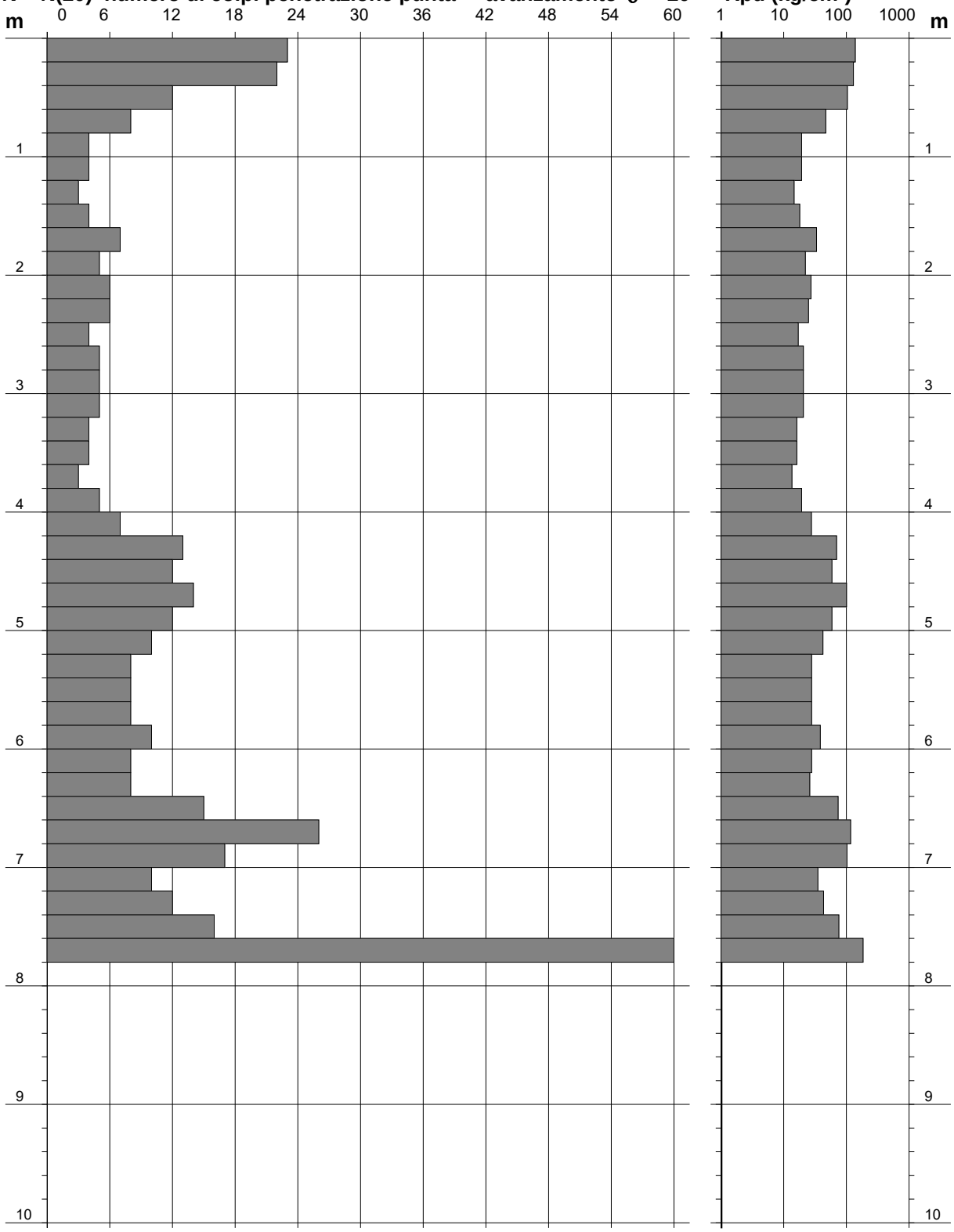
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 291
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-291
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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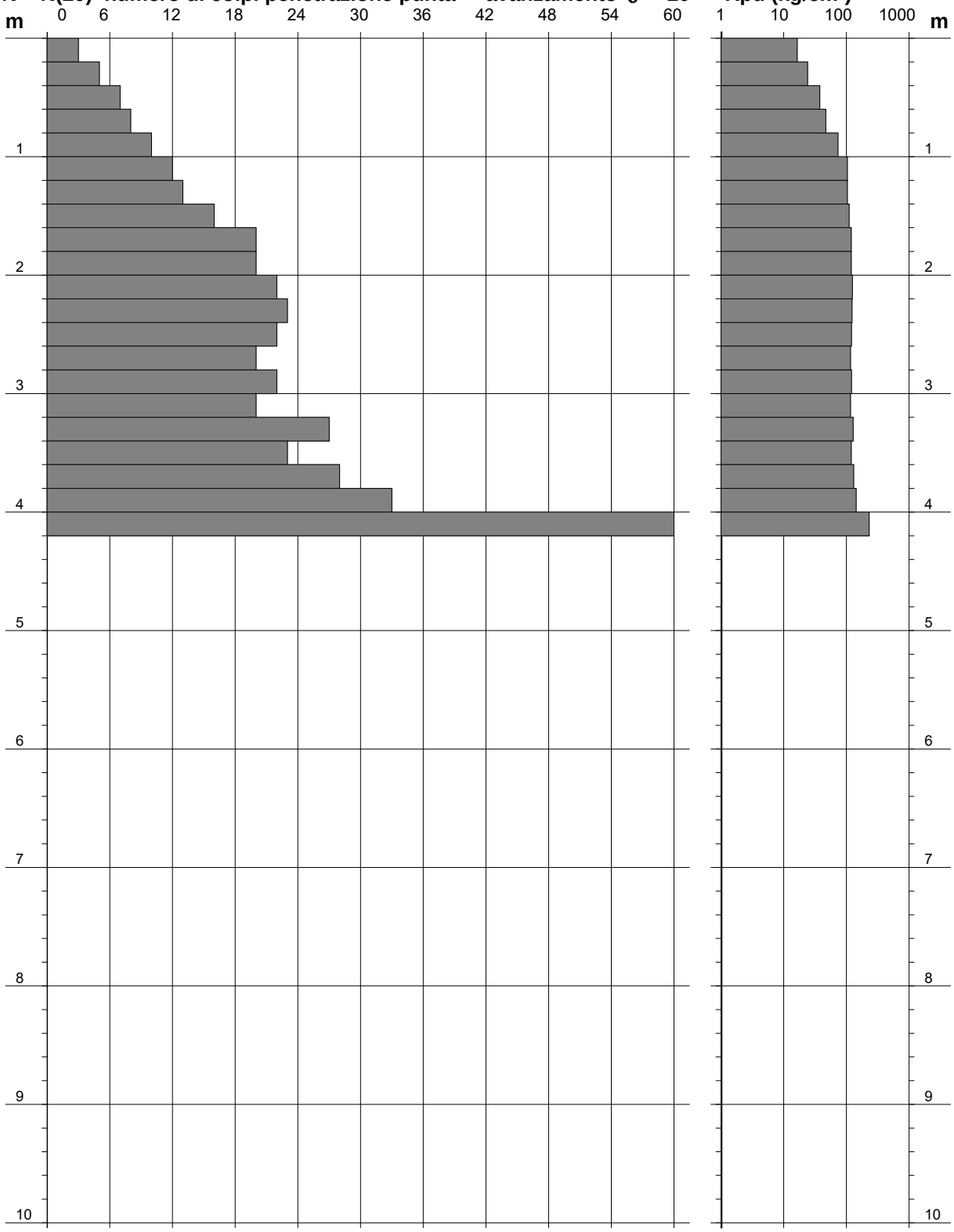
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 260
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	12/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-260
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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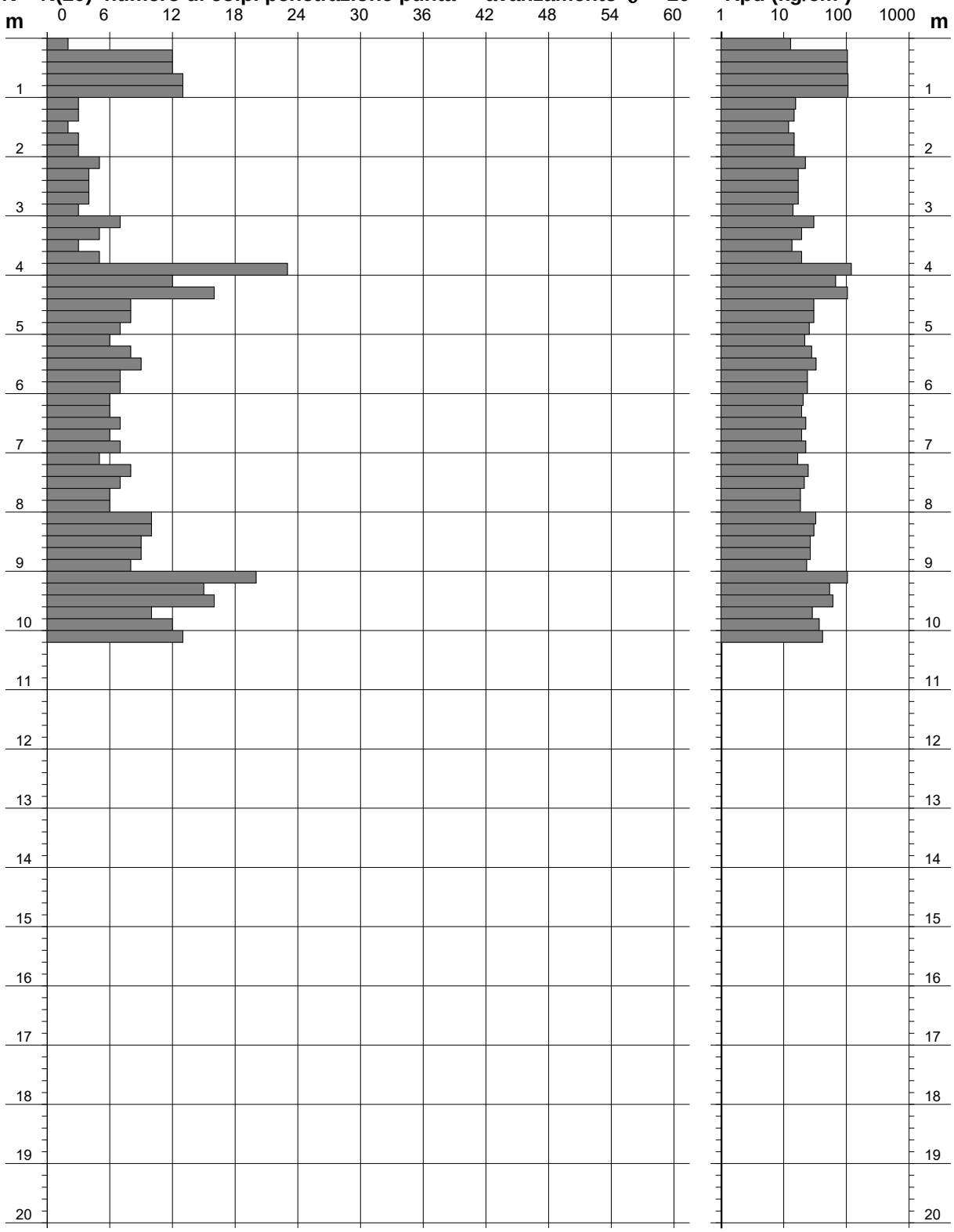
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 257
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	12/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-257
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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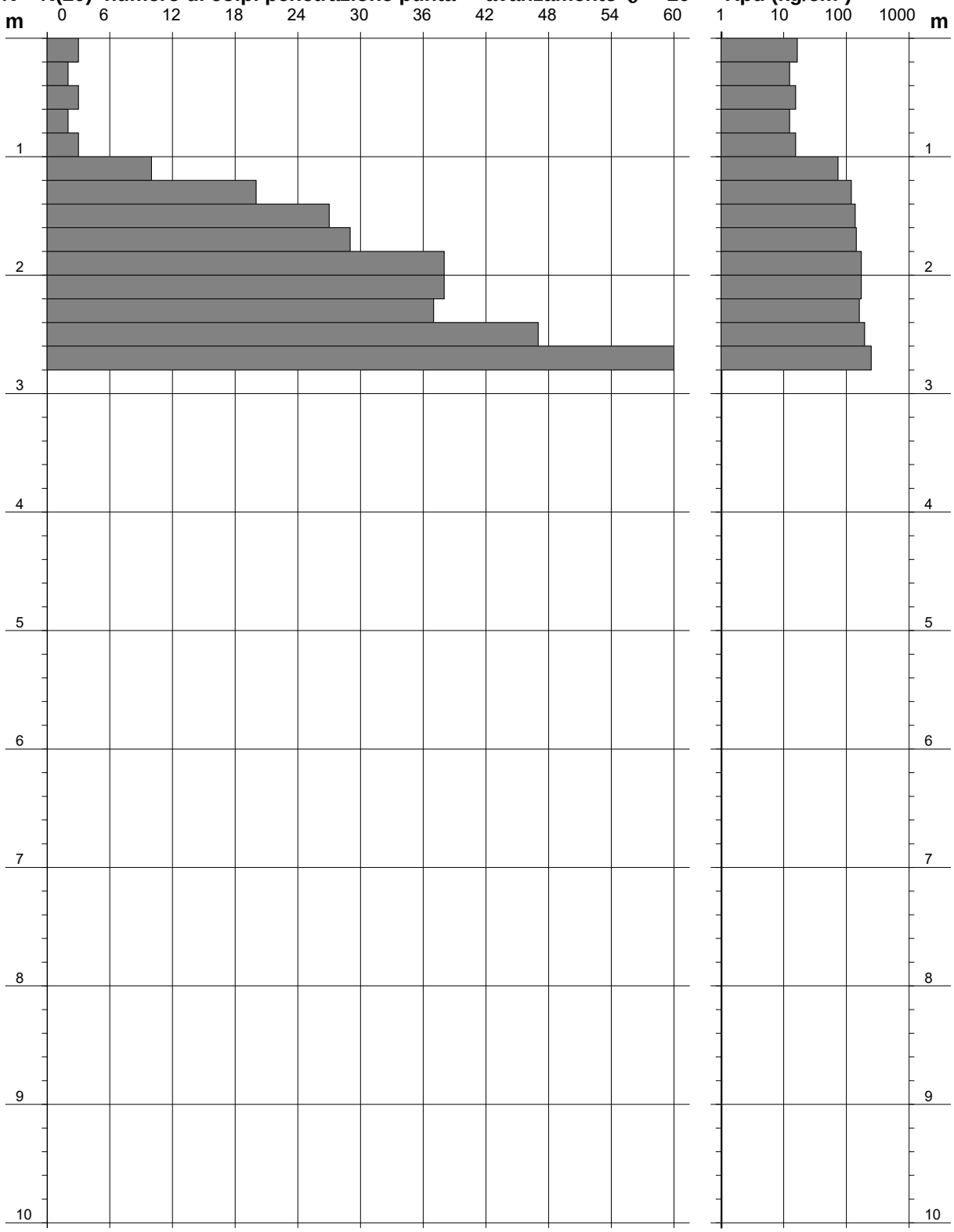
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 256
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	12/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-256
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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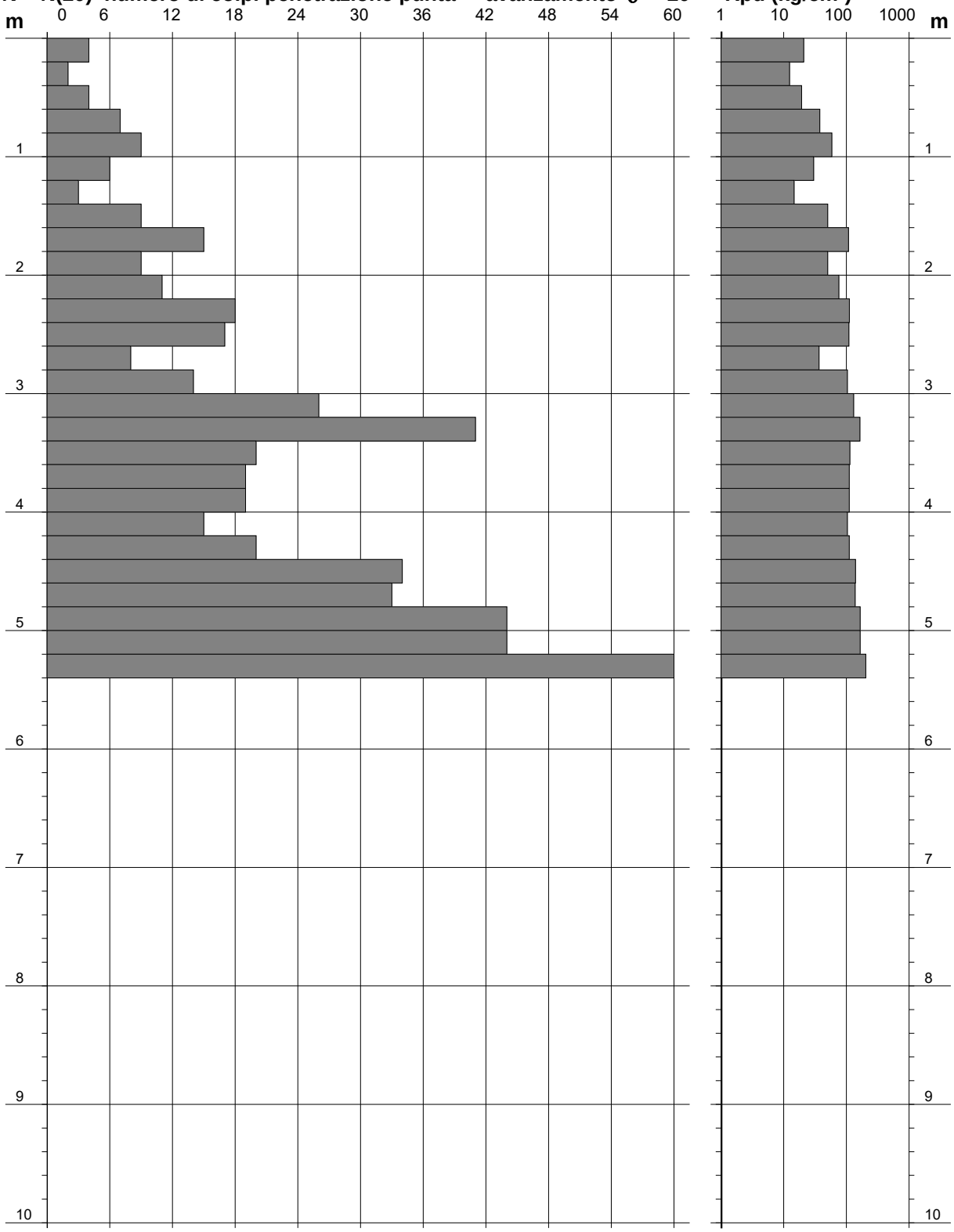
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 255
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	10/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-255
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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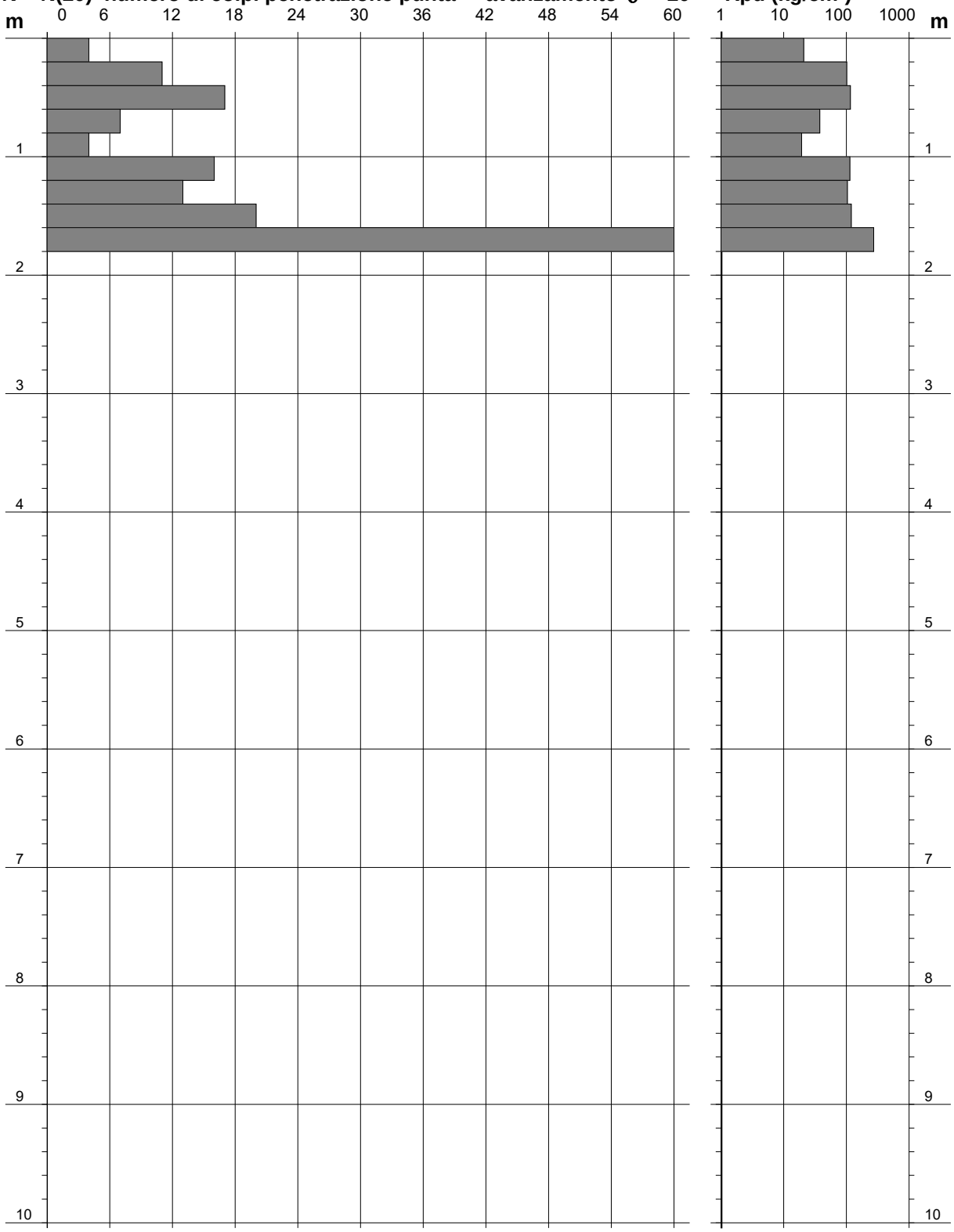
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 254
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	10/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-254
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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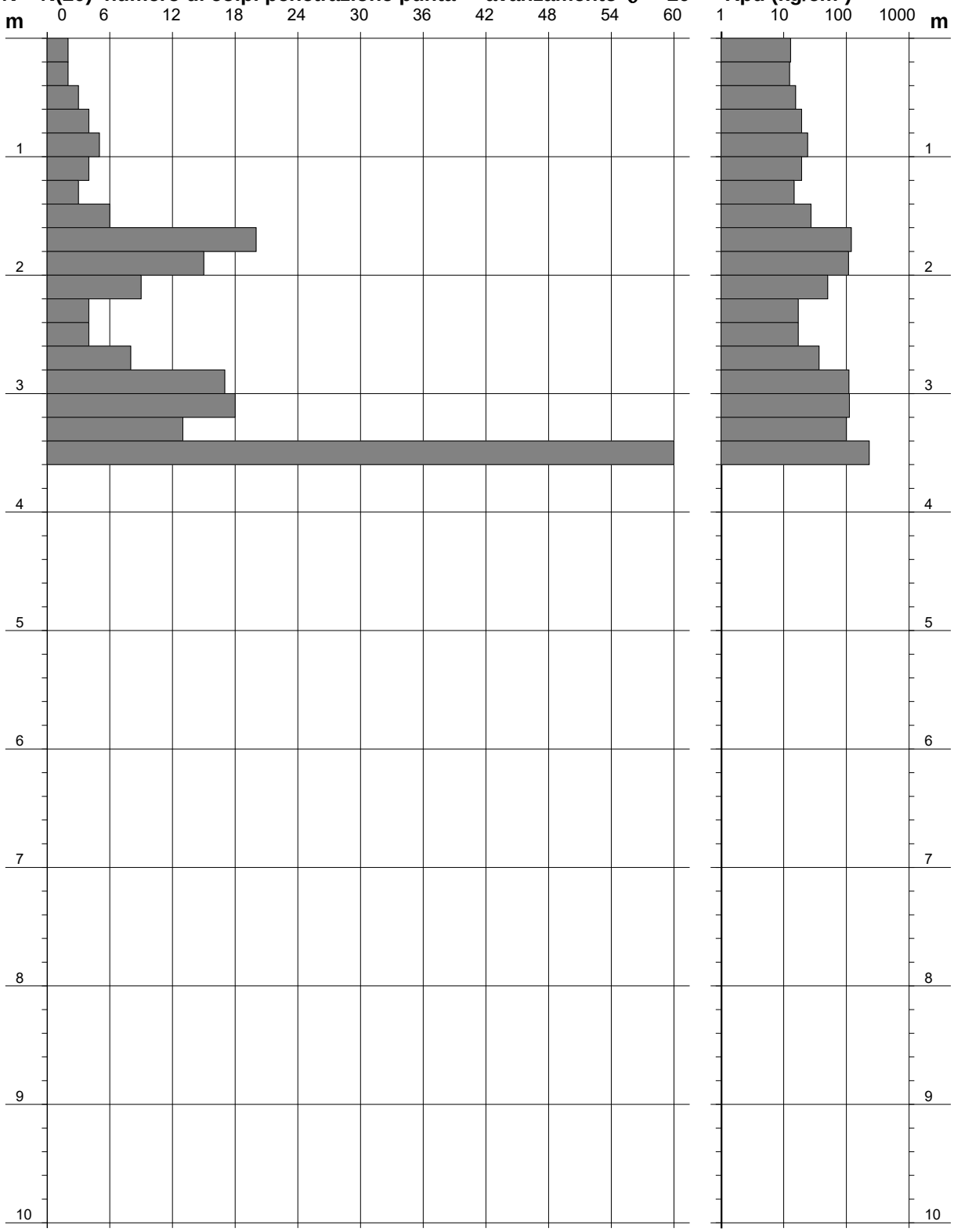
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 252
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	10/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-252
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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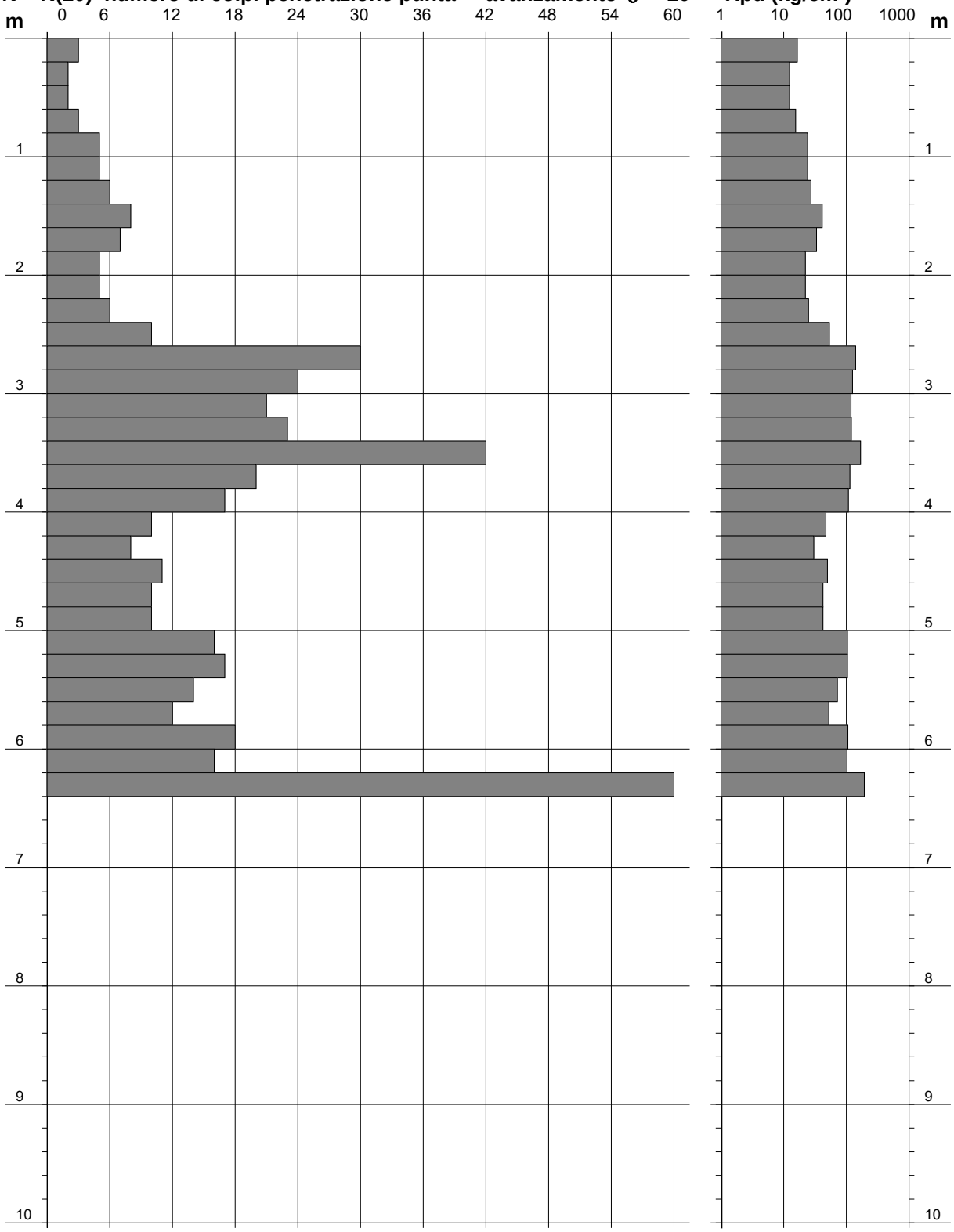
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 250
