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PARCO SOLARE FOTOVOLTAICO ED OPERE CONNESSE, COMUNE DI AQUILEIA - POTENZA IMPIANTO 75,832 MWp

Relazione geologica

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1 PREMESSA

Per incarico della committenza è stata eseguita un'indagine per la verifica della compatibilità geologica, geomorfologica ed idrogeologica delle aree interessate da un progetto di realizzazione di un impianto fotovoltaico, ubicate lungo la Strada Provinciale 91 nel comune di Aquileia (UD) (Figura 1 – Figura 2). Posteriormente alle prime indagini, sono state eseguite diverse prove integrative nelle giornate del 13/03 e 16-17/03/2023.



Figura 1 – Estratto di CTR con ubicazione delle aree oggetto di intervento.



Figura 2 – Immagine satellitare con ubicazione delle aree oggetto di intervento (Google Earth).

Per la caratterizzazione del sottosuolo sono state eseguite le seguenti indagini:

- n° 8 prove penetrometriche statiche con punta elettrica (CPTU), di cui n° 4 spinte fino alla profondità di -6,0 m dal p.c. e n° 4 spinte fino alla profondità di -7,0 m dal p.c.;
- n° 1 indagine di sismica attiva MASW;
- n°14 prove penetrometriche statiche con punta elettrica (CPTU) integrative, spinte a profondità variabile fino a individuare livelli maggiormente resistenti all'avanzamento della punta.

Le modalità di esecuzione delle indagini sono descritte in seguito, mentre la loro ubicazione è riportata nella planimetria di Figura 7.

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In allegato alla presente relazione si riportano i seguenti elaborati:

- Allegato 1: Grafici ed elaborazioni delle prove penetrometriche CPTU;
- Allegato 2: Grafici ed elaborazioni delle prove penetrometriche CPTU integrative;
- Allegato 3: Report dell'indagine MASW;
- Allegato 4: Report della verifica a liquefazione;
- Allegato 5: Report della verifica a liquefazione integrativa;
- Allegato 6: Documentazione fotografica.

2 NORMATIVA DI RIFERIMENTO

La normativa di interesse specifico per la presente relazione è la seguente:

- D.M. 17/01/2018 "Aggiornamento Norme Tecniche per le Costruzioni" (NTC 2018);
- Circ. Min. 21/01/2019 "Istruzioni per l'applicazione dell'Aggiornamento delle Norme tecniche per le costruzioni";
- D.M. 14/01/2008 "Norme Tecniche per le Costruzioni" (NTC 2008);
- Circ. Min. 02/02/2009 "Istruzioni per l'applicazione delle norme tecniche";
- O.P.C.M. 3274/2003 e succ. modd.;
- O.P.C.M. 3519/2006;
- "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione ed il collaudo delle opere di sostegno delle terre e delle opere di fondazione" – D.M. 11/03/1988;
- Istruzioni applicative al D.M. 11.03.88 – Circ. Min. LL.PP. 24.09.88 n° 30483;
- "Raccomandazioni A.G.I. riguardanti l'esecuzione e programmazione delle indagini geotecniche" – A.G.I. 1977.

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3 DEFINIZIONE TERRITORIALE

3.1 Inquadramento geologico e geomorfologico

Il territorio di Aquileia si colloca nella propaggine orientale della Bassa Pianura Veneto-Friulana, nella porzione di territorio compresa tra i fiumi Livenza e Isonzo-Torre. La Pianura, di cui fa parte il sito in esame, è costituita da una coltre di depositi alluvionali del Quaternario di origine essenzialmente fluviale-fluvioglaciale. Alla base di tali depositi si riconoscono formazioni flyschoidi eoceniche e oligoceniche che ricoprono una serie prevalentemente carbonatica mesozoica. La deposizione dei sedimenti quaternari si deve principalmente all'attività dei fiumi che hanno interessato questa porzione di territorio durante la glaciazione würmiana. Durante tale periodo si assiste ad un abbassamento del livello marino di un centinaio di metri, cui segue l'instaurarsi di un regime sedimentario prettamente continentale: le aree planiziali fungono da bacino di deposizione dei principali corsi fluviali e fluvioglaciali, i cui sedimenti ricoprono per lacune decine di metri i sottostanti depositi marini.

Nel Quaternario recente, i fiumi che solcano la Pianura Friulana hanno frequentemente cambiato percorso a valle del loro sbocco montano interessando aree molto ampie fino a coprire migliaia di km², costituendo strutture a ventaglio denominate conoidi o megafan. In particolare, l'area in esame si colloca all'interno del megafan dei fiumi Isonzo e Torre (Figura 3).

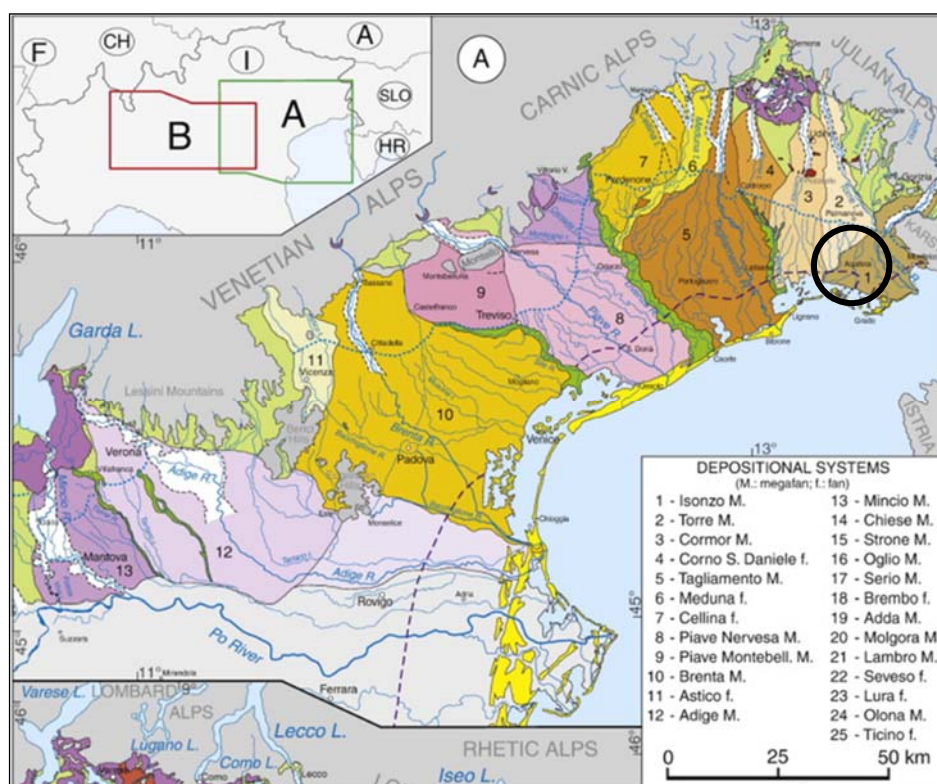


Figura 3 – Estratto della Carta dei Sistemi Deposizionali tardo-quaternari della Pianura Veneto Friulana.

Dal punto di vista litologico, nell'area aquileiese si riconoscono due grandi aree:

- una formazione quaternaria costituita da terreni spesso organici sovrastanti depositi fluviali e di fondo lagunare. Tale facies interessa tutta la fascia occidentale del territorio comunale. La copertura superficiale è costituita da un terreno di natura limo-argillosa di potenza submetrica, al di sotto del quale si riconoscono termini di fondo lagunare contraddistinti da ritmiche alternanze di livelli limo argillosi e sabbiosi, sono inoltre presenti livelli torbosi;
- una formazione quaternaria costituita da depositi di natura prevalentemente calcareo dolomitica che occupa la restante parte del territorio comunale. La granulometria dei sedimenti spazia dalle sabbie grossolane o ghiaie fini alle argille. I depositi sono il risultato dell'azione fluviale combinata del sistema Isonzo-Torre.

Dalla Carta Litologica del PRC del comune di Aquileia (Figura 4), il sito in esame è caratterizzato da *sedimenti prevalentemente argilloso-limosi organici*.

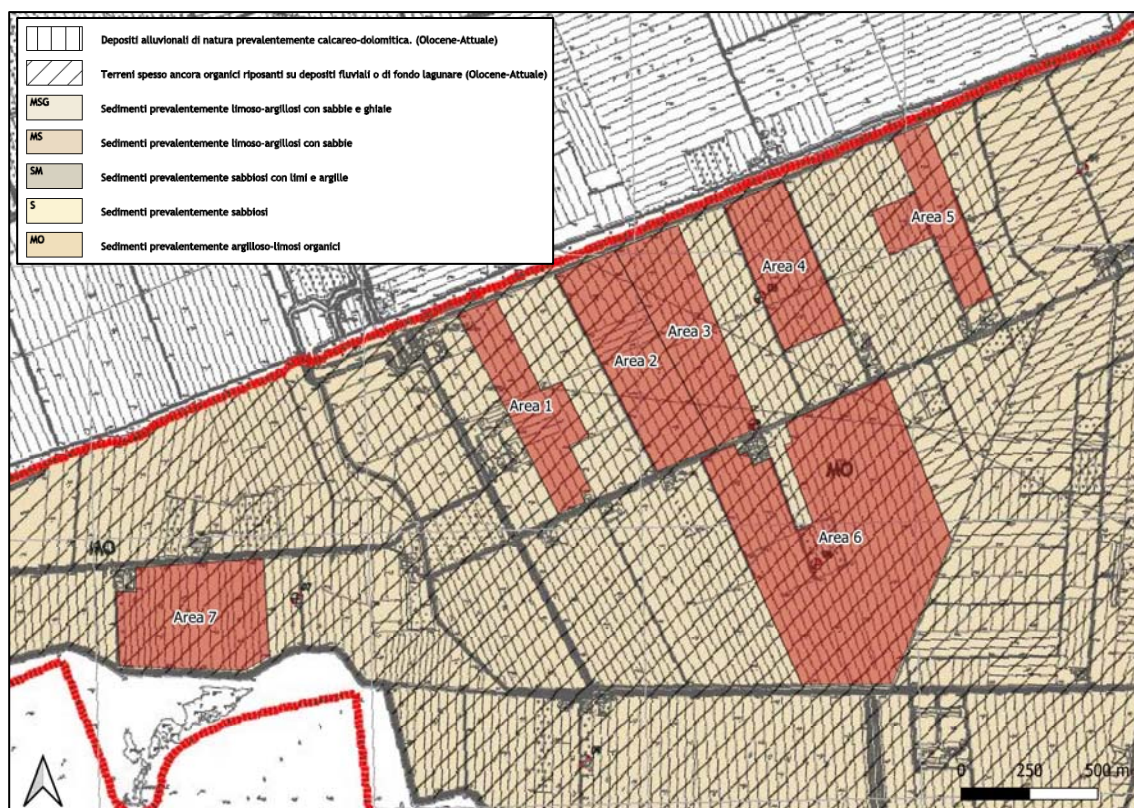


Figura 4 – Estratto della Carta Litologica del PRC del Comune di Aquileia. In rosso sono indicate le aree oggetto di intervento.

Dal punto di vista geomorfologico, il territorio comunale si presenta uniformemente pianeggiante con pendenze ridotte degradanti da nord a sud dell'ordine dell'1,5-2‰. Le quote si attestano su valori compresi fra 5,7 m s.l.m. (zona settentrionale) e -2,0 m s.l.m. nelle aree perilagunari.

Dalla Carta Geomorfologica del PRC di Aquileia (Figura 5) emerge che le principali strutture geomorfologiche presenti nelle aree oggetto di intervento sono le tracce di paleocanali e paleovalvei. Si riconosce in particolare il tracciato di un corso principale il quale, dopo un tratto rettilineo in direzione NE-SO, si piega a gomito verso E e poi verso S prima di terminare nelle vicinanze della foce del fiume Natissa.

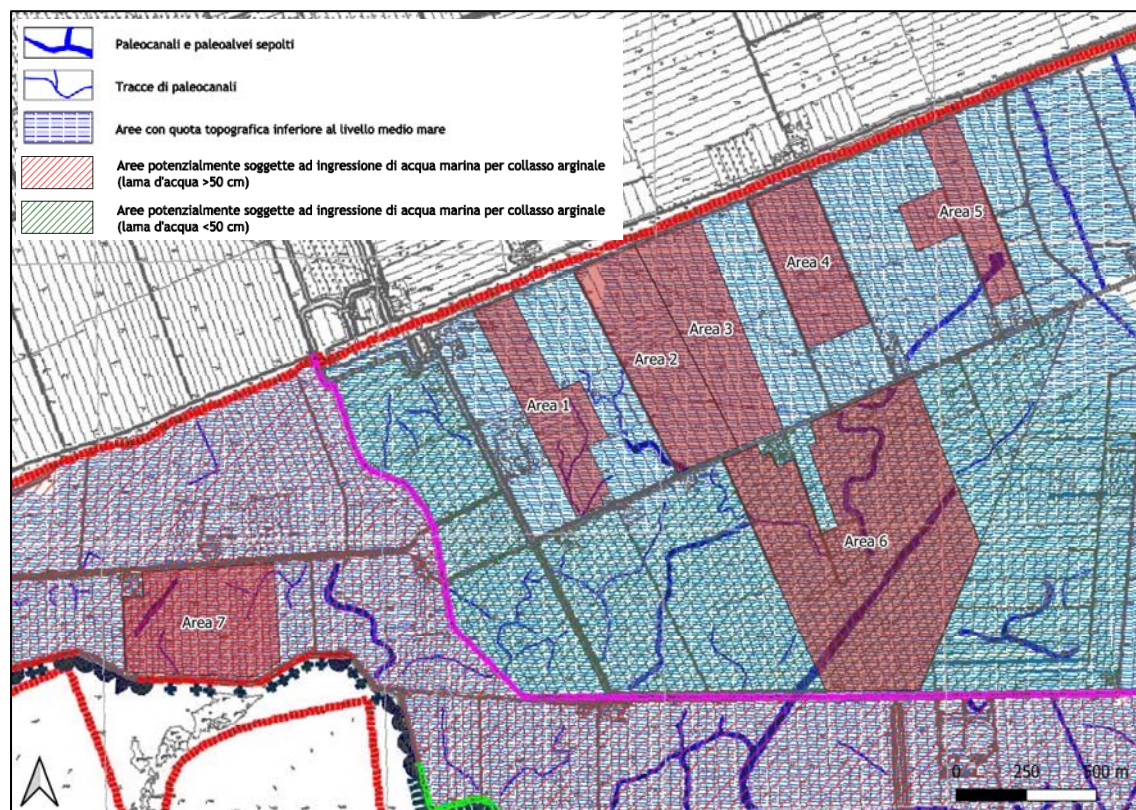


Figura 5 – Estratto della Carta Geomorfologica del PRC di Aquileia. In rosso sono indicate le aree oggetto di intervento.

3.2 Inquadramento idrogeologico

La Pianura Friulana possiede differenti caratteristiche sedimentologiche e geomorfologiche che influenzano la situazione idrogeologica sotterranea, la cui struttura è divisa dalla Fascia delle Risorgive in due parti, l'Alta e la Bassa Pianura (Figura 6).

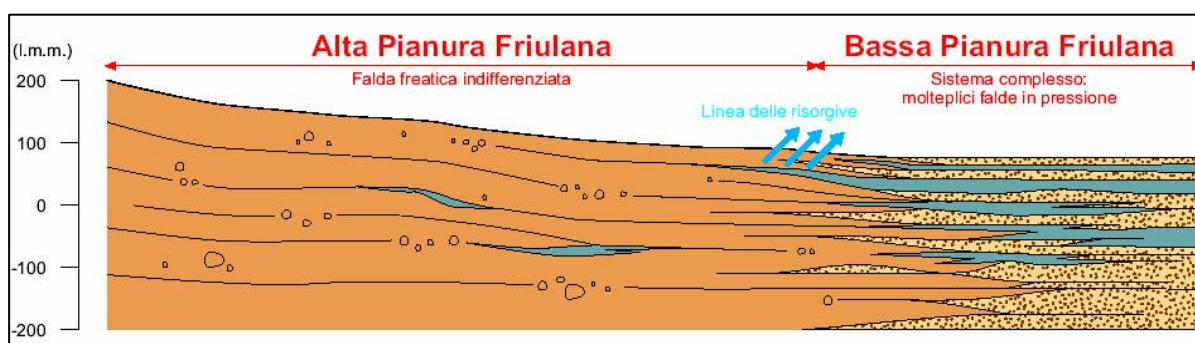


Figura 6 – Schema esplicativo – idrogeologico dell'Alta e Bassa Pianura Friulana.

La zona di Alta Pianura è costituita da un potente materasso di sedimenti detritici grossolani, prevalentemente ghiaiosi e talvolta ghiaioso-sabbiosi, caratterizzati da grandi valori di permeabilità. Il terreno molto permeabile favorisce l'infiltrazione delle acque meteoriche e delle perdite in alveo all'interno del materasso ghiaioso, andando così ad alimentare un'estesa e potente falda freatica.

La fascia delle risorgive si estende per circa 100 km, tagliando tutta la Pianura Friulana con andamento Nord – Ovest Sud – Est. Il limite meridionale della fascia è diventato convenzionalmente il confine tra l'Alta e la Bassa Pianura. Lungo la fascia si ha l'affioramento parziale della falda, causato dalla diminuzione di permeabilità verticale e laterale legata all'aumento della frazione fine nei depositi alluvionali.

La zona di Bassa Pianura è composta da alternanze di sedimenti fini, pressoché impermeabili, e sedimenti più o meno grossolani (ghiaie e sabbie) permeabili in livelli continui o in lenti. Questa situazione condiziona le caratteristiche dell'acquifero, che da libero si scinde in un sistema multifalda con più acquiferi confinati.

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L'area in esame si colloca nella Bassa Pianura ed è quindi caratterizzata, dal punto di vista idrogeologico, da una falda freatica superficiale, al disotto della quale si sviluppa il sistema mulifalda ad acquiferi confinati.

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4 INDAGINI IN SITO

4.1 Planimetria dell'intervento

In Figura 7 si riporta l'ubicazione delle indagini eseguite su base satellitare.



Figura 7 – Estratto foto con ubicazione delle indagini eseguite (Google Earth).

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4.2 Prove penetrometriche Statiche Elettriche con Piezocono (CPTU)

La prova penetrometrica statica con punta elettrica (CPTE/U) consiste essenzialmente nella misura della resistenza alla penetrazione di una punta conica standard, connessa all'estremità inferiore di una batteria di aste cave, che viene infissa a pressione e velocità costante nel terreno tramite un dispositivo di spinta idraulico che agisce alla sommità delle aste.

La punta elettrica è strumentata con sensori elettrici e un sistema di trasmissione dei dati in superficie via cavo, che permette l'acquisizione e la registrazione dei dati quasi in continuo, ogni centimetro. I dati misurati durante la prova sono la resistenza alla penetrazione della punta Q_c e la resistenza laterale del manicotto F_s ; è possibile inoltre monitorare, durante l'esecuzione della prova, alcuni parametri di controllo, quali l'inclinazione rispetto alla verticalità e la velocità di penetrazione del cono.

La punta detta "piezocono", è dotata anche di un dispositivo di misura della pressione, attraverso il quale viene misurata la pressione dell'acqua nei pori del terreno u (CPTU).



La pressione che viene misurata è la pressione $u = u_0 + \Delta u$, dove u_0 è la pressione dovuta al livello idrostatico e Δu quella generata dallo sforzo alla penetrazione nel terreno. Inoltre con il piezocono si possono ottenere informazioni circa il livello idrostatico della falda nel terreno a varie quote e valutazioni sulle caratteristiche di consolidazione dei materiali coesivi teneri. A causa della geometria del cono, l'acqua esercita una pressione sul bordo dietro il cono e agli estremi del manicotto. Questo effetto viene generalmente correlato alla presenza di differenze in termini di superfici (u_1 e u_2).

Quando sono presenti argille poco consistenti e limi sopra falda, è necessario eseguire una correzione sul parametro q_c per la pressione dei pori agente sulla superficie del cono, in modo da ottenere la resistenza corretta del cono q_t .

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$$q_t = q_c + u_2(1 - a)$$

Dove “a” è il rapporto della superficie netta, determinata dalla calibrazione in laboratorio con un valore compreso tra 0,70 e 0,85. In suoli sabbiosi $q_c = q_t$.

Una correzione simile va applicata all’attrito del manicotto

$$f_t = f_s - (u_2 A_{sb} - u_3 A_{st}) / A_s$$

Dove

f_s = attrito del manicotto misurato

u_2 = pressione dell’acqua alla base del manicotto

u_3 = pressione dell’acqua all’apice del manicotto

A_s = area laterale del manicotto

A_{sb} = sezione della base del manicotto

A_{st} = sezione dell’apice del manicotto

4.2.1 Interpretazione dei dati

I dati acquisiti sono stati elaborati con il software *CPeT – IT v.2.0.1.74* prodotto da *GeoLogisMiki – Geotechnical Software* e con il software *Static Probing 2020* di *Geostru*.

I report, in cui sono plottati in grafico i valori di resistenza e pressione interstiziale misurati e l’interpretazione litostratigrafica e geotecnica delle prove, sono riportati in allegato.

L’identificazione dei tipi di suoli è stata effettuata in funzione delle carte proposte da Robertson (Figura 8), in cui il tipo di comportamento del terreno (Soil Behavior Type) è definito da tre parametri: q_t , resistenza alla punta corretta, R_f , B_q , nella prima carta (1986), e con i parametri normalizzati nella seconda (1990).

Le carte proposte da Robertson si basano sul fatto che la resistenza offerta dal terreno alla penetrazione della punta conica dipende dalle proprietà meccaniche del materiale, quindi tali diagrammi permettono una caratterizzazione dei terreni sulla base del loro comportamento meccanico (SBT), la quale non coincide necessariamente con una classificazione basata sulla distribuzione granulometrica o sulla plasticità. Tuttavia, spesso il comportamento meccanico dipende dalla distribuzione granulometrica del materiale, quindi la classificazione sviluppata

secondo il SBT è approssimabile ad una caratterizzazione del terreno effettuata su base granulometrica.

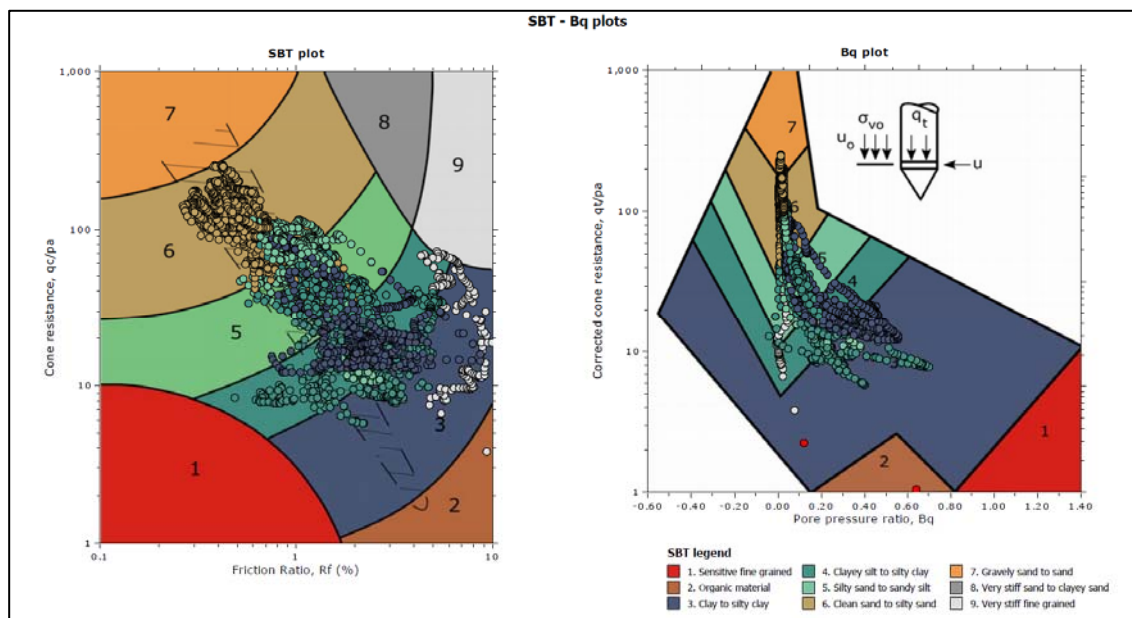


Figura 8 – Diagrammi per la determinazione del SBT.

La ricerca e la disponibilità di numerosi dati ottenuti in camera di calibrazione e in campagna hanno prodotto numerose correlazioni tra i dati misurati in sito ed il valore dei parametri geotecnici caratteristici dei terreni. Il software *CPeT – IT* utilizza le correlazioni riportate nello schema di Figura 9.

:: Unit Weight, g (kN/m³) :: $g = g_w \cdot \left(0.27 \cdot \log(R_f) + 0.36 \cdot \log\left(\frac{q_t}{p_a}\right) + 1.236 \right)$ where g_w = water unit weight :: Permeability, k (m/s) :: $I_c < 3.27$ and $I_c > 1.00$ then $k = 10^{0.952 - 3.04 \cdot I_c}$ $I_c \leq 4.00$ and $I_c > 3.27$ then $k = 10^{-4.52 - 1.37 \cdot I_c}$:: N_{SPT} (blows per 30 cm) :: $N_{60} = \left(\frac{q_c}{p_a} \right) \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$ $N_{1(60)} = Q_{tn} \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$:: Young's Modulus, E_s (MPa) :: $(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 \cdot I_c + 1.68}$ (applicable only to $I_c < I_{c,cutoff}$) :: Relative Density, D_r (%) :: $100 \cdot \sqrt{\frac{Q_{tn}}{k_{DR}}} \quad \text{(applicable only to SBT}_n: 5, 6, 7 \text{ and } 8 \text{ or } I_c < I_{c,cutoff})$:: State Parameter, ψ :: $\psi = 0.56 - 0.33 \cdot \log(Q_{tn,cs})$:: Peak drained friction angle, ϕ (°) :: $\phi = 17.60 + 11 \cdot \log(Q_{tn})$ (applicable only to SBT_n: 5, 6, 7 and 8) :: 1-D constrained modulus, M (MPa) :: If $I_c > 2.20$ $\alpha = 14$ for $Q_{tn} > 14$ $\alpha = Q_{tn}$ for $Q_{tn} \leq 14$ $M_{CPT} = \alpha \cdot (q_t - \sigma_v)$ If $I_c \leq 2.20$ $M_{CPT} = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$	:: Small strain shear Modulus, G_0 (MPa) :: $G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$:: Shear Wave Velocity, V_s (m/s) :: $V_s = \left(\frac{G_0}{\rho} \right)^{0.50}$:: Undrained peak shear strength, S_u (kPa) :: $N_{kt} = 10.50 + 7 \cdot \log(F_r) \text{ or user defined}$ $S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$ (applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c,cutoff}$) :: Remolded undrained shear strength, $S_{u(rem)}$ (kPa) :: $S_{u(rem)} = f_s \quad \text{(applicable only to SBT}_n: 1, 2, 3, 4 \text{ and } 9 \text{ or } I_c > I_{c,cutoff})$:: Overconsolidation Ratio, OCR :: $k_{OCR} = \left[\frac{Q_{tn}^{0.20}}{0.25 \cdot (10.50 + 7 \cdot \log(F_r))} \right]^{1.25} \text{ or user defined}$ $OCR = k_{OCR} \cdot Q_{tn}$ (applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c,cutoff}$) :: In situ Stress Ratio, K_0 :: $K_0 = (1 - \sin \phi') \cdot OCR^{\sin \phi'}$ (applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c,cutoff}$) :: Soil Sensitivity, S_t :: $S_t = \frac{N_s}{F_r}$ (applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c,cutoff}$) :: Effective Stress Friction Angle, $\phi' < \phi_{sun} >$:: $\phi' = 29.5^\circ \cdot B_q^{0.121} \cdot (0.256 + 0.336 \cdot B_q + \log Q_t)$ (applicable for $0.10 < B_q < 1.00$)

Figura 9 – Correlazioni utilizzate per la stima dei parametri geotecnici.

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4.3 Indagine sismica attiva con tecnica MASW

Il metodo MASW (Multichannel Analysis of Surface Waves) è una tecnica geofisica di indagine non invasiva del sottosuolo basata sulla dispersione geometrica delle onde superficiali, in particolare delle onde Rayleigh. La dispersione delle onde di Rayleigh è un fenomeno nel quale differenti lunghezze d'onda si propagano con diverse velocità di fase, campionando diversi strati di profondità. La natura dispersiva delle onde superficiali è correlabile al fatto che onde ad alta frequenza e piccola lunghezza d'onda si propagano negli strati più superficiali (e quindi danno informazioni sulla parte più superficiale del suolo), invece onde a bassa frequenza si propagano negli strati più profondi. Questo permette di acquisire informazioni relative alle proprietà meccaniche delle zone di interesse.

Il metodo di indagine MASW è di tipo attivo e, dal punto di vista sperimentale, l'acquisizione Masw viene eseguita con una metodologia simile alla tecnica sismica a rifrazione. La differenza sostanziale viene dalla configurazione geometrica dei ricevitori, in genere i geofoni (dai 12 ai 24) vengono spazati di 1, 2 o 3 metri, con una frequenza di campionamento pari a 4.5 Hz. Essendo una tecnica attiva, l'acquisizione Masw risulta comunque possibile in presenza di una sorgente polarizzata, essendo un metodo che utilizza una generazione energetica attiva per creare le onde sismiche, applicando le migliori metodologie di acquisizione sismica (filtri ecc.) che i moderni sismografi consentono (Figura 10).

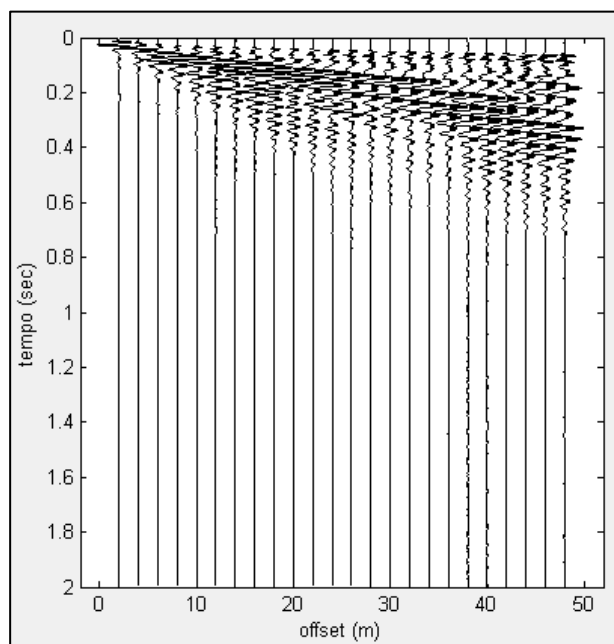


Figura 10 – Esempio di acquisizione MASW.

4.3.1 Interpretazione Masw

Per il processing delle indagini MASW è stato utilizzato il software GEOPSY (GEOPhysical Signal Processing). Il primo passo dell'elaborazione prevede la definizione della curva di dispersione, la quale gode di una certa "variabilità" giustificata dall'influenza sulle misure della distanza dei ricevitori, posizione della sorgente e il volume di terreno campionato. Il secondo passo consiste nell'inversione della curva di dispersione, utilizzando l'applicativo Dinver, al fine di individuare quale sia il profilo di rigidezza che riproduce al meglio la curva sperimentale. Questo software utilizza il metodo del Neighbourhood Algorithm, che minimizza la funzione di errore tra la curva calcolata e quella misurata, attraverso una ricerca diretta nello spazio dei modelli. L'individuazione del modello sismostratigrafico migliore avviene modificando opportunamente lo spessore h , la velocità delle onde V_s e V_p , e la densità degli strati che costituiscono il modello di suolo, fino a raggiungere una sovrapposizione ottimale (fitting) tra la curva di dispersione sperimentale e la curva di dispersione numerica corrispondente al modello di sottosuolo assegnato.

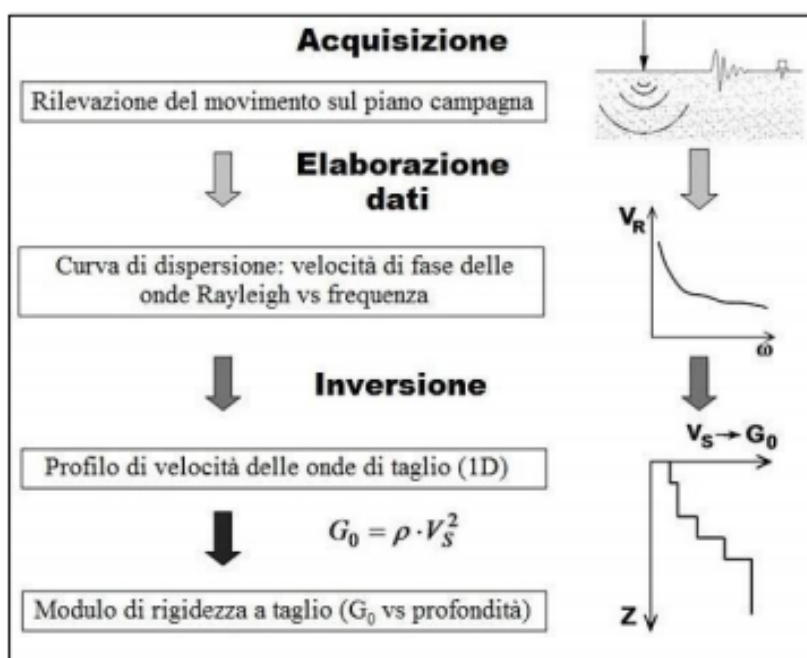


Figura 11 – Schema riassuntivo delle diverse fasi di un'indagine MASW.

4.3.1 Interpretazione Masw

I profili sismici vengono eseguiti disponendo sul terreno una serie di sensori (*geofoni*), posti ad intervallo costante, collegati ad un sismografo mediante un cavo multipolare.

Dopo l'allestimento del dispositivo di ricezione, si provvede a generare artificialmente (sismica attiva) vibrazioni impulsive in corrispondenza di punti prestabiliti lungo i profili: nello stesso istante di partenza della vibrazione viene trasmesso al sismografo il comando di avvio della registrazione (*trigger*). Da questo istante inizia l'acquisizione digitale, con campionamento ad intervallo costante e predeterminato, dei segnali ricevuti dai sensori.

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5 RICOSTRUZIONE STRATIGRAFICA E GEOTECNICA

5.1 Modello geotecnico da prova penetrometrica

Dai dati delle prove penetrometriche è stato ricostruito il modello geologico e geotecnico (Tabella 1 – Tabella 8). I parametri geotecnici espressi rappresentano valori medi, ricavati da una stima ragionata e cautelativa all'interno di ciascuno strato considerato.

Va sottolineato che, come richiesto dalle NTC 2018, i parametri geotecnici riportati nella presente relazione ed in allegato ad essa non sono parametri caratteristici. In fase progettuale, dovranno essere scelti in ragione delle specifiche verifiche e degli approcci metodologici adottati i corrispondenti parametri geotecnici caratteristici e di progetto.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 0,7	Limo argilloso e argilla limosa	–	86	–	4600
0,7 – 1,5	Argilla e argilla limosa	–	42	–	3000
1,5 – 3,9	Argilla	–	11	–	1100
3,9 – 5,7	Argilla	–	23	–	2100
5,7 – 5,9	Sabbia e sabbia limosa	29	–	12900	–
5,9 – 7,0	Limo sabbioso e sabbia limosa	25	–	5700	–

Tabella 1 – Parametri geotecnici medi CPTU1.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 0,9	Argilla e argilla limosa	–	68	–	4200
0,9 – 1,7	Argilla e argilla limosa	–	30	–	2300
1,7 – 3,2	Argilla	–	12	–	1200
3,2 – 6,0	Argilla	–	14	–	1600
6,0 – 7,0	Limo argilloso sabbioso	–	127	–	4100

Tabella 2 – Parametri geotecnici medi CPTU2.

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Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,3	Sabbia e sabbia limosa	34	–	7600	–
1,3 – 2,0	Argilla e argilla limosa	–	32	–	2400
2,0 – 3,3	Argilla	–	14	–	1300
3,3 – 4,4	Argilla	–	24	–	2100
4,4 – 4,9	Limo sabbioso e sabbia limosa	28	–	7900	–
4,9 – 6,0	Sabbia e sabba densa	36	–	49900	–

Tabella 3 – Parametri geotecnici medi CPTU3.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,6	Limo argilloso sabbioso	–	118	–	4500
1,6 – 2,5	Argilla e argilla limosa	–	44	–	3200
2,5 – 3,7	Argilla	–	18	–	1700
3,7 – 4,4	Argilla	–	29	–	2500
4,4 – 5,2	Sabbia e sabbia limosa	33	–	15200	–
5,2 – 5,8	Sabbia e sabbia densa	37	–	36800	–
5,8 – 6,0	Limo sabbioso e sabbia limosa	30	–	9500	–

Tabella 4 – Parametri geotecnici medi CPTU4.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 0,4	Sabbia e sabbia limosa	31	–	10200	–
0,4 – 1,3	Limo argilloso sabbioso	–	121	–	4500
1,3 – 4,8	Argilla	–	22	–	2000
4,8 – 5,6	Sabbia e sabbia limosa	31	–	9900	–
5,6 – 6,0	Sabbia e sabbia densa	35	–	25900	–

Tabella 5 – Parametri geotecnici medi CPTU5.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 0,5	Limo argilloso e argilla limosa	–	85	–	4600
0,5 – 1,6	Argilla e argilla limosa	–	40	–	2900
1,6 – 3,6	Argilla	–	8	–	900
3,6 – 6,0	Argilla	–	14	–	1500
6,0 – 7,0	Limo argilloso e argilla limosa	–	91	–	4700

Tabella 6 – Parametri geotecnici medi CPTU6.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,0	Argilla e argilla limosa	–	48	–	3300
1,0 – 3,1	Argilla	–	10	–	1000
3,1 – 4,1	Argilla	–	23	–	2000
4,1 – 6,0	Limo argilloso sabbioso	–	127	–	4000

Tabella 7 – Parametri geotecnici medi CPTU7.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 0,6	Limo argilloso sabbioso	–	157	–	5000
0,6 – 2,2	Argilla e argilla limosa	–	62	–	3900
2,2 – 4,8	Argilla	–	15	–	1600
4,8 – 5,9	Argilla	–	19	–	2000
5,9 – 7,0	Limo argilloso sabbioso	–	117	–	4300

Tabella 8 – Parametri geotecnici medi CPTU8.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,1	Argilla e limo argilloso	-	64	-	4700
1,1 – 3,4	Argilla	-	10	-	1300
3,4 – 5,0	Limo argilloso sabbioso	-	56	-	4500
5,0 – 7,8	Sabbia e sabbia limosa	28	-	4400	-

Tabella 9 – Parametri geotecnici medi CPTU1bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,1	Argilla e limo argilloso	-	43	-	4000
1,1 – 3,0	Argilla	-	9	-	1200
3,0 – 4,0	Limo argilloso e argilla	-	17	-	2000
4,0 – 8,4	Limo argilloso sabbioso	-	94	-	4300
8,4 – 8,9	Sabbia e sabbia limosa	32	-	24100	-

Tabella 10 – Parametri geotecnici medi CPTU2bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,0	Argilla e argilla limosa	-	33	-	3400
1,0 – 2,8	Argilla torbosa	-	6	-	700
2,8 – 4,0	Limo argilloso deb. sabbioso	-	19	-	2300
4,0 – 7,5	Limo argilloso sabbioso	-	89	-	4500
7,5 – 8,8	Sabbia e sabbia limosa	32	-	25000	-

Tabella 11 – Parametri geotecnici medi CPTU3bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,0	Argilla e argilla limosa	-	30	-	3200
1,0 – 3,0	Argilla torbosa	-	7	-	800
3,0 – 4,0	Limo argilloso e argilla	-	19	-	2200
4,0 – 5,1	Limo sabbioso	28	-	2900	5900
5,1 – 7,8	Limo argilloso sabbioso	-	90	-	4400
7,8 – 8,0	Sabbia e sabbia limosa	32	-	23000	-

Tabella 12 – Parametri geotecnici medi CPTU4bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,4	Argilla e limo argilloso	-	52	-	4400
1,4 – 3,2	Argilla	-	9	-	1200
3,2 – 4,5	Limo argilloso	-	16	-	2000
4,5 – 7,0	Limo argilloso sabbioso	-	89	-	4500
7,0 – 10,0	Limo argilloso deb. sabbioso	-	55	-	4500
10,0 – 10,9	Sabbia e sabbia limosa	30	-	8700	-

Tabella 13 – Parametri geotecnici medi CPTU5bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,0	Argilla e limo argilloso	-	78	-	4700
1,0 – 2,0	Argilla e argilla limosa	-	23	-	2600
2,0 – 4,4	Argilla	-	12	-	1500
4,4 – 7,2	Limo sabbioso e limo	-	107	-	4300
7,2 – 8,0	Sabbia e sabbia limosa	33	-	12900	-
8,0 – 10,2	Limo argilloso deb. sabbioso	-	36	-	3600
10,2 – 10,9	Limo argilloso sabbioso	-	70	-	4700

Tabella 14 – Parametri geotecnici medi CPTU6bis.

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Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,0	Sabbia limosa	32	-	7500	-
1,0 – 3,2	Limo sabbioso deb. argilloso	-	65	-	4700
3,2 – 5,0	Limo argilloso e argilla	-	21	-	2400
5,0 – 7,3	Sabbia e sabbia limosa	35	-	28000	-

Tabella 15 – Parametri geotecnici medi CPTU7bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,0	Argilla e argilla limosa	-	35	-	3500
1,0 – 3,8	Argilla e limo argilloso	-	43	-	4000
3,8 – 7,2	Argilla	-	10	-	1300
7,2 – 7,8	Limo argilloso sabbioso	-	35	-	3500
7,8 – 9,9	Sabbia e sabbia limosa	35	-	26800	-

Tabella 16 – Parametri geotecnici medi CPTU8bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,2	Argilla e limo argilloso	-	42	-	3900
1,2 – 2,4	Argilla e argilla limosa	-	35	-	3500
2,4 – 5,0	Argilla	-	15	-	1800
5,0 – 9,0	Limo sabbioso e sabbia limosa	29	-	5200	10300
9,0 – 10,0	Sabbia e sabbia limosa	36	-	32200	-

Tabella 17 – Parametri geotecnici medi CPTU9bis.

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Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 2,4	Argilla e limo argilloso	-	43	-	4000
2,4 – 7,0	Argilla	-	21	-	2400
7,0 – 9,1	Limo sabbioso e sabbia limosa	30	-	6900	13900
9,1 – 10,0	Sabbia e sabbia limosa	35	-	24900	-

Tabella 18 – Parametri geotecnici medi CPTU10bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,2	Limo argilloso e limo	-	71	-	4700
1,2 – 2,0	Argilla e argilla deb. limosa	-	24	-	2700
2,0 – 4,1	Argilla	-	17	-	2100
4,1 – 7,9	Sabbia e sabbia limosa	35	-	39100	-

Tabella 19 – Parametri geotecnici medi CPTU11bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 2,0	Argilla e limo argilloso	-	44	-	4100
2,0 – 3,4	Argilla	-	13	-	1700
3,4 – 4,1	Argilla e limo argilloso	-	37	-	3700
4,1 – 7,9	Sabbia e sabbia limosa	36	-	41000	-

Tabella 20 – Parametri geotecnici medi CPTU12bis.

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Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,4	Argilla e limo argilloso	-	39	-	3800
1,4 – 4,2	Argilla	-	12	-	1500
4,2 – 5,2	Argilla e limo argilloso	-	29	-	3100
5,2 – 10,3	Argilla	-	22	-	2500
10,3 – 11,9	Sabbia e sabbia limosa	35	-	24300	-

Tabella 21 – Parametri geotecnici medi CPTU13bis.

Profondità da p.c. [m]	Litologia	Angolo d'attrito (ϕ') [°]	Coesione non drenata (C_u) [kPa]	Modulo di Young (E) [kPa]	Modulo edometrico (M) [kPa]
0,0 – 1,1	Argilla e limo argilloso	-	43	-	4000
1,1 – 2,2	Argilla	-	14	-	1700
2,2 – 3,0	Argilla organica	-	7	-	1000
3,0 – 4,2	Argilla	-	18	-	2100
4,2 – 5,0	Limo argilloso e sabbioso	31	105	5300	4200
5,0 – 6,2	Sabbia e sabbia limosa	36	-	20400	-
6,2 – 8,0	Limo argilloso e sabbioso	28	68	3400	4700
8,0 – 9,9	Sabbia limosa e sabbia	32	-	11900	-

Tabella 22 – Parametri geotecnici medi CPTU14bis.

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Al termine dell'esecuzione delle prove penetrometriche si è misurato, per mezzo di una sonda freaticometrica, il livello dell'acqua nel foro di indagine, indicato nella Tabella 23.

Prova penetrometrica	Profondità acqua in foro [m da p.c.]
CPTU1	-1,20
CPTU2	-1,20
CPTU3	-1,40
CPTU4	-1,40
CPTU5	-1,40
CPTU6	-1,20
CPTU7	-1,20
CPTU8	-1,20
CPTU1bis	-1,20
CPTU2bis	-1,20
CPTU3bis	-1,20
CPTU4bis	-1,20
CPTU5bis	-1,20
CPTU6bis	-1,20
CPTU7bis	-1,30
CPTU8bis	-1,30
CPTU9bis	-1,30
CPTU10bis	-1,30
CPTU11bis	-1,30
CPTU12bis	-1,30
CPTU13bis	-1,30
CPTU14bis	-1,30

Tabella 23 – Rilievo del livello di acqua in foro

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6 ANALISI SISMICA

6.1 Pericolosità sismica di base

Come riportato nelle NTC2018, la pericolosità sismica è definita in termini di accelerazione orizzontale massima attesa a_g in condizioni di campo libero su sito di riferimento rigido con superficie topografica orizzontale (di categoria A), nonché di ordinate dello spettro di risposta elastico in accelerazione ad essa corrispondente $S_e(T)$, con riferimento a prefissate probabilità di eccedenza P_{VR} nel periodo di riferimento V_R ; si ritiene pertanto necessario determinare il periodo di riferimento della struttura così come segue:

$$V_R = V_N * C_U$$

Con V_N , vita nominale di un'opera, intesa come numero di anni nel quale deve poter essere utilizzata per lo scopo al quale è destinata, definita secondo la seguente tabella:

TIPI DI COSTRUZIONI		Valori minimi di V_N (anni)
1	Costruzioni temporanee e provvisorie	10
2	Costruzioni con livelli di prestazioni ordinari	50
3	Costruzioni con livelli di prestazioni elevati	100

E C_U , coefficiente d'uso, che dipende dalla classe d'uso:

Classe I: Costruzioni con presenza solo occasionale di persone, edifici agricoli.

Classe II: Costruzioni il cui uso preveda normali affollamenti, senza contenuti pericolosi per l'ambiente e senza funzioni pubbliche e sociali essenziali. Industrie con attività non pericolose per l'ambiente. Ponti, opere infrastrutturali, reti viarie non ricadenti in Classe d'uso III o in Classe d'uso IV, reti ferroviarie la cui interruzione non provochi situazioni di emergenza. Dighe il cui collasso non provochi conseguenze rilevanti.

Classe III: Costruzioni il cui uso preveda affollamenti significativi. Industrie con attività pericolose per l'ambiente. Reti viarie extraurbane non ricadenti in Classe d'uso IV. Ponti e reti ferroviarie la cui interruzione provochi situazioni di emergenza. Dighe rilevanti per le conseguenze di un loro eventuale collasso.

Classe IV: Costruzioni con funzioni pubbliche o strategiche importanti, anche con riferimento alla gestione della protezione civile in caso di calamità. Industrie con attività particolarmente

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pericolose per l'ambiente. Reti viarie di tipo A o B, di cui al DM 5/11/2001, n. 6792, "Norme funzionali e geometriche per la costruzione delle strade", e di tipo C quando appartenenti ad itinerari di collegamento tra capoluoghi di provincia non altresì serviti da strade di tipo A o B. Ponti e reti ferroviarie di importanza critica per il mantenimento delle vie di comunicazione, particolarmente dopo un evento sismico. Dighe connesse al funzionamento di acquedotti e a impianti di produzione di energia elettrica.

A seconda della classe d'uso vengono definiti i seguenti valori di coefficiente d'uso:

CLASSE D'USO	I	II	III	IV
COEFFICIENTE C_U	0,7	1,0	1,5	2,0

Per l'intervento in oggetto è stato assunto $V_N=50$ anni e **Classe d'uso IV**, da cui deriva una vita di riferimento pari a 50 anni:

$$V_R = V_N \cdot C_U = 50 \text{ anni} \cdot 2,0 = 100 \text{ anni}$$

L'azione sismica va valutata con riferimento alle seguenti probabilità di eccedenza P_{VR} nel periodo di riferimento V_R :

Stati Limite	P_{VR} : Probabilità di superamento nel periodo di riferimento V_R	
Stati limite di esercizio	SLO	81%
	SLD	63%
Stati limite ultimi	SLV	10%
	SLC	5%

Per ciascuno stato limite e relativa probabilità di eccedenza P_{VR} nel periodo di riferimento V_R si ricava il periodo di ritorno T_R del sisma utilizzando la relazione:

$$T_R = - V_R / \ln (1 - P_{VR}) = - C_U V_N / \ln (1 - P_{VR})$$

In seguito si riportano i valori di a_g (accelerazione massima al sito), F_o (valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale) e T_c^* (periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale), per i periodi di ritorno T_R di riferimento sul sito in oggetto in condizioni di campo libero su sito di riferimento rigido con superficie topografica orizzontale di categoria A:

STATO LIMITE	T _r (anni)	a _g (g)	F ₀ (-)	T _c * (s)
SLO	60	0,044	2,553	0,264
SLD	101	0,055	2,575	0,292
SLV	949	0,126	2,600	0,387
SLC	1950	0,159	2,643	0,402

Tabella 24 – Valori di a_g, F₀ e T_c associati agli stati limite da verificare.

6.2 Azione sismica di progetto

Per la definizione dell'azione sismica di progetto è necessario valutare l'amplificazione dell'azione sismica indotta dalle condizioni stratigrafiche e topografiche del sito. Entrambi questi fattori infatti, concorrono a modificare l'azione sismica in superficie rispetto a quella attesa su suolo rigido con superficie orizzontale, sia dal punto di vista dell'ampiezza del segnale, sia nel contenuto in frequenza.

6.2.1 Effetti stratigrafici

Ai fini della definizione dell'azione sismica di progetto, si rende necessario valutare l'effetto della risposta sismica locale mediante specifiche analisi, come indicato nel par. 7.11.3 delle NTC18. 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. Secondo il punto 3.2.2 delle NTC 2018, l'identificazione della categoria di sottosuolo si effettua calcolando il valore della velocità equivalente $V_{s,eq}$ di propagazione delle onde di taglio a partire dal piano di imposta delle fondazioni superficiali o della testa dei pali nel caso di fondazioni profonde fino alla profondità del substrato sismico (H = substrato caratterizzato da velocità V_s maggiori di 800 m/s); per depositi con profondità H del substrato superiore a 30 m, la velocità equivalente delle onde di taglio $V_{s,eq}$ è definita dal parametro $V_{s,30}$ ottenuto ponendo $H=30$.

$$V_{s,eq} = \frac{H}{\sum_{i=1}^N \frac{h_i}{V_{s,i}}}$$

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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 V_s non inferiore a 800 m/s.

Le categorie di sottosuolo che permettono l'utilizzo dell'approccio semplificato sono definite dalla seguente tabella:

Categoria	Caratteristiche della superficie topografica
A	<i>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.</i>
B	<i>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.</i>
C	<i>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.</i>
D	<i>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.</i>
E	<i>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.</i>

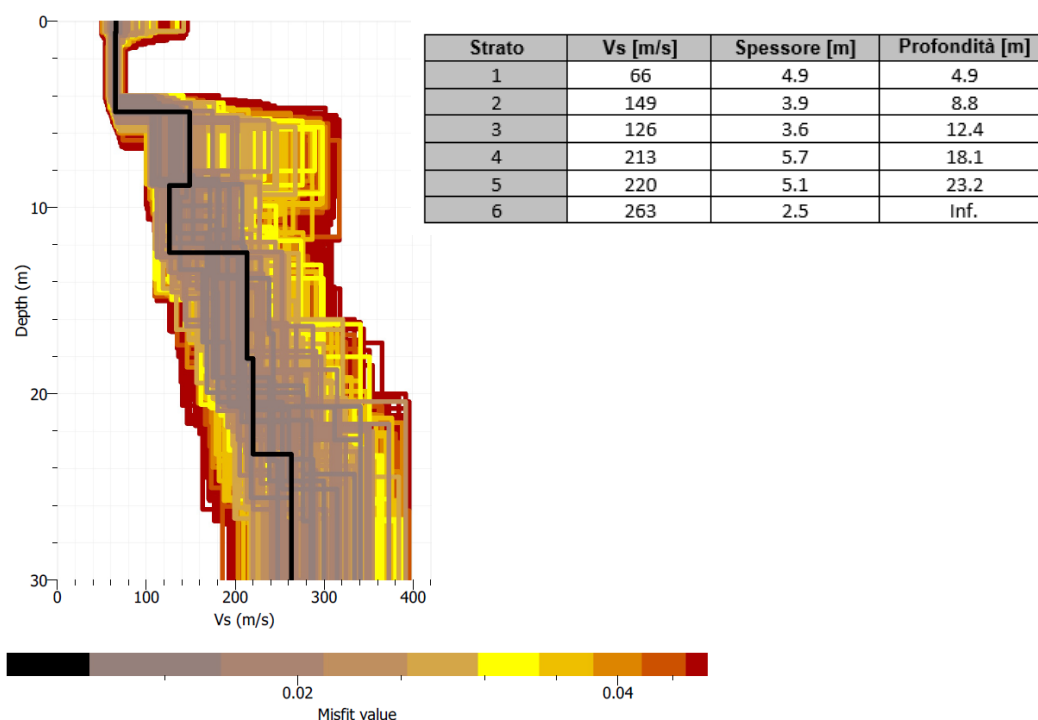
Tabella 25 – Categorie di sottosuolo Categorie di sottosuolo. Tratta da Tab 3.2.II delle NTC 2018.

Il modello sismo-stratigrafico del sito è stato ricostruito analizzando la dispersione della componente verticale delle onde di Rayleigh acquisita tramite l'indagine MASW (metodo MASW in configurazione ZVF), tarando il modello sulla base delle prove CPTU.

La MASW è stata eseguita con uno stendimento da 12 geofoni con spaziatura pari a 4 m, per un profilo lungo in totale 44 m. Per la registrazione dei sismogrammi in campagna è stato utilizzato un sismografo Pasi GEA 24 canali e geofoni verticali a frequenza naturale di 4.5 Hz.

Per l'energizzazione del terreno è stata impiegata una mazza da 8 Kg. In questo modo è stata acquisita la componente verticale delle onde di Rayleigh. I sismogrammi acquisiti sono stati elaborati con il software Geopsy.

In allegato è riportato il report della MASW, mentre di seguito si riporta il profilo di V_s ottenuto con la tabella riassuntiva dei sismostrati individuati.



$V_{s_{eq}} = 159 \text{ m/s}$

Figura 12 – Profilo di velocità delle onde S per l'indagine MASW1.

Dall'elaborazione delle indagini MASW risulta che il substrato sismico è situato a profondità superiore a 30 m e il valore di $V_{s_{eq}} = 159 \text{ m/s}$; si assume perciò la **CATEGORIA D** secondo la Tabella 25, che comprende *“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”*.

6.2.2 Effetti topografici

Per condizioni topografiche complesse è necessario predisporre specifiche analisi di risposta sismica locale. Per configurazioni superficiali semplici si può adottare la seguente classificazione:

Per il sito in esame è possibile assumere una categoria topografica T1: *“Superficie pianeggiante, pendii e rilievi isolati con inclinazione media $i < 15^\circ$ ”*.

Categoria	Caratteristiche della superficie topografica
T1	Superficie pianeggiante, pendii e rilievi isolati con inclinazione media $i \leq 15^\circ$
T2	Pendii con inclinazione media $i > 15^\circ$
T3	Rilievi con larghezza in cresta molto minore che alla base e inclinazione media $15^\circ \leq i \leq 30^\circ$
T4	Rilievi con larghezza in cresta molto minore che alla base e inclinazione media $i > 30^\circ$

Tabella 26 – Tabella 3.2.III delle NTC 2018 – Categorie topografiche.

6.2.3 Coefficienti sismici di progetto

In seguito si riportano i coefficienti sismici di progetto ottenuti attribuendo i seguenti parametri:

Vita nominale	$V_N = 50$
Coefficiente d'uso	$C_U = 2$
Categoria topografica	T1
Categoria stratigrafica	D

STATO LIMITE	SLO	SLD	SLV	SLC
Ss	1,800	1,800	1,800	1,770
Cc	2,430	2,310	2,010	1,970
St	1,000	1,000	1,000	1,000
Kh	0,016	0,020	0,055	0,068
Kv	0,008	0,010	0,027	0,034
A max [m/s ²]	0,778	0,963	2,231	2,759
β	0,200	0,200	0,240	0,240

Tabella 27 – Valori $S_s, C_c, S_t, K_h, K_v, A_{max}, \beta$, per i diversi stati limite.

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6.3 Verifica della suscettibilità a liquefazione

L'analisi della suscettibilità a liquefazione dei sedimenti, se sottoposti a sollecitazioni cicliche indotte da terremoti, è di fondamentale importanza per gli aspetti di progettazione geotecnica antisismica. In particolare occorre valutare, nel modo più adeguato possibile, le effettive condizioni di suscettibilità, le condizioni di innesco e il rischio sito specifico di tale fenomeno.

Con il termine “liquefazione” si indicano vari fenomeni fisici (mobilità ciclica, liquefazione ciclica, fluidificazione) osservati durante terremoti significativi (generalmente, $M > 5,5$) nei depositi e nei pendii sabbiosi saturi; in questi sedimenti, le condizioni “non drenate” durante il sisma possono indurre un incremento e un accumulo delle pressioni interstiziali, che a loro volta possono provocare una drastica caduta della resistenza al taglio e quindi una perdita di capacità portante del terreno. Il meccanismo di liquefazione dei sedimenti è governato da molti fattori che si possono ricondurre principalmente:

- alle caratteristiche dell’impulso sismico (forma; durata dello scuotimento; ecc.) e la sua energia (magnitudo; accelerazioni; ecc.);
- alle caratteristiche tessiturali e meccaniche dei sedimenti (fuso granulometrico; densità relativa; coesione; limiti di Atterberg; ecc.);
- alla presenza di falda superficiale e alle condizioni di confinamento dello strato liquefacibile (non sono riportati casi in letteratura di liquefazione in strati granulari profondi oltre 15-20 metri).

La differenza fra i diversi fenomeni dipende dalle tensioni di taglio mobilitate per l’equilibrio in condizioni statiche e dalla resistenza al taglio residua dopo il terremoto. In condizioni di sisma, vi possono anche essere effetti di “riordino” dei sedimenti, con possibilità di cedimenti significativi che possono coinvolgere sia i depositi granulari, sia i sedimenti fini poco coesivi.

Nell'ultimo decennio, sono state elaborate procedure di stima delle potenziali deformazioni post-sisma, provocate da perdite di resistenza, anche nei sedimenti fini di bassa coesione (limi e argille a comportamento “non drenato”). Quest'ultimo fenomeno è noto con il termine “cyclic softening” (Idriss & Boulanger, 2004 e 2008).

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Al paragrafo 7.11.3.4.2 delle NTC18 sono riportate le situazioni nelle quali può essere omessa la verifica a liquefazione dei terreni, ovvero:

1. accelerazioni massime attese al piano campagna in assenza di manufatti (condizioni di campo libero) minori di 0,1g;
2. profondità media stagionale della falda superiore a 15 m dal piano campagna, per piano campagna sub-orizzontale e strutture con fondazioni superficiali;
3. depositi costituiti da sabbie pulite con resistenza penetrometrica normalizzata $(N1)_{60} > 30$ oppure $qc_{1N} > 180$ dove $(N1)_{60}$ è il valore della resistenza determinata in prove penetrometriche dinamiche (Standard Penetration Test) normalizzata ad una tensione efficace verticale di 100 kPa e qc_{1N} è il valore della resistenza determinata in prove penetrometriche statiche (Cone Penetration Test) normalizzata ad una tensione efficace verticale di 100 kPa;
4. distribuzione granulometrica esterna alle zone indicate nella Figura 14 (a) nel caso di terreni con coefficiente di uniformità $U_c < 3,5$ e in Figura 14 (b) nel caso di terreni con coefficiente di uniformità $U_c > 3,5$.

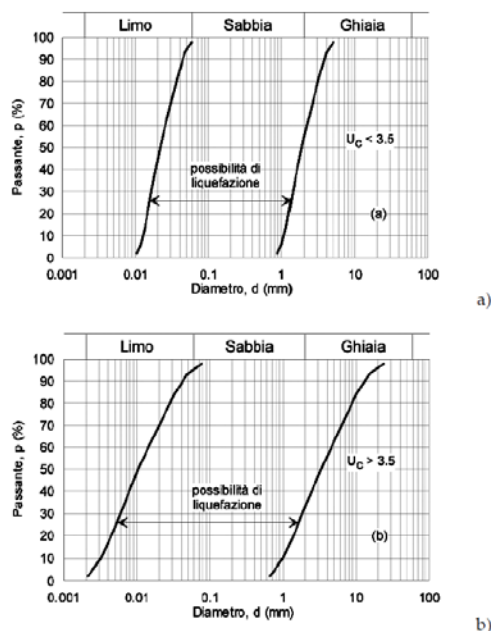


Fig. 7.11.1 – Fusi granulometrici di terreni suscettibili di liquefazione

Di seguito si riporta un estratto del paragrafo **7.11.3.4.3 Metodi di analisi** delle NTC18:

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” Quando nessuna delle condizioni del § 7.11.3.4.2 risulti soddisfatta e il terreno di fondazione comprenda strati estesi o lenti spesse di sabbie sciolte sotto falda, occorre valutare il coefficiente di sicurezza alla liquefazione alle profondità in cui sono presenti i terreni potenzialmente liquefacibili. Salvo utilizzare procedure di analisi avanzate, la verifica può essere effettuata con metodologie di tipo storico-empirico in cui il coefficiente di sicurezza viene definito dal rapporto tra la resistenza disponibile alla liquefazione e la sollecitazione indotta dal terremoto di progetto. La resistenza alla liquefazione può essere valutata sulla base dei risultati di prove in sito o di prove cicliche di laboratorio. La sollecitazione indotta dall’azione sismica è stimata attraverso la conoscenza dell’accelerazione massima attesa alla profondità di interesse. L’adeguatezza del margine di sicurezza nei confronti della liquefazione deve essere valutata e motivata dal progettista.”

Nel caso del sito in esame le azioni sismiche sono superiori a 0,1 g e la falda è poco profonda, pertanto si è reso necessario verificare la suscettibilità a liquefazione mediante software specifici di modellizzazione e calcolo. Il valore di valore di a_{max} inserito nelle verifiche a liquefazione è quello ottenuto dalla procedura semplificata e riportata al paragrafo 6.2.3.

Per l’elaborazione dei dati derivanti da prove penetrometriche statiche CPTU è stato usato il programma CLiq fornito dalla ditta Geologismiki Geotechnical Engineers impiegando come metodo di calcolo la procedura NCEER (1998).

La stima del Fattore di Sicurezza nei confronti della liquefazione è definita dalla relazione:

$$FSL = \frac{CRR_{7.5}}{CSR} * MSF * K_{\sigma} * K_{\alpha}$$

Con

- $CRR_{7.5}$ = resistenza alla liquefazione ciclica (Cyclic Resistance Ratio) dei sedimenti attraversati, ricavata dagli esiti CPTU, per terremoti di $M = 7,5$. La procedura si fonda su equazioni che determinano i valori di CRR dei sedimenti attraversati utilizzando i valori di resistenza alla punta q_t , corretti per tenere conto delle tensioni litostatiche di confinamento, della differente classificazione dei sedimenti attraversati (contenuto di fine; plasticità);
- CSR = rapporto di sollecitazione ciclica (Cyclic Stress Ratio) prodotta da un sisma e stimata sulla base di correlazioni empiriche dalle caratteristiche del terremoto, magnitudo e accelerazione tangenziale del suolo (a_{max}) ottenuta dalla procedura semplificata. Il

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CSR viene calcolato dalla nota equazione semiempirica proposta da Seed e Idriss (1971) per terremoti di $M = 7,5$:

$$CSR = 0.65 \frac{a_{max,s}}{g} \frac{\sigma_{v0}}{\sigma'_{v0}} r_d$$

- K_σ = Fattore di correzione per la pressione di confinamento (Overburden Correction Factor);
- K_α = Fattore di correzione per la tensione tangenziale mobilitata; $K_\alpha=1$ per superfici orizzontali;
- MSF = Fattore di Scala della Magnitudo (Magnitude Scale Factor) da applicare per sismi con magnitudo diverse da 7,5.

Per quanto riguarda la valutazione del rischio a liquefazione si fa riferimento al potenziale di liquefazione (PL) che esprime con un numero compreso tra 0 e 1, la pericolosità di liquefazione di uno strato nei confronti dell'evento sismico atteso ed è funzione del fattore di sicurezza e della profondità dello strato (maggiore è la profondità e minori sono gli effetti della liquefazione in superficie)

$$PL = F(z) W(z)$$

In cui:

z è la profondità dal p.c.

$$W(z) = 10 - 0,5z$$

$$F(z) = 1 - F_s \text{ se } F_s < 1; F(z) = 0 \text{ se } F_s \geq 1 \text{ (con } F_s = \text{fattore di sicurezza a liquefazione).}$$

Per tenere conto del fatto che in superficie si risente dell'effetto cumulativo della liquefacibilità degli strati sottostanti, viene introdotto l'indice del potenziale di liquefazione IL o LPI (Iwasaki, 1978)

$$IL(x, y) = \int_0^{20} F(x, y, z) W(x, y, z) dz$$

Dai valori risultanti di IL si può stimare il rischio a liquefazione così come segue (paragrafo 3.2.5 Allegato A DGRV 1572/2013):

$0 < IL < 2$ Rischio di liquefazione basso

$2 < IL < 5$ Rischio di liquefazione moderato

$5 < IL < 15$ Rischio di liquefazione alto

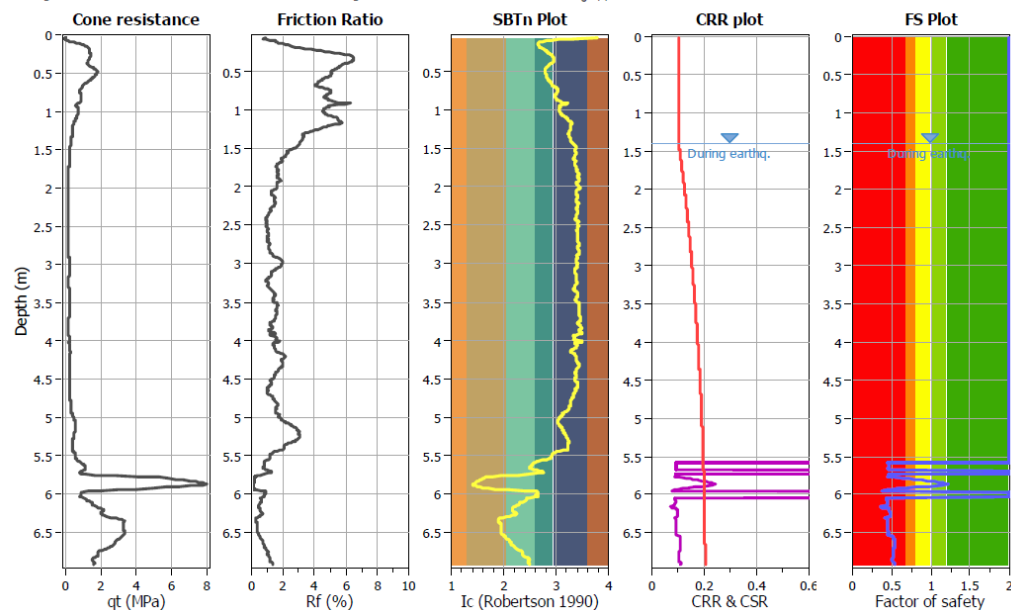
IL > 15 Rischio di liquefazione molto alto

Di seguito, si riportano i risultati ottenuti:

CPT file : CPTU01

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots

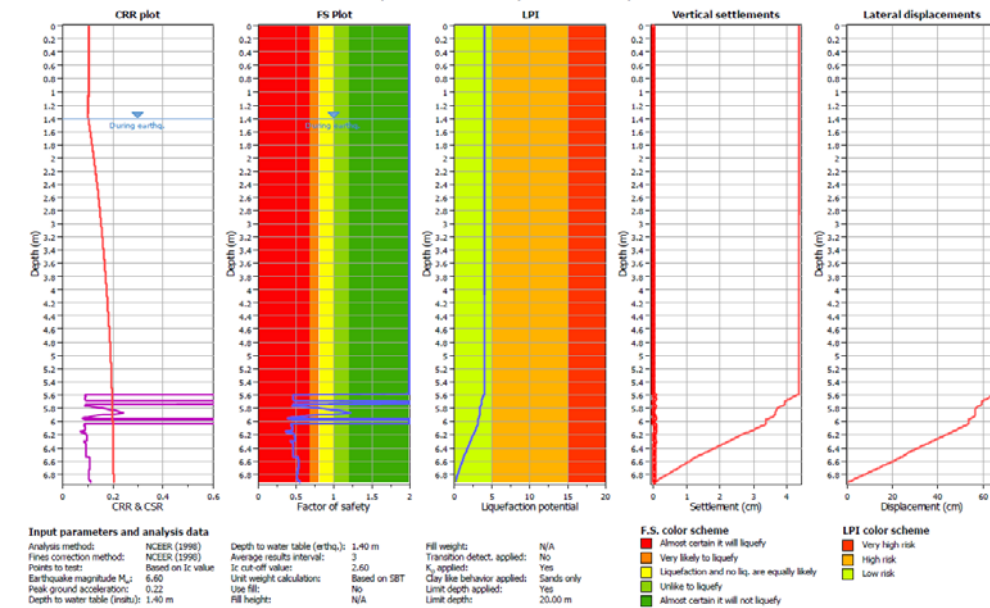


Figura 13 – Report della verifica a liquefazione CPTU1.

CPT file : CPTU02

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based

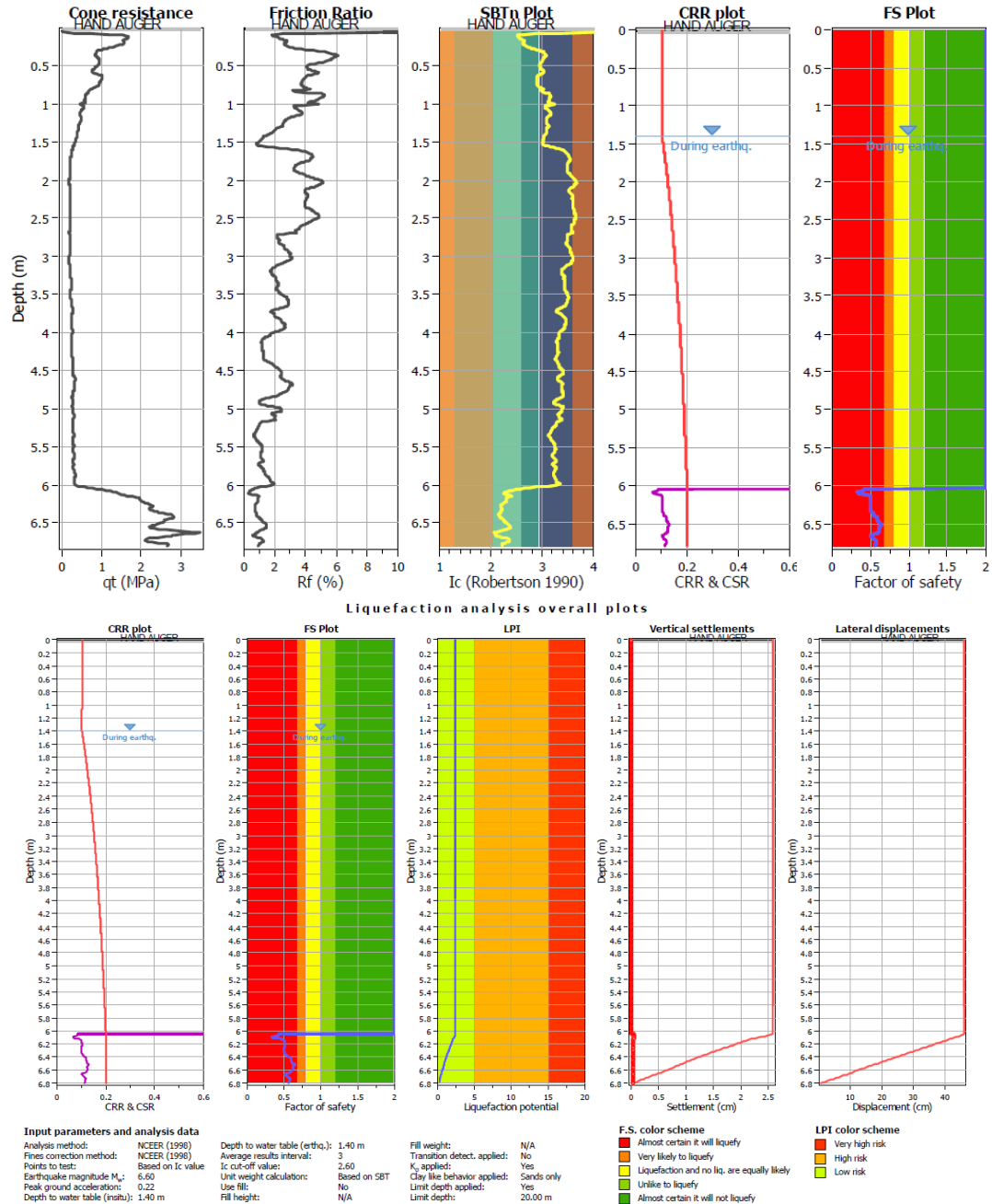
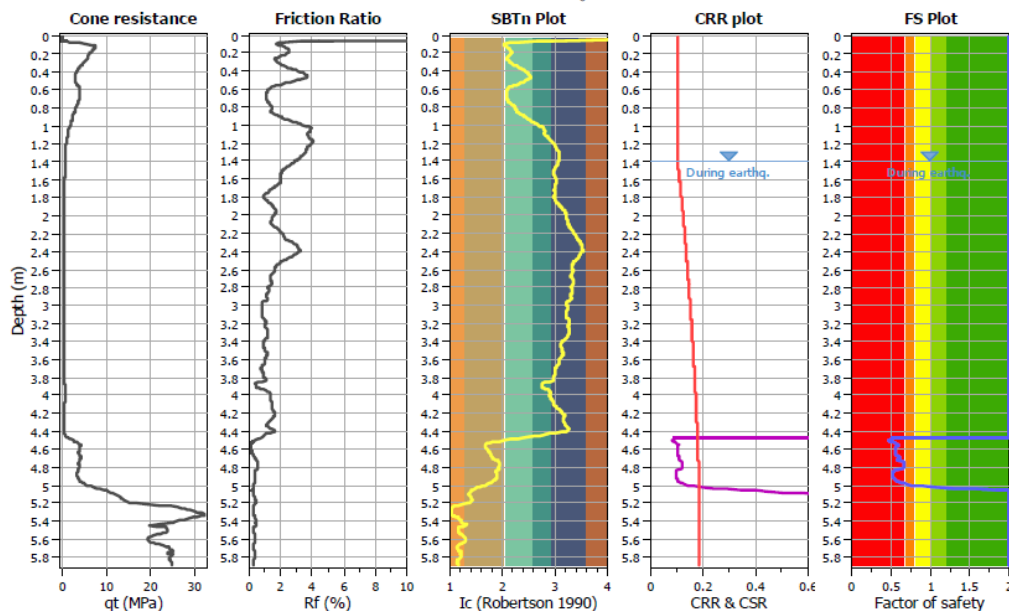


Figura 14 – Report della verifica a liquefazione CPTU02.

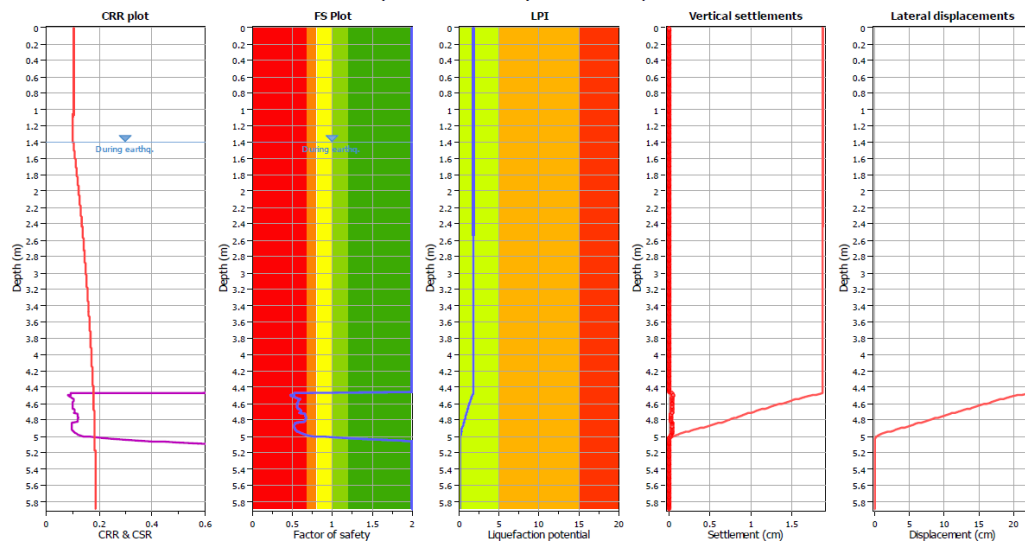
CPT file : CPTU03

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)
Fines correction method:	NCEER (1998)
Points to test:	Based on Ic value
Earthquake magnitude M_w :	6.60
Peak ground acceleration:	0.22
Depth to water table (in situ):	1.40 m

Depth to water table (earthq.):	1.40 m
Average results interval:	3
Ic cut-off value:	2.60
Unit weight calculation:	Based on SBT
Fill height:	N/A

Fill weight:	N/A
Transition detect. applied:	No
K_0 applied:	Yes
Clay like behavior applied:	Sands only
Limit depth applied:	Yes
Limit depth:	20.00 m

F.S. color scheme

Very high risk	Almost certain it will liquefy
High risk	Very likely to liquefy
Low risk	Liquefaction and no liq. are equally likely
	Unlikely to liquefy
	Almost certain it will not liquefy

LPI color scheme

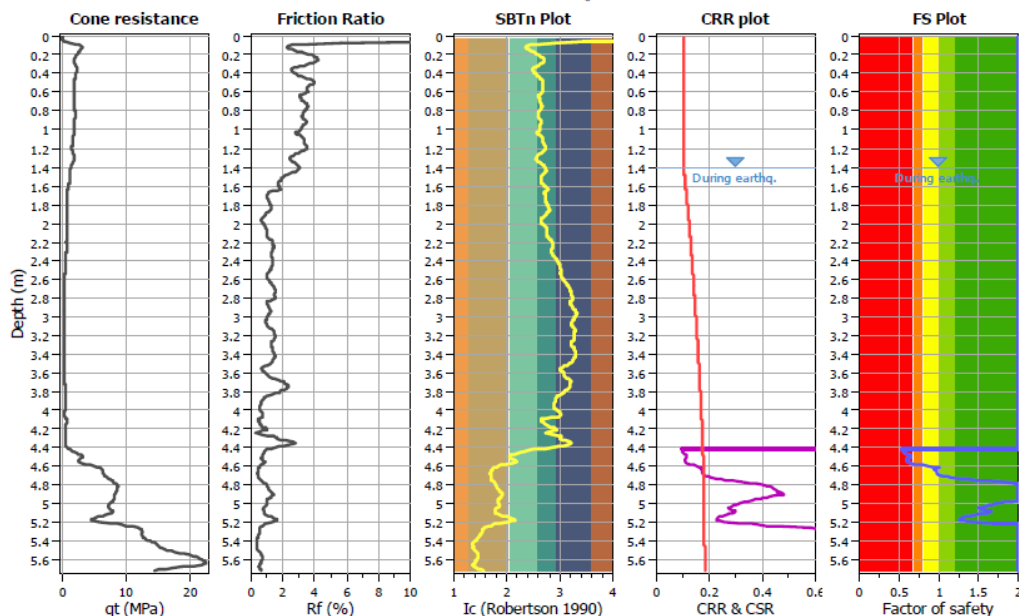
Very high risk	Very high risk
High risk	High risk
Low risk	Low risk

Figura 15 – Report della verifica a liquefazione CPTU3.

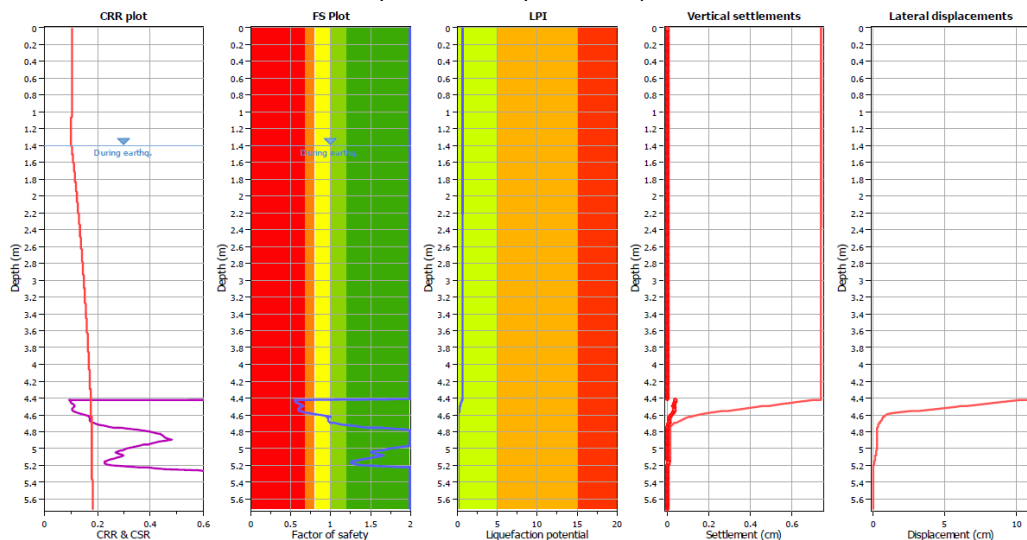
CPT file : CPTU04

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_a applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in-situ): 1.40 m

Depth to water table (earthq.): 1.40 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_a applied: Yes
Clay like behavior applied: Yes
Limit depth applied: 20.00 m

F.S. color scheme

Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlike to liquefy
Almost certain it will not liquefy

LPI color scheme

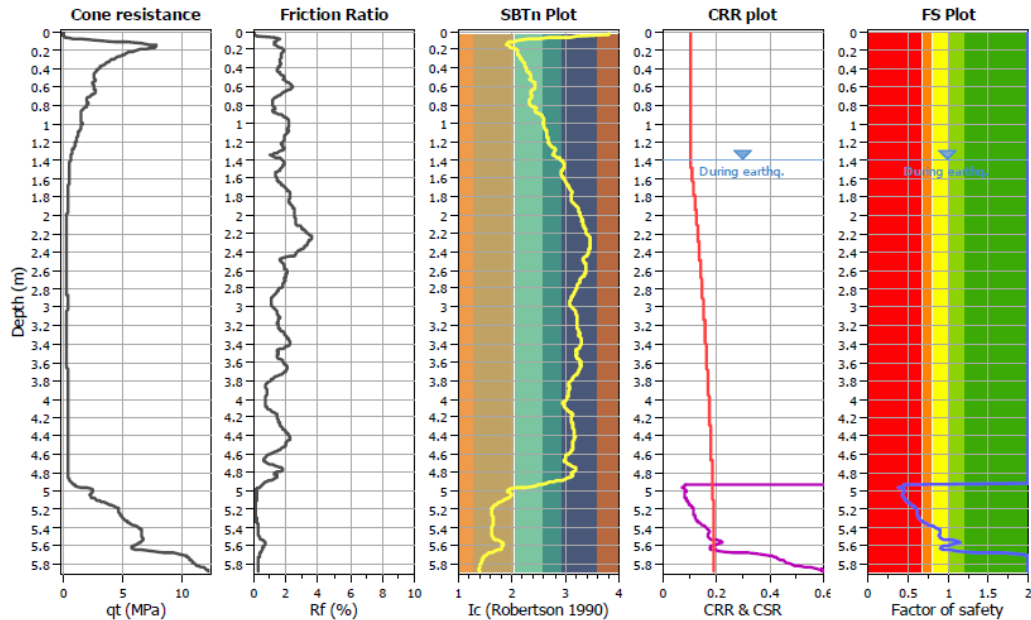
Very high risk
High risk
Low risk

Figura 16 – Report della verifica a liquefazione CPTU4.

CPT file : CPTU05

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots

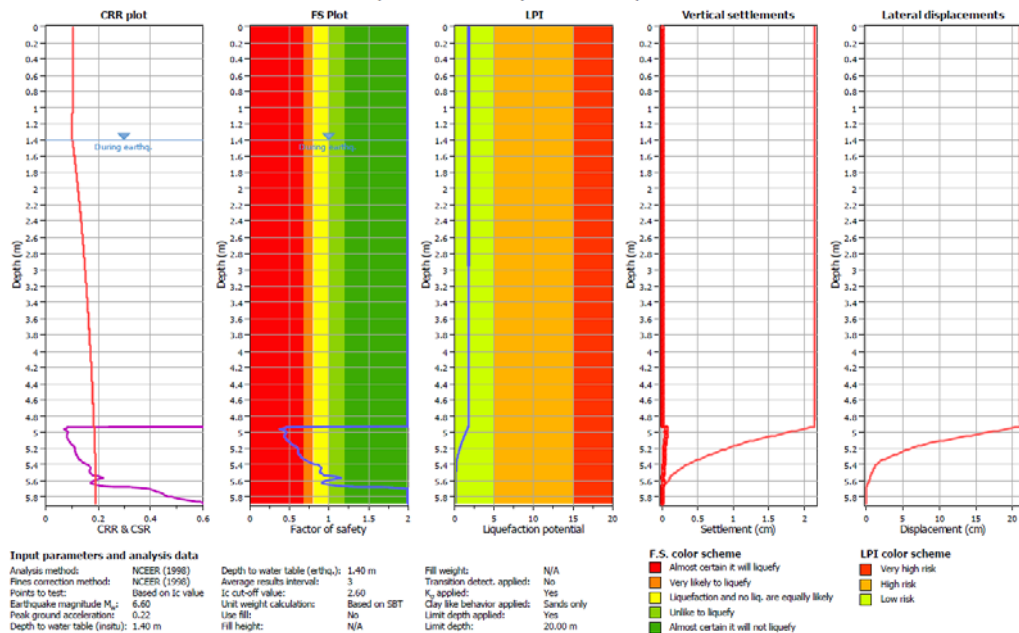
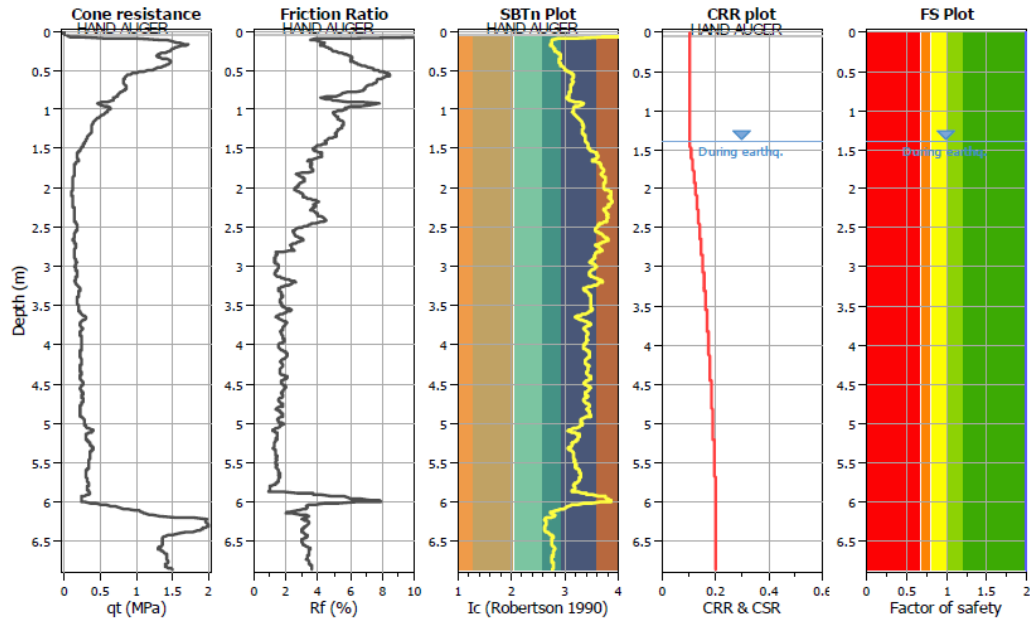


Figura 17 – Report della verifica a liquefazione CPTU5.

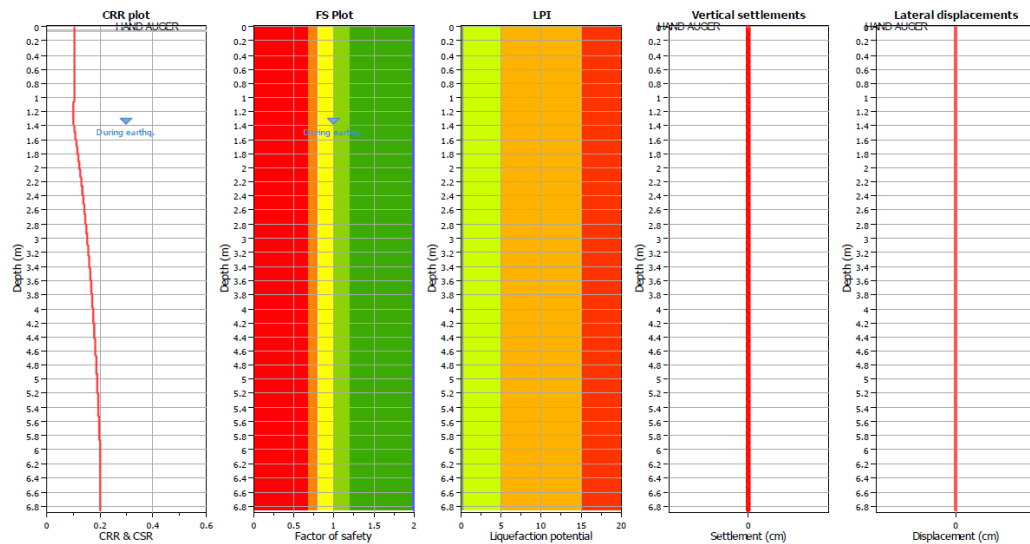
CPT file : CPTU06

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_u applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_u applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (in-situ):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

F.S. color scheme

Very likely to liquefy	Very high risk
Liquefaction and no liq. are equally likely	High risk
Unlikely to liquefy	Low risk
Almost certain it will not liquefy	

LPI color scheme

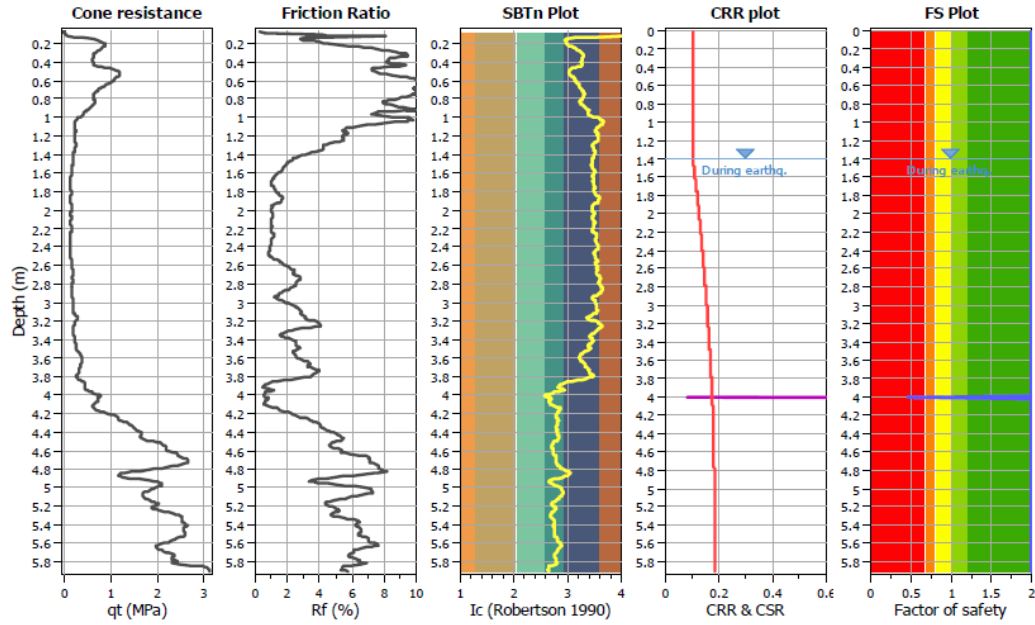
Very high risk
High risk
Low risk

Figura 18 – Report della verifica a liquefazione CPTU6.

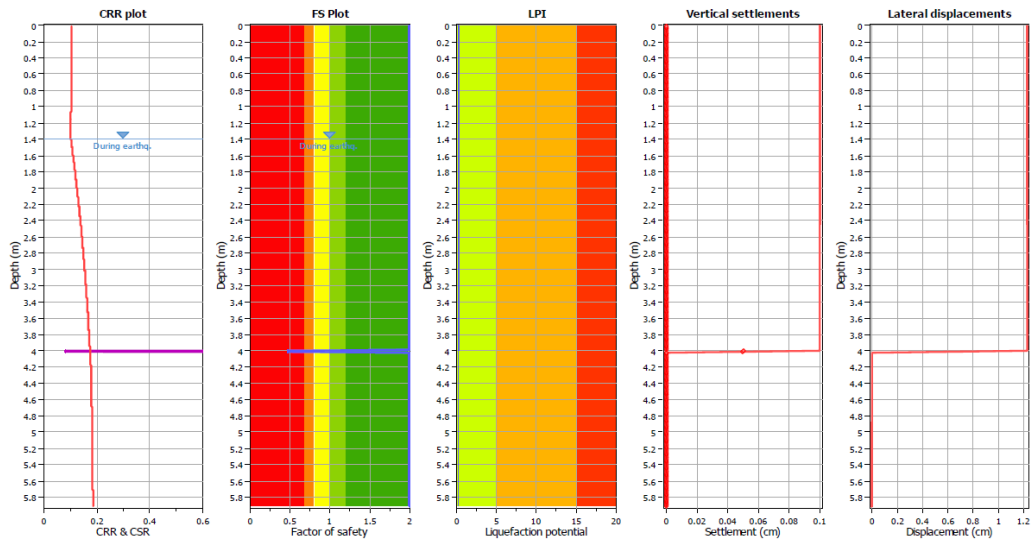
CPT file : CPTU07

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_p applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)
Fines correction method:	NCEER (1998)
Points to test:	Based on Ic value
Earthquake magnitude M_w :	6.60
Peak ground acceleration:	0.22
Depth to water table (in-situ):	1.40 m

Depth to water table (earthq.):	1.40 m
Average results interval:	3
Ic cut-off values:	2.60
Unit weight calculation:	Based on SBT
Use fill:	No
Fill height:	N/A

Fill weight:	N/A
Transition detect. applied:	No
K_p applied:	Yes
Clay like behavior applied:	Sands only
Limit depth applied:	Yes
Limit depth:	20.00 m

F.S. color scheme

■	Almost certain it will liquefy
■	Very likely to liquefy
■	Liquefaction and no liq. are equally likely
■	Unlikely to liquefy
■	Almost certain it will not liquefy

LPI color scheme

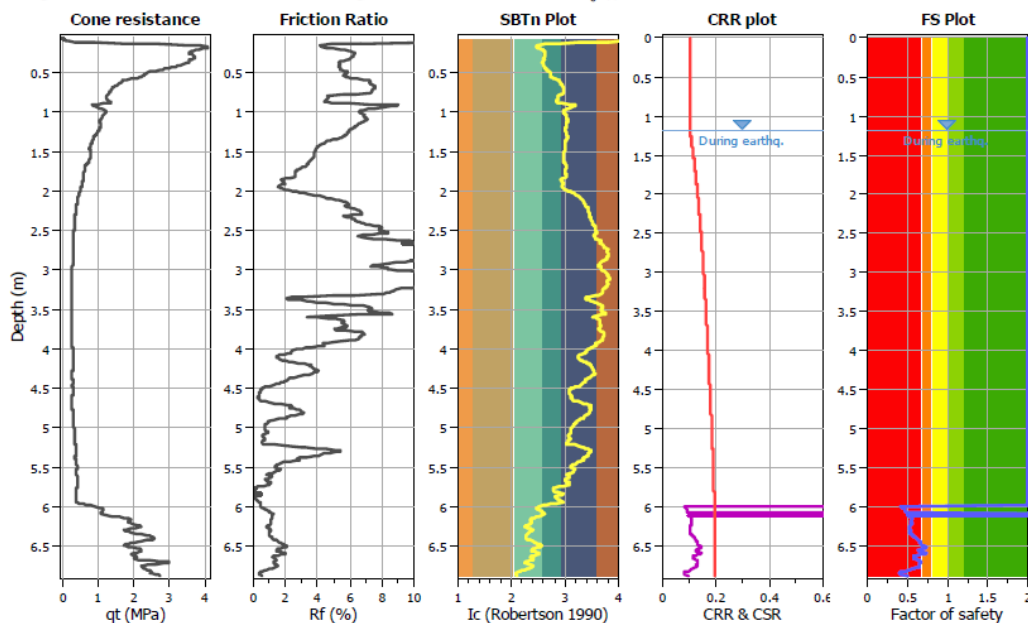
■	Very high risk
■	High risk
■	Low risk

Figura 19 – Report della verifica a liquefazione CPTU7.

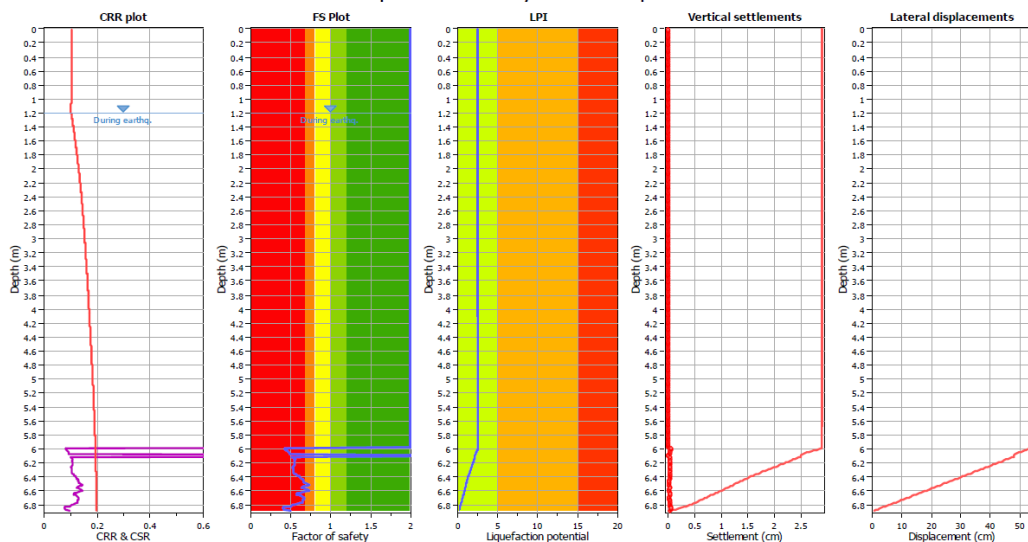
CPT file : CPTU08

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)
Fines correction method:	NCEER (1998)
Points to test:	Based on Ic value
Earthquake magnitude M_w :	6.60
Peak ground acceleration:	0.22
Depth to water table (in situ):	1.20 m

Depth to water table (earthq.):	1.20 m
Average results interval:	3
Ic cut-off value:	2.60
Unit weight calculation:	Based on SBT
Use fill:	No
Fill height:	N/A

Fill weight:	N/A
Transition detect. applied:	No
K_0 applied:	Yes
Clay like behavior applied:	Sands only
Limit depth applied:	Yes
Limit depth:	20.00 m

F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Green	Unlikely to liquefy
Dark Green	Almost certain it will not liquefy

LPT color scheme

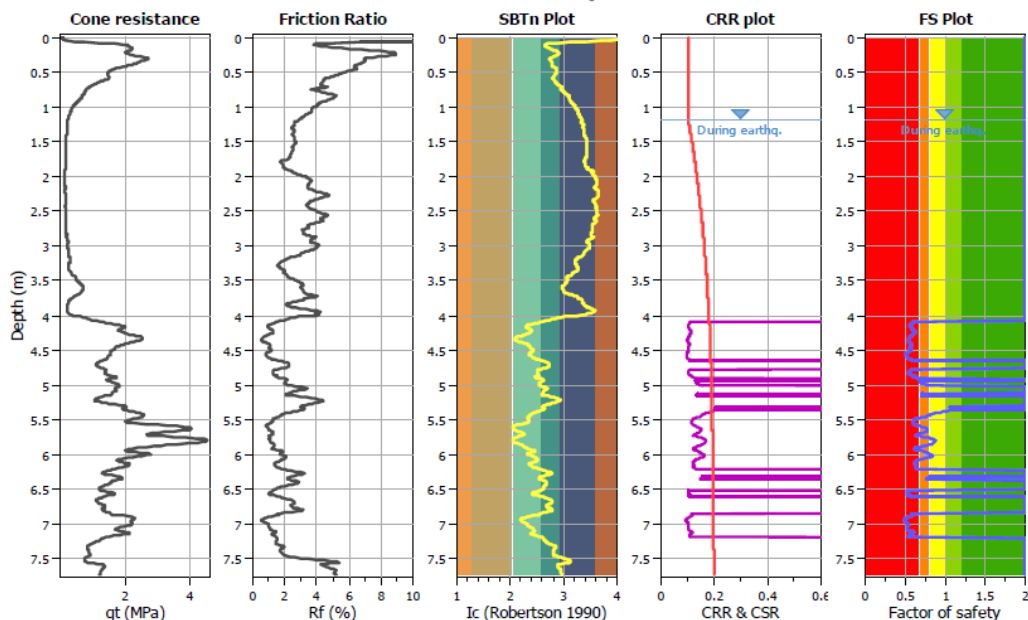
Red	Very high risk
Orange	High risk
Green	Low risk

Figura 20 – Report della verifica a liquefazione CPTU08.

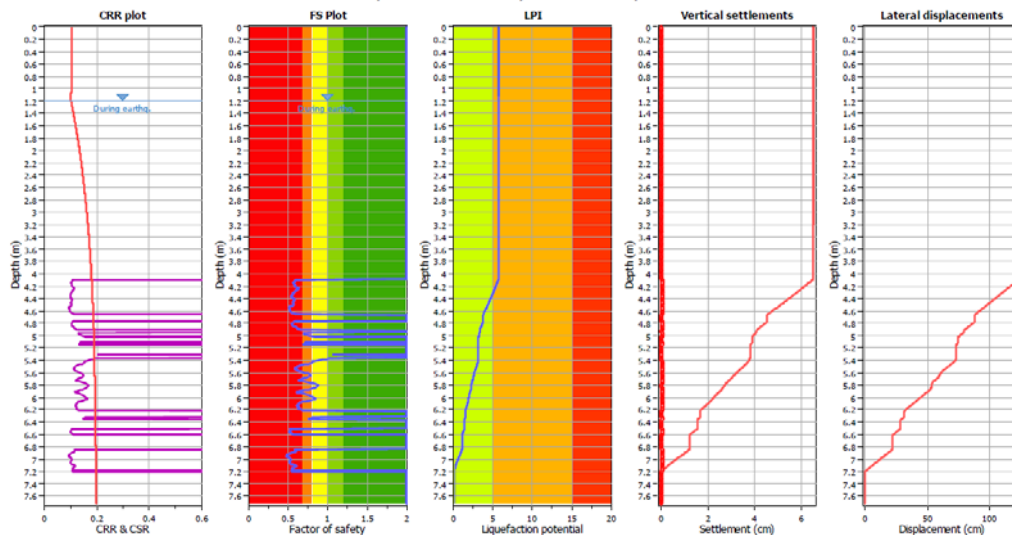
CPT file : CPTU01bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in-situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_0 applied: Yes
Clay like behavior applied: No
Limit depth applied: No
Limit depth: N/A

F.S. color scheme
Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlikely to liquefy
Almost certain it will not liquefy

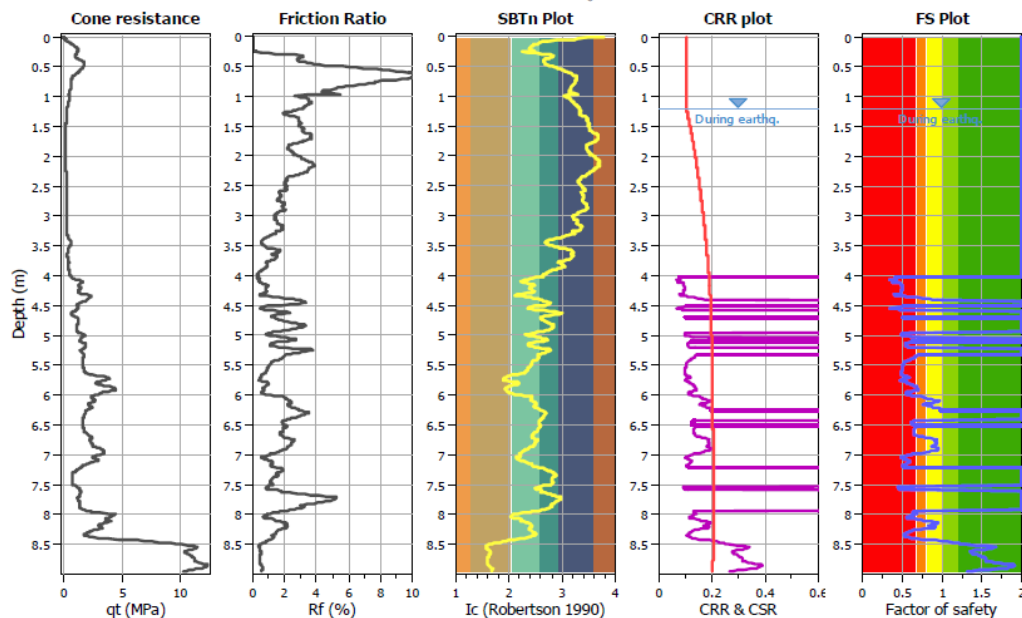
LPI color scheme
Very high risk
High risk
Low risk

Figura 21 – Report della verifica a liquefazione CPTU01bis.

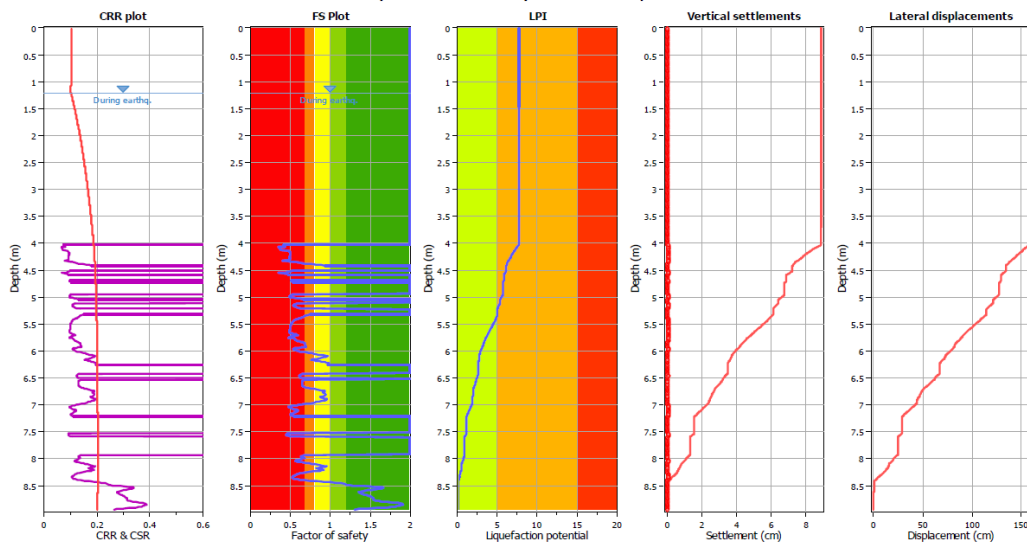
CPT file : CPTU2bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m
Fines correction method:	NCEER (1998)	Average results interval:	3
Points to test:	Based on Ic value	Ic cut-off value:	2.60
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT
Peak ground acceleration:	0.22	Use fill:	No
Depth to water table (in-situ):	1.20 m	Fill height:	N/A

Fill weight:	N/A
Transition detect. applied:	No
K_0 applied:	Yes
Clay like behavior applied:	Sands only
Limit depth applied:	No
Limit depth:	N/A

F.S. color scheme

Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlikely to liquefy
Almost certain it will not liquefy

LPI color scheme

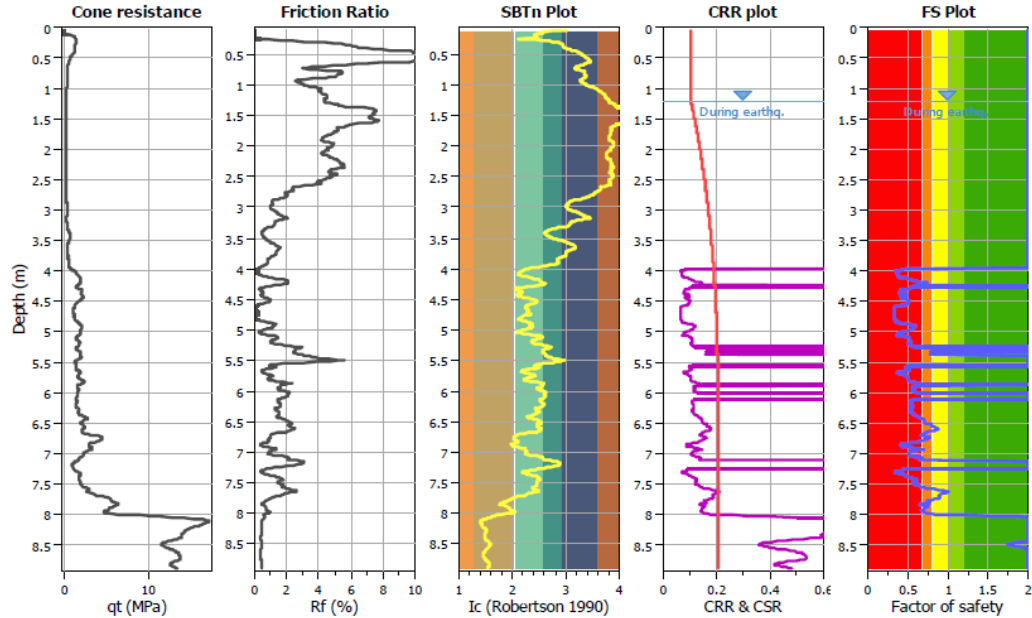
Very high risk
High risk
Low risk

Figura 22 – Report della verifica a liquefazione CPTU2bis.

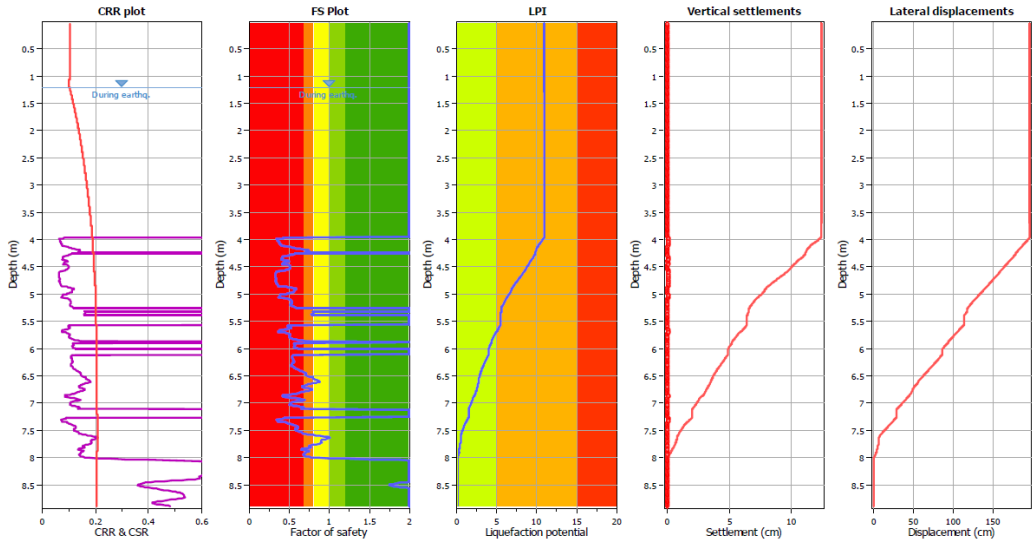
CPT file : CPTU3bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_v applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (natu): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_v applied: Yes
Clay like behavior applied: Sands only
Limit depth applied: No
Limit depth: N/A

F.S. color scheme

Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlike to liquefy
Almost certain it will not liquefy

LPI color scheme

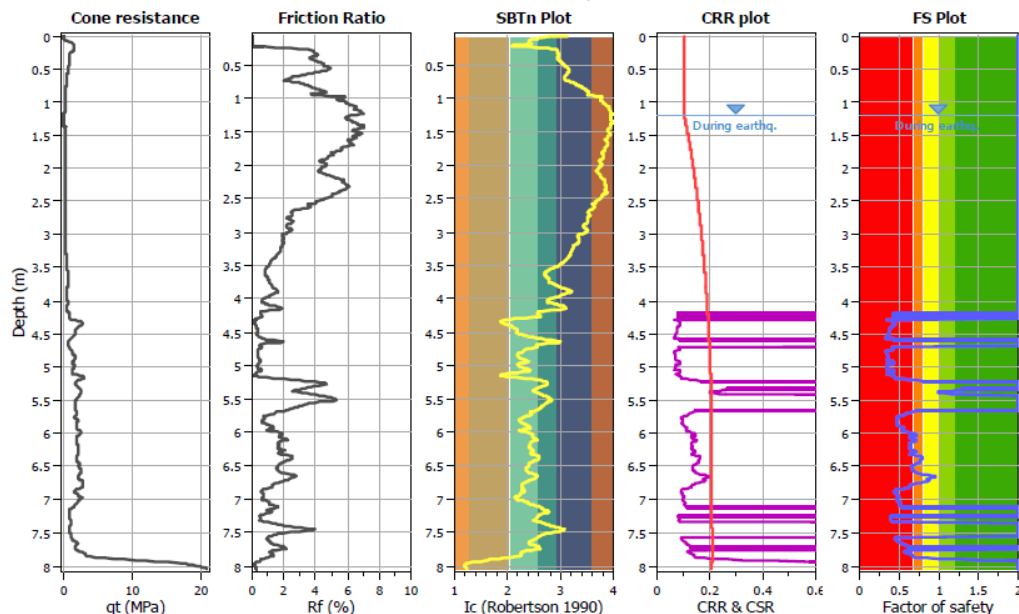
Very high risk
High risk
Low risk

Figura 23 – Report della verifica a liquefazione CPTU3bis.

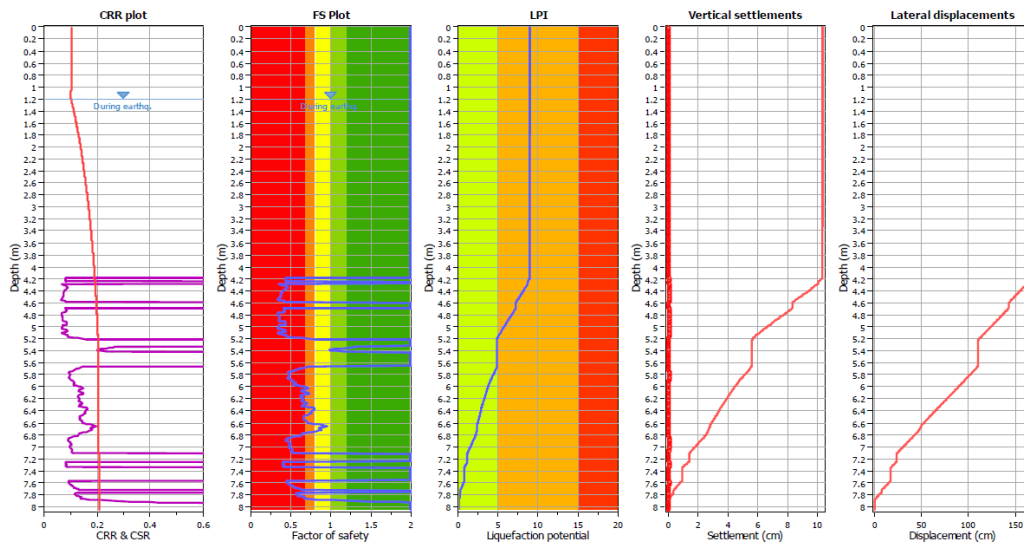
CPT file : CPTU4bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_v applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m
Fines correction method:	NCEER (1998)	Average results interval:	3
Points to test:	Based on Ic value	Ic cut-off value:	2.60
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT
Peak ground acceleration:	0.22	Use fill:	No
Depth to water table (in-situ):	1.20 m	Fill height:	N/A

Fill weight:	N/A	Transition detect. applied:	No
K_v applied:	Yes	Clay like behavior applied:	Sands only
Limit depth applied:	No	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlikely to liquefy
- Almost certain it will not liquefy

LPI color scheme

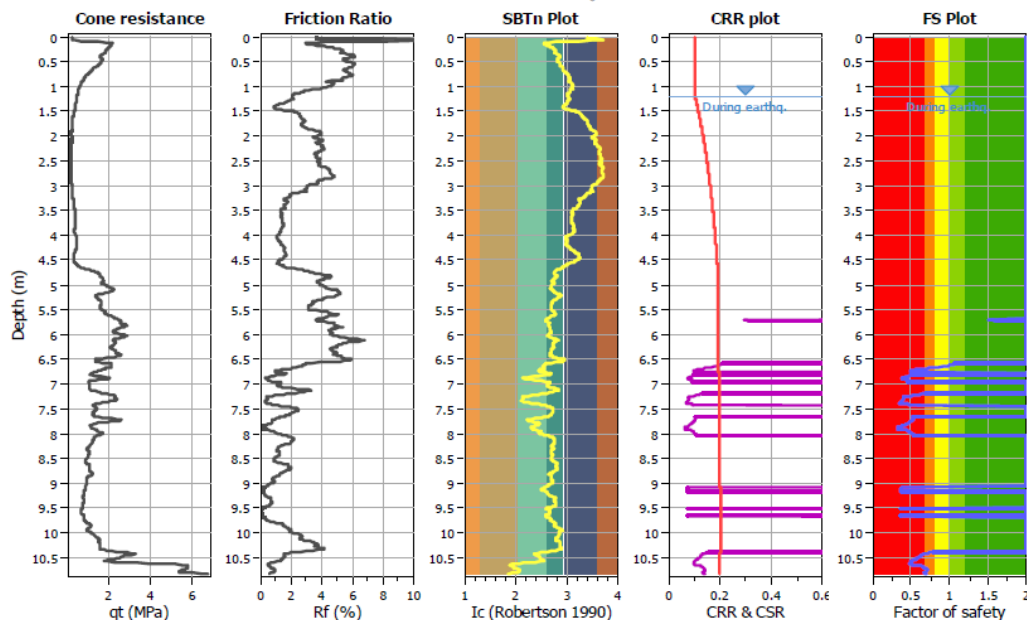
- Very high risk
- High risk
- Low risk

Figura 24 – Report della verifica a liquefazione CPTU4bis.

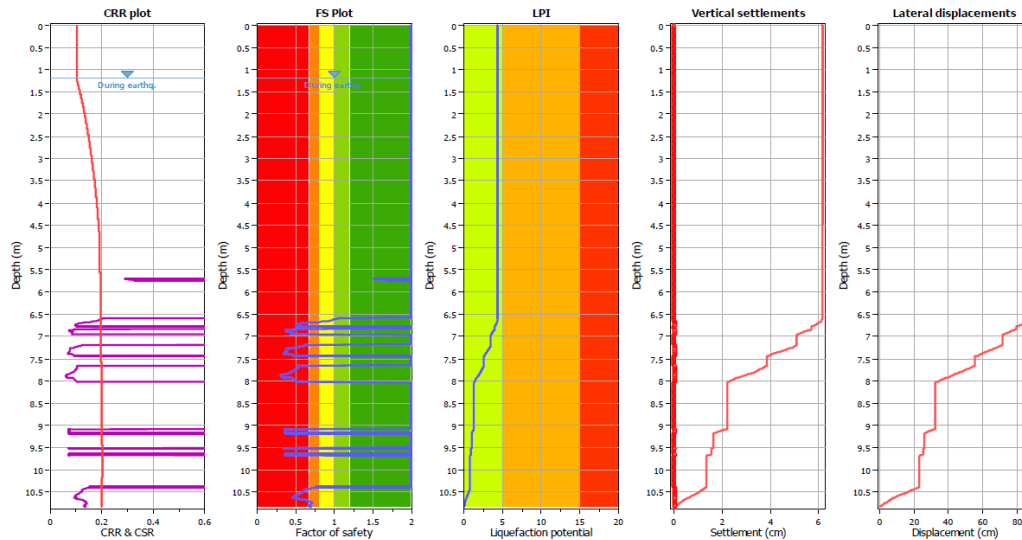
CPT file : CPTU5bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_0 applied: Yes
Clay like behavior applied: Sands only
Limit depth applied: N/A

F.S. color scheme

Red: Almost certain it will liquefy
Orange: Very likely to liquefy
Yellow: Liquefaction and no liq. are equally likely
Green: Unlikely to liquefy
Dark Green: Almost certain it will not liquefy

LPI color scheme

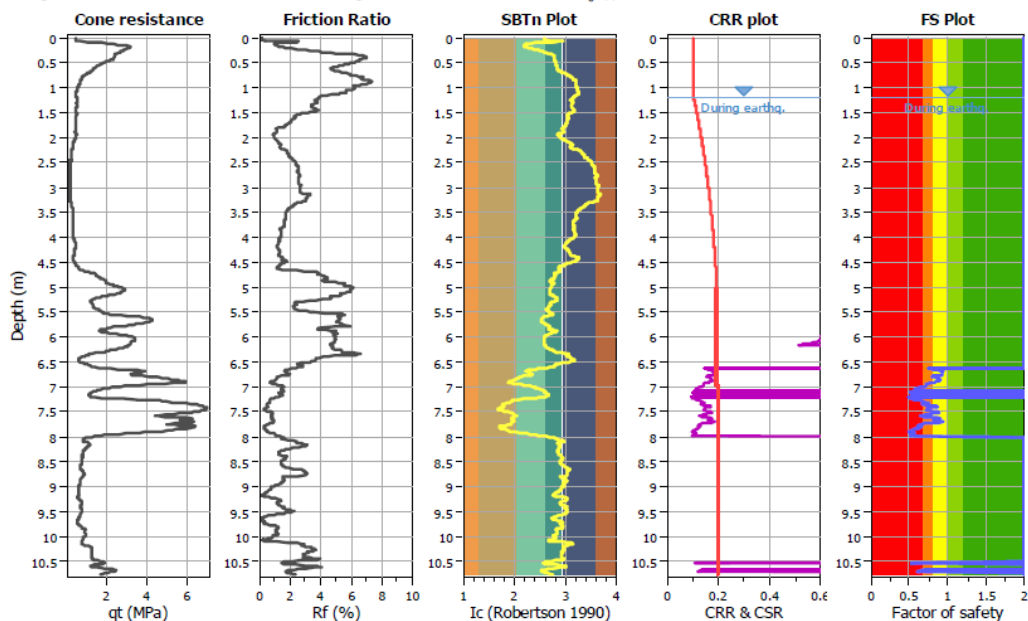
Red: Very high risk
Orange: High risk
Yellow: Low risk

Figura 25 – Report della verifica a liquefazione CPTU5bis.

CPT file : CPTU6bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_u applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots

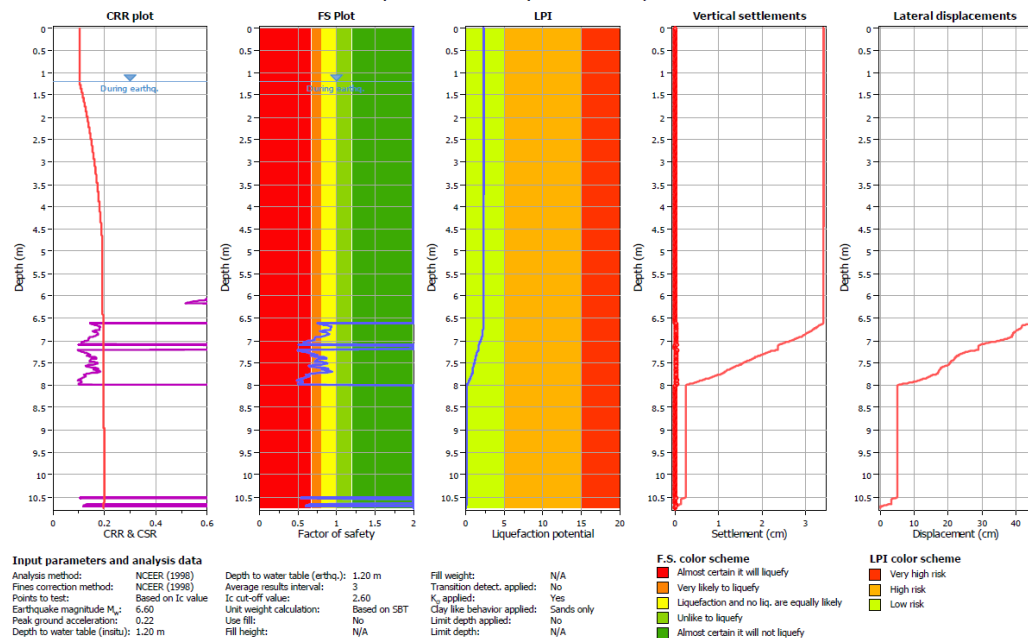
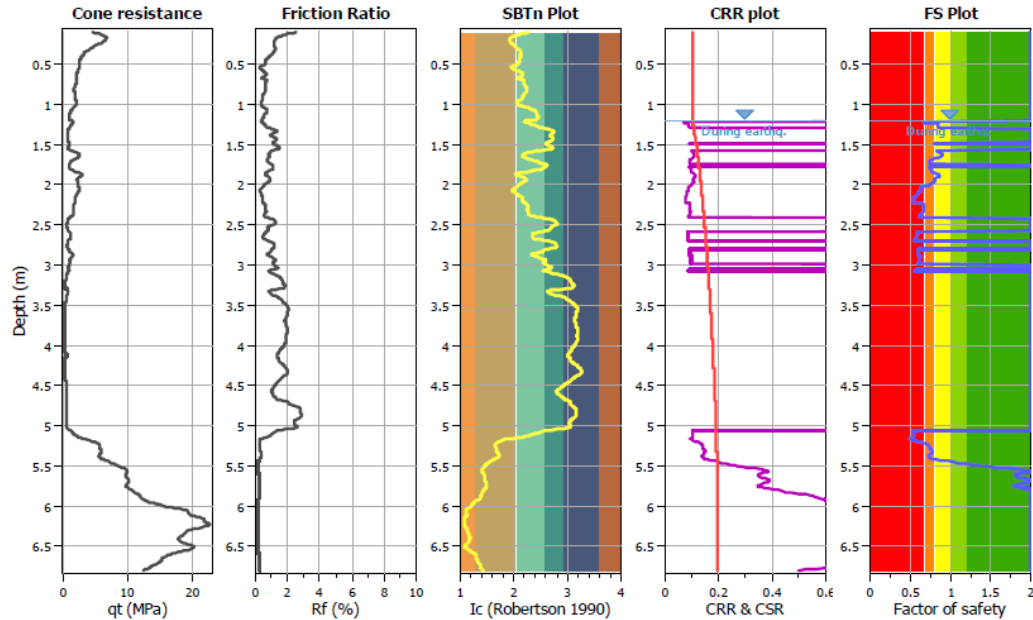


Figura 26 – Report della verifica a liquefazione CPTU6bis.

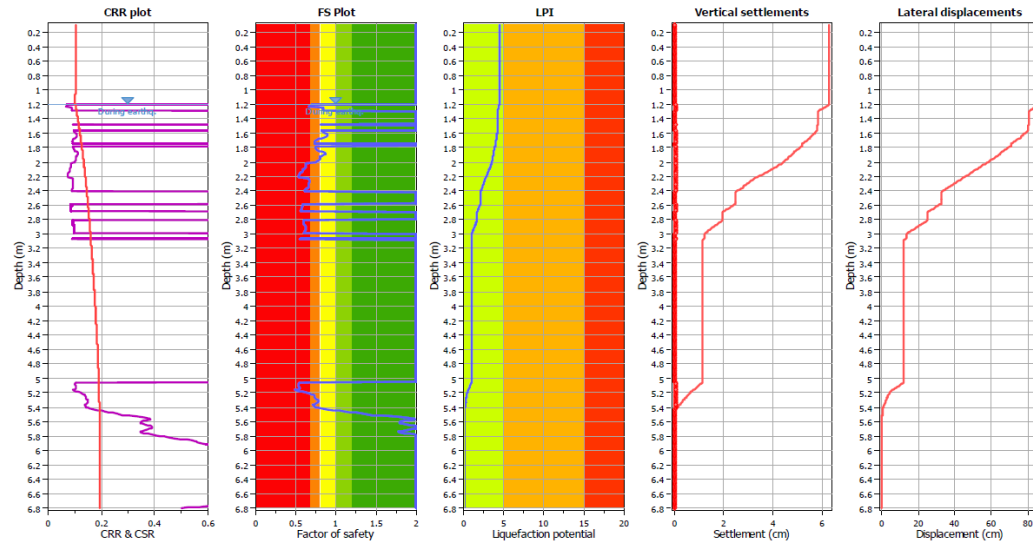
CPT file : CPTU7bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in-situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_0 applied: Yes
Clay like behavior applied: Sands only
Limit depth applied: N/A

F.S. color scheme
 ■ Almost certain it will liquefy
 ■ Very likely to liquefy
 ■ Liquefaction and no liq. are equally likely
 ■ Unlikely to liquefy
 ■ Almost certain it will not liquefy

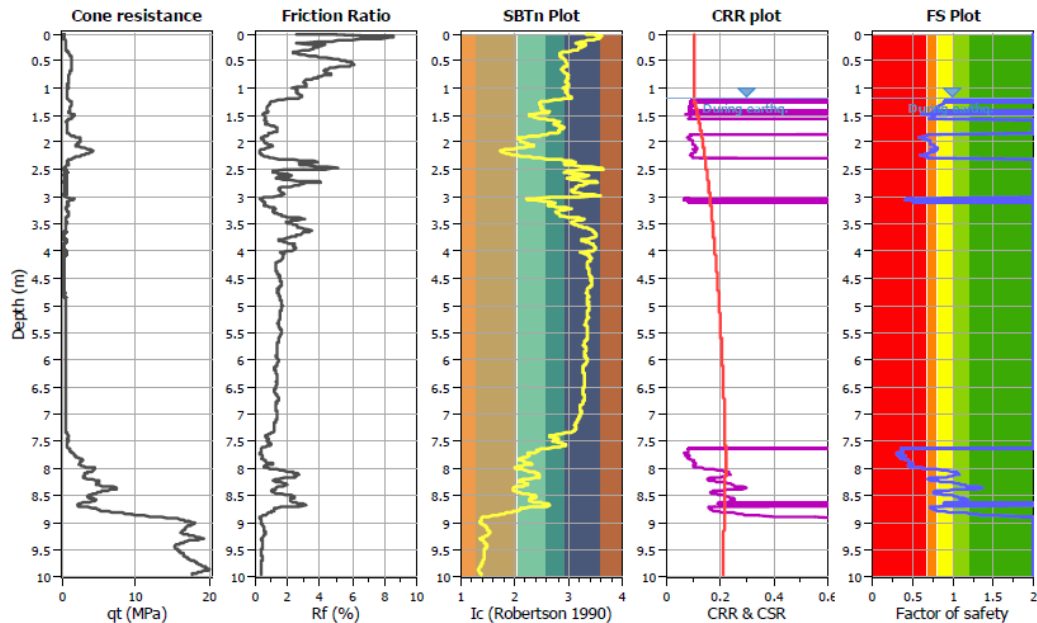
LPI color scheme
 ■ Very high risk
 ■ High risk
 ■ Low risk

Figura 27 – Report della verifica a liquefazione CPTU7bis.

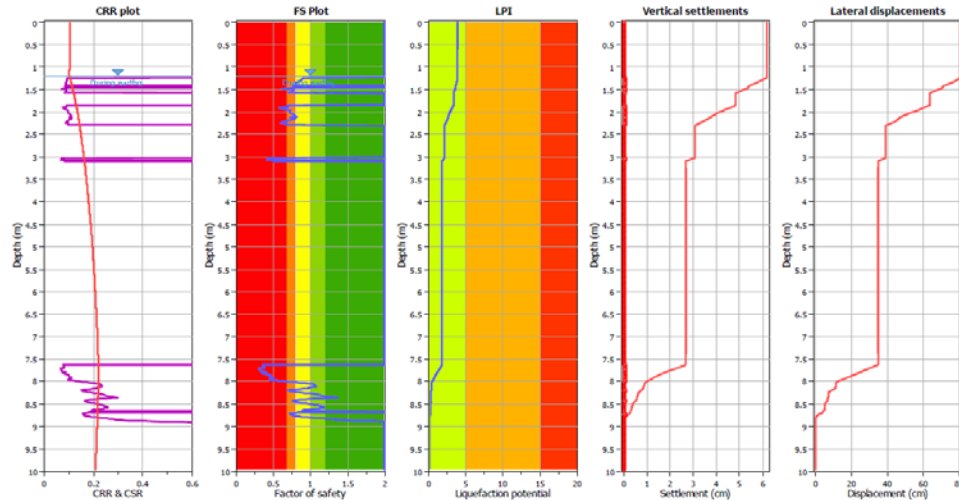
CPT file : CPTU8bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_p applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data
Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in-situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_p applied: Yes
Clay like behavior applied: No
Limit depth applied: No
Limit depth: N/A

F.S. color scheme
Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlikely to liquefy
Almost certain it will not liquefy

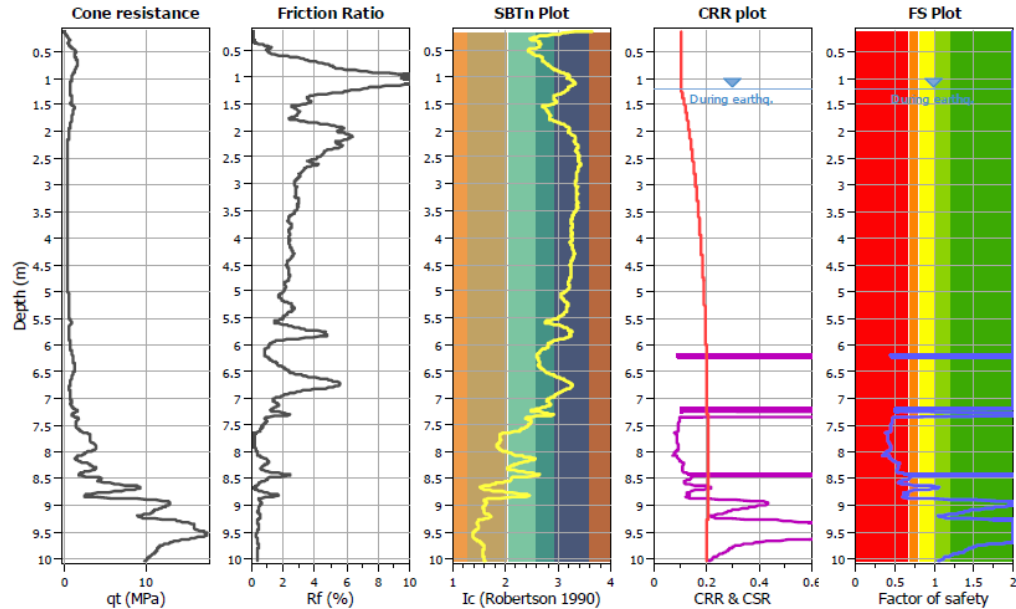
LPI color scheme
Very high risk
High risk
Low risk

Figura 28 – Report della verifica a liquefazione CPTU8bis.

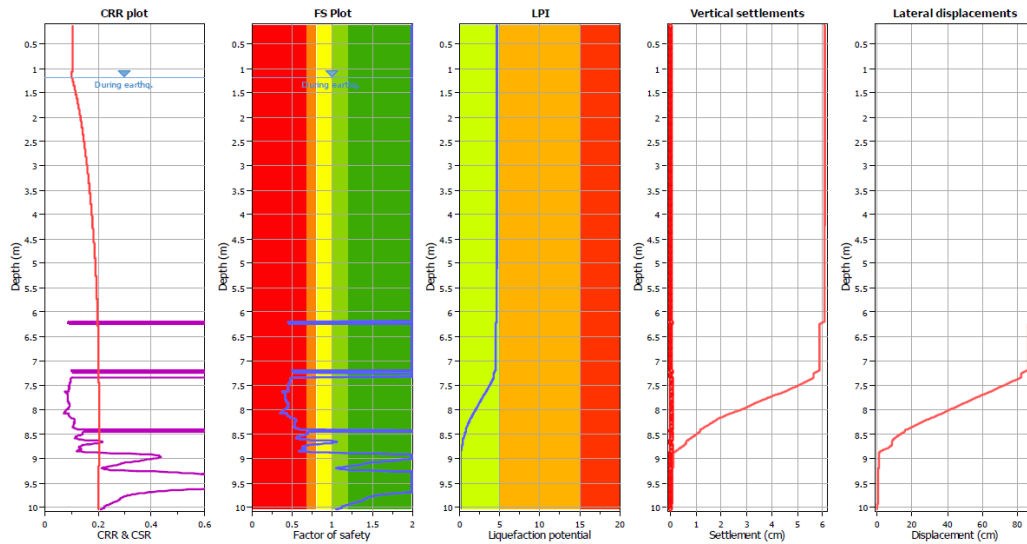
CPT file : CPTU9bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_0 applied: Yes
Clay like behavior applied: No
Limit depth applied: No
Limit depth: N/A

F.S. color scheme

Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlike to liquefy
Almost certain it will not liquefy

LPI color scheme

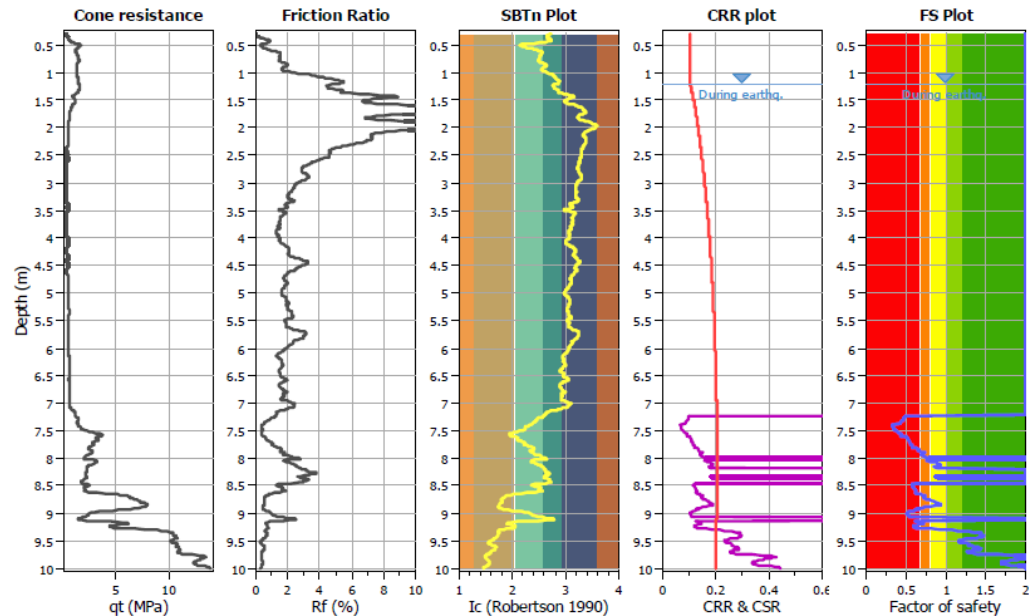
Very high risk
High risk
Low risk

Figura 29 – Report della verifica a liquefazione CPTU9bis.

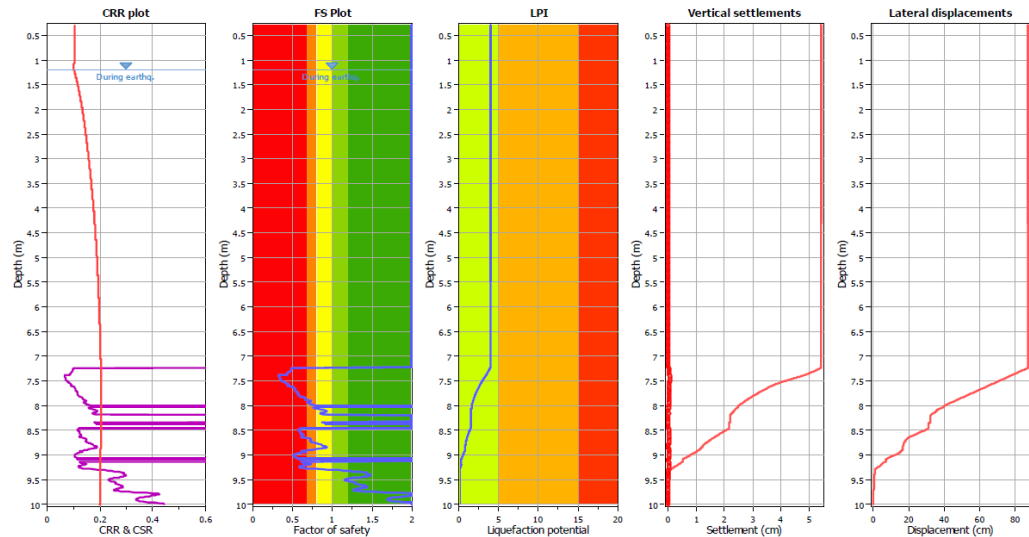
CPT file : CPTU10bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_0 applied: Yes
Clay like behavior applied: No
Limit depth applied: N/A

F.S. color scheme

Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlike to liquefy
Almost certain it will not liquefy

LPI color scheme

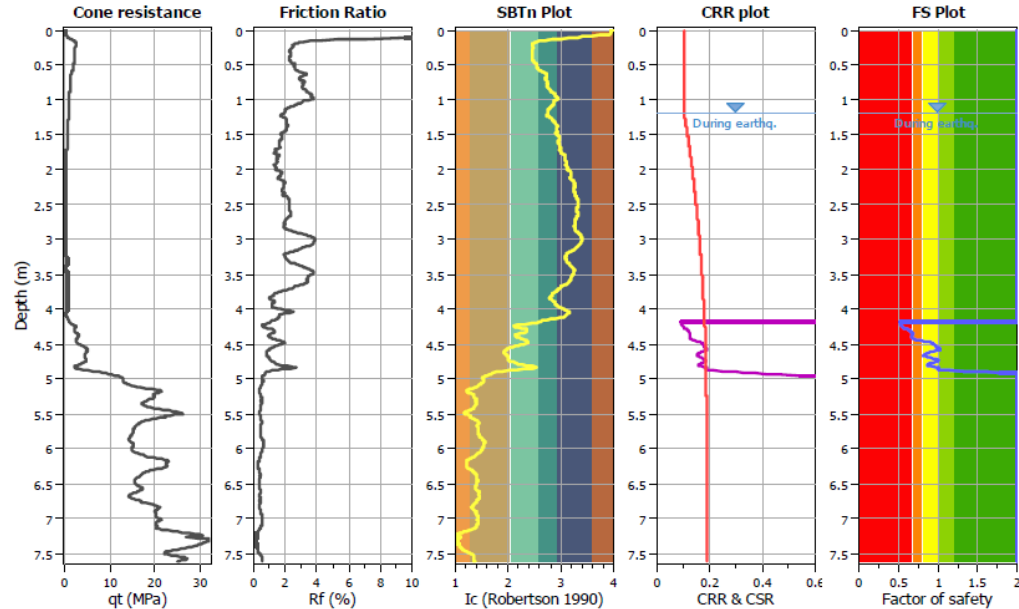
Very high risk
High risk
Low risk

Figura 30 – Report della verifica a liquefazione CPTU10bis.

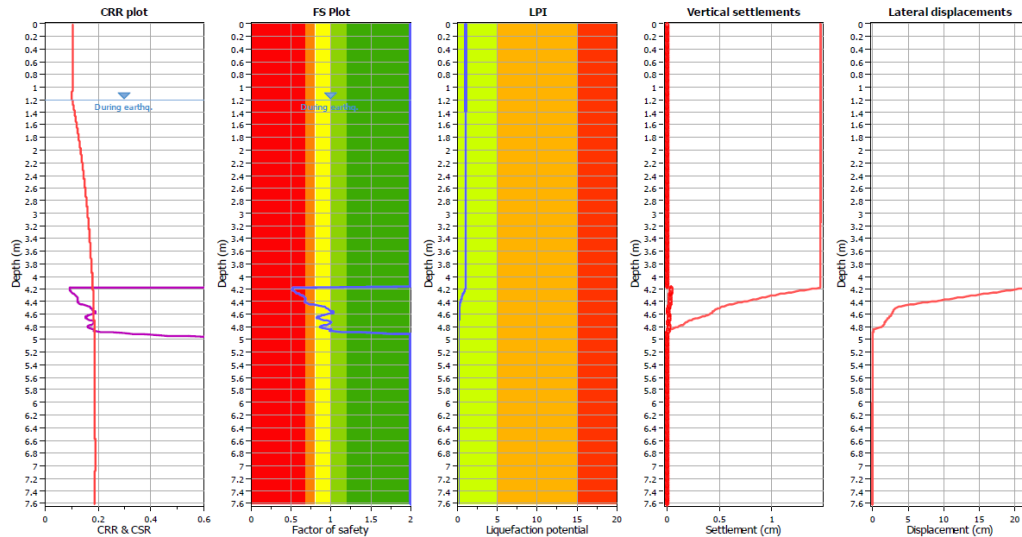
CPT file : CPTU11bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off values:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_{σ} applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data
Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (natu): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off values: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_{σ} applied: Yes
Clay like behavior applied: No
Limit depth applied: No
Limit depth: N/A

F.S. color scheme
Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlike to liquefy
Almost certain it will not liquefy

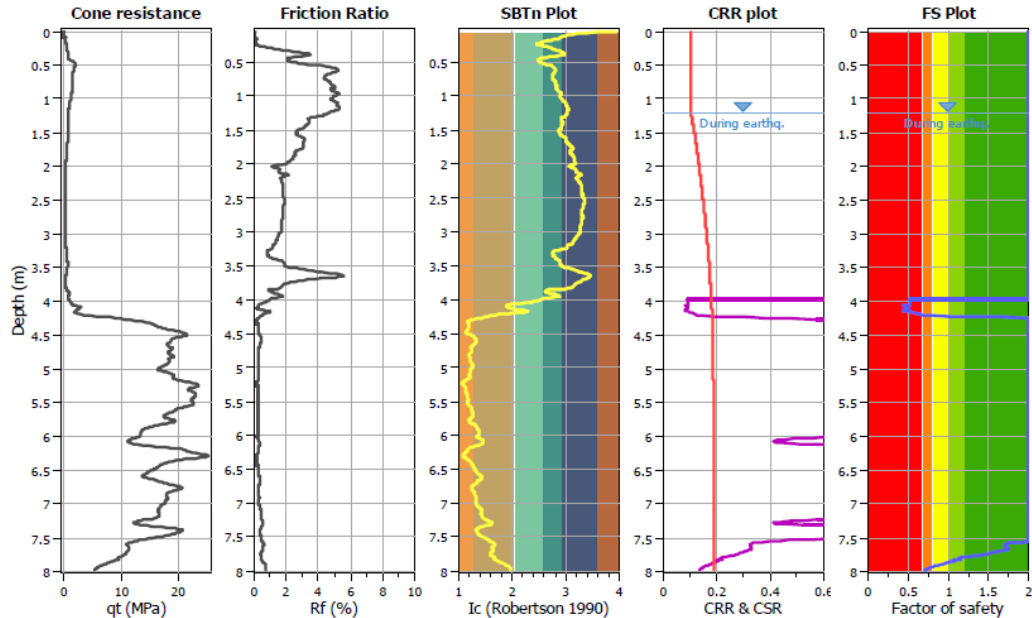
LPI color scheme
Very high risk
High risk
Low risk

Figura 31 – Report della verifica a liquefazione CPTU11bis.

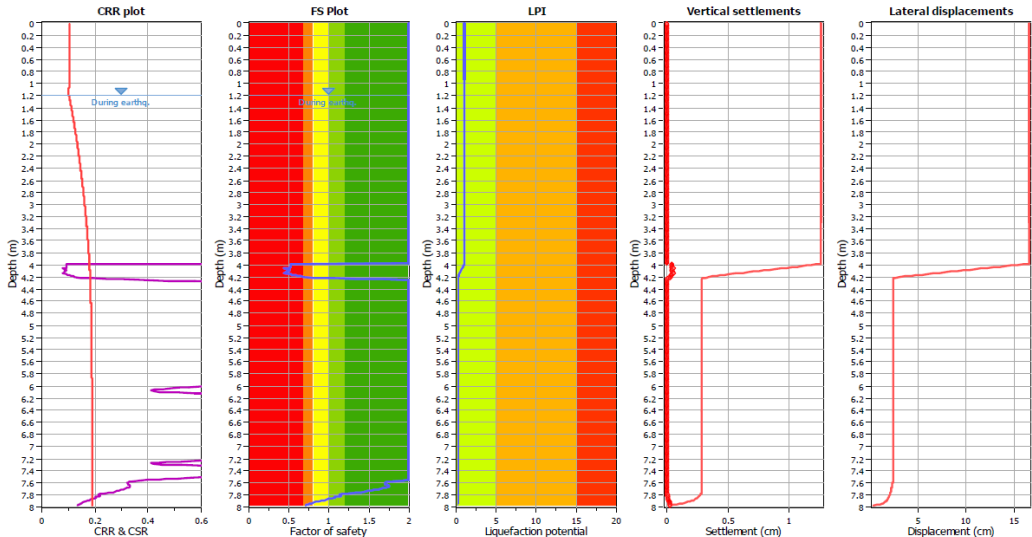
CPT file : CPTU12bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_u applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in-situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_u applied: Yes
Clay like behavior applied: Sands only
Limit depth applied: No
Limit depth: N/A

F.S. color scheme

Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlikely to liquefy
Almost certain it will not liquefy

LPI color scheme

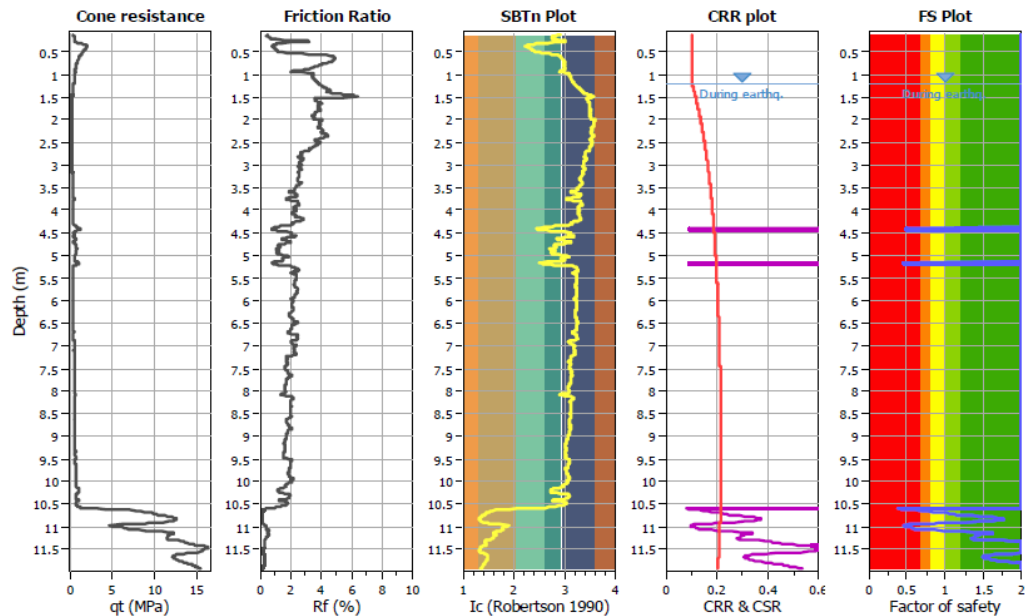
Very high risk
High risk
Low risk

Figura 32 – Report della verifica a liquefazione CPTU12bis.

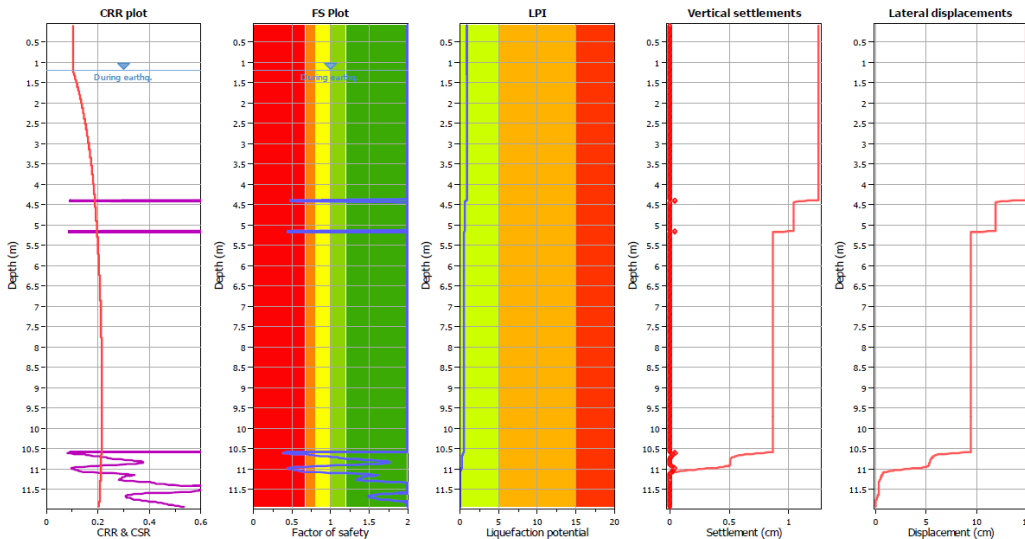
CPT file : CPTU13bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method: NCEER (1998)
Fines correction method: NCEER (1998)
Points to test: Based on Ic value
Earthquake magnitude M_w : 6.60
Peak ground acceleration: 0.22
Depth to water table (in-situ): 1.20 m

Depth to water table (earthq.): 1.20 m
Average results interval: 3
Ic cut-off value: 2.60
Unit weight calculation: Based on SBT
Use fill: No
Fill height: N/A

Fill weight: N/A
Transition detect. applied: No
 K_0 applied: Yes
Clay like behavior applied: Sands only
Limit depth applied: No
Limit depth: N/A

F.S. color scheme

Almost certain it will liquefy
Very likely to liquefy
Liquefaction and no liq. are equally likely
Unlike to liquefy
Almost certain it will not liquefy

LPI color scheme

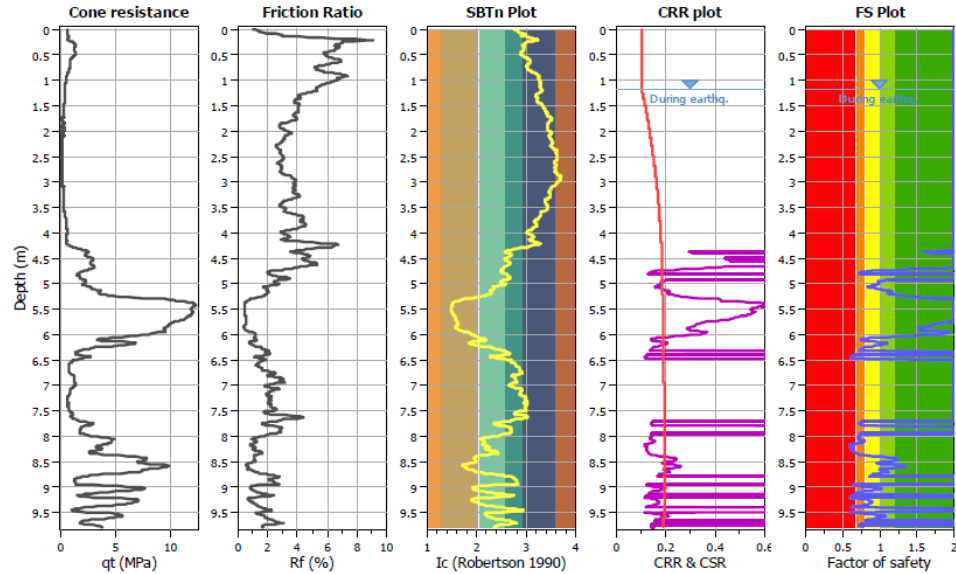
Very high risk
High risk
Low risk

Figura 33 – Report della verifica a liquefazione CPTU13bis.

CPT file : CPTU14bis

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_{α} applied:	Yes	MSF method:	Method based



Liquefaction analysis overall plots

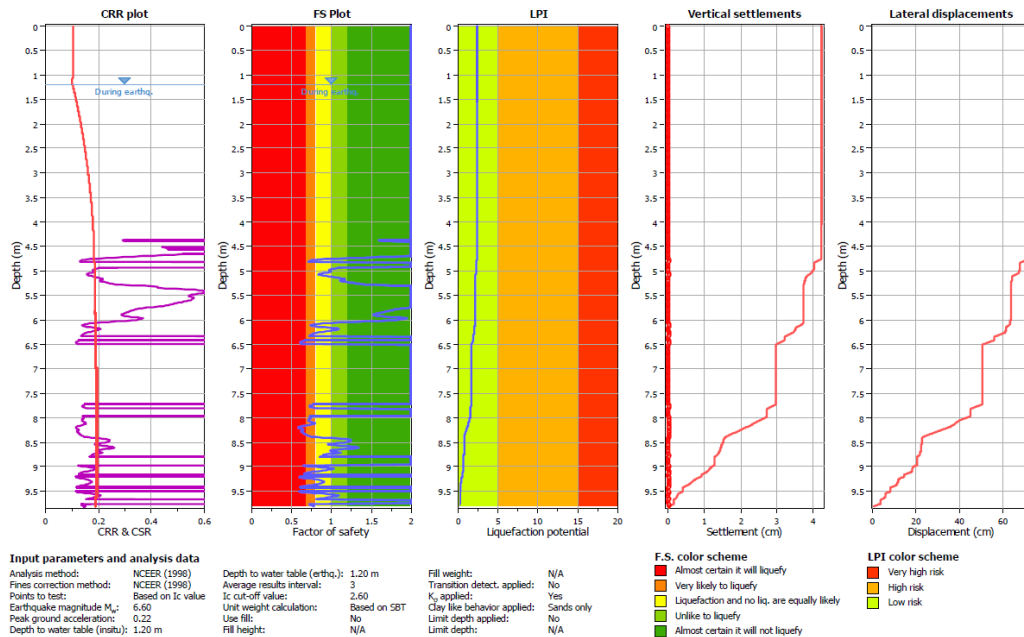


Figura 34 – Report della verifica a liquefazione CPTU14bis.

Prova penetrometrica	Indice del potenziale di liquefazione I_L
CPTU1	3,94
CPTU2	2,39
CPTU3	1,73
CPTU4	0,56
CPTU5	1,69
CPTU6	0,00
CPTU7	0,08
CPTU8	2,51
CPTU1bis	5,72
CPTU2bis	7,66
CPTU3bis	10,93
CPTU4bis	8,97
CPTU5bis	4,31
CPTU6bis	2,35
CPTU7bis	4,41
CPTU8bis	3,88
CPTU9bis	4,63
CPTU10bis	3,92
CPTU11bis	1,04
CPTU12bis	1,01
CPTU13bis	0,85
CPTU14bis	2,33

Tabella 28 – Indice del potenziale di liquefazione in corrispondenza delle indagini CPTU.

Come si evince dalla tabella soprastante, il rischio di liquefazione è basso per le CPTU3, CPTU4, CPT5, CPTU6, CPTU7, CPTU11bis, CPTU12bis e CPTU13bis mentre per le restanti CPTU risulta essere moderato/alto.

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7 CONSIDERAZIONI CONCLUSIVE

Dalle indagini eseguite risulta che:

- Nelle indagini CPTU sono stati rilevati terreni limoso argillosi molli nella porzione più superficiale di sottosuolo, fino a 6-7 m di profondità, seguiti da un livello limoso sabbioso più consistente. Gli orizzonti sabbiosi mostrano profondità variabili ma, nella maggioranza delle prove integrative, la loro presenza è certa a partire da 9 m da piano campagna. Particolare attenzione ad alcuni livelli più organici debolmente consistenti localmente riscontrati nelle prove CPTU3bis, CPTU4bis, CPTU5bis.
- La categoria di sottosuolo, secondo la normativa vigente, risulta essere D ovvero *“Depositi di terreni a grana grossa scarsamente addensati o 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”*.
- Il livello dell’acqua nel terreno misurato nel foro di indagine è stato riscontrato alla profondità di 1,2/1,4 m da piano campagna. Nel caso di scavi spinti oltre queste profondità potrebbe rendersi necessario adottare dei sistemi per abbassare localmente il livello dell’acqua nel terreno.

Si ritiene che gli interventi previsti siano compatibili dal punto di vista geologico, geomorfologico e idrogeologico, considerando gli aspetti precedentemente esposti.

DOTT. GEOL. BASILIO ZANNINELLO



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ALLEGATO 1

GRAFICI ED ELABORAZIONI DELLE PROVE PENETROMETRICHE CPTU



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE Greenplan Engineering S.r.l.

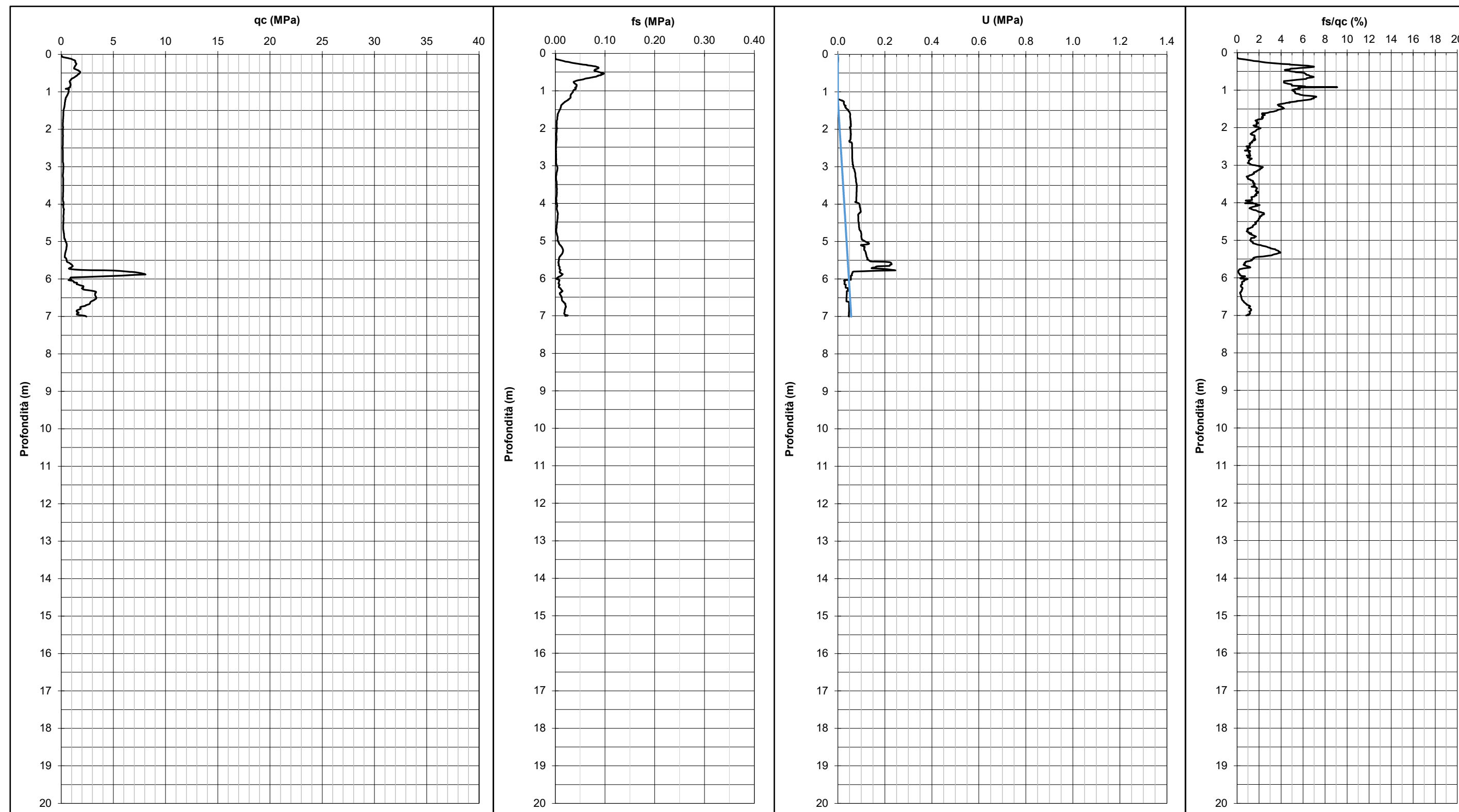
CANTIERE Aquileia (UD)

PROVA CPTU1 **DATA** 19/09/2022 **OPERATORE** Dott. Andrea Zampieri

Punta Mkj497 **Quota inizio indagine** p.c. m s.l.m. **Prescavo** 0.00 m da p.c.

Profondità prova 7.00 m da p.c. **Livello acqua** 1.20 m da p.c.