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-250
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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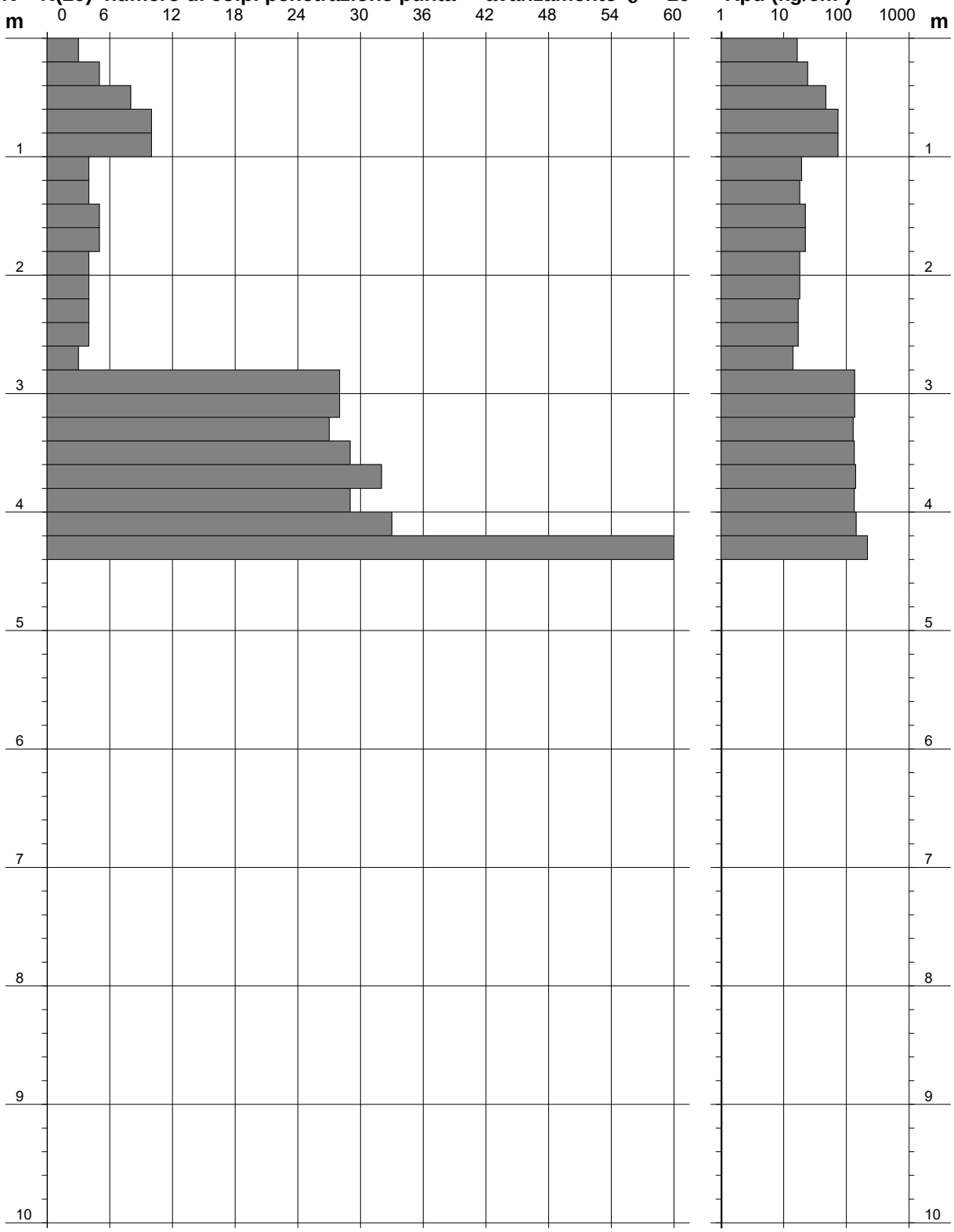
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 245
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	09/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-245
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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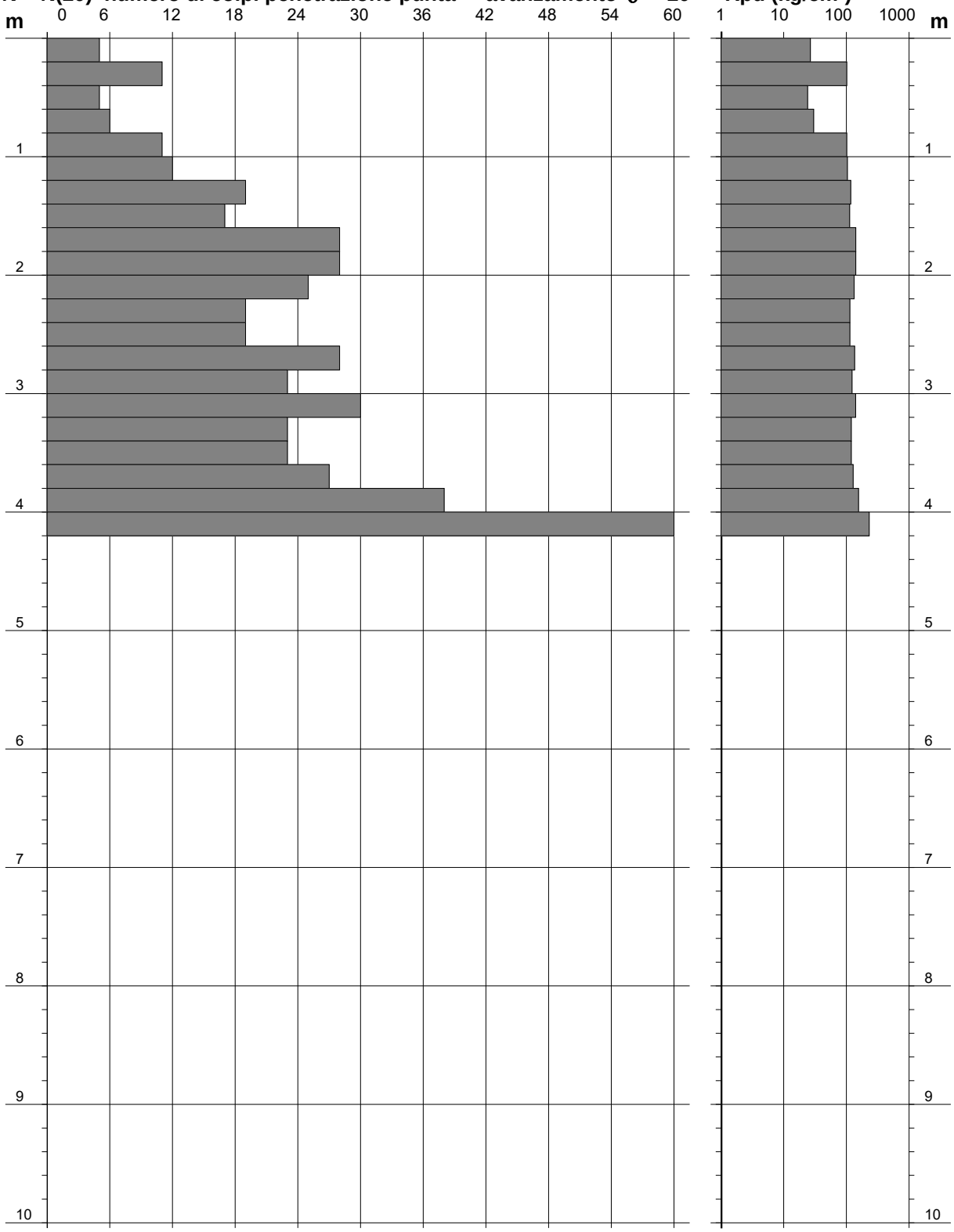
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 242
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	05/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-242
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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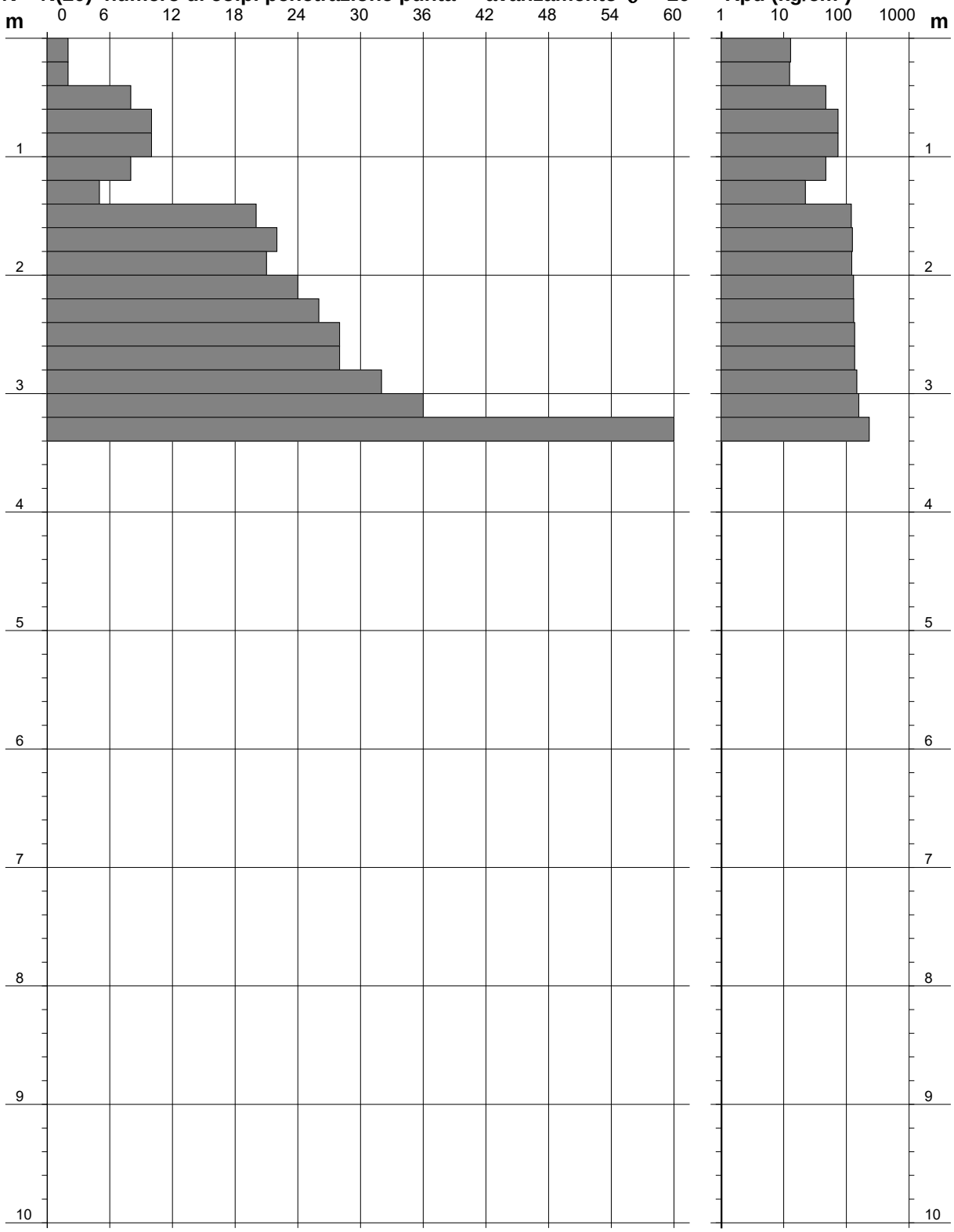
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 238
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	05/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-238
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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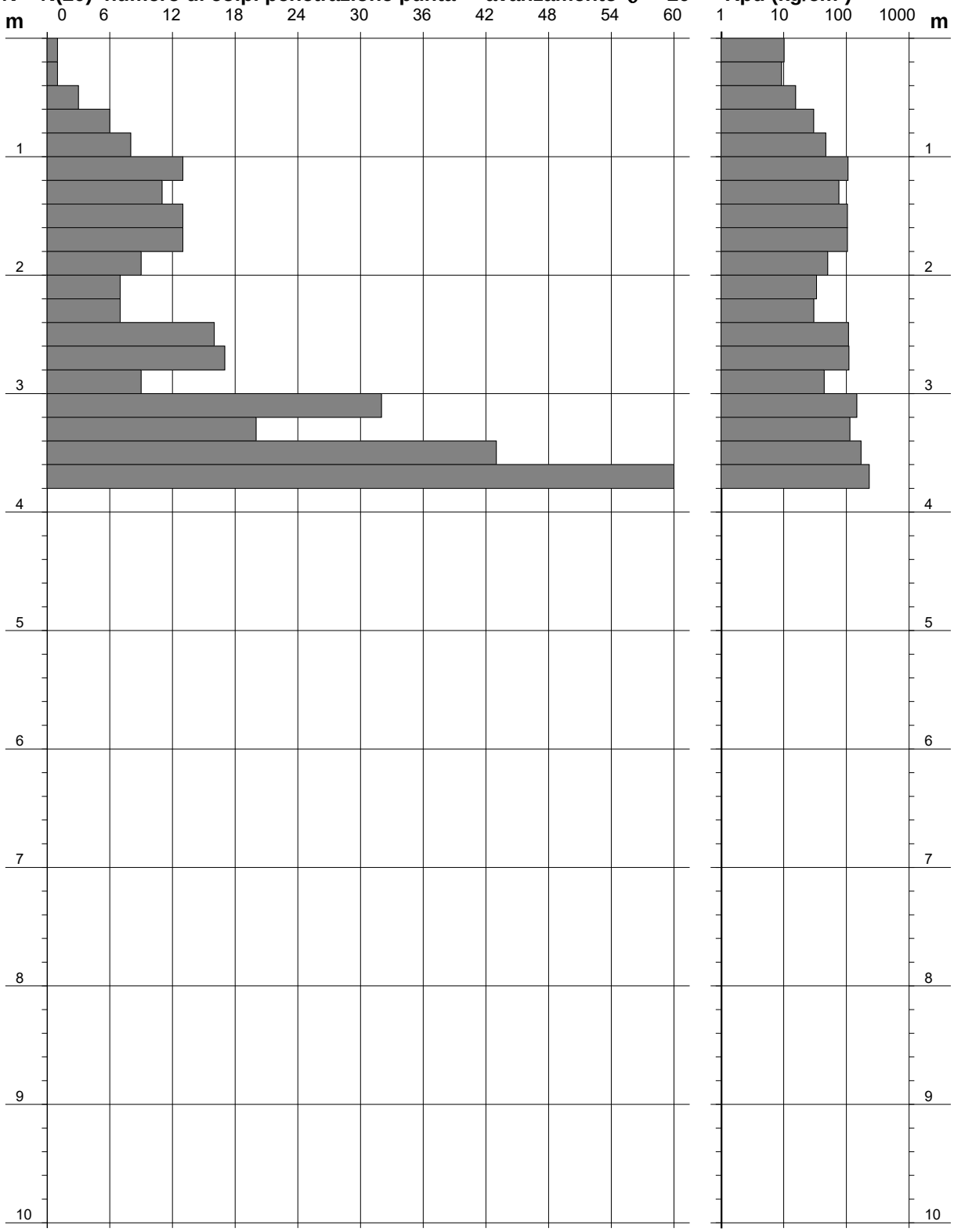
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 231
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-231
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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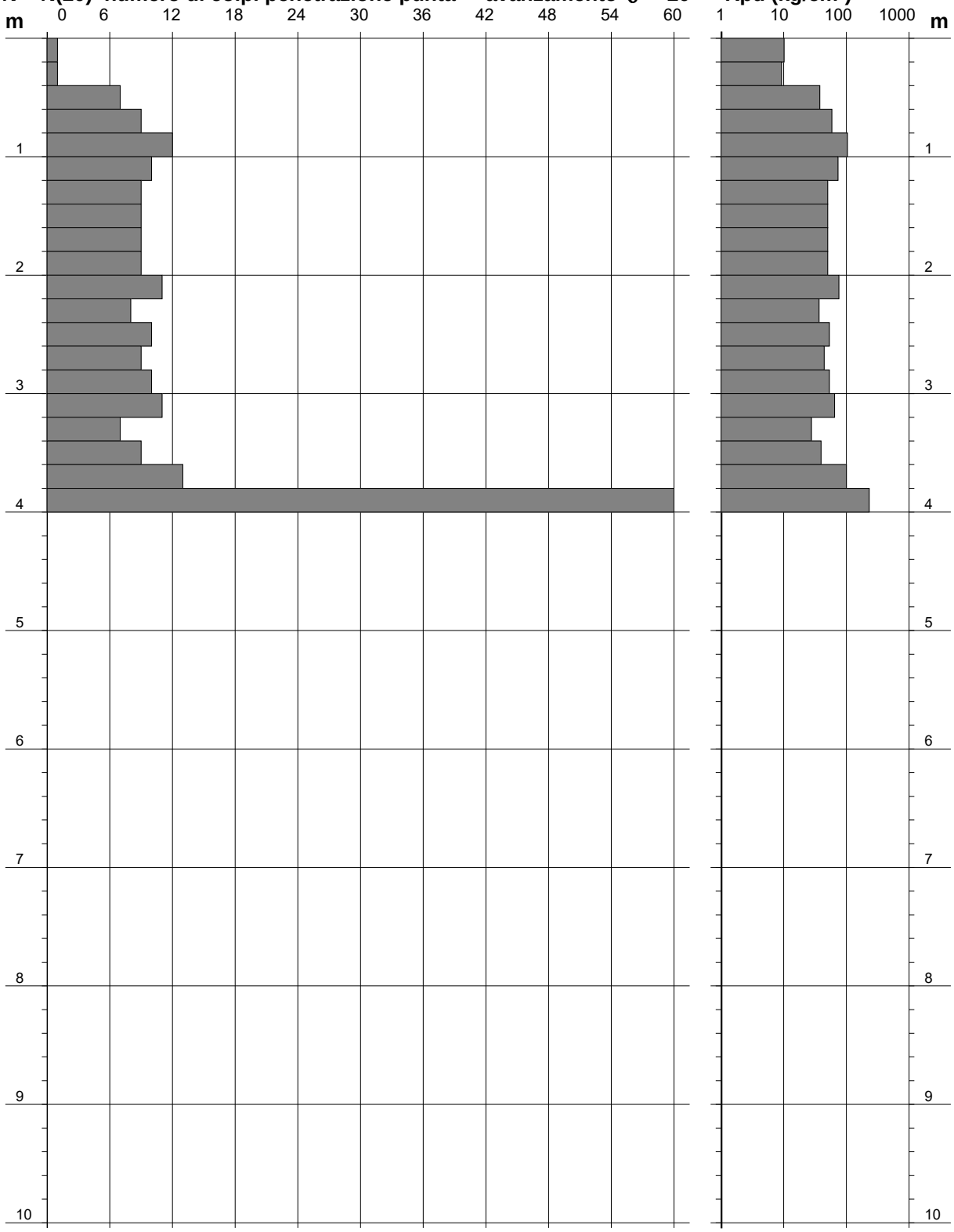
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 223
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-223
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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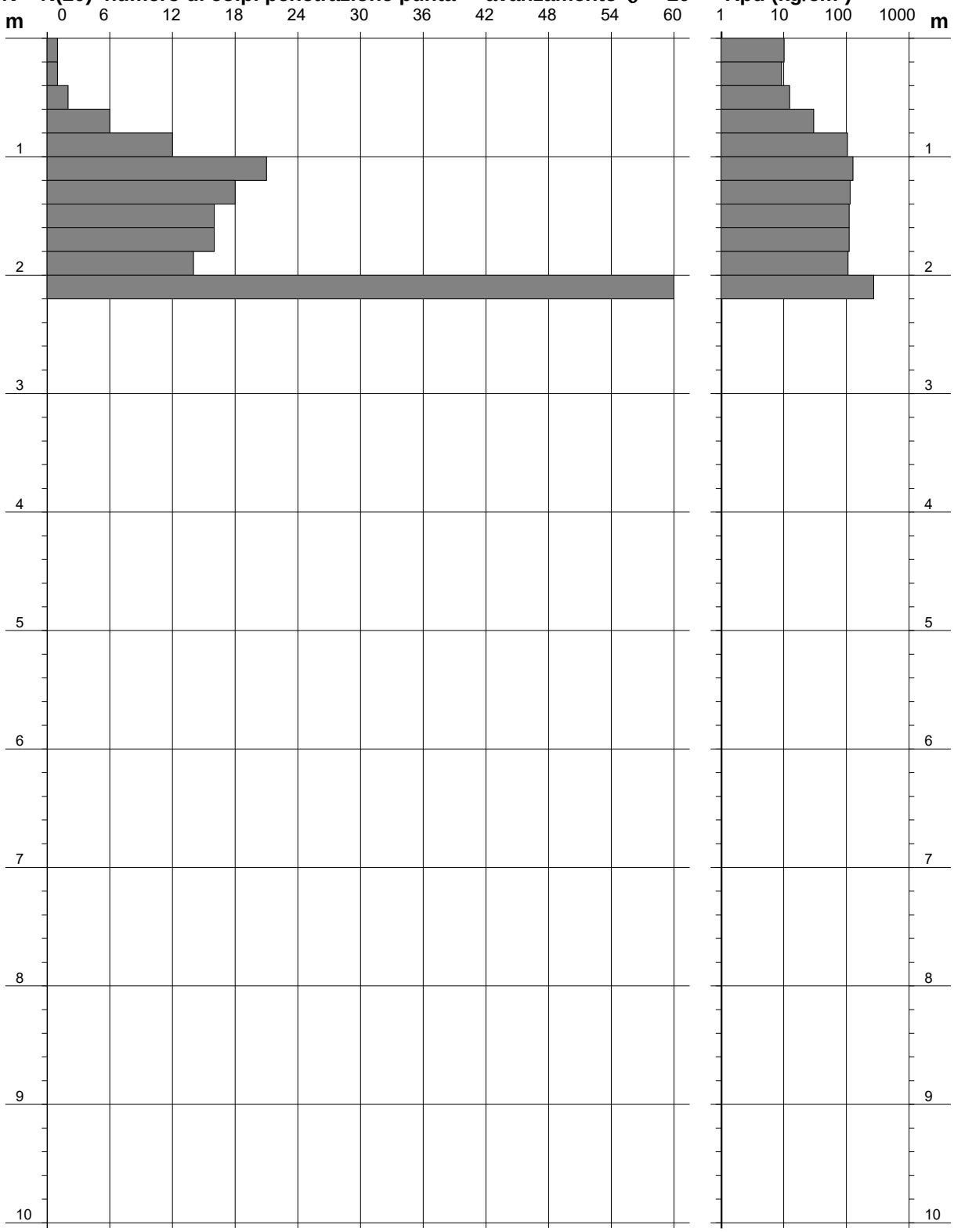
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 229
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	29/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-229
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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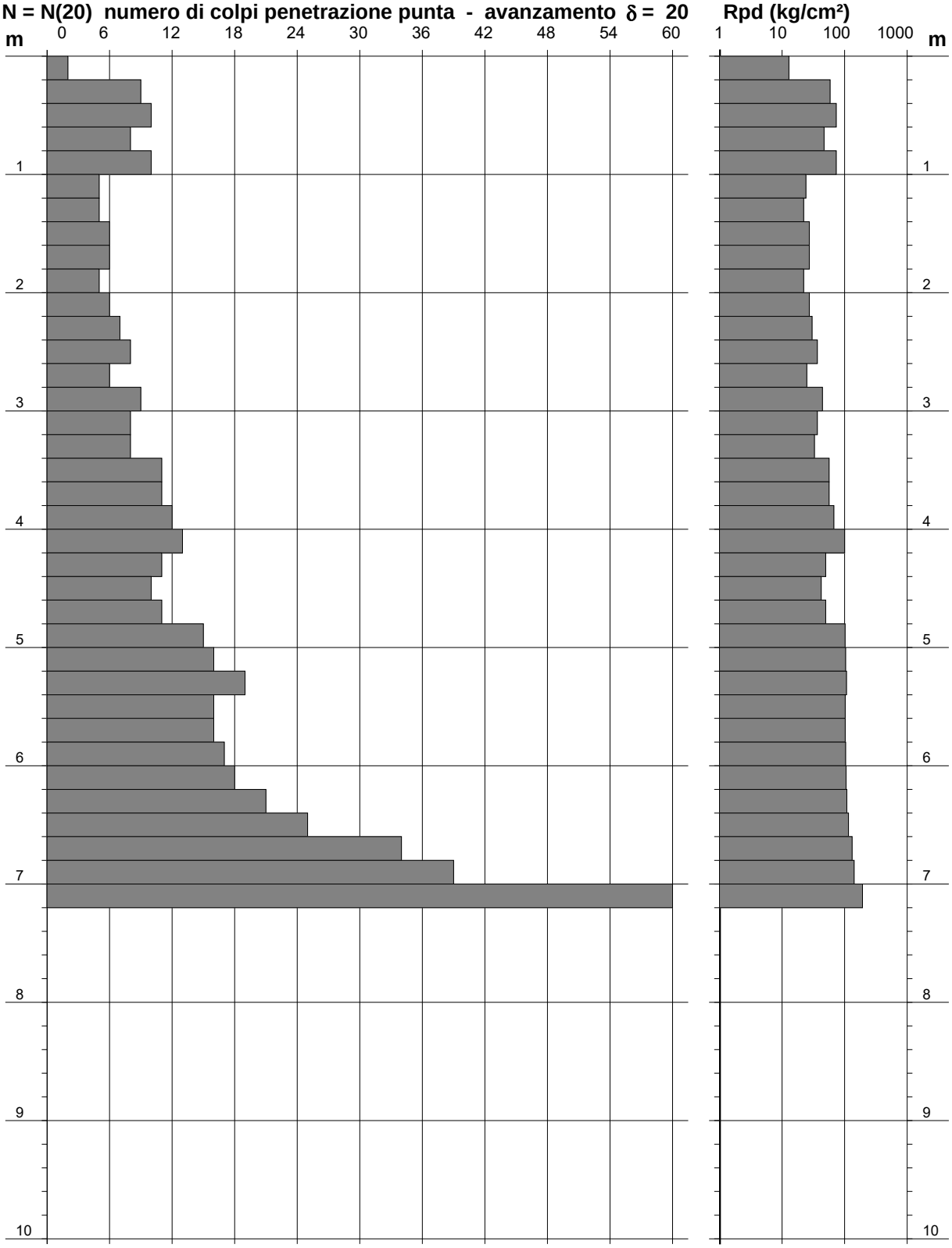
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 228
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-228
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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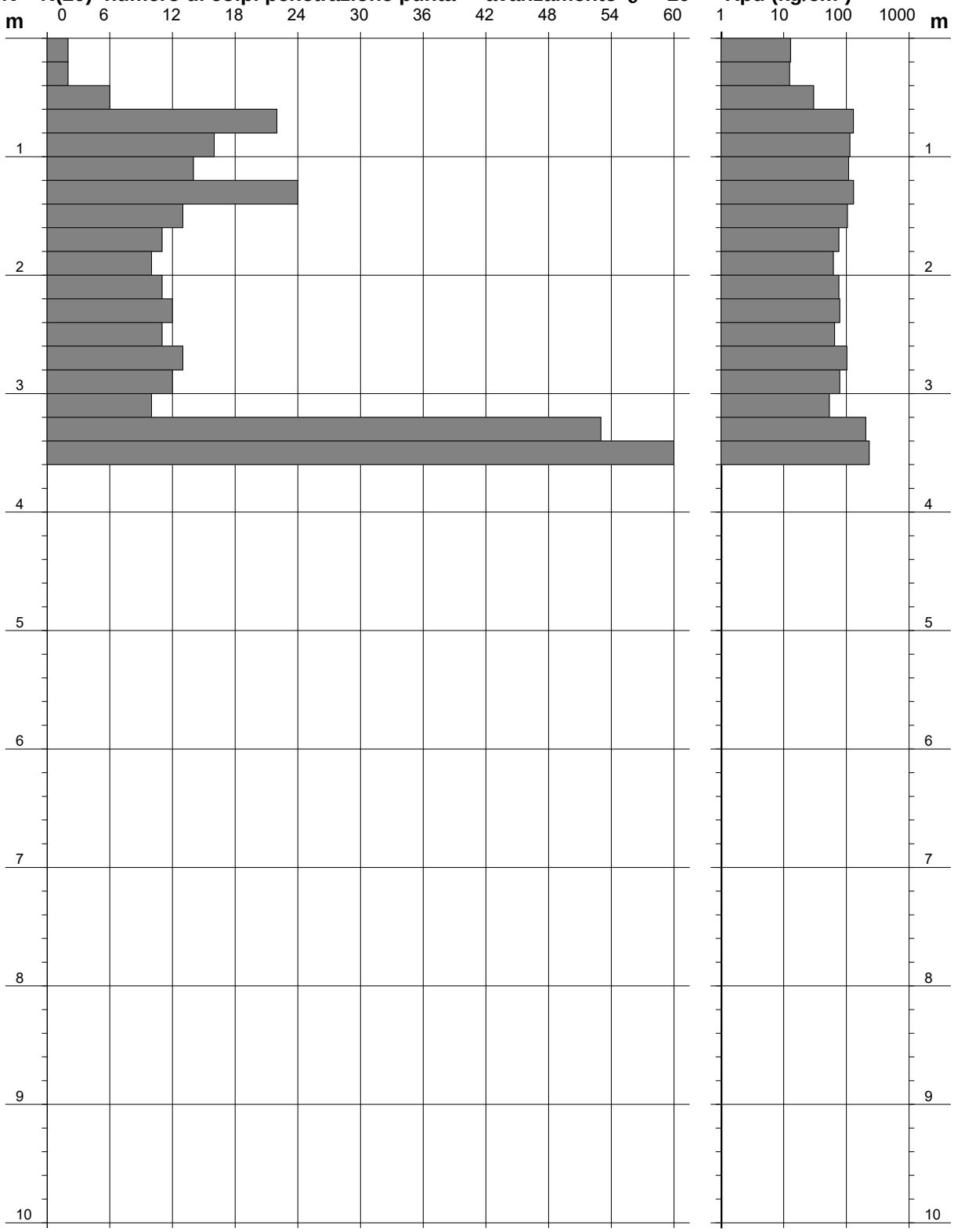
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 226
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-226
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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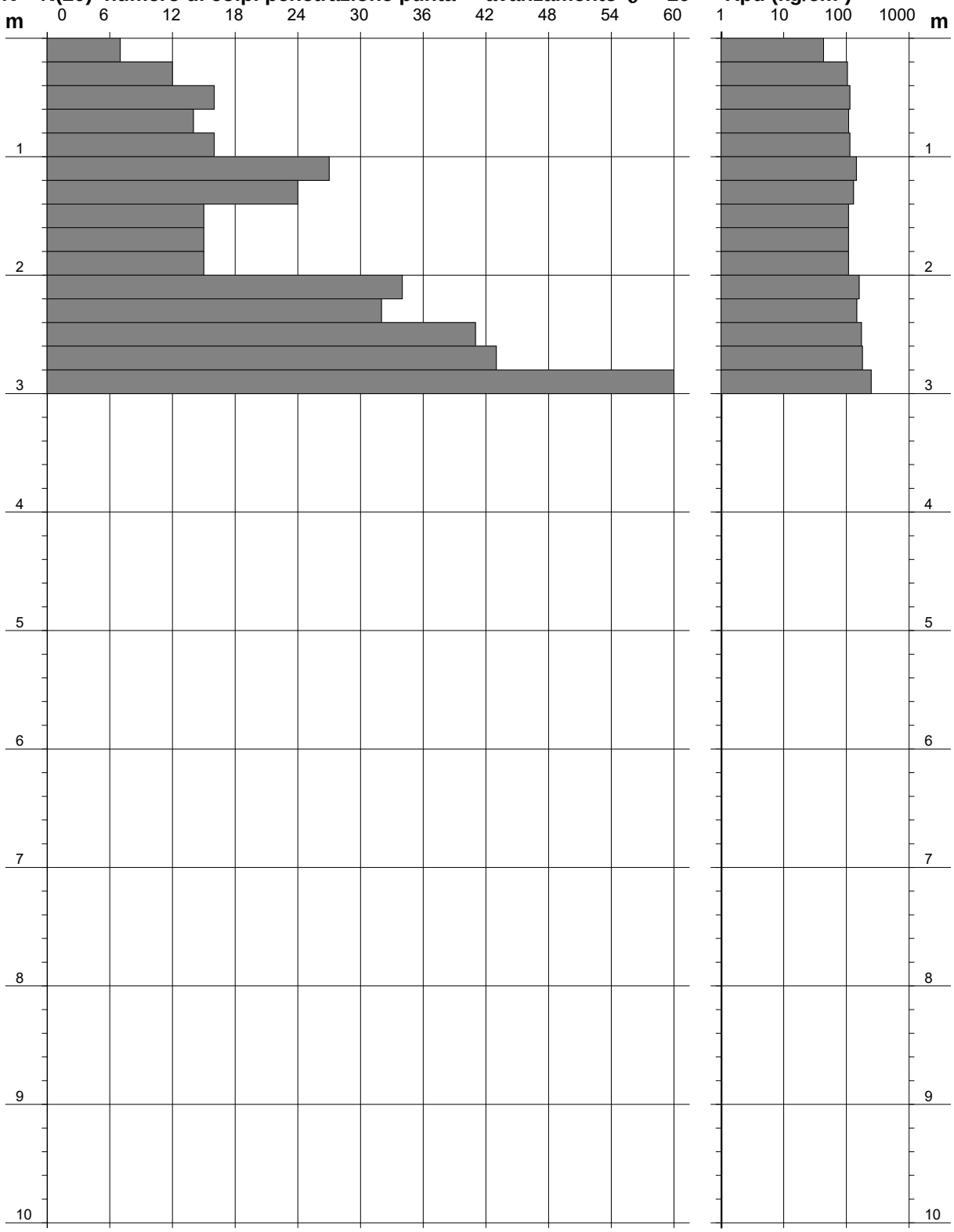
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 225
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-225
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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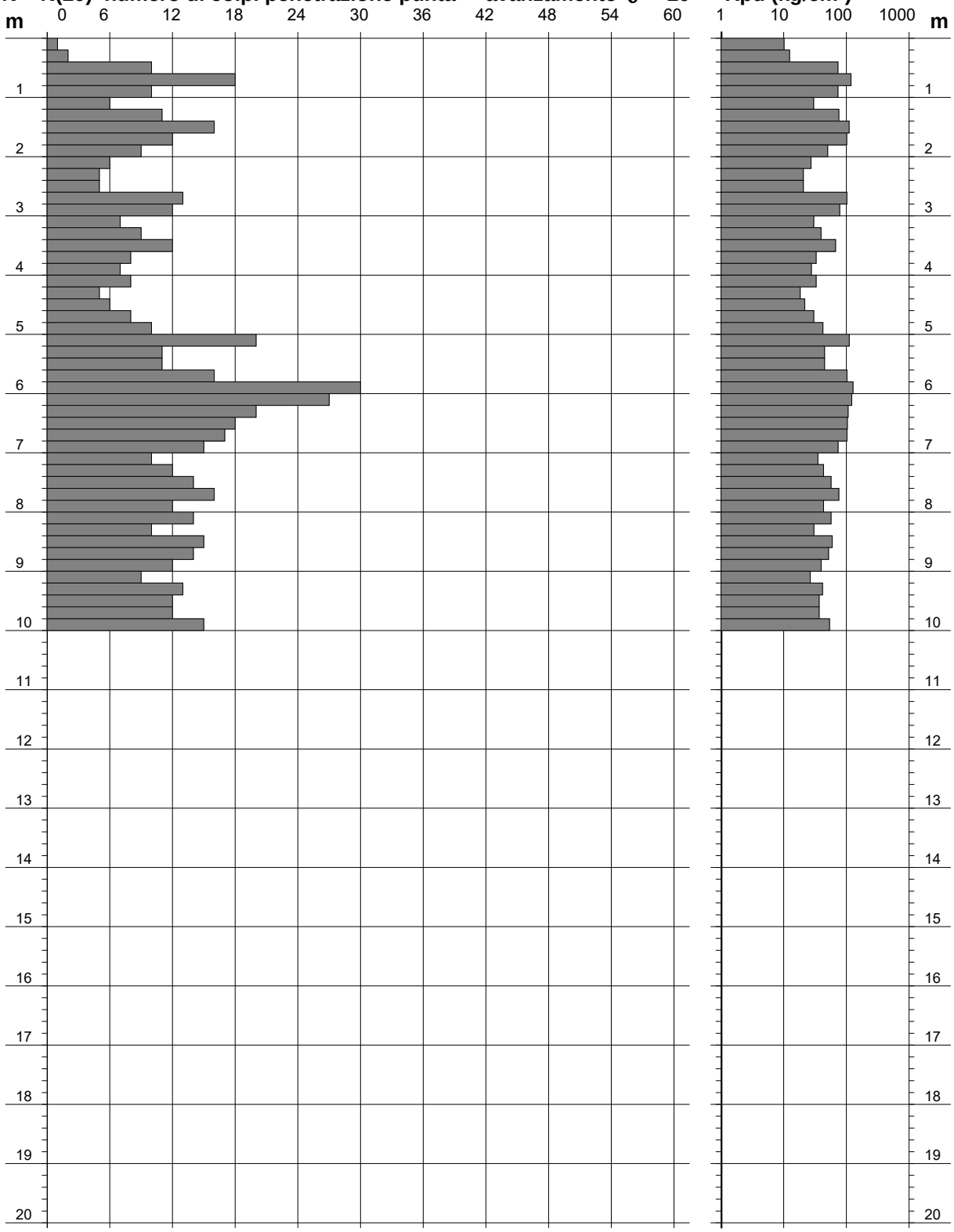
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 224
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	VIANINI LAVORI Spa	- data :	28/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-224
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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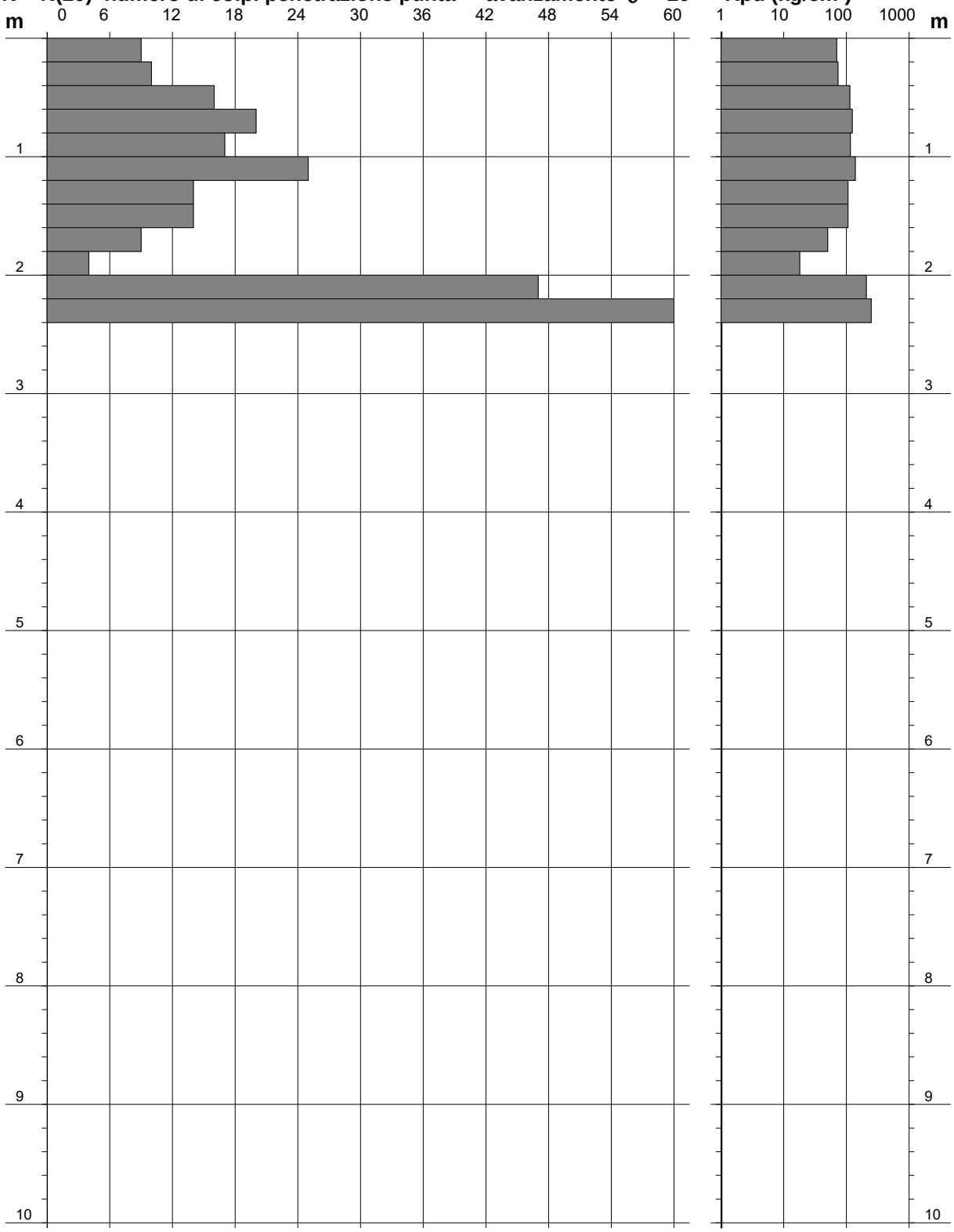
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 218
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	19/09/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-218
- località :	Campolattaro (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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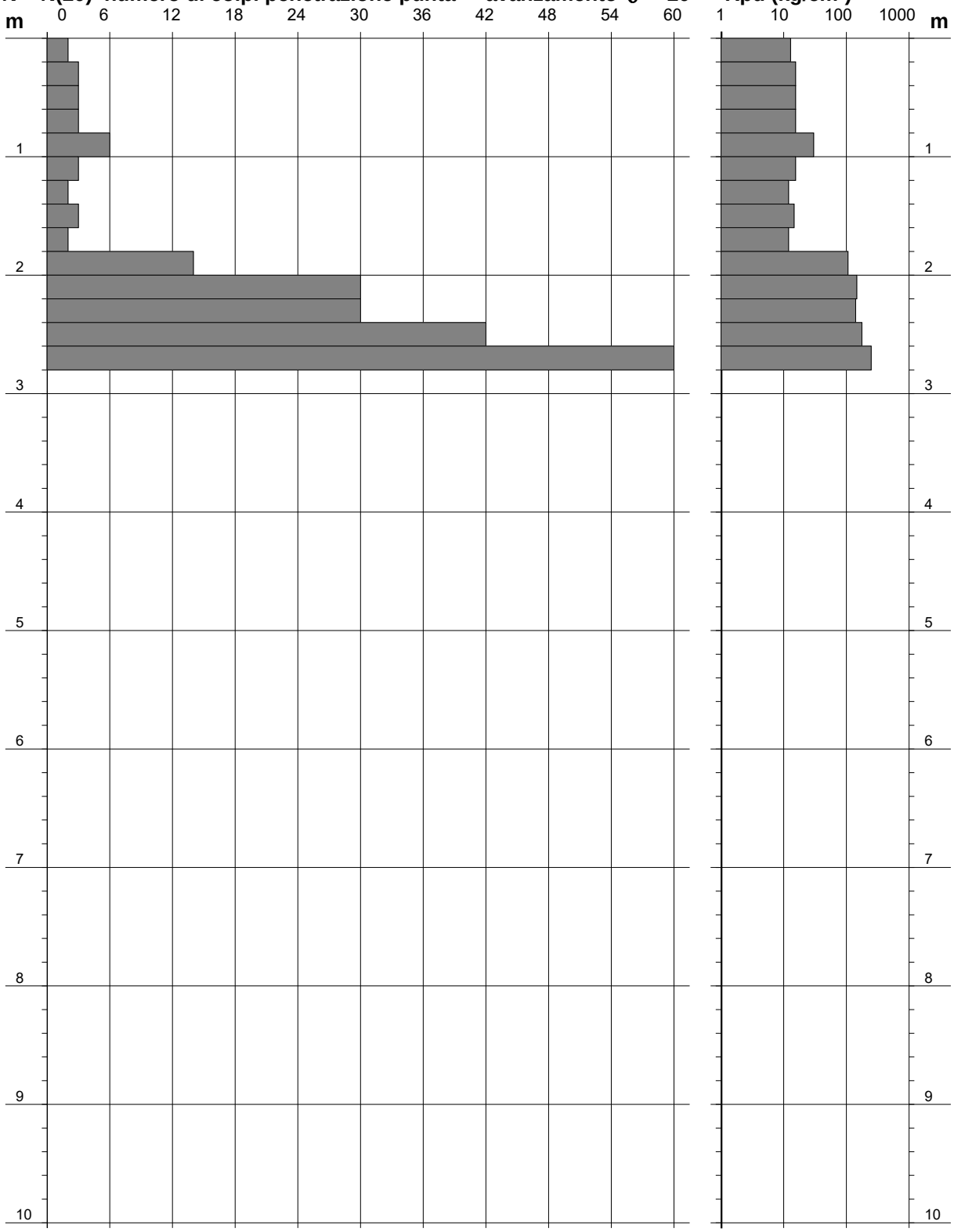
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 201
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	16/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-201
- località :	Caampolattaro (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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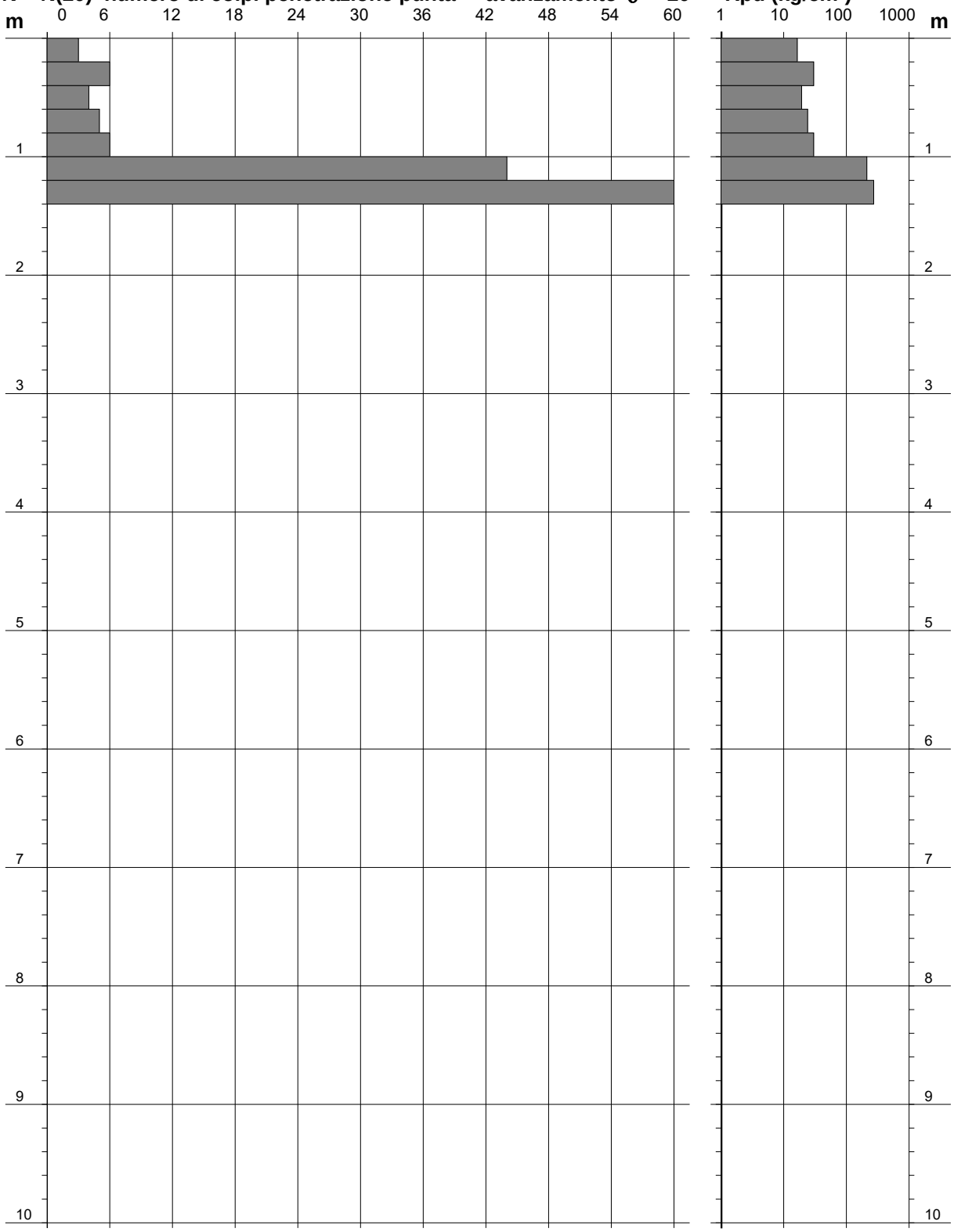
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 181
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	20/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-181
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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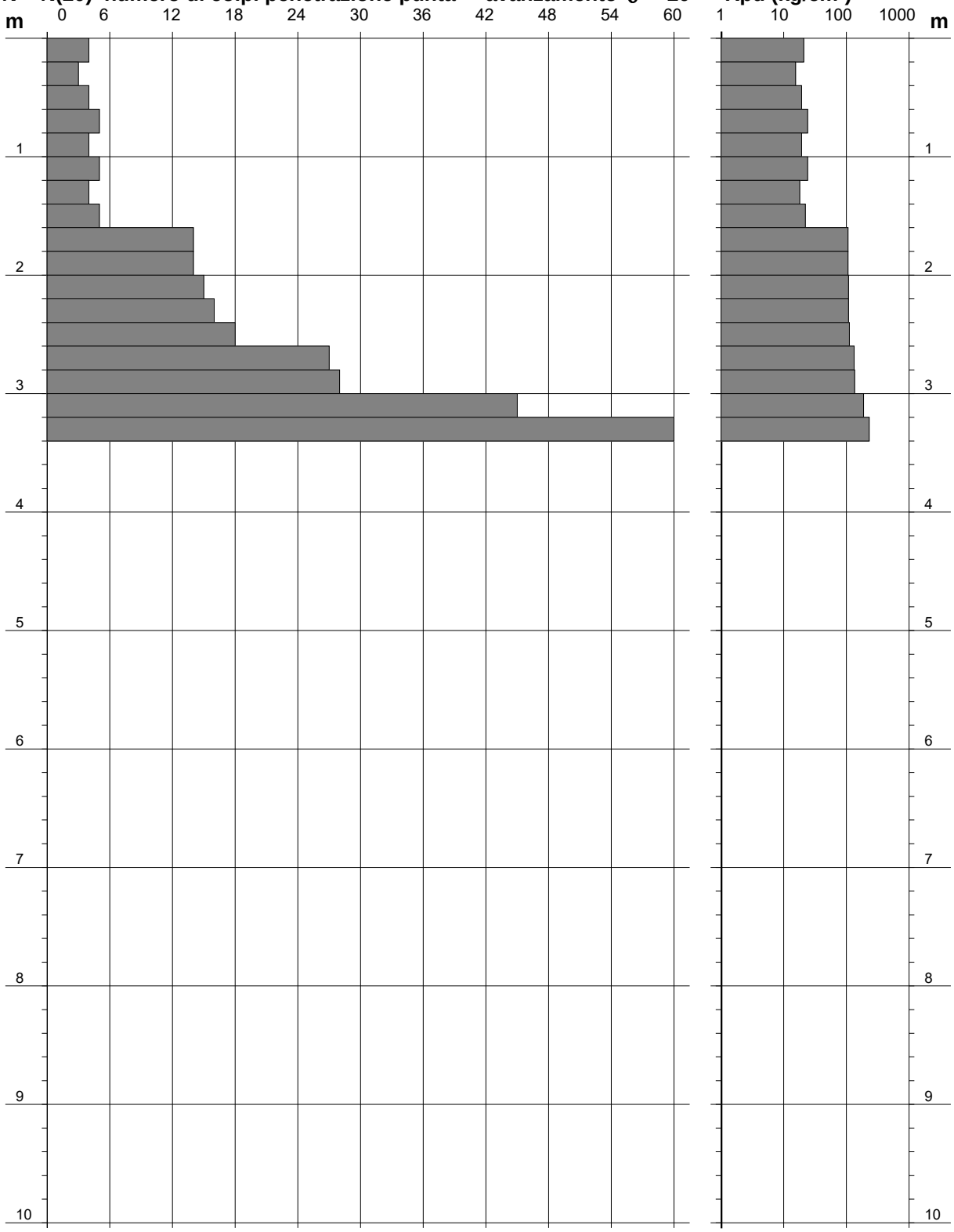
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 180
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	20/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-180
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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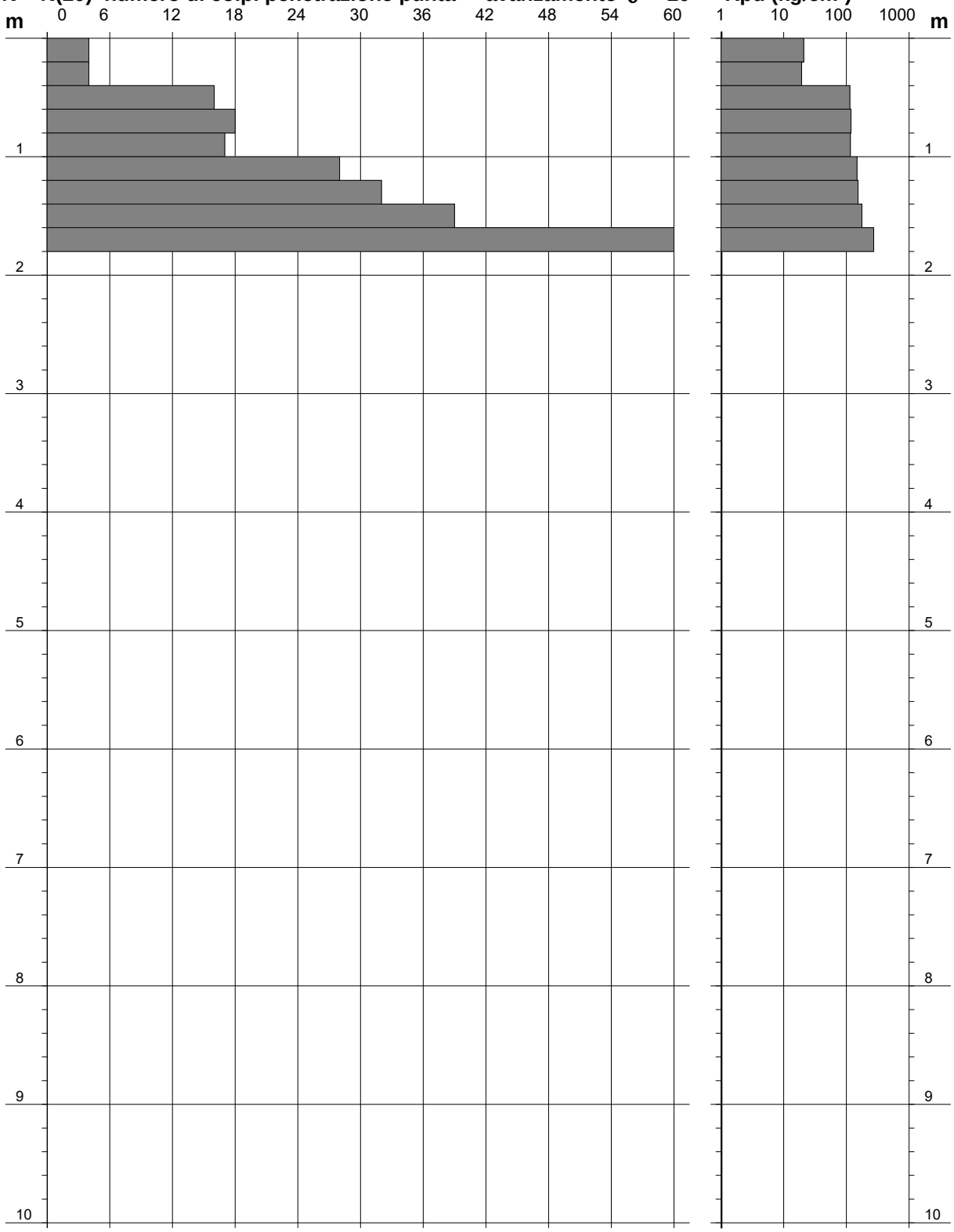
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 178