Coordinate WGS84 Y 13.331448 E X 45.755375 N



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU01

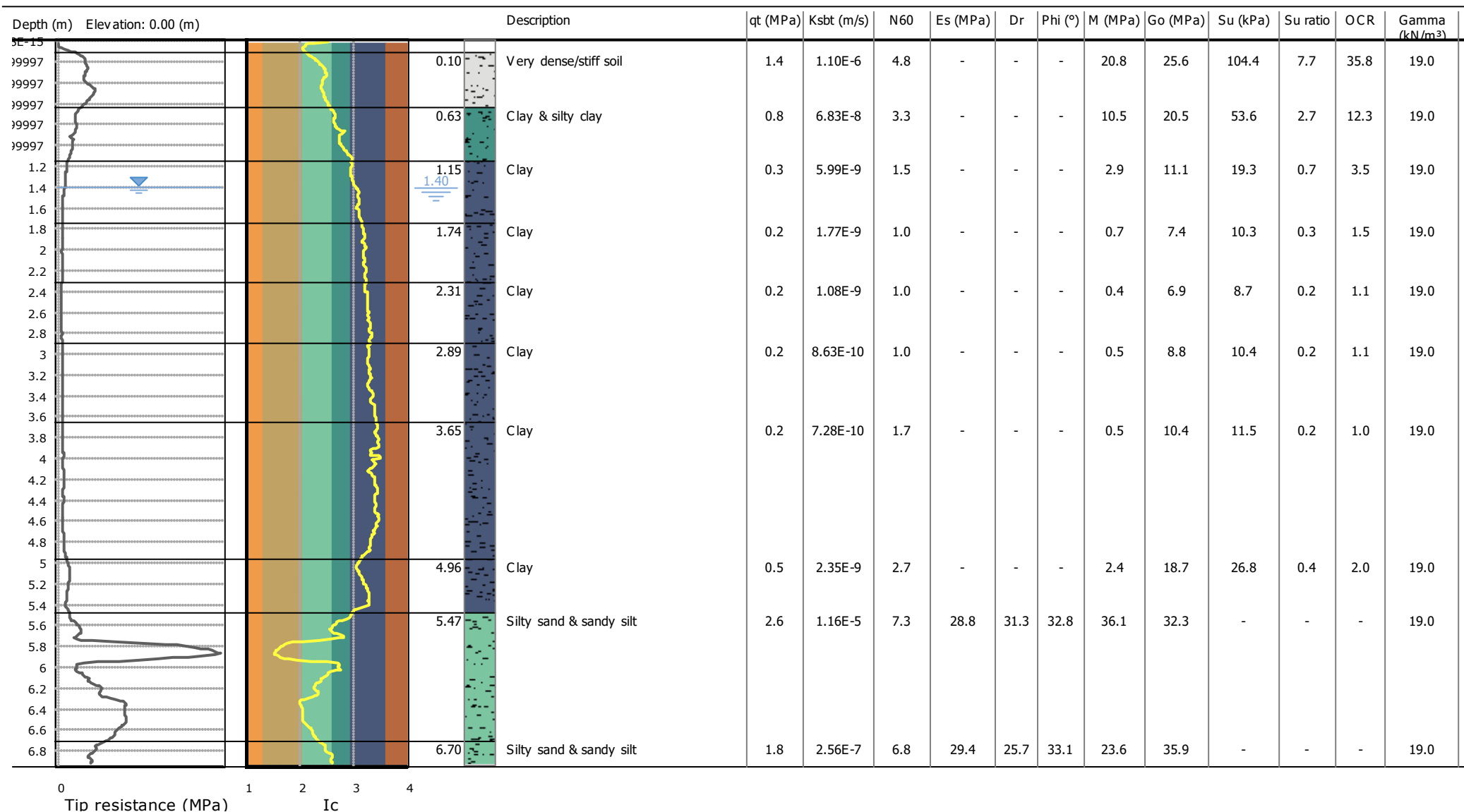
Total depth: 6.92 m, Date: 19/09/2022

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



::: Layer No: 1 :::		
Code: Layer_1 Start depth: 0.10 (m), End depth: 0.63 (m)		
Description: Very dense/stiff soil		
Basic results	Estimation results	
Total cone resistance: 1.40 ±0.24 MPa	Permeability: 1.10E-06 ±1.48E-06 m/s	Constrained Mod.: 20.83 ±3.55 MPa
Sleeve friction: 68.18 ±24.83 kPa	N₆₀: 4.83 ±1.02 blows	Go: 25.57 ±6.57 MPa
SBT _n : 9	Es: 0.00 ±0.00 MPa	Su: 104.44 ±13.52 kPa
SBTn description: Very dense/stiff soil	Dr (%): 0.00 ±0.00	Su ratio: 7.75 ±1.46
	φ (degrees): 0.00 ±0.00 °	O.C.R.: 35.80 ±6.74
	Unit weight: 19.00 ±0.00 kN/m ³	

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.63 (m), **End depth:** 1.15 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.77 ±0.15 MPa

Sleeve friction: 36.85 ±5.28 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 6.83E-08 ±5.21E-08 m/s

N<sub>60</sub>: 3.30 ±0.54 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 10.50 ±2.17 MPa

Go: 20.50 ±1.56 MPa

Su: 53.56 ±11.05 kPa

Su ratio: 2.66 ±0.74

O.C.R.: 12.31 ±3.42

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.15 (m), **End depth:** 1.74 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.30 ±0.08 MPa

Sleeve friction: 10.11 ±6.50 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.99E-09 ±2.65E-09 m/s

N<sub>60</sub>: 1.50 ±0.50 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.94 ±1.77 MPa

Go: 11.11 ±2.66 MPa

Su: 19.34 ±6.06 kPa

Su ratio: 0.75 ±0.30

O.C.R.: 3.46 ±1.39

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 1.74 (m), **End depth:** 2.31 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.18 ±0.01 MPa

Sleeve friction: 2.79 ±0.35 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.77E-09 ±3.59E-10 m/s

N<sub>60</sub>: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.65 ±0.09 MPa

Go: 7.44 ±0.20 MPa

Su: 10.34 ±0.50 kPa

Su ratio: 0.32 ±0.03

O.C.R.: 1.48 ±0.13

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 2.31 (m), **End depth:** 2.89 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.17 ±0.01 MPa

Sleeve friction: 1.83 ±0.26 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.08E-09 ±2.21E-10 m/s

N<sub>60</sub>: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.40 ±0.04 MPa

Go: 6.91 ±0.34 MPa

Su: 8.71 ±0.34 kPa

Su ratio: 0.23 ±0.01

O.C.R.: 1.07 ±0.07

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 2.89 (m), **End depth:** 3.65 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.21 ±0.01 MPa

Sleeve friction: 3.05 ±0.75 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 8.63E-10 ±1.23E-10 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.50 ±0.11 MPa

Go: 8.82 ±0.68 MPa

Su: 10.44 ±0.95 kPa

Su ratio: 0.24 ±0.03

O.C.R.: 1.11 ±0.14

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 3.65 (m), **End depth:** 4.96 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.24 ±0.04 MPa

Sleeve friction: 3.67 ±1.13 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 7.28E-10 ±2.63E-10 m/s

N_{₆₀}: 1.65 ±0.48 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.50 ±0.24 MPa

Go: 10.40 ±1.58 MPa

Su: 11.47 ±2.78 kPa

Su ratio: 0.21 ±0.04

O.C.R.: 0.99 ±0.20

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 4.96 (m), **End depth:** 5.47 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.47 ±0.06 MPa

Sleeve friction: 11.27 ±3.21 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.35E-09 ±1.43E-09 m/s

N_{₆₀}: 2.71 ±0.46 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.35 ±0.80 MPa

Go: 18.72 ±2.11 MPa

Su: 26.76 ±4.63 kPa

Su ratio: 0.44 ±0.08

O.C.R.: 2.01 ±0.37

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 5.47 (m), **End depth:** 6.70 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 2.60 ±1.87 MPa

Sleeve friction: 11.01 ±4.45 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 1.16E-05 ±3.56E-05 m/s

N_{₆₀}: 7.35 ±3.37 blows

Es: 28.78 ±5.72 MPa

Dr (%): 31.32 ±7.77

φ (degrees): 32.79 ±1.14 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 36.15 ±24.71 MPa

Go: 32.33 ±9.21 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 10 ::**Code:** Layer_10 **Start depth:** 6.70 (m), **End depth:** 6.92 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 1.81 ±0.27 MPa

Sleeve friction: 19.65 ±1.66 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 2.56E-07 ±1.76E-07 m/s

N_{₆₀}: 6.77 ±0.69 blows

Es: 29.38 ±1.17 MPa

Dr (%): 25.66 ±1.51

φ (degrees): 33.08 ±0.03 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 23.55 ±3.79 MPa

Go: 35.90 ±1.78 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.10	0.53	1.10E-06	4.8	0.0	0.0	0.0	20.8	25.6	104.4	7.7	35.8	19.0
0.63		(±1.48E-06)	(±1.0)	(±0.0)	(±0.0)	(±0.0)	(±3.6)	(±6.6)	(±13.5)	(±1.5)	(±6.7)	(±0.0)
0.63	0.52	6.83E-08	3.3	0.0	0.0	0.0	10.5	20.5	53.6	2.7	12.3	19.0
1.15		(±5.21E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±2.2)	(±1.6)	(±11.1)	(±0.7)	(±3.4)	(±0.0)
1.15	0.59	5.99E-09	1.5	0.0	0.0	0.0	2.9	11.1	19.3	0.7	3.5	19.0
1.74		(±2.65E-09)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±1.8)	(±2.7)	(±6.1)	(±0.3)	(±1.4)	(±0.0)
1.74	0.57	1.77E-09	1.0	0.0	0.0	0.0	0.7	7.4	10.3	0.3	1.5	19.0
2.31		(±3.59E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.2)	(±0.5)	(±0.0)	(±0.1)	(±0.0)
2.31	0.58	1.08E-09	1.0	0.0	0.0	0.0	0.4	6.9	8.7	0.2	1.1	19.0
2.89		(±2.21E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.3)	(±0.3)	(±0.0)	(±0.1)	(±0.0)
2.89	0.76	8.63E-10	1.0	0.0	0.0	0.0	0.5	8.8	10.4	0.2	1.1	19.0
3.65		(±1.23E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.7)	(±1.0)	(±0.0)	(±0.1)	(±0.0)
3.65	1.31	7.28E-10	1.7	0.0	0.0	0.0	0.5	10.4	11.5	0.2	1.0	19.0
4.96		(±2.63E-10)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±1.6)	(±2.8)	(±0.0)	(±0.2)	(±0.0)
4.96	0.51	2.35E-09	2.7	0.0	0.0	0.0	2.4	18.7	26.8	0.4	2.0	19.0
5.47		(±1.43E-09)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±0.8)	(±2.1)	(±4.6)	(±0.1)	(±0.4)	(±0.0)
5.47	1.23	1.16E-05	7.3	28.8	31.3	32.8	36.1	32.3	0.0	0.0	0.0	19.0
6.70		(±3.56E-05)	(±3.4)	(±5.7)	(±7.8)	(±1.1)	(±24.7)	(±9.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
6.70	0.22	2.56E-07	6.8	29.4	25.7	33.1	23.6	35.9	0.0	0.0	0.0	19.0
6.92		(±1.76E-07)	(±0.7)	(±1.2)	(±1.5)	(±0.0)	(±3.8)	(±1.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

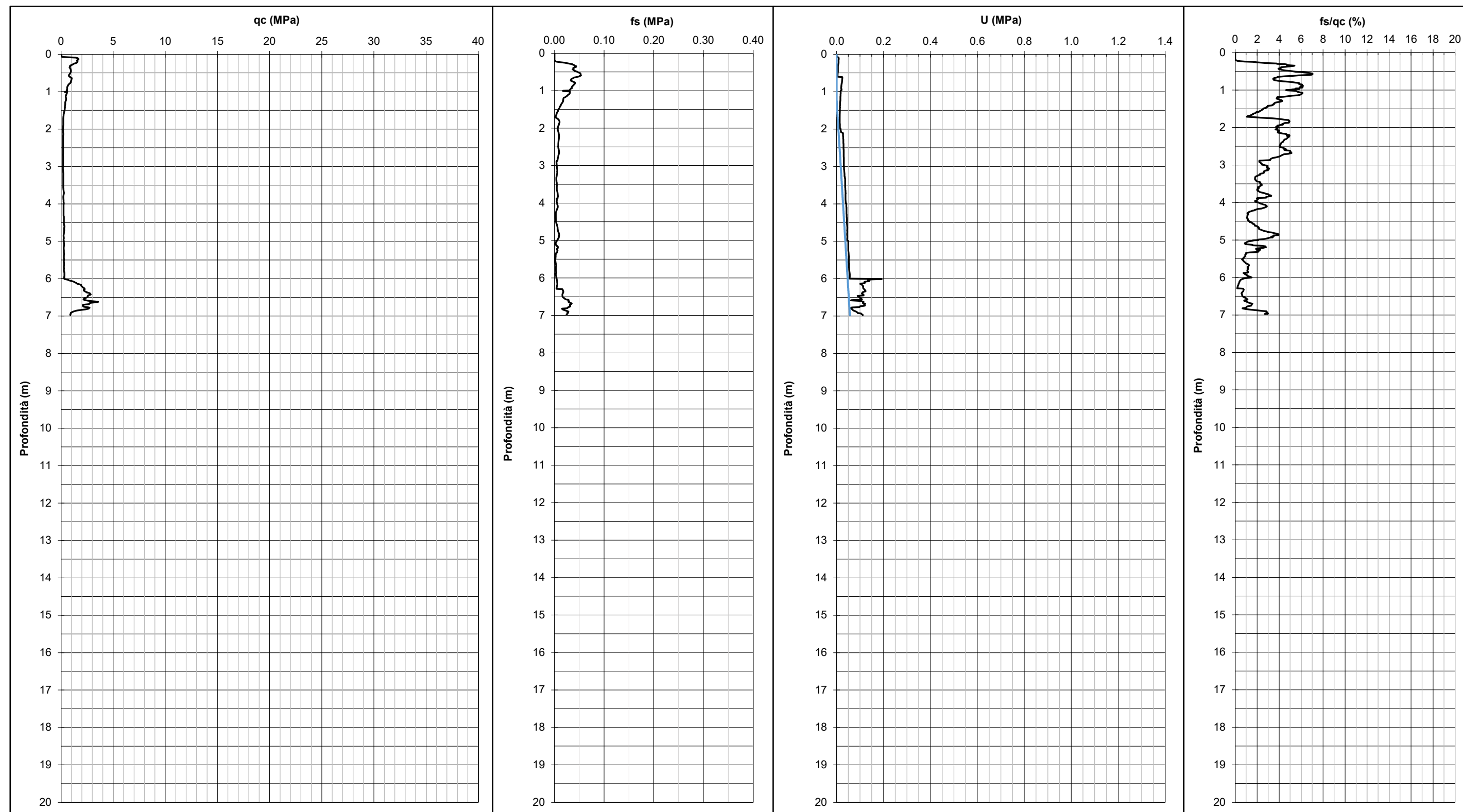
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	0.70	C	86.1	44.6	4.6	12.7	>9	18.5	19.3	--	--	--	146.19
2	1.50	C	42.1	20.3	3.0	8.0	>9	17.2	18.0	--	--	--	153.61
3	3.90	C	10.8	5.0	1.1	4.0	<0.5	14.9	15.7	--	--	--	142.44
4	5.70	C	23.1	10.9	2.1	6.2	0.5	16.2	17.0	--	--	--	176.92
5	5.90	I	--	--	7.7	30.9	2.7	18.6	21.6	<5	29.5	12.9	330.60
6	7.00	I	--	--	11.4	18.8	<0.5	18.6	21.6	<5	24.8	5.7	273.93



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Greenplan Engineering S.r.l.
CANTIERE	Aquileia (UD)
PROVA	CPTU2
DATA	19/09/2022
OPERATORE	Dott. Andrea Zampieri

Punta	Mkj497	Quota inizio indagine	p.c.	m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	7.00 m da p.c.	Livello acqua	1.20 m da p.c.			
Coordinate WGS84	Y 13.331628 E	X 45.755180 N				





GE Ground Engineering S.r.l.

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU02

Total depth: 6.80 m, Date: 19/09/2022

Surface Elevation: 0.00 m

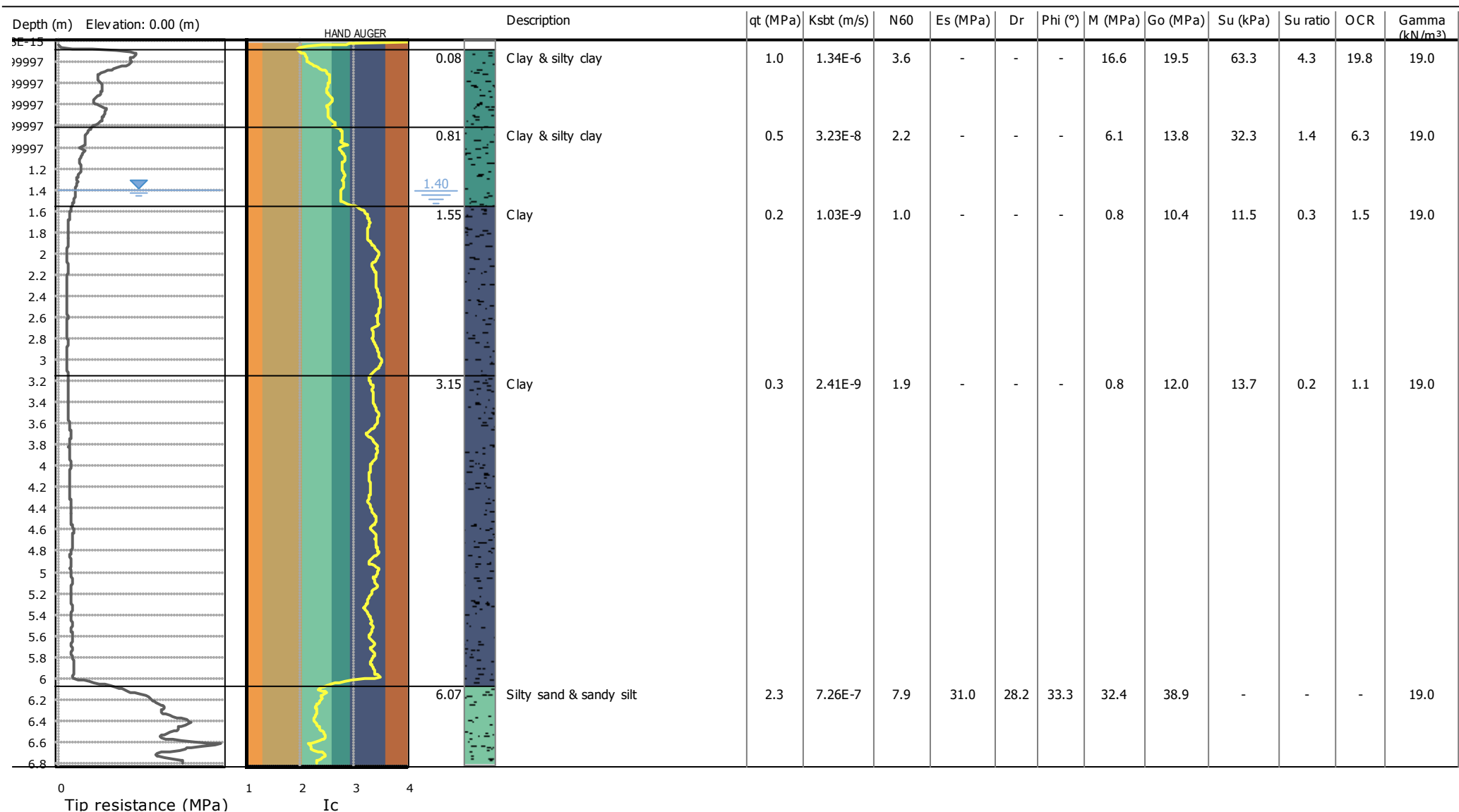
Coords: X:0.00, Y:0.00

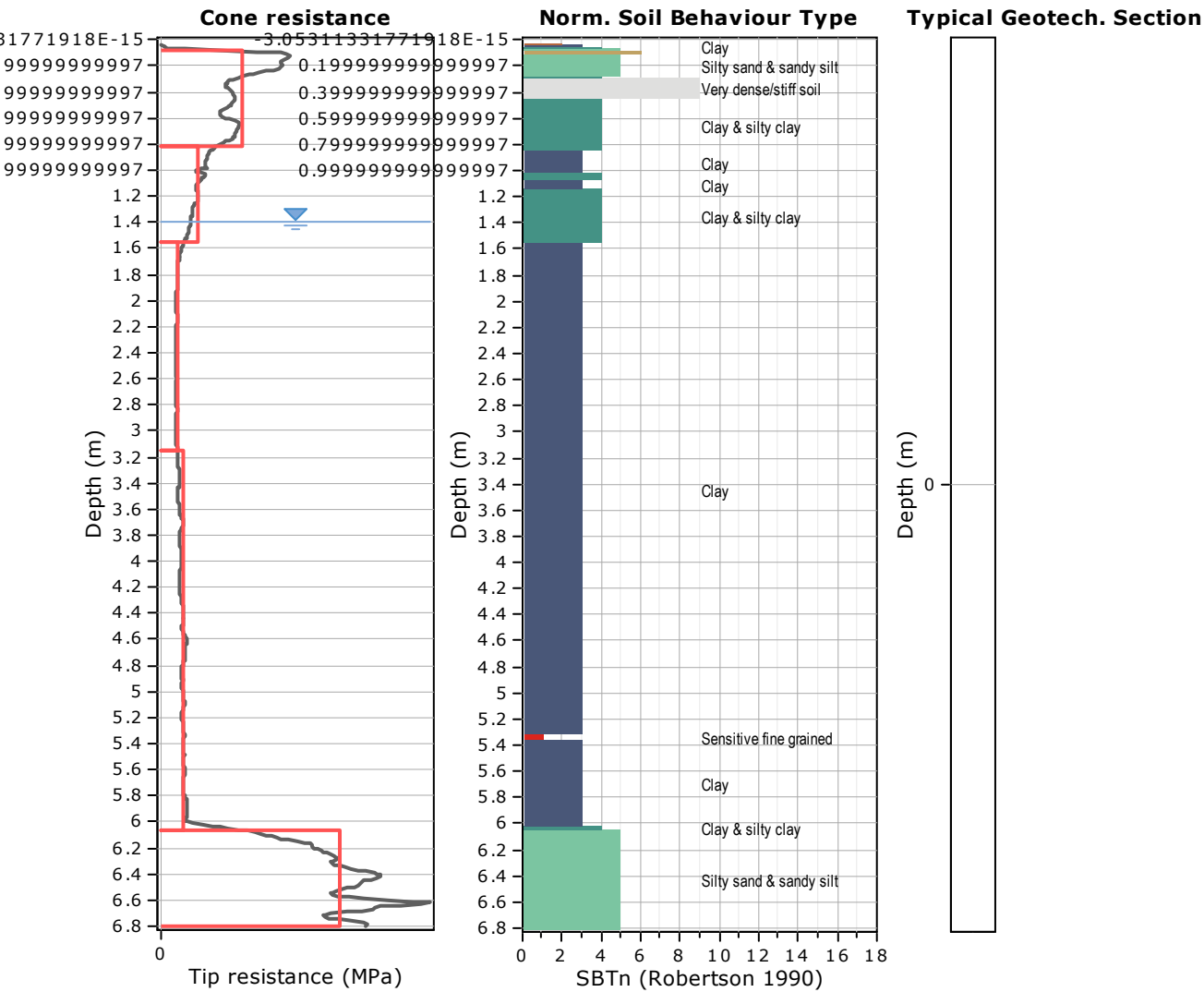
Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.

Location: Aquileia (UD)





Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.08 (m), **End depth:** 0.81 (m)

Description: Clay & silty clay

Basic results

Total cone resistance: 1.05 ±0.28 MPa

Sleeve friction: 39.74 ±6.97 kPa

SBT_n: 4

SBT_n description: Clay & silty clay

Estimation results

Permeability: 1.34E-06 ±2.45E-06 m/s

N_{₆₀}: 3.65 ±0.67 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 16.60 ±7.66 MPa

Go: 19.51 ±1.85 MPa

Su: 63.32 ±5.61 kPa

Su ratio: 4.28 ±1.00

O.C.R.: 19.78 ±4.64

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.81 (m), **End depth:** 1.55 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.47 ±0.10 MPa

Sleeve friction: 15.19 ±9.18 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 3.23E-08 ±1.43E-08 m/s

N_{₆₀}: 2.16 ±0.55 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 6.06 ±1.86 MPa

Go: 13.79 ±2.88 MPa

Su: 32.26 ±7.67 kPa

Su ratio: 1.36 ±0.52

O.C.R.: 6.30 ±2.41

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.55 (m), **End depth:** 3.15 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.20 ±0.02 MPa

Sleeve friction: 7.34 ±1.82 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.03E-09 ±2.01E-09 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.78 ±0.39 MPa

Go: 10.35 ±0.62 MPa

Su: 11.45 ±1.86 kPa

Su ratio: 0.33 ±0.10

O.C.R.: 1.54 ±0.44

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.15 (m), **End depth:** 6.07 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.28 ±0.09 MPa

Sleeve friction: 4.85 ±1.81 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.41E-09 ±1.52E-08 m/s

N_{₆₀}: 1.91 ±0.41 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.77 ±1.13 MPa

Go: 11.96 ±1.86 MPa

Su: 13.71 ±3.91 kPa

Su ratio: 0.25 ±0.05

O.C.R.: 1.14 ±0.25

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 6.07 (m), **End depth:** 6.80 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 2.33 ±0.47 MPa

Sleeve friction: 21.85 ±7.93 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 7.26E-07 ±4.57E-07 m/s

N_{₆₀}: 7.86 ±1.42 blows

Es: 31.00 ±5.01 MPa

Dr (%): 28.18 ±2.88

φ (degrees): 33.34 ±0.78 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 32.35 ±10.94 MPa

Go: 38.86 ±6.28 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU02

Total depth: 6.80 m, Date: 19/09/2022

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.08	0.73	1.34E-06	3.6	0.0	0.0	0.0	16.6	19.5	63.3	4.3	19.8	19.0
0.81		(±2.45E-06)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±7.7)	(±1.8)	(±5.6)	(±1.0)	(±4.6)	(±0.0)
0.81	0.74	3.23E-08	2.2	0.0	0.0	0.0	6.1	13.8	32.3	1.4	6.3	19.0
1.55		(±1.43E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±1.9)	(±2.9)	(±7.7)	(±0.5)	(±2.4)	(±0.0)
1.55	1.60	1.03E-09	1.0	0.0	0.0	0.0	0.8	10.4	11.5	0.3	1.5	19.0
3.15		(±2.01E-09)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±0.6)	(±1.9)	(±0.1)	(±0.4)	(±0.0)
3.15	2.92	2.41E-09	1.9	0.0	0.0	0.0	0.8	12.0	13.7	0.2	1.1	19.0
6.07		(±1.52E-08)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±1.1)	(±1.9)	(±3.9)	(±0.1)	(±0.2)	(±0.0)
6.07	0.73	7.26E-07	7.9	31.0	28.2	33.3	32.4	38.9	0.0	0.0	0.0	19.0
6.80		(±4.57E-07)	(±1.4)	(±5.0)	(±2.9)	(±0.8)	(±10.9)	(±6.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

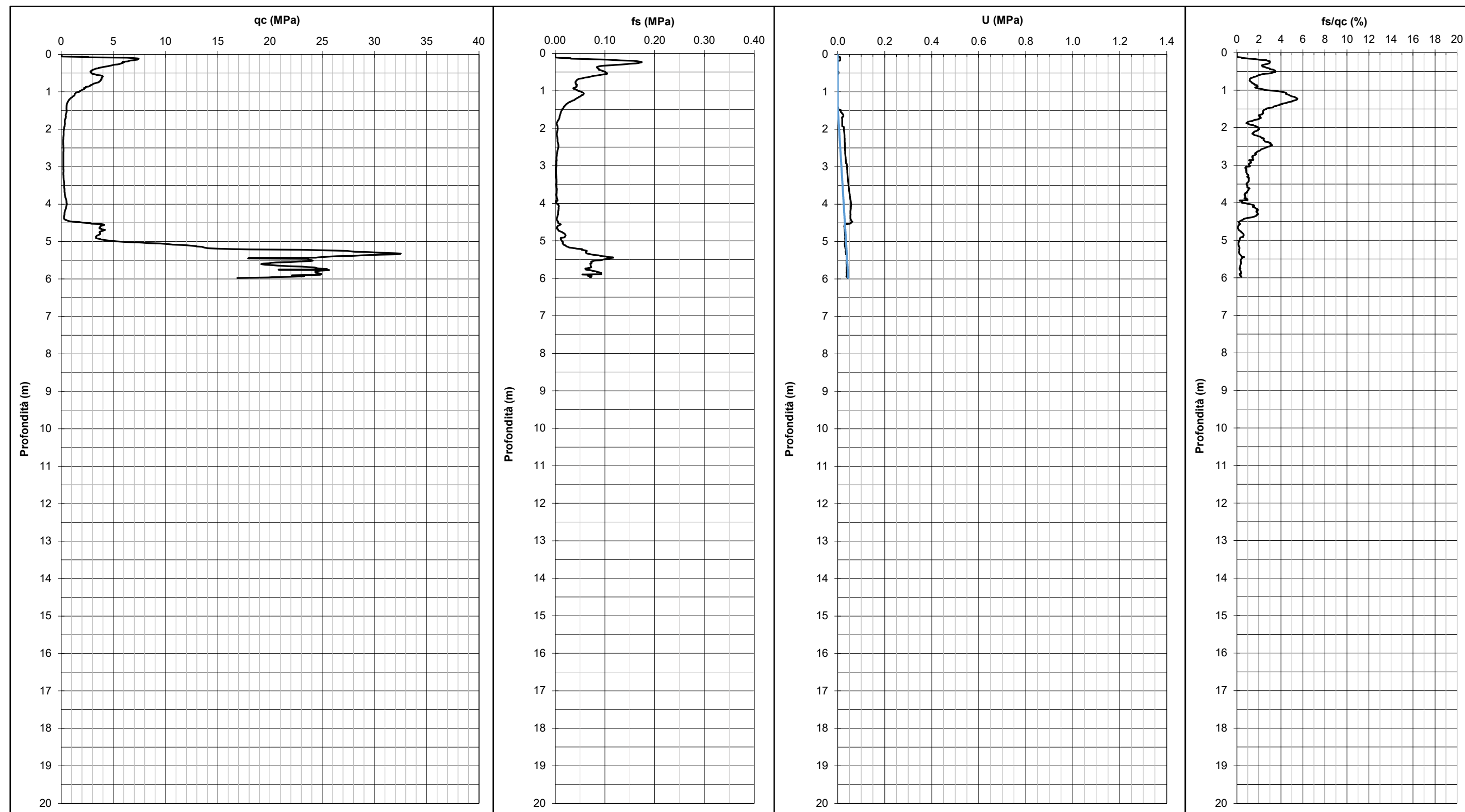
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	0.90	C	68.6	34.5	4.2	10.8	>9	18.1	18.9	--	--	--	145.35
2	1.70	C	30.4	14.4	2.3	6.6	5.1	16.7	17.4	--	--	--	148.47
3	3.20	C	12.1	5.6	1.2	4.2	1.1	15.1	15.9	--	--	--	144.02
4	6.00	C	14.6	6.8	1.6	5.0	<0.5	15.4	16.2	--	--	--	167.48
5	6.97	C	127.2	72.1	4.1	17.5	1.0	19.3	20.1	--	--	--	255.44



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Greenplan Engineering S.r.l.
CANTIERE	Aquileia (UD)
PROVA	CPTU3
DATA	19/09/2022
OPERATORE	Dott. Andrea Zampieri

Punta	Mkj497	Quota inizio indagine	p.c. m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	6.00 m da p.c.	Livello acqua	1.40 m da p.c.		
Coordinate WGS84	Y 13.326047 E	X	45.754501 N		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU03

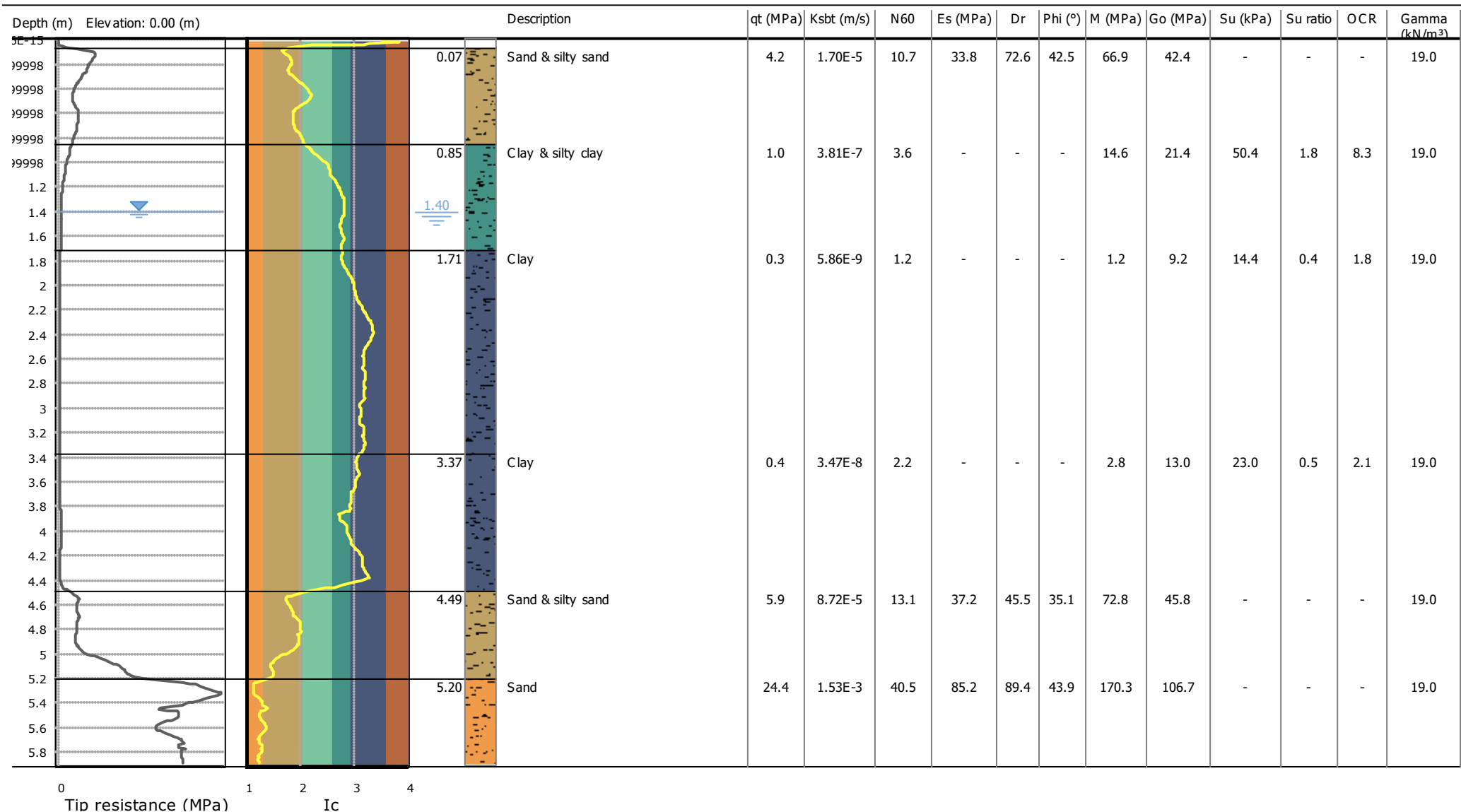
Total depth: 5.89 m, Date: 19/09/2022

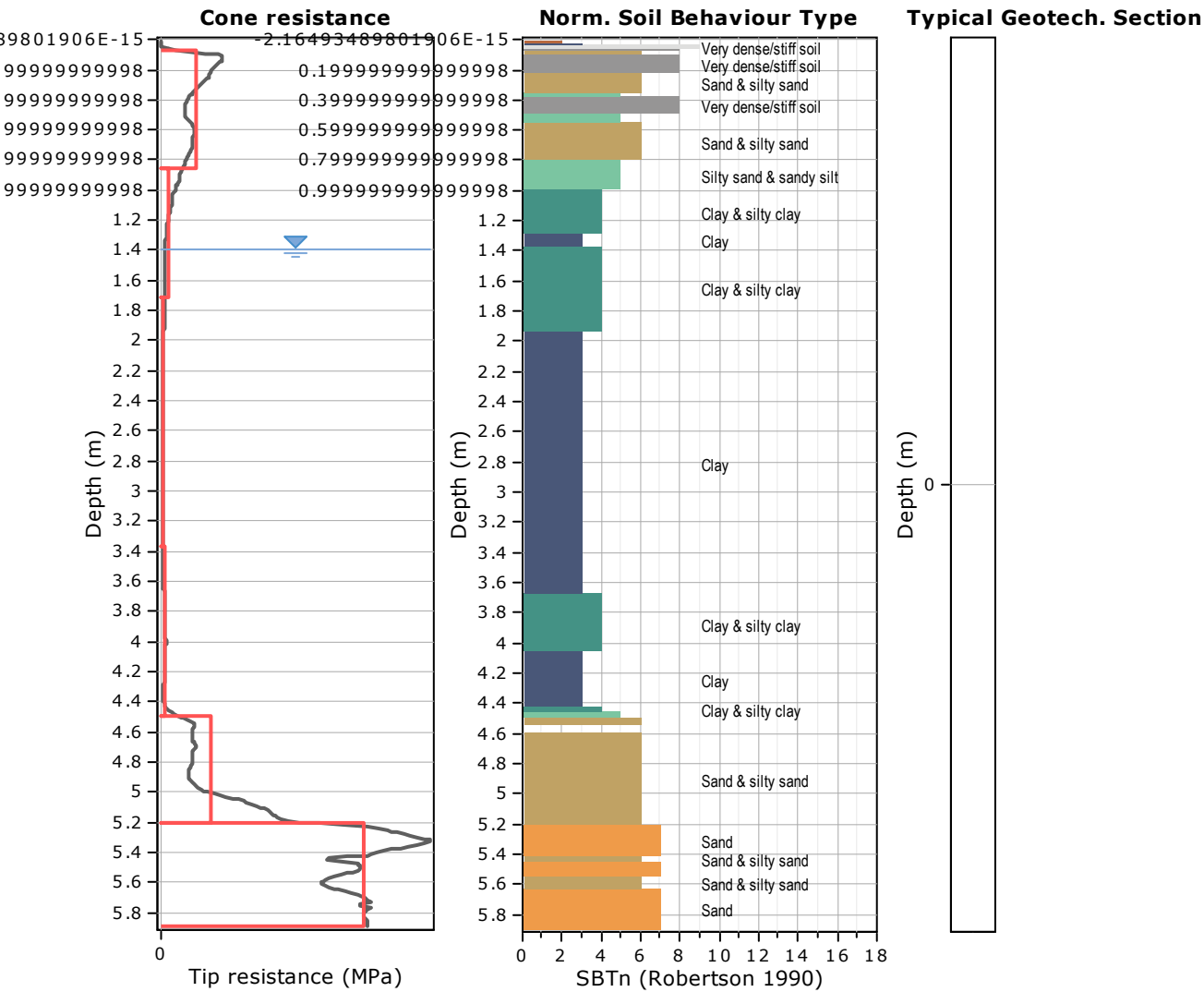
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.07 (m), **End depth:** 0.85 (m)

Description: Sand & silty sand

Basic results

Total cone resistance: 4.18 ±1.39 MPa

Sleeve friction: 83.90 ±39.91 kPa

SBT_n: 6

SBT_n description: Sand & silty sand

Estimation results

Permeability: 1.70E-05 ±1.49E-05 m/s

N_{₆₀}: 10.68 ±2.71 blows

Es: 33.81 ±6.60 MPa

Dr (%): 72.60 ±16.64

φ (degrees): 42.47 ±3.13 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 66.95 ±13.95 MPa

Go: 42.37 ±8.28 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.85 (m), **End depth:** 1.71 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.98 ±0.64 MPa

Sleeve friction: 27.78 ±17.32 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 3.81E-07 ±9.04E-07 m/s

N_{₆₀}: 3.64 ±1.88 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 14.56 ±12.32 MPa

Go: 21.38 ±7.64 MPa

Su: 50.42 ±24.60 kPa

Su ratio: 1.80 ±0.97

O.C.R.: 8.31 ±4.50

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.71 (m), **End depth:** 3.37 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.25 ±0.05 MPa

Sleeve friction: 3.76 ±1.37 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.86E-09 ±8.99E-09 m/s

N_{₆₀}: 1.16 ±0.37 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.24 ±0.92 MPa

Go: 9.23 ±0.83 MPa

Su: 14.43 ±4.04 kPa

Su ratio: 0.40 ±0.15

O.C.R.: 1.83 ±0.68

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.37 (m), **End depth:** 4.49 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.43 ±0.23 MPa

Sleeve friction: 4.56 ±1.95 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.47E-08 ±1.77E-07 m/s

N_{₆₀}: 2.21 ±0.63 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.76 ±3.59 MPa

Go: 12.95 ±3.19 MPa

Su: 22.97 ±7.58 kPa

Su ratio: 0.45 ±0.13

O.C.R.: 2.10 ±0.60

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.49 (m), **End depth:** 5.20 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 5.94 ±3.87 MPa

Sleeve friction: 19.28 ±15.31 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 8.72E-05 ±1.23E-04 m/s

N_{₆₀}: 13.14 ±6.51 blows

Es: 37.19 ±13.15 MPa

Dr (%): 45.49 ±12.62

φ (degrees): 35.11 ±2.80 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 72.82 ±26.47 MPa

Go: 45.80 ±16.36 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 6 ::**Code:** Layer_6 **Start depth:** 5.20 (m), **End depth:** 5.89 (m)**Description:** Sand**Basic results**

Total cone resistance: 24.40 ±3.50 MPa

Sleeve friction: 78.56 ±14.96 kPa

SBT_n: 7SBT_n description: Sand**Estimation results**

Permeability: 1.53E-03 ±8.19E-04 m/s

N_{₆₀}: 40.51 ±4.24 blows

Es: 85.16 ±6.86 MPa

Dr (%): 89.36 ±5.79

φ (degrees): 43.86 ±0.93 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 170.33 ±13.72 MPa

Go: 106.74 ±8.60 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU03

Total depth: 5.89 m, Date: 19/09/2022

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.07	0.78	1.70E-05	10.7	33.8	72.6	42.5	66.9	42.4	0.0	0.0	0.0	19.0
0.85		(±1.49E-05)	(±2.7)	(±6.6)	(±16.6)	(±3.1)	(±13.9)	(±8.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
0.85	0.86	3.81E-07	3.6	0.0	0.0	0.0	14.6	21.4	50.4	1.8	8.3	19.0
1.71		(±9.04E-07)	(±1.9)	(±0.0)	(±0.0)	(±0.0)	(±12.3)	(±7.6)	(±24.6)	(±1.0)	(±4.5)	(±0.0)
1.71	1.66	5.86E-09	1.2	0.0	0.0	0.0	1.2	9.2	14.4	0.4	1.8	19.0
3.37		(±8.99E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±0.9)	(±0.8)	(±4.0)	(±0.1)	(±0.7)	(±0.0)
3.37	1.12	3.47E-08	2.2	0.0	0.0	0.0	2.8	13.0	23.0	0.5	2.1	19.0
4.49		(±1.77E-07)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±3.6)	(±3.2)	(±7.6)	(±0.1)	(±0.6)	(±0.0)
4.49	0.71	8.72E-05	13.1	37.2	45.5	35.1	72.8	45.8	0.0	0.0	0.0	19.0
5.20		(±1.23E-04)	(±6.5)	(±13.1)	(±12.6)	(±2.8)	(±26.5)	(±16.4)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
5.20	0.69	1.53E-03	40.5	85.2	89.4	43.9	170.3	106.7	0.0	0.0	0.0	19.0
5.89		(±8.19E-04)	(±4.2)	(±6.9)	(±5.8)	(±0.9)	(±13.7)	(±8.6)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m ³)
PuvS:	Peso unità di volume saturo (KN/m ³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.30	I	--	--	9.1	22.3	0.8	17.7	20.6	<5	34.2	7.6	225.27
2	2.00	C	31.7	15.0	2.4	6.8	2.4	16.7	17.5	--	--	--	157.35
3	3.30	C	13.9	6.4	1.3	4.5	0.5	15.3	16.1	--	--	--	148.92
4	4.40	C	23.7	11.1	2.1	6.1	<0.5	16.2	17.0	--	--	--	172.16
5	4.90	I	--	--	9.5	23.0	<0.5	18.6	21.6	<5	27.9	7.9	286.82
6	5.97	I	--	--	29.9	70.7	0.8	18.6	21.6	<5	36.1	49.9	466.10



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE Greenplan Engineering S.r.l.

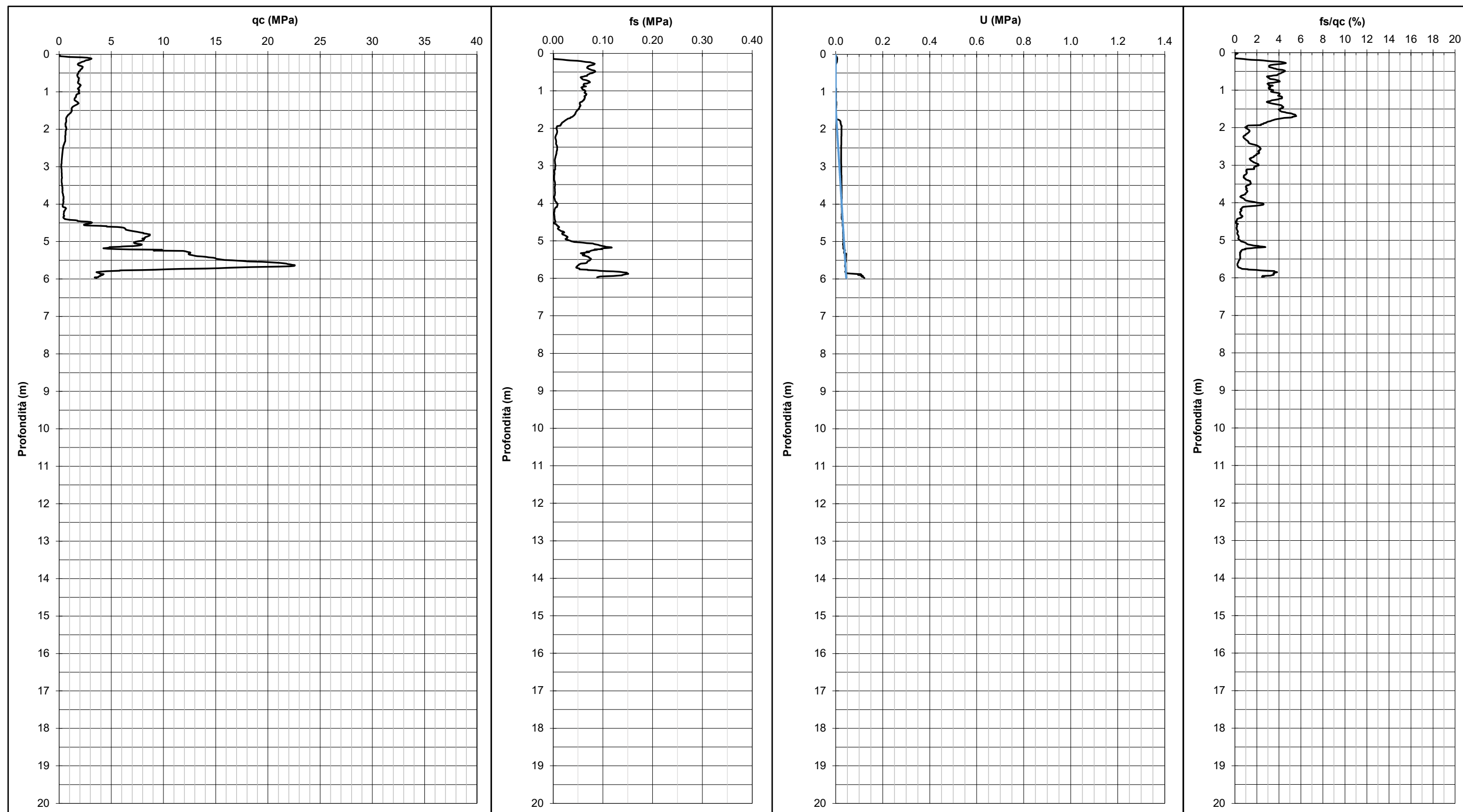
CANTIERE Aquileia (UD)

PROVA CPTU4 **DATA** 19/09/2022 **OPERATORE** Dott. Andrea Zampieri

Punta Mkj497 **Quota inizio indagine** p.c. m s.l.m. **Prescavo** 0.00 m da p.c.

Profondità prova 6.00 m da p.c. **Livello acqua** 1.40 m da p.c.

Coordinate WGS84 Y 13.329153 E X 45.754948 N



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU04

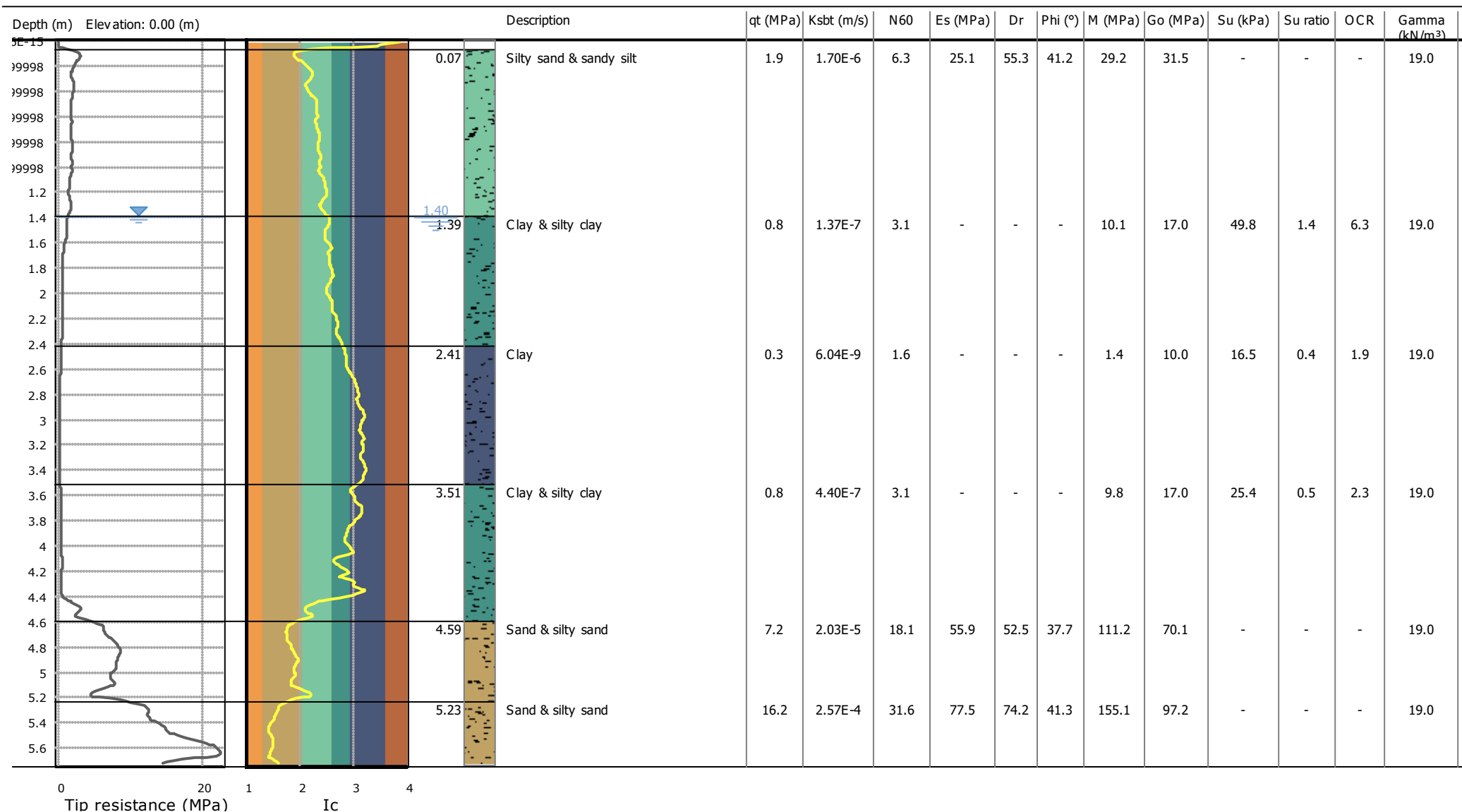
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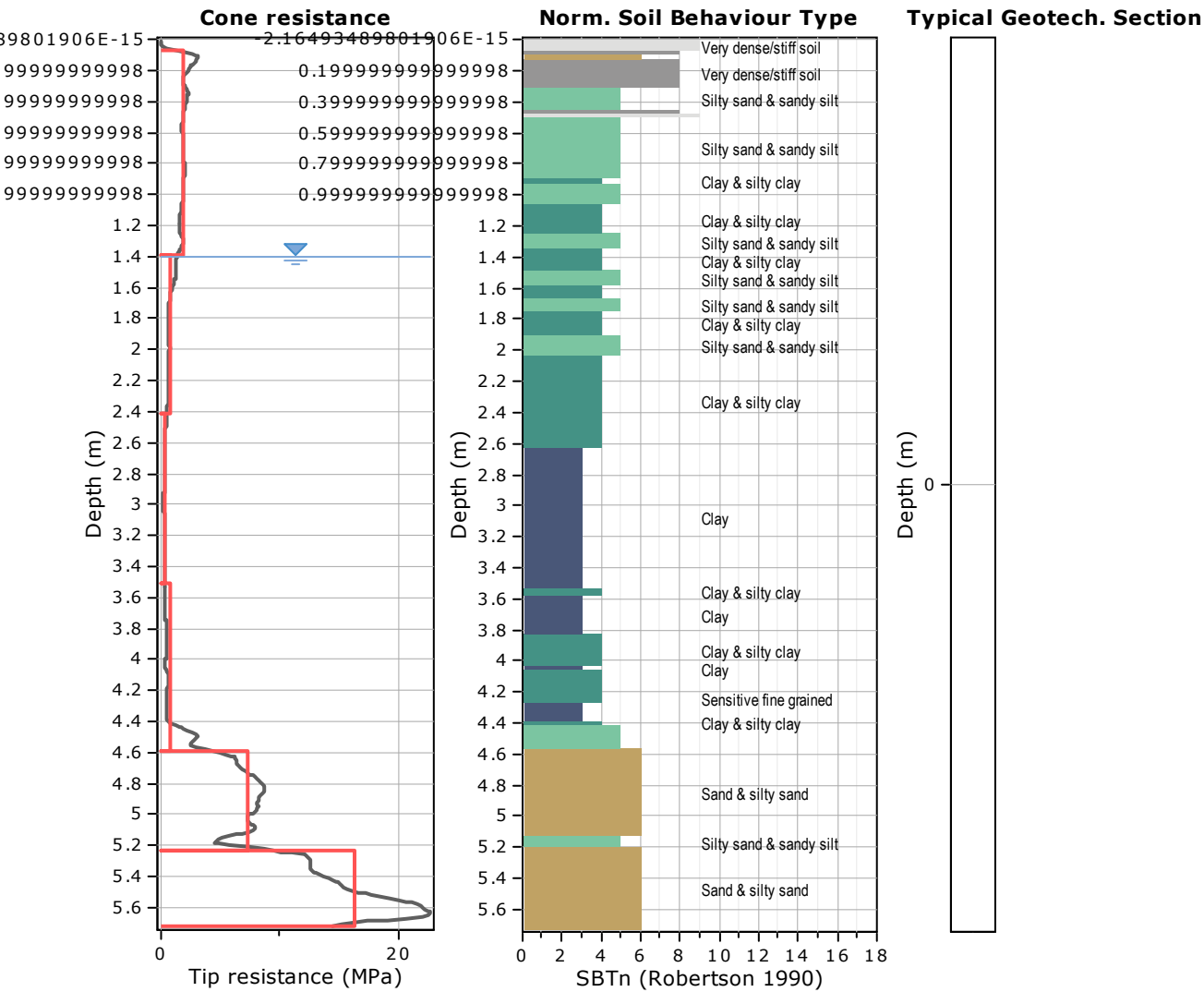
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.07 (m), **End depth:** 1.39 (m)

Description: Silty sand & sandy silt

Basic results

Total cone resistance: 1.91 ±0.32 MPa

Sleeve friction: 61.49 ±9.86 kPa

SBT_n: 5

SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 1.70E-06 ±3.01E-06 m/s

N₆₀: 6.26 ±0.59 blows

Es: 25.08 ±1.77 MPa

Dr (%): 55.29 ±13.71

φ (degrees): 41.22 ±1.98 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 29.24 ±9.15 MPa

Go: 31.49 ±2.30 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 1.39 (m), **End depth:** 2.41 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.76 ±0.24 MPa

Sleeve friction: 11.65 ±9.20 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 1.37E-07 ±6.72E-08 m/s

N_{₆₀}: 3.10 ±0.90 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 10.05 ±3.46 MPa

Go: 17.02 ±4.50 MPa

Su: 49.77 ±17.53 kPa

Su ratio: 1.37 ±0.57

O.C.R.: 6.32 ±2.62

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 2.41 (m), **End depth:** 3.51 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.29 ±0.06 MPa

Sleeve friction: 3.62 ±0.90 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 6.04E-09 ±6.61E-09 m/s

N_{₆₀}: 1.65 ±0.48 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.42 ±0.92 MPa

Go: 10.01 ±1.06 MPa

Su: 16.48 ±4.41 kPa

Su ratio: 0.41 ±0.13

O.C.R.: 1.87 ±0.60

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.51 (m), **End depth:** 4.59 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.79 ±0.88 MPa

Sleeve friction: 7.24 ±6.16 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 4.40E-07 ±1.31E-06 m/s

N_{₆₀}: 3.11 ±2.27 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 9.85 ±18.18 MPa

Go: 16.95 ±8.96 MPa

Su: 25.36 ±6.50 kPa

Su ratio: 0.49 ±0.10

O.C.R.: 2.28 ±0.46

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.59 (m), **End depth:** 5.23 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 7.22 ±1.23 MPa

Sleeve friction: 66.04 ±25.80 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 2.03E-05 ±1.21E-05 m/s

N_{₆₀}: 18.09 ±2.91 blows

Es: 55.93 ±9.29 MPa

Dr (%): 52.51 ±4.55

φ (degrees): 37.72 ±1.07 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 111.22 ±19.58 MPa

Go: 70.10 ±11.65 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 6 ::**Code:** Layer_6 **Start depth:** 5.23 (m), **End depth:** 5.72 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 16.19 ±3.92 MPa

Sleeve friction: 85.86 ±36.23 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 2.57E-04 ±1.10E-04 m/s

N_{₆₀}: 31.59 ±6.83 blows

Es: 77.55 ±15.34 MPa

Dr (%): 74.21 ±8.45

φ (degrees): 41.25 ±1.51 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 155.09 ±30.68 MPa

Go: 97.19 ±19.23 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU04

Total depth: 5.72 m, Date: 19/09/2022

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.07	1.32	1.70E-06	6.3	25.1	55.3	41.2	29.2	31.5	0.0	0.0	0.0	19.0
1.39		(±3.01E-06)	(±0.6)	(±1.8)	(±13.7)	(±2.0)	(±9.2)	(±2.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
1.39	1.02	1.37E-07	3.1	0.0	0.0	0.0	10.1	17.0	49.8	1.4	6.3	19.0
2.41		(±6.72E-08)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±3.5)	(±4.5)	(±17.5)	(±0.6)	(±2.6)	(±0.0)
2.41	1.10	6.04E-09	1.6	0.0	0.0	0.0	1.4	10.0	16.5	0.4	1.9	19.0
3.51		(±6.61E-09)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±0.9)	(±1.1)	(±4.4)	(±0.1)	(±0.6)	(±0.0)
3.51	1.08	4.40E-07	3.1	0.0	0.0	0.0	9.8	17.0	25.4	0.5	2.3	19.0
4.59		(±1.31E-06)	(±2.3)	(±0.0)	(±0.0)	(±0.0)	(±18.2)	(±9.0)	(±6.5)	(±0.1)	(±0.5)	(±0.0)
4.59	0.64	2.03E-05	18.1	55.9	52.5	37.7	111.2	70.1	0.0	0.0	0.0	19.0
5.23		(±1.21E-05)	(±2.9)	(±9.3)	(±4.6)	(±1.1)	(±19.6)	(±11.6)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
5.23	0.49	2.57E-04	31.6	77.5	74.2	41.3	155.1	97.2	0.0	0.0	0.0	19.0
5.72		(±1.10E-04)	(±6.8)	(±15.3)	(±8.5)	(±1.5)	(±30.7)	(±19.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.60	C	118.3	65.1	4.5	16.0	>9	19.1	19.9	--	--	--	180.07
2	2.50	C	44.6	21.9	3.2	8.4	3.2	17.4	18.1	--	--	--	167.99
3	3.70	C	17.8	8.9	1.7	5.2	0.7	15.9	16.7	--	--	--	150.35
4	4.40	C	29.4	15.0	2.5	6.9	0.6	16.7	17.5	--	--	--	167.60
5	5.20	I	--	--	9.1	34.2	1.2	18.6	21.6	<5	33.3	15.2	320.03
6	5.80	I	--	--	22.1	58.7	0.7	18.6	21.6	<5	36.9	36.8	406.65
7	6.00	I	--	--	11.4	25.6	2.3	17.7	20.6	<5	29.8	9.5	292.16



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE Greenplan Engineering S.r.l.

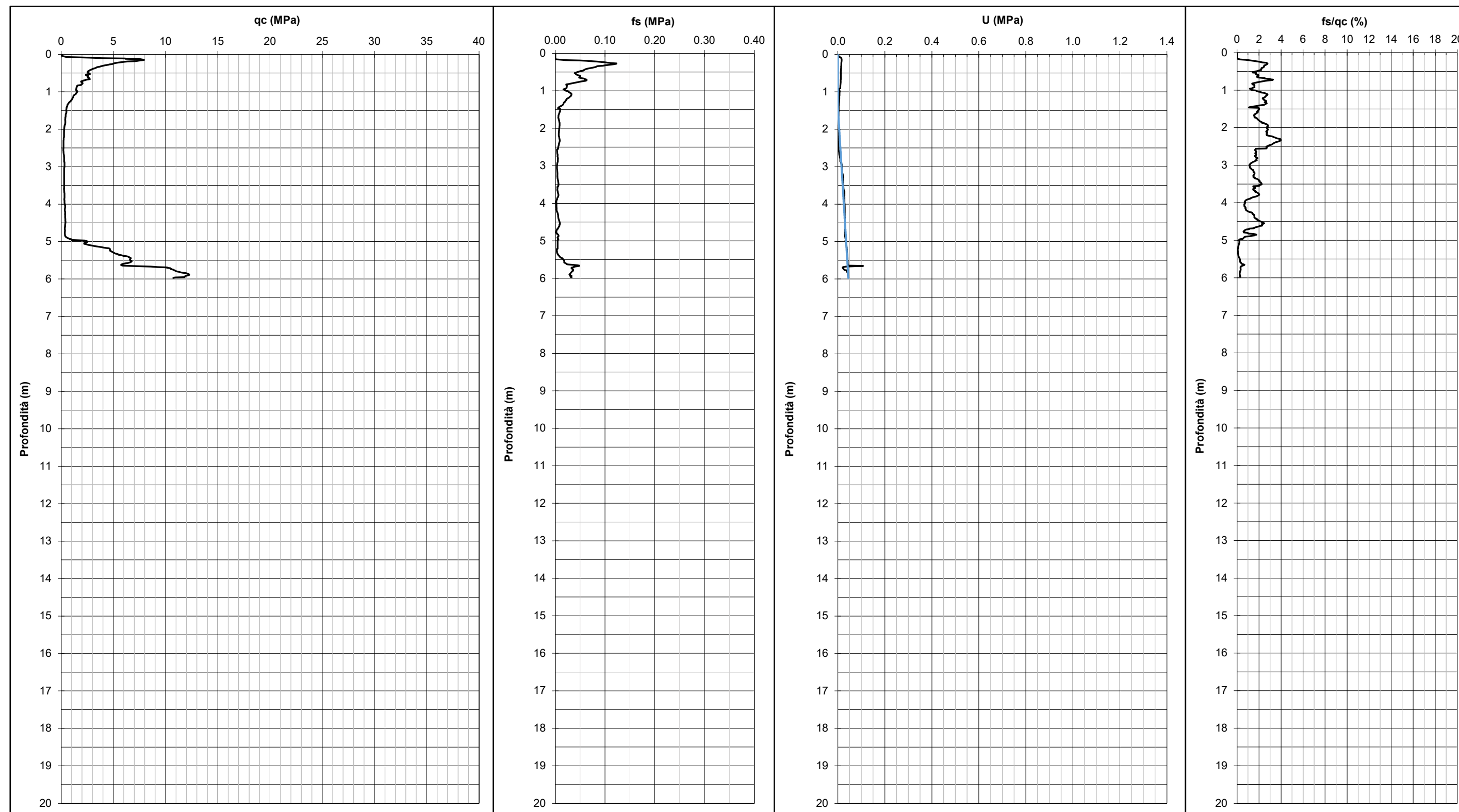
CANTIERE Aquileia (UD)

PROVA CPTU5 **DATA** 19/09/2022 **OPERATORE** Dott. Andrea Zampieri

Punta Mkj497 **Quota inizio indagine** p.c. m s.l.m. **Prescavo** 0.00 m da p.c.

Profondità prova 6.00 m da p.c. **Livello acqua** 1.40 m da p.c.

Coordinate WGS84 Y 13.329336 E X 45.754974 N



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU05

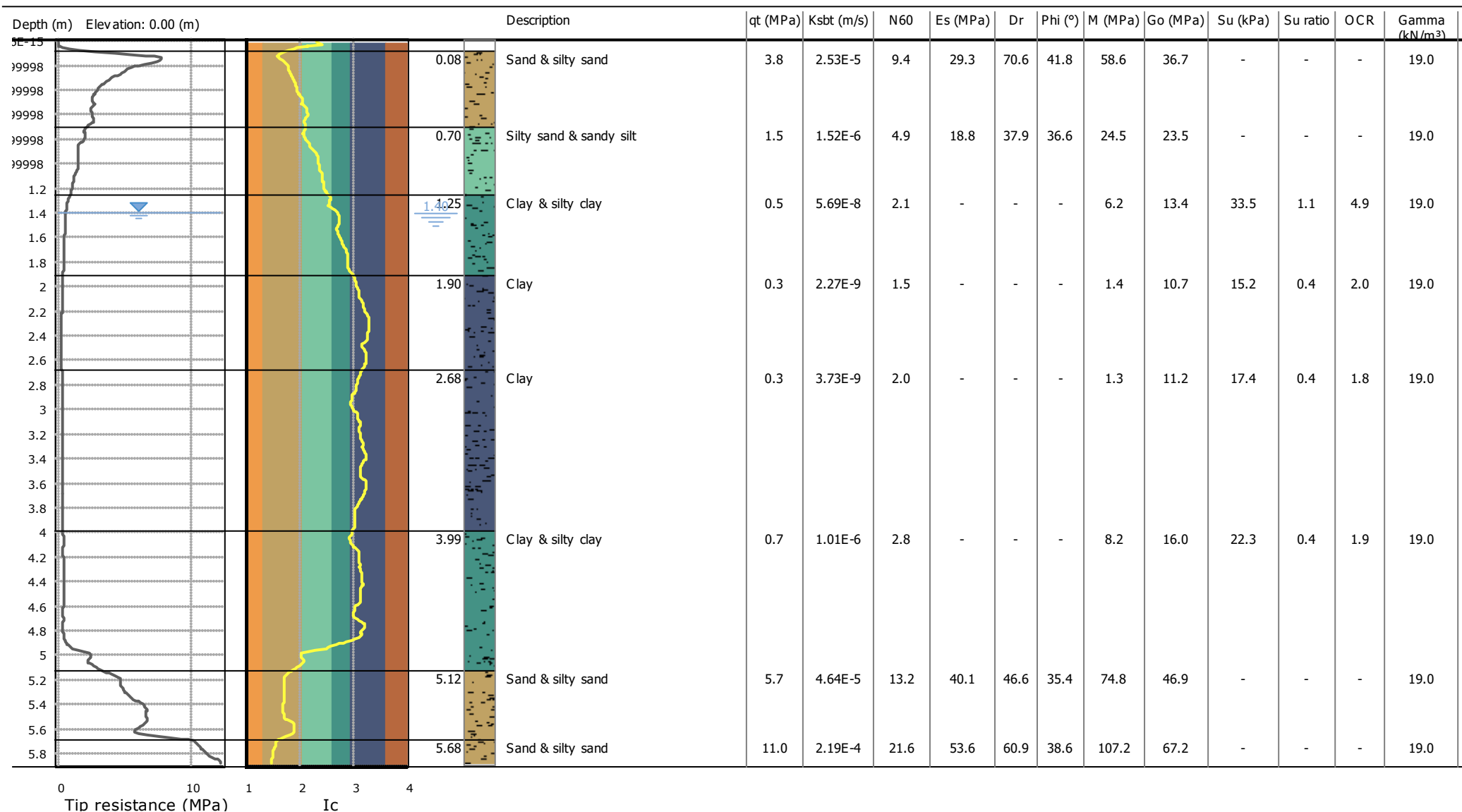
Total depth: 5.88 m, Date: 19/09/2022

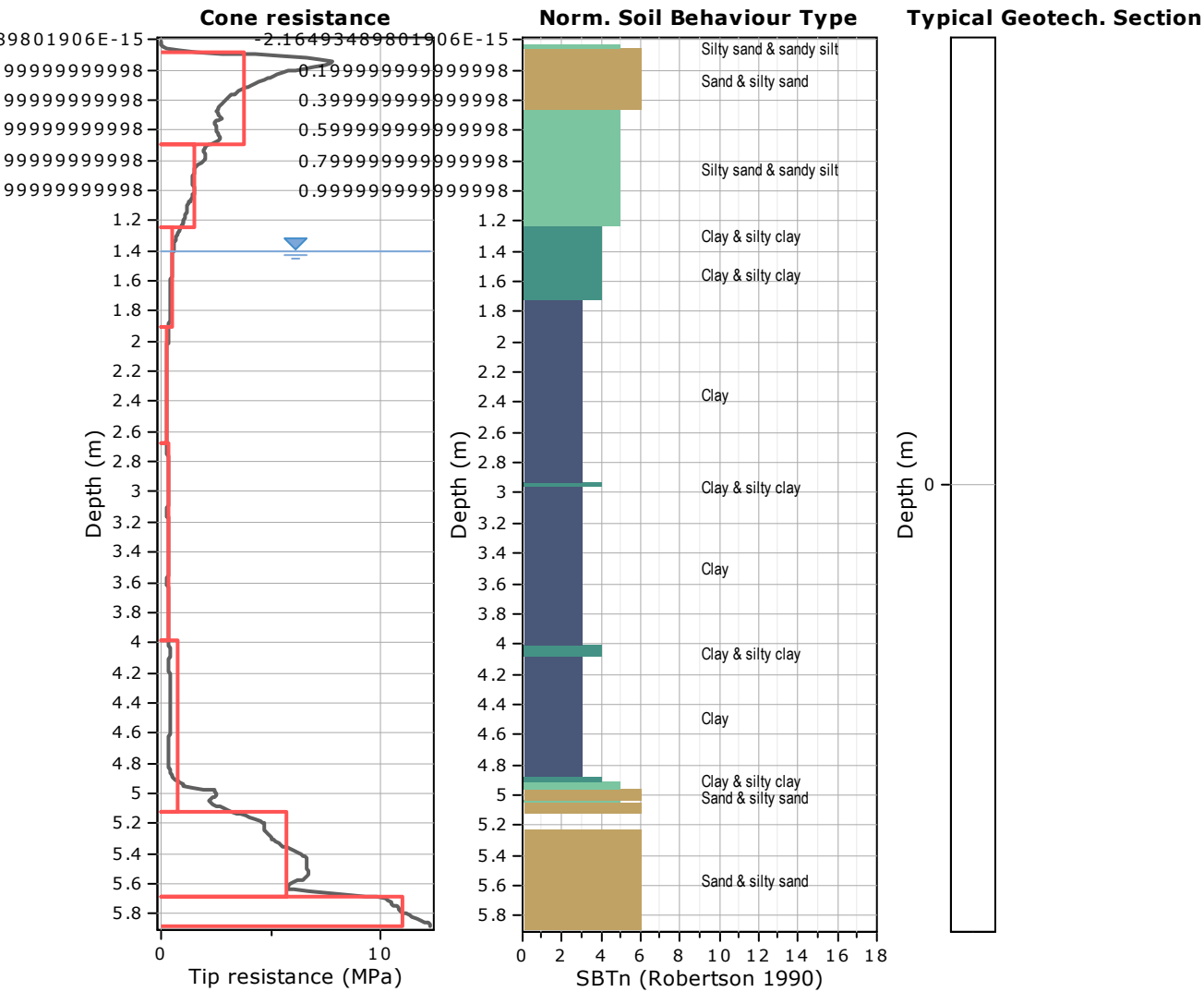
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.08 (m), **End depth:** 0.70 (m)

Description: Sand & silty sand

Basic results

Total cone resistance: 3.79 ± 1.68 MPa

Sleeve friction: 64.28 ± 24.34 kPa

SBT_n: 6

SBT_n description: Sand & silty sand

Estimation results

Permeability: $2.53E-05 \pm 3.34E-05$ m/s

N_{60} : 9.38 ± 3.05 blows

Es: 29.30 ± 6.72 MPa

Dr (%): 70.60 ± 17.14

ϕ (degrees): $41.83 \pm 2.47^\circ$

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 58.61 ± 13.44 MPa

Go: 36.73 ± 8.42 MPa

Su: 0.00 ± 0.00 kPa

Su ratio: 0.00 ± 0.00

O.C.R.: 0.00 ± 0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.70 (m), **End depth:** 1.25 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 1.48 ±0.34 MPa
 Sleeve friction: 24.52 ±5.04 kPa
 SBT_n: 5
 SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 1.52E-06 ±1.50E-06 m/s
 N_{₆₀}: 4.88 ±0.79 blows
 Es: 18.83 ±1.64 MPa
 Dr (%): 37.88 ±4.92
 φ (degrees): 36.56 ±0.67 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 24.52 ±10.23 MPa
 Go: 23.52 ±2.13 MPa
 Su: 0.00 ±0.00 kPa
 Su ratio: 0.00 ±0.00
 O.C.R.: 0.00 ±0.00

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.25 (m), **End depth:** 1.90 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.50 ±0.13 MPa
 Sleeve friction: 8.79 ±2.29 kPa
 SBT_n: 4
 SBT_n description: Clay & silty clay

Estimation results

Permeability: 5.69E-08 ±5.23E-08 m/s
 N_{₆₀}: 2.14 ±0.35 blows
 Es: 0.00 ±0.00 MPa
 Dr (%): 0.00 ±0.00
 φ (degrees): 0.00 ±0.00 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 6.21 ±2.19 MPa
 Go: 13.45 ±1.62 MPa
 Su: 33.52 ±9.44 kPa
 Su ratio: 1.07 ±0.31
 O.C.R.: 4.94 ±1.43

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 1.90 (m), **End depth:** 2.68 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.26 ±0.03 MPa
 Sleeve friction: 6.69 ±1.71 kPa
 SBT_n: 3
 SBT_n description: Clay

Estimation results

Permeability: 2.27E-09 ±1.61E-09 m/s
 N_{₆₀}: 1.48 ±0.50 blows
 Es: 0.00 ±0.00 MPa
 Dr (%): 0.00 ±0.00
 φ (degrees): 0.00 ±0.00 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.37 ±0.56 MPa
 Go: 10.73 ±0.90 MPa
 Su: 15.22 ±2.53 kPa
 Su ratio: 0.44 ±0.10
 O.C.R.: 2.05 ±0.46

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 2.68 (m), **End depth:** 3.99 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.31 ±0.02 MPa
 Sleeve friction: 4.58 ±1.20 kPa
 SBT_n: 3
 SBT_n description: Clay

Estimation results

Permeability: 3.73E-09 ±2.13E-09 m/s
 N_{₆₀}: 2.00 ±0.00 blows
 Es: 0.00 ±0.00 MPa
 Dr (%): 0.00 ±0.00
 φ (degrees): 0.00 ±0.00 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.35 ±0.20 MPa
 Go: 11.21 ±0.73 MPa
 Su: 17.38 ±0.99 kPa
 Su ratio: 0.39 ±0.04
 O.C.R.: 1.82 ±0.18

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 3.99 (m), **End depth:** 5.12 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.71 ±0.74 MPa

Sleeve friction: 5.33 ±1.92 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 1.01E-06 ±2.84E-06 m/s

N_{₆₀}: 2.78 ±1.71 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 8.17 ±14.83 MPa

Go: 15.95 ±5.18 MPa

Su: 22.28 ±4.09 kPa

Su ratio: 0.41 ±0.06

O.C.R.: 1.88 ±0.29

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 5.12 (m), **End depth:** 5.68 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 5.75 ±1.17 MPa

Sleeve friction: 18.16 ±13.70 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 4.64E-05 ±1.99E-05 m/s

N_{₆₀}: 13.18 ±2.73 blows

Es: 40.06 ±7.02 MPa

Dr (%): 46.60 ±3.67

φ (degrees): 35.39 ±1.12 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 74.80 ±16.28 MPa

Go: 46.88 ±10.20 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 5.68 (m), **End depth:** 5.88 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 10.97 ±0.77 MPa

Sleeve friction: 32.11 ±2.22 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 2.19E-04 ±6.29E-05 m/s

N_{₆₀}: 21.65 ±0.93 blows

Es: 53.58 ±1.03 MPa

Dr (%): 60.91 ±1.84

φ (degrees): 38.59 ±0.42 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 107.16 ±2.06 MPa

Go: 67.15 ±1.29 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU05

Total depth: 5.88 m, Date: 19/09/2022

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mkj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.08	0.62	2.53E-05	9.4	29.3	70.6	41.8	58.6	36.7	0.0	0.0	0.0	19.0
0.70		(±3.34E-05)	(±3.1)	(±6.7)	(±17.1)	(±2.5)	(±13.4)	(±8.4)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
0.70	0.55	1.52E-06	4.9	18.8	37.9	36.6	24.5	23.5	0.0	0.0	0.0	19.0
1.25		(±1.50E-06)	(±0.8)	(±1.6)	(±4.9)	(±0.7)	(±10.2)	(±2.1)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
1.25	0.65	5.69E-08	2.1	0.0	0.0	0.0	6.2	13.4	33.5	1.1	4.9	19.0
1.90		(±5.23E-08)	(±0.3)	(±0.0)	(±0.0)	(±0.0)	(±2.2)	(±1.6)	(±9.4)	(±0.3)	(±1.4)	(±0.0)
1.90	0.78	2.27E-09	1.5	0.0	0.0	0.0	1.4	10.7	15.2	0.4	2.0	19.0
2.68		(±1.61E-09)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±0.6)	(±0.9)	(±2.5)	(±0.1)	(±0.5)	(±0.0)
2.68	1.31	3.73E-09	2.0	0.0	0.0	0.0	1.3	11.2	17.4	0.4	1.8	19.0
3.99		(±2.13E-09)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.7)	(±1.0)	(±0.0)	(±0.2)	(±0.0)
3.99	1.13	1.01E-06	2.8	0.0	0.0	0.0	8.2	16.0	22.3	0.4	1.9	19.0
5.12		(±2.84E-06)	(±1.7)	(±0.0)	(±0.0)	(±0.0)	(±14.8)	(±5.2)	(±4.1)	(±0.1)	(±0.3)	(±0.0)
5.12	0.56	4.64E-05	13.2	40.1	46.6	35.4	74.8	46.9	0.0	0.0	0.0	19.0
5.68		(±1.99E-05)	(±2.7)	(±7.0)	(±3.7)	(±1.1)	(±16.3)	(±10.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
5.68	0.20	2.19E-04	21.6	53.6	60.9	38.6	107.2	67.2	0.0	0.0	0.0	19.0
5.88		(±6.29E-05)	(±0.9)	(±1.0)	(±1.8)	(±0.4)	(±2.1)	(±1.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

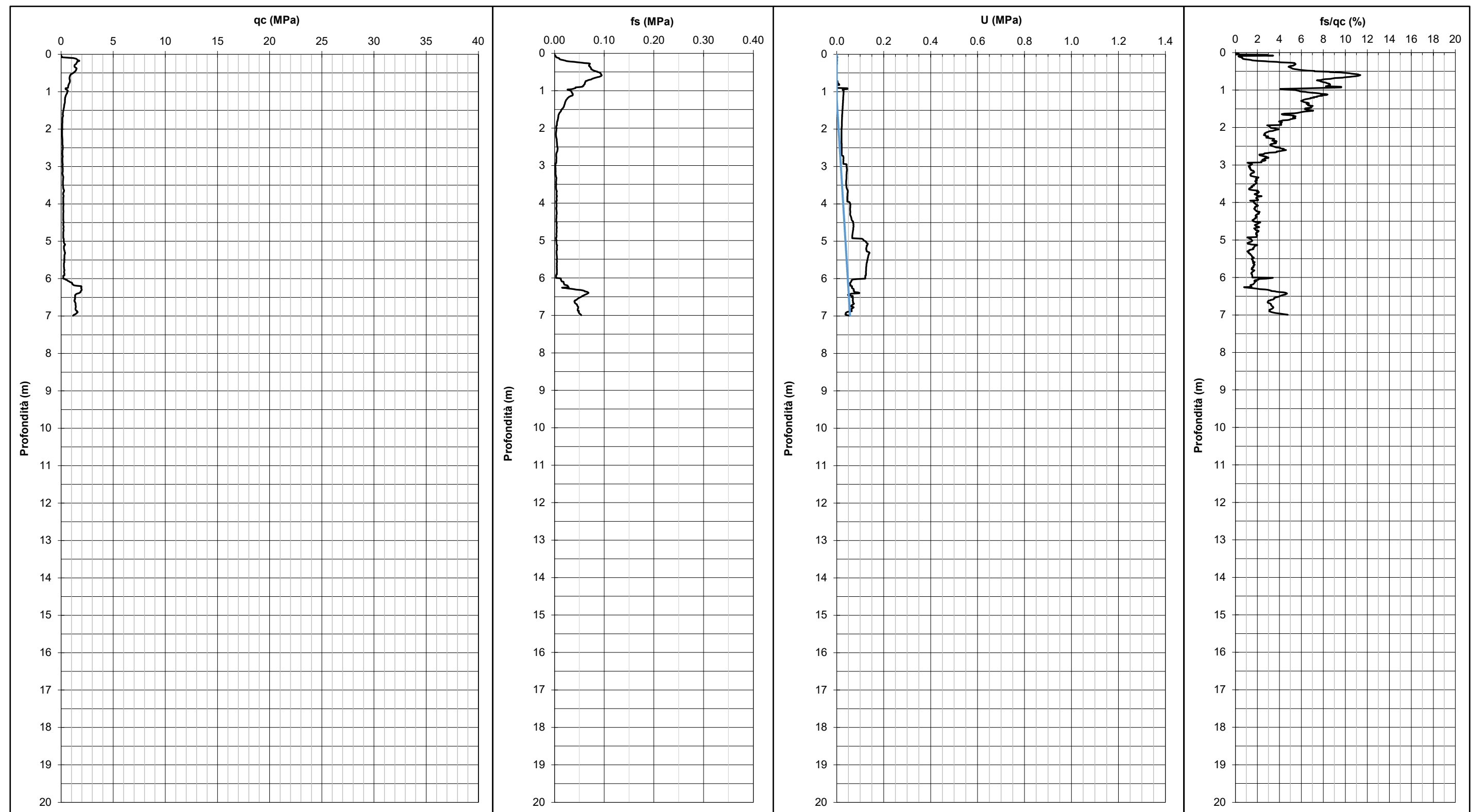
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	0.40	I	--	--	12.2	26.8	<0.5	18.6	21.6	<5	31.6	10.2	209.75
2	1.30	C	120.7	66.8	4.5	16.2	>9	19.2	20.0	--	--	--	183.06
3	4.80	C	22.6	11.2	2.0	5.8	1.1	16.2	17.0	--	--	--	155.00
4	5.60	I	--	--	11.9	26.4	1.7	18.6	21.6	<5	30.9	9.9	289.29
5	5.98	I	--	--	15.5	47.4	0.9	18.6	21.6	<5	35.1	25.9	372.85



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Greenplan Engineering S.r.l.
CANTIERE	Aquileia (UD)
PROVA	CPTU6
DATA	19/09/2022
OPERATORE	Dott. Andrea Zampieri

Punta	Mks880	Quota inizio indagine	p.c.	m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	7.00 m da p.c.	Livello acqua	1.20 m da p.c.			
Coordinate WGS84	Y 13.334316 E	X 45.760464 N				



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU06

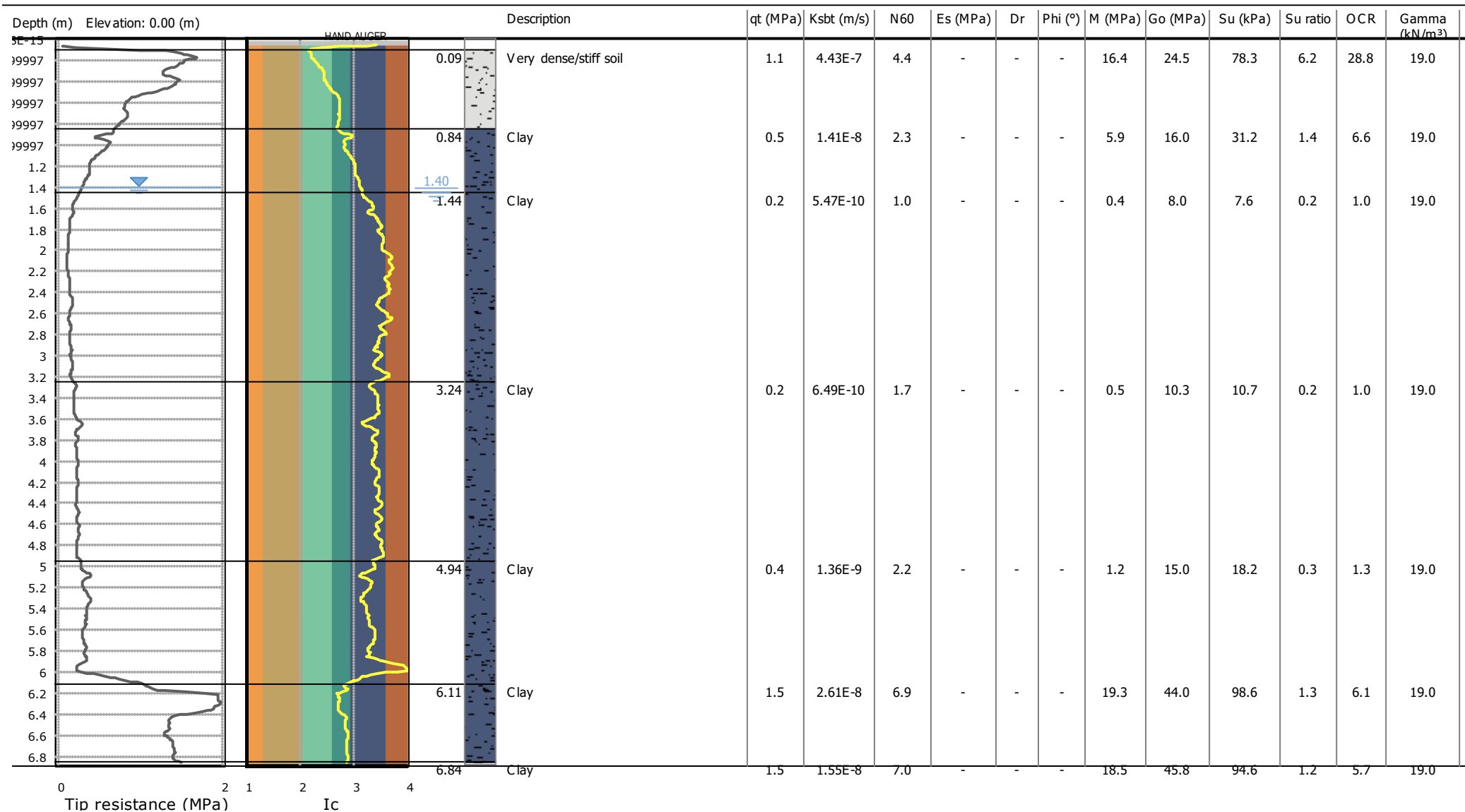
Total depth: 6.86 m, Date: 19/09/2022

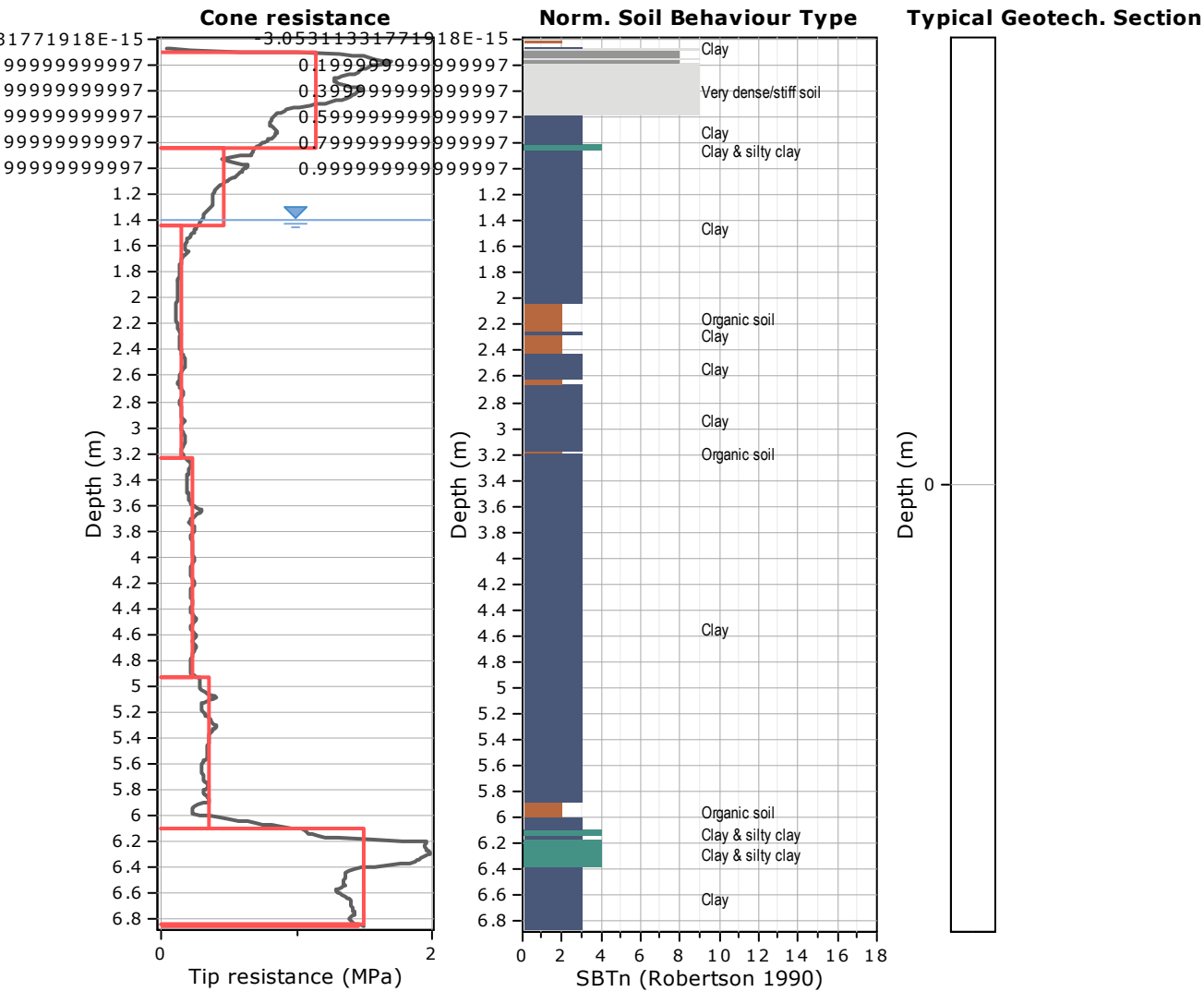
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mks880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.09 (m), **End depth:** 0.84 (m)

Description: Very dense/stiff soil

Basic results

Total cone resistance: 1.14 ± 0.32 MPa

Sleeve friction: 69.27 ± 16.82 kPa

SBT_n: 9

SBT_n description: Very dense/stiff soil

Estimation results

Permeability: $4.43E-07 \pm 6.17E-07$ m/s

$N_{₆₀}$: 4.36 ± 0.74 blows

Es: 0.00 ± 0.00 MPa

Dr (%): 0.00 ± 0.00

ϕ (degrees): 0.00 ± 0.00 °

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 16.37 ± 5.42 MPa

Go: 24.54 ± 3.54 MPa

Su: 78.28 ± 21.86 kPa

Su ratio: 6.24 ± 2.81

O.C.R.: 28.84 ± 13.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.84 (m), **End depth:** 1.44 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.46 ±0.13 MPa

Sleeve friction: 24.43 ±7.77 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.41E-08 ±1.41E-08 m/s

N_{₆₀}: 2.31 ±0.47 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 5.91 ±2.11 MPa

Go: 15.97 ±2.31 MPa

Su: 31.16 ±9.39 kPa

Su ratio: 1.43 ±0.55

O.C.R.: 6.61 ±2.53

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.44 (m), **End depth:** 3.24 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.15 ±0.03 MPa

Sleeve friction: 4.41 ±1.90 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.47E-10 ±3.79E-10 m/s

N_{₆₀}: 1.01 ±0.07 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.38 ±0.36 MPa

Go: 7.96 ±1.08 MPa

Su: 7.63 ±2.39 kPa

Su ratio: 0.23 ±0.10

O.C.R.: 1.04 ±0.47

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.24 (m), **End depth:** 4.94 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.23 ±0.02 MPa

Sleeve friction: 4.00 ±0.44 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 6.49E-10 ±2.74E-10 m/s

N_{₆₀}: 1.73 ±0.44 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.45 ±0.14 MPa

Go: 10.31 ±0.73 MPa

Su: 10.73 ±1.39 kPa

Su ratio: 0.21 ±0.03

O.C.R.: 0.97 ±0.16

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.94 (m), **End depth:** 6.11 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.36 ±0.13 MPa

Sleeve friction: 7.47 ±6.19 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.36E-09 ±1.64E-09 m/s

N_{₆₀}: 2.19 ±0.62 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.24 ±1.75 MPa

Go: 15.00 ±4.37 MPa

Su: 18.25 ±9.18 kPa

Su ratio: 0.28 ±0.13

O.C.R.: 1.30 ±0.60

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 6.11 (m), **End depth:** 6.84 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.50 ±0.27 MPa

Sleeve friction: 48.36 ±10.24 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.61E-08 ±1.43E-08 m/s

N_{₆₀}: 6.89 ±1.01 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 19.30 ±3.87 MPa

Go: 43.99 ±5.15 MPa

Su: 98.61 ±19.47 kPa

Su ratio: 1.33 ±0.27

O.C.R.: 6.15 ±1.23

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 6.84 (m), **End depth:** 6.86 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.45 ±0.03 MPa

Sleeve friction: 52.66 ±0.71 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.55E-08 ±8.69E-10 m/s

N_{₆₀}: 7.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 18.53 ±0.36 MPa

Go: 45.81 ±0.43 MPa

Su: 94.56 ±1.84 kPa

Su ratio: 1.23 ±0.02

O.C.R.: 5.68 ±0.10

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU06

Total depth: 6.86 m, Date: 19/09/2022

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mks880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.09	0.75	4.43E-07	4.4	0.0	0.0	0.0	16.4	24.5	78.3	6.2	28.8	19.0
0.84		(±6.17E-07)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±5.4)	(±3.5)	(±21.9)	(±2.8)	(±13.0)	(±0.0)
0.84	0.60	1.41E-08	2.3	0.0	0.0	0.0	5.9	16.0	31.2	1.4	6.6	19.0
1.44		(±1.41E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±2.1)	(±2.3)	(±9.4)	(±0.5)	(±2.5)	(±0.0)
1.44	1.80	5.47E-10	1.0	0.0	0.0	0.0	0.4	8.0	7.6	0.2	1.0	19.0
3.24		(±3.79E-10)	(±0.1)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±1.1)	(±2.4)	(±0.1)	(±0.5)	(±0.0)
3.24	1.70	6.49E-10	1.7	0.0	0.0	0.0	0.5	10.3	10.7	0.2	1.0	19.0
4.94		(±2.74E-10)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.7)	(±1.4)	(±0.0)	(±0.2)	(±0.0)
4.94	1.17	1.36E-09	2.2	0.0	0.0	0.0	1.2	15.0	18.2	0.3	1.3	19.0
6.11		(±1.64E-09)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±1.8)	(±4.4)	(±9.2)	(±0.1)	(±0.6)	(±0.0)
6.11	0.73	2.61E-08	6.9	0.0	0.0	0.0	19.3	44.0	98.6	1.3	6.1	19.0
6.84		(±1.43E-08)	(±1.0)	(±0.0)	(±0.0)	(±0.0)	(±3.9)	(±5.1)	(±19.5)	(±0.3)	(±1.2)	(±0.0)
6.84	0.02	1.55E-08	7.0	0.0	0.0	0.0	18.5	45.8	94.6	1.2	5.7	19.0
6.86		(±8.69E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±0.4)	(±1.8)	(±0.0)	(±0.1)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

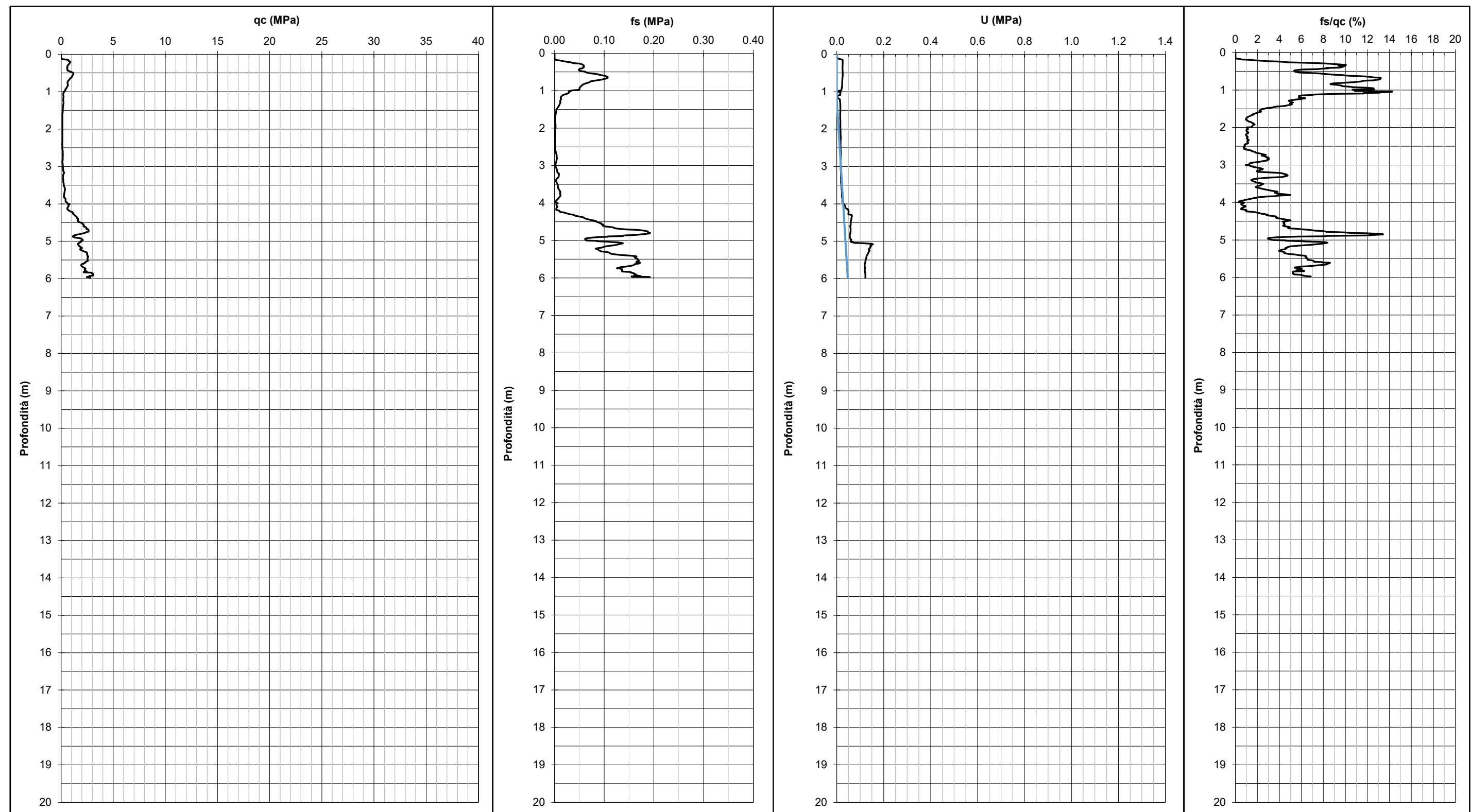
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	0.50	C	85.2	44.1	4.6	12.6	>9	18.5	19.3	--	--	--	138.58
2	1.60	C	40.1	19.3	2.9	7.7	>9	17.1	17.9	--	--	--	151.25
3	3.60	C	8.2	3.8	0.9	3.5	0.6	14.5	15.2	--	--	--	138.15
4	6.00	C	13.9	6.5	1.5	5.0	<0.5	15.3	16.1	--	--	--	166.92
5	6.99	C	90.7	48.1	4.7	13.9	2.6	18.6	19.4	--	--	--	237.29



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Greenplan Engineering S.r.l.				
CANTIERE	Aquileia (UD)				
PROVA	CPTU7	DATA	19/09/2022	OPERATORE	Dott. Andrea Zampieri

Punta	Mks880	Quota inizio indagine	p.c.	m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	6.00 m da p.c.	Livello acqua	1.20 m da p.c.			
Coordinate WGS84	Y 13.344919 E	X 45.760731 N				



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU07

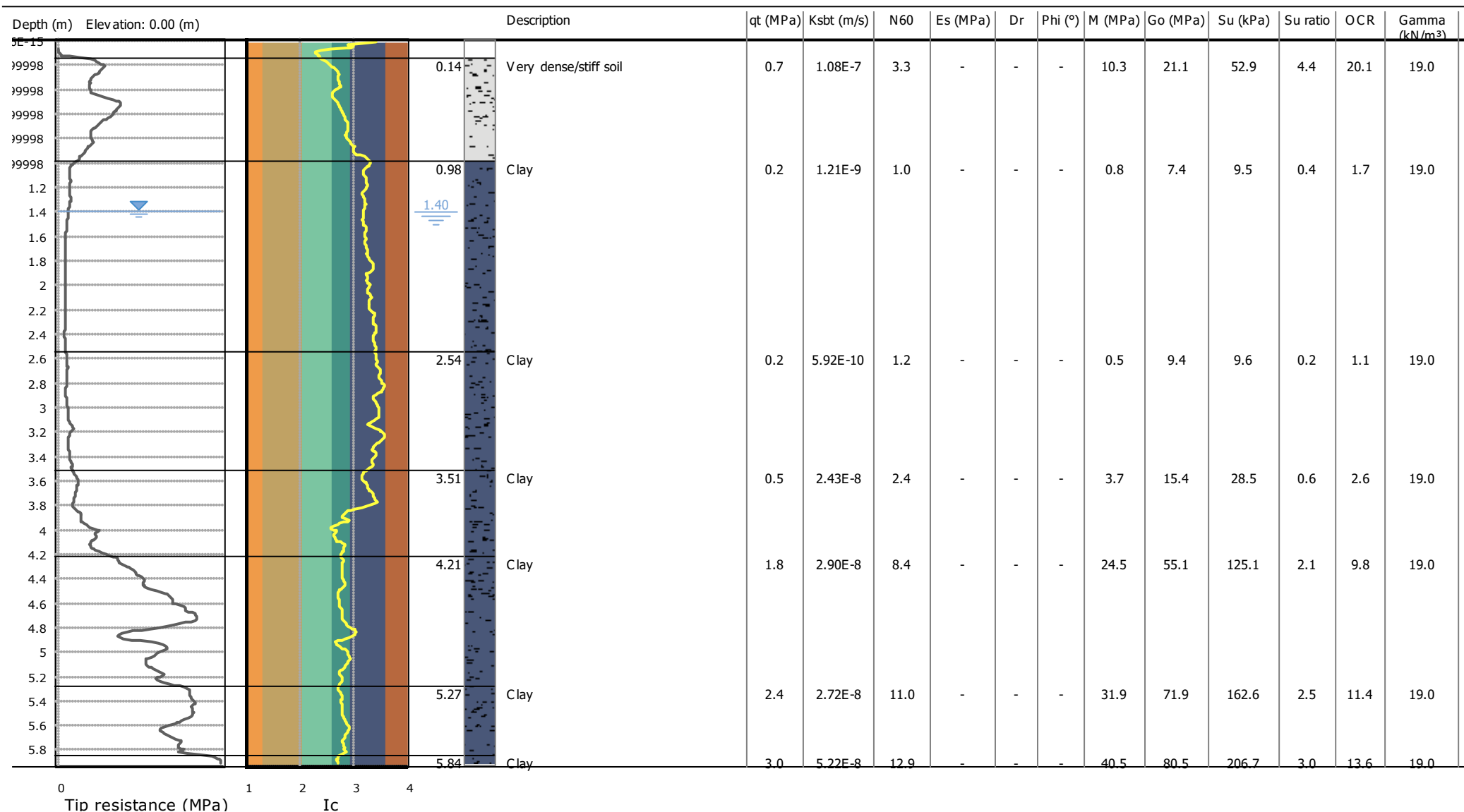
Total depth: 5.91 m, Date: 19/09/2022

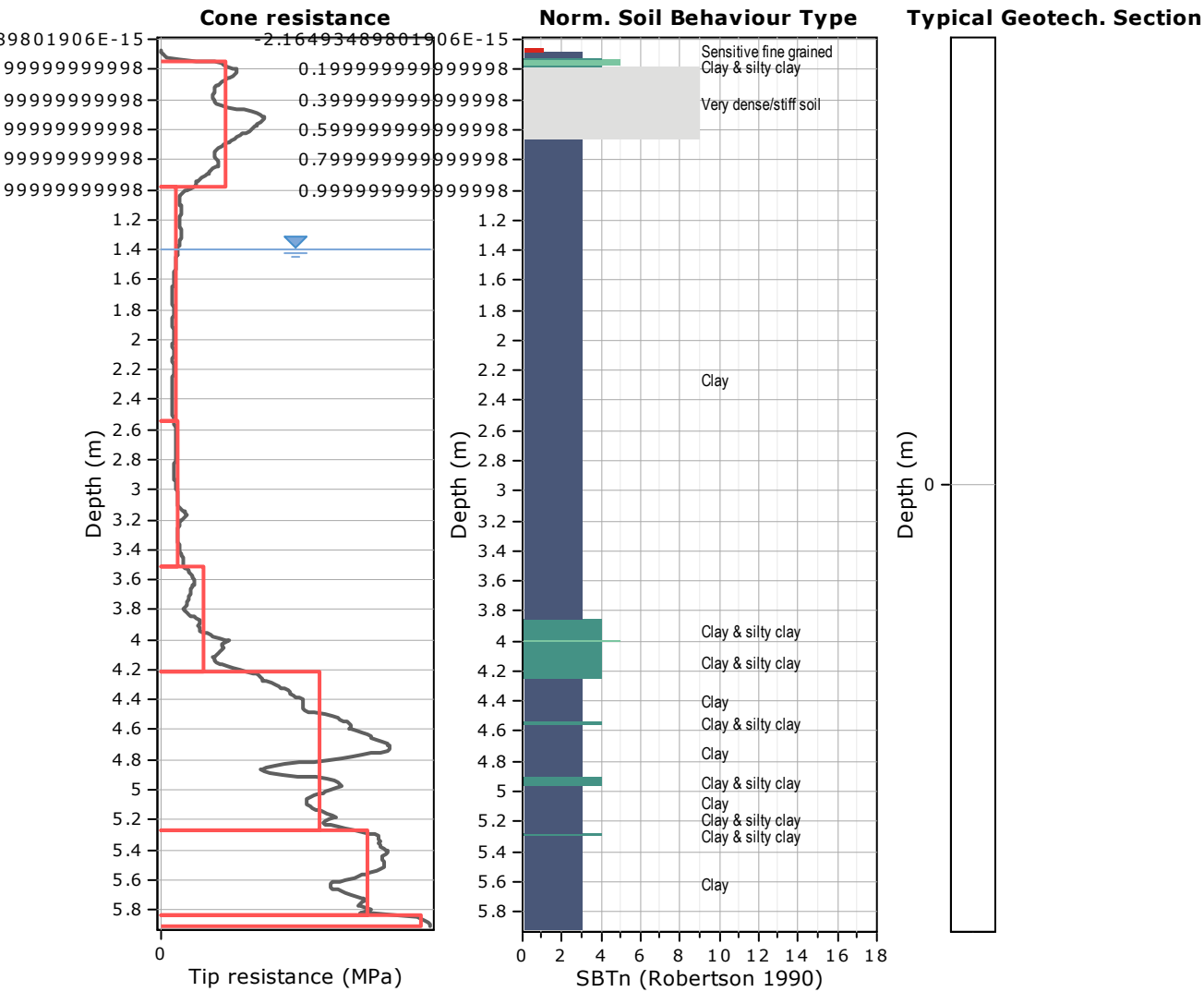
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mks880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.14 (m), **End depth:** 0.98 (m)

Description: Very dense/stiff soil

Basic results

Total cone resistance: 0.75 ± 0.21 MPa

Sleeve friction: 61.94 ± 22.94 kPa

SBT_n: 9

SBT_n description: Very dense/stiff soil

Estimation results

Permeability: $1.08\text{E-}07 \pm 1.98\text{E-}07$ m/s

$N_{>60}$: 3.28 ± 0.89 blows

Es: 0.00 ± 0.00 MPa

Dr (%): 0.00 ± 0.00

ϕ (degrees): 0.00 ± 0.00 °

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 10.28 ± 2.99 MPa

Go: 21.07 ± 5.31 MPa

Su: 52.89 ± 15.40 kPa

Su ratio: 4.36 ± 1.72

O.C.R.: 20.13 ± 7.96

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.98 (m), **End depth:** 2.54 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.17 ±0.05 MPa

Sleeve friction: 5.17 ±6.34 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.21E-09 ±5.11E-10 m/s

N_{₆₀}: 1.04 ±0.19 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.81 ±0.86 MPa

Go: 7.41 ±2.44 MPa

Su: 9.52 ±3.78 kPa

Su ratio: 0.36 ±0.22

O.C.R.: 1.66 ±1.04

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 2.54 (m), **End depth:** 3.51 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.19 ±0.04 MPa

Sleeve friction: 4.74 ±1.97 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.92E-10 ±1.32E-10 m/s

N_{₆₀}: 1.22 ±0.42 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.46 ±0.22 MPa

Go: 9.42 ±1.77 MPa

Su: 9.64 ±2.37 kPa

Su ratio: 0.23 ±0.05

O.C.R.: 1.07 ±0.22

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.51 (m), **End depth:** 4.21 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.48 ±0.19 MPa

Sleeve friction: 8.04 ±4.23 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.43E-08 ±3.25E-08 m/s

N_{₆₀}: 2.41 ±0.60 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 3.72 ±2.99 MPa

Go: 15.40 ±2.96 MPa

Su: 28.52 ±12.74 kPa

Su ratio: 0.55 ±0.21

O.C.R.: 2.56 ±0.99

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.21 (m), **End depth:** 5.27 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.84 ±0.42 MPa

Sleeve friction: 102.44 ±41.81 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.90E-08 ±1.32E-08 m/s

N_{₆₀}: 8.37 ±1.83 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 24.53 ±5.86 MPa

Go: 55.13 ±11.82 MPa

Su: 125.13 ±29.89 kPa

Su ratio: 2.11 ±0.48

O.C.R.: 9.76 ±2.22

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 5.27 (m), **End depth:** 5.84 (m)**Description:** Clay**Basic results**

Total cone resistance: 2.38 ±0.20 MPa

Sleeve friction: 150.36 ±17.63 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.72E-08 ±1.01E-08 m/s

N_{₆₀}: 11.00 ±0.75 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 31.87 ±2.85 MPa

Go: 71.86 ±4.25 MPa

Su: 162.59 ±14.54 kPa

Su ratio: 2.46 ±0.23

O.C.R.: 11.36 ±1.08

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 5.84 (m), **End depth:** 5.91 (m)**Description:** Clay**Basic results**

Total cone resistance: 3.01 ±0.14 MPa

Sleeve friction: 163.63 ±5.50 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.22E-08 ±8.21E-09 m/s

N_{₆₀}: 12.86 ±0.38 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 40.51 ±1.96 MPa

Go: 80.53 ±1.61 MPa

Su: 206.70 ±9.99 kPa

Su ratio: 2.95 ±0.13

O.C.R.: 13.64 ±0.58

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.14	0.84	1.08E-07	3.3	0.0	0.0	0.0	10.3	21.1	52.9	4.4	20.1	19.0
0.98		(±1.98E-07)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±3.0)	(±5.3)	(±15.4)	(±1.7)	(±8.0)	(±0.0)
0.98	1.56	1.21E-09	1.0	0.0	0.0	0.0	0.8	7.4	9.5	0.4	1.7	19.0
2.54		(±5.11E-10)	(±0.2)	(±0.0)	(±0.0)	(±0.0)	(±0.9)	(±2.4)	(±3.8)	(±0.2)	(±1.0)	(±0.0)
2.54	0.97	5.92E-10	1.2	0.0	0.0	0.0	0.5	9.4	9.6	0.2	1.1	19.0
3.51		(±1.32E-10)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±1.8)	(±2.4)	(±0.0)	(±0.2)	(±0.0)
3.51	0.70	2.43E-08	2.4	0.0	0.0	0.0	3.7	15.4	28.5	0.6	2.6	19.0
4.21		(±3.25E-08)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±3.0)	(±3.0)	(±12.7)	(±0.2)	(±1.0)	(±0.0)
4.21	1.06	2.90E-08	8.4	0.0	0.0	0.0	24.5	55.1	125.1	2.1	9.8	19.0
5.27		(±1.32E-08)	(±1.8)	(±0.0)	(±0.0)	(±0.0)	(±5.9)	(±11.8)	(±29.9)	(±0.5)	(±2.2)	(±0.0)
5.27	0.57	2.72E-08	11.0	0.0	0.0	0.0	31.9	71.9	162.6	2.5	11.4	19.0
5.84		(±1.01E-08)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±2.9)	(±4.3)	(±14.5)	(±0.2)	(±1.1)	(±0.0)
5.84	0.07	5.22E-08	12.9	0.0	0.0	0.0	40.5	80.5	206.7	3.0	13.6	19.0
5.91		(±8.21E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±2.0)	(±1.6)	(±10.0)	(±0.1)	(±0.6)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.00	C	48.6	23.6	3.3	8.6	>9	17.5	18.3	--	--	--	138.27
2	3.10	C	10.3	4.7	1.0	3.7	1.0	14.8	15.6	--	--	--	133.56
3	4.10	C	22.8	10.7	2.0	5.9	0.8	16.2	17.0	--	--	--	167.42
4	5.97	C	127.1	71.8	4.0	17.3	8.9	19.3	20.1	--	--	--	243.74



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE Greenplan Engineering S.r.l.

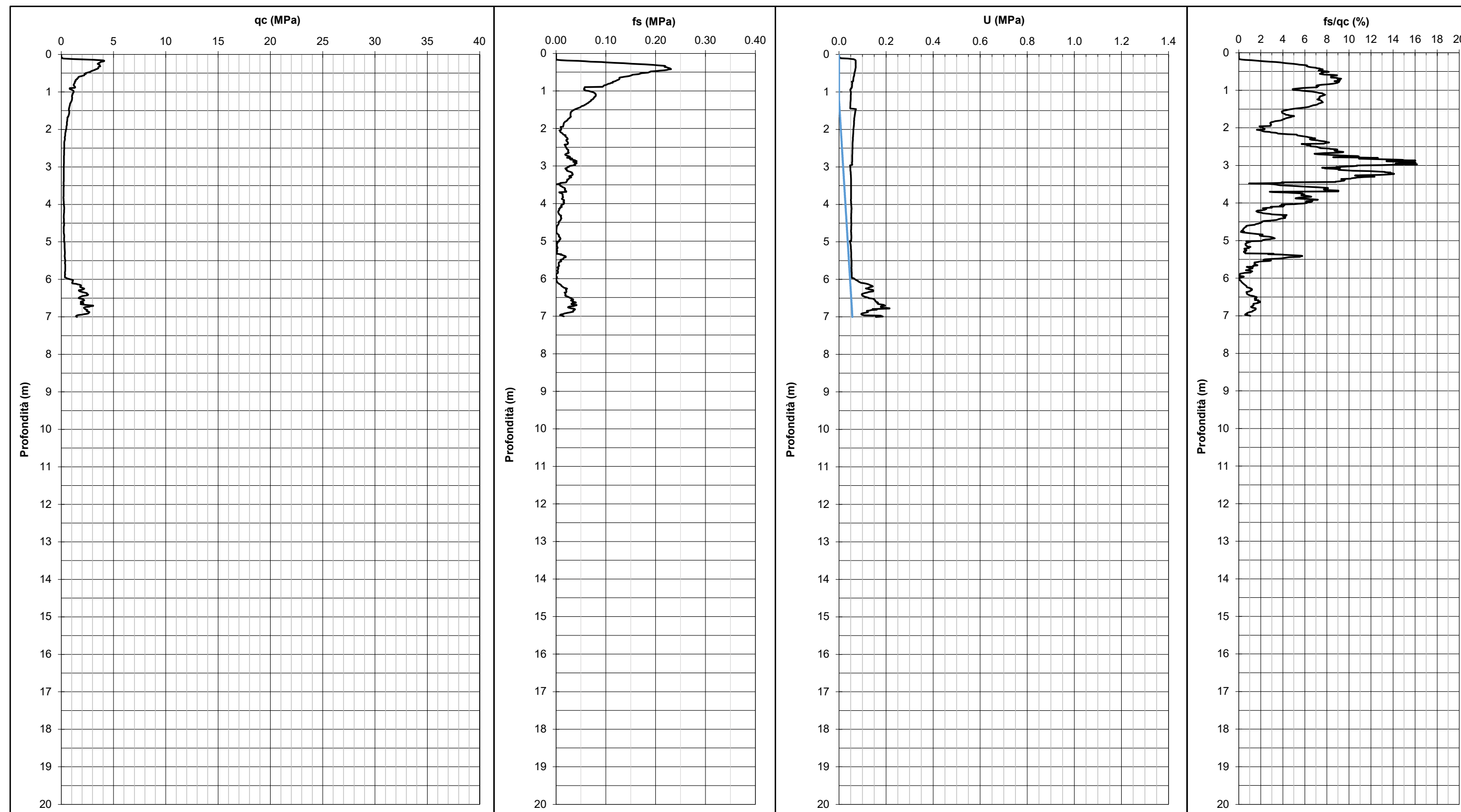
CANTIERE Aquileia (UD)

PROVA CPTU8 **DATA** 19/09/2022 **OPERATORE** Dott. Andrea Zampieri

Punta Mks880 **Quota inizio indagine** p.c. m s.l.m. **Prescavo** 0.00 m da p.c.

Profondità prova 7.00 m da p.c. **Livello acqua** 1.20 m da p.c.

Coordinate WGS84 Y 13.310678 E X 45.752049 N



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU08

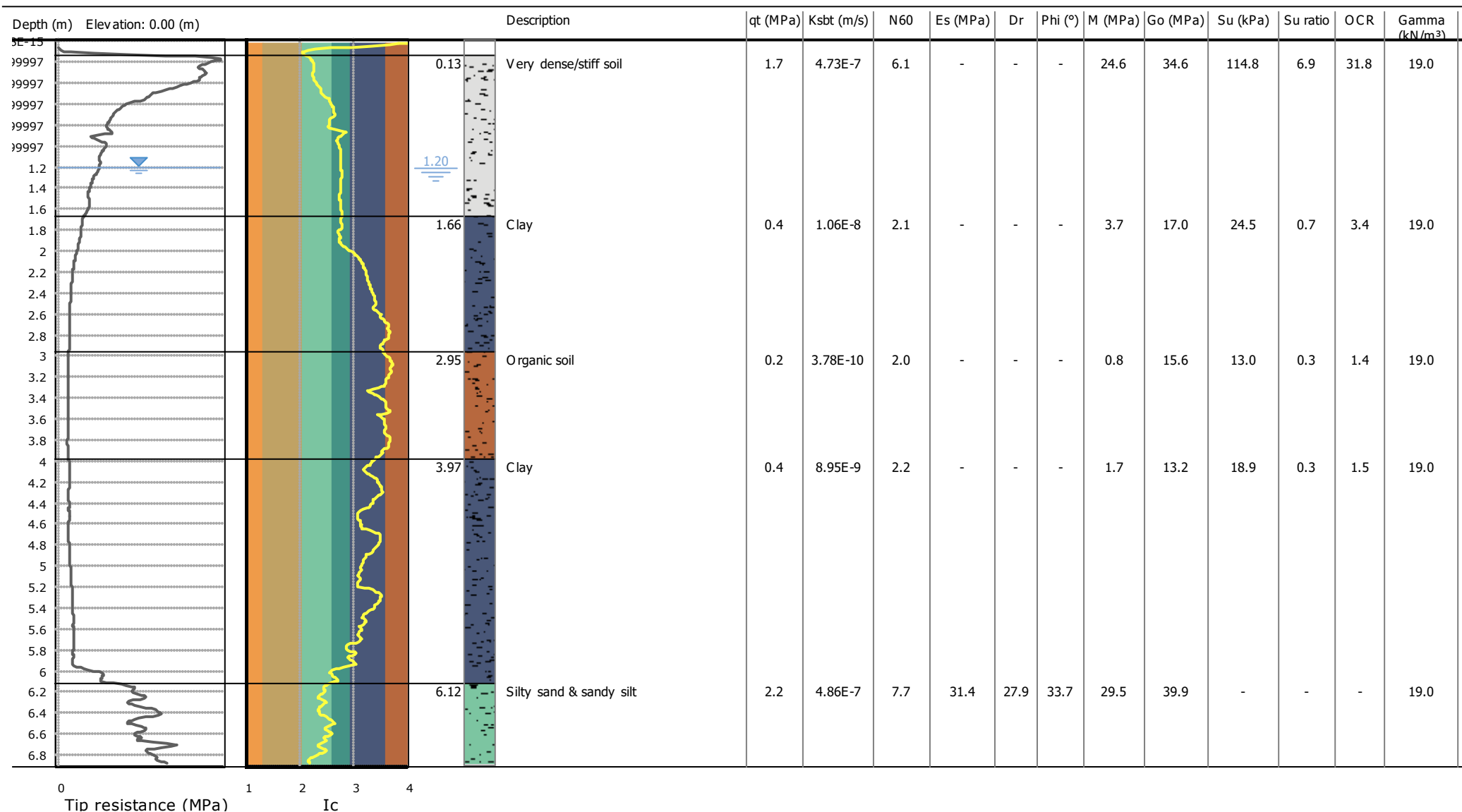
Total depth: 6.88 m, Date: 02/11/2022

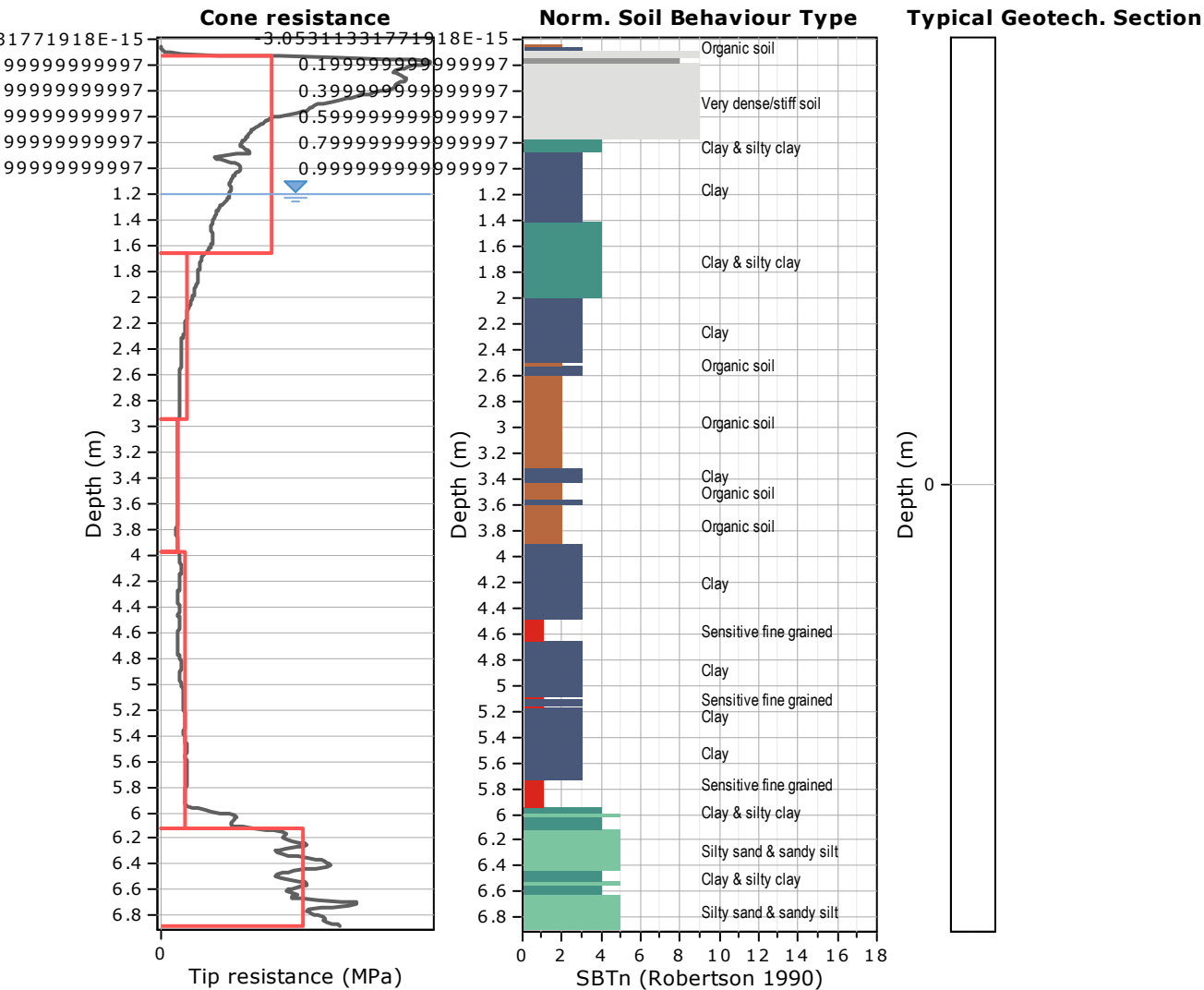
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mks880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.13 (m), **End depth:** 1.66 (m)

Description: Very dense/stiff soil

Basic results

Total cone resistance: 1.68 ±1.05 MPa

Sleeve friction: 96.90 ±60.77 kPa

SBT_n: 9

SBT_n description: Very dense/stiff soil

Estimation results

Permeability: 4.73E-07 ±8.84E-07 m/s

N_{₆₀}: 6.12 ±2.86 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 24.64 ±18.21 MPa

Go: 34.62 ±11.26 MPa

Su: 114.79 ±72.24 kPa

Su ratio: 6.89 ±6.56

O.C.R.: 31.82 ±30.31

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 1.66 (m), **End depth:** 2.95 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.39 ±0.12 MPa

Sleeve friction: 21.83 ±8.10 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.06E-08 ±1.55E-08 m/s

N_{₆₀}: 2.13 ±0.34 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 3.72 ±2.50 MPa

Go: 16.96 ±1.65 MPa

Su: 24.48 ±8.97 kPa

Su ratio: 0.74 ±0.32

O.C.R.: 3.44 ±1.47

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 2.95 (m), **End depth:** 3.97 (m)**Description:** Organic soil**Basic results**

Total cone resistance: 0.25 ±0.01 MPa

Sleeve friction: 18.16 ±7.50 kPa

SBT_n: 2SBT_n description: Organic soil**Estimation results**

Permeability: 3.78E-10 ±1.38E-10 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.77 ±0.16 MPa

Go: 15.59 ±2.02 MPa

Su: 12.98 ±0.93 kPa

Su ratio: 0.30 ±0.04

O.C.R.: 1.39 ±0.18

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.97 (m), **End depth:** 6.12 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.37 ±0.20 MPa

Sleeve friction: 5.54 ±4.27 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 8.95E-09 ±2.50E-08 m/s

N_{₆₀}: 2.17 ±0.73 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.70 ±3.10 MPa

Go: 13.21 ±4.03 MPa

Su: 18.94 ±12.55 kPa

Su ratio: 0.32 ±0.16

O.C.R.: 1.46 ±0.76

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 6.12 (m), **End depth:** 6.88 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 2.16 ±0.32 MPa

Sleeve friction: 26.40 ±8.46 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 4.86E-07 ±5.14E-07 m/s

N_{₆₀}: 7.68 ±0.88 blows

Es: 31.41 ±3.65 MPa

Dr (%): 27.91 ±1.79

φ (degrees): 33.66 ±0.81 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 29.52 ±7.31 MPa

Go: 39.87 ±4.44 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

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Tel: +39.049.9703506

CPT: CPTU08

Total depth: 6.88 m, Date: 02/11/2022

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: Mks880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.13	1.53	4.73E-07	6.1	0.0	0.0	0.0	24.6	34.6	114.8	6.9	31.8	19.0
1.66		(±8.84E-07)	(±2.9)	(±0.0)	(±0.0)	(±0.0)	(±18.2)	(±11.3)	(±72.2)	(±6.6)	(±30.3)	(±0.0)
1.66	1.29	1.06E-08	2.1	0.0	0.0	0.0	3.7	17.0	24.5	0.7	3.4	19.0
2.95		(±1.55E-08)	(±0.3)	(±0.0)	(±0.0)	(±0.0)	(±2.5)	(±1.7)	(±9.0)	(±0.3)	(±1.5)	(±0.0)
2.95	1.02	3.78E-10	2.0	0.0	0.0	0.0	0.8	15.6	13.0	0.3	1.4	19.0
3.97		(±1.38E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±2.0)	(±0.9)	(±0.0)	(±0.2)	(±0.0)
3.97	2.15	8.95E-09	2.2	0.0	0.0	0.0	1.7	13.2	18.9	0.3	1.5	19.0
6.12		(±2.50E-08)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±3.1)	(±4.0)	(±12.5)	(±0.2)	(±0.8)	(±0.0)
6.12	0.76	4.86E-07	7.7	31.4	27.9	33.7	29.5	39.9	0.0	0.0	0.0	19.0
6.88		(±5.14E-07)	(±0.9)	(±3.7)	(±1.8)	(±0.8)	(±7.3)	(±4.4)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	0.60	C	157.4	93.4	5.0	19.8	>9	19.7	20.5	--	--	--	163.49
2	2.20	C	61.7	30.8	3.9	10.3	>9	17.9	18.7	--	--	--	172.40
3	4.80	C	15.5	7.2	1.6	5.0	1.8	15.5	16.3	--	--	--	160.65
4	5.90	C	19.3	9.1	2.0	5.9	<0.5	15.9	16.7	--	--	--	180.35
5	7.00	C	117.3	65.3	4.3	16.6	1.1	19.2	19.9	--	--	--	252.37

	ID Documento Committente Cod059_FV_BGR_00010_00	Pagina 2 / 6
		Numero Revisione
		00

ALLEGATO 2

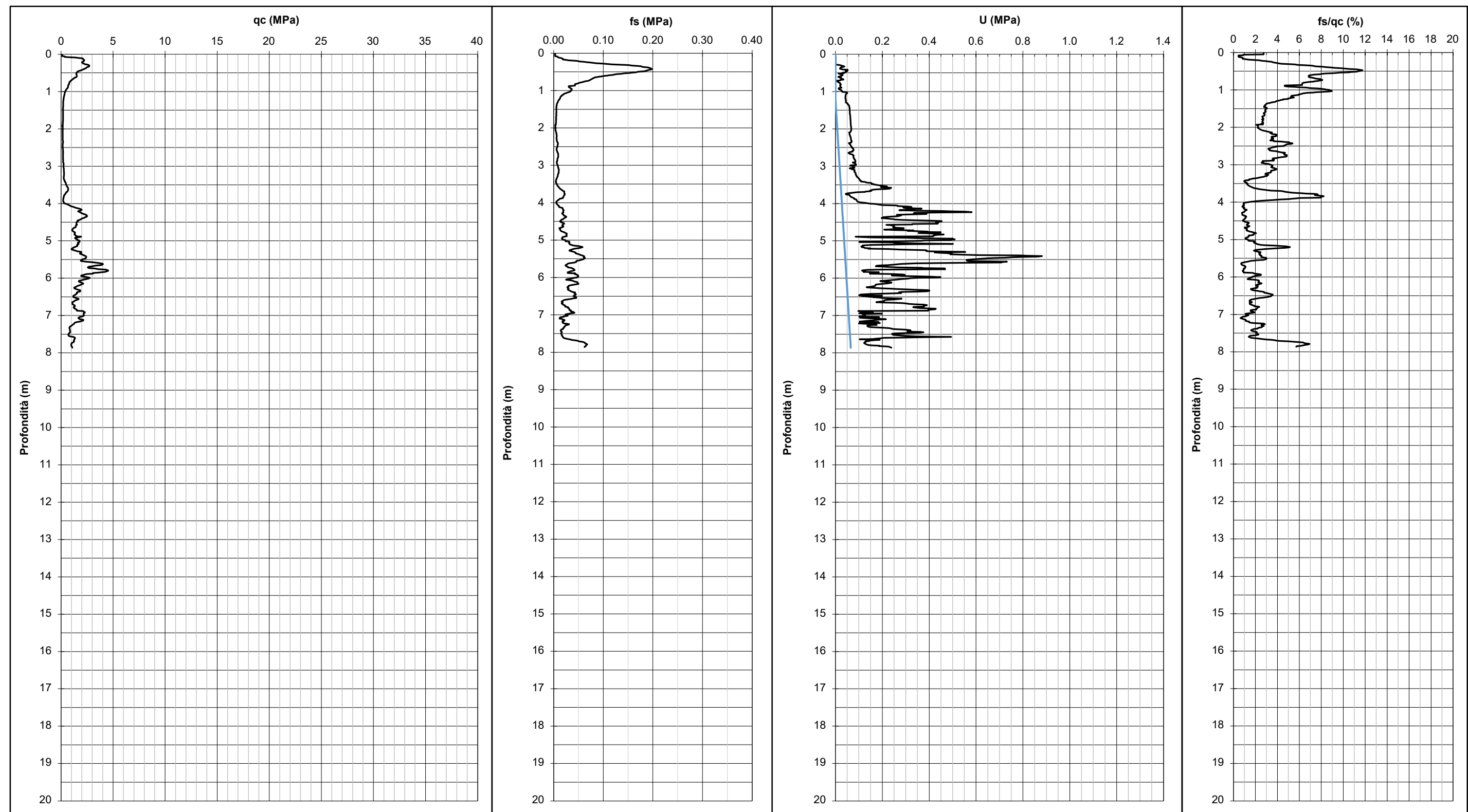
GRAFICI ED ELABORAZIONI DELLE PROVE PENETROMETRICHE CPTU INTEGRATIVE



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Greenplan Engineering S.r.l.
CANTIERE	Aquileia (UD)
PROVA	CPTU1bis
DATA	13/03/2023
OPERATORE	Dott. Andrea Zampieri

Punta	Mks880	Quota inizio indagine	p.c.	m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	7.86 m da p.c.	Livello acqua	1.20 m da p.c.			
Coordinate WGS84	Y	0	X	0		



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Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU01bis

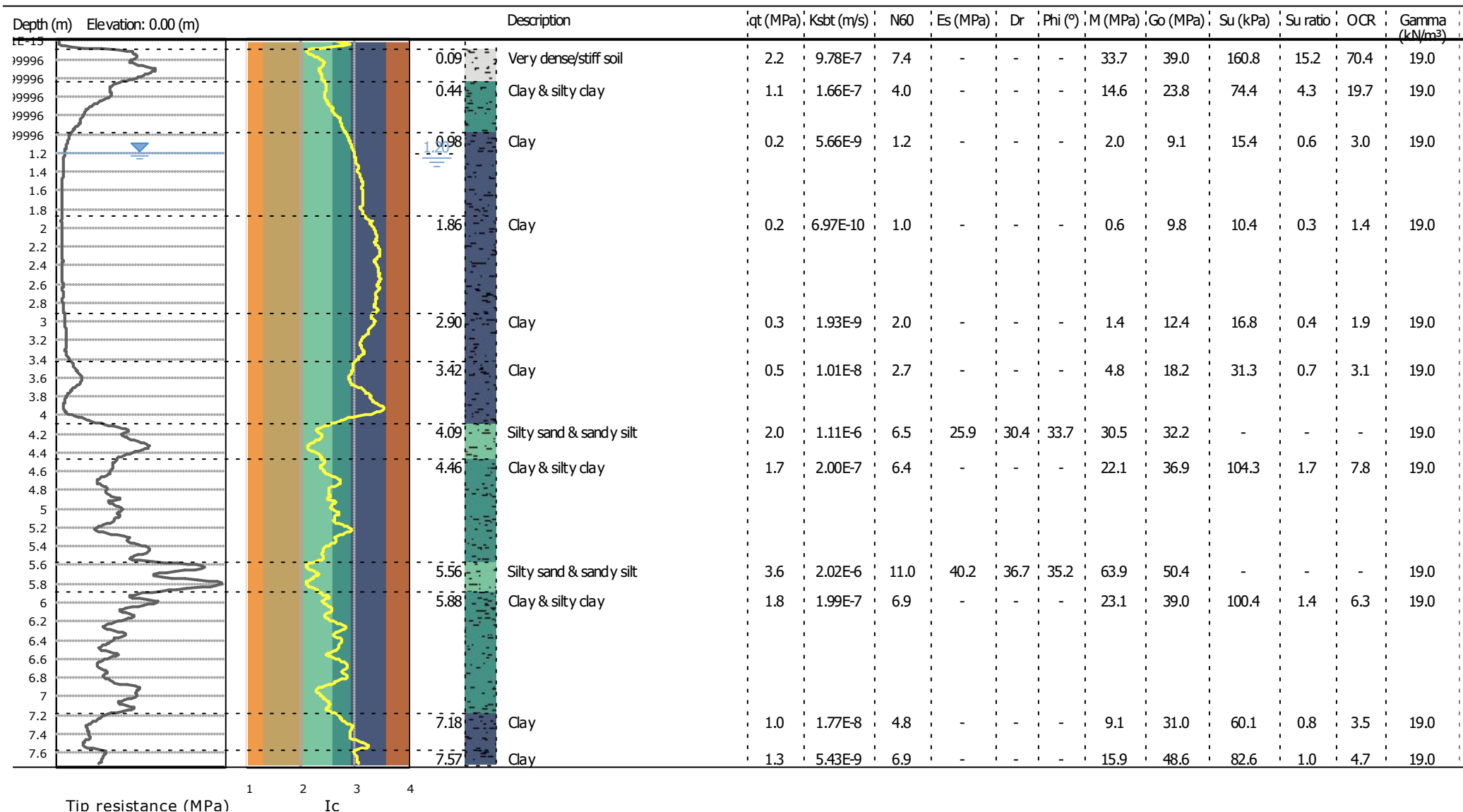
Total depth: 7.72 m, Date: 13/03/2023

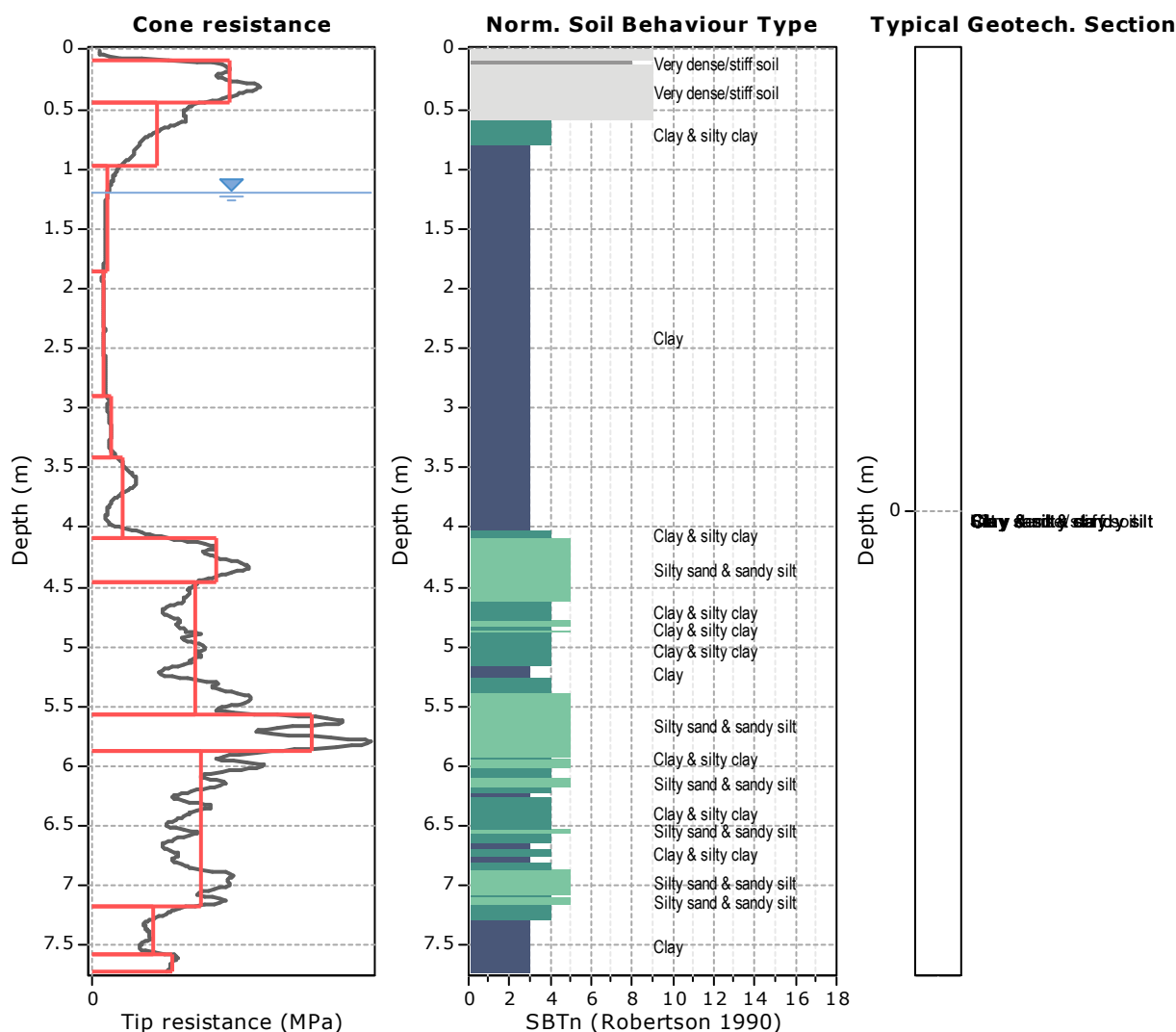
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.09 (m), **End depth:** 0.44 (m)

Description: Very dense/stiff soil

Basic results

Total cone resistance: 2.22 ±0.30 MPa

Sleeve friction: 150.85 ±41.81 kPa

SBT_n: 9

SBTn description: Very dense/stiff soil

Estimation results

Permeability: 9.78E-07 ±9.60E-07 m/s

N_{₆₀}: 7.42 ±1.20 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 33.65 ±6.44 MPa

Go: 38.96 ±7.61 MPa

Su: 160.80 ±21.43 kPa

Su ratio: 15.24 ±2.80

O.C.R.: 70.39 ±12.95

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.44 (m), **End depth:** 0.98 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.06 ±0.41 MPa

Sleeve friction: 52.36 ±26.58 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 1.66E-07 ±1.14E-07 m/s

N_{₆₀}: 3.98 ±1.30 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 14.59 ±5.77 MPa

Go: 23.79 ±6.14 MPa

Su: 74.45 ±29.43 kPa

Su ratio: 4.26 ±2.13

O.C.R.: 19.68 ±9.84

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 0.98 (m), **End depth:** 1.86 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.24 ±0.06 MPa

Sleeve friction: 6.82 ±3.38 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.66E-09 ±4.58E-09 m/s

N_{₆₀}: 1.17 ±0.38 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.04 ±1.40 MPa

Go: 9.12 ±1.51 MPa

Su: 15.40 ±4.75 kPa

Su ratio: 0.65 ±0.27

O.C.R.: 2.98 ±1.25

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 1.86 (m), **End depth:** 2.90 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.19 ±0.02 MPa

Sleeve friction: 6.94 ±1.52 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 6.97E-10 ±2.70E-10 m/s

N_{₆₀}: 1.02 ±0.14 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.64 ±0.08 MPa

Go: 9.83 ±1.12 MPa

Su: 10.45 ±0.91 kPa

Su ratio: 0.31 ±0.02

O.C.R.: 1.44 ±0.09

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 2.90 (m), **End depth:** 3.42 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.29 ±0.04 MPa

Sleeve friction: 7.80 ±2.05 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.93E-09 ±1.18E-09 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.37 ±0.38 MPa

Go: 12.39 ±0.88 MPa

Su: 16.77 ±2.39 kPa

Su ratio: 0.41 ±0.05

O.C.R.: 1.89 ±0.22

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 3.42 (m), **End depth:** 4.09 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.51 ±0.23 MPa

Sleeve friction: 14.64 ±5.72 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.01E-08 ±1.97E-08 m/s

N_{₆₀}: 2.69 ±0.72 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 4.80 ±3.92 MPa

Go: 18.18 ±4.57 MPa

Su: 31.33 ±16.36 kPa

Su ratio: 0.67 ±0.33

O.C.R.: 3.09 ±1.51

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 4.09 (m), **End depth:** 4.46 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 2.01 ±0.34 MPa

Sleeve friction: 19.02 ±3.16 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 1.11E-06 ±8.99E-07 m/s

N_{₆₀}: 6.53 ±0.65 blows

Es: 25.90 ±1.16 MPa

Dr (%): 30.40 ±1.82

φ (degrees): 33.68 ±0.44 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 30.46 ±10.96 MPa

Go: 32.23 ±1.76 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 4.46 (m), **End depth:** 5.56 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.68 ±0.40 MPa

Sleeve friction: 34.03 ±15.36 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 2.00E-07 ±1.79E-07 m/s

N_{₆₀}: 6.42 ±1.33 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 22.14 ±5.49 MPa

Go: 36.92 ±7.06 MPa

Su: 104.27 ±22.21 kPa

Su ratio: 1.69 ±0.31

O.C.R.: 7.79 ±1.42

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 5.56 (m), **End depth:** 5.88 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 3.58 ±0.61 MPa

Sleeve friction: 39.21 ±7.57 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 2.02E-06 ±9.65E-07 m/s

N_{₆₀}: 10.97 ±1.42 blows

Es: 40.19 ±4.01 MPa

Dr (%): 36.67 ±2.99

φ (degrees): 35.17 ±0.55 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 63.93 ±23.02 MPa

Go: 50.38 ±5.02 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 10 :::**Code:** Layer_10 **Start depth:** 5.88 (m), **End depth:** 7.18 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.78 ±0.42 MPa

Sleeve friction: 30.03 ±9.88 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 1.99E-07 ±2.19E-07 m/s

N_{₆₀}: 6.95 ±1.17 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 23.11 ±5.90 MPa

Go: 38.98 ±4.53 MPa

Su: 100.40 ±20.18 kPa

Su ratio: 1.37 ±0.29

O.C.R.: 6.31 ±1.33

::: Layer No: 11 :::**Code:** Layer_11 **Start depth:** 7.18 (m), **End depth:** 7.57 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.98 ±0.19 MPa

Sleeve friction: 21.98 ±10.22 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.77E-08 ±1.90E-08 m/s

N_{₆₀}: 4.80 ±0.72 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 9.06 ±4.03 MPa

Go: 31.02 ±4.14 MPa

Su: 60.07 ±13.78 kPa

Su ratio: 0.75 ±0.17

O.C.R.: 3.47 ±0.80

::: Layer No: 12 :::**Code:** Layer_12 **Start depth:** 7.57 (m), **End depth:** 7.72 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.30 ±0.06 MPa

Sleeve friction: 63.15 ±4.00 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.43E-09 ±1.31E-09 m/s

N_{₆₀}: 6.93 ±0.26 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 15.93 ±1.13 MPa

Go: 48.60 ±1.33 MPa

Su: 82.62 ±3.97 kPa

Su ratio: 1.01 ±0.05

O.C.R.: 4.66 ±0.24

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.09	0.35	9.78E-07	7.4	0.0	0.0	0.0	33.7	39.0	160.8	15.2	70.4	19.0
0.44		(±9.60E-07)	(±1.2)	(±0.0)	(±0.0)	(±0.0)	(±6.4)	(±7.6)	(±21.4)	(±2.8)	(±13.0)	(±0.0)
0.44	0.54	1.66E-07	4.0	0.0	0.0	0.0	14.6	23.8	74.4	4.3	19.7	19.0
0.98		(±1.14E-07)	(±1.3)	(±0.0)	(±0.0)	(±0.0)	(±5.8)	(±6.1)	(±29.4)	(±2.1)	(±9.8)	(±0.0)
0.98	0.88	5.66E-09	1.2	0.0	0.0	0.0	2.0	9.1	15.4	0.6	3.0	19.0
1.86		(±4.58E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±1.4)	(±1.5)	(±4.8)	(±0.3)	(±1.3)	(±0.0)
1.86	1.04	6.97E-10	1.0	0.0	0.0	0.0	0.6	9.8	10.4	0.3	1.4	19.0
2.90		(±2.70E-10)	(±0.1)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±1.1)	(±0.9)	(±0.0)	(±0.1)	(±0.0)
2.90	0.52	1.93E-09	2.0	0.0	0.0	0.0	1.4	12.4	16.8	0.4	1.9	19.0
3.42		(±1.18E-09)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±0.9)	(±2.4)	(±0.0)	(±0.2)	(±0.0)
3.42	0.67	1.01E-08	2.7	0.0	0.0	0.0	4.8	18.2	31.3	0.7	3.1	19.0
4.09		(±1.97E-08)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±3.9)	(±4.6)	(±16.4)	(±0.3)	(±1.5)	(±0.0)
4.09	0.37	1.11E-06	6.5	25.9	30.4	33.7	30.5	32.2	0.0	0.0	0.0	19.0
4.46		(±8.99E-07)	(±0.6)	(±1.2)	(±1.8)	(±0.4)	(±11.0)	(±1.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
4.46	1.10	2.00E-07	6.4	0.0	0.0	0.0	22.1	36.9	104.3	1.7	7.8	19.0
5.56		(±1.79E-07)	(±1.3)	(±0.0)	(±0.0)	(±0.0)	(±5.5)	(±7.1)	(±22.2)	(±0.3)	(±1.4)	(±0.0)
5.56	0.32	2.02E-06	11.0	40.2	36.7	35.2	63.9	50.4	0.0	0.0	0.0	19.0
5.88		(±9.65E-07)	(±1.4)	(±4.0)	(±3.0)	(±0.5)	(±23.0)	(±5.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
5.88	1.30	1.99E-07	6.9	0.0	0.0	0.0	23.1	39.0	100.4	1.4	6.3	19.0
7.18		(±2.19E-07)	(±1.2)	(±0.0)	(±0.0)	(±0.0)	(±5.9)	(±4.5)	(±20.2)	(±0.3)	(±1.3)	(±0.0)
7.18	0.39	1.77E-08	4.8	0.0	0.0	0.0	9.1	31.0	60.1	0.8	3.5	19.0
7.57		(±1.90E-08)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±4.0)	(±4.1)	(±13.8)	(±0.2)	(±0.8)	(±0.0)

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU01bis

Total depth: 7.72 m, Date: 13/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
7.57	0.15	5.43E-09	6.9	0.0	0.0	0.0	15.9	48.6	82.6	1.0	4.7	19.0
7.72		(±1.31E-09)	(±0.3)	(±0.0)	(±0.0)	(±0.0)	(±1.1)	(±1.3)	(±4.0)	(±0.1)	(±0.2)	(±0.0)

Depth values presented in this table are measured from free ground surface

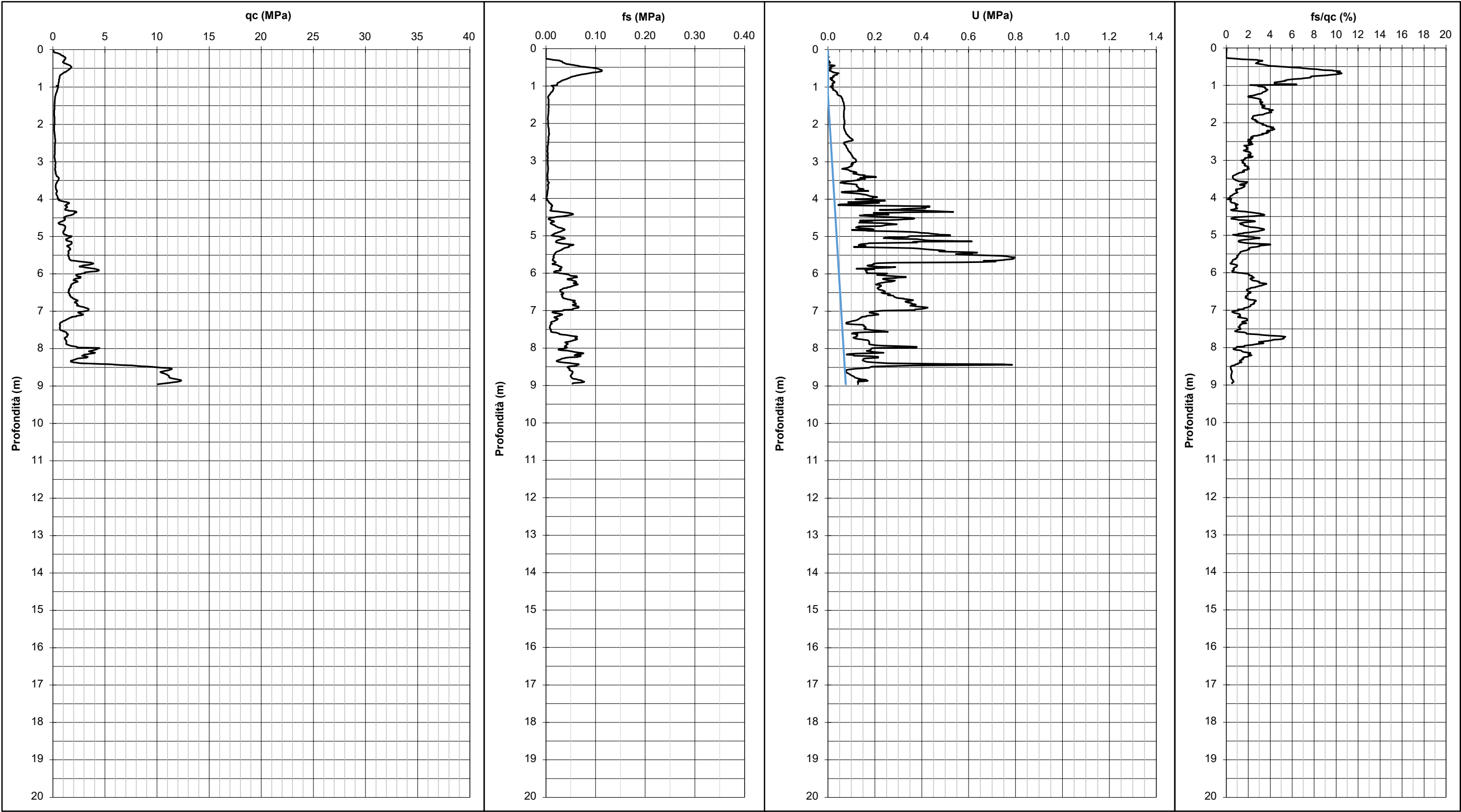
STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.10	C	64.7	48.2	4.7	13.3	>9	18.7	19.4	--	--	--	159.24
2	3.40	C	10.8	6.4	1.3	4.4	1.3	15.3	16.1	--	--	--	141.27
3	5.00	CI	56.9	40.0	4.5	12.3	<0.5	18.3	19.1	<5	28.7	2.8	216.96
4	7.86	CI	88.3	62.2	4.5	16.1	<0.5	19.1	19.9	<5	28.7	4.4	256.97

COMMITTENTE	Greenplan Engineering S.r.l.			
CANTIERE	Aquileia (UD)			
PROVA	CPTU2bis	DATA	13/03/2023	OPERATORE Dott. Andrea Zampieri

Punta	Mks880	Quota inizio indagine	p.c.	m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	8.95	m da p.c.	Livello acqua	1.20	m da p.c.	
Coordinate WGS84	Y	0	X	0		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU2bis

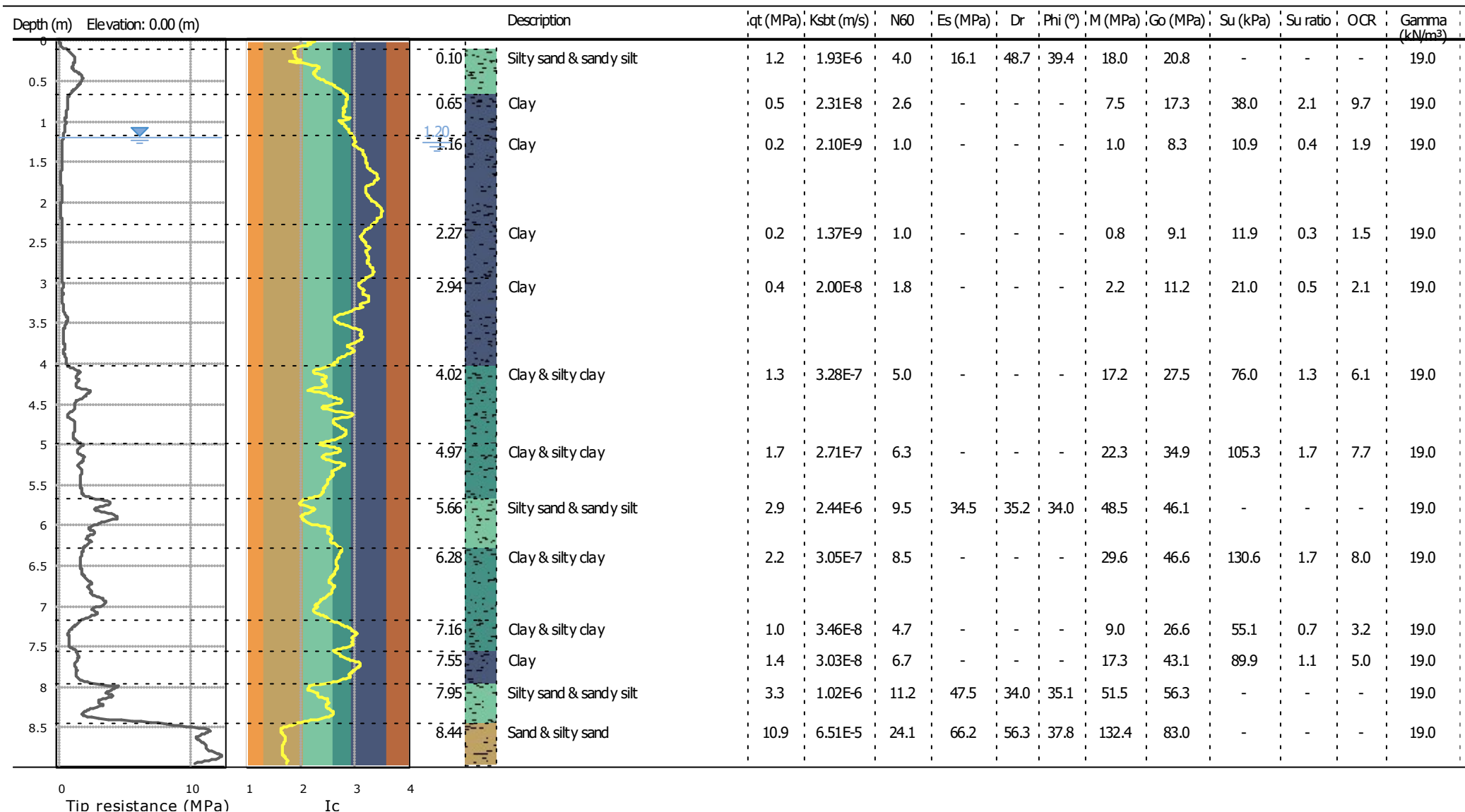
Total depth: 8.95 m, Date: 13/03/2023

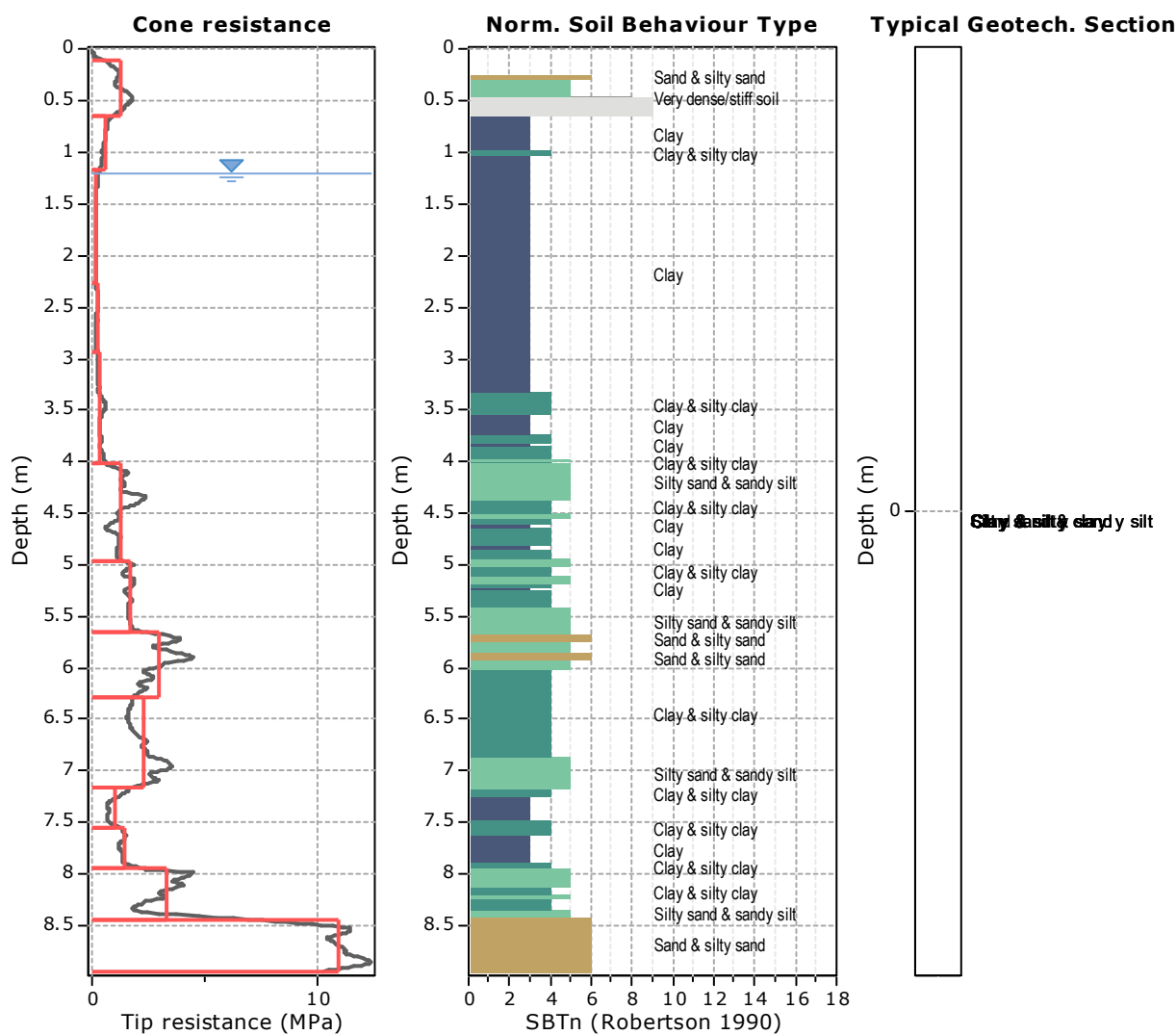
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.10 (m), **End depth:** 0.65 (m)

Description: Silty sand & sandy silt

Basic results

Total cone resistance: 1.23 ±0.32 MPa

Sleeve friction: 45.62 ±42.86 kPa

SBT_n: 5

SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 1.93E-06 ±5.46E-06 m/s

N_{₆₀}: 4.02 ±1.46 blows

Es: 16.07 ±4.74 MPa

Dr (%): 48.74 ±4.36

φ (degrees): 39.38 ±2.25 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 17.99 ±4.32 MPa

Go: 20.80 ±9.73 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.65 (m), **End depth:** 1.16 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.55 ±0.13 MPa

Sleeve friction: 34.33 ±22.23 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.31E-08 ±8.14E-09 m/s

N_{₆₀}: 2.56 ±0.64 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 7.46 ±1.80 MPa

Go: 17.30 ±4.13 MPa

Su: 38.05 ±9.15 kPa

Su ratio: 2.10 ±0.85

O.C.R.: 9.72 ±3.91

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.16 (m), **End depth:** 2.27 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.18 ±0.04 MPa

Sleeve friction: 5.48 ±1.32 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.10E-09 ±2.44E-09 m/s

N_{₆₀}: 1.04 ±0.19 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.97 ±0.77 MPa

Go: 8.34 ±0.75 MPa

Su: 10.87 ±3.11 kPa

Su ratio: 0.41 ±0.16

O.C.R.: 1.89 ±0.75

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 2.27 (m), **End depth:** 2.94 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.22 ±0.02 MPa

Sleeve friction: 4.40 ±0.95 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.37E-09 ±5.87E-10 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.79 ±0.24 MPa

Go: 9.09 ±0.54 MPa

Su: 11.86 ±1.54 kPa

Su ratio: 0.33 ±0.06

O.C.R.: 1.54 ±0.26

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 2.94 (m), **End depth:** 4.02 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.37 ±0.11 MPa

Sleeve friction: 3.73 ±0.89 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.00E-08 ±2.87E-08 m/s

N_{₆₀}: 1.81 ±0.40 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.17 ±1.46 MPa

Go: 11.21 ±1.16 MPa

Su: 21.05 ±7.44 kPa

Su ratio: 0.46 ±0.13

O.C.R.: 2.14 ±0.61

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 4.02 (m), **End depth:** 4.97 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.29 ±0.39 MPa

Sleeve friction: 19.31 ±13.63 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 3.28E-07 ±4.89E-07 m/s

N_{₆₀}: 4.99 ±1.23 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 17.16 ±7.61 MPa

Go: 27.48 ±6.82 MPa

Su: 76.01 ±23.82 kPa

Su ratio: 1.32 ±0.41

O.C.R.: 6.08 ±1.89

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 4.97 (m), **End depth:** 5.66 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.67 ±0.19 MPa

Sleeve friction: 26.61 ±11.68 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 2.71E-07 ±2.83E-07 m/s

N_{₆₀}: 6.34 ±0.54 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 22.29 ±4.53 MPa

Go: 34.85 ±3.74 MPa

Su: 105.28 ±9.31 kPa

Su ratio: 1.66 ±0.12

O.C.R.: 7.65 ±0.53

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 5.66 (m), **End depth:** 6.28 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 2.95 ±0.75 MPa

Sleeve friction: 36.28 ±16.65 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 2.44E-06 ±2.67E-06 m/s

N_{₆₀}: 9.48 ±1.13 blows

Es: 34.52 ±3.35 MPa

Dr (%): 35.17 ±3.13

φ (degrees): 33.97 ±0.72 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 48.46 ±19.48 MPa

Go: 46.09 ±5.04 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 6.28 (m), **End depth:** 7.16 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 2.25 ±0.59 MPa

Sleeve friction: 42.23 ±14.63 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 3.05E-07 ±3.77E-07 m/s

N_{₆₀}: 8.52 ±1.57 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 29.64 ±8.19 MPa

Go: 46.62 ±7.06 MPa

Su: 130.58 ±25.28 kPa

Su ratio: 1.74 ±0.29

O.C.R.: 8.02 ±1.35

::: Layer No: 10 :::**Code:** Layer_10 **Start depth:** 7.16 (m), **End depth:** 7.55 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.97 ±0.33 MPa

Sleeve friction: 13.17 ±5.40 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 3.46E-08 ±4.72E-08 m/s

N_{₆₀}: 4.67 ±0.94 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 8.98 ±6.29 MPa

Go: 26.64 ±5.18 MPa

Su: 55.14 ±19.12 kPa

Su ratio: 0.69 ±0.24

O.C.R.: 3.18 ±1.10

::: Layer No: 11 :::**Code:** Layer_11 **Start depth:** 7.55 (m), **End depth:** 7.95 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.41 ±0.24 MPa

Sleeve friction: 43.01 ±15.55 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.03E-08 ±3.68E-08 m/s

N_{₆₀}: 6.73 ±0.87 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 17.33 ±3.64 MPa

Go: 43.06 ±5.74 MPa

Su: 89.88 ±17.11 kPa

Su ratio: 1.07 ±0.19

O.C.R.: 4.96 ±0.87

::: Layer No: 12 :::**Code:** Layer_12 **Start depth:** 7.95 (m), **End depth:** 8.44 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 3.32 ±1.10 MPa

Sleeve friction: 46.06 ±16.72 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 1.02E-06 ±1.38E-06 m/s

N_{₆₀}: 11.20 ±2.57 blows

Es: 47.54 ±6.35 MPa

Dr (%): 34.01 ±4.27

φ (degrees): 35.11 ±0.89 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 51.53 ±27.13 MPa

Go: 56.28 ±9.67 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 13 :::**Code:** Layer_13 **Start depth:** 8.44 (m), **End depth:** 8.95 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 10.86 ±1.12 MPa

Sleeve friction: 55.59 ±9.09 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 6.51E-05 ±2.23E-05 m/s

N_{₆₀}: 24.08 ±1.76 blows

Es: 66.20 ±3.86 MPa

Dr (%): 56.35 ±2.90

φ (degrees): 37.79 ±0.45 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 132.41 ±7.72 MPa

Go: 82.97 ±4.84 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.10	0.55	1.93E-06	4.0	16.1	48.7	39.4	18.0	20.8	0.0	0.0	0.0	19.0
0.65		(±5.46E-06)	(±1.5)	(±4.7)	(±4.4)	(±2.3)	(±4.3)	(±9.7)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
0.65	0.51	2.31E-08	2.6	0.0	0.0	0.0	7.5	17.3	38.0	2.1	9.7	19.0
1.16		(±8.14E-09)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±1.8)	(±4.1)	(±9.2)	(±0.8)	(±3.9)	(±0.0)
1.16	1.11	2.10E-09	1.0	0.0	0.0	0.0	1.0	8.3	10.9	0.4	1.9	19.0
2.27		(±2.44E-09)	(±0.2)	(±0.0)	(±0.0)	(±0.0)	(±0.8)	(±0.8)	(±3.1)	(±0.2)	(±0.8)	(±0.0)
2.27	0.67	1.37E-09	1.0	0.0	0.0	0.0	0.8	9.1	11.9	0.3	1.5	19.0
2.94		(±5.87E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.5)	(±1.5)	(±0.1)	(±0.3)	(±0.0)
2.94	1.08	2.00E-08	1.8	0.0	0.0	0.0	2.2	11.2	21.0	0.5	2.1	19.0
4.02		(±2.87E-08)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±1.5)	(±1.2)	(±7.4)	(±0.1)	(±0.6)	(±0.0)
4.02	0.95	3.28E-07	5.0	0.0	0.0	0.0	17.2	27.5	76.0	1.3	6.1	19.0
4.97		(±4.89E-07)	(±1.2)	(±0.0)	(±0.0)	(±0.0)	(±7.6)	(±6.8)	(±23.8)	(±0.4)	(±1.9)	(±0.0)
4.97	0.69	2.71E-07	6.3	0.0	0.0	0.0	22.3	34.9	105.3	1.7	7.7	19.0
5.66		(±2.83E-07)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±4.5)	(±3.7)	(±9.3)	(±0.1)	(±0.5)	(±0.0)
5.66	0.62	2.44E-06	9.5	34.5	35.2	34.0	48.5	46.1	0.0	0.0	0.0	19.0
6.28		(±2.67E-06)	(±1.1)	(±3.3)	(±3.1)	(±0.7)	(±19.5)	(±5.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
6.28	0.88	3.05E-07	8.5	0.0	0.0	0.0	29.6	46.6	130.6	1.7	8.0	19.0
7.16		(±3.77E-07)	(±1.6)	(±0.0)	(±0.0)	(±0.0)	(±8.2)	(±7.1)	(±25.3)	(±0.3)	(±1.4)	(±0.0)
7.16	0.39	3.46E-08	4.7	0.0	0.0	0.0	9.0	26.6	55.1	0.7	3.2	19.0
7.55		(±4.72E-08)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±6.3)	(±5.2)	(±19.1)	(±0.2)	(±1.1)	(±0.0)
7.55	0.40	3.03E-08	6.7	0.0	0.0	0.0	17.3	43.1	89.9	1.1	5.0	19.0
7.95		(±3.68E-08)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±3.6)	(±5.7)	(±17.1)	(±0.2)	(±0.9)	(±0.0)

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU2bis

Total depth: 8.95 m, Date: 13/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G _o (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
7.95	0.49	1.02E-06	11.2	47.5	34.0	35.1	51.5	56.3	0.0	0.0	0.0	19.0
8.44		(±1.38E-06)	(±2.6)	(±6.3)	(±4.3)	(±0.9)	(±27.1)	(±9.7)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
8.44	0.51	6.51E-05	24.1	66.2	56.3	37.8	132.4	83.0	0.0	0.0	0.0	19.0
8.95		(±2.23E-05)	(±1.8)	(±3.9)	(±2.9)	(±0.4)	(±7.7)	(±4.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.10	C	43.1	32.1	4.0	10.4	>9	18.0	18.8	--	--	--	147.24
2	3.00	C	9.8	5.8	1.2	4.1	1.0	15.2	15.9	--	--	--	136.13
3	4.00	CI	17.7	10.9	2.0	5.9	<0.5	16.2	17.0	<5	28.7	0.9	156.74
4	8.40	CI	94.1	66.8	4.3	16.7	<0.5	19.2	20.0	<5	29.2	4.7	259.69
5	8.95	I	--	--	15.8	47.8	1.7	18.6	21.6	<5	36.6	26.3	418.68



PROVA PENETROMETRICA STATICA CPTU

M31 Rev. 0 del 21/04/2020

Pagina 1 di 1

COMMITTENTE Greenplan Engineering S.r.l.