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	19/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-178
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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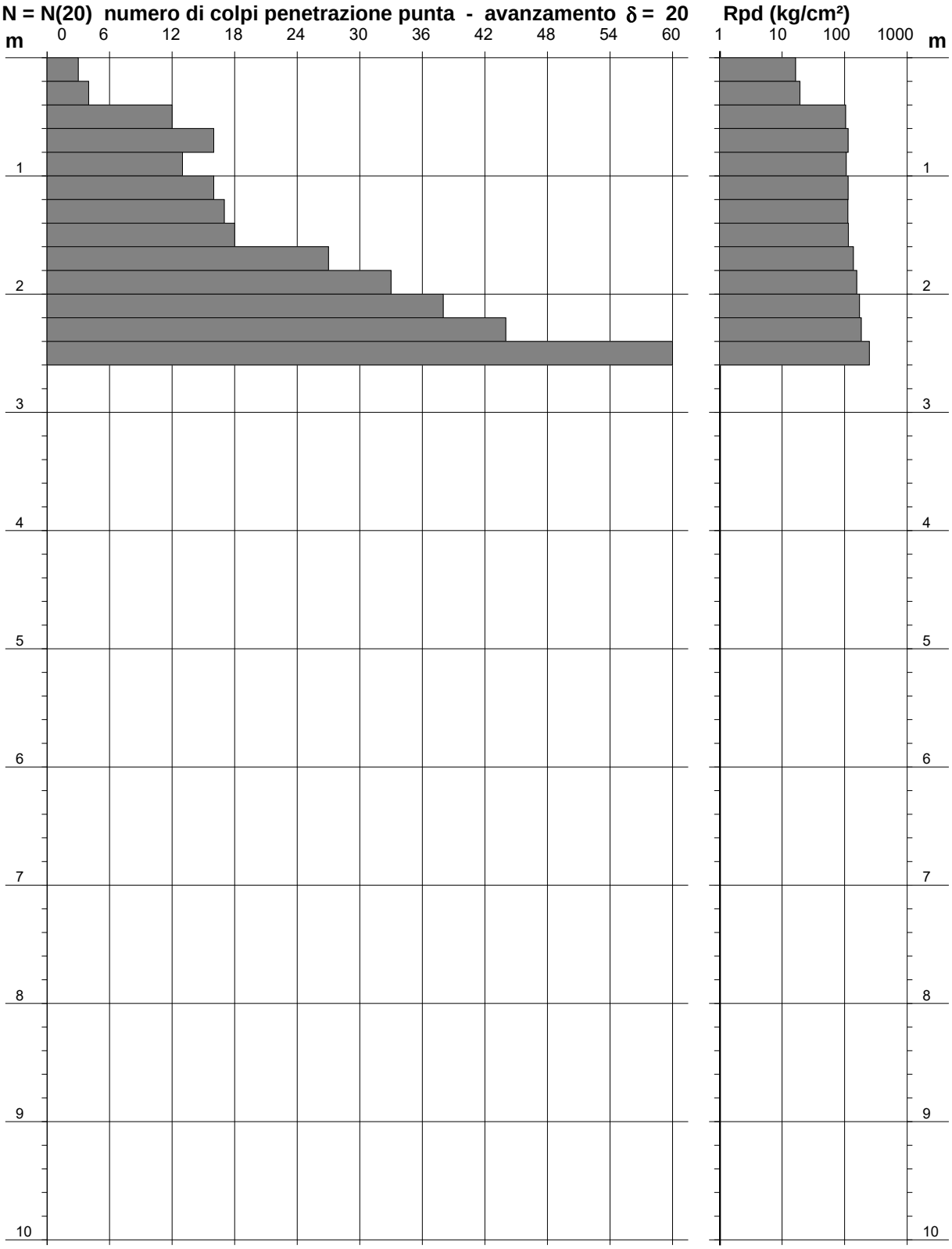
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 177
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	19/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-177
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

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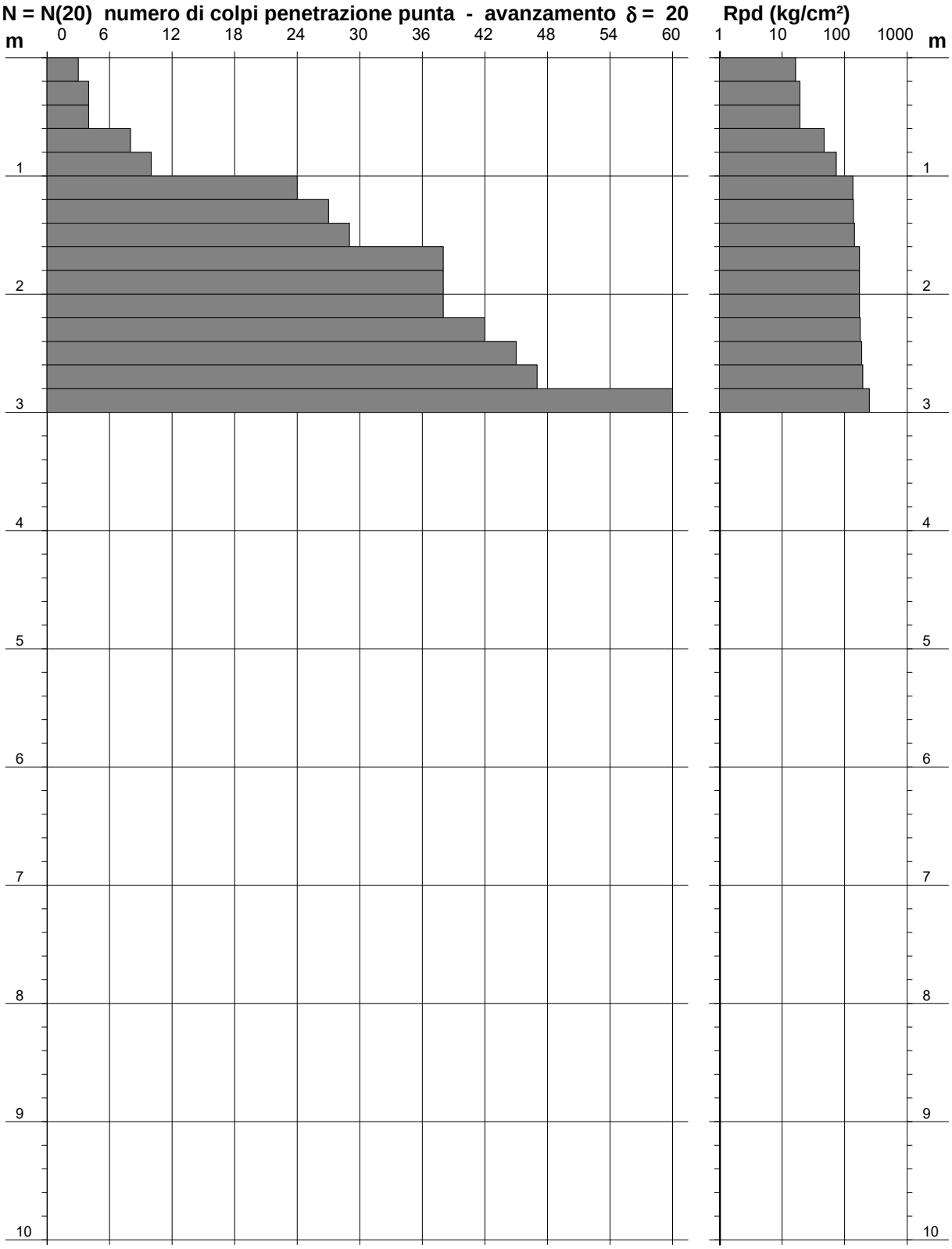
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 176
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	19/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-176
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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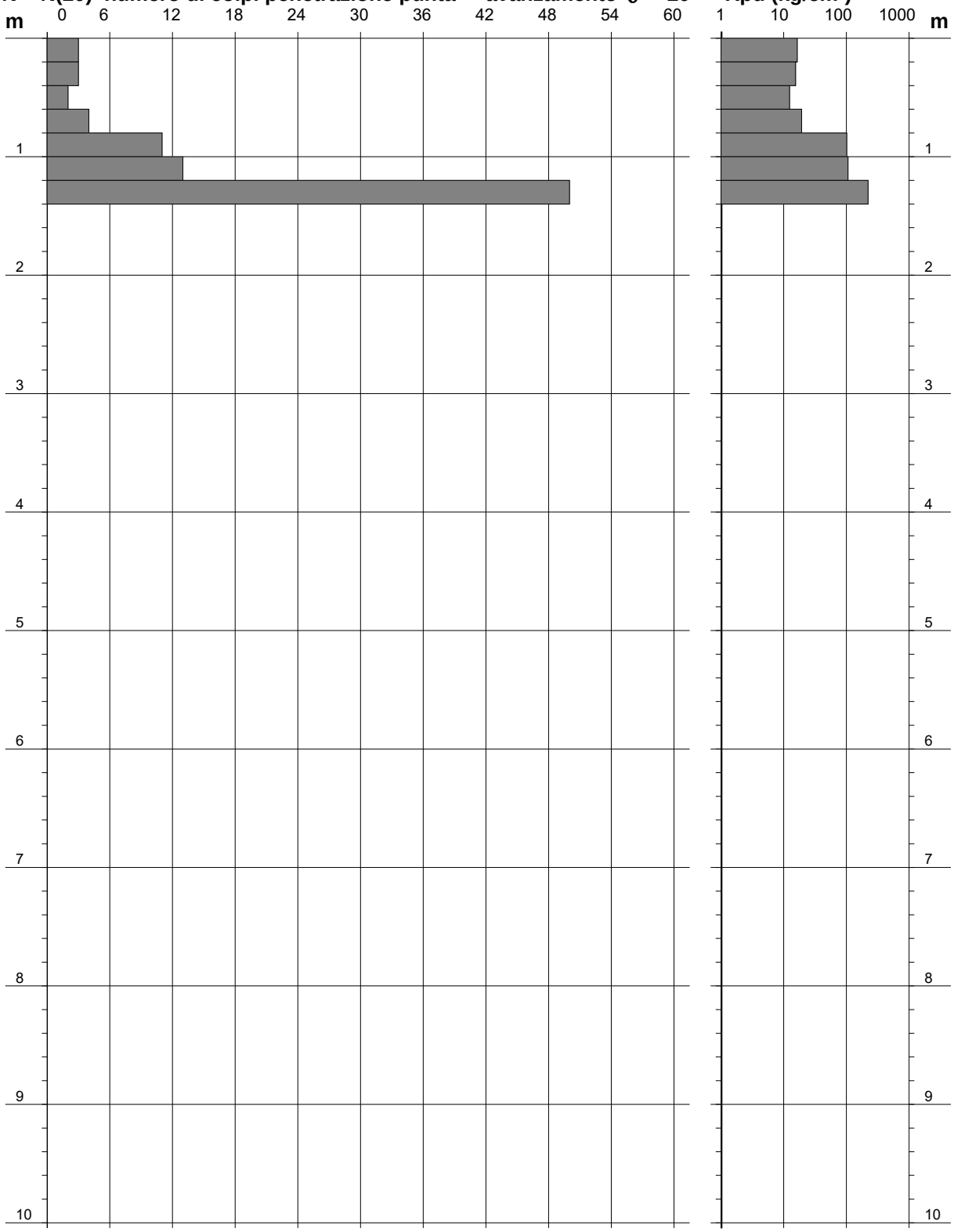
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 175
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	VIANINI LAVORI Spa	- data :	17/10/2020
- cantiere :	Utilizzo idropotabile acque invaso Campolattaro	- quota inizio :	Cert 100-20-175
- località :	Gioia Sannitica (CE)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **PaganiTG63-200**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **NO**

Software by: Dr.D.MERLIN - 0425/840820

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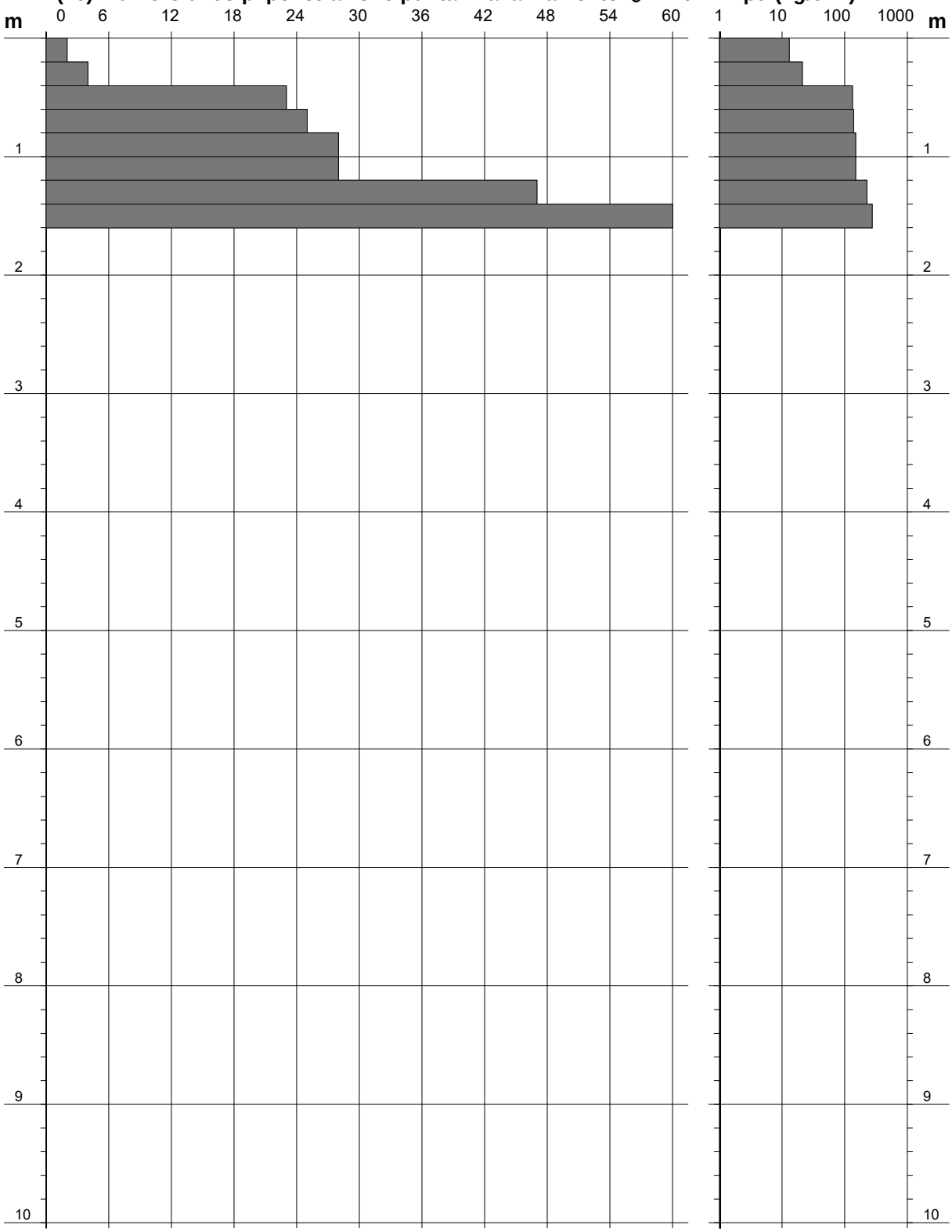
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 300
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	11/11/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-300
- località :	Colle Sannita (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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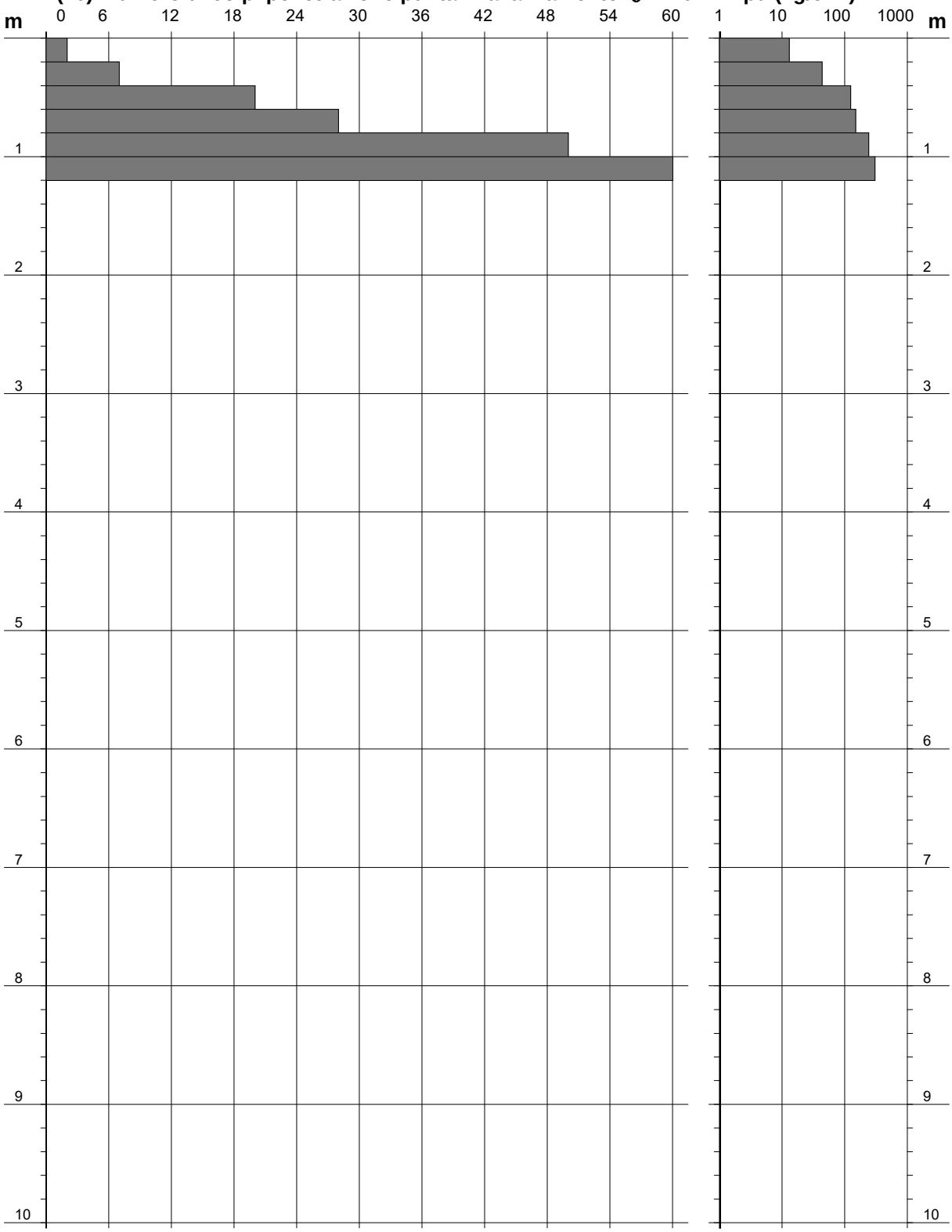
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 314
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	02/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-314
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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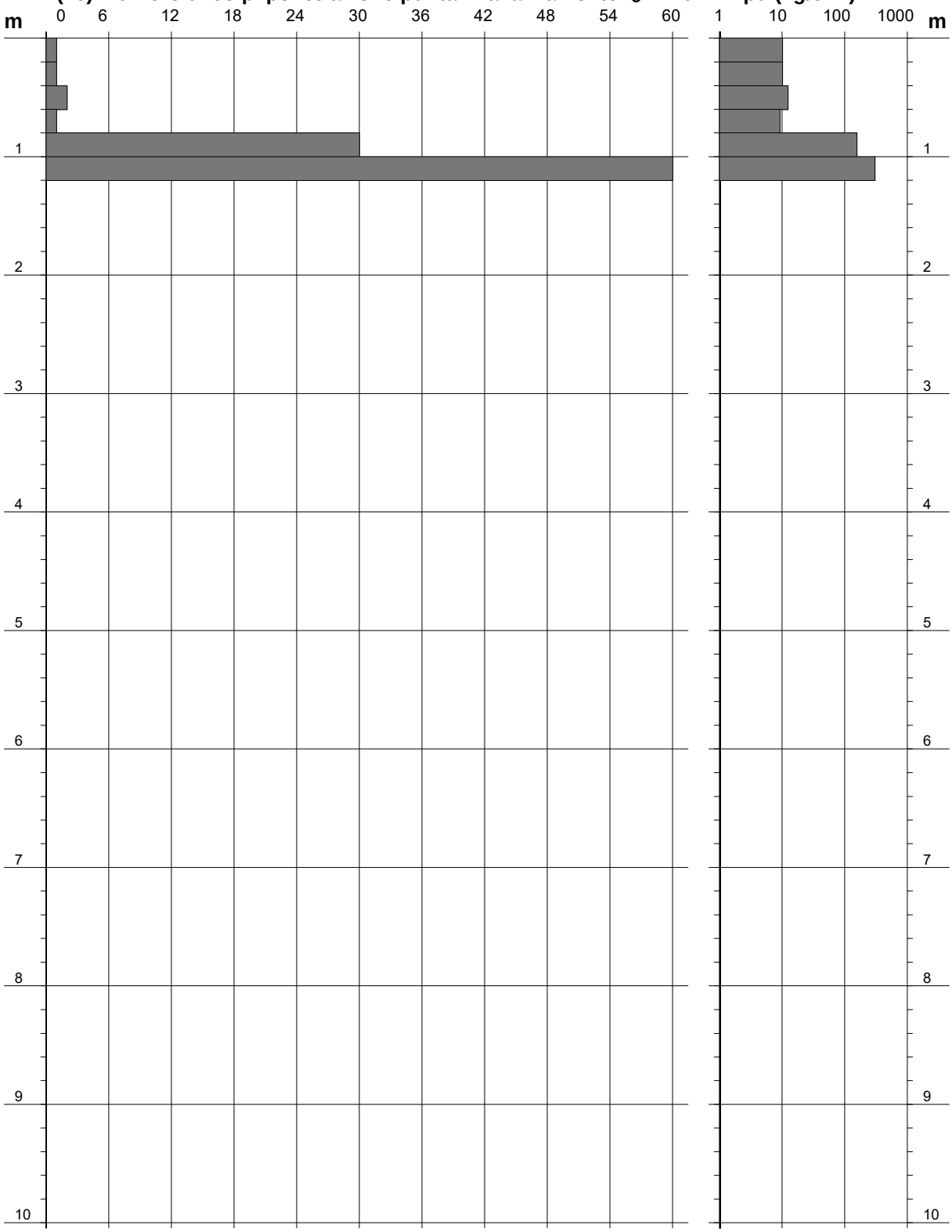
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 315
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	02/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-315
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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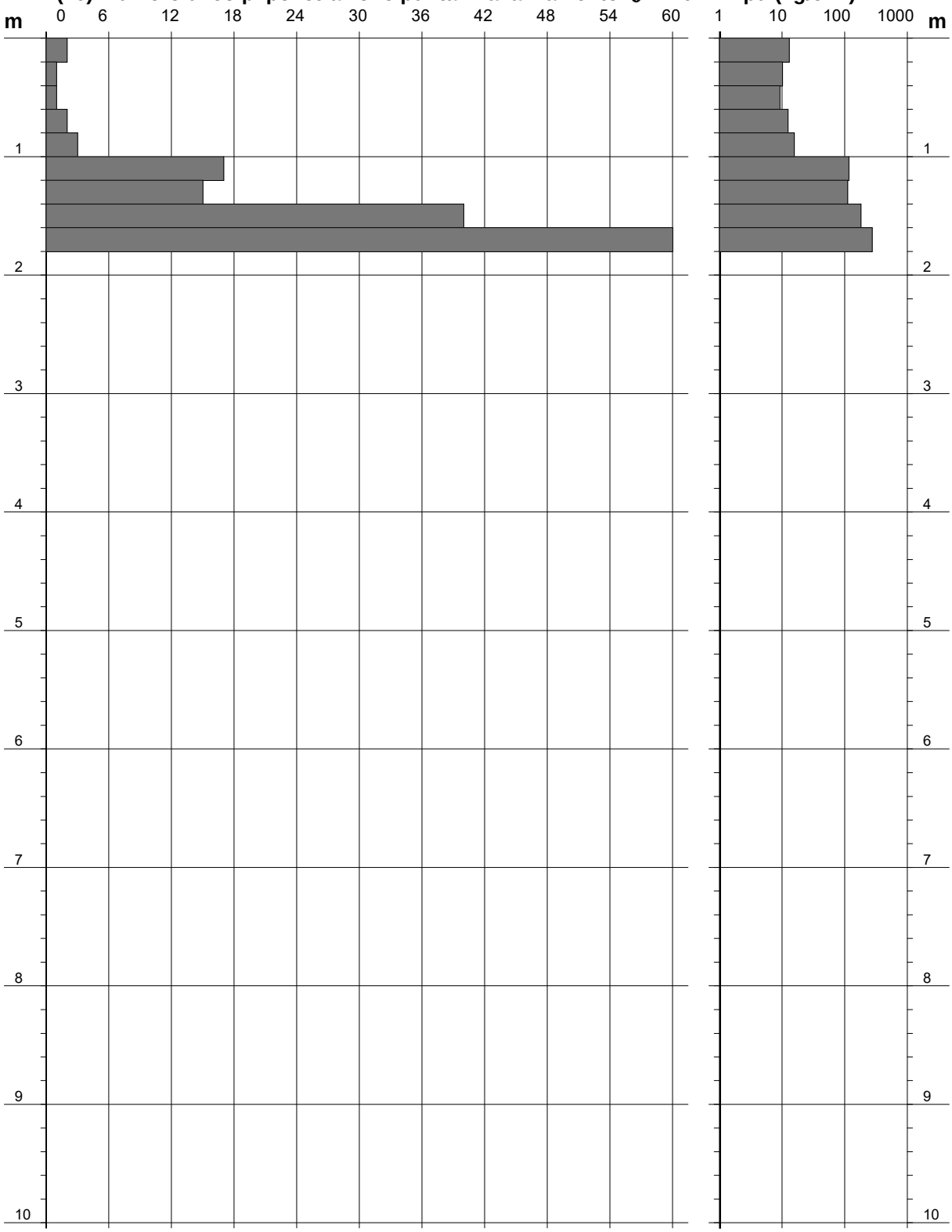
PROVA PENETROMETRICA DINAMICA n° 316
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	05/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-316
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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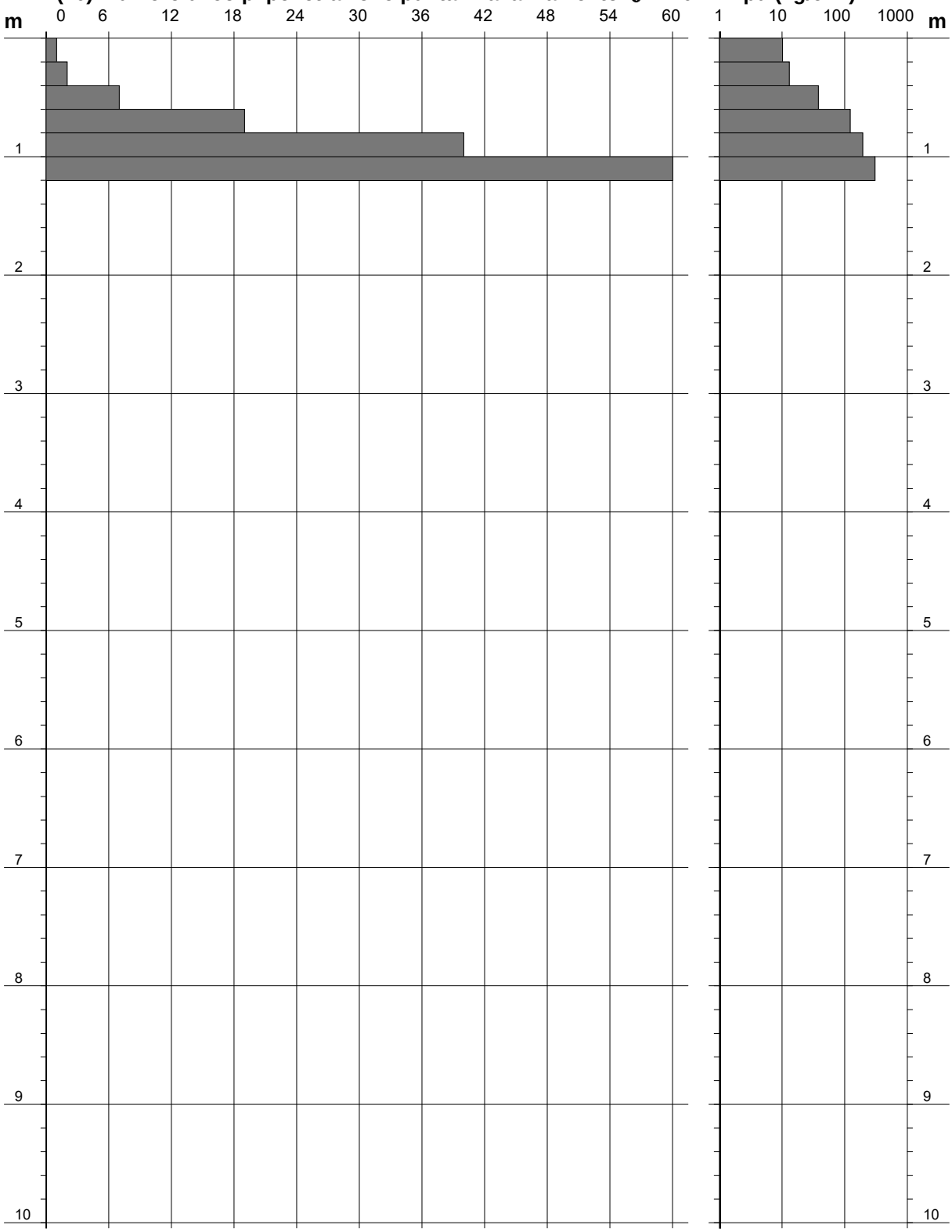
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 317
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	05/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-317
- località :	Castelpagano (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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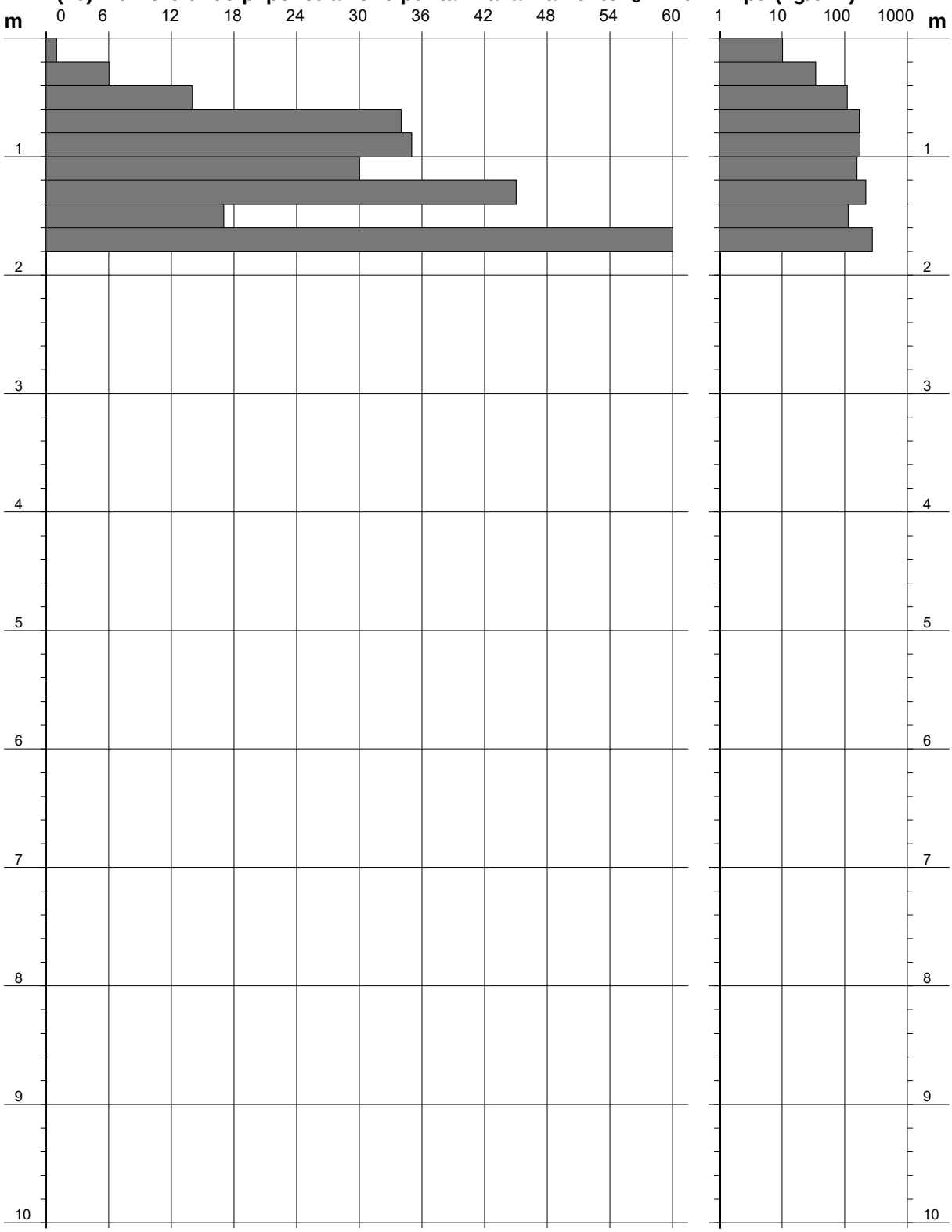
PROVA PENETROMETRICA DINAMICA n° 327
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	09/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-327
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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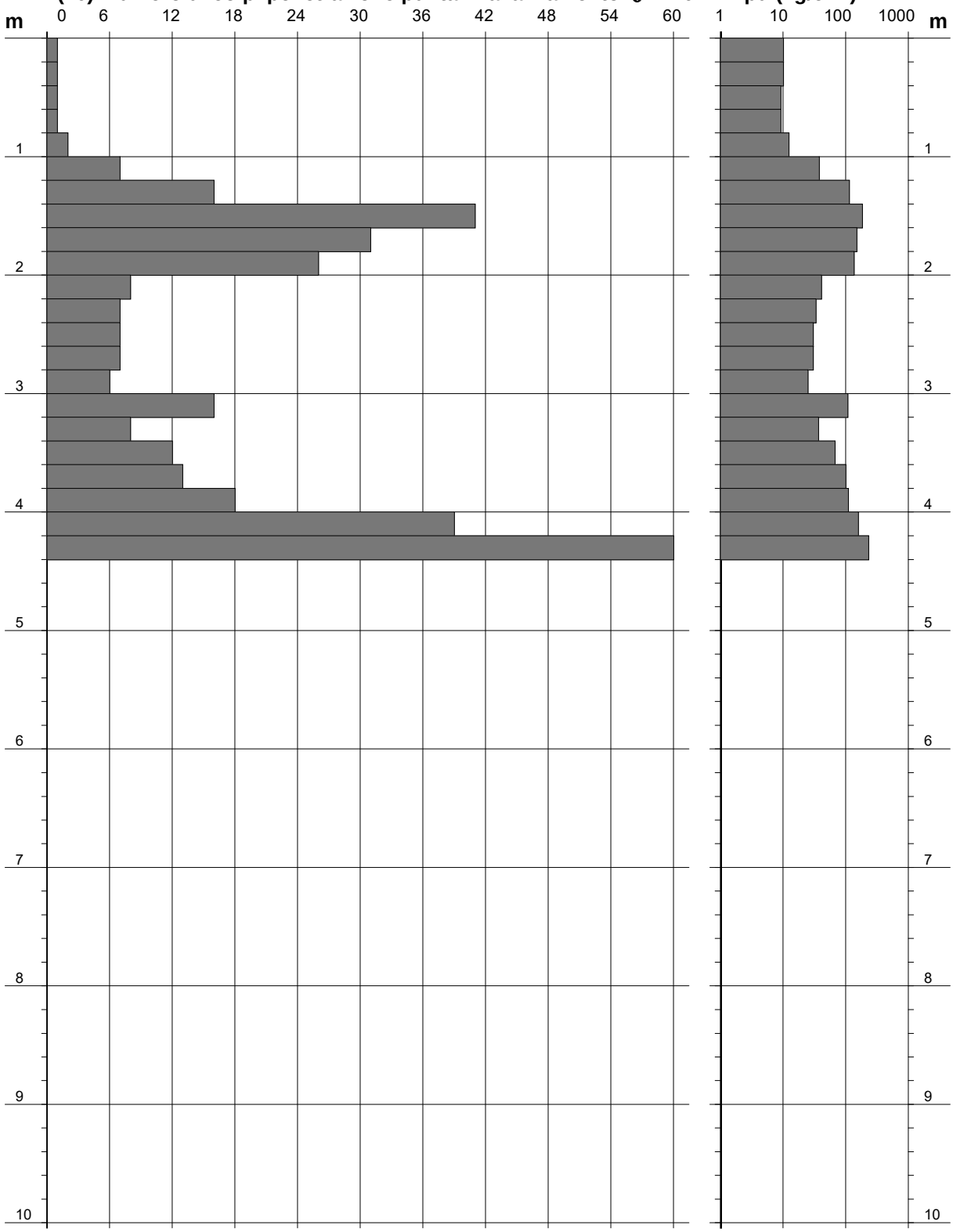
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 328
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	09/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-328
- località :	Morcone (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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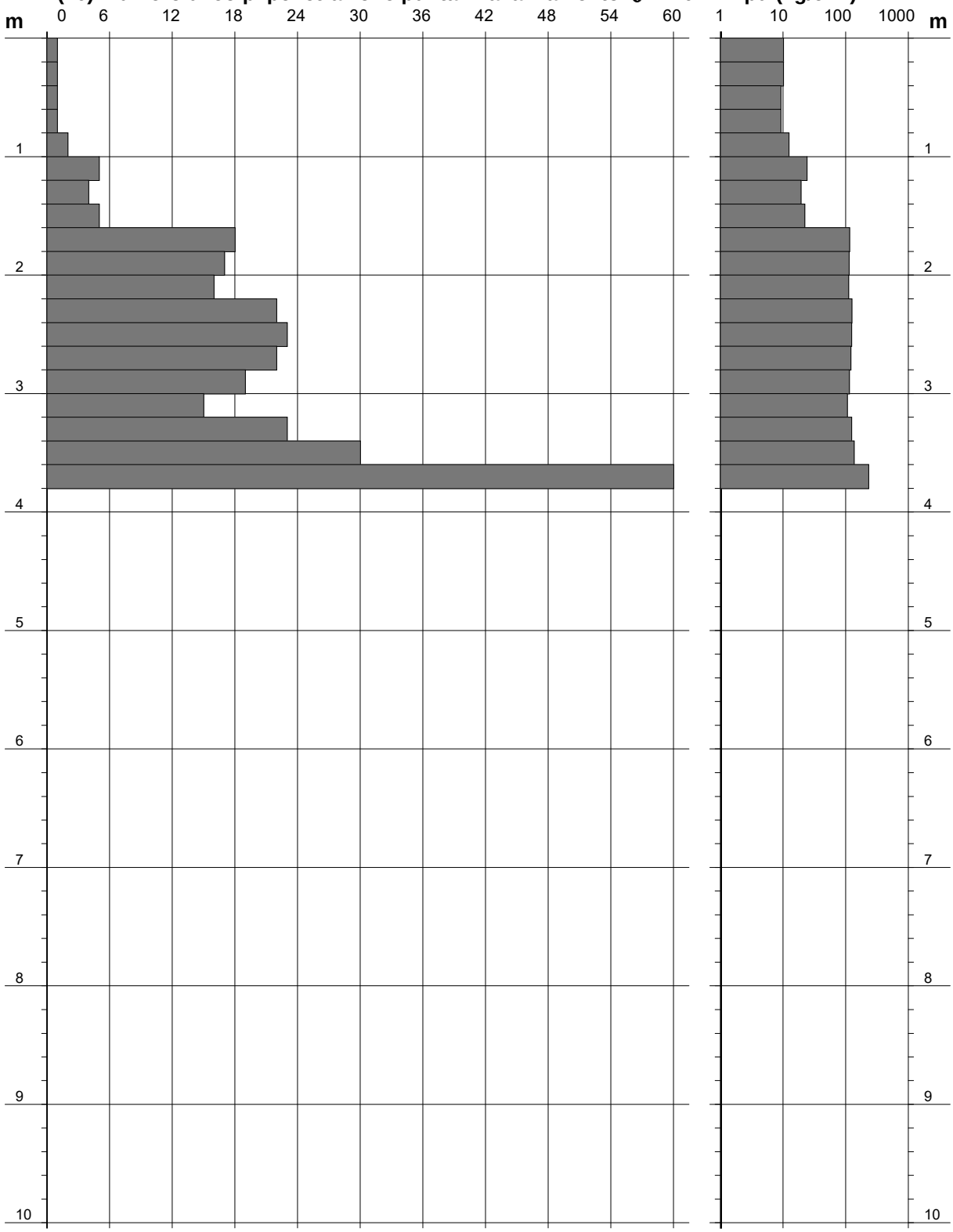
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 335
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-335
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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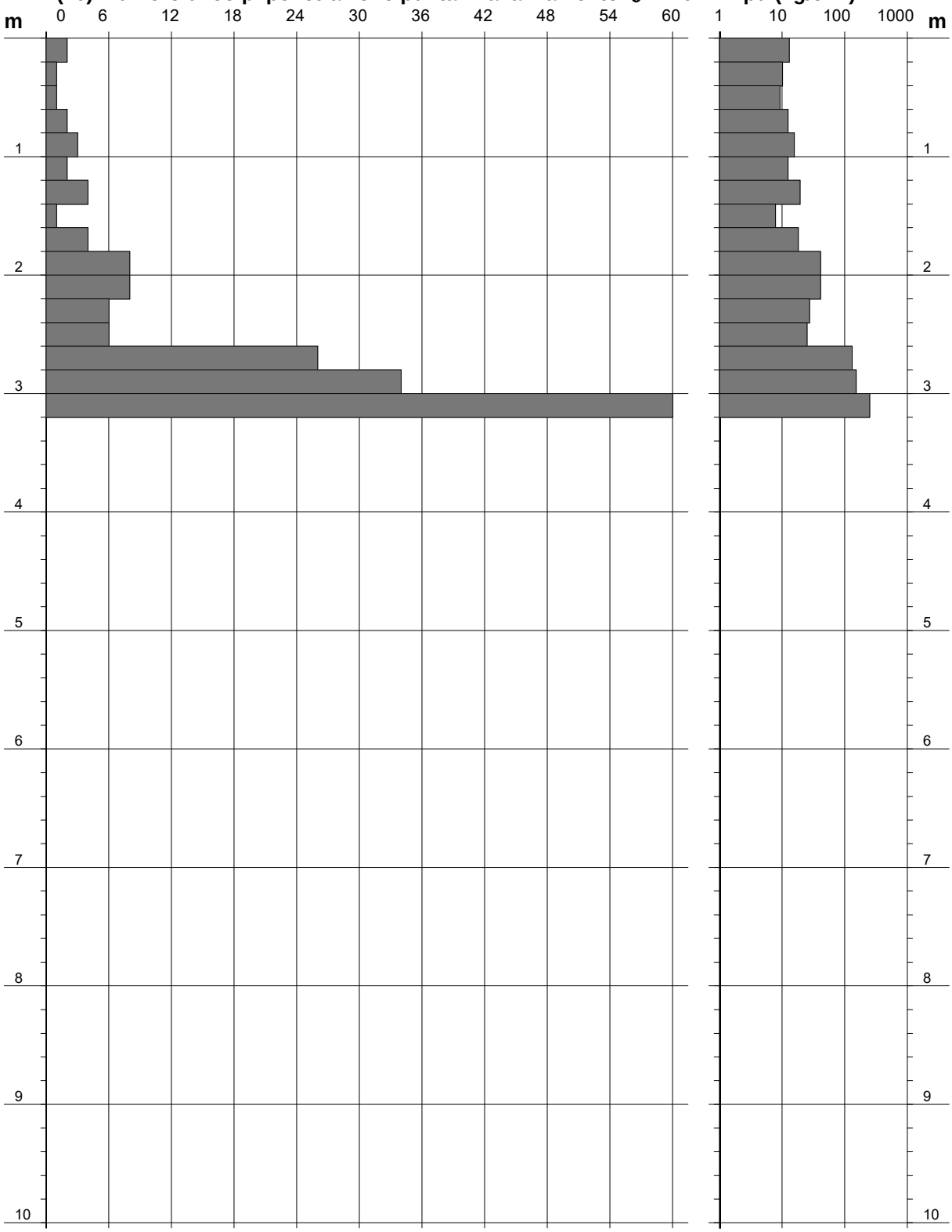
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 336
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-336
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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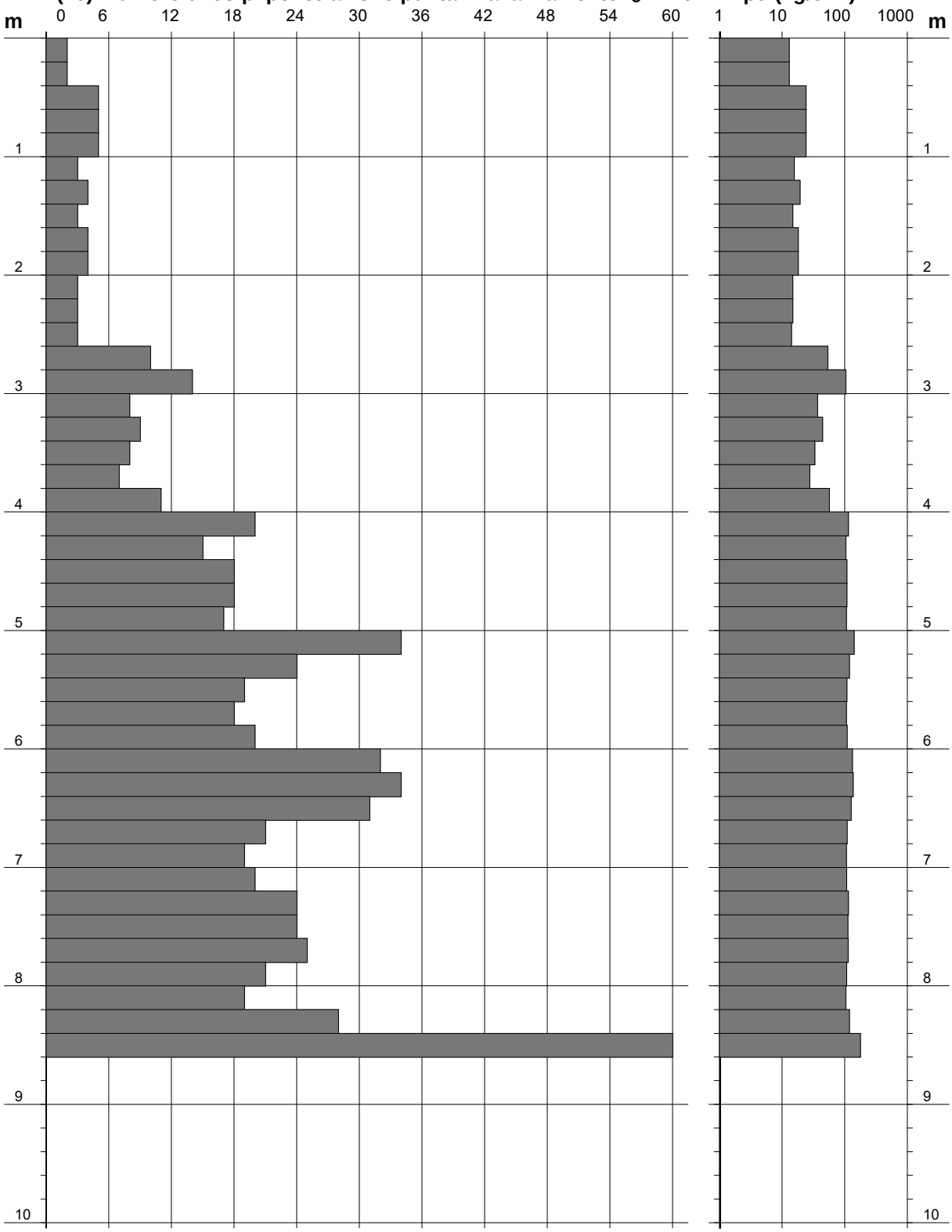
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 337
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-337
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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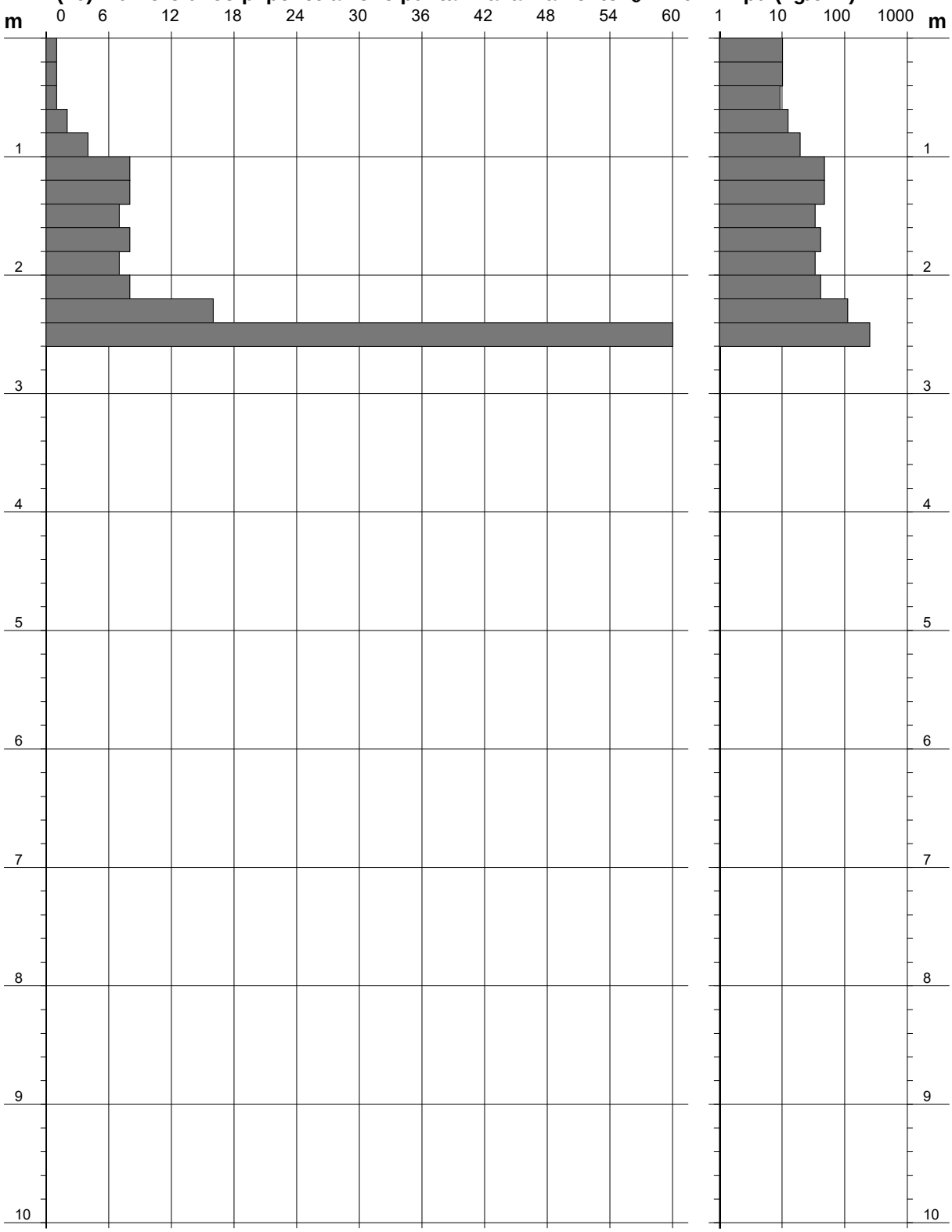