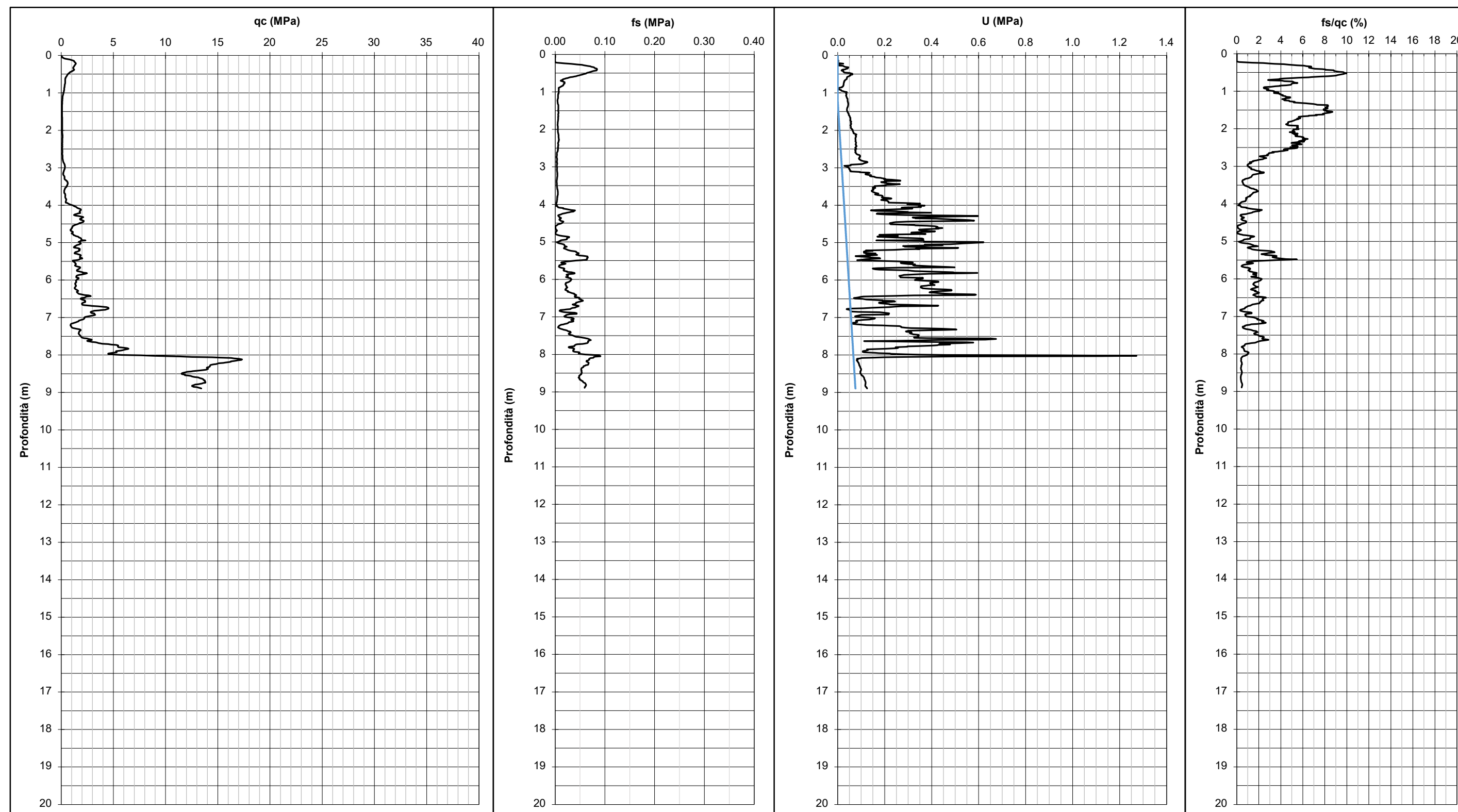
CANTIERE Aquileia (UD)

PROVA CPTU3bis **DATA** 13/03/2023 **OPERATORE** Dott. Andrea Zampieri

Punta Mks880 **Quota inizio indagine** p.c. m s.l.m. **Prescavo** 0.00 m da p.c.

Profondità prova 8.89 m da p.c. **Livello acqua** 1.20 m da p.c.

Coordinate WGS84 Y 0 X 0



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU3bis

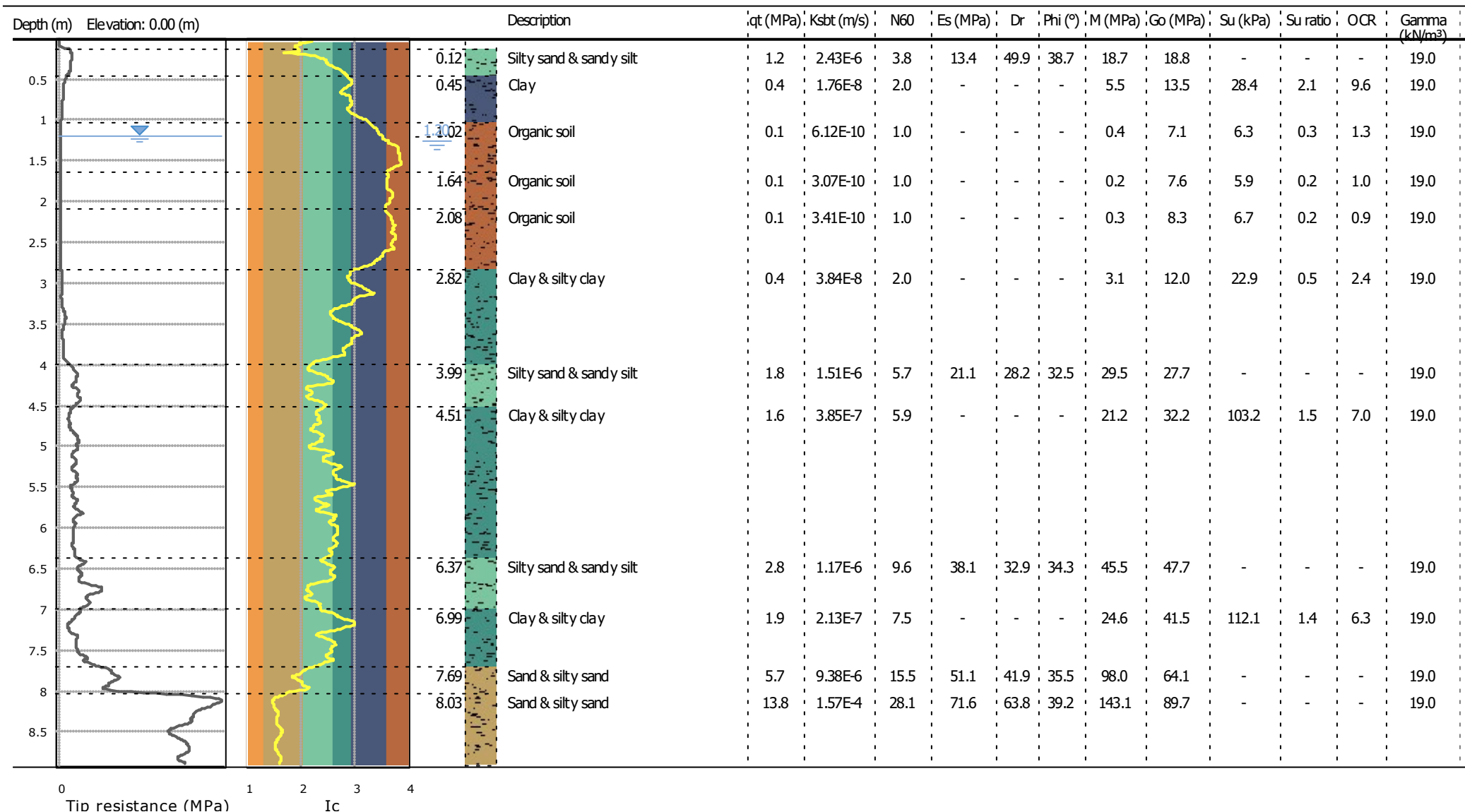
Total depth: 8.89 m, Date: 13/03/2023

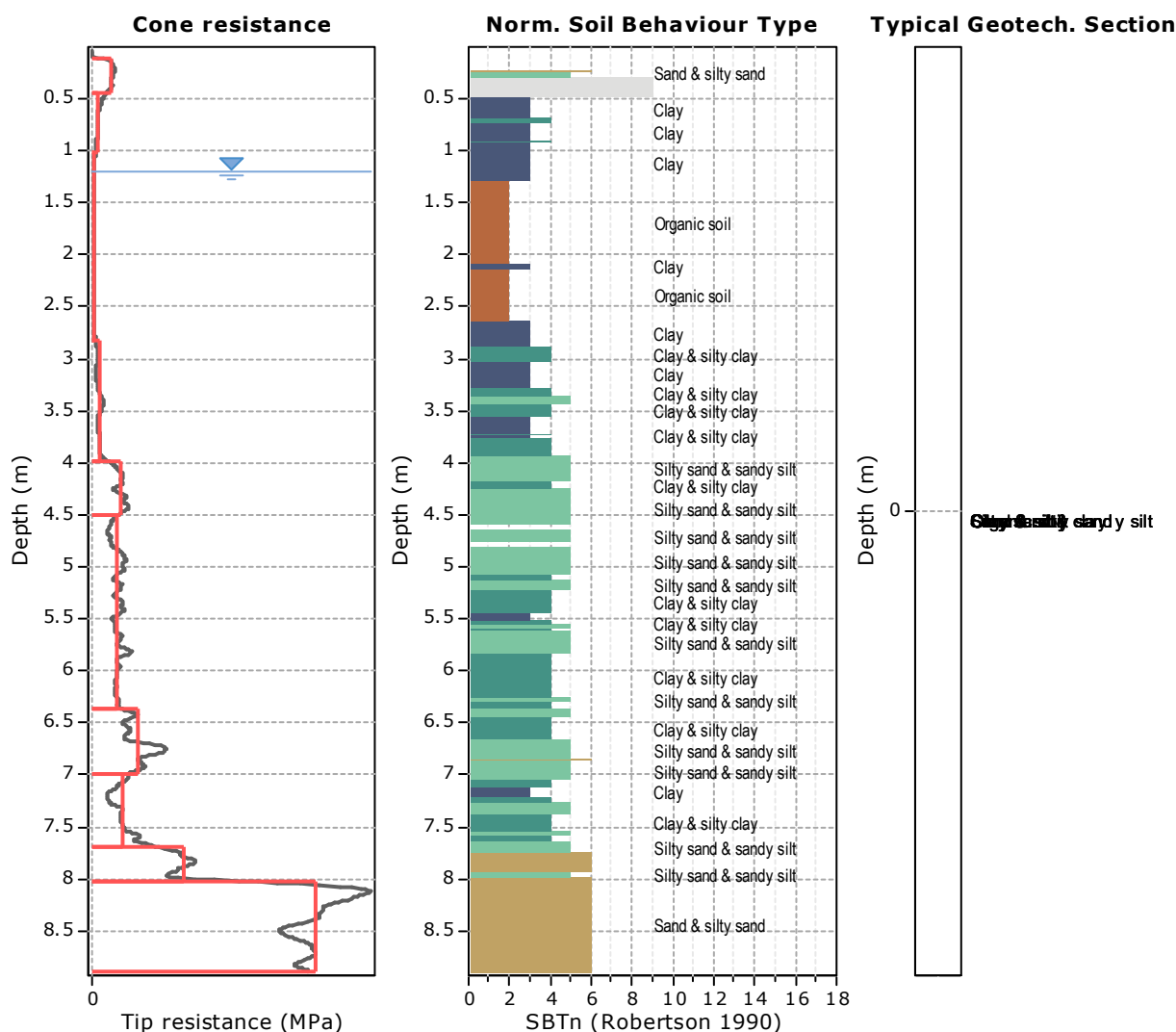
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.12 (m), **End depth:** 0.45 (m)

Description: Silty sand & sandy silt

Basic results

Total cone resistance: 1.20 ±0.16 MPa

Sleeve friction: 37.31 ±35.97 kPa

SBT_n: 5

SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 2.43E-06 ±6.51E-06 m/s

N_{₆₀}: 3.76 ±0.65 blows

Es: 13.36 ±2.72 MPa

Dr (%): 49.95 ±3.63

φ (degrees): 38.68 ±2.58 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 18.71 ±4.08 MPa

Go: 18.81 ±5.80 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.45 (m), **End depth:** 1.02 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.41 ±0.15 MPa

Sleeve friction: 29.44 ±23.93 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.76E-08 ±1.03E-08 m/s

N_{₆₀}: 1.98 ±0.76 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 5.49 ±2.29 MPa

Go: 13.54 ±4.50 MPa

Su: 28.37 ±11.23 kPa

Su ratio: 2.08 ±1.24

O.C.R.: 9.59 ±5.72

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.02 (m), **End depth:** 1.64 (m)**Description:** Organic soil**Basic results**

Total cone resistance: 0.11 ±0.03 MPa

Sleeve friction: 6.13 ±0.73 kPa

SBT_n: 2SBT_n description: Organic soil**Estimation results**

Permeability: 6.12E-10 ±8.09E-10 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.42 ±0.41 MPa

Go: 7.08 ±0.43 MPa

Su: 6.35 ±2.52 kPa

Su ratio: 0.28 ±0.14

O.C.R.: 1.29 ±0.65

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 1.64 (m), **End depth:** 2.08 (m)**Description:** Organic soil**Basic results**

Total cone resistance: 0.12 ±0.01 MPa

Sleeve friction: 5.71 ±0.48 kPa

SBT_n: 2SBT_n description: Organic soil**Estimation results**

Permeability: 3.07E-10 ±3.82E-11 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.24 ±0.03 MPa

Go: 7.56 ±0.19 MPa

Su: 5.93 ±0.38 kPa

Su ratio: 0.21 ±0.02

O.C.R.: 0.95 ±0.08

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 2.08 (m), **End depth:** 2.82 (m)**Description:** Organic soil**Basic results**

Total cone resistance: 0.14 ±0.02 MPa

Sleeve friction: 5.64 ±1.38 kPa

SBT_n: 2SBT_n description: Organic soil**Estimation results**

Permeability: 3.41E-10 ±1.47E-10 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.26 ±0.08 MPa

Go: 8.32 ±0.44 MPa

Su: 6.68 ±1.01 kPa

Su ratio: 0.20 ±0.03

O.C.R.: 0.90 ±0.13

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 2.82 (m), **End depth:** 3.99 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.42 ±0.15 MPa

Sleeve friction: 4.09 ±0.68 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 3.84E-08 ±7.85E-08 m/s

N_{₆₀}: 1.99 ±0.53 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 3.15 ±2.39 MPa

Go: 12.00 ±1.73 MPa

Su: 22.87 ±7.38 kPa

Su ratio: 0.51 ±0.13

O.C.R.: 2.38 ±0.61

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 3.99 (m), **End depth:** 4.51 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 1.77 ±0.30 MPa

Sleeve friction: 13.71 ±10.49 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 1.51E-06 ±1.09E-06 m/s

N_{₆₀}: 5.74 ±0.92 blows

Es: 21.10 ±3.67 MPa

Dr (%): 28.19 ±2.25

φ (degrees): 32.53 ±0.85 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 29.48 ±10.10 MPa

Go: 27.71 ±5.37 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 4.51 (m), **End depth:** 6.37 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.58 ±0.30 MPa

Sleeve friction: 22.38 ±15.99 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 3.85E-07 ±4.70E-07 m/s

N_{₆₀}: 5.89 ±1.13 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 21.21 ±5.13 MPa

Go: 32.16 ±8.02 MPa

Su: 103.17 ±13.83 kPa

Su ratio: 1.52 ±0.22

O.C.R.: 7.02 ±1.01

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 6.37 (m), **End depth:** 6.99 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 2.83 ±0.79 MPa

Sleeve friction: 37.28 ±11.93 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 1.17E-06 ±1.28E-06 m/s

N_{₆₀}: 9.56 ±1.65 blows

Es: 38.06 ±5.43 MPa

Dr (%): 32.93 ±3.59

φ (degrees): 34.32 ±1.07 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 45.52 ±22.57 MPa

Go: 47.67 ±5.74 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 10 :::**Code:** Layer_10 **Start depth:** 6.99 (m), **End depth:** 7.69 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.93 ±0.69 MPa

Sleeve friction: 31.89 ±18.33 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 2.13E-07 ±2.16E-07 m/s

N_{₆₀}: 7.52 ±2.12 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 24.62 ±10.30 MPa

Go: 41.48 ±11.08 MPa

Su: 112.14 ±41.70 kPa

Su ratio: 1.37 ±0.48

O.C.R.: 6.35 ±2.20

::: Layer No: 11 :::**Code:** Layer_11 **Start depth:** 7.69 (m), **End depth:** 8.03 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 5.72 ±1.24 MPa

Sleeve friction: 44.72 ±11.77 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 9.38E-06 ±9.29E-06 m/s

N_{₆₀}: 15.51 ±2.11 blows

Es: 51.15 ±4.43 MPa

Dr (%): 41.94 ±4.07

φ (degrees): 35.53 ±0.69 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 97.96 ±15.63 MPa

Go: 64.11 ±5.55 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 12 :::**Code:** Layer_12 **Start depth:** 8.03 (m), **End depth:** 8.89 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 13.78 ±1.54 MPa

Sleeve friction: 60.02 ±10.12 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.57E-04 ±5.63E-05 m/s

N_{₆₀}: 28.12 ±2.32 blows

Es: 71.55 ±4.63 MPa

Dr (%): 63.82 ±3.74

φ (degrees): 39.23 ±0.78 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 143.11 ±9.27 MPa

Go: 89.68 ±5.81 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.12	0.33	2.43E-06	3.8	13.4	49.9	38.7	18.7	18.8	0.0	0.0	0.0	19.0
0.45		(±6.51E-06)	(±0.7)	(±2.7)	(±3.6)	(±2.6)	(±4.1)	(±5.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
0.45	0.57	1.76E-08	2.0	0.0	0.0	0.0	5.5	13.5	28.4	2.1	9.6	19.0
1.02		(±1.03E-08)	(±0.8)	(±0.0)	(±0.0)	(±0.0)	(±2.3)	(±4.5)	(±11.2)	(±1.2)	(±5.7)	(±0.0)
1.02	0.62	6.12E-10	1.0	0.0	0.0	0.0	0.4	7.1	6.3	0.3	1.3	19.0
1.64		(±8.09E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±0.4)	(±2.5)	(±0.1)	(±0.7)	(±0.0)
1.64	0.44	3.07E-10	1.0	0.0	0.0	0.0	0.2	7.6	5.9	0.2	1.0	19.0
2.08		(±3.82E-11)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.4)	(±0.0)	(±0.1)	(±0.0)
2.08	0.74	3.41E-10	1.0	0.0	0.0	0.0	0.3	8.3	6.7	0.2	0.9	19.0
2.82		(±1.47E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.4)	(±1.0)	(±0.0)	(±0.1)	(±0.0)
2.82	1.17	3.84E-08	2.0	0.0	0.0	0.0	3.1	12.0	22.9	0.5	2.4	19.0
3.99		(±7.85E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±2.4)	(±1.7)	(±7.4)	(±0.1)	(±0.6)	(±0.0)
3.99	0.52	1.51E-06	5.7	21.1	28.2	32.5	29.5	27.7	0.0	0.0	0.0	19.0
4.51		(±1.09E-06)	(±0.9)	(±3.7)	(±2.2)	(±0.9)	(±10.1)	(±5.4)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
4.51	1.86	3.85E-07	5.9	0.0	0.0	0.0	21.2	32.2	103.2	1.5	7.0	19.0
6.37		(±4.70E-07)	(±1.1)	(±0.0)	(±0.0)	(±0.0)	(±5.1)	(±8.0)	(±13.8)	(±0.2)	(±1.0)	(±0.0)
6.37	0.62	1.17E-06	9.6	38.1	32.9	34.3	45.5	47.7	0.0	0.0	0.0	19.0
6.99		(±1.28E-06)	(±1.7)	(±5.4)	(±3.6)	(±1.1)	(±22.6)	(±5.7)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
6.99	0.70	2.13E-07	7.5	0.0	0.0	0.0	24.6	41.5	112.1	1.4	6.3	19.0
7.69		(±2.16E-07)	(±2.1)	(±0.0)	(±0.0)	(±0.0)	(±10.3)	(±11.1)	(±41.7)	(±0.5)	(±2.2)	(±0.0)
7.69	0.34	9.38E-06	15.5	51.1	41.9	35.5	98.0	64.1	0.0	0.0	0.0	19.0
8.03		(±9.29E-06)	(±2.1)	(±4.4)	(±4.1)	(±0.7)	(±15.6)	(±5.6)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU3bis

Total depth: 8.89 m, Date: 13/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
8.03	0.86	1.57E-04	28.1	71.6	63.8	39.2	143.1	89.7	0.0	0.0	0.0	19.0
8.89		(±5.63E-05)	(±2.3)	(±4.6)	(±3.7)	(±0.8)	(±9.3)	(±5.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo, I: Incoerente, CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

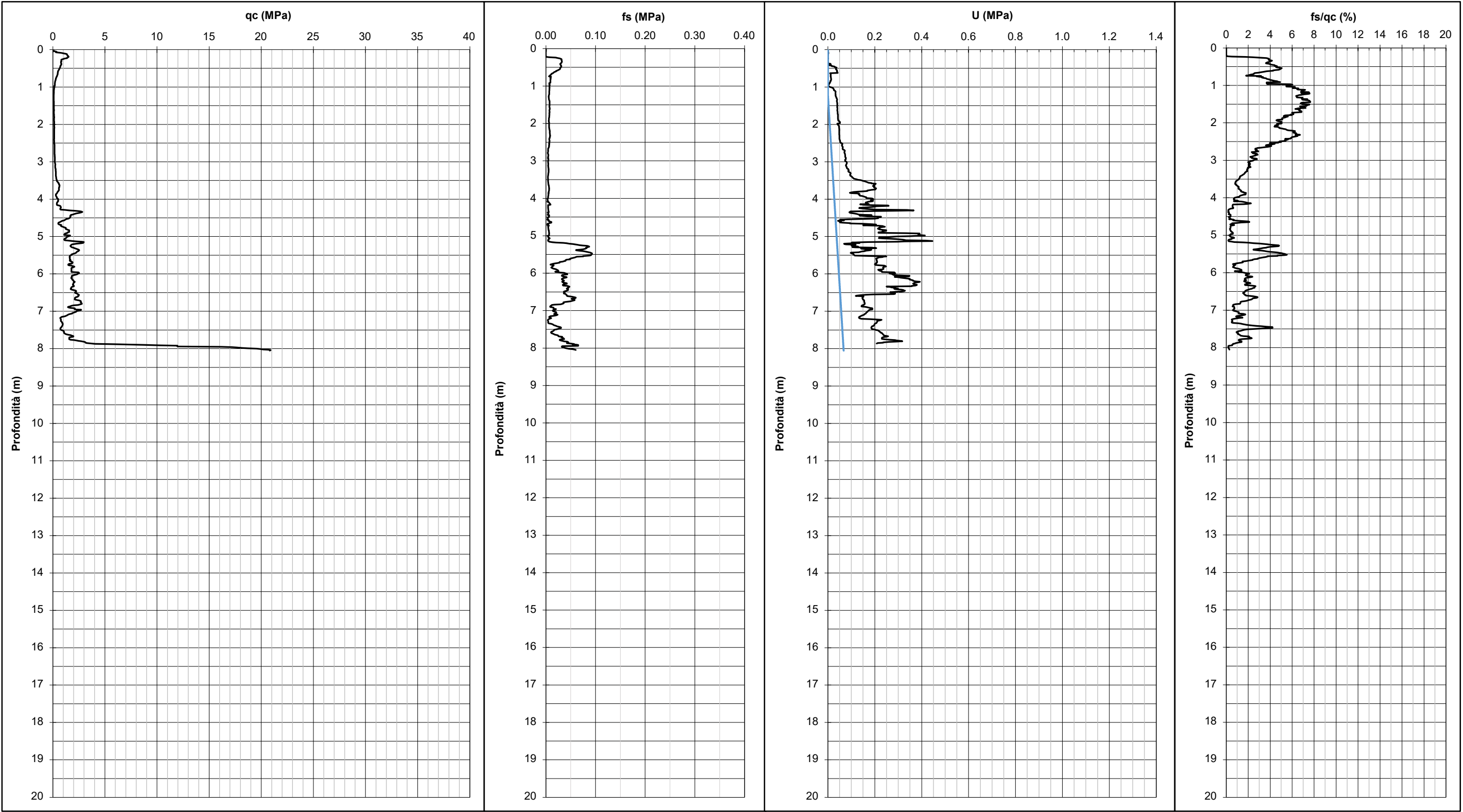
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.00	C	33.3	24.4	3.4	8.8	>9	17.5	18.3	--	--	--	137.36
2	2.80	C	5.9	3.1	0.7	3.0	1.3	14.1	14.9	--	--	--	121.86
3	4.00	CI	19.6	12.8	2.3	6.4	<0.5	16.5	17.3	<5	28.7	1.0	160.61
4	7.50	CI	89.2	63.3	4.5	16.2	<0.5	19.1	19.9	<5	29.3	4.5	252.68
5	8.89	I	--	--	15.5	47.2	1.7	18.6	21.6	<5	36.7	25.8	412.92



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Greenplan Engineering S.r.l.		
CANTIERE	Aquileia (UD)		
PROVA	CPTU4bis	DATA	13/03/2023
OPERATORE	Dott. Andrea Zampieri		

Punta	Mks880	Quota inizio indagine	p.c.	m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	8.05	m da p.c.	Livello acqua	1.20	m da p.c.	
Coordinate WGS84	Y	0	X	0		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU4bis

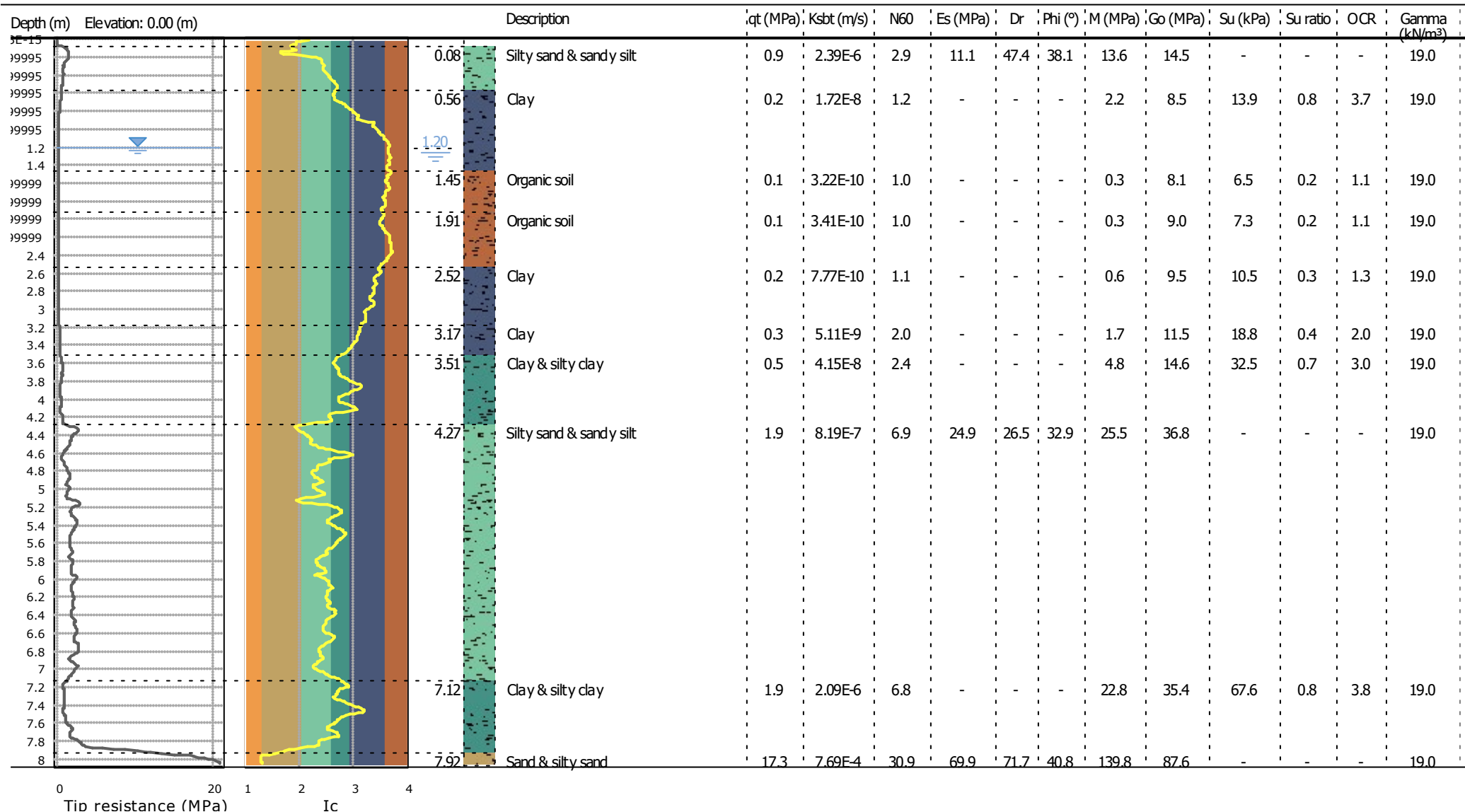
Total depth: 8.05 m, Date: 13/03/2023

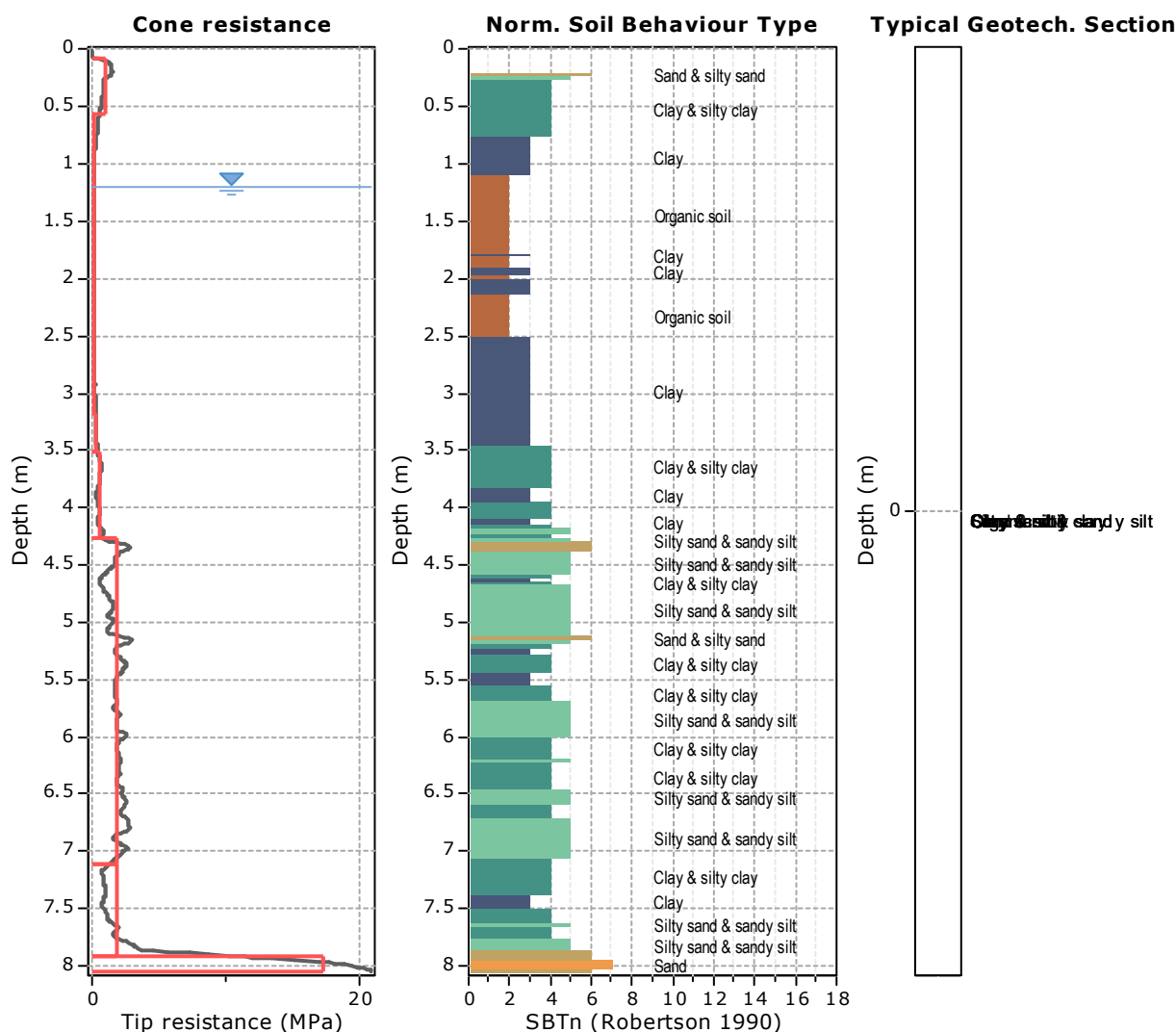
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.08 (m), **End depth:** 0.56 (m)

Description: Silty sand & sandy silt

Basic results

Total cone resistance: 0.93 ± 0.31 MPa

Sleeve friction: 20.27 ± 14.05 kPa

SBT_n: 5

SBTn description: Silty sand & sandy silt

Estimation results

Permeability: $2.39\text{E-}06 \pm 9.47\text{E-}06$ m/s

$N_{₆₀}$: 2.94 ± 0.52 blows

Es: 11.10 ± 1.37 MPa

Dr (%): 47.43 ± 1.67

ϕ (degrees): 38.12 ± 2.32 °

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 13.58 ± 5.04 MPa

Go: 14.49 ± 2.21 MPa

Su: 0.00 ± 0.00 kPa

Su ratio: 0.00 ± 0.00

O.C.R.: 0.00 ± 0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.56 (m), **End depth:** 1.45 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.21 ±0.14 MPa

Sleeve friction: 9.15 ±4.45 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.72E-08 ±2.75E-08 m/s

N_{₆₀}: 1.20 ±0.40 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.19 ±2.40 MPa

Go: 8.50 ±1.99 MPa

Su: 13.94 ±10.39 kPa

Su ratio: 0.81 ±0.71

O.C.R.: 3.73 ±3.30

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.45 (m), **End depth:** 1.91 (m)**Description:** Organic soil**Basic results**

Total cone resistance: 0.12 ±0.01 MPa

Sleeve friction: 7.19 ±0.50 kPa

SBT_n: 2SBT_n description: Organic soil**Estimation results**

Permeability: 3.22E-10 ±3.76E-11 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.30 ±0.03 MPa

Go: 8.08 ±0.19 MPa

Su: 6.47 ±0.42 kPa

Su ratio: 0.24 ±0.01

O.C.R.: 1.10 ±0.05

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 1.91 (m), **End depth:** 2.52 (m)**Description:** Organic soil**Basic results**

Total cone resistance: 0.14 ±0.01 MPa

Sleeve friction: 7.23 ±0.76 kPa

SBT_n: 2SBT_n description: Organic soil**Estimation results**

Permeability: 3.41E-10 ±7.98E-11 m/s

N_{₆₀}: 1.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.33 ±0.06 MPa

Go: 8.96 ±0.40 MPa

Su: 7.28 ±0.56 kPa

Su ratio: 0.23 ±0.02

O.C.R.: 1.05 ±0.11

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 2.52 (m), **End depth:** 3.17 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.20 ±0.03 MPa

Sleeve friction: 5.10 ±0.82 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 7.77E-10 ±2.90E-10 m/s

N_{₆₀}: 1.08 ±0.27 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.58 ±0.17 MPa

Go: 9.49 ±0.51 MPa

Su: 10.54 ±1.74 kPa

Su ratio: 0.28 ±0.03

O.C.R.: 1.28 ±0.16

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 3.17 (m), **End depth:** 3.51 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.33 ±0.04 MPa

Sleeve friction: 4.91 ±0.50 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.11E-09 ±3.55E-09 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.66 ±0.44 MPa

Go: 11.47 ±0.36 MPa

Su: 18.84 ±2.69 kPa

Su ratio: 0.44 ±0.05

O.C.R.: 2.04 ±0.24

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 3.51 (m), **End depth:** 4.27 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.55 ±0.13 MPa

Sleeve friction: 5.33 ±1.26 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 4.15E-08 ±3.84E-08 m/s

N_{₆₀}: 2.43 ±0.50 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 4.80 ±2.36 MPa

Go: 14.62 ±1.52 MPa

Su: 32.52 ±8.52 kPa

Su ratio: 0.66 ±0.16

O.C.R.: 3.03 ±0.73

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 4.27 (m), **End depth:** 7.12 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 1.88 ±0.50 MPa

Sleeve friction: 29.86 ±24.62 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 8.19E-07 ±1.83E-06 m/s

N_{₆₀}: 6.85 ±1.87 blows

Es: 24.87 ±7.72 MPa

Dr (%): 26.54 ±3.47

φ (degrees): 32.86 ±1.21 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 25.55 ±8.44 MPa

Go: 36.79 ±11.78 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 7.12 (m), **End depth:** 7.92 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.85 ±2.00 MPa

Sleeve friction: 21.98 ±14.70 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 2.09E-06 ±9.41E-06 m/s

N_{₆₀}: 6.77 ±4.29 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 22.75 ±29.75 MPa

Go: 35.45 ±14.85 MPa

Su: 67.62 ±23.99 kPa

Su ratio: 0.83 ±0.27

O.C.R.: 3.83 ±1.26

:: Layer No: 10 ::**Code:** Layer_10 **Start depth:** 7.92 (m), **End depth:** 8.05 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 17.28 ±3.28 MPa

Sleeve friction: 46.68 ±13.28 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 7.69E-04 ±4.28E-04 m/s

N₆₀: 30.92 ±3.64 blows

Es: 69.90 ±4.17 MPa

Dr (%): 71.73 ±6.83

φ (degrees): 40.81 ±1.32 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 139.81 ±8.35 MPa

Go: 87.61 ±5.23 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.08	0.48	2.39E-06	2.9	11.1	47.4	38.1	13.6	14.5	0.0	0.0	0.0	19.0
0.56		(±9.47E-06)	(±0.5)	(±1.4)	(±1.7)	(±2.3)	(±5.0)	(±2.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
0.56	0.89	1.72E-08	1.2	0.0	0.0	0.0	2.2	8.5	13.9	0.8	3.7	19.0
1.45		(±2.75E-08)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±2.4)	(±2.0)	(±10.4)	(±0.7)	(±3.3)	(±0.0)
1.45	0.46	3.22E-10	1.0	0.0	0.0	0.0	0.3	8.1	6.5	0.2	1.1	19.0
1.91		(±3.76E-11)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.4)	(±0.0)	(±0.1)	(±0.0)
1.91	0.61	3.41E-10	1.0	0.0	0.0	0.0	0.3	9.0	7.3	0.2	1.1	19.0
2.52		(±7.98E-11)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.4)	(±0.6)	(±0.0)	(±0.1)	(±0.0)
2.52	0.65	7.77E-10	1.1	0.0	0.0	0.0	0.6	9.5	10.5	0.3	1.3	19.0
3.17		(±2.90E-10)	(±0.3)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.5)	(±1.7)	(±0.0)	(±0.2)	(±0.0)
3.17	0.34	5.11E-09	2.0	0.0	0.0	0.0	1.7	11.5	18.8	0.4	2.0	19.0
3.51		(±3.55E-09)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±0.4)	(±2.7)	(±0.1)	(±0.2)	(±0.0)
3.51	0.76	4.15E-08	2.4	0.0	0.0	0.0	4.8	14.6	32.5	0.7	3.0	19.0
4.27		(±3.84E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±2.4)	(±1.5)	(±8.5)	(±0.2)	(±0.7)	(±0.0)
4.27	2.85	8.19E-07	6.9	24.9	26.5	32.9	25.5	36.8	0.0	0.0	0.0	19.0
7.12		(±1.83E-06)	(±1.9)	(±7.7)	(±3.5)	(±1.2)	(±8.4)	(±11.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
7.12	0.80	2.09E-06	6.8	0.0	0.0	0.0	22.8	35.4	67.6	0.8	3.8	19.0
7.92		(±9.41E-06)	(±4.3)	(±0.0)	(±0.0)	(±0.0)	(±29.8)	(±14.8)	(±24.0)	(±0.3)	(±1.3)	(±0.0)
7.92	0.13	7.69E-04	30.9	69.9	71.7	40.8	139.8	87.6	0.0	0.0	0.0	19.0
8.05		(±4.28E-04)	(±3.6)	(±4.2)	(±6.8)	(±1.3)	(±8.3)	(±5.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

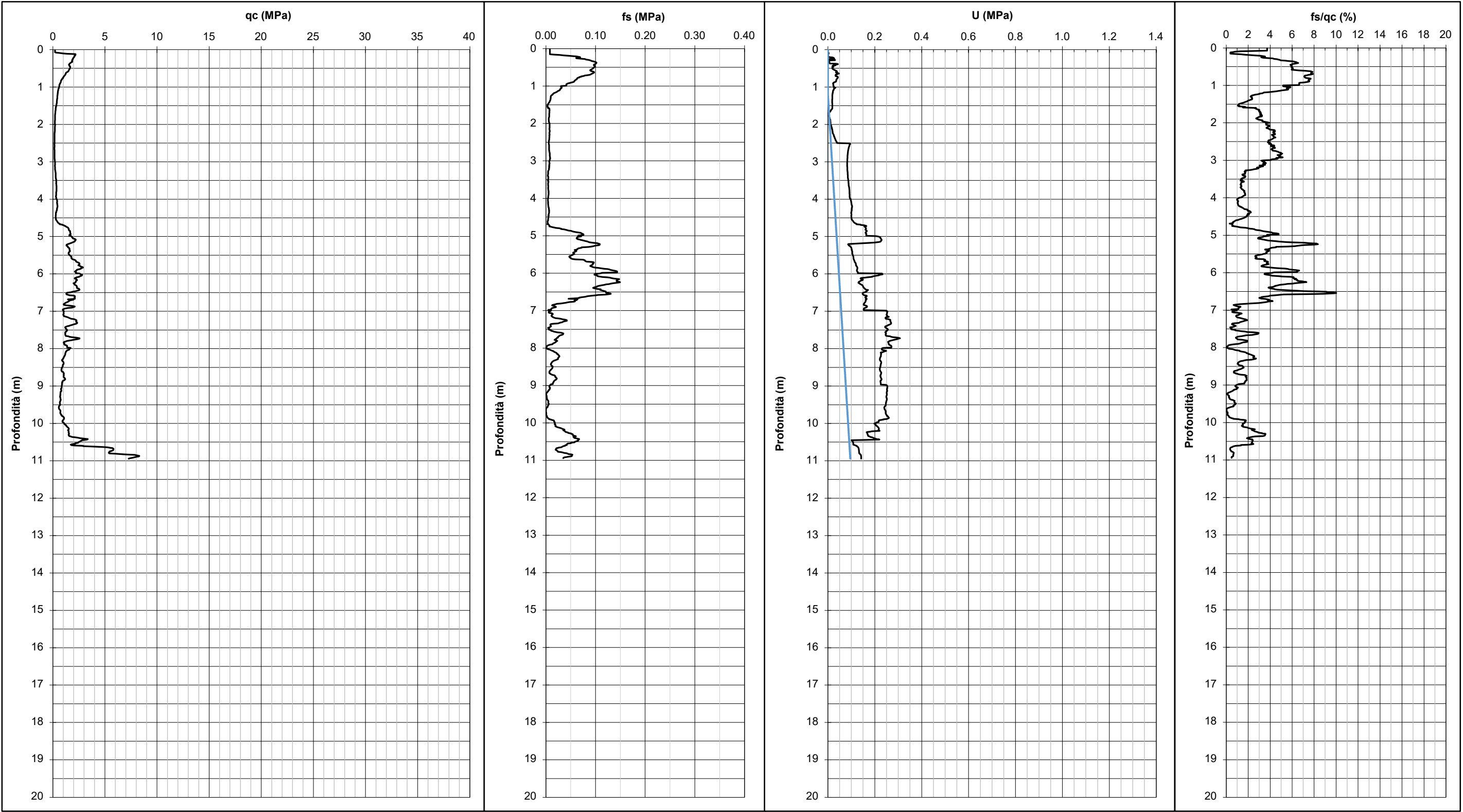
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.00	CI	30.4	22.5	3.2	8.4	2.0	17.4	18.2	<5	32.9	1.5	142.84
2	3.00	C	6.9	3.8	0.8	3.3	1.5	14.4	15.2	--	--	--	126.20
3	4.00	CI	19.6	12.4	2.2	6.3	<0.5	16.4	17.2	<5	28.7	1.0	160.03
4	5.10	I	--	--	5.9	12.5	<0.5	18.6	21.6	<5	28.7	2.9	219.75
5	7.80	CI	90.2	63.8	4.4	16.3	<0.5	19.1	19.9	<5	28.9	4.5	257.44
6	8.05	I	--	--	18.1	51.9	1.4	18.6	21.6	<5	37.7	30.1	426.47



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Greenplan Engineering S.r.l.		
CANTIERE	Aquileia (UD)		
PROVA	CPTU5bis	DATA	14/03/2023
OPERATORE	Dott. Andrea Zampieri		

Punta	Mks880	Quota inizio indagine	p.c.	m s.l.m.	Prescavo	0.00 m da p.c.
Profondità prova	10.94 m da p.c.	Livello acqua	1.20 m da p.c.			
Coordinate WGS84	Y	0	X	0		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU5bis

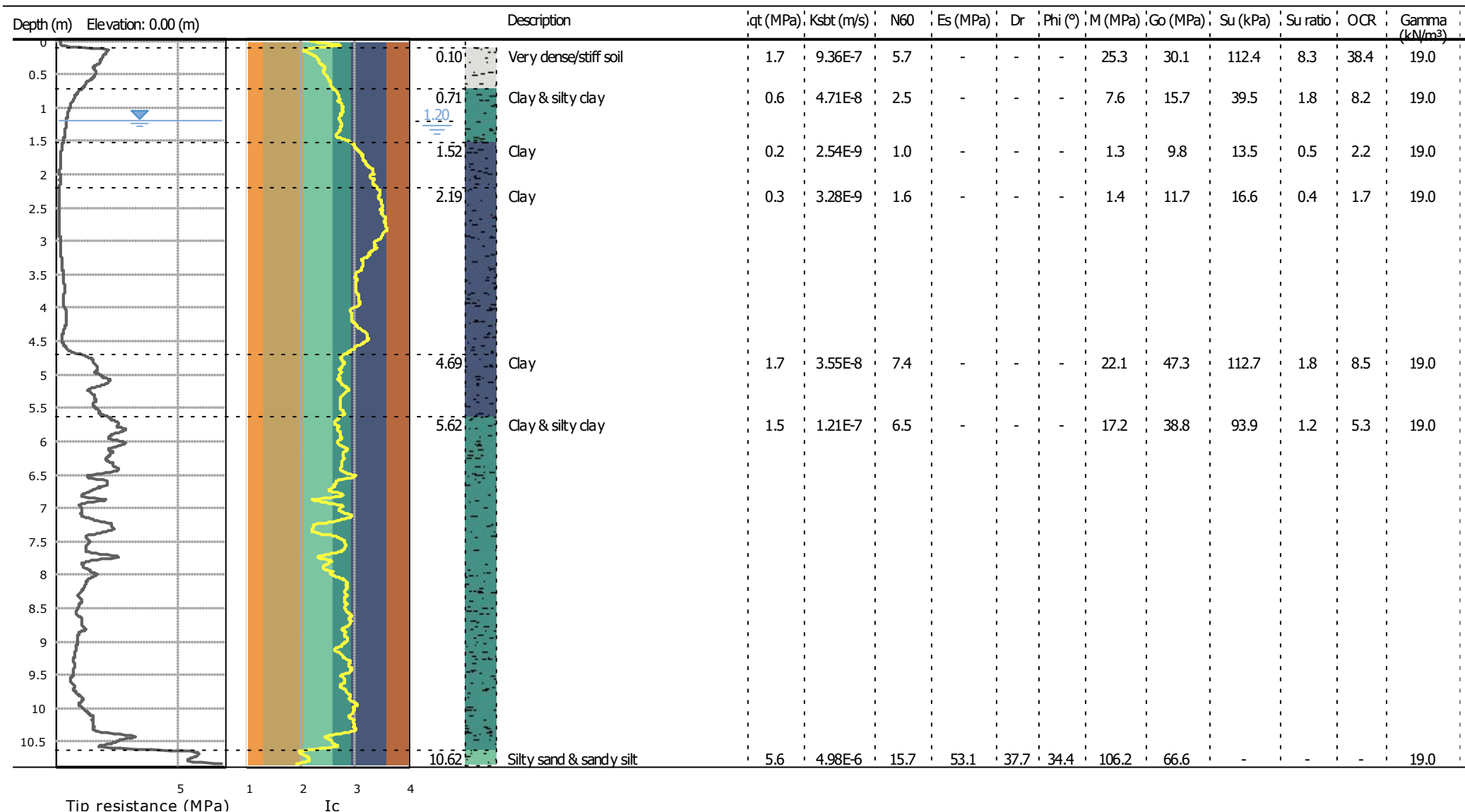
Total depth: 10.83 m, Date: 14/03/2023

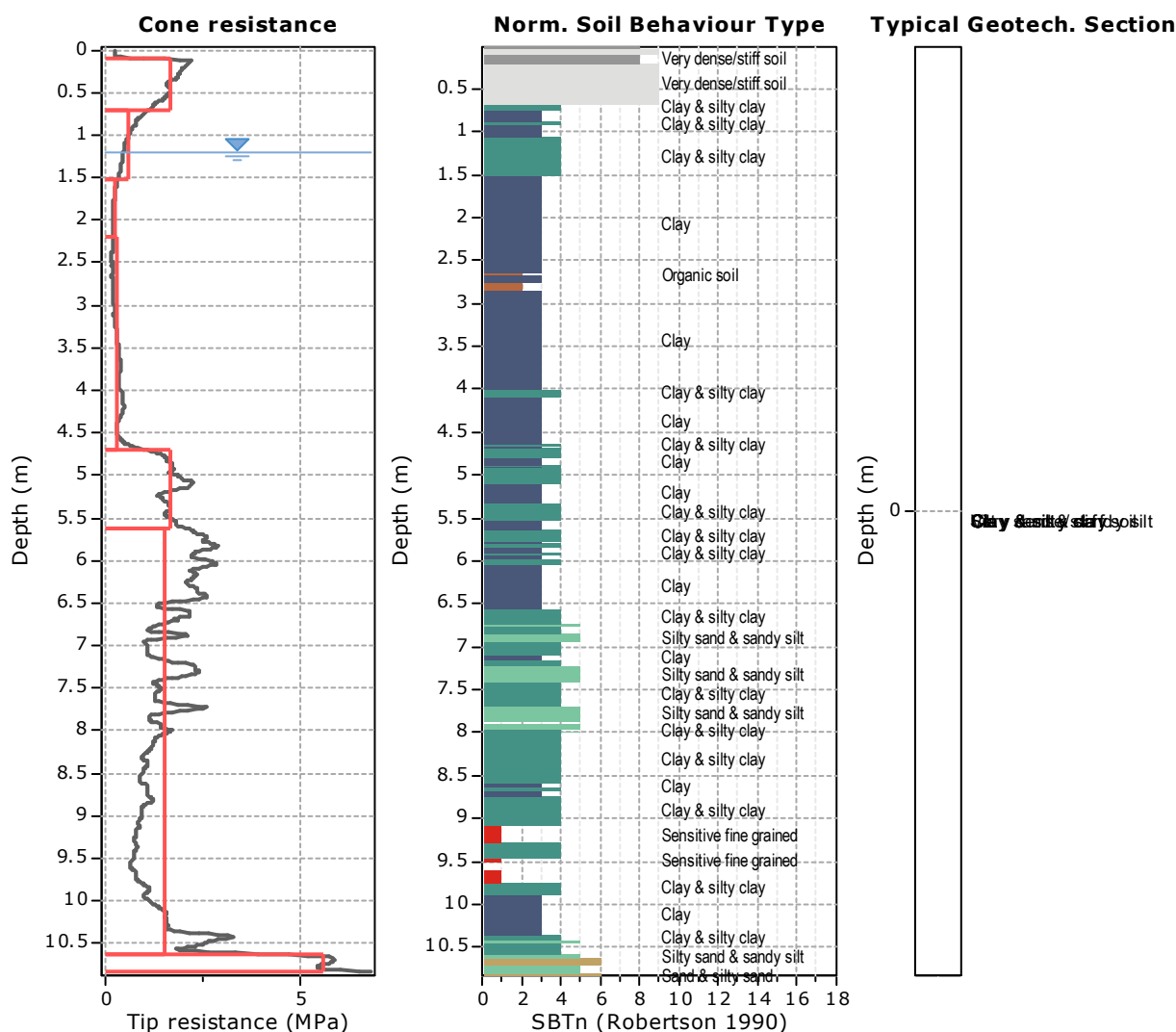
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.10 (m), **End depth:** 0.71 (m)

Description: Very dense/stiff soil

Basic results

Total cone resistance: 1.65 ±0.30 MPa

Sleeve friction: 86.32 ±13.45 kPa

SBT_n: 9

SBT_n description: Very dense/stiff soil

Estimation results

Permeability: 9.36E-07 ±1.30E-06 m/s

N_{₆₀}: 5.68 ±0.62 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 25.33 ±8.46 MPa

Go: 30.07 ±3.00 MPa

Su: 112.36 ±18.78 kPa

Su ratio: 8.30 ±2.74

O.C.R.: 38.36 ±12.65

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.71 (m), **End depth:** 1.52 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.57 ±0.20 MPa

Sleeve friction: 21.84 ±17.98 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 4.71E-08 ±1.75E-08 m/s

N_{₆₀}: 2.55 ±0.72 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 7.61 ±3.06 MPa

Go: 15.69 ±5.14 MPa

Su: 39.55 ±14.76 kPa

Su ratio: 1.78 ±0.96

O.C.R.: 8.22 ±4.41

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.52 (m), **End depth:** 2.19 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.22 ±0.03 MPa

Sleeve friction: 7.06 ±0.60 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.54E-09 ±2.58E-09 m/s

N_{₆₀}: 1.04 ±0.21 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.32 ±0.64 MPa

Go: 9.76 ±0.36 MPa

Su: 13.48 ±2.64 kPa

Su ratio: 0.47 ±0.12

O.C.R.: 2.19 ±0.56

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 2.19 (m), **End depth:** 4.69 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.30 ±0.12 MPa

Sleeve friction: 6.05 ±2.21 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.28E-09 ±3.55E-09 m/s

N_{₆₀}: 1.64 ±0.61 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.39 ±1.35 MPa

Go: 11.69 ±2.40 MPa

Su: 16.64 ±7.82 kPa

Su ratio: 0.37 ±0.12

O.C.R.: 1.71 ±0.58

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.69 (m), **End depth:** 5.62 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.68 ±0.25 MPa

Sleeve friction: 68.38 ±18.86 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.55E-08 ±1.00E-08 m/s

N_{₆₀}: 7.40 ±1.02 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 22.08 ±3.50 MPa

Go: 47.26 ±6.52 MPa

Su: 112.65 ±17.86 kPa

Su ratio: 1.84 ±0.28

O.C.R.: 8.49 ±1.29

:: Layer No: 6 ::**Code:** Layer_6 **Start depth:** 5.62 (m), **End depth:** 10.62 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.52 ±0.65 MPa

Sleeve friction: 36.93 ±41.06 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 1.21E-07 ±3.00E-07 m/s

N_{₆₀}: 6.51 ±2.53 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 17.24 ±11.18 MPa

Go: 38.83 ±16.56 MPa

Su: 93.88 ±45.43 kPa

Su ratio: 1.15 ±0.70

O.C.R.: 5.33 ±3.24

:: Layer No: 7 ::**Code:** Layer_7 **Start depth:** 10.62 (m), **End depth:** 10.83 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 5.55 ±0.51 MPa

Sleeve friction: 39.19 ±11.41 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 4.98E-06 ±2.45E-06 m/s

N_{₆₀}: 15.67 ±1.28 blows

Es: 53.11 ±5.22 MPa

Dr (%): 37.67 ±1.85

φ (degrees): 34.37 ±0.67 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 106.22 ±10.45 MPa

Go: 66.56 ±6.55 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU5bis

Total depth: 10.83 m, Date: 14/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.10	0.61	9.36E-07	5.7	0.0	0.0	0.0	25.3	30.1	112.4	8.3	38.4	19.0
0.71		(±1.30E-06)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±8.5)	(±3.0)	(±18.8)	(±2.7)	(±12.7)	(±0.0)
0.71	0.81	4.71E-08	2.5	0.0	0.0	0.0	7.6	15.7	39.5	1.8	8.2	19.0
1.52		(±1.75E-08)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±3.1)	(±5.1)	(±14.8)	(±1.0)	(±4.4)	(±0.0)
1.52	0.67	2.54E-09	1.0	0.0	0.0	0.0	1.3	9.8	13.5	0.5	2.2	19.0
2.19		(±2.58E-09)	(±0.2)	(±0.0)	(±0.0)	(±0.0)	(±0.6)	(±0.4)	(±2.6)	(±0.1)	(±0.6)	(±0.0)
2.19	2.50	3.28E-09	1.6	0.0	0.0	0.0	1.4	11.7	16.6	0.4	1.7	19.0
4.69		(±3.55E-09)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±1.3)	(±2.4)	(±7.8)	(±0.1)	(±0.6)	(±0.0)
4.69	0.93	3.55E-08	7.4	0.0	0.0	0.0	22.1	47.3	112.7	1.8	8.5	19.0
5.62		(±1.00E-08)	(±1.0)	(±0.0)	(±0.0)	(±0.0)	(±3.5)	(±6.5)	(±17.9)	(±0.3)	(±1.3)	(±0.0)
5.62	5.00	1.21E-07	6.5	0.0	0.0	0.0	17.2	38.8	93.9	1.2	5.3	19.0
10.62		(±3.00E-07)	(±2.5)	(±0.0)	(±0.0)	(±0.0)	(±11.2)	(±16.6)	(±45.4)	(±0.7)	(±3.2)	(±0.0)
10.62	0.21	4.98E-06	15.7	53.1	37.7	34.4	106.2	66.6	0.0	0.0	0.0	19.0
10.83		(±2.45E-06)	(±1.3)	(±5.2)	(±1.9)	(±0.7)	(±10.4)	(±6.5)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo, I: Incoerente, CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.40	C	52.0	38.7	4.4	11.7	>9	18.3	19.1	--	--	--	158.63
2	3.20	C	9.8	6.2	1.2	4.3	1.2	15.3	16.0	--	--	--	141.16
3	4.50	CI	16.7	10.2	2.0	5.8	<0.5	16.1	16.9	<5	28.7	0.8	157.82
4	7.00	CI	89.2	63.3	4.5	16.2	<0.5	19.1	19.9	<5	29.2	4.5	253.26
5	10.00	CI	55.9	36.1	4.5	12.1	<0.5	18.2	19.0	<5	28.7	2.8	236.78
6	10.94	I	--	--	10.4	24.2	<0.5	18.6	21.6	<5	30.2	8.7	323.80



PROVA PENETROMETRICA STATICA CPTU

M31 Rev. 0 del 21/04/2020

Pagina 1 di 1

COMMITTENTE Greenplan Engineering S.r.l.

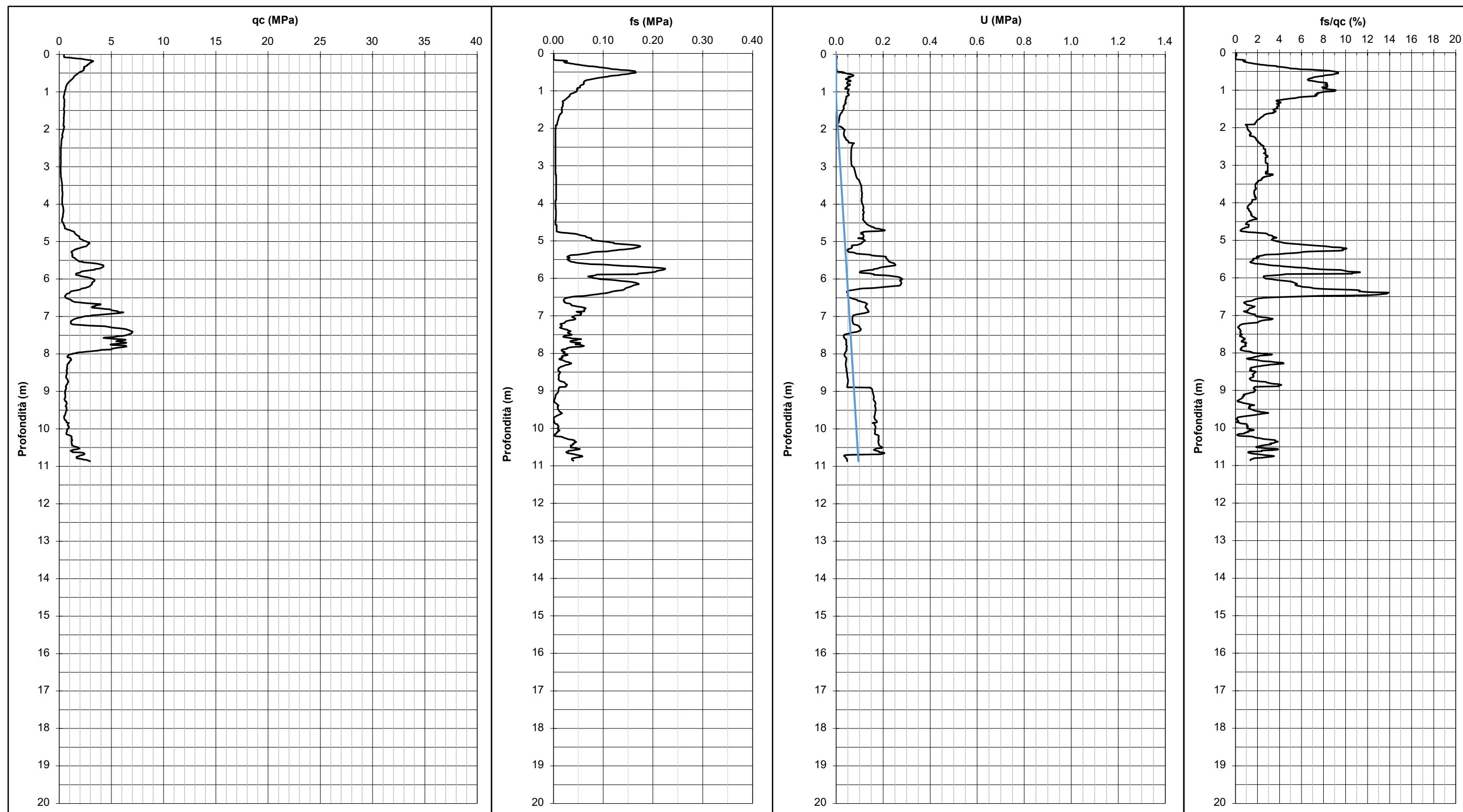
CANTIERE Aquileia (UD)

PROVA CPTU6bis **DATA** 13/03/2023 **OPERATORE** Dott. Andrea Zampieri

Punta Mks880 **Quota inizio indagine** p.c. m s.l.m. **Prescavo** 0.00 m da p.c.

Profondità prova 10.86 m da p.c. **Livello acqua** 1.20 m da p.c.

Coordinate WGS84 Y 0 X 0



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU6bis

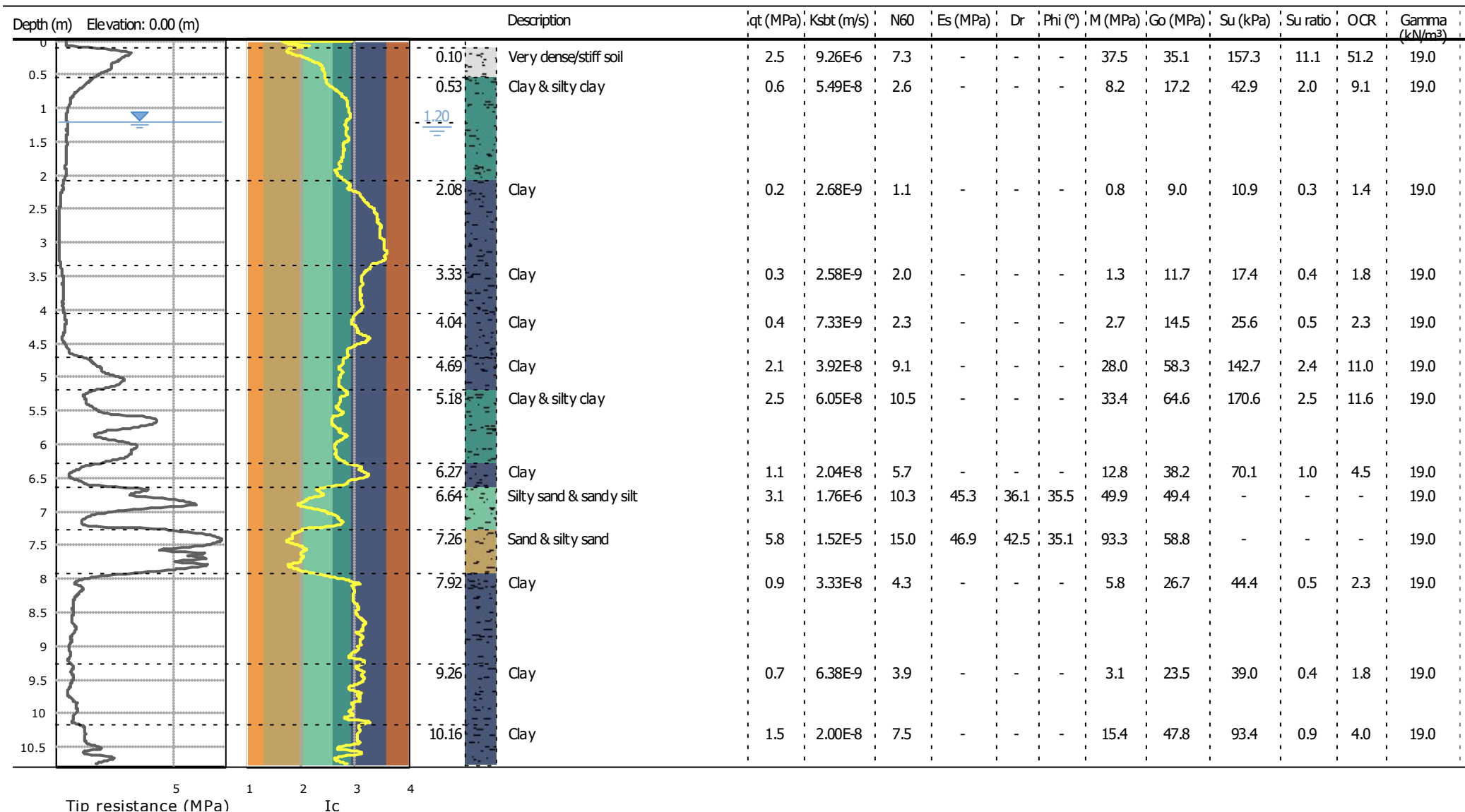
Total depth: 10.75 m, Date: 13/03/2023

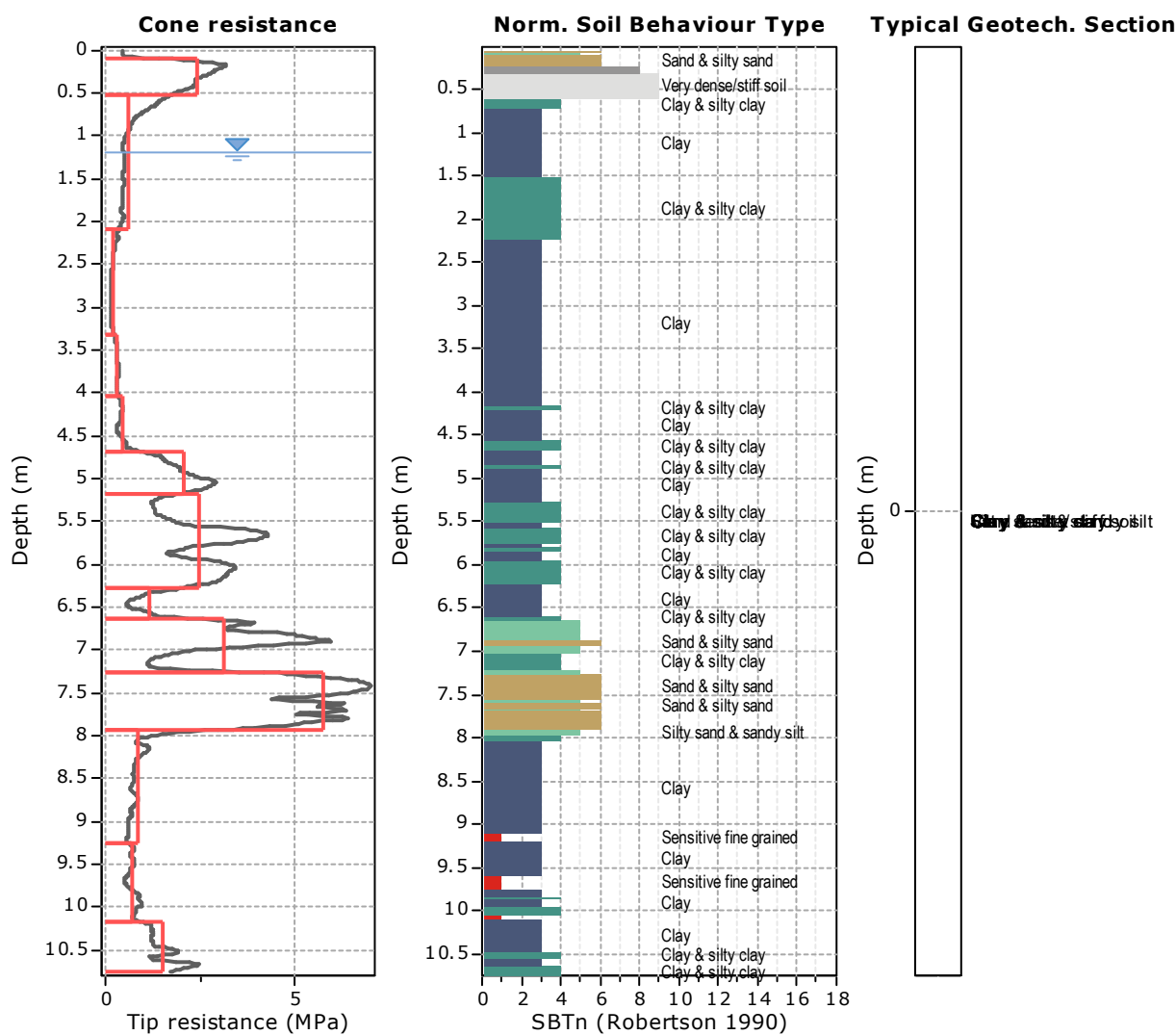
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.10 (m), **End depth:** 0.53 (m)

Description: Very dense/stiff soil

Basic results

Total cone resistance: 2.45 ± 0.45 MPa

Sleeve friction: 101.25 ± 48.43 kPa

SBT_n: 9

SBT_n description: Very dense/stiff soil

Estimation results

Permeability: $9.26E-06 \pm 1.41E-05$ m/s

$N_{>60}$: 7.32 ± 1.12 blows

Es: 0.00 ± 0.00 MPa

Dr (%): 0.00 ± 0.00

ϕ (degrees): 0.00 ± 0.00 °

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 37.48 ± 10.90 MPa

Go: 35.15 ± 8.34 MPa

Su: 157.28 ± 18.61 kPa

Su ratio: 11.09 ± 2.04

O.C.R.: 51.23 ± 9.43

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.53 (m), **End depth:** 2.08 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.62 ±0.31 MPa

Sleeve friction: 26.72 ±22.50 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 5.49E-08 ±7.32E-08 m/s

N_{₆₀}: 2.64 ±1.08 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 8.24 ±4.57 MPa

Go: 17.21 ±5.71 MPa

Su: 42.87 ±22.71 kPa

Su ratio: 1.96 ±1.54

O.C.R.: 9.08 ±7.10

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 2.08 (m), **End depth:** 3.33 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.20 ±0.05 MPa

Sleeve friction: 4.53 ±0.40 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.68E-09 ±4.90E-09 m/s

N_{₆₀}: 1.13 ±0.33 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.77 ±0.72 MPa

Go: 9.03 ±0.57 MPa

Su: 10.89 ±4.15 kPa

Su ratio: 0.31 ±0.14

O.C.R.: 1.41 ±0.65

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.33 (m), **End depth:** 4.04 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.31 ±0.03 MPa

Sleeve friction: 5.08 ±0.49 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.58E-09 ±7.93E-10 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.30 ±0.24 MPa

Go: 11.74 ±0.45 MPa

Su: 17.35 ±1.84 kPa

Su ratio: 0.38 ±0.03

O.C.R.: 1.76 ±0.16

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.04 (m), **End depth:** 4.69 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.44 ±0.13 MPa

Sleeve friction: 6.45 ±4.69 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 7.33E-09 ±4.89E-09 m/s

N_{₆₀}: 2.26 ±0.59 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.71 ±2.19 MPa

Go: 14.47 ±3.52 MPa

Su: 25.61 ±9.40 kPa

Su ratio: 0.49 ±0.16

O.C.R.: 2.26 ±0.75

:: Layer No: 6 ::**Code:** Layer_6 **Start depth:** 4.69 (m), **End depth:** 5.18 (m)**Description:** Clay**Basic results**

Total cone resistance: 2.09 ±0.53 MPa

Sleeve friction: 108.15 ±42.79 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.92E-08 ±1.04E-08 m/s

N_{₆₀}: 9.14 ±2.16 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 27.97 ±7.45 MPa

Go: 58.27 ±13.29 MPa

Su: 142.71 ±37.99 kPa

Su ratio: 2.38 ±0.58

O.C.R.: 11.01 ±2.69

:: Layer No: 7 ::**Code:** Layer_7 **Start depth:** 5.18 (m), **End depth:** 6.27 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 2.50 ±0.96 MPa

Sleeve friction: 116.28 ±60.68 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 6.05E-08 ±3.26E-08 m/s

N_{₆₀}: 10.55 ±3.56 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 33.43 ±13.34 MPa

Go: 64.55 ±20.47 MPa

Su: 170.55 ±68.07 kPa

Su ratio: 2.52 ±0.95

O.C.R.: 11.64 ±4.38

:: Layer No: 8 ::**Code:** Layer_8 **Start depth:** 6.27 (m), **End depth:** 6.64 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.14 ±0.52 MPa

Sleeve friction: 44.69 ±27.78 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.04E-08 ±4.47E-08 m/s

N_{₆₀}: 5.74 ±1.81 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 12.77 ±8.53 MPa

Go: 38.20 ±11.24 MPa

Su: 70.05 ±33.12 kPa

Su ratio: 0.98 ±0.46

O.C.R.: 4.52 ±2.11

:: Layer No: 9 ::**Code:** Layer_9 **Start depth:** 6.64 (m), **End depth:** 7.26 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 3.14 ±1.54 MPa

Sleeve friction: 38.85 ±17.72 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 1.76E-06 ±2.65E-06 m/s

N_{₆₀}: 10.25 ±3.74 blows

Es: 45.33 ±6.19 MPa

Dr (%): 36.12 ±5.38

φ (degrees): 35.47 ±0.97 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 49.94 ±32.64 MPa

Go: 49.42 ±13.20 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 10 :::**Code:** Layer_10 **Start depth:** 7.26 (m), **End depth:** 7.92 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 5.76 ±0.89 MPa

Sleeve friction: 33.94 ±12.30 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.52E-05 ±1.24E-05 m/s

N_{₆₀}: 14.99 ±1.67 blows

Es: 46.90 ±5.10 MPa

Dr (%): 42.48 ±3.46

φ (degrees): 35.12 ±0.75 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 93.31 ±11.65 MPa

Go: 58.78 ±6.39 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 11 :::**Code:** Layer_11 **Start depth:** 7.92 (m), **End depth:** 9.26 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.85 ±0.41 MPa

Sleeve friction: 13.83 ±8.49 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.33E-08 ±1.60E-07 m/s

N_{₆₀}: 4.32 ±1.28 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 5.80 ±6.73 MPa

Go: 26.74 ±6.80 MPa

Su: 44.40 ±14.01 kPa

Su ratio: 0.49 ±0.17

O.C.R.: 2.28 ±0.79

::: Layer No: 12 :::**Code:** Layer_12 **Start depth:** 9.26 (m), **End depth:** 10.16 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.73 ±0.12 MPa

Sleeve friction: 8.36 ±5.42 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 6.38E-09 ±5.16E-09 m/s

N_{₆₀}: 3.93 ±0.59 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 3.08 ±1.22 MPa

Go: 23.46 ±5.09 MPa

Su: 39.04 ±8.28 kPa

Su ratio: 0.39 ±0.08

O.C.R.: 1.78 ±0.36

::: Layer No: 13 :::**Code:** Layer_13 **Start depth:** 10.16 (m), **End depth:** 10.75 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.51 ±0.41 MPa

Sleeve friction: 40.06 ±8.20 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.00E-08 ±2.55E-08 m/s

N_{₆₀}: 7.51 ±1.09 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 15.40 ±7.71 MPa

Go: 47.79 ±4.97 MPa

Su: 93.38 ±29.28 kPa

Su ratio: 0.87 ±0.26

O.C.R.: 4.00 ±1.21

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.10	0.43	9.26E-06	7.3	0.0	0.0	0.0	37.5	35.1	157.3	11.1	51.2	19.0
0.53		(±1.41E-05)	(±1.1)	(±0.0)	(±0.0)	(±0.0)	(±10.9)	(±8.3)	(±18.6)	(±2.0)	(±9.4)	(±0.0)
0.53	1.55	5.49E-08	2.6	0.0	0.0	0.0	8.2	17.2	42.9	2.0	9.1	19.0
2.08		(±7.32E-08)	(±1.1)	(±0.0)	(±0.0)	(±0.0)	(±4.6)	(±5.7)	(±22.7)	(±1.5)	(±7.1)	(±0.0)
2.08	1.25	2.68E-09	1.1	0.0	0.0	0.0	0.8	9.0	10.9	0.3	1.4	19.0
3.33		(±4.90E-09)	(±0.3)	(±0.0)	(±0.0)	(±0.0)	(±0.7)	(±0.6)	(±4.1)	(±0.1)	(±0.7)	(±0.0)
3.33	0.71	2.58E-09	2.0	0.0	0.0	0.0	1.3	11.7	17.4	0.4	1.8	19.0
4.04		(±7.93E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.5)	(±1.8)	(±0.0)	(±0.2)	(±0.0)
4.04	0.65	7.33E-09	2.3	0.0	0.0	0.0	2.7	14.5	25.6	0.5	2.3	19.0
4.69		(±4.89E-09)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±2.2)	(±3.5)	(±9.4)	(±0.2)	(±0.7)	(±0.0)
4.69	0.49	3.92E-08	9.1	0.0	0.0	0.0	28.0	58.3	142.7	2.4	11.0	19.0
5.18		(±1.04E-08)	(±2.2)	(±0.0)	(±0.0)	(±0.0)	(±7.4)	(±13.3)	(±38.0)	(±0.6)	(±2.7)	(±0.0)
5.18	1.09	6.05E-08	10.5	0.0	0.0	0.0	33.4	64.6	170.6	2.5	11.6	19.0
6.27		(±3.26E-08)	(±3.6)	(±0.0)	(±0.0)	(±0.0)	(±13.3)	(±20.5)	(±68.1)	(±0.9)	(±4.4)	(±0.0)
6.27	0.37	2.04E-08	5.7	0.0	0.0	0.0	12.8	38.2	70.1	1.0	4.5	19.0
6.64		(±4.47E-08)	(±1.8)	(±0.0)	(±0.0)	(±0.0)	(±8.5)	(±11.2)	(±33.1)	(±0.5)	(±2.1)	(±0.0)
6.64	0.62	1.76E-06	10.3	45.3	36.1	35.5	49.9	49.4	0.0	0.0	0.0	19.0
7.26		(±2.65E-06)	(±3.7)	(±6.2)	(±5.4)	(±1.0)	(±32.6)	(±13.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
7.26	0.66	1.52E-05	15.0	46.9	42.5	35.1	93.3	58.8	0.0	0.0	0.0	19.0
7.92		(±1.24E-05)	(±1.7)	(±5.1)	(±3.5)	(±0.8)	(±11.6)	(±6.4)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
7.92	1.34	3.33E-08	4.3	0.0	0.0	0.0	5.8	26.7	44.4	0.5	2.3	19.0
9.26		(±1.60E-07)	(±1.3)	(±0.0)	(±0.0)	(±0.0)	(±6.7)	(±6.8)	(±14.0)	(±0.2)	(±0.8)	(±0.0)

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU6bis

Total depth: 10.75 m, Date: 13/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G _o (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
9.26	0.90	6.38E-09	3.9	0.0	0.0	0.0	3.1	23.5	39.0	0.4	1.8	19.0
10.16		(±5.16E-09)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±1.2)	(±5.1)	(±8.3)	(±0.1)	(±0.4)	(±0.0)
10.16	0.59	2.00E-08	7.5	0.0	0.0	0.0	15.4	47.8	93.4	0.9	4.0	19.0
10.75		(±2.55E-08)	(±1.1)	(±0.0)	(±0.0)	(±0.0)	(±7.7)	(±5.0)	(±29.3)	(±0.3)	(±1.2)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo, I: Incoerente, CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

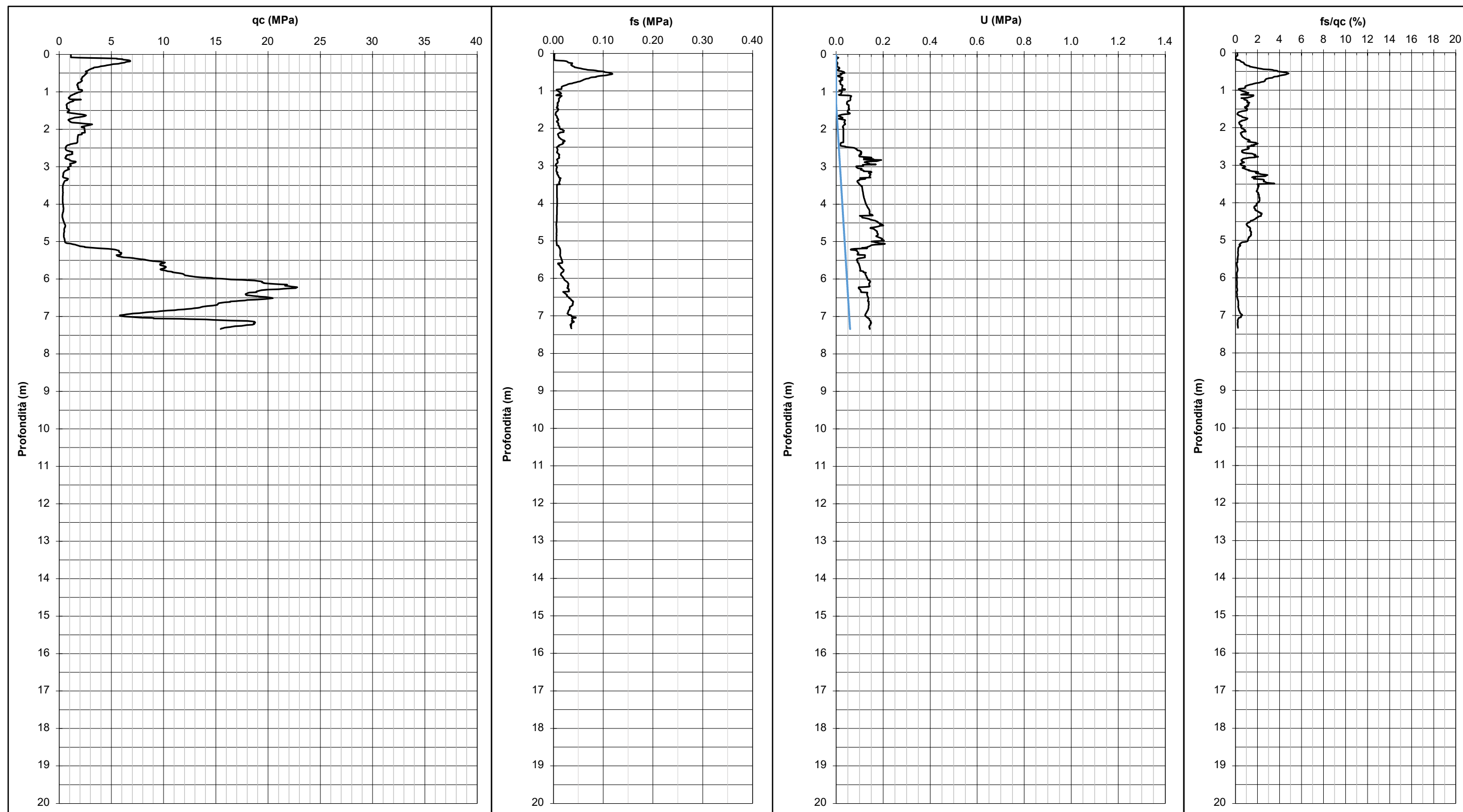
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.00	CI	78.5	58.7	4.7	15.0	1.0	19.0	19.8	<5	37.4	3.9	183.50
2	2.00	C	23.5	16.5	2.6	7.1	4.8	16.9	17.7	--	--	--	155.11
3	4.40	CI	12.7	7.5	1.5	4.9	<0.5	15.6	16.4	<5	28.7	0.6	144.39
4	7.20	CI	107.9	77.2	4.3	18.1	<0.5	19.4	20.2	<5	30.1	5.4	266.26
5	8.00	I	--	--	7.7	30.9	<0.5	18.6	21.6	<5	33.4	12.9	344.06
6	10.20	CI	36.3	21.5	3.6	9.4	<0.5	17.3	18.1	<5	28.7	1.8	215.81
7	10.96	CI	70.6	46.2	4.7	14.1	<0.5	18.6	19.4	<5	28.7	3.6	259.57



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Green Plan Engineering
CANTIERE	Aquileia
PROVA	CPTU7bis
DATA	13/03/2023
OPERATORE	Dott. Andrea Zampieri

Punta	Mks880	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
Profondità prova	7.33 m da p.c.	Livello acqua	1.30 m da p.c.		
Coordinate WGS84	X		Y		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU7bis

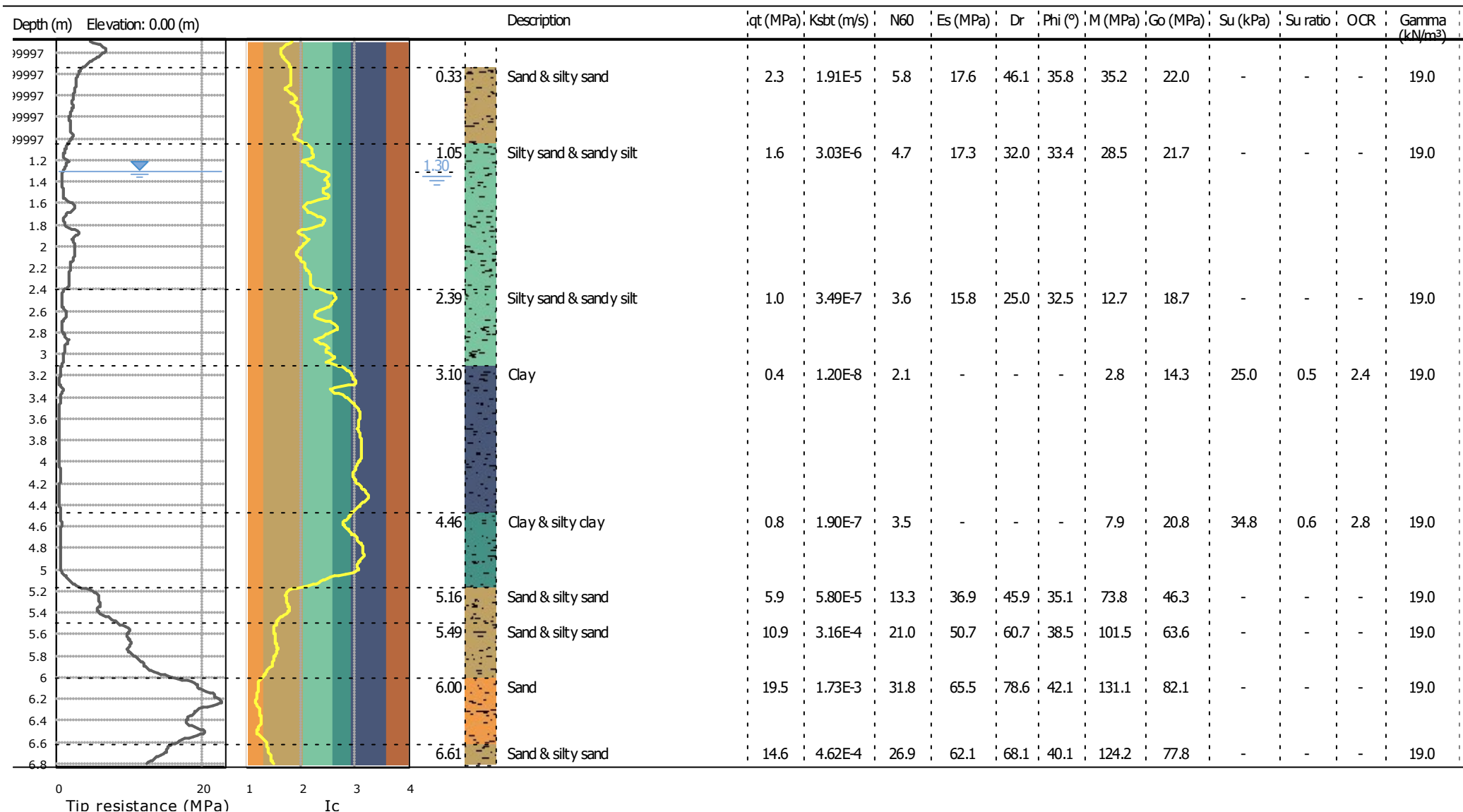
Total depth: 6.80 m, Date: 13/03/2023

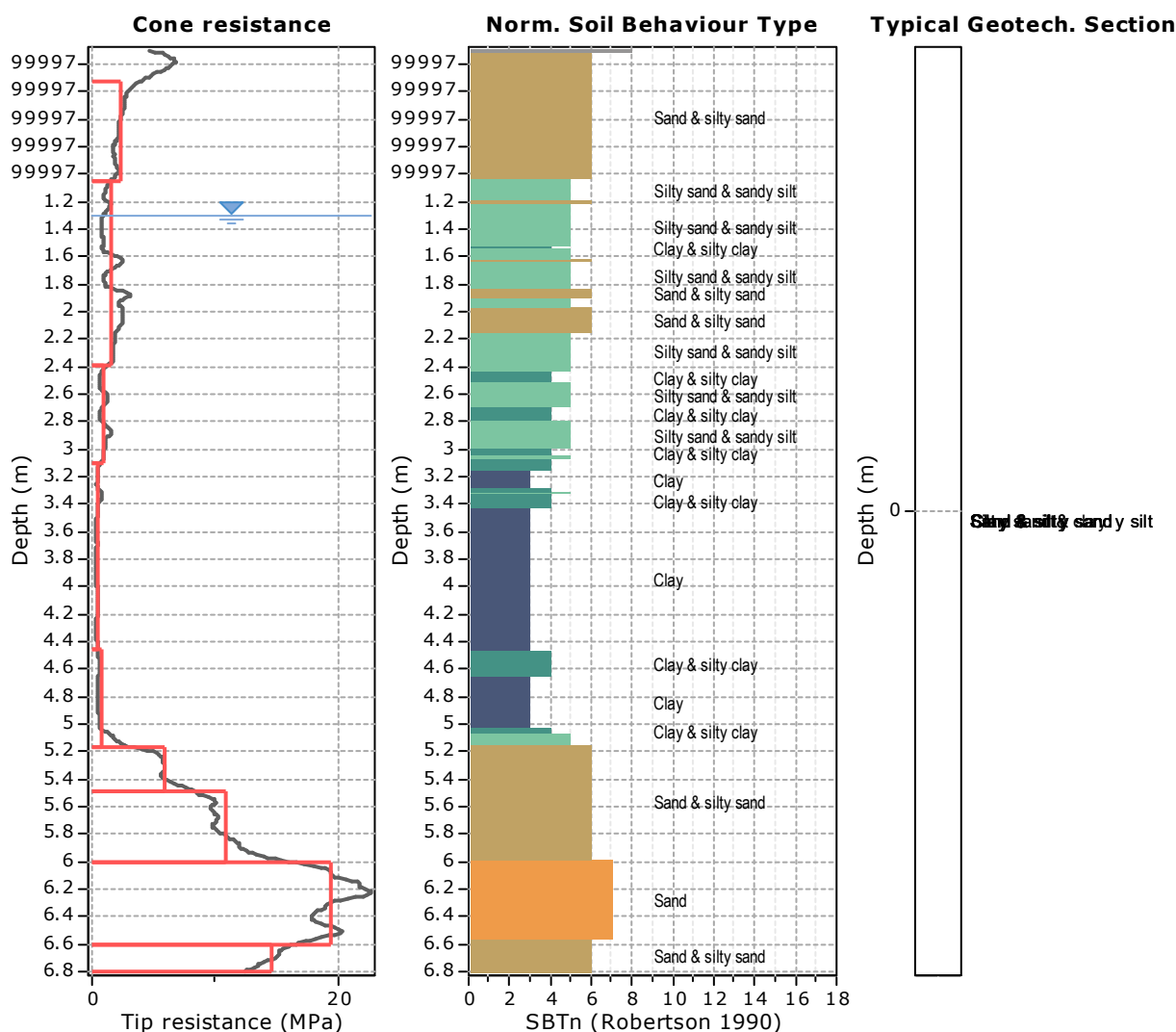
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.33 (m), **End depth:** 1.05 (m)

Description: Sand & silty sand

Basic results

Total cone resistance: 2.27 ± 0.50 MPa

Sleeve friction: 14.28 ± 8.75 kPa

SBT_n: 6

SBT_n description: Sand & silty sand

Estimation results

Permeability: $1.91E-05 \pm 1.17E-05$ m/s

$N_{>60}$: 5.75 ± 1.01 blows

Es: 17.58 ± 2.56 MPa

Dr (%): 46.12 ± 8.06

ϕ (degrees): $35.77 \pm 1.92^\circ$

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 35.15 ± 5.12 MPa

Go: 22.03 ± 3.21 MPa

Su: 0.00 ± 0.00 kPa

Su ratio: 0.00 ± 0.00

O.C.R.: 0.00 ± 0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 1.05 (m), **End depth:** 2.39 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 1.58 ±0.64 MPa
 Sleeve friction: 11.11 ±4.48 kPa
 SBT_n: 5
 SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 3.03E-06 ±3.08E-06 m/s
 N_{₆₀}: 4.69 ±1.51 blows
 Es: 17.34 ±4.14 MPa
 Dr (%): 31.98 ±4.80
 φ (degrees): 33.41 ±0.86 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 28.49 ±14.26 MPa
 Go: 21.70 ±5.18 MPa
 Su: 0.00 ±0.00 kPa
 Su ratio: 0.00 ±0.00
 O.C.R.: 0.00 ±0.00

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 2.39 (m), **End depth:** 3.10 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 0.96 ±0.27 MPa
 Sleeve friction: 8.77 ±2.72 kPa
 SBT_n: 5
 SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 3.49E-07 ±3.42E-07 m/s
 N_{₆₀}: 3.58 ±0.64 blows
 Es: 15.82 ±2.30 MPa
 Dr (%): 25.03 ±2.40
 φ (degrees): 32.54 ±0.59 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 12.69 ±3.71 MPa
 Go: 18.75 ±2.93 MPa
 Su: 0.00 ±0.00 kPa
 Su ratio: 0.00 ±0.00
 O.C.R.: 0.00 ±0.00

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.10 (m), **End depth:** 4.46 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.42 ±0.10 MPa
 Sleeve friction: 6.94 ±0.45 kPa
 SBT_n: 3
 SBT_n description: Clay

Estimation results

Permeability: 1.20E-08 ±2.51E-08 m/s
 N_{₆₀}: 2.09 ±0.28 blows
 Es: 0.00 ±0.00 MPa
 Dr (%): 0.00 ±0.00
 φ (degrees): 0.00 ±0.00 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.82 ±2.00 MPa
 Go: 14.28 ±0.91 MPa
 Su: 24.96 ±7.03 kPa
 Su ratio: 0.52 ±0.16
 O.C.R.: 2.43 ±0.73

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.46 (m), **End depth:** 5.16 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.78 ±0.57 MPa
 Sleeve friction: 11.76 ±4.14 kPa
 SBT_n: 4
 SBT_n description: Clay & silty clay

Estimation results

Permeability: 1.90E-07 ±7.26E-07 m/s
 N_{₆₀}: 3.55 ±1.42 blows
 Es: 0.00 ±0.00 MPa
 Dr (%): 0.00 ±0.00
 φ (degrees): 0.00 ±0.00 °
 Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 7.86 ±10.86 MPa
 Go: 20.85 ±5.55 MPa
 Su: 34.81 ±11.18 kPa
 Su ratio: 0.61 ±0.17
 O.C.R.: 2.80 ±0.76

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 5.16 (m), **End depth:** 5.49 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 5.89 ±1.15 MPa

Sleeve friction: 15.85 ±3.32 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 5.80E-05 ±4.10E-05 m/s

N_{₆₀}: 13.26 ±1.86 blows

Es: 36.90 ±3.52 MPa

Dr (%): 45.93 ±4.17

φ (degrees): 35.13 ±0.93 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 73.80 ±7.03 MPa

Go: 46.25 ±4.41 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 5.49 (m), **End depth:** 6.00 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 10.94 ±1.75 MPa

Sleeve friction: 25.95 ±4.56 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 3.16E-04 ±2.25E-04 m/s

N_{₆₀}: 20.98 ±2.31 blows

Es: 50.74 ±3.64 MPa

Dr (%): 60.74 ±4.10

φ (degrees): 38.53 ±0.90 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 101.47 ±7.27 MPa

Go: 63.59 ±4.56 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 6.00 (m), **End depth:** 6.61 (m)**Description:** Sand**Basic results**

Total cone resistance: 19.45 ±1.71 MPa

Sleeve friction: 34.08 ±4.44 kPa

SBT_n: 7SBT_n description: Sand**Estimation results**

Permeability: 1.73E-03 ±4.84E-04 m/s

N_{₆₀}: 31.77 ±2.02 blows

Es: 65.54 ±2.89 MPa

Dr (%): 78.58 ±3.36

φ (degrees): 42.09 ±0.59 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 131.08 ±5.78 MPa

Go: 82.14 ±3.62 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 6.61 (m), **End depth:** 6.80 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 14.57 ±1.05 MPa

Sleeve friction: 38.24 ±2.44 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 4.62E-04 ±1.15E-04 m/s

N_{₆₀}: 26.89 ±1.45 blows

Es: 62.09 ±1.81 MPa

Dr (%): 68.12 ±2.46

φ (degrees): 40.13 ±0.50 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 124.18 ±3.62 MPa

Go: 77.82 ±2.27 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU7bis

Total depth: 6.80 m, Date: 13/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKs880

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.33	0.72	1.91E-05	5.8	17.6	46.1	35.8	35.2	22.0	0.0	0.0	0.0	19.0
1.05		(±1.17E-05)	(±1.0)	(±2.6)	(±8.1)	(±1.9)	(±5.1)	(±3.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
1.05	1.34	3.03E-06	4.7	17.3	32.0	33.4	28.5	21.7	0.0	0.0	0.0	19.0
2.39		(±3.08E-06)	(±1.5)	(±4.1)	(±4.8)	(±0.9)	(±14.3)	(±5.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
2.39	0.71	3.49E-07	3.6	15.8	25.0	32.5	12.7	18.7	0.0	0.0	0.0	19.0
3.10		(±3.42E-07)	(±0.6)	(±2.3)	(±2.4)	(±0.6)	(±3.7)	(±2.9)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
3.10	1.36	1.20E-08	2.1	0.0	0.0	0.0	2.8	14.3	25.0	0.5	2.4	19.0
4.46		(±2.51E-08)	(±0.3)	(±0.0)	(±0.0)	(±0.0)	(±2.0)	(±0.9)	(±7.0)	(±0.2)	(±0.7)	(±0.0)
4.46	0.70	1.90E-07	3.5	0.0	0.0	0.0	7.9	20.8	34.8	0.6	2.8	19.0
5.16		(±7.26E-07)	(±1.4)	(±0.0)	(±0.0)	(±0.0)	(±10.9)	(±5.5)	(±11.2)	(±0.2)	(±0.8)	(±0.0)
5.16	0.33	5.80E-05	13.3	36.9	45.9	35.1	73.8	46.3	0.0	0.0	0.0	19.0
5.49		(±4.10E-05)	(±1.9)	(±3.5)	(±4.2)	(±0.9)	(±7.0)	(±4.4)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
5.49	0.51	3.16E-04	21.0	50.7	60.7	38.5	101.5	63.6	0.0	0.0	0.0	19.0
6.00		(±2.25E-04)	(±2.3)	(±3.6)	(±4.1)	(±0.9)	(±7.3)	(±4.6)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
6.00	0.61	1.73E-03	31.8	65.5	78.6	42.1	131.1	82.1	0.0	0.0	0.0	19.0
6.61		(±4.84E-04)	(±2.0)	(±2.9)	(±3.4)	(±0.6)	(±5.8)	(±3.6)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
6.61	0.19	4.62E-04	26.9	62.1	68.1	40.1	124.2	77.8	0.0	0.0	0.0	19.0
6.80		(±1.15E-04)	(±1.4)	(±1.8)	(±2.5)	(±0.5)	(±3.6)	(±2.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

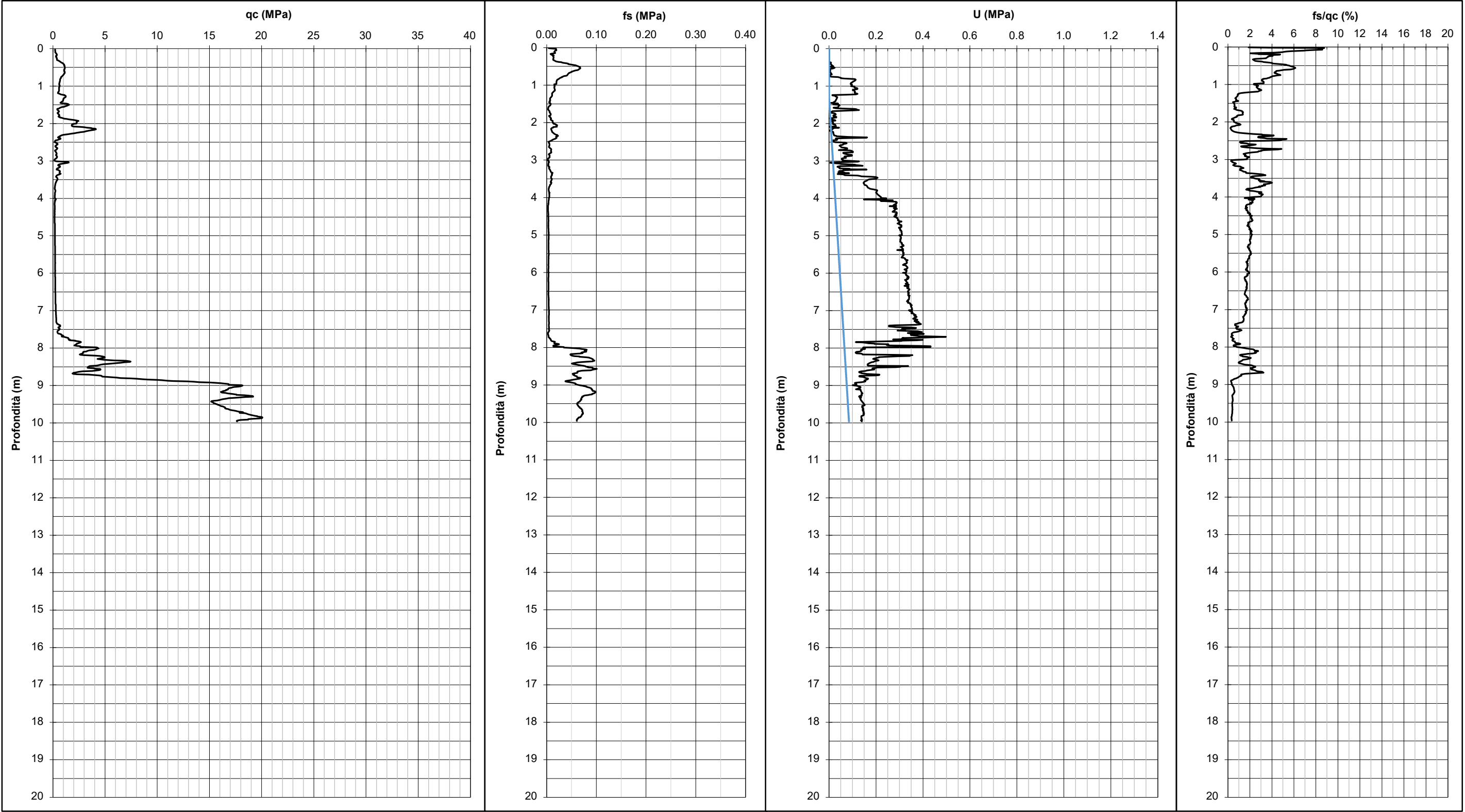
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.00	I	--	--	8.9	22.1	0.6	18.6	21.6	<5	40.4	7.5	216.75
2	3.20	CI	65.7	48.0	4.7	13.4	<0.5	18.6	19.4	<5	31.0	3.3	210.26
3	5.00	C	21.6	13.1	2.4	6.7	0.7	16.5	17.3	--	--	--	179.22
4	7.30	I	--	--	18.7	53.0	1.2	18.6	21.6	<5	38.5	31.2	421.49



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Green Plan Engineering		
CANTIERE	Aquileia		
PROVA	CPTU8bis	DATA	16/03/2023
OPERATORE	Dott. Andrea Zampieri		

Punta	Mkj497	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
Profondità prova	9.96 m da p.c.	Livello acqua	1.30 m da p.c.		
Coordinate WGS84	X		Y		





GE Ground Engineering S.r.l.

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU8bis

Total depth: 9.96 m, Date: 16/03/2023

Surface Elevation: 0.00 m

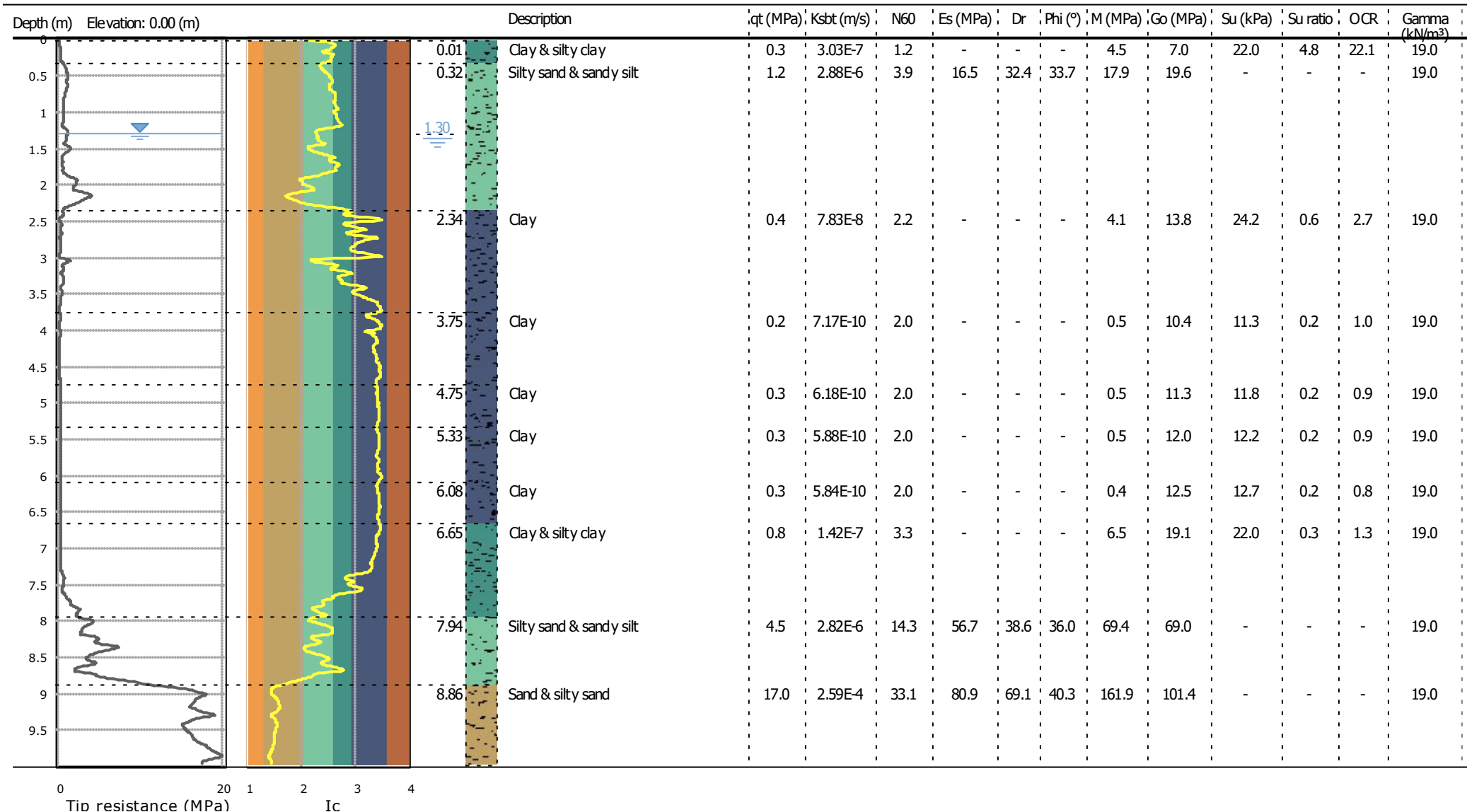
Coords: X:0.00, Y:0.00

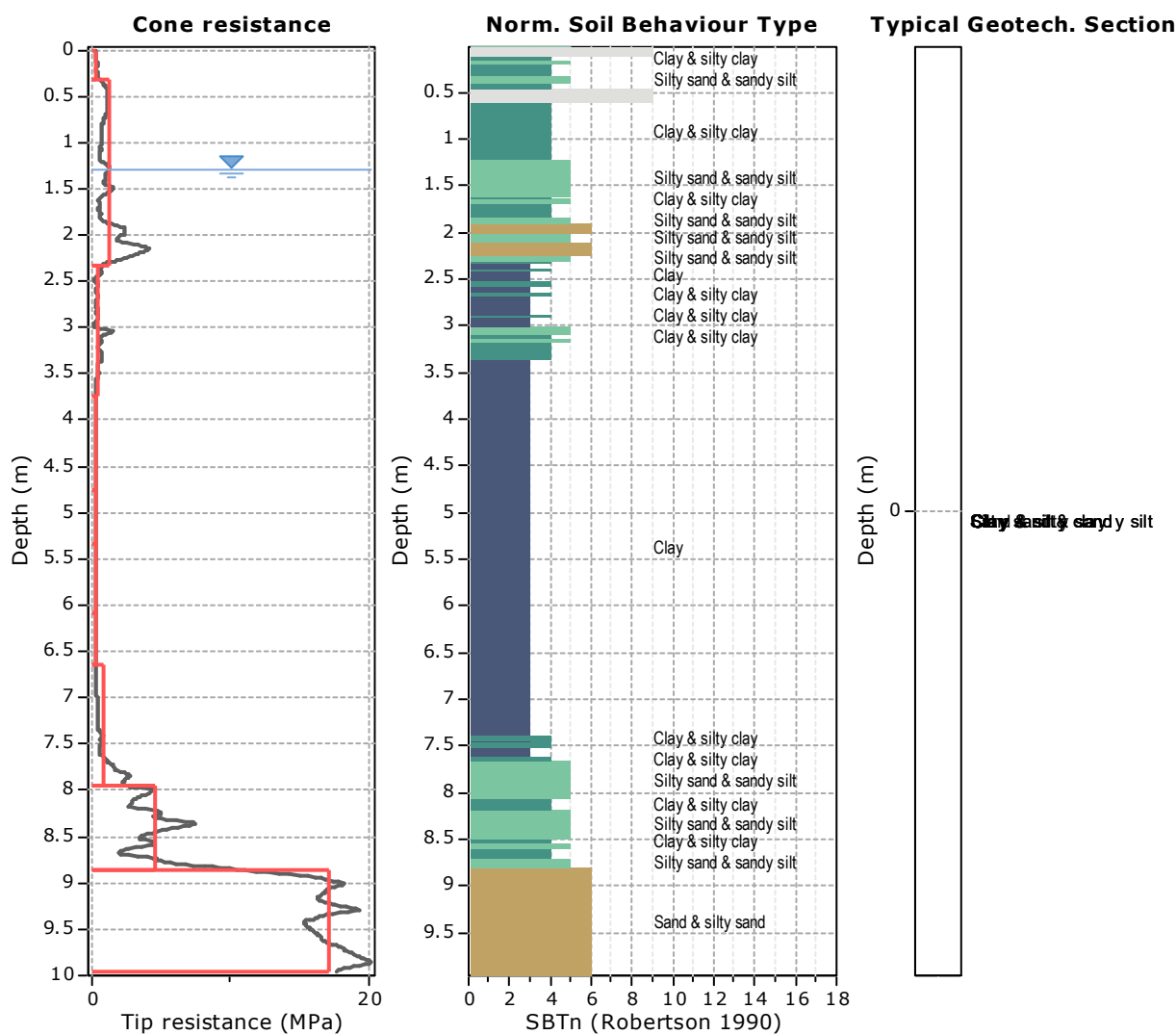
Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.

Location: Aquileia (UD)





Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.01 (m), **End depth:** 0.32 (m)

Description: Clay & silty clay

Basic results

Total cone resistance: 0.32 ±0.08 MPa

Sleeve friction: 14.21 ±3.58 kPa

SBT_n: 4

SBT_n description: Clay & silty clay

Estimation results

Permeability: 3.03E-07 ±5.75E-07 m/s

N_{₆₀}: 1.19 ±0.40 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 4.50 ±1.05 MPa

Go: 7.01 ±1.67 MPa

Su: 22.04 ±4.94 kPa

Su ratio: 4.78 ±2.03

O.C.R.: 22.07 ±9.36

:: Layer No: 2 ::**Code:** Layer_2 **Start depth:** 0.32 (m), **End depth:** 2.34 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 1.19 ±0.80 MPa

Sleeve friction: 19.88 ±17.07 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 2.88E-06 ±8.28E-06 m/s

N_{₆₀}: 3.86 ±1.72 blows

Es: 16.52 ±5.27 MPa

Dr (%): 32.41 ±6.89

φ (degrees): 33.68 ±1.74 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 17.95 ±13.40 MPa

Go: 19.61 ±5.68 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 3 ::**Code:** Layer_3 **Start depth:** 2.34 (m), **End depth:** 3.75 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.44 ±0.23 MPa

Sleeve friction: 7.93 ±4.25 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 7.83E-08 ±3.07E-07 m/s

N_{₆₀}: 2.16 ±0.65 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 4.14 ±4.65 MPa

Go: 13.81 ±2.94 MPa

Su: 24.19 ±10.74 kPa

Su ratio: 0.58 ±0.26

O.C.R.: 2.70 ±1.20

:: Layer No: 4 ::**Code:** Layer_4 **Start depth:** 3.75 (m), **End depth:** 4.75 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.24 ±0.02 MPa

Sleeve friction: 3.92 ±0.85 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 7.17E-10 ±2.52E-10 m/s

N_{₆₀}: 1.99 ±0.10 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.49 ±0.16 MPa

Go: 10.41 ±0.58 MPa

Su: 11.29 ±1.42 kPa

Su ratio: 0.22 ±0.04

O.C.R.: 1.01 ±0.17

:: Layer No: 5 ::**Code:** Layer_5 **Start depth:** 4.75 (m), **End depth:** 5.33 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.26 ±0.01 MPa

Sleeve friction: 3.99 ±0.22 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 6.18E-10 ±3.17E-11 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.46 ±0.02 MPa

Go: 11.33 ±0.28 MPa

Su: 11.78 ±0.24 kPa

Su ratio: 0.20 ±0.00

O.C.R.: 0.92 ±0.02

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 5.33 (m), **End depth:** 6.08 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.28 ±0.01 MPa

Sleeve friction: 3.99 ±0.21 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.88E-10 ±4.52E-11 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.45 ±0.03 MPa

Go: 11.99 ±0.14 MPa

Su: 12.22 ±0.40 kPa

Su ratio: 0.19 ±0.01

O.C.R.: 0.87 ±0.04

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 6.08 (m), **End depth:** 6.65 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.30 ±0.01 MPa

Sleeve friction: 3.80 ±0.16 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.84E-10 ±3.06E-11 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.44 ±0.02 MPa

Go: 12.50 ±0.21 MPa

Su: 12.71 ±0.23 kPa

Su ratio: 0.18 ±0.00

O.C.R.: 0.82 ±0.02

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 6.65 (m), **End depth:** 7.94 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.77 ±0.68 MPa

Sleeve friction: 5.85 ±4.08 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 1.42E-07 ±3.35E-07 m/s

N_{₆₀}: 3.29 ±1.91 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 6.46 ±10.34 MPa

Go: 19.15 ±7.81 MPa

Su: 22.04 ±10.39 kPa

Su ratio: 0.28 ±0.12

O.C.R.: 1.28 ±0.56

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 7.94 (m), **End depth:** 8.86 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 4.47 ±1.75 MPa

Sleeve friction: 66.94 ±19.51 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 2.82E-06 ±7.15E-06 m/s

N_{₆₀}: 14.27 ±3.56 blows

Es: 56.67 ±9.36 MPa

Dr (%): 38.55 ±5.83

φ (degrees): 35.96 ±1.28 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 69.43 ±35.12 MPa

Go: 69.02 ±10.82 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 10 ::**Code:** Layer_10 **Start depth:** 8.86 (m), **End depth:** 9.96 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 17.00 ±1.72 MPa

Sleeve friction: 70.68 ±13.21 kPa

SBT_n: 6

SBTn description: Sand & silty sand

Estimation results

Permeability: 2.59E-04 ±1.02E-04 m/s

N_{₆₀}: 33.15 ±2.60 blows

Es: 80.94 ±5.76 MPa

Dr (%): 69.13 ±3.42

φ (degrees): 40.32 ±0.69 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 161.88 ±11.53 MPa

Go: 101.44 ±7.22 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.01	0.31	3.03E-07	1.2	0.0	0.0	0.0	4.5	7.0	22.0	4.8	22.1	19.0
0.32		(±5.75E-07)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±1.1)	(±1.7)	(±4.9)	(±2.0)	(±9.4)	(±0.0)
0.32	2.02	2.88E-06	3.9	16.5	32.4	33.7	17.9	19.6	0.0	0.0	0.0	19.0
2.34		(±8.28E-06)	(±1.7)	(±5.3)	(±6.9)	(±1.7)	(±13.4)	(±5.7)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
2.34	1.41	7.83E-08	2.2	0.0	0.0	0.0	4.1	13.8	24.2	0.6	2.7	19.0
3.75		(±3.07E-07)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±4.7)	(±2.9)	(±10.7)	(±0.3)	(±1.2)	(±0.0)
3.75	1.00	7.17E-10	2.0	0.0	0.0	0.0	0.5	10.4	11.3	0.2	1.0	19.0
4.75		(±2.52E-10)	(±0.1)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.6)	(±1.4)	(±0.0)	(±0.2)	(±0.0)
4.75	0.58	6.18E-10	2.0	0.0	0.0	0.0	0.5	11.3	11.8	0.2	0.9	19.0
5.33		(±3.17E-11)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.3)	(±0.2)	(±0.0)	(±0.0)	(±0.0)
5.33	0.75	5.88E-10	2.0	0.0	0.0	0.0	0.5	12.0	12.2	0.2	0.9	19.0
6.08		(±4.52E-11)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.4)	(±0.0)	(±0.0)	(±0.0)
6.08	0.57	5.84E-10	2.0	0.0	0.0	0.0	0.4	12.5	12.7	0.2	0.8	19.0
6.65		(±3.06E-11)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.2)	(±0.2)	(±0.0)	(±0.0)	(±0.0)
6.65	1.29	1.42E-07	3.3	0.0	0.0	0.0	6.5	19.1	22.0	0.3	1.3	19.0
7.94		(±3.35E-07)	(±1.9)	(±0.0)	(±0.0)	(±0.0)	(±10.3)	(±7.8)	(±10.4)	(±0.1)	(±0.6)	(±0.0)
7.94	0.92	2.82E-06	14.3	56.7	38.6	36.0	69.4	69.0	0.0	0.0	0.0	19.0
8.86		(±7.15E-06)	(±3.6)	(±9.4)	(±5.8)	(±1.3)	(±35.1)	(±10.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
8.86	1.10	2.59E-04	33.1	80.9	69.1	40.3	161.9	101.4	0.0	0.0	0.0	19.0
9.96		(±1.02E-04)	(±2.6)	(±5.8)	(±3.4)	(±0.7)	(±11.5)	(±7.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo, I: Incoerente, CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

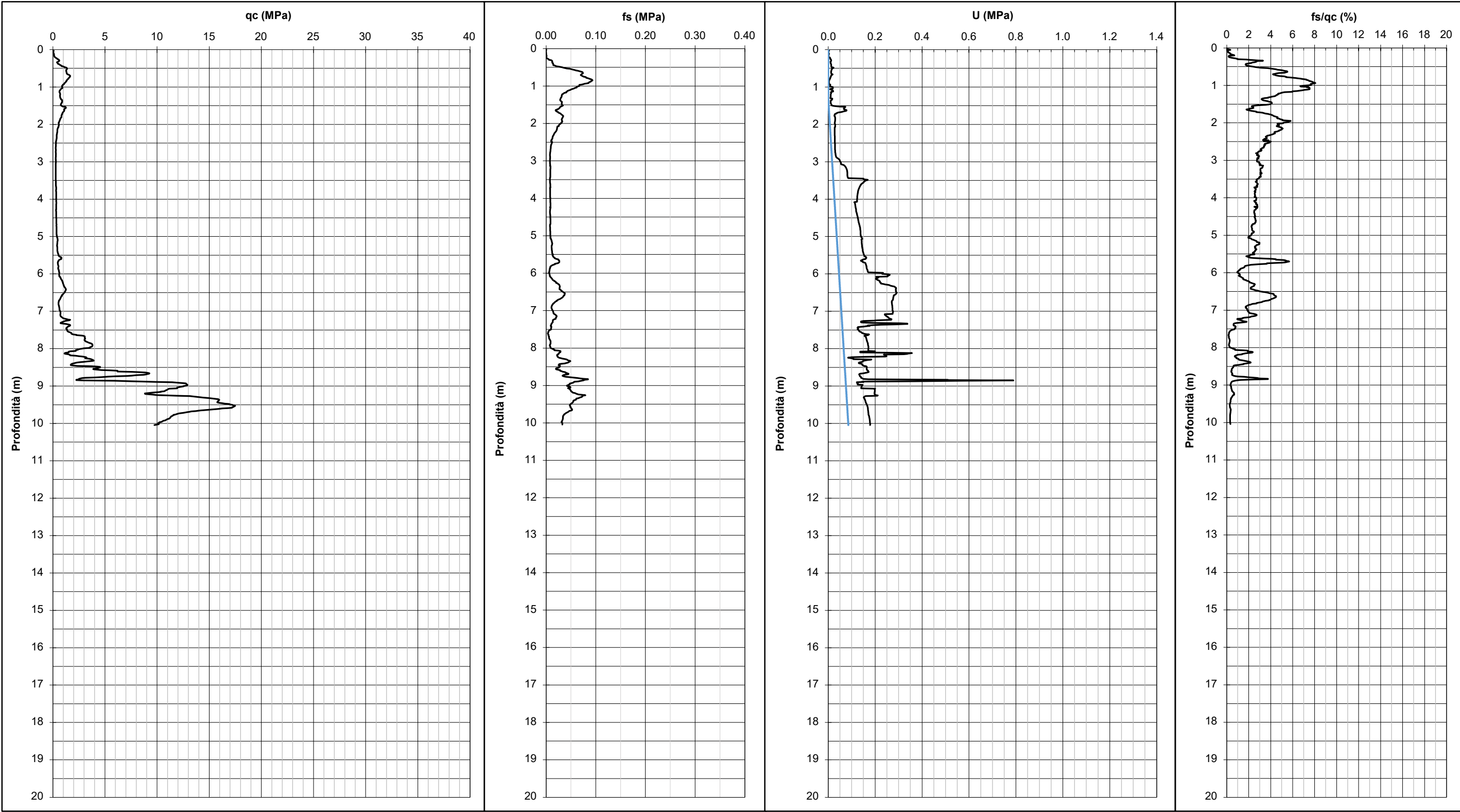
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.00	C	35.3	26.3	3.5	9.2	>9	17.7	18.4	--	--	--	139.56
2	3.80	CI	43.1	30.5	4.0	10.3	<0.5	17.9	18.7	<5	28.7	2.1	189.42
3	7.20	C	10.8	4.7	1.3	4.4	<0.5	14.8	15.6	--	--	--	163.41
4	7.80	CI	35.3	22.2	3.5	9.2	<0.5	17.4	18.2	<5	28.7	1.8	206.64
5	9.96	I	--	--	16.1	48.4	1.7	18.6	21.6	<5	36.8	26.8	419.15



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Green Plan Engineering		
CANTIERE	Aquileia		
PROVA	CPTU9bis	DATA	16/03/2023
OPERATORE	Dott. Andrea Zampieri		

Punta	Mkj497	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
Profondità prova	10.04 m da p.c.	Livello acqua	1.30 m da p.c.		
Coordinate WGS84	X		Y		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU9bis

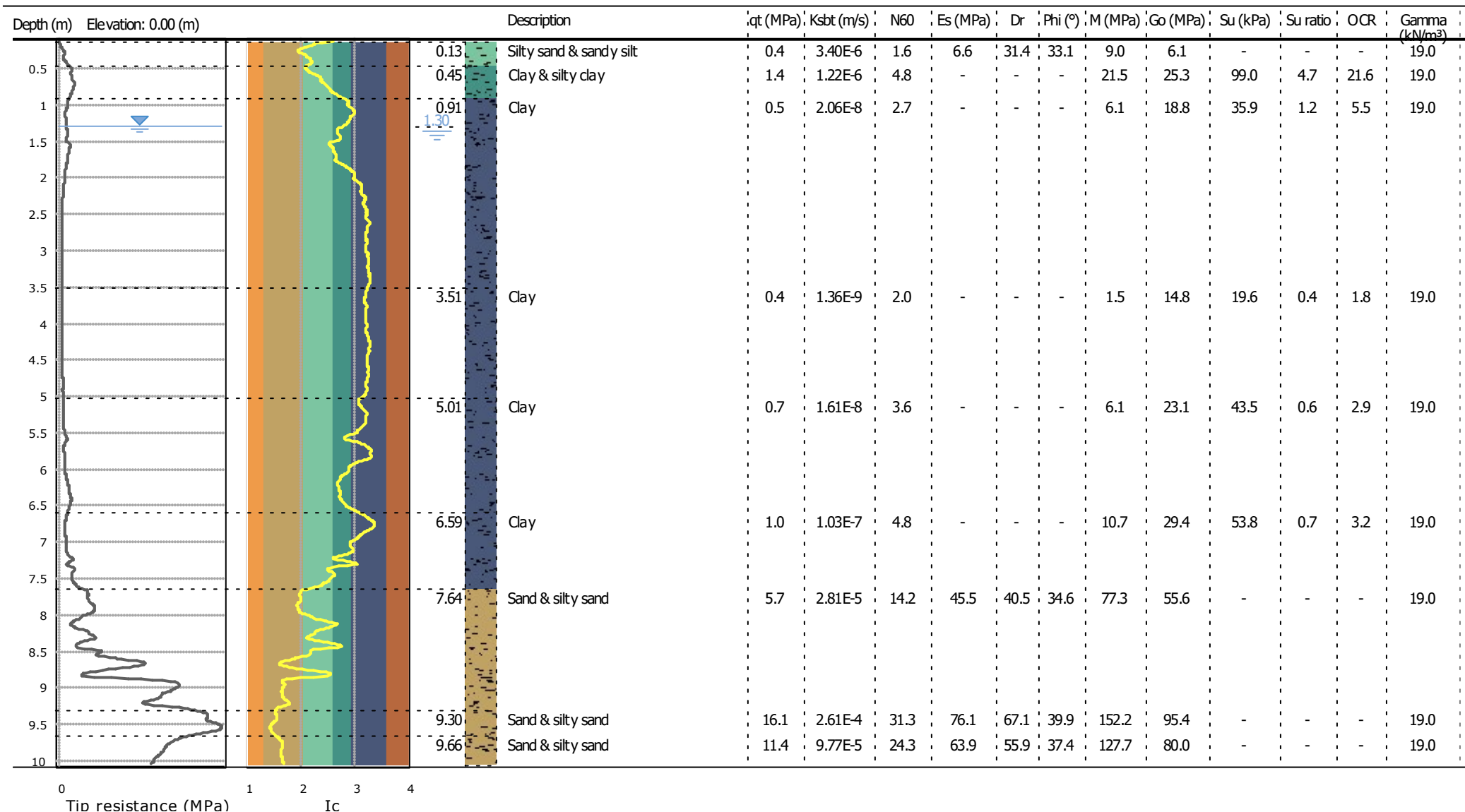
Total depth: 10.04 m, Date: 16/03/2023

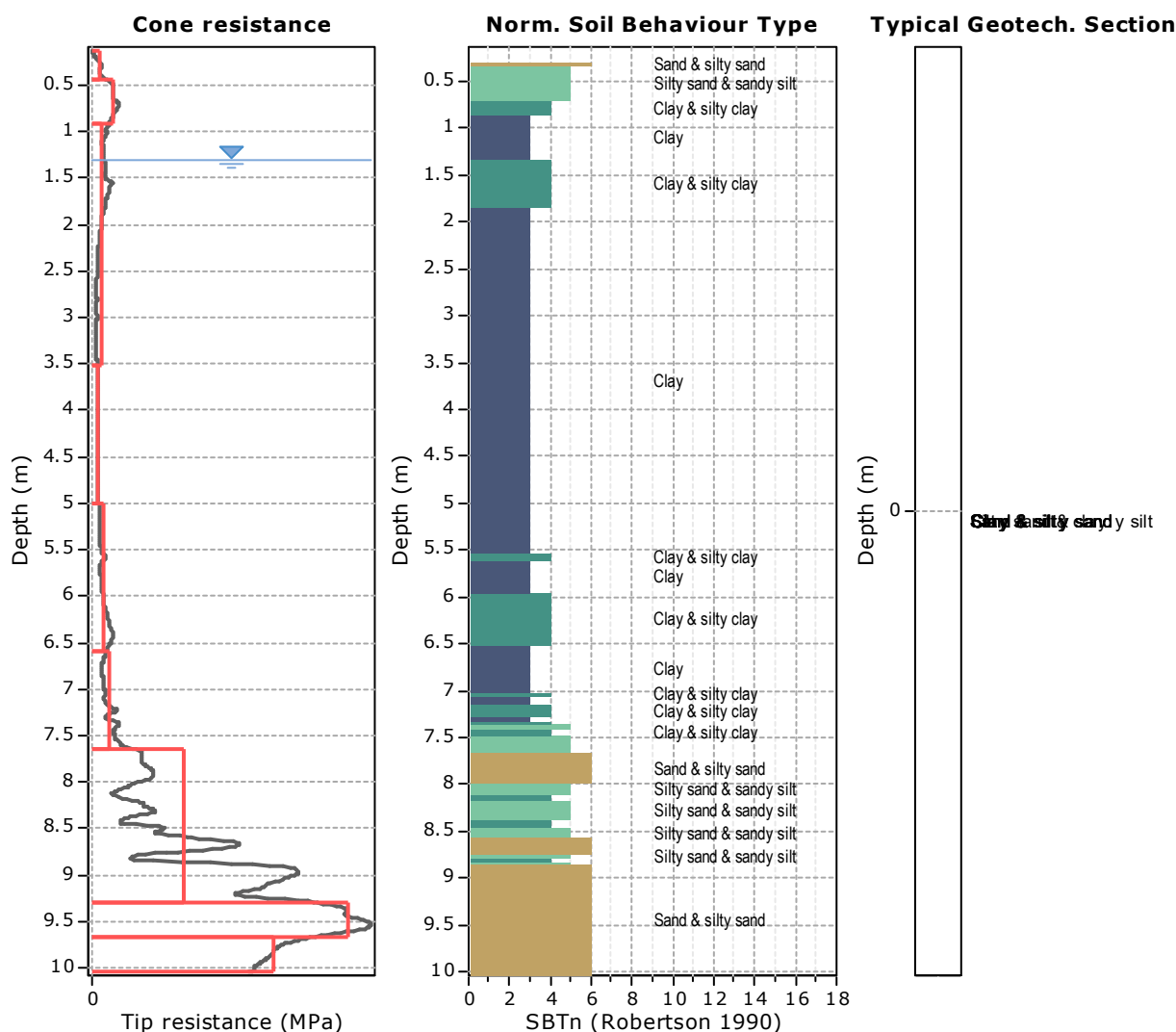
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.13 (m), **End depth:** 0.45 (m)

Description: Silty sand & sandy silt

Basic results

Total cone resistance: 0.44 ±0.25 MPa

Sleeve friction: 1.99 ±3.42 kPa

SBT_n: 5

SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 3.40E-06 ±2.08E-06 m/s

N_{₆₀}: 1.56 ±0.70 blows

Es: 6.61 ±2.31 MPa

Dr (%): 31.37 ±3.89

φ (degrees): 33.06 ±1.44 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 8.97 ±4.94 MPa

Go: 6.14 ±3.28 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.45 (m), **End depth:** 0.91 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.36 ±0.16 MPa

Sleeve friction: 47.49 ±26.63 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 1.22E-06 ±1.41E-06 m/s

N_{₆₀}: 4.77 ±0.89 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 21.52 ±3.90 MPa

Go: 25.30 ±6.65 MPa

Su: 98.99 ±13.19 kPa

Su ratio: 4.68 ±0.60

O.C.R.: 21.64 ±2.77

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 0.91 (m), **End depth:** 3.51 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.54 ±0.27 MPa

Sleeve friction: 26.30 ±21.35 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.06E-08 ±3.65E-08 m/s

N_{₆₀}: 2.72 ±0.87 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 6.10 ±4.84 MPa

Go: 18.77 ±5.62 MPa

Su: 35.87 ±20.48 kPa

Su ratio: 1.20 ±0.86

O.C.R.: 5.54 ±3.98

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.51 (m), **End depth:** 5.01 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.36 ±0.02 MPa

Sleeve friction: 8.40 ±0.34 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.36E-09 ±2.51E-10 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.46 ±0.11 MPa

Go: 14.82 ±0.73 MPa

Su: 19.62 ±1.03 kPa

Su ratio: 0.38 ±0.02

O.C.R.: 1.75 ±0.10

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 5.01 (m), **End depth:** 6.59 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.72 ±0.27 MPa

Sleeve friction: 14.34 ±7.04 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.61E-08 ±1.87E-08 m/s

N_{₆₀}: 3.64 ±0.95 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 6.10 ±4.64 MPa

Go: 23.07 ±5.36 MPa

Su: 43.49 ±18.50 kPa

Su ratio: 0.64 ±0.23

O.C.R.: 2.95 ±1.05

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 6.59 (m), **End depth:** 7.64 (m)**Description:** Clay**Basic results**

Total cone resistance: 1.05 ±0.43 MPa

Sleeve friction: 18.78 ±9.10 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.03E-07 ±2.62E-07 m/s

N_{₆₀}: 4.80 ±0.90 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 10.74 ±8.32 MPa

Go: 29.39 ±3.38 MPa

Su: 53.81 ±19.90 kPa

Su ratio: 0.69 ±0.23

O.C.R.: 3.17 ±1.05

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 7.64 (m), **End depth:** 9.30 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 5.71 ±3.82 MPa

Sleeve friction: 29.53 ±19.59 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 2.81E-05 ±3.89E-05 m/s

N_{₆₀}: 14.25 ±7.16 blows

Es: 45.46 ±16.29 MPa

Dr (%): 40.46 ±12.37

φ (degrees): 34.62 ±2.41 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 77.29 ±41.36 MPa

Go: 55.57 ±19.93 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 9.30 (m), **End depth:** 9.66 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 16.07 ±0.99 MPa

Sleeve friction: 59.62 ±8.88 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 2.61E-04 ±8.45E-05 m/s

N_{₆₀}: 31.30 ±1.51 blows

Es: 76.08 ±3.44 MPa

Dr (%): 67.14 ±2.08

φ (degrees): 39.93 ±0.43 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 152.16 ±6.88 MPa

Go: 95.35 ±4.31 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 9.66 (m), **End depth:** 10.04 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 11.41 ±1.04 MPa

Sleeve friction: 42.19 ±7.27 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 9.77E-05 ±2.61E-05 m/s

N_{₆₀}: 24.26 ±1.86 blows

Es: 63.86 ±4.07 MPa

Dr (%): 55.93 ±2.71

φ (degrees): 37.44 ±0.64 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 127.73 ±8.14 MPa

Go: 80.04 ±5.10 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.13	0.32	3.40E-06	1.6	6.6	31.4	33.1	9.0	6.1	0.0	0.0	0.0	19.0
0.45		(±2.08E-06)	(±0.7)	(±2.3)	(±3.9)	(±1.4)	(±4.9)	(±3.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
0.45	0.46	1.22E-06	4.8	0.0	0.0	0.0	21.5	25.3	99.0	4.7	21.6	19.0
0.91		(±1.41E-06)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±3.9)	(±6.6)	(±13.2)	(±0.6)	(±2.8)	(±0.0)
0.91	2.60	2.06E-08	2.7	0.0	0.0	0.0	6.1	18.8	35.9	1.2	5.5	19.0
3.51		(±3.65E-08)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±4.8)	(±5.6)	(±20.5)	(±0.9)	(±4.0)	(±0.0)
3.51	1.50	1.36E-09	2.0	0.0	0.0	0.0	1.5	14.8	19.6	0.4	1.8	19.0
5.01		(±2.51E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.7)	(±1.0)	(±0.0)	(±0.1)	(±0.0)
5.01	1.58	1.61E-08	3.6	0.0	0.0	0.0	6.1	23.1	43.5	0.6	2.9	19.0
6.59		(±1.87E-08)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±4.6)	(±5.4)	(±18.5)	(±0.2)	(±1.1)	(±0.0)
6.59	1.05	1.03E-07	4.8	0.0	0.0	0.0	10.7	29.4	53.8	0.7	3.2	19.0
7.64		(±2.62E-07)	(±0.9)	(±0.0)	(±0.0)	(±0.0)	(±8.3)	(±3.4)	(±19.9)	(±0.2)	(±1.1)	(±0.0)
7.64	1.66	2.81E-05	14.2	45.5	40.5	34.6	77.3	55.6	0.0	0.0	0.0	19.0
9.30		(±3.89E-05)	(±7.2)	(±16.3)	(±12.4)	(±2.4)	(±41.4)	(±19.9)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
9.30	0.36	2.61E-04	31.3	76.1	67.1	39.9	152.2	95.4	0.0	0.0	0.0	19.0
9.66		(±8.45E-05)	(±1.5)	(±3.4)	(±2.1)	(±0.4)	(±6.9)	(±4.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
9.66	0.38	9.77E-05	24.3	63.9	55.9	37.4	127.7	80.0	0.0	0.0	0.0	19.0
10.04		(±2.61E-05)	(±1.9)	(±4.1)	(±2.7)	(±0.6)	(±8.1)	(±5.1)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

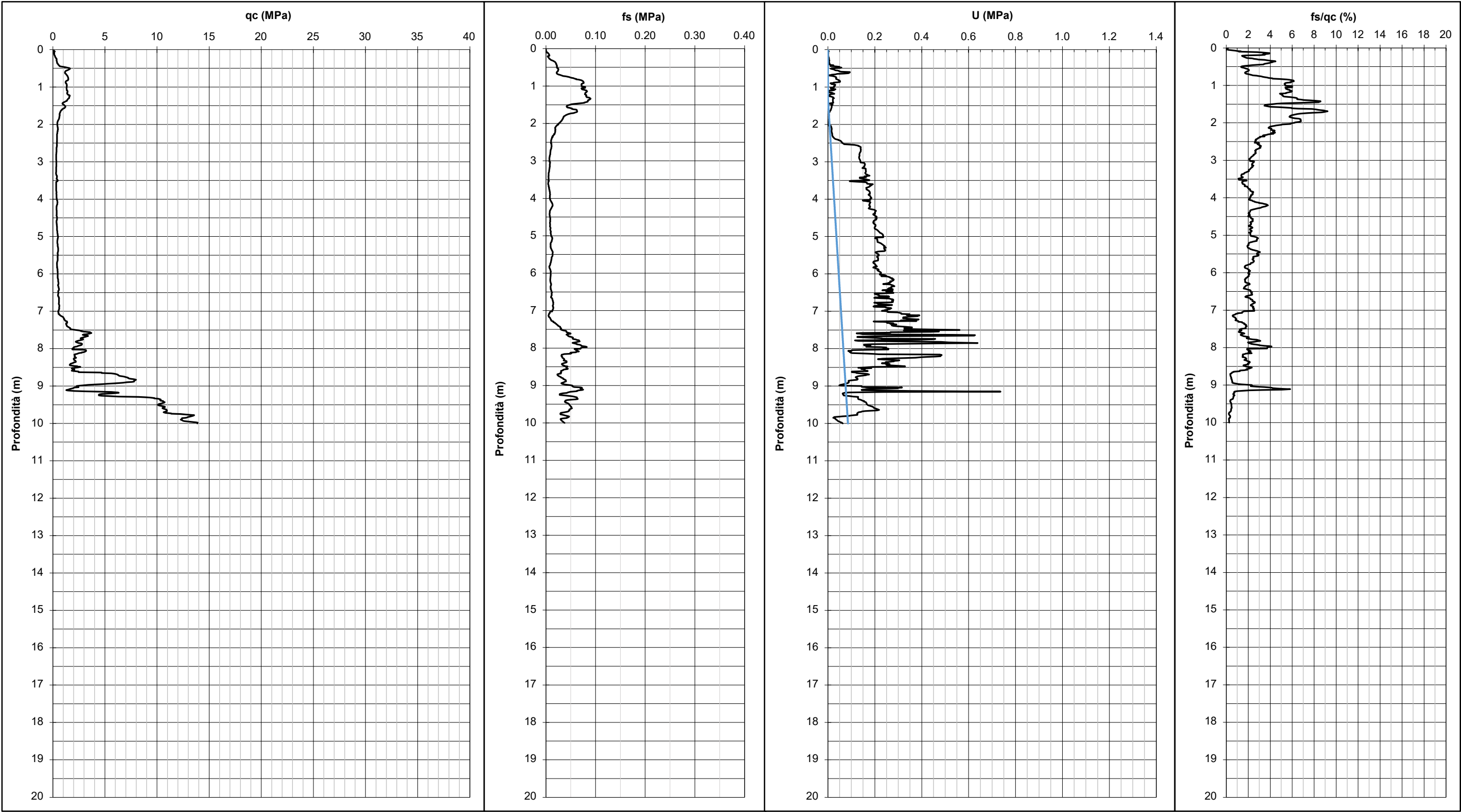
Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.20	C	42.2	31.3	3.9	10.2	>9	17.9	18.7	--	--	--	148.43
2	2.40	CI	35.3	25.1	3.5	9.1	<0.5	17.6	18.4	<5	28.7	1.8	174.17
3	5.00	CI	15.7	9.3	1.8	5.6	<0.5	15.9	16.7	<5	28.7	0.8	154.64
4	9.00	I	--	--	10.3	17.7	<0.5	18.6	21.6	<5	29.2	5.2	269.76
5	10.04	I	--	--	19.3	54.1	1.6	18.6	21.6	<5	37.3	32.2	445.52

COMMITTENTE	Green Plan Engineering	Punta	Mkj497	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
CANTIERE	Aquileia	Profondità prova	10.00 m da p.c.	Livello acqua	1.30 m da p.c.		
PROVA	CPTU10bis	DATA	16/03/2023	OPERATORE	Dott. Andrea Zampieri	Coordinate WGS84	X Y



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU10bis

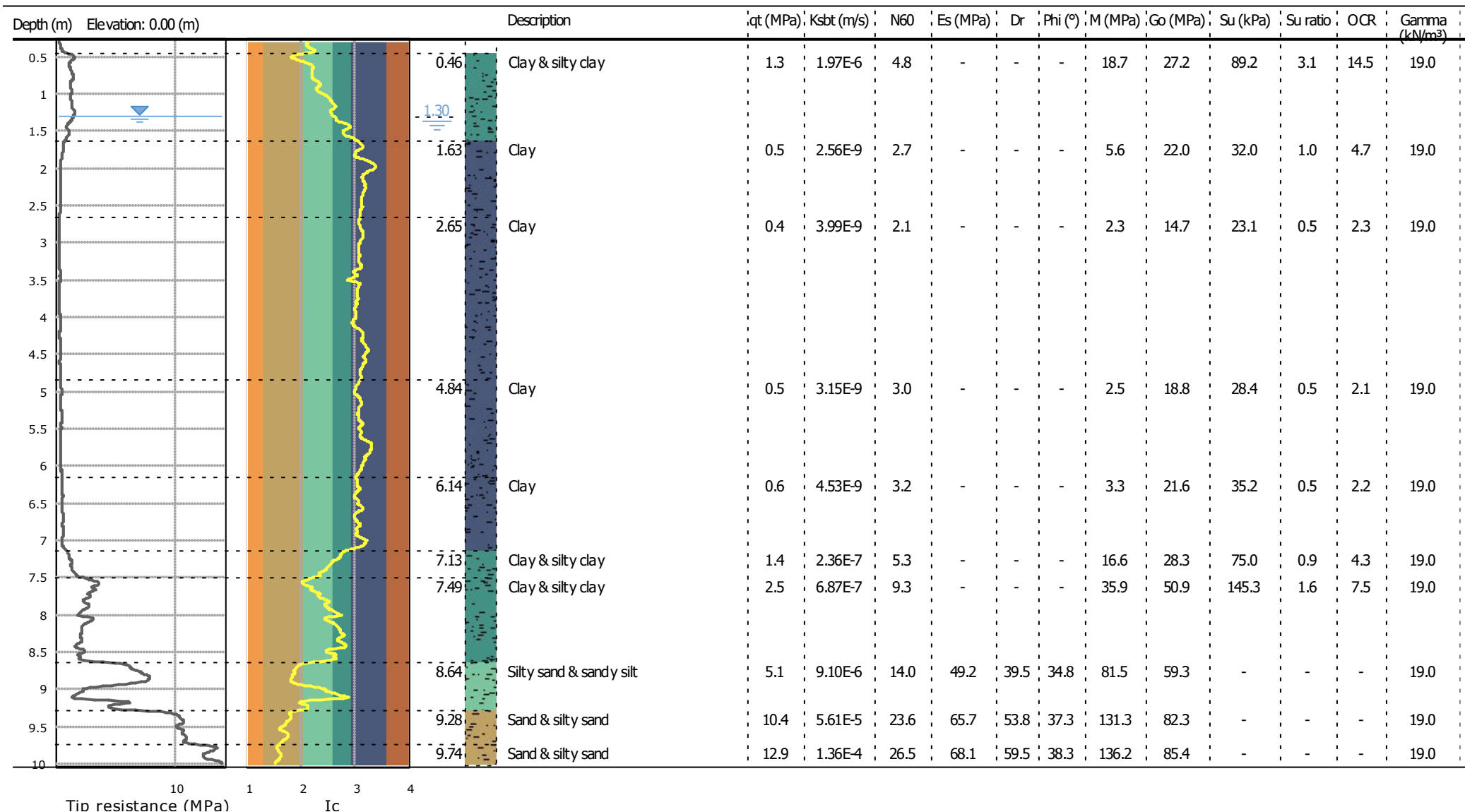
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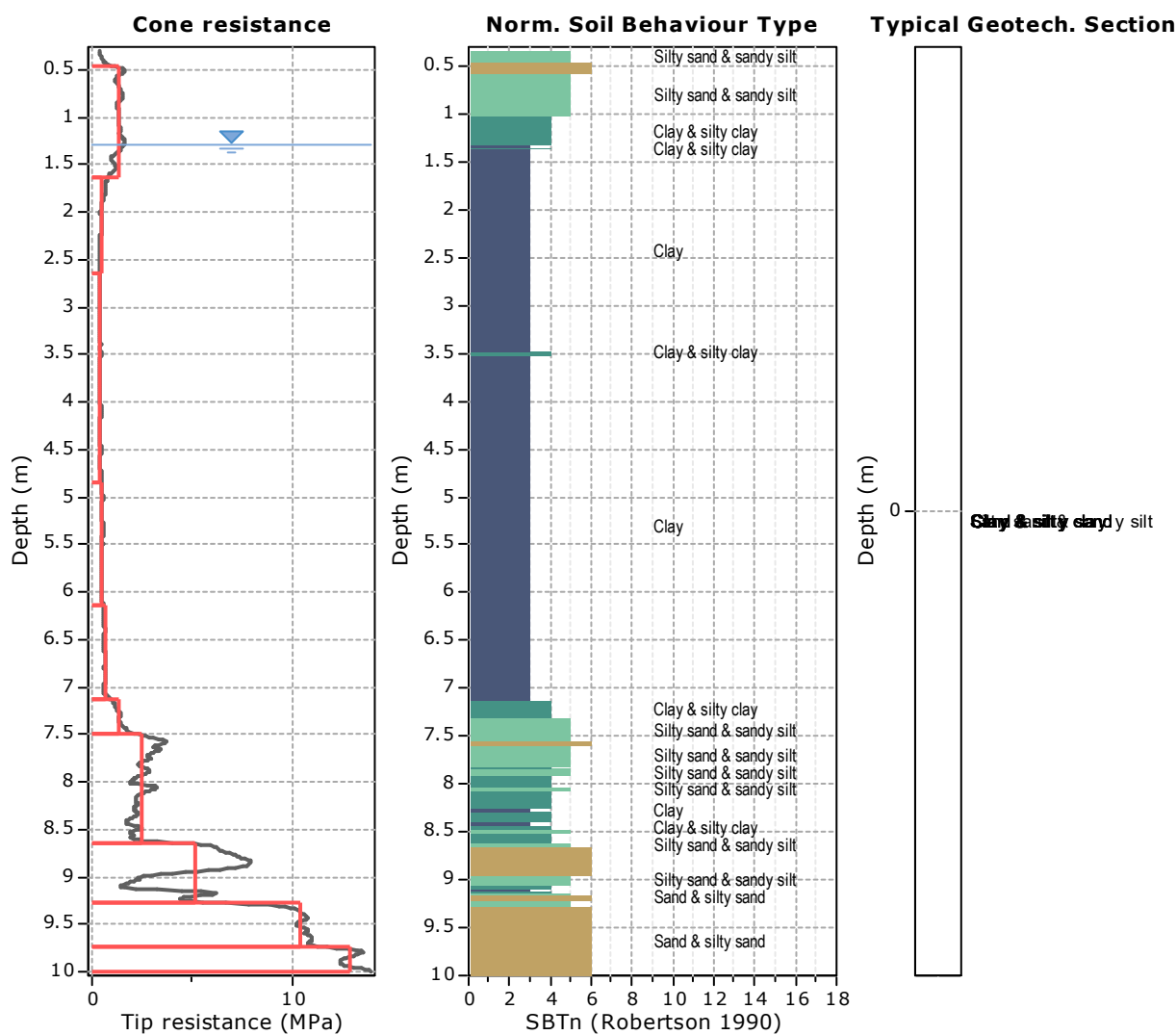
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.46 (m), **End depth:** 1.63 (m)

Description: Clay & silty clay

Basic results

Total cone resistance: 1.31 ±0.19 MPa

Sleeve friction: 47.18 ±29.38 kPa

SBT_n: 4

SBT_n description: Clay & silty clay

Estimation results

Permeability: 1.97E-06 ±4.80E-06 m/s

N_{₆₀}: 4.81 ±0.83 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 18.75 ±3.20 MPa

Go: 27.21 ±7.87 MPa

Su: 89.25 ±16.39 kPa

Su ratio: 3.14 ±0.54

O.C.R.: 14.50 ±2.51

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 1.63 (m), **End depth:** 2.65 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.49 ±0.11 MPa

Sleeve friction: 40.08 ±21.87 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 2.56E-09 ±1.32E-09 m/s

N_{₆₀}: 2.74 ±0.69 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 5.60 ±2.06 MPa

Go: 22.04 ±4.80 MPa

Su: 31.96 ±7.90 kPa

Su ratio: 1.01 ±0.34

O.C.R.: 4.67 ±1.57

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 2.65 (m), **End depth:** 4.84 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.39 ±0.04 MPa

Sleeve friction: 8.42 ±2.24 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.99E-09 ±2.22E-09 m/s

N_{₆₀}: 2.05 ±0.23 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.25 ±0.43 MPa

Go: 14.65 ±1.49 MPa

Su: 23.10 ±2.16 kPa

Su ratio: 0.50 ±0.06

O.C.R.: 2.29 ±0.29

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 4.84 (m), **End depth:** 6.14 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.50 ±0.03 MPa

Sleeve friction: 10.35 ±1.77 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 3.15E-09 ±1.45E-09 m/s

N_{₆₀}: 3.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.54 ±0.46 MPa

Go: 18.84 ±1.03 MPa

Su: 28.44 ±2.31 kPa

Su ratio: 0.45 ±0.05

O.C.R.: 2.09 ±0.23

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 6.14 (m), **End depth:** 7.13 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.62 ±0.06 MPa

Sleeve friction: 10.70 ±1.93 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 4.53E-09 ±1.76E-09 m/s

N_{₆₀}: 3.22 ±0.42 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 3.33 ±0.73 MPa

Go: 21.57 ±1.73 MPa

Su: 35.21 ±3.89 kPa

Su ratio: 0.48 ±0.05

O.C.R.: 2.20 ±0.21

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 7.13 (m), **End depth:** 7.49 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.36 ±0.25 MPa

Sleeve friction: 10.64 ±3.85 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 2.36E-07 ±2.43E-07 m/s

N_{₆₀}: 5.30 ±0.57 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 16.57 ±4.31 MPa

Go: 28.34 ±1.75 MPa

Su: 75.03 ±11.27 kPa

Su ratio: 0.93 ±0.13

O.C.R.: 4.30 ±0.59

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 7.49 (m), **End depth:** 8.64 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 2.51 ±0.51 MPa

Sleeve friction: 43.15 ±18.87 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 6.87E-07 ±1.27E-06 m/s

N_{₆₀}: 9.34 ±1.04 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 35.87 ±12.89 MPa

Go: 50.92 ±7.09 MPa

Su: 145.25 ±20.41 kPa

Su ratio: 1.62 ±0.24

O.C.R.: 7.50 ±1.11

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 8.64 (m), **End depth:** 9.28 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 5.09 ±2.09 MPa

Sleeve friction: 34.99 ±5.87 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 9.10E-06 ±8.99E-06 m/s

N_{₆₀}: 13.95 ±3.91 blows

Es: 49.15 ±6.14 MPa

Dr (%): 39.51 ±6.86

φ (degrees): 34.80 ±0.90 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 81.47 ±34.53 MPa

Go: 59.29 ±9.23 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 9.28 (m), **End depth:** 9.74 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 10.38 ±0.83 MPa

Sleeve friction: 52.50 ±13.87 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 5.61E-05 ±2.97E-05 m/s

N_{₆₀}: 23.55 ±1.52 blows

Es: 65.66 ±5.22 MPa

Dr (%): 53.77 ±2.20

φ (degrees): 37.29 ±0.44 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 131.32 ±10.44 MPa

Go: 82.29 ±6.54 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 10 ::**Code:** Layer_10 **Start depth:** 9.74 (m), **End depth:** 10.00 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 12.88 ±0.56 MPa

Sleeve friction: 47.51 ±3.29 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.36E-04 ±3.13E-05 m/s

N_{₆₀}: 26.46 ±0.81 blows

Es: 68.11 ±1.41 MPa

Dr (%): 59.50 ±1.30

φ (degrees): 38.27 ±0.30 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 136.22 ±2.83 MPa

Go: 85.36 ±1.77 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.46	1.17	1.97E-06	4.8	0.0	0.0	0.0	18.7	27.2	89.2	3.1	14.5	19.0
1.63		(±4.80E-06)	(±0.8)	(±0.0)	(±0.0)	(±0.0)	(±3.2)	(±7.9)	(±16.4)	(±0.5)	(±2.5)	(±0.0)
1.63	1.02	2.56E-09	2.7	0.0	0.0	0.0	5.6	22.0	32.0	1.0	4.7	19.0
2.65		(±1.32E-09)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±2.1)	(±4.8)	(±7.9)	(±0.3)	(±1.6)	(±0.0)
2.65	2.19	3.99E-09	2.1	0.0	0.0	0.0	2.3	14.7	23.1	0.5	2.3	19.0
4.84		(±2.22E-09)	(±0.2)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±1.5)	(±2.2)	(±0.1)	(±0.3)	(±0.0)
4.84	1.30	3.15E-09	3.0	0.0	0.0	0.0	2.5	18.8	28.4	0.5	2.1	19.0
6.14		(±1.45E-09)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.5)	(±1.0)	(±2.3)	(±0.0)	(±0.2)	(±0.0)
6.14	0.99	4.53E-09	3.2	0.0	0.0	0.0	3.3	21.6	35.2	0.5	2.2	19.0
7.13		(±1.76E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±0.7)	(±1.7)	(±3.9)	(±0.0)	(±0.2)	(±0.0)
7.13	0.36	2.36E-07	5.3	0.0	0.0	0.0	16.6	28.3	75.0	0.9	4.3	19.0
7.49		(±2.43E-07)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±4.3)	(±1.7)	(±11.3)	(±0.1)	(±0.6)	(±0.0)
7.49	1.15	6.87E-07	9.3	0.0	0.0	0.0	35.9	50.9	145.3	1.6	7.5	19.0
8.64		(±1.27E-06)	(±1.0)	(±0.0)	(±0.0)	(±0.0)	(±12.9)	(±7.1)	(±20.4)	(±0.2)	(±1.1)	(±0.0)
8.64	0.64	9.10E-06	14.0	49.2	39.5	34.8	81.5	59.3	0.0	0.0	0.0	19.0
9.28		(±8.99E-06)	(±3.9)	(±6.1)	(±6.9)	(±0.9)	(±34.5)	(±9.2)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
9.28	0.46	5.61E-05	23.6	65.7	53.8	37.3	131.3	82.3	0.0	0.0	0.0	19.0
9.74		(±2.97E-05)	(±1.5)	(±5.2)	(±2.2)	(±0.4)	(±10.4)	(±6.5)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
9.74	0.26	1.36E-04	26.5	68.1	59.5	38.3	136.2	85.4	0.0	0.0	0.0	19.0
10.00		(±3.13E-05)	(±0.8)	(±1.4)	(±1.3)	(±0.3)	(±2.8)	(±1.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

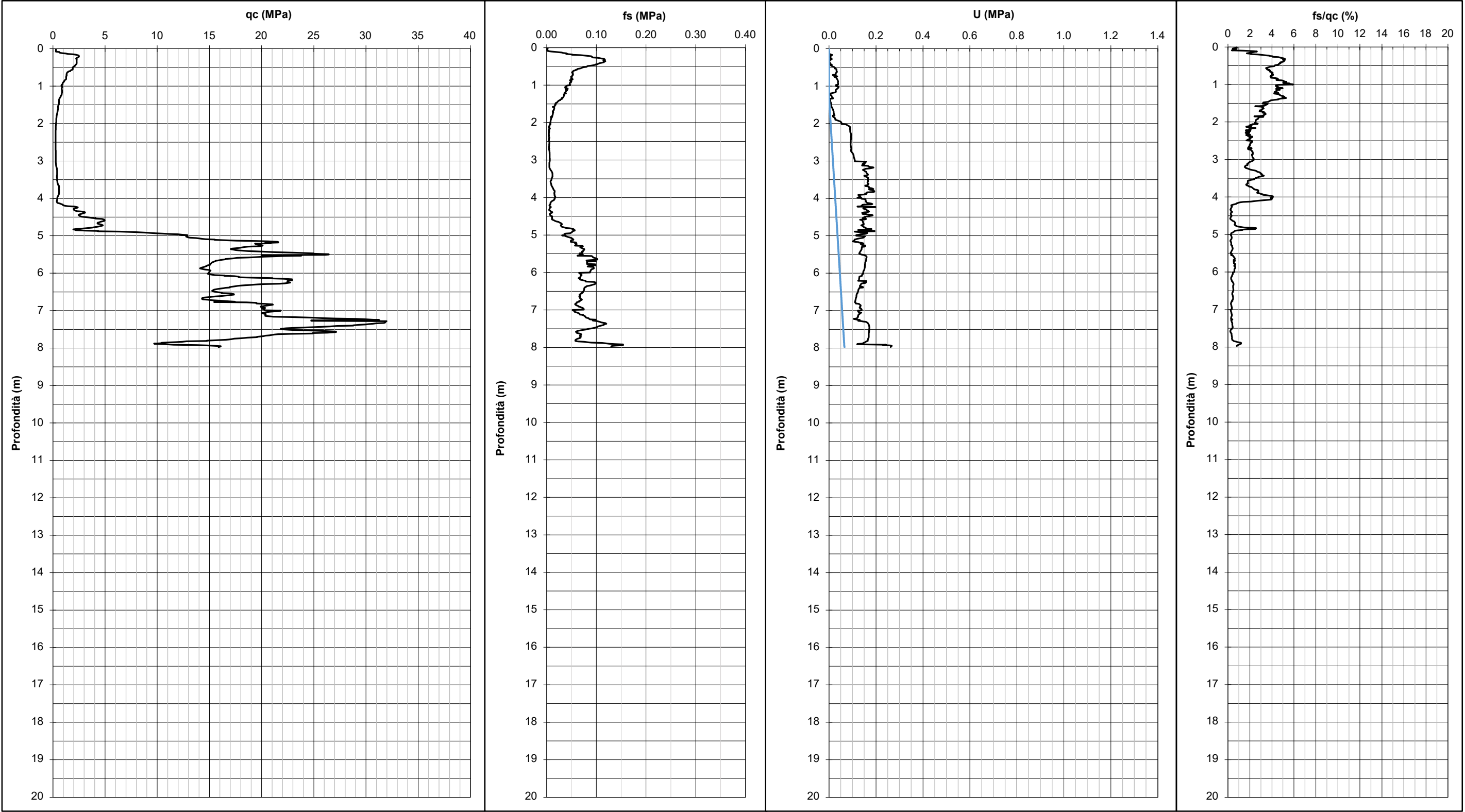
Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	2.40	C	43.1	31.6	4.0	10.4	>9	18.0	18.7	--	--	--	166.57
2	7.00	CI	21.6	13.0	2.4	6.7	<0.5	16.5	17.3	<5	28.7	1.1	172.74
3	9.10	I	--	--	13.9	21.2	<0.5	18.6	21.6	<5	30.1	6.9	295.73
4	10.00	I	--	--	15.0	46.3	2.0	18.6	21.6	<5	35.9	24.9	417.93



COMMITTENTE	Green Plan Engineering		
CANTIERE	Aquileia		
PROVA	CPTU11bis	DATA	17/03/2023
OPERATORE	Dott. Andrea Zampieri		

Punta	Mkj497	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
Profondità prova	7.97 m da p.c.	Livello acqua	1.30 m da p.c.		
Coordinate WGS84	X		Y		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU11bis

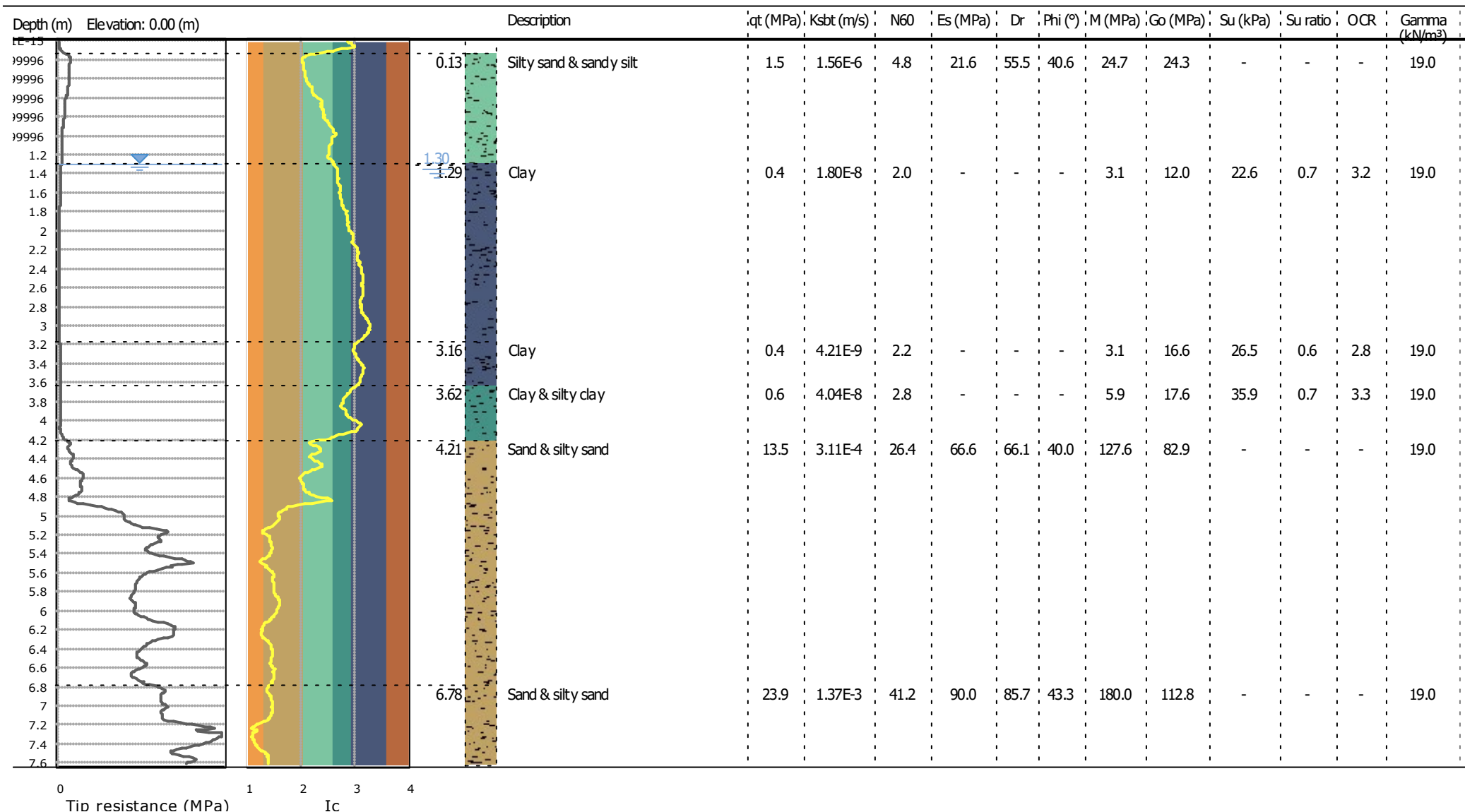
Total depth: 7.61 m, Date: 17/03/2023

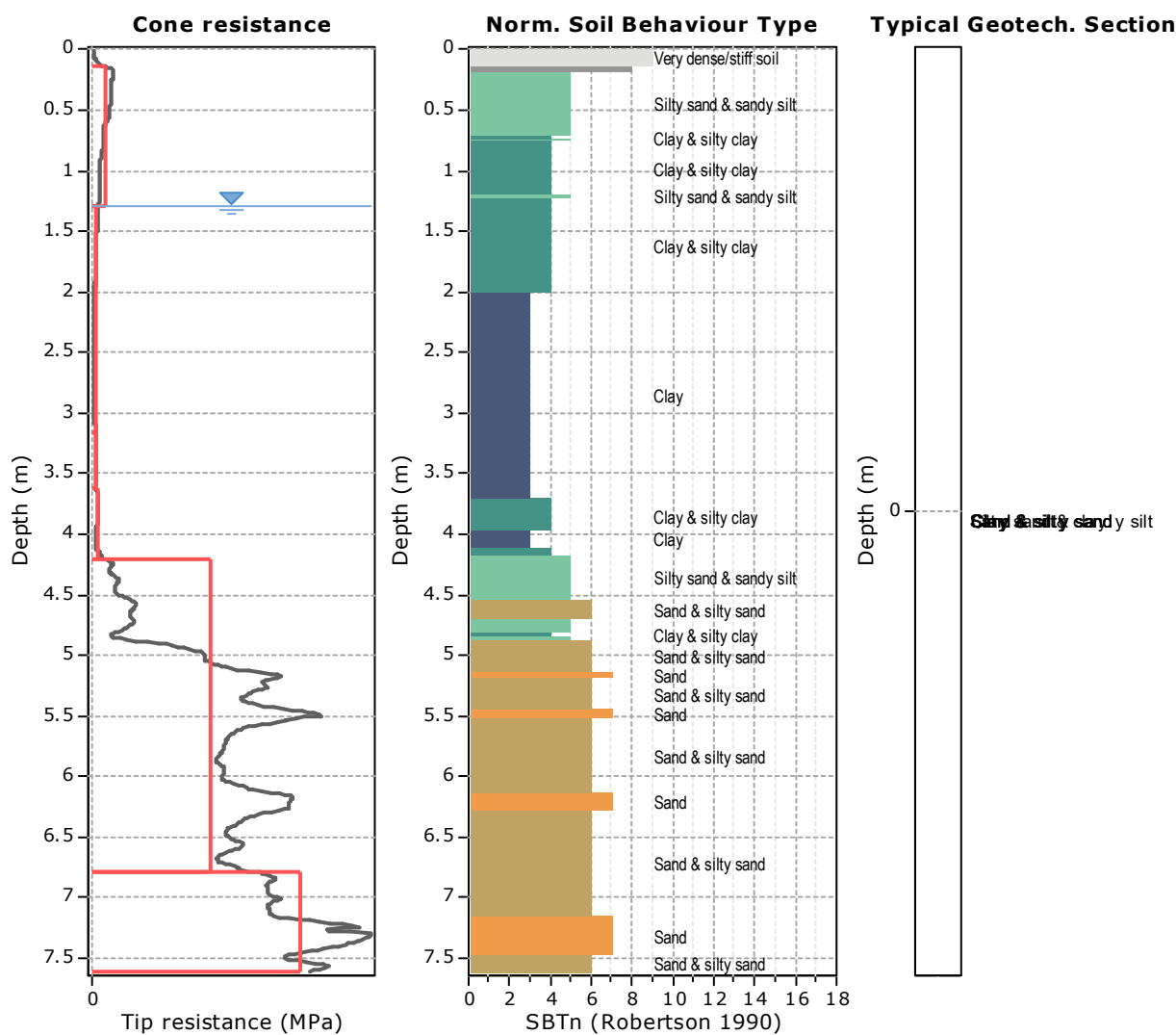
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.13 (m), **End depth:** 1.29 (m)

Description: Silty sand & sandy silt

Basic results

Total cone resistance: 1.48 ± 0.59 MPa

Sleeve friction: 40.63 ± 15.99 kPa

SBT_n: 5

SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: $1.56\text{E-}06 \pm 1.90\text{E-}06$ m/s

$N_{₆₀}$: 4.83 ± 1.37 blows

E_s : 21.55 ± 2.11 MPa

D_r (%): 55.50 ± 12.09

ϕ (degrees): $40.57 \pm 1.92^\circ$

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 24.71 ± 14.14 MPa

G_o : 24.28 ± 3.86 MPa

S_u : 0.00 ± 0.00 kPa

S_u ratio: 0.00 ± 0.00

O.C.R.: 0.00 ± 0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 1.29 (m), **End depth:** 3.16 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.36 ±0.11 MPa

Sleeve friction: 7.37 ±2.78 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.80E-08 ±2.31E-08 m/s

N_{₆₀}: 1.96 ±0.45 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 3.15 ±2.39 MPa

Go: 11.96 ±1.95 MPa

Su: 22.65 ±8.68 kPa

Su ratio: 0.68 ±0.32

O.C.R.: 3.15 ±1.49

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 3.16 (m), **End depth:** 3.62 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.44 ±0.03 MPa

Sleeve friction: 12.62 ±3.27 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 4.21E-09 ±1.89E-09 m/s

N_{₆₀}: 2.23 ±0.43 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 3.14 ±0.39 MPa

Go: 16.59 ±1.74 MPa

Su: 26.49 ±1.89 kPa

Su ratio: 0.60 ±0.03

O.C.R.: 2.79 ±0.15

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.62 (m), **End depth:** 4.21 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.61 ±0.21 MPa

Sleeve friction: 9.62 ±3.55 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 4.04E-08 ±1.01E-07 m/s

N_{₆₀}: 2.83 ±0.72 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 5.86 ±3.65 MPa

Go: 17.62 ±2.74 MPa

Su: 35.90 ±9.33 kPa

Su ratio: 0.72 ±0.17

O.C.R.: 3.31 ±0.76

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 4.21 (m), **End depth:** 6.78 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 13.48 ±6.75 MPa

Sleeve friction: 66.03 ±19.98 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 3.11E-04 ±3.35E-04 m/s

N_{₆₀}: 26.37 ±10.47 blows

Es: 66.58 ±18.13 MPa

Dr (%): 66.06 ±17.69

φ (degrees): 40.00 ±2.91 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 127.57 ±45.42 MPa

Go: 82.89 ±22.98 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 6 ::**Code:** Layer_6 **Start depth:** 6.78 (m), **End depth:** 7.61 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 23.91 ±4.06 MPa

Sleeve friction: 87.89 ±25.27 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.37E-03 ±1.35E-03 m/s

N_{₆₀}: 41.17 ±4.08 blows

Es: 89.99 ±7.70 MPa

Dr (%): 85.68 ±6.39

φ (degrees): 43.26 ±1.01 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 179.99 ±15.41 MPa

Go: 112.79 ±9.66 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU11bis

Total depth: 7.61 m, Date: 17/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.13	1.16	1.56E-06	4.8	21.6	55.5	40.6	24.7	24.3	0.0	0.0	0.0	19.0
1.29		(±1.90E-06)	(±1.4)	(±2.1)	(±12.1)	(±1.9)	(±14.1)	(±3.9)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
1.29	1.87	1.80E-08	2.0	0.0	0.0	0.0	3.1	12.0	22.6	0.7	3.2	19.0
3.16		(±2.31E-08)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±2.4)	(±1.9)	(±8.7)	(±0.3)	(±1.5)	(±0.0)
3.16	0.46	4.21E-09	2.2	0.0	0.0	0.0	3.1	16.6	26.5	0.6	2.8	19.0
3.62		(±1.89E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±0.4)	(±1.7)	(±1.9)	(±0.0)	(±0.1)	(±0.0)
3.62	0.59	4.04E-08	2.8	0.0	0.0	0.0	5.9	17.6	35.9	0.7	3.3	19.0
4.21		(±1.01E-07)	(±0.7)	(±0.0)	(±0.0)	(±0.0)	(±3.6)	(±2.7)	(±9.3)	(±0.2)	(±0.8)	(±0.0)
4.21	2.57	3.11E-04	26.4	66.6	66.1	40.0	127.6	82.9	0.0	0.0	0.0	19.0
6.78		(±3.35E-04)	(±10.5)	(±18.1)	(±17.7)	(±2.9)	(±45.4)	(±23.0)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
6.78	0.83	1.37E-03	41.2	90.0	85.7	43.3	180.0	112.8	0.0	0.0	0.0	19.0
7.61		(±1.35E-03)	(±4.1)	(±7.7)	(±6.4)	(±1.0)	(±15.4)	(±9.7)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

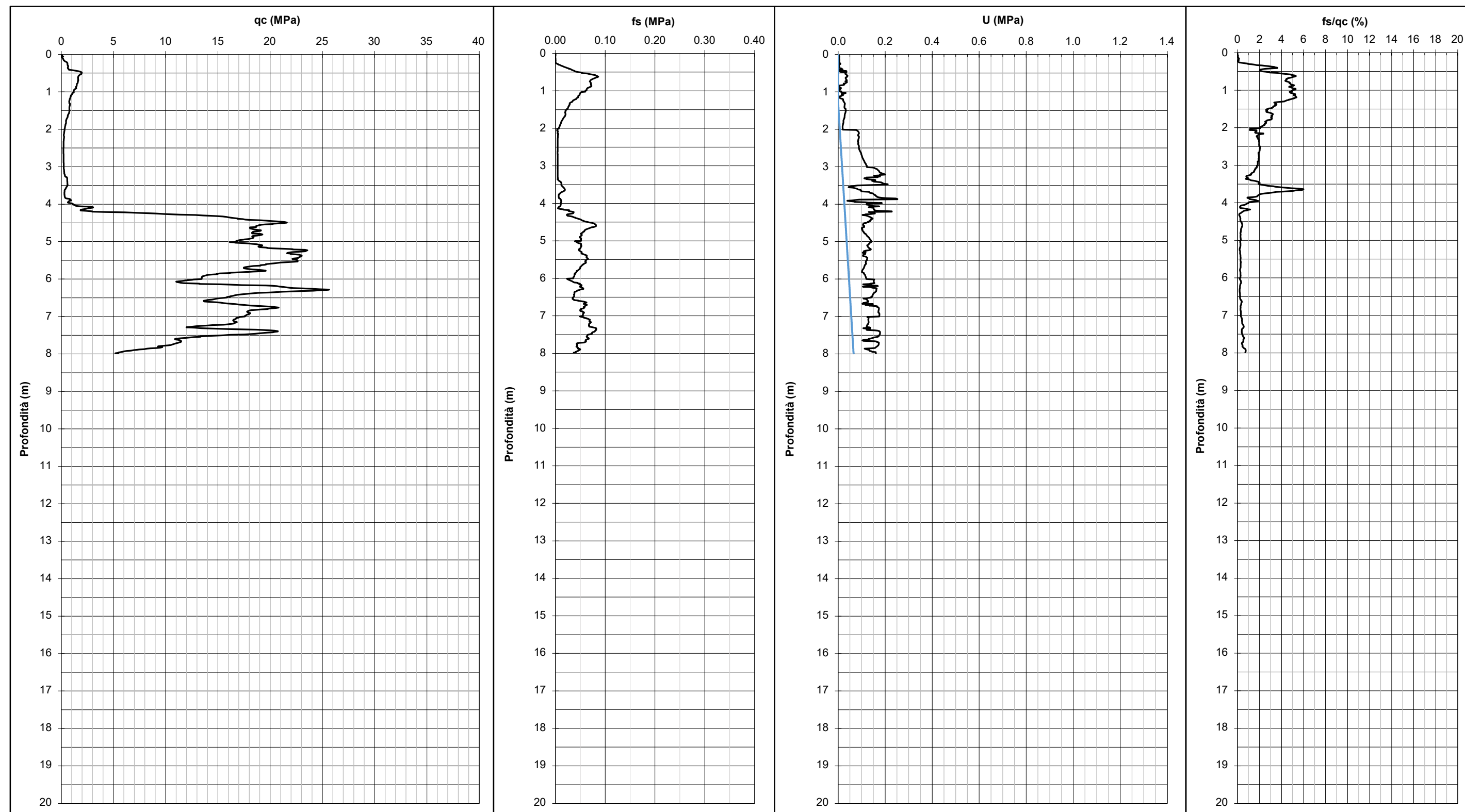
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.20	CI	71.6	53.0	4.7	14.1	1.2	18.8	19.6	<5	36.2	3.6	182.80
2	2.00	C	24.5	17.6	2.7	7.4	4.6	17.0	17.8	--	--	--	158.60
3	4.10	CI	17.7	11.4	2.1	6.0	<0.5	16.3	17.1	<5	28.7	0.9	156.63
4	7.97	I	--	--	23.4	60.9	1.1	18.6	21.6	<5	39.8	39.1	444.91



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE		Green Plan Engineering			
CANTIERE		Aquileia			
PROVA	CPTU12bis	DATA	17/03/2023	OPERATORE	Dott. Andrea Zampieri

Punta	Mkj497	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
Profondità prova	7.98 m da p.c.	Livello acqua	1.30 m da p.c.		
Coordinate WGS84	X		Y		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU12bis

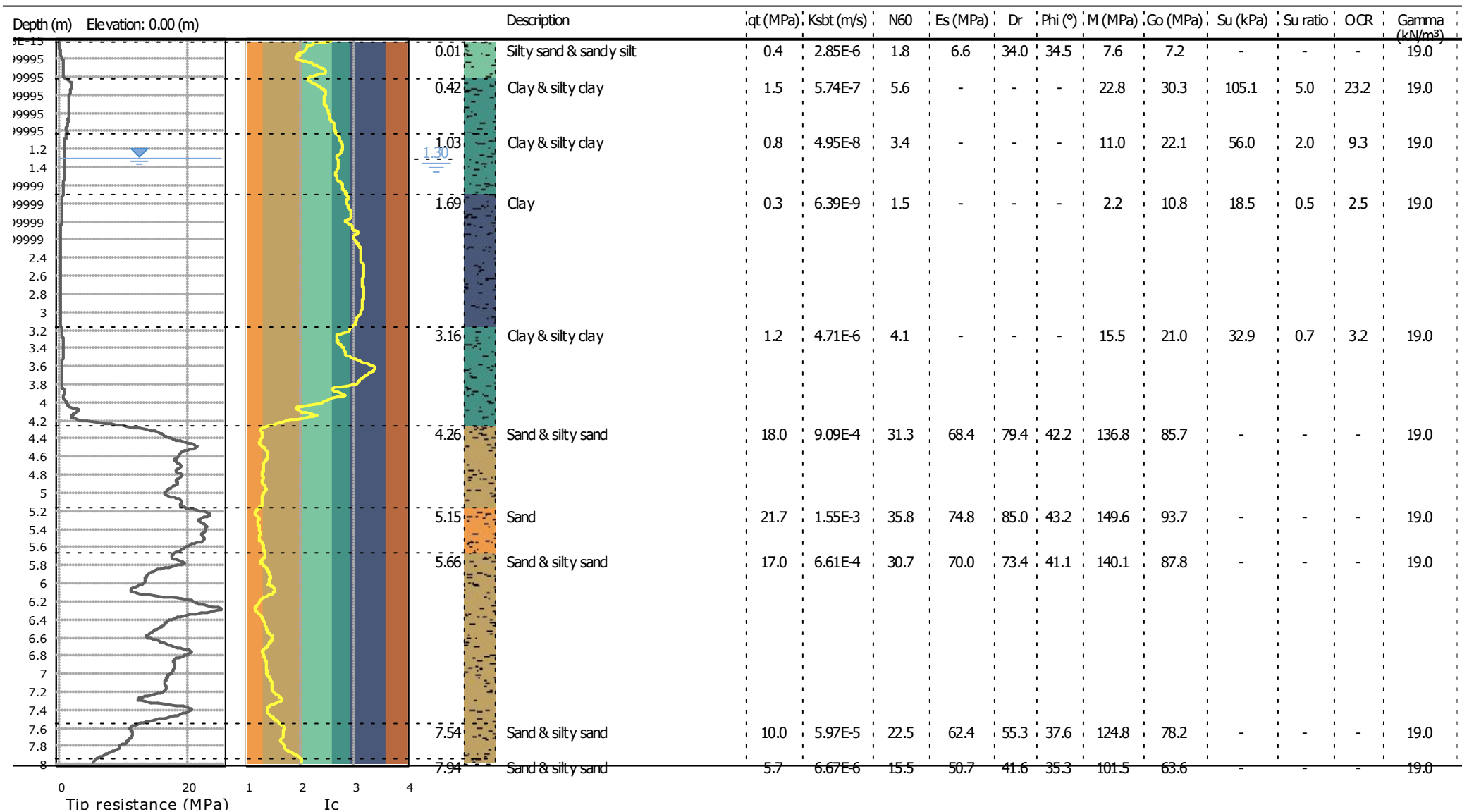
Total depth: 7.98 m, Date: 17/03/2023

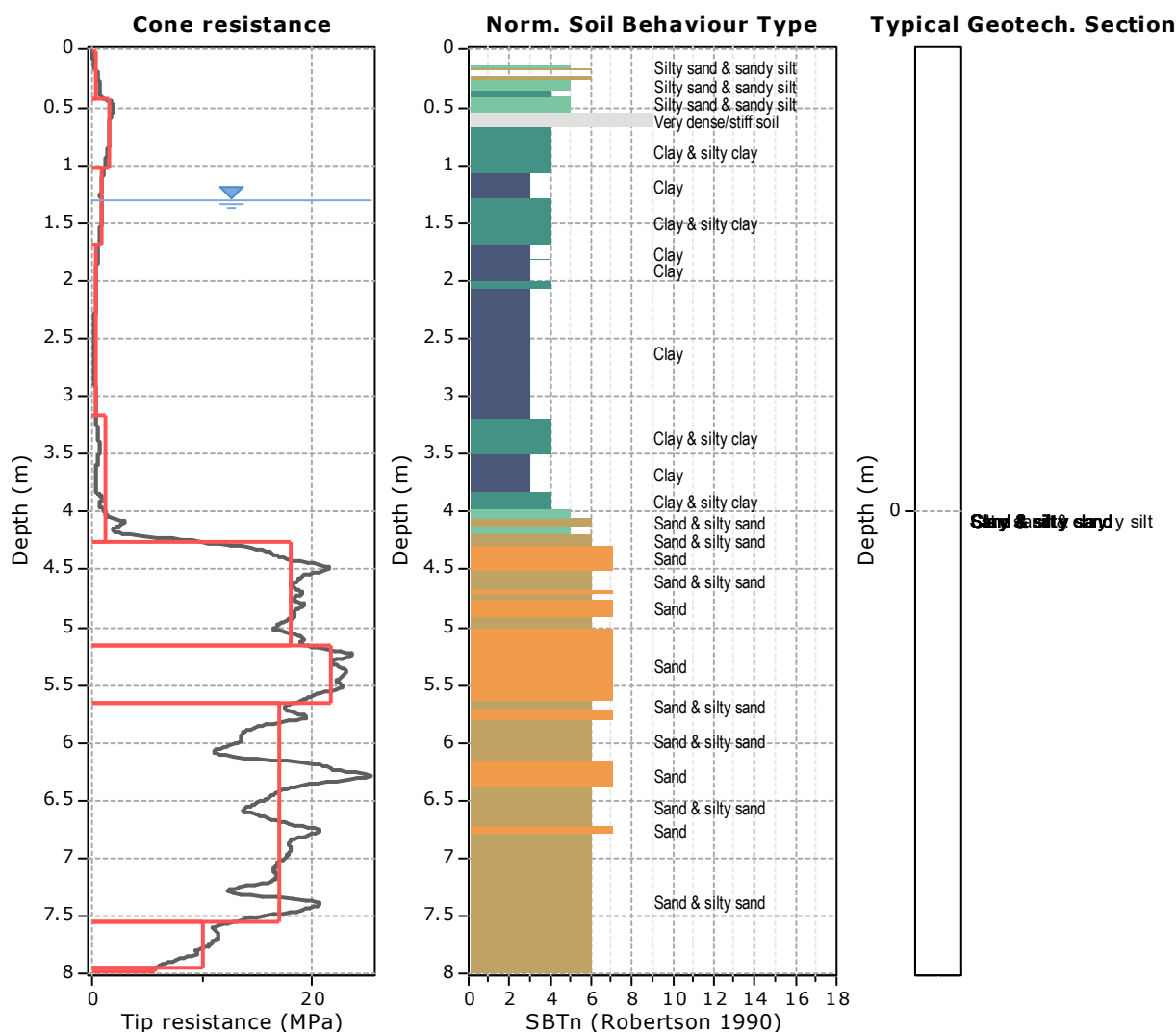
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.01 (m), **End depth:** 0.42 (m)

Description: Silty sand & sandy silt

Basic results

Total cone resistance: 0.42 ±0.28 MPa

Sleeve friction: 5.96 ±9.20 kPa

SBT_n: 5

SBT_n description: Silty sand & sandy silt

Estimation results

Permeability: 2.85E-06 ±3.23E-06 m/s

N_{₆₀}: 1.81 ±0.65 blows

Es: 6.62 ±3.12 MPa

Dr (%): 33.97 ±4.86

φ (degrees): 34.46 ±2.60 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 7.63 ±3.59 MPa

Go: 7.17 ±4.76 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.42 (m), **End depth:** 1.03 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.54 ±0.23 MPa

Sleeve friction: 65.10 ±14.01 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 5.74E-07 ±7.47E-07 m/s

N_{₆₀}: 5.63 ±0.61 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 22.76 ±6.64 MPa

Go: 30.27 ±3.26 MPa

Su: 105.12 ±12.55 kPa

Su ratio: 5.02 ±1.05

O.C.R.: 23.18 ±4.87

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 1.03 (m), **End depth:** 1.69 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 0.81 ±0.11 MPa

Sleeve friction: 31.90 ±11.15 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 4.95E-08 ±1.54E-08 m/s

N_{₆₀}: 3.43 ±0.53 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 10.99 ±1.59 MPa

Go: 22.15 ±2.67 MPa

Su: 56.05 ±8.12 kPa

Su ratio: 2.01 ±0.46

O.C.R.: 9.27 ±2.13

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 1.69 (m), **End depth:** 3.16 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.30 ±0.08 MPa

Sleeve friction: 6.09 ±3.39 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 6.39E-09 ±5.83E-09 m/s

N_{₆₀}: 1.50 ±0.55 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.17 ±1.77 MPa

Go: 10.85 ±1.95 MPa

Su: 18.46 ±6.27 kPa

Su ratio: 0.54 ±0.23

O.C.R.: 2.49 ±1.09

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 3.16 (m), **End depth:** 4.26 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 1.22 ±1.71 MPa

Sleeve friction: 11.51 ±7.45 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 4.71E-06 ±2.06E-05 m/s

N_{₆₀}: 4.09 ±3.52 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 15.51 ±23.13 MPa

Go: 21.01 ±10.62 MPa

Su: 32.89 ±12.40 kPa

Su ratio: 0.69 ±0.22

O.C.R.: 3.18 ±1.03

::: Layer No: 6 :::**Code:** Layer_6 **Start depth:** 4.26 (m), **End depth:** 5.15 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 18.00 ±2.07 MPa

Sleeve friction: 53.56 ±14.48 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 9.09E-04 ±2.68E-04 m/s

N<sub>60</sub>: 31.26 ±3.26 blows

Es: 68.39 ±6.97 MPa

Dr (%): 79.40 ±4.53

φ (degrees): 42.22 ±0.83 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 136.78 ±13.95 MPa

Go: 85.72 ±8.74 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 7 :::**Code:** Layer_7 **Start depth:** 5.15 (m), **End depth:** 5.66 (m)**Description:** Sand**Basic results**

Total cone resistance: 21.71 ±1.45 MPa

Sleeve friction: 56.50 ±5.70 kPa

SBT_n: 7SBT_n description: Sand**Estimation results**

Permeability: 1.55E-03 ±4.73E-04 m/s

N<sub>60</sub>: 35.79 ±1.66 blows

Es: 74.79 ±2.67 MPa

Dr (%): 84.98 ±2.74

φ (degrees): 43.17 ±0.45 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 149.58 ±5.33 MPa

Go: 93.74 ±3.34 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 8 :::**Code:** Layer_8 **Start depth:** 5.66 (m), **End depth:** 7.54 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 16.96 ±2.99 MPa

Sleeve friction: 52.92 ±13.96 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 6.61E-04 ±5.13E-04 m/s

N<sub>60</sub>: 30.70 ±3.94 blows

Es: 70.03 ±7.43 MPa

Dr (%): 73.37 ±6.15

φ (degrees): 41.11 ±1.15 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 140.05 ±14.85 MPa

Go: 87.77 ±9.31 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 9 :::**Code:** Layer_9 **Start depth:** 7.54 (m), **End depth:** 7.94 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 10.01 ±1.90 MPa

Sleeve friction: 52.84 ±9.26 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 5.97E-05 ±2.96E-05 m/s

N<sub>60</sub>: 22.46 ±3.12 blows

Es: 62.39 ±5.67 MPa

Dr (%): 55.25 ±5.63

φ (degrees): 37.61 ±1.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 124.78 ±11.34 MPa

Go: 78.19 ±7.11 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 10 ::**Code:** Layer_10 **Start depth:** 7.94 (m), **End depth:** 7.98 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 5.65 ±0.20 MPa

Sleeve friction: 42.22 ±1.52 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 6.67E-06 ±4.96E-07 m/s

N_{₆₀}: 15.50 ±0.58 blows

Es: 50.74 ±1.14 MPa

Dr (%): 41.60 ±0.75

φ (degrees): 35.27 ±0.17 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 101.49 ±2.29 MPa

Go: 63.60 ±1.43 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.01	0.41	2.85E-06	1.8	6.6	34.0	34.5	7.6	7.2	0.0	0.0	0.0	19.0
0.42		(±3.23E-06)	(±0.7)	(±3.1)	(±4.9)	(±2.6)	(±3.6)	(±4.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
0.42	0.61	5.74E-07	5.6	0.0	0.0	0.0	22.8	30.3	105.1	5.0	23.2	19.0
1.03		(±7.47E-07)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±6.6)	(±3.3)	(±12.5)	(±1.1)	(±4.9)	(±0.0)
1.03	0.66	4.95E-08	3.4	0.0	0.0	0.0	11.0	22.1	56.0	2.0	9.3	19.0
1.69		(±1.54E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±1.6)	(±2.7)	(±8.1)	(±0.5)	(±2.1)	(±0.0)
1.69	1.47	6.39E-09	1.5	0.0	0.0	0.0	2.2	10.8	18.5	0.5	2.5	19.0
3.16		(±5.83E-09)	(±0.6)	(±0.0)	(±0.0)	(±0.0)	(±1.8)	(±2.0)	(±6.3)	(±0.2)	(±1.1)	(±0.0)
3.16	1.10	4.71E-06	4.1	0.0	0.0	0.0	15.5	21.0	32.9	0.7	3.2	19.0
4.26		(±2.06E-05)	(±3.5)	(±0.0)	(±0.0)	(±0.0)	(±23.1)	(±10.6)	(±12.4)	(±0.2)	(±1.0)	(±0.0)
4.26	0.89	9.09E-04	31.3	68.4	79.4	42.2	136.8	85.7	0.0	0.0	0.0	19.0
5.15		(±2.68E-04)	(±3.3)	(±7.0)	(±4.5)	(±0.8)	(±13.9)	(±8.7)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
5.15	0.51	1.55E-03	35.8	74.8	85.0	43.2	149.6	93.7	0.0	0.0	0.0	19.0
5.66		(±4.73E-04)	(±1.7)	(±2.7)	(±2.7)	(±0.5)	(±5.3)	(±3.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
5.66	1.88	6.61E-04	30.7	70.0	73.4	41.1	140.1	87.8	0.0	0.0	0.0	19.0
7.54		(±5.13E-04)	(±3.9)	(±7.4)	(±6.2)	(±1.2)	(±14.9)	(±9.3)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
7.54	0.40	5.97E-05	22.5	62.4	55.3	37.6	124.8	78.2	0.0	0.0	0.0	19.0
7.94		(±2.96E-05)	(±3.1)	(±5.7)	(±5.6)	(±1.0)	(±11.3)	(±7.1)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
7.94	0.04	6.67E-06	15.5	50.7	41.6	35.3	101.5	63.6	0.0	0.0	0.0	19.0
7.98		(±4.96E-07)	(±0.6)	(±1.1)	(±0.8)	(±0.2)	(±2.3)	(±1.4)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

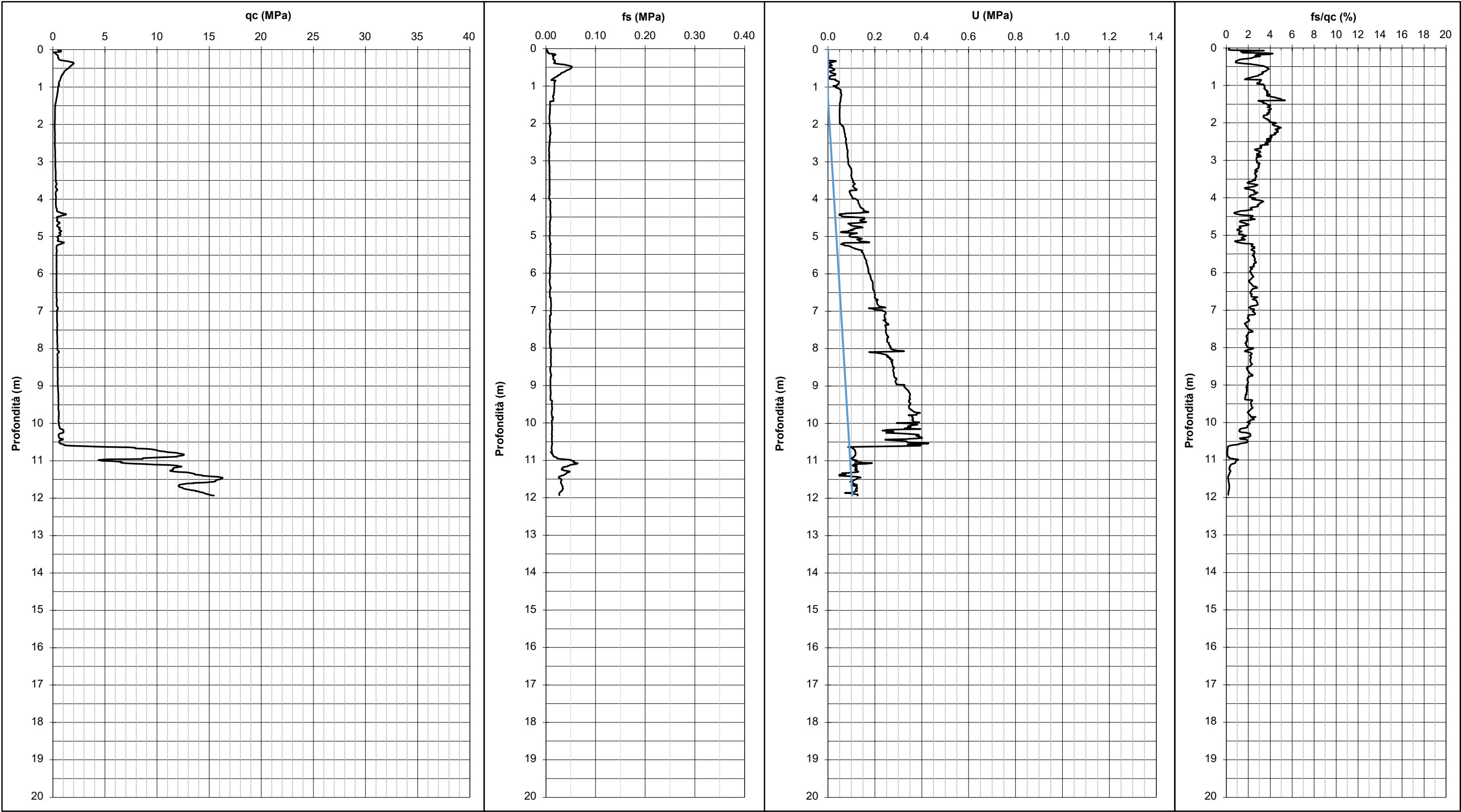
STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo. I: Incoerente. CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	2.00	CI	44.1	32.8	4.1	10.6	<0.5	18.0	18.8	<5	32.1	2.2	172.23
2	3.40	CI	13.7	8.9	1.7	5.3	<0.5	15.9	16.7	<5	28.7	0.7	145.75
3	4.10	CI	37.3	25.8	3.7	9.5	<0.5	17.6	18.4	<5	28.7	1.9	193.33
4	7.98	I	--	--	24.7	62.8	1.0	18.6	21.6	<5	40.0	41.1	451.04

COMMITTENTE	Green Plan Engineering		
CANTIERE	Aquileia		
PROVA	CPTU13bis	DATA	17/03/2023
OPERATORE	Dott. Andrea Zampieri		

Punta	Mkj497	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
Profondità prova	11.93 m da p.c.	Livello acqua	1.30 m da p.c.		
Coordinate WGS84	X		Y		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU13bis

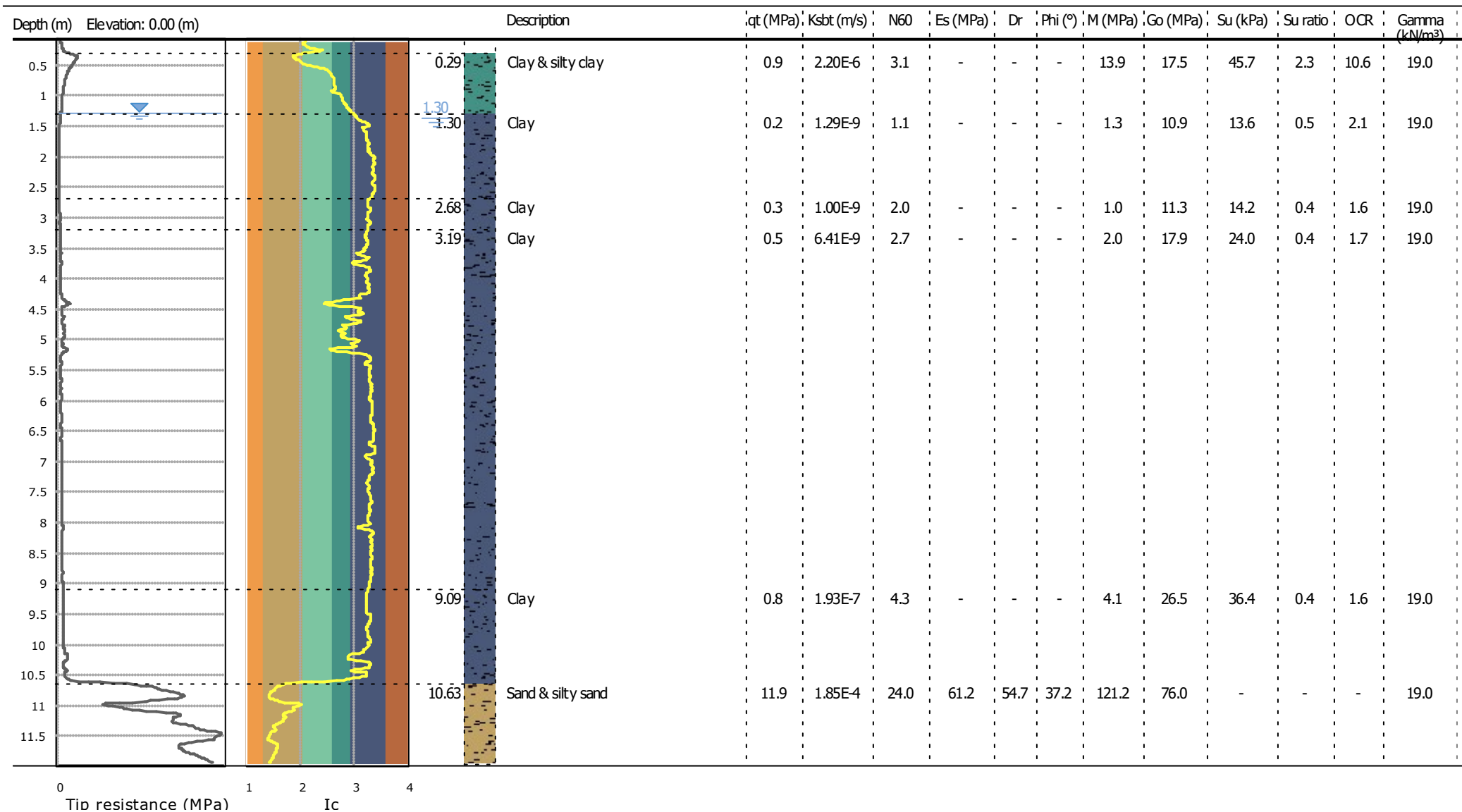
Total depth: 11.93 m, Date: 17/03/2023

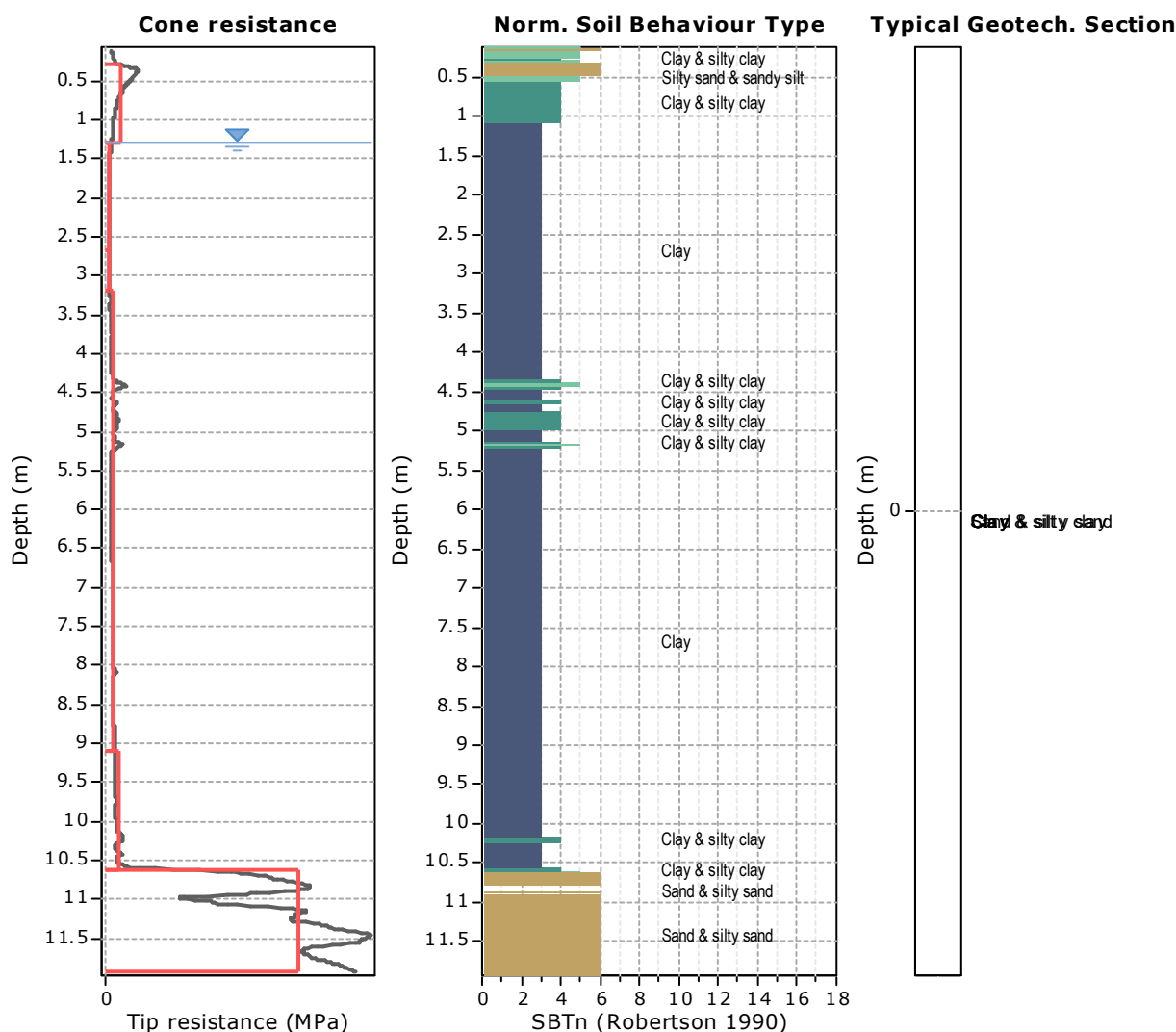
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.29 (m), **End depth:** 1.30 (m)

Description: Clay & silty clay

Basic results

Total cone resistance: 0.91 ± 0.49 MPa

Sleeve friction: 24.07 ± 11.99 kPa

SBT_n: 4

SBT_n description: Clay & silty clay

Estimation results

Permeability: $2.20E-06 \pm 4.67E-06$ m/s

$N_{>60}$: 3.10 ± 1.08 blows

Es: 0.00 ± 0.00 MPa

Dr (%): 0.00 ± 0.00

ϕ (degrees): 0.00 ± 0.00 °

Unit weight: 19.00 ± 0.00 kN/m³

Constrained Mod.: 13.88 ± 9.22 MPa

Go: 17.55 ± 3.28 MPa

Su: 45.67 ± 16.86 kPa

Su ratio: 2.29 ± 1.17

O.C.R.: 10.60 ± 5.40

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 1.30 (m), **End depth:** 2.68 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.23 ±0.04 MPa

Sleeve friction: 9.22 ±2.65 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.29E-09 ±1.19E-09 m/s

N_{₆₀}: 1.14 ±0.35 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.29 ±0.87 MPa

Go: 10.91 ±1.03 MPa

Su: 13.58 ±2.98 kPa

Su ratio: 0.45 ±0.16

O.C.R.: 2.09 ±0.72

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 2.68 (m), **End depth:** 3.19 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.25 ±0.01 MPa

Sleeve friction: 6.72 ±0.32 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.00E-09 ±8.21E-11 m/s

N_{₆₀}: 1.98 ±0.14 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.99 ±0.06 MPa

Go: 11.33 ±0.33 MPa

Su: 14.16 ±0.56 kPa

Su ratio: 0.36 ±0.01

O.C.R.: 1.65 ±0.05

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 3.19 (m), **End depth:** 9.09 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.46 ±0.13 MPa

Sleeve friction: 8.69 ±1.00 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 6.41E-09 ±2.63E-08 m/s

N_{₆₀}: 2.71 ±0.50 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 2.00 ±2.10 MPa

Go: 17.93 ±2.75 MPa

Su: 24.03 ±7.24 kPa

Su ratio: 0.36 ±0.14

O.C.R.: 1.67 ±0.63

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 9.09 (m), **End depth:** 10.63 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.78 ±0.56 MPa

Sleeve friction: 11.54 ±1.38 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.93E-07 ±1.77E-06 m/s

N_{₆₀}: 4.33 ±1.22 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 4.08 ±9.48 MPa

Go: 26.46 ±4.01 MPa

Su: 36.40 ±10.79 kPa

Su ratio: 0.35 ±0.09

O.C.R.: 1.62 ±0.43

:: Layer No: 6 ::**Code:** Layer_6 **Start depth:** 10.63 (m), **End depth:** 11.93 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 11.87 ±2.88 MPa

Sleeve friction: 29.95 ±14.16 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.85E-04 ±1.31E-04 m/s

N_{₆₀}: 24.03 ±4.50 blows

Es: 61.24 ±9.51 MPa

Dr (%): 54.70 ±7.55

φ (degrees): 37.17 ±1.74 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 121.20 ±18.81 MPa

Go: 75.95 ±11.78 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU13bis

Total depth: 11.93 m, Date: 17/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.29	1.01	2.20E-06	3.1	0.0	0.0	0.0	13.9	17.5	45.7	2.3	10.6	19.0
1.30		(±4.67E-06)	(±1.1)	(±0.0)	(±0.0)	(±0.0)	(±9.2)	(±3.3)	(±16.9)	(±1.2)	(±5.4)	(±0.0)
1.30	1.38	1.29E-09	1.1	0.0	0.0	0.0	1.3	10.9	13.6	0.5	2.1	19.0
2.68		(±1.19E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±0.9)	(±1.0)	(±3.0)	(±0.2)	(±0.7)	(±0.0)
2.68	0.51	1.00E-09	2.0	0.0	0.0	0.0	1.0	11.3	14.2	0.4	1.6	19.0
3.19		(±8.21E-11)	(±0.1)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.3)	(±0.6)	(±0.0)	(±0.0)	(±0.0)
3.19	5.90	6.41E-09	2.7	0.0	0.0	0.0	2.0	17.9	24.0	0.4	1.7	19.0
9.09		(±2.63E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±2.1)	(±2.8)	(±7.2)	(±0.1)	(±0.6)	(±0.0)
9.09	1.54	1.93E-07	4.3	0.0	0.0	0.0	4.1	26.5	36.4	0.4	1.6	19.0
10.63		(±1.77E-06)	(±1.2)	(±0.0)	(±0.0)	(±0.0)	(±9.5)	(±4.0)	(±10.8)	(±0.1)	(±0.4)	(±0.0)
10.63	1.30	1.85E-04	24.0	61.2	54.7	37.2	121.2	76.0	0.0	0.0	0.0	19.0
11.93		(±1.31E-04)	(±4.5)	(±9.5)	(±7.5)	(±1.7)	(±18.8)	(±11.8)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo, I: Incoerente, CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

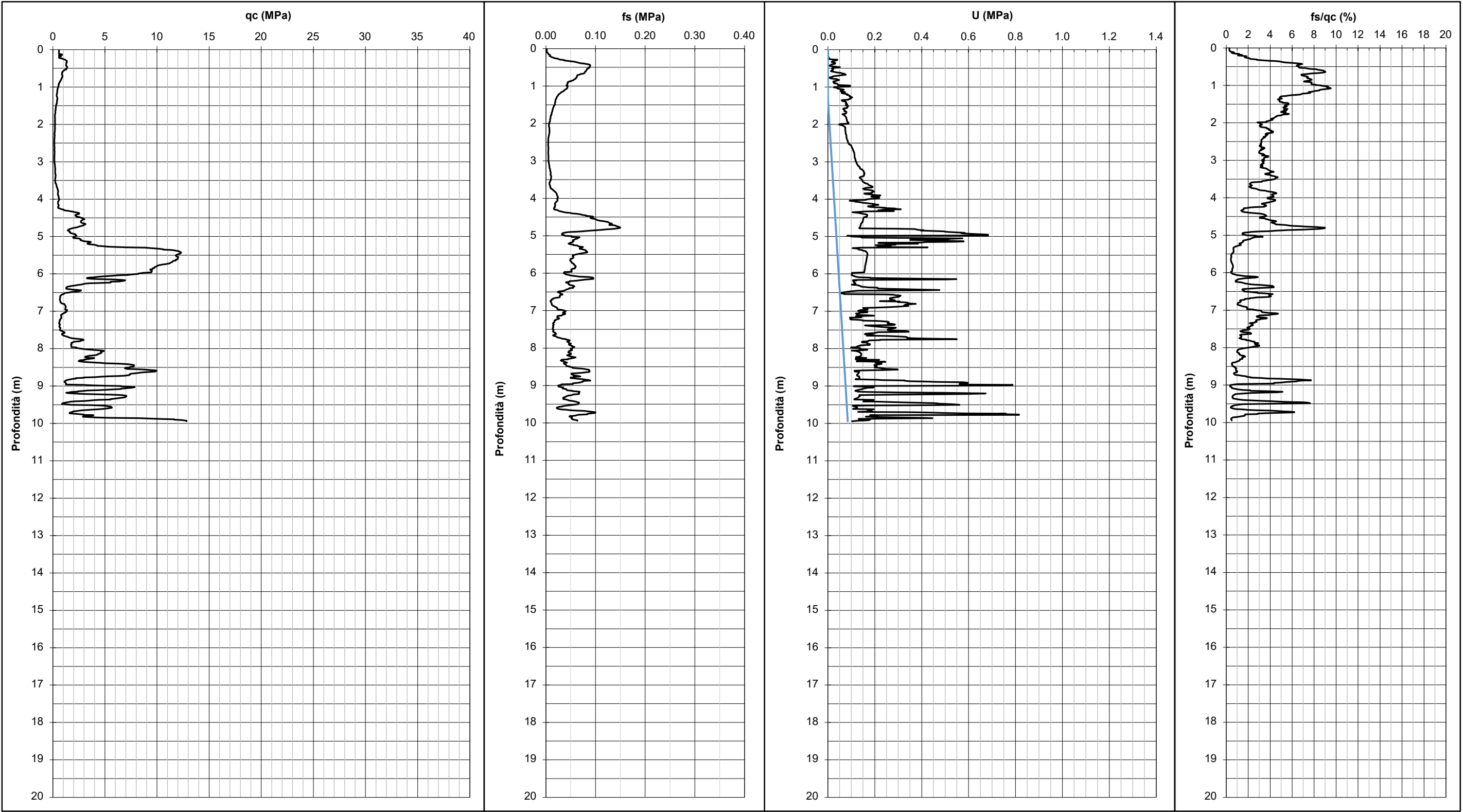
Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.40	CI	39.2	28.8	3.8	9.7	2.3	17.8	18.6	<5	32.8	1.9	158.91
2	4.20	C	12.7	7.5	1.5	4.8	1.1	15.6	16.4	--	--	--	150.26
3	5.20	CI	29.4	19.6	3.1	8.3	<0.5	17.2	18.0	<5	28.7	1.5	186.87
4	10.30	CI	22.6	12.3	2.5	7.0	<0.5	16.4	17.2	<5	28.7	1.1	185.91
5	11.93	I	--	--	14.6	45.6	2.6	18.6	21.6	<5	35.5	24.3	420.34



PROVA PENETROMETRICA STATICA CPTU

COMMITTENTE	Green Plan Engineering		
CANTIERE	Aquileia		
PROVA	CPTU14bis	DATA	17/03/2023
OPERATORE	Dott. Andrea Zampieri		

Punta	Mkj497	Quota inizio indagine	p.c.	Prescavo	0.00 m da p.c.
Profondità prova	9.94 m da p.c.	Livello acqua	1.30 m da p.c.		
Coordinate WGS84	X		Y		



**GE Ground Engineering S.r.l.**

Sede legale: Via Villa 5/c - 30010 Campolongo Maggiore (VE)

Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU14bis

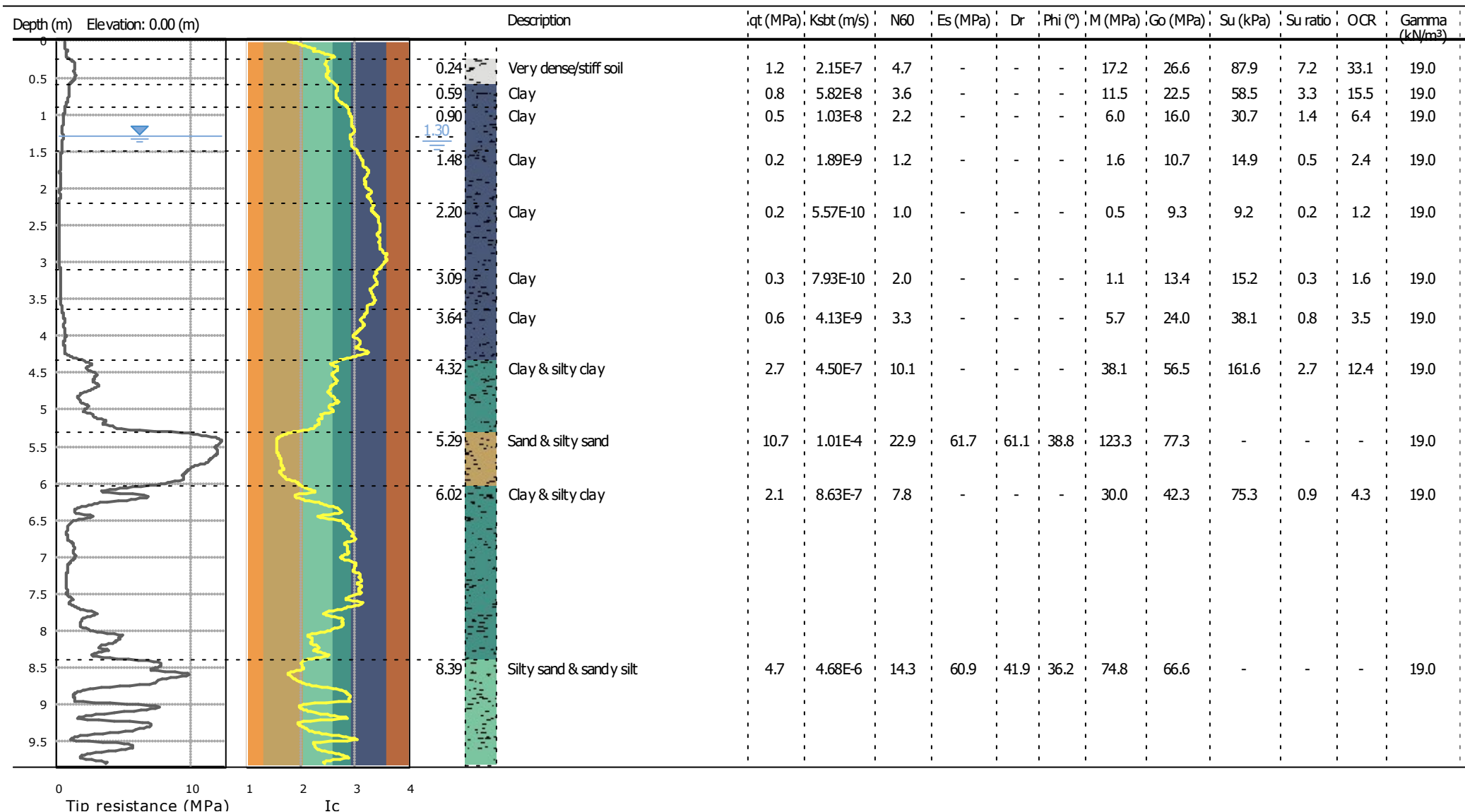
Total depth: 9.80 m, Date: 17/03/2023

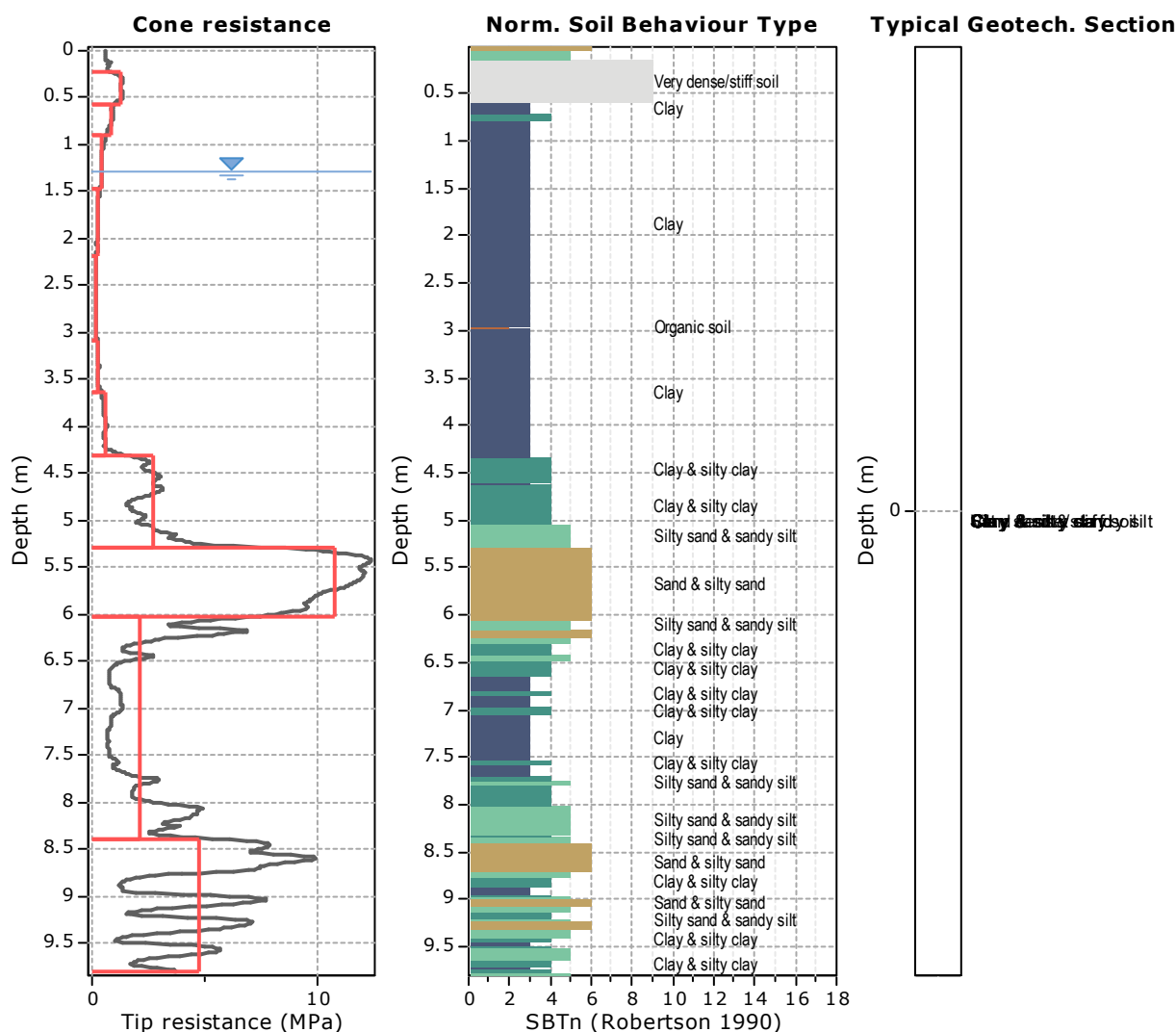
Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)**



Tabular results

::: Layer No: 1 :::

Code: Layer_1 **Start depth:** 0.24 (m), **End depth:** 0.59 (m)

Description: Very dense/stiff soil

Basic results

Total cone resistance: 1.24 ±0.14 MPa

Sleeve friction: 79.48 ±8.25 kPa

SBT_n: 9

SBT_n description: Very dense/stiff soil

Estimation results

Permeability: 2.15E-07 ±5.73E-08 m/s

N_{₆₀}: 4.72 ±0.51 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 17.24 ±1.93 MPa

Go: 26.60 ±2.12 MPa

Su: 87.93 ±9.85 kPa

Su ratio: 7.16 ±1.39

O.C.R.: 33.08 ±6.41

::: Layer No: 2 :::**Code:** Layer_2 **Start depth:** 0.59 (m), **End depth:** 0.90 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.83 ±0.10 MPa

Sleeve friction: 50.71 ±8.09 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.82E-08 ±1.97E-08 m/s

N_{₆₀}: 3.59 ±0.50 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 11.46 ±1.44 MPa

Go: 22.47 ±1.36 MPa

Su: 58.45 ±7.34 kPa

Su ratio: 3.35 ±0.64

O.C.R.: 15.46 ±2.94

::: Layer No: 3 :::**Code:** Layer_3 **Start depth:** 0.90 (m), **End depth:** 1.48 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.45 ±0.06 MPa

Sleeve friction: 24.32 ±8.68 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.03E-08 ±2.61E-09 m/s

N_{₆₀}: 2.19 ±0.39 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 5.98 ±0.99 MPa

Go: 16.00 ±1.83 MPa

Su: 30.66 ±4.82 kPa

Su ratio: 1.38 ±0.38

O.C.R.: 6.36 ±1.74

::: Layer No: 4 :::**Code:** Layer_4 **Start depth:** 1.48 (m), **End depth:** 2.20 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.24 ±0.04 MPa

Sleeve friction: 8.65 ±2.35 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 1.89E-09 ±1.12E-09 m/s

N_{₆₀}: 1.25 ±0.43 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.57 ±0.78 MPa

Go: 10.74 ±1.06 MPa

Su: 14.91 ±2.96 kPa

Su ratio: 0.51 ±0.14

O.C.R.: 2.36 ±0.63

::: Layer No: 5 :::**Code:** Layer_5 **Start depth:** 2.20 (m), **End depth:** 3.09 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.18 ±0.01 MPa

Sleeve friction: 5.51 ±0.94 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 5.57E-10 ±1.34E-10 m/s

N_{₆₀}: 1.02 ±0.15 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 0.45 ±0.10 MPa

Go: 9.31 ±0.74 MPa

Su: 9.20 ±0.86 kPa

Su ratio: 0.25 ±0.03

O.C.R.: 1.15 ±0.15

:: Layer No: 6 ::**Code:** Layer_6 **Start depth:** 3.09 (m), **End depth:** 3.64 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.28 ±0.04 MPa

Sleeve friction: 9.57 ±1.57 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 7.93E-10 ±1.97E-10 m/s

N_{₆₀}: 2.00 ±0.00 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 1.06 ±0.34 MPa

Go: 13.36 ±1.15 MPa

Su: 15.23 ±2.41 kPa

Su ratio: 0.35 ±0.05

O.C.R.: 1.61 ±0.21

:: Layer No: 7 ::**Code:** Layer_7 **Start depth:** 3.64 (m), **End depth:** 4.32 (m)**Description:** Clay**Basic results**

Total cone resistance: 0.61 ±0.22 MPa

Sleeve friction: 26.78 ±15.59 kPa

SBT_n: 3SBT_n description: Clay**Estimation results**

Permeability: 4.13E-09 ±4.19E-09 m/s

N_{₆₀}: 3.26 ±0.96 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 5.66 ±3.64 MPa

Go: 23.97 ±6.39 MPa

Su: 38.11 ±15.47 kPa

Su ratio: 0.76 ±0.27

O.C.R.: 3.53 ±1.27

:: Layer No: 8 ::**Code:** Layer_8 **Start depth:** 4.32 (m), **End depth:** 5.29 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 2.72 ±0.94 MPa

Sleeve friction: 83.23 ±34.33 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 4.50E-07 ±1.22E-06 m/s

N_{₆₀}: 10.11 ±2.35 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 38.14 ±18.43 MPa

Go: 56.48 ±10.62 MPa

Su: 161.63 ±32.98 kPa

Su ratio: 2.69 ±0.58

O.C.R.: 12.45 ±2.66

:: Layer No: 9 ::**Code:** Layer_9 **Start depth:** 5.29 (m), **End depth:** 6.02 (m)**Description:** Sand & silty sand**Basic results**

Total cone resistance: 10.69 ±1.36 MPa

Sleeve friction: 58.31 ±14.56 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.01E-04 ±5.11E-05 m/s

N_{₆₀}: 22.93 ±1.67 blows

Es: 61.67 ±3.63 MPa

Dr (%): 61.14 ±3.83

φ (degrees): 38.85 ±0.61 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 123.34 ±7.25 MPa

Go: 77.29 ±4.54 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

:: Layer No: 10 ::**Code:** Layer_10 **Start depth:** 6.02 (m), **End depth:** 8.39 (m)**Description:** Clay & silty clay**Basic results**

Total cone resistance: 2.13 ±1.59 MPa

Sleeve friction: 33.63 ±15.73 kPa

SBT_n: 4SBT_n description: Clay & silty clay**Estimation results**

Permeability: 8.63E-07 ±2.32E-06 m/s

N_{₆₀}: 7.82 ±3.88 blows

Es: 0.00 ±0.00 MPa

Dr (%): 0.00 ±0.00

φ (degrees): 0.00 ±0.00 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 30.03 ±30.86 MPa

Go: 42.30 ±14.26 MPa

Su: 75.33 ±35.87 kPa

Su ratio: 0.94 ±0.41

O.C.R.: 4.35 ±1.91

:: Layer No: 11 ::**Code:** Layer_11 **Start depth:** 8.39 (m), **End depth:** 9.80 (m)**Description:** Silty sand & sandy silt**Basic results**

Total cone resistance: 4.71 ±2.59 MPa

Sleeve friction: 56.61 ±19.26 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 4.68E-06 ±7.83E-06 m/s

N_{₆₀}: 14.30 ±5.41 blows

Es: 60.90 ±7.02 MPa

Dr (%): 41.94 ±6.71

φ (degrees): 36.19 ±0.86 °

Unit weight: 19.00 ±0.00 kN/m³

Constrained Mod.: 74.82 ±47.80 MPa

Go: 66.58 ±15.90 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

**GE Ground Engineering S.r.l.**

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Sede operativa: Via Spagna 6 - 35010 Vigonza (PD)

Tel: +39.049.9703506

CPT: CPTU14bis

Total depth: 9.80 m, Date: 17/03/2023

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type: MKj497

Cone Operator: Dott. Andrea Zampieri

Project: Greenplan Engineering S.r.l.**Location: Aquileia (UD)****Summary table of mean values**

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.24	0.35	2.15E-07	4.7	0.0	0.0	0.0	17.2	26.6	87.9	7.2	33.1	19.0
0.59		(±5.73E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±1.9)	(±2.1)	(±9.9)	(±1.4)	(±6.4)	(±0.0)
0.59	0.31	5.82E-08	3.6	0.0	0.0	0.0	11.5	22.5	58.5	3.3	15.5	19.0
0.90		(±1.97E-08)	(±0.5)	(±0.0)	(±0.0)	(±0.0)	(±1.4)	(±1.4)	(±7.3)	(±0.6)	(±2.9)	(±0.0)
0.90	0.58	1.03E-08	2.2	0.0	0.0	0.0	6.0	16.0	30.7	1.4	6.4	19.0
1.48		(±2.61E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±1.0)	(±1.8)	(±4.8)	(±0.4)	(±1.7)	(±0.0)
1.48	0.72	1.89E-09	1.2	0.0	0.0	0.0	1.6	10.7	14.9	0.5	2.4	19.0
2.20		(±1.12E-09)	(±0.4)	(±0.0)	(±0.0)	(±0.0)	(±0.8)	(±1.1)	(±3.0)	(±0.1)	(±0.6)	(±0.0)
2.20	0.89	5.57E-10	1.0	0.0	0.0	0.0	0.5	9.3	9.2	0.2	1.2	19.0
3.09		(±1.34E-10)	(±0.1)	(±0.0)	(±0.0)	(±0.0)	(±0.1)	(±0.7)	(±0.9)	(±0.0)	(±0.1)	(±0.0)
3.09	0.55	7.93E-10	2.0	0.0	0.0	0.0	1.1	13.4	15.2	0.3	1.6	19.0
3.64		(±1.97E-10)	(±0.0)	(±0.0)	(±0.0)	(±0.0)	(±0.3)	(±1.2)	(±2.4)	(±0.0)	(±0.2)	(±0.0)
3.64	0.68	4.13E-09	3.3	0.0	0.0	0.0	5.7	24.0	38.1	0.8	3.5	19.0
4.32		(±4.19E-09)	(±1.0)	(±0.0)	(±0.0)	(±0.0)	(±3.6)	(±6.4)	(±15.5)	(±0.3)	(±1.3)	(±0.0)
4.32	0.97	4.50E-07	10.1	0.0	0.0	0.0	38.1	56.5	161.6	2.7	12.4	19.0
5.29		(±1.22E-06)	(±2.4)	(±0.0)	(±0.0)	(±0.0)	(±18.4)	(±10.6)	(±33.0)	(±0.6)	(±2.7)	(±0.0)
5.29	0.73	1.01E-04	22.9	61.7	61.1	38.8	123.3	77.3	0.0	0.0	0.0	19.0
6.02		(±5.11E-05)	(±1.7)	(±3.6)	(±3.8)	(±0.6)	(±7.3)	(±4.5)	(±0.0)	(±0.0)	(±0.0)	(±0.0)
6.02	2.37	8.63E-07	7.8	0.0	0.0	0.0	30.0	42.3	75.3	0.9	4.3	19.0
8.39		(±2.32E-06)	(±3.9)	(±0.0)	(±0.0)	(±0.0)	(±30.9)	(±14.3)	(±35.9)	(±0.4)	(±1.9)	(±0.0)
8.39	1.41	4.68E-06	14.3	60.9	41.9	36.2	74.8	66.6	0.0	0.0	0.0	19.0
9.80		(±7.83E-06)	(±5.4)	(±7.0)	(±6.7)	(±0.9)	(±47.8)	(±15.9)	(±0.0)	(±0.0)	(±0.0)	(±0.0)

Depth values presented in this table are measured from free ground surface

STIMA PARAMETRI GEOTECNICI

Nr:	Numero progressivo strato
Prof:	Profondità strato (m)
Tipo:	C: Coesivo, I: Incoerente, CI: Coesivo-Incoerente
Cu:	Coesione non drenata (KPa)
Eu:	Modulo di defomazione non drenato (Mpa)
Mo:	Modulo Edometrico (Mpa)
G:	Modulo di deformazione a taglio (Mpa)
OCR:	Grado di sovraconsolidazione
Puv:	Peso unità di volume (KN/m³)
PuvS:	Peso unità di volume saturo (KN/m³)
Dr:	Densità relativa (%)
Fi:	Angolo di resistenza al taglio (°)
Ey:	Modulo di Young (Mpa)
Vs:	Velocità onde di taglio (m/s)

Nr.	Prof.	Tipo	Cu	Eu	Mo	G	OCR	Puv	PuvS	Dr	Fi	Ey	Vs
1	1.10	C	43.1	32.0	4.0	10.4	>9	18.0	18.8	--	--	--	147.35
2	2.20	C	14.7	9.7	1.7	5.3	3.8	16.0	16.8	--	--	--	142.90
3	3.00	C	7.8	4.3	1.0	3.7	0.8	14.7	15.4	--	--	--	136.82
4	4.20	C	18.6	11.5	2.1	6.1	1.5	16.3	17.1	--	--	--	167.46
5	5.00	CI	105.9	76.4	4.2	17.9	<0.5	19.4	20.2	<5	31.0	5.3	256.20
6	6.20	I	--	--	12.2	40.9	1.5	18.6	21.6	<5	37.0	20.4	370.33
7	8.00	CI	68.6	46.6	4.7	13.7	<0.5	18.6	19.4	<5	28.7	3.4	244.69
8	9.94	I	--	--	7.2	29.5	<0.5	18.6	21.6	<5	32.3	11.9	345.43

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ALLEGATO 3

REPORT DELL'INDAGINE MASW

MASW 1

Attività in sito:

- a) **Sismografo utilizzato:** sismografo Pasi GEA24
- b) **Numero geofoni:** 12, con frequenza propria 4.5 Hz, in posizione verticale;
- c) **Acquisizione** a 1000 Hz per 2 sec.
- d) **Numero profili:** 1;
- e) **Tiri:** n. 2
 - i. Tiro n. 1 eseguito +5 metri dal geofono n. 12 con finestra di acquisizione pari a 2000 millisecondi
- f) **Lunghezza singolo profilo:** 44.0 metri;
- g) **Sorgente utilizzata:** Mazza battente da kg 8 con trigger (dispositivo per il comando di avvio della registrazione). Battuta verticale;
- h) **Energia utilizzata:** numero 5 colpi di mazza da 8 kg per tiro;
- i) **Tipologia di analisi:** analisi della dispersione della componente verticale delle onde di Rayleigh (MASW in configurazione ZVF);

	ID	Name	Component	Start time	End time	Sampling frequency	Sampling period	N samples	Duration	Rec x	Rec y
1	25	R001	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	49	0
2	26	R002	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	45	0
3	27	R003	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	41	0
4	28	R004	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	37	0
5	29	R005	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	33	0
6	30	R006	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	29	0
7	31	R007	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	25	0
8	32	R008	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	21	0
9	33	R009	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	17	0
10	34	R010	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	13	0
11	35	R011	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	9	0
12	36	R012	Vertical	2022-10-19 10:59:55.000000	2022-10-19 10:59:57.000000	1000	0.001	2000	2.000000s	5	0

Figura 1 – Configurazione acquisizione

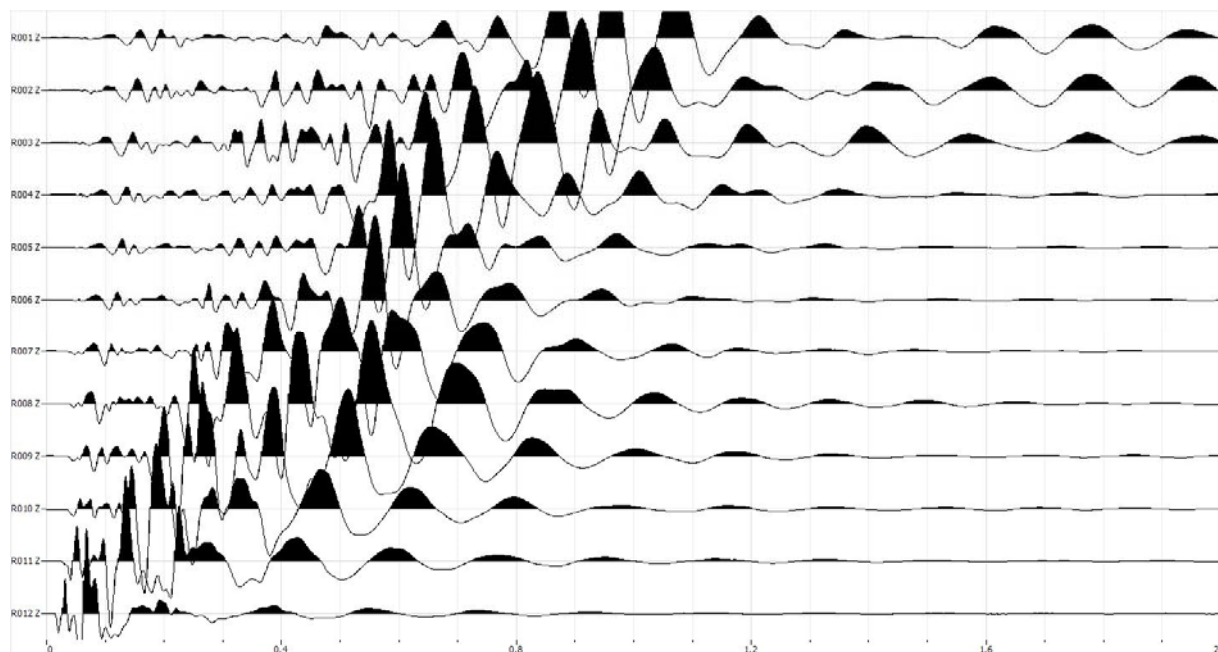


Figura 2 – Tracce sismiche acquisite dai geofoni – Trigger +5 m

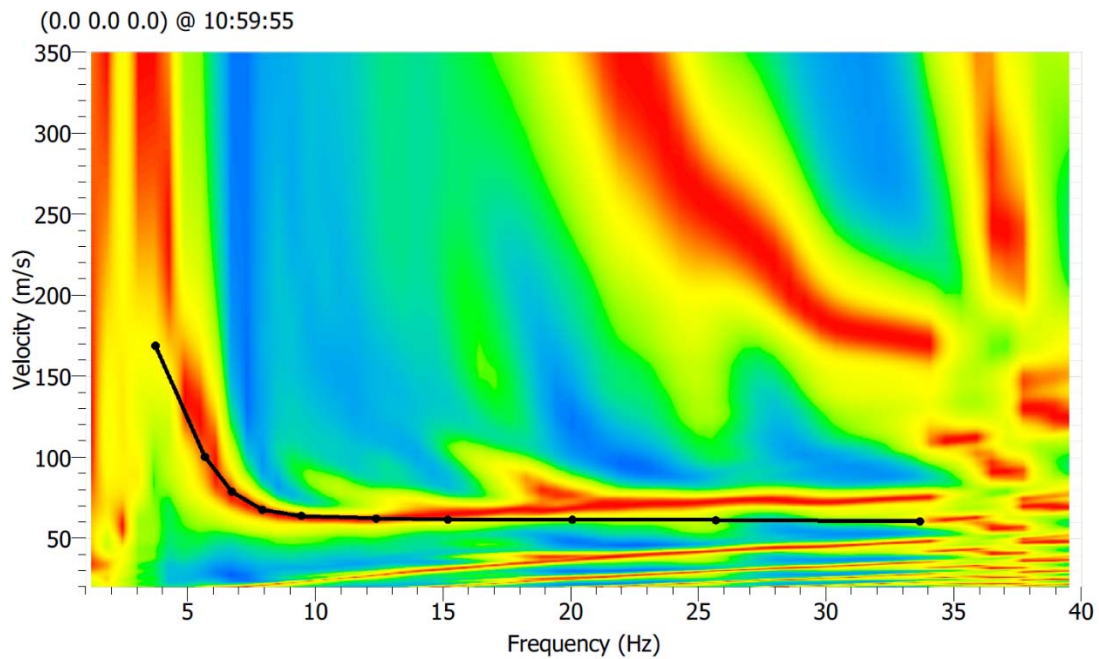


Figura 3 – Spettro di velocità di fase della componente verticale delle onde di Reyleigh (analisi ZVF) e picking della curva di dispersione del modo fondamentale

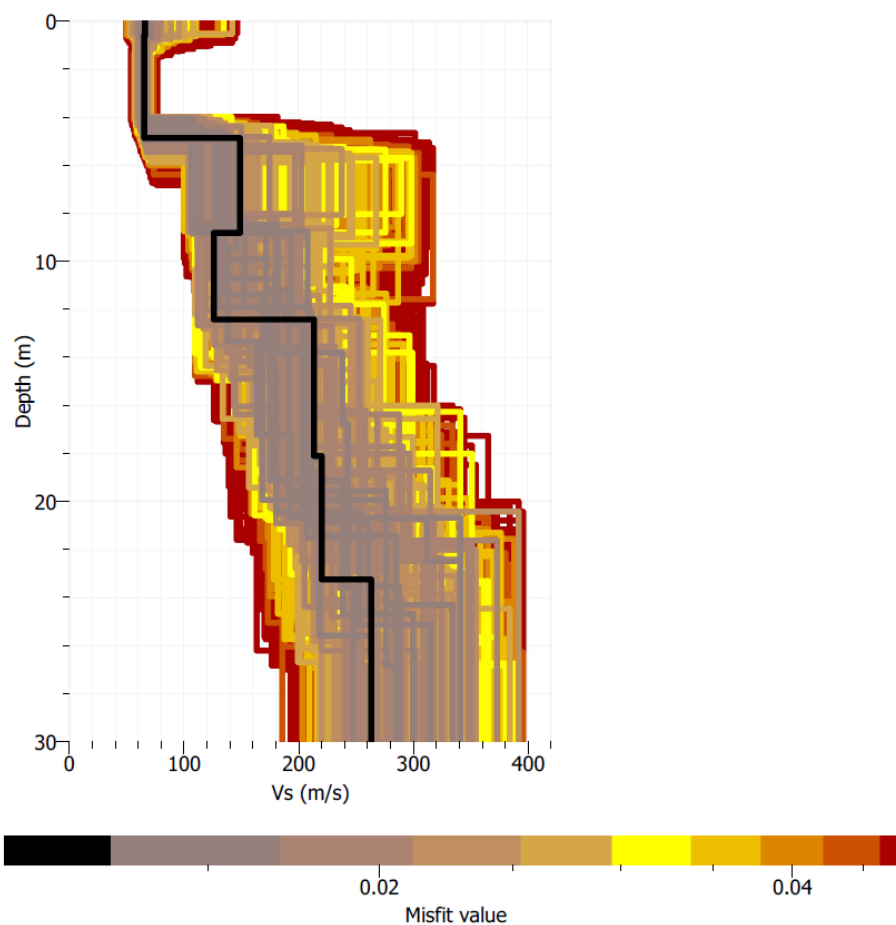


Figura 4 – Visualizzazione di tutti i profili elaborati. In nero il profilo di Vs che minimizza l'errore con le misure sperimentali

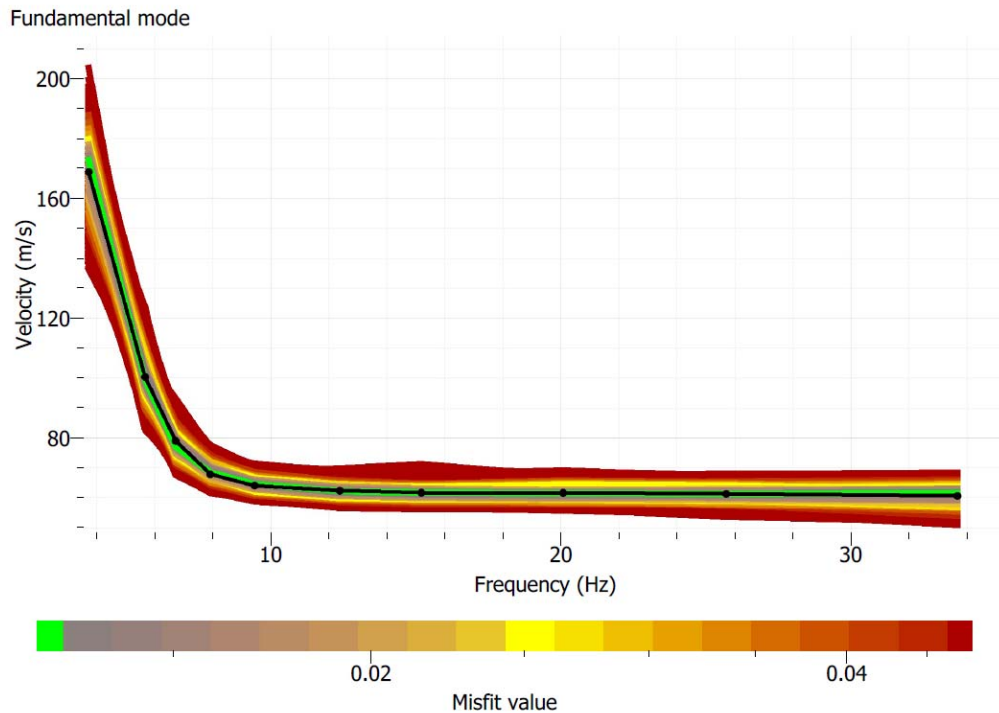


Figura 5 - Curva di dispersione sperimentale (in nero) e curve di dispersione numeriche del modello, entrambe riferite al modo fondamentale. In verde la curva di dispersione del modo fondamentale associata al profilo di colore nero in Figura 5

Strato	Vs [m/s]	Spessore [m]	Profondità [m]
1	66	4.9	4.9
2	149	3.9	8.8
3	126	3.6	12.4
4	213	5.7	18.1
5	220	5.1	23.2
6	263	2.5	Inf.

$V_{seq} = 159 \text{ m/s}$

CATEGORIA DI SOTTOSUOLO: D

Tabella 1 – Modello di velocità delle onde S per il sito in esame

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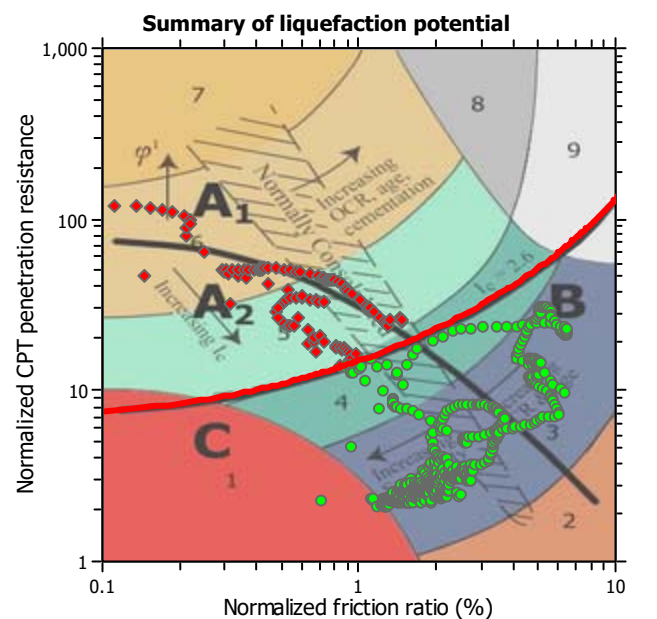
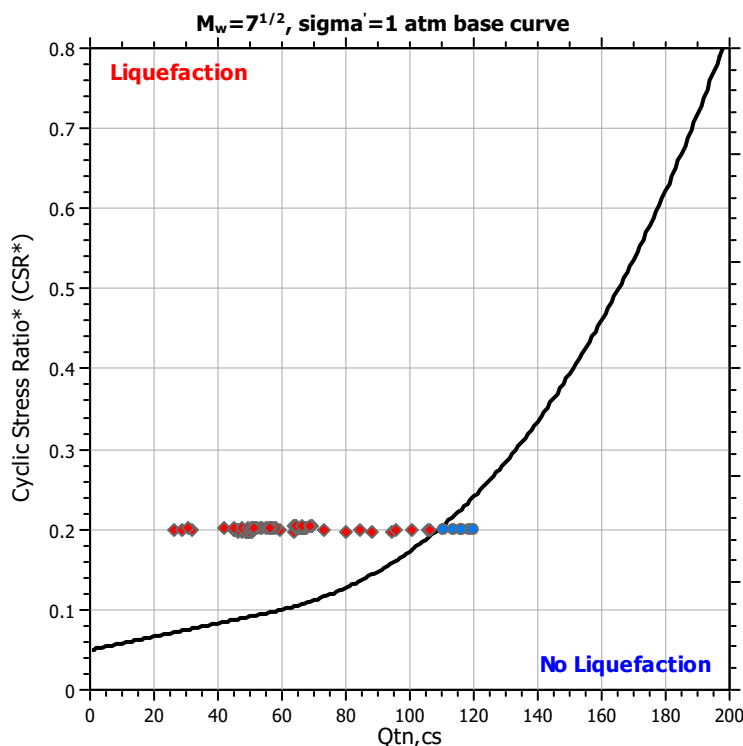
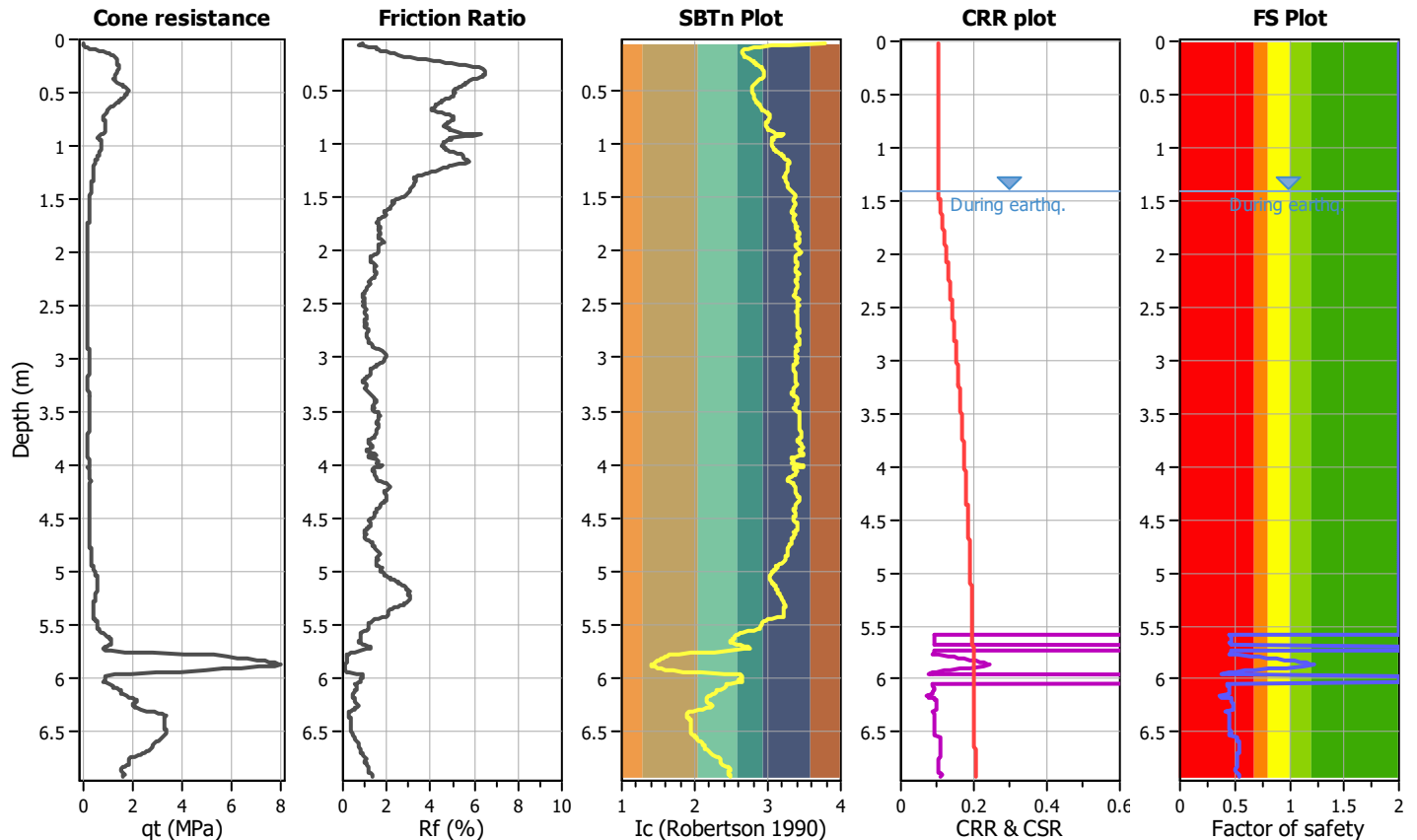
ALLEGATO 4

REPORT DELLA VERIFICA A LIQUEFAZIONE

LIQUEFACTION ANALYSIS REPORT

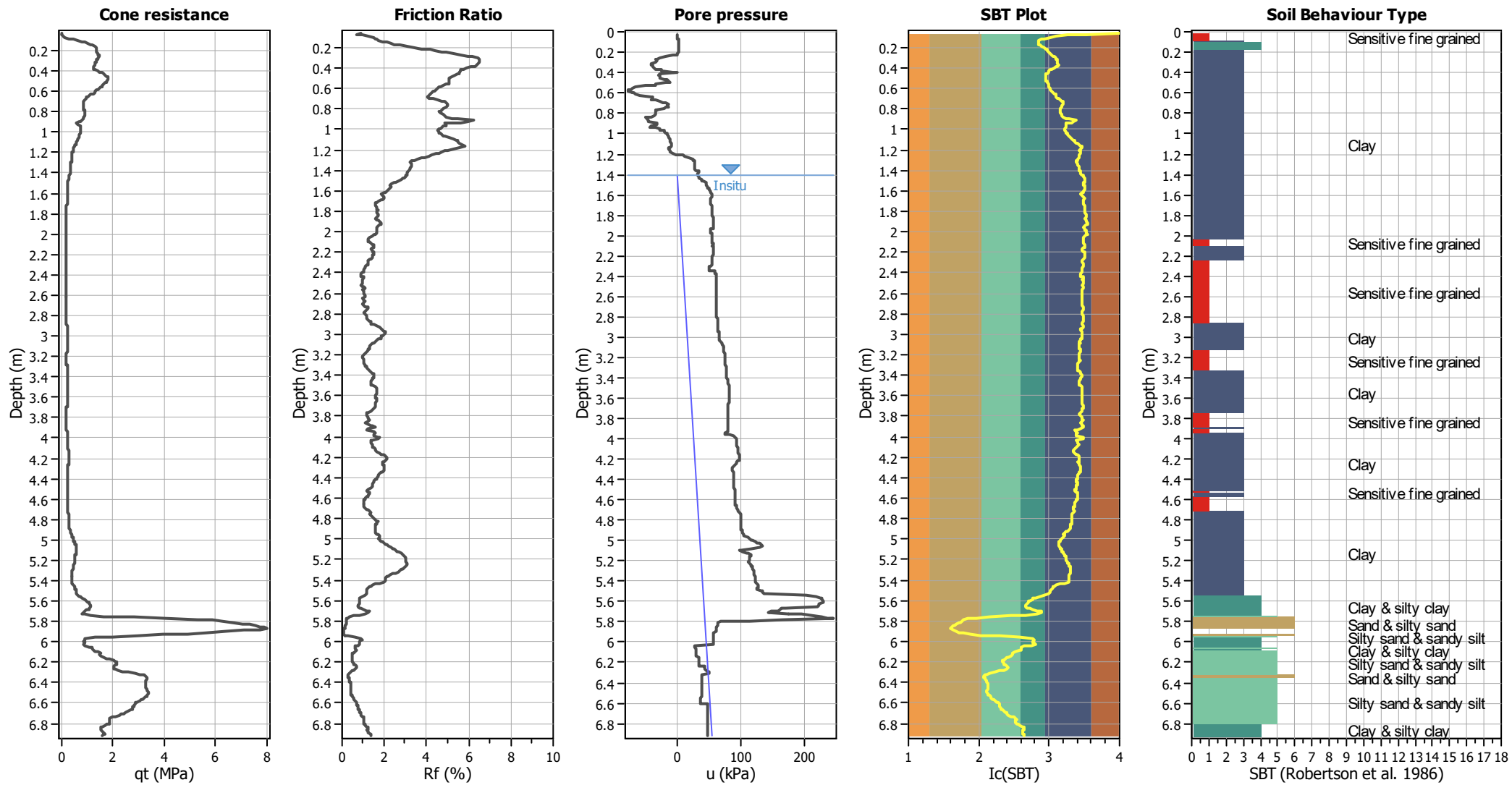
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU01
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

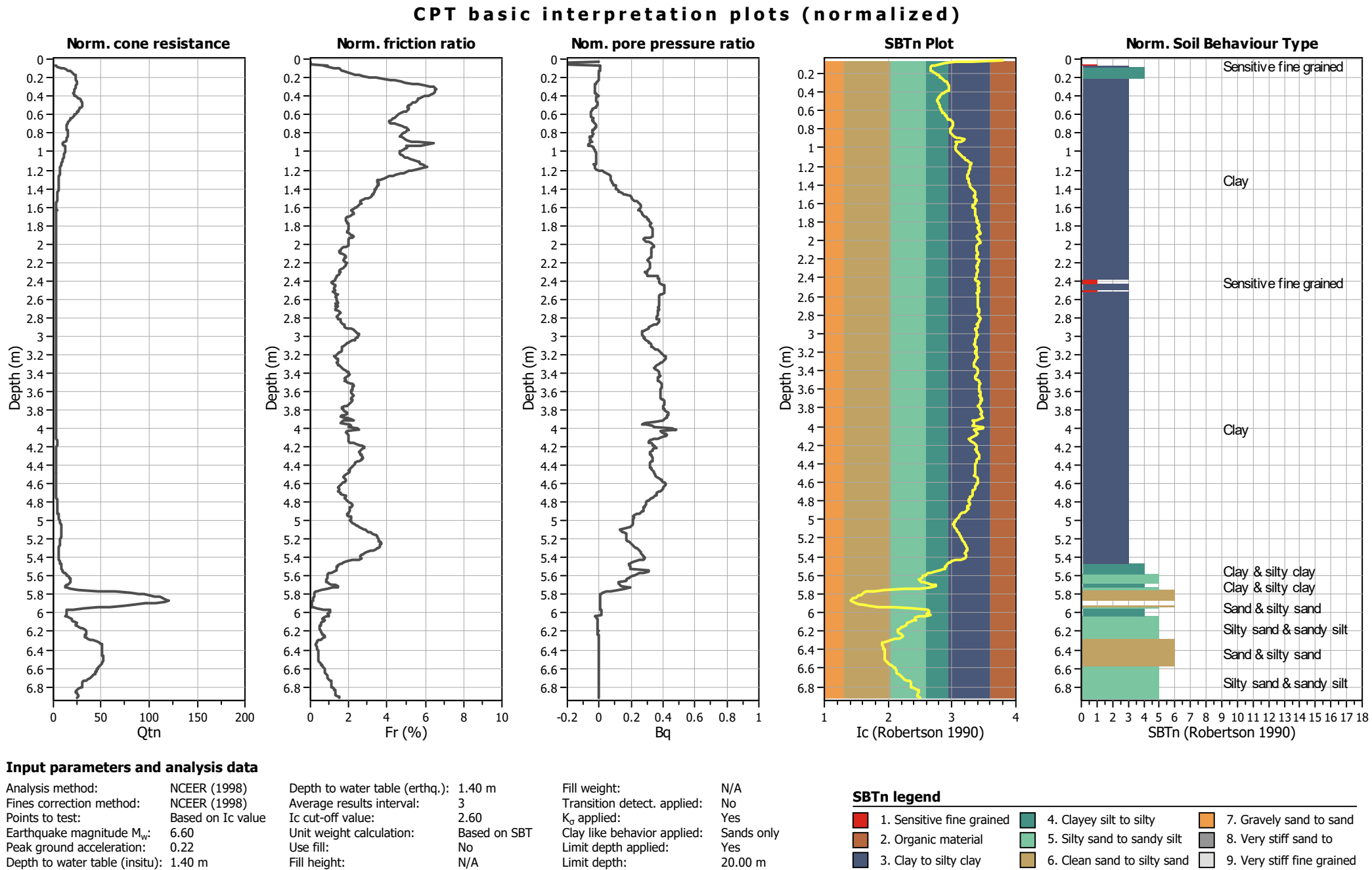


Input parameters and analysis data

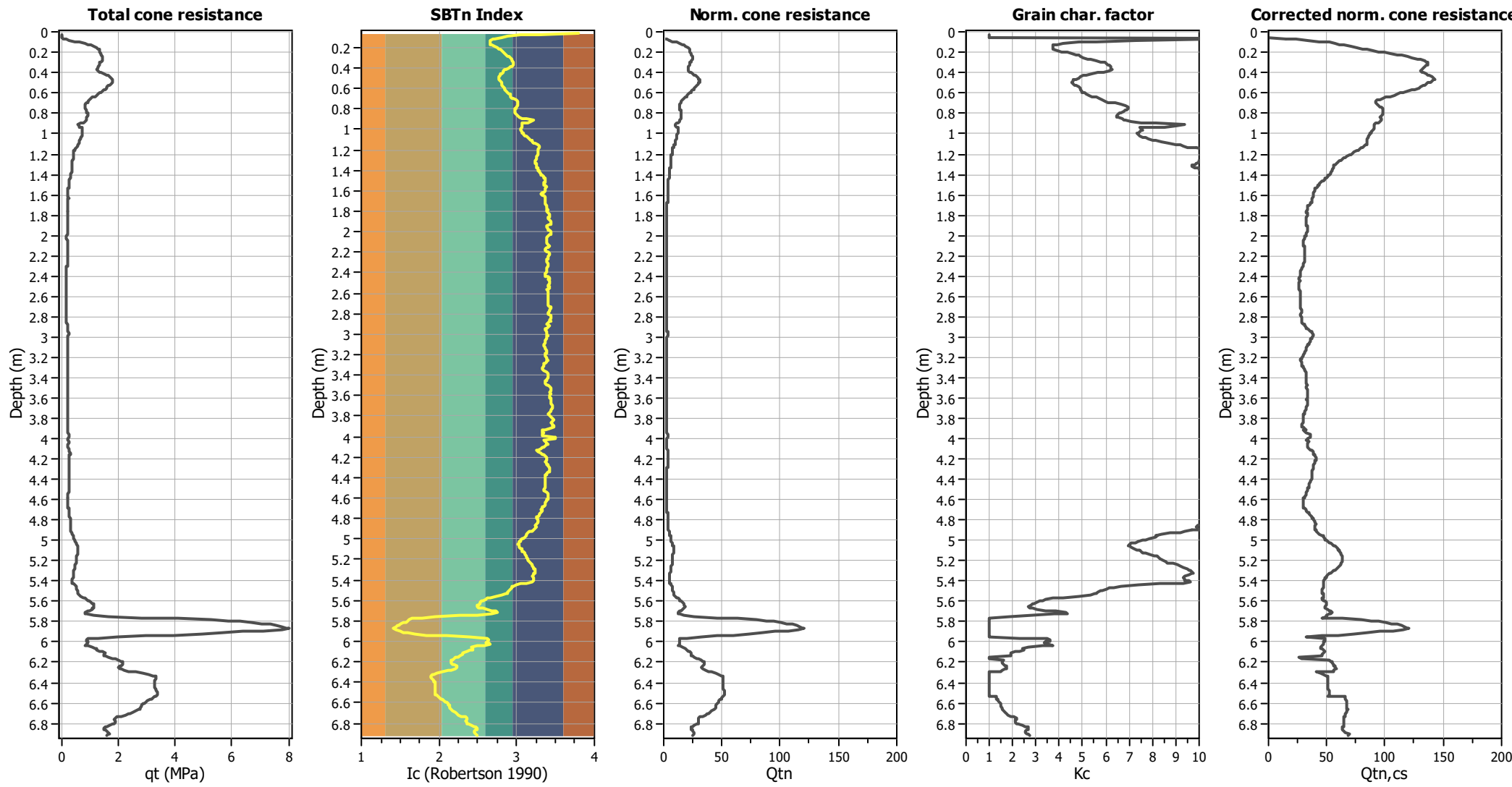
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



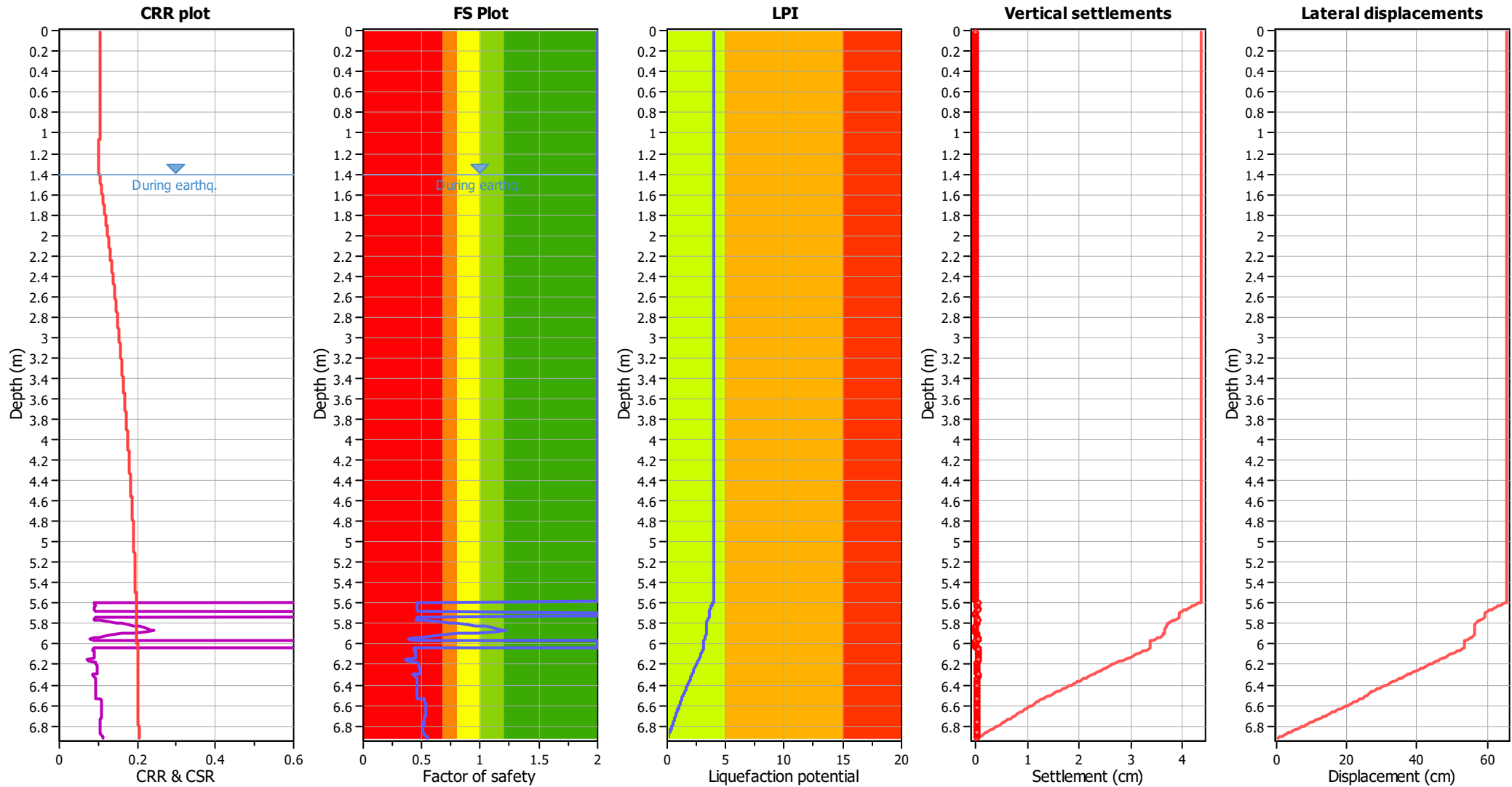
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

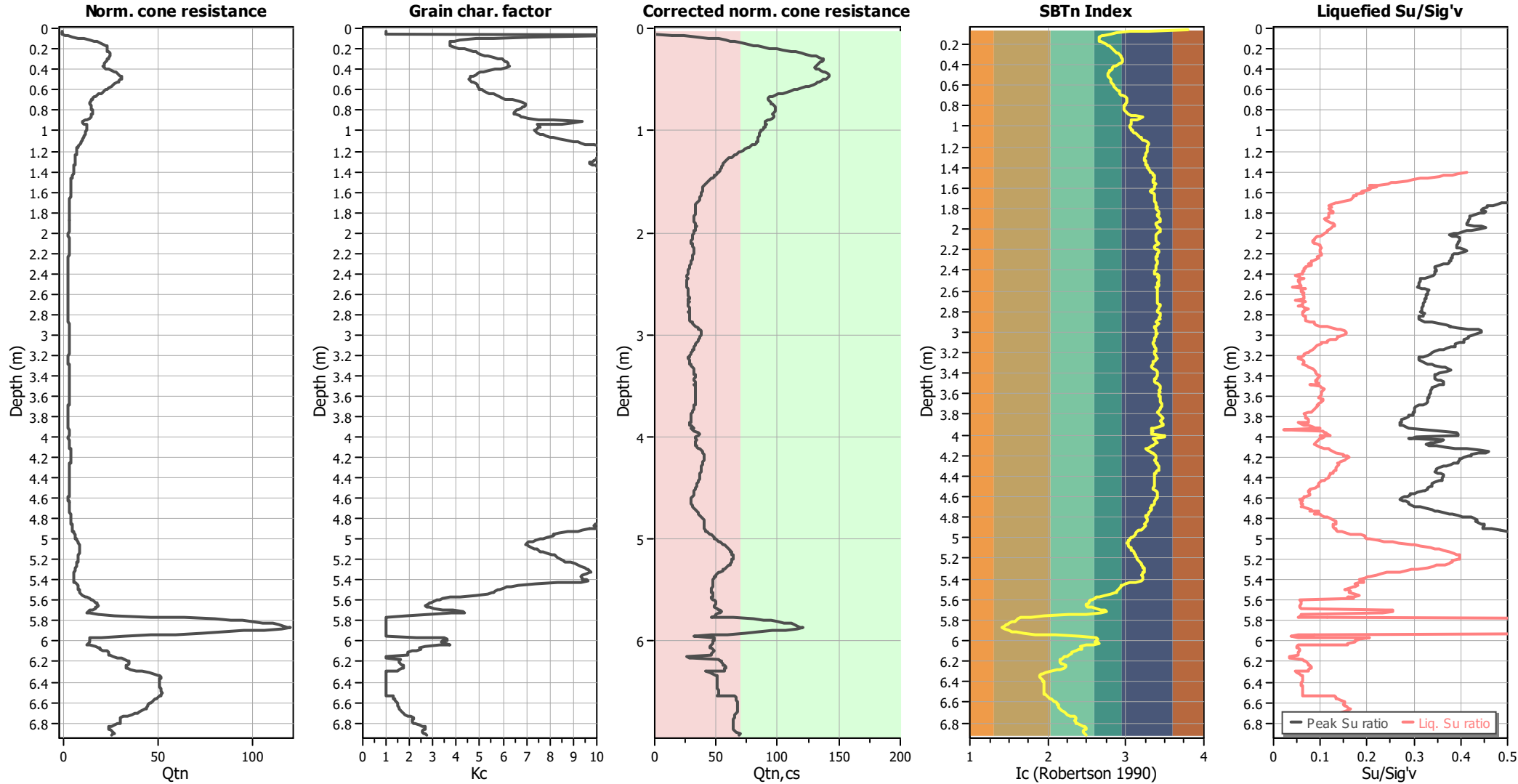
Red	Very high risk
Orange	High risk
Yellow	Low risk

The figure consists of three subplots:

- Left Plot:** A log-log plot showing Normalized CPT penetration resistance (y-axis, 1 to 1000) versus Normalized friction ratio (%) (x-axis, 0.1 to 10). The plot is divided into several regions labeled 1 through 9. Regions 1, 2, and 3 are shaded red, orange, and blue respectively. Region 4 is green, and regions 5, 6, 7, 8, and 9 are various shades of yellow and grey. Arrows indicate trends such as "Increasing OCR, age, cementation" and "Normally Consolidated". Data points are shown as red diamonds (A1, A2) and green circles (B).
- Middle Plot:** A semi-log plot showing Cyclic Stress Ratio* (CSR*) (y-axis, 0 to 0.8) versus $Q_{tn,cs}$ (x-axis, 0 to 200). A black curve separates the "Liquefaction" region (above) from the "No Liquefaction" region (below). Data points are shown as red diamonds and blue circles.
- Right Plot:** A log-log plot showing Thickness of liquefiable sand layer, H_2 (m) (y-axis, 0.0 to 12.0) versus Thickness of surface layer, H_1 (m) (x-axis, 0 to 10). A blue curve represents the relationship between H_1 and H_2 . Shaded regions represent different levels of maximum acceleration (a_{max}): 200 gal, 300 gal, and 400-500 gal. A specific point is labeled "CPTU01 (3.94)".

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	0.46	0.54	7.21	0.01	0.04	5.60	0.46	0.54	7.20	0.01	0.04
5.61	0.46	0.54	7.20	0.01	0.04	5.62	0.46	0.54	7.19	0.01	0.04
5.63	0.46	0.54	7.18	0.01	0.04	5.64	0.46	0.54	7.18	0.01	0.04
5.65	0.46	0.54	7.17	0.01	0.04	5.66	0.46	0.54	7.17	0.01	0.04
5.67	0.46	0.54	7.17	0.01	0.04	5.68	0.47	0.53	7.16	0.01	0.04
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	0.46	0.54	7.13	0.01	0.04
5.75	0.46	0.54	7.13	0.01	0.04	5.76	0.45	0.55	7.12	0.01	0.04

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	0.53	0.47	7.12	0.01	0.03	5.78	0.64	0.36	7.11	0.01	0.03
5.79	0.73	0.27	7.11	0.01	0.02	5.80	0.80	0.20	7.10	0.01	0.01
5.81	0.88	0.12	7.09	0.01	0.01	5.82	0.96	0.04	7.09	0.01	0.00
5.83	1.04	0.00	7.08	0.01	0.00	5.84	1.09	0.00	7.08	0.01	0.00
5.85	1.15	0.00	7.08	0.01	0.00	5.86	1.19	0.00	7.07	0.01	0.00
5.87	1.22	0.00	7.07	0.01	0.00	5.88	1.13	0.00	7.06	0.01	0.00
5.89	0.97	0.03	7.05	0.01	0.00	5.90	0.81	0.19	7.05	0.01	0.01
5.91	0.68	0.32	7.04	0.01	0.02	5.92	0.59	0.41	7.04	0.01	0.03
5.93	0.50	0.50	7.04	0.01	0.04	5.94	0.45	0.55	7.03	0.01	0.04
5.95	0.38	0.62	7.03	0.01	0.04	5.96	0.45	0.55	7.02	0.01	0.04
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	0.44	0.56	6.98	0.01	0.04
6.05	0.44	0.56	6.97	0.01	0.04	6.06	0.44	0.56	6.97	0.01	0.04
6.07	0.44	0.56	6.96	0.01	0.04	6.08	0.45	0.55	6.96	0.01	0.04
6.09	0.45	0.55	6.96	0.01	0.04	6.10	0.45	0.55	6.95	0.01	0.04
6.11	0.45	0.55	6.95	0.01	0.04	6.12	0.44	0.56	6.94	0.01	0.04
6.13	0.44	0.56	6.93	0.01	0.04	6.14	0.44	0.56	6.93	0.01	0.04
6.15	0.36	0.64	6.92	0.01	0.04	6.16	0.37	0.63	6.92	0.01	0.04
6.17	0.38	0.62	6.92	0.01	0.04	6.18	0.46	0.54	6.91	0.01	0.04
6.19	0.47	0.53	6.91	0.01	0.04	6.20	0.47	0.53	6.90	0.01	0.04
6.21	0.47	0.53	6.89	0.01	0.04	6.22	0.48	0.52	6.89	0.01	0.04
6.23	0.48	0.52	6.88	0.01	0.04	6.24	0.48	0.52	6.88	0.01	0.04
6.25	0.49	0.51	6.88	0.01	0.04	6.26	0.49	0.51	6.87	0.01	0.04
6.27	0.48	0.52	6.87	0.01	0.04	6.28	0.48	0.52	6.86	0.01	0.04
6.29	0.48	0.52	6.86	0.01	0.04	6.30	0.42	0.58	6.85	0.01	0.04
6.31	0.43	0.57	6.84	0.01	0.04	6.32	0.45	0.55	6.84	0.01	0.04
6.33	0.45	0.55	6.83	0.01	0.04	6.34	0.46	0.54	6.83	0.01	0.04
6.35	0.46	0.54	6.83	0.01	0.04	6.36	0.46	0.54	6.82	0.01	0.04
6.37	0.46	0.54	6.82	0.01	0.04	6.38	0.46	0.54	6.81	0.01	0.04
6.39	0.46	0.54	6.80	0.01	0.04	6.40	0.46	0.54	6.80	0.01	0.04
6.41	0.46	0.54	6.79	0.01	0.04	6.42	0.46	0.54	6.79	0.01	0.04
6.43	0.46	0.54	6.79	0.01	0.04	6.44	0.46	0.54	6.78	0.01	0.04
6.45	0.46	0.54	6.78	0.01	0.04	6.46	0.46	0.54	6.77	0.01	0.04
6.47	0.46	0.54	6.76	0.01	0.04	6.48	0.46	0.54	6.76	0.01	0.04
6.49	0.46	0.54	6.75	0.01	0.04	6.50	0.46	0.54	6.75	0.01	0.04
6.51	0.46	0.54	6.75	0.01	0.04	6.52	0.46	0.54	6.74	0.01	0.04
6.53	0.46	0.54	6.74	0.01	0.04	6.54	0.52	0.48	6.73	0.01	0.03
6.55	0.53	0.47	6.72	0.01	0.03	6.56	0.53	0.47	6.72	0.01	0.03
6.57	0.53	0.47	6.71	0.01	0.03	6.58	0.53	0.47	6.71	0.01	0.03
6.59	0.53	0.47	6.71	0.01	0.03	6.60	0.53	0.47	6.70	0.01	0.03
6.61	0.53	0.47	6.70	0.01	0.03	6.62	0.53	0.47	6.69	0.01	0.03
6.63	0.53	0.47	6.68	0.01	0.03	6.64	0.53	0.47	6.68	0.01	0.03
6.65	0.54	0.46	6.67	0.01	0.03	6.66	0.54	0.46	6.67	0.01	0.03
6.67	0.54	0.46	6.67	0.01	0.03	6.68	0.54	0.46	6.66	0.01	0.03
6.69	0.53	0.47	6.66	0.01	0.03	6.70	0.53	0.47	6.65	0.01	0.03
6.71	0.52	0.48	6.64	0.01	0.03	6.72	0.52	0.48	6.64	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	0.52	0.48	6.63	0.01	0.03	6.74	0.52	0.48	6.63	0.01	0.03
6.75	0.52	0.48	6.63	0.01	0.03	6.76	0.52	0.48	6.62	0.01	0.03
6.77	0.51	0.49	6.62	0.01	0.03	6.78	0.52	0.48	6.61	0.01	0.03
6.79	0.52	0.48	6.61	0.01	0.03	6.80	0.52	0.48	6.60	0.01	0.03
6.81	0.52	0.48	6.59	0.01	0.03	6.82	0.51	0.49	6.59	0.01	0.03
6.83	0.51	0.49	6.58	0.01	0.03	6.84	0.51	0.49	6.58	0.01	0.03
6.85	0.51	0.49	6.58	0.01	0.03	6.86	0.51	0.49	6.57	0.01	0.03
6.87	0.51	0.49	6.57	0.01	0.03	6.88	0.52	0.48	6.56	0.01	0.03
6.89	0.53	0.47	6.55	0.01	0.03	6.90	0.55	0.45	6.55	0.01	0.03
6.91	0.55	0.45	6.54	0.01	0.03	6.92	0.54	0.46	6.54	0.01	0.03

Overall liquefaction potential: 3.94

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

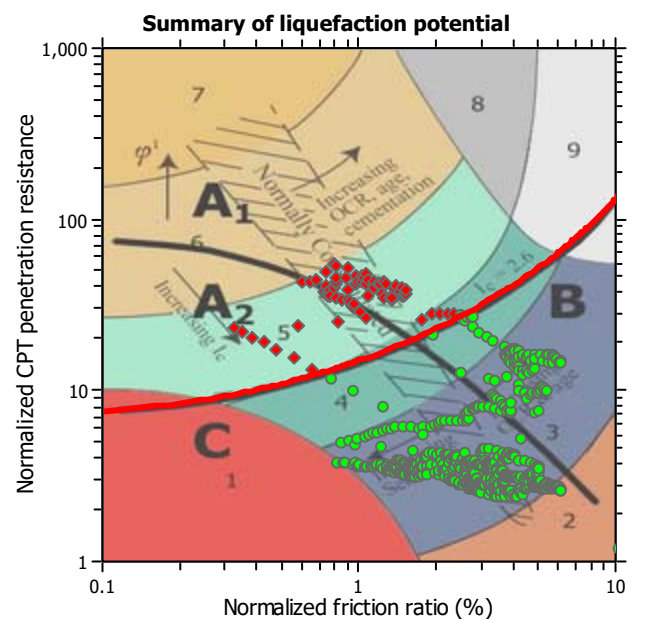
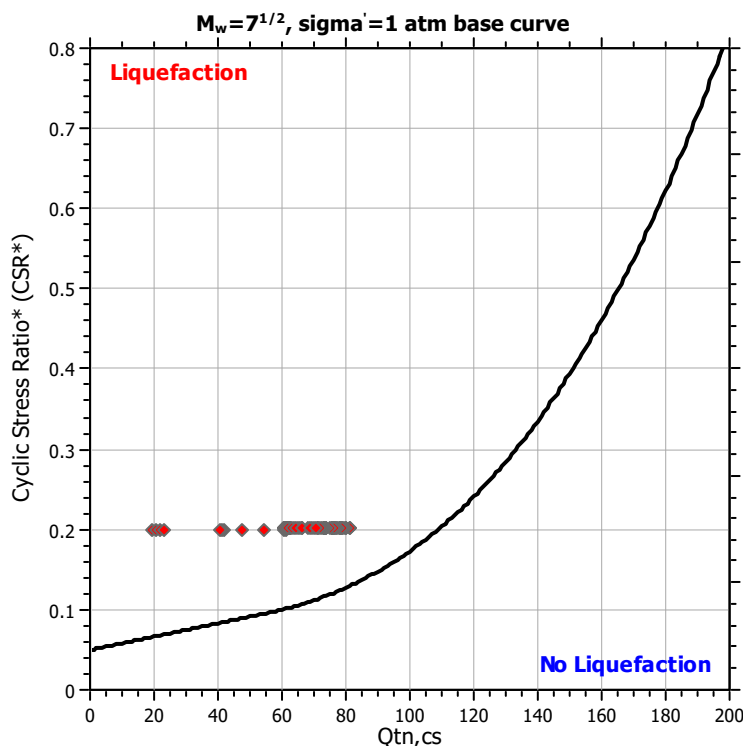
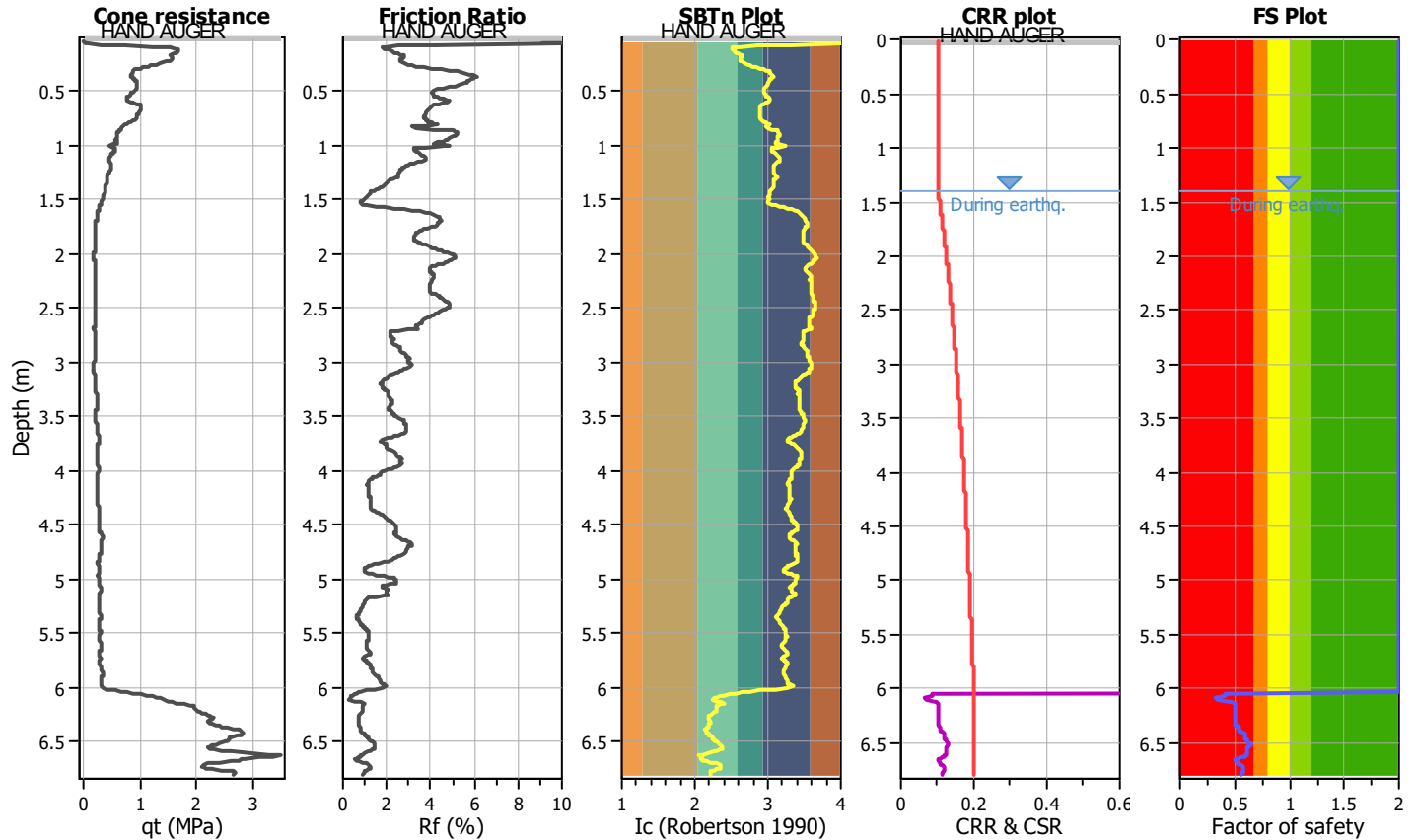
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

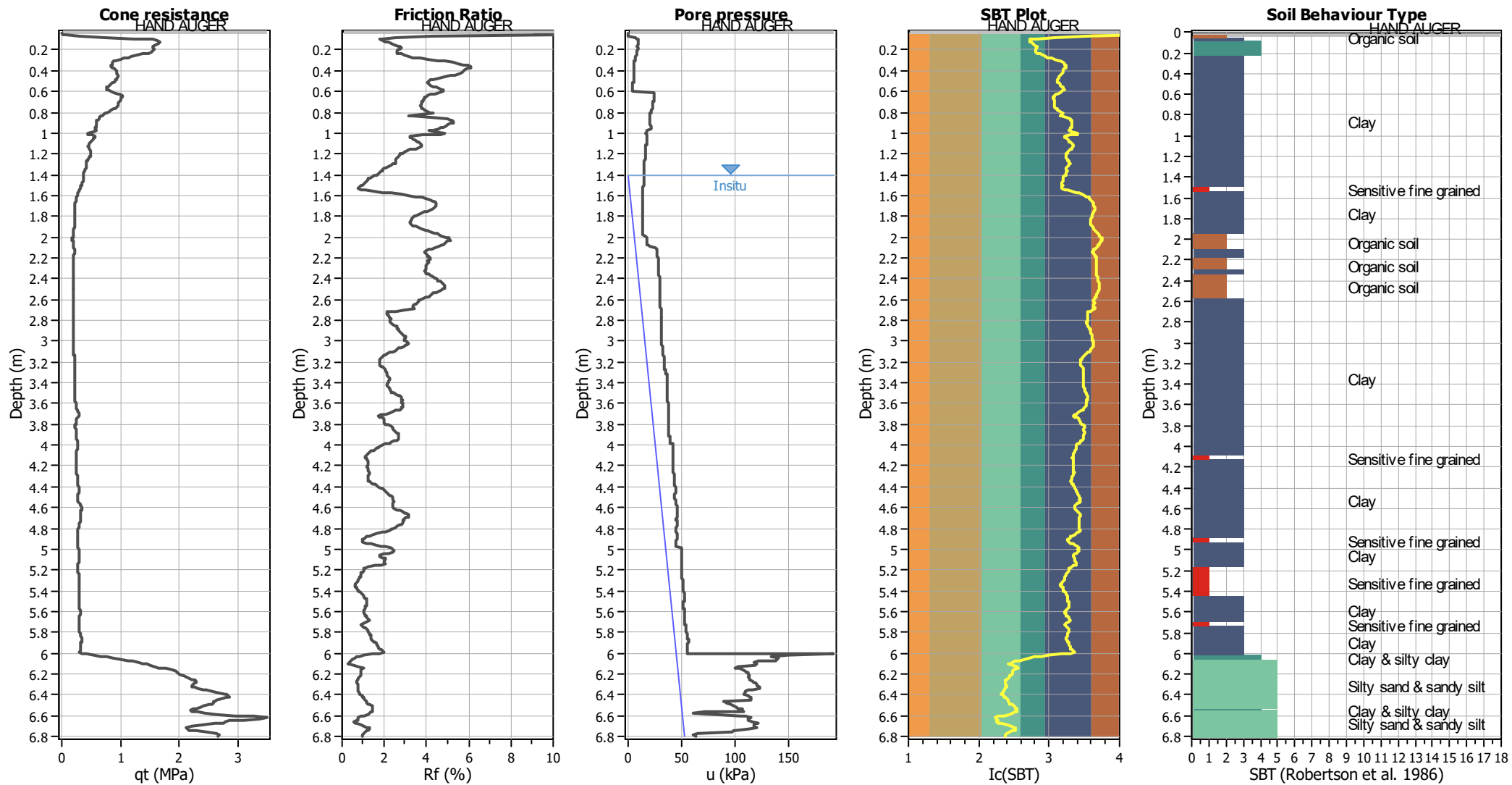
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU02
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

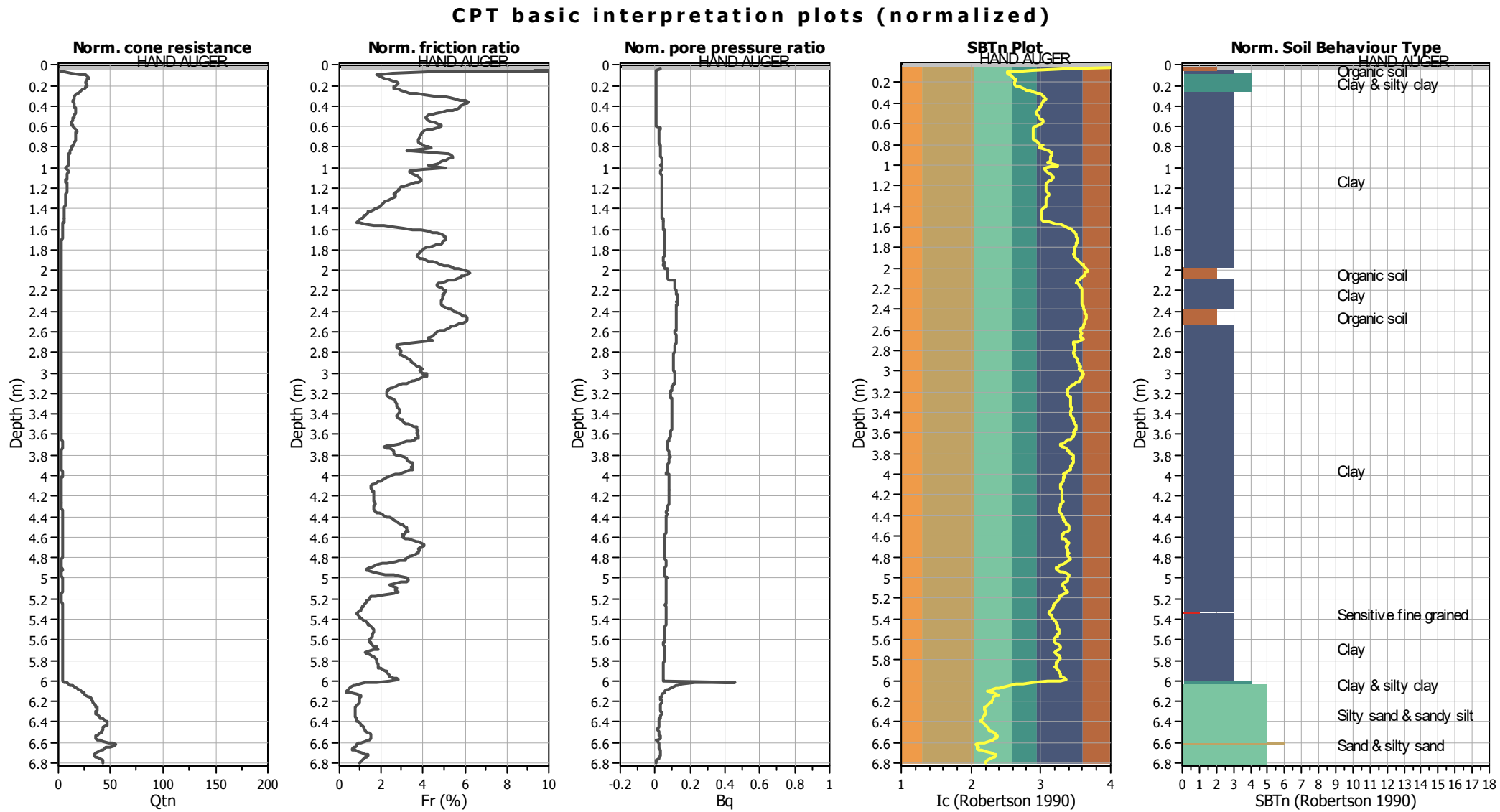


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



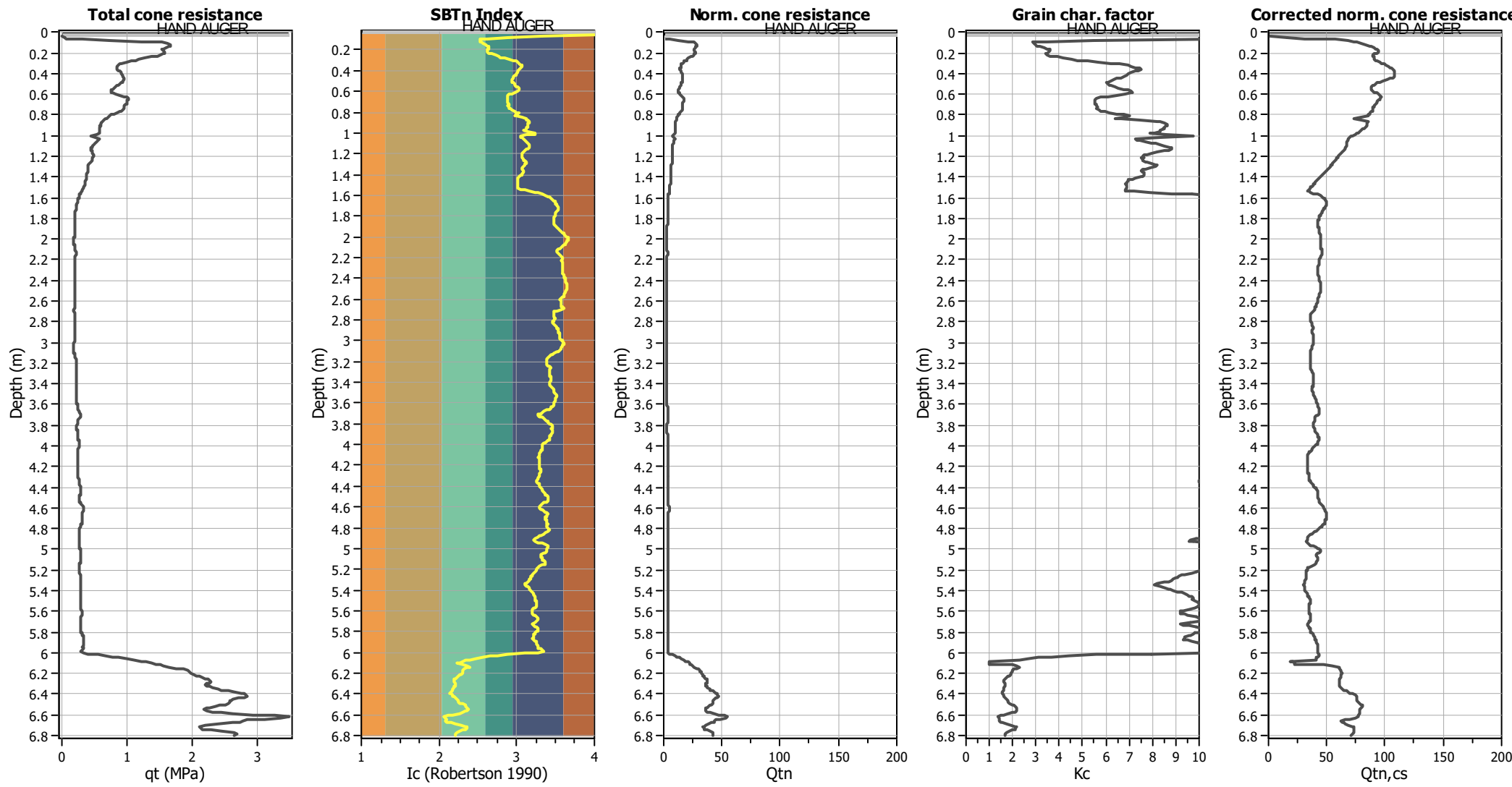
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

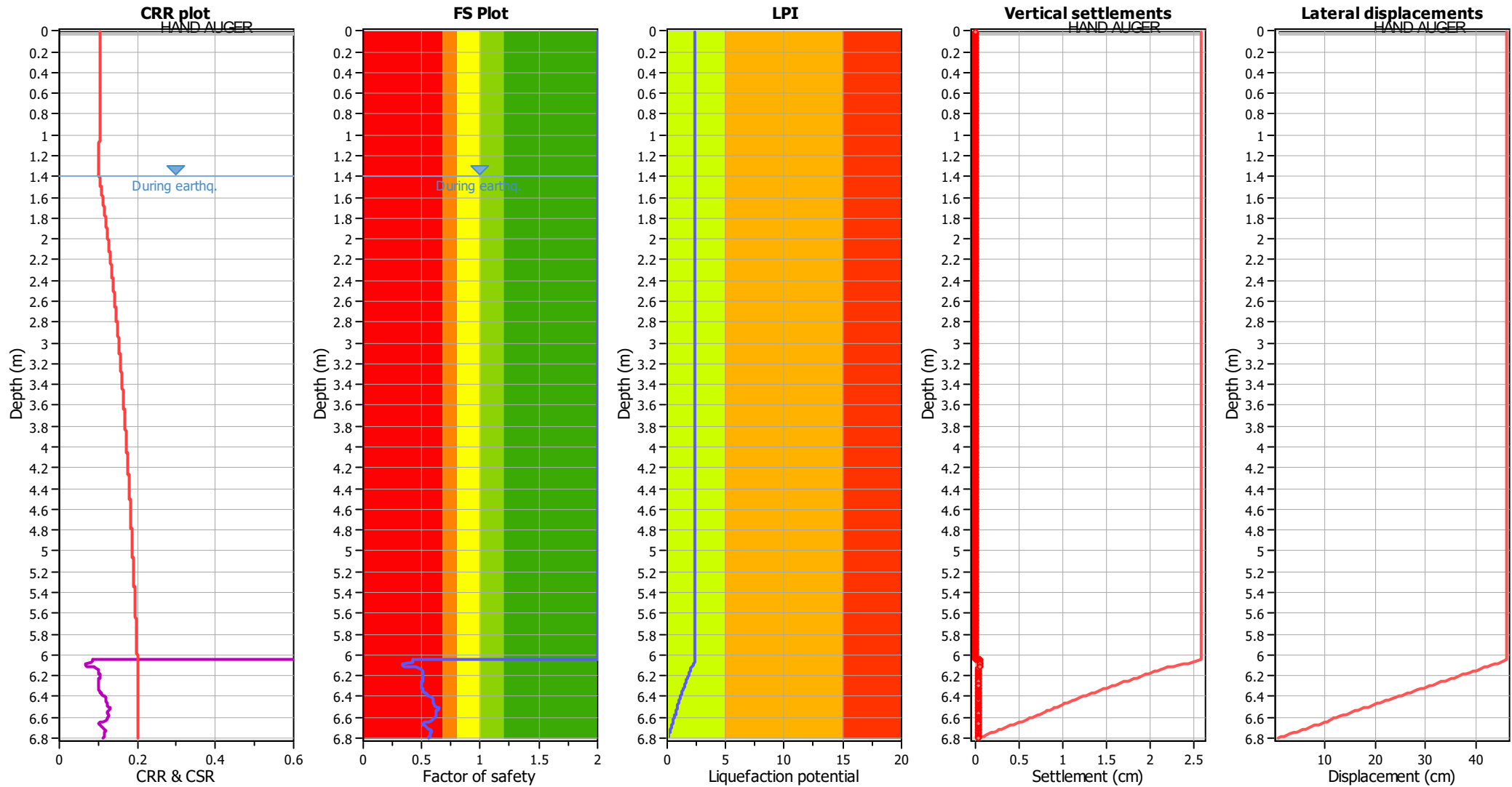
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _G applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

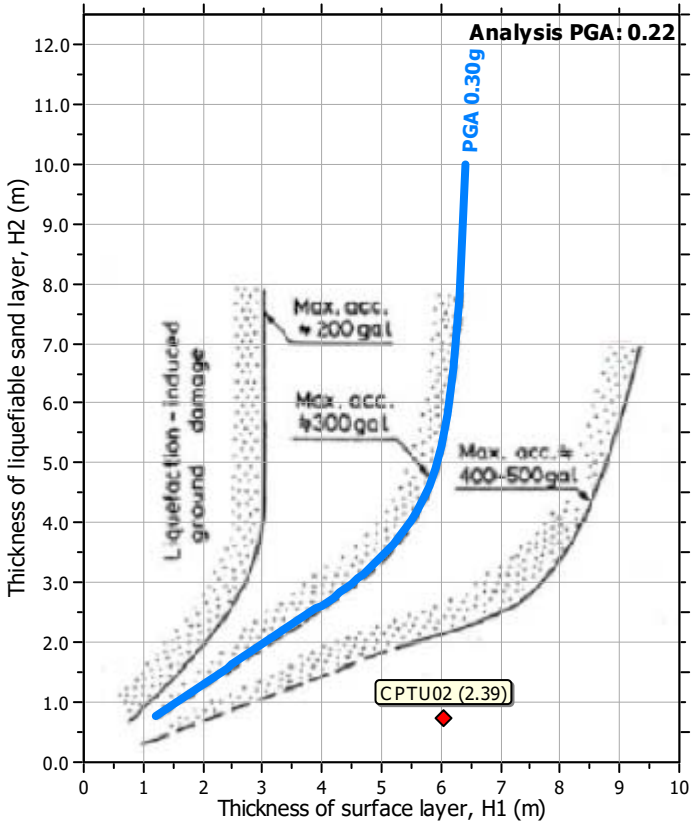
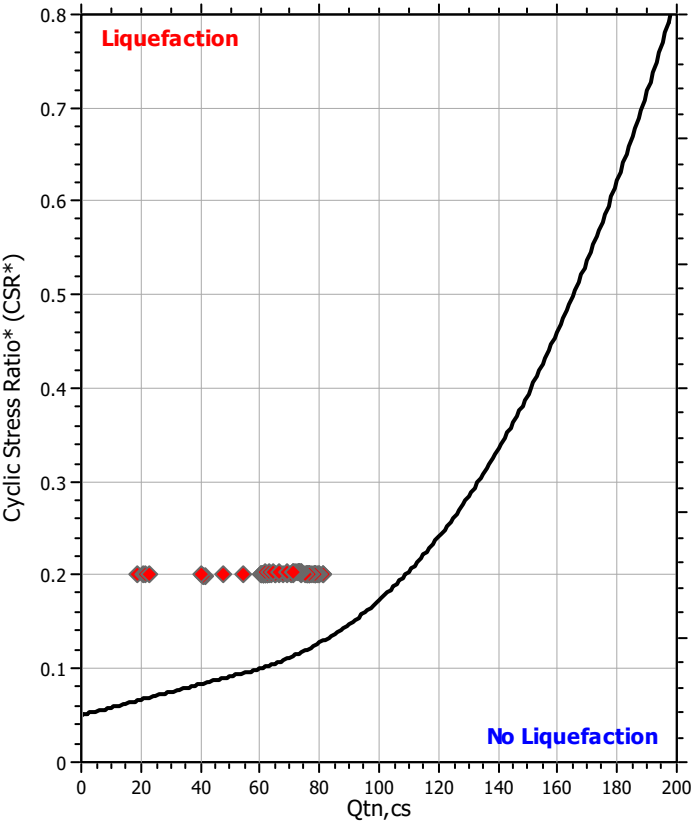
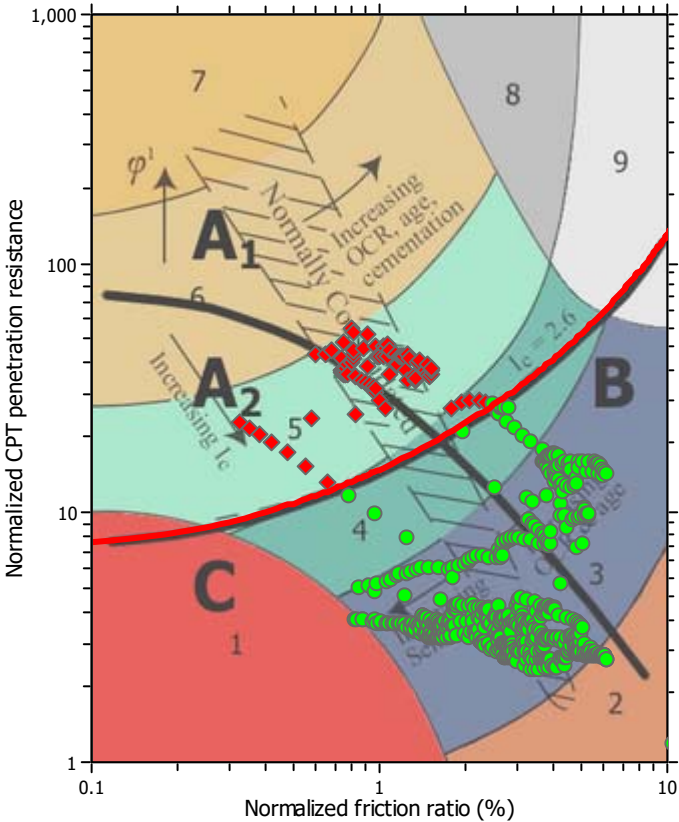
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

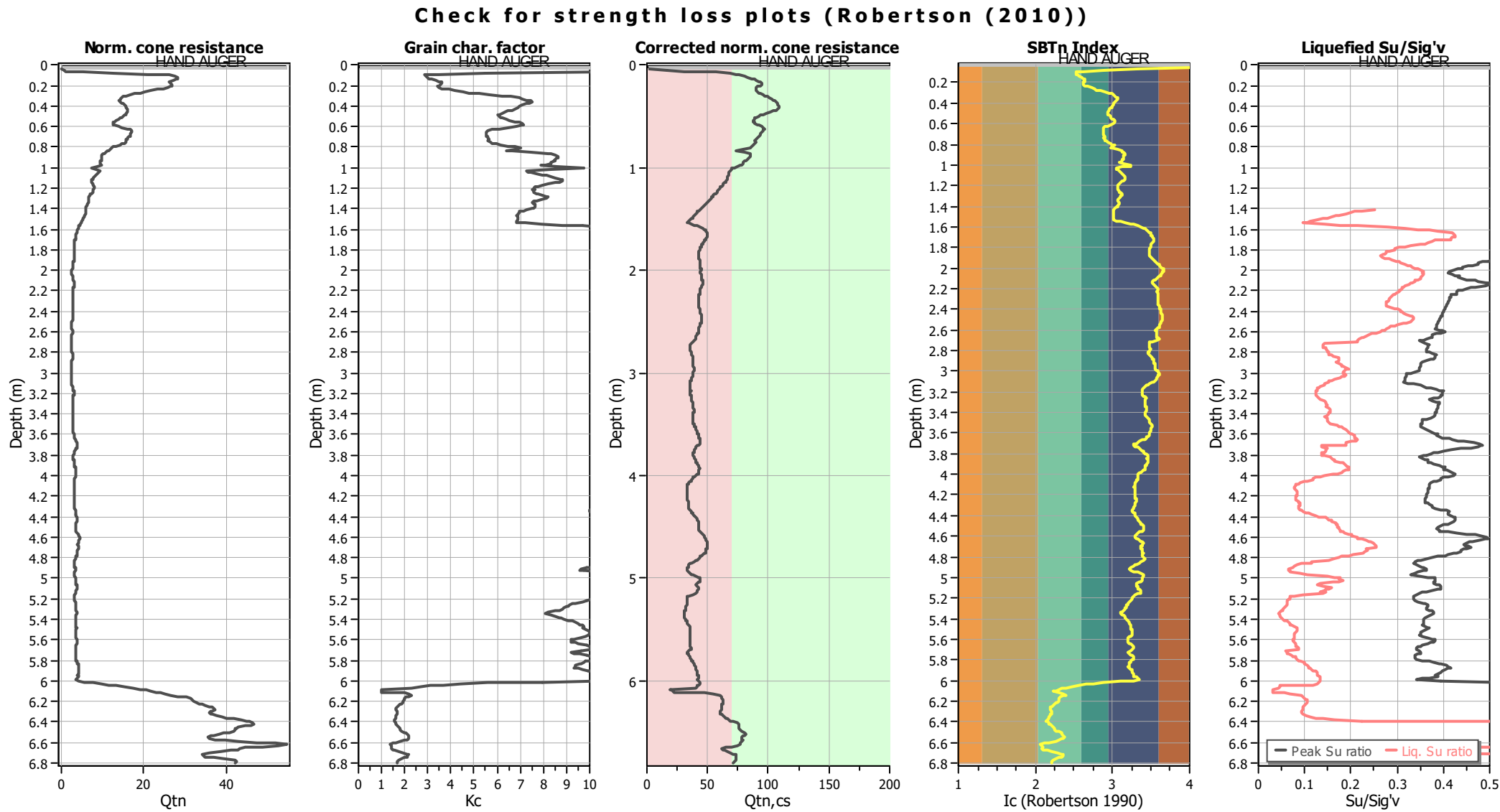
- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	0.00	0.00	0.00	0.02	2.00	0.00	0.00	0.00	0.00
0.03	2.00	0.00	0.00	0.00	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	0.42	0.58	6.97	0.01	0.04	6.06	0.42	0.58	6.97	0.01	0.04
6.07	0.42	0.58	6.96	0.01	0.04	6.08	0.33	0.67	6.96	0.01	0.05
6.09	0.34	0.66	6.96	0.01	0.05	6.10	0.34	0.66	6.95	0.01	0.05
6.11	0.34	0.66	6.95	0.01	0.05	6.12	0.45	0.55	6.94	0.01	0.04
6.13	0.47	0.53	6.93	0.01	0.04	6.14	0.50	0.50	6.93	0.01	0.03
6.15	0.50	0.50	6.92	0.01	0.03	6.16	0.51	0.49	6.92	0.01	0.03
6.17	0.51	0.49	6.92	0.01	0.03	6.18	0.51	0.49	6.91	0.01	0.03
6.19	0.51	0.49	6.91	0.01	0.03	6.20	0.51	0.49	6.90	0.01	0.03
6.21	0.51	0.49	6.89	0.01	0.03	6.22	0.51	0.49	6.89	0.01	0.03
6.23	0.51	0.49	6.88	0.01	0.03	6.24	0.51	0.49	6.88	0.01	0.03
6.25	0.50	0.50	6.88	0.01	0.03	6.26	0.50	0.50	6.87	0.01	0.03
6.27	0.50	0.50	6.87	0.01	0.03	6.28	0.50	0.50	6.86	0.01	0.03
6.29	0.50	0.50	6.86	0.01	0.03	6.30	0.50	0.50	6.85	0.01	0.03
6.31	0.50	0.50	6.84	0.01	0.03	6.32	0.50	0.50	6.84	0.01	0.03
6.33	0.50	0.50	6.83	0.01	0.03	6.34	0.51	0.49	6.83	0.01	0.03
6.35	0.52	0.48	6.83	0.01	0.03	6.36	0.52	0.48	6.82	0.01	0.03
6.37	0.53	0.47	6.82	0.01	0.03	6.38	0.54	0.46	6.81	0.01	0.03
6.39	0.55	0.45	6.80	0.01	0.03	6.40	0.57	0.43	6.80	0.01	0.03
6.41	0.58	0.42	6.79	0.01	0.03	6.42	0.60	0.40	6.79	0.01	0.03
6.43	0.60	0.40	6.79	0.01	0.03	6.44	0.60	0.40	6.78	0.01	0.03
6.45	0.60	0.40	6.78	0.01	0.03	6.46	0.60	0.40	6.77	0.01	0.03
6.47	0.60	0.40	6.76	0.01	0.03	6.48	0.61	0.39	6.76	0.01	0.03
6.49	0.61	0.39	6.75	0.01	0.03	6.50	0.63	0.37	6.75	0.01	0.02
6.51	0.64	0.36	6.75	0.01	0.02	6.52	0.64	0.36	6.74	0.01	0.02
6.53	0.63	0.37	6.74	0.01	0.02	6.54	0.62	0.38	6.73	0.01	0.03
6.55	0.62	0.38	6.72	0.01	0.03	6.56	0.62	0.38	6.72	0.01	0.03
6.57	0.62	0.38	6.71	0.01	0.03	6.58	0.62	0.38	6.71	0.01	0.03
6.59	0.62	0.38	6.71	0.01	0.03	6.60	0.61	0.39	6.70	0.01	0.03
6.61	0.60	0.40	6.70	0.01	0.03	6.62	0.60	0.40	6.69	0.01	0.03
6.63	0.59	0.41	6.68	0.01	0.03	6.64	0.55	0.45	6.68	0.01	0.03
6.65	0.52	0.48	6.67	0.01	0.03	6.66	0.51	0.49	6.67	0.01	0.03
6.67	0.51	0.49	6.67	0.01	0.03	6.68	0.52	0.48	6.66	0.01	0.03
6.69	0.53	0.47	6.66	0.01	0.03	6.70	0.55	0.45	6.65	0.01	0.03
6.71	0.56	0.44	6.64	0.01	0.03	6.72	0.58	0.42	6.64	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	0.58	0.42	6.63	0.01	0.03	6.74	0.58	0.42	6.63	0.01	0.03
6.75	0.58	0.42	6.63	0.01	0.03	6.76	0.58	0.42	6.62	0.01	0.03
6.77	0.57	0.43	6.62	0.01	0.03	6.78	0.57	0.43	6.61	0.01	0.03
6.79	0.56	0.44	6.61	0.01	0.03	6.80	0.56	0.44	6.60	0.01	0.03

Overall liquefaction potential: 2.39

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

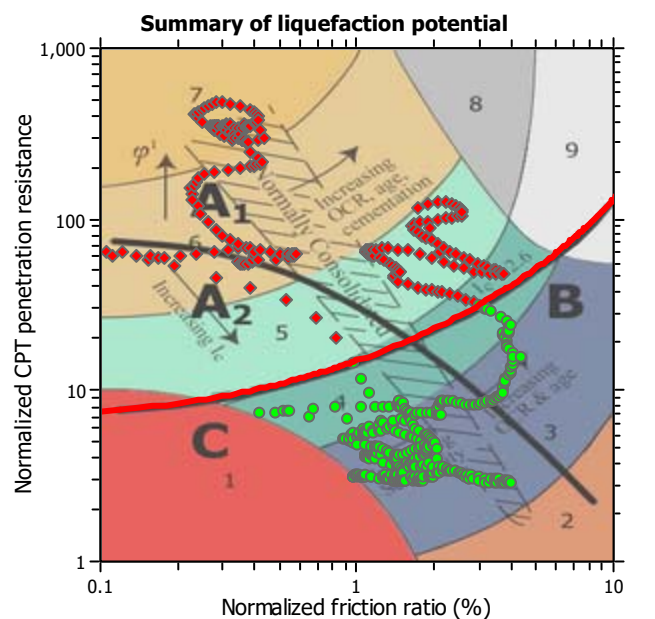
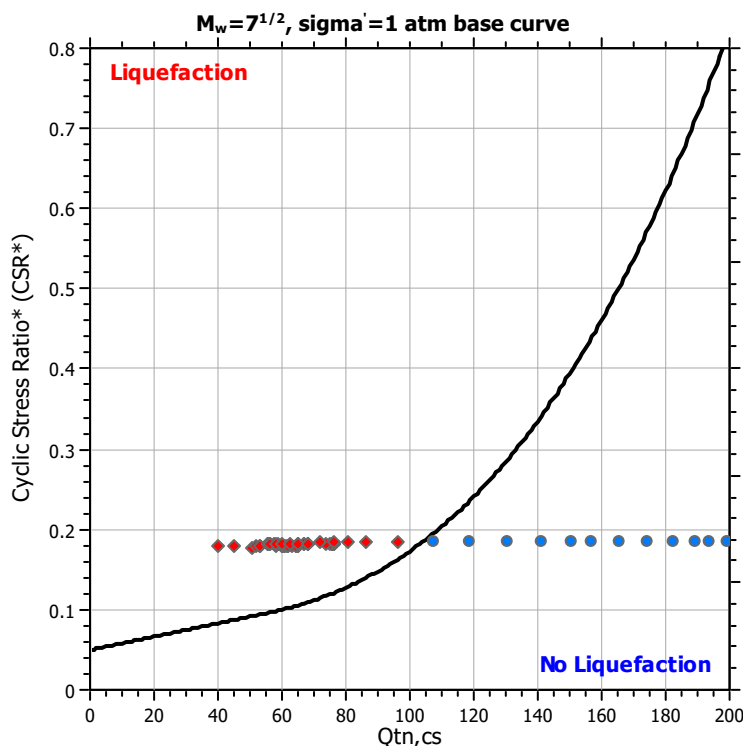
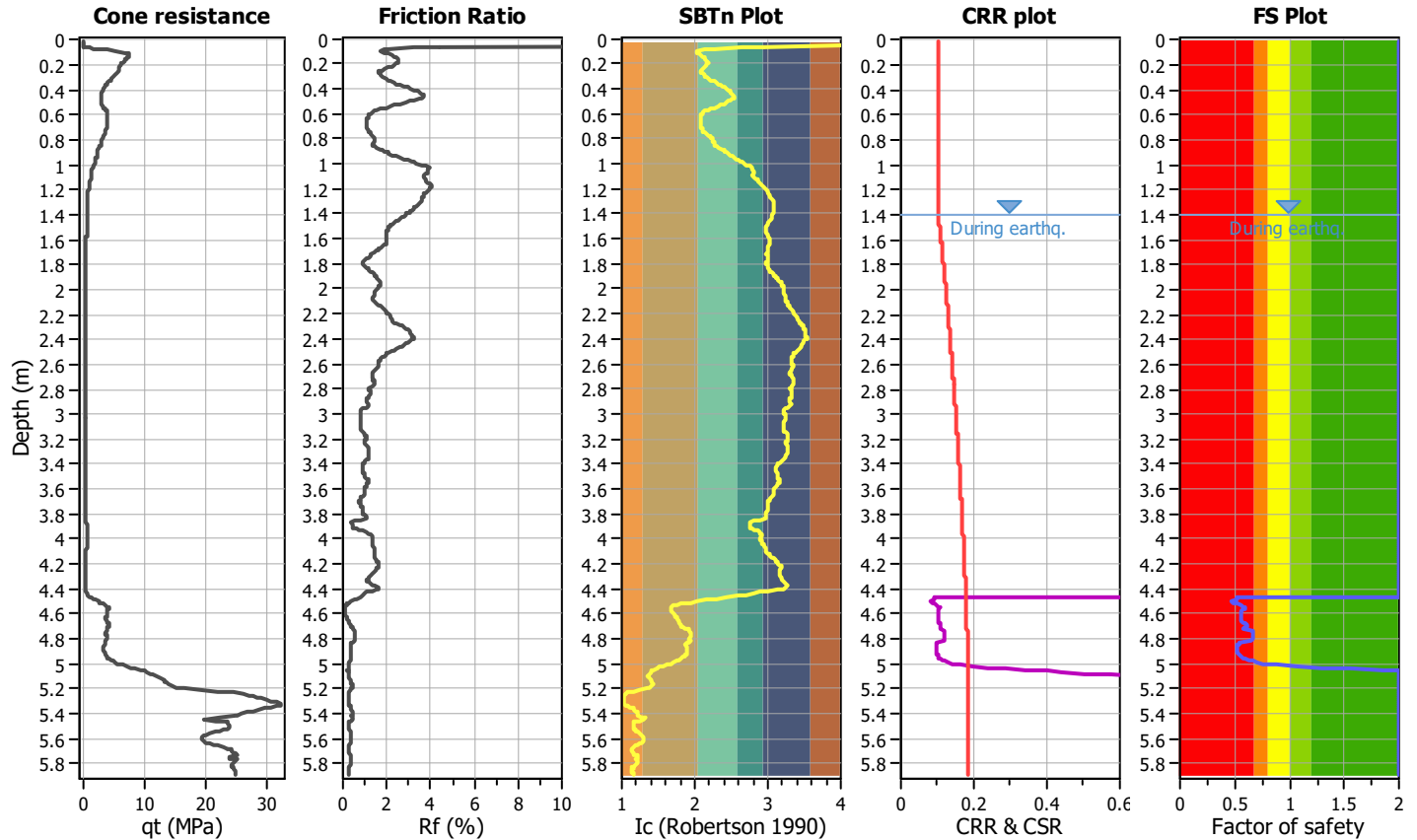
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

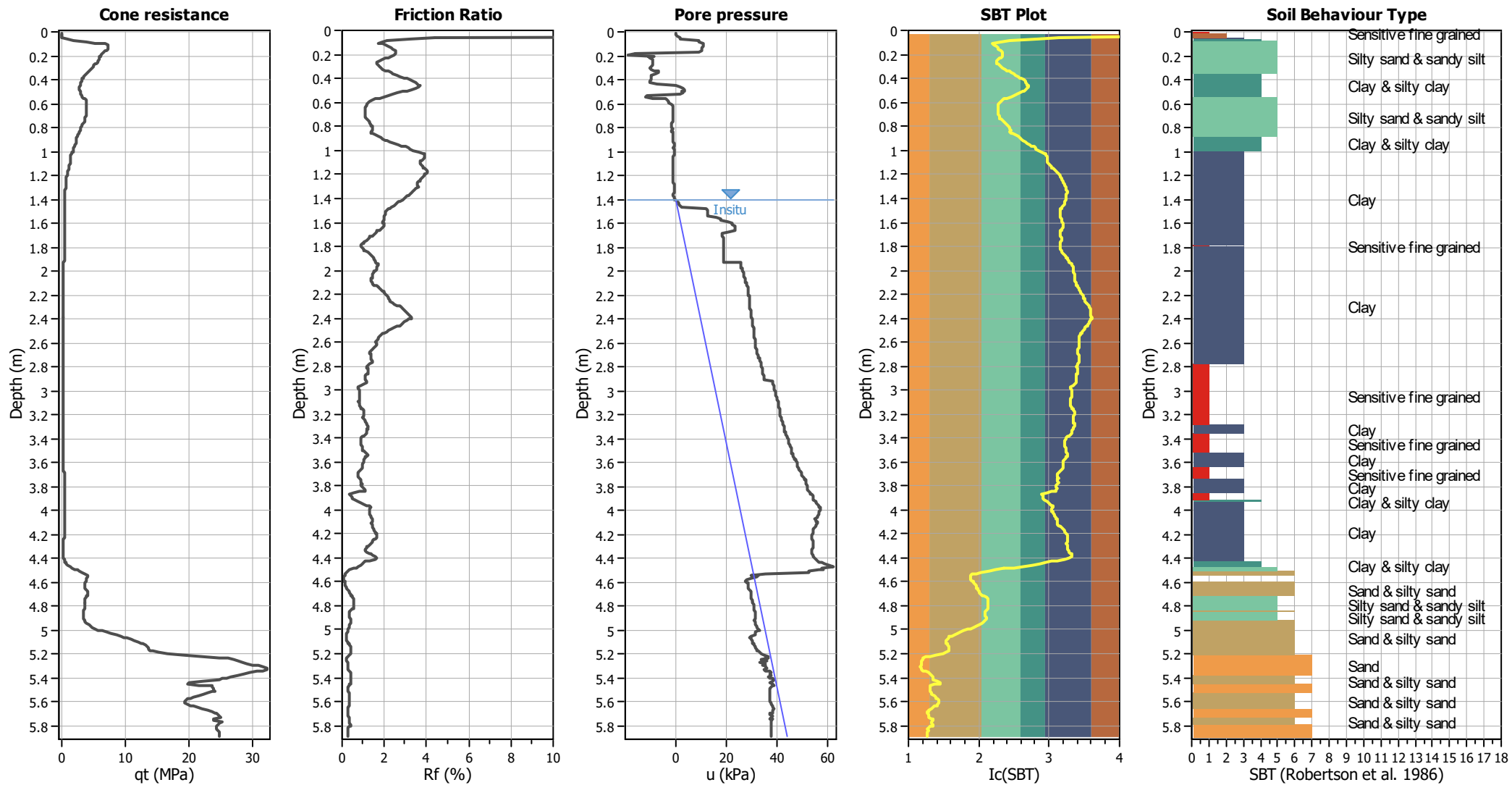
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU03
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

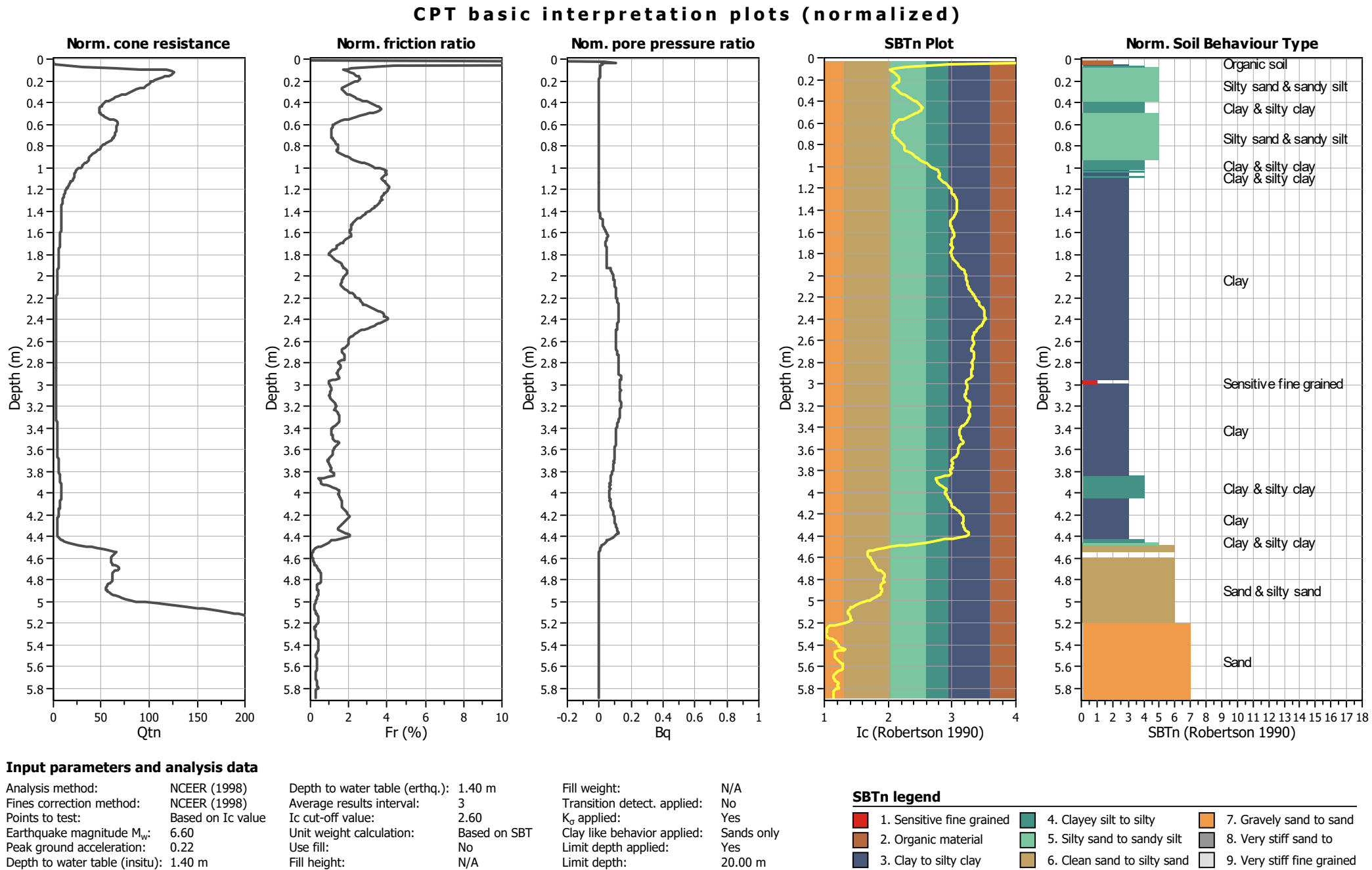


Input parameters and analysis data

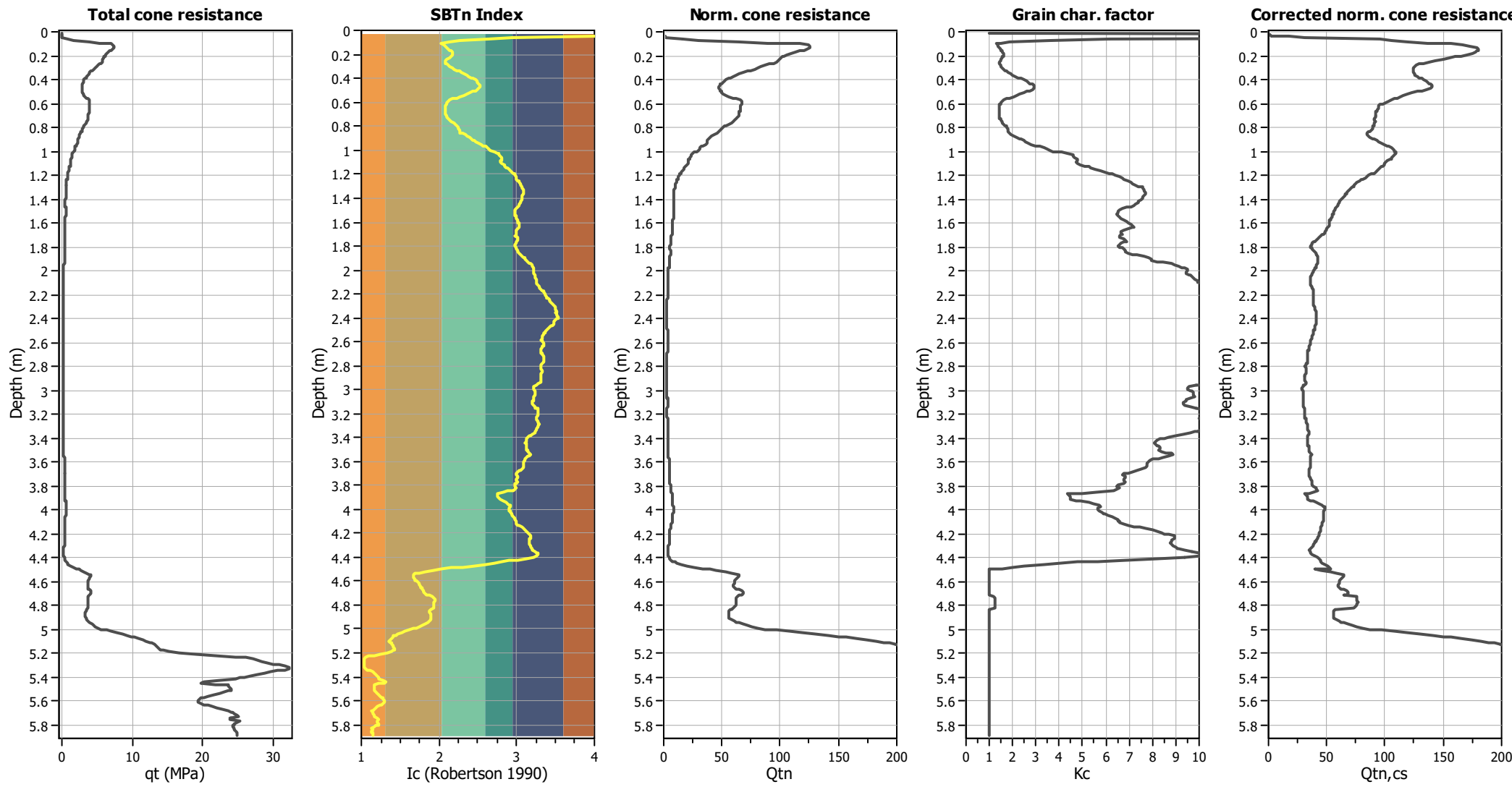
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



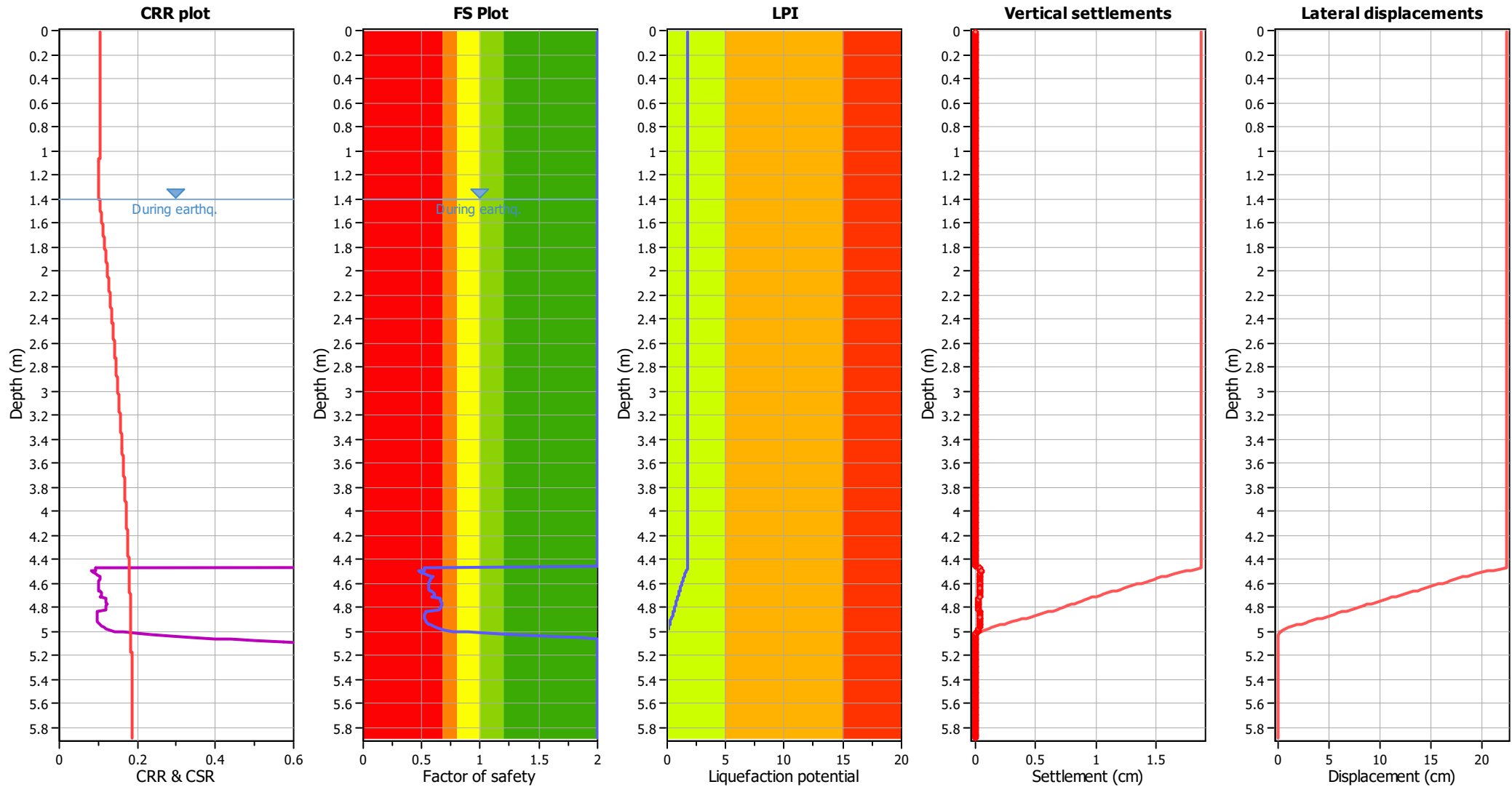
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