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 338
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	14/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-338
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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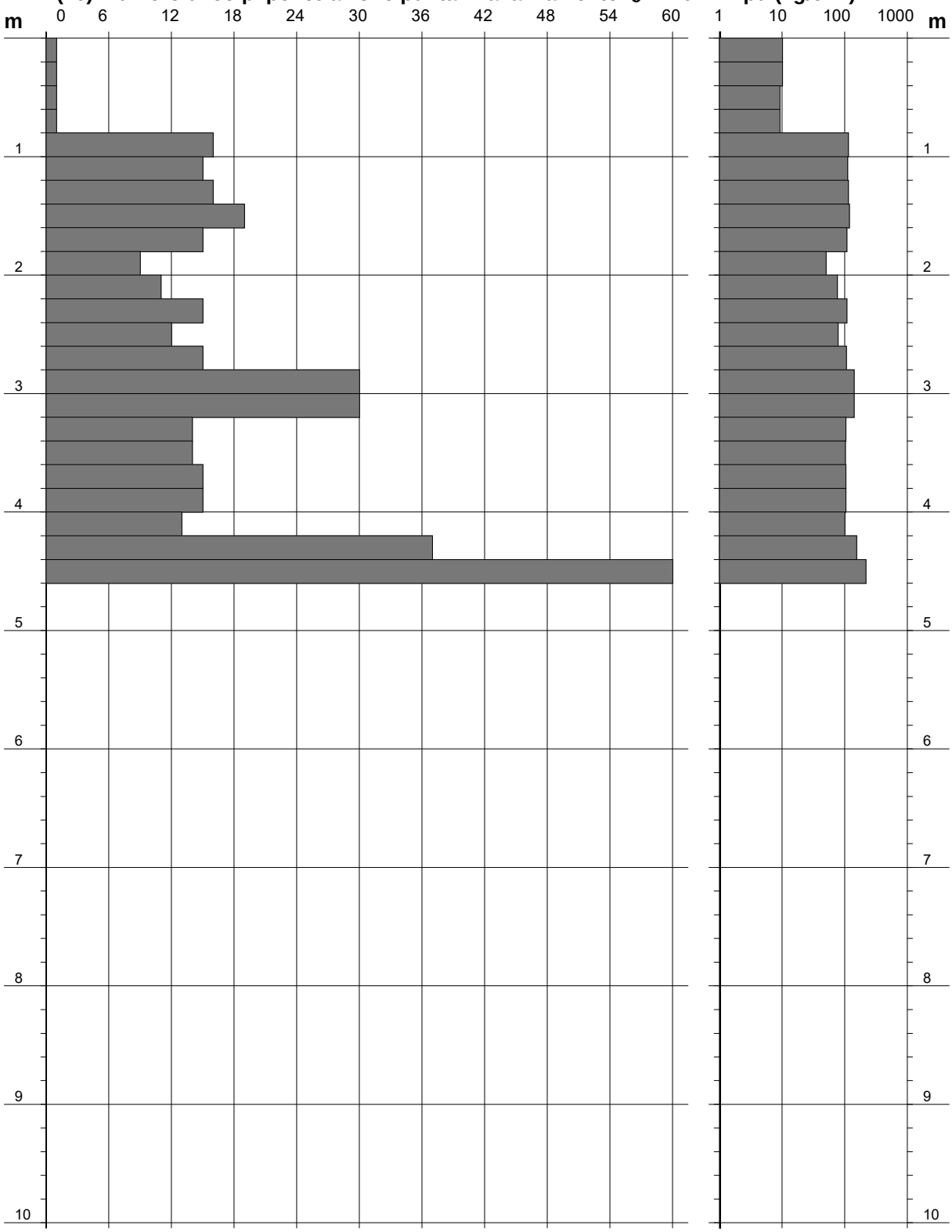
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 344
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-344
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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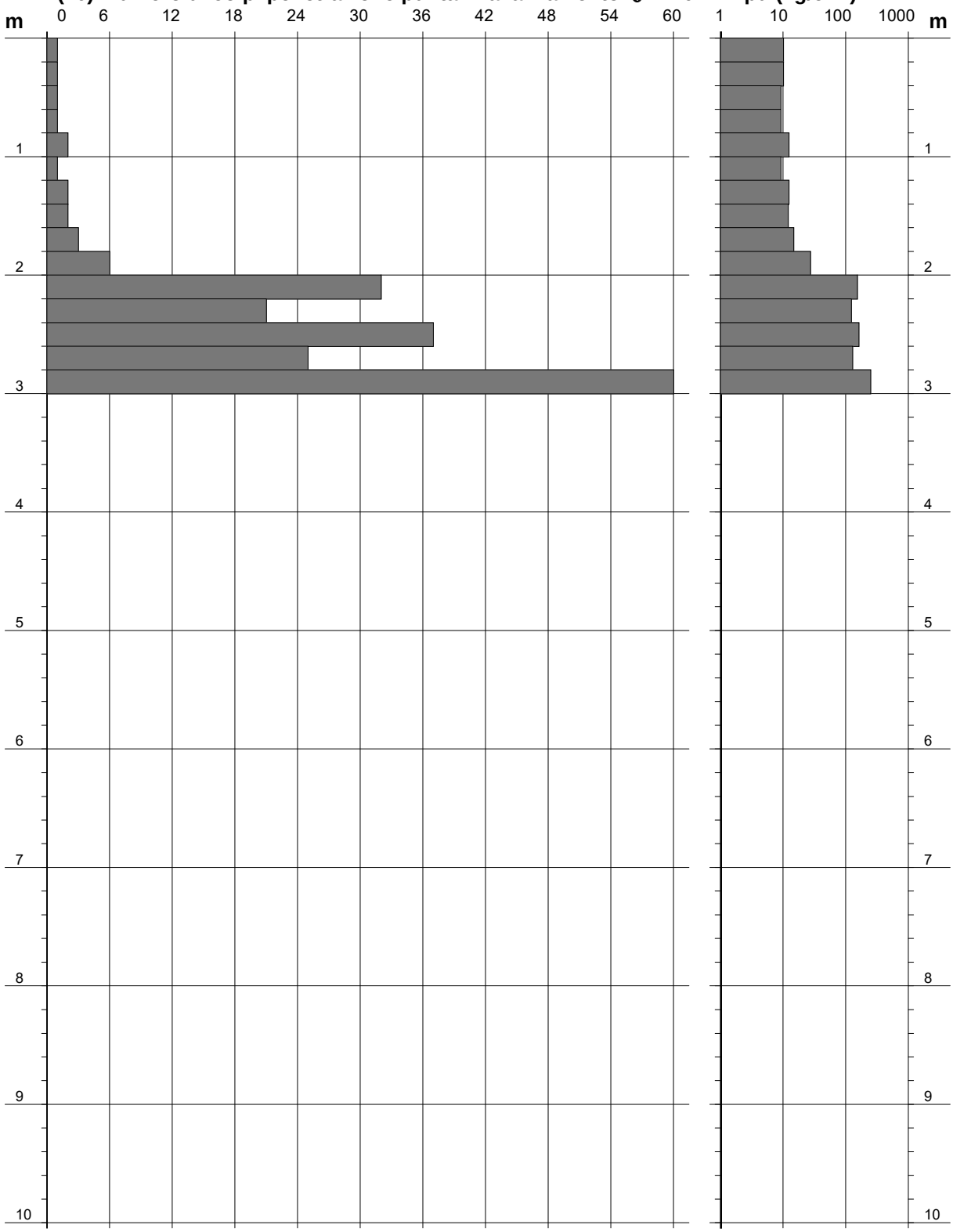
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 339
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-339
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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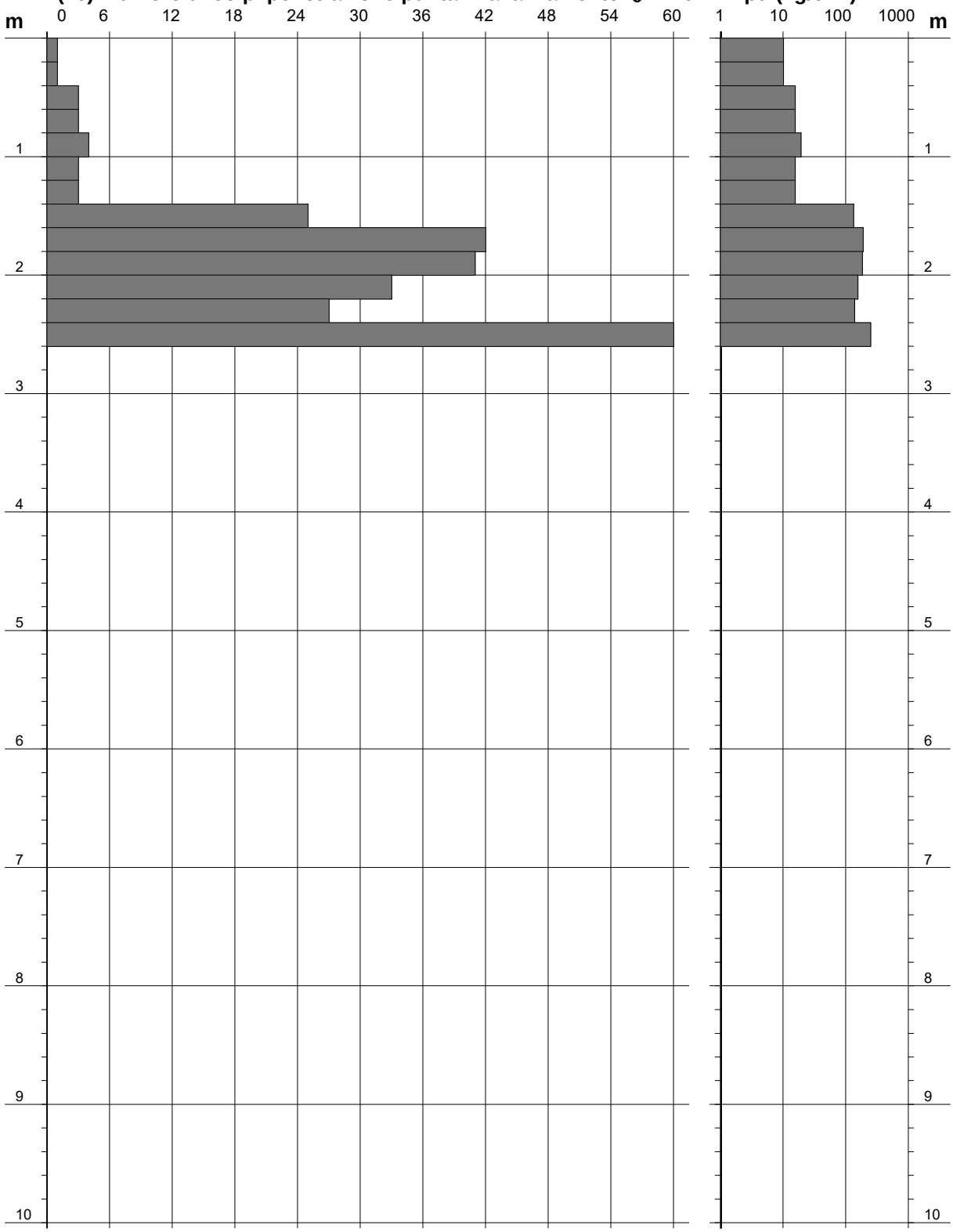
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 340
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-340
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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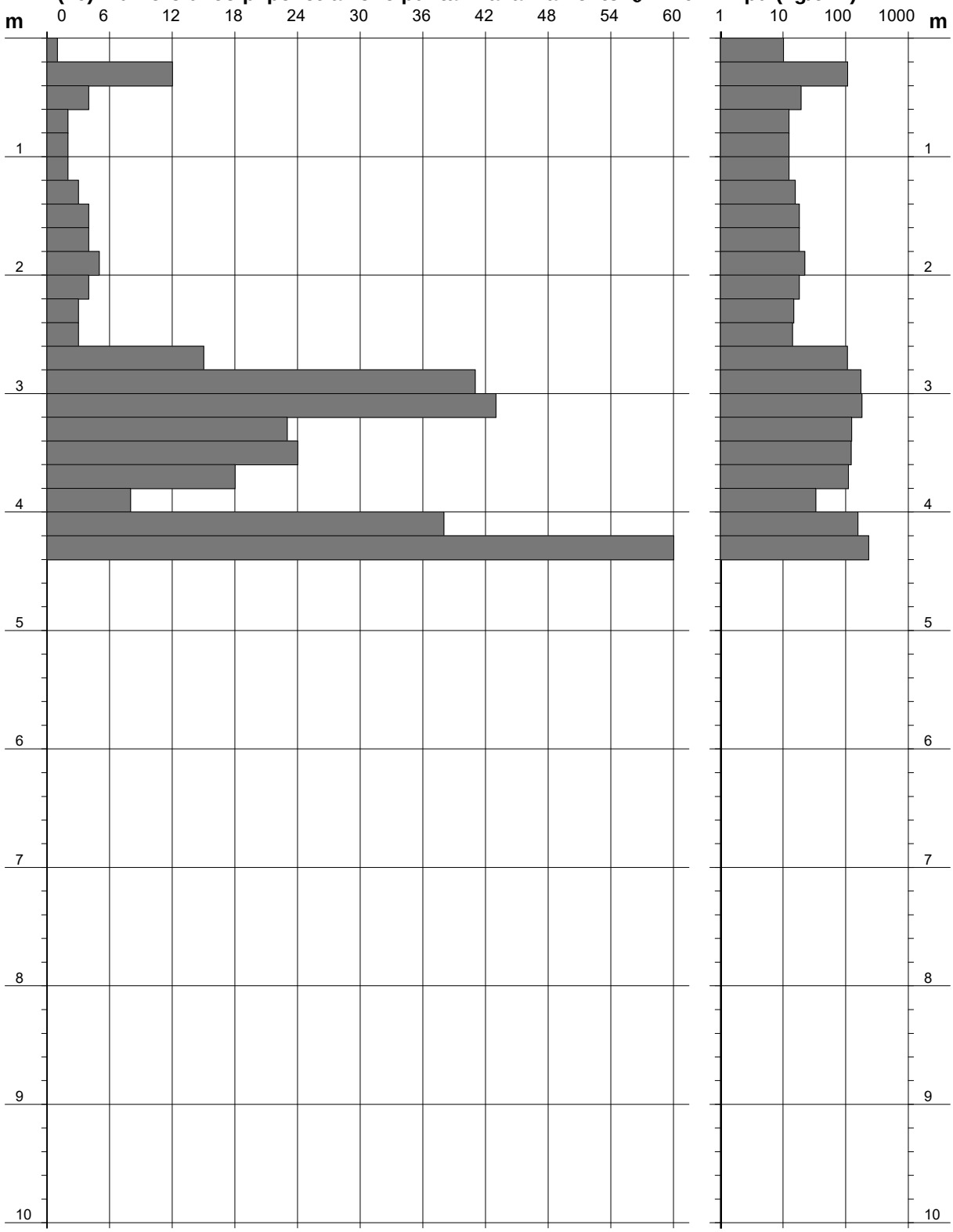
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 341
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-341
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 342
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	16/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-342
- località :	Ponte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**

- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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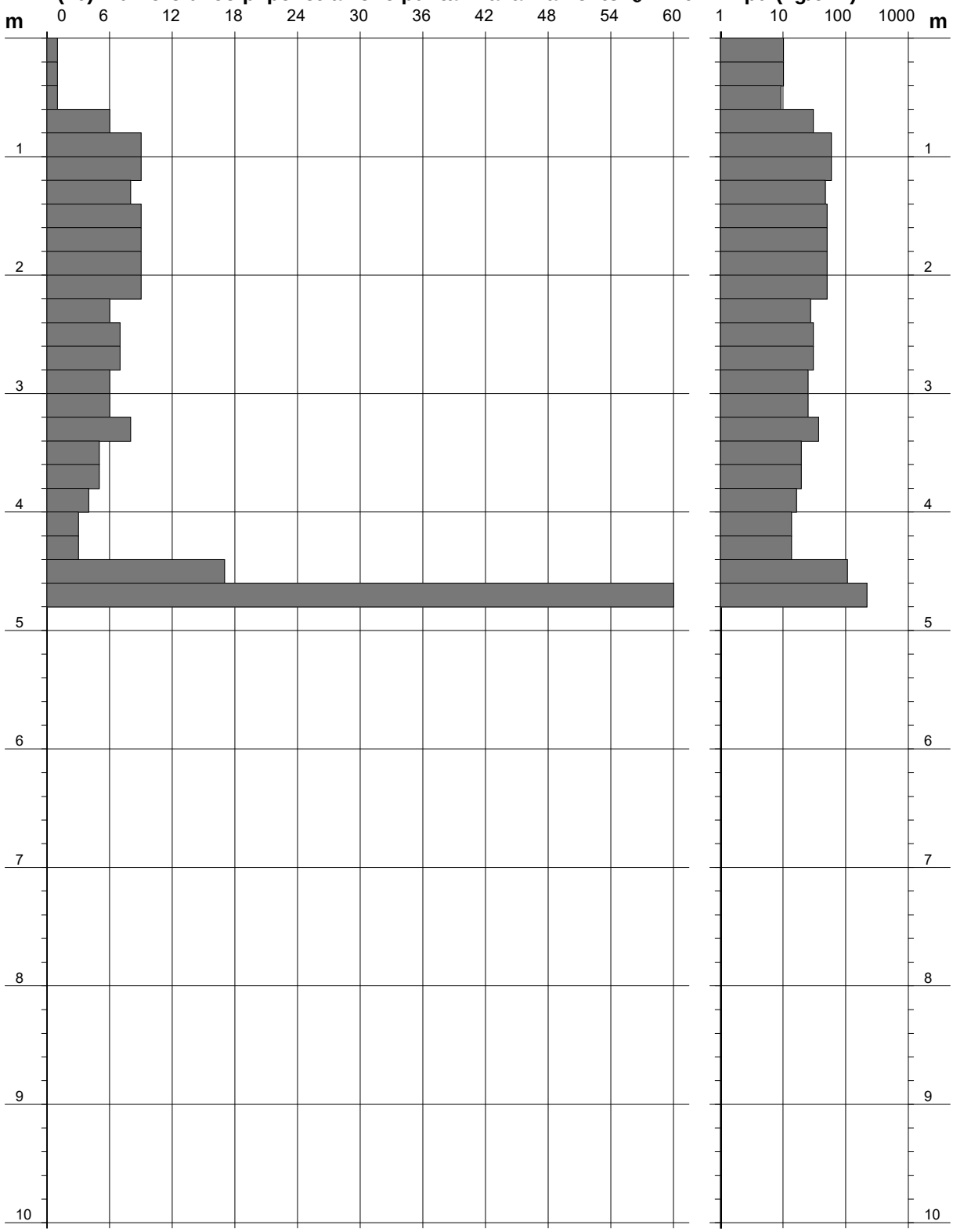
PROVA PENETROMETRICA DINAMICA n° 353
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	17/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-353
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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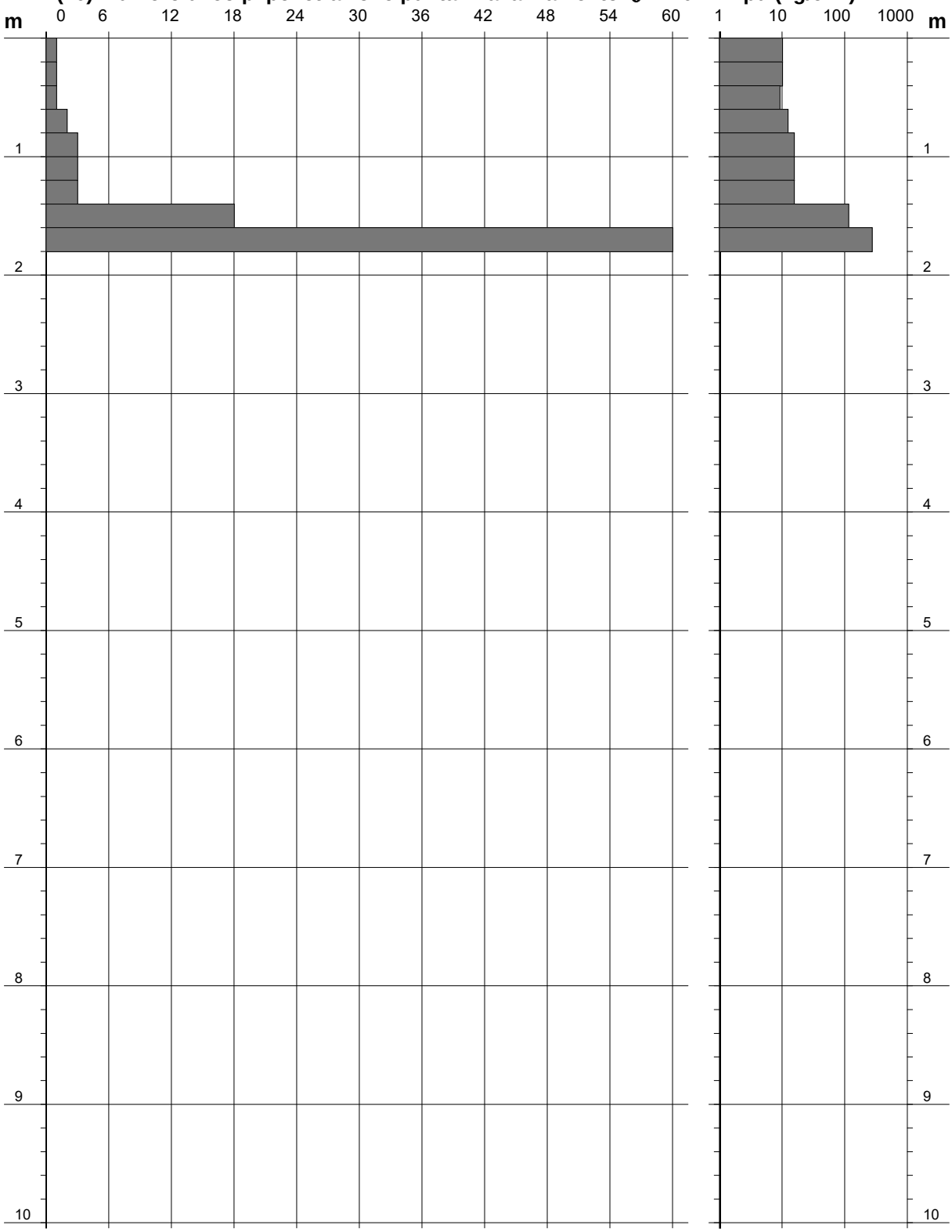
PROVA PENETROMETRICA DINAMICA n° 357
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	19/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-357
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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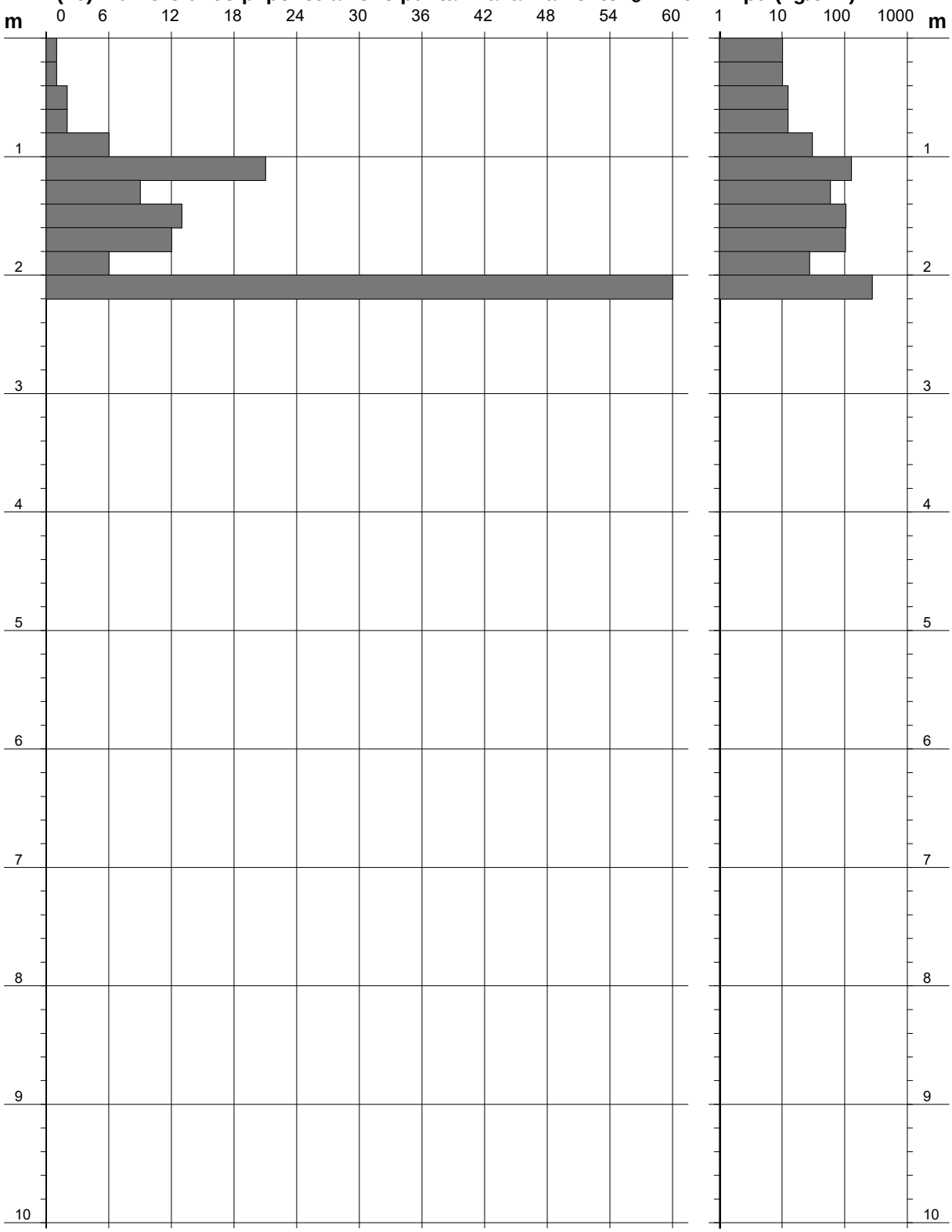
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 346