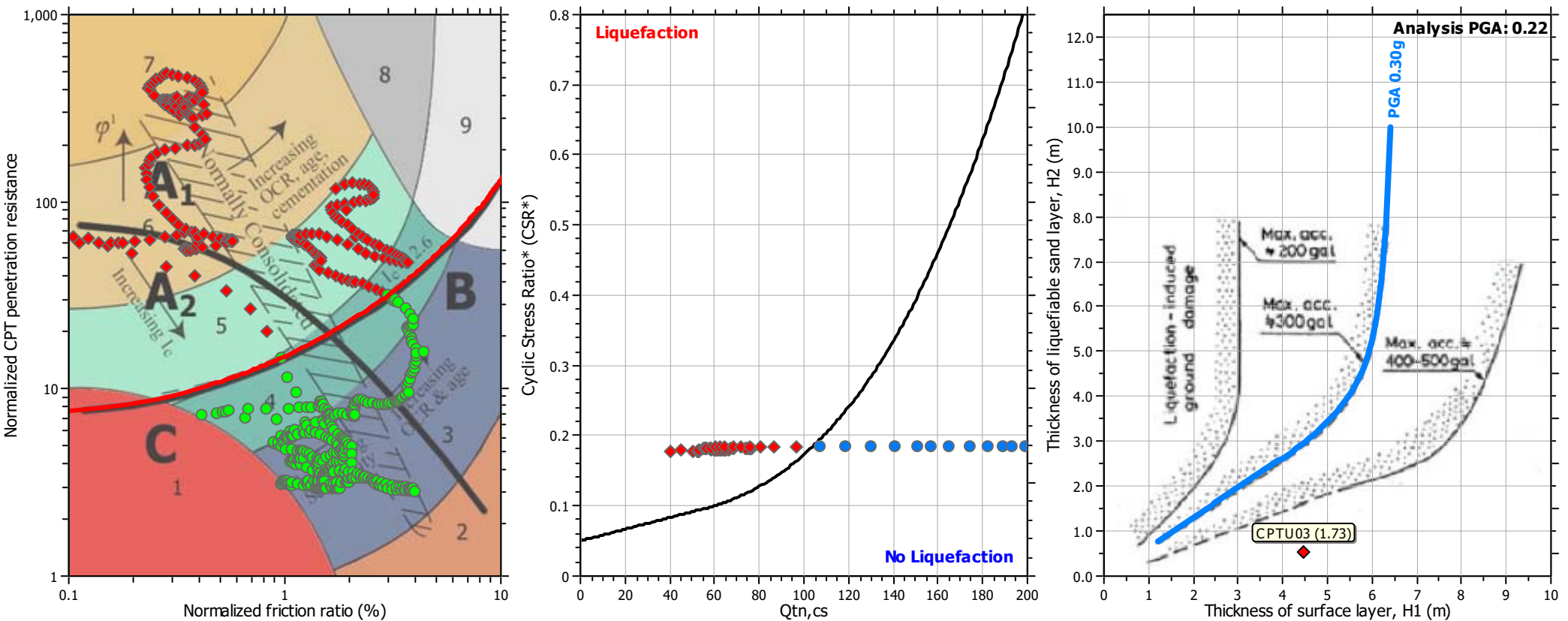
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

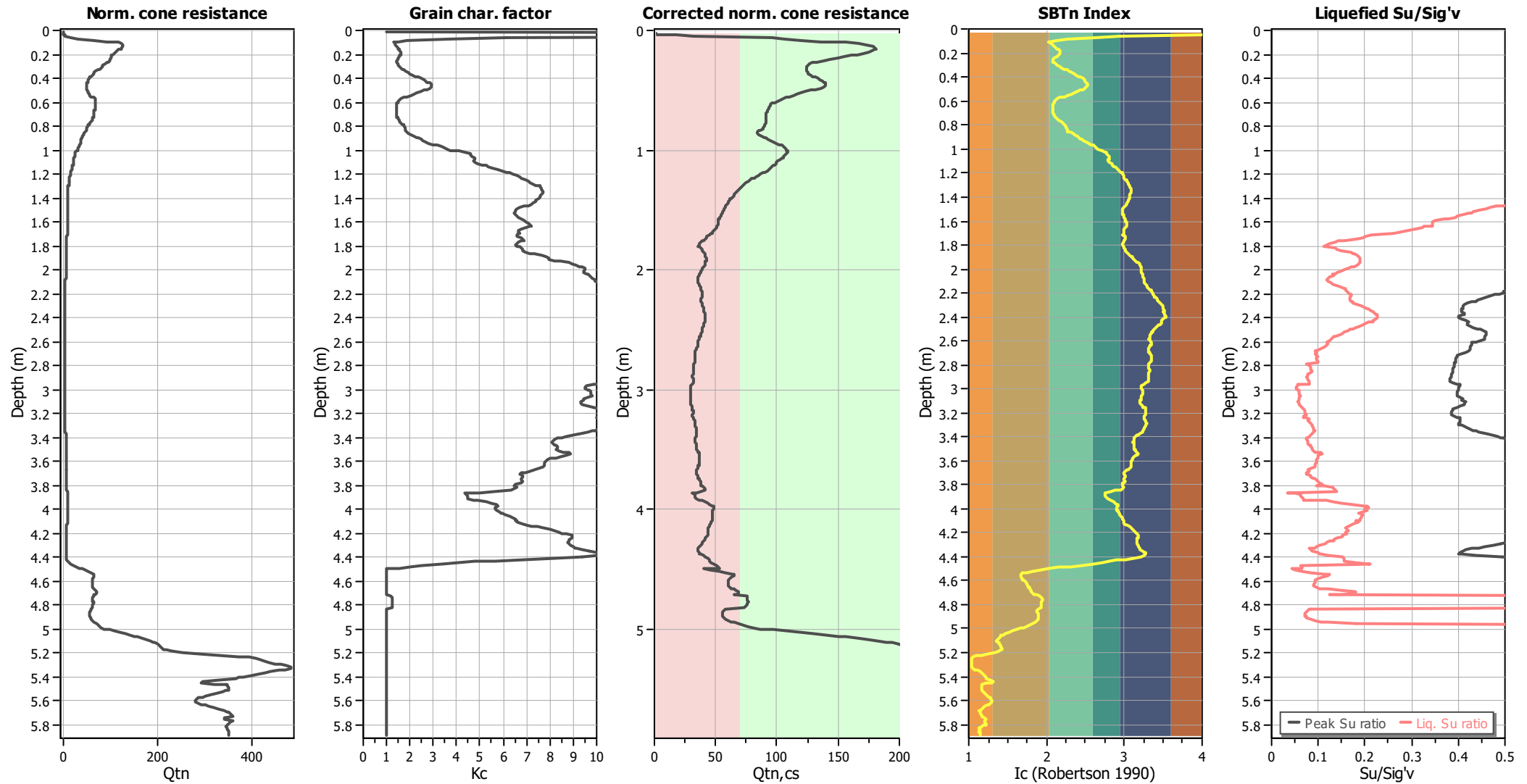
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	0.52	0.48	7.76	0.01	0.04	4.48	0.52	0.48	7.76	0.01	0.04
4.49	0.53	0.47	7.75	0.01	0.04	4.50	0.47	0.53	7.75	0.01	0.04
4.51	0.49	0.51	7.75	0.01	0.04	4.52	0.52	0.48	7.74	0.01	0.04
4.53	0.55	0.45	7.74	0.01	0.03	4.54	0.58	0.42	7.73	0.01	0.03
4.55	0.59	0.41	7.72	0.01	0.03	4.56	0.59	0.41	7.72	0.01	0.03
4.57	0.58	0.42	7.71	0.01	0.03	4.58	0.57	0.43	7.71	0.01	0.03
4.59	0.56	0.44	7.71	0.01	0.03	4.60	0.56	0.44	7.70	0.01	0.03
4.61	0.56	0.44	7.70	0.01	0.03	4.62	0.56	0.44	7.69	0.01	0.03
4.63	0.56	0.44	7.68	0.01	0.03	4.64	0.56	0.44	7.68	0.01	0.03
4.65	0.56	0.44	7.67	0.01	0.03	4.66	0.57	0.43	7.67	0.01	0.03
4.67	0.58	0.42	7.67	0.01	0.03	4.68	0.60	0.40	7.66	0.01	0.03
4.69	0.61	0.39	7.66	0.01	0.03	4.70	0.61	0.39	7.65	0.01	0.03
4.71	0.60	0.40	7.64	0.01	0.03	4.72	0.58	0.42	7.64	0.01	0.03
4.73	0.66	0.34	7.63	0.01	0.03	4.74	0.66	0.34	7.63	0.01	0.03
4.75	0.66	0.34	7.63	0.01	0.03	4.76	0.67	0.33	7.62	0.01	0.03
4.77	0.67	0.33	7.62	0.01	0.03	4.78	0.67	0.33	7.61	0.01	0.03
4.79	0.67	0.33	7.61	0.01	0.03	4.80	0.66	0.34	7.60	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	0.65	0.35	7.59	0.01	0.03	4.82	0.65	0.35	7.59	0.01	0.03
4.83	0.54	0.46	7.58	0.01	0.03	4.84	0.54	0.46	7.58	0.01	0.04
4.85	0.53	0.47	7.58	0.01	0.04	4.86	0.53	0.47	7.57	0.01	0.04
4.87	0.53	0.47	7.57	0.01	0.04	4.88	0.52	0.48	7.56	0.01	0.04
4.89	0.53	0.47	7.55	0.01	0.04	4.90	0.53	0.47	7.55	0.01	0.04
4.91	0.53	0.47	7.54	0.01	0.04	4.92	0.54	0.46	7.54	0.01	0.03
4.93	0.55	0.45	7.54	0.01	0.03	4.94	0.56	0.44	7.53	0.01	0.03
4.95	0.57	0.43	7.53	0.01	0.03	4.96	0.60	0.40	7.52	0.01	0.03
4.97	0.62	0.38	7.51	0.01	0.03	4.98	0.66	0.34	7.51	0.01	0.03
4.99	0.70	0.30	7.50	0.01	0.02	5.00	0.76	0.24	7.50	0.01	0.02
5.01	0.89	0.11	7.50	0.01	0.01	5.02	1.07	0.00	7.49	0.01	0.00
5.03	1.29	0.00	7.49	0.01	0.00	5.04	1.56	0.00	7.48	0.01	0.00
5.05	1.86	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00						

Overall liquefaction potential: 1.73

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

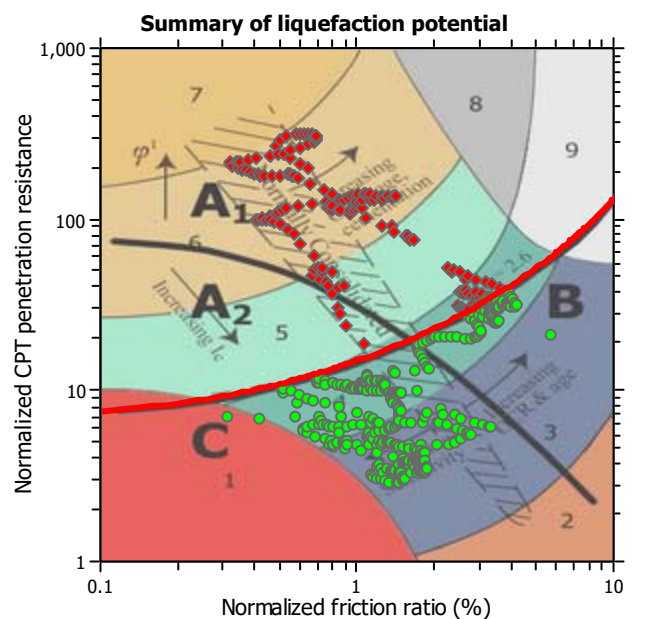
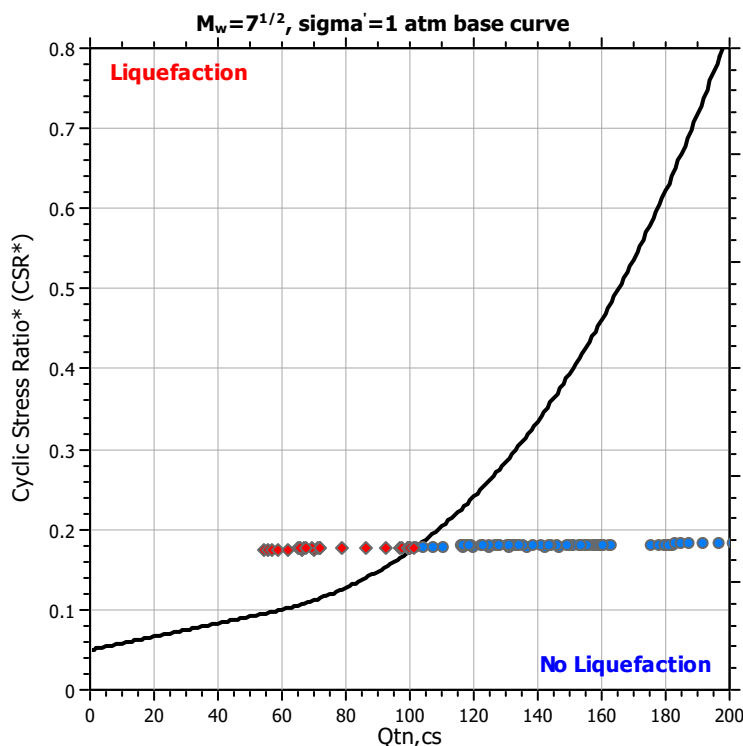
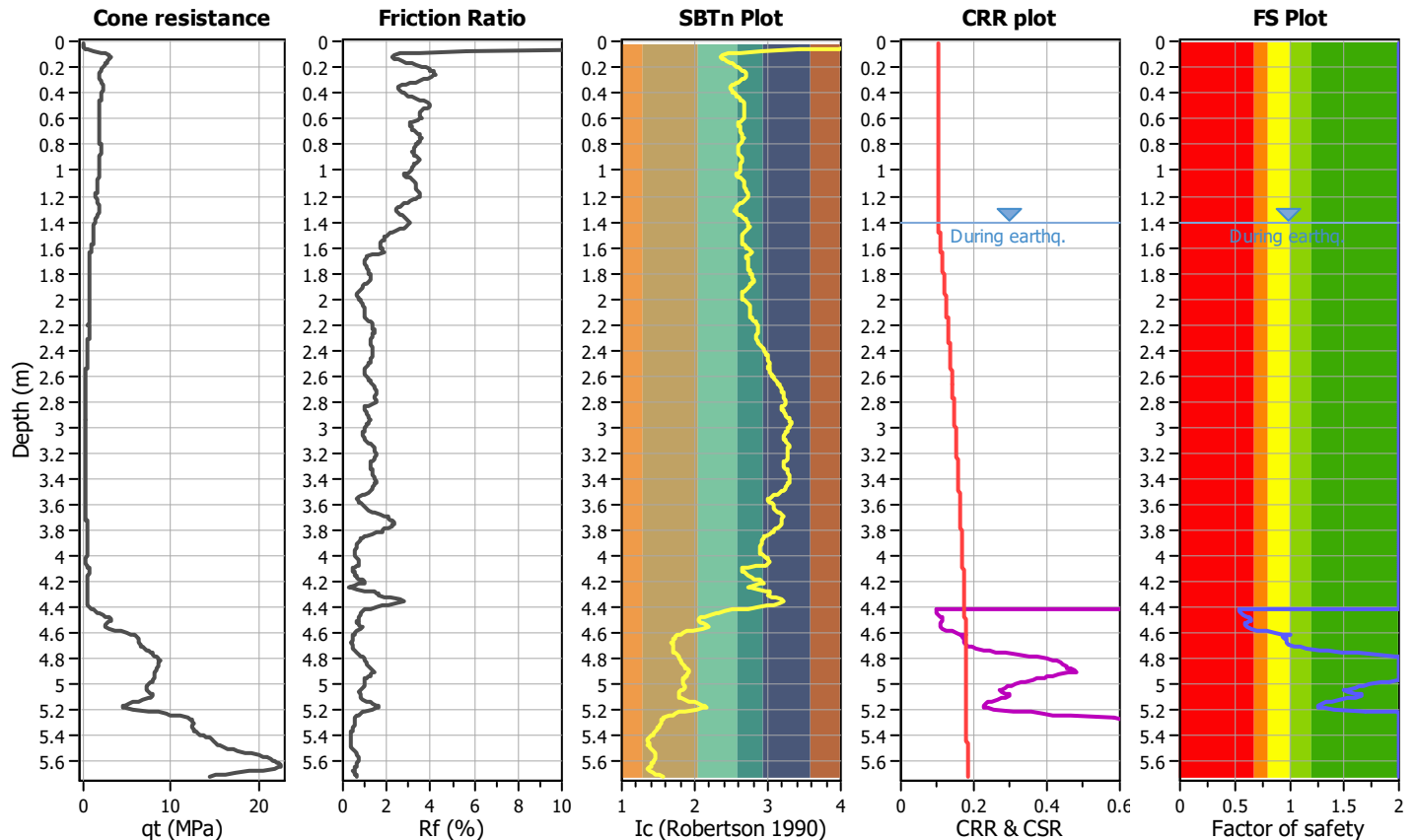
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

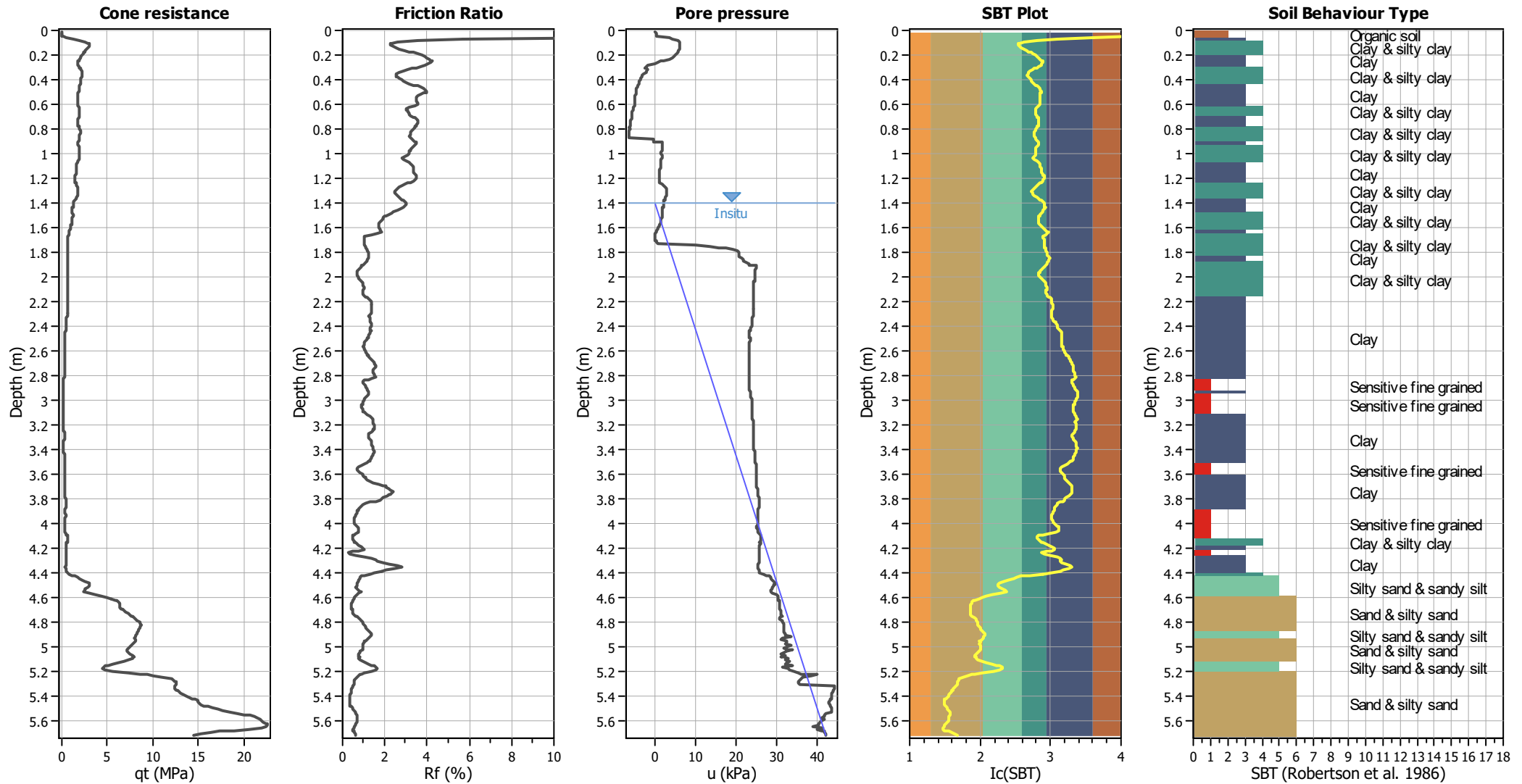
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU04
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	20.00 m
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes		



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

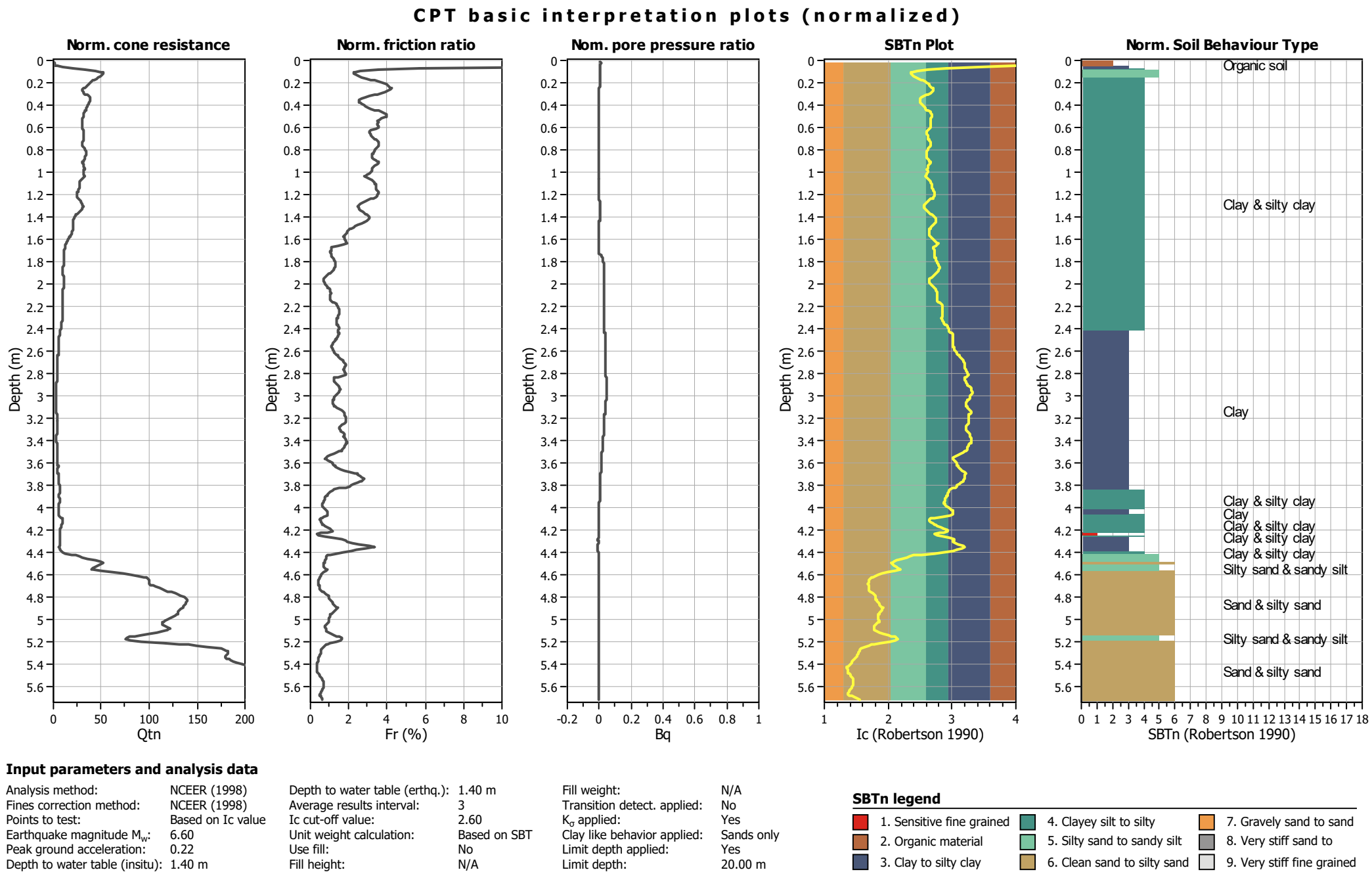


Input parameters and analysis data

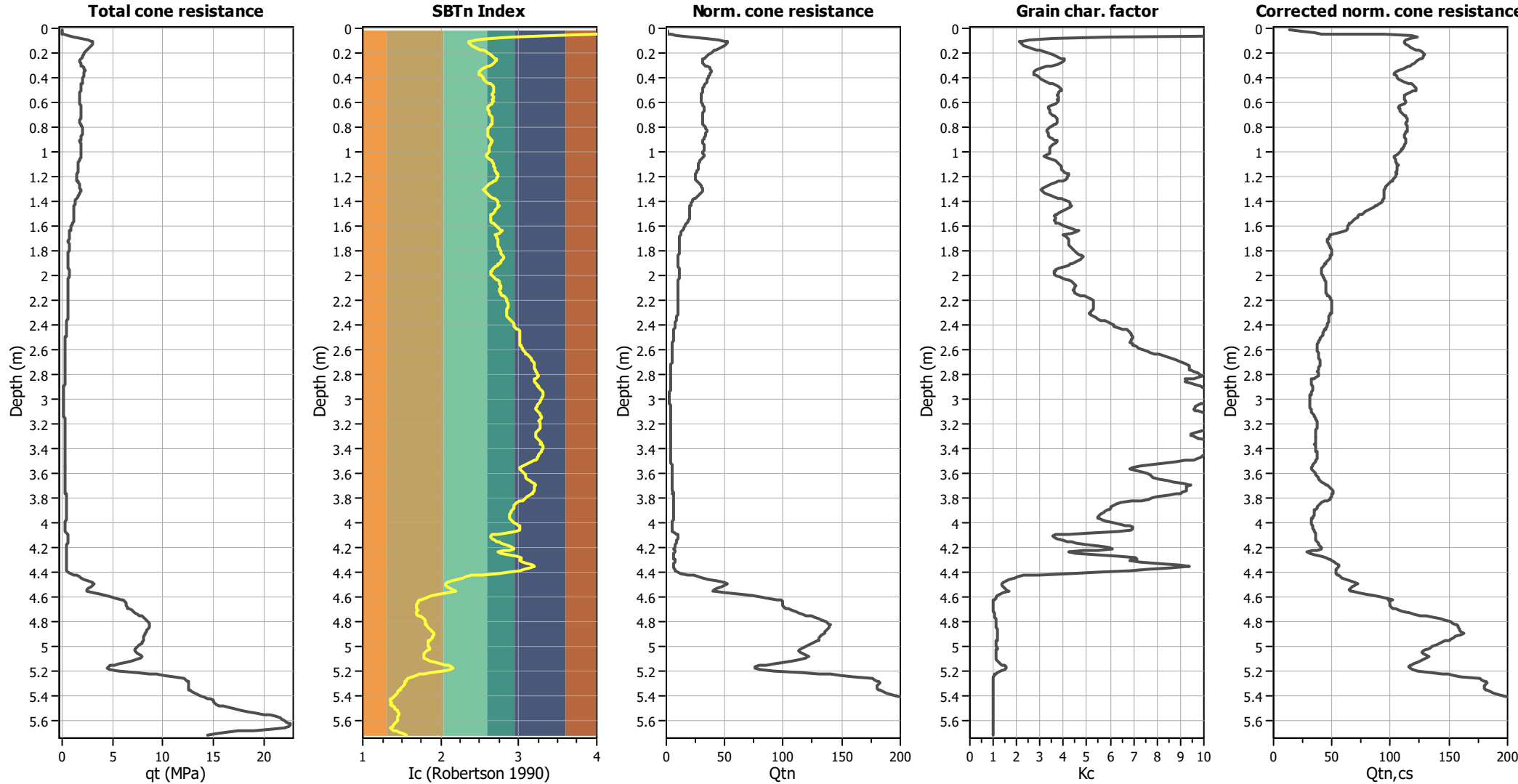
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



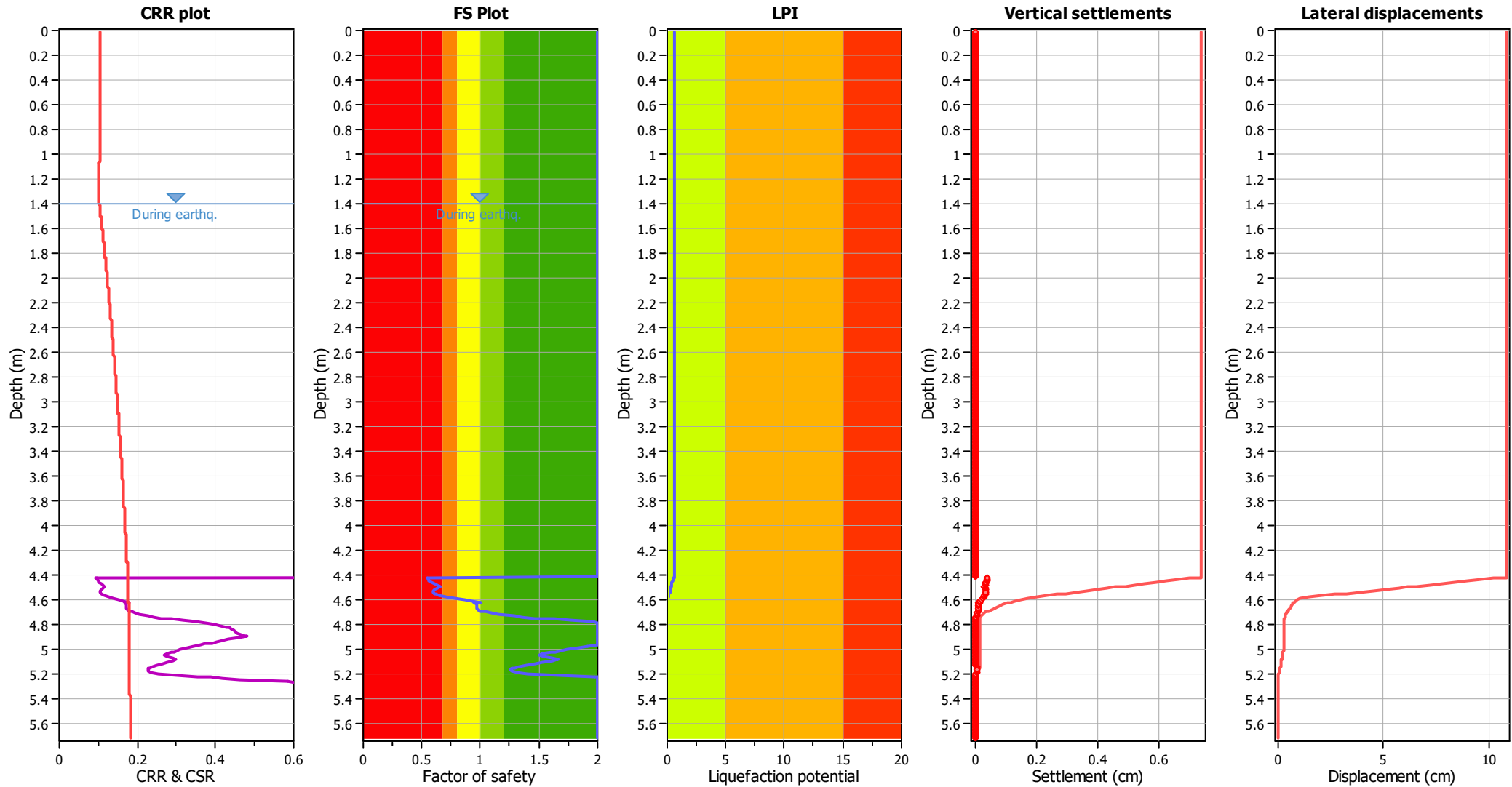
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

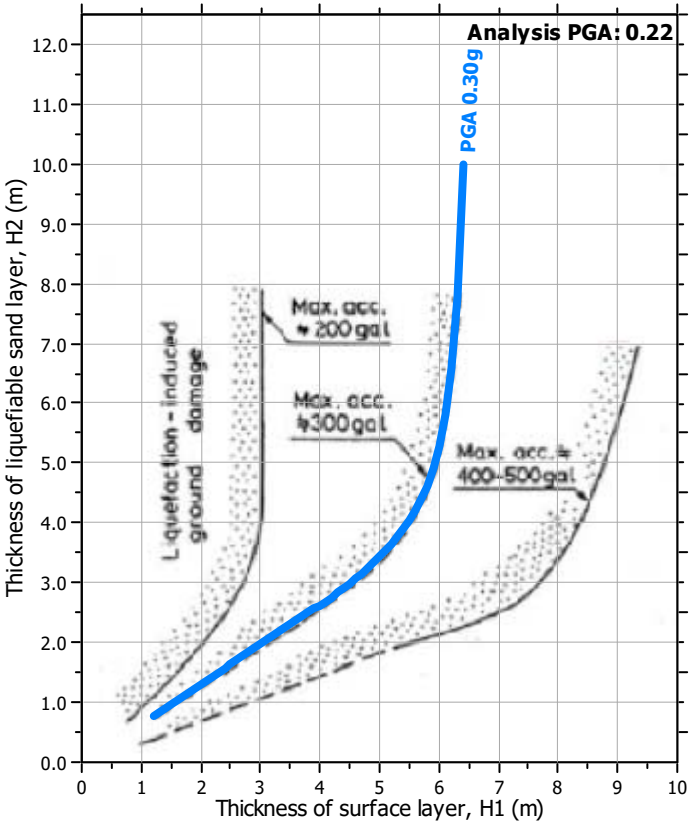
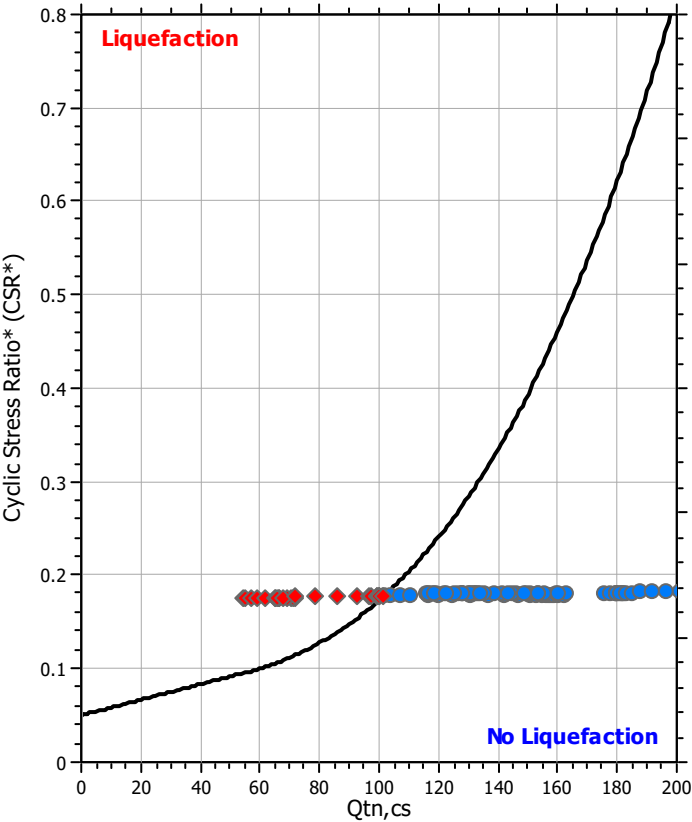
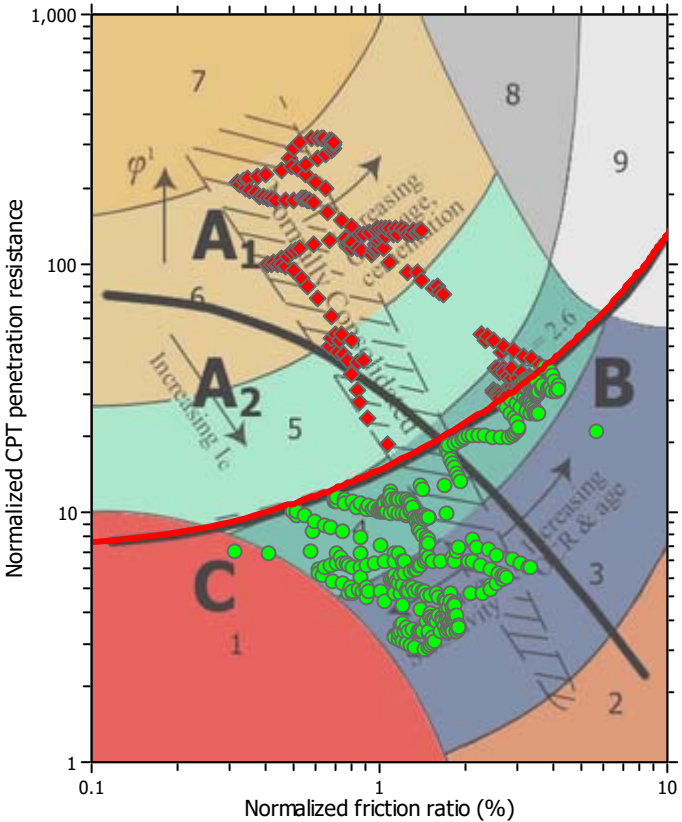
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

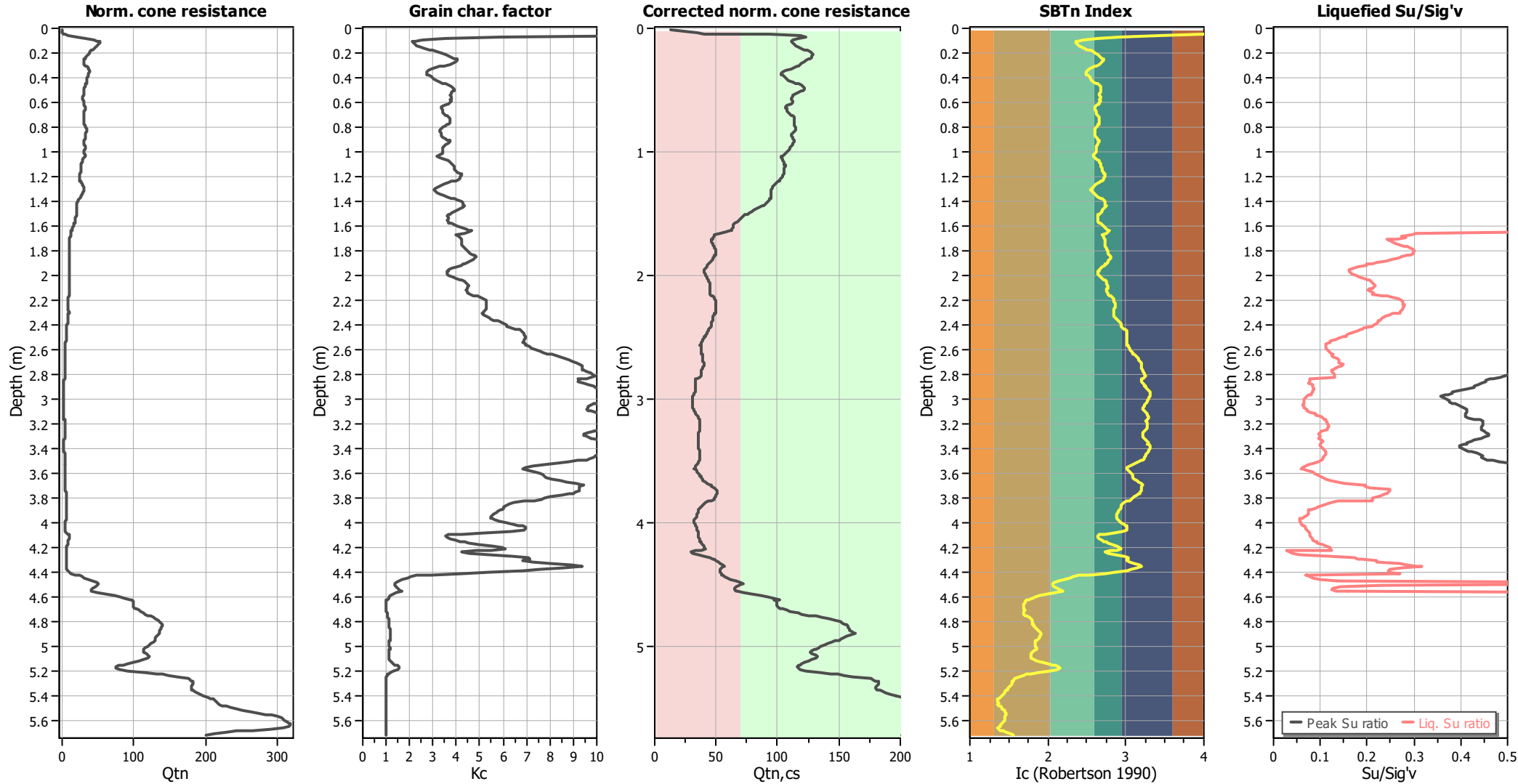
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	0.54	0.46	7.79	0.01	0.04
4.43	0.55	0.45	7.79	0.01	0.04	4.44	0.55	0.45	7.78	0.01	0.03
4.45	0.56	0.44	7.78	0.01	0.03	4.46	0.58	0.42	7.77	0.01	0.03
4.47	0.61	0.39	7.76	0.01	0.03	4.48	0.64	0.36	7.76	0.01	0.03
4.49	0.65	0.35	7.75	0.01	0.03	4.50	0.65	0.35	7.75	0.01	0.03
4.51	0.63	0.37	7.75	0.01	0.03	4.52	0.61	0.39	7.74	0.01	0.03
4.53	0.60	0.40	7.74	0.01	0.03	4.54	0.60	0.40	7.73	0.01	0.03
4.55	0.60	0.40	7.72	0.01	0.03	4.56	0.62	0.38	7.72	0.01	0.03
4.57	0.65	0.35	7.71	0.01	0.03	4.58	0.71	0.29	7.71	0.01	0.02
4.59	0.79	0.21	7.71	0.01	0.02	4.60	0.87	0.13	7.70	0.01	0.01
4.61	0.93	0.07	7.70	0.01	0.01	4.62	1.01	0.00	7.69	0.01	0.00
4.63	0.94	0.06	7.68	0.01	0.00	4.64	0.96	0.04	7.68	0.01	0.00
4.65	0.97	0.03	7.67	0.01	0.00	4.66	0.97	0.03	7.67	0.01	0.00
4.67	0.97	0.03	7.67	0.01	0.00	4.68	0.98	0.02	7.66	0.01	0.00
4.69	1.00	0.00	7.66	0.01	0.00	4.70	1.05	0.00	7.65	0.01	0.00
4.71	1.10	0.00	7.64	0.01	0.00	4.72	1.16	0.00	7.64	0.01	0.00
4.73	1.29	0.00	7.63	0.01	0.00	4.74	1.35	0.00	7.63	0.01	0.00
4.75	1.47	0.00	7.63	0.01	0.00	4.76	1.62	0.00	7.62	0.01	0.00
4.77	1.78	0.00	7.62	0.01	0.00	4.78	1.96	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	1.92	0.00	7.51	0.01	0.00
4.99	1.83	0.00	7.50	0.01	0.00	5.00	1.74	0.00	7.50	0.01	0.00
5.01	1.68	0.00	7.50	0.01	0.00	5.02	1.64	0.00	7.49	0.01	0.00
5.03	1.60	0.00	7.49	0.01	0.00	5.04	1.53	0.00	7.48	0.01	0.00
5.05	1.50	0.00	7.47	0.01	0.00	5.06	1.54	0.00	7.47	0.01	0.00
5.07	1.61	0.00	7.46	0.01	0.00	5.08	1.66	0.00	7.46	0.01	0.00
5.09	1.65	0.00	7.46	0.01	0.00	5.10	1.61	0.00	7.45	0.01	0.00
5.11	1.53	0.00	7.45	0.01	0.00	5.12	1.46	0.00	7.44	0.01	0.00
5.13	1.39	0.00	7.43	0.01	0.00	5.14	1.33	0.00	7.43	0.01	0.00
5.15	1.29	0.00	7.42	0.01	0.00	5.16	1.27	0.00	7.42	0.01	0.00
5.17	1.25	0.00	7.42	0.01	0.00	5.18	1.27	0.00	7.41	0.01	0.00
5.19	1.31	0.00	7.41	0.01	0.00	5.20	1.40	0.00	7.40	0.01	0.00
5.21	1.70	0.00	7.39	0.01	0.00	5.22	1.97	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI

Overall liquefaction potential: 0.56

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

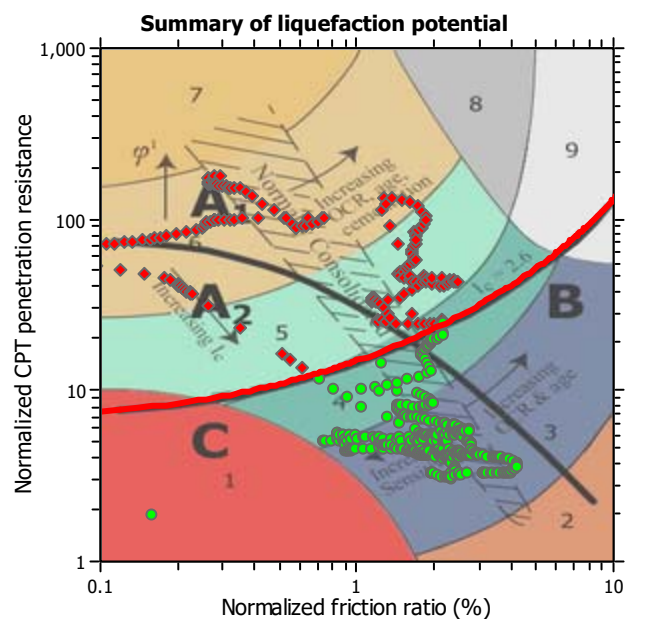
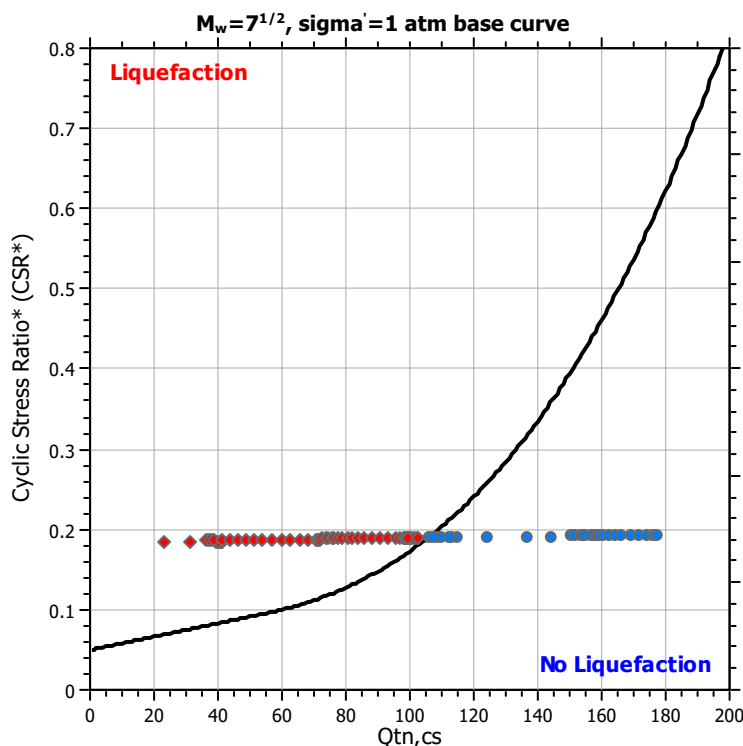
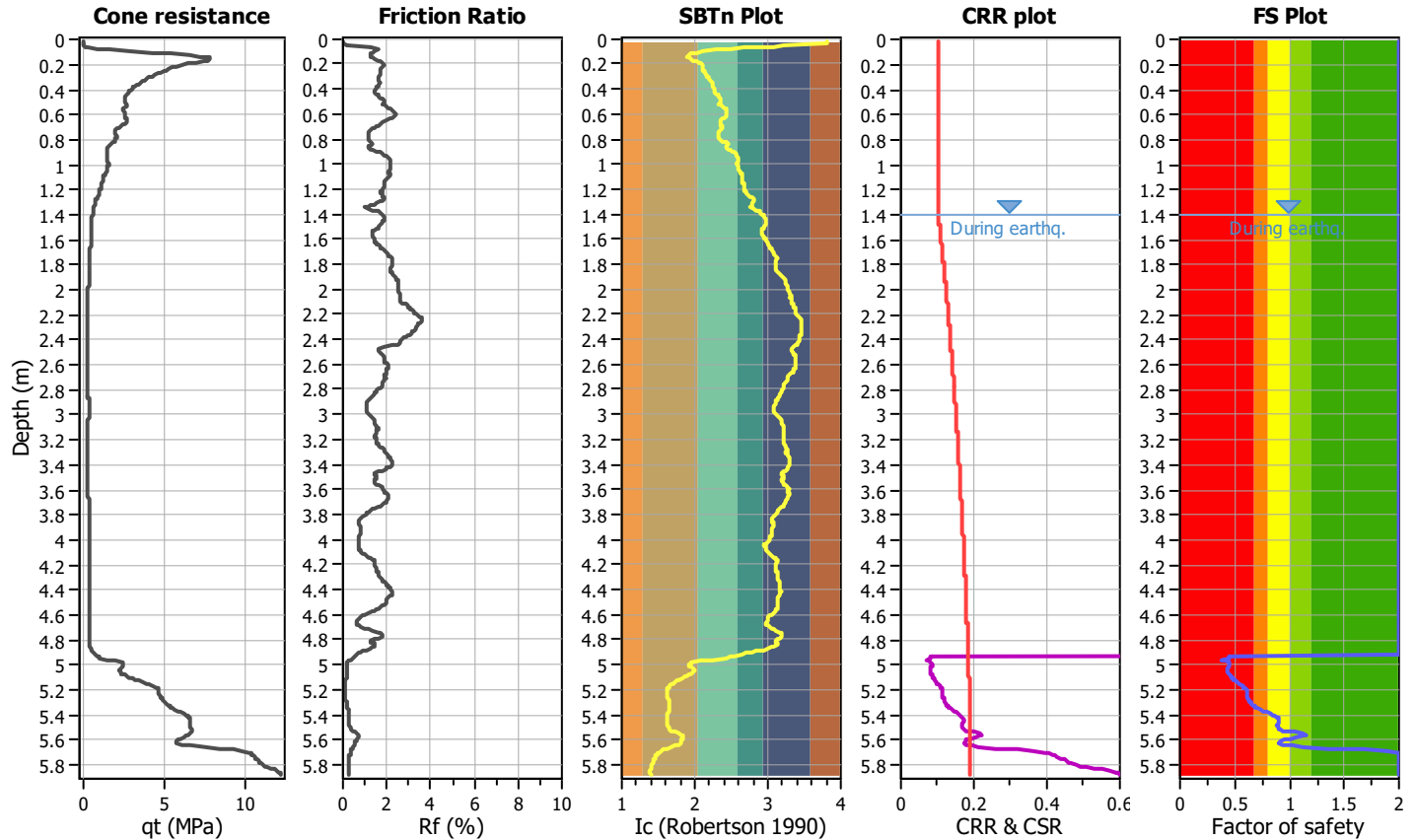
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

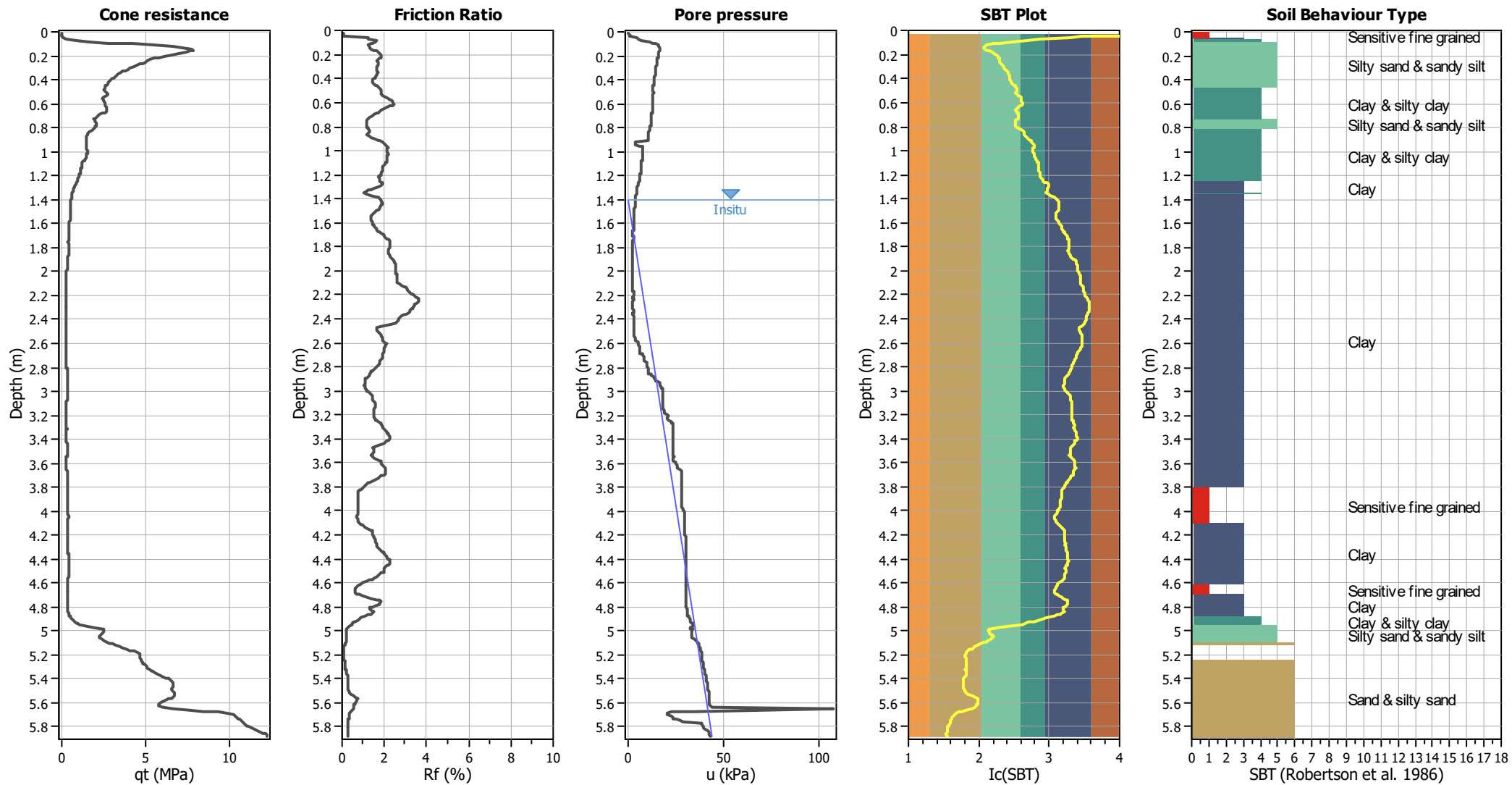
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU05
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
 Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
 Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
 Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

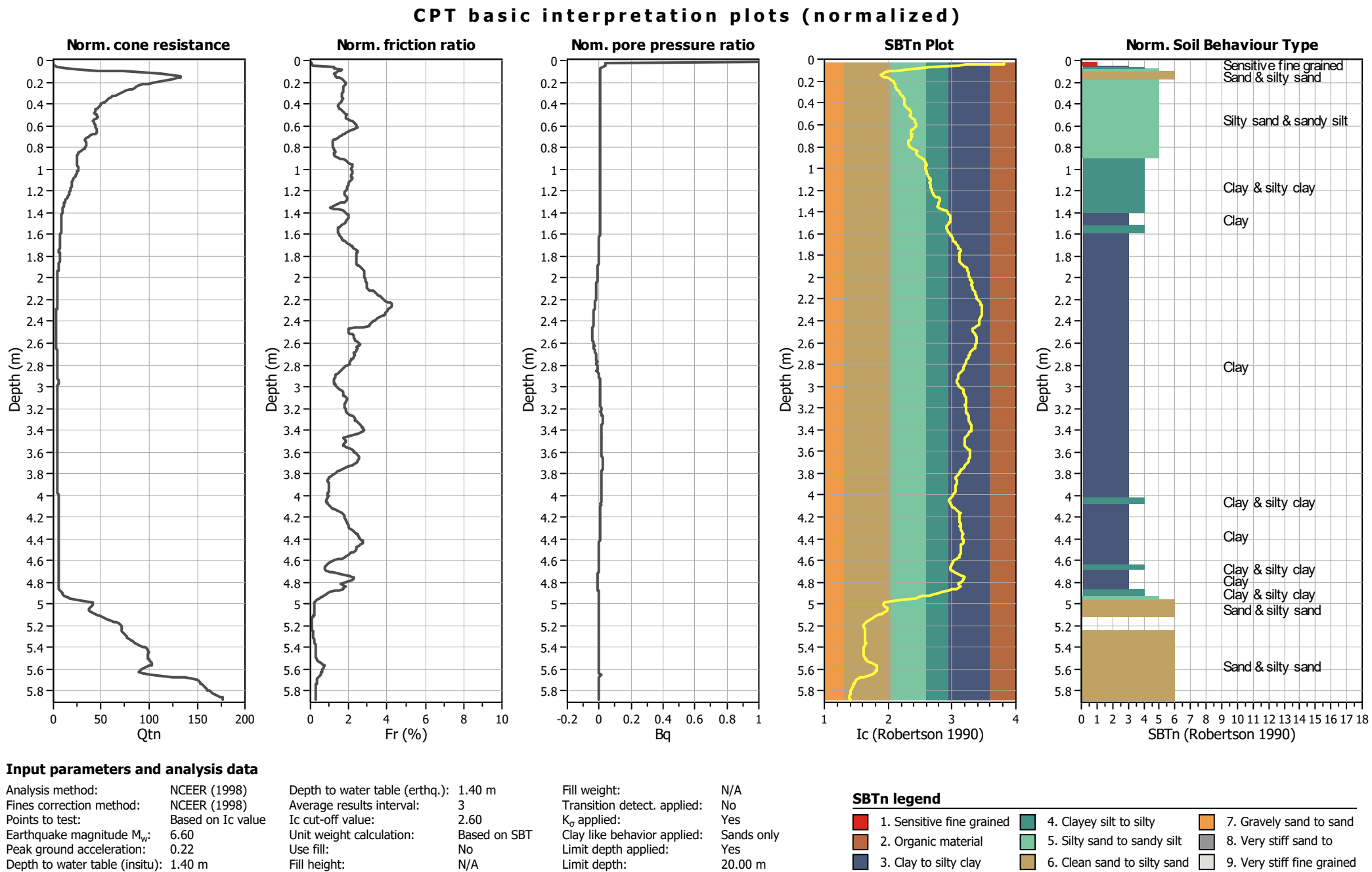


Input parameters and analysis data

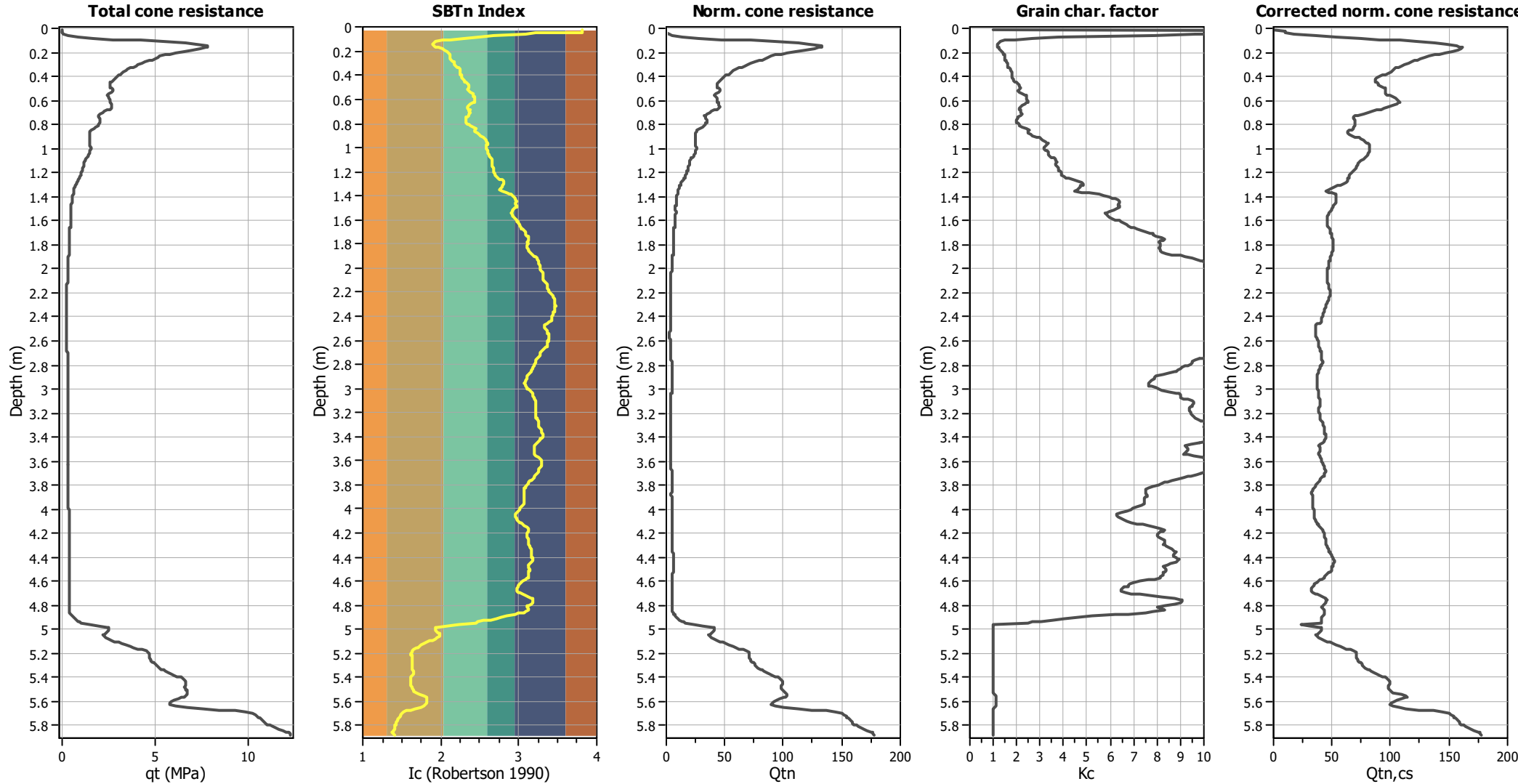
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



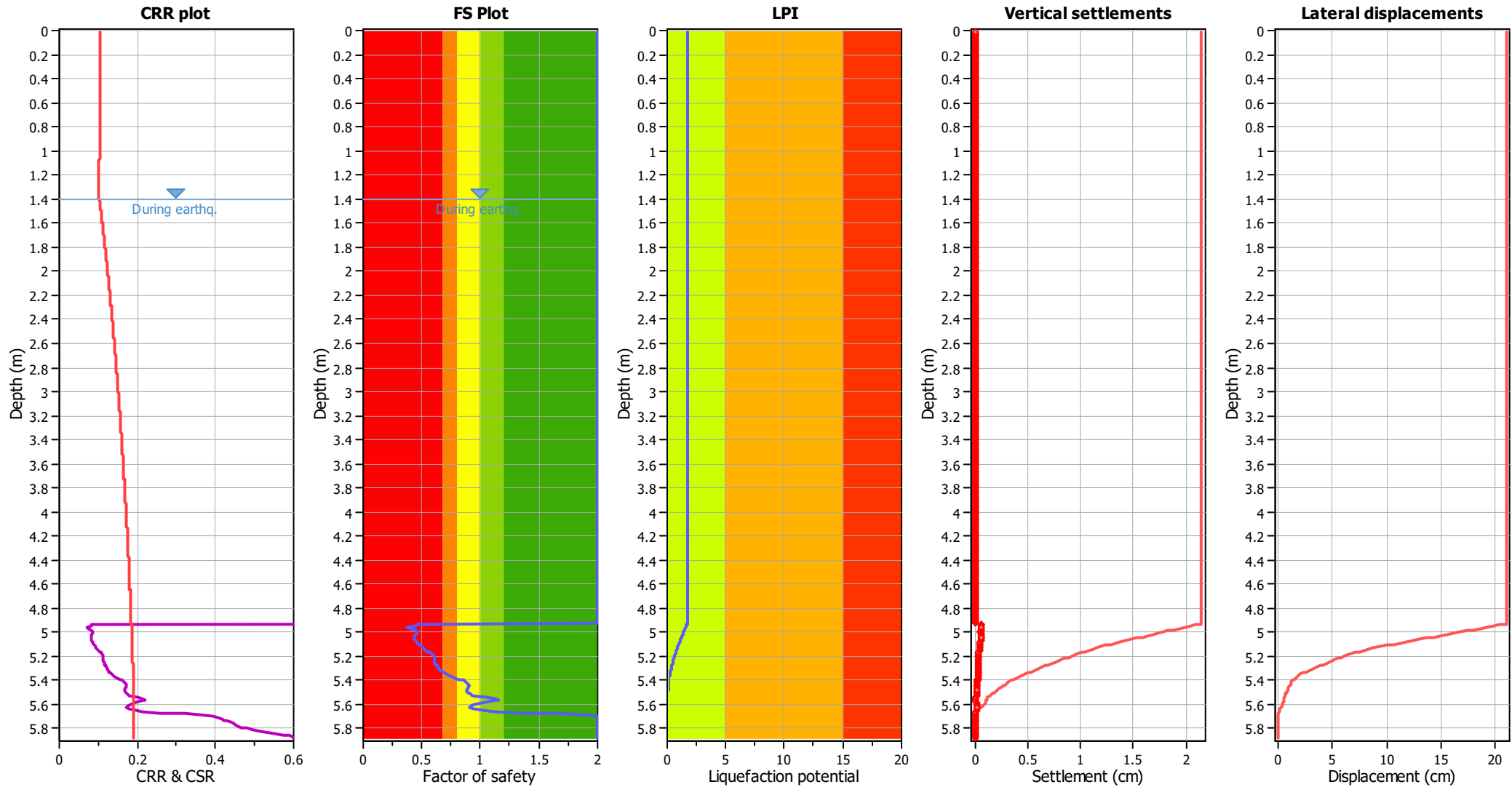
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

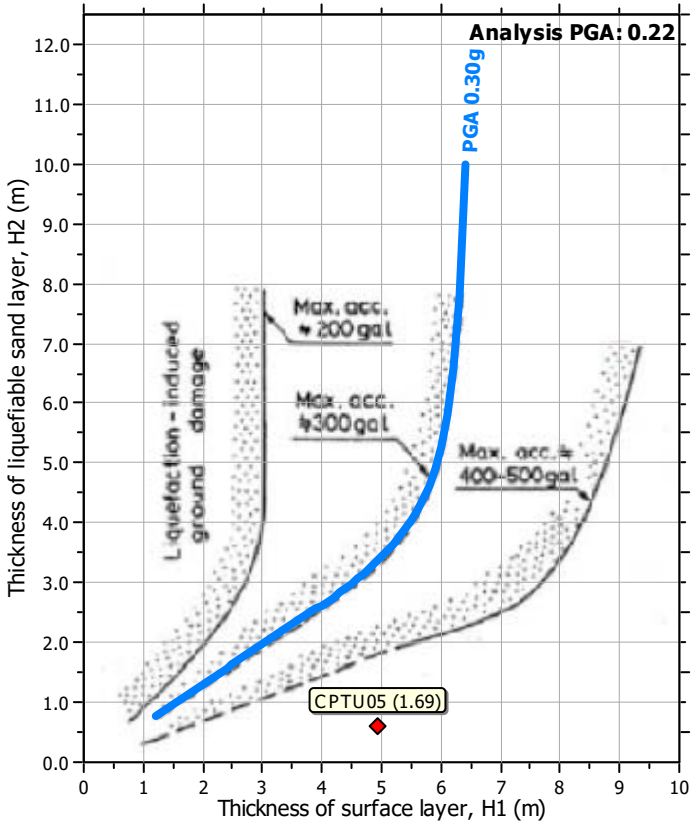
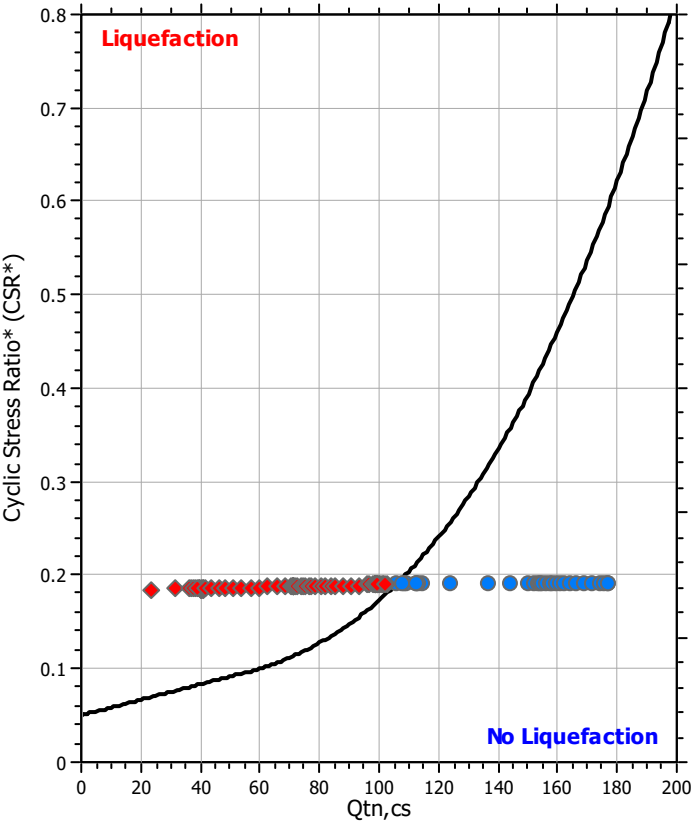
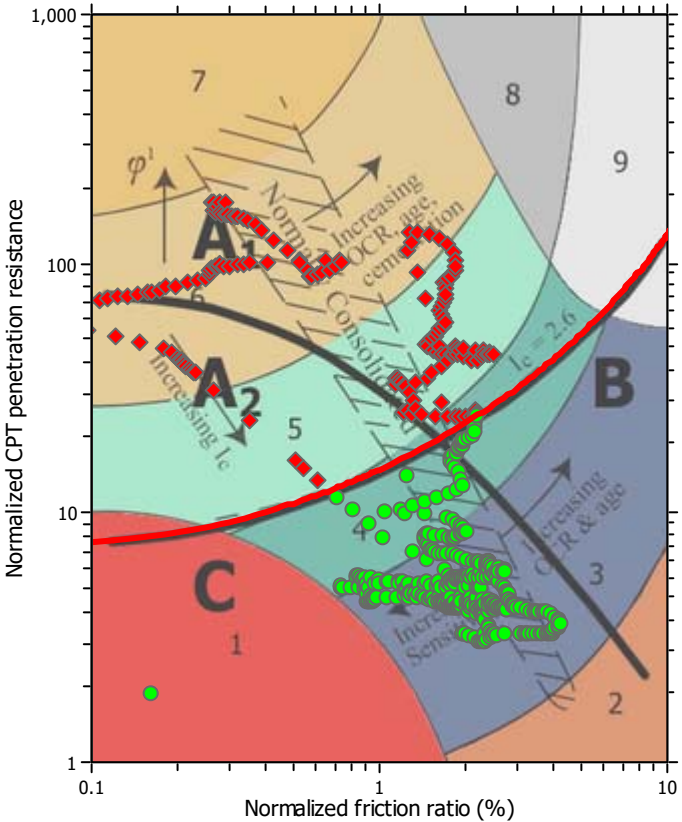
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

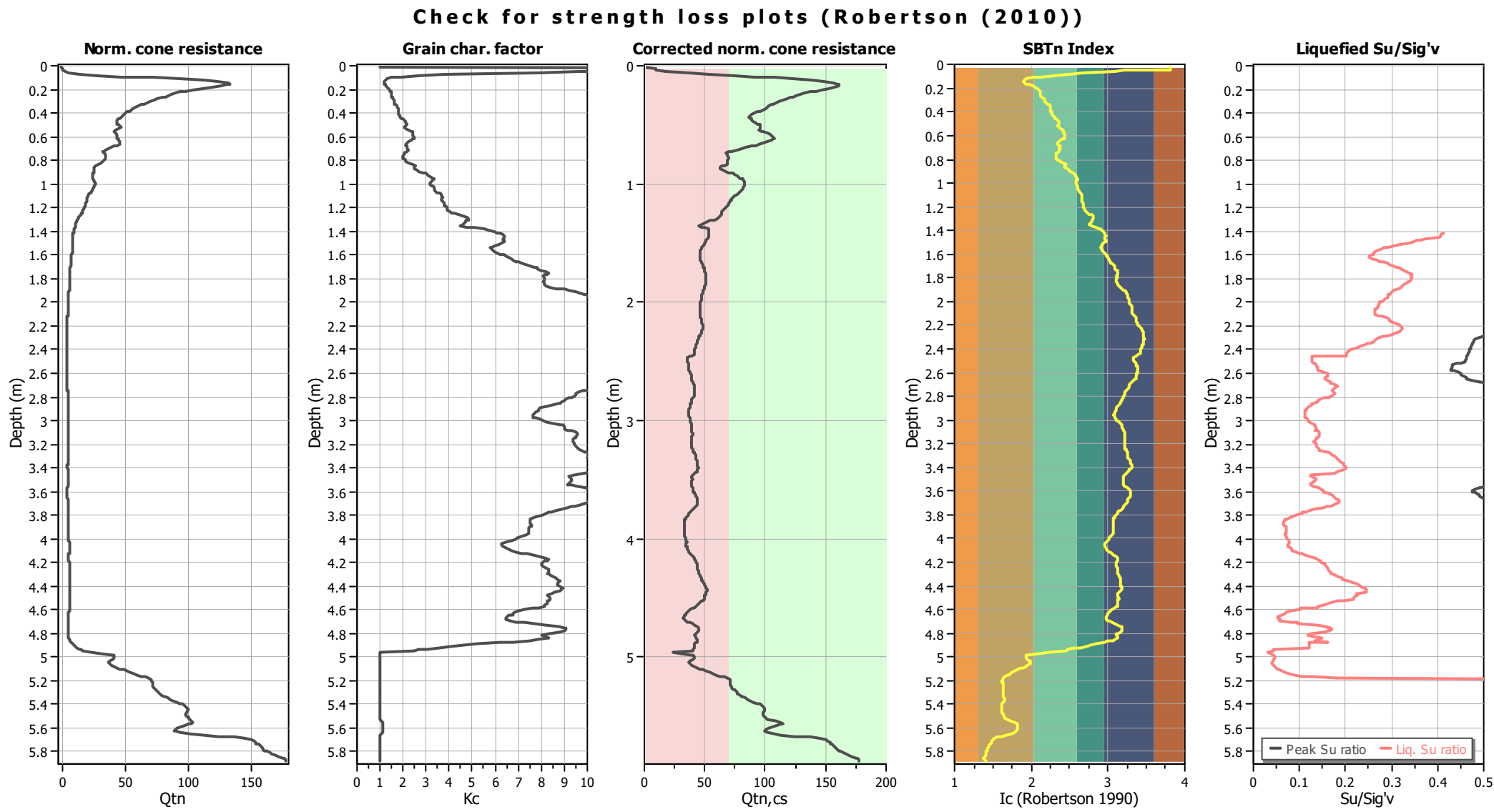
Red	Very high risk
Orange	High risk
Yellow	Low risk

Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	0.45	0.55	7.54	0.01	0.04	4.94	0.45	0.55	7.53	0.01	0.04
4.95	0.45	0.55	7.53	0.01	0.04	4.96	0.38	0.62	7.52	0.01	0.05
4.97	0.41	0.59	7.51	0.01	0.04	4.98	0.45	0.55	7.51	0.01	0.04
4.99	0.45	0.55	7.50	0.01	0.04	5.00	0.45	0.55	7.50	0.01	0.04
5.01	0.45	0.55	7.50	0.01	0.04	5.02	0.45	0.55	7.49	0.01	0.04
5.03	0.44	0.56	7.49	0.01	0.04	5.04	0.43	0.57	7.48	0.01	0.04
5.05	0.43	0.57	7.47	0.01	0.04	5.06	0.44	0.56	7.47	0.01	0.04
5.07	0.44	0.56	7.46	0.01	0.04	5.08	0.45	0.55	7.46	0.01	0.04
5.09	0.46	0.54	7.46	0.01	0.04	5.10	0.47	0.53	7.45	0.01	0.04
5.11	0.48	0.52	7.45	0.01	0.04	5.12	0.50	0.50	7.44	0.01	0.04
5.13	0.51	0.49	7.43	0.01	0.04	5.14	0.52	0.48	7.43	0.01	0.04
5.15	0.53	0.47	7.42	0.01	0.03	5.16	0.55	0.45	7.42	0.01	0.03
5.17	0.57	0.43	7.42	0.01	0.03	5.18	0.59	0.41	7.41	0.01	0.03
5.19	0.60	0.40	7.41	0.01	0.03	5.20	0.60	0.40	7.40	0.01	0.03
5.21	0.60	0.40	7.39	0.01	0.03	5.22	0.60	0.40	7.39	0.01	0.03
5.23	0.60	0.40	7.38	0.01	0.03	5.24	0.60	0.40	7.38	0.01	0.03
5.25	0.61	0.39	7.38	0.01	0.03	5.26	0.61	0.39	7.37	0.01	0.03
5.27	0.62	0.38	7.37	0.01	0.03	5.28	0.63	0.37	7.36	0.01	0.03
5.29	0.64	0.36	7.36	0.01	0.03	5.30	0.64	0.36	7.35	0.01	0.03
5.31	0.65	0.35	7.34	0.01	0.03	5.32	0.66	0.34	7.34	0.01	0.02
5.33	0.68	0.32	7.33	0.01	0.02	5.34	0.69	0.31	7.33	0.01	0.02
5.35	0.71	0.29	7.33	0.01	0.02	5.36	0.73	0.27	7.32	0.01	0.02
5.37	0.76	0.24	7.32	0.01	0.02	5.38	0.79	0.21	7.31	0.01	0.02
5.39	0.82	0.18	7.30	0.01	0.01	5.40	0.85	0.15	7.30	0.01	0.01
5.41	0.87	0.13	7.29	0.01	0.01	5.42	0.89	0.11	7.29	0.01	0.01
5.43	0.90	0.10	7.29	0.01	0.01	5.44	0.91	0.09	7.28	0.01	0.01
5.45	0.91	0.09	7.28	0.01	0.01	5.46	0.90	0.10	7.27	0.01	0.01
5.47	0.89	0.11	7.26	0.01	0.01	5.48	0.89	0.11	7.26	0.01	0.01
5.49	0.89	0.11	7.25	0.01	0.01	5.50	0.89	0.11	7.25	0.01	0.01
5.51	0.91	0.09	7.25	0.01	0.01	5.52	0.92	0.08	7.24	0.01	0.01
5.53	0.93	0.07	7.24	0.01	0.00	5.54	1.05	0.00	7.23	0.01	0.00
5.55	1.12	0.00	7.22	0.01	0.00	5.56	1.16	0.00	7.22	0.01	0.00
5.57	1.13	0.00	7.21	0.01	0.00	5.58	1.07	0.00	7.21	0.01	0.00
5.59	1.00	0.00	7.21	0.01	0.00	5.60	0.95	0.05	7.20	0.01	0.00
5.61	0.92	0.08	7.20	0.01	0.01	5.62	0.90	0.10	7.19	0.01	0.01
5.63	0.90	0.10	7.18	0.01	0.01	5.64	0.94	0.06	7.18	0.01	0.00
5.65	1.03	0.00	7.17	0.01	0.00	5.66	1.12	0.00	7.17	0.01	0.00
5.67	1.36	0.00	7.17	0.01	0.00	5.68	1.68	0.00	7.16	0.01	0.00
5.69	1.89	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00

Overall liquefaction potential: 1.69

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

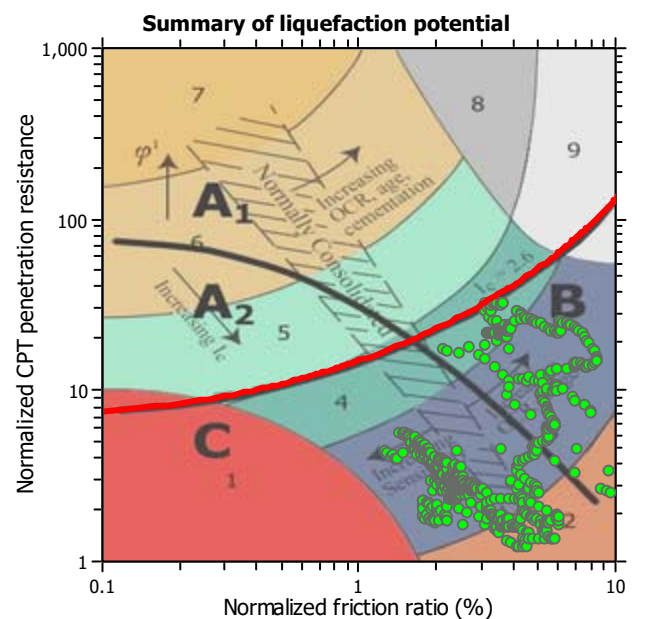
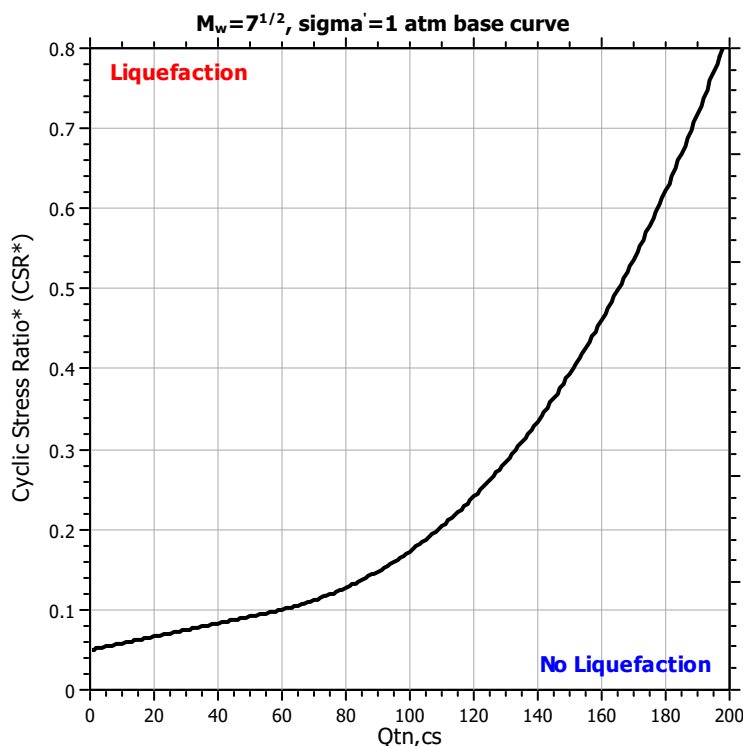
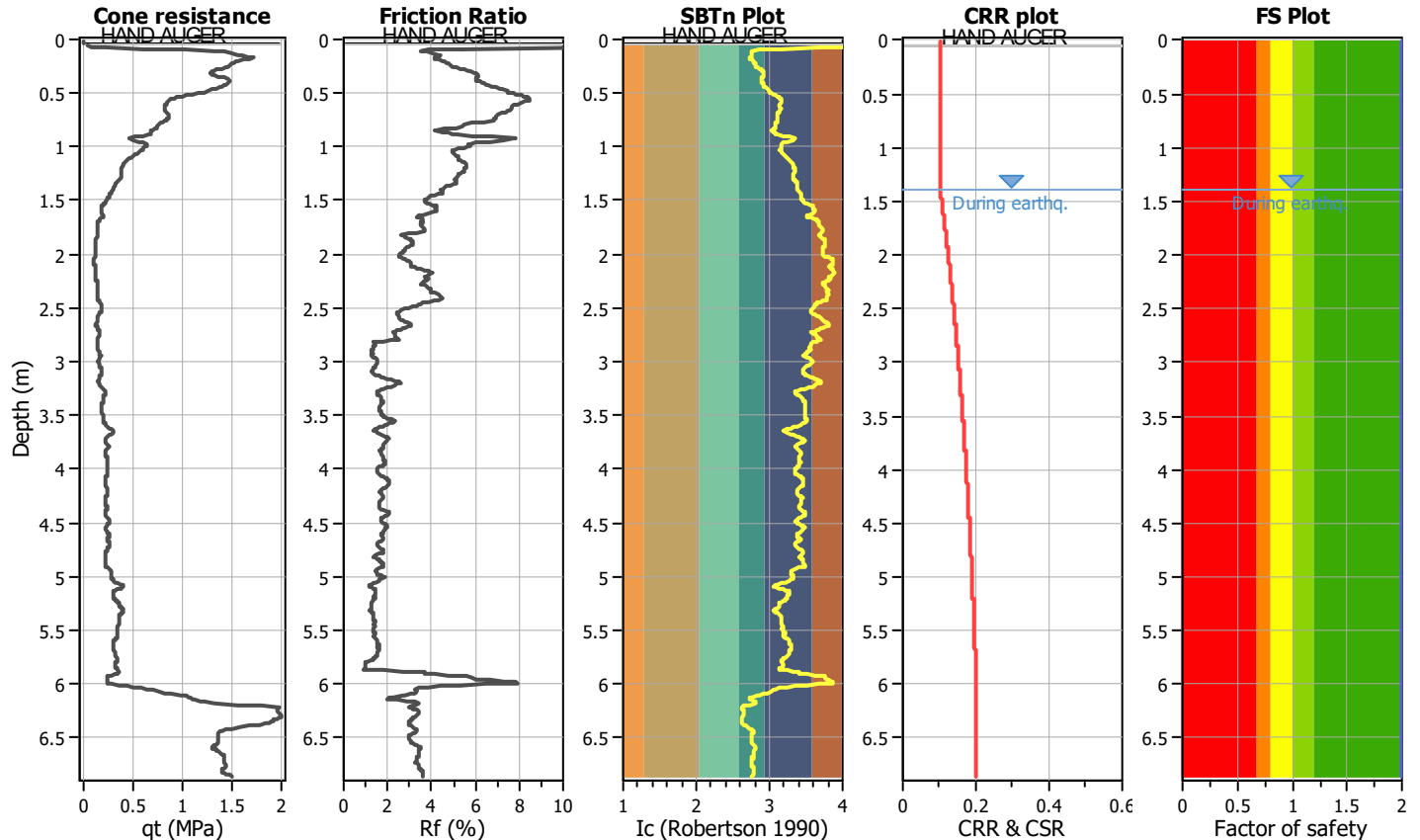
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

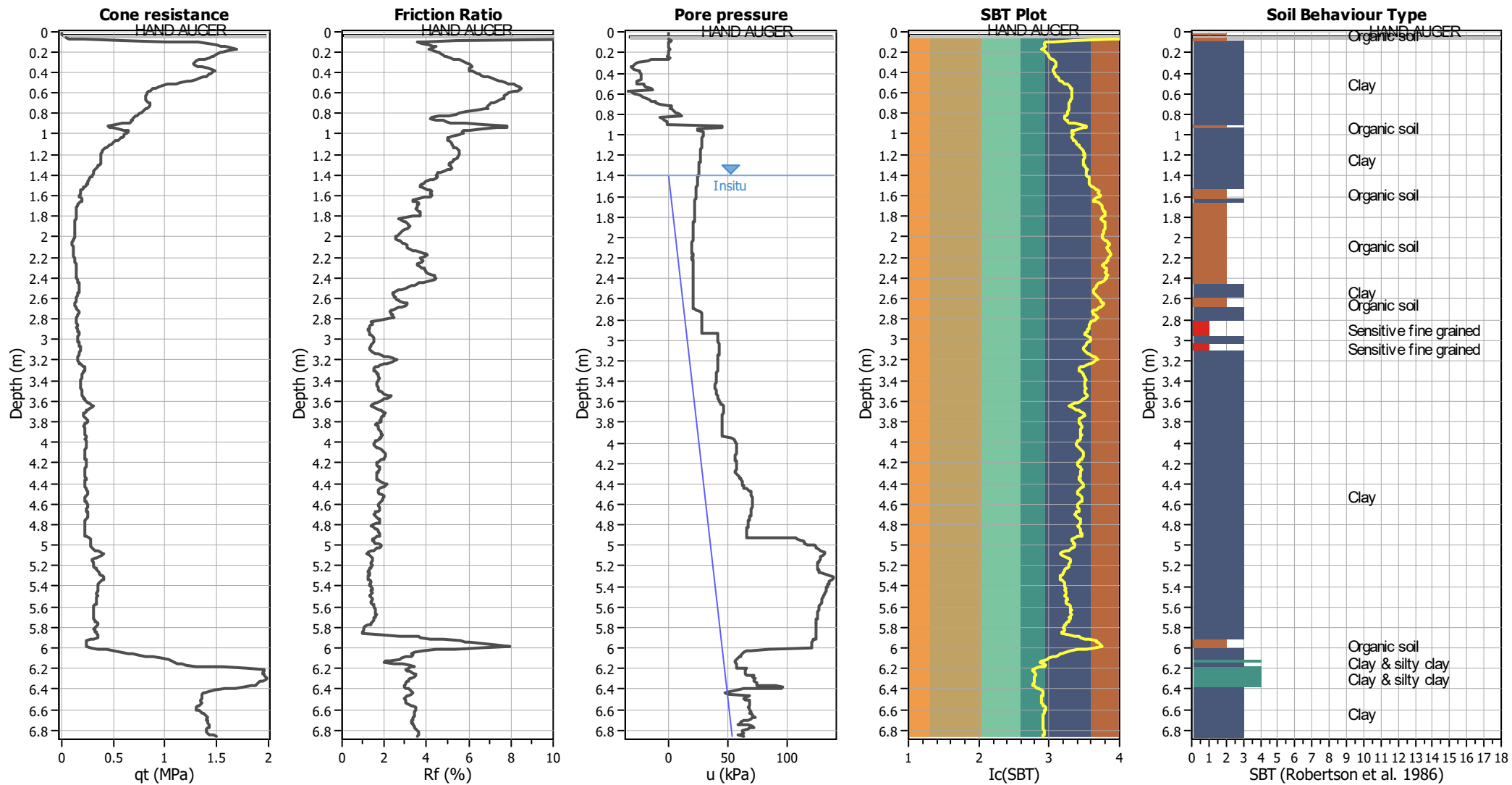
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU06
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

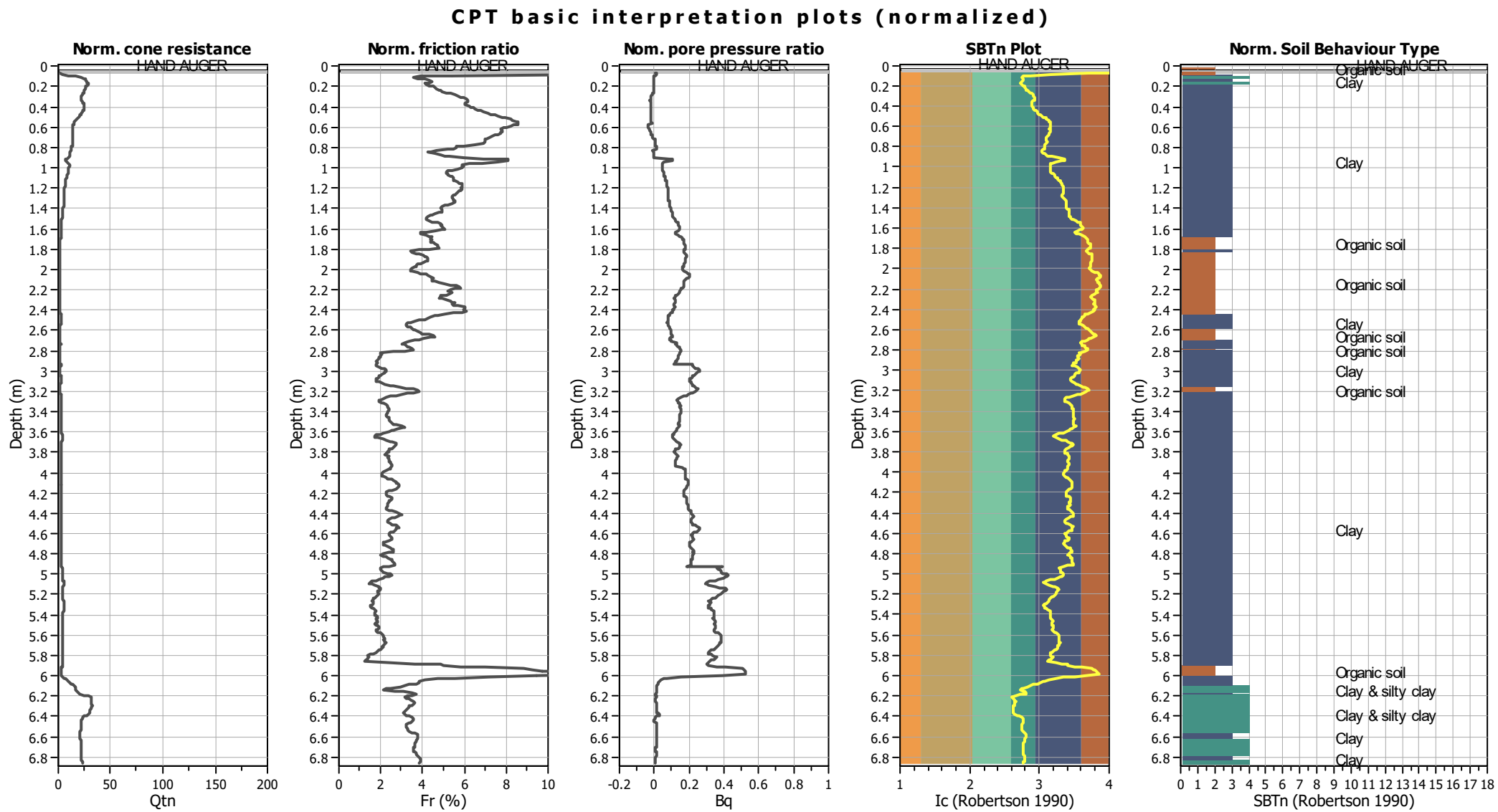
CPT basic interpretation plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend		
1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



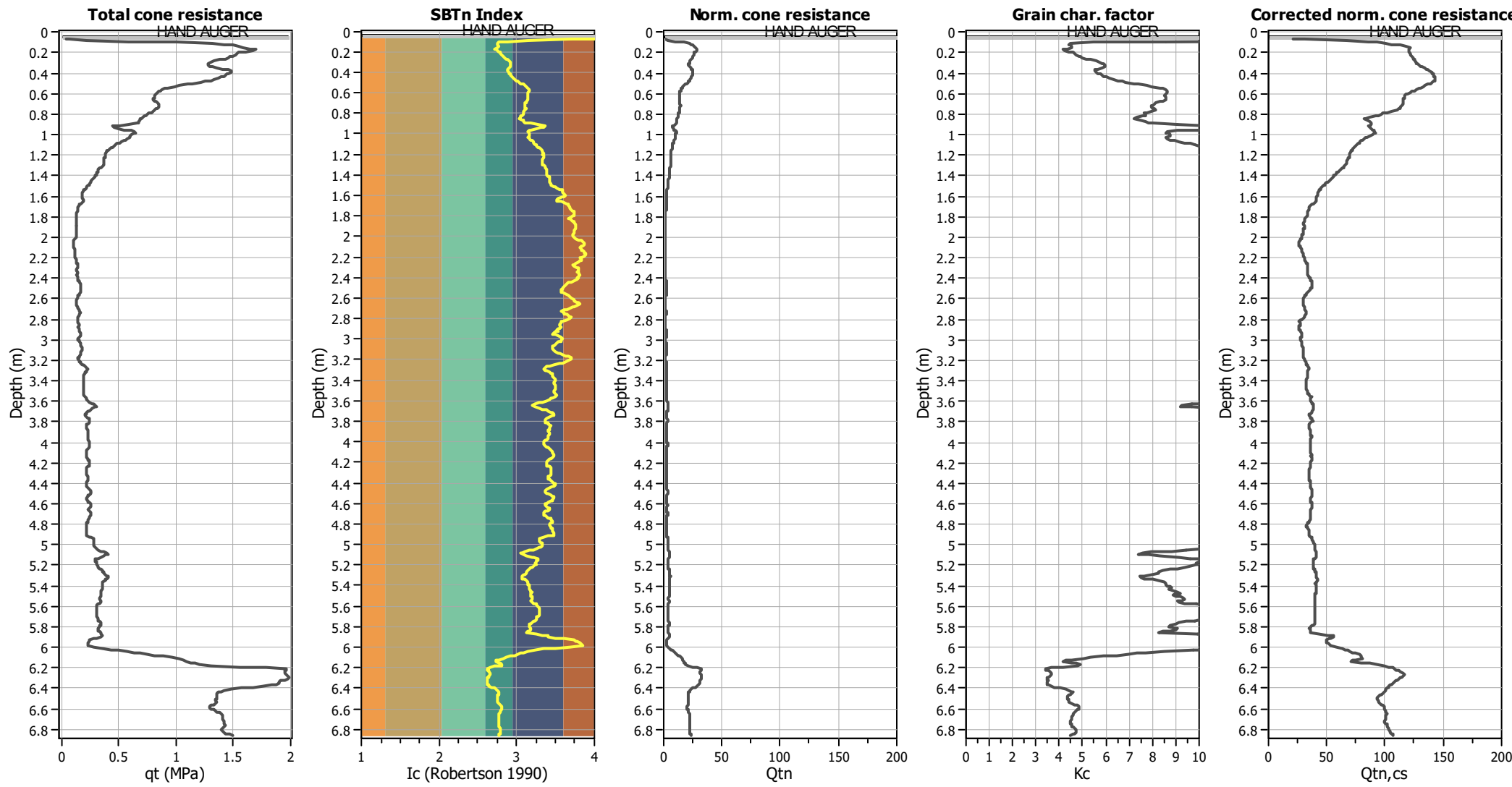
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBTn legend

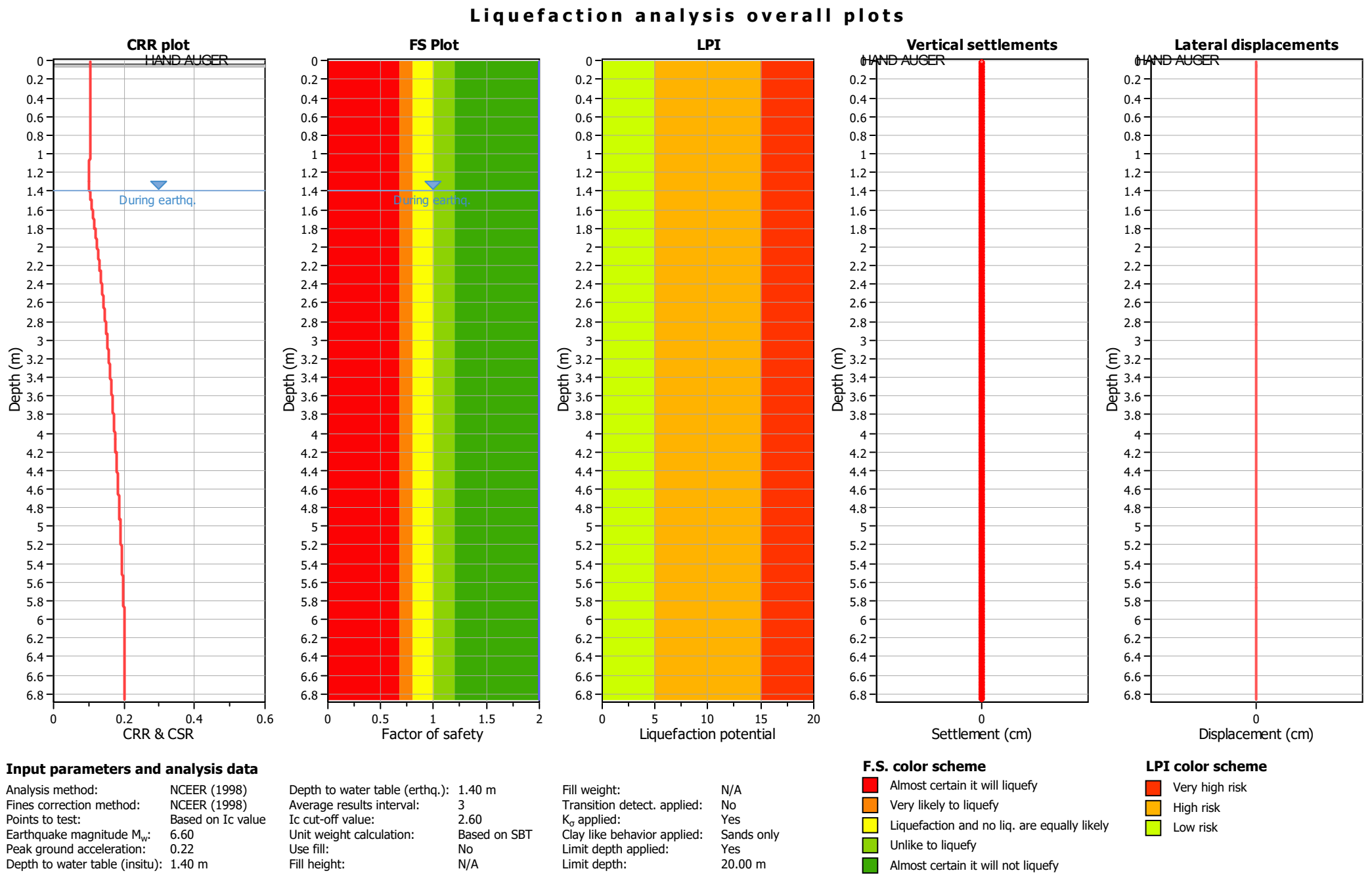
1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Liquefaction analysis overall plots (intermediate results)

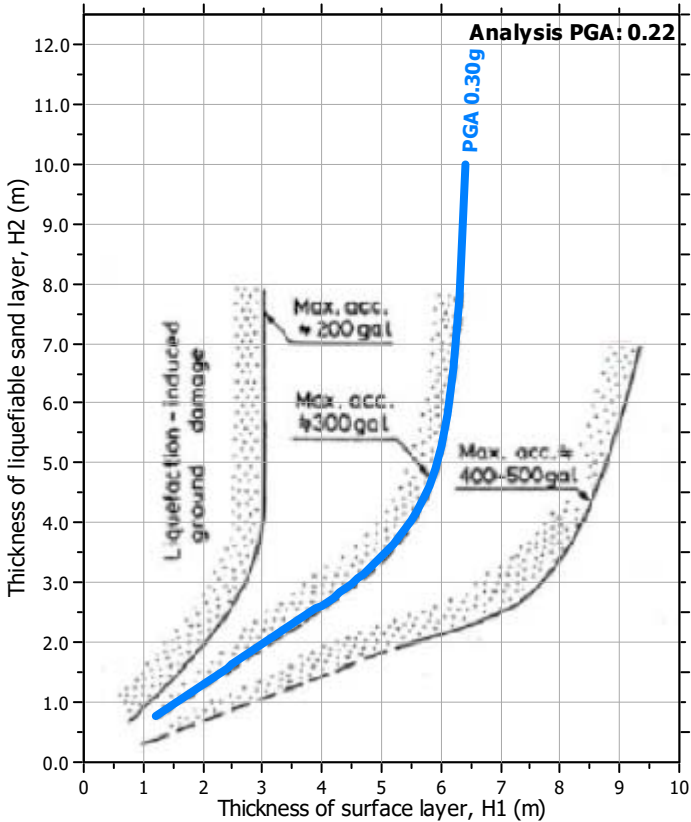
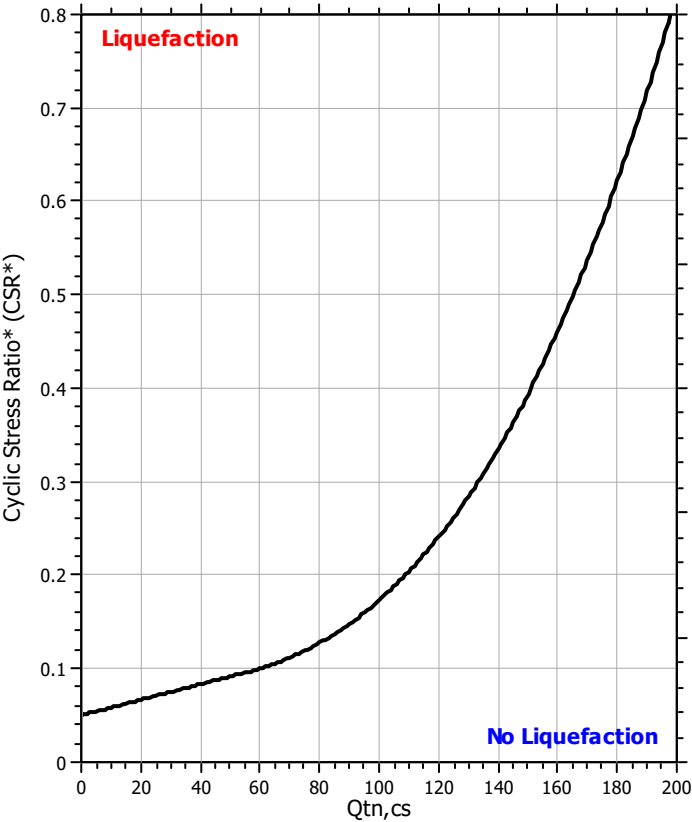
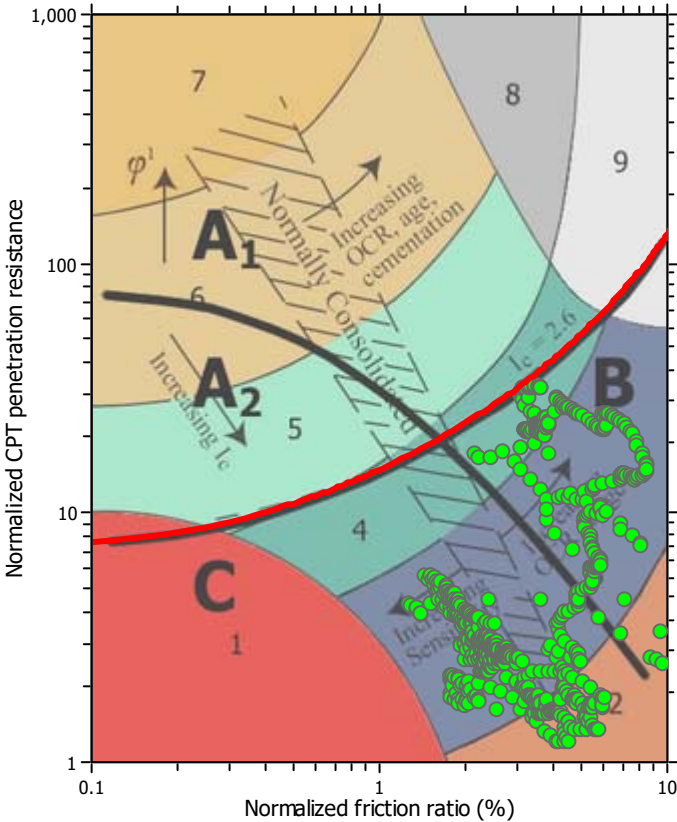


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m



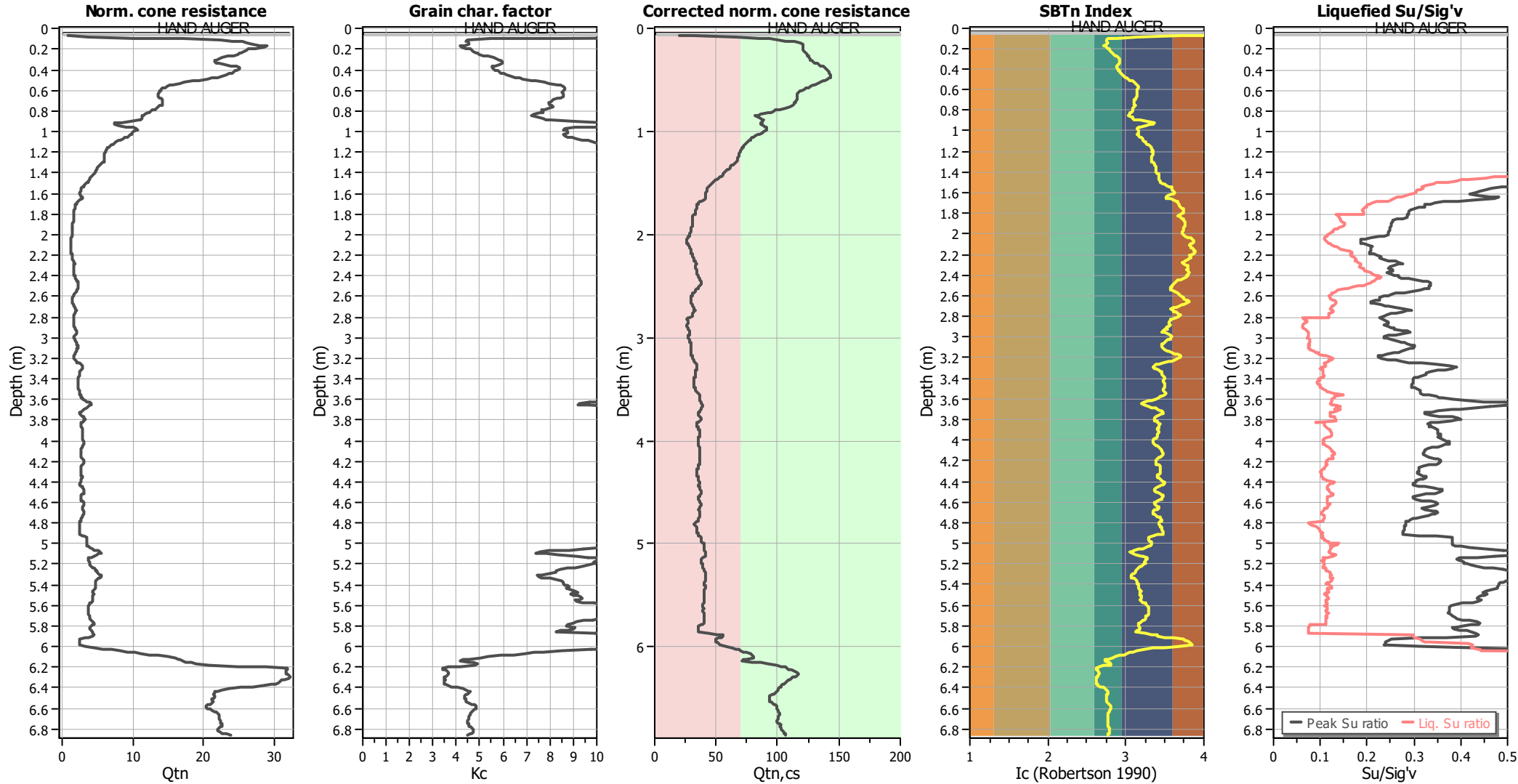
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	0.00	0.00	0.00
0.05	2.00	0.00	0.00	0.00	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	2.00	0.00	6.91	0.01	0.00	6.20	2.00	0.00	6.90	0.01	0.00
6.21	2.00	0.00	6.89	0.01	0.00	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	2.00	0.00	6.58	0.01	0.00	6.84	2.00	0.00	6.58	0.01	0.00
6.85	2.00	0.00	6.58	0.01	0.00	6.86	2.00	0.00	6.57	0.01	0.00

Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

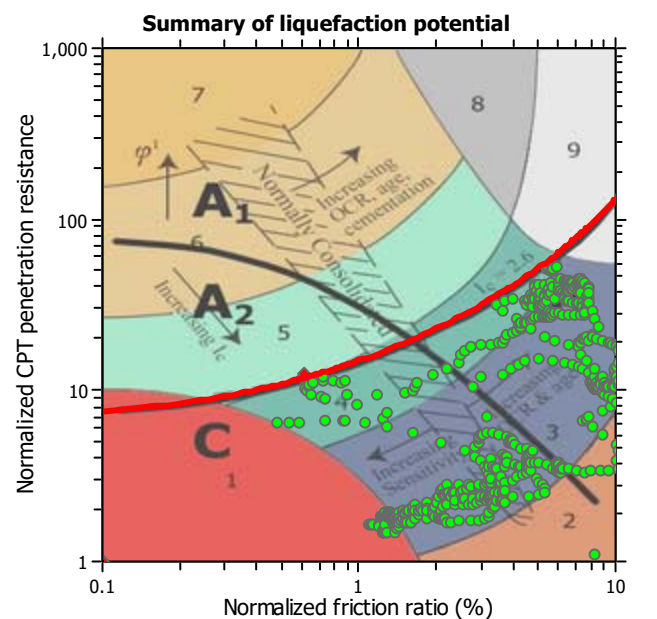
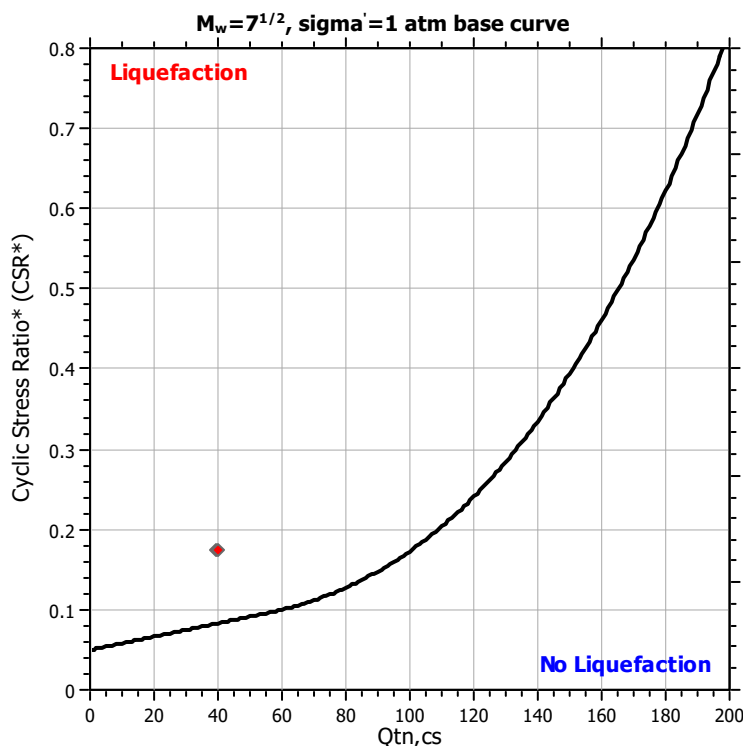
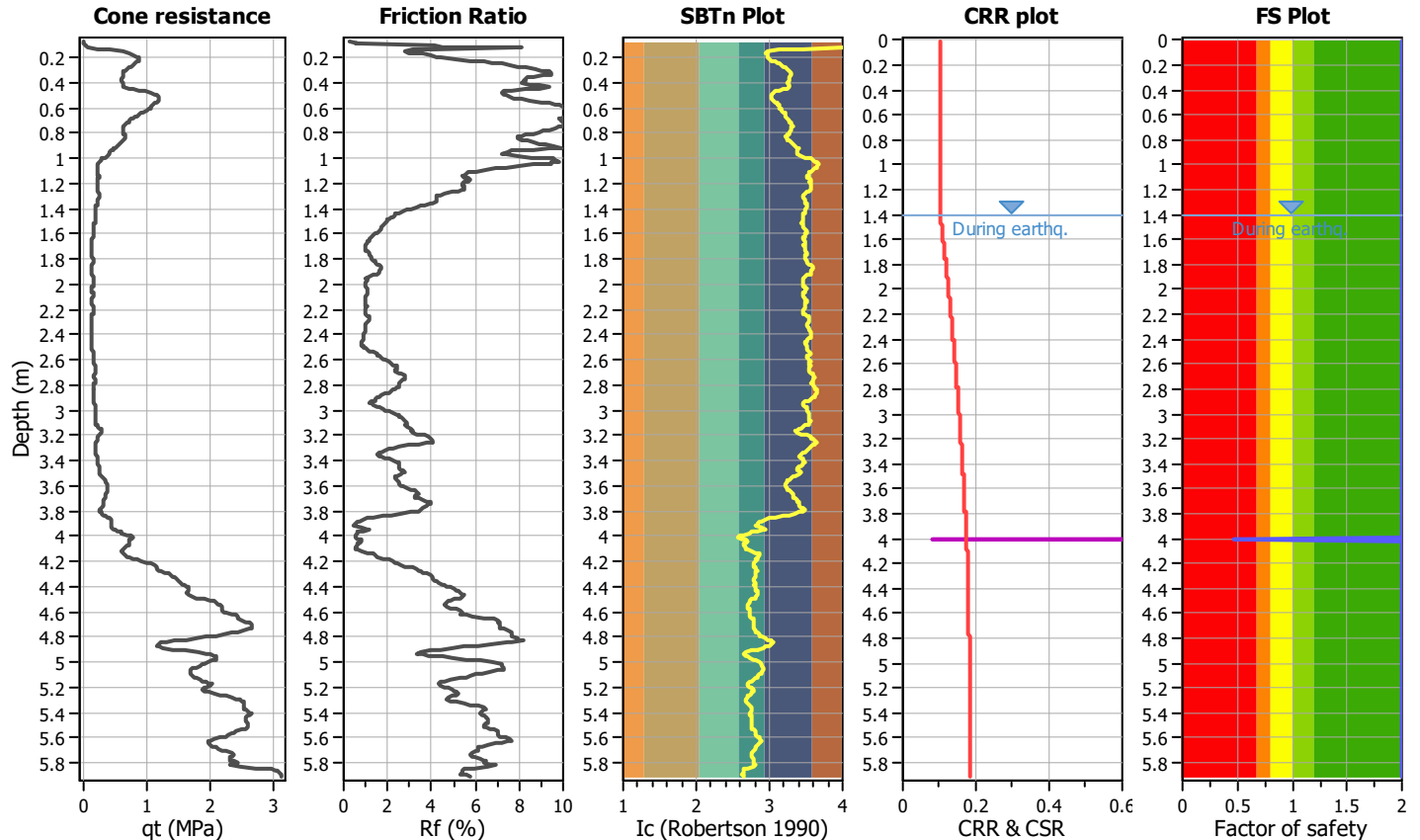
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

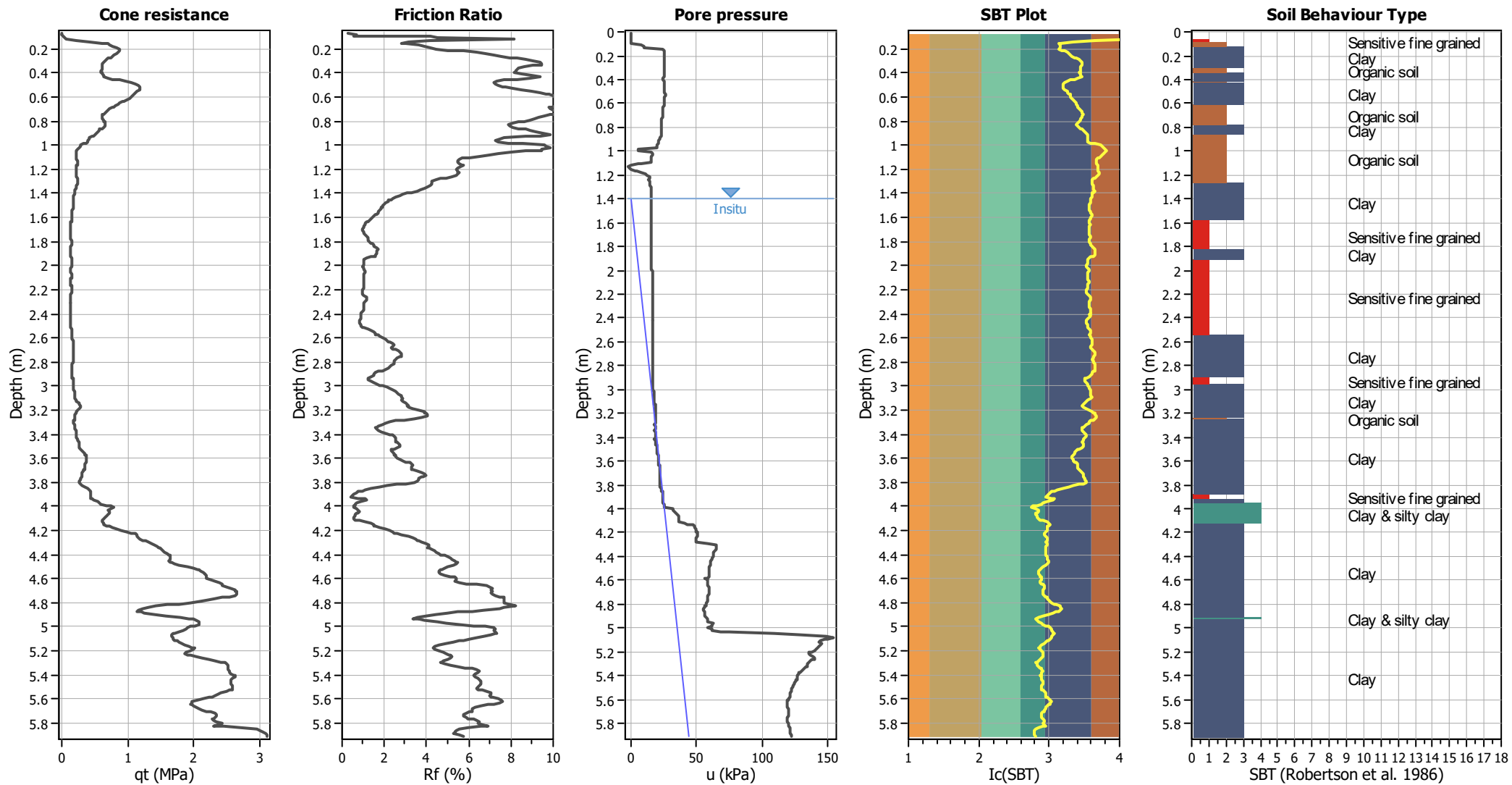
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU07
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.40 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

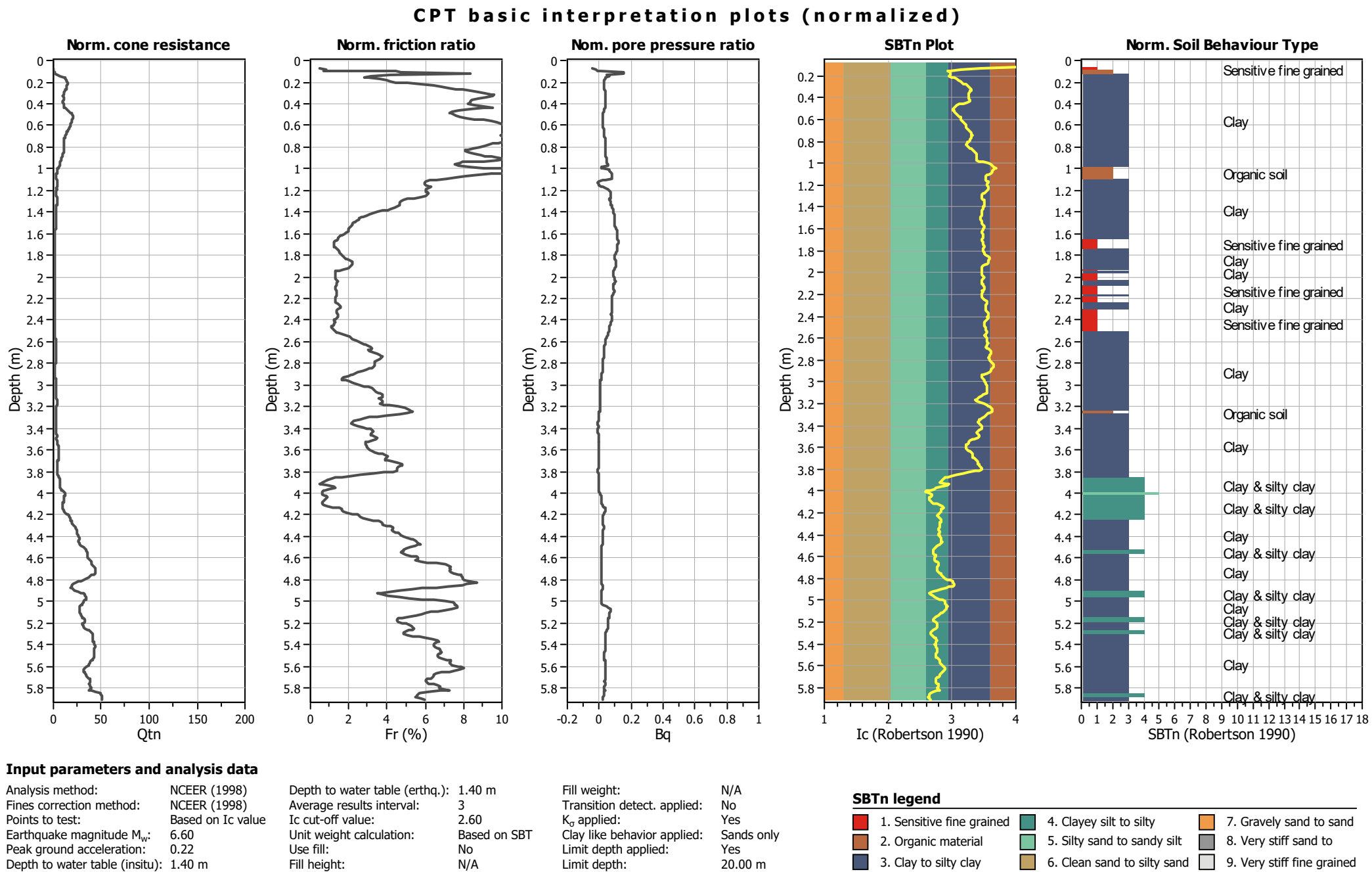


Input parameters and analysis data

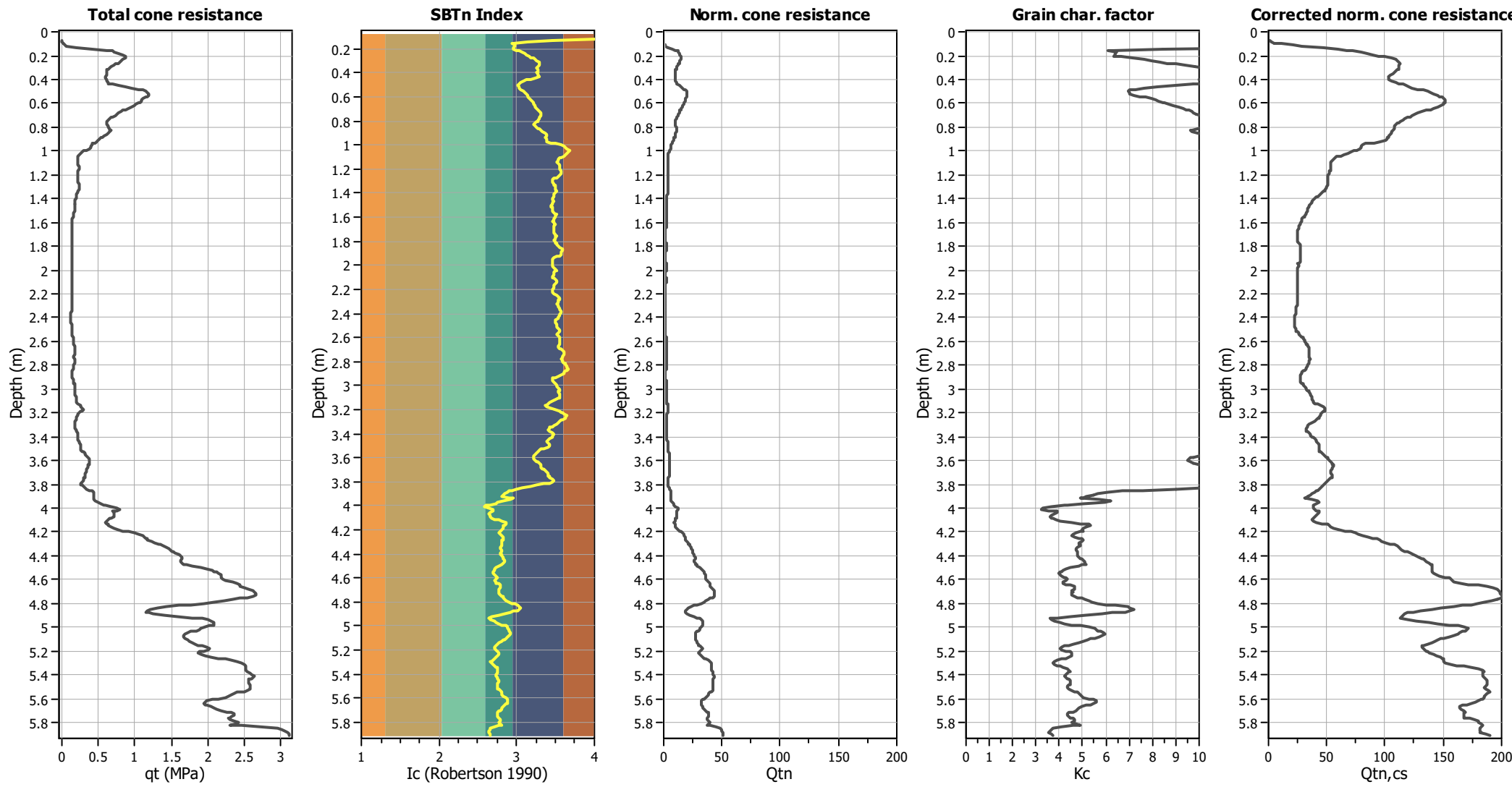
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



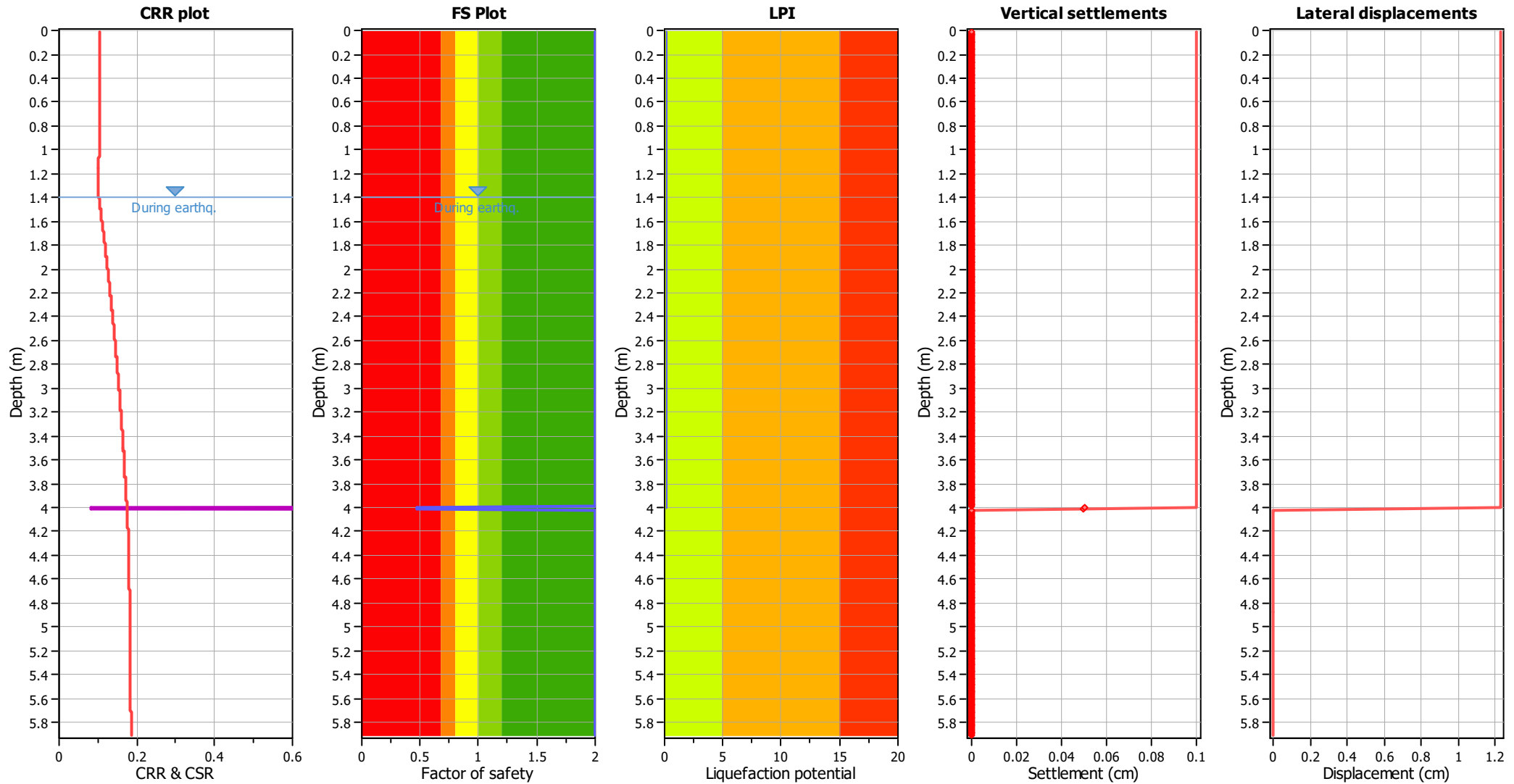
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

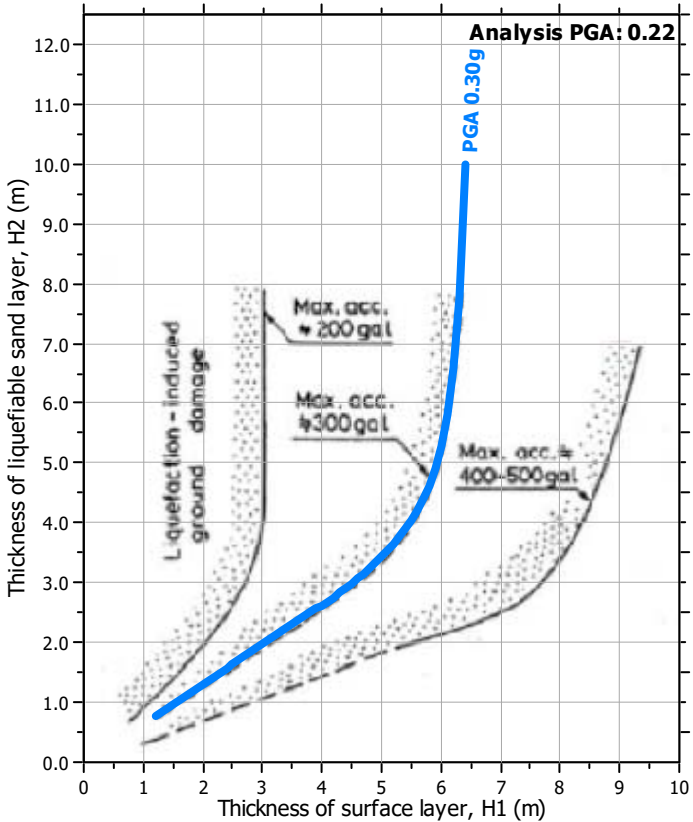
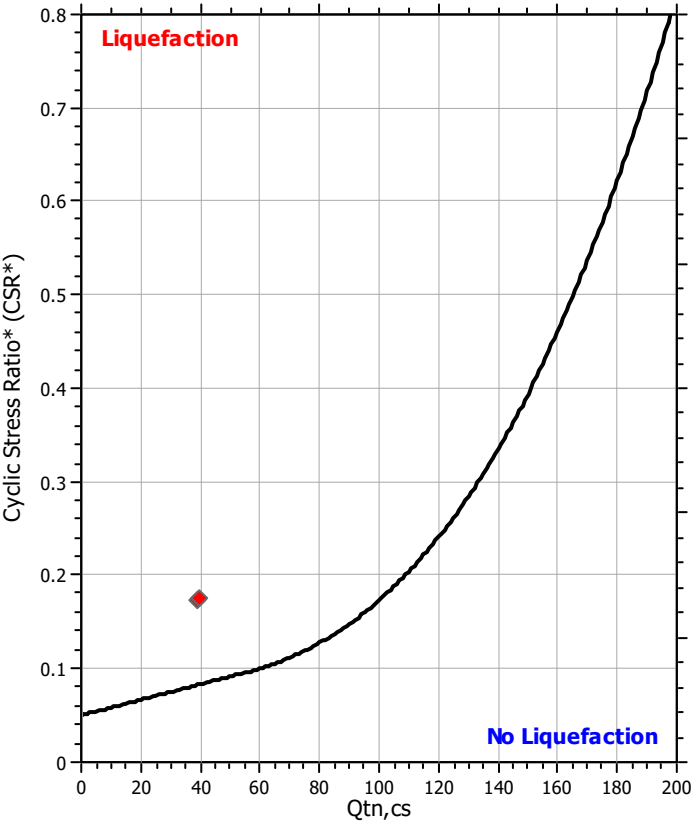
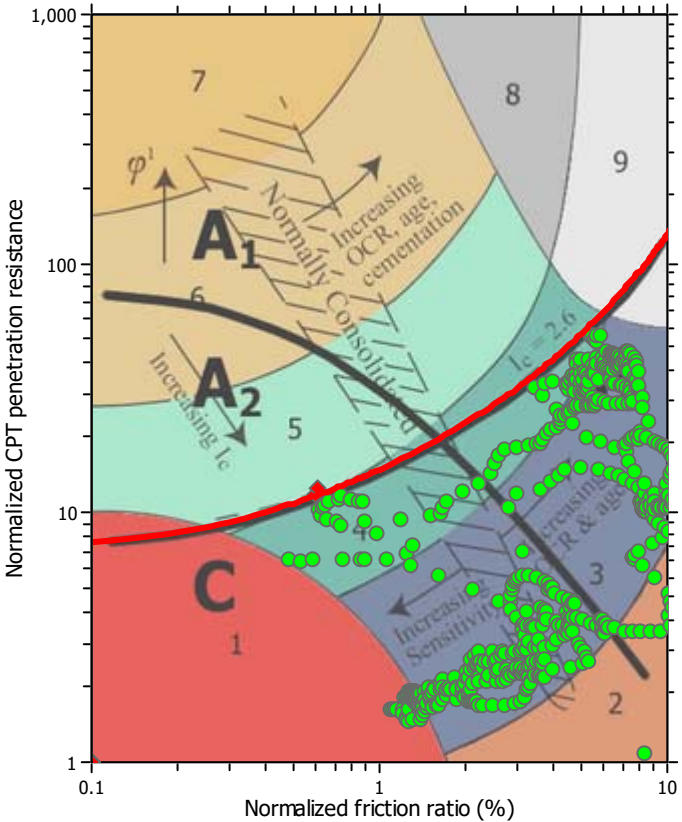
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

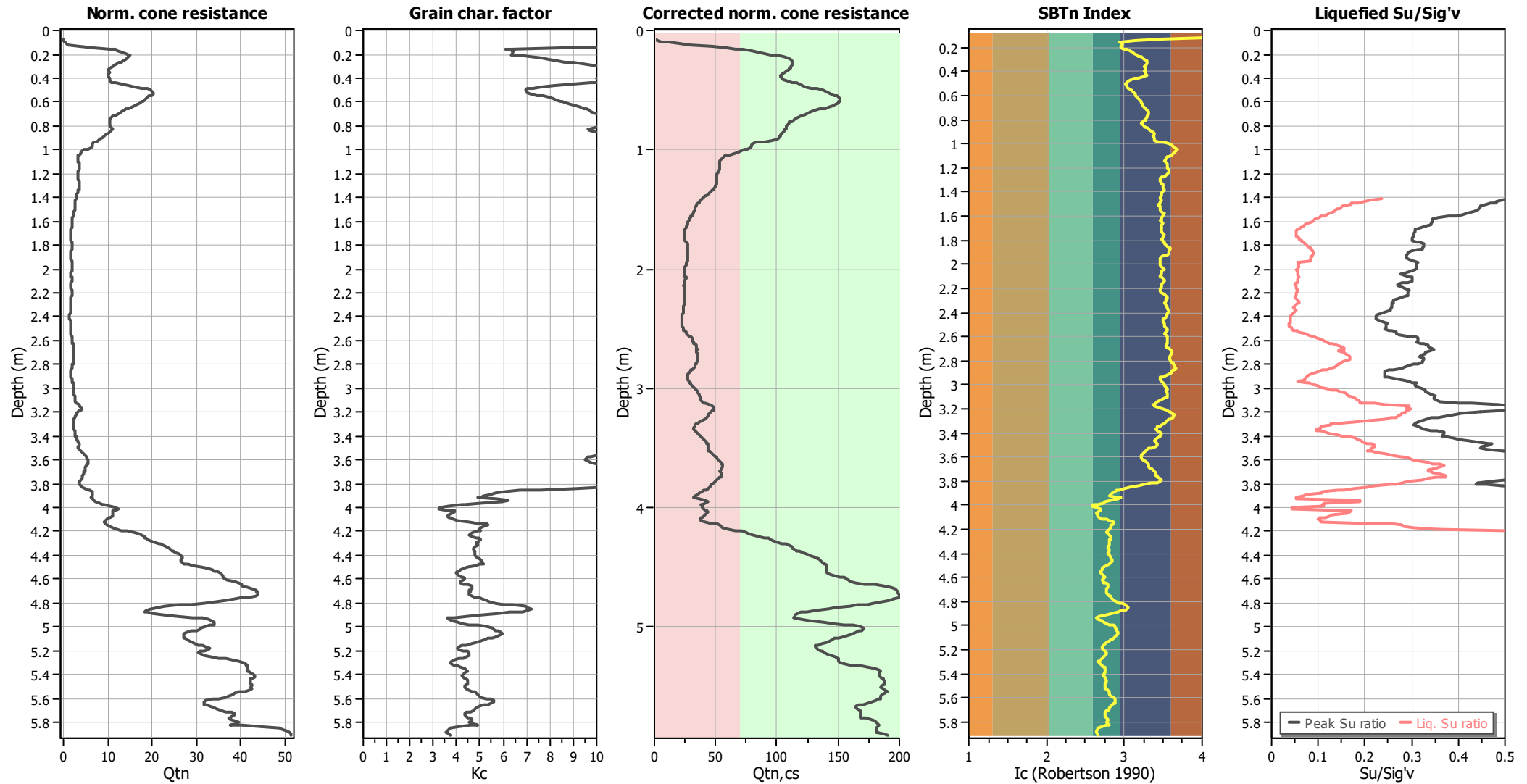
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.40 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.40 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	0.47	0.53	8.00	0.01	0.04
4.01	0.48	0.52	8.00	0.01	0.04	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00						

Overall liquefaction potential: 0.08

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

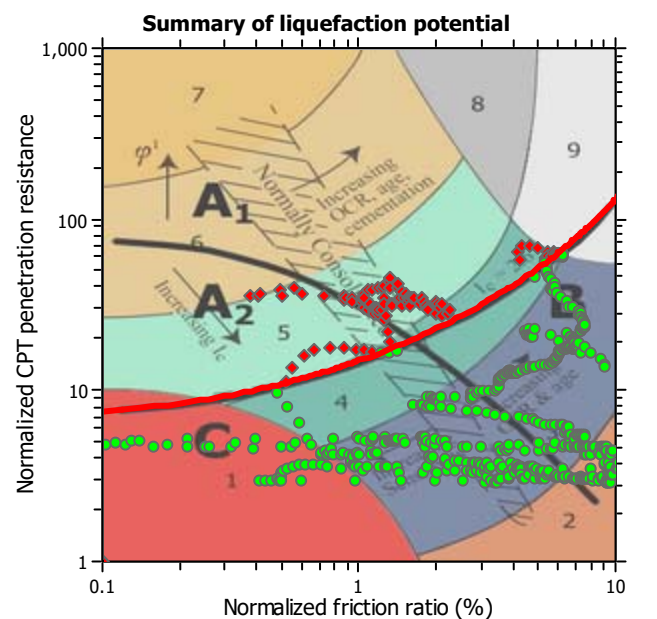
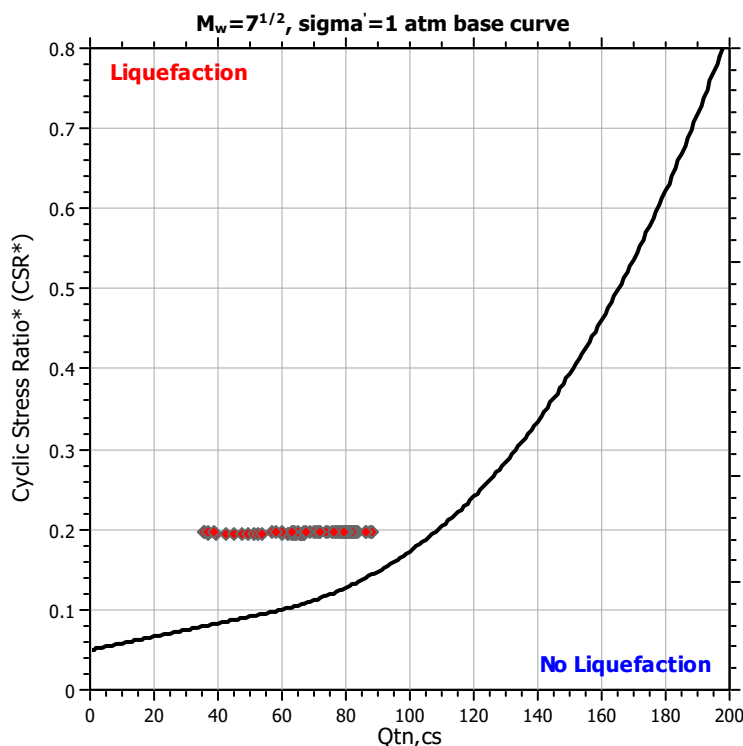
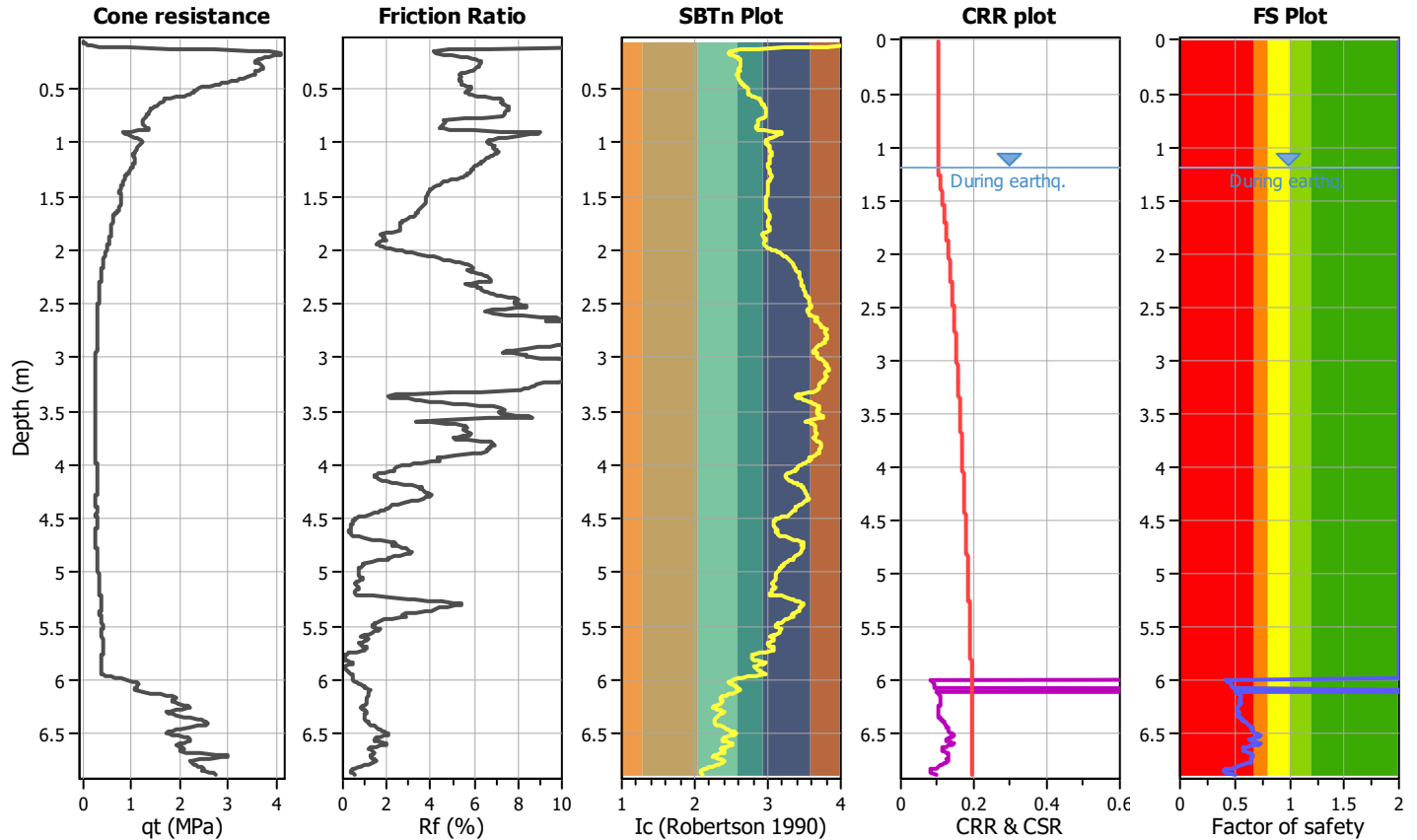
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

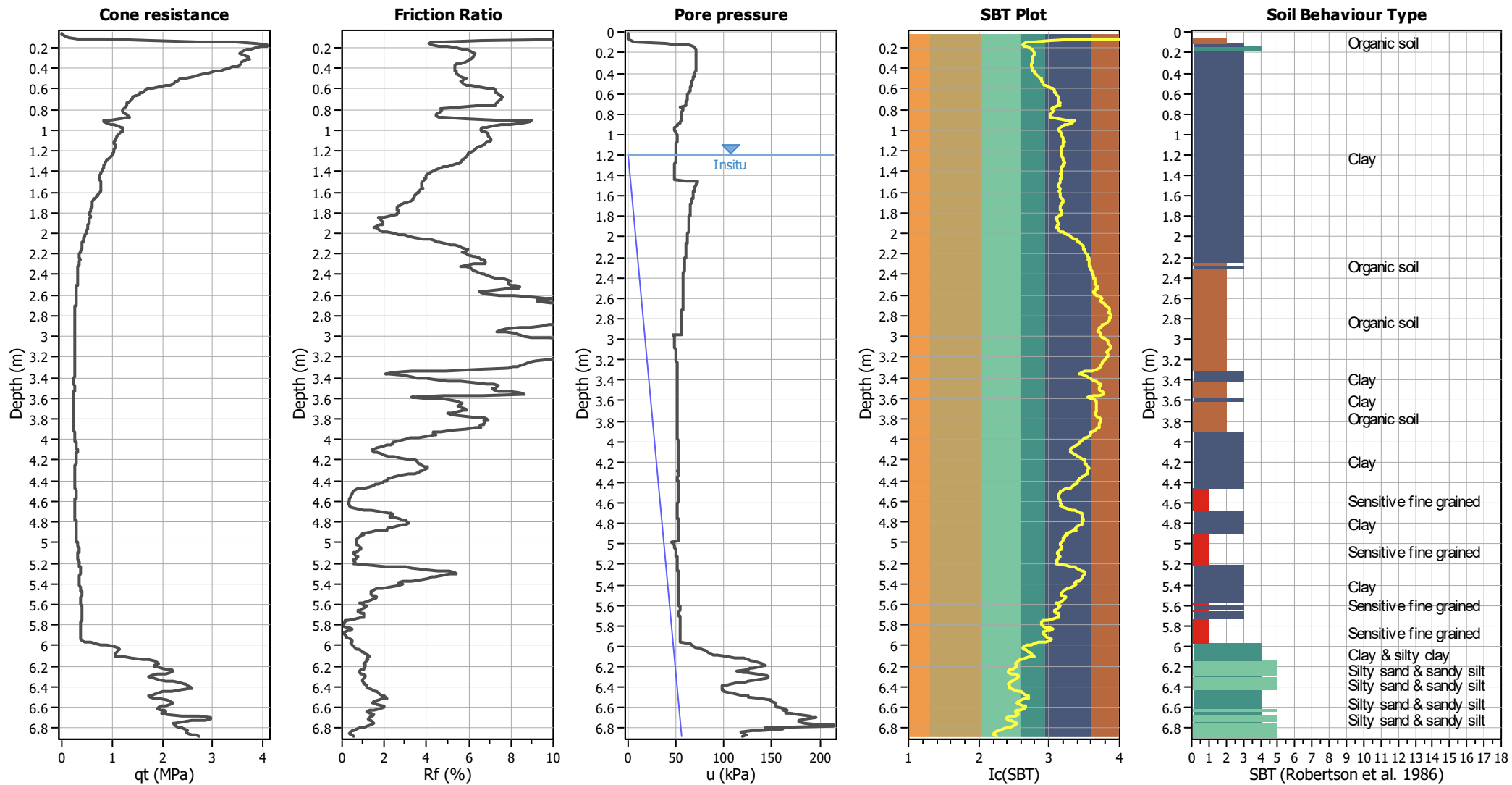
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU08
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	Yes
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	20.00 m
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

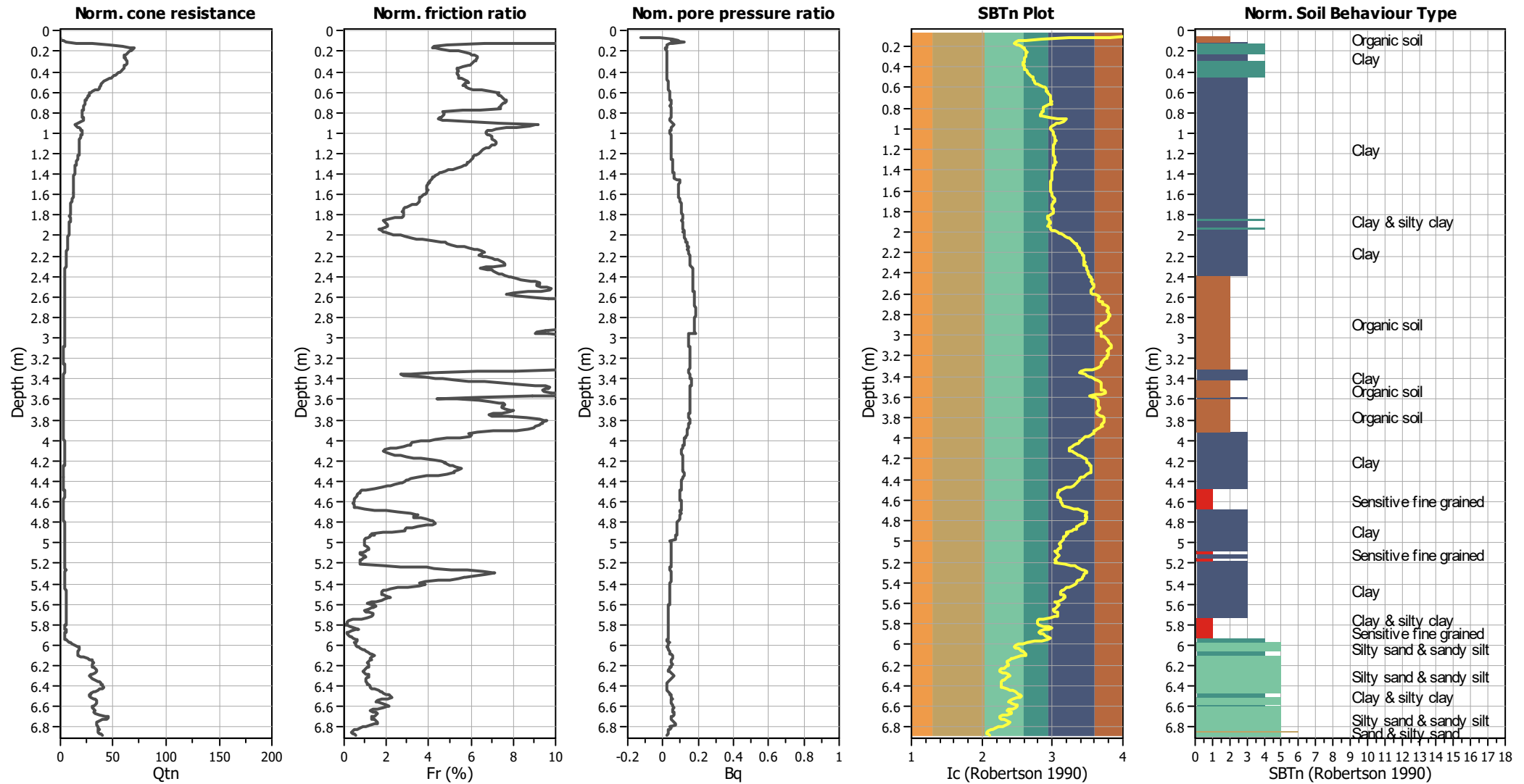


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	20.00 m

SBT legend		
1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

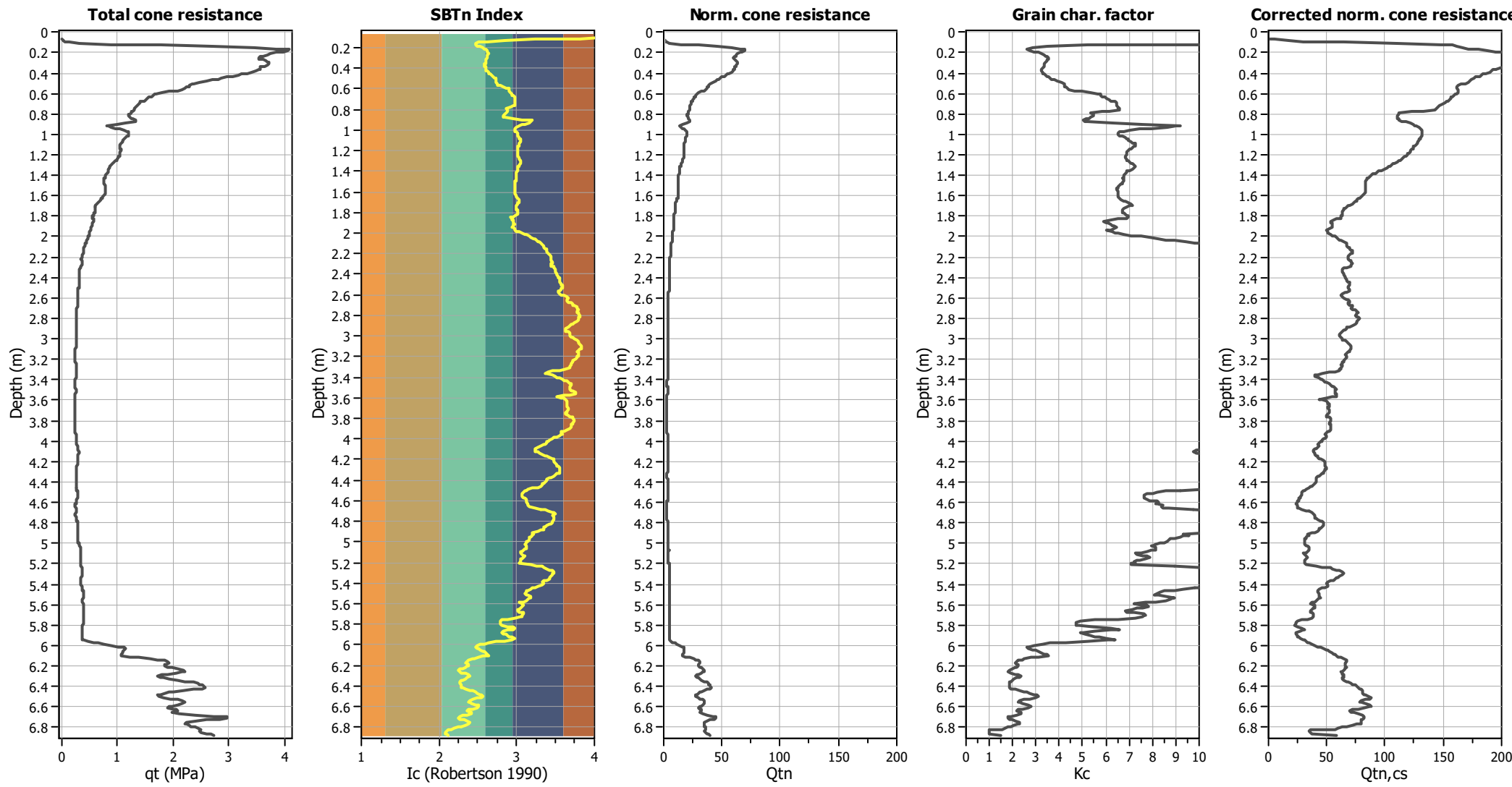
CPT basic interpretation plots (normalized)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_0 applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	20.00 m

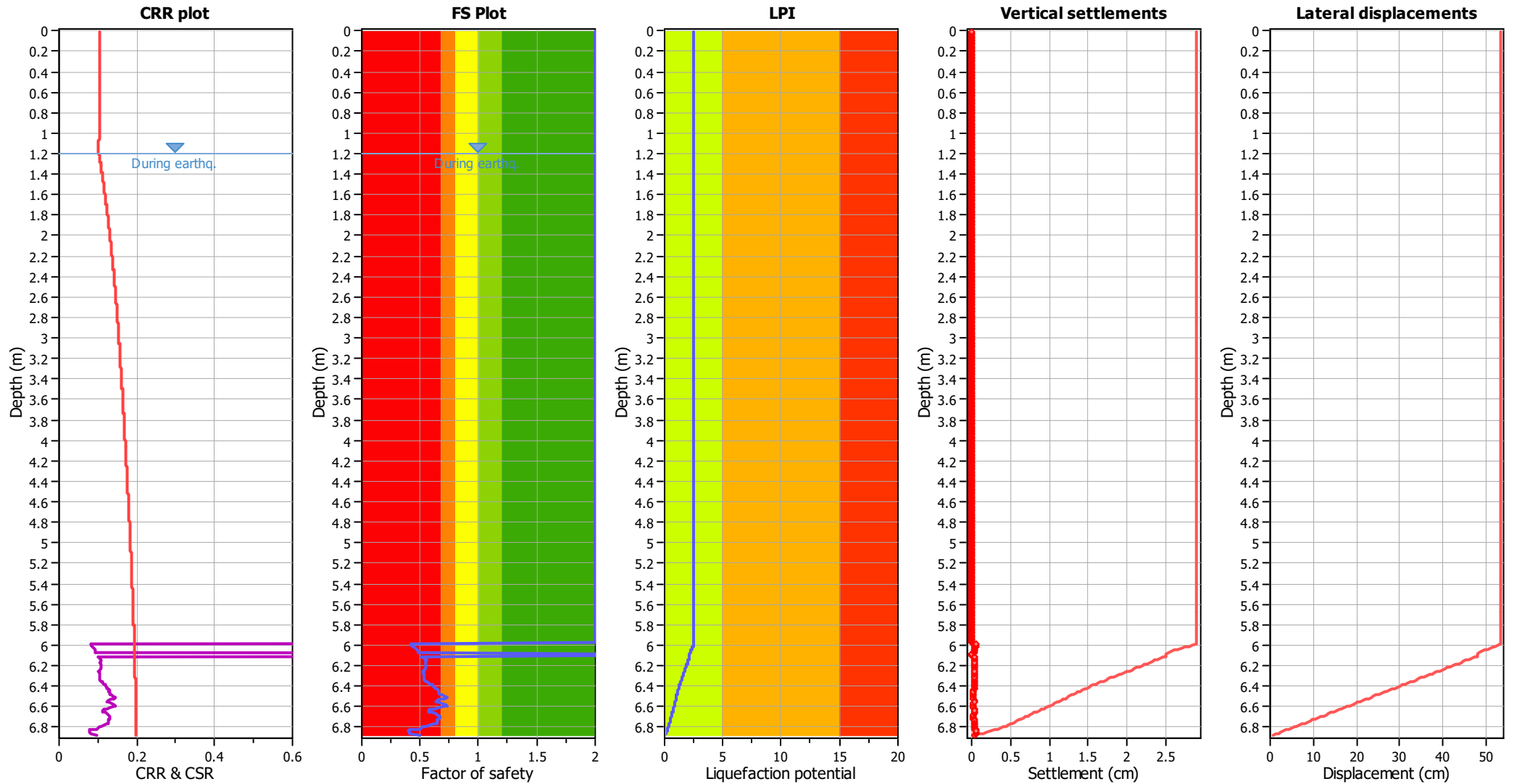
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	20.00 m

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	20.00 m

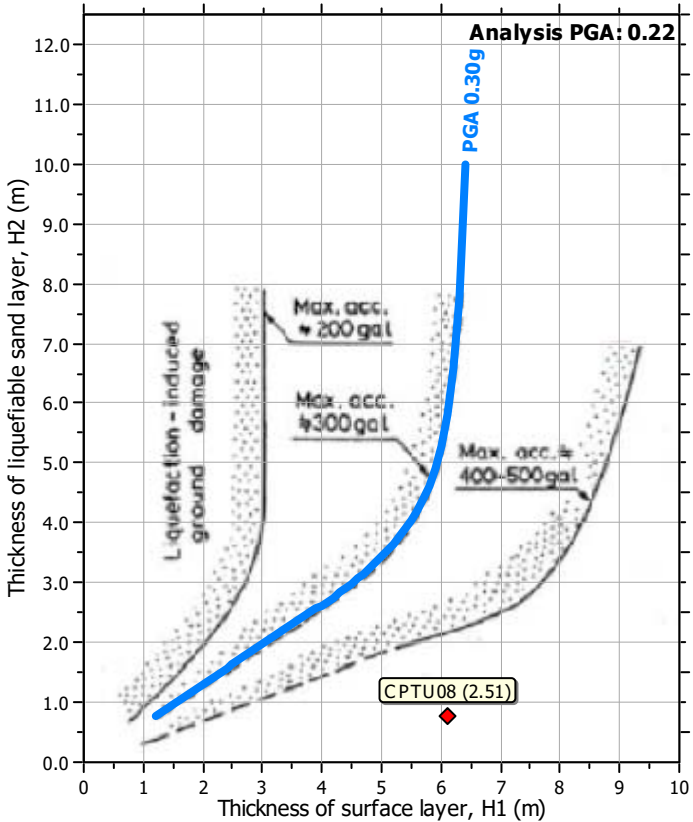
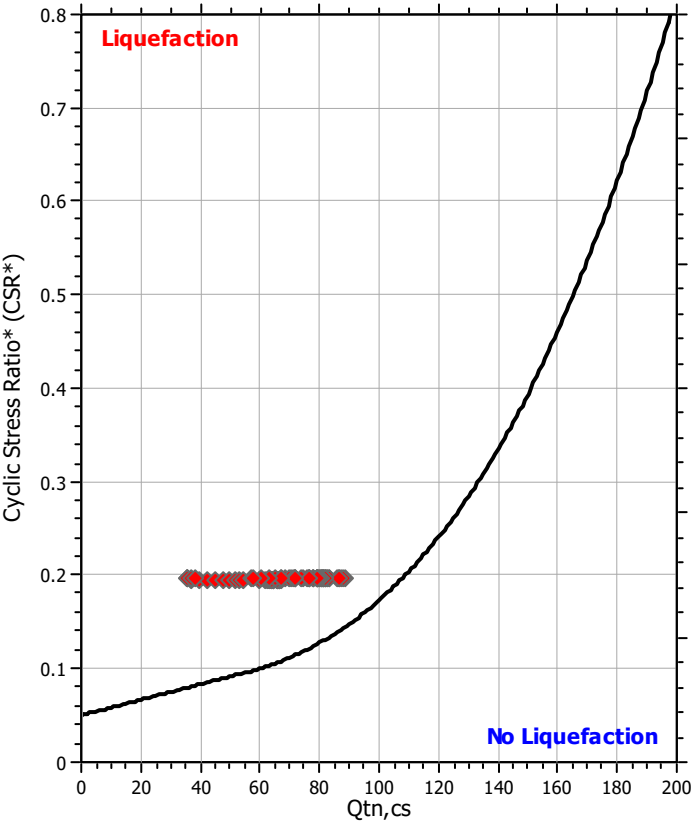
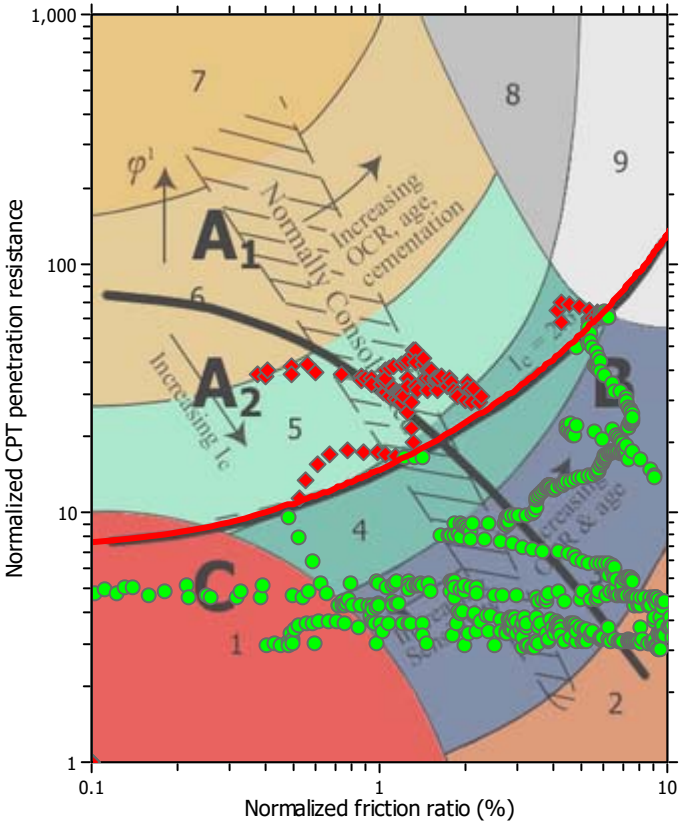
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

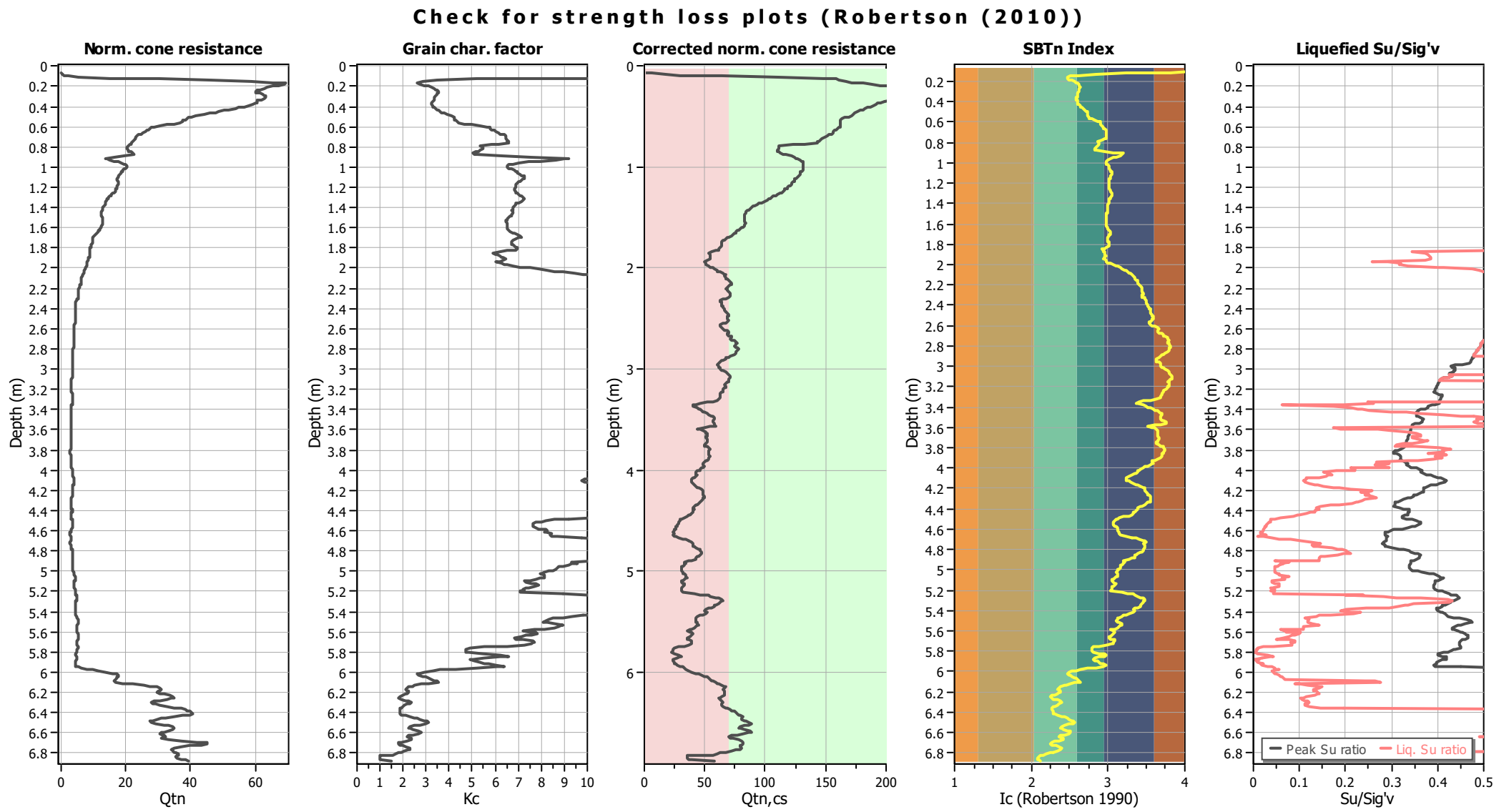
Red	Very high risk
Orange	High risk
Yellow	Low risk

Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	20.00 m



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	20.00 m

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	0.42	0.58	7.00	0.01	0.04	6.00	0.43	0.57	7.00	0.01	0.04
6.01	0.44	0.56	7.00	0.01	0.04	6.02	0.45	0.55	6.99	0.01	0.04
6.03	0.46	0.54	6.99	0.01	0.04	6.04	0.47	0.53	6.98	0.01	0.04
6.05	0.48	0.52	6.97	0.01	0.04	6.06	0.48	0.52	6.97	0.01	0.04
6.07	0.49	0.51	6.96	0.01	0.04	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	0.51	0.49	6.95	0.01	0.03	6.12	0.52	0.48	6.94	0.01	0.03
6.13	0.54	0.46	6.93	0.01	0.03	6.14	0.55	0.45	6.93	0.01	0.03
6.15	0.55	0.45	6.92	0.01	0.03	6.16	0.55	0.45	6.92	0.01	0.03
6.17	0.54	0.46	6.92	0.01	0.03	6.18	0.55	0.45	6.91	0.01	0.03
6.19	0.55	0.45	6.91	0.01	0.03	6.20	0.55	0.45	6.90	0.01	0.03
6.21	0.55	0.45	6.89	0.01	0.03	6.22	0.55	0.45	6.89	0.01	0.03
6.23	0.55	0.45	6.88	0.01	0.03	6.24	0.54	0.46	6.88	0.01	0.03
6.25	0.53	0.47	6.88	0.01	0.03	6.26	0.52	0.48	6.87	0.01	0.03
6.27	0.53	0.47	6.87	0.01	0.03	6.28	0.53	0.47	6.86	0.01	0.03
6.29	0.54	0.46	6.86	0.01	0.03	6.30	0.54	0.46	6.85	0.01	0.03
6.31	0.54	0.46	6.84	0.01	0.03	6.32	0.53	0.47	6.84	0.01	0.03
6.33	0.53	0.47	6.83	0.01	0.03	6.34	0.54	0.46	6.83	0.01	0.03
6.35	0.55	0.45	6.83	0.01	0.03	6.36	0.56	0.44	6.82	0.01	0.03
6.37	0.57	0.43	6.82	0.01	0.03	6.38	0.58	0.42	6.81	0.01	0.03
6.39	0.60	0.40	6.80	0.01	0.03	6.40	0.61	0.39	6.80	0.01	0.03
6.41	0.62	0.38	6.79	0.01	0.03	6.42	0.63	0.37	6.79	0.01	0.02
6.43	0.65	0.35	6.79	0.01	0.02	6.44	0.66	0.34	6.78	0.01	0.02
6.45	0.65	0.35	6.78	0.01	0.02	6.46	0.66	0.34	6.77	0.01	0.02
6.47	0.66	0.34	6.76	0.01	0.02	6.48	0.67	0.33	6.76	0.01	0.02
6.49	0.68	0.32	6.75	0.01	0.02	6.50	0.71	0.29	6.75	0.01	0.02
6.51	0.73	0.27	6.75	0.01	0.02	6.52	0.71	0.29	6.74	0.01	0.02
6.53	0.68	0.32	6.74	0.01	0.02	6.54	0.64	0.36	6.73	0.01	0.02
6.55	0.63	0.37	6.72	0.01	0.02	6.56	0.64	0.36	6.72	0.01	0.02
6.57	0.68	0.32	6.71	0.01	0.02	6.58	0.72	0.28	6.71	0.01	0.02
6.59	0.73	0.27	6.71	0.01	0.02	6.60	0.71	0.29	6.70	0.01	0.02
6.61	0.66	0.34	6.70	0.01	0.02	6.62	0.62	0.38	6.69	0.01	0.03
6.63	0.58	0.42	6.68	0.01	0.03	6.64	0.57	0.43	6.68	0.01	0.03
6.65	0.58	0.42	6.67	0.01	0.03	6.66	0.60	0.40	6.67	0.01	0.03
6.67	0.63	0.37	6.67	0.01	0.02	6.68	0.65	0.35	6.66	0.01	0.02
6.69	0.67	0.33	6.66	0.01	0.02	6.70	0.67	0.33	6.65	0.01	0.02
6.71	0.67	0.33	6.64	0.01	0.02	6.72	0.65	0.35	6.64	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	0.65	0.35	6.63	0.01	0.02	6.74	0.64	0.36	6.63	0.01	0.02
6.75	0.65	0.35	6.63	0.01	0.02	6.76	0.64	0.36	6.62	0.01	0.02
6.77	0.62	0.38	6.62	0.01	0.03	6.78	0.58	0.42	6.61	0.01	0.03
6.79	0.55	0.45	6.61	0.01	0.03	6.80	0.52	0.48	6.60	0.01	0.03
6.81	0.51	0.49	6.59	0.01	0.03	6.82	0.49	0.51	6.59	0.01	0.03
6.83	0.41	0.59	6.58	0.01	0.04	6.84	0.40	0.60	6.58	0.01	0.04
6.85	0.40	0.60	6.58	0.01	0.04	6.86	0.41	0.59	6.57	0.01	0.04
6.87	0.42	0.58	6.57	0.01	0.04	6.88	0.50	0.50	6.56	0.01	0.03

Overall liquefaction potential: 2.51

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

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		Numero Revisione
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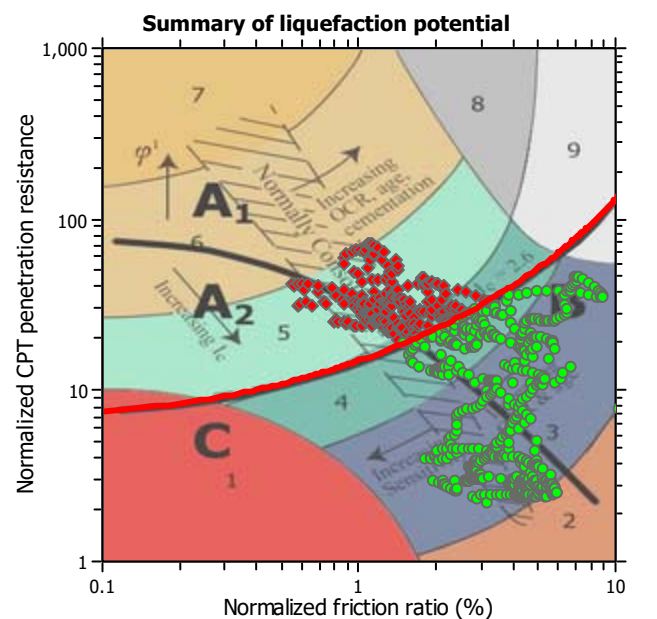
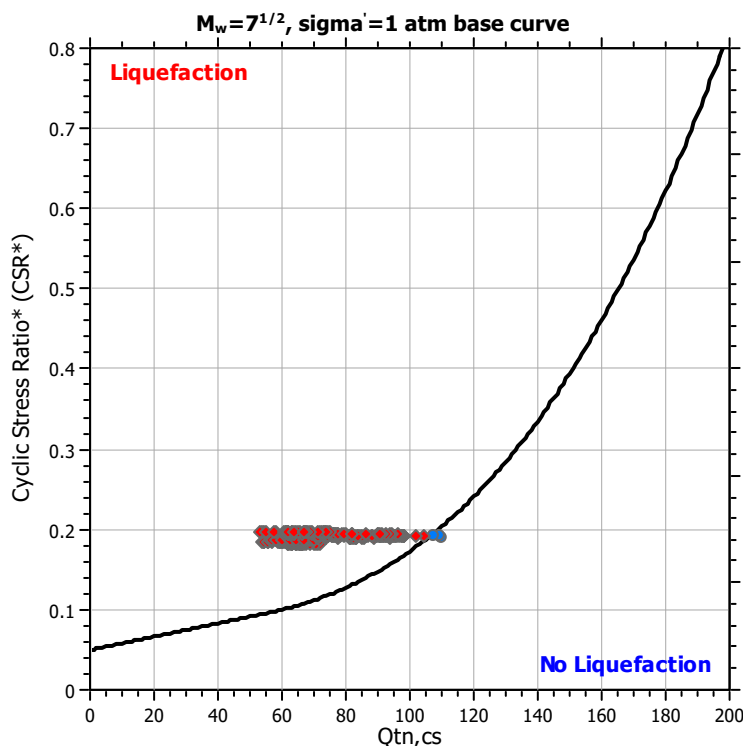
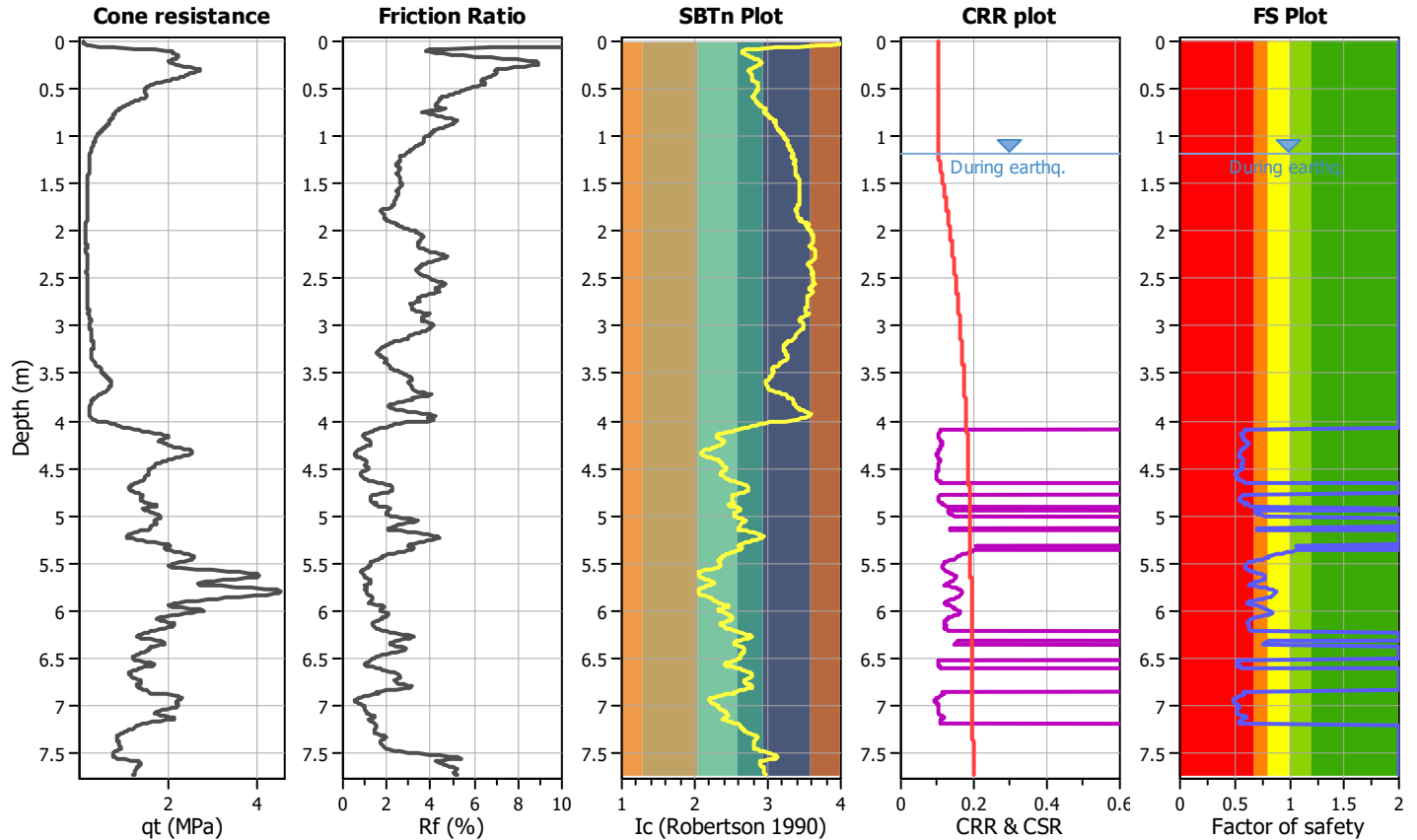
ALLEGATO 5

REPORT DELLA VERIFICA A LIQUEFAZIONE INTEGRATIVA

LIQUEFACTION ANALYSIS REPORT

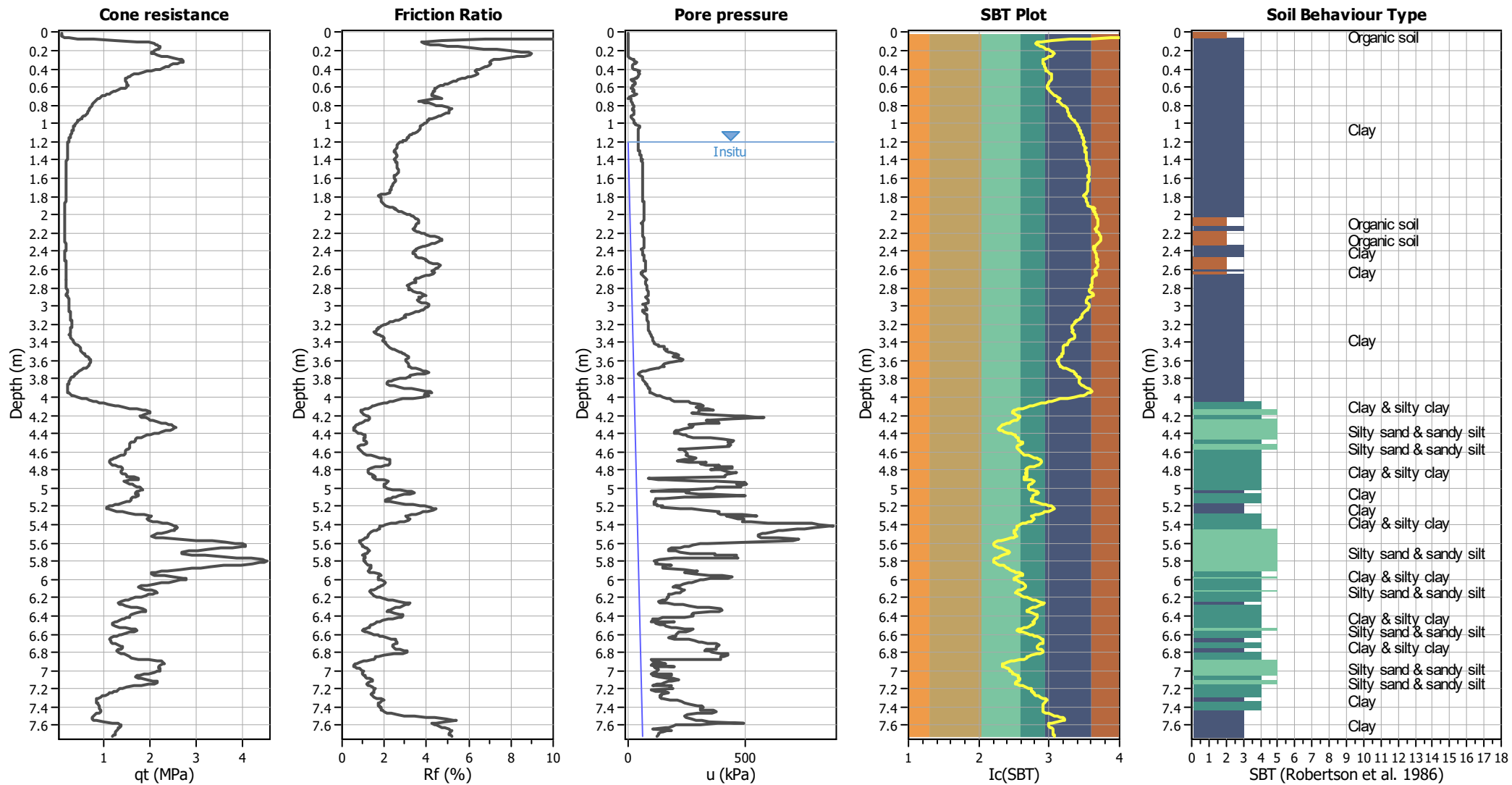
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU01bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

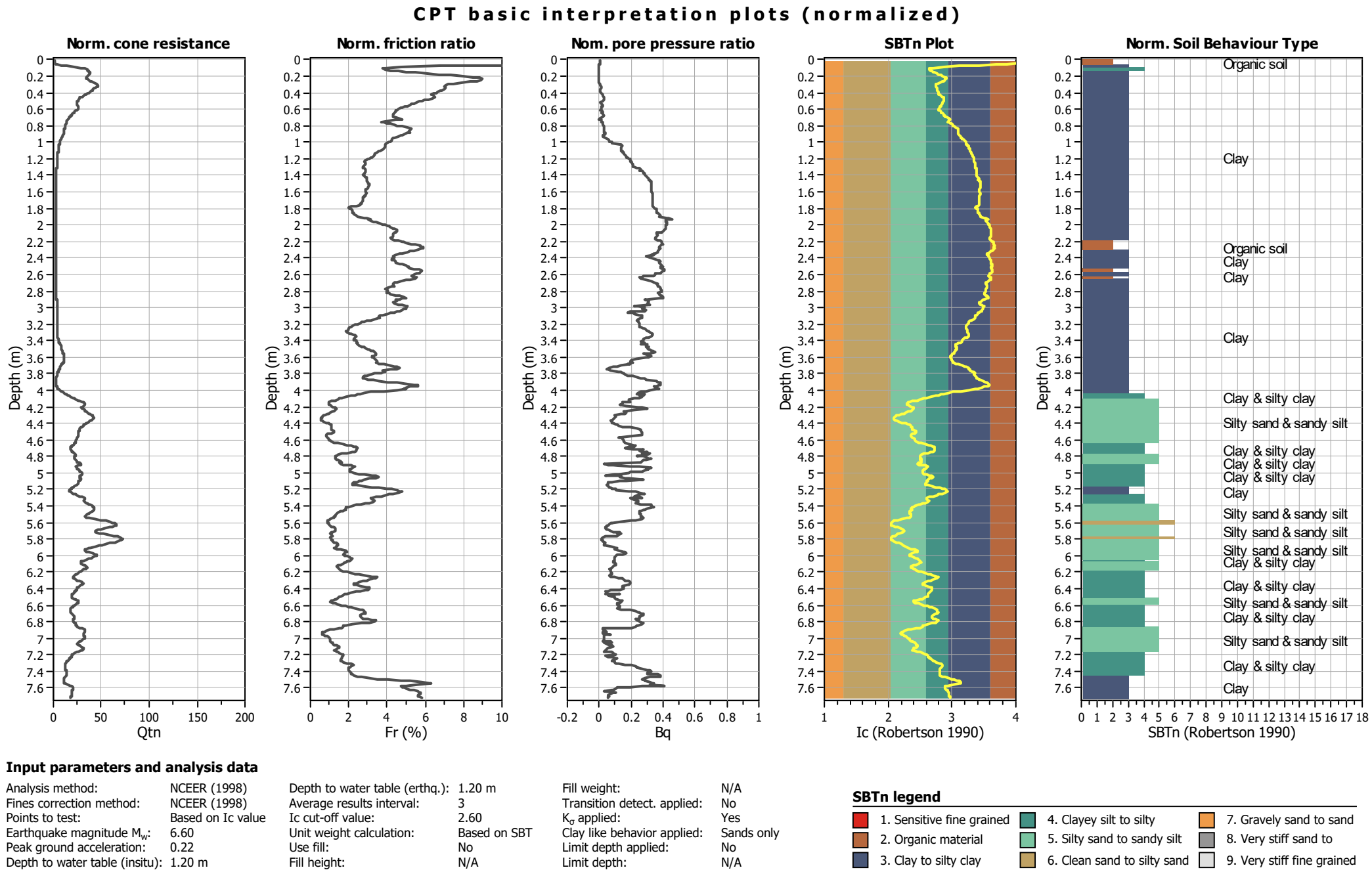


Input parameters and analysis data

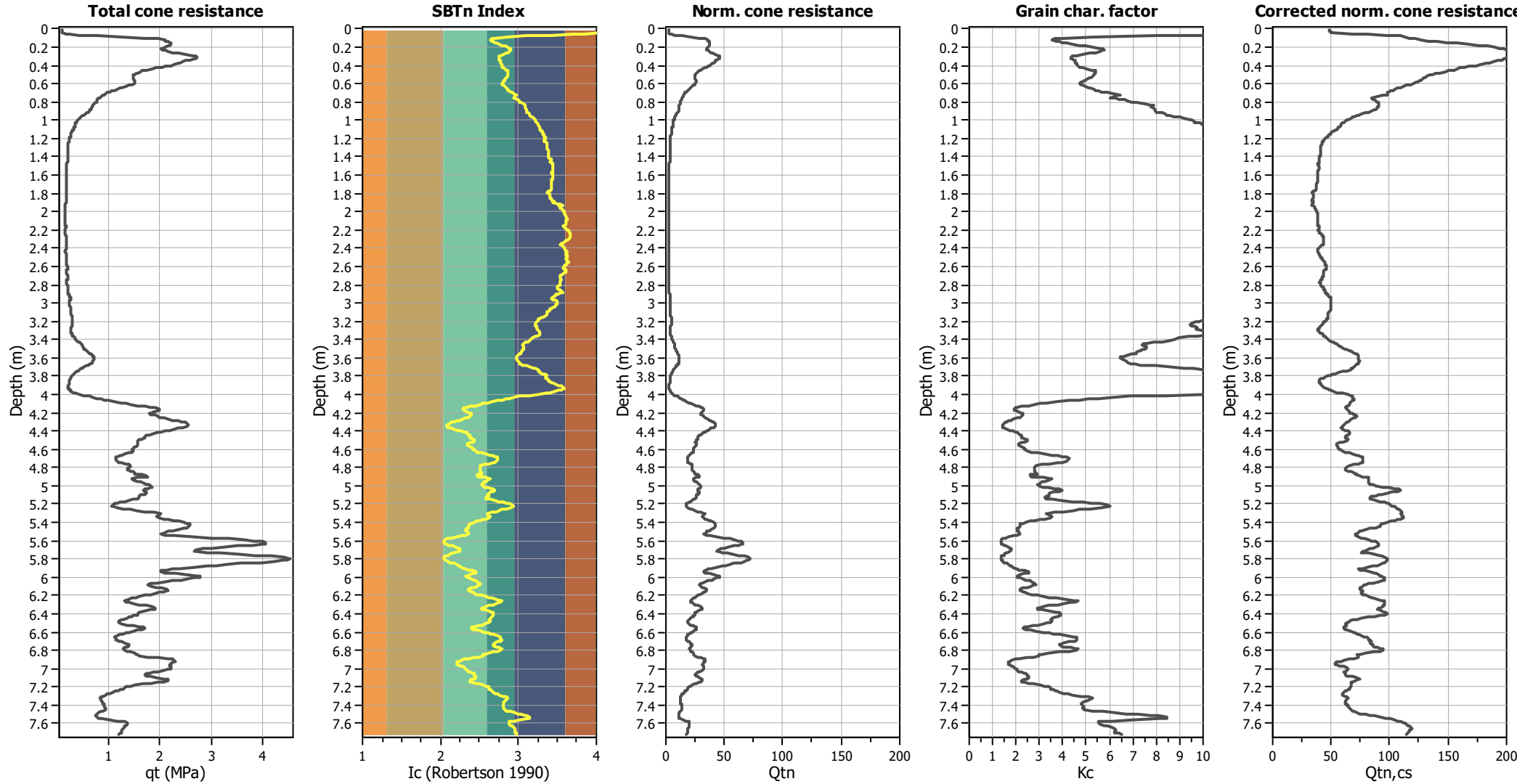
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Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



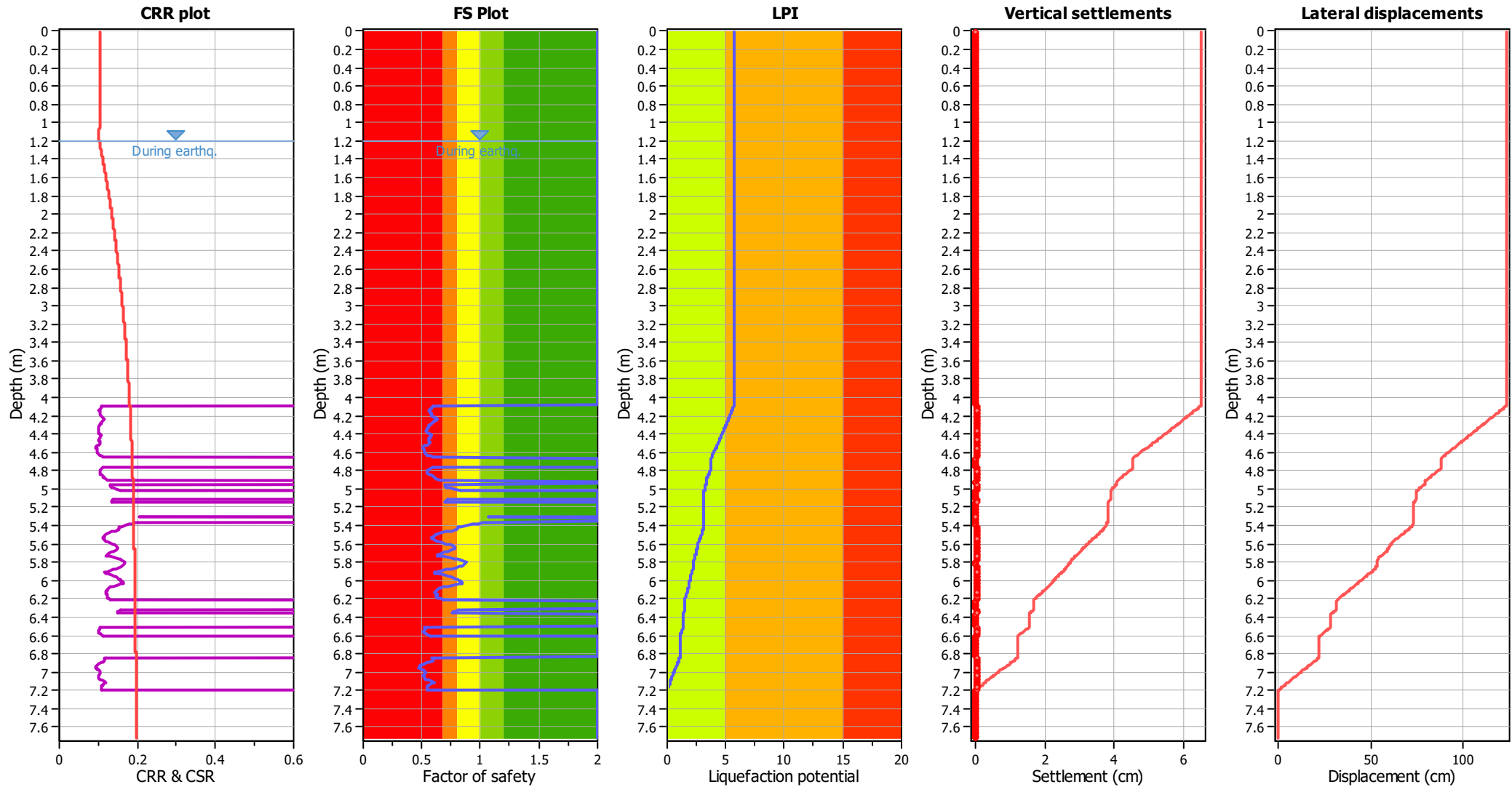
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

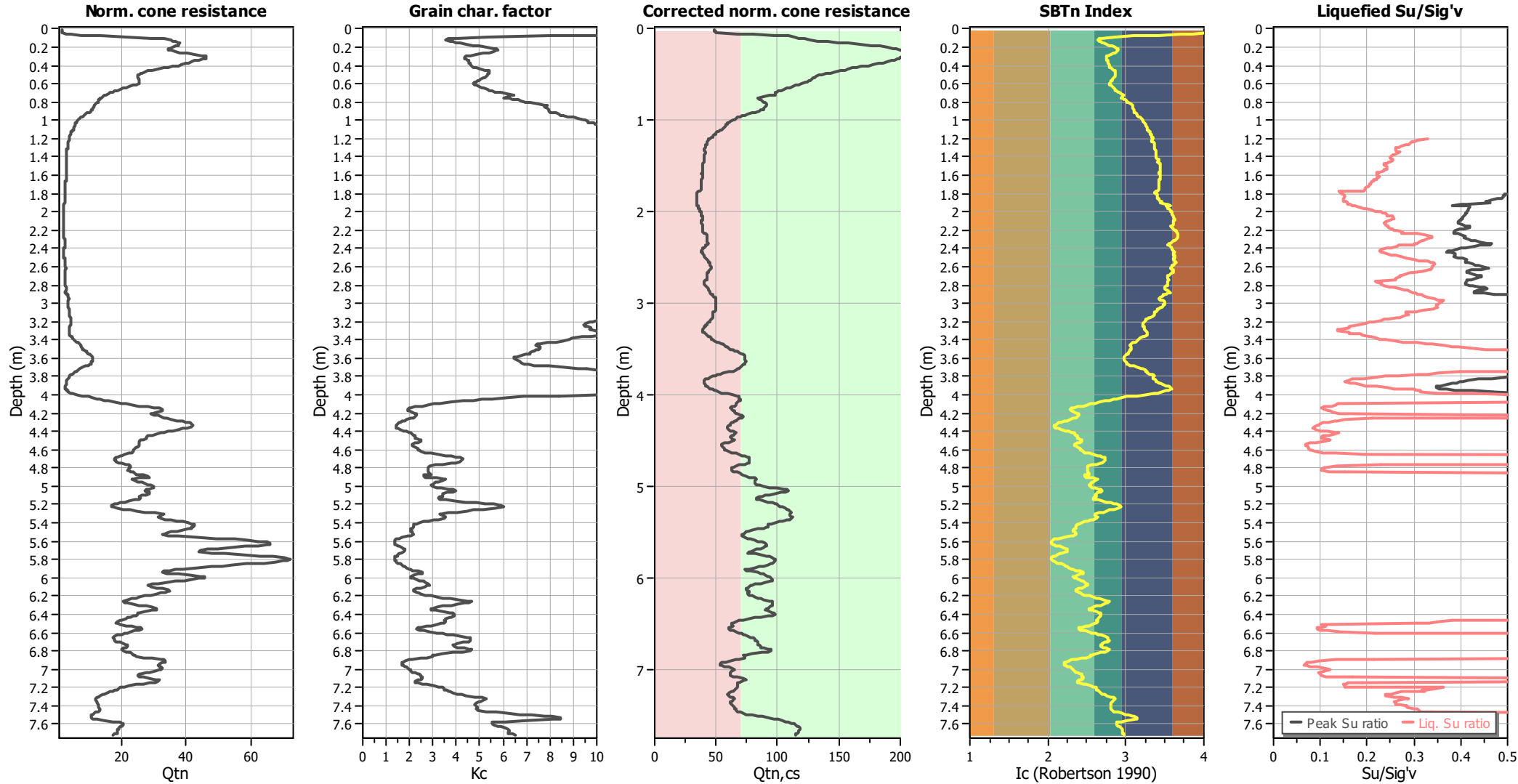
Red	Very high risk
Orange	High risk
Yellow	Low risk

Figure 10 consists of three plots related to soil liquefaction analysis.

- Left Plot:** Normalized CPT penetration resistance (log scale, 1 to 1,000) vs. Normalized friction ratio (%) (log scale, 0.1 to 10). The plot shows various soil behavior zones (A1, A2, C) and data points (red and green dots). Arrows indicate trends like "Increasing ϕ' ", "Normally Consolidated", "Increasing OCR, age, cementation", "Increasing I_c ", and "Increasing Sensitivity".
- Middle Plot:** Cyclic Stress Ratio* (CSR*) (log scale, 0 to 0.8) vs. $Q_{tn,cs}$ (linear scale, 0 to 200). The plot shows the Liquefaction threshold curve (black line) and data points (red and green dots). The region above the curve is labeled "Liquefaction" and the region below is labeled "No Liquefaction".
- Right Plot:** Thickness of liquefiable sand layer, H_2 (m) (linear scale, 0.0 to 12.0) vs. Thickness of surface layer, H_1 (m) (linear scale, 0 to 10). The plot shows the Liquefaction-induced ground damage zone (shaded area) and analysis results for PGA 0.22 (blue line). Key points include "Max. acc. ≈ 200 gal", "Max. acc. ≈ 300 gal", "Max. acc. $\approx 400-500$ gal", and "CPTU01bis (5.72)".

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	0.59	0.41	7.96	0.01	0.03	4.10	0.59	0.41	7.95	0.01	0.03
4.11	0.59	0.41	7.95	0.01	0.03	4.12	0.58	0.42	7.94	0.01	0.03
4.13	0.57	0.43	7.93	0.01	0.03	4.14	0.56	0.44	7.93	0.01	0.03
4.15	0.57	0.43	7.92	0.01	0.03	4.16	0.57	0.43	7.92	0.01	0.03
4.17	0.58	0.42	7.92	0.01	0.03	4.18	0.58	0.42	7.91	0.01	0.03
4.19	0.58	0.42	7.91	0.01	0.03	4.20	0.59	0.41	7.90	0.01	0.03
4.21	0.60	0.40	7.89	0.01	0.03	4.22	0.61	0.39	7.89	0.01	0.03
4.23	0.62	0.38	7.88	0.01	0.03	4.24	0.63	0.37	7.88	0.01	0.03
4.25	0.62	0.38	7.88	0.01	0.03	4.26	0.61	0.39	7.87	0.01	0.03
4.27	0.59	0.41	7.87	0.01	0.03	4.28	0.59	0.41	7.86	0.01	0.03
4.29	0.58	0.42	7.86	0.01	0.03	4.30	0.57	0.43	7.85	0.01	0.03
4.31	0.56	0.44	7.84	0.01	0.03	4.32	0.56	0.44	7.84	0.01	0.03
4.33	0.55	0.45	7.83	0.01	0.03	4.34	0.55	0.45	7.83	0.01	0.04
4.35	0.54	0.46	7.83	0.01	0.04	4.36	0.54	0.46	7.82	0.01	0.04
4.37	0.54	0.46	7.82	0.01	0.04	4.38	0.55	0.45	7.81	0.01	0.04
4.39	0.56	0.44	7.80	0.01	0.03	4.40	0.57	0.43	7.80	0.01	0.03
4.41	0.58	0.42	7.79	0.01	0.03	4.42	0.58	0.42	7.79	0.01	0.03
4.43	0.58	0.42	7.79	0.01	0.03	4.44	0.57	0.43	7.78	0.01	0.03
4.45	0.56	0.44	7.78	0.01	0.03	4.46	0.55	0.45	7.77	0.01	0.03
4.47	0.55	0.45	7.76	0.01	0.03	4.48	0.56	0.44	7.76	0.01	0.03
4.49	0.57	0.43	7.75	0.01	0.03	4.50	0.57	0.43	7.75	0.01	0.03
4.51	0.56	0.44	7.75	0.01	0.03	4.52	0.54	0.46	7.74	0.01	0.04
4.53	0.52	0.48	7.74	0.01	0.04	4.54	0.51	0.49	7.73	0.01	0.04
4.55	0.51	0.49	7.72	0.01	0.04	4.56	0.51	0.49	7.72	0.01	0.04
4.57	0.52	0.48	7.71	0.01	0.04	4.58	0.52	0.48	7.71	0.01	0.04
4.59	0.52	0.48	7.71	0.01	0.04	4.60	0.52	0.48	7.70	0.01	0.04
4.61	0.53	0.47	7.70	0.01	0.04	4.62	0.54	0.46	7.69	0.01	0.04
4.63	0.55	0.45	7.68	0.01	0.03	4.64	0.57	0.43	7.68	0.01	0.03
4.65	0.59	0.41	7.67	0.01	0.03	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	0.59	0.41	7.62	0.01	0.03	4.78	0.57	0.43	7.61	0.01	0.03
4.79	0.56	0.44	7.61	0.01	0.03	4.80	0.55	0.45	7.60	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	0.55	0.45	7.59	0.01	0.03	4.82	0.55	0.45	7.59	0.01	0.03
4.83	0.55	0.45	7.58	0.01	0.03	4.84	0.56	0.44	7.58	0.01	0.03
4.85	0.58	0.42	7.58	0.01	0.03	4.86	0.59	0.41	7.57	0.01	0.03
4.87	0.61	0.39	7.57	0.01	0.03	4.88	0.60	0.40	7.56	0.01	0.03
4.89	0.63	0.37	7.55	0.01	0.03	4.90	0.65	0.35	7.55	0.01	0.03
4.91	0.69	0.31	7.54	0.01	0.02	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	0.69	0.31	7.53	0.01	0.02	4.96	0.69	0.31	7.52	0.01	0.02
4.97	0.70	0.30	7.51	0.01	0.02	4.98	0.71	0.29	7.51	0.01	0.02
4.99	0.73	0.27	7.50	0.01	0.02	5.00	0.77	0.23	7.50	0.01	0.02
5.01	0.83	0.17	7.50	0.01	0.01	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	0.72	0.28	7.44	0.01	0.02
5.13	0.70	0.30	7.43	0.01	0.02	5.14	0.70	0.30	7.43	0.01	0.02
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	1.07	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	1.06	0.00	7.32	0.01	0.00
5.37	1.02	0.00	7.32	0.01	0.00	5.38	0.98	0.02	7.31	0.01	0.00
5.39	0.93	0.07	7.30	0.01	0.00	5.40	0.88	0.12	7.30	0.01	0.01
5.41	0.84	0.16	7.29	0.01	0.01	5.42	0.81	0.19	7.29	0.01	0.01
5.43	0.80	0.20	7.29	0.01	0.01	5.44	0.80	0.20	7.28	0.01	0.01
5.45	0.78	0.22	7.28	0.01	0.02	5.46	0.75	0.25	7.27	0.01	0.02
5.47	0.70	0.30	7.26	0.01	0.02	5.48	0.66	0.34	7.26	0.01	0.02
5.49	0.63	0.37	7.25	0.01	0.03	5.50	0.62	0.38	7.25	0.01	0.03
5.51	0.61	0.39	7.25	0.01	0.03	5.52	0.60	0.40	7.24	0.01	0.03
5.53	0.59	0.41	7.24	0.01	0.03	5.54	0.59	0.41	7.23	0.01	0.03
5.55	0.59	0.41	7.22	0.01	0.03	5.56	0.61	0.39	7.22	0.01	0.03
5.57	0.63	0.37	7.21	0.01	0.03	5.58	0.65	0.35	7.21	0.01	0.03
5.59	0.68	0.32	7.21	0.01	0.02	5.60	0.71	0.29	7.20	0.01	0.02
5.61	0.75	0.25	7.20	0.01	0.02	5.62	0.77	0.23	7.19	0.01	0.02
5.63	0.78	0.22	7.18	0.01	0.02	5.64	0.78	0.22	7.18	0.01	0.02
5.65	0.78	0.22	7.17	0.01	0.02	5.66	0.77	0.23	7.17	0.01	0.02
5.67	0.75	0.25	7.17	0.01	0.02	5.68	0.72	0.28	7.16	0.01	0.02
5.69	0.69	0.31	7.16	0.01	0.02	5.70	0.67	0.33	7.15	0.01	0.02
5.71	0.64	0.36	7.14	0.01	0.03	5.72	0.63	0.37	7.14	0.01	0.03
5.73	0.63	0.37	7.13	0.01	0.03	5.74	0.68	0.32	7.13	0.01	0.02
5.75	0.73	0.27	7.13	0.01	0.02	5.76	0.79	0.21	7.12	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	0.81	0.19	7.12	0.01	0.01	5.78	0.84	0.16	7.11	0.01	0.01
5.79	0.86	0.14	7.11	0.01	0.01	5.80	0.88	0.12	7.10	0.01	0.01
5.81	0.87	0.13	7.09	0.01	0.01	5.82	0.87	0.13	7.09	0.01	0.01
5.83	0.85	0.15	7.08	0.01	0.01	5.84	0.84	0.16	7.08	0.01	0.01
5.85	0.82	0.18	7.08	0.01	0.01	5.86	0.79	0.21	7.07	0.01	0.01
5.87	0.76	0.24	7.07	0.01	0.02	5.88	0.71	0.29	7.06	0.01	0.02
5.89	0.67	0.33	7.05	0.01	0.02	5.90	0.63	0.37	7.05	0.01	0.03
5.91	0.61	0.39	7.04	0.01	0.03	5.92	0.61	0.39	7.04	0.01	0.03
5.93	0.65	0.35	7.04	0.01	0.02	5.94	0.70	0.30	7.03	0.01	0.02
5.95	0.73	0.27	7.03	0.01	0.02	5.96	0.75	0.25	7.02	0.01	0.02
5.97	0.77	0.23	7.01	0.01	0.02	5.98	0.79	0.21	7.01	0.01	0.01
5.99	0.81	0.19	7.00	0.01	0.01	6.00	0.82	0.18	7.00	0.01	0.01
6.01	0.83	0.17	7.00	0.01	0.01	6.02	0.84	0.16	6.99	0.01	0.01
6.03	0.84	0.16	6.99	0.01	0.01	6.04	0.82	0.18	6.98	0.01	0.01
6.05	0.77	0.23	6.97	0.01	0.02	6.06	0.72	0.28	6.97	0.01	0.02
6.07	0.68	0.32	6.96	0.01	0.02	6.08	0.66	0.34	6.96	0.01	0.02
6.09	0.65	0.35	6.96	0.01	0.02	6.10	0.64	0.36	6.95	0.01	0.03
6.11	0.63	0.37	6.95	0.01	0.03	6.12	0.62	0.38	6.94	0.01	0.03
6.13	0.61	0.39	6.93	0.01	0.03	6.14	0.62	0.38	6.93	0.01	0.03
6.15	0.63	0.37	6.92	0.01	0.03	6.16	0.63	0.37	6.92	0.01	0.03
6.17	0.63	0.37	6.92	0.01	0.03	6.18	0.63	0.37	6.91	0.01	0.03
6.19	0.64	0.36	6.91	0.01	0.03	6.20	0.66	0.34	6.90	0.01	0.02
6.21	0.68	0.32	6.89	0.01	0.02	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	0.81	0.19	6.84	0.01	0.01
6.33	0.79	0.21	6.83	0.01	0.01	6.34	0.77	0.23	6.83	0.01	0.02
6.35	0.76	0.24	6.83	0.01	0.02	6.36	0.77	0.23	6.82	0.01	0.02
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	0.53	0.47	6.75	0.01	0.03	6.52	0.53	0.47	6.74	0.01	0.03
6.53	0.53	0.47	6.74	0.01	0.03	6.54	0.52	0.48	6.73	0.01	0.03
6.55	0.52	0.48	6.72	0.01	0.03	6.56	0.52	0.48	6.72	0.01	0.03
6.57	0.52	0.48	6.71	0.01	0.03	6.58	0.53	0.47	6.71	0.01	0.03
6.59	0.55	0.45	6.71	0.01	0.03	6.60	0.57	0.43	6.70	0.01	0.03
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	2.00	0.00	6.58	0.01	0.00	6.84	0.61	0.39	6.58	0.01	0.03
6.85	0.58	0.42	6.58	0.01	0.03	6.86	0.59	0.41	6.57	0.01	0.03
6.87	0.60	0.40	6.57	0.01	0.03	6.88	0.59	0.41	6.56	0.01	0.03
6.89	0.56	0.44	6.55	0.01	0.03	6.90	0.54	0.46	6.55	0.01	0.03
6.91	0.52	0.48	6.54	0.01	0.03	6.92	0.50	0.50	6.54	0.01	0.03
6.93	0.49	0.51	6.54	0.01	0.03	6.94	0.48	0.52	6.53	0.01	0.03
6.95	0.48	0.52	6.53	0.01	0.03	6.96	0.49	0.51	6.52	0.01	0.03
6.97	0.50	0.50	6.51	0.01	0.03	6.98	0.51	0.49	6.51	0.01	0.03
6.99	0.53	0.47	6.50	0.01	0.03	7.00	0.54	0.46	6.50	0.01	0.03
7.01	0.54	0.46	6.50	0.01	0.03	7.02	0.53	0.47	6.49	0.01	0.03
7.03	0.52	0.48	6.49	0.01	0.03	7.04	0.52	0.48	6.48	0.01	0.03
7.05	0.52	0.48	6.47	0.01	0.03	7.06	0.52	0.48	6.47	0.01	0.03
7.07	0.52	0.48	6.46	0.01	0.03	7.08	0.53	0.47	6.46	0.01	0.03
7.09	0.56	0.44	6.46	0.01	0.03	7.10	0.59	0.41	6.45	0.01	0.03
7.11	0.61	0.39	6.45	0.01	0.03	7.12	0.60	0.40	6.44	0.01	0.03
7.13	0.58	0.42	6.43	0.01	0.03	7.14	0.56	0.44	6.43	0.01	0.03
7.15	0.55	0.45	6.42	0.01	0.03	7.16	0.55	0.45	6.42	0.01	0.03
7.17	0.55	0.45	6.42	0.01	0.03	7.18	0.55	0.45	6.41	0.01	0.03
7.19	0.55	0.45	6.41	0.01	0.03	7.20	2.00	0.00	6.40	0.01	0.00
7.21	2.00	0.00	6.39	0.01	0.00	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	2.00	0.00	6.38	0.01	0.00	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	2.00	0.00	6.33	0.01	0.00
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	2.00	0.00	6.21	0.01	0.00	7.58	2.00	0.00	6.21	0.01	0.00
7.59	2.00	0.00	6.21	0.01	0.00	7.60	2.00	0.00	6.20	0.01	0.00
7.61	2.00	0.00	6.20	0.01	0.00	7.62	2.00	0.00	6.19	0.01	0.00
7.63	2.00	0.00	6.18	0.01	0.00	7.64	2.00	0.00	6.18	0.01	0.00
7.65	2.00	0.00	6.17	0.01	0.00	7.66	2.00	0.00	6.17	0.01	0.00
7.67	2.00	0.00	6.17	0.01	0.00	7.68	2.00	0.00	6.16	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	2.00	0.00	6.16	0.01	0.00	7.70	2.00	0.00	6.15	0.01	0.00
7.71	2.00	0.00	6.14	0.01	0.00	7.72	2.00	0.00	6.14	0.01	0.00

Overall liquefaction potential: 5.72

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

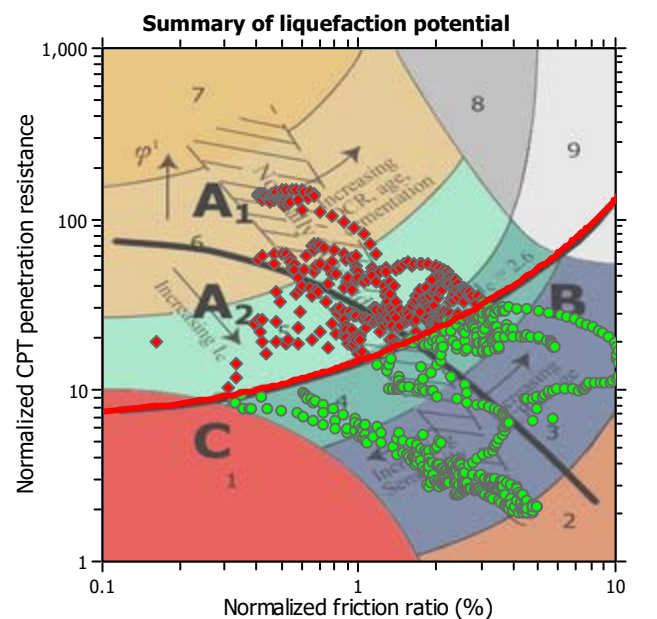
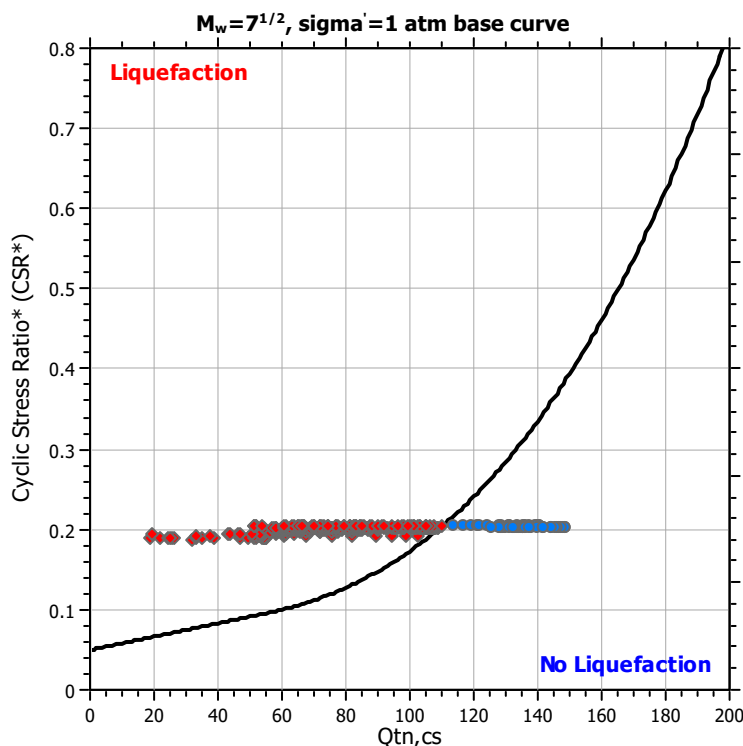
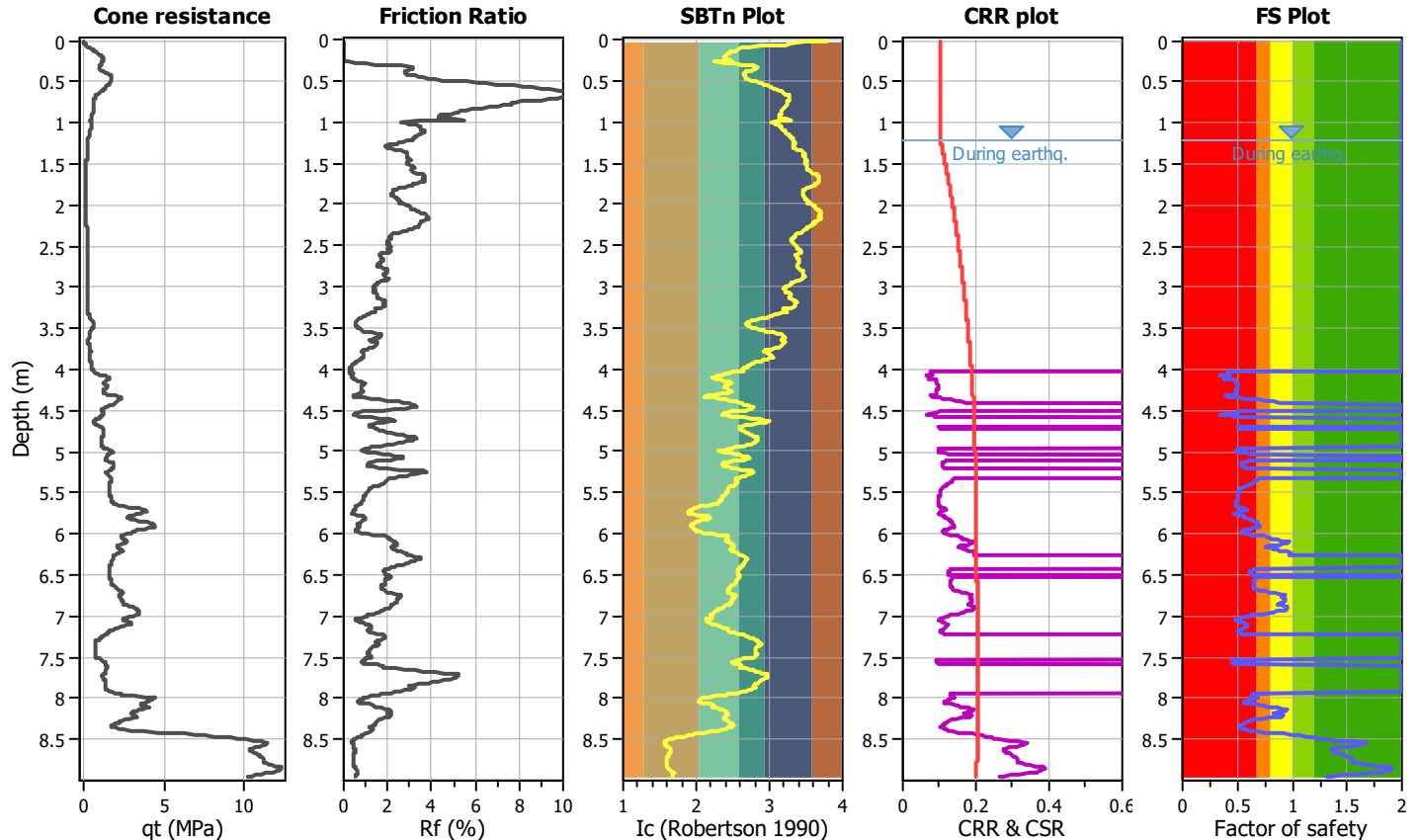
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

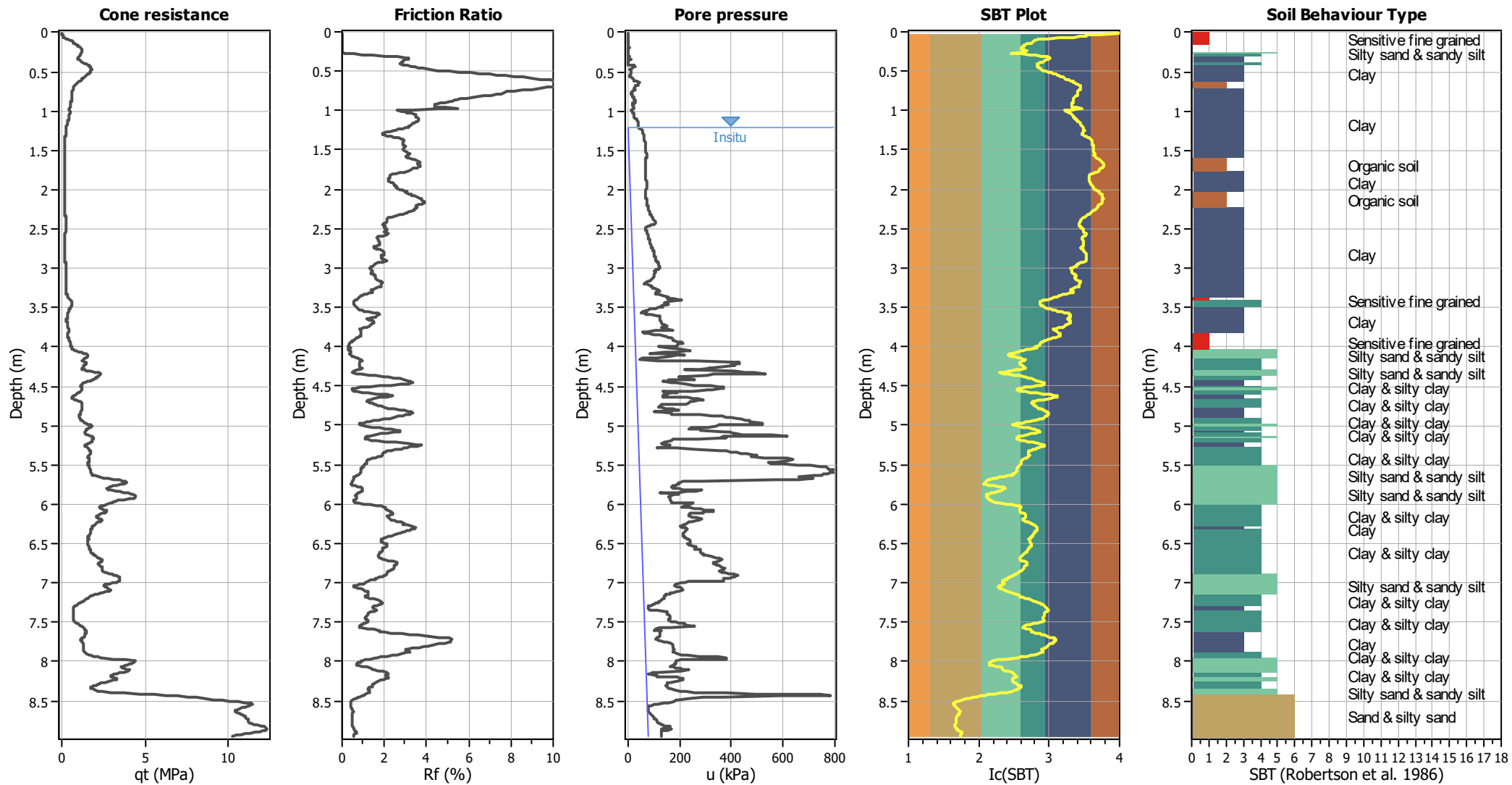
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU2bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

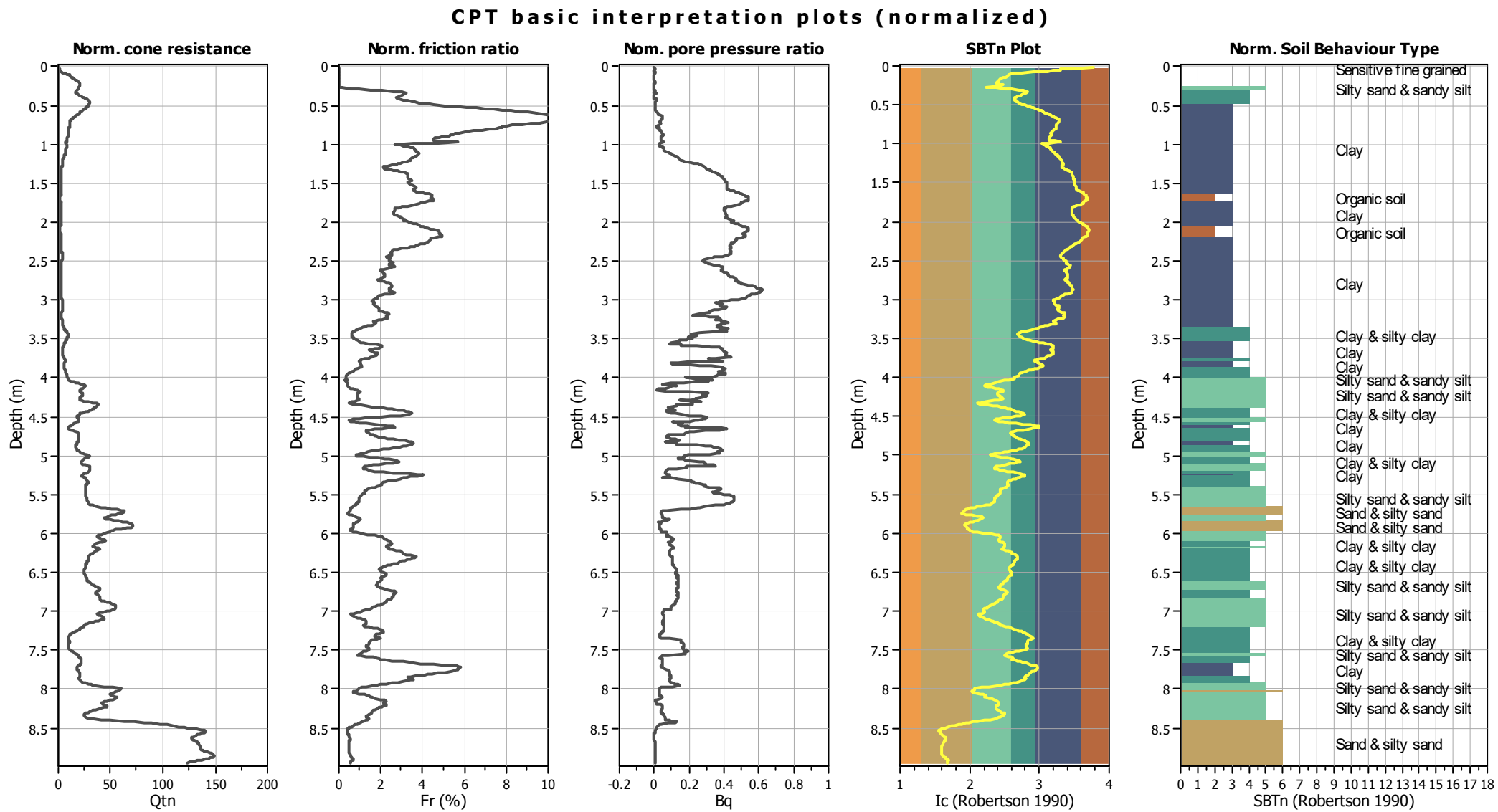


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



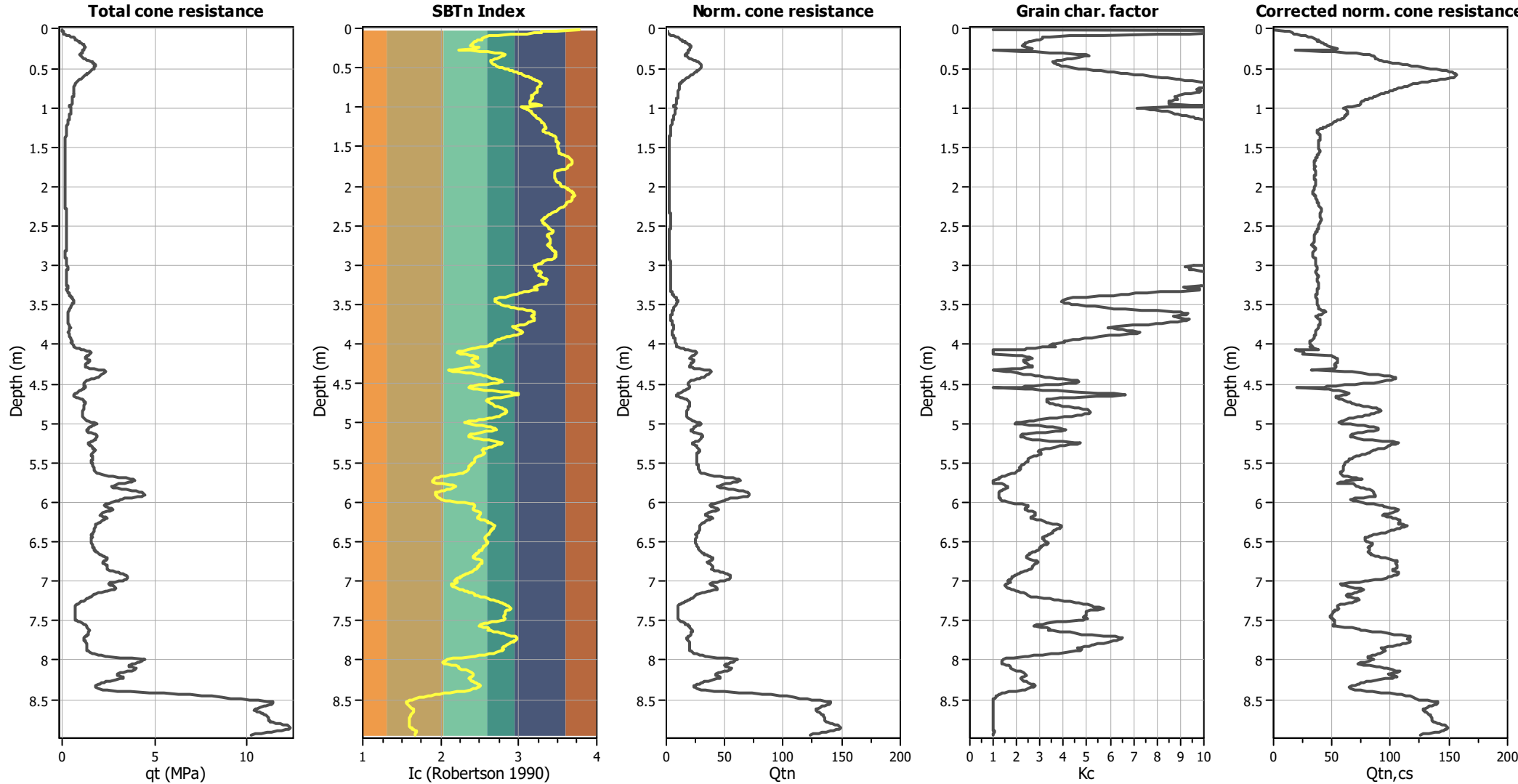
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

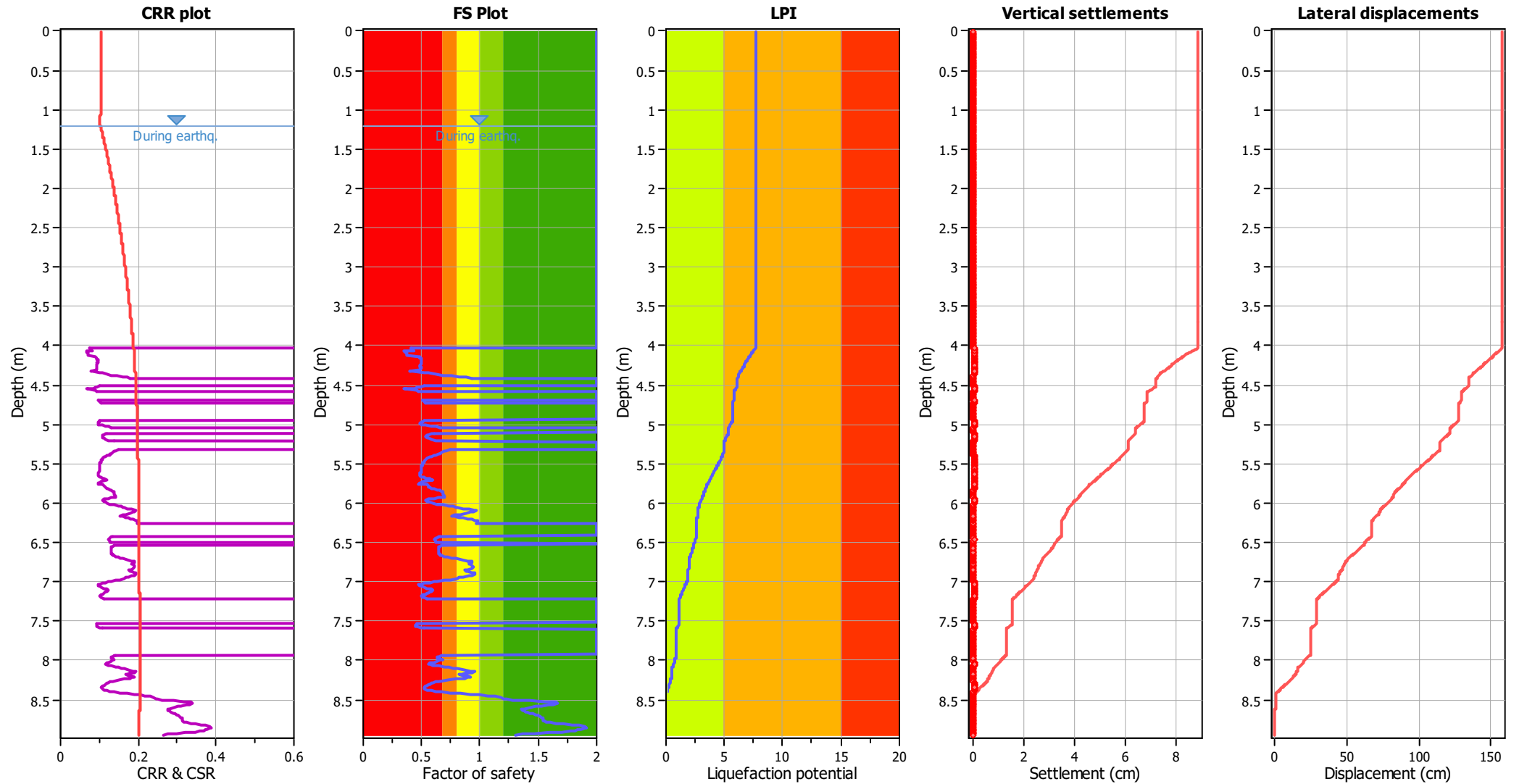
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _c applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

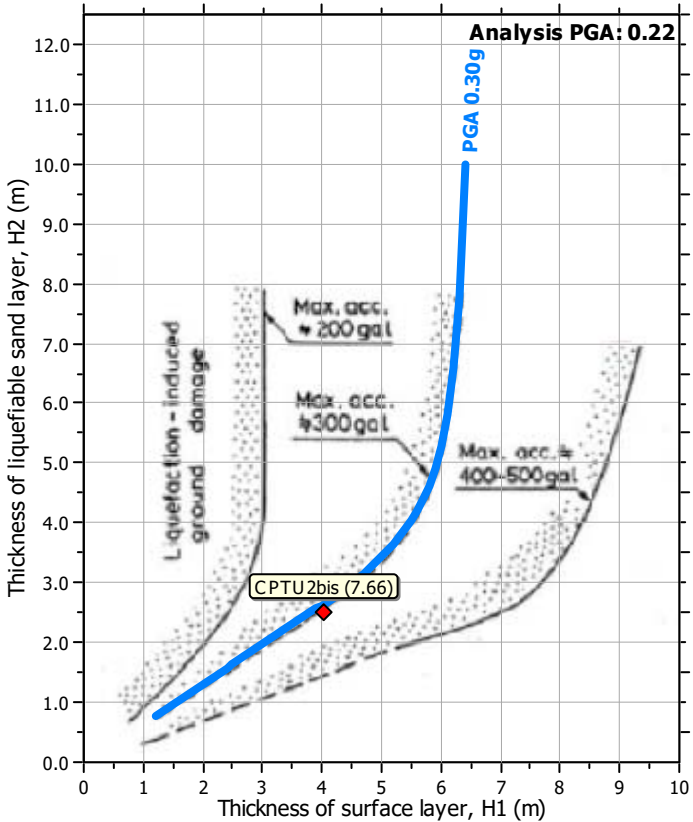
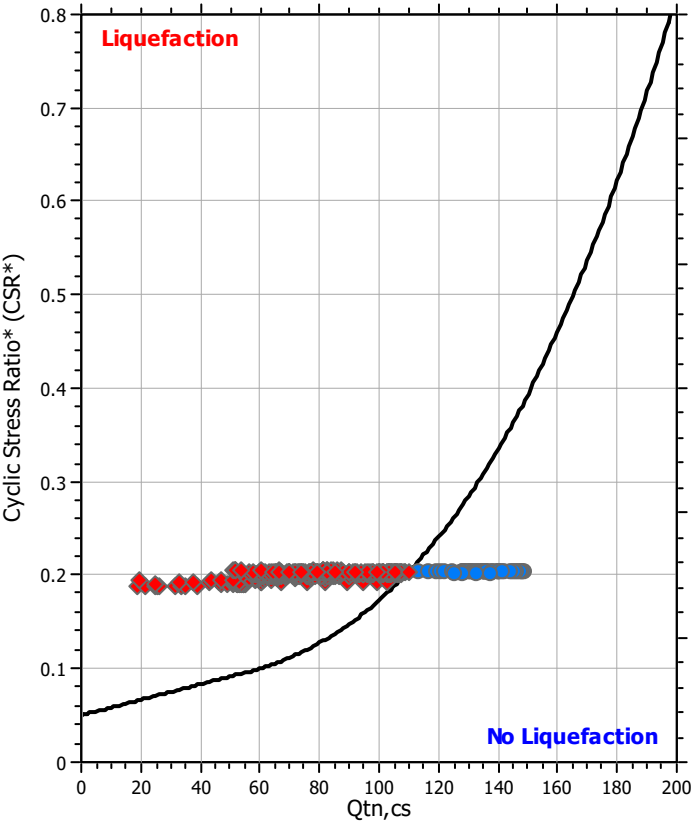
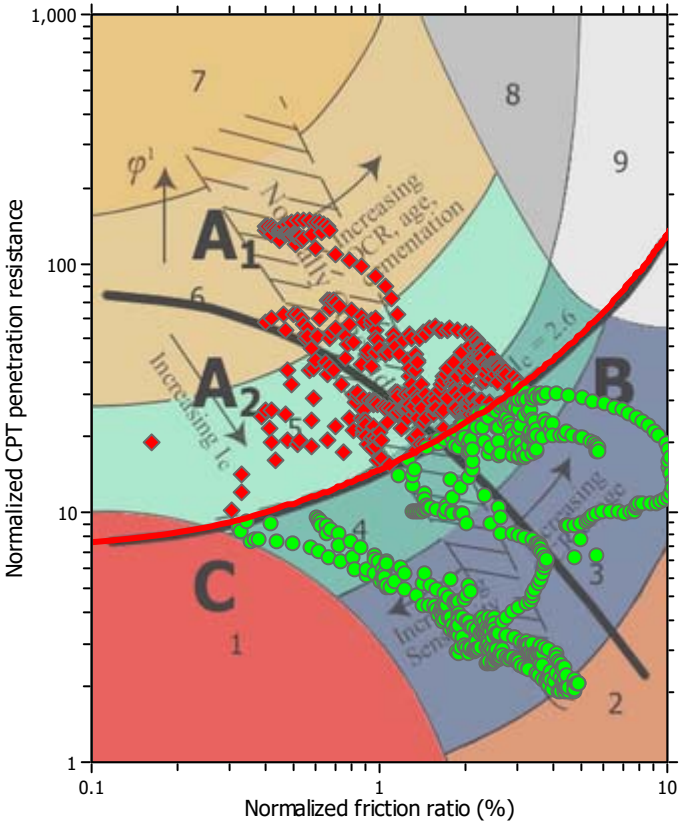
F.S. color scheme

■	Almost certain it will liquefy
■	Very likely to liquefy
■	Liquefaction and no liq. are equally likely
■	Unlike to liquefy
■	Almost certain it will not liquefy

LPI color scheme

■	Very high risk
■	High risk
■	Low risk

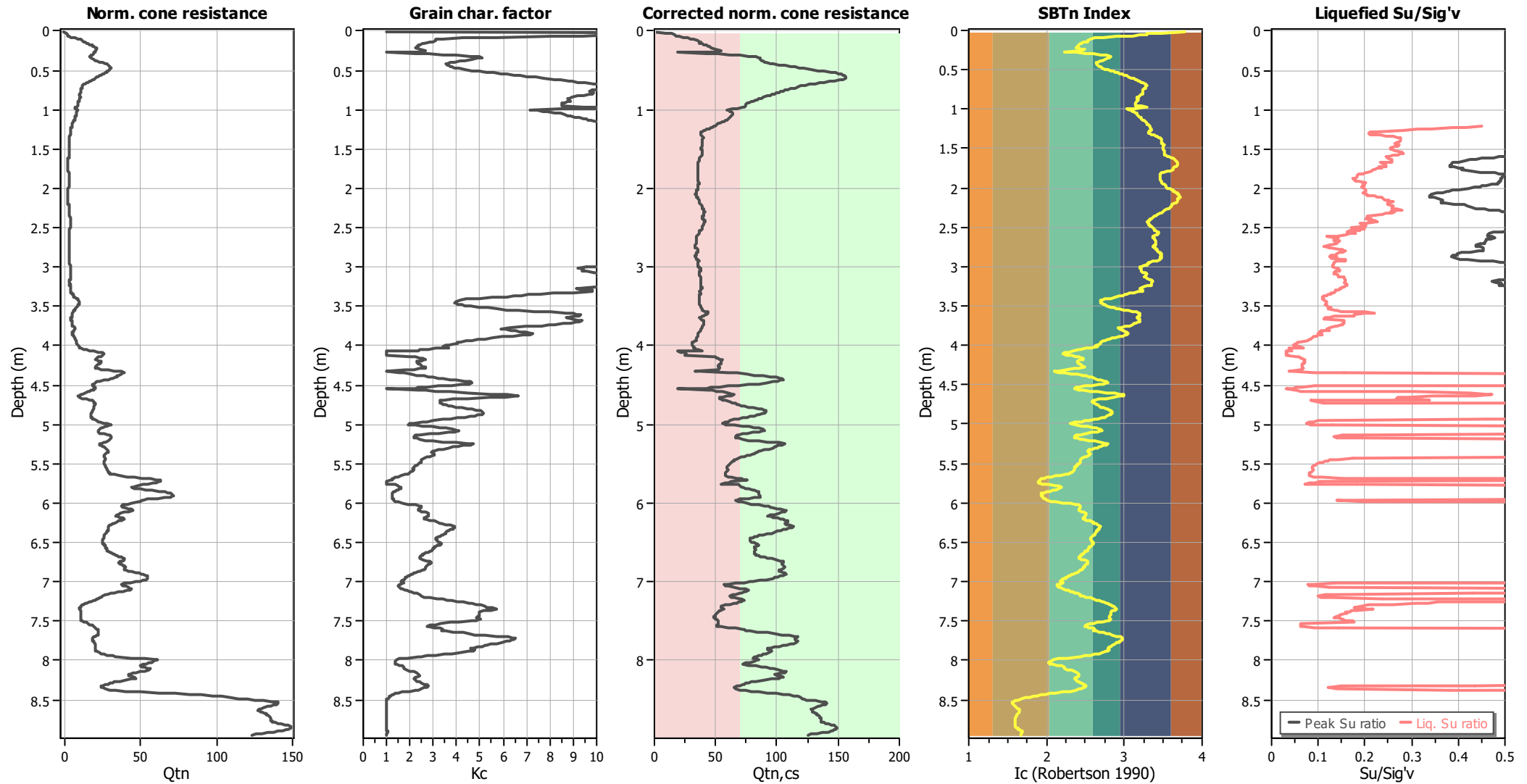
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_g applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	0.41	0.59	7.99	0.01	0.05	4.04	0.41	0.59	7.98	0.01	0.05
4.05	0.42	0.58	7.97	0.01	0.05	4.06	0.44	0.56	7.97	0.01	0.04
4.07	0.35	0.65	7.96	0.01	0.05	4.08	0.36	0.64	7.96	0.01	0.05
4.09	0.37	0.63	7.96	0.01	0.05	4.10	0.38	0.62	7.95	0.01	0.05
4.11	0.38	0.62	7.95	0.01	0.05	4.12	0.37	0.63	7.94	0.01	0.05
4.13	0.47	0.53	7.93	0.01	0.04	4.14	0.48	0.52	7.93	0.01	0.04
4.15	0.49	0.51	7.92	0.01	0.04	4.16	0.49	0.51	7.92	0.01	0.04
4.17	0.50	0.50	7.92	0.01	0.04	4.18	0.50	0.50	7.91	0.01	0.04
4.19	0.50	0.50	7.91	0.01	0.04	4.20	0.50	0.50	7.90	0.01	0.04
4.21	0.50	0.50	7.89	0.01	0.04	4.22	0.50	0.50	7.89	0.01	0.04
4.23	0.50	0.50	7.88	0.01	0.04	4.24	0.49	0.51	7.88	0.01	0.04
4.25	0.49	0.51	7.88	0.01	0.04	4.26	0.49	0.51	7.87	0.01	0.04
4.27	0.49	0.51	7.87	0.01	0.04	4.28	0.49	0.51	7.86	0.01	0.04
4.29	0.49	0.51	7.86	0.01	0.04	4.30	0.49	0.51	7.85	0.01	0.04
4.31	0.48	0.52	7.84	0.01	0.04	4.32	0.40	0.60	7.84	0.01	0.05
4.33	0.42	0.58	7.83	0.01	0.05	4.34	0.52	0.48	7.83	0.01	0.04
4.35	0.56	0.44	7.83	0.01	0.03	4.36	0.63	0.37	7.82	0.01	0.03
4.37	0.68	0.32	7.82	0.01	0.02	4.38	0.76	0.24	7.81	0.01	0.02
4.39	0.82	0.18	7.80	0.01	0.01	4.40	0.89	0.11	7.80	0.01	0.01
4.41	0.94	0.06	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	0.52	0.48	7.75	0.01	0.04	4.52	0.49	0.51	7.74	0.01	0.04
4.53	0.46	0.54	7.74	0.01	0.04	4.54	0.44	0.56	7.73	0.01	0.04
4.55	0.34	0.66	7.72	0.01	0.05	4.56	0.45	0.55	7.72	0.01	0.04
4.57	0.46	0.54	7.71	0.01	0.04	4.58	0.48	0.52	7.71	0.01	0.04
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	0.50	0.50	7.65	0.01	0.04
4.71	0.52	0.48	7.64	0.01	0.04	4.72	0.53	0.47	7.64	0.01	0.04
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	0.52	0.48	7.53	0.01	0.04	4.96	0.51	0.49	7.52	0.01	0.04
4.97	0.50	0.50	7.51	0.01	0.04	4.98	0.49	0.51	7.51	0.01	0.04
4.99	0.49	0.51	7.50	0.01	0.04	5.00	0.50	0.50	7.50	0.01	0.04
5.01	0.54	0.46	7.50	0.01	0.03	5.02	0.58	0.42	7.49	0.01	0.03
5.03	0.62	0.38	7.49	0.01	0.03	5.04	0.66	0.34	7.48	0.01	0.03
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	0.61	0.39	7.45	0.01	0.03	5.12	0.58	0.42	7.44	0.01	0.03
5.13	0.56	0.44	7.43	0.01	0.03	5.14	0.55	0.45	7.43	0.01	0.03
5.15	0.54	0.46	7.42	0.01	0.03	5.16	0.54	0.46	7.42	0.01	0.03
5.17	0.54	0.46	7.42	0.01	0.03	5.18	0.56	0.44	7.41	0.01	0.03
5.19	0.58	0.42	7.41	0.01	0.03	5.20	0.62	0.38	7.40	0.01	0.03
5.21	0.69	0.31	7.39	0.01	0.02	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	0.74	0.26	7.34	0.01	0.02
5.33	0.71	0.29	7.33	0.01	0.02	5.34	0.69	0.31	7.33	0.01	0.02
5.35	0.67	0.33	7.33	0.01	0.02	5.36	0.67	0.33	7.32	0.01	0.02
5.37	0.65	0.35	7.32	0.01	0.03	5.38	0.64	0.36	7.31	0.01	0.03
5.39	0.63	0.37	7.30	0.01	0.03	5.40	0.61	0.39	7.30	0.01	0.03
5.41	0.59	0.41	7.29	0.01	0.03	5.42	0.57	0.43	7.29	0.01	0.03
5.43	0.55	0.45	7.29	0.01	0.03	5.44	0.54	0.46	7.28	0.01	0.03
5.45	0.53	0.47	7.28	0.01	0.03	5.46	0.53	0.47	7.27	0.01	0.03
5.47	0.52	0.48	7.26	0.01	0.03	5.48	0.52	0.48	7.26	0.01	0.03
5.49	0.51	0.49	7.25	0.01	0.04	5.50	0.51	0.49	7.25	0.01	0.04
5.51	0.51	0.49	7.25	0.01	0.04	5.52	0.50	0.50	7.24	0.01	0.04
5.53	0.50	0.50	7.24	0.01	0.04	5.54	0.50	0.50	7.23	0.01	0.04
5.55	0.50	0.50	7.22	0.01	0.04	5.56	0.50	0.50	7.22	0.01	0.04
5.57	0.50	0.50	7.21	0.01	0.04	5.58	0.50	0.50	7.21	0.01	0.04
5.59	0.50	0.50	7.21	0.01	0.04	5.60	0.49	0.51	7.20	0.01	0.04
5.61	0.49	0.51	7.20	0.01	0.04	5.62	0.49	0.51	7.19	0.01	0.04
5.63	0.49	0.51	7.18	0.01	0.04	5.64	0.49	0.51	7.18	0.01	0.04
5.65	0.49	0.51	7.17	0.01	0.04	5.66	0.50	0.50	7.17	0.01	0.04
5.67	0.52	0.48	7.17	0.01	0.03	5.68	0.54	0.46	7.16	0.01	0.03
5.69	0.57	0.43	7.16	0.01	0.03	5.70	0.58	0.42	7.15	0.01	0.03
5.71	0.60	0.40	7.14	0.01	0.03	5.72	0.51	0.49	7.14	0.01	0.03
5.73	0.51	0.49	7.13	0.01	0.03	5.74	0.50	0.50	7.13	0.01	0.04
5.75	0.49	0.51	7.13	0.01	0.04	5.76	0.47	0.53	7.12	0.01	0.04

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	0.55	0.45	7.12	0.01	0.03	5.78	0.56	0.44	7.11	0.01	0.03
5.79	0.57	0.43	7.11	0.01	0.03	5.80	0.57	0.43	7.10	0.01	0.03
5.81	0.58	0.42	7.09	0.01	0.03	5.82	0.60	0.40	7.09	0.01	0.03
5.83	0.63	0.37	7.08	0.01	0.03	5.84	0.65	0.35	7.08	0.01	0.02
5.85	0.67	0.33	7.08	0.01	0.02	5.86	0.68	0.32	7.07	0.01	0.02
5.87	0.68	0.32	7.07	0.01	0.02	5.88	0.68	0.32	7.06	0.01	0.02
5.89	0.69	0.31	7.05	0.01	0.02	5.90	0.70	0.30	7.05	0.01	0.02
5.91	0.70	0.30	7.04	0.01	0.02	5.92	0.70	0.30	7.04	0.01	0.02
5.93	0.65	0.35	7.04	0.01	0.02	5.94	0.60	0.40	7.03	0.01	0.03
5.95	0.55	0.45	7.03	0.01	0.03	5.96	0.54	0.46	7.02	0.01	0.03
5.97	0.53	0.47	7.01	0.01	0.03	5.98	0.55	0.45	7.01	0.01	0.03
5.99	0.56	0.44	7.00	0.01	0.03	6.00	0.59	0.41	7.00	0.01	0.03
6.01	0.63	0.37	7.00	0.01	0.03	6.02	0.69	0.31	6.99	0.01	0.02
6.03	0.74	0.26	6.99	0.01	0.02	6.04	0.77	0.23	6.98	0.01	0.02
6.05	0.79	0.21	6.97	0.01	0.01	6.06	0.80	0.20	6.97	0.01	0.01
6.07	0.86	0.14	6.96	0.01	0.01	6.08	0.91	0.09	6.96	0.01	0.01
6.09	0.96	0.04	6.96	0.01	0.00	6.10	0.96	0.04	6.95	0.01	0.00
6.11	0.95	0.05	6.95	0.01	0.00	6.12	0.92	0.08	6.94	0.01	0.01
6.13	0.88	0.12	6.93	0.01	0.01	6.14	0.83	0.17	6.93	0.01	0.01
6.15	0.79	0.21	6.92	0.01	0.01	6.16	0.76	0.24	6.92	0.01	0.02
6.17	0.79	0.21	6.92	0.01	0.01	6.18	0.82	0.18	6.91	0.01	0.01
6.19	0.86	0.14	6.91	0.01	0.01	6.20	0.89	0.11	6.90	0.01	0.01
6.21	0.93	0.07	6.89	0.01	0.01	6.22	0.96	0.04	6.89	0.01	0.00
6.23	0.98	0.02	6.88	0.01	0.00	6.24	0.98	0.02	6.88	0.01	0.00
6.25	0.97	0.03	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	0.66	0.34	6.79	0.01	0.02
6.43	0.65	0.35	6.79	0.01	0.02	6.44	0.63	0.37	6.78	0.01	0.02
6.45	0.62	0.38	6.78	0.01	0.03	6.46	0.61	0.39	6.77	0.01	0.03
6.47	0.61	0.39	6.76	0.01	0.03	6.48	0.62	0.38	6.76	0.01	0.03
6.49	0.62	0.38	6.75	0.01	0.03	6.50	0.64	0.36	6.75	0.01	0.02
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	0.68	0.32	6.74	0.01	0.02	6.54	0.67	0.33	6.73	0.01	0.02
6.55	0.66	0.34	6.72	0.01	0.02	6.56	0.64	0.36	6.72	0.01	0.02
6.57	0.64	0.36	6.71	0.01	0.02	6.58	0.64	0.36	6.71	0.01	0.02
6.59	0.65	0.35	6.71	0.01	0.02	6.60	0.65	0.35	6.70	0.01	0.02
6.61	0.65	0.35	6.70	0.01	0.02	6.62	0.64	0.36	6.69	0.01	0.02
6.63	0.64	0.36	6.68	0.01	0.02	6.64	0.65	0.35	6.68	0.01	0.02
6.65	0.65	0.35	6.67	0.01	0.02	6.66	0.66	0.34	6.67	0.01	0.02
6.67	0.67	0.33	6.67	0.01	0.02	6.68	0.70	0.30	6.66	0.01	0.02
6.69	0.73	0.27	6.66	0.01	0.02	6.70	0.76	0.24	6.65	0.01	0.02
6.71	0.79	0.21	6.64	0.01	0.01	6.72	0.85	0.15	6.64	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	0.90	0.10	6.63	0.01	0.01	6.74	0.93	0.07	6.63	0.01	0.00
6.75	0.93	0.07	6.63	0.01	0.00	6.76	0.91	0.09	6.62	0.01	0.01
6.77	0.91	0.09	6.62	0.01	0.01	6.78	0.91	0.09	6.61	0.01	0.01
6.79	0.93	0.07	6.61	0.01	0.00	6.80	0.93	0.07	6.60	0.01	0.00
6.81	0.94	0.06	6.59	0.01	0.00	6.82	0.94	0.06	6.59	0.01	0.00
6.83	0.93	0.07	6.58	0.01	0.00	6.84	0.90	0.10	6.58	0.01	0.01
6.85	0.87	0.13	6.58	0.01	0.01	6.86	0.88	0.12	6.57	0.01	0.01
6.87	0.90	0.10	6.57	0.01	0.01	6.88	0.93	0.07	6.56	0.01	0.00
6.89	0.96	0.04	6.55	0.01	0.00	6.90	0.96	0.04	6.55	0.01	0.00
6.91	0.95	0.05	6.54	0.01	0.00	6.92	0.93	0.07	6.54	0.01	0.00
6.93	0.90	0.10	6.54	0.01	0.01	6.94	0.86	0.14	6.53	0.01	0.01
6.95	0.82	0.18	6.53	0.01	0.01	6.96	0.81	0.19	6.52	0.01	0.01
6.97	0.75	0.25	6.51	0.01	0.02	6.98	0.69	0.31	6.51	0.01	0.02
6.99	0.63	0.37	6.50	0.01	0.02	7.00	0.61	0.39	6.50	0.01	0.03
7.01	0.58	0.42	6.50	0.01	0.03	7.02	0.53	0.47	6.49	0.01	0.03
7.03	0.49	0.51	6.49	0.01	0.03	7.04	0.48	0.52	6.48	0.01	0.03
7.05	0.48	0.52	6.47	0.01	0.03	7.06	0.50	0.50	6.47	0.01	0.03
7.07	0.52	0.48	6.46	0.01	0.03	7.08	0.55	0.45	6.46	0.01	0.03
7.09	0.58	0.42	6.46	0.01	0.03	7.10	0.60	0.40	6.45	0.01	0.03
7.11	0.60	0.40	6.45	0.01	0.03	7.12	0.59	0.41	6.44	0.01	0.03
7.13	0.57	0.43	6.43	0.01	0.03	7.14	0.56	0.44	6.43	0.01	0.03
7.15	0.55	0.45	6.42	0.01	0.03	7.16	0.53	0.47	6.42	0.01	0.03
7.17	0.51	0.49	6.42	0.01	0.03	7.18	0.50	0.50	6.41	0.01	0.03
7.19	0.51	0.49	6.41	0.01	0.03	7.20	0.52	0.48	6.40	0.01	0.03
7.21	0.55	0.45	6.39	0.01	0.03	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	2.00	0.00	6.38	0.01	0.00	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	2.00	0.00	6.33	0.01	0.00
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	0.45	0.55	6.24	0.01	0.03	7.54	0.45	0.55	6.23	0.01	0.03
7.55	0.45	0.55	6.22	0.01	0.03	7.56	0.45	0.55	6.22	0.01	0.03
7.57	0.46	0.54	6.21	0.01	0.03	7.58	0.49	0.51	6.21	0.01	0.03
7.59	0.53	0.47	6.21	0.01	0.03	7.60	2.00	0.00	6.20	0.01	0.00
7.61	2.00	0.00	6.20	0.01	0.00	7.62	2.00	0.00	6.19	0.01	0.00
7.63	2.00	0.00	6.18	0.01	0.00	7.64	2.00	0.00	6.18	0.01	0.00
7.65	2.00	0.00	6.17	0.01	0.00	7.66	2.00	0.00	6.17	0.01	0.00
7.67	2.00	0.00	6.17	0.01	0.00	7.68	2.00	0.00	6.16	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	2.00	0.00	6.16	0.01	0.00	7.70	2.00	0.00	6.15	0.01	0.00
7.71	2.00	0.00	6.14	0.01	0.00	7.72	2.00	0.00	6.14	0.01	0.00
7.73	2.00	0.00	6.13	0.01	0.00	7.74	2.00	0.00	6.13	0.01	0.00
7.75	2.00	0.00	6.13	0.01	0.00	7.76	2.00	0.00	6.12	0.01	0.00
7.77	2.00	0.00	6.12	0.01	0.00	7.78	2.00	0.00	6.11	0.01	0.00
7.79	2.00	0.00	6.11	0.01	0.00	7.80	2.00	0.00	6.10	0.01	0.00
7.81	2.00	0.00	6.09	0.01	0.00	7.82	2.00	0.00	6.09	0.01	0.00
7.83	2.00	0.00	6.08	0.01	0.00	7.84	2.00	0.00	6.08	0.01	0.00
7.85	2.00	0.00	6.08	0.01	0.00	7.86	2.00	0.00	6.07	0.01	0.00
7.87	2.00	0.00	6.07	0.01	0.00	7.88	2.00	0.00	6.06	0.01	0.00
7.89	2.00	0.00	6.05	0.01	0.00	7.90	2.00	0.00	6.05	0.01	0.00
7.91	2.00	0.00	6.04	0.01	0.00	7.92	2.00	0.00	6.04	0.01	0.00
7.93	0.70	0.30	6.04	0.01	0.02	7.94	0.67	0.33	6.03	0.01	0.02
7.95	0.65	0.35	6.03	0.01	0.02	7.96	0.64	0.36	6.02	0.01	0.02
7.97	0.63	0.37	6.01	0.01	0.02	7.98	0.65	0.35	6.01	0.01	0.02
7.99	0.68	0.32	6.00	0.01	0.02	8.00	0.66	0.34	6.00	0.01	0.02
8.01	0.64	0.36	6.00	0.01	0.02	8.02	0.60	0.40	5.99	0.01	0.02
8.03	0.58	0.42	5.99	0.01	0.03	8.04	0.56	0.44	5.98	0.01	0.03
8.05	0.57	0.43	5.97	0.01	0.03	8.06	0.60	0.40	5.97	0.01	0.02
8.07	0.65	0.35	5.96	0.01	0.02	8.08	0.70	0.30	5.96	0.01	0.02
8.09	0.73	0.27	5.96	0.01	0.02	8.10	0.77	0.23	5.95	0.01	0.01
8.11	0.81	0.19	5.95	0.01	0.01	8.12	0.87	0.13	5.94	0.01	0.01
8.13	0.92	0.08	5.93	0.01	0.00	8.14	0.96	0.04	5.93	0.01	0.00
8.15	0.94	0.06	5.92	0.01	0.00	8.16	0.89	0.11	5.92	0.01	0.01
8.17	0.84	0.16	5.92	0.01	0.01	8.18	0.82	0.18	5.91	0.01	0.01
8.19	0.86	0.14	5.91	0.01	0.01	8.20	0.89	0.11	5.90	0.01	0.01
8.21	0.92	0.08	5.89	0.01	0.00	8.22	0.89	0.11	5.89	0.01	0.01
8.23	0.87	0.13	5.88	0.01	0.01	8.24	0.80	0.20	5.88	0.01	0.01
8.25	0.72	0.28	5.88	0.01	0.02	8.26	0.65	0.35	5.87	0.01	0.02
8.27	0.62	0.38	5.87	0.01	0.02	8.28	0.60	0.40	5.86	0.01	0.02
8.29	0.58	0.42	5.86	0.01	0.02	8.30	0.57	0.43	5.85	0.01	0.02
8.31	0.56	0.44	5.84	0.01	0.03	8.32	0.55	0.45	5.84	0.01	0.03
8.33	0.53	0.47	5.83	0.01	0.03	8.34	0.52	0.48	5.83	0.01	0.03
8.35	0.52	0.48	5.83	0.01	0.03	8.36	0.53	0.47	5.82	0.01	0.03
8.37	0.55	0.45	5.82	0.01	0.03	8.38	0.58	0.42	5.81	0.01	0.02
8.39	0.62	0.38	5.80	0.01	0.02	8.40	0.67	0.33	5.80	0.01	0.02
8.41	0.75	0.25	5.79	0.01	0.01	8.42	0.84	0.16	5.79	0.01	0.01
8.43	0.92	0.08	5.79	0.01	0.00	8.44	1.00	0.00	5.78	0.01	0.00
8.45	1.06	0.00	5.78	0.01	0.00	8.46	1.13	0.00	5.77	0.01	0.00
8.47	1.18	0.00	5.76	0.01	0.00	8.48	1.21	0.00	5.76	0.01	0.00
8.49	1.22	0.00	5.75	0.01	0.00	8.50	1.28	0.00	5.75	0.01	0.00
8.51	1.42	0.00	5.75	0.01	0.00	8.52	1.55	0.00	5.74	0.01	0.00
8.53	1.65	0.00	5.74	0.01	0.00	8.54	1.67	0.00	5.73	0.01	0.00
8.55	1.66	0.00	5.72	0.01	0.00	8.56	1.63	0.00	5.72	0.01	0.00
8.57	1.59	0.00	5.71	0.01	0.00	8.58	1.53	0.00	5.71	0.01	0.00
8.59	1.48	0.00	5.71	0.01	0.00	8.60	1.43	0.00	5.70	0.01	0.00
8.61	1.38	0.00	5.70	0.01	0.00	8.62	1.36	0.00	5.69	0.01	0.00
8.63	1.36	0.00	5.68	0.01	0.00	8.64	1.37	0.00	5.68	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.65	1.39	0.00	5.67	0.01	0.00	8.66	1.40	0.00	5.67	0.01	0.00
8.67	1.43	0.00	5.67	0.01	0.00	8.68	1.45	0.00	5.66	0.01	0.00
8.69	1.48	0.00	5.66	0.01	0.00	8.70	1.50	0.00	5.65	0.01	0.00
8.71	1.51	0.00	5.64	0.01	0.00	8.72	1.53	0.00	5.64	0.01	0.00
8.73	1.54	0.00	5.63	0.01	0.00	8.74	1.54	0.00	5.63	0.01	0.00
8.75	1.55	0.00	5.63	0.01	0.00	8.76	1.54	0.00	5.62	0.01	0.00
8.77	1.55	0.00	5.62	0.01	0.00	8.78	1.56	0.00	5.61	0.01	0.00
8.79	1.60	0.00	5.61	0.01	0.00	8.80	1.65	0.00	5.60	0.01	0.00
8.81	1.71	0.00	5.59	0.01	0.00	8.82	1.79	0.00	5.59	0.01	0.00
8.83	1.85	0.00	5.58	0.01	0.00	8.84	1.90	0.00	5.58	0.01	0.00
8.85	1.91	0.00	5.58	0.01	0.00	8.86	1.90	0.00	5.57	0.01	0.00
8.87	1.87	0.00	5.57	0.01	0.00	8.88	1.84	0.00	5.56	0.01	0.00
8.89	1.82	0.00	5.55	0.01	0.00	8.90	1.78	0.00	5.55	0.01	0.00
8.91	1.71	0.00	5.54	0.01	0.00	8.92	1.59	0.00	5.54	0.01	0.00
8.93	1.47	0.00	5.54	0.01	0.00	8.94	1.36	0.00	5.53	0.01	0.00
8.95	1.31	0.00	5.53	0.01	0.00						

Overall liquefaction potential: 7.66

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

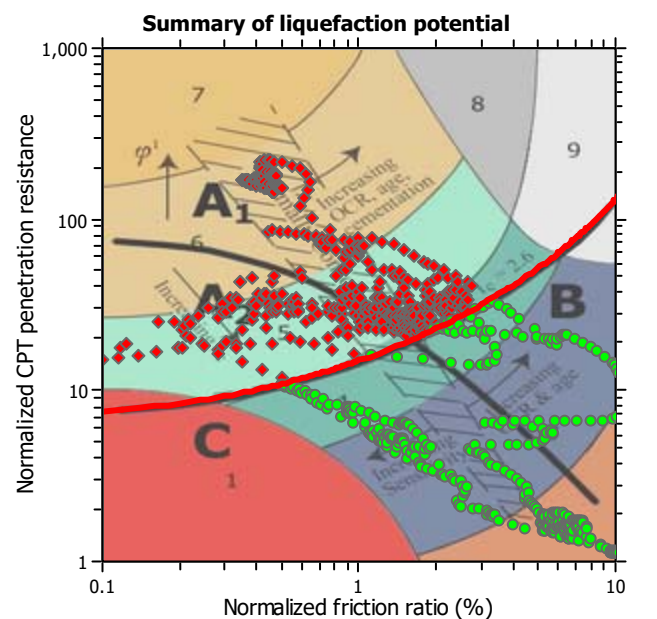
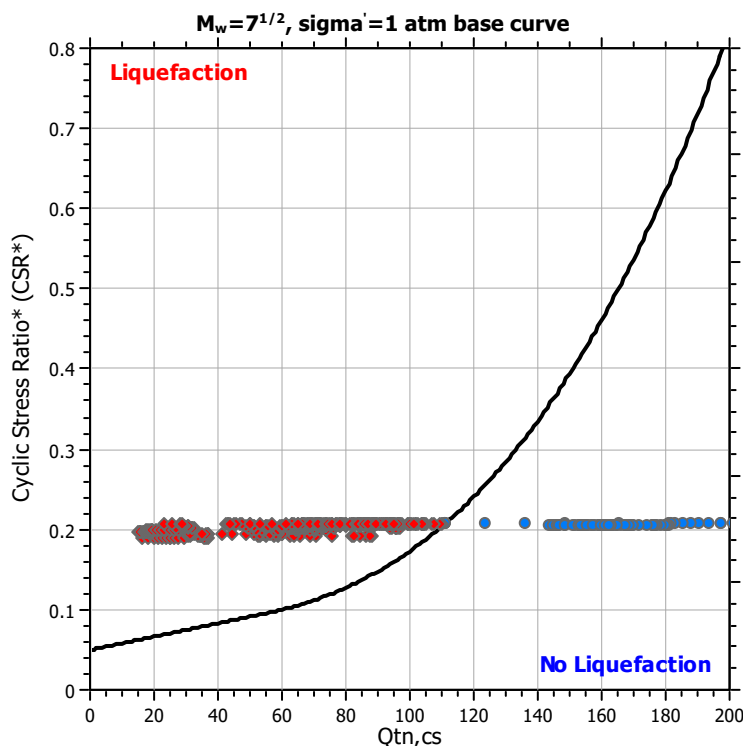
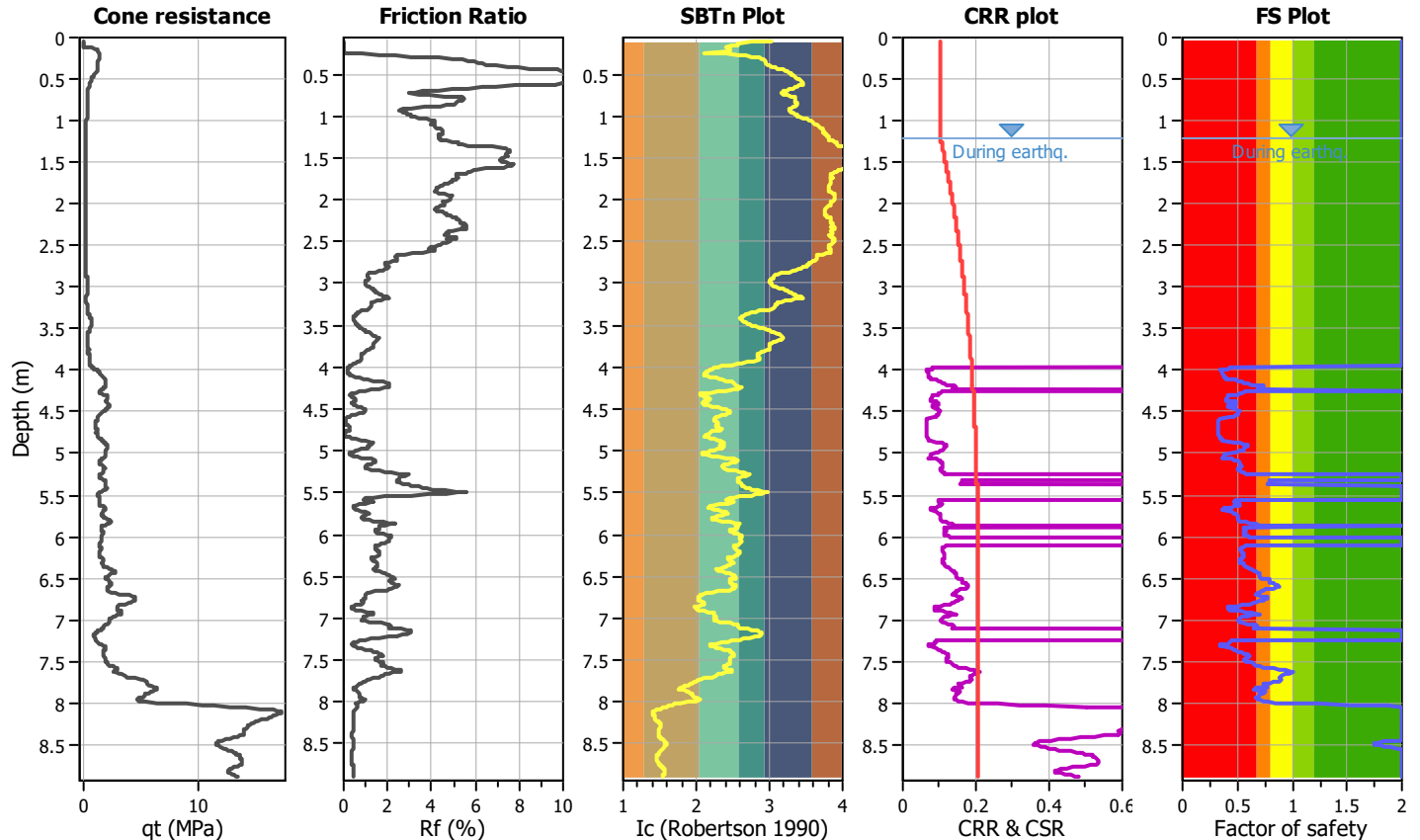
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

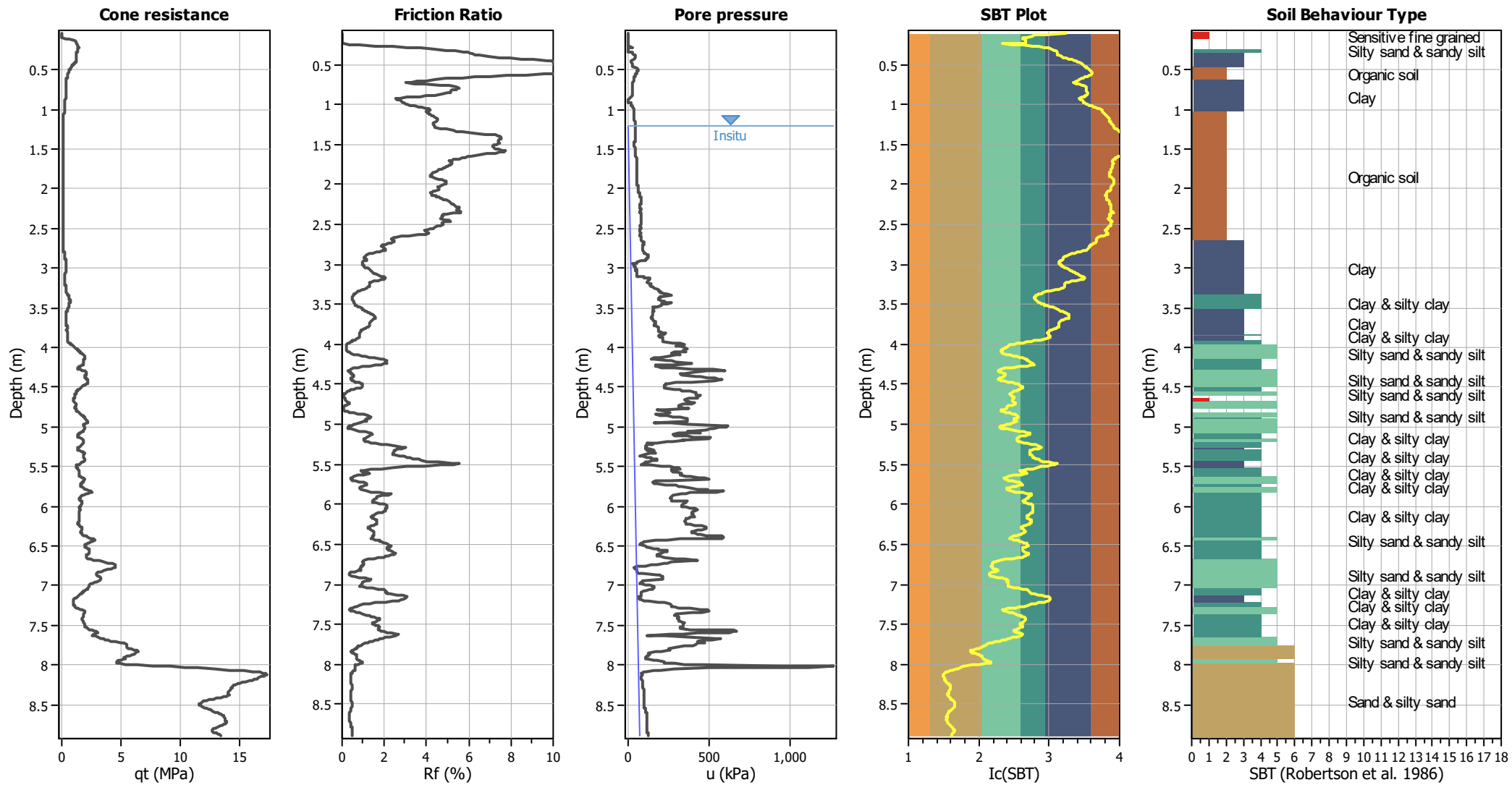
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU3bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

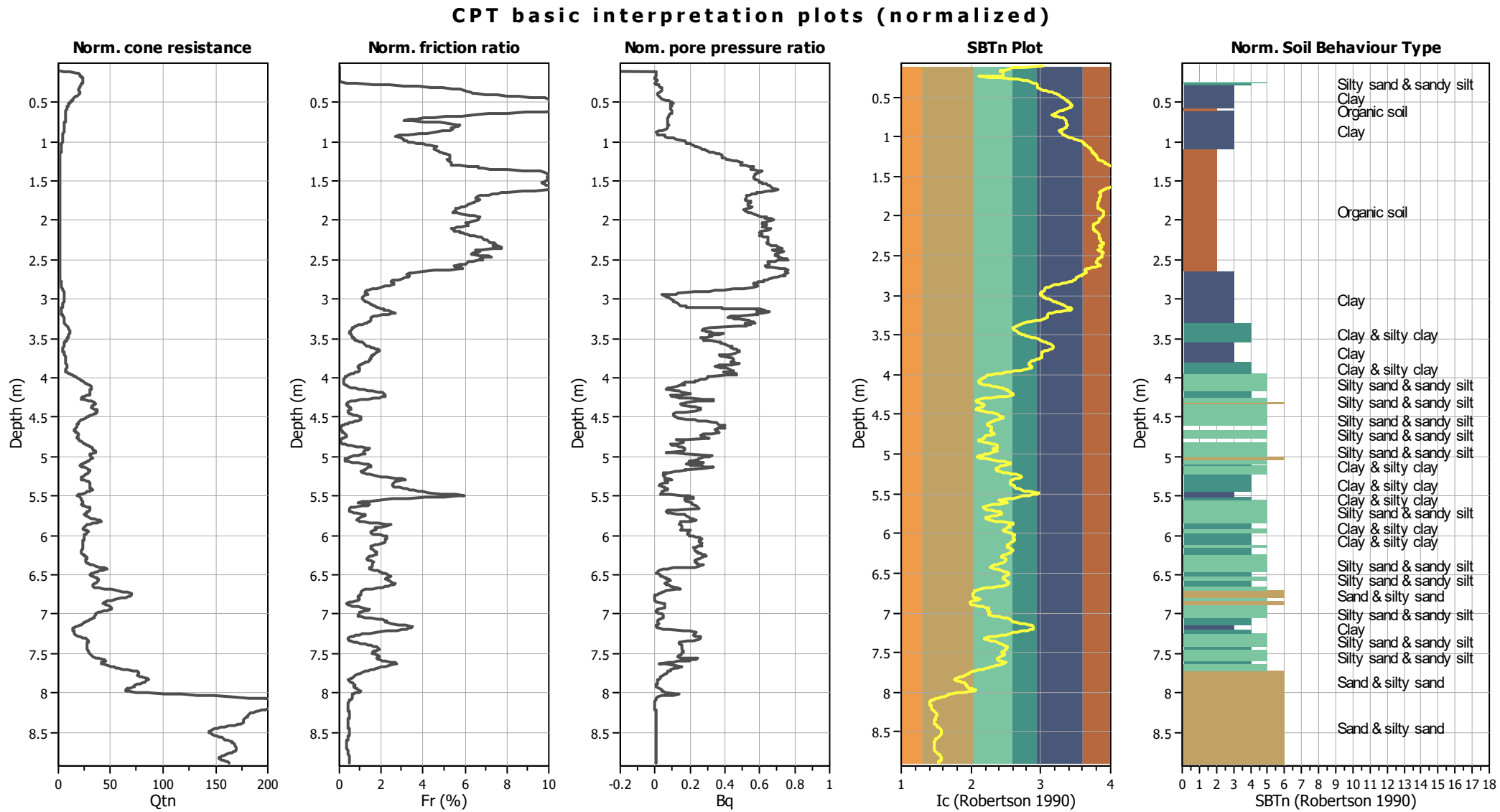


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



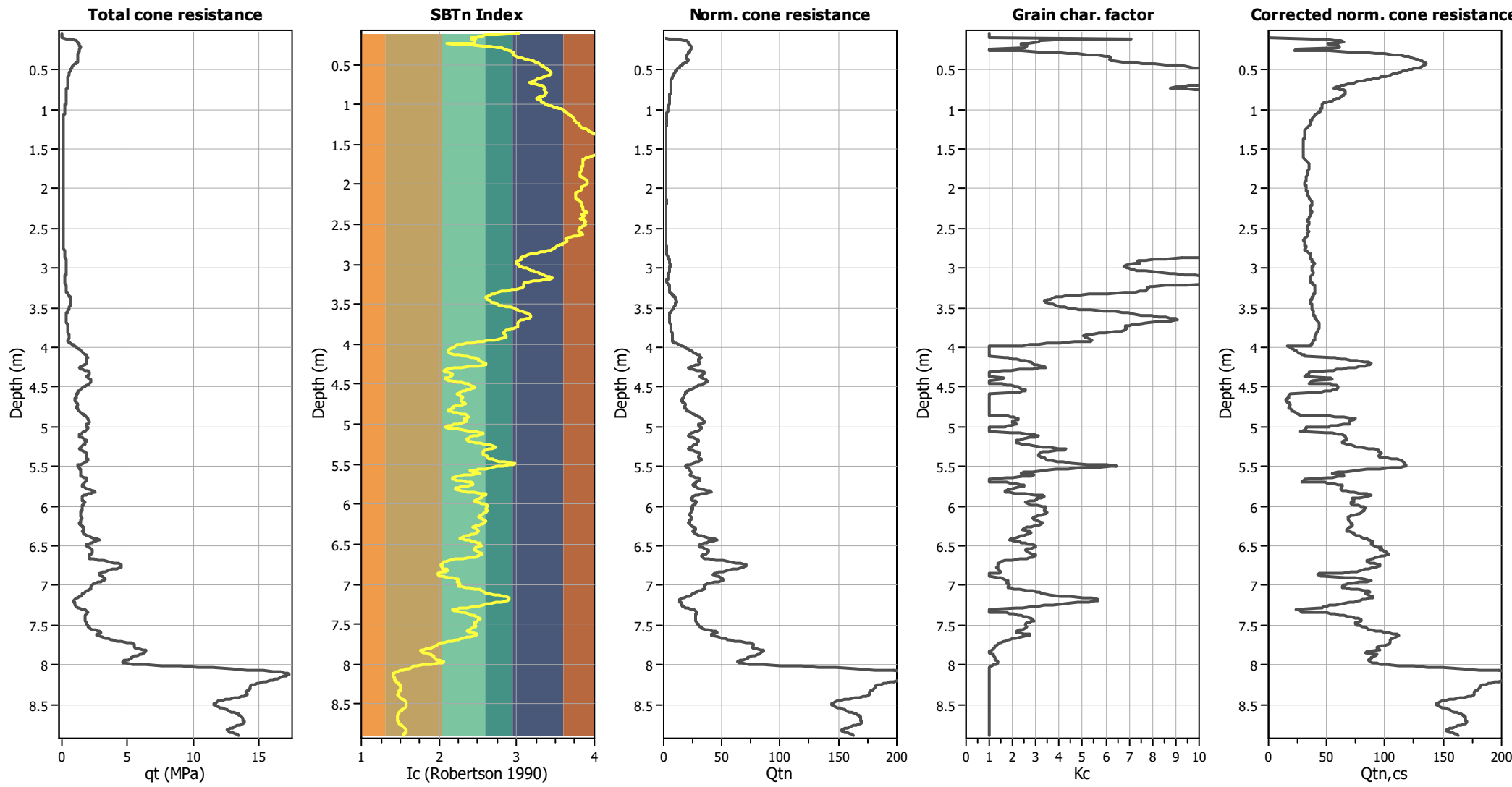
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

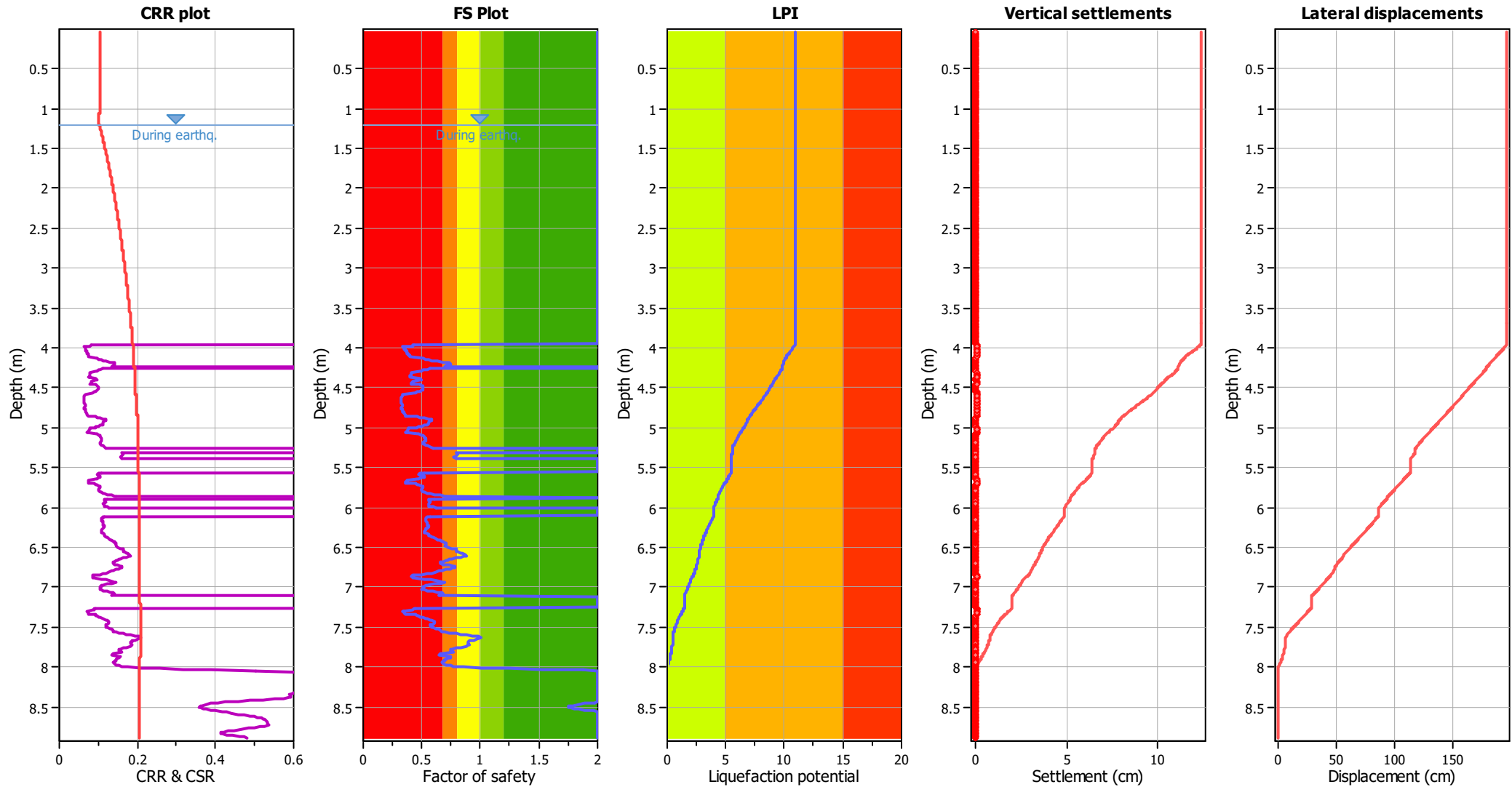
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

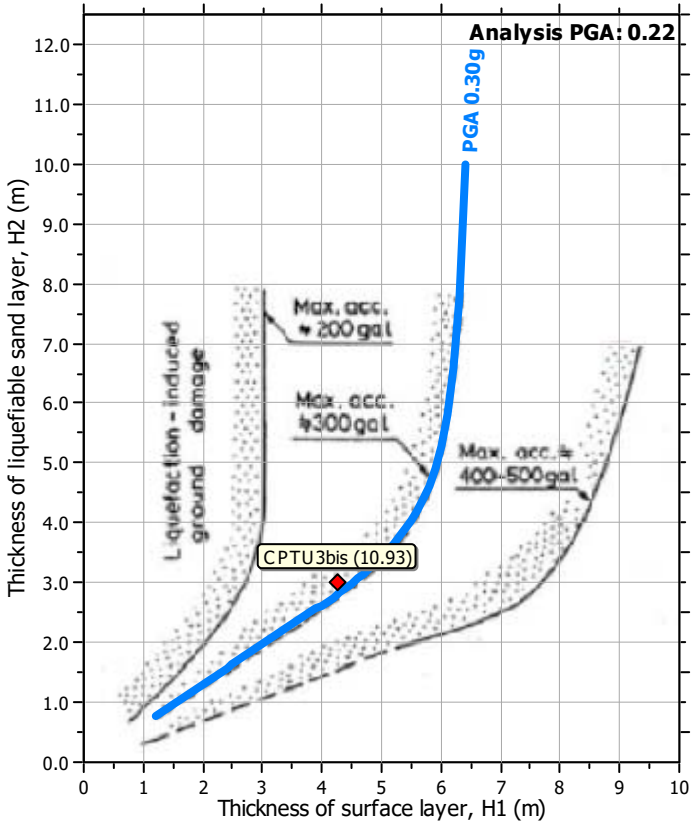
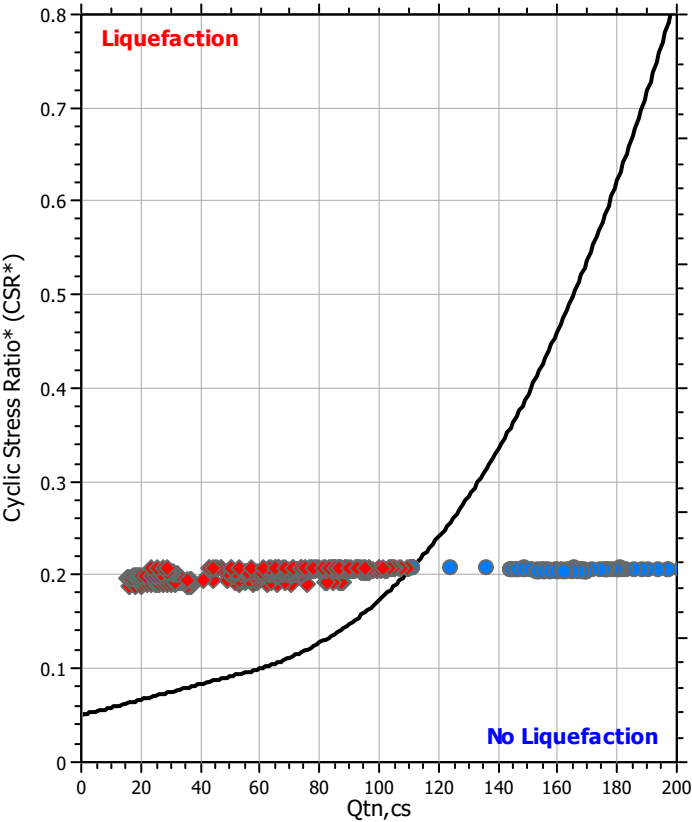
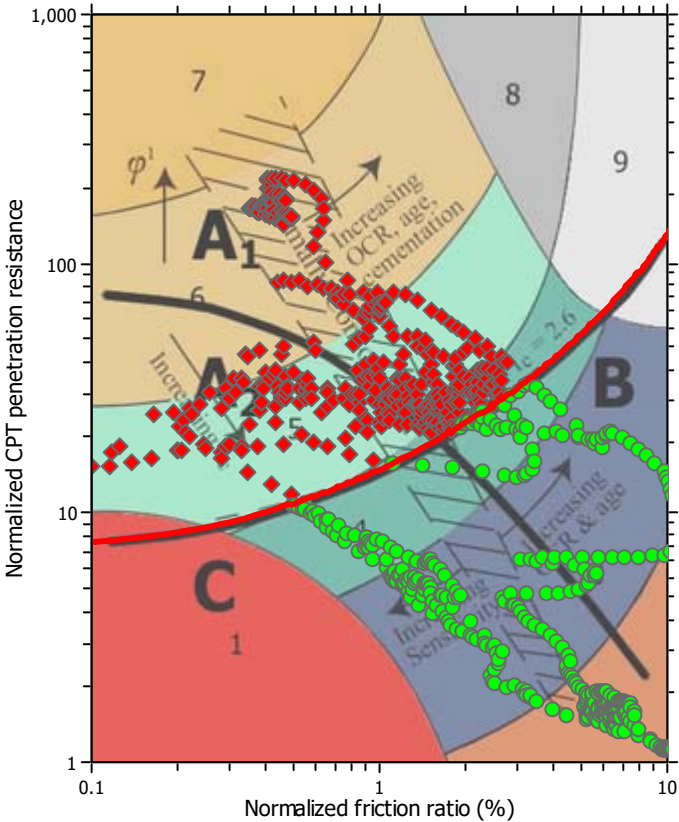
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

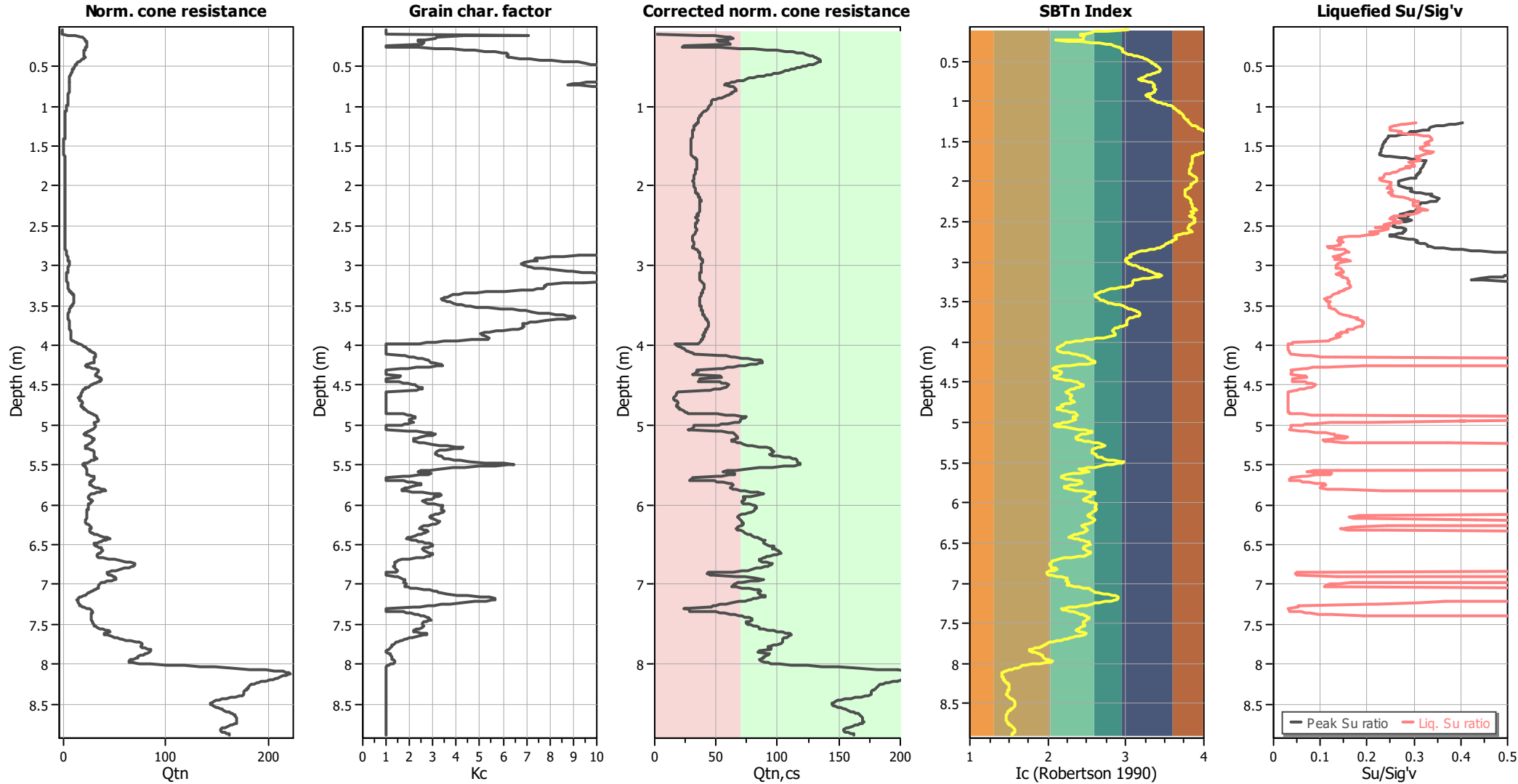
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.04	2.00	0.00	9.98	0.01	0.00	0.05	2.00	0.00	9.97	0.01	0.00
0.06	2.00	0.00	9.97	0.01	0.00	0.07	2.00	0.00	9.96	0.01	0.00
0.08	2.00	0.00	9.96	0.01	0.00	0.09	2.00	0.00	9.96	0.01	0.00
0.10	2.00	0.00	9.95	0.01	0.00	0.11	2.00	0.00	9.95	0.01	0.00
0.12	2.00	0.00	9.94	0.01	0.00	0.13	2.00	0.00	9.94	0.01	0.00
0.14	2.00	0.00	9.93	0.01	0.00	0.15	2.00	0.00	9.93	0.01	0.00
0.16	2.00	0.00	9.92	0.01	0.00	0.17	2.00	0.00	9.91	0.01	0.00
0.18	2.00	0.00	9.91	0.01	0.00	0.19	2.00	0.00	9.90	0.01	0.00
0.20	2.00	0.00	9.90	0.01	0.00	0.21	2.00	0.00	9.89	0.01	0.00
0.22	2.00	0.00	9.89	0.01	0.00	0.23	2.00	0.00	9.88	0.01	0.00
0.24	2.00	0.00	9.88	0.01	0.00	0.25	2.00	0.00	9.88	0.01	0.00
0.26	2.00	0.00	9.87	0.01	0.00	0.27	2.00	0.00	9.87	0.01	0.00
0.28	2.00	0.00	9.86	0.01	0.00	0.29	2.00	0.00	9.86	0.01	0.00
0.30	2.00	0.00	9.85	0.01	0.00	0.31	2.00	0.00	9.85	0.01	0.00
0.32	2.00	0.00	9.84	0.01	0.00	0.33	2.00	0.00	9.84	0.01	0.00
0.34	2.00	0.00	9.83	0.01	0.00	0.35	2.00	0.00	9.82	0.01	0.00
0.36	2.00	0.00	9.82	0.01	0.00	0.37	2.00	0.00	9.81	0.01	0.00
0.38	2.00	0.00	9.81	0.01	0.00	0.39	2.00	0.00	9.80	0.01	0.00
0.40	2.00	0.00	9.80	0.01	0.00	0.41	2.00	0.00	9.79	0.01	0.00
0.42	2.00	0.00	9.79	0.01	0.00	0.43	2.00	0.00	9.79	0.01	0.00
0.44	2.00	0.00	9.78	0.01	0.00	0.45	2.00	0.00	9.78	0.01	0.00
0.46	2.00	0.00	9.77	0.01	0.00	0.47	2.00	0.00	9.77	0.01	0.00
0.48	2.00	0.00	9.76	0.01	0.00	0.49	2.00	0.00	9.76	0.01	0.00
0.50	2.00	0.00	9.75	0.01	0.00	0.51	2.00	0.00	9.74	0.01	0.00
0.52	2.00	0.00	9.74	0.01	0.00	0.53	2.00	0.00	9.73	0.01	0.00
0.54	2.00	0.00	9.73	0.01	0.00	0.55	2.00	0.00	9.72	0.01	0.00
0.56	2.00	0.00	9.72	0.01	0.00	0.57	2.00	0.00	9.71	0.01	0.00
0.58	2.00	0.00	9.71	0.01	0.00	0.59	2.00	0.00	9.71	0.01	0.00
0.60	2.00	0.00	9.70	0.01	0.00	0.61	2.00	0.00	9.70	0.01	0.00
0.62	2.00	0.00	9.69	0.01	0.00	0.63	2.00	0.00	9.69	0.01	0.00
0.64	2.00	0.00	9.68	0.01	0.00	0.65	2.00	0.00	9.68	0.01	0.00
0.66	2.00	0.00	9.67	0.01	0.00	0.67	2.00	0.00	9.66	0.01	0.00
0.68	2.00	0.00	9.66	0.01	0.00	0.69	2.00	0.00	9.65	0.01	0.00
0.70	2.00	0.00	9.65	0.01	0.00	0.71	2.00	0.00	9.64	0.01	0.00
0.72	2.00	0.00	9.64	0.01	0.00	0.73	2.00	0.00	9.63	0.01	0.00
0.74	2.00	0.00	9.63	0.01	0.00	0.75	2.00	0.00	9.63	0.01	0.00
0.76	2.00	0.00	9.62	0.01	0.00	0.77	2.00	0.00	9.62	0.01	0.00
0.78	2.00	0.00	9.61	0.01	0.00	0.79	2.00	0.00	9.61	0.01	0.00
0.80	2.00	0.00	9.60	0.01	0.00	0.81	2.00	0.00	9.60	0.01	0.00
0.82	2.00	0.00	9.59	0.01	0.00	0.83	2.00	0.00	9.59	0.01	0.00
0.84	2.00	0.00	9.58	0.01	0.00	0.85	2.00	0.00	9.57	0.01	0.00
0.86	2.00	0.00	9.57	0.01	0.00	0.87	2.00	0.00	9.56	0.01	0.00
0.88	2.00	0.00	9.56	0.01	0.00	0.89	2.00	0.00	9.55	0.01	0.00
0.90	2.00	0.00	9.55	0.01	0.00	0.91	2.00	0.00	9.54	0.01	0.00
0.92	2.00	0.00	9.54	0.01	0.00	0.93	2.00	0.00	9.54	0.01	0.00
0.94	2.00	0.00	9.53	0.01	0.00	0.95	2.00	0.00	9.53	0.01	0.00
0.96	2.00	0.00	9.52	0.01	0.00	0.97	2.00	0.00	9.52	0.01	0.00
0.98	2.00	0.00	9.51	0.01	0.00	0.99	2.00	0.00	9.51	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.00	2.00	0.00	9.50	0.01	0.00	1.01	2.00	0.00	9.49	0.01	0.00
1.02	2.00	0.00	9.49	0.01	0.00	1.03	2.00	0.00	9.48	0.01	0.00
1.04	2.00	0.00	9.48	0.01	0.00	1.05	2.00	0.00	9.47	0.01	0.00
1.06	2.00	0.00	9.47	0.01	0.00	1.07	2.00	0.00	9.46	0.01	0.00
1.08	2.00	0.00	9.46	0.01	0.00	1.09	2.00	0.00	9.46	0.01	0.00
1.10	2.00	0.00	9.45	0.01	0.00	1.11	2.00	0.00	9.45	0.01	0.00
1.12	2.00	0.00	9.44	0.01	0.00	1.13	2.00	0.00	9.44	0.01	0.00
1.14	2.00	0.00	9.43	0.01	0.00	1.15	2.00	0.00	9.43	0.01	0.00
1.16	2.00	0.00	9.42	0.01	0.00	1.17	2.00	0.00	9.41	0.01	0.00
1.18	2.00	0.00	9.41	0.01	0.00	1.19	2.00	0.00	9.40	0.01	0.00
1.20	2.00	0.00	9.40	0.01	0.00	1.21	2.00	0.00	9.39	0.01	0.00
1.22	2.00	0.00	9.39	0.01	0.00	1.23	2.00	0.00	9.38	0.01	0.00
1.24	2.00	0.00	9.38	0.01	0.00	1.25	2.00	0.00	9.38	0.01	0.00
1.26	2.00	0.00	9.37	0.01	0.00	1.27	2.00	0.00	9.37	0.01	0.00
1.28	2.00	0.00	9.36	0.01	0.00	1.29	2.00	0.00	9.36	0.01	0.00
1.30	2.00	0.00	9.35	0.01	0.00	1.31	2.00	0.00	9.35	0.01	0.00
1.32	2.00	0.00	9.34	0.01	0.00	1.33	2.00	0.00	9.34	0.01	0.00
1.34	2.00	0.00	9.33	0.01	0.00	1.35	2.00	0.00	9.32	0.01	0.00
1.36	2.00	0.00	9.32	0.01	0.00	1.37	2.00	0.00	9.31	0.01	0.00
1.38	2.00	0.00	9.31	0.01	0.00	1.39	2.00	0.00	9.30	0.01	0.00
1.40	2.00	0.00	9.30	0.01	0.00	1.41	2.00	0.00	9.29	0.01	0.00
1.42	2.00	0.00	9.29	0.01	0.00	1.43	2.00	0.00	9.29	0.01	0.00
1.44	2.00	0.00	9.28	0.01	0.00	1.45	2.00	0.00	9.28	0.01	0.00
1.46	2.00	0.00	9.27	0.01	0.00	1.47	2.00	0.00	9.27	0.01	0.00
1.48	2.00	0.00	9.26	0.01	0.00	1.49	2.00	0.00	9.26	0.01	0.00
1.50	2.00	0.00	9.25	0.01	0.00	1.51	2.00	0.00	9.24	0.01	0.00
1.52	2.00	0.00	9.24	0.01	0.00	1.53	2.00	0.00	9.23	0.01	0.00
1.54	2.00	0.00	9.23	0.01	0.00	1.55	2.00	0.00	9.22	0.01	0.00
1.56	2.00	0.00	9.22	0.01	0.00	1.57	2.00	0.00	9.21	0.01	0.00
1.58	2.00	0.00	9.21	0.01	0.00	1.59	2.00	0.00	9.21	0.01	0.00
1.60	2.00	0.00	9.20	0.01	0.00	1.61	2.00	0.00	9.20	0.01	0.00
1.62	2.00	0.00	9.19	0.01	0.00	1.63	2.00	0.00	9.19	0.01	0.00
1.64	2.00	0.00	9.18	0.01	0.00	1.65	2.00	0.00	9.18	0.01	0.00
1.66	2.00	0.00	9.17	0.01	0.00	1.67	2.00	0.00	9.16	0.01	0.00
1.68	2.00	0.00	9.16	0.01	0.00	1.69	2.00	0.00	9.15	0.01	0.00
1.70	2.00	0.00	9.15	0.01	0.00	1.71	2.00	0.00	9.14	0.01	0.00
1.72	2.00	0.00	9.14	0.01	0.00	1.73	2.00	0.00	9.13	0.01	0.00
1.74	2.00	0.00	9.13	0.01	0.00	1.75	2.00	0.00	9.13	0.01	0.00
1.76	2.00	0.00	9.12	0.01	0.00	1.77	2.00	0.00	9.12	0.01	0.00
1.78	2.00	0.00	9.11	0.01	0.00	1.79	2.00	0.00	9.11	0.01	0.00
1.80	2.00	0.00	9.10	0.01	0.00	1.81	2.00	0.00	9.10	0.01	0.00
1.82	2.00	0.00	9.09	0.01	0.00	1.83	2.00	0.00	9.09	0.01	0.00
1.84	2.00	0.00	9.08	0.01	0.00	1.85	2.00	0.00	9.07	0.01	0.00
1.86	2.00	0.00	9.07	0.01	0.00	1.87	2.00	0.00	9.06	0.01	0.00
1.88	2.00	0.00	9.06	0.01	0.00	1.89	2.00	0.00	9.05	0.01	0.00
1.90	2.00	0.00	9.05	0.01	0.00	1.91	2.00	0.00	9.04	0.01	0.00
1.92	2.00	0.00	9.04	0.01	0.00	1.93	2.00	0.00	9.04	0.01	0.00
1.94	2.00	0.00	9.03	0.01	0.00	1.95	2.00	0.00	9.03	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.96	2.00	0.00	9.02	0.01	0.00	1.97	2.00	0.00	9.02	0.01	0.00
1.98	2.00	0.00	9.01	0.01	0.00	1.99	2.00	0.00	9.01	0.01	0.00
2.00	2.00	0.00	9.00	0.01	0.00	2.01	2.00	0.00	8.99	0.01	0.00
2.02	2.00	0.00	8.99	0.01	0.00	2.03	2.00	0.00	8.98	0.01	0.00
2.04	2.00	0.00	8.98	0.01	0.00	2.05	2.00	0.00	8.97	0.01	0.00
2.06	2.00	0.00	8.97	0.01	0.00	2.07	2.00	0.00	8.96	0.01	0.00
2.08	2.00	0.00	8.96	0.01	0.00	2.09	2.00	0.00	8.96	0.01	0.00
2.10	2.00	0.00	8.95	0.01	0.00	2.11	2.00	0.00	8.95	0.01	0.00
2.12	2.00	0.00	8.94	0.01	0.00	2.13	2.00	0.00	8.94	0.01	0.00
2.14	2.00	0.00	8.93	0.01	0.00	2.15	2.00	0.00	8.93	0.01	0.00
2.16	2.00	0.00	8.92	0.01	0.00	2.17	2.00	0.00	8.91	0.01	0.00
2.18	2.00	0.00	8.91	0.01	0.00	2.19	2.00	0.00	8.90	0.01	0.00
2.20	2.00	0.00	8.90	0.01	0.00	2.21	2.00	0.00	8.89	0.01	0.00
2.22	2.00	0.00	8.89	0.01	0.00	2.23	2.00	0.00	8.88	0.01	0.00
2.24	2.00	0.00	8.88	0.01	0.00	2.25	2.00	0.00	8.88	0.01	0.00
2.26	2.00	0.00	8.87	0.01	0.00	2.27	2.00	0.00	8.87	0.01	0.00
2.28	2.00	0.00	8.86	0.01	0.00	2.29	2.00	0.00	8.86	0.01	0.00
2.30	2.00	0.00	8.85	0.01	0.00	2.31	2.00	0.00	8.85	0.01	0.00
2.32	2.00	0.00	8.84	0.01	0.00	2.33	2.00	0.00	8.84	0.01	0.00
2.34	2.00	0.00	8.83	0.01	0.00	2.35	2.00	0.00	8.82	0.01	0.00
2.36	2.00	0.00	8.82	0.01	0.00	2.37	2.00	0.00	8.81	0.01	0.00
2.38	2.00	0.00	8.81	0.01	0.00	2.39	2.00	0.00	8.80	0.01	0.00
2.40	2.00	0.00	8.80	0.01	0.00	2.41	2.00	0.00	8.79	0.01	0.00
2.42	2.00	0.00	8.79	0.01	0.00	2.43	2.00	0.00	8.79	0.01	0.00
2.44	2.00	0.00	8.78	0.01	0.00	2.45	2.00	0.00	8.78	0.01	0.00
2.46	2.00	0.00	8.77	0.01	0.00	2.47	2.00	0.00	8.77	0.01	0.00
2.48	2.00	0.00	8.76	0.01	0.00	2.49	2.00	0.00	8.76	0.01	0.00
2.50	2.00	0.00	8.75	0.01	0.00	2.51	2.00	0.00	8.74	0.01	0.00
2.52	2.00	0.00	8.74	0.01	0.00	2.53	2.00	0.00	8.73	0.01	0.00
2.54	2.00	0.00	8.73	0.01	0.00	2.55	2.00	0.00	8.72	0.01	0.00
2.56	2.00	0.00	8.72	0.01	0.00	2.57	2.00	0.00	8.71	0.01	0.00
2.58	2.00	0.00	8.71	0.01	0.00	2.59	2.00	0.00	8.71	0.01	0.00
2.60	2.00	0.00	8.70	0.01	0.00	2.61	2.00	0.00	8.70	0.01	0.00
2.62	2.00	0.00	8.69	0.01	0.00	2.63	2.00	0.00	8.69	0.01	0.00
2.64	2.00	0.00	8.68	0.01	0.00	2.65	2.00	0.00	8.68	0.01	0.00
2.66	2.00	0.00	8.67	0.01	0.00	2.67	2.00	0.00	8.66	0.01	0.00
2.68	2.00	0.00	8.66	0.01	0.00	2.69	2.00	0.00	8.65	0.01	0.00
2.70	2.00	0.00	8.65	0.01	0.00	2.71	2.00	0.00	8.64	0.01	0.00
2.72	2.00	0.00	8.64	0.01	0.00	2.73	2.00	0.00	8.63	0.01	0.00
2.74	2.00	0.00	8.63	0.01	0.00	2.75	2.00	0.00	8.63	0.01	0.00
2.76	2.00	0.00	8.62	0.01	0.00	2.77	2.00	0.00	8.62	0.01	0.00
2.78	2.00	0.00	8.61	0.01	0.00	2.79	2.00	0.00	8.61	0.01	0.00
2.80	2.00	0.00	8.60	0.01	0.00	2.81	2.00	0.00	8.60	0.01	0.00
2.82	2.00	0.00	8.59	0.01	0.00	2.83	2.00	0.00	8.59	0.01	0.00
2.84	2.00	0.00	8.58	0.01	0.00	2.85	2.00	0.00	8.57	0.01	0.00
2.86	2.00	0.00	8.57	0.01	0.00	2.87	2.00	0.00	8.56	0.01	0.00
2.88	2.00	0.00	8.56	0.01	0.00	2.89	2.00	0.00	8.55	0.01	0.00
2.90	2.00	0.00	8.55	0.01	0.00	2.91	2.00	0.00	8.54	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.92	2.00	0.00	8.54	0.01	0.00	2.93	2.00	0.00	8.54	0.01	0.00
2.94	2.00	0.00	8.53	0.01	0.00	2.95	2.00	0.00	8.53	0.01	0.00
2.96	2.00	0.00	8.52	0.01	0.00	2.97	2.00	0.00	8.52	0.01	0.00
2.98	2.00	0.00	8.51	0.01	0.00	2.99	2.00	0.00	8.51	0.01	0.00
3.00	2.00	0.00	8.50	0.01	0.00	3.01	2.00	0.00	8.49	0.01	0.00
3.02	2.00	0.00	8.49	0.01	0.00	3.03	2.00	0.00	8.48	0.01	0.00
3.04	2.00	0.00	8.48	0.01	0.00	3.05	2.00	0.00	8.47	0.01	0.00
3.06	2.00	0.00	8.47	0.01	0.00	3.07	2.00	0.00	8.46	0.01	0.00
3.08	2.00	0.00	8.46	0.01	0.00	3.09	2.00	0.00	8.46	0.01	0.00
3.10	2.00	0.00	8.45	0.01	0.00	3.11	2.00	0.00	8.45	0.01	0.00
3.12	2.00	0.00	8.44	0.01	0.00	3.13	2.00	0.00	8.44	0.01	0.00
3.14	2.00	0.00	8.43	0.01	0.00	3.15	2.00	0.00	8.43	0.01	0.00
3.16	2.00	0.00	8.42	0.01	0.00	3.17	2.00	0.00	8.41	0.01	0.00
3.18	2.00	0.00	8.41	0.01	0.00	3.19	2.00	0.00	8.40	0.01	0.00
3.20	2.00	0.00	8.40	0.01	0.00	3.21	2.00	0.00	8.39	0.01	0.00
3.22	2.00	0.00	8.39	0.01	0.00	3.23	2.00	0.00	8.38	0.01	0.00
3.24	2.00	0.00	8.38	0.01	0.00	3.25	2.00	0.00	8.38	0.01	0.00
3.26	2.00	0.00	8.37	0.01	0.00	3.27	2.00	0.00	8.37	0.01	0.00
3.28	2.00	0.00	8.36	0.01	0.00	3.29	2.00	0.00	8.36	0.01	0.00
3.30	2.00	0.00	8.35	0.01	0.00	3.31	2.00	0.00	8.35	0.01	0.00
3.32	2.00	0.00	8.34	0.01	0.00	3.33	2.00	0.00	8.34	0.01	0.00
3.34	2.00	0.00	8.33	0.01	0.00	3.35	2.00	0.00	8.32	0.01	0.00
3.36	2.00	0.00	8.32	0.01	0.00	3.37	2.00	0.00	8.31	0.01	0.00
3.38	2.00	0.00	8.31	0.01	0.00	3.39	2.00	0.00	8.30	0.01	0.00
3.40	2.00	0.00	8.30	0.01	0.00	3.41	2.00	0.00	8.29	0.01	0.00
3.42	2.00	0.00	8.29	0.01	0.00	3.43	2.00	0.00	8.29	0.01	0.00
3.44	2.00	0.00	8.28	0.01	0.00	3.45	2.00	0.00	8.28	0.01	0.00
3.46	2.00	0.00	8.27	0.01	0.00	3.47	2.00	0.00	8.27	0.01	0.00
3.48	2.00	0.00	8.26	0.01	0.00	3.49	2.00	0.00	8.26	0.01	0.00
3.50	2.00	0.00	8.25	0.01	0.00	3.51	2.00	0.00	8.24	0.01	0.00
3.52	2.00	0.00	8.24	0.01	0.00	3.53	2.00	0.00	8.23	0.01	0.00
3.54	2.00	0.00	8.23	0.01	0.00	3.55	2.00	0.00	8.22	0.01	0.00
3.56	2.00	0.00	8.22	0.01	0.00	3.57	2.00	0.00	8.21	0.01	0.00
3.58	2.00	0.00	8.21	0.01	0.00	3.59	2.00	0.00	8.21	0.01	0.00
3.60	2.00	0.00	8.20	0.01	0.00	3.61	2.00	0.00	8.20	0.01	0.00
3.62	2.00	0.00	8.19	0.01	0.00	3.63	2.00	0.00	8.19	0.01	0.00
3.64	2.00	0.00	8.18	0.01	0.00	3.65	2.00	0.00	8.18	0.01	0.00
3.66	2.00	0.00	8.17	0.01	0.00	3.67	2.00	0.00	8.16	0.01	0.00
3.68	2.00	0.00	8.16	0.01	0.00	3.69	2.00	0.00	8.15	0.01	0.00
3.70	2.00	0.00	8.15	0.01	0.00	3.71	2.00	0.00	8.14	0.01	0.00
3.72	2.00	0.00	8.14	0.01	0.00	3.73	2.00	0.00	8.13	0.01	0.00
3.74	2.00	0.00	8.13	0.01	0.00	3.75	2.00	0.00	8.13	0.01	0.00
3.76	2.00	0.00	8.12	0.01	0.00	3.77	2.00	0.00	8.12	0.01	0.00
3.78	2.00	0.00	8.11	0.01	0.00	3.79	2.00	0.00	8.11	0.01	0.00
3.80	2.00	0.00	8.10	0.01	0.00	3.81	2.00	0.00	8.10	0.01	0.00
3.82	2.00	0.00	8.09	0.01	0.00	3.83	2.00	0.00	8.09	0.01	0.00
3.84	2.00	0.00	8.08	0.01	0.00	3.85	2.00	0.00	8.07	0.01	0.00
3.86	2.00	0.00	8.07	0.01	0.00	3.87	2.00	0.00	8.06	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.88	2.00	0.00	8.06	0.01	0.00	3.89	2.00	0.00	8.05	0.01	0.00
3.90	2.00	0.00	8.05	0.01	0.00	3.91	2.00	0.00	8.04	0.01	0.00
3.92	2.00	0.00	8.04	0.01	0.00	3.93	2.00	0.00	8.04	0.01	0.00
3.94	2.00	0.00	8.03	0.01	0.00	3.95	2.00	0.00	8.03	0.01	0.00
3.96	0.43	0.57	8.02	0.01	0.05	3.97	0.43	0.57	8.02	0.01	0.05
3.98	0.42	0.58	8.01	0.01	0.05	3.99	0.34	0.66	8.01	0.01	0.05
4.00	0.35	0.65	8.00	0.01	0.05	4.01	0.35	0.65	8.00	0.01	0.05
4.02	0.36	0.64	7.99	0.01	0.05	4.03	0.36	0.64	7.99	0.01	0.05
4.04	0.37	0.63	7.98	0.01	0.05	4.05	0.37	0.63	7.97	0.01	0.05
4.06	0.37	0.63	7.97	0.01	0.05	4.07	0.38	0.62	7.96	0.01	0.05
4.08	0.38	0.62	7.96	0.01	0.05	4.09	0.39	0.61	7.96	0.01	0.05
4.10	0.40	0.60	7.95	0.01	0.05	4.11	0.40	0.60	7.95	0.01	0.05
4.12	0.49	0.51	7.94	0.01	0.04	4.13	0.51	0.49	7.93	0.01	0.04
4.14	0.54	0.46	7.93	0.01	0.04	4.15	0.56	0.44	7.92	0.01	0.04
4.16	0.59	0.41	7.92	0.01	0.03	4.17	0.63	0.37	7.92	0.01	0.03
4.18	0.68	0.32	7.91	0.01	0.02	4.19	0.73	0.27	7.91	0.01	0.02
4.20	0.75	0.25	7.90	0.01	0.02	4.21	0.74	0.26	7.89	0.01	0.02
4.22	0.71	0.29	7.89	0.01	0.02	4.23	0.69	0.31	7.88	0.01	0.02
4.24	2.00	0.00	7.88	0.01	0.00	4.25	2.00	0.00	7.88	0.01	0.00
4.26	0.57	0.43	7.87	0.01	0.03	4.27	0.54	0.46	7.87	0.01	0.04
4.28	0.51	0.49	7.86	0.01	0.04	4.29	0.50	0.50	7.86	0.01	0.04
4.30	0.49	0.51	7.85	0.01	0.04	4.31	0.41	0.59	7.84	0.01	0.05
4.32	0.41	0.59	7.84	0.01	0.05	4.33	0.41	0.59	7.83	0.01	0.05
4.34	0.40	0.60	7.83	0.01	0.05	4.35	0.40	0.60	7.83	0.01	0.05
4.36	0.40	0.60	7.82	0.01	0.05	4.37	0.39	0.61	7.82	0.01	0.05
4.38	0.48	0.52	7.81	0.01	0.04	4.39	0.49	0.51	7.80	0.01	0.04
4.40	0.49	0.51	7.80	0.01	0.04	4.41	0.49	0.51	7.79	0.01	0.04
4.42	0.42	0.58	7.79	0.01	0.05	4.43	0.42	0.58	7.79	0.01	0.05
4.44	0.41	0.59	7.78	0.01	0.05	4.45	0.41	0.59	7.78	0.01	0.05
4.46	0.48	0.52	7.77	0.01	0.04	4.47	0.49	0.51	7.76	0.01	0.04
4.48	0.50	0.50	7.76	0.01	0.04	4.49	0.51	0.49	7.75	0.01	0.04
4.50	0.51	0.49	7.75	0.01	0.04	4.51	0.51	0.49	7.75	0.01	0.04
4.52	0.50	0.50	7.74	0.01	0.04	4.53	0.50	0.50	7.74	0.01	0.04
4.54	0.48	0.52	7.73	0.01	0.04	4.55	0.47	0.53	7.72	0.01	0.04
4.56	0.45	0.55	7.72	0.01	0.04	4.57	0.43	0.57	7.71	0.01	0.04
4.58	0.33	0.67	7.71	0.01	0.05	4.59	0.33	0.67	7.71	0.01	0.05
4.60	0.33	0.67	7.70	0.01	0.05	4.61	0.33	0.67	7.70	0.01	0.05
4.62	0.33	0.67	7.69	0.01	0.05	4.63	0.33	0.67	7.68	0.01	0.05
4.64	0.32	0.68	7.68	0.01	0.05	4.65	0.32	0.68	7.67	0.01	0.05
4.66	0.32	0.68	7.67	0.01	0.05	4.67	0.32	0.68	7.67	0.01	0.05
4.68	0.32	0.68	7.66	0.01	0.05	4.69	0.32	0.68	7.66	0.01	0.05
4.70	0.33	0.67	7.65	0.01	0.05	4.71	0.33	0.67	7.64	0.01	0.05
4.72	0.33	0.67	7.64	0.01	0.05	4.73	0.33	0.67	7.63	0.01	0.05
4.74	0.33	0.67	7.63	0.01	0.05	4.75	0.33	0.67	7.63	0.01	0.05
4.76	0.33	0.67	7.62	0.01	0.05	4.77	0.33	0.67	7.62	0.01	0.05
4.78	0.33	0.67	7.61	0.01	0.05	4.79	0.33	0.67	7.61	0.01	0.05
4.80	0.34	0.66	7.60	0.01	0.05	4.81	0.34	0.66	7.59	0.01	0.05
4.82	0.35	0.65	7.59	0.01	0.05	4.83	0.36	0.64	7.58	0.01	0.05

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.84	0.36	0.64	7.58	0.01	0.05	4.85	0.37	0.63	7.58	0.01	0.05
4.86	0.46	0.54	7.57	0.01	0.04	4.87	0.49	0.51	7.57	0.01	0.04
4.88	0.53	0.47	7.56	0.01	0.04	4.89	0.56	0.44	7.55	0.01	0.03
4.90	0.59	0.41	7.55	0.01	0.03	4.91	0.59	0.41	7.54	0.01	0.03
4.92	0.57	0.43	7.54	0.01	0.03	4.93	0.56	0.44	7.54	0.01	0.03
4.94	0.56	0.44	7.53	0.01	0.03	4.95	0.56	0.44	7.53	0.01	0.03
4.96	0.55	0.45	7.52	0.01	0.03	4.97	0.52	0.48	7.51	0.01	0.04
4.98	0.49	0.51	7.51	0.01	0.04	4.99	0.47	0.53	7.50	0.01	0.04
5.00	0.46	0.54	7.50	0.01	0.04	5.01	0.38	0.62	7.50	0.01	0.05
5.02	0.38	0.62	7.49	0.01	0.05	5.03	0.38	0.62	7.49	0.01	0.05
5.04	0.38	0.62	7.48	0.01	0.05	5.05	0.37	0.63	7.47	0.01	0.05
5.06	0.36	0.64	7.47	0.01	0.05	5.07	0.45	0.55	7.46	0.01	0.04
5.08	0.47	0.53	7.46	0.01	0.04	5.09	0.50	0.50	7.46	0.01	0.04
5.10	0.51	0.49	7.45	0.01	0.04	5.11	0.52	0.48	7.45	0.01	0.04
5.12	0.53	0.47	7.44	0.01	0.04	5.13	0.53	0.47	7.43	0.01	0.04
5.14	0.53	0.47	7.43	0.01	0.03	5.15	0.54	0.46	7.42	0.01	0.03
5.16	0.54	0.46	7.42	0.01	0.03	5.17	0.53	0.47	7.42	0.01	0.04
5.18	0.51	0.49	7.41	0.01	0.04	5.19	0.51	0.49	7.41	0.01	0.04
5.20	0.51	0.49	7.40	0.01	0.04	5.21	0.52	0.48	7.39	0.01	0.04
5.22	0.53	0.47	7.39	0.01	0.03	5.23	0.55	0.45	7.38	0.01	0.03
5.24	0.57	0.43	7.38	0.01	0.03	5.25	0.60	0.40	7.38	0.01	0.03
5.26	2.00	0.00	7.37	0.01	0.00	5.27	2.00	0.00	7.37	0.01	0.00
5.28	2.00	0.00	7.36	0.01	0.00	5.29	2.00	0.00	7.36	0.01	0.00
5.30	2.00	0.00	7.35	0.01	0.00	5.31	2.00	0.00	7.34	0.01	0.00
5.32	0.79	0.21	7.34	0.01	0.02	5.33	0.81	0.19	7.33	0.01	0.01
5.34	0.81	0.19	7.33	0.01	0.01	5.35	0.80	0.20	7.33	0.01	0.01
5.36	0.78	0.22	7.32	0.01	0.02	5.37	0.78	0.22	7.32	0.01	0.02
5.38	0.79	0.21	7.31	0.01	0.02	5.39	2.00	0.00	7.30	0.01	0.00
5.40	2.00	0.00	7.30	0.01	0.00	5.41	2.00	0.00	7.29	0.01	0.00
5.42	2.00	0.00	7.29	0.01	0.00	5.43	2.00	0.00	7.29	0.01	0.00
5.44	2.00	0.00	7.28	0.01	0.00	5.45	2.00	0.00	7.28	0.01	0.00
5.46	2.00	0.00	7.27	0.01	0.00	5.47	2.00	0.00	7.26	0.01	0.00
5.48	2.00	0.00	7.26	0.01	0.00	5.49	2.00	0.00	7.25	0.01	0.00
5.50	2.00	0.00	7.25	0.01	0.00	5.51	2.00	0.00	7.25	0.01	0.00
5.52	2.00	0.00	7.24	0.01	0.00	5.53	2.00	0.00	7.24	0.01	0.00
5.54	2.00	0.00	7.23	0.01	0.00	5.55	2.00	0.00	7.22	0.01	0.00
5.56	0.53	0.47	7.22	0.01	0.03	5.57	0.49	0.51	7.21	0.01	0.04
5.58	0.47	0.53	7.21	0.01	0.04	5.59	0.48	0.52	7.21	0.01	0.04
5.60	0.50	0.50	7.20	0.01	0.04	5.61	0.52	0.48	7.20	0.01	0.03
5.62	0.52	0.48	7.19	0.01	0.03	5.63	0.49	0.51	7.18	0.01	0.04
5.64	0.47	0.53	7.18	0.01	0.04	5.65	0.45	0.55	7.17	0.01	0.04
5.66	0.37	0.63	7.17	0.01	0.05	5.67	0.37	0.63	7.17	0.01	0.05
5.68	0.37	0.63	7.16	0.01	0.05	5.69	0.36	0.64	7.16	0.01	0.05
5.70	0.44	0.56	7.15	0.01	0.04	5.71	0.45	0.55	7.14	0.01	0.04
5.72	0.47	0.53	7.14	0.01	0.04	5.73	0.49	0.51	7.13	0.01	0.04
5.74	0.51	0.49	7.13	0.01	0.04	5.75	0.51	0.49	7.13	0.01	0.03
5.76	0.51	0.49	7.12	0.01	0.04	5.77	0.50	0.50	7.12	0.01	0.04
5.78	0.50	0.50	7.11	0.01	0.04	5.79	0.50	0.50	7.11	0.01	0.04