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	19/12/2020
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-346
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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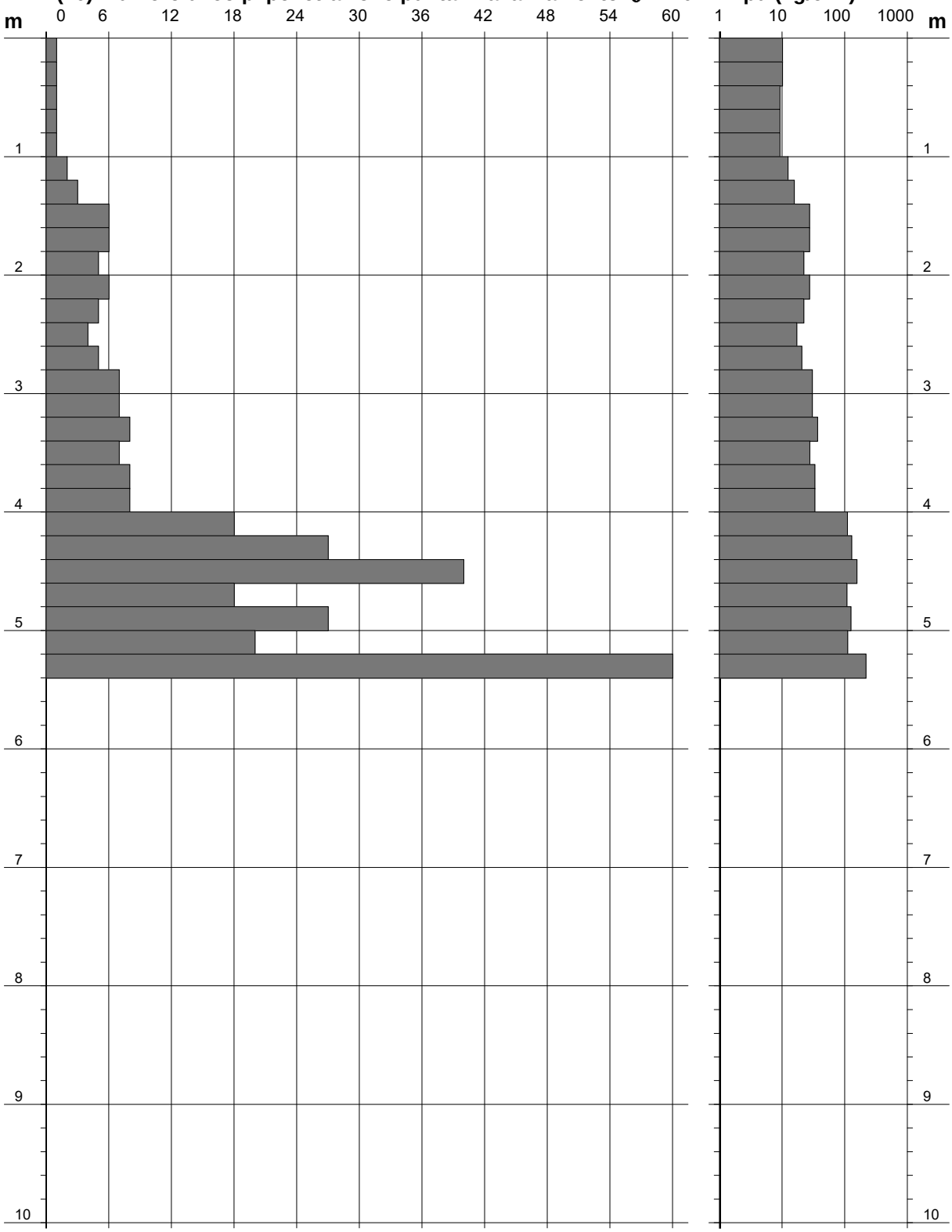
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 379
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	08/01/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-379
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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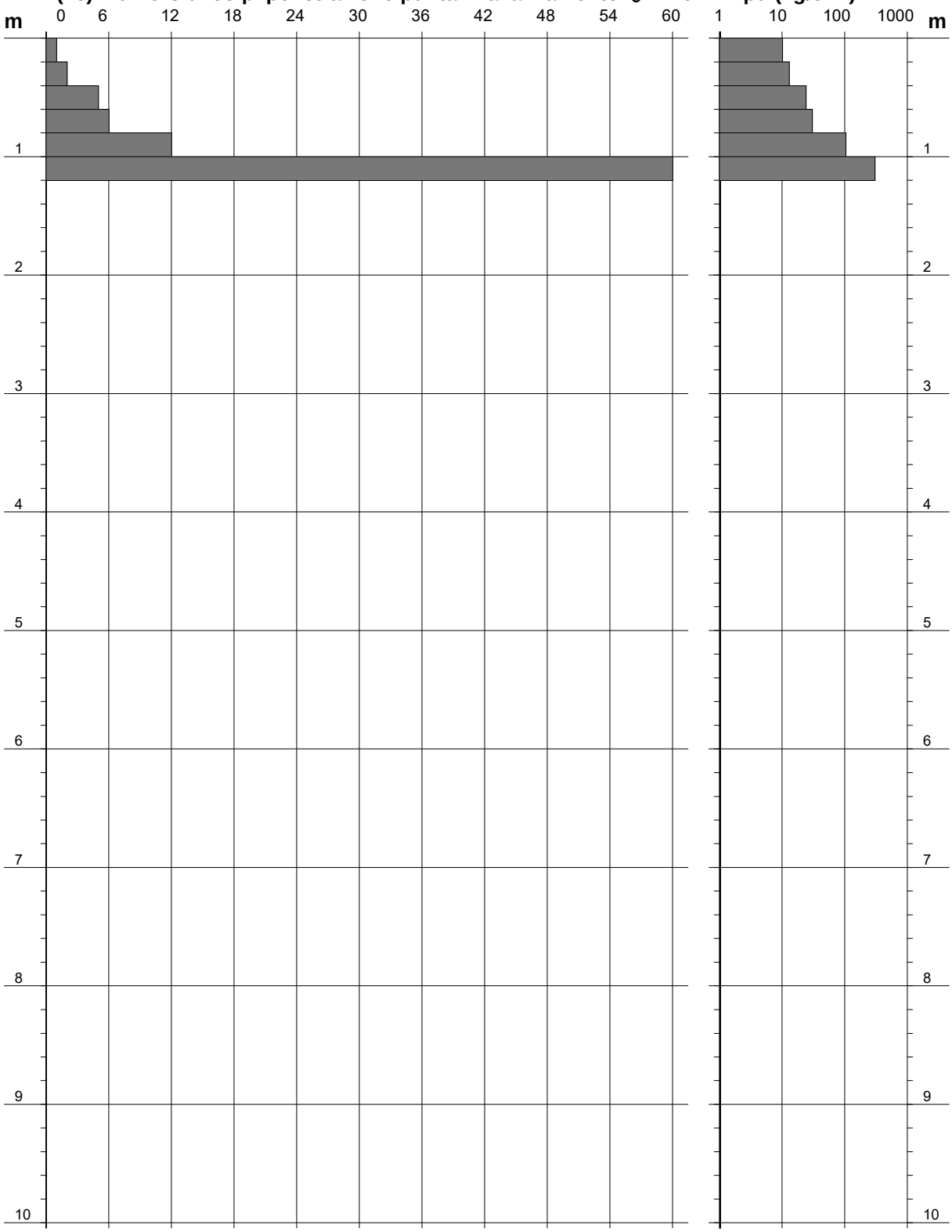
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 380
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	08/01/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-380
- località :	Castelvenere (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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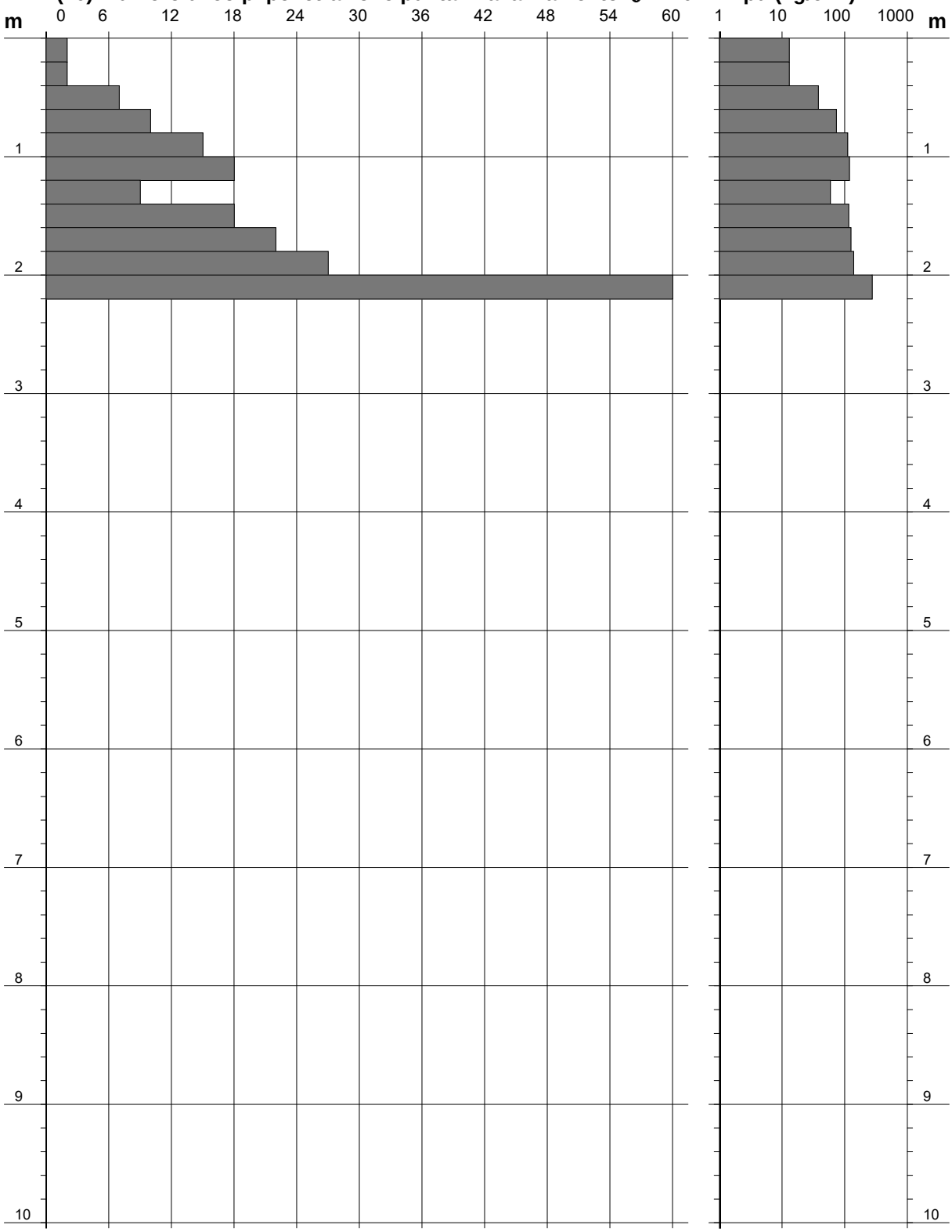
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 406a
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	17/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-406a
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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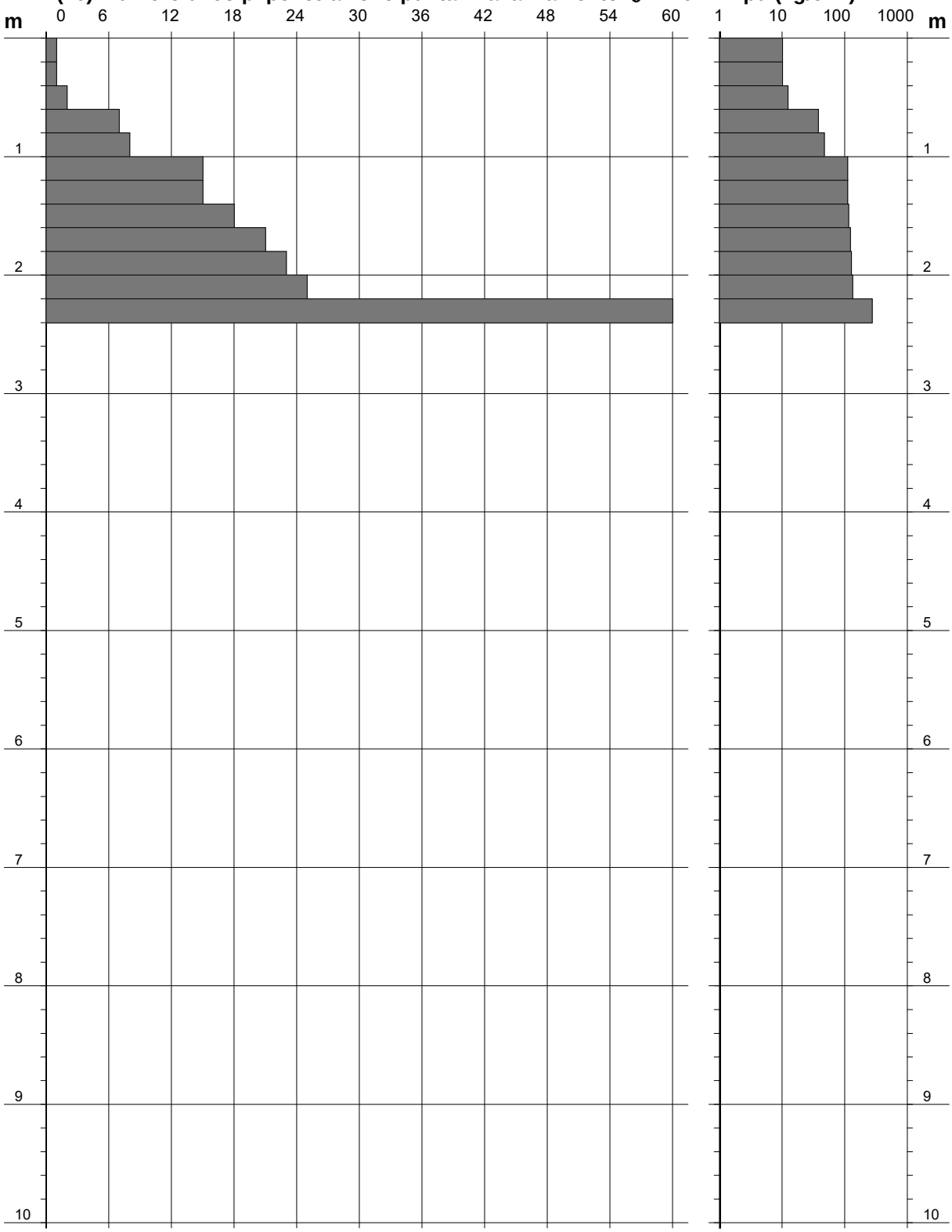
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 406b
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	17/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-406b
- località :	San Marco dei Cavoti (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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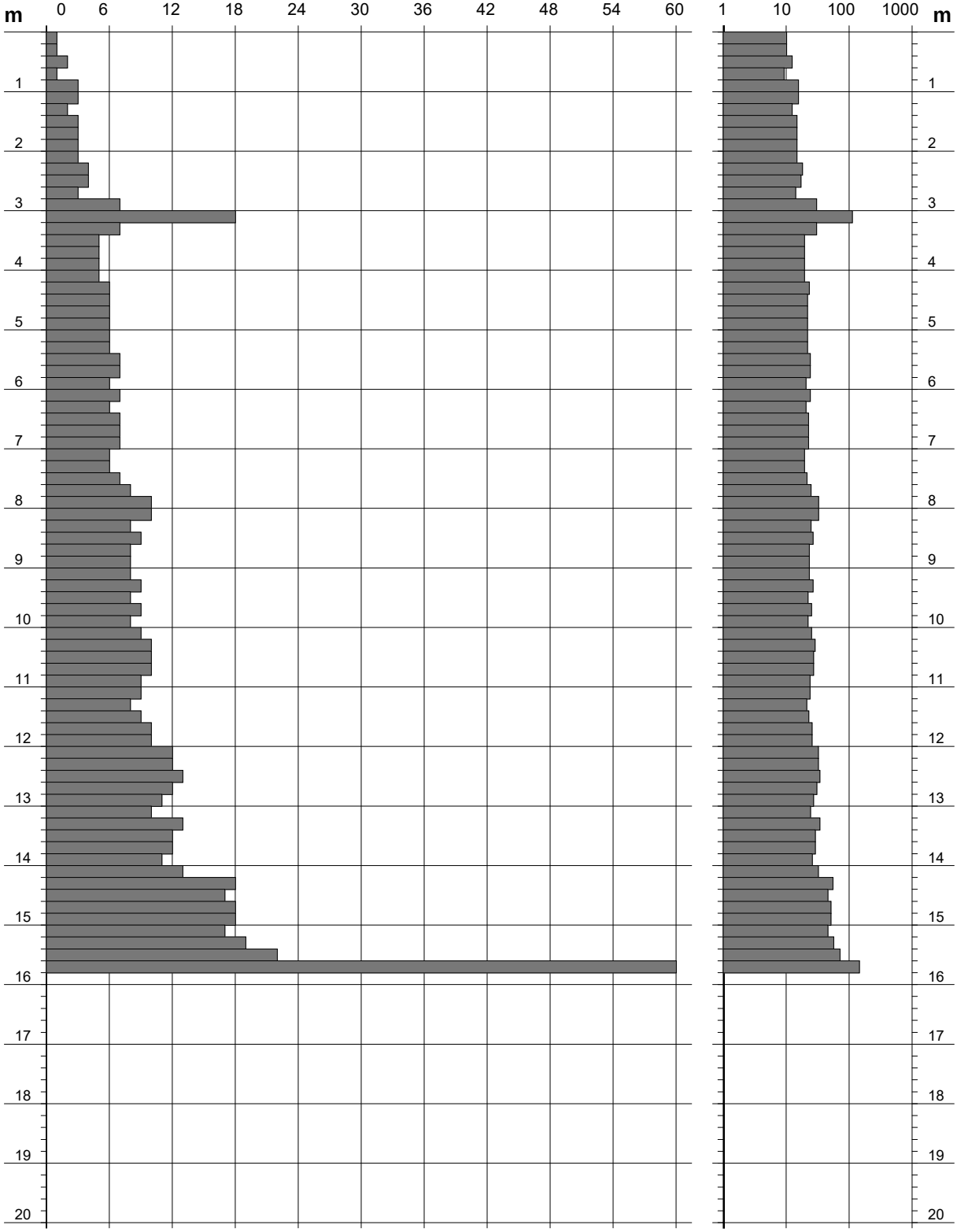
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 387a
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-387a
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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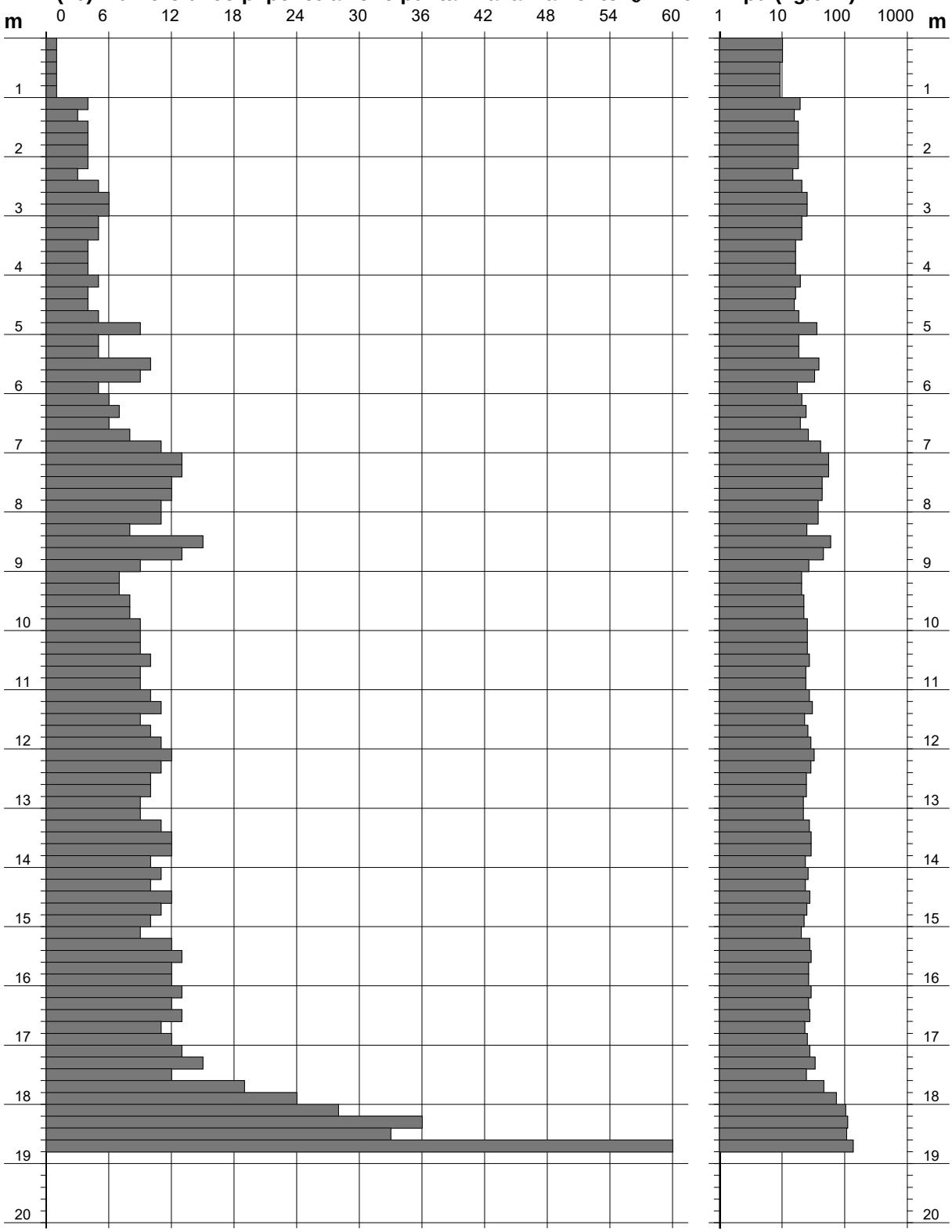
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 387b
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-387b
- località :	Fragneto Monforte (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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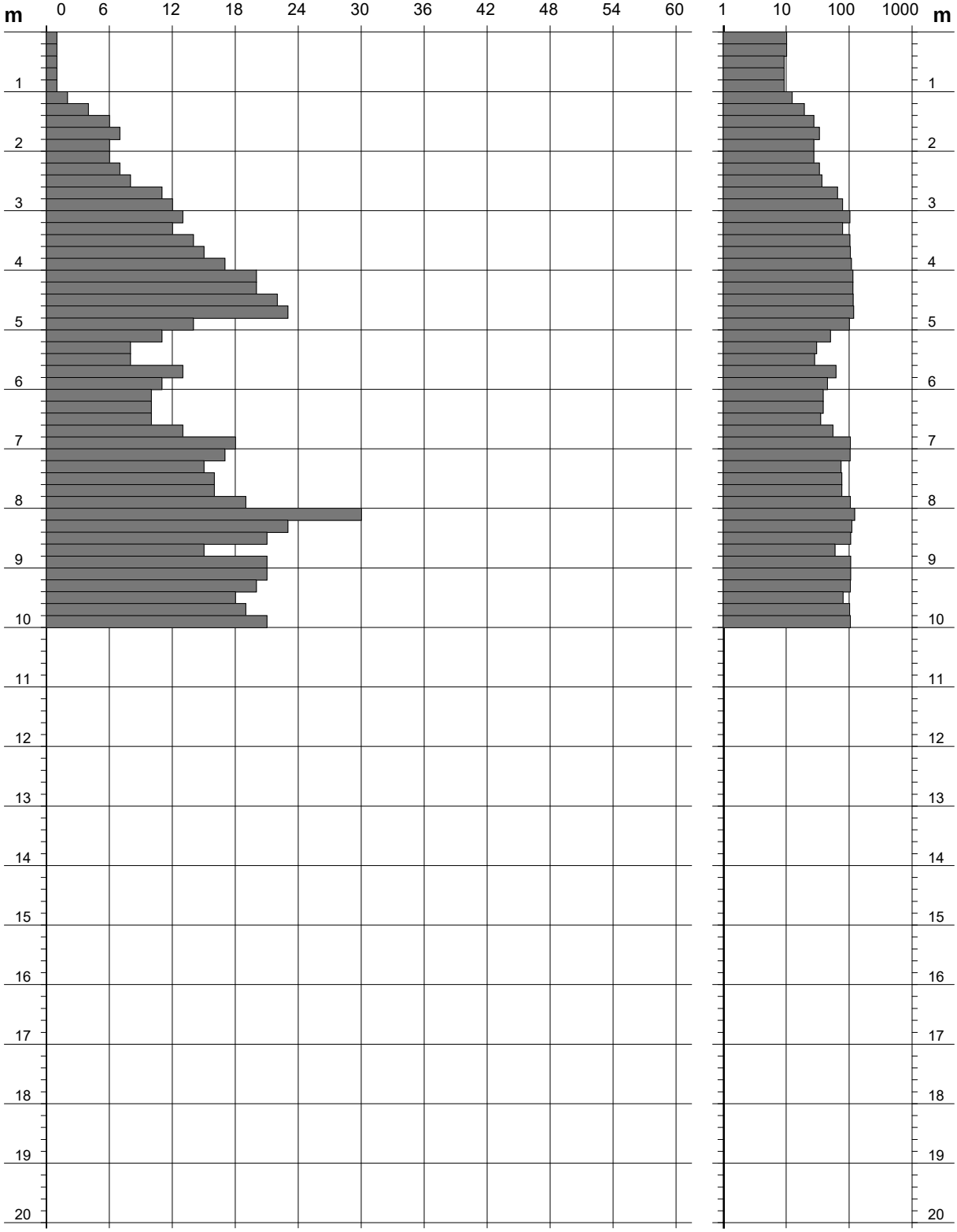
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 391