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.80	0.51	0.49	7.10	0.01	0.03	5.81	0.53	0.47	7.09	0.01	0.03
5.82	0.54	0.46	7.09	0.01	0.03	5.83	0.57	0.43	7.08	0.01	0.03
5.84	0.61	0.39	7.08	0.01	0.03	5.85	0.66	0.34	7.08	0.01	0.02
5.86	0.69	0.31	7.07	0.01	0.02	5.87	0.71	0.29	7.07	0.01	0.02
5.88	2.00	0.00	7.06	0.01	0.00	5.89	0.61	0.39	7.05	0.01	0.03
5.90	0.56	0.44	7.05	0.01	0.03	5.91	0.56	0.44	7.04	0.01	0.03
5.92	0.57	0.43	7.04	0.01	0.03	5.93	0.57	0.43	7.04	0.01	0.03
5.94	0.57	0.43	7.03	0.01	0.03	5.95	0.56	0.44	7.03	0.01	0.03
5.96	0.55	0.45	7.02	0.01	0.03	5.97	0.56	0.44	7.01	0.01	0.03
5.98	0.56	0.44	7.01	0.01	0.03	5.99	0.60	0.40	7.00	0.01	0.03
6.00	0.62	0.38	7.00	0.01	0.03	6.01	2.00	0.00	7.00	0.01	0.00
6.02	2.00	0.00	6.99	0.01	0.00	6.03	2.00	0.00	6.99	0.01	0.00
6.04	2.00	0.00	6.98	0.01	0.00	6.05	2.00	0.00	6.97	0.01	0.00
6.06	2.00	0.00	6.97	0.01	0.00	6.07	2.00	0.00	6.96	0.01	0.00
6.08	2.00	0.00	6.96	0.01	0.00	6.09	2.00	0.00	6.96	0.01	0.00
6.10	2.00	0.00	6.95	0.01	0.00	6.11	0.57	0.43	6.95	0.01	0.03
6.12	0.55	0.45	6.94	0.01	0.03	6.13	0.54	0.46	6.93	0.01	0.03
6.14	0.53	0.47	6.93	0.01	0.03	6.15	0.53	0.47	6.92	0.01	0.03
6.16	0.53	0.47	6.92	0.01	0.03	6.17	0.53	0.47	6.92	0.01	0.03
6.18	0.54	0.46	6.91	0.01	0.03	6.19	0.54	0.46	6.91	0.01	0.03
6.20	0.55	0.45	6.90	0.01	0.03	6.21	0.55	0.45	6.89	0.01	0.03
6.22	0.55	0.45	6.89	0.01	0.03	6.23	0.55	0.45	6.88	0.01	0.03
6.24	0.56	0.44	6.88	0.01	0.03	6.25	0.56	0.44	6.88	0.01	0.03
6.26	0.55	0.45	6.87	0.01	0.03	6.27	0.54	0.46	6.87	0.01	0.03
6.28	0.53	0.47	6.86	0.01	0.03	6.29	0.52	0.48	6.86	0.01	0.03
6.30	0.52	0.48	6.85	0.01	0.03	6.31	0.53	0.47	6.84	0.01	0.03
6.32	0.54	0.46	6.84	0.01	0.03	6.33	0.55	0.45	6.83	0.01	0.03
6.34	0.56	0.44	6.83	0.01	0.03	6.35	0.56	0.44	6.83	0.01	0.03
6.36	0.57	0.43	6.82	0.01	0.03	6.37	0.58	0.42	6.82	0.01	0.03
6.38	0.60	0.40	6.81	0.01	0.03	6.39	0.62	0.38	6.80	0.01	0.03
6.40	0.64	0.36	6.80	0.01	0.02	6.41	0.66	0.34	6.79	0.01	0.02
6.42	0.67	0.33	6.79	0.01	0.02	6.43	0.68	0.32	6.79	0.01	0.02
6.44	0.69	0.31	6.78	0.01	0.02	6.45	0.71	0.29	6.78	0.01	0.02
6.46	0.71	0.29	6.77	0.01	0.02	6.47	0.70	0.30	6.76	0.01	0.02
6.48	0.70	0.30	6.76	0.01	0.02	6.49	0.70	0.30	6.75	0.01	0.02
6.50	0.73	0.27	6.75	0.01	0.02	6.51	0.76	0.24	6.75	0.01	0.02
6.52	0.79	0.21	6.74	0.01	0.01	6.53	0.80	0.20	6.74	0.01	0.01
6.54	0.79	0.21	6.73	0.01	0.01	6.55	0.79	0.21	6.72	0.01	0.01
6.56	0.81	0.19	6.72	0.01	0.01	6.57	0.83	0.17	6.71	0.01	0.01
6.58	0.85	0.15	6.71	0.01	0.01	6.59	0.87	0.13	6.71	0.01	0.01
6.60	0.88	0.12	6.70	0.01	0.01	6.61	0.86	0.14	6.70	0.01	0.01
6.62	0.83	0.17	6.69	0.01	0.01	6.63	0.79	0.21	6.68	0.01	0.01
6.64	0.76	0.24	6.68	0.01	0.02	6.65	0.73	0.27	6.67	0.01	0.02
6.66	0.72	0.28	6.67	0.01	0.02	6.67	0.70	0.30	6.67	0.01	0.02
6.68	0.68	0.32	6.66	0.01	0.02	6.69	0.66	0.34	6.66	0.01	0.02
6.70	0.66	0.34	6.65	0.01	0.02	6.71	0.69	0.31	6.64	0.01	0.02
6.72	0.73	0.27	6.64	0.01	0.02	6.73	0.77	0.23	6.63	0.01	0.02
6.74	0.78	0.22	6.63	0.01	0.01	6.75	0.78	0.22	6.63	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.76	0.76	0.24	6.62	0.01	0.02	6.77	0.74	0.26	6.62	0.01	0.02
6.78	0.71	0.29	6.61	0.01	0.02	6.79	0.68	0.32	6.61	0.01	0.02
6.80	0.64	0.36	6.60	0.01	0.02	6.81	0.62	0.38	6.59	0.01	0.03
6.82	0.58	0.42	6.59	0.01	0.03	6.83	0.55	0.45	6.58	0.01	0.03
6.84	0.50	0.50	6.58	0.01	0.03	6.85	0.42	0.58	6.58	0.01	0.04
6.86	0.41	0.59	6.57	0.01	0.04	6.87	0.42	0.58	6.57	0.01	0.04
6.88	0.42	0.58	6.56	0.01	0.04	6.89	0.43	0.57	6.55	0.01	0.04
6.90	0.52	0.48	6.55	0.01	0.03	6.91	0.57	0.43	6.54	0.01	0.03
6.92	0.63	0.37	6.54	0.01	0.02	6.93	0.69	0.31	6.54	0.01	0.02
6.94	0.70	0.30	6.53	0.01	0.02	6.95	0.66	0.34	6.53	0.01	0.02
6.96	0.60	0.40	6.52	0.01	0.03	6.97	0.55	0.45	6.51	0.01	0.03
6.98	0.53	0.47	6.51	0.01	0.03	6.99	0.52	0.48	6.50	0.01	0.03
7.00	0.51	0.49	6.50	0.01	0.03	7.01	0.50	0.50	6.50	0.01	0.03
7.02	0.50	0.50	6.49	0.01	0.03	7.03	0.52	0.48	6.49	0.01	0.03
7.04	0.55	0.45	6.48	0.01	0.03	7.05	0.60	0.40	6.47	0.01	0.03
7.06	0.64	0.36	6.47	0.01	0.02	7.07	0.67	0.33	6.46	0.01	0.02
7.08	0.68	0.32	6.46	0.01	0.02	7.09	0.68	0.32	6.46	0.01	0.02
7.10	0.66	0.34	6.45	0.01	0.02	7.11	0.65	0.35	6.45	0.01	0.02
7.12	2.00	0.00	6.44	0.01	0.00	7.13	2.00	0.00	6.43	0.01	0.00
7.14	2.00	0.00	6.43	0.01	0.00	7.15	2.00	0.00	6.42	0.01	0.00
7.16	2.00	0.00	6.42	0.01	0.00	7.17	2.00	0.00	6.42	0.01	0.00
7.18	2.00	0.00	6.41	0.01	0.00	7.19	2.00	0.00	6.41	0.01	0.00
7.20	2.00	0.00	6.40	0.01	0.00	7.21	2.00	0.00	6.39	0.01	0.00
7.22	2.00	0.00	6.39	0.01	0.00	7.23	2.00	0.00	6.38	0.01	0.00
7.24	2.00	0.00	6.38	0.01	0.00	7.25	2.00	0.00	6.38	0.01	0.00
7.26	0.44	0.56	6.37	0.01	0.04	7.27	0.43	0.57	6.37	0.01	0.04
7.28	0.43	0.57	6.36	0.01	0.04	7.29	0.42	0.58	6.36	0.01	0.04
7.30	0.33	0.67	6.35	0.01	0.04	7.31	0.34	0.66	6.34	0.01	0.04
7.32	0.35	0.65	6.34	0.01	0.04	7.33	0.36	0.64	6.33	0.01	0.04
7.34	0.44	0.56	6.33	0.01	0.04	7.35	0.45	0.55	6.33	0.01	0.03
7.36	0.47	0.53	6.32	0.01	0.03	7.37	0.49	0.51	6.32	0.01	0.03
7.38	0.51	0.49	6.31	0.01	0.03	7.39	0.53	0.47	6.30	0.01	0.03
7.40	0.55	0.45	6.30	0.01	0.03	7.41	0.57	0.43	6.29	0.01	0.03
7.42	0.59	0.41	6.29	0.01	0.03	7.43	0.61	0.39	6.29	0.01	0.02
7.44	0.61	0.39	6.28	0.01	0.02	7.45	0.60	0.40	6.28	0.01	0.02
7.46	0.59	0.41	6.27	0.01	0.03	7.47	0.57	0.43	6.26	0.01	0.03
7.48	0.57	0.43	6.26	0.01	0.03	7.49	0.57	0.43	6.25	0.01	0.03
7.50	0.58	0.42	6.25	0.01	0.03	7.51	0.60	0.40	6.25	0.01	0.03
7.52	0.62	0.38	6.24	0.01	0.02	7.53	0.65	0.35	6.24	0.01	0.02
7.54	0.66	0.34	6.23	0.01	0.02	7.55	0.67	0.33	6.22	0.01	0.02
7.56	0.70	0.30	6.22	0.01	0.02	7.57	0.74	0.26	6.21	0.01	0.02
7.58	0.79	0.21	6.21	0.01	0.01	7.59	0.83	0.17	6.21	0.01	0.01
7.60	0.88	0.12	6.20	0.01	0.01	7.61	0.93	0.07	6.20	0.01	0.00
7.62	0.98	0.02	6.19	0.01	0.00	7.63	1.00	0.00	6.18	0.01	0.00
7.64	1.01	0.00	6.18	0.01	0.00	7.65	0.97	0.03	6.17	0.01	0.00
7.66	0.94	0.06	6.17	0.01	0.00	7.67	0.91	0.09	6.17	0.01	0.01
7.68	0.90	0.10	6.16	0.01	0.01	7.69	0.89	0.11	6.16	0.01	0.01
7.70	0.89	0.11	6.15	0.01	0.01	7.71	0.89	0.11	6.14	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.72	0.90	0.10	6.14	0.01	0.01	7.73	0.90	0.10	6.13	0.01	0.01
7.74	0.88	0.12	6.13	0.01	0.01	7.75	0.83	0.17	6.13	0.01	0.01
7.76	0.79	0.21	6.12	0.01	0.01	7.77	0.75	0.25	6.12	0.01	0.02
7.78	0.74	0.26	6.11	0.01	0.02	7.79	0.75	0.25	6.11	0.01	0.02
7.80	0.76	0.24	6.10	0.01	0.01	7.81	0.77	0.23	6.09	0.01	0.01
7.82	0.77	0.23	6.09	0.01	0.01	7.83	0.67	0.33	6.08	0.01	0.02
7.84	0.66	0.34	6.08	0.01	0.02	7.85	0.65	0.35	6.08	0.01	0.02
7.86	0.75	0.25	6.07	0.01	0.02	7.87	0.75	0.25	6.07	0.01	0.02
7.88	0.74	0.26	6.06	0.01	0.02	7.89	0.72	0.28	6.05	0.01	0.02
7.90	0.71	0.29	6.05	0.01	0.02	7.91	0.70	0.30	6.04	0.01	0.02
7.92	0.70	0.30	6.04	0.01	0.02	7.93	0.69	0.31	6.04	0.01	0.02
7.94	0.68	0.32	6.03	0.01	0.02	7.95	0.67	0.33	6.03	0.01	0.02
7.96	0.68	0.32	6.02	0.01	0.02	7.97	0.71	0.29	6.01	0.01	0.02
7.98	0.74	0.26	6.01	0.01	0.02	7.99	0.78	0.22	6.00	0.01	0.01
8.00	0.86	0.14	6.00	0.01	0.01	8.01	1.01	0.00	6.00	0.01	0.00
8.02	1.24	0.00	5.99	0.01	0.00	8.03	1.53	0.00	5.99	0.01	0.00
8.04	1.88	0.00	5.98	0.01	0.00	8.05	2.00	0.00	5.97	0.01	0.00
8.06	2.00	0.00	5.97	0.01	0.00	8.07	2.00	0.00	5.96	0.01	0.00
8.08	2.00	0.00	5.96	0.01	0.00	8.09	2.00	0.00	5.96	0.01	0.00
8.10	2.00	0.00	5.95	0.01	0.00	8.11	2.00	0.00	5.95	0.01	0.00
8.12	2.00	0.00	5.94	0.01	0.00	8.13	2.00	0.00	5.93	0.01	0.00
8.14	2.00	0.00	5.93	0.01	0.00	8.15	2.00	0.00	5.92	0.01	0.00
8.16	2.00	0.00	5.92	0.01	0.00	8.17	2.00	0.00	5.92	0.01	0.00
8.18	2.00	0.00	5.91	0.01	0.00	8.19	2.00	0.00	5.91	0.01	0.00
8.20	2.00	0.00	5.90	0.01	0.00	8.21	2.00	0.00	5.89	0.01	0.00
8.22	2.00	0.00	5.89	0.01	0.00	8.23	2.00	0.00	5.88	0.01	0.00
8.24	2.00	0.00	5.88	0.01	0.00	8.25	2.00	0.00	5.88	0.01	0.00
8.26	2.00	0.00	5.87	0.01	0.00	8.27	2.00	0.00	5.87	0.01	0.00
8.28	2.00	0.00	5.86	0.01	0.00	8.29	2.00	0.00	5.86	0.01	0.00
8.30	2.00	0.00	5.85	0.01	0.00	8.31	2.00	0.00	5.84	0.01	0.00
8.32	2.00	0.00	5.84	0.01	0.00	8.33	2.00	0.00	5.83	0.01	0.00
8.34	2.00	0.00	5.83	0.01	0.00	8.35	2.00	0.00	5.83	0.01	0.00
8.36	2.00	0.00	5.82	0.01	0.00	8.37	2.00	0.00	5.82	0.01	0.00
8.38	2.00	0.00	5.81	0.01	0.00	8.39	2.00	0.00	5.80	0.01	0.00
8.40	2.00	0.00	5.80	0.01	0.00	8.41	2.00	0.00	5.79	0.01	0.00
8.42	2.00	0.00	5.79	0.01	0.00	8.43	2.00	0.00	5.79	0.01	0.00
8.44	2.00	0.00	5.78	0.01	0.00	8.45	1.98	0.00	5.78	0.01	0.00
8.46	1.89	0.00	5.77	0.01	0.00	8.47	1.83	0.00	5.76	0.01	0.00
8.48	1.79	0.00	5.76	0.01	0.00	8.49	1.76	0.00	5.75	0.01	0.00
8.50	1.75	0.00	5.75	0.01	0.00	8.51	1.77	0.00	5.75	0.01	0.00
8.52	1.80	0.00	5.74	0.01	0.00	8.53	1.84	0.00	5.74	0.01	0.00
8.54	1.89	0.00	5.73	0.01	0.00	8.55	1.96	0.00	5.72	0.01	0.00
8.56	2.00	0.00	5.72	0.01	0.00	8.57	2.00	0.00	5.71	0.01	0.00
8.58	2.00	0.00	5.71	0.01	0.00	8.59	2.00	0.00	5.71	0.01	0.00
8.60	2.00	0.00	5.70	0.01	0.00	8.61	2.00	0.00	5.70	0.01	0.00
8.62	2.00	0.00	5.69	0.01	0.00	8.63	2.00	0.00	5.68	0.01	0.00
8.64	2.00	0.00	5.68	0.01	0.00	8.65	2.00	0.00	5.67	0.01	0.00
8.66	2.00	0.00	5.67	0.01	0.00	8.67	2.00	0.00	5.67	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.68	2.00	0.00	5.66	0.01	0.00	8.69	2.00	0.00	5.66	0.01	0.00
8.70	2.00	0.00	5.65	0.01	0.00	8.71	2.00	0.00	5.64	0.01	0.00
8.72	2.00	0.00	5.64	0.01	0.00	8.73	2.00	0.00	5.63	0.01	0.00
8.74	2.00	0.00	5.63	0.01	0.00	8.75	2.00	0.00	5.63	0.01	0.00
8.76	2.00	0.00	5.62	0.01	0.00	8.77	2.00	0.00	5.62	0.01	0.00
8.78	2.00	0.00	5.61	0.01	0.00	8.79	2.00	0.00	5.61	0.01	0.00
8.80	2.00	0.00	5.60	0.01	0.00	8.81	2.00	0.00	5.59	0.01	0.00
8.82	2.00	0.00	5.59	0.01	0.00	8.83	2.00	0.00	5.58	0.01	0.00
8.84	2.00	0.00	5.58	0.01	0.00	8.85	2.00	0.00	5.58	0.01	0.00
8.86	2.00	0.00	5.57	0.01	0.00	8.87	2.00	0.00	5.57	0.01	0.00
8.88	2.00	0.00	5.56	0.01	0.00	8.89	2.00	0.00	5.55	0.01	0.00

Overall liquefaction potential: 10.93

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

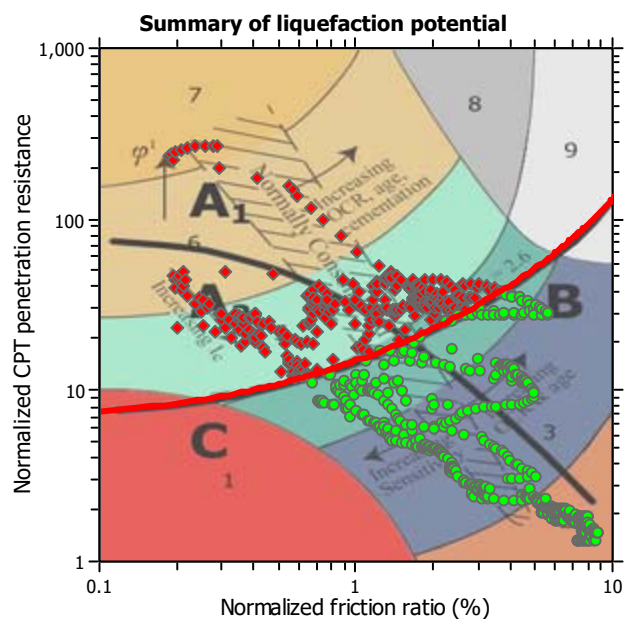
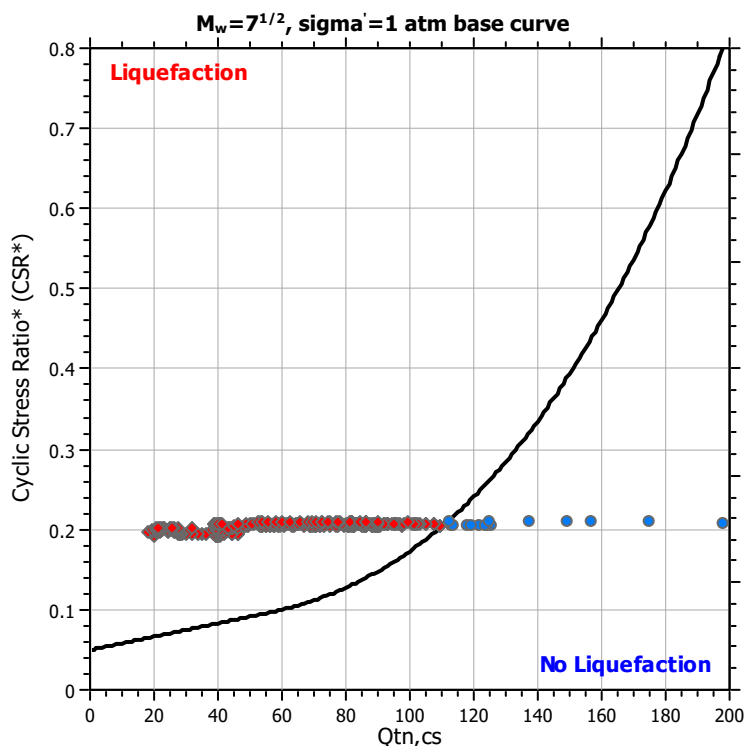
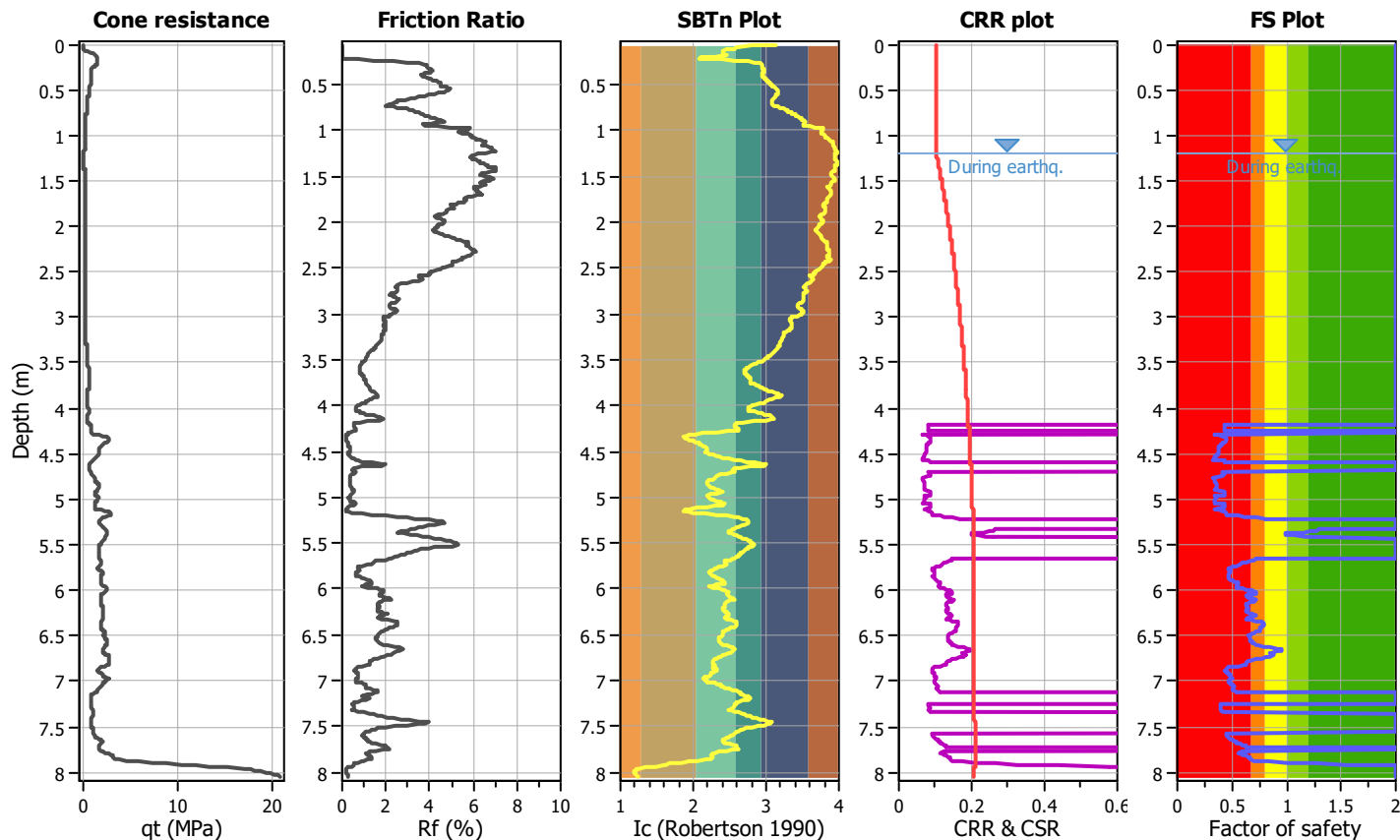
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

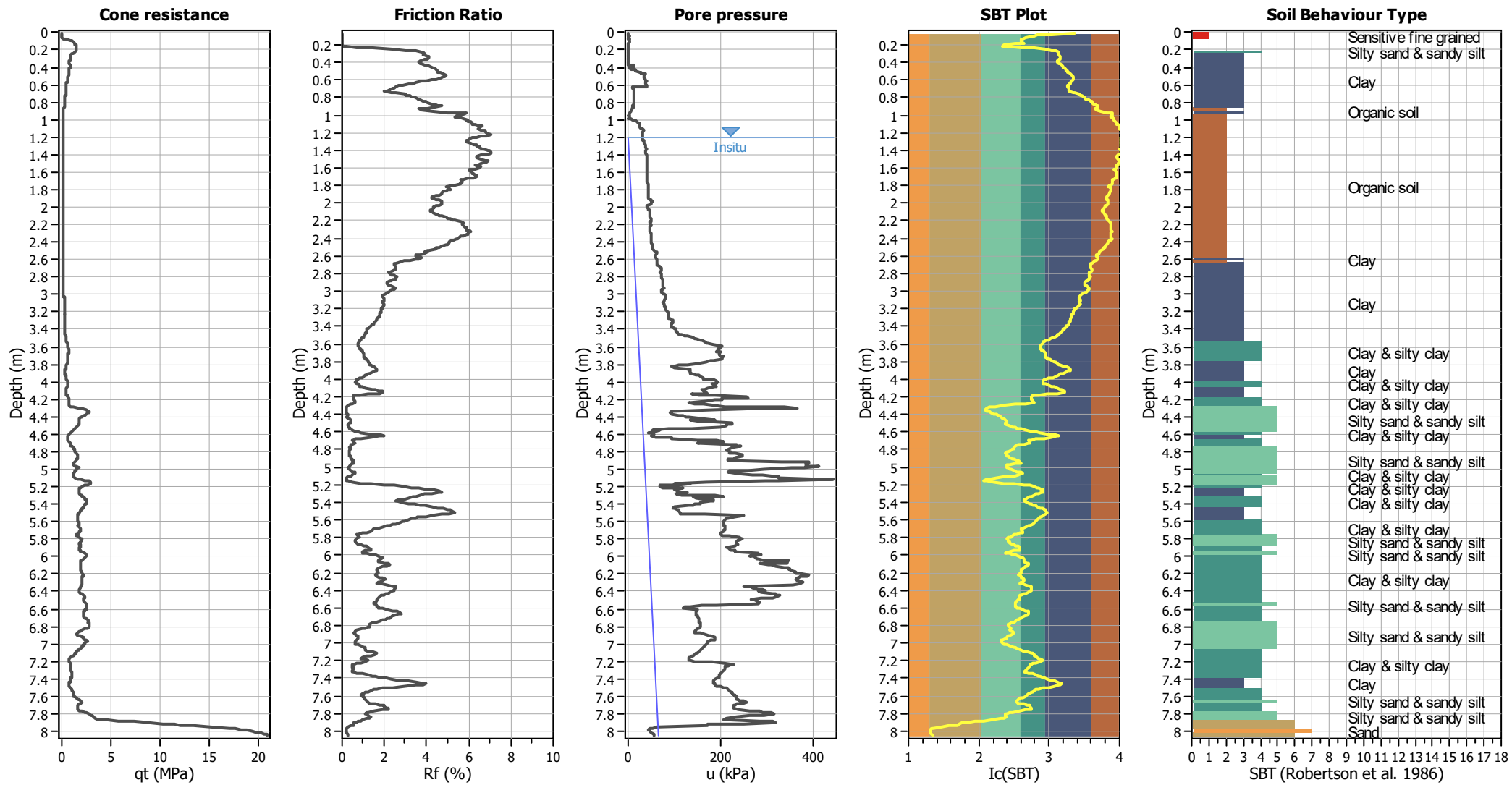
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU4bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
 Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
 Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
 Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



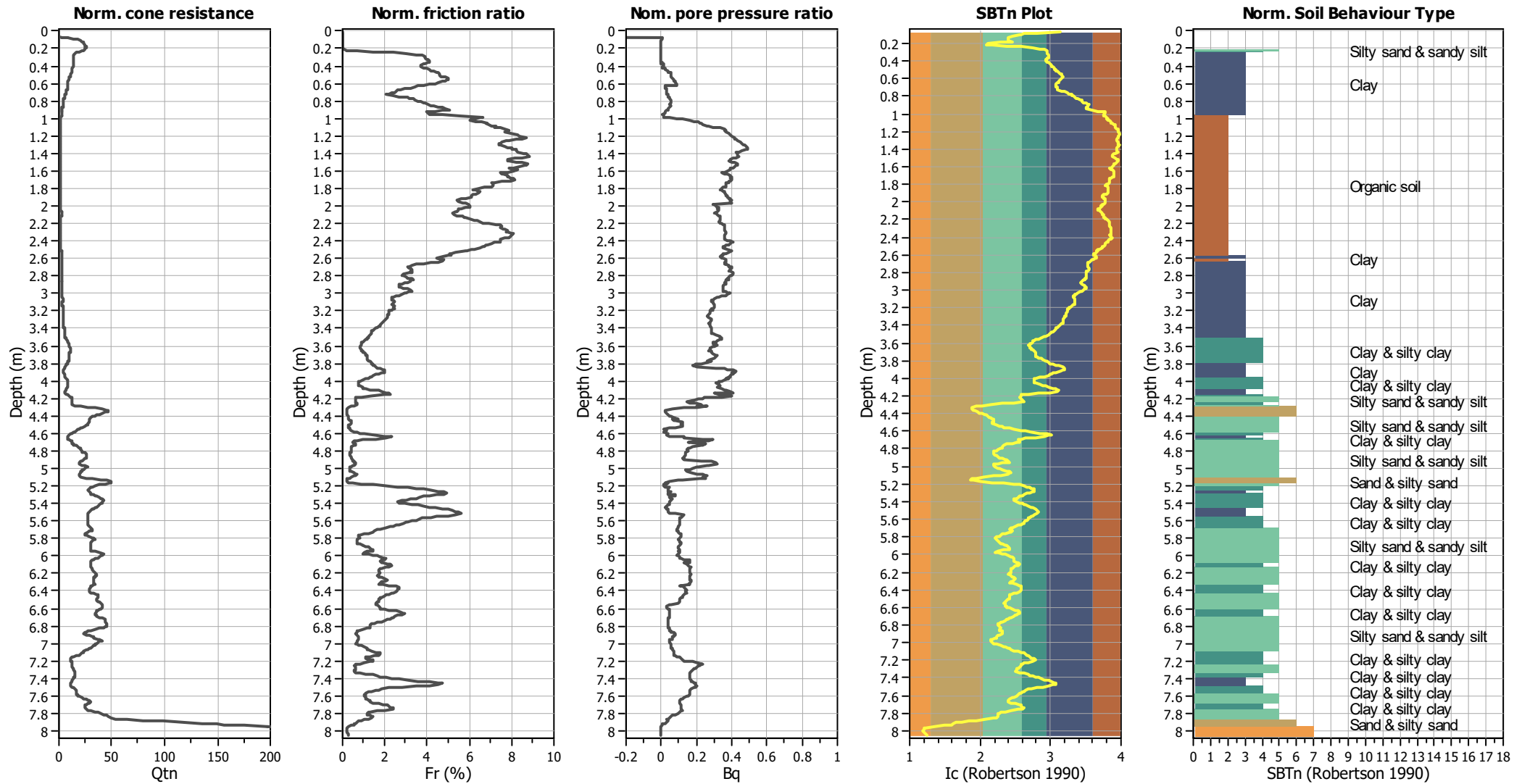
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

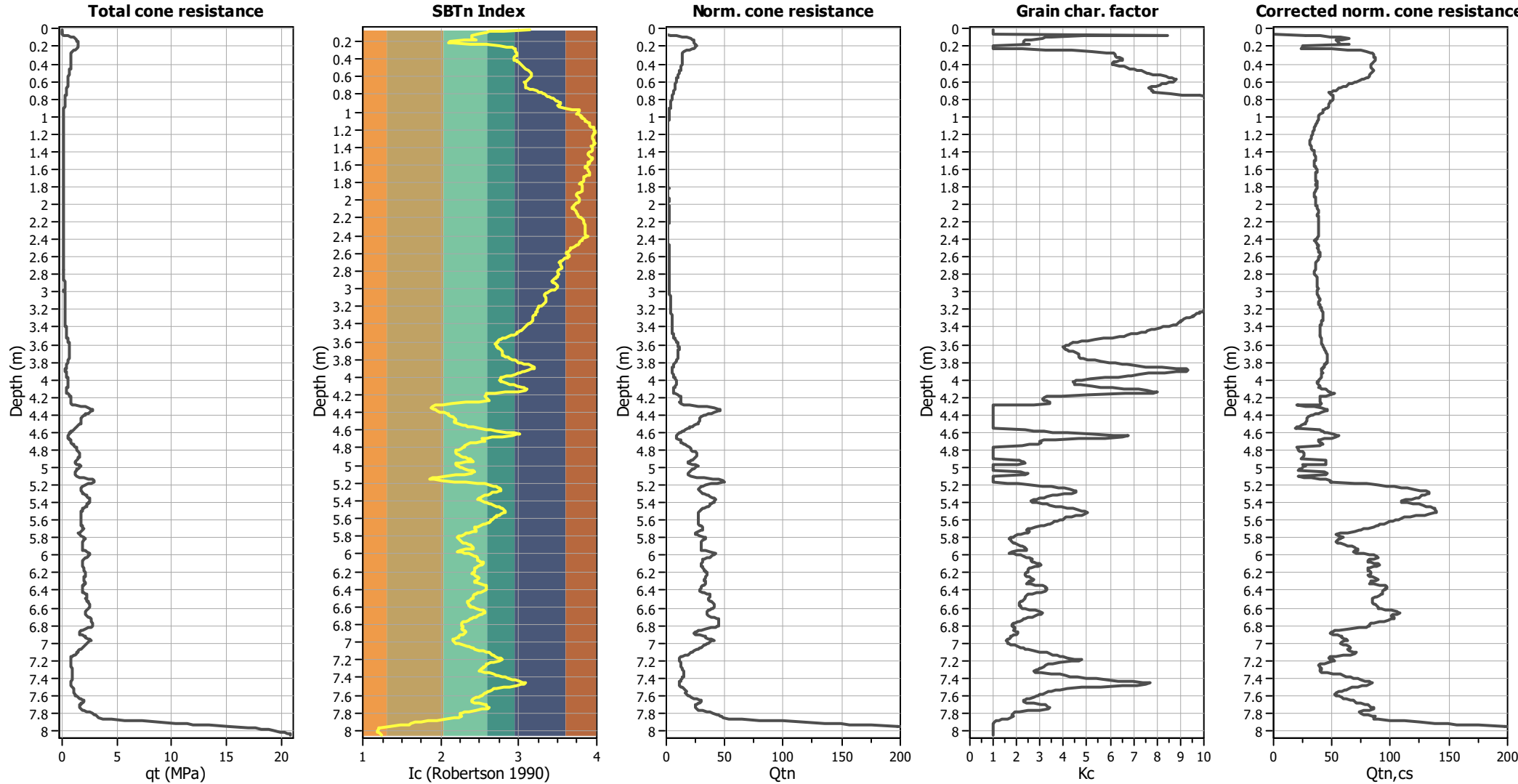
CPT basic interpretation plots (normalized)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

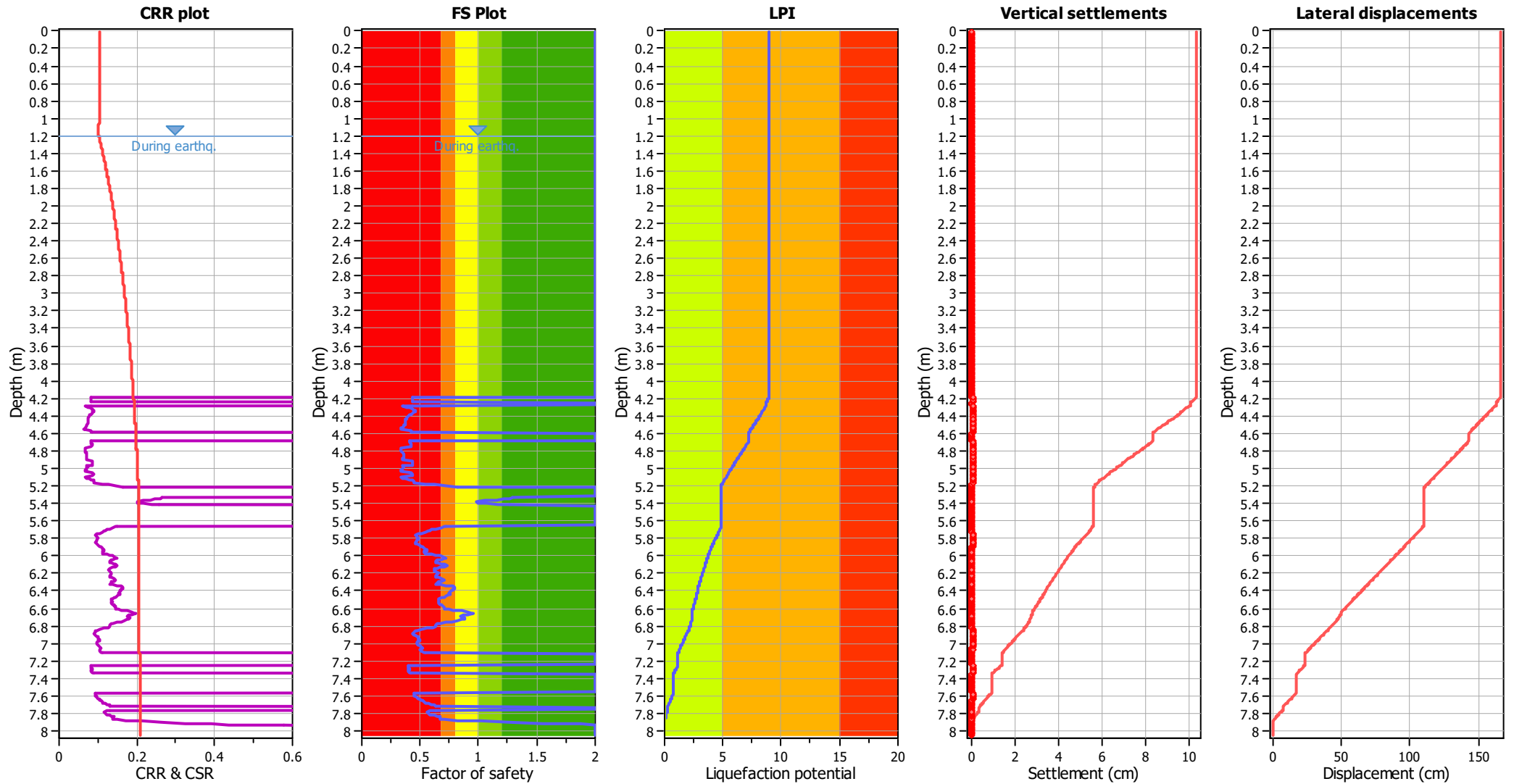
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

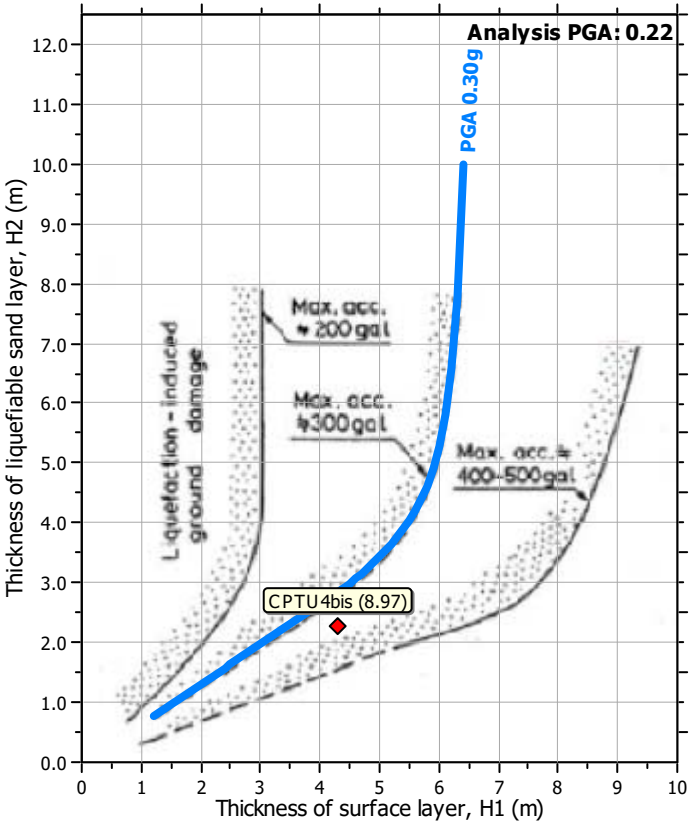
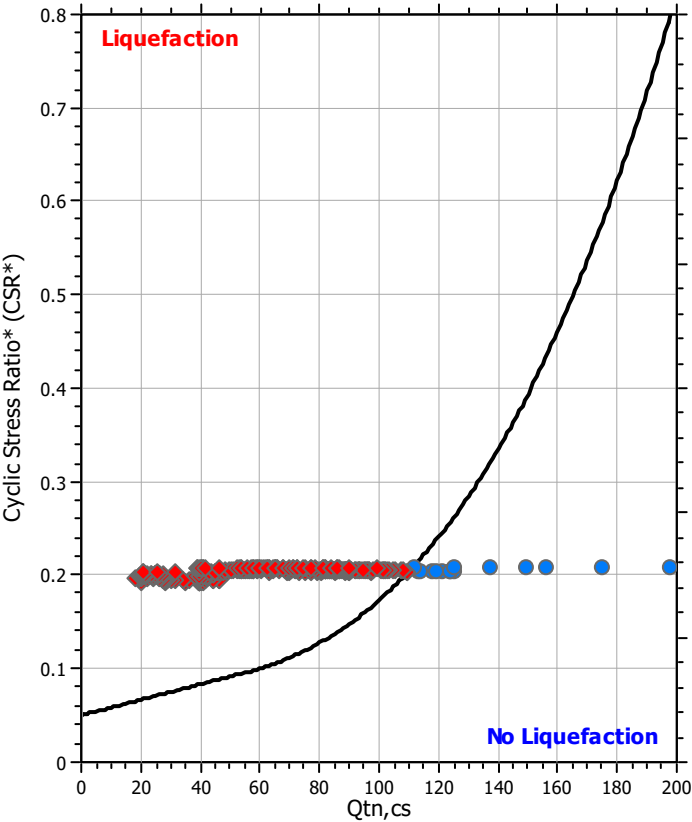
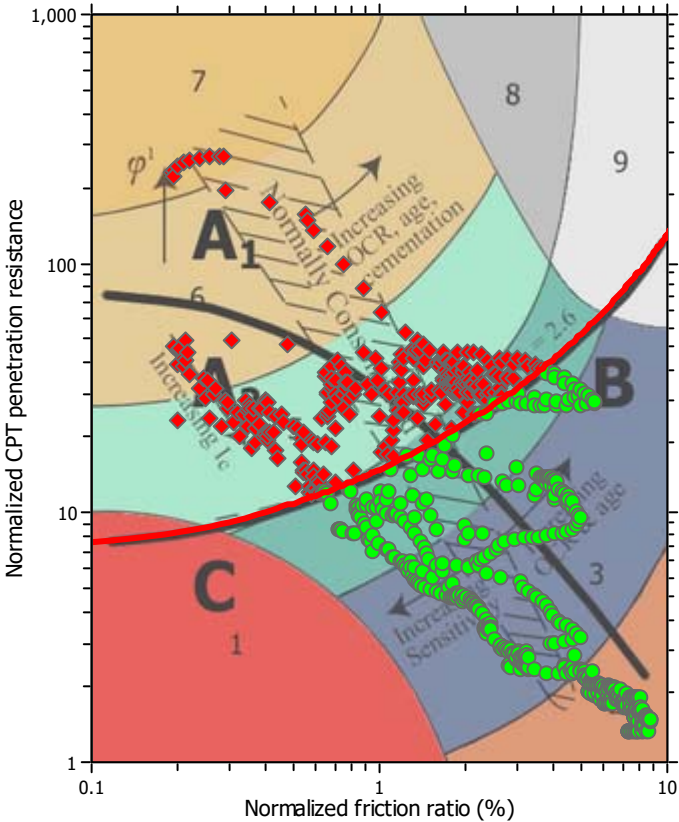
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

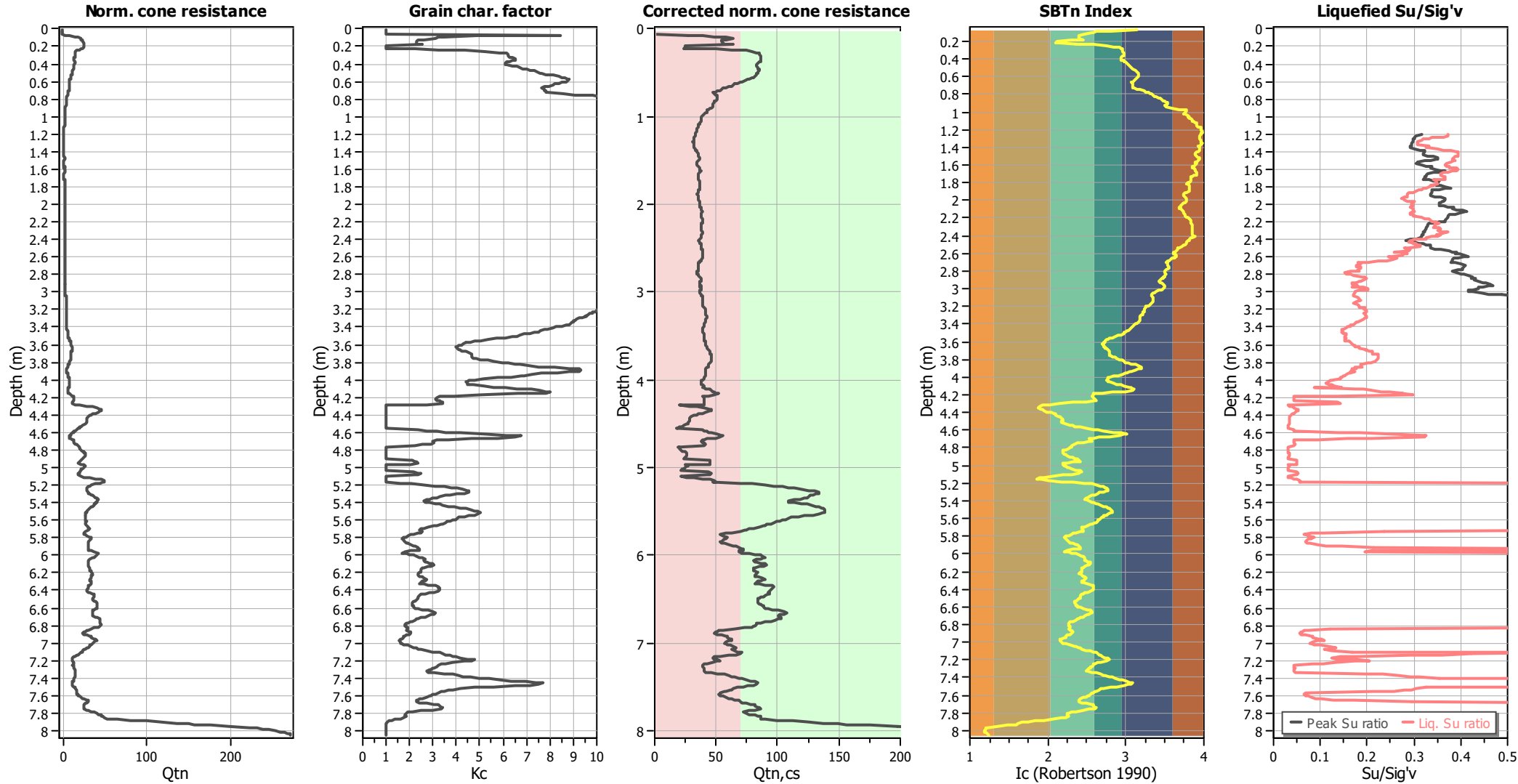
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_g applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	0.43	0.57	7.91	0.01	0.04	4.20	0.43	0.57	7.90	0.01	0.04
4.21	0.43	0.57	7.89	0.01	0.04	4.22	0.43	0.57	7.89	0.01	0.04
4.23	0.43	0.57	7.88	0.01	0.04	4.24	0.43	0.57	7.88	0.01	0.04
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	0.43	0.57	7.86	0.01	0.04
4.29	0.35	0.65	7.86	0.01	0.05	4.30	0.38	0.62	7.85	0.01	0.05
4.31	0.41	0.59	7.84	0.01	0.05	4.32	0.43	0.57	7.84	0.01	0.04
4.33	0.45	0.55	7.83	0.01	0.04	4.34	0.46	0.54	7.83	0.01	0.04
4.35	0.46	0.54	7.83	0.01	0.04	4.36	0.45	0.55	7.82	0.01	0.04
4.37	0.44	0.56	7.82	0.01	0.04	4.38	0.42	0.58	7.81	0.01	0.05
4.39	0.41	0.59	7.80	0.01	0.05	4.40	0.40	0.60	7.80	0.01	0.05
4.41	0.39	0.61	7.79	0.01	0.05	4.42	0.38	0.62	7.79	0.01	0.05
4.43	0.38	0.62	7.79	0.01	0.05	4.44	0.38	0.62	7.78	0.01	0.05
4.45	0.38	0.62	7.78	0.01	0.05	4.46	0.38	0.62	7.77	0.01	0.05
4.47	0.38	0.62	7.76	0.01	0.05	4.48	0.37	0.63	7.76	0.01	0.05
4.49	0.37	0.63	7.75	0.01	0.05	4.50	0.37	0.63	7.75	0.01	0.05
4.51	0.37	0.63	7.75	0.01	0.05	4.52	0.36	0.64	7.74	0.01	0.05
4.53	0.35	0.65	7.74	0.01	0.05	4.54	0.34	0.66	7.73	0.01	0.05
4.55	0.34	0.66	7.72	0.01	0.05	4.56	0.33	0.67	7.72	0.01	0.05
4.57	0.42	0.58	7.71	0.01	0.04	4.58	0.43	0.57	7.71	0.01	0.04
4.59	0.43	0.57	7.71	0.01	0.04	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	0.41	0.59	7.66	0.01	0.04	4.70	0.41	0.59	7.65	0.01	0.04
4.71	0.42	0.58	7.64	0.01	0.04	4.72	0.42	0.58	7.64	0.01	0.04
4.73	0.43	0.57	7.63	0.01	0.04	4.74	0.42	0.58	7.63	0.01	0.04
4.75	0.42	0.58	7.63	0.01	0.04	4.76	0.33	0.67	7.62	0.01	0.05
4.77	0.34	0.66	7.62	0.01	0.05	4.78	0.34	0.66	7.61	0.01	0.05
4.79	0.34	0.66	7.61	0.01	0.05	4.80	0.34	0.66	7.60	0.01	0.05

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	0.34	0.66	7.59	0.01	0.05	4.82	0.35	0.65	7.59	0.01	0.05
4.83	0.36	0.64	7.58	0.01	0.05	4.84	0.36	0.64	7.58	0.01	0.05
4.85	0.36	0.64	7.58	0.01	0.05	4.86	0.36	0.64	7.57	0.01	0.05
4.87	0.36	0.64	7.57	0.01	0.05	4.88	0.35	0.65	7.56	0.01	0.05
4.89	0.35	0.65	7.55	0.01	0.05	4.90	0.35	0.65	7.55	0.01	0.05
4.91	0.43	0.57	7.54	0.01	0.04	4.92	0.43	0.57	7.54	0.01	0.04
4.93	0.43	0.57	7.54	0.01	0.04	4.94	0.43	0.57	7.53	0.01	0.04
4.95	0.43	0.57	7.53	0.01	0.04	4.96	0.43	0.57	7.52	0.01	0.04
4.97	0.35	0.65	7.51	0.01	0.05	4.98	0.36	0.64	7.51	0.01	0.05
4.99	0.36	0.64	7.50	0.01	0.05	5.00	0.35	0.65	7.50	0.01	0.05
5.01	0.34	0.66	7.50	0.01	0.05	5.02	0.34	0.66	7.49	0.01	0.05
5.03	0.34	0.66	7.49	0.01	0.05	5.04	0.33	0.67	7.48	0.01	0.05
5.05	0.43	0.57	7.47	0.01	0.04	5.06	0.44	0.56	7.47	0.01	0.04
5.07	0.44	0.56	7.46	0.01	0.04	5.08	0.43	0.57	7.46	0.01	0.04
5.09	0.42	0.58	7.46	0.01	0.04	5.10	0.33	0.67	7.45	0.01	0.05
5.11	0.35	0.65	7.45	0.01	0.05	5.12	0.38	0.62	7.44	0.01	0.05
5.13	0.41	0.59	7.43	0.01	0.04	5.14	0.43	0.57	7.43	0.01	0.04
5.15	0.45	0.55	7.42	0.01	0.04	5.16	0.45	0.55	7.42	0.01	0.04
5.17	0.44	0.56	7.42	0.01	0.04	5.18	0.55	0.45	7.41	0.01	0.03
5.19	0.62	0.38	7.41	0.01	0.03	5.20	0.72	0.28	7.40	0.01	0.02
5.21	0.81	0.19	7.39	0.01	0.01	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	1.30	0.00	7.33	0.01	0.00	5.34	1.27	0.00	7.33	0.01	0.00
5.35	1.22	0.00	7.33	0.01	0.00	5.36	1.15	0.00	7.32	0.01	0.00
5.37	1.05	0.00	7.32	0.01	0.00	5.38	0.99	0.01	7.31	0.01	0.00
5.39	0.99	0.01	7.30	0.01	0.00	5.40	1.06	0.00	7.30	0.01	0.00
5.41	1.17	0.00	7.29	0.01	0.00	5.42	1.26	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	0.72	0.28	7.17	0.01	0.02
5.67	0.71	0.29	7.17	0.01	0.02	5.68	0.68	0.32	7.16	0.01	0.02
5.69	0.63	0.37	7.16	0.01	0.03	5.70	0.60	0.40	7.15	0.01	0.03
5.71	0.58	0.42	7.14	0.01	0.03	5.72	0.57	0.43	7.14	0.01	0.03
5.73	0.54	0.46	7.13	0.01	0.03	5.74	0.51	0.49	7.13	0.01	0.04
5.75	0.48	0.52	7.13	0.01	0.04	5.76	0.46	0.54	7.12	0.01	0.04

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	0.46	0.54	7.12	0.01	0.04	5.78	0.47	0.53	7.11	0.01	0.04
5.79	0.49	0.51	7.11	0.01	0.04	5.80	0.48	0.52	7.10	0.01	0.04
5.81	0.48	0.52	7.09	0.01	0.04	5.82	0.47	0.53	7.09	0.01	0.04
5.83	0.47	0.53	7.08	0.01	0.04	5.84	0.46	0.54	7.08	0.01	0.04
5.85	0.46	0.54	7.08	0.01	0.04	5.86	0.47	0.53	7.07	0.01	0.04
5.87	0.48	0.52	7.07	0.01	0.04	5.88	0.49	0.51	7.06	0.01	0.04
5.89	0.51	0.49	7.05	0.01	0.03	5.90	0.53	0.47	7.05	0.01	0.03
5.91	0.54	0.46	7.04	0.01	0.03	5.92	0.55	0.45	7.04	0.01	0.03
5.93	0.56	0.44	7.04	0.01	0.03	5.94	0.56	0.44	7.03	0.01	0.03
5.95	0.54	0.46	7.03	0.01	0.03	5.96	0.54	0.46	7.02	0.01	0.03
5.97	0.55	0.45	7.01	0.01	0.03	5.98	0.60	0.40	7.01	0.01	0.03
5.99	0.64	0.36	7.00	0.01	0.03	6.00	0.68	0.32	7.00	0.01	0.02
6.01	0.70	0.30	7.00	0.01	0.02	6.02	0.72	0.28	6.99	0.01	0.02
6.03	0.71	0.29	6.99	0.01	0.02	6.04	0.68	0.32	6.98	0.01	0.02
6.05	0.64	0.36	6.97	0.01	0.02	6.06	0.63	0.37	6.97	0.01	0.03
6.07	0.63	0.37	6.96	0.01	0.03	6.08	0.64	0.36	6.96	0.01	0.02
6.09	0.68	0.32	6.96	0.01	0.02	6.10	0.71	0.29	6.95	0.01	0.02
6.11	0.73	0.27	6.95	0.01	0.02	6.12	0.70	0.30	6.94	0.01	0.02
6.13	0.67	0.33	6.93	0.01	0.02	6.14	0.64	0.36	6.93	0.01	0.02
6.15	0.63	0.37	6.92	0.01	0.03	6.16	0.62	0.38	6.92	0.01	0.03
6.17	0.63	0.37	6.92	0.01	0.03	6.18	0.64	0.36	6.91	0.01	0.03
6.19	0.65	0.35	6.91	0.01	0.02	6.20	0.65	0.35	6.90	0.01	0.02
6.21	0.65	0.35	6.89	0.01	0.02	6.22	0.63	0.37	6.89	0.01	0.03
6.23	0.63	0.37	6.88	0.01	0.03	6.24	0.64	0.36	6.88	0.01	0.03
6.25	0.66	0.34	6.88	0.01	0.02	6.26	0.69	0.31	6.87	0.01	0.02
6.27	0.71	0.29	6.87	0.01	0.02	6.28	0.71	0.29	6.86	0.01	0.02
6.29	0.69	0.31	6.86	0.01	0.02	6.30	0.65	0.35	6.85	0.01	0.02
6.31	0.65	0.35	6.84	0.01	0.02	6.32	0.64	0.36	6.84	0.01	0.02
6.33	0.67	0.33	6.83	0.01	0.02	6.34	0.72	0.28	6.83	0.01	0.02
6.35	0.78	0.22	6.83	0.01	0.02	6.36	0.80	0.20	6.82	0.01	0.01
6.37	0.79	0.21	6.82	0.01	0.01	6.38	0.78	0.22	6.81	0.01	0.01
6.39	0.78	0.22	6.80	0.01	0.02	6.40	0.77	0.23	6.80	0.01	0.02
6.41	0.75	0.25	6.79	0.01	0.02	6.42	0.75	0.25	6.79	0.01	0.02
6.43	0.75	0.25	6.79	0.01	0.02	6.44	0.75	0.25	6.78	0.01	0.02
6.45	0.74	0.26	6.78	0.01	0.02	6.46	0.72	0.28	6.77	0.01	0.02
6.47	0.70	0.30	6.76	0.01	0.02	6.48	0.68	0.32	6.76	0.01	0.02
6.49	0.66	0.34	6.75	0.01	0.02	6.50	0.66	0.34	6.75	0.01	0.02
6.51	0.66	0.34	6.75	0.01	0.02	6.52	0.66	0.34	6.74	0.01	0.02
6.53	0.66	0.34	6.74	0.01	0.02	6.54	0.66	0.34	6.73	0.01	0.02
6.55	0.67	0.33	6.72	0.01	0.02	6.56	0.68	0.32	6.72	0.01	0.02
6.57	0.69	0.31	6.71	0.01	0.02	6.58	0.70	0.30	6.71	0.01	0.02
6.59	0.71	0.29	6.71	0.01	0.02	6.60	0.71	0.29	6.70	0.01	0.02
6.61	0.74	0.26	6.70	0.01	0.02	6.62	0.79	0.21	6.69	0.01	0.01
6.63	0.85	0.15	6.68	0.01	0.01	6.64	0.91	0.09	6.68	0.01	0.01
6.65	0.95	0.05	6.67	0.01	0.00	6.66	0.95	0.05	6.67	0.01	0.00
6.67	0.91	0.09	6.67	0.01	0.01	6.68	0.87	0.13	6.66	0.01	0.01
6.69	0.85	0.15	6.66	0.01	0.01	6.70	0.87	0.13	6.65	0.01	0.01
6.71	0.88	0.12	6.64	0.01	0.01	6.72	0.88	0.12	6.64	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	0.85	0.15	6.63	0.01	0.01	6.74	0.82	0.18	6.63	0.01	0.01
6.75	0.77	0.23	6.63	0.01	0.02	6.76	0.72	0.28	6.62	0.01	0.02
6.77	0.67	0.33	6.62	0.01	0.02	6.78	0.65	0.35	6.61	0.01	0.02
6.79	0.64	0.36	6.61	0.01	0.02	6.80	0.64	0.36	6.60	0.01	0.02
6.81	0.63	0.37	6.59	0.01	0.02	6.82	0.61	0.39	6.59	0.01	0.03
6.83	0.56	0.44	6.58	0.01	0.03	6.84	0.51	0.49	6.58	0.01	0.03
6.85	0.47	0.53	6.58	0.01	0.04	6.86	0.45	0.55	6.57	0.01	0.04
6.87	0.45	0.55	6.57	0.01	0.04	6.88	0.44	0.56	6.56	0.01	0.04
6.89	0.44	0.56	6.55	0.01	0.04	6.90	0.45	0.55	6.55	0.01	0.04
6.91	0.46	0.54	6.54	0.01	0.04	6.92	0.47	0.53	6.54	0.01	0.03
6.93	0.48	0.52	6.54	0.01	0.03	6.94	0.48	0.52	6.53	0.01	0.03
6.95	0.49	0.51	6.53	0.01	0.03	6.96	0.50	0.50	6.52	0.01	0.03
6.97	0.50	0.50	6.51	0.01	0.03	6.98	0.49	0.51	6.51	0.01	0.03
6.99	0.48	0.52	6.50	0.01	0.03	7.00	0.47	0.53	6.50	0.01	0.03
7.01	0.47	0.53	6.50	0.01	0.03	7.02	0.48	0.52	6.49	0.01	0.03
7.03	0.49	0.51	6.49	0.01	0.03	7.04	0.51	0.49	6.48	0.01	0.03
7.05	0.52	0.48	6.47	0.01	0.03	7.06	0.51	0.49	6.47	0.01	0.03
7.07	0.51	0.49	6.46	0.01	0.03	7.08	0.50	0.50	6.46	0.01	0.03
7.09	0.51	0.49	6.46	0.01	0.03	7.10	0.53	0.47	6.45	0.01	0.03
7.11	0.55	0.45	6.45	0.01	0.03	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	2.00	0.00	6.40	0.01	0.00
7.21	2.00	0.00	6.39	0.01	0.00	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	0.40	0.60	6.38	0.01	0.04	7.26	0.40	0.60	6.37	0.01	0.04
7.27	0.40	0.60	6.37	0.01	0.04	7.28	0.40	0.60	6.36	0.01	0.04
7.29	0.40	0.60	6.36	0.01	0.04	7.30	0.40	0.60	6.35	0.01	0.04
7.31	0.40	0.60	6.34	0.01	0.04	7.32	0.40	0.60	6.34	0.01	0.04
7.33	0.41	0.59	6.33	0.01	0.04	7.34	0.42	0.58	6.33	0.01	0.04
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	0.45	0.55	6.21	0.01	0.03	7.58	0.45	0.55	6.21	0.01	0.03
7.59	0.45	0.55	6.21	0.01	0.03	7.60	0.45	0.55	6.20	0.01	0.03
7.61	0.46	0.54	6.20	0.01	0.03	7.62	0.47	0.53	6.19	0.01	0.03
7.63	0.48	0.52	6.18	0.01	0.03	7.64	0.49	0.51	6.18	0.01	0.03
7.65	0.51	0.49	6.17	0.01	0.03	7.66	0.52	0.48	6.17	0.01	0.03
7.67	0.53	0.47	6.17	0.01	0.03	7.68	0.54	0.46	6.16	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	0.57	0.43	6.16	0.01	0.03	7.70	0.60	0.40	6.15	0.01	0.02
7.71	0.62	0.38	6.14	0.01	0.02	7.72	0.63	0.37	6.14	0.01	0.02
7.73	2.00	0.00	6.13	0.01	0.00	7.74	2.00	0.00	6.13	0.01	0.00
7.75	2.00	0.00	6.13	0.01	0.00	7.76	0.63	0.37	6.12	0.01	0.02
7.77	0.59	0.41	6.12	0.01	0.03	7.78	0.56	0.44	6.11	0.01	0.03
7.79	0.56	0.44	6.11	0.01	0.03	7.80	0.57	0.43	6.10	0.01	0.03
7.81	0.59	0.41	6.09	0.01	0.03	7.82	0.62	0.38	6.09	0.01	0.02
7.83	0.65	0.35	6.08	0.01	0.02	7.84	0.67	0.33	6.08	0.01	0.02
7.85	0.67	0.33	6.08	0.01	0.02	7.86	0.67	0.33	6.07	0.01	0.02
7.87	0.71	0.29	6.07	0.01	0.02	7.88	0.82	0.18	6.06	0.01	0.01
7.89	1.02	0.00	6.05	0.01	0.00	7.90	1.26	0.00	6.05	0.01	0.00
7.91	1.55	0.00	6.04	0.01	0.00	7.92	1.88	0.00	6.04	0.01	0.00
7.93	2.00	0.00	6.04	0.01	0.00	7.94	2.00	0.00	6.03	0.01	0.00
7.95	2.00	0.00	6.03	0.01	0.00	7.96	2.00	0.00	6.02	0.01	0.00
7.97	2.00	0.00	6.01	0.01	0.00	7.98	2.00	0.00	6.01	0.01	0.00
7.99	2.00	0.00	6.00	0.01	0.00	8.00	2.00	0.00	6.00	0.01	0.00
8.01	2.00	0.00	6.00	0.01	0.00	8.02	2.00	0.00	5.99	0.01	0.00
8.03	2.00	0.00	5.99	0.01	0.00	8.04	2.00	0.00	5.98	0.01	0.00
8.05	2.00	0.00	5.97	0.01	0.00						

Overall liquefaction potential: 8.97

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

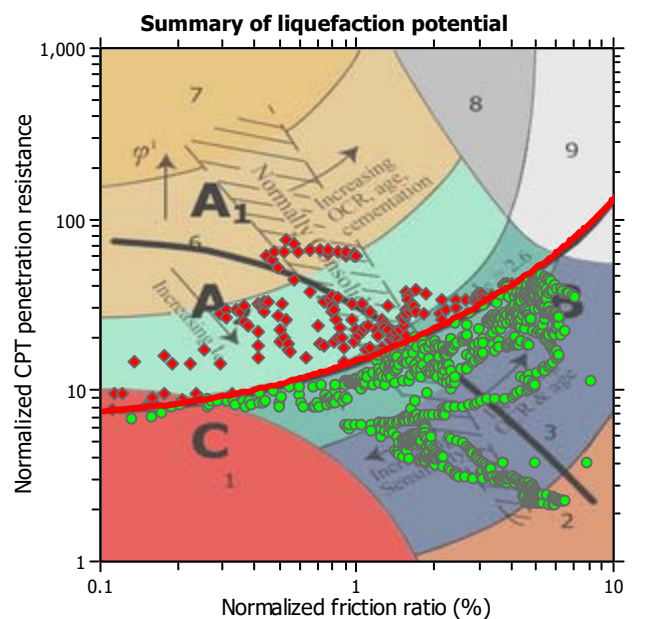
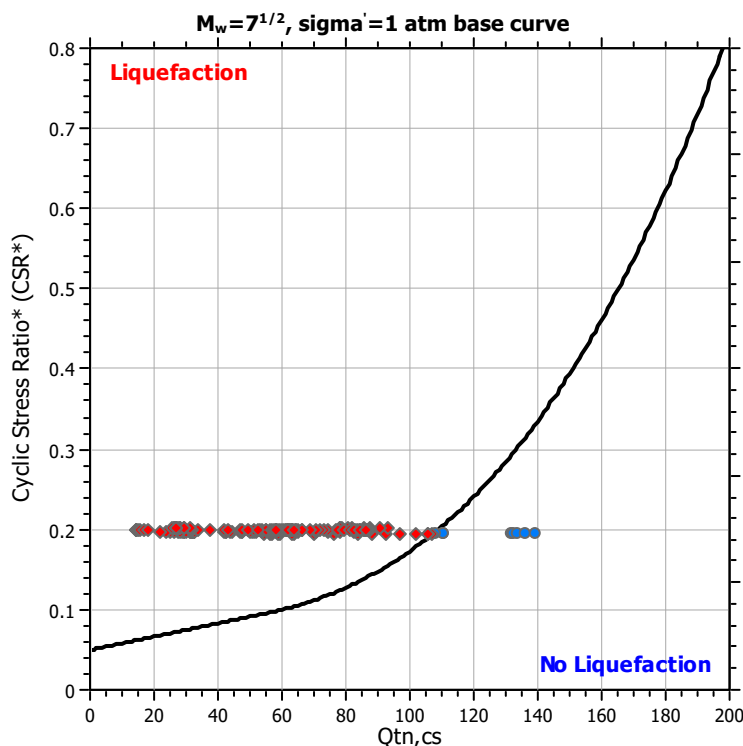
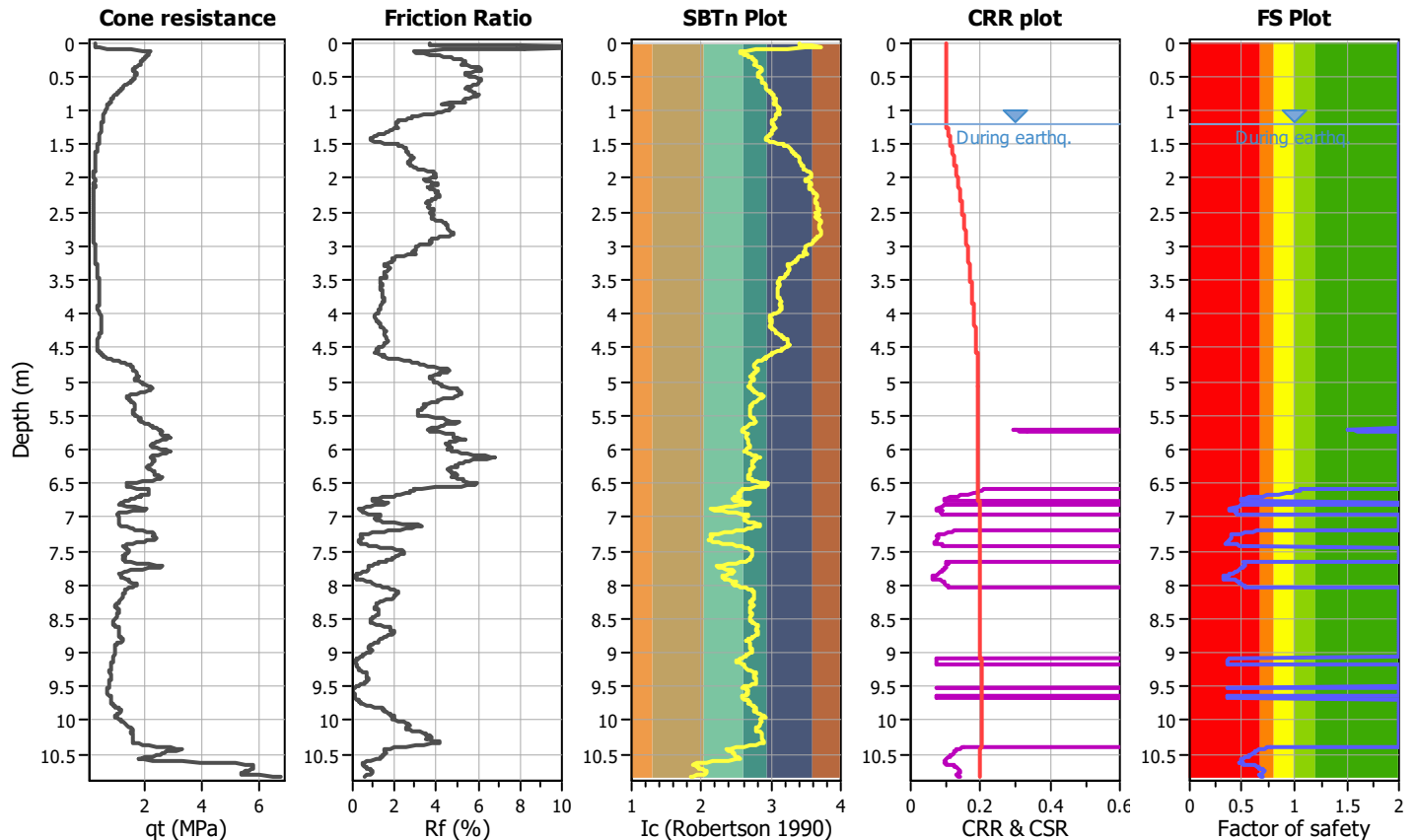
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

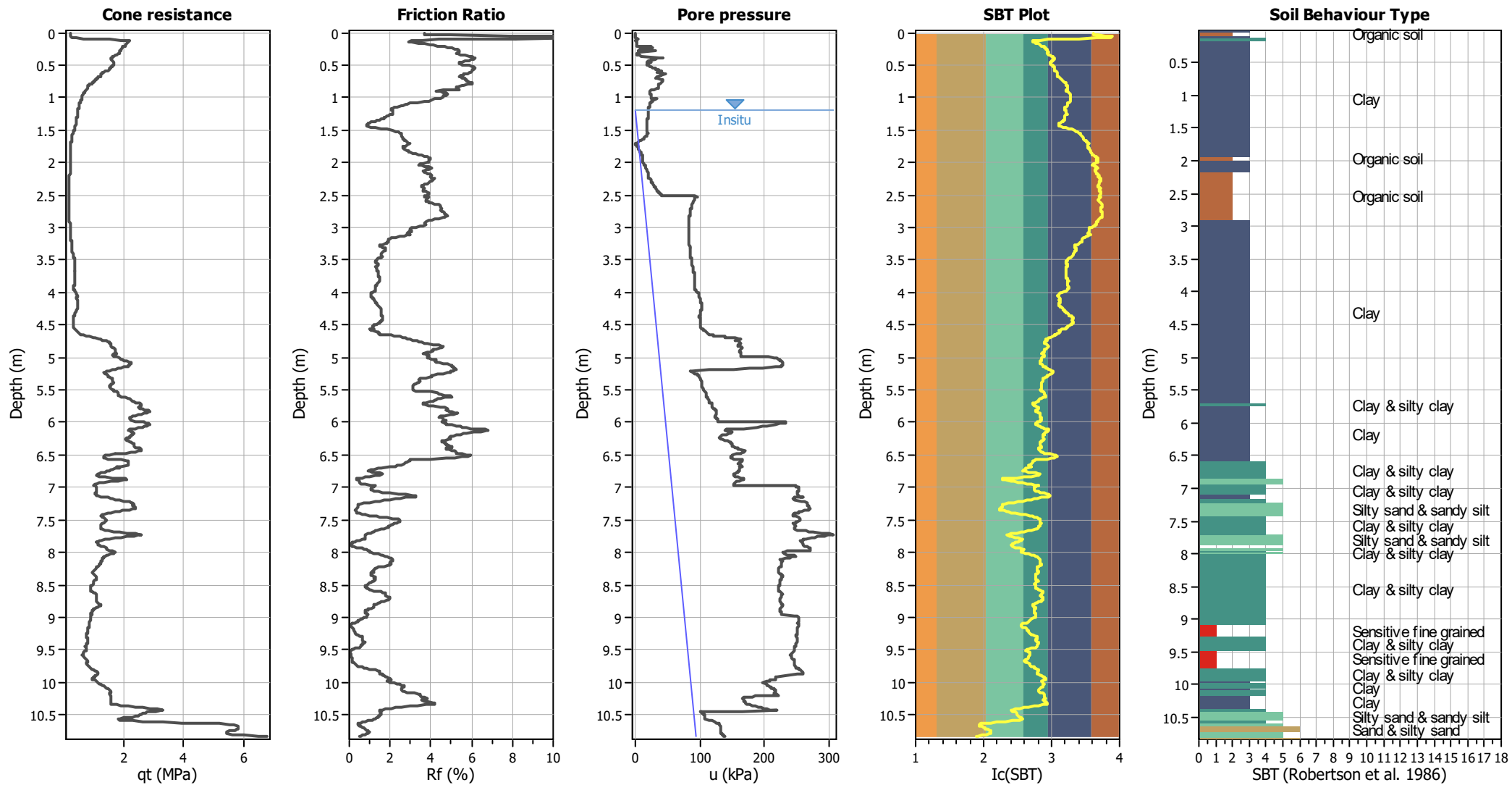
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU5bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

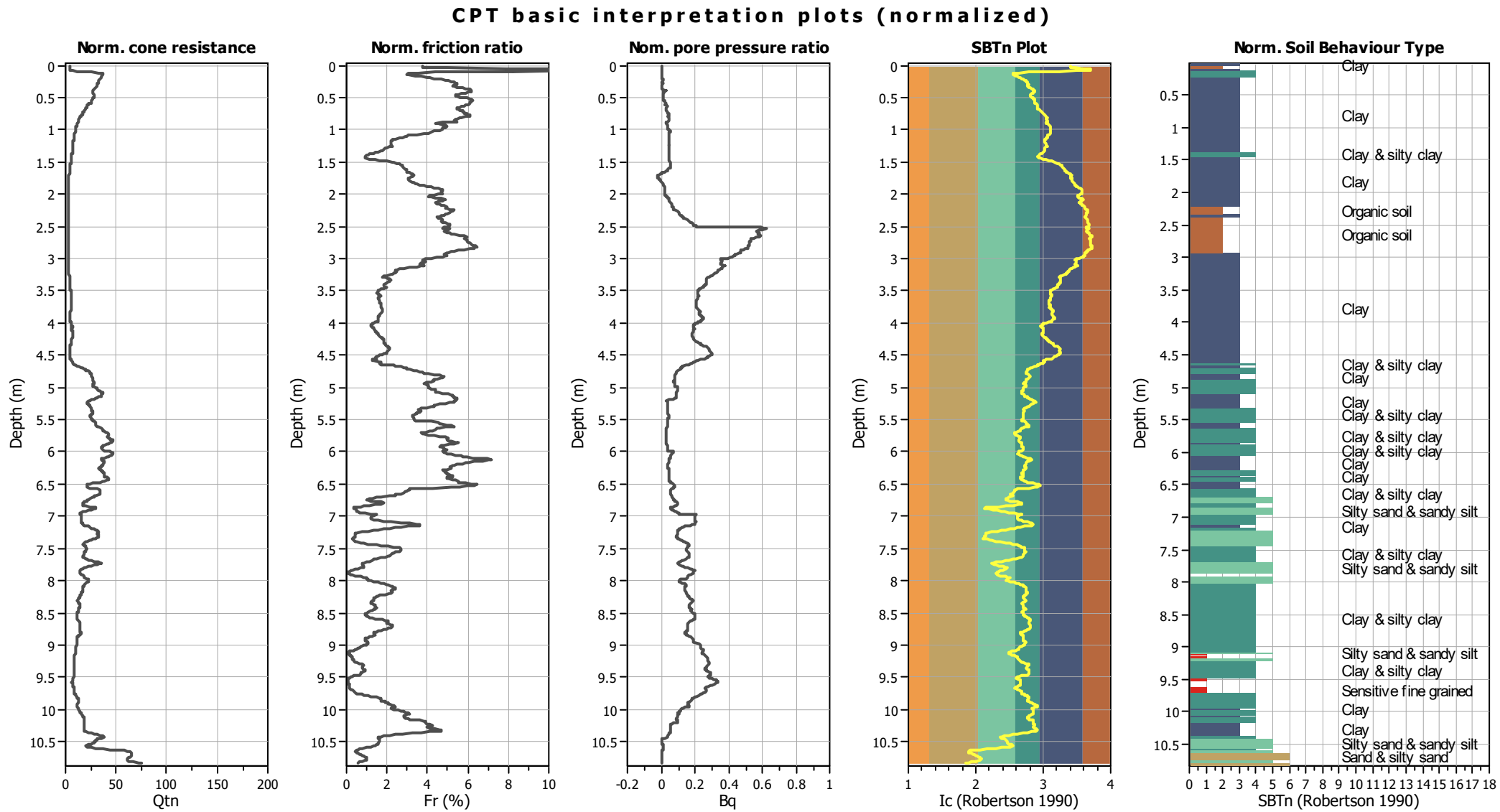


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erth.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



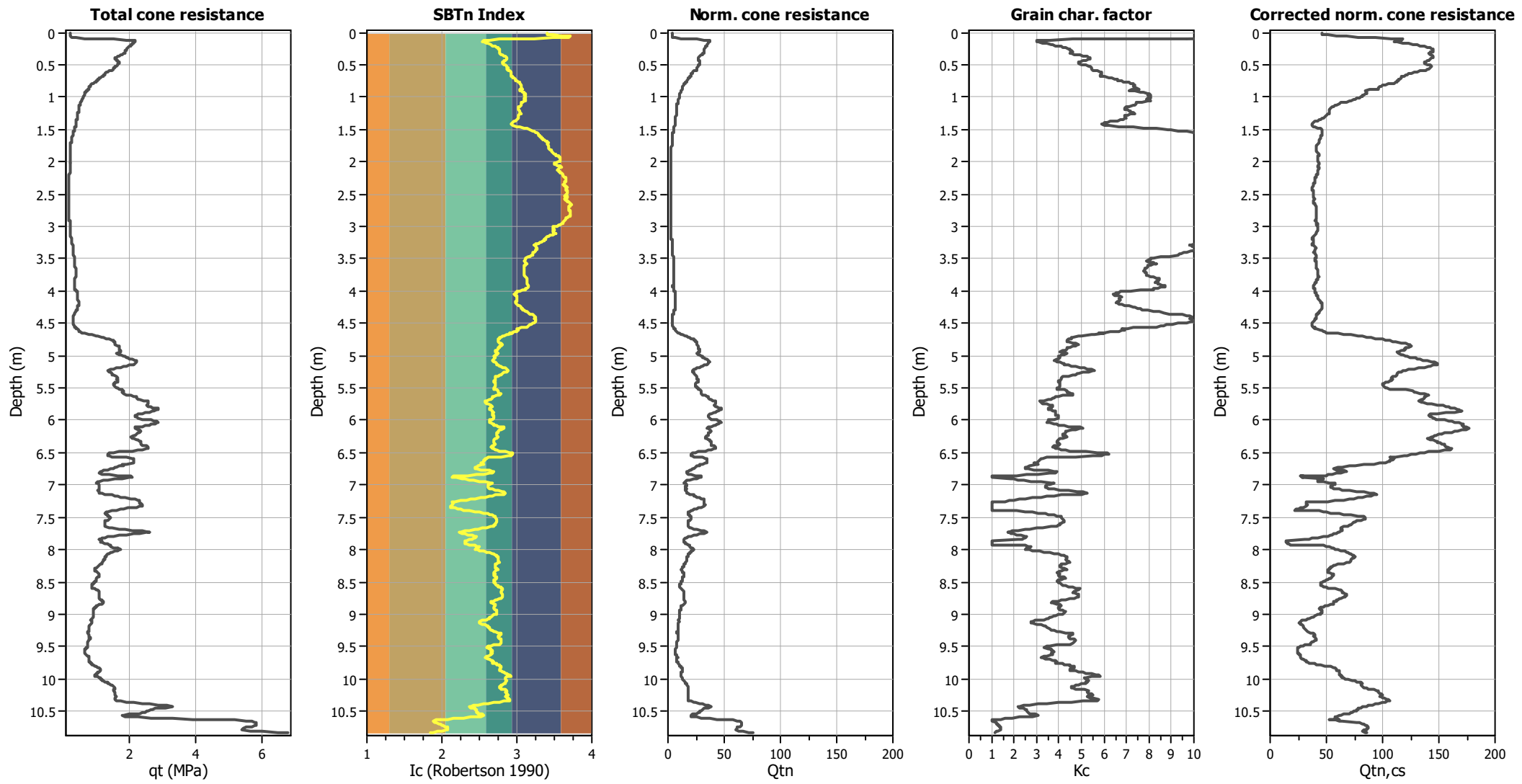
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

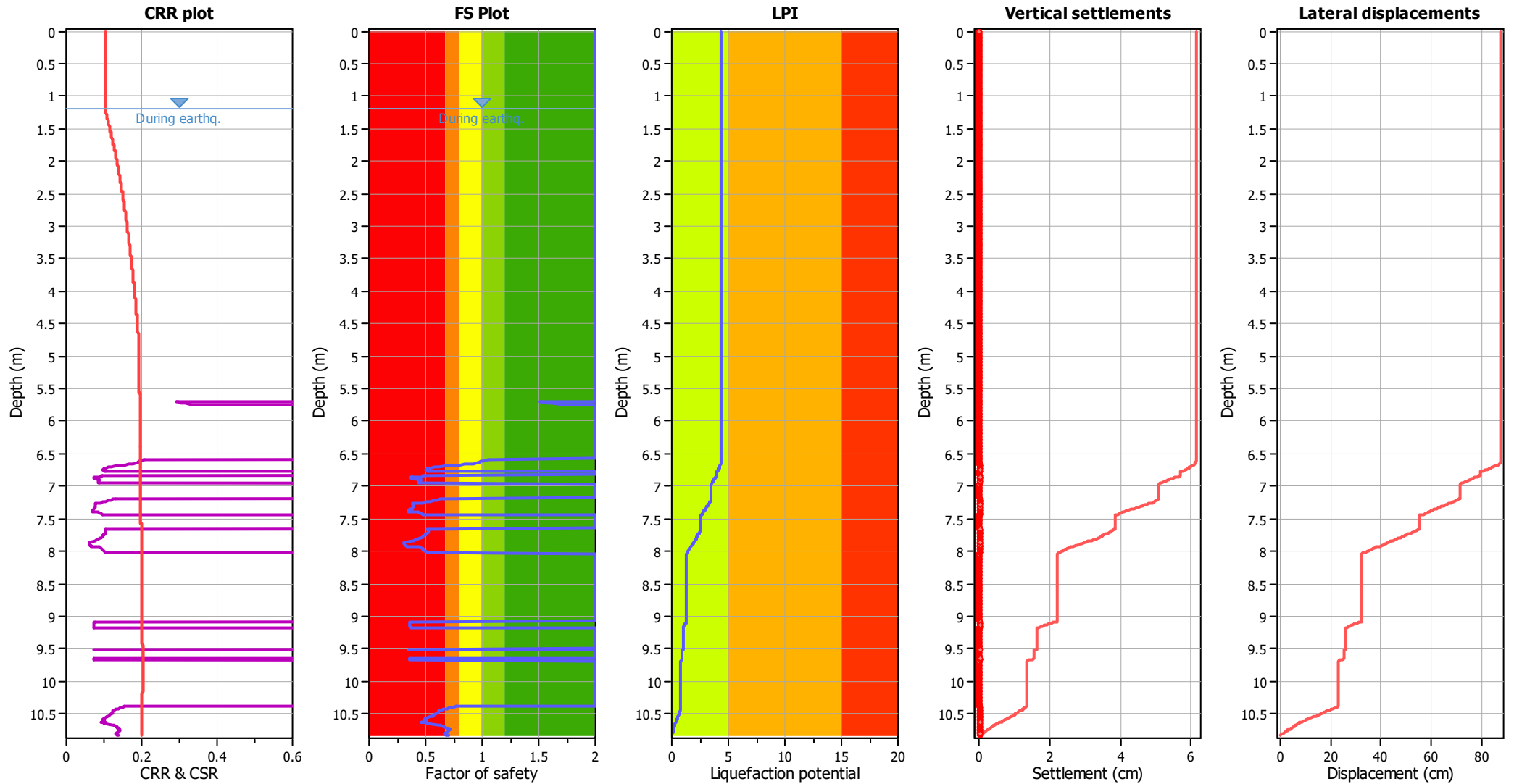
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

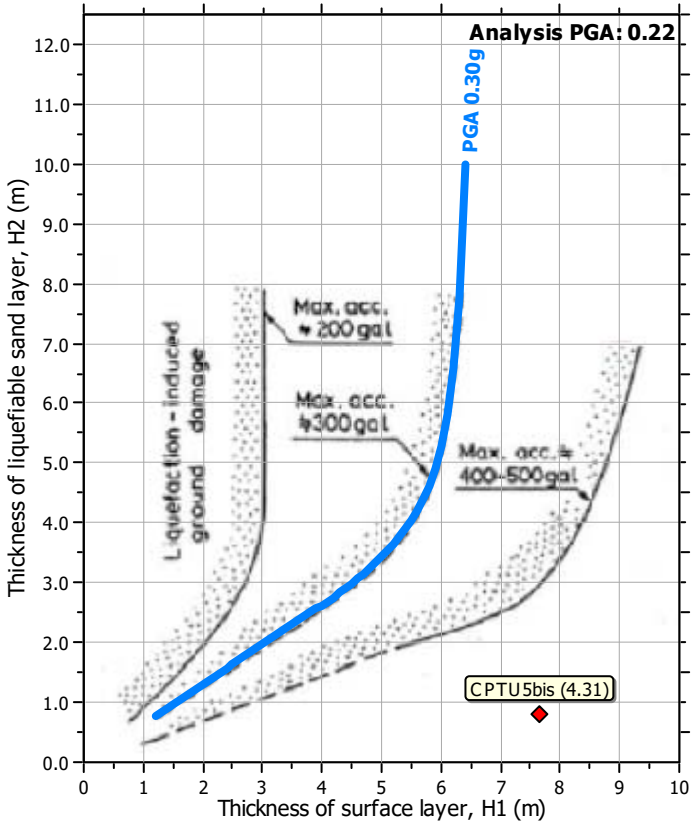
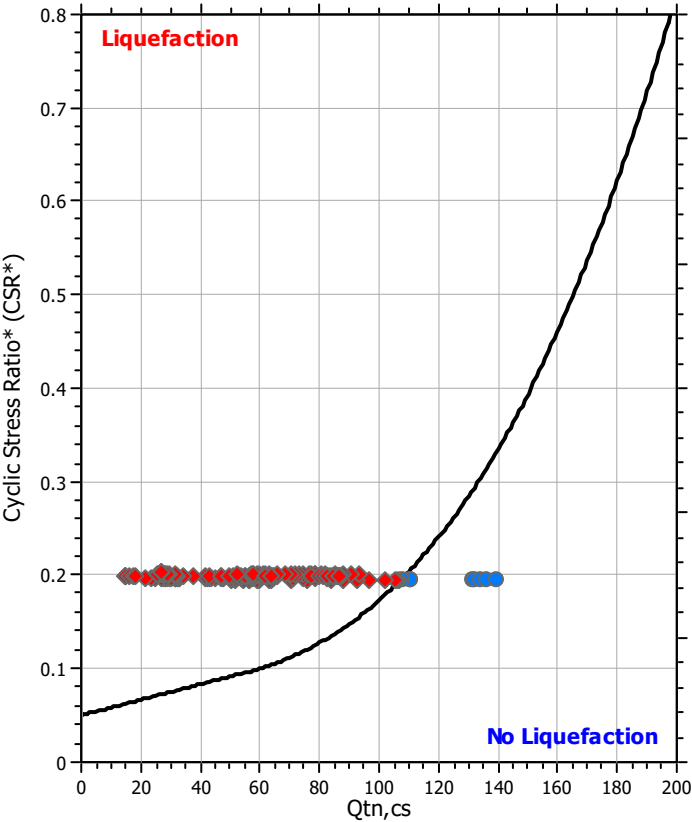
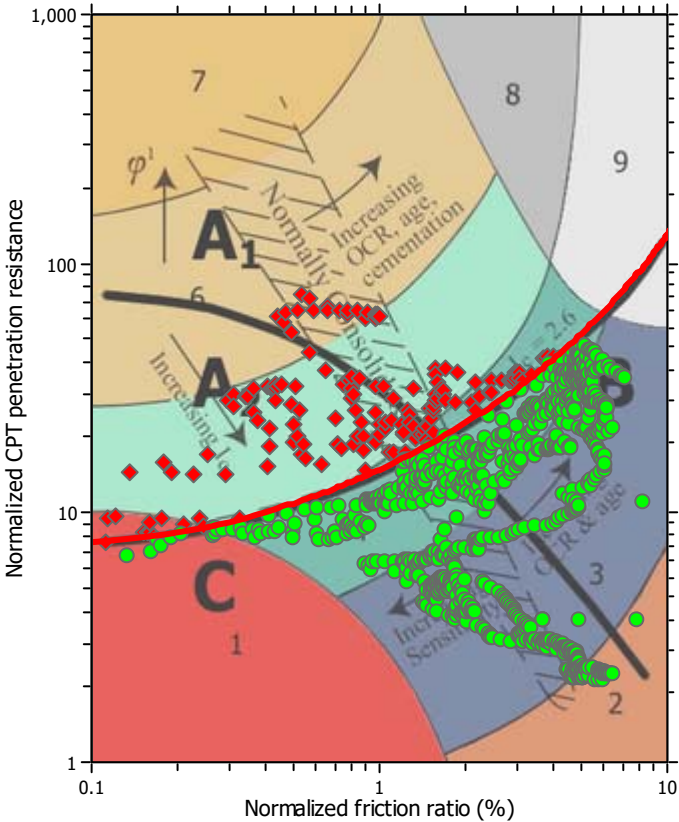
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

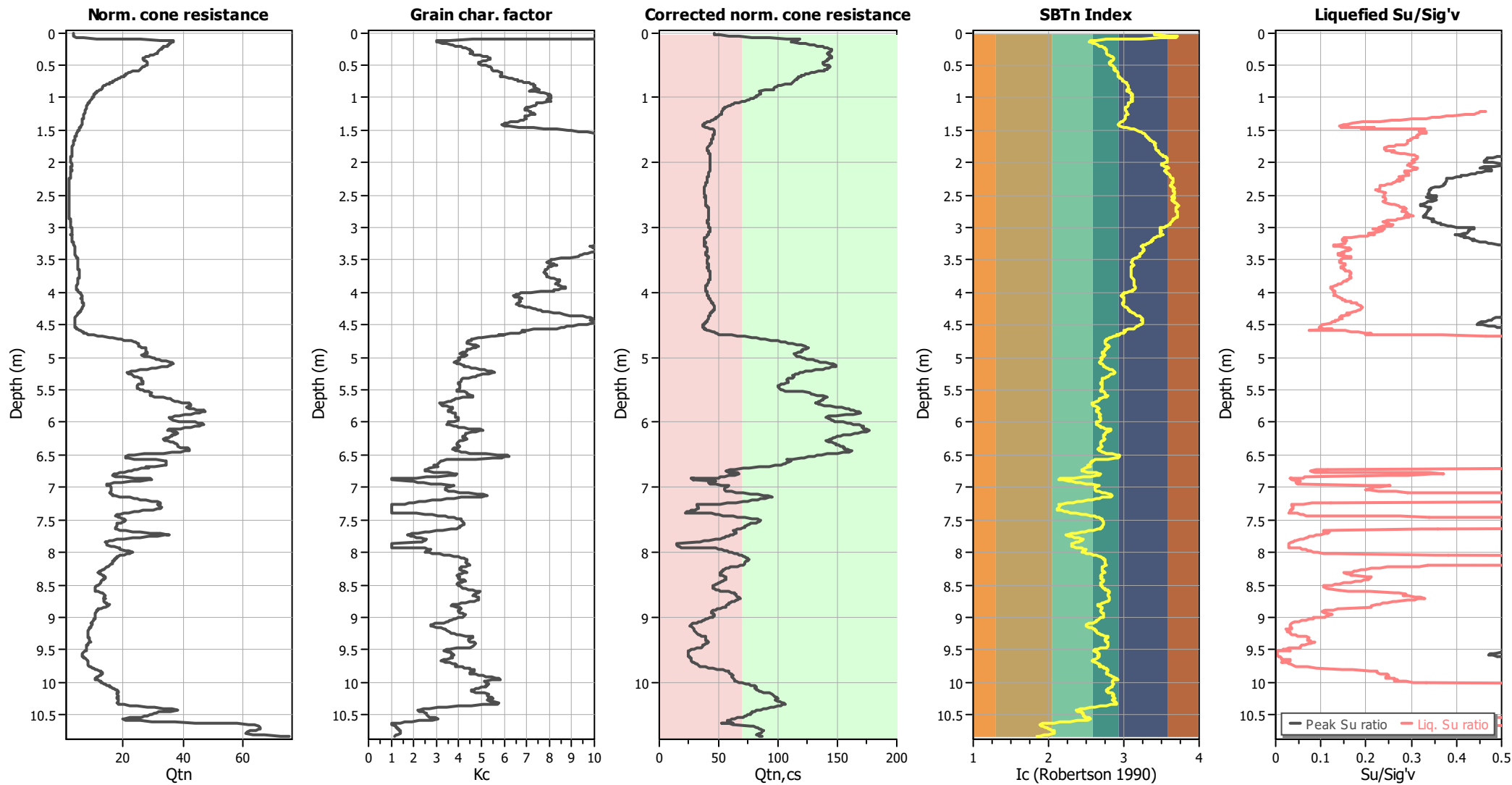
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	1.51	0.00	7.15	0.01	0.00
5.71	1.52	0.00	7.14	0.01	0.00	5.72	1.56	0.00	7.14	0.01	0.00
5.73	1.61	0.00	7.13	0.01	0.00	5.74	1.71	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	2.00	0.00	6.91	0.01	0.00	6.20	2.00	0.00	6.90	0.01	0.00
6.21	2.00	0.00	6.89	0.01	0.00	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	1.06	0.00	6.71	0.01	0.00	6.60	1.05	0.00	6.70	0.01	0.00
6.61	1.02	0.00	6.70	0.01	0.00	6.62	0.99	0.01	6.69	0.01	0.00
6.63	0.98	0.02	6.68	0.01	0.00	6.64	0.97	0.03	6.68	0.01	0.00
6.65	0.92	0.08	6.67	0.01	0.01	6.66	0.85	0.15	6.67	0.01	0.01
6.67	0.79	0.21	6.67	0.01	0.01	6.68	0.74	0.26	6.66	0.01	0.02
6.69	0.69	0.31	6.66	0.01	0.02	6.70	0.62	0.38	6.65	0.01	0.03
6.71	0.57	0.43	6.64	0.01	0.03	6.72	0.53	0.47	6.64	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	0.51	0.49	6.63	0.01	0.03	6.74	0.50	0.50	6.63	0.01	0.03
6.75	0.50	0.50	6.63	0.01	0.03	6.76	0.51	0.49	6.62	0.01	0.03
6.77	0.53	0.47	6.62	0.01	0.03	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	0.49	0.51	6.58	0.01	0.03	6.84	0.48	0.52	6.58	0.01	0.03
6.85	0.47	0.53	6.58	0.01	0.03	6.86	0.37	0.63	6.57	0.01	0.04
6.87	0.38	0.62	6.57	0.01	0.04	6.88	0.38	0.62	6.56	0.01	0.04
6.89	0.38	0.62	6.55	0.01	0.04	6.90	0.46	0.54	6.55	0.01	0.04
6.91	0.44	0.56	6.54	0.01	0.04	6.92	0.44	0.56	6.54	0.01	0.04
6.93	0.43	0.57	6.54	0.01	0.04	6.94	0.44	0.56	6.53	0.01	0.04
6.95	0.46	0.54	6.53	0.01	0.04	6.96	2.00	0.00	6.52	0.01	0.00
6.97	2.00	0.00	6.51	0.01	0.00	6.98	2.00	0.00	6.51	0.01	0.00
6.99	2.00	0.00	6.50	0.01	0.00	7.00	2.00	0.00	6.50	0.01	0.00
7.01	2.00	0.00	6.50	0.01	0.00	7.02	2.00	0.00	6.49	0.01	0.00
7.03	2.00	0.00	6.49	0.01	0.00	7.04	2.00	0.00	6.48	0.01	0.00
7.05	2.00	0.00	6.47	0.01	0.00	7.06	2.00	0.00	6.47	0.01	0.00
7.07	2.00	0.00	6.46	0.01	0.00	7.08	2.00	0.00	6.46	0.01	0.00
7.09	2.00	0.00	6.46	0.01	0.00	7.10	2.00	0.00	6.45	0.01	0.00
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	0.67	0.33	6.41	0.01	0.02	7.20	0.63	0.37	6.40	0.01	0.02
7.21	0.60	0.40	6.39	0.01	0.03	7.22	0.57	0.43	6.39	0.01	0.03
7.23	0.53	0.47	6.38	0.01	0.03	7.24	0.50	0.50	6.38	0.01	0.03
7.25	0.47	0.53	6.38	0.01	0.03	7.26	0.39	0.61	6.37	0.01	0.04
7.27	0.39	0.61	6.37	0.01	0.04	7.28	0.39	0.61	6.36	0.01	0.04
7.29	0.39	0.61	6.36	0.01	0.04	7.30	0.39	0.61	6.35	0.01	0.04
7.31	0.39	0.61	6.34	0.01	0.04	7.32	0.39	0.61	6.34	0.01	0.04
7.33	0.39	0.61	6.33	0.01	0.04	7.34	0.38	0.62	6.33	0.01	0.04
7.35	0.37	0.63	6.33	0.01	0.04	7.36	0.37	0.63	6.32	0.01	0.04
7.37	0.36	0.64	6.32	0.01	0.04	7.38	0.35	0.65	6.31	0.01	0.04
7.39	0.34	0.66	6.30	0.01	0.04	7.40	0.44	0.56	6.30	0.01	0.04
7.41	0.45	0.55	6.29	0.01	0.03	7.42	0.46	0.54	6.29	0.01	0.03
7.43	0.48	0.52	6.29	0.01	0.03	7.44	0.49	0.51	6.28	0.01	0.03
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	2.00	0.00	6.21	0.01	0.00	7.58	2.00	0.00	6.21	0.01	0.00
7.59	2.00	0.00	6.21	0.01	0.00	7.60	2.00	0.00	6.20	0.01	0.00
7.61	2.00	0.00	6.20	0.01	0.00	7.62	2.00	0.00	6.19	0.01	0.00
7.63	2.00	0.00	6.18	0.01	0.00	7.64	2.00	0.00	6.18	0.01	0.00
7.65	2.00	0.00	6.17	0.01	0.00	7.66	0.52	0.48	6.17	0.01	0.03
7.67	0.52	0.48	6.17	0.01	0.03	7.68	0.52	0.48	6.16	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	0.53	0.47	6.16	0.01	0.03	7.70	0.53	0.47	6.15	0.01	0.03
7.71	0.52	0.48	6.14	0.01	0.03	7.72	0.51	0.49	6.14	0.01	0.03
7.73	0.51	0.49	6.13	0.01	0.03	7.74	0.50	0.50	6.13	0.01	0.03
7.75	0.50	0.50	6.13	0.01	0.03	7.76	0.49	0.51	6.12	0.01	0.03
7.77	0.48	0.52	6.12	0.01	0.03	7.78	0.48	0.52	6.11	0.01	0.03
7.79	0.47	0.53	6.11	0.01	0.03	7.80	0.45	0.55	6.10	0.01	0.03
7.81	0.43	0.57	6.09	0.01	0.03	7.82	0.41	0.59	6.09	0.01	0.04
7.83	0.39	0.61	6.08	0.01	0.04	7.84	0.39	0.61	6.08	0.01	0.04
7.85	0.38	0.62	6.08	0.01	0.04	7.86	0.31	0.69	6.07	0.01	0.04
7.87	0.31	0.69	6.07	0.01	0.04	7.88	0.31	0.69	6.06	0.01	0.04
7.89	0.31	0.69	6.05	0.01	0.04	7.90	0.32	0.68	6.05	0.01	0.04
7.91	0.32	0.68	6.04	0.01	0.04	7.92	0.33	0.67	6.04	0.01	0.04
7.93	0.43	0.57	6.04	0.01	0.03	7.94	0.45	0.55	6.03	0.01	0.03
7.95	0.46	0.54	6.03	0.01	0.03	7.96	0.47	0.53	6.02	0.01	0.03
7.97	0.48	0.52	6.01	0.01	0.03	7.98	0.49	0.51	6.01	0.01	0.03
7.99	0.49	0.51	6.00	0.01	0.03	8.00	0.50	0.50	6.00	0.01	0.03
8.01	0.52	0.48	6.00	0.01	0.03	8.02	0.53	0.47	5.99	0.01	0.03
8.03	0.54	0.46	5.99	0.01	0.03	8.04	2.00	0.00	5.98	0.01	0.00
8.05	2.00	0.00	5.97	0.01	0.00	8.06	2.00	0.00	5.97	0.01	0.00
8.07	2.00	0.00	5.96	0.01	0.00	8.08	2.00	0.00	5.96	0.01	0.00
8.09	2.00	0.00	5.96	0.01	0.00	8.10	2.00	0.00	5.95	0.01	0.00
8.11	2.00	0.00	5.95	0.01	0.00	8.12	2.00	0.00	5.94	0.01	0.00
8.13	2.00	0.00	5.93	0.01	0.00	8.14	2.00	0.00	5.93	0.01	0.00
8.15	2.00	0.00	5.92	0.01	0.00	8.16	2.00	0.00	5.92	0.01	0.00
8.17	2.00	0.00	5.92	0.01	0.00	8.18	2.00	0.00	5.91	0.01	0.00
8.19	2.00	0.00	5.91	0.01	0.00	8.20	2.00	0.00	5.90	0.01	0.00
8.21	2.00	0.00	5.89	0.01	0.00	8.22	2.00	0.00	5.89	0.01	0.00
8.23	2.00	0.00	5.88	0.01	0.00	8.24	2.00	0.00	5.88	0.01	0.00
8.25	2.00	0.00	5.88	0.01	0.00	8.26	2.00	0.00	5.87	0.01	0.00
8.27	2.00	0.00	5.87	0.01	0.00	8.28	2.00	0.00	5.86	0.01	0.00
8.29	2.00	0.00	5.86	0.01	0.00	8.30	2.00	0.00	5.85	0.01	0.00
8.31	2.00	0.00	5.84	0.01	0.00	8.32	2.00	0.00	5.84	0.01	0.00
8.33	2.00	0.00	5.83	0.01	0.00	8.34	2.00	0.00	5.83	0.01	0.00
8.35	2.00	0.00	5.83	0.01	0.00	8.36	2.00	0.00	5.82	0.01	0.00
8.37	2.00	0.00	5.82	0.01	0.00	8.38	2.00	0.00	5.81	0.01	0.00
8.39	2.00	0.00	5.80	0.01	0.00	8.40	2.00	0.00	5.80	0.01	0.00
8.41	2.00	0.00	5.79	0.01	0.00	8.42	2.00	0.00	5.79	0.01	0.00
8.43	2.00	0.00	5.79	0.01	0.00	8.44	2.00	0.00	5.78	0.01	0.00
8.45	2.00	0.00	5.78	0.01	0.00	8.46	2.00	0.00	5.77	0.01	0.00
8.47	2.00	0.00	5.76	0.01	0.00	8.48	2.00	0.00	5.76	0.01	0.00
8.49	2.00	0.00	5.75	0.01	0.00	8.50	2.00	0.00	5.75	0.01	0.00
8.51	2.00	0.00	5.75	0.01	0.00	8.52	2.00	0.00	5.74	0.01	0.00
8.53	2.00	0.00	5.74	0.01	0.00	8.54	2.00	0.00	5.73	0.01	0.00
8.55	2.00	0.00	5.72	0.01	0.00	8.56	2.00	0.00	5.72	0.01	0.00
8.57	2.00	0.00	5.71	0.01	0.00	8.58	2.00	0.00	5.71	0.01	0.00
8.59	2.00	0.00	5.71	0.01	0.00	8.60	2.00	0.00	5.70	0.01	0.00
8.61	2.00	0.00	5.70	0.01	0.00	8.62	2.00	0.00	5.69	0.01	0.00
8.63	2.00	0.00	5.68	0.01	0.00	8.64	2.00	0.00	5.68	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.65	2.00	0.00	5.67	0.01	0.00	8.66	2.00	0.00	5.67	0.01	0.00
8.67	2.00	0.00	5.67	0.01	0.00	8.68	2.00	0.00	5.66	0.01	0.00
8.69	2.00	0.00	5.66	0.01	0.00	8.70	2.00	0.00	5.65	0.01	0.00
8.71	2.00	0.00	5.64	0.01	0.00	8.72	2.00	0.00	5.64	0.01	0.00
8.73	2.00	0.00	5.63	0.01	0.00	8.74	2.00	0.00	5.63	0.01	0.00
8.75	2.00	0.00	5.63	0.01	0.00	8.76	2.00	0.00	5.62	0.01	0.00
8.77	2.00	0.00	5.62	0.01	0.00	8.78	2.00	0.00	5.61	0.01	0.00
8.79	2.00	0.00	5.61	0.01	0.00	8.80	2.00	0.00	5.60	0.01	0.00
8.81	2.00	0.00	5.59	0.01	0.00	8.82	2.00	0.00	5.59	0.01	0.00
8.83	2.00	0.00	5.58	0.01	0.00	8.84	2.00	0.00	5.58	0.01	0.00
8.85	2.00	0.00	5.58	0.01	0.00	8.86	2.00	0.00	5.57	0.01	0.00
8.87	2.00	0.00	5.57	0.01	0.00	8.88	2.00	0.00	5.56	0.01	0.00
8.89	2.00	0.00	5.55	0.01	0.00	8.90	2.00	0.00	5.55	0.01	0.00
8.91	2.00	0.00	5.54	0.01	0.00	8.92	2.00	0.00	5.54	0.01	0.00
8.93	2.00	0.00	5.54	0.01	0.00	8.94	2.00	0.00	5.53	0.01	0.00
8.95	2.00	0.00	5.53	0.01	0.00	8.96	2.00	0.00	5.52	0.01	0.00
8.97	2.00	0.00	5.51	0.01	0.00	8.98	2.00	0.00	5.51	0.01	0.00
8.99	2.00	0.00	5.50	0.01	0.00	9.00	2.00	0.00	5.50	0.01	0.00
9.01	2.00	0.00	5.50	0.01	0.00	9.02	2.00	0.00	5.49	0.01	0.00
9.03	2.00	0.00	5.49	0.01	0.00	9.04	2.00	0.00	5.48	0.01	0.00
9.05	2.00	0.00	5.47	0.01	0.00	9.06	2.00	0.00	5.47	0.01	0.00
9.07	2.00	0.00	5.46	0.01	0.00	9.08	0.38	0.62	5.46	0.01	0.03
9.09	0.37	0.63	5.46	0.01	0.03	9.10	0.37	0.63	5.45	0.01	0.03
9.11	0.36	0.64	5.45	0.01	0.03	9.12	0.36	0.64	5.44	0.01	0.03
9.13	0.36	0.64	5.43	0.01	0.03	9.14	0.36	0.64	5.43	0.01	0.03
9.15	0.36	0.64	5.42	0.01	0.03	9.16	0.37	0.63	5.42	0.01	0.03
9.17	0.37	0.63	5.42	0.01	0.03	9.18	2.00	0.00	5.41	0.01	0.00
9.19	2.00	0.00	5.41	0.01	0.00	9.20	2.00	0.00	5.40	0.01	0.00
9.21	2.00	0.00	5.39	0.01	0.00	9.22	2.00	0.00	5.39	0.01	0.00
9.23	2.00	0.00	5.38	0.01	0.00	9.24	2.00	0.00	5.38	0.01	0.00
9.25	2.00	0.00	5.38	0.01	0.00	9.26	2.00	0.00	5.37	0.01	0.00
9.27	2.00	0.00	5.37	0.01	0.00	9.28	2.00	0.00	5.36	0.01	0.00
9.29	2.00	0.00	5.36	0.01	0.00	9.30	2.00	0.00	5.35	0.01	0.00
9.31	2.00	0.00	5.34	0.01	0.00	9.32	2.00	0.00	5.34	0.01	0.00
9.33	2.00	0.00	5.33	0.01	0.00	9.34	2.00	0.00	5.33	0.01	0.00
9.35	2.00	0.00	5.33	0.01	0.00	9.36	2.00	0.00	5.32	0.01	0.00
9.37	2.00	0.00	5.32	0.01	0.00	9.38	2.00	0.00	5.31	0.01	0.00
9.39	2.00	0.00	5.30	0.01	0.00	9.40	2.00	0.00	5.30	0.01	0.00
9.41	2.00	0.00	5.29	0.01	0.00	9.42	2.00	0.00	5.29	0.01	0.00
9.43	2.00	0.00	5.29	0.01	0.00	9.44	2.00	0.00	5.28	0.01	0.00
9.45	2.00	0.00	5.28	0.01	0.00	9.46	2.00	0.00	5.27	0.01	0.00
9.47	2.00	0.00	5.26	0.01	0.00	9.48	2.00	0.00	5.26	0.01	0.00
9.49	2.00	0.00	5.25	0.01	0.00	9.50	2.00	0.00	5.25	0.01	0.00
9.51	0.35	0.65	5.25	0.01	0.03	9.52	2.00	0.00	5.24	0.01	0.00
9.53	2.00	0.00	5.24	0.01	0.00	9.54	2.00	0.00	5.23	0.01	0.00
9.55	2.00	0.00	5.22	0.01	0.00	9.56	2.00	0.00	5.22	0.01	0.00
9.57	2.00	0.00	5.21	0.01	0.00	9.58	2.00	0.00	5.21	0.01	0.00
9.59	2.00	0.00	5.21	0.01	0.00	9.60	2.00	0.00	5.20	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
9.61	2.00	0.00	5.20	0.01	0.00	9.62	2.00	0.00	5.19	0.01	0.00
9.63	2.00	0.00	5.18	0.01	0.00	9.64	2.00	0.00	5.18	0.01	0.00
9.65	0.36	0.64	5.17	0.01	0.03	9.66	0.36	0.64	5.17	0.01	0.03
9.67	0.36	0.64	5.17	0.01	0.03	9.68	0.36	0.64	5.16	0.01	0.03
9.69	2.00	0.00	5.16	0.01	0.00	9.70	2.00	0.00	5.15	0.01	0.00
9.71	2.00	0.00	5.14	0.01	0.00	9.72	2.00	0.00	5.14	0.01	0.00
9.73	2.00	0.00	5.13	0.01	0.00	9.74	2.00	0.00	5.13	0.01	0.00
9.75	2.00	0.00	5.13	0.01	0.00	9.76	2.00	0.00	5.12	0.01	0.00
9.77	2.00	0.00	5.12	0.01	0.00	9.78	2.00	0.00	5.11	0.01	0.00
9.79	2.00	0.00	5.11	0.01	0.00	9.80	2.00	0.00	5.10	0.01	0.00
9.81	2.00	0.00	5.09	0.01	0.00	9.82	2.00	0.00	5.09	0.01	0.00
9.83	2.00	0.00	5.08	0.01	0.00	9.84	2.00	0.00	5.08	0.01	0.00
9.85	2.00	0.00	5.08	0.01	0.00	9.86	2.00	0.00	5.07	0.01	0.00
9.87	2.00	0.00	5.07	0.01	0.00	9.88	2.00	0.00	5.06	0.01	0.00
9.89	2.00	0.00	5.05	0.01	0.00	9.90	2.00	0.00	5.05	0.01	0.00
9.91	2.00	0.00	5.04	0.01	0.00	9.92	2.00	0.00	5.04	0.01	0.00
9.93	2.00	0.00	5.04	0.01	0.00	9.94	2.00	0.00	5.03	0.01	0.00
9.95	2.00	0.00	5.03	0.01	0.00	9.96	2.00	0.00	5.02	0.01	0.00
9.97	2.00	0.00	5.01	0.01	0.00	9.98	2.00	0.00	5.01	0.01	0.00
9.99	2.00	0.00	5.00	0.01	0.00	10.00	2.00	0.00	5.00	0.01	0.00
10.01	2.00	0.00	5.00	0.01	0.00	10.02	2.00	0.00	4.99	0.01	0.00
10.03	2.00	0.00	4.99	0.01	0.00	10.04	2.00	0.00	4.98	0.01	0.00
10.05	2.00	0.00	4.97	0.01	0.00	10.06	2.00	0.00	4.97	0.01	0.00
10.07	2.00	0.00	4.96	0.01	0.00	10.08	2.00	0.00	4.96	0.01	0.00
10.09	2.00	0.00	4.96	0.01	0.00	10.10	2.00	0.00	4.95	0.01	0.00
10.11	2.00	0.00	4.95	0.01	0.00	10.12	2.00	0.00	4.94	0.01	0.00
10.13	2.00	0.00	4.93	0.01	0.00	10.14	2.00	0.00	4.93	0.01	0.00
10.15	2.00	0.00	4.92	0.01	0.00	10.16	2.00	0.00	4.92	0.01	0.00
10.17	2.00	0.00	4.92	0.01	0.00	10.18	2.00	0.00	4.91	0.01	0.00
10.19	2.00	0.00	4.91	0.01	0.00	10.20	2.00	0.00	4.90	0.01	0.00
10.21	2.00	0.00	4.89	0.01	0.00	10.22	2.00	0.00	4.89	0.01	0.00
10.23	2.00	0.00	4.88	0.01	0.00	10.24	2.00	0.00	4.88	0.01	0.00
10.25	2.00	0.00	4.88	0.01	0.00	10.26	2.00	0.00	4.87	0.01	0.00
10.27	2.00	0.00	4.87	0.01	0.00	10.28	2.00	0.00	4.86	0.01	0.00
10.29	2.00	0.00	4.86	0.01	0.00	10.30	2.00	0.00	4.85	0.01	0.00
10.31	2.00	0.00	4.84	0.01	0.00	10.32	2.00	0.00	4.84	0.01	0.00
10.33	2.00	0.00	4.83	0.01	0.00	10.34	2.00	0.00	4.83	0.01	0.00
10.35	2.00	0.00	4.83	0.01	0.00	10.36	2.00	0.00	4.82	0.01	0.00
10.37	2.00	0.00	4.82	0.01	0.00	10.38	2.00	0.00	4.81	0.01	0.00
10.39	0.77	0.23	4.80	0.01	0.01	10.40	0.75	0.25	4.80	0.01	0.01
10.41	0.71	0.29	4.79	0.01	0.01	10.42	0.69	0.31	4.79	0.01	0.01
10.43	0.65	0.35	4.79	0.01	0.02	10.44	0.64	0.36	4.78	0.01	0.02
10.45	0.62	0.38	4.78	0.01	0.02	10.46	0.62	0.38	4.77	0.01	0.02
10.47	0.62	0.38	4.76	0.01	0.02	10.48	0.61	0.39	4.76	0.01	0.02
10.49	0.61	0.39	4.75	0.01	0.02	10.50	0.59	0.41	4.75	0.01	0.02
10.51	0.58	0.42	4.75	0.01	0.02	10.52	0.57	0.43	4.74	0.01	0.02
10.53	0.56	0.44	4.74	0.01	0.02	10.54	0.55	0.45	4.73	0.01	0.02
10.55	0.53	0.47	4.72	0.01	0.02	10.56	0.52	0.48	4.72	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
10.57	0.51	0.49	4.71	0.01	0.02	10.58	0.50	0.50	4.71	0.01	0.02
10.59	0.49	0.51	4.71	0.01	0.02	10.60	0.49	0.51	4.70	0.01	0.02
10.61	0.49	0.51	4.70	0.01	0.02	10.62	0.51	0.49	4.69	0.01	0.02
10.63	0.47	0.53	4.68	0.01	0.02	10.64	0.49	0.51	4.68	0.01	0.02
10.65	0.51	0.49	4.67	0.01	0.02	10.66	0.52	0.48	4.67	0.01	0.02
10.67	0.62	0.38	4.67	0.01	0.02	10.68	0.63	0.37	4.66	0.01	0.02
10.69	0.65	0.35	4.66	0.01	0.02	10.70	0.67	0.33	4.65	0.01	0.02
10.71	0.68	0.32	4.64	0.01	0.01	10.72	0.69	0.31	4.64	0.01	0.01
10.73	0.71	0.29	4.63	0.01	0.01	10.74	0.71	0.29	4.63	0.01	0.01
10.75	0.71	0.29	4.63	0.01	0.01	10.76	0.70	0.30	4.62	0.01	0.01
10.77	0.70	0.30	4.62	0.01	0.01	10.78	0.69	0.31	4.61	0.01	0.01
10.79	0.68	0.32	4.61	0.01	0.01	10.80	0.66	0.34	4.60	0.01	0.02
10.81	0.66	0.34	4.59	0.01	0.02	10.82	0.69	0.31	4.59	0.01	0.01
10.83	0.70	0.30	4.58	0.01	0.01						

Overall liquefaction potential: 4.31

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

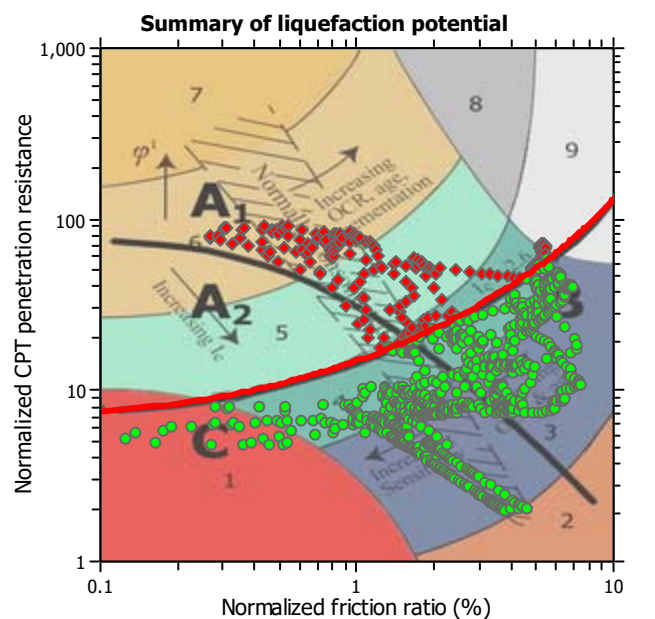
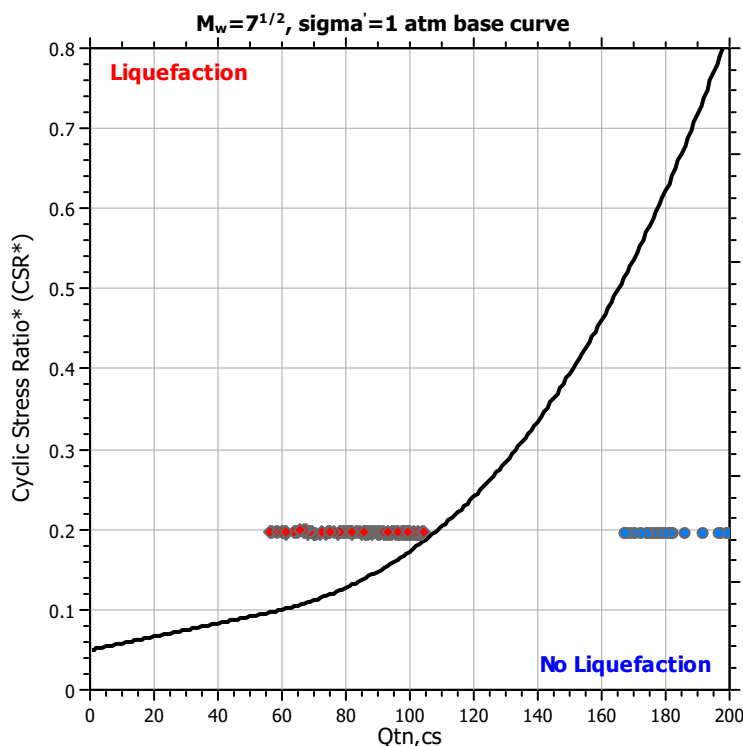
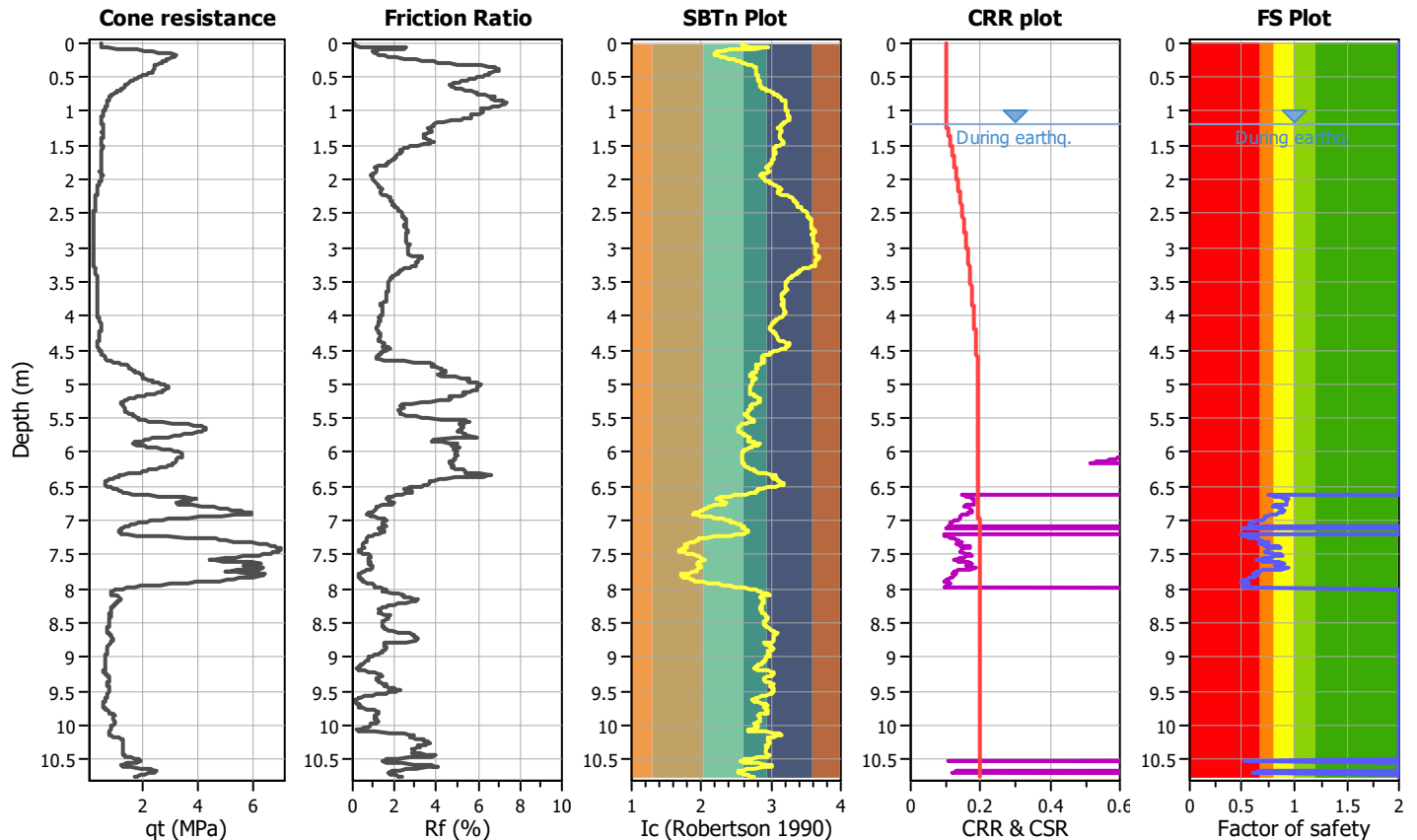
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

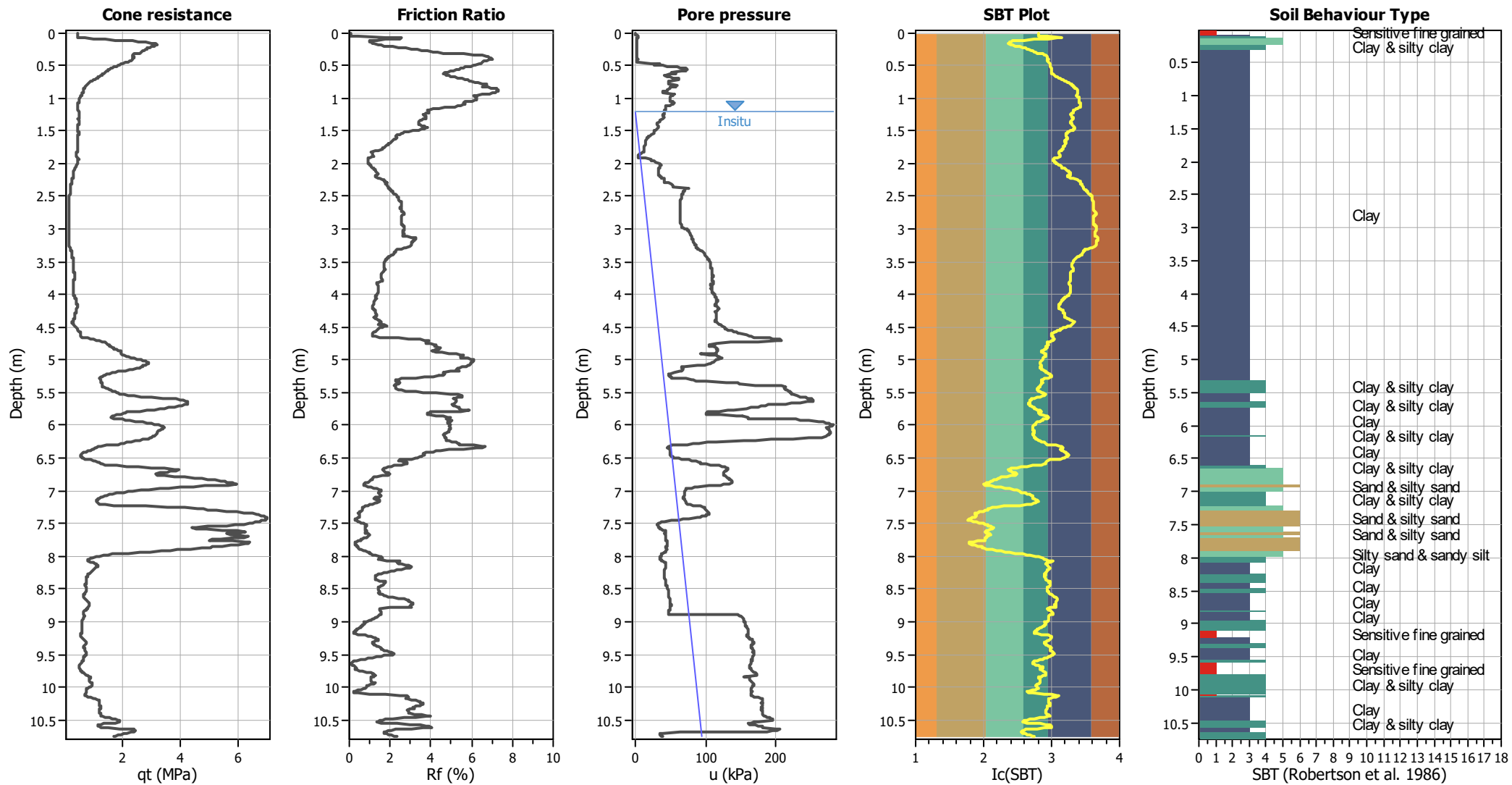
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU6bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

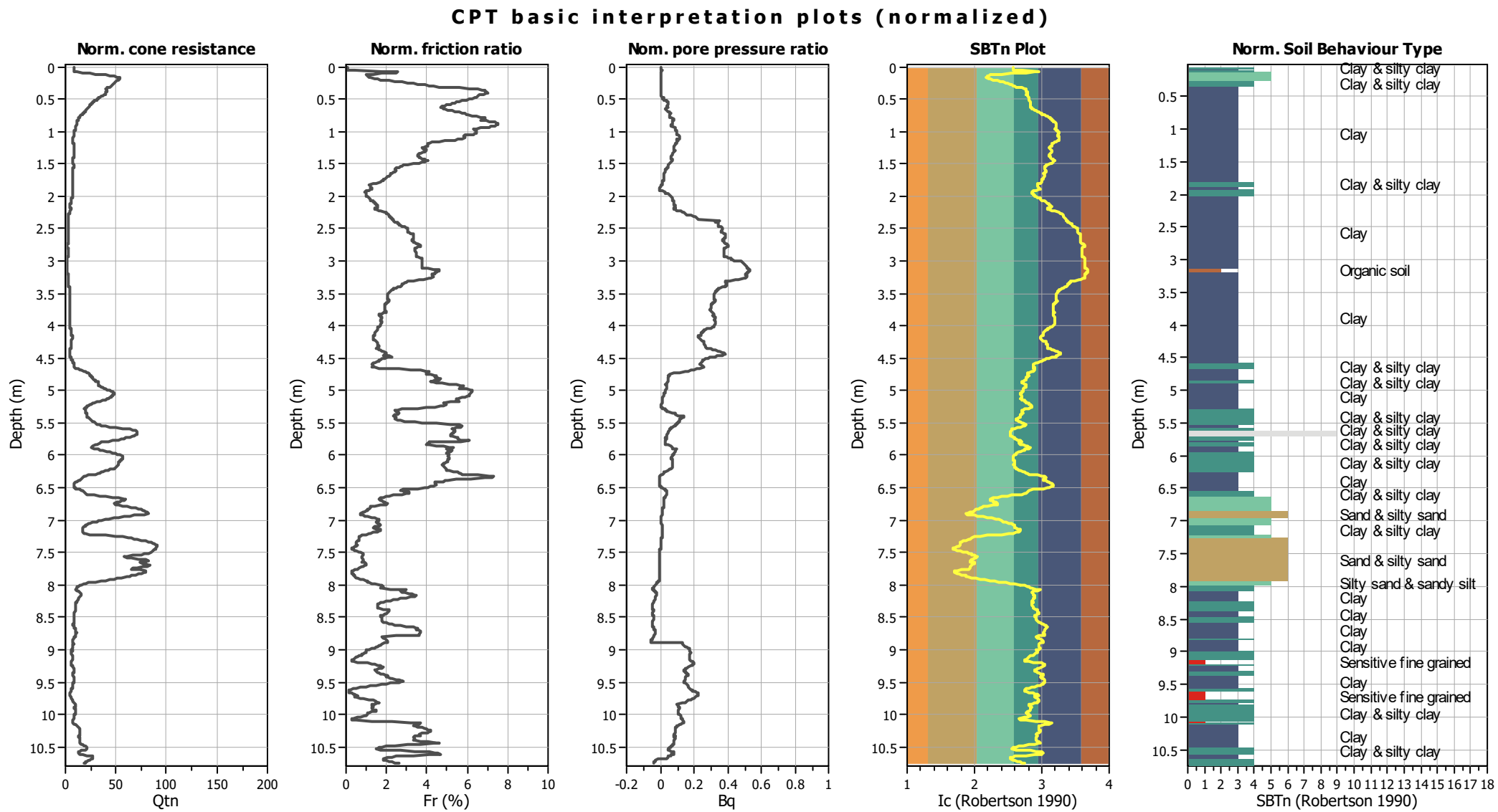
CPT basic interpretation plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend		
1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



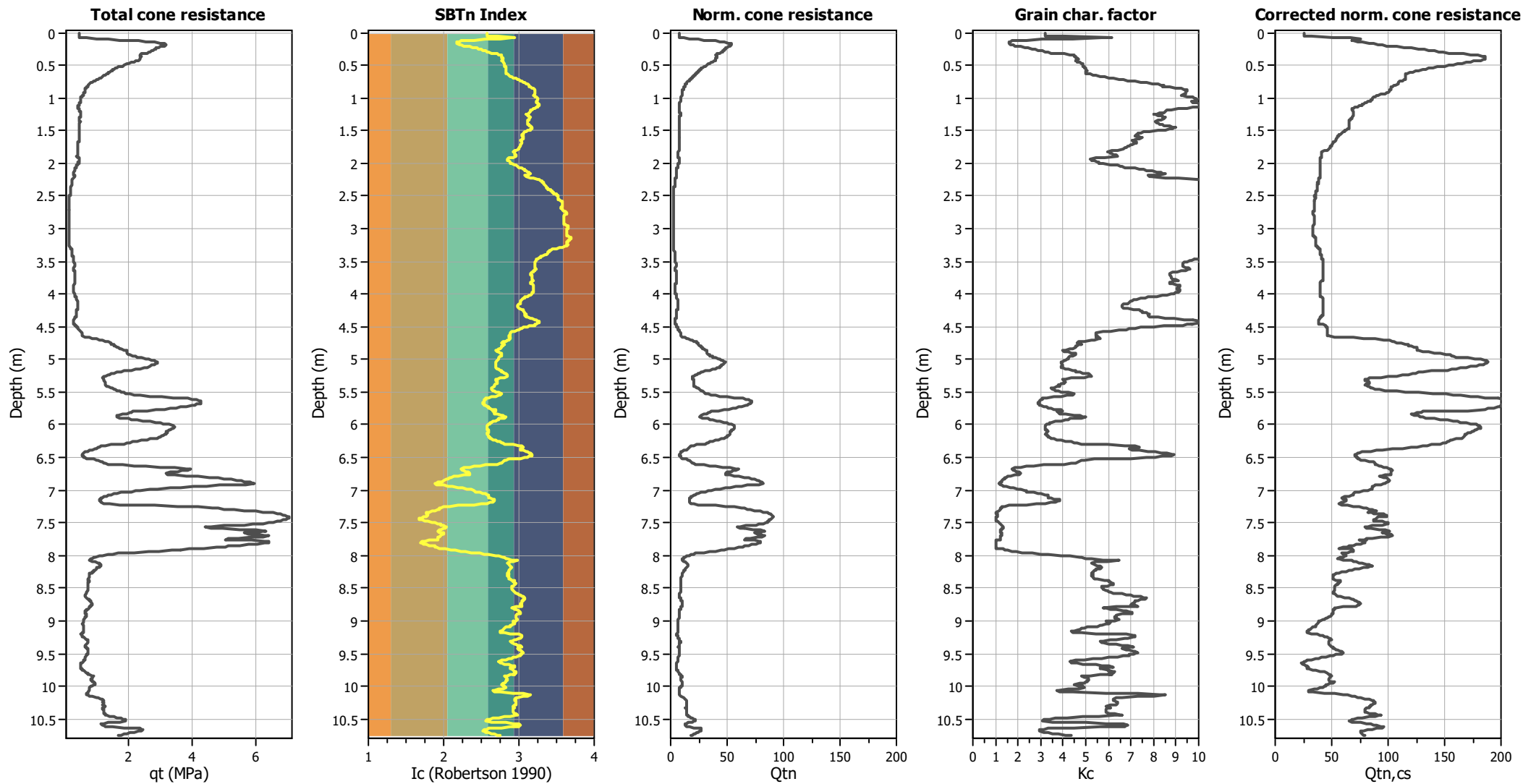
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

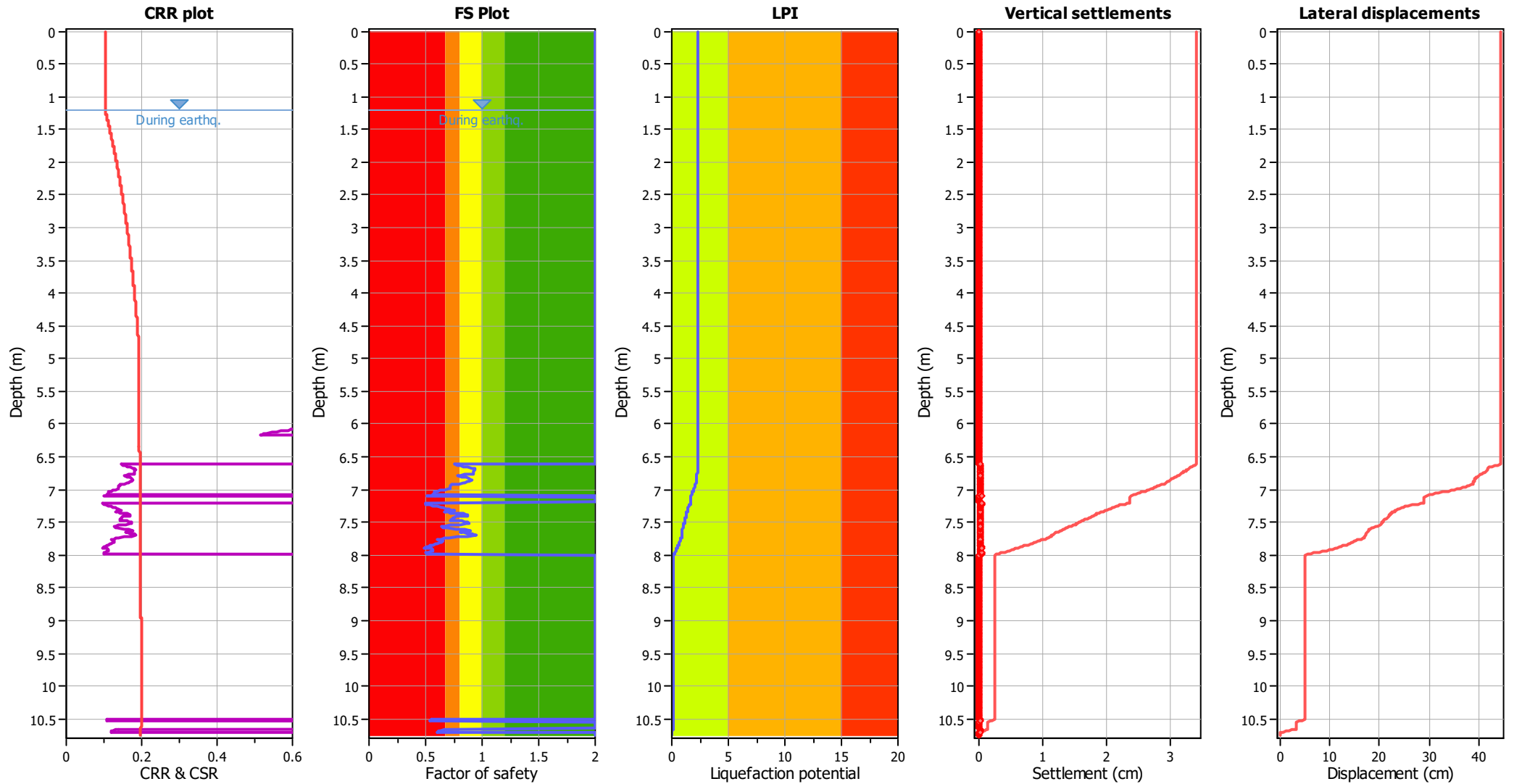
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

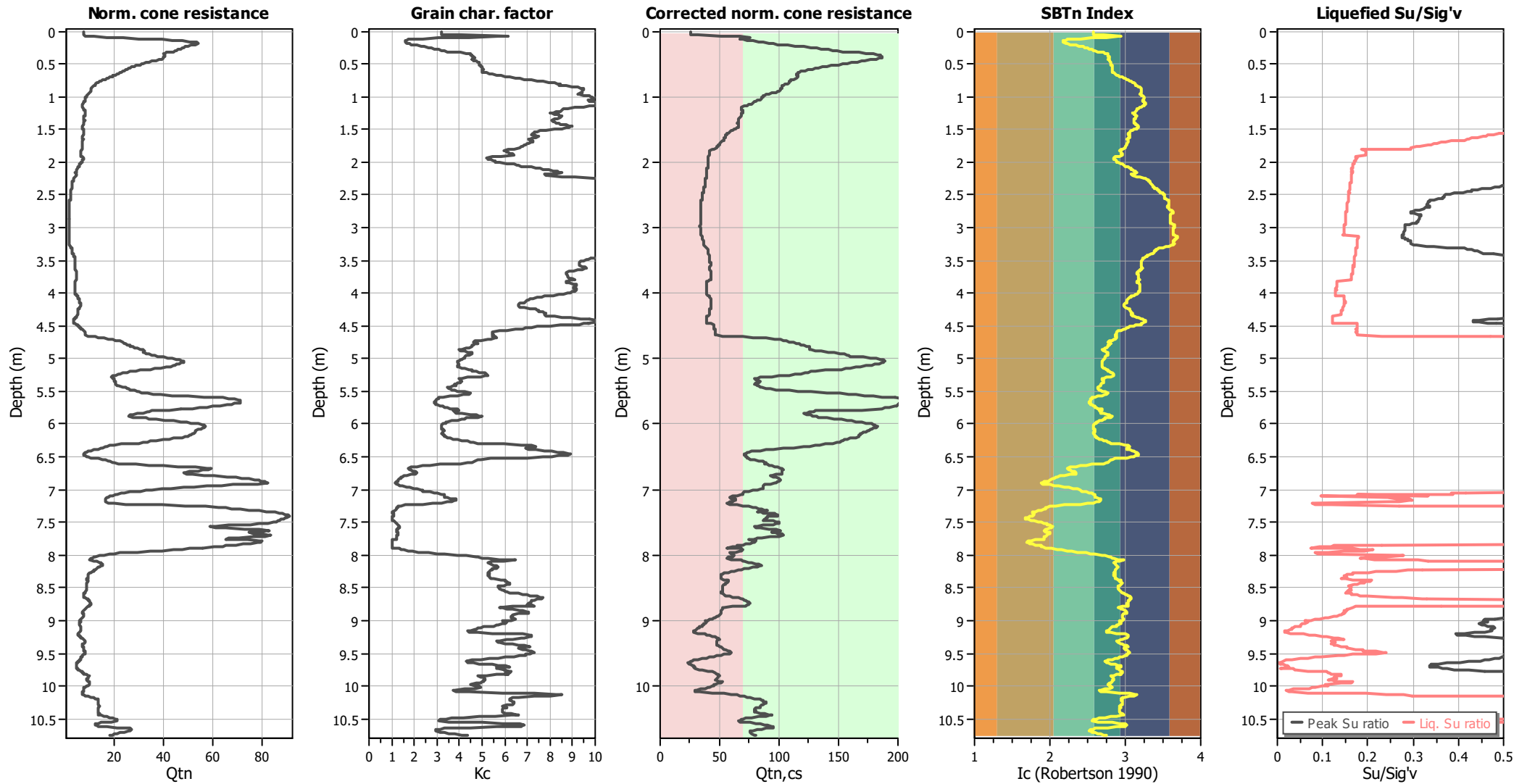
Red	Very high risk
Orange	High risk
Yellow	Low risk

Figure 10 consists of three plots related to soil liquefaction analysis.

- Left Plot:** Normalized CPT penetration resistance (log scale, 1 to 1,000) vs. Normalized friction ratio (%) (log scale, 0.1 to 10). The plot shows various soil behavior zones (1-9) and data points (red diamonds for A1, green circles for A2, and blue circles for C). Arrows indicate trends like "Normal Increasing OCR, age, cementation" and "Increasing ϕ' ".
- Middle Plot:** Cyclic Stress Ratio* (CSR*) (0 to 0.8) vs. $Q_{tn,cs}$ (0 to 200). A black curve separates the "Liquefaction" region (above) from the "No Liquefaction" region (below). Data points are shown as red diamonds (A1) and blue circles (A2 and C).
- Right Plot:** Thickness of liquefiable sand layer, H_2 (m) (0.0 to 12.0) vs. Thickness of surface layer, H_1 (m) (0 to 10). The plot shows regions for "Max. acc. ≤ 200 gal", "Max. acc. ≤ 400 gal", and "Max. acc. $\leq 400-500$ gal". A blue curve represents the "Analysis PGA: 0.22". A red diamond marks the "CPTU6bis (2.35)" data point.