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 100

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-391
- località :	Fragneto L'Abate (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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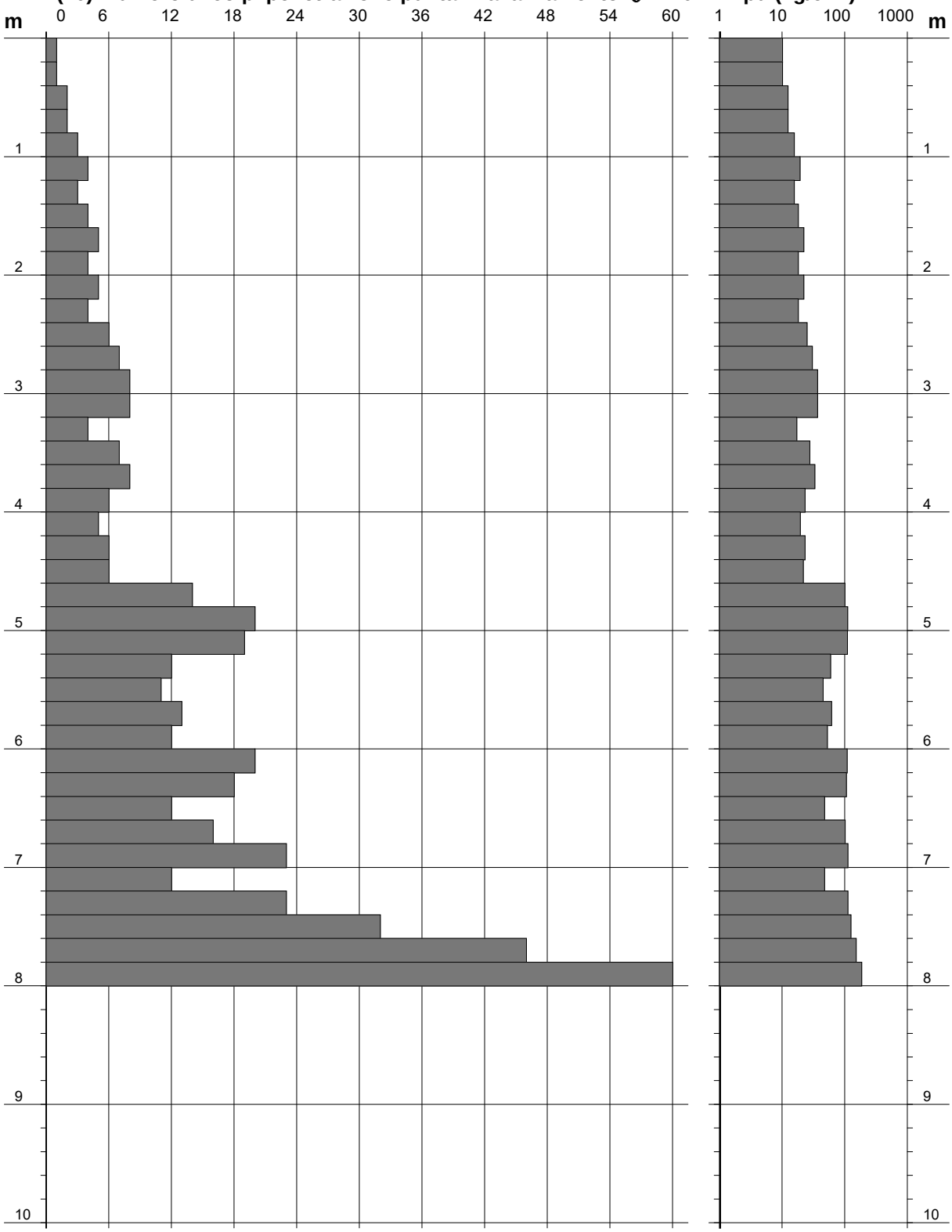
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 400a
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-400a
- località :	Reino (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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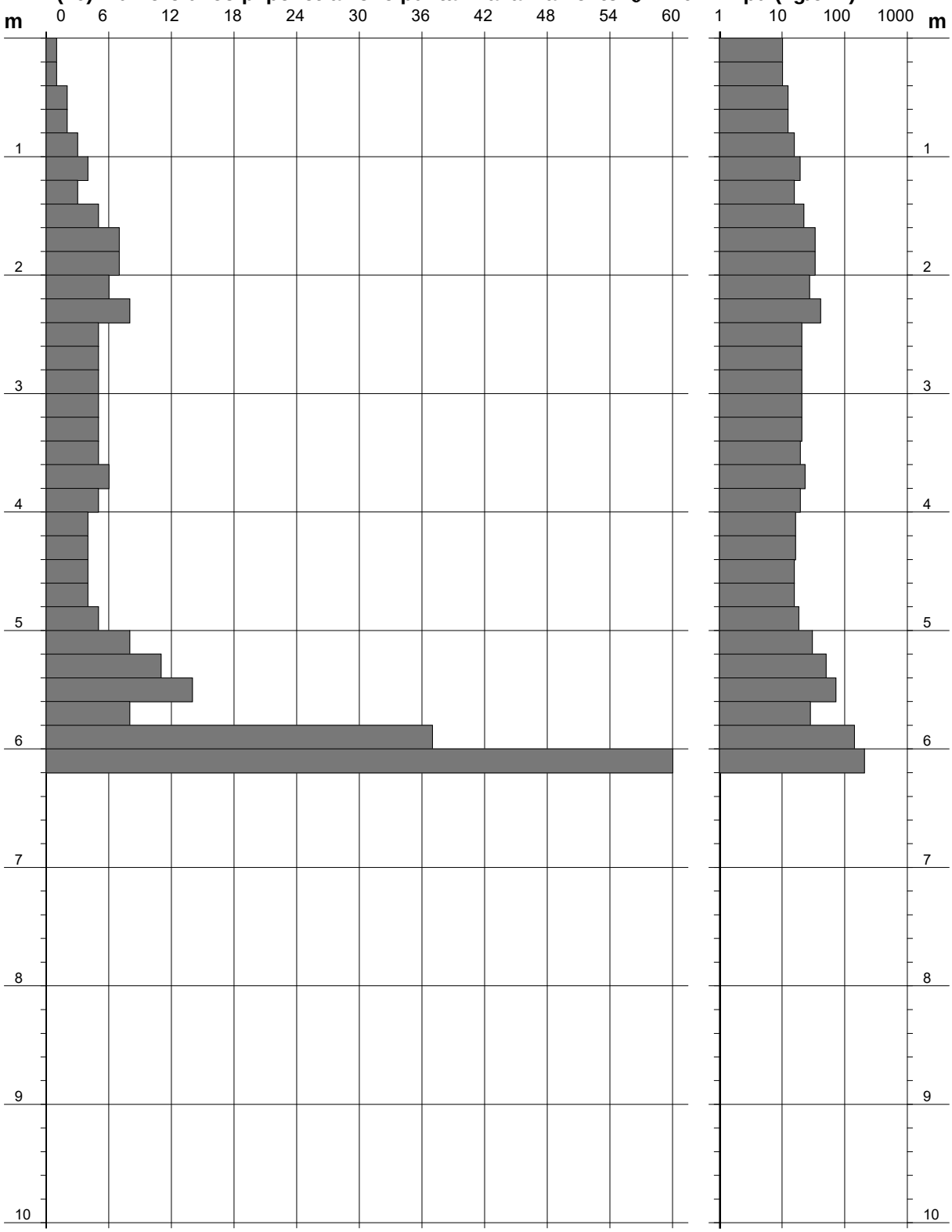
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 400b
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	22/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-400b
- località :	Reino (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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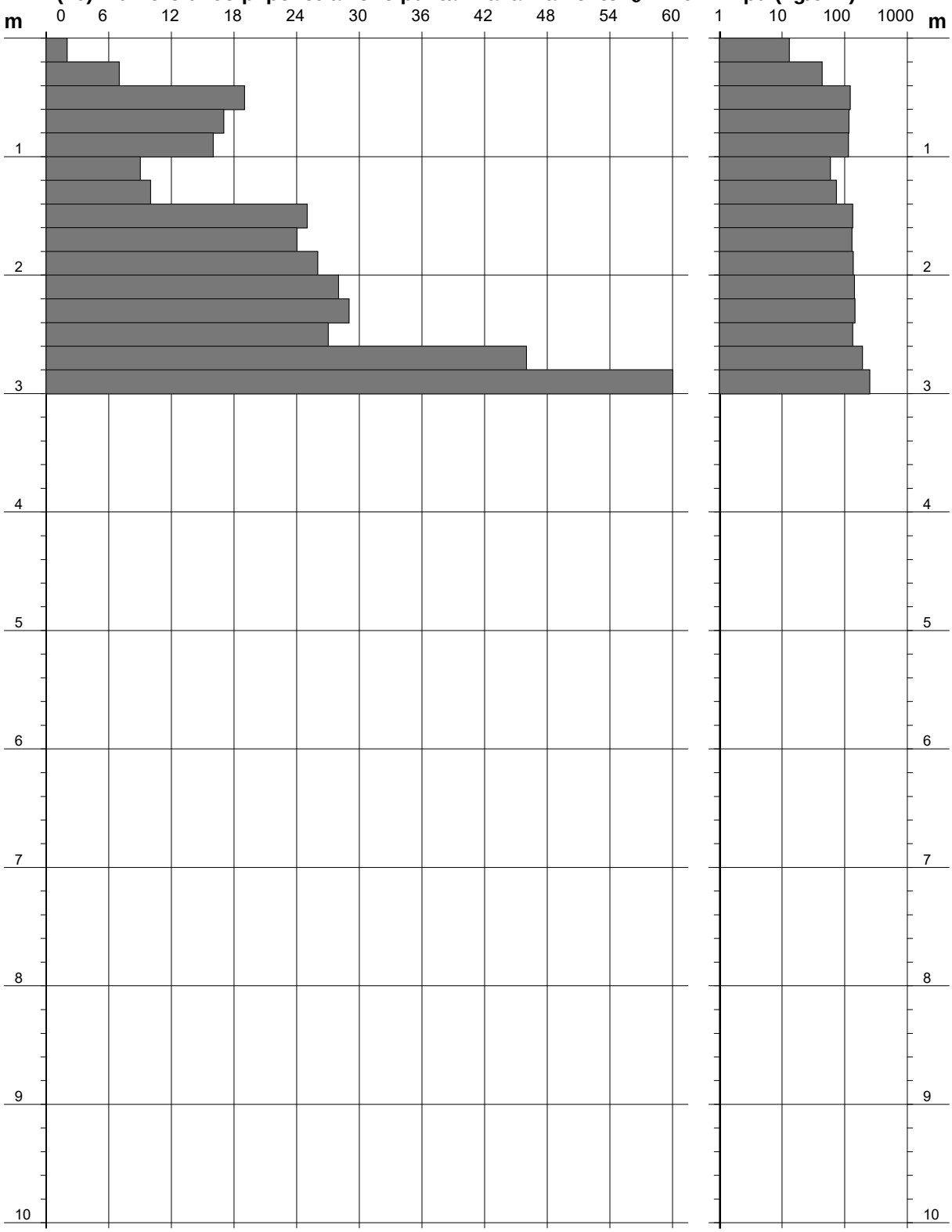
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 422
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	24/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-422
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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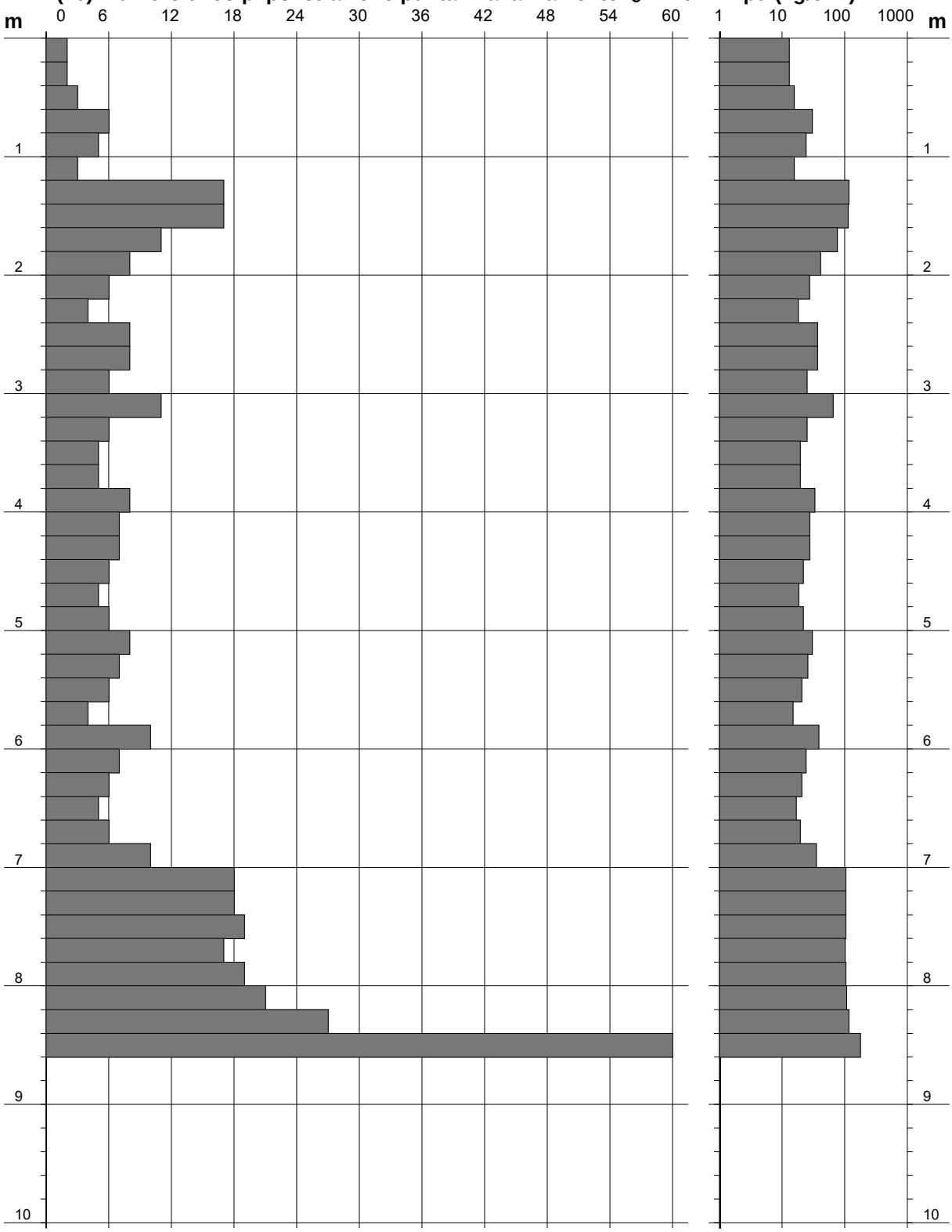
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 423
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	26/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-423
- località :	San Lupo (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**

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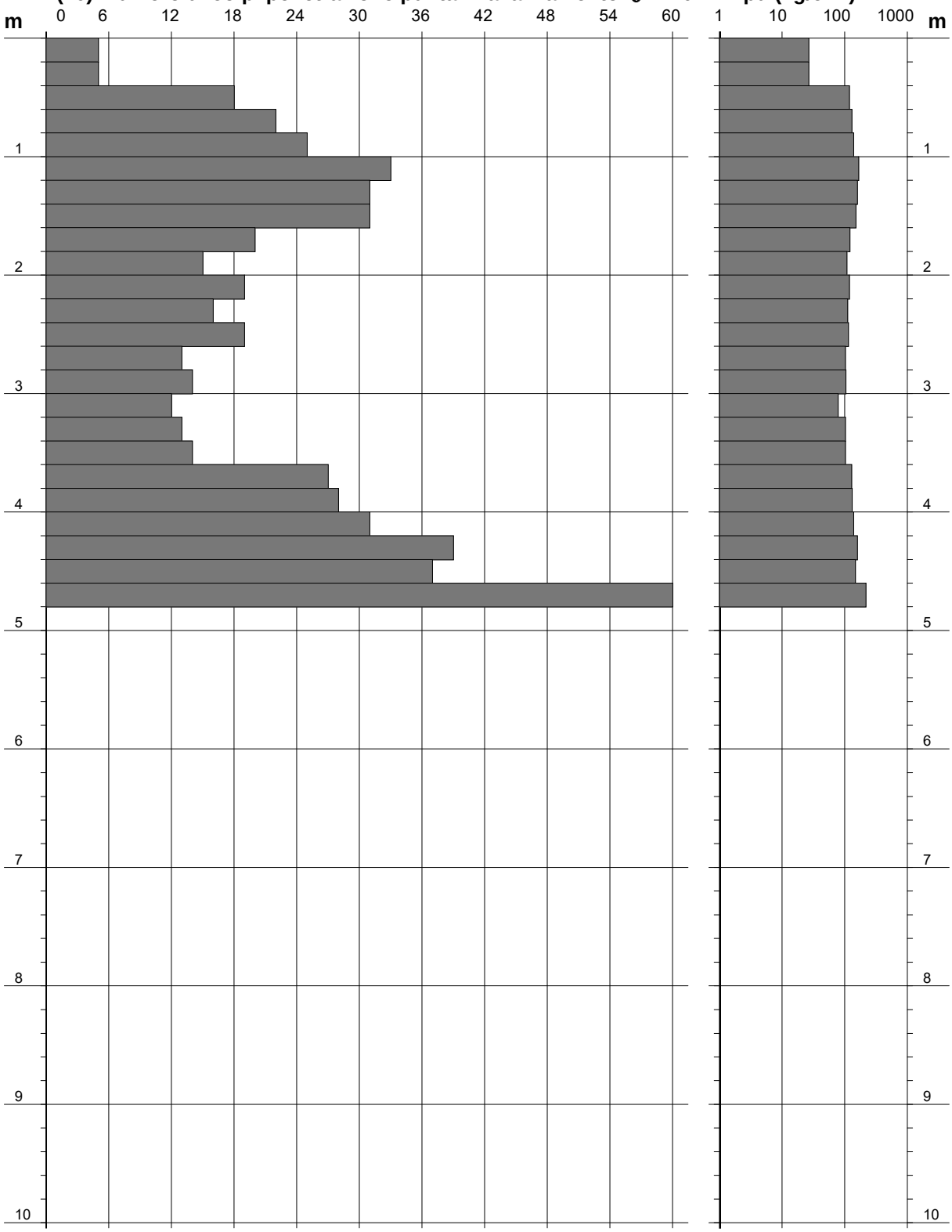
Riferimento: 100-20

PROVA PENETROMETRICA DINAMICA n° 421
DIAGRAMMA NUMERO COLPI PUNTA - Rpd

Scala 1: 50

- indagine :	Vianini Lavori S.p.a.	- data :	29/03/2021
- cantiere :	Intervento utilizzo idropotabile acque invaso Camp	- quota inizio :	Cert. 100-20-421
- località :	San Lorenzo Maggiore (BN)	- prof. falda :	Falda non rilevata

N = N(20) numero di colpi penetrazione punta - avanzamento δ = 20 **Rpd (kg/cm²)**



- PENETROMETRO DINAMICO tipo : **TG 63-100 EML.C**
- M (massa battente)= **63,50** kg - H (altezza caduta)= **0,75** m - A (area punta)= **20,43** cm² - D(diam. punta)= **51,00 mm**
- Numero Colpi Punta N = N(**20**) [δ = 20 cm] - Uso rivestimento / fanghi iniezione : **SI**