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	2.00	0.00	6.91	0.01	0.00	6.20	2.00	0.00	6.90	0.01	0.00
6.21	2.00	0.00	6.89	0.01	0.00	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	0.76	0.24	6.69	0.01	0.02
6.63	0.78	0.22	6.68	0.01	0.01	6.64	0.81	0.19	6.68	0.01	0.01
6.65	0.84	0.16	6.67	0.01	0.01	6.66	0.87	0.13	6.67	0.01	0.01
6.67	0.90	0.10	6.67	0.01	0.01	6.68	0.93	0.07	6.66	0.01	0.00
6.69	0.94	0.06	6.66	0.01	0.00	6.70	0.93	0.07	6.65	0.01	0.00
6.71	0.92	0.08	6.64	0.01	0.01	6.72	0.92	0.08	6.64	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	0.92	0.08	6.63	0.01	0.01	6.74	0.92	0.08	6.63	0.01	0.00
6.75	0.92	0.08	6.63	0.01	0.01	6.76	0.92	0.08	6.62	0.01	0.01
6.77	0.85	0.15	6.62	0.01	0.01	6.78	0.81	0.19	6.61	0.01	0.01
6.79	0.78	0.22	6.61	0.01	0.01	6.80	0.83	0.17	6.60	0.01	0.01
6.81	0.86	0.14	6.59	0.01	0.01	6.82	0.88	0.12	6.59	0.01	0.01
6.83	0.88	0.12	6.58	0.01	0.01	6.84	0.89	0.11	6.58	0.01	0.01
6.85	0.90	0.10	6.58	0.01	0.01	6.86	0.91	0.09	6.57	0.01	0.01
6.87	0.89	0.11	6.57	0.01	0.01	6.88	0.87	0.13	6.56	0.01	0.01
6.89	0.85	0.15	6.55	0.01	0.01	6.90	0.84	0.16	6.55	0.01	0.01
6.91	0.80	0.20	6.54	0.01	0.01	6.92	0.77	0.23	6.54	0.01	0.02
6.93	0.74	0.26	6.54	0.01	0.02	6.94	0.72	0.28	6.53	0.01	0.02
6.95	0.72	0.28	6.53	0.01	0.02	6.96	0.72	0.28	6.52	0.01	0.02
6.97	0.72	0.28	6.51	0.01	0.02	6.98	0.71	0.29	6.51	0.01	0.02
6.99	0.70	0.30	6.50	0.01	0.02	7.00	0.67	0.33	6.50	0.01	0.02
7.01	0.63	0.37	6.50	0.01	0.02	7.02	0.60	0.40	6.49	0.01	0.03
7.03	0.59	0.41	6.49	0.01	0.03	7.04	0.58	0.42	6.48	0.01	0.03
7.05	0.57	0.43	6.47	0.01	0.03	7.06	0.57	0.43	6.47	0.01	0.03
7.07	0.57	0.43	6.46	0.01	0.03	7.08	0.56	0.44	6.46	0.01	0.03
7.09	2.00	0.00	6.46	0.01	0.00	7.10	0.52	0.48	6.45	0.01	0.03
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	0.50	0.50	6.40	0.01	0.03
7.21	0.49	0.51	6.39	0.01	0.03	7.22	0.50	0.50	6.39	0.01	0.03
7.23	0.52	0.48	6.38	0.01	0.03	7.24	0.53	0.47	6.38	0.01	0.03
7.25	0.57	0.43	6.38	0.01	0.03	7.26	0.60	0.40	6.37	0.01	0.03
7.27	0.64	0.36	6.37	0.01	0.02	7.28	0.66	0.34	6.36	0.01	0.02
7.29	0.68	0.32	6.36	0.01	0.02	7.30	0.71	0.29	6.35	0.01	0.02
7.31	0.73	0.27	6.34	0.01	0.02	7.32	0.75	0.25	6.34	0.01	0.02
7.33	0.67	0.33	6.33	0.01	0.02	7.34	0.69	0.31	6.33	0.01	0.02
7.35	0.70	0.30	6.33	0.01	0.02	7.36	0.72	0.28	6.32	0.01	0.02
7.37	0.83	0.17	6.32	0.01	0.01	7.38	0.85	0.15	6.31	0.01	0.01
7.39	0.87	0.13	6.30	0.01	0.01	7.40	0.87	0.13	6.30	0.01	0.01
7.41	0.76	0.24	6.29	0.01	0.01	7.42	0.75	0.25	6.29	0.01	0.02
7.43	0.74	0.26	6.29	0.01	0.02	7.44	0.74	0.26	6.28	0.01	0.02
7.45	0.73	0.27	6.28	0.01	0.02	7.46	0.73	0.27	6.27	0.01	0.02
7.47	0.72	0.28	6.26	0.01	0.02	7.48	0.81	0.19	6.26	0.01	0.01
7.49	0.84	0.16	6.25	0.01	0.01	7.50	0.88	0.12	6.25	0.01	0.01
7.51	0.88	0.12	6.25	0.01	0.01	7.52	0.86	0.14	6.24	0.01	0.01
7.53	0.81	0.19	6.24	0.01	0.01	7.54	0.77	0.23	6.23	0.01	0.01
7.55	0.71	0.29	6.22	0.01	0.02	7.56	0.67	0.33	6.22	0.01	0.02
7.57	0.65	0.35	6.21	0.01	0.02	7.58	0.66	0.34	6.21	0.01	0.02
7.59	0.69	0.31	6.21	0.01	0.02	7.60	0.77	0.23	6.20	0.01	0.01
7.61	0.85	0.15	6.20	0.01	0.01	7.62	0.90	0.10	6.19	0.01	0.01
7.63	0.87	0.13	6.18	0.01	0.01	7.64	0.83	0.17	6.18	0.01	0.01
7.65	0.81	0.19	6.17	0.01	0.01	7.66	0.83	0.17	6.17	0.01	0.01
7.67	0.87	0.13	6.17	0.01	0.01	7.68	0.91	0.09	6.16	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	0.94	0.06	6.16	0.01	0.00	7.70	0.94	0.06	6.15	0.01	0.00
7.71	0.88	0.12	6.14	0.01	0.01	7.72	0.79	0.21	6.14	0.01	0.01
7.73	0.71	0.29	6.13	0.01	0.02	7.74	0.66	0.34	6.13	0.01	0.02
7.75	0.64	0.36	6.13	0.01	0.02	7.76	0.65	0.35	6.12	0.01	0.02
7.77	0.60	0.40	6.12	0.01	0.02	7.78	0.64	0.36	6.11	0.01	0.02
7.79	0.65	0.35	6.11	0.01	0.02	7.80	0.65	0.35	6.10	0.01	0.02
7.81	0.63	0.37	6.09	0.01	0.02	7.82	0.61	0.39	6.09	0.01	0.02
7.83	0.59	0.41	6.08	0.01	0.03	7.84	0.56	0.44	6.08	0.01	0.03
7.85	0.55	0.45	6.08	0.01	0.03	7.86	0.54	0.46	6.07	0.01	0.03
7.87	0.53	0.47	6.07	0.01	0.03	7.88	0.51	0.49	6.06	0.01	0.03
7.89	0.49	0.51	6.05	0.01	0.03	7.90	0.56	0.44	6.05	0.01	0.03
7.91	0.56	0.44	6.04	0.01	0.03	7.92	0.56	0.44	6.04	0.01	0.03
7.93	0.56	0.44	6.04	0.01	0.03	7.94	0.55	0.45	6.03	0.01	0.03
7.95	0.53	0.47	6.03	0.01	0.03	7.96	0.51	0.49	6.02	0.01	0.03
7.97	0.50	0.50	6.01	0.01	0.03	7.98	0.51	0.49	6.01	0.01	0.03
7.99	0.52	0.48	6.00	0.01	0.03	8.00	2.00	0.00	6.00	0.01	0.00
8.01	2.00	0.00	6.00	0.01	0.00	8.02	2.00	0.00	5.99	0.01	0.00
8.03	2.00	0.00	5.99	0.01	0.00	8.04	2.00	0.00	5.98	0.01	0.00
8.05	2.00	0.00	5.97	0.01	0.00	8.06	2.00	0.00	5.97	0.01	0.00
8.07	2.00	0.00	5.96	0.01	0.00	8.08	2.00	0.00	5.96	0.01	0.00
8.09	2.00	0.00	5.96	0.01	0.00	8.10	2.00	0.00	5.95	0.01	0.00
8.11	2.00	0.00	5.95	0.01	0.00	8.12	2.00	0.00	5.94	0.01	0.00
8.13	2.00	0.00	5.93	0.01	0.00	8.14	2.00	0.00	5.93	0.01	0.00
8.15	2.00	0.00	5.92	0.01	0.00	8.16	2.00	0.00	5.92	0.01	0.00
8.17	2.00	0.00	5.92	0.01	0.00	8.18	2.00	0.00	5.91	0.01	0.00
8.19	2.00	0.00	5.91	0.01	0.00	8.20	2.00	0.00	5.90	0.01	0.00
8.21	2.00	0.00	5.89	0.01	0.00	8.22	2.00	0.00	5.89	0.01	0.00
8.23	2.00	0.00	5.88	0.01	0.00	8.24	2.00	0.00	5.88	0.01	0.00
8.25	2.00	0.00	5.88	0.01	0.00	8.26	2.00	0.00	5.87	0.01	0.00
8.27	2.00	0.00	5.87	0.01	0.00	8.28	2.00	0.00	5.86	0.01	0.00
8.29	2.00	0.00	5.86	0.01	0.00	8.30	2.00	0.00	5.85	0.01	0.00
8.31	2.00	0.00	5.84	0.01	0.00	8.32	2.00	0.00	5.84	0.01	0.00
8.33	2.00	0.00	5.83	0.01	0.00	8.34	2.00	0.00	5.83	0.01	0.00
8.35	2.00	0.00	5.83	0.01	0.00	8.36	2.00	0.00	5.82	0.01	0.00
8.37	2.00	0.00	5.82	0.01	0.00	8.38	2.00	0.00	5.81	0.01	0.00
8.39	2.00	0.00	5.80	0.01	0.00	8.40	2.00	0.00	5.80	0.01	0.00
8.41	2.00	0.00	5.79	0.01	0.00	8.42	2.00	0.00	5.79	0.01	0.00
8.43	2.00	0.00	5.79	0.01	0.00	8.44	2.00	0.00	5.78	0.01	0.00
8.45	2.00	0.00	5.78	0.01	0.00	8.46	2.00	0.00	5.77	0.01	0.00
8.47	2.00	0.00	5.76	0.01	0.00	8.48	2.00	0.00	5.76	0.01	0.00
8.49	2.00	0.00	5.75	0.01	0.00	8.50	2.00	0.00	5.75	0.01	0.00
8.51	2.00	0.00	5.75	0.01	0.00	8.52	2.00	0.00	5.74	0.01	0.00
8.53	2.00	0.00	5.74	0.01	0.00	8.54	2.00	0.00	5.73	0.01	0.00
8.55	2.00	0.00	5.72	0.01	0.00	8.56	2.00	0.00	5.72	0.01	0.00
8.57	2.00	0.00	5.71	0.01	0.00	8.58	2.00	0.00	5.71	0.01	0.00
8.59	2.00	0.00	5.71	0.01	0.00	8.60	2.00	0.00	5.70	0.01	0.00
8.61	2.00	0.00	5.70	0.01	0.00	8.62	2.00	0.00	5.69	0.01	0.00
8.63	2.00	0.00	5.68	0.01	0.00	8.64	2.00	0.00	5.68	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.65	2.00	0.00	5.67	0.01	0.00	8.66	2.00	0.00	5.67	0.01	0.00
8.67	2.00	0.00	5.67	0.01	0.00	8.68	2.00	0.00	5.66	0.01	0.00
8.69	2.00	0.00	5.66	0.01	0.00	8.70	2.00	0.00	5.65	0.01	0.00
8.71	2.00	0.00	5.64	0.01	0.00	8.72	2.00	0.00	5.64	0.01	0.00
8.73	2.00	0.00	5.63	0.01	0.00	8.74	2.00	0.00	5.63	0.01	0.00
8.75	2.00	0.00	5.63	0.01	0.00	8.76	2.00	0.00	5.62	0.01	0.00
8.77	2.00	0.00	5.62	0.01	0.00	8.78	2.00	0.00	5.61	0.01	0.00
8.79	2.00	0.00	5.61	0.01	0.00	8.80	2.00	0.00	5.60	0.01	0.00
8.81	2.00	0.00	5.59	0.01	0.00	8.82	2.00	0.00	5.59	0.01	0.00
8.83	2.00	0.00	5.58	0.01	0.00	8.84	2.00	0.00	5.58	0.01	0.00
8.85	2.00	0.00	5.58	0.01	0.00	8.86	2.00	0.00	5.57	0.01	0.00
8.87	2.00	0.00	5.57	0.01	0.00	8.88	2.00	0.00	5.56	0.01	0.00
8.89	2.00	0.00	5.55	0.01	0.00	8.90	2.00	0.00	5.55	0.01	0.00
8.91	2.00	0.00	5.54	0.01	0.00	8.92	2.00	0.00	5.54	0.01	0.00
8.93	2.00	0.00	5.54	0.01	0.00	8.94	2.00	0.00	5.53	0.01	0.00
8.95	2.00	0.00	5.53	0.01	0.00	8.96	2.00	0.00	5.52	0.01	0.00
8.97	2.00	0.00	5.51	0.01	0.00	8.98	2.00	0.00	5.51	0.01	0.00
8.99	2.00	0.00	5.50	0.01	0.00	9.00	2.00	0.00	5.50	0.01	0.00
9.01	2.00	0.00	5.50	0.01	0.00	9.02	2.00	0.00	5.49	0.01	0.00
9.03	2.00	0.00	5.49	0.01	0.00	9.04	2.00	0.00	5.48	0.01	0.00
9.05	2.00	0.00	5.47	0.01	0.00	9.06	2.00	0.00	5.47	0.01	0.00
9.07	2.00	0.00	5.46	0.01	0.00	9.08	2.00	0.00	5.46	0.01	0.00
9.09	2.00	0.00	5.46	0.01	0.00	9.10	2.00	0.00	5.45	0.01	0.00
9.11	2.00	0.00	5.45	0.01	0.00	9.12	2.00	0.00	5.44	0.01	0.00
9.13	2.00	0.00	5.43	0.01	0.00	9.14	2.00	0.00	5.43	0.01	0.00
9.15	2.00	0.00	5.42	0.01	0.00	9.16	2.00	0.00	5.42	0.01	0.00
9.17	2.00	0.00	5.42	0.01	0.00	9.18	2.00	0.00	5.41	0.01	0.00
9.19	2.00	0.00	5.41	0.01	0.00	9.20	2.00	0.00	5.40	0.01	0.00
9.21	2.00	0.00	5.39	0.01	0.00	9.22	2.00	0.00	5.39	0.01	0.00
9.23	2.00	0.00	5.38	0.01	0.00	9.24	2.00	0.00	5.38	0.01	0.00
9.25	2.00	0.00	5.38	0.01	0.00	9.26	2.00	0.00	5.37	0.01	0.00
9.27	2.00	0.00	5.37	0.01	0.00	9.28	2.00	0.00	5.36	0.01	0.00
9.29	2.00	0.00	5.36	0.01	0.00	9.30	2.00	0.00	5.35	0.01	0.00
9.31	2.00	0.00	5.34	0.01	0.00	9.32	2.00	0.00	5.34	0.01	0.00
9.33	2.00	0.00	5.33	0.01	0.00	9.34	2.00	0.00	5.33	0.01	0.00
9.35	2.00	0.00	5.33	0.01	0.00	9.36	2.00	0.00	5.32	0.01	0.00
9.37	2.00	0.00	5.32	0.01	0.00	9.38	2.00	0.00	5.31	0.01	0.00
9.39	2.00	0.00	5.30	0.01	0.00	9.40	2.00	0.00	5.30	0.01	0.00
9.41	2.00	0.00	5.29	0.01	0.00	9.42	2.00	0.00	5.29	0.01	0.00
9.43	2.00	0.00	5.29	0.01	0.00	9.44	2.00	0.00	5.28	0.01	0.00
9.45	2.00	0.00	5.28	0.01	0.00	9.46	2.00	0.00	5.27	0.01	0.00
9.47	2.00	0.00	5.26	0.01	0.00	9.48	2.00	0.00	5.26	0.01	0.00
9.49	2.00	0.00	5.25	0.01	0.00	9.50	2.00	0.00	5.25	0.01	0.00
9.51	2.00	0.00	5.25	0.01	0.00	9.52	2.00	0.00	5.24	0.01	0.00
9.53	2.00	0.00	5.24	0.01	0.00	9.54	2.00	0.00	5.23	0.01	0.00
9.55	2.00	0.00	5.22	0.01	0.00	9.56	2.00	0.00	5.22	0.01	0.00
9.57	2.00	0.00	5.21	0.01	0.00	9.58	2.00	0.00	5.21	0.01	0.00
9.59	2.00	0.00	5.21	0.01	0.00	9.60	2.00	0.00	5.20	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
9.61	2.00	0.00	5.20	0.01	0.00	9.62	2.00	0.00	5.19	0.01	0.00
9.63	2.00	0.00	5.18	0.01	0.00	9.64	2.00	0.00	5.18	0.01	0.00
9.65	2.00	0.00	5.17	0.01	0.00	9.66	2.00	0.00	5.17	0.01	0.00
9.67	2.00	0.00	5.17	0.01	0.00	9.68	2.00	0.00	5.16	0.01	0.00
9.69	2.00	0.00	5.16	0.01	0.00	9.70	2.00	0.00	5.15	0.01	0.00
9.71	2.00	0.00	5.14	0.01	0.00	9.72	2.00	0.00	5.14	0.01	0.00
9.73	2.00	0.00	5.13	0.01	0.00	9.74	2.00	0.00	5.13	0.01	0.00
9.75	2.00	0.00	5.13	0.01	0.00	9.76	2.00	0.00	5.12	0.01	0.00
9.77	2.00	0.00	5.12	0.01	0.00	9.78	2.00	0.00	5.11	0.01	0.00
9.79	2.00	0.00	5.11	0.01	0.00	9.80	2.00	0.00	5.10	0.01	0.00
9.81	2.00	0.00	5.09	0.01	0.00	9.82	2.00	0.00	5.09	0.01	0.00
9.83	2.00	0.00	5.08	0.01	0.00	9.84	2.00	0.00	5.08	0.01	0.00
9.85	2.00	0.00	5.08	0.01	0.00	9.86	2.00	0.00	5.07	0.01	0.00
9.87	2.00	0.00	5.07	0.01	0.00	9.88	2.00	0.00	5.06	0.01	0.00
9.89	2.00	0.00	5.05	0.01	0.00	9.90	2.00	0.00	5.05	0.01	0.00
9.91	2.00	0.00	5.04	0.01	0.00	9.92	2.00	0.00	5.04	0.01	0.00
9.93	2.00	0.00	5.04	0.01	0.00	9.94	2.00	0.00	5.03	0.01	0.00
9.95	2.00	0.00	5.03	0.01	0.00	9.96	2.00	0.00	5.02	0.01	0.00
9.97	2.00	0.00	5.01	0.01	0.00	9.98	2.00	0.00	5.01	0.01	0.00
9.99	2.00	0.00	5.00	0.01	0.00	10.00	2.00	0.00	5.00	0.01	0.00
10.01	2.00	0.00	5.00	0.01	0.00	10.02	2.00	0.00	4.99	0.01	0.00
10.03	2.00	0.00	4.99	0.01	0.00	10.04	2.00	0.00	4.98	0.01	0.00
10.05	2.00	0.00	4.97	0.01	0.00	10.06	2.00	0.00	4.97	0.01	0.00
10.07	2.00	0.00	4.96	0.01	0.00	10.08	2.00	0.00	4.96	0.01	0.00
10.09	2.00	0.00	4.96	0.01	0.00	10.10	2.00	0.00	4.95	0.01	0.00
10.11	2.00	0.00	4.95	0.01	0.00	10.12	2.00	0.00	4.94	0.01	0.00
10.13	2.00	0.00	4.93	0.01	0.00	10.14	2.00	0.00	4.93	0.01	0.00
10.15	2.00	0.00	4.92	0.01	0.00	10.16	2.00	0.00	4.92	0.01	0.00
10.17	2.00	0.00	4.92	0.01	0.00	10.18	2.00	0.00	4.91	0.01	0.00
10.19	2.00	0.00	4.91	0.01	0.00	10.20	2.00	0.00	4.90	0.01	0.00
10.21	2.00	0.00	4.89	0.01	0.00	10.22	2.00	0.00	4.89	0.01	0.00
10.23	2.00	0.00	4.88	0.01	0.00	10.24	2.00	0.00	4.88	0.01	0.00
10.25	2.00	0.00	4.88	0.01	0.00	10.26	2.00	0.00	4.87	0.01	0.00
10.27	2.00	0.00	4.87	0.01	0.00	10.28	2.00	0.00	4.86	0.01	0.00
10.29	2.00	0.00	4.86	0.01	0.00	10.30	2.00	0.00	4.85	0.01	0.00
10.31	2.00	0.00	4.84	0.01	0.00	10.32	2.00	0.00	4.84	0.01	0.00
10.33	2.00	0.00	4.83	0.01	0.00	10.34	2.00	0.00	4.83	0.01	0.00
10.35	2.00	0.00	4.83	0.01	0.00	10.36	2.00	0.00	4.82	0.01	0.00
10.37	2.00	0.00	4.82	0.01	0.00	10.38	2.00	0.00	4.81	0.01	0.00
10.39	2.00	0.00	4.80	0.01	0.00	10.40	2.00	0.00	4.80	0.01	0.00
10.41	2.00	0.00	4.79	0.01	0.00	10.42	2.00	0.00	4.79	0.01	0.00
10.43	2.00	0.00	4.79	0.01	0.00	10.44	2.00	0.00	4.78	0.01	0.00
10.45	2.00	0.00	4.78	0.01	0.00	10.46	2.00	0.00	4.77	0.01	0.00
10.47	2.00	0.00	4.76	0.01	0.00	10.48	2.00	0.00	4.76	0.01	0.00
10.49	2.00	0.00	4.75	0.01	0.00	10.50	2.00	0.00	4.75	0.01	0.00
10.51	0.55	0.45	4.75	0.01	0.02	10.52	0.54	0.46	4.74	0.01	0.02
10.53	0.54	0.46	4.74	0.01	0.02	10.54	2.00	0.00	4.73	0.01	0.00
10.55	2.00	0.00	4.72	0.01	0.00	10.56	2.00	0.00	4.72	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
10.57	2.00	0.00	4.71	0.01	0.00	10.58	2.00	0.00	4.71	0.01	0.00
10.59	2.00	0.00	4.71	0.01	0.00	10.60	2.00	0.00	4.70	0.01	0.00
10.61	2.00	0.00	4.70	0.01	0.00	10.62	2.00	0.00	4.69	0.01	0.00
10.63	2.00	0.00	4.68	0.01	0.00	10.64	2.00	0.00	4.68	0.01	0.00
10.65	2.00	0.00	4.67	0.01	0.00	10.66	0.70	0.30	4.67	0.01	0.01
10.67	0.66	0.34	4.67	0.01	0.02	10.68	0.63	0.37	4.66	0.01	0.02
10.69	0.61	0.39	4.66	0.01	0.02	10.70	0.60	0.40	4.65	0.01	0.02
10.71	2.00	0.00	4.64	0.01	0.00	10.72	2.00	0.00	4.64	0.01	0.00
10.73	2.00	0.00	4.63	0.01	0.00	10.74	2.00	0.00	4.63	0.01	0.00
10.75	2.00	0.00	4.63	0.01	0.00						

Overall liquefaction potential: 2.35

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

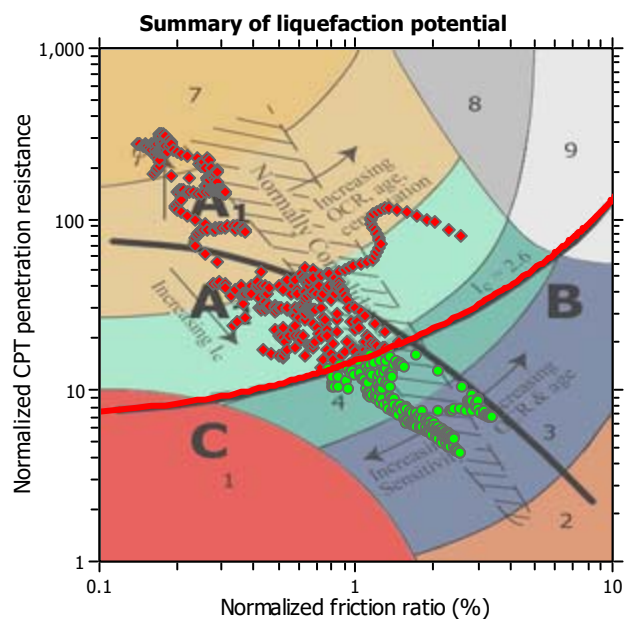
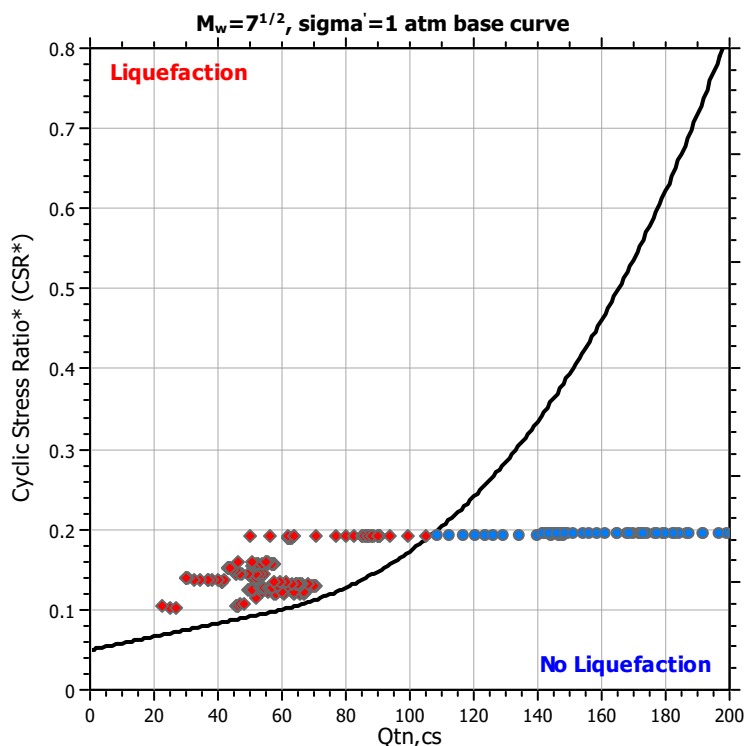
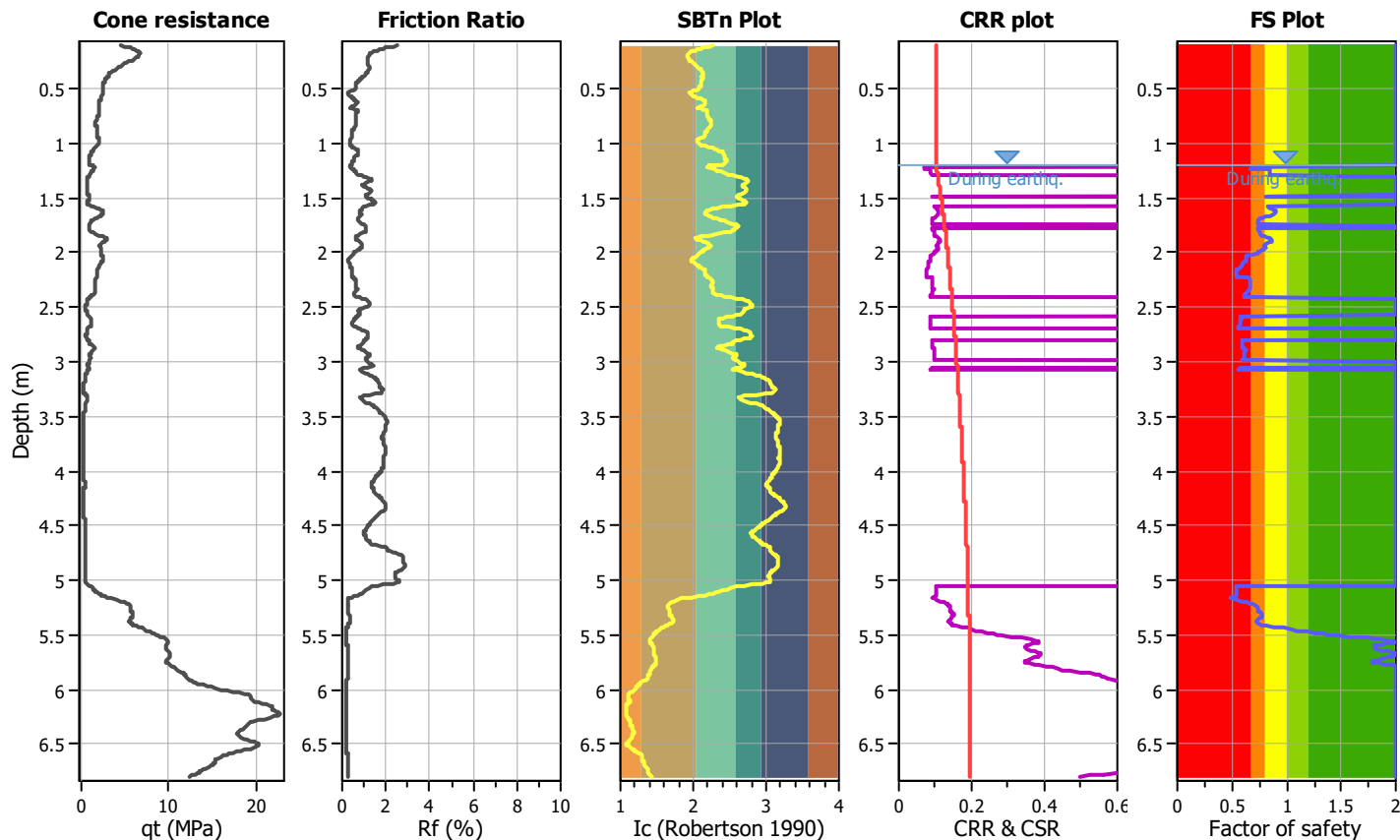
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

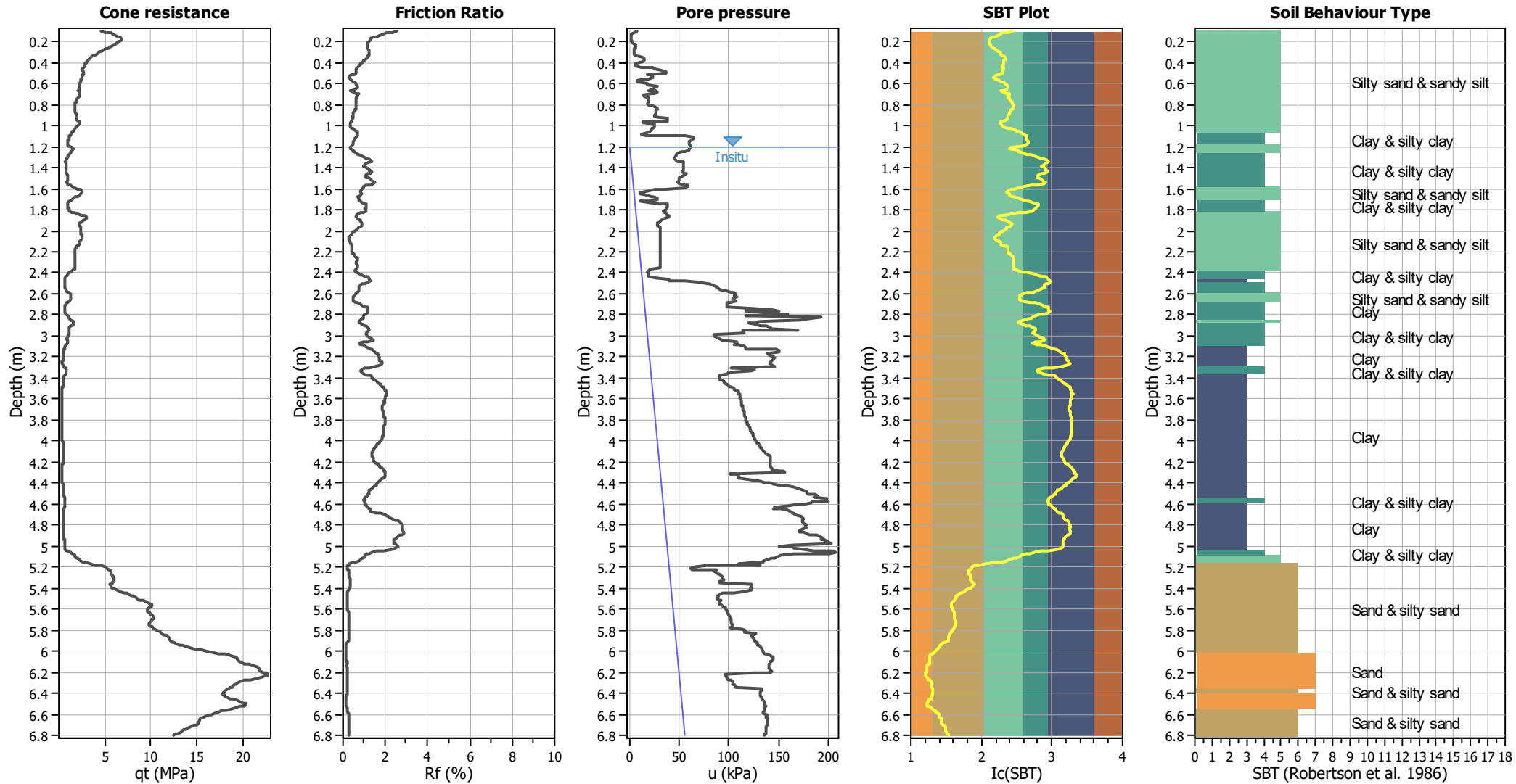
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU7bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
 Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
 Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
 Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

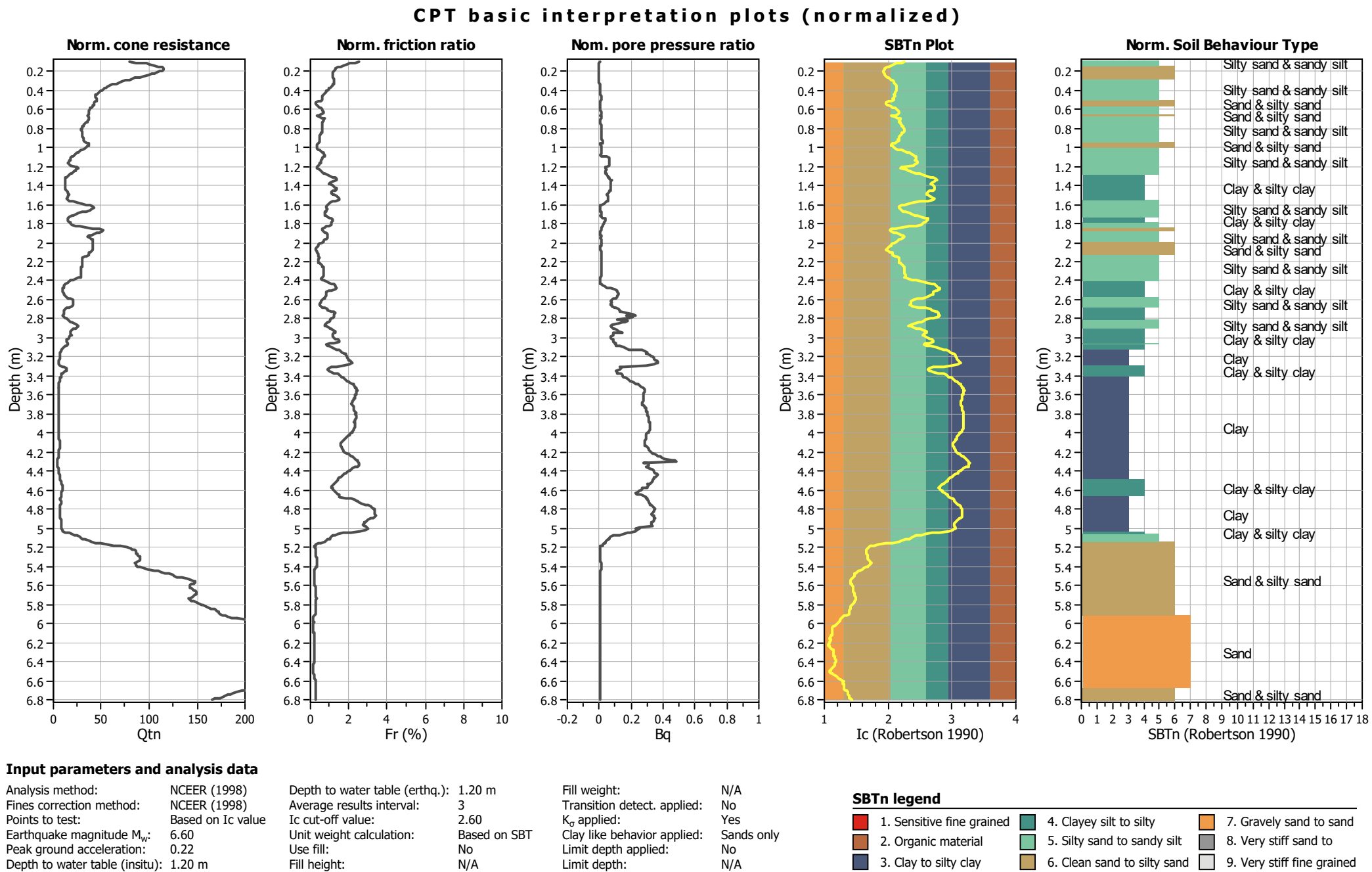


Input parameters and analysis data

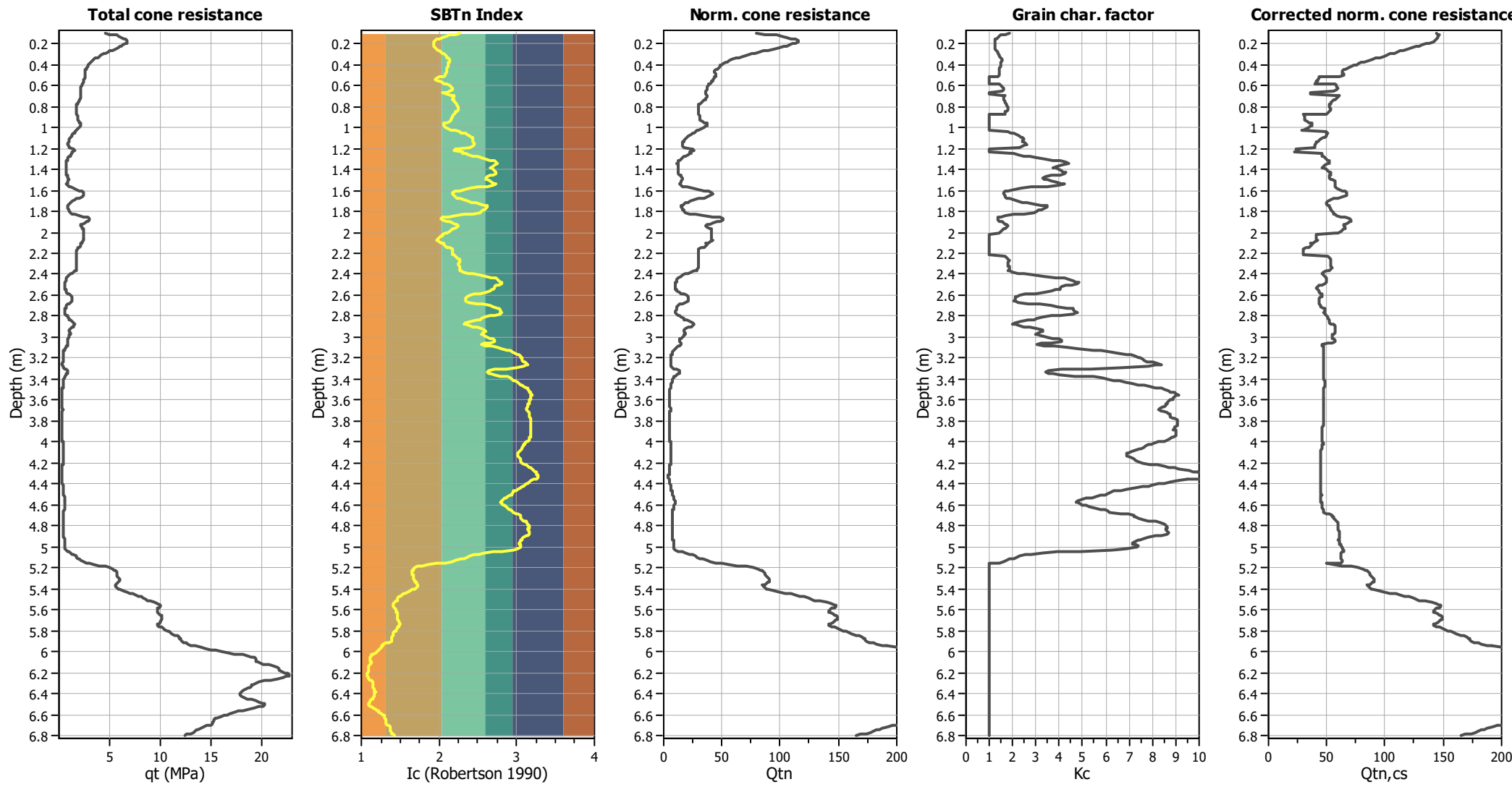
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



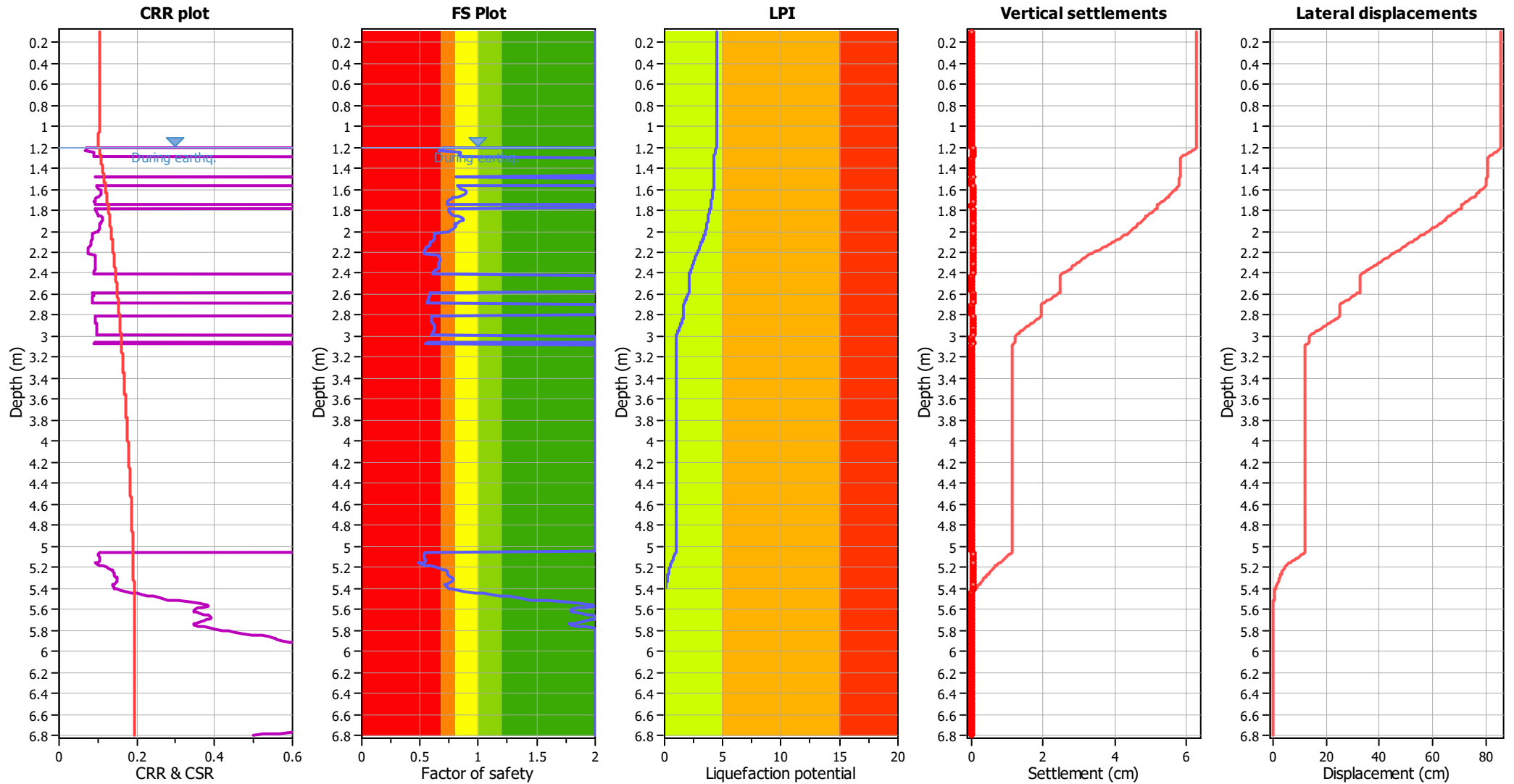
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

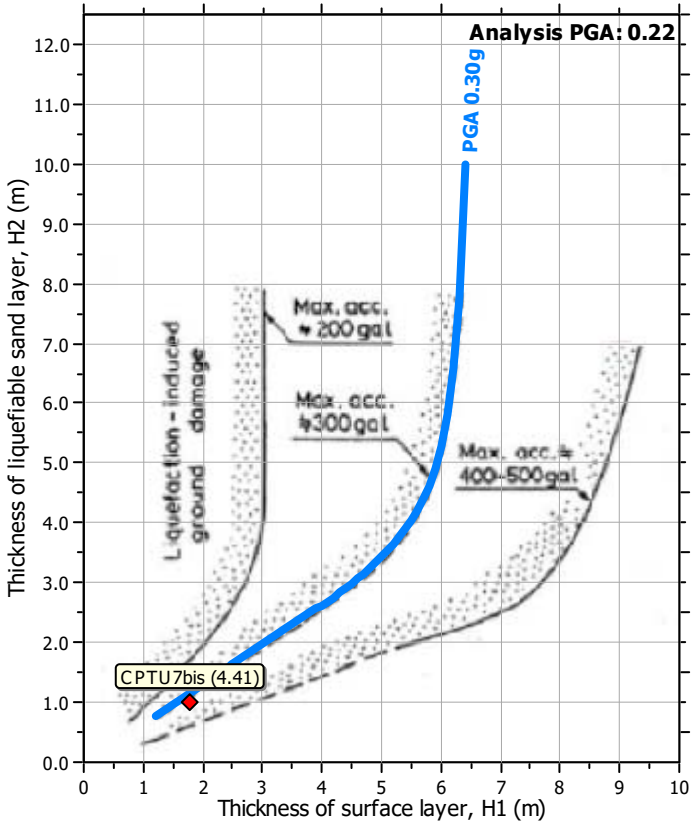
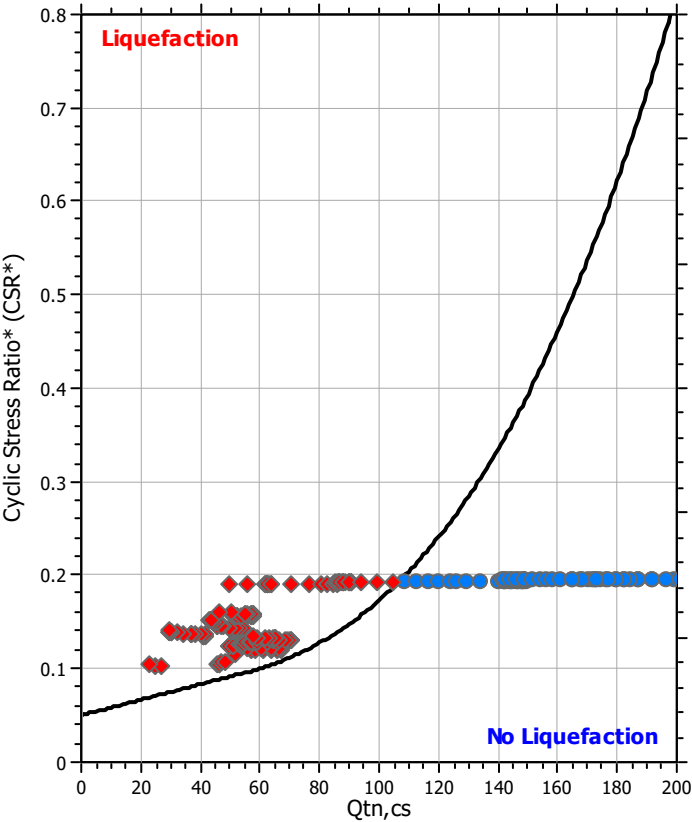
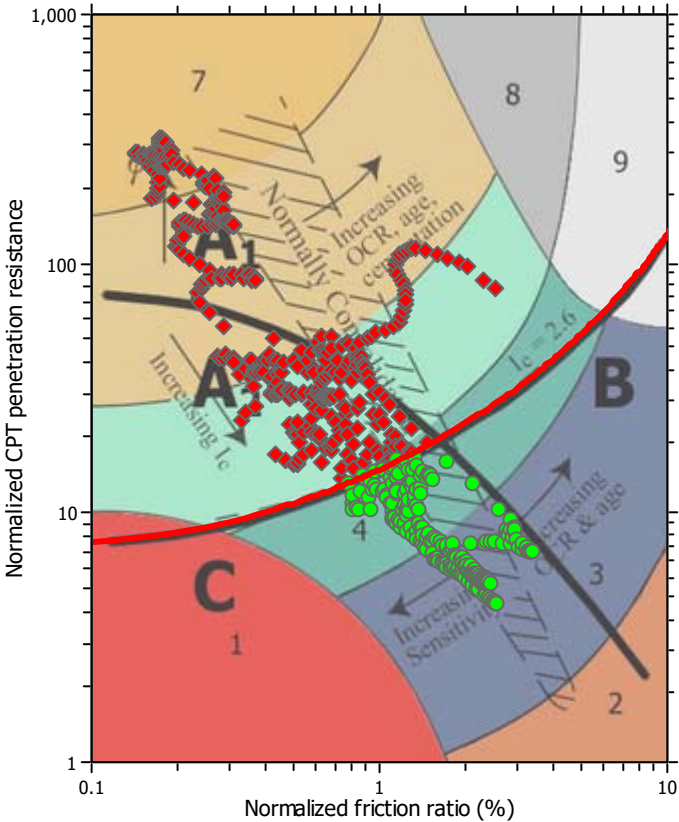
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

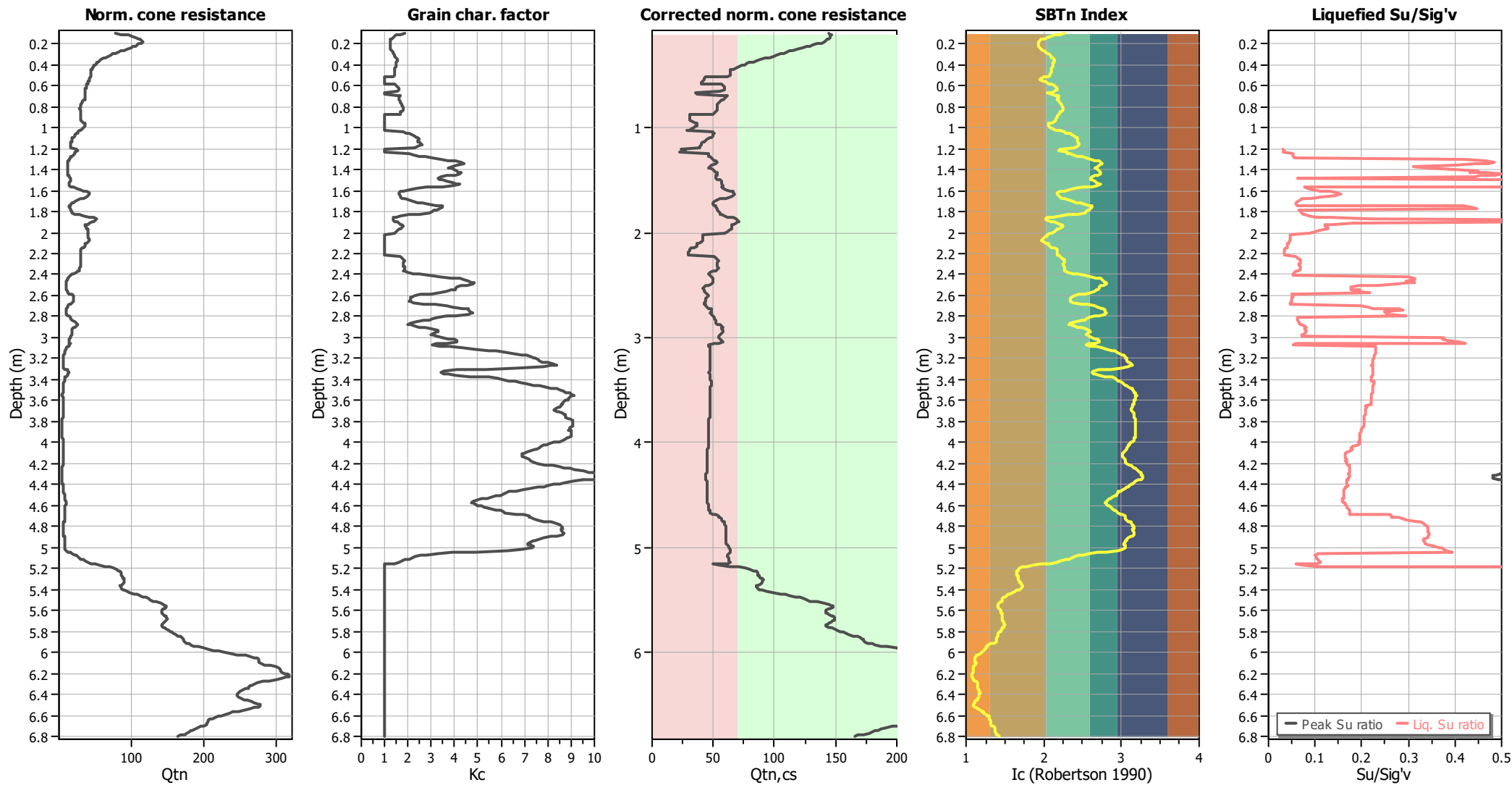
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _G applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.10	2.00	0.00	9.95	0.01	0.00	0.11	2.00	0.00	9.95	0.01	0.00
0.12	2.00	0.00	9.94	0.01	0.00	0.13	2.00	0.00	9.94	0.01	0.00
0.14	2.00	0.00	9.93	0.01	0.00	0.15	2.00	0.00	9.93	0.01	0.00
0.16	2.00	0.00	9.92	0.01	0.00	0.17	2.00	0.00	9.91	0.01	0.00
0.18	2.00	0.00	9.91	0.01	0.00	0.19	2.00	0.00	9.90	0.01	0.00
0.20	2.00	0.00	9.90	0.01	0.00	0.21	2.00	0.00	9.89	0.01	0.00
0.22	2.00	0.00	9.89	0.01	0.00	0.23	2.00	0.00	9.88	0.01	0.00
0.24	2.00	0.00	9.88	0.01	0.00	0.25	2.00	0.00	9.88	0.01	0.00
0.26	2.00	0.00	9.87	0.01	0.00	0.27	2.00	0.00	9.87	0.01	0.00
0.28	2.00	0.00	9.86	0.01	0.00	0.29	2.00	0.00	9.86	0.01	0.00
0.30	2.00	0.00	9.85	0.01	0.00	0.31	2.00	0.00	9.85	0.01	0.00
0.32	2.00	0.00	9.84	0.01	0.00	0.33	2.00	0.00	9.84	0.01	0.00
0.34	2.00	0.00	9.83	0.01	0.00	0.35	2.00	0.00	9.82	0.01	0.00
0.36	2.00	0.00	9.82	0.01	0.00	0.37	2.00	0.00	9.81	0.01	0.00
0.38	2.00	0.00	9.81	0.01	0.00	0.39	2.00	0.00	9.80	0.01	0.00
0.40	2.00	0.00	9.80	0.01	0.00	0.41	2.00	0.00	9.79	0.01	0.00
0.42	2.00	0.00	9.79	0.01	0.00	0.43	2.00	0.00	9.79	0.01	0.00
0.44	2.00	0.00	9.78	0.01	0.00	0.45	2.00	0.00	9.78	0.01	0.00
0.46	2.00	0.00	9.77	0.01	0.00	0.47	2.00	0.00	9.77	0.01	0.00
0.48	2.00	0.00	9.76	0.01	0.00	0.49	2.00	0.00	9.76	0.01	0.00
0.50	2.00	0.00	9.75	0.01	0.00	0.51	2.00	0.00	9.74	0.01	0.00
0.52	2.00	0.00	9.74	0.01	0.00	0.53	2.00	0.00	9.73	0.01	0.00
0.54	2.00	0.00	9.73	0.01	0.00	0.55	2.00	0.00	9.72	0.01	0.00
0.56	2.00	0.00	9.72	0.01	0.00	0.57	2.00	0.00	9.71	0.01	0.00
0.58	2.00	0.00	9.71	0.01	0.00	0.59	2.00	0.00	9.71	0.01	0.00
0.60	2.00	0.00	9.70	0.01	0.00	0.61	2.00	0.00	9.70	0.01	0.00
0.62	2.00	0.00	9.69	0.01	0.00	0.63	2.00	0.00	9.69	0.01	0.00
0.64	2.00	0.00	9.68	0.01	0.00	0.65	2.00	0.00	9.68	0.01	0.00
0.66	2.00	0.00	9.67	0.01	0.00	0.67	2.00	0.00	9.66	0.01	0.00
0.68	2.00	0.00	9.66	0.01	0.00	0.69	2.00	0.00	9.65	0.01	0.00
0.70	2.00	0.00	9.65	0.01	0.00	0.71	2.00	0.00	9.64	0.01	0.00
0.72	2.00	0.00	9.64	0.01	0.00	0.73	2.00	0.00	9.63	0.01	0.00
0.74	2.00	0.00	9.63	0.01	0.00	0.75	2.00	0.00	9.63	0.01	0.00
0.76	2.00	0.00	9.62	0.01	0.00	0.77	2.00	0.00	9.62	0.01	0.00
0.78	2.00	0.00	9.61	0.01	0.00	0.79	2.00	0.00	9.61	0.01	0.00
0.80	2.00	0.00	9.60	0.01	0.00	0.81	2.00	0.00	9.60	0.01	0.00
0.82	2.00	0.00	9.59	0.01	0.00	0.83	2.00	0.00	9.59	0.01	0.00
0.84	2.00	0.00	9.58	0.01	0.00	0.85	2.00	0.00	9.57	0.01	0.00
0.86	2.00	0.00	9.57	0.01	0.00	0.87	2.00	0.00	9.56	0.01	0.00
0.88	2.00	0.00	9.56	0.01	0.00	0.89	2.00	0.00	9.55	0.01	0.00
0.90	2.00	0.00	9.55	0.01	0.00	0.91	2.00	0.00	9.54	0.01	0.00
0.92	2.00	0.00	9.54	0.01	0.00	0.93	2.00	0.00	9.54	0.01	0.00
0.94	2.00	0.00	9.53	0.01	0.00	0.95	2.00	0.00	9.53	0.01	0.00
0.96	2.00	0.00	9.52	0.01	0.00	0.97	2.00	0.00	9.52	0.01	0.00
0.98	2.00	0.00	9.51	0.01	0.00	0.99	2.00	0.00	9.51	0.01	0.00
1.00	2.00	0.00	9.50	0.01	0.00	1.01	2.00	0.00	9.49	0.01	0.00
1.02	2.00	0.00	9.49	0.01	0.00	1.03	2.00	0.00	9.48	0.01	0.00
1.04	2.00	0.00	9.48	0.01	0.00	1.05	2.00	0.00	9.47	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.06	2.00	0.00	9.47	0.01	0.00	1.07	2.00	0.00	9.46	0.01	0.00
1.08	2.00	0.00	9.46	0.01	0.00	1.09	2.00	0.00	9.46	0.01	0.00
1.10	2.00	0.00	9.45	0.01	0.00	1.11	2.00	0.00	9.45	0.01	0.00
1.12	2.00	0.00	9.44	0.01	0.00	1.13	2.00	0.00	9.44	0.01	0.00
1.14	2.00	0.00	9.43	0.01	0.00	1.15	2.00	0.00	9.43	0.01	0.00
1.16	2.00	0.00	9.42	0.01	0.00	1.17	2.00	0.00	9.41	0.01	0.00
1.18	2.00	0.00	9.41	0.01	0.00	1.19	2.00	0.00	9.40	0.01	0.00
1.20	2.00	0.00	9.40	0.01	0.00	1.21	0.69	0.31	9.39	0.01	0.03
1.22	0.70	0.30	9.39	0.01	0.03	1.23	0.66	0.34	9.38	0.01	0.03
1.24	0.84	0.16	9.38	0.01	0.01	1.25	0.84	0.16	9.38	0.01	0.01
1.26	0.84	0.16	9.37	0.01	0.01	1.27	0.84	0.16	9.37	0.01	0.02
1.28	0.84	0.16	9.36	0.01	0.01	1.29	0.85	0.15	9.36	0.01	0.01
1.30	2.00	0.00	9.35	0.01	0.00	1.31	2.00	0.00	9.35	0.01	0.00
1.32	2.00	0.00	9.34	0.01	0.00	1.33	2.00	0.00	9.34	0.01	0.00
1.34	2.00	0.00	9.33	0.01	0.00	1.35	2.00	0.00	9.32	0.01	0.00
1.36	2.00	0.00	9.32	0.01	0.00	1.37	2.00	0.00	9.31	0.01	0.00
1.38	2.00	0.00	9.31	0.01	0.00	1.39	2.00	0.00	9.30	0.01	0.00
1.40	2.00	0.00	9.30	0.01	0.00	1.41	2.00	0.00	9.29	0.01	0.00
1.42	2.00	0.00	9.29	0.01	0.00	1.43	2.00	0.00	9.29	0.01	0.00
1.44	2.00	0.00	9.28	0.01	0.00	1.45	2.00	0.00	9.28	0.01	0.00
1.46	2.00	0.00	9.27	0.01	0.00	1.47	2.00	0.00	9.27	0.01	0.00
1.48	0.81	0.19	9.26	0.01	0.02	1.49	2.00	0.00	9.26	0.01	0.00
1.50	2.00	0.00	9.25	0.01	0.00	1.51	2.00	0.00	9.24	0.01	0.00
1.52	2.00	0.00	9.24	0.01	0.00	1.53	2.00	0.00	9.23	0.01	0.00
1.54	2.00	0.00	9.23	0.01	0.00	1.55	2.00	0.00	9.22	0.01	0.00
1.56	2.00	0.00	9.22	0.01	0.00	1.57	0.82	0.18	9.21	0.01	0.02
1.58	0.83	0.17	9.21	0.01	0.02	1.59	0.85	0.15	9.21	0.01	0.01
1.60	0.87	0.13	9.20	0.01	0.01	1.61	0.88	0.12	9.20	0.01	0.01
1.62	0.89	0.11	9.19	0.01	0.01	1.63	0.90	0.10	9.19	0.01	0.01
1.64	0.89	0.11	9.18	0.01	0.01	1.65	0.88	0.12	9.18	0.01	0.01
1.66	0.85	0.15	9.17	0.01	0.01	1.67	0.82	0.18	9.16	0.01	0.02
1.68	0.78	0.22	9.16	0.01	0.02	1.69	0.76	0.24	9.15	0.01	0.02
1.70	0.75	0.25	9.15	0.01	0.02	1.71	0.74	0.26	9.14	0.01	0.02
1.72	0.73	0.27	9.14	0.01	0.02	1.73	0.73	0.27	9.13	0.01	0.02
1.74	0.74	0.26	9.13	0.01	0.02	1.75	2.00	0.00	9.13	0.01	0.00
1.76	2.00	0.00	9.12	0.01	0.00	1.77	2.00	0.00	9.12	0.01	0.00
1.78	0.74	0.26	9.11	0.01	0.02	1.79	0.74	0.26	9.11	0.01	0.02
1.80	0.75	0.25	9.10	0.01	0.02	1.81	0.75	0.25	9.10	0.01	0.02
1.82	0.75	0.25	9.09	0.01	0.02	1.83	0.76	0.24	9.09	0.01	0.02
1.84	0.77	0.23	9.08	0.01	0.02	1.85	0.79	0.21	9.07	0.01	0.02
1.86	0.83	0.17	9.07	0.01	0.02	1.87	0.85	0.15	9.06	0.01	0.01
1.88	0.86	0.14	9.06	0.01	0.01	1.89	0.87	0.13	9.05	0.01	0.01
1.90	0.86	0.14	9.05	0.01	0.01	1.91	0.84	0.16	9.04	0.01	0.01
1.92	0.81	0.19	9.04	0.01	0.02	1.93	0.80	0.20	9.04	0.01	0.02
1.94	0.80	0.20	9.03	0.01	0.02	1.95	0.80	0.20	9.03	0.01	0.02
1.96	0.80	0.20	9.02	0.01	0.02	1.97	0.79	0.21	9.02	0.01	0.02
1.98	0.78	0.22	9.01	0.01	0.02	1.99	0.76	0.24	9.01	0.01	0.02
2.00	0.74	0.26	9.00	0.01	0.02	2.01	0.73	0.27	8.99	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.02	0.63	0.37	8.99	0.01	0.03	2.03	0.63	0.37	8.98	0.01	0.03
2.04	0.63	0.37	8.98	0.01	0.03	2.05	0.62	0.38	8.97	0.01	0.03
2.06	0.62	0.38	8.97	0.01	0.03	2.07	0.62	0.38	8.96	0.01	0.03
2.08	0.62	0.38	8.96	0.01	0.03	2.09	0.61	0.39	8.96	0.01	0.03
2.10	0.60	0.40	8.95	0.01	0.04	2.11	0.59	0.41	8.95	0.01	0.04
2.12	0.59	0.41	8.94	0.01	0.04	2.13	0.59	0.41	8.94	0.01	0.04
2.14	0.57	0.43	8.93	0.01	0.04	2.15	0.56	0.44	8.93	0.01	0.04
2.16	0.54	0.46	8.92	0.01	0.04	2.17	0.54	0.46	8.91	0.01	0.04
2.18	0.54	0.46	8.91	0.01	0.04	2.19	0.54	0.46	8.90	0.01	0.04
2.20	0.54	0.46	8.90	0.01	0.04	2.21	0.53	0.47	8.89	0.01	0.04
2.22	0.53	0.47	8.89	0.01	0.04	2.23	0.65	0.35	8.88	0.01	0.03
2.24	0.66	0.34	8.88	0.01	0.03	2.25	0.67	0.33	8.88	0.01	0.03
2.26	0.67	0.33	8.87	0.01	0.03	2.27	0.67	0.33	8.87	0.01	0.03
2.28	0.67	0.33	8.86	0.01	0.03	2.29	0.66	0.34	8.86	0.01	0.03
2.30	0.66	0.34	8.85	0.01	0.03	2.31	0.66	0.34	8.85	0.01	0.03
2.32	0.66	0.34	8.84	0.01	0.03	2.33	0.66	0.34	8.84	0.01	0.03
2.34	0.66	0.34	8.83	0.01	0.03	2.35	0.65	0.35	8.82	0.01	0.03
2.36	0.65	0.35	8.82	0.01	0.03	2.37	0.63	0.37	8.81	0.01	0.03
2.38	0.62	0.38	8.81	0.01	0.03	2.39	0.61	0.39	8.80	0.01	0.03
2.40	0.61	0.39	8.80	0.01	0.03	2.41	0.61	0.39	8.79	0.01	0.03
2.42	2.00	0.00	8.79	0.01	0.00	2.43	2.00	0.00	8.79	0.01	0.00
2.44	2.00	0.00	8.78	0.01	0.00	2.45	2.00	0.00	8.78	0.01	0.00
2.46	2.00	0.00	8.77	0.01	0.00	2.47	2.00	0.00	8.77	0.01	0.00
2.48	2.00	0.00	8.76	0.01	0.00	2.49	2.00	0.00	8.76	0.01	0.00
2.50	2.00	0.00	8.75	0.01	0.00	2.51	2.00	0.00	8.74	0.01	0.00
2.52	2.00	0.00	8.74	0.01	0.00	2.53	2.00	0.00	8.73	0.01	0.00
2.54	2.00	0.00	8.73	0.01	0.00	2.55	2.00	0.00	8.72	0.01	0.00
2.56	2.00	0.00	8.72	0.01	0.00	2.57	2.00	0.00	8.71	0.01	0.00
2.58	0.58	0.42	8.71	0.01	0.04	2.59	0.59	0.41	8.71	0.01	0.04
2.60	0.59	0.41	8.70	0.01	0.04	2.61	0.58	0.42	8.70	0.01	0.04
2.62	0.58	0.42	8.69	0.01	0.04	2.63	0.57	0.43	8.69	0.01	0.04
2.64	0.57	0.43	8.68	0.01	0.04	2.65	0.57	0.43	8.68	0.01	0.04
2.66	0.57	0.43	8.67	0.01	0.04	2.67	0.56	0.44	8.66	0.01	0.04
2.68	0.57	0.43	8.66	0.01	0.04	2.69	0.57	0.43	8.65	0.01	0.04
2.70	2.00	0.00	8.65	0.01	0.00	2.71	2.00	0.00	8.64	0.01	0.00
2.72	2.00	0.00	8.64	0.01	0.00	2.73	2.00	0.00	8.63	0.01	0.00
2.74	2.00	0.00	8.63	0.01	0.00	2.75	2.00	0.00	8.63	0.01	0.00
2.76	2.00	0.00	8.62	0.01	0.00	2.77	2.00	0.00	8.62	0.01	0.00
2.78	2.00	0.00	8.61	0.01	0.00	2.79	2.00	0.00	8.61	0.01	0.00
2.80	2.00	0.00	8.60	0.01	0.00	2.81	0.59	0.41	8.60	0.01	0.03
2.82	0.60	0.40	8.59	0.01	0.03	2.83	0.60	0.40	8.59	0.01	0.03
2.84	0.60	0.40	8.58	0.01	0.03	2.85	0.60	0.40	8.57	0.01	0.03
2.86	0.60	0.40	8.57	0.01	0.03	2.87	0.60	0.40	8.56	0.01	0.03
2.88	0.61	0.39	8.56	0.01	0.03	2.89	0.62	0.38	8.55	0.01	0.03
2.90	0.62	0.38	8.55	0.01	0.03	2.91	0.62	0.38	8.54	0.01	0.03
2.92	0.62	0.38	8.54	0.01	0.03	2.93	0.62	0.38	8.54	0.01	0.03
2.94	0.62	0.38	8.53	0.01	0.03	2.95	0.62	0.38	8.53	0.01	0.03
2.96	0.61	0.39	8.52	0.01	0.03	2.97	0.61	0.39	8.52	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.98	0.60	0.40	8.51	0.01	0.03	2.99	0.60	0.40	8.51	0.01	0.03
3.00	2.00	0.00	8.50	0.01	0.00	3.01	2.00	0.00	8.49	0.01	0.00
3.02	2.00	0.00	8.49	0.01	0.00	3.03	2.00	0.00	8.48	0.01	0.00
3.04	2.00	0.00	8.48	0.01	0.00	3.05	2.00	0.00	8.47	0.01	0.00
3.06	0.57	0.43	8.47	0.01	0.04	3.07	0.55	0.45	8.46	0.01	0.04
3.08	2.00	0.00	8.46	0.01	0.00	3.09	2.00	0.00	8.46	0.01	0.00
3.10	2.00	0.00	8.45	0.01	0.00	3.11	2.00	0.00	8.45	0.01	0.00
3.12	2.00	0.00	8.44	0.01	0.00	3.13	2.00	0.00	8.44	0.01	0.00
3.14	2.00	0.00	8.43	0.01	0.00	3.15	2.00	0.00	8.43	0.01	0.00
3.16	2.00	0.00	8.42	0.01	0.00	3.17	2.00	0.00	8.41	0.01	0.00
3.18	2.00	0.00	8.41	0.01	0.00	3.19	2.00	0.00	8.40	0.01	0.00
3.20	2.00	0.00	8.40	0.01	0.00	3.21	2.00	0.00	8.39	0.01	0.00
3.22	2.00	0.00	8.39	0.01	0.00	3.23	2.00	0.00	8.38	0.01	0.00
3.24	2.00	0.00	8.38	0.01	0.00	3.25	2.00	0.00	8.38	0.01	0.00
3.26	2.00	0.00	8.37	0.01	0.00	3.27	2.00	0.00	8.37	0.01	0.00
3.28	2.00	0.00	8.36	0.01	0.00	3.29	2.00	0.00	8.36	0.01	0.00
3.30	2.00	0.00	8.35	0.01	0.00	3.31	2.00	0.00	8.35	0.01	0.00
3.32	2.00	0.00	8.34	0.01	0.00	3.33	2.00	0.00	8.34	0.01	0.00
3.34	2.00	0.00	8.33	0.01	0.00	3.35	2.00	0.00	8.32	0.01	0.00
3.36	2.00	0.00	8.32	0.01	0.00	3.37	2.00	0.00	8.31	0.01	0.00
3.38	2.00	0.00	8.31	0.01	0.00	3.39	2.00	0.00	8.30	0.01	0.00
3.40	2.00	0.00	8.30	0.01	0.00	3.41	2.00	0.00	8.29	0.01	0.00
3.42	2.00	0.00	8.29	0.01	0.00	3.43	2.00	0.00	8.29	0.01	0.00
3.44	2.00	0.00	8.28	0.01	0.00	3.45	2.00	0.00	8.28	0.01	0.00
3.46	2.00	0.00	8.27	0.01	0.00	3.47	2.00	0.00	8.27	0.01	0.00
3.48	2.00	0.00	8.26	0.01	0.00	3.49	2.00	0.00	8.26	0.01	0.00
3.50	2.00	0.00	8.25	0.01	0.00	3.51	2.00	0.00	8.24	0.01	0.00
3.52	2.00	0.00	8.24	0.01	0.00	3.53	2.00	0.00	8.23	0.01	0.00
3.54	2.00	0.00	8.23	0.01	0.00	3.55	2.00	0.00	8.22	0.01	0.00
3.56	2.00	0.00	8.22	0.01	0.00	3.57	2.00	0.00	8.21	0.01	0.00
3.58	2.00	0.00	8.21	0.01	0.00	3.59	2.00	0.00	8.21	0.01	0.00
3.60	2.00	0.00	8.20	0.01	0.00	3.61	2.00	0.00	8.20	0.01	0.00
3.62	2.00	0.00	8.19	0.01	0.00	3.63	2.00	0.00	8.19	0.01	0.00
3.64	2.00	0.00	8.18	0.01	0.00	3.65	2.00	0.00	8.18	0.01	0.00
3.66	2.00	0.00	8.17	0.01	0.00	3.67	2.00	0.00	8.16	0.01	0.00
3.68	2.00	0.00	8.16	0.01	0.00	3.69	2.00	0.00	8.15	0.01	0.00
3.70	2.00	0.00	8.15	0.01	0.00	3.71	2.00	0.00	8.14	0.01	0.00
3.72	2.00	0.00	8.14	0.01	0.00	3.73	2.00	0.00	8.13	0.01	0.00
3.74	2.00	0.00	8.13	0.01	0.00	3.75	2.00	0.00	8.13	0.01	0.00
3.76	2.00	0.00	8.12	0.01	0.00	3.77	2.00	0.00	8.12	0.01	0.00
3.78	2.00	0.00	8.11	0.01	0.00	3.79	2.00	0.00	8.11	0.01	0.00
3.80	2.00	0.00	8.10	0.01	0.00	3.81	2.00	0.00	8.10	0.01	0.00
3.82	2.00	0.00	8.09	0.01	0.00	3.83	2.00	0.00	8.09	0.01	0.00
3.84	2.00	0.00	8.08	0.01	0.00	3.85	2.00	0.00	8.07	0.01	0.00
3.86	2.00	0.00	8.07	0.01	0.00	3.87	2.00	0.00	8.06	0.01	0.00
3.88	2.00	0.00	8.06	0.01	0.00	3.89	2.00	0.00	8.05	0.01	0.00
3.90	2.00	0.00	8.05	0.01	0.00	3.91	2.00	0.00	8.04	0.01	0.00
3.92	2.00	0.00	8.04	0.01	0.00	3.93	2.00	0.00	8.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.94	2.00	0.00	8.03	0.01	0.00	3.95	2.00	0.00	8.03	0.01	0.00
3.96	2.00	0.00	8.02	0.01	0.00	3.97	2.00	0.00	8.02	0.01	0.00
3.98	2.00	0.00	8.01	0.01	0.00	3.99	2.00	0.00	8.01	0.01	0.00
4.00	2.00	0.00	8.00	0.01	0.00	4.01	2.00	0.00	8.00	0.01	0.00
4.02	2.00	0.00	7.99	0.01	0.00	4.03	2.00	0.00	7.99	0.01	0.00
4.04	2.00	0.00	7.98	0.01	0.00	4.05	2.00	0.00	7.97	0.01	0.00
4.06	2.00	0.00	7.97	0.01	0.00	4.07	2.00	0.00	7.96	0.01	0.00
4.08	2.00	0.00	7.96	0.01	0.00	4.09	2.00	0.00	7.96	0.01	0.00
4.10	2.00	0.00	7.95	0.01	0.00	4.11	2.00	0.00	7.95	0.01	0.00
4.12	2.00	0.00	7.94	0.01	0.00	4.13	2.00	0.00	7.93	0.01	0.00
4.14	2.00	0.00	7.93	0.01	0.00	4.15	2.00	0.00	7.92	0.01	0.00
4.16	2.00	0.00	7.92	0.01	0.00	4.17	2.00	0.00	7.92	0.01	0.00
4.18	2.00	0.00	7.91	0.01	0.00	4.19	2.00	0.00	7.91	0.01	0.00
4.20	2.00	0.00	7.90	0.01	0.00	4.21	2.00	0.00	7.89	0.01	0.00
4.22	2.00	0.00	7.89	0.01	0.00	4.23	2.00	0.00	7.88	0.01	0.00
4.24	2.00	0.00	7.88	0.01	0.00	4.25	2.00	0.00	7.88	0.01	0.00
4.26	2.00	0.00	7.87	0.01	0.00	4.27	2.00	0.00	7.87	0.01	0.00
4.28	2.00	0.00	7.86	0.01	0.00	4.29	2.00	0.00	7.86	0.01	0.00
4.30	2.00	0.00	7.85	0.01	0.00	4.31	2.00	0.00	7.84	0.01	0.00
4.32	2.00	0.00	7.84	0.01	0.00	4.33	2.00	0.00	7.83	0.01	0.00
4.34	2.00	0.00	7.83	0.01	0.00	4.35	2.00	0.00	7.83	0.01	0.00
4.36	2.00	0.00	7.82	0.01	0.00	4.37	2.00	0.00	7.82	0.01	0.00
4.38	2.00	0.00	7.81	0.01	0.00	4.39	2.00	0.00	7.80	0.01	0.00
4.40	2.00	0.00	7.80	0.01	0.00	4.41	2.00	0.00	7.79	0.01	0.00
4.42	2.00	0.00	7.79	0.01	0.00	4.43	2.00	0.00	7.79	0.01	0.00
4.44	2.00	0.00	7.78	0.01	0.00	4.45	2.00	0.00	7.78	0.01	0.00
4.46	2.00	0.00	7.77	0.01	0.00	4.47	2.00	0.00	7.76	0.01	0.00
4.48	2.00	0.00	7.76	0.01	0.00	4.49	2.00	0.00	7.75	0.01	0.00
4.50	2.00	0.00	7.75	0.01	0.00	4.51	2.00	0.00	7.75	0.01	0.00
4.52	2.00	0.00	7.74	0.01	0.00	4.53	2.00	0.00	7.74	0.01	0.00
4.54	2.00	0.00	7.73	0.01	0.00	4.55	2.00	0.00	7.72	0.01	0.00
4.56	2.00	0.00	7.72	0.01	0.00	4.57	2.00	0.00	7.71	0.01	0.00
4.58	2.00	0.00	7.71	0.01	0.00	4.59	2.00	0.00	7.71	0.01	0.00
4.60	2.00	0.00	7.70	0.01	0.00	4.61	2.00	0.00	7.70	0.01	0.00
4.62	2.00	0.00	7.69	0.01	0.00	4.63	2.00	0.00	7.68	0.01	0.00
4.64	2.00	0.00	7.68	0.01	0.00	4.65	2.00	0.00	7.67	0.01	0.00
4.66	2.00	0.00	7.67	0.01	0.00	4.67	2.00	0.00	7.67	0.01	0.00
4.68	2.00	0.00	7.66	0.01	0.00	4.69	2.00	0.00	7.66	0.01	0.00
4.70	2.00	0.00	7.65	0.01	0.00	4.71	2.00	0.00	7.64	0.01	0.00
4.72	2.00	0.00	7.64	0.01	0.00	4.73	2.00	0.00	7.63	0.01	0.00
4.74	2.00	0.00	7.63	0.01	0.00	4.75	2.00	0.00	7.63	0.01	0.00
4.76	2.00	0.00	7.62	0.01	0.00	4.77	2.00	0.00	7.62	0.01	0.00
4.78	2.00	0.00	7.61	0.01	0.00	4.79	2.00	0.00	7.61	0.01	0.00
4.80	2.00	0.00	7.60	0.01	0.00	4.81	2.00	0.00	7.59	0.01	0.00
4.82	2.00	0.00	7.59	0.01	0.00	4.83	2.00	0.00	7.58	0.01	0.00
4.84	2.00	0.00	7.58	0.01	0.00	4.85	2.00	0.00	7.58	0.01	0.00
4.86	2.00	0.00	7.57	0.01	0.00	4.87	2.00	0.00	7.57	0.01	0.00
4.88	2.00	0.00	7.56	0.01	0.00	4.89	2.00	0.00	7.55	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.90	2.00	0.00	7.55	0.01	0.00	4.91	2.00	0.00	7.54	0.01	0.00
4.92	2.00	0.00	7.54	0.01	0.00	4.93	2.00	0.00	7.54	0.01	0.00
4.94	2.00	0.00	7.53	0.01	0.00	4.95	2.00	0.00	7.53	0.01	0.00
4.96	2.00	0.00	7.52	0.01	0.00	4.97	2.00	0.00	7.51	0.01	0.00
4.98	2.00	0.00	7.51	0.01	0.00	4.99	2.00	0.00	7.50	0.01	0.00
5.00	2.00	0.00	7.50	0.01	0.00	5.01	2.00	0.00	7.50	0.01	0.00
5.02	2.00	0.00	7.49	0.01	0.00	5.03	2.00	0.00	7.49	0.01	0.00
5.04	2.00	0.00	7.48	0.01	0.00	5.05	2.00	0.00	7.47	0.01	0.00
5.06	0.54	0.46	7.47	0.01	0.03	5.07	0.54	0.46	7.46	0.01	0.03
5.08	0.54	0.46	7.46	0.01	0.03	5.09	0.54	0.46	7.46	0.01	0.03
5.10	0.54	0.46	7.45	0.01	0.03	5.11	0.54	0.46	7.45	0.01	0.03
5.12	0.54	0.46	7.44	0.01	0.03	5.13	0.54	0.46	7.43	0.01	0.03
5.14	0.54	0.46	7.43	0.01	0.03	5.15	0.54	0.46	7.42	0.01	0.03
5.16	0.48	0.52	7.42	0.01	0.04	5.17	0.50	0.50	7.42	0.01	0.04
5.18	0.54	0.46	7.41	0.01	0.03	5.19	0.59	0.41	7.41	0.01	0.03
5.20	0.64	0.36	7.40	0.01	0.03	5.21	0.67	0.33	7.39	0.01	0.02
5.22	0.69	0.31	7.39	0.01	0.02	5.23	0.72	0.28	7.38	0.01	0.02
5.24	0.73	0.27	7.38	0.01	0.02	5.25	0.74	0.26	7.38	0.01	0.02
5.26	0.74	0.26	7.37	0.01	0.02	5.27	0.74	0.26	7.37	0.01	0.02
5.28	0.74	0.26	7.36	0.01	0.02	5.29	0.76	0.24	7.36	0.01	0.02
5.30	0.77	0.23	7.35	0.01	0.02	5.31	0.78	0.22	7.34	0.01	0.02
5.32	0.78	0.22	7.34	0.01	0.02	5.33	0.77	0.23	7.33	0.01	0.02
5.34	0.77	0.23	7.33	0.01	0.02	5.35	0.75	0.25	7.33	0.01	0.02
5.36	0.73	0.27	7.32	0.01	0.02	5.37	0.71	0.29	7.32	0.01	0.02
5.38	0.72	0.28	7.31	0.01	0.02	5.39	0.73	0.27	7.30	0.01	0.02
5.40	0.75	0.25	7.30	0.01	0.02	5.41	0.77	0.23	7.29	0.01	0.02
5.42	0.82	0.18	7.29	0.01	0.01	5.43	0.89	0.11	7.29	0.01	0.01
5.44	0.97	0.03	7.28	0.01	0.00	5.45	1.04	0.00	7.28	0.01	0.00
5.46	1.10	0.00	7.27	0.01	0.00	5.47	1.18	0.00	7.26	0.01	0.00
5.48	1.26	0.00	7.26	0.01	0.00	5.49	1.33	0.00	7.25	0.01	0.00
5.50	1.39	0.00	7.25	0.01	0.00	5.51	1.46	0.00	7.25	0.01	0.00
5.52	1.58	0.00	7.24	0.01	0.00	5.53	1.74	0.00	7.24	0.01	0.00
5.54	1.86	0.00	7.23	0.01	0.00	5.55	1.95	0.00	7.22	0.01	0.00
5.56	1.98	0.00	7.22	0.01	0.00	5.57	1.99	0.00	7.21	0.01	0.00
5.58	1.92	0.00	7.21	0.01	0.00	5.59	1.85	0.00	7.21	0.01	0.00
5.60	1.81	0.00	7.20	0.01	0.00	5.61	1.79	0.00	7.20	0.01	0.00
5.62	1.80	0.00	7.19	0.01	0.00	5.63	1.83	0.00	7.18	0.01	0.00
5.64	1.87	0.00	7.18	0.01	0.00	5.65	1.93	0.00	7.17	0.01	0.00
5.66	1.98	0.00	7.17	0.01	0.00	5.67	2.00	0.00	7.17	0.01	0.00
5.68	2.00	0.00	7.16	0.01	0.00	5.69	2.00	0.00	7.16	0.01	0.00
5.70	1.97	0.00	7.15	0.01	0.00	5.71	1.93	0.00	7.14	0.01	0.00
5.72	1.88	0.00	7.14	0.01	0.00	5.73	1.81	0.00	7.13	0.01	0.00
5.74	1.78	0.00	7.13	0.01	0.00	5.75	1.79	0.00	7.13	0.01	0.00
5.76	1.85	0.00	7.12	0.01	0.00	5.77	1.92	0.00	7.12	0.01	0.00
5.78	1.99	0.00	7.11	0.01	0.00	5.79	2.00	0.00	7.11	0.01	0.00
5.80	2.00	0.00	7.10	0.01	0.00	5.81	2.00	0.00	7.09	0.01	0.00
5.82	2.00	0.00	7.09	0.01	0.00	5.83	2.00	0.00	7.08	0.01	0.00
5.84	2.00	0.00	7.08	0.01	0.00	5.85	2.00	0.00	7.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.86	2.00	0.00	7.07	0.01	0.00	5.87	2.00	0.00	7.07	0.01	0.00
5.88	2.00	0.00	7.06	0.01	0.00	5.89	2.00	0.00	7.05	0.01	0.00
5.90	2.00	0.00	7.05	0.01	0.00	5.91	2.00	0.00	7.04	0.01	0.00
5.92	2.00	0.00	7.04	0.01	0.00	5.93	2.00	0.00	7.04	0.01	0.00
5.94	2.00	0.00	7.03	0.01	0.00	5.95	2.00	0.00	7.03	0.01	0.00
5.96	2.00	0.00	7.02	0.01	0.00	5.97	2.00	0.00	7.01	0.01	0.00
5.98	2.00	0.00	7.01	0.01	0.00	5.99	2.00	0.00	7.00	0.01	0.00
6.00	2.00	0.00	7.00	0.01	0.00	6.01	2.00	0.00	7.00	0.01	0.00
6.02	2.00	0.00	6.99	0.01	0.00	6.03	2.00	0.00	6.99	0.01	0.00
6.04	2.00	0.00	6.98	0.01	0.00	6.05	2.00	0.00	6.97	0.01	0.00
6.06	2.00	0.00	6.97	0.01	0.00	6.07	2.00	0.00	6.96	0.01	0.00
6.08	2.00	0.00	6.96	0.01	0.00	6.09	2.00	0.00	6.96	0.01	0.00
6.10	2.00	0.00	6.95	0.01	0.00	6.11	2.00	0.00	6.95	0.01	0.00
6.12	2.00	0.00	6.94	0.01	0.00	6.13	2.00	0.00	6.93	0.01	0.00
6.14	2.00	0.00	6.93	0.01	0.00	6.15	2.00	0.00	6.92	0.01	0.00
6.16	2.00	0.00	6.92	0.01	0.00	6.17	2.00	0.00	6.92	0.01	0.00
6.18	2.00	0.00	6.91	0.01	0.00	6.19	2.00	0.00	6.91	0.01	0.00
6.20	2.00	0.00	6.90	0.01	0.00	6.21	2.00	0.00	6.89	0.01	0.00
6.22	2.00	0.00	6.89	0.01	0.00	6.23	2.00	0.00	6.88	0.01	0.00
6.24	2.00	0.00	6.88	0.01	0.00	6.25	2.00	0.00	6.88	0.01	0.00
6.26	2.00	0.00	6.87	0.01	0.00	6.27	2.00	0.00	6.87	0.01	0.00
6.28	2.00	0.00	6.86	0.01	0.00	6.29	2.00	0.00	6.86	0.01	0.00
6.30	2.00	0.00	6.85	0.01	0.00	6.31	2.00	0.00	6.84	0.01	0.00
6.32	2.00	0.00	6.84	0.01	0.00	6.33	2.00	0.00	6.83	0.01	0.00
6.34	2.00	0.00	6.83	0.01	0.00	6.35	2.00	0.00	6.83	0.01	0.00
6.36	2.00	0.00	6.82	0.01	0.00	6.37	2.00	0.00	6.82	0.01	0.00
6.38	2.00	0.00	6.81	0.01	0.00	6.39	2.00	0.00	6.80	0.01	0.00
6.40	2.00	0.00	6.80	0.01	0.00	6.41	2.00	0.00	6.79	0.01	0.00
6.42	2.00	0.00	6.79	0.01	0.00	6.43	2.00	0.00	6.79	0.01	0.00
6.44	2.00	0.00	6.78	0.01	0.00	6.45	2.00	0.00	6.78	0.01	0.00
6.46	2.00	0.00	6.77	0.01	0.00	6.47	2.00	0.00	6.76	0.01	0.00
6.48	2.00	0.00	6.76	0.01	0.00	6.49	2.00	0.00	6.75	0.01	0.00
6.50	2.00	0.00	6.75	0.01	0.00	6.51	2.00	0.00	6.75	0.01	0.00
6.52	2.00	0.00	6.74	0.01	0.00	6.53	2.00	0.00	6.74	0.01	0.00
6.54	2.00	0.00	6.73	0.01	0.00	6.55	2.00	0.00	6.72	0.01	0.00
6.56	2.00	0.00	6.72	0.01	0.00	6.57	2.00	0.00	6.71	0.01	0.00
6.58	2.00	0.00	6.71	0.01	0.00	6.59	2.00	0.00	6.71	0.01	0.00
6.60	2.00	0.00	6.70	0.01	0.00	6.61	2.00	0.00	6.70	0.01	0.00
6.62	2.00	0.00	6.69	0.01	0.00	6.63	2.00	0.00	6.68	0.01	0.00
6.64	2.00	0.00	6.68	0.01	0.00	6.65	2.00	0.00	6.67	0.01	0.00
6.66	2.00	0.00	6.67	0.01	0.00	6.67	2.00	0.00	6.67	0.01	0.00
6.68	2.00	0.00	6.66	0.01	0.00	6.69	2.00	0.00	6.66	0.01	0.00
6.70	2.00	0.00	6.65	0.01	0.00	6.71	2.00	0.00	6.64	0.01	0.00
6.72	2.00	0.00	6.64	0.01	0.00	6.73	2.00	0.00	6.63	0.01	0.00
6.74	2.00	0.00	6.63	0.01	0.00	6.75	2.00	0.00	6.63	0.01	0.00
6.76	2.00	0.00	6.62	0.01	0.00	6.77	2.00	0.00	6.62	0.01	0.00
6.78	2.00	0.00	6.61	0.01	0.00	6.79	2.00	0.00	6.61	0.01	0.00
6.80	2.00	0.00	6.60	0.01	0.00						

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI

Overall liquefaction potential: 4.41

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

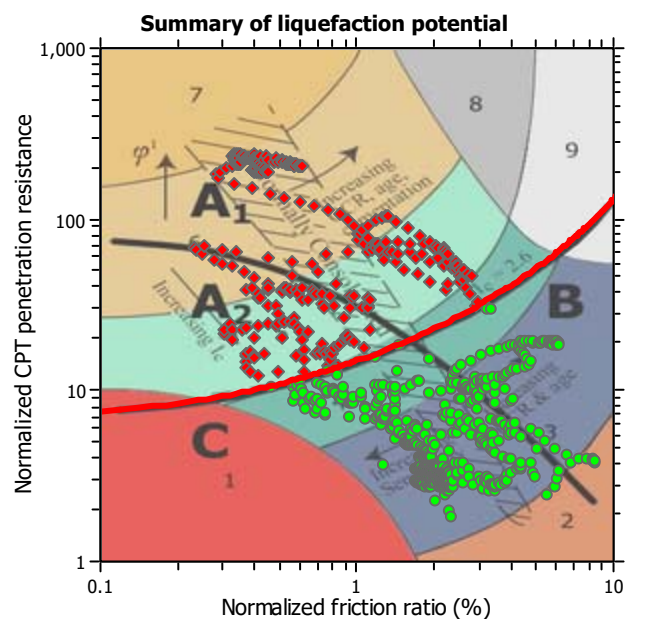
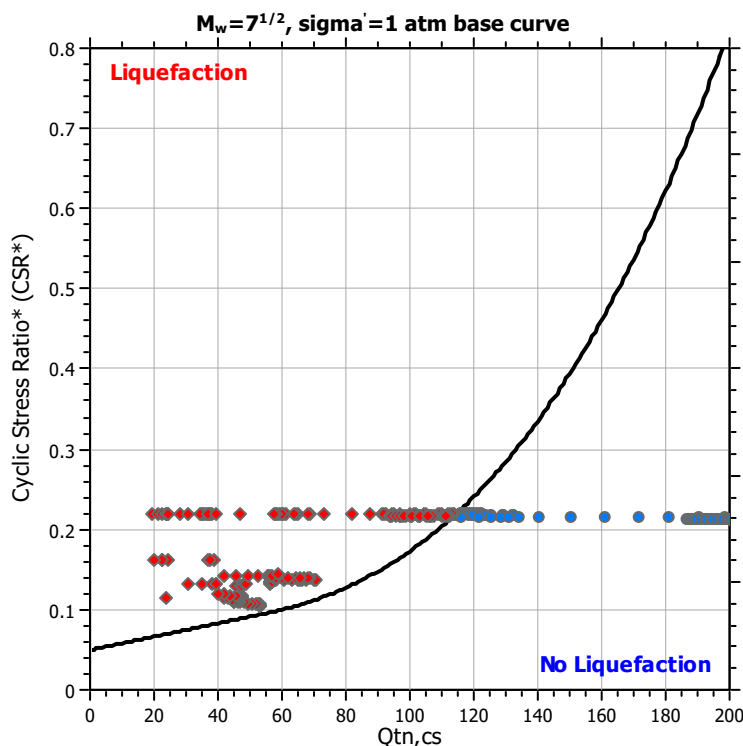
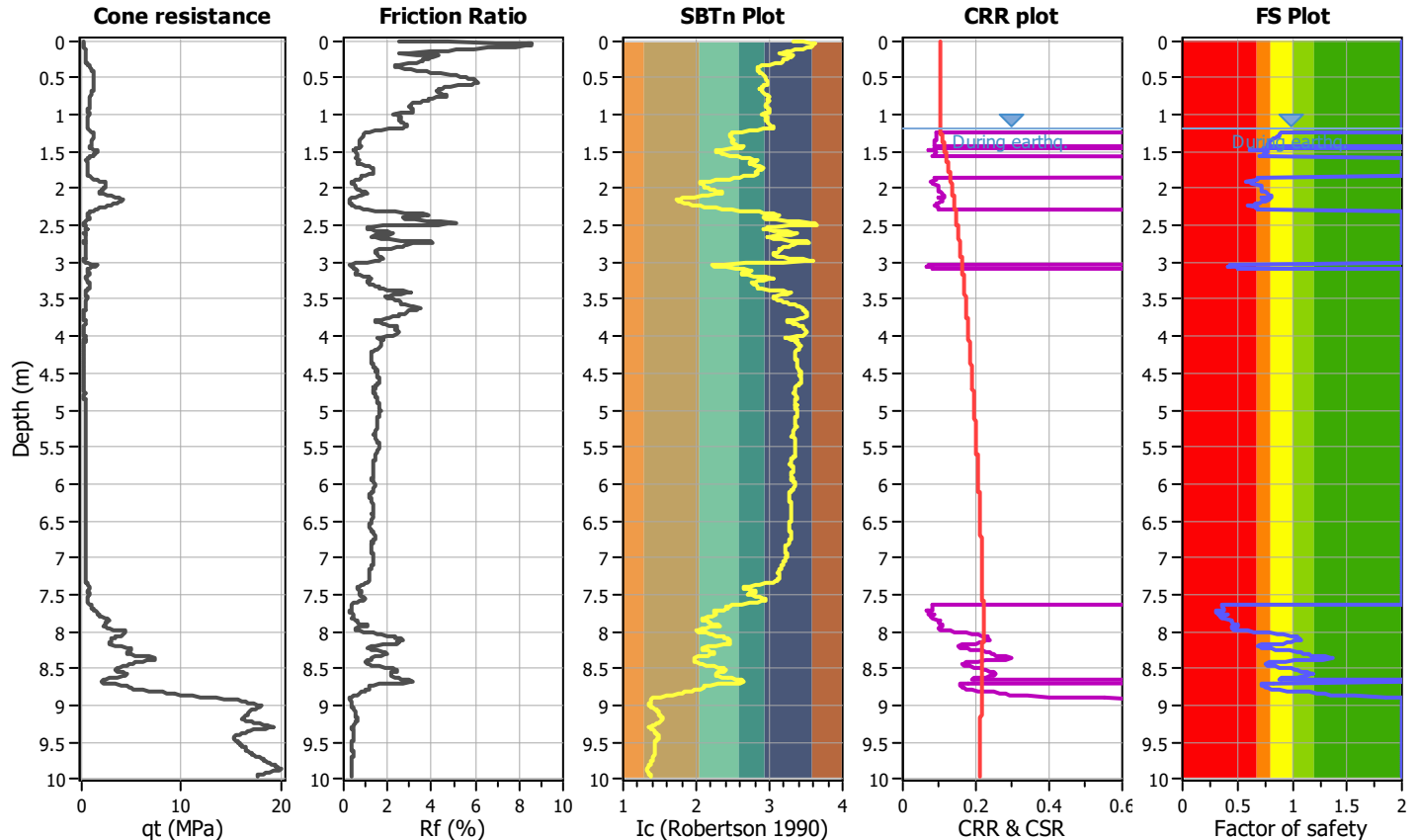
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

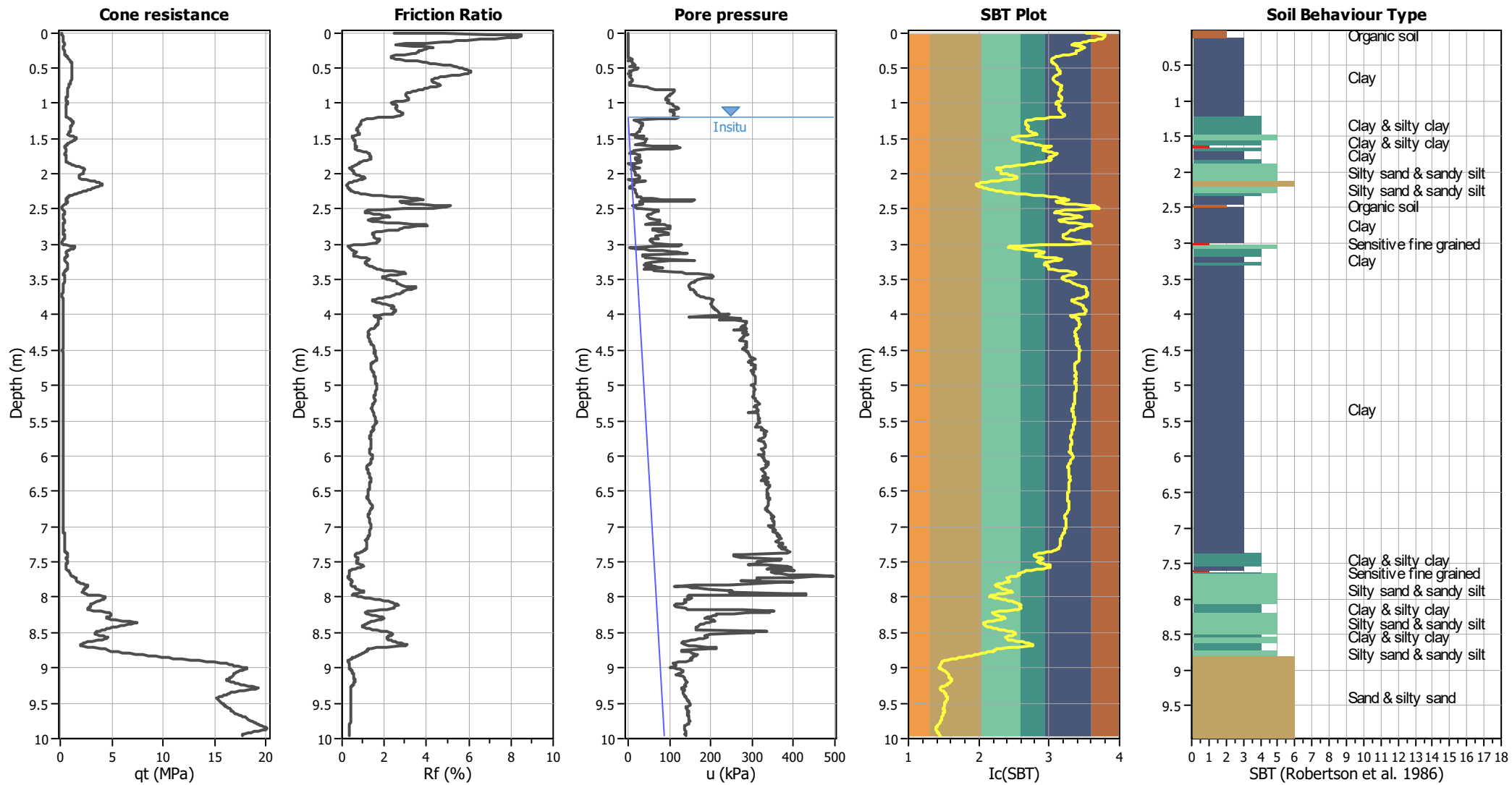
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU8bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
 Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
 Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
 Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

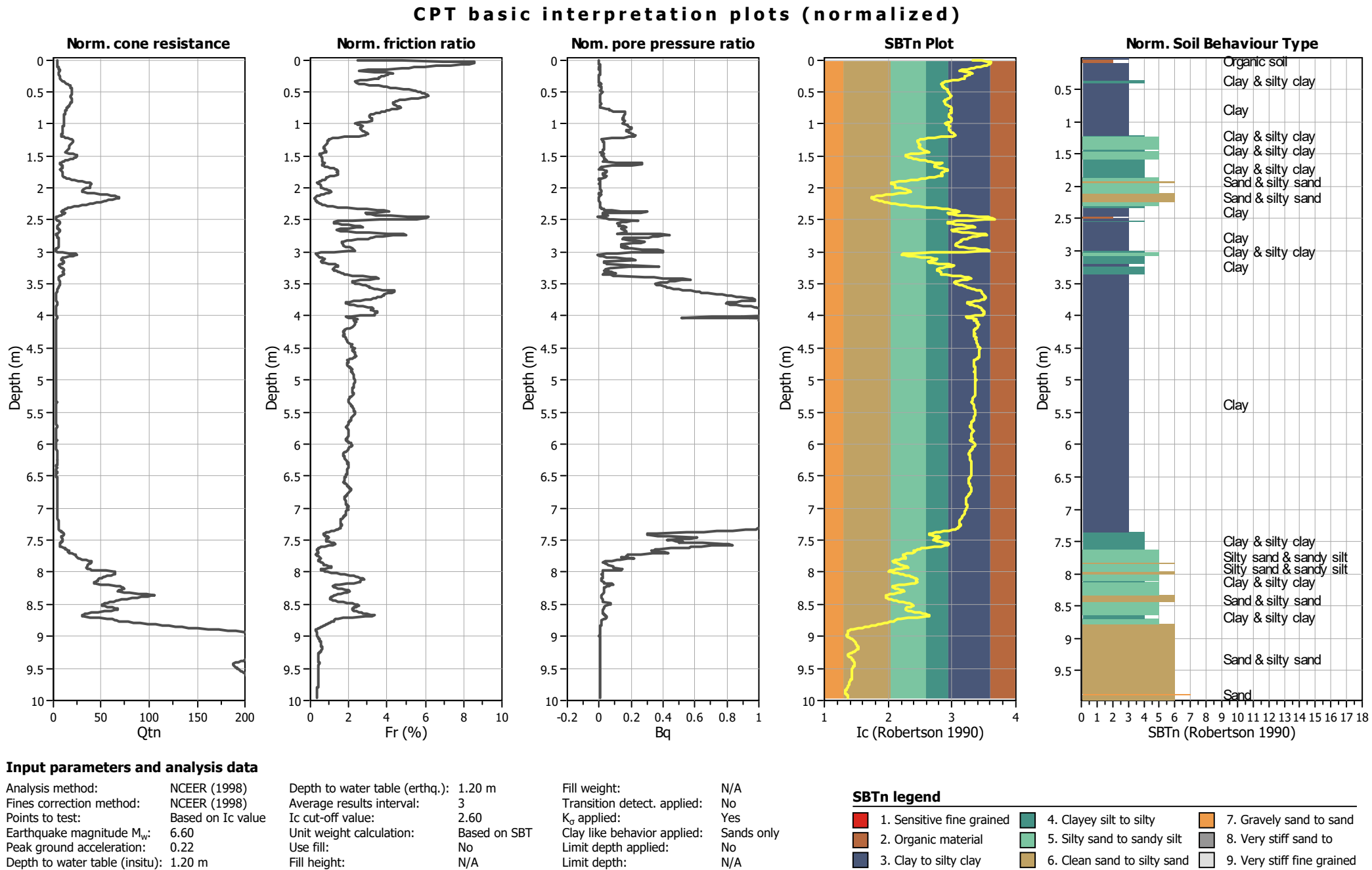


Input parameters and analysis data

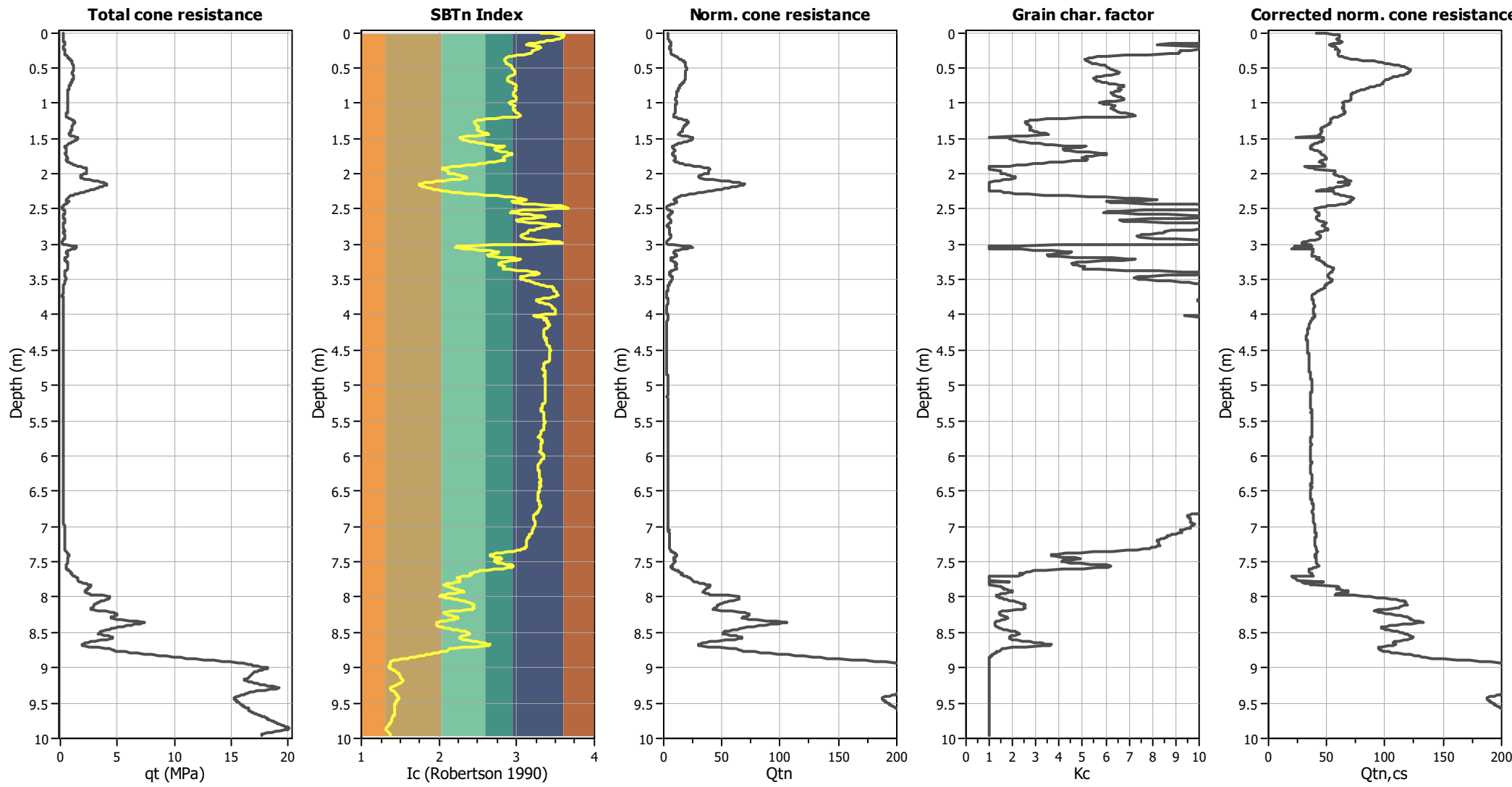
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



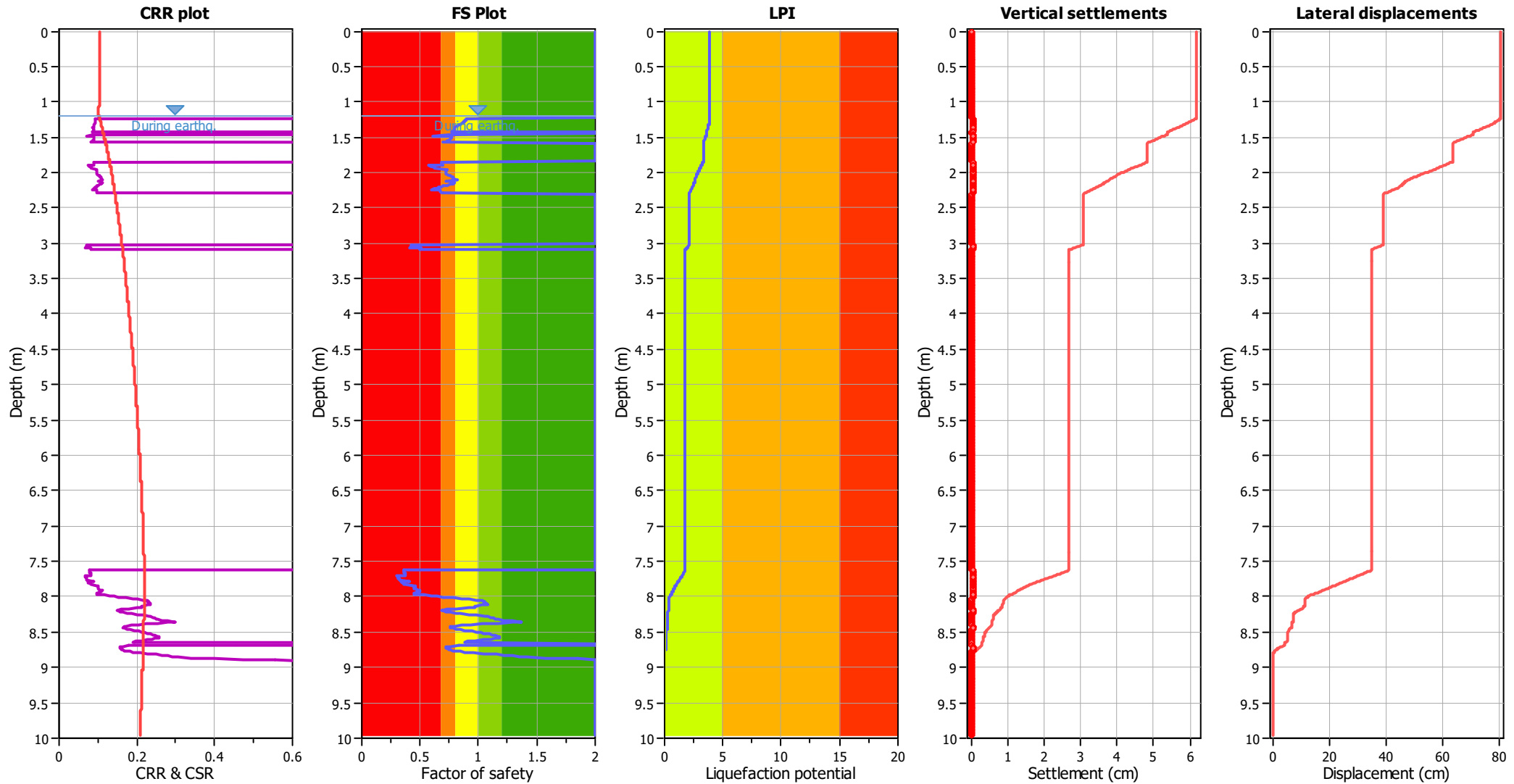
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

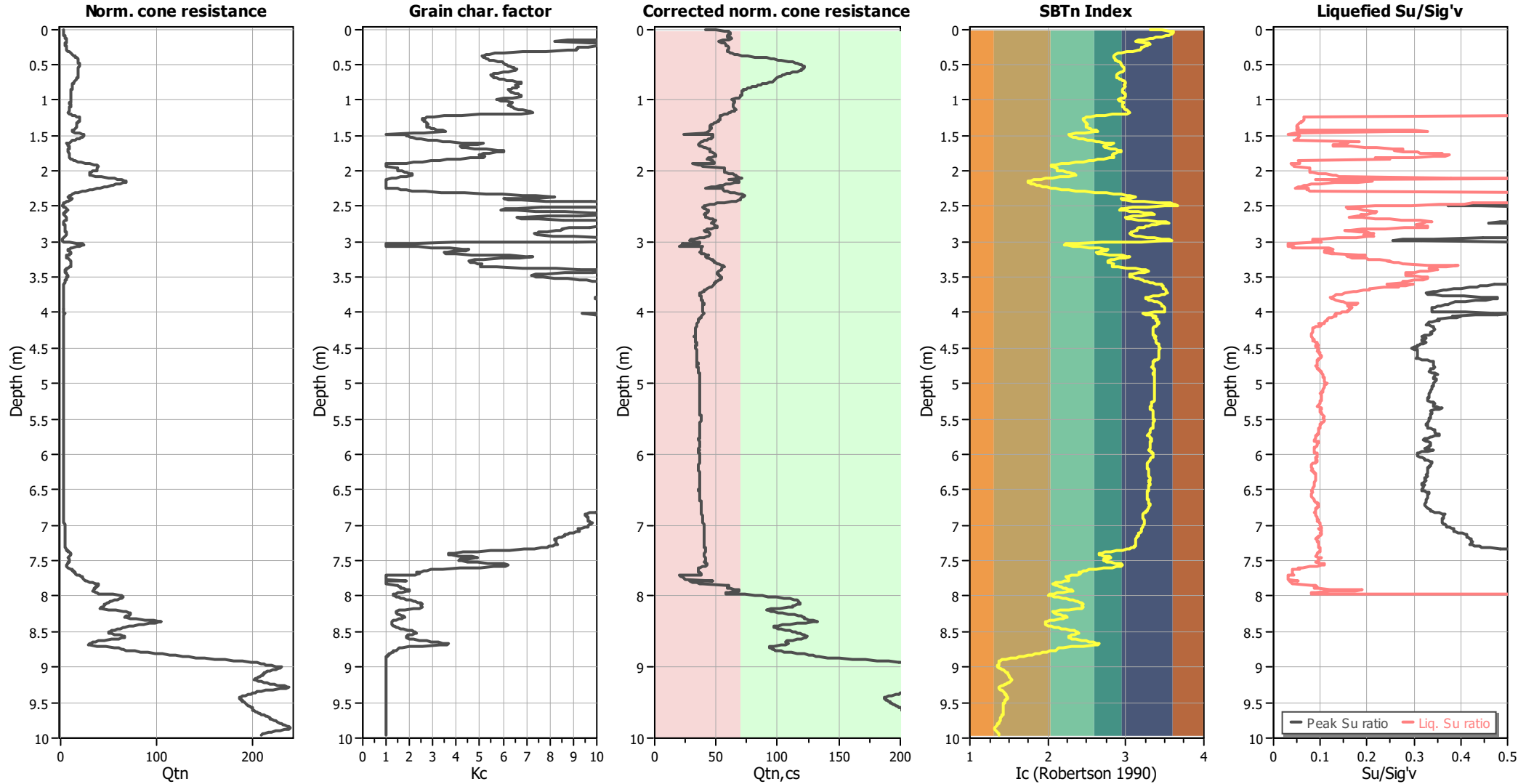
Red	Very high risk
Orange	High risk
Yellow	Low risk

Figure 10 consists of three plots related to soil liquefaction and CPT penetration resistance.

- Left Plot:** Normalized CPT penetration resistance (log scale, 1 to 1,000) vs. Normalized friction ratio (%) (log scale, 0.1 to 10). The plot shows various soil behavior zones (A1, A2, B, C) and data points (red diamonds, green circles). Arrows indicate trends like "Increasing ϕ' ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ", "Increasing $C_{R, age}$ ".
- Middle Plot:** Cyclic Stress Ratio* (CSR*) (0 to 0.8) vs. $Q_{tn,cs}$ (0 to 200). The plot shows a black curve separating the "Liquefaction" region (above) from the "No Liquefaction" region (below). Data points (red diamonds, green circles) are plotted along the curve.
- Right Plot:** Thickness of liquefiable sand layer, H_2 (m) (0.0 to 12.0) vs. Thickness of surface layer, H_1 (m) (0 to 10). The plot shows a blue curve representing the "Analysis PGA: 0.22" and a red curve representing the "Analysis PGA: 0.30g". A point labeled "CPTU8bis (3.88)" is marked on the blue curve. Shaded regions indicate "Liquefaction-induced ground damage" and "Max. acc. ≈ 200 gal", "Max. acc. ≈ 300 gal", "Max. acc. $\approx 400-500$ gal".

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	0.90	0.10	9.38	0.01	0.01
1.25	0.89	0.11	9.38	0.01	0.01	1.26	0.89	0.11	9.37	0.01	0.01
1.27	0.89	0.11	9.37	0.01	0.01	1.28	0.88	0.12	9.36	0.01	0.01
1.29	0.88	0.12	9.36	0.01	0.01	1.30	0.87	0.13	9.35	0.01	0.01
1.31	0.85	0.15	9.35	0.01	0.01	1.32	0.84	0.16	9.34	0.01	0.01
1.33	0.83	0.17	9.34	0.01	0.02	1.34	0.82	0.18	9.33	0.01	0.02
1.35	0.81	0.19	9.32	0.01	0.02	1.36	0.80	0.20	9.32	0.01	0.02
1.37	0.79	0.21	9.31	0.01	0.02	1.38	0.79	0.21	9.31	0.01	0.02
1.39	0.79	0.21	9.30	0.01	0.02	1.40	0.79	0.21	9.30	0.01	0.02
1.41	0.78	0.22	9.29	0.01	0.02	1.42	0.77	0.23	9.29	0.01	0.02
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	0.74	0.26	9.27	0.01	0.02
1.47	0.75	0.25	9.27	0.01	0.02	1.48	0.60	0.40	9.26	0.01	0.04
1.49	0.77	0.23	9.26	0.01	0.02	1.50	0.77	0.23	9.25	0.01	0.02
1.51	0.77	0.23	9.24	0.01	0.02	1.52	0.76	0.24	9.24	0.01	0.02
1.53	0.76	0.24	9.23	0.01	0.02	1.54	0.75	0.25	9.23	0.01	0.02
1.55	0.73	0.27	9.22	0.01	0.02	1.56	0.72	0.28	9.22	0.01	0.03
1.57	0.70	0.30	9.21	0.01	0.03	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	0.68	0.32	9.07	0.01	0.03	1.86	0.68	0.32	9.07	0.01	0.03
1.87	0.69	0.31	9.06	0.01	0.03	1.88	0.69	0.31	9.06	0.01	0.03
1.89	0.69	0.31	9.05	0.01	0.03	1.90	0.57	0.43	9.05	0.01	0.04
1.91	0.60	0.40	9.04	0.01	0.04	1.92	0.62	0.38	9.04	0.01	0.03

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	0.62	0.38	9.04	0.01	0.03	1.94	0.62	0.38	9.03	0.01	0.03
1.95	0.72	0.28	9.03	0.01	0.02	1.96	0.73	0.27	9.02	0.01	0.02
1.97	0.72	0.28	9.02	0.01	0.02	1.98	0.72	0.28	9.01	0.01	0.03
1.99	0.72	0.28	9.01	0.01	0.03	2.00	0.72	0.28	9.00	0.01	0.03
2.01	0.72	0.28	8.99	0.01	0.03	2.02	0.72	0.28	8.99	0.01	0.03
2.03	0.72	0.28	8.98	0.01	0.02	2.04	0.74	0.26	8.98	0.01	0.02
2.05	0.76	0.24	8.97	0.01	0.02	2.06	0.77	0.23	8.97	0.01	0.02
2.07	0.78	0.22	8.96	0.01	0.02	2.08	0.78	0.22	8.96	0.01	0.02
2.09	0.79	0.21	8.96	0.01	0.02	2.10	0.81	0.19	8.95	0.01	0.02
2.11	0.82	0.18	8.95	0.01	0.02	2.12	0.72	0.28	8.94	0.01	0.02
2.13	0.75	0.25	8.94	0.01	0.02	2.14	0.77	0.23	8.93	0.01	0.02
2.15	0.79	0.21	8.93	0.01	0.02	2.16	0.79	0.21	8.92	0.01	0.02
2.17	0.76	0.24	8.91	0.01	0.02	2.18	0.73	0.27	8.91	0.01	0.02
2.19	0.70	0.30	8.90	0.01	0.03	2.20	0.68	0.32	8.90	0.01	0.03
2.21	0.66	0.34	8.89	0.01	0.03	2.22	0.64	0.36	8.89	0.01	0.03
2.23	0.62	0.38	8.88	0.01	0.03	2.24	0.60	0.40	8.88	0.01	0.04
2.25	0.68	0.32	8.88	0.01	0.03	2.26	0.67	0.33	8.87	0.01	0.03
2.27	0.67	0.33	8.87	0.01	0.03	2.28	0.68	0.32	8.86	0.01	0.03
2.29	0.69	0.31	8.86	0.01	0.03	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	0.50	0.50	8.49	0.01	0.04
3.03	0.43	0.57	8.48	0.01	0.05	3.04	0.43	0.57	8.48	0.01	0.05
3.05	0.42	0.58	8.47	0.01	0.05	3.06	0.41	0.59	8.47	0.01	0.05
3.07	0.51	0.49	8.46	0.01	0.04	3.08	0.50	0.50	8.46	0.01	0.04
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	2.00	0.00	6.91	0.01	0.00	6.20	2.00	0.00	6.90	0.01	0.00
6.21	2.00	0.00	6.89	0.01	0.00	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	2.00	0.00	6.58	0.01	0.00	6.84	2.00	0.00	6.58	0.01	0.00
6.85	2.00	0.00	6.58	0.01	0.00	6.86	2.00	0.00	6.57	0.01	0.00
6.87	2.00	0.00	6.57	0.01	0.00	6.88	2.00	0.00	6.56	0.01	0.00
6.89	2.00	0.00	6.55	0.01	0.00	6.90	2.00	0.00	6.55	0.01	0.00
6.91	2.00	0.00	6.54	0.01	0.00	6.92	2.00	0.00	6.54	0.01	0.00
6.93	2.00	0.00	6.54	0.01	0.00	6.94	2.00	0.00	6.53	0.01	0.00
6.95	2.00	0.00	6.53	0.01	0.00	6.96	2.00	0.00	6.52	0.01	0.00
6.97	2.00	0.00	6.51	0.01	0.00	6.98	2.00	0.00	6.51	0.01	0.00
6.99	2.00	0.00	6.50	0.01	0.00	7.00	2.00	0.00	6.50	0.01	0.00
7.01	2.00	0.00	6.50	0.01	0.00	7.02	2.00	0.00	6.49	0.01	0.00
7.03	2.00	0.00	6.49	0.01	0.00	7.04	2.00	0.00	6.48	0.01	0.00
7.05	2.00	0.00	6.47	0.01	0.00	7.06	2.00	0.00	6.47	0.01	0.00
7.07	2.00	0.00	6.46	0.01	0.00	7.08	2.00	0.00	6.46	0.01	0.00
7.09	2.00	0.00	6.46	0.01	0.00	7.10	2.00	0.00	6.45	0.01	0.00
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	2.00	0.00	6.40	0.01	0.00
7.21	2.00	0.00	6.39	0.01	0.00	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	2.00	0.00	6.38	0.01	0.00	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	2.00	0.00	6.33	0.01	0.00
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	2.00	0.00	6.21	0.01	0.00	7.58	2.00	0.00	6.21	0.01	0.00
7.59	2.00	0.00	6.21	0.01	0.00	7.60	2.00	0.00	6.20	0.01	0.00
7.61	2.00	0.00	6.20	0.01	0.00	7.62	2.00	0.00	6.19	0.01	0.00
7.63	0.36	0.64	6.18	0.01	0.04	7.64	0.36	0.64	6.18	0.01	0.04
7.65	0.36	0.64	6.17	0.01	0.04	7.66	0.36	0.64	6.17	0.01	0.04
7.67	0.37	0.63	6.17	0.01	0.04	7.68	0.37	0.63	6.16	0.01	0.04

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	0.37	0.63	6.16	0.01	0.04	7.70	0.37	0.63	6.15	0.01	0.04
7.71	0.30	0.70	6.14	0.01	0.04	7.72	0.31	0.69	6.14	0.01	0.04
7.73	0.31	0.69	6.13	0.01	0.04	7.74	0.32	0.68	6.13	0.01	0.04
7.75	0.32	0.68	6.13	0.01	0.04	7.76	0.32	0.68	6.12	0.01	0.04
7.77	0.32	0.68	6.12	0.01	0.04	7.78	0.41	0.59	6.11	0.01	0.04
7.79	0.33	0.67	6.11	0.01	0.04	7.80	0.34	0.66	6.10	0.01	0.04
7.81	0.36	0.64	6.09	0.01	0.04	7.82	0.37	0.63	6.09	0.01	0.04
7.83	0.38	0.62	6.08	0.01	0.04	7.84	0.45	0.55	6.08	0.01	0.03
7.85	0.45	0.55	6.08	0.01	0.03	7.86	0.46	0.54	6.07	0.01	0.03
7.87	0.45	0.55	6.07	0.01	0.03	7.88	0.45	0.55	6.06	0.01	0.03
7.89	0.46	0.54	6.05	0.01	0.03	7.90	0.48	0.52	6.05	0.01	0.03
7.91	0.50	0.50	6.04	0.01	0.03	7.92	0.50	0.50	6.04	0.01	0.03
7.93	0.48	0.52	6.04	0.01	0.03	7.94	0.46	0.54	6.03	0.01	0.03
7.95	0.45	0.55	6.03	0.01	0.03	7.96	0.44	0.56	6.02	0.01	0.03
7.97	0.47	0.53	6.01	0.01	0.03	7.98	0.53	0.47	6.01	0.01	0.03
7.99	0.59	0.41	6.00	0.01	0.02	8.00	0.65	0.35	6.00	0.01	0.02
8.01	0.70	0.30	6.00	0.01	0.02	8.02	0.78	0.22	5.99	0.01	0.01
8.03	0.86	0.14	5.99	0.01	0.01	8.04	0.92	0.08	5.98	0.01	0.00
8.05	0.99	0.01	5.97	0.01	0.00	8.06	1.03	0.00	5.97	0.01	0.00
8.07	1.05	0.00	5.96	0.01	0.00	8.08	1.04	0.00	5.96	0.01	0.00
8.09	1.05	0.00	5.96	0.01	0.00	8.10	1.07	0.00	5.95	0.01	0.00
8.11	1.08	0.00	5.95	0.01	0.00	8.12	1.03	0.00	5.94	0.01	0.00
8.13	0.99	0.01	5.93	0.01	0.00	8.14	0.97	0.03	5.93	0.01	0.00
8.15	0.96	0.04	5.92	0.01	0.00	8.16	0.91	0.09	5.92	0.01	0.01
8.17	0.81	0.19	5.92	0.01	0.01	8.18	0.73	0.27	5.91	0.01	0.02
8.19	0.69	0.31	5.91	0.01	0.02	8.20	0.69	0.31	5.90	0.01	0.02
8.21	0.72	0.28	5.89	0.01	0.02	8.22	0.75	0.25	5.89	0.01	0.01
8.23	0.81	0.19	5.88	0.01	0.01	8.24	0.85	0.15	5.88	0.01	0.01
8.25	0.92	0.08	5.88	0.01	0.00	8.26	0.98	0.02	5.87	0.01	0.00
8.27	1.05	0.00	5.87	0.01	0.00	8.28	1.08	0.00	5.86	0.01	0.00
8.29	1.11	0.00	5.86	0.01	0.00	8.30	1.13	0.00	5.85	0.01	0.00
8.31	1.15	0.00	5.84	0.01	0.00	8.32	1.17	0.00	5.84	0.01	0.00
8.33	1.22	0.00	5.83	0.01	0.00	8.34	1.29	0.00	5.83	0.01	0.00
8.35	1.36	0.00	5.83	0.01	0.00	8.36	1.36	0.00	5.82	0.01	0.00
8.37	1.29	0.00	5.82	0.01	0.00	8.38	1.17	0.00	5.81	0.01	0.00
8.39	1.03	0.00	5.80	0.01	0.00	8.40	0.93	0.07	5.80	0.01	0.00
8.41	0.86	0.14	5.79	0.01	0.01	8.42	0.80	0.20	5.79	0.01	0.01
8.43	0.76	0.24	5.79	0.01	0.01	8.44	0.76	0.24	5.78	0.01	0.01
8.45	0.78	0.22	5.78	0.01	0.01	8.46	0.80	0.20	5.77	0.01	0.01
8.47	0.84	0.16	5.76	0.01	0.01	8.48	0.89	0.11	5.76	0.01	0.01
8.49	0.95	0.05	5.75	0.01	0.00	8.50	0.98	0.02	5.75	0.01	0.00
8.51	1.02	0.00	5.75	0.01	0.00	8.52	1.04	0.00	5.74	0.01	0.00
8.53	1.09	0.00	5.74	0.01	0.00	8.54	1.11	0.00	5.73	0.01	0.00
8.55	1.14	0.00	5.72	0.01	0.00	8.56	1.17	0.00	5.72	0.01	0.00
8.57	1.18	0.00	5.71	0.01	0.00	8.58	1.18	0.00	5.71	0.01	0.00
8.59	1.14	0.00	5.71	0.01	0.00	8.60	1.11	0.00	5.70	0.01	0.00
8.61	1.05	0.00	5.70	0.01	0.00	8.62	0.97	0.03	5.69	0.01	0.00
8.63	0.91	0.09	5.68	0.01	0.01	8.64	0.89	0.11	5.68	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.65	0.89	0.11	5.67	0.01	0.01	8.66	2.00	0.00	5.67	0.01	0.00
8.67	2.00	0.00	5.67	0.01	0.00	8.68	2.00	0.00	5.66	0.01	0.00
8.69	0.84	0.16	5.66	0.01	0.01	8.70	0.76	0.24	5.65	0.01	0.01
8.71	0.73	0.27	5.64	0.01	0.02	8.72	0.73	0.27	5.64	0.01	0.02
8.73	0.74	0.26	5.63	0.01	0.01	8.74	0.74	0.26	5.63	0.01	0.01
8.75	0.76	0.24	5.63	0.01	0.01	8.76	0.78	0.22	5.62	0.01	0.01
8.77	0.81	0.19	5.62	0.01	0.01	8.78	0.85	0.15	5.61	0.01	0.01
8.79	0.88	0.12	5.61	0.01	0.01	8.80	0.96	0.04	5.60	0.01	0.00
8.81	1.05	0.00	5.59	0.01	0.00	8.82	1.16	0.00	5.59	0.01	0.00
8.83	1.22	0.00	5.58	0.01	0.00	8.84	1.29	0.00	5.58	0.01	0.00
8.85	1.35	0.00	5.58	0.01	0.00	8.86	1.41	0.00	5.57	0.01	0.00
8.87	1.57	0.00	5.57	0.01	0.00	8.88	1.85	0.00	5.56	0.01	0.00
8.89	2.00	0.00	5.55	0.01	0.00	8.90	2.00	0.00	5.55	0.01	0.00
8.91	2.00	0.00	5.54	0.01	0.00	8.92	2.00	0.00	5.54	0.01	0.00
8.93	2.00	0.00	5.54	0.01	0.00	8.94	2.00	0.00	5.53	0.01	0.00
8.95	2.00	0.00	5.53	0.01	0.00	8.96	2.00	0.00	5.52	0.01	0.00
8.97	2.00	0.00	5.51	0.01	0.00	8.98	2.00	0.00	5.51	0.01	0.00
8.99	2.00	0.00	5.50	0.01	0.00	9.00	2.00	0.00	5.50	0.01	0.00
9.01	2.00	0.00	5.50	0.01	0.00	9.02	2.00	0.00	5.49	0.01	0.00
9.03	2.00	0.00	5.49	0.01	0.00	9.04	2.00	0.00	5.48	0.01	0.00
9.05	2.00	0.00	5.47	0.01	0.00	9.06	2.00	0.00	5.47	0.01	0.00
9.07	2.00	0.00	5.46	0.01	0.00	9.08	2.00	0.00	5.46	0.01	0.00
9.09	2.00	0.00	5.46	0.01	0.00	9.10	2.00	0.00	5.45	0.01	0.00
9.11	2.00	0.00	5.45	0.01	0.00	9.12	2.00	0.00	5.44	0.01	0.00
9.13	2.00	0.00	5.43	0.01	0.00	9.14	2.00	0.00	5.43	0.01	0.00
9.15	2.00	0.00	5.42	0.01	0.00	9.16	2.00	0.00	5.42	0.01	0.00
9.17	2.00	0.00	5.42	0.01	0.00	9.18	2.00	0.00	5.41	0.01	0.00
9.19	2.00	0.00	5.41	0.01	0.00	9.20	2.00	0.00	5.40	0.01	0.00
9.21	2.00	0.00	5.39	0.01	0.00	9.22	2.00	0.00	5.39	0.01	0.00
9.23	2.00	0.00	5.38	0.01	0.00	9.24	2.00	0.00	5.38	0.01	0.00
9.25	2.00	0.00	5.38	0.01	0.00	9.26	2.00	0.00	5.37	0.01	0.00
9.27	2.00	0.00	5.37	0.01	0.00	9.28	2.00	0.00	5.36	0.01	0.00
9.29	2.00	0.00	5.36	0.01	0.00	9.30	2.00	0.00	5.35	0.01	0.00
9.31	2.00	0.00	5.34	0.01	0.00	9.32	2.00	0.00	5.34	0.01	0.00
9.33	2.00	0.00	5.33	0.01	0.00	9.34	2.00	0.00	5.33	0.01	0.00
9.35	2.00	0.00	5.33	0.01	0.00	9.36	2.00	0.00	5.32	0.01	0.00
9.37	2.00	0.00	5.32	0.01	0.00	9.38	2.00	0.00	5.31	0.01	0.00
9.39	2.00	0.00	5.30	0.01	0.00	9.40	2.00	0.00	5.30	0.01	0.00
9.41	2.00	0.00	5.29	0.01	0.00	9.42	2.00	0.00	5.29	0.01	0.00
9.43	2.00	0.00	5.29	0.01	0.00	9.44	2.00	0.00	5.28	0.01	0.00
9.45	2.00	0.00	5.28	0.01	0.00	9.46	2.00	0.00	5.27	0.01	0.00
9.47	2.00	0.00	5.26	0.01	0.00	9.48	2.00	0.00	5.26	0.01	0.00
9.49	2.00	0.00	5.25	0.01	0.00	9.50	2.00	0.00	5.25	0.01	0.00
9.51	2.00	0.00	5.25	0.01	0.00	9.52	2.00	0.00	5.24	0.01	0.00
9.53	2.00	0.00	5.24	0.01	0.00	9.54	2.00	0.00	5.23	0.01	0.00
9.55	2.00	0.00	5.22	0.01	0.00	9.56	2.00	0.00	5.22	0.01	0.00
9.57	2.00	0.00	5.21	0.01	0.00	9.58	2.00	0.00	5.21	0.01	0.00
9.59	2.00	0.00	5.21	0.01	0.00	9.60	2.00	0.00	5.20	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
9.61	2.00	0.00	5.20	0.01	0.00	9.62	2.00	0.00	5.19	0.01	0.00
9.63	2.00	0.00	5.18	0.01	0.00	9.64	2.00	0.00	5.18	0.01	0.00
9.65	2.00	0.00	5.17	0.01	0.00	9.66	2.00	0.00	5.17	0.01	0.00
9.67	2.00	0.00	5.17	0.01	0.00	9.68	2.00	0.00	5.16	0.01	0.00
9.69	2.00	0.00	5.16	0.01	0.00	9.70	2.00	0.00	5.15	0.01	0.00
9.71	2.00	0.00	5.14	0.01	0.00	9.72	2.00	0.00	5.14	0.01	0.00
9.73	2.00	0.00	5.13	0.01	0.00	9.74	2.00	0.00	5.13	0.01	0.00
9.75	2.00	0.00	5.13	0.01	0.00	9.76	2.00	0.00	5.12	0.01	0.00
9.77	2.00	0.00	5.12	0.01	0.00	9.78	2.00	0.00	5.11	0.01	0.00
9.79	2.00	0.00	5.11	0.01	0.00	9.80	2.00	0.00	5.10	0.01	0.00
9.81	2.00	0.00	5.09	0.01	0.00	9.82	2.00	0.00	5.09	0.01	0.00
9.83	2.00	0.00	5.08	0.01	0.00	9.84	2.00	0.00	5.08	0.01	0.00
9.85	2.00	0.00	5.08	0.01	0.00	9.86	2.00	0.00	5.07	0.01	0.00
9.87	2.00	0.00	5.07	0.01	0.00	9.88	2.00	0.00	5.06	0.01	0.00
9.89	2.00	0.00	5.05	0.01	0.00	9.90	2.00	0.00	5.05	0.01	0.00
9.91	2.00	0.00	5.04	0.01	0.00	9.92	2.00	0.00	5.04	0.01	0.00
9.93	2.00	0.00	5.04	0.01	0.00	9.94	2.00	0.00	5.03	0.01	0.00
9.95	2.00	0.00	5.03	0.01	0.00	9.96	2.00	0.00	5.02	0.01	0.00

Overall liquefaction potential: 3.88

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

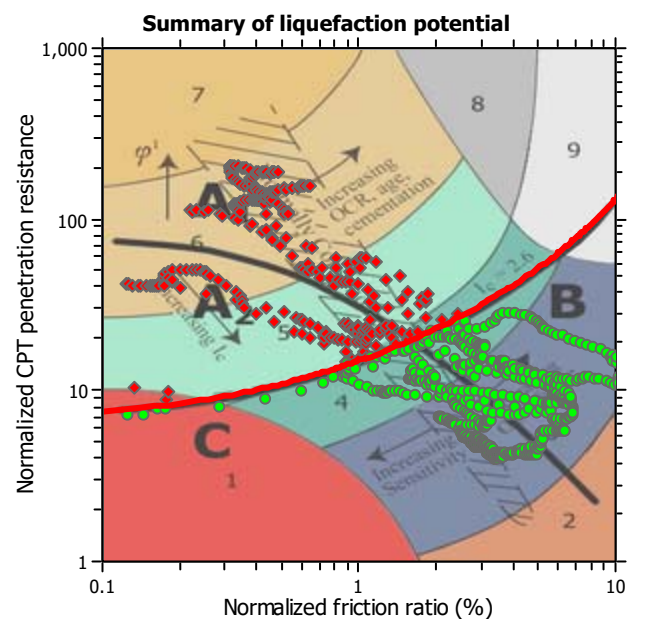
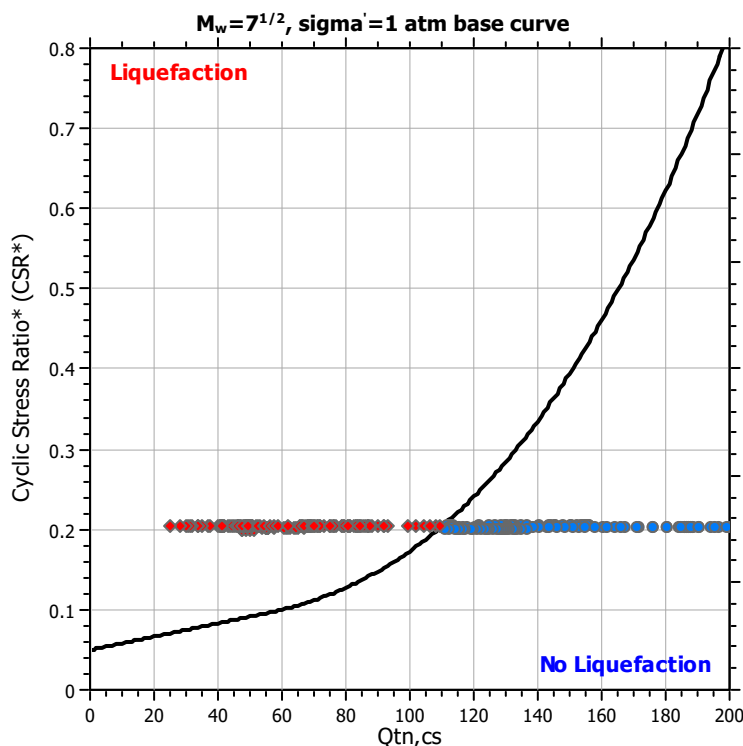
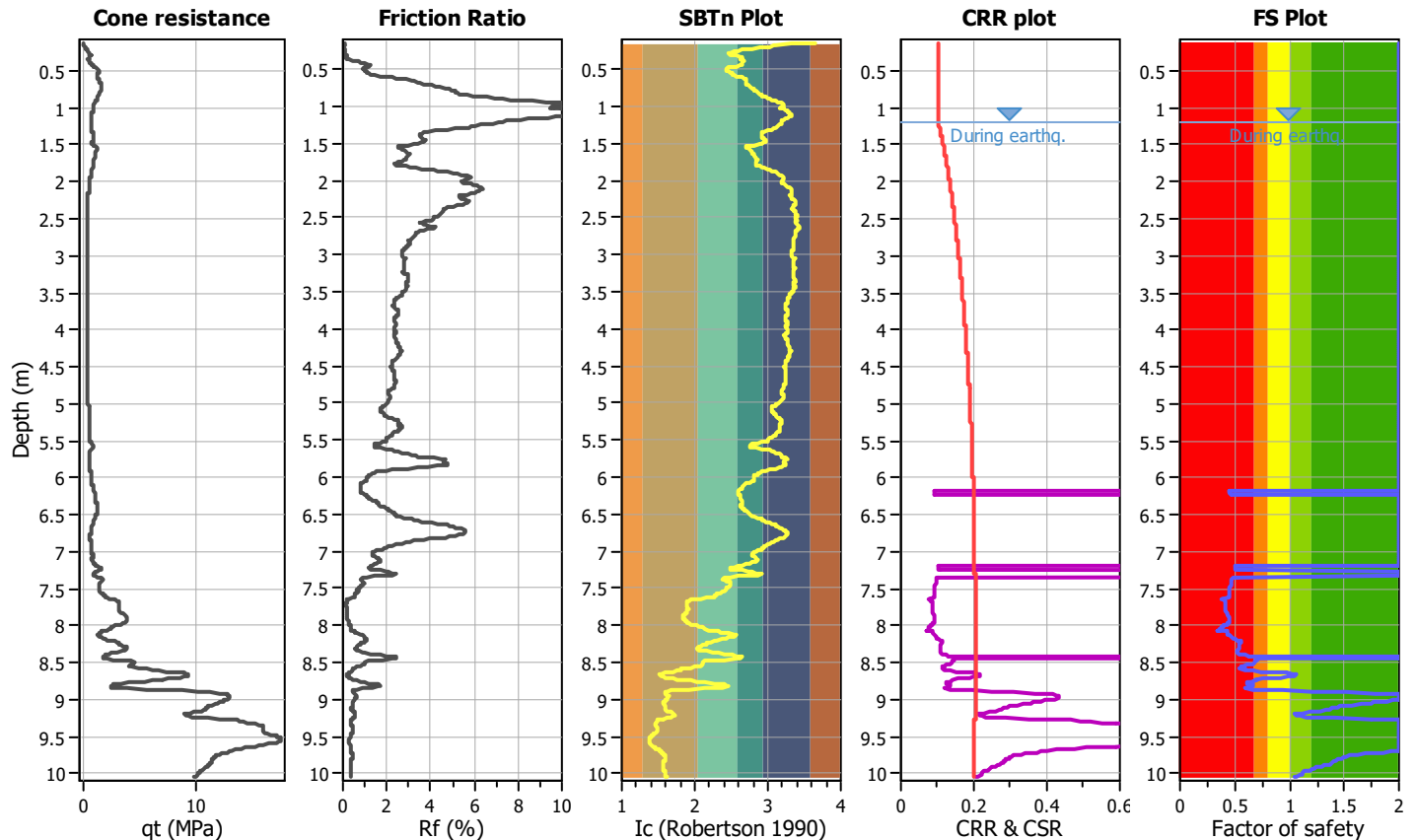
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

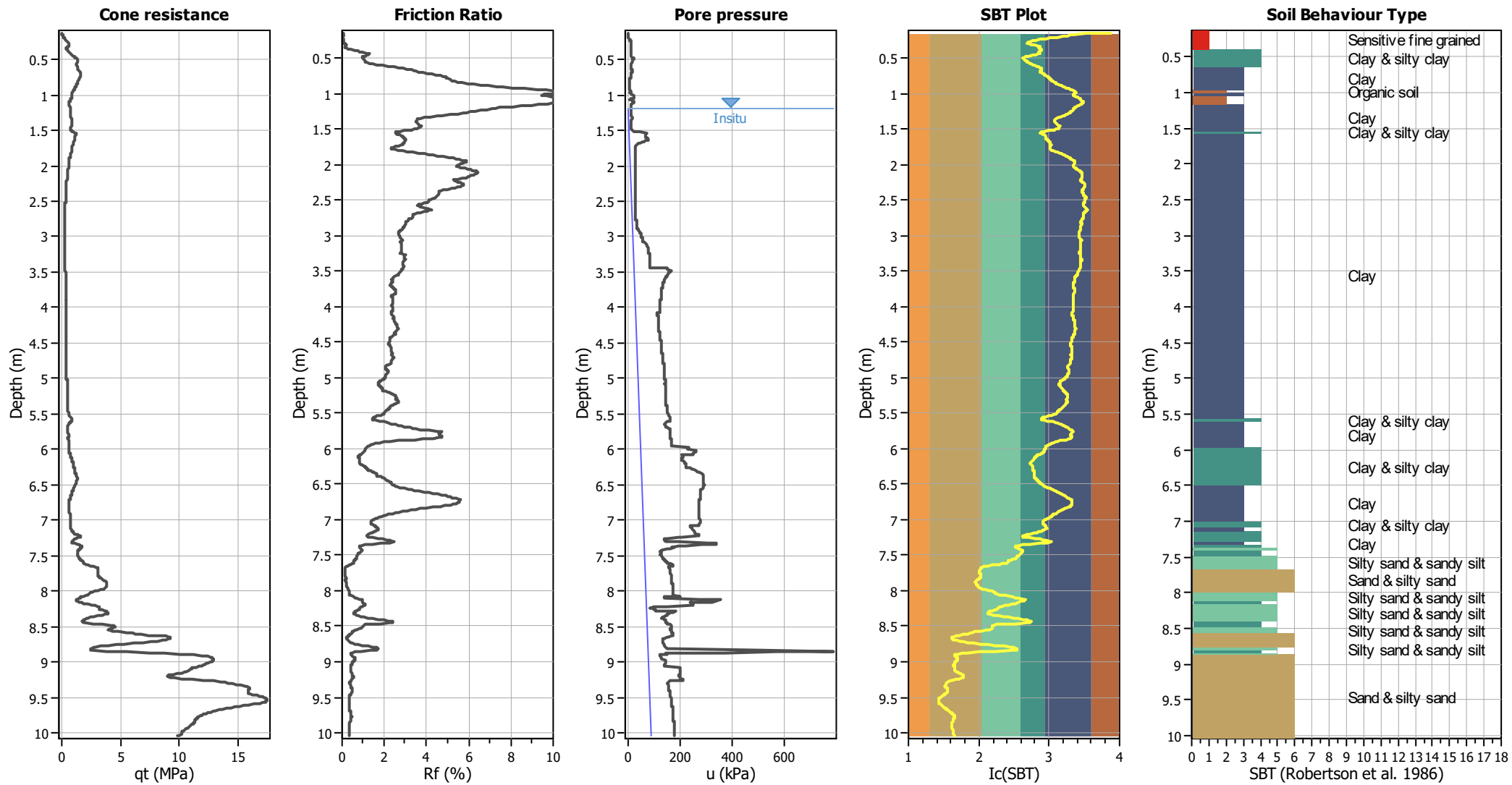
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU9bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
 Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
 Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
 Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

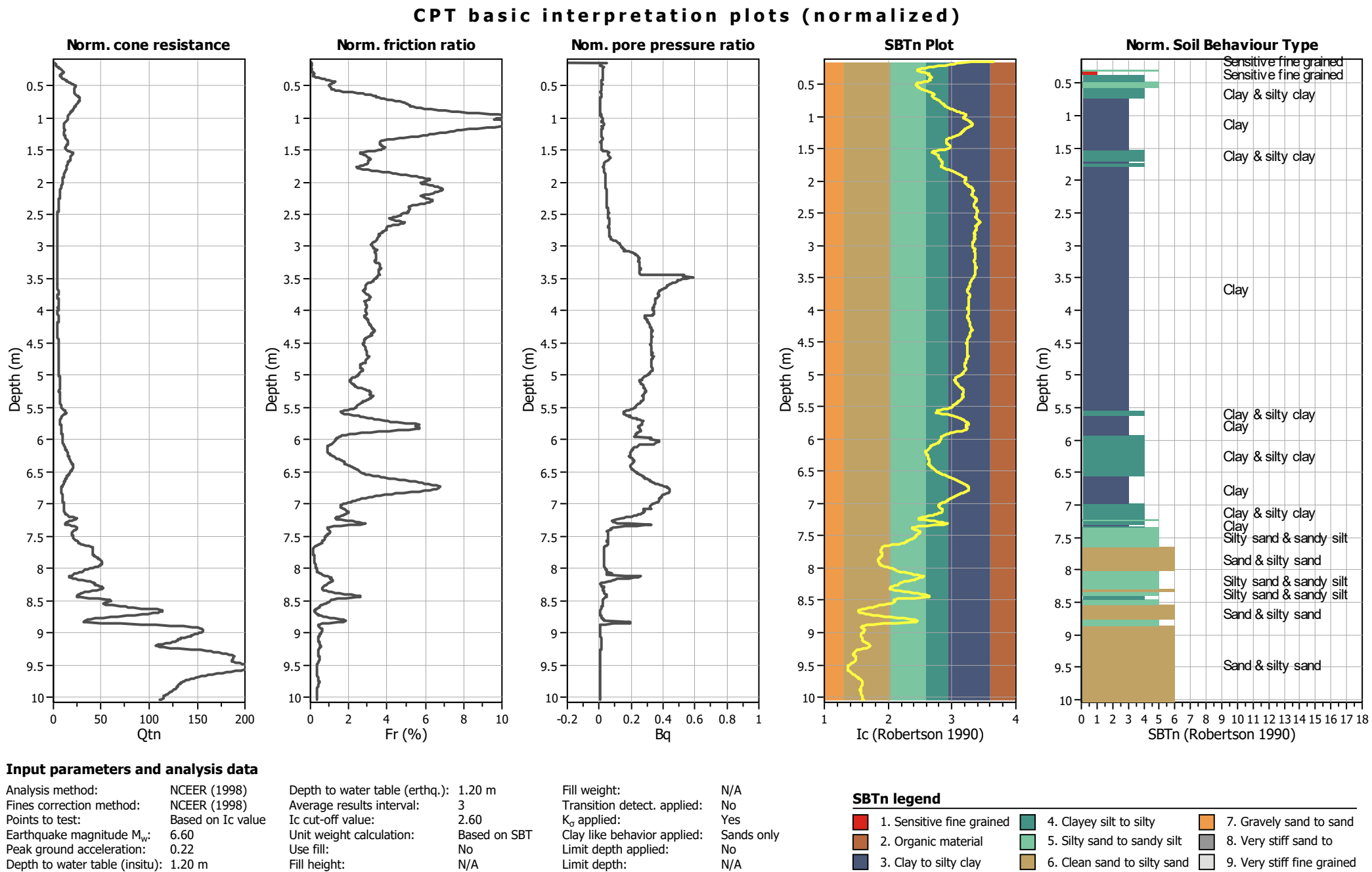


Input parameters and analysis data

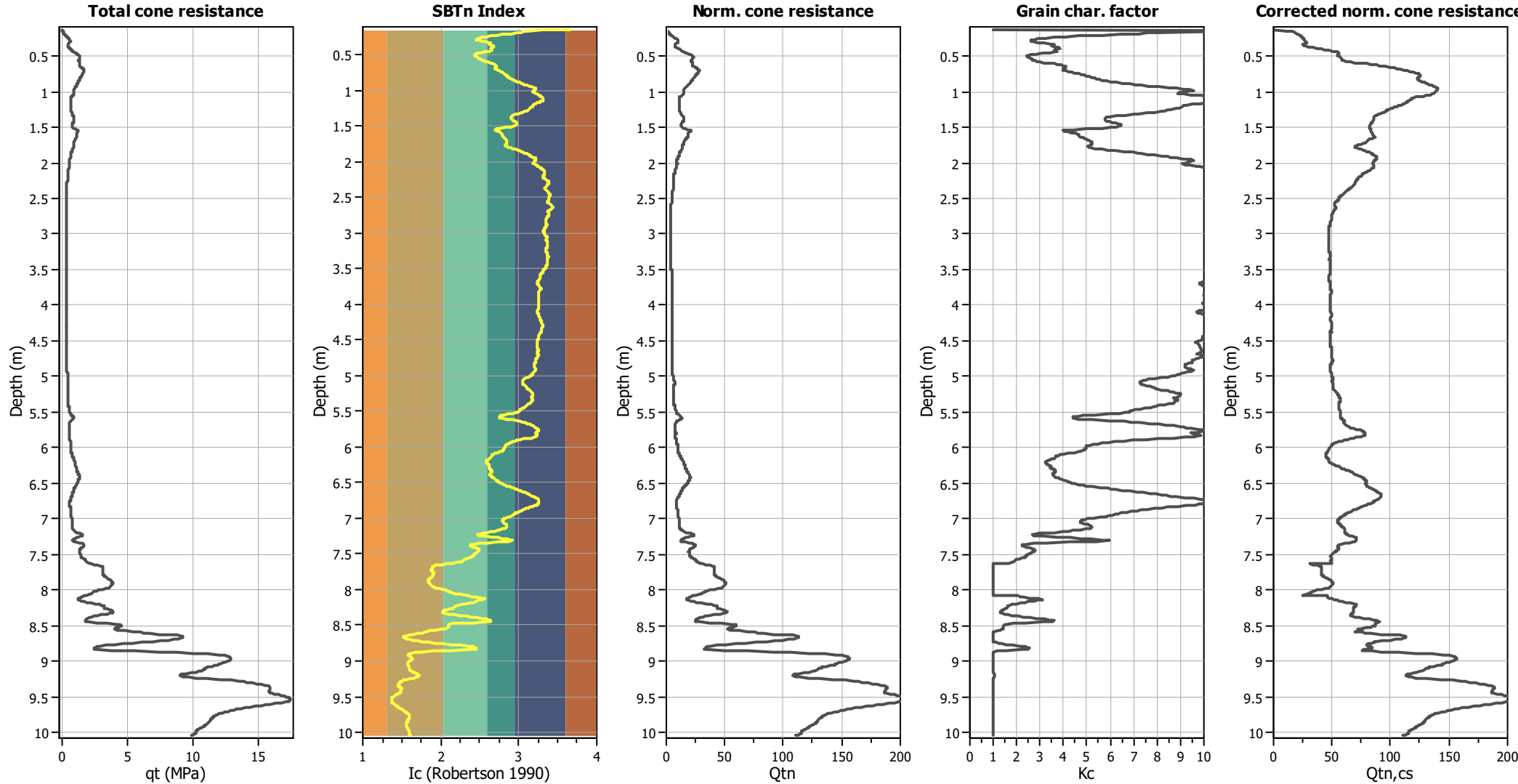
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



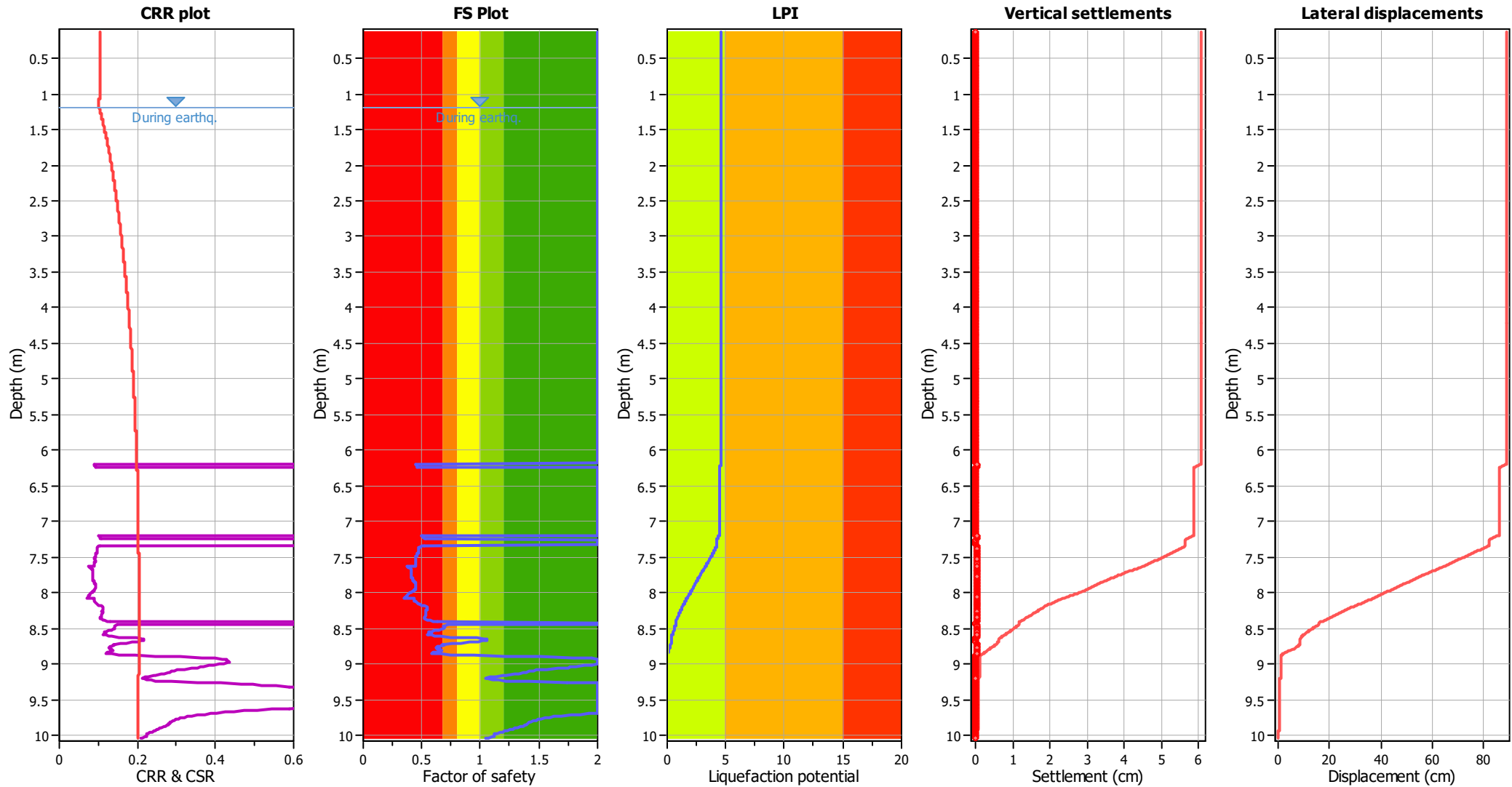
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

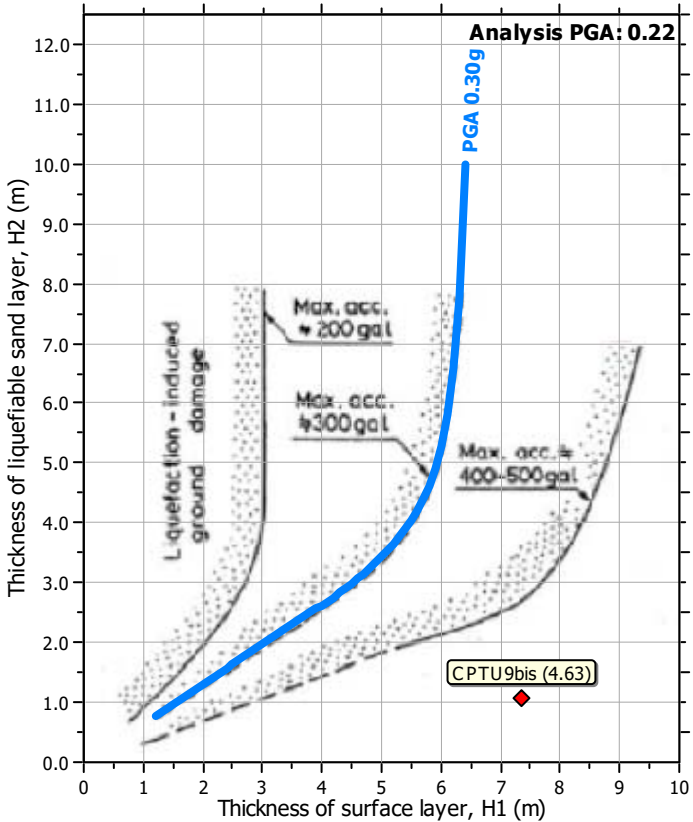
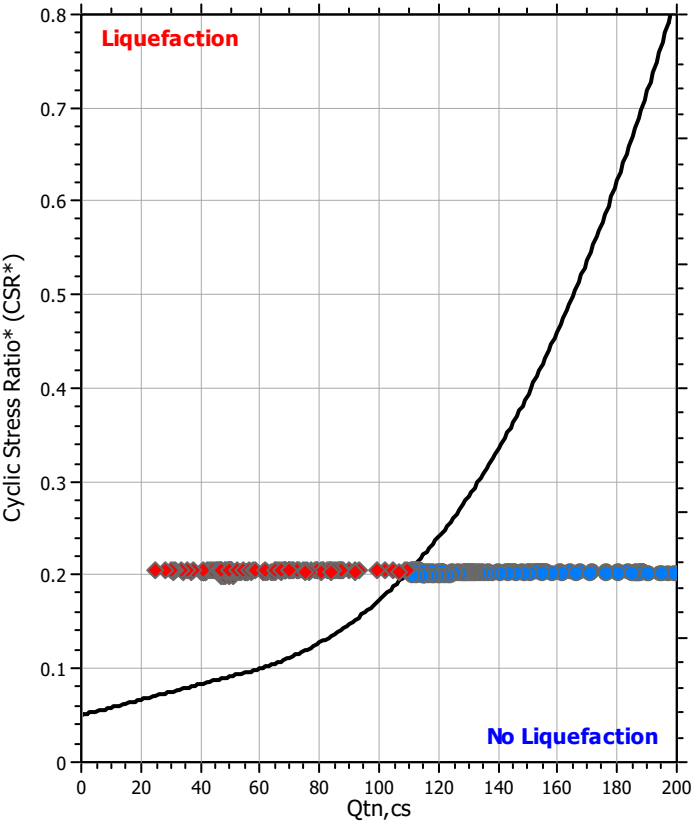
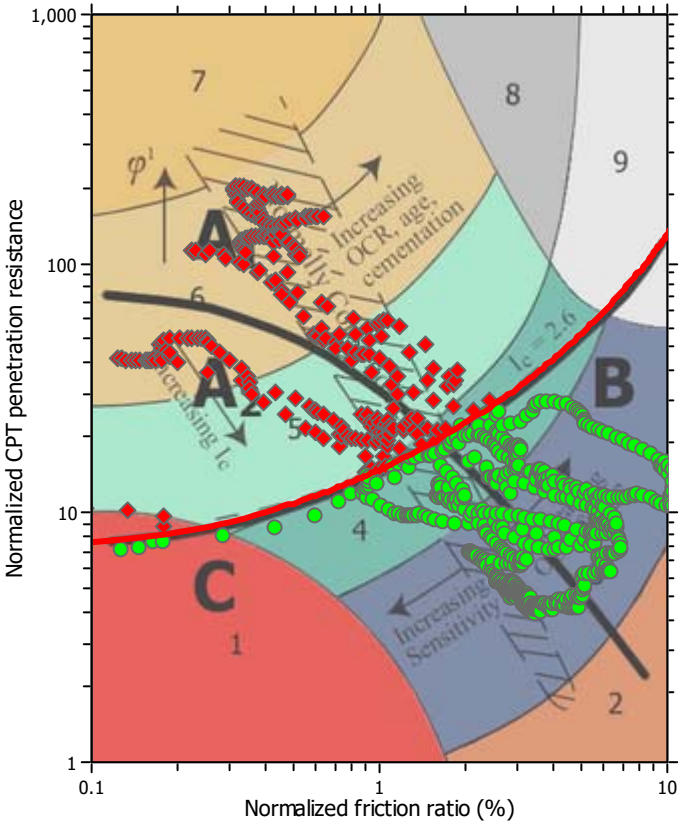
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Green	Unlike to liquefy
Dark Green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Green	Low risk

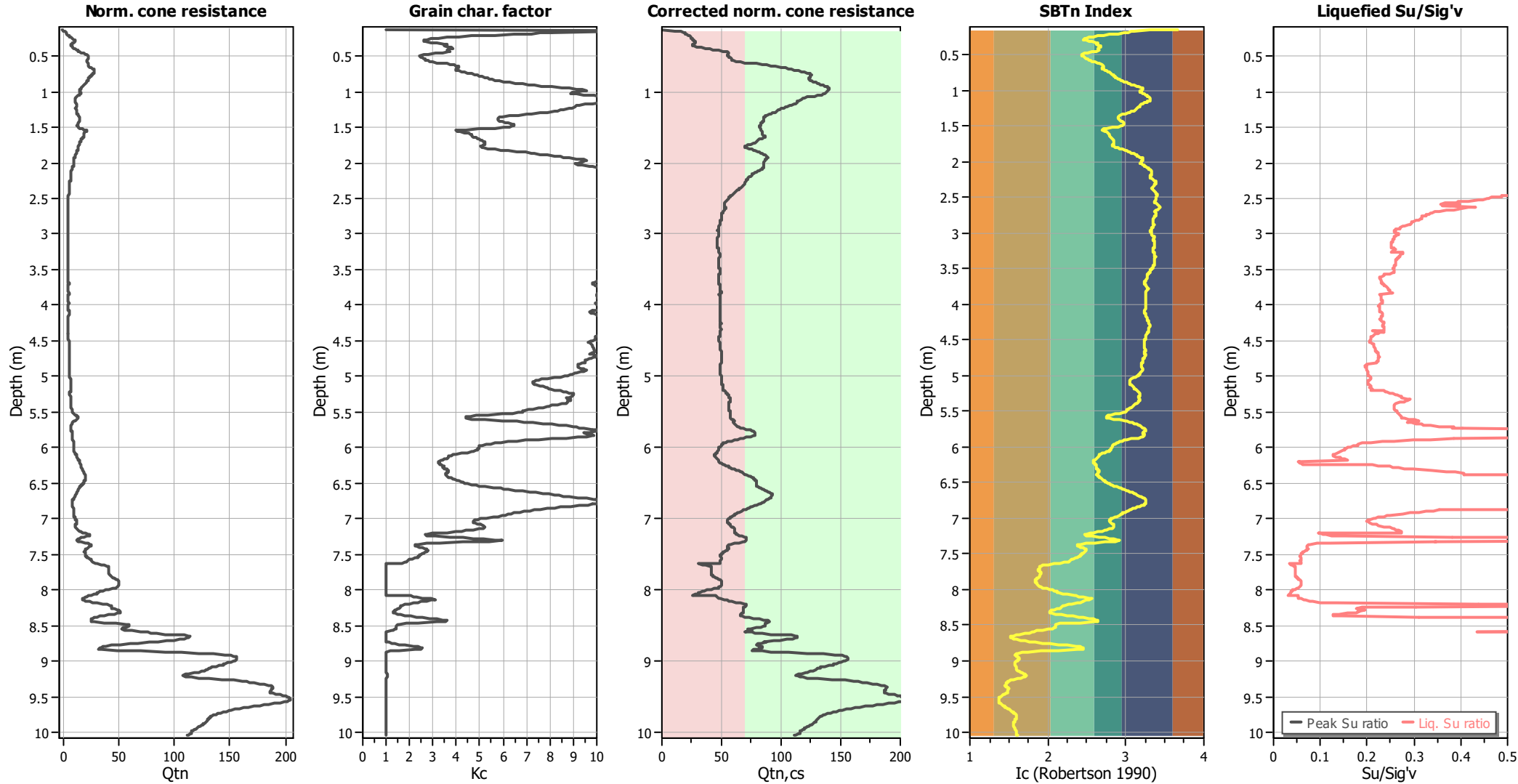
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	0.45	0.55	6.91	0.01	0.04	6.20	0.45	0.55	6.90	0.01	0.04
6.21	0.45	0.55	6.89	0.01	0.04	6.22	0.46	0.54	6.89	0.01	0.04
6.23	0.46	0.54	6.88	0.01	0.04	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	2.00	0.00	6.58	0.01	0.00	6.84	2.00	0.00	6.58	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.85	2.00	0.00	6.58	0.01	0.00	6.86	2.00	0.00	6.57	0.01	0.00
6.87	2.00	0.00	6.57	0.01	0.00	6.88	2.00	0.00	6.56	0.01	0.00
6.89	2.00	0.00	6.55	0.01	0.00	6.90	2.00	0.00	6.55	0.01	0.00
6.91	2.00	0.00	6.54	0.01	0.00	6.92	2.00	0.00	6.54	0.01	0.00
6.93	2.00	0.00	6.54	0.01	0.00	6.94	2.00	0.00	6.53	0.01	0.00
6.95	2.00	0.00	6.53	0.01	0.00	6.96	2.00	0.00	6.52	0.01	0.00
6.97	2.00	0.00	6.51	0.01	0.00	6.98	2.00	0.00	6.51	0.01	0.00
6.99	2.00	0.00	6.50	0.01	0.00	7.00	2.00	0.00	6.50	0.01	0.00
7.01	2.00	0.00	6.50	0.01	0.00	7.02	2.00	0.00	6.49	0.01	0.00
7.03	2.00	0.00	6.49	0.01	0.00	7.04	2.00	0.00	6.48	0.01	0.00
7.05	2.00	0.00	6.47	0.01	0.00	7.06	2.00	0.00	6.47	0.01	0.00
7.07	2.00	0.00	6.46	0.01	0.00	7.08	2.00	0.00	6.46	0.01	0.00
7.09	2.00	0.00	6.46	0.01	0.00	7.10	2.00	0.00	6.45	0.01	0.00
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	0.50	0.50	6.40	0.01	0.03
7.21	0.50	0.50	6.39	0.01	0.03	7.22	0.51	0.49	6.39	0.01	0.03
7.23	0.51	0.49	6.38	0.01	0.03	7.24	0.52	0.48	6.38	0.01	0.03
7.25	0.53	0.47	6.38	0.01	0.03	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	0.52	0.48	6.33	0.01	0.03
7.35	0.50	0.50	6.33	0.01	0.03	7.36	0.48	0.52	6.32	0.01	0.03
7.37	0.47	0.53	6.32	0.01	0.03	7.38	0.47	0.53	6.31	0.01	0.03
7.39	0.47	0.53	6.30	0.01	0.03	7.40	0.47	0.53	6.30	0.01	0.03
7.41	0.47	0.53	6.29	0.01	0.03	7.42	0.47	0.53	6.29	0.01	0.03
7.43	0.47	0.53	6.29	0.01	0.03	7.44	0.47	0.53	6.28	0.01	0.03
7.45	0.47	0.53	6.28	0.01	0.03	7.46	0.46	0.54	6.27	0.01	0.03
7.47	0.46	0.54	6.26	0.01	0.03	7.48	0.45	0.55	6.26	0.01	0.03
7.49	0.45	0.55	6.25	0.01	0.03	7.50	0.45	0.55	6.25	0.01	0.03
7.51	0.45	0.55	6.25	0.01	0.03	7.52	0.45	0.55	6.24	0.01	0.03
7.53	0.45	0.55	6.24	0.01	0.03	7.54	0.45	0.55	6.23	0.01	0.03
7.55	0.45	0.55	6.22	0.01	0.03	7.56	0.45	0.55	6.22	0.01	0.03
7.57	0.45	0.55	6.21	0.01	0.03	7.58	0.45	0.55	6.21	0.01	0.03
7.59	0.45	0.55	6.21	0.01	0.03	7.60	0.45	0.55	6.20	0.01	0.03
7.61	0.45	0.55	6.20	0.01	0.03	7.62	0.45	0.55	6.19	0.01	0.03
7.63	0.37	0.63	6.18	0.01	0.04	7.64	0.38	0.62	6.18	0.01	0.04
7.65	0.40	0.60	6.17	0.01	0.04	7.66	0.41	0.59	6.17	0.01	0.04
7.67	0.41	0.59	6.17	0.01	0.04	7.68	0.41	0.59	6.16	0.01	0.04
7.69	0.41	0.59	6.16	0.01	0.04	7.70	0.41	0.59	6.15	0.01	0.04
7.71	0.41	0.59	6.14	0.01	0.04	7.72	0.41	0.59	6.14	0.01	0.04
7.73	0.41	0.59	6.13	0.01	0.04	7.74	0.41	0.59	6.13	0.01	0.04
7.75	0.41	0.59	6.13	0.01	0.04	7.76	0.41	0.59	6.12	0.01	0.04
7.77	0.41	0.59	6.12	0.01	0.04	7.78	0.41	0.59	6.11	0.01	0.04
7.79	0.41	0.59	6.11	0.01	0.04	7.80	0.42	0.58	6.10	0.01	0.04

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.81	0.42	0.58	6.09	0.01	0.04	7.82	0.42	0.58	6.09	0.01	0.04
7.83	0.43	0.57	6.08	0.01	0.03	7.84	0.43	0.57	6.08	0.01	0.03
7.85	0.44	0.56	6.08	0.01	0.03	7.86	0.44	0.56	6.07	0.01	0.03
7.87	0.45	0.55	6.07	0.01	0.03	7.88	0.45	0.55	6.06	0.01	0.03
7.89	0.45	0.55	6.05	0.01	0.03	7.90	0.45	0.55	6.05	0.01	0.03
7.91	0.45	0.55	6.04	0.01	0.03	7.92	0.45	0.55	6.04	0.01	0.03
7.93	0.45	0.55	6.04	0.01	0.03	7.94	0.45	0.55	6.03	0.01	0.03
7.95	0.44	0.56	6.03	0.01	0.03	7.96	0.44	0.56	6.02	0.01	0.03
7.97	0.44	0.56	6.01	0.01	0.03	7.98	0.43	0.57	6.01	0.01	0.03
7.99	0.41	0.59	6.00	0.01	0.04	8.00	0.40	0.60	6.00	0.01	0.04
8.01	0.39	0.61	6.00	0.01	0.04	8.02	0.38	0.62	5.99	0.01	0.04
8.03	0.37	0.63	5.99	0.01	0.04	8.04	0.37	0.63	5.98	0.01	0.04
8.05	0.37	0.63	5.97	0.01	0.04	8.06	0.36	0.64	5.97	0.01	0.04
8.07	0.35	0.65	5.96	0.01	0.04	8.08	0.43	0.57	5.96	0.01	0.03
8.09	0.43	0.57	5.96	0.01	0.03	8.10	0.43	0.57	5.95	0.01	0.03
8.11	0.44	0.56	5.95	0.01	0.03	8.12	0.44	0.56	5.94	0.01	0.03
8.13	0.46	0.54	5.93	0.01	0.03	8.14	0.46	0.54	5.93	0.01	0.03
8.15	0.47	0.53	5.92	0.01	0.03	8.16	0.48	0.52	5.92	0.01	0.03
8.17	0.48	0.52	5.92	0.01	0.03	8.18	0.50	0.50	5.91	0.01	0.03
8.19	0.52	0.48	5.91	0.01	0.03	8.20	0.54	0.46	5.90	0.01	0.03
8.21	0.55	0.45	5.89	0.01	0.03	8.22	0.55	0.45	5.89	0.01	0.03
8.23	0.55	0.45	5.88	0.01	0.03	8.24	0.54	0.46	5.88	0.01	0.03
8.25	0.54	0.46	5.88	0.01	0.03	8.26	0.53	0.47	5.87	0.01	0.03
8.27	0.54	0.46	5.87	0.01	0.03	8.28	0.54	0.46	5.86	0.01	0.03
8.29	0.54	0.46	5.86	0.01	0.03	8.30	0.53	0.47	5.85	0.01	0.03
8.31	0.54	0.46	5.84	0.01	0.03	8.32	0.53	0.47	5.84	0.01	0.03
8.33	0.53	0.47	5.83	0.01	0.03	8.34	0.52	0.48	5.83	0.01	0.03
8.35	0.52	0.48	5.83	0.01	0.03	8.36	0.52	0.48	5.82	0.01	0.03
8.37	0.53	0.47	5.82	0.01	0.03	8.38	0.54	0.46	5.81	0.01	0.03
8.39	0.57	0.43	5.80	0.01	0.03	8.40	0.60	0.40	5.80	0.01	0.02
8.41	0.64	0.36	5.79	0.01	0.02	8.42	2.00	0.00	5.79	0.01	0.00
8.43	2.00	0.00	5.79	0.01	0.00	8.44	2.00	0.00	5.78	0.01	0.00
8.45	0.72	0.28	5.78	0.01	0.02	8.46	0.70	0.30	5.77	0.01	0.02
8.47	0.69	0.31	5.76	0.01	0.02	8.48	0.69	0.31	5.76	0.01	0.02
8.49	0.69	0.31	5.75	0.01	0.02	8.50	0.68	0.32	5.75	0.01	0.02
8.51	0.67	0.33	5.75	0.01	0.02	8.52	0.65	0.35	5.74	0.01	0.02
8.53	0.61	0.39	5.74	0.01	0.02	8.54	0.58	0.42	5.73	0.01	0.02
8.55	0.56	0.44	5.72	0.01	0.03	8.56	0.56	0.44	5.72	0.01	0.03
8.57	0.59	0.41	5.71	0.01	0.02	8.58	0.55	0.45	5.71	0.01	0.03
8.59	0.59	0.41	5.71	0.01	0.02	8.60	0.61	0.39	5.70	0.01	0.02
8.61	0.66	0.34	5.70	0.01	0.02	8.62	0.74	0.26	5.69	0.01	0.01
8.63	0.87	0.13	5.68	0.01	0.01	8.64	0.97	0.03	5.68	0.01	0.00
8.65	1.03	0.00	5.67	0.01	0.00	8.66	1.06	0.00	5.67	0.01	0.00
8.67	1.05	0.00	5.67	0.01	0.00	8.68	1.02	0.00	5.66	0.01	0.00
8.69	0.98	0.02	5.66	0.01	0.00	8.70	0.91	0.09	5.65	0.01	0.00
8.71	0.84	0.16	5.64	0.01	0.01	8.72	0.76	0.24	5.64	0.01	0.01
8.73	0.68	0.32	5.63	0.01	0.02	8.74	0.69	0.31	5.63	0.01	0.02
8.75	0.65	0.35	5.63	0.01	0.02	8.76	0.63	0.37	5.62	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.77	0.62	0.38	5.62	0.01	0.02	8.78	0.62	0.38	5.61	0.01	0.02
8.79	0.64	0.36	5.61	0.01	0.02	8.80	0.66	0.34	5.60	0.01	0.02
8.81	0.67	0.33	5.59	0.01	0.02	8.82	0.65	0.35	5.59	0.01	0.02
8.83	0.63	0.37	5.58	0.01	0.02	8.84	0.59	0.41	5.58	0.01	0.02
8.85	0.59	0.41	5.58	0.01	0.02	8.86	0.66	0.34	5.57	0.01	0.02
8.87	0.74	0.26	5.57	0.01	0.01	8.88	0.94	0.06	5.56	0.01	0.00
8.89	1.21	0.00	5.55	0.01	0.00	8.90	1.51	0.00	5.55	0.01	0.00
8.91	1.79	0.00	5.54	0.01	0.00	8.92	1.95	0.00	5.54	0.01	0.00
8.93	2.00	0.00	5.54	0.01	0.00	8.94	2.00	0.00	5.53	0.01	0.00
8.95	2.00	0.00	5.53	0.01	0.00	8.96	2.00	0.00	5.52	0.01	0.00
8.97	2.00	0.00	5.51	0.01	0.00	8.98	2.00	0.00	5.51	0.01	0.00
8.99	2.00	0.00	5.50	0.01	0.00	9.00	2.00	0.00	5.50	0.01	0.00
9.01	1.94	0.00	5.50	0.01	0.00	9.02	1.89	0.00	5.49	0.01	0.00
9.03	1.81	0.00	5.49	0.01	0.00	9.04	1.77	0.00	5.48	0.01	0.00
9.05	1.75	0.00	5.47	0.01	0.00	9.06	1.66	0.00	5.47	0.01	0.00
9.07	1.57	0.00	5.46	0.01	0.00	9.08	1.48	0.00	5.46	0.01	0.00
9.09	1.46	0.00	5.46	0.01	0.00	9.10	1.44	0.00	5.45	0.01	0.00
9.11	1.41	0.00	5.45	0.01	0.00	9.12	1.39	0.00	5.44	0.01	0.00
9.13	1.37	0.00	5.43	0.01	0.00	9.14	1.33	0.00	5.43	0.01	0.00
9.15	1.29	0.00	5.42	0.01	0.00	9.16	1.21	0.00	5.42	0.01	0.00
9.17	1.19	0.00	5.42	0.01	0.00	9.18	1.12	0.00	5.41	0.01	0.00
9.19	1.08	0.00	5.41	0.01	0.00	9.20	1.05	0.00	5.40	0.01	0.00
9.21	1.06	0.00	5.39	0.01	0.00	9.22	1.10	0.00	5.39	0.01	0.00
9.23	1.15	0.00	5.38	0.01	0.00	9.24	1.22	0.00	5.38	0.01	0.00
9.25	1.41	0.00	5.38	0.01	0.00	9.26	1.74	0.00	5.37	0.01	0.00
9.27	2.00	0.00	5.37	0.01	0.00	9.28	2.00	0.00	5.36	0.01	0.00
9.29	2.00	0.00	5.36	0.01	0.00	9.30	2.00	0.00	5.35	0.01	0.00
9.31	2.00	0.00	5.34	0.01	0.00	9.32	2.00	0.00	5.34	0.01	0.00
9.33	2.00	0.00	5.33	0.01	0.00	9.34	2.00	0.00	5.33	0.01	0.00
9.35	2.00	0.00	5.33	0.01	0.00	9.36	2.00	0.00	5.32	0.01	0.00
9.37	2.00	0.00	5.32	0.01	0.00	9.38	2.00	0.00	5.31	0.01	0.00
9.39	2.00	0.00	5.30	0.01	0.00	9.40	2.00	0.00	5.30	0.01	0.00
9.41	2.00	0.00	5.29	0.01	0.00	9.42	2.00	0.00	5.29	0.01	0.00
9.43	2.00	0.00	5.29	0.01	0.00	9.44	2.00	0.00	5.28	0.01	0.00
9.45	2.00	0.00	5.28	0.01	0.00	9.46	2.00	0.00	5.27	0.01	0.00
9.47	2.00	0.00	5.26	0.01	0.00	9.48	2.00	0.00	5.26	0.01	0.00
9.49	2.00	0.00	5.25	0.01	0.00	9.50	2.00	0.00	5.25	0.01	0.00
9.51	2.00	0.00	5.25	0.01	0.00	9.52	2.00	0.00	5.24	0.01	0.00
9.53	2.00	0.00	5.24	0.01	0.00	9.54	2.00	0.00	5.23	0.01	0.00
9.55	2.00	0.00	5.22	0.01	0.00	9.56	2.00	0.00	5.22	0.01	0.00
9.57	2.00	0.00	5.21	0.01	0.00	9.58	2.00	0.00	5.21	0.01	0.00
9.59	2.00	0.00	5.21	0.01	0.00	9.60	2.00	0.00	5.20	0.01	0.00
9.61	2.00	0.00	5.20	0.01	0.00	9.62	2.00	0.00	5.19	0.01	0.00
9.63	2.00	0.00	5.18	0.01	0.00	9.64	2.00	0.00	5.18	0.01	0.00
9.65	2.00	0.00	5.17	0.01	0.00	9.66	2.00	0.00	5.17	0.01	0.00
9.67	2.00	0.00	5.17	0.01	0.00	9.68	2.00	0.00	5.16	0.01	0.00
9.69	2.00	0.00	5.16	0.01	0.00	9.70	1.92	0.00	5.15	0.01	0.00
9.71	1.85	0.00	5.14	0.01	0.00	9.72	1.77	0.00	5.14	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
9.73	1.70	0.00	5.13	0.01	0.00	9.74	1.63	0.00	5.13	0.01	0.00
9.75	1.59	0.00	5.13	0.01	0.00	9.76	1.55	0.00	5.12	0.01	0.00
9.77	1.52	0.00	5.12	0.01	0.00	9.78	1.49	0.00	5.11	0.01	0.00
9.79	1.47	0.00	5.11	0.01	0.00	9.80	1.45	0.00	5.10	0.01	0.00
9.81	1.43	0.00	5.09	0.01	0.00	9.82	1.42	0.00	5.09	0.01	0.00
9.83	1.41	0.00	5.08	0.01	0.00	9.84	1.40	0.00	5.08	0.01	0.00
9.85	1.39	0.00	5.08	0.01	0.00	9.86	1.38	0.00	5.07	0.01	0.00
9.87	1.36	0.00	5.07	0.01	0.00	9.88	1.34	0.00	5.06	0.01	0.00
9.89	1.31	0.00	5.05	0.01	0.00	9.90	1.29	0.00	5.05	0.01	0.00
9.91	1.28	0.00	5.04	0.01	0.00	9.92	1.25	0.00	5.04	0.01	0.00
9.93	1.23	0.00	5.04	0.01	0.00	9.94	1.20	0.00	5.03	0.01	0.00
9.95	1.19	0.00	5.03	0.01	0.00	9.96	1.16	0.00	5.02	0.01	0.00
9.97	1.14	0.00	5.01	0.01	0.00	9.98	1.12	0.00	5.01	0.01	0.00
9.99	1.12	0.00	5.00	0.01	0.00	10.00	1.11	0.00	5.00	0.01	0.00
10.01	1.12	0.00	5.00	0.01	0.00	10.02	1.10	0.00	4.99	0.01	0.00
10.03	1.07	0.00	4.99	0.01	0.00	10.04	1.04	0.00	4.98	0.01	0.00

Overall liquefaction potential: 4.63

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

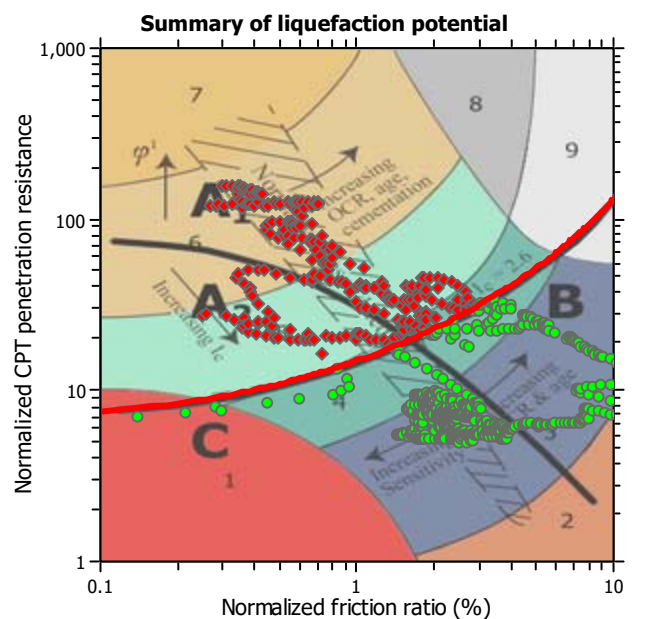
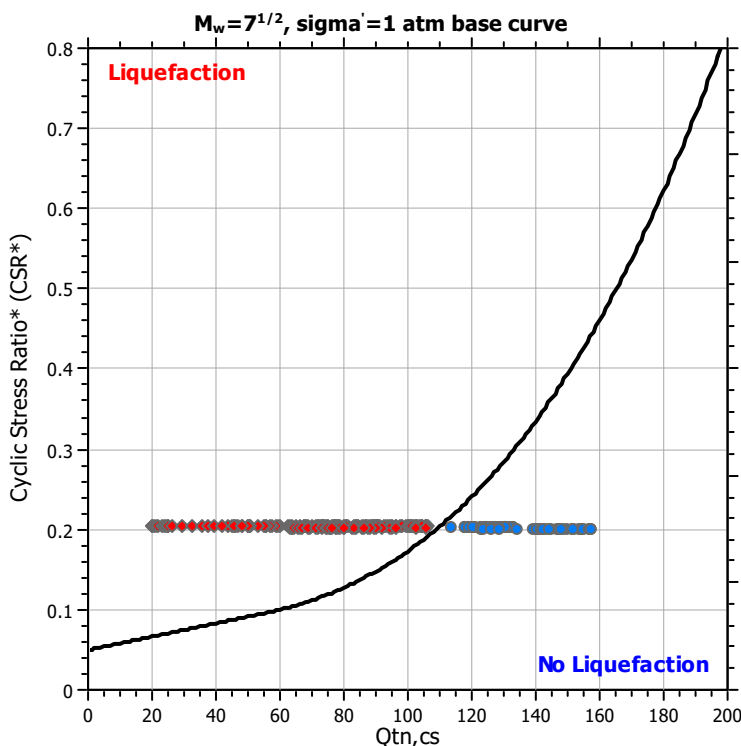
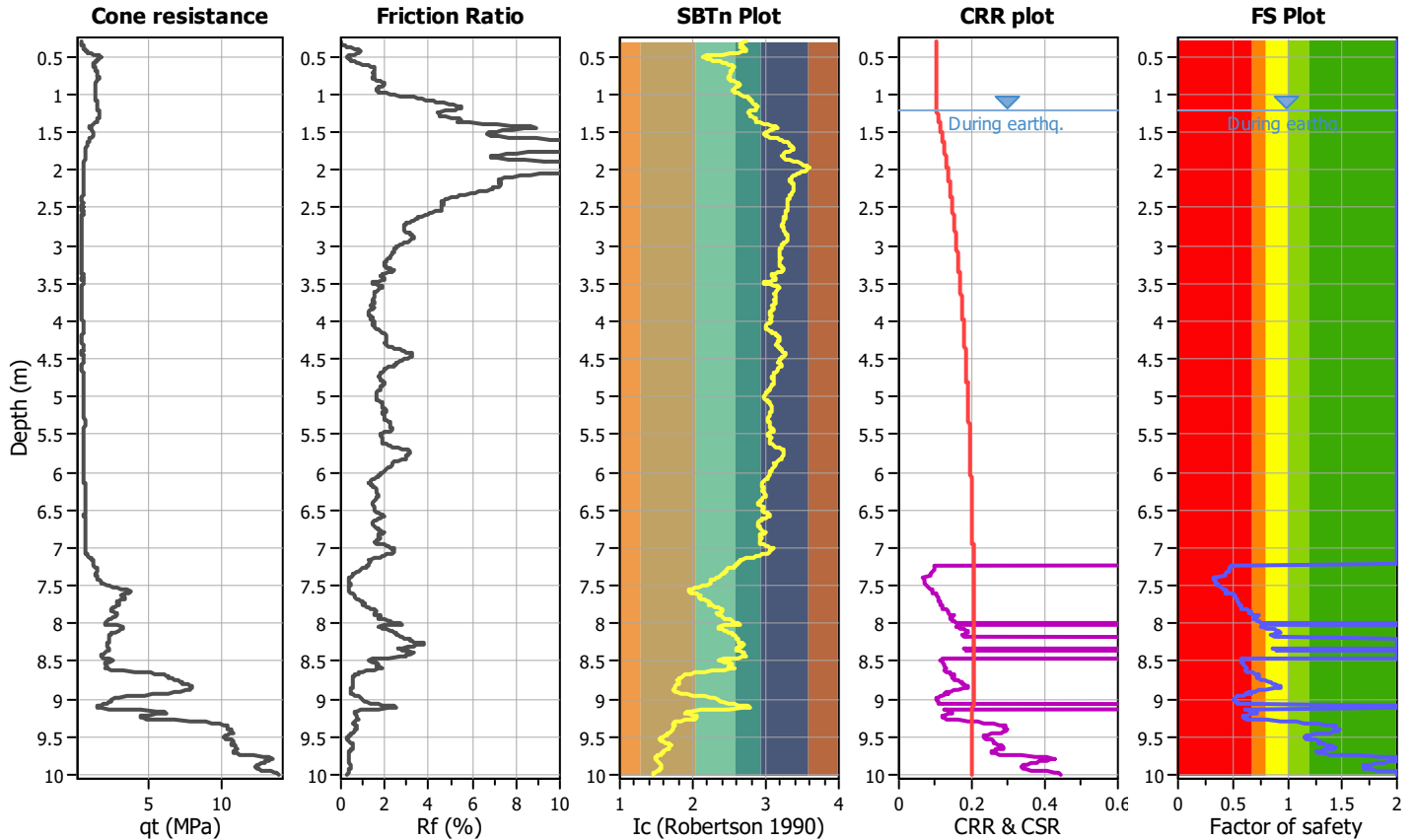
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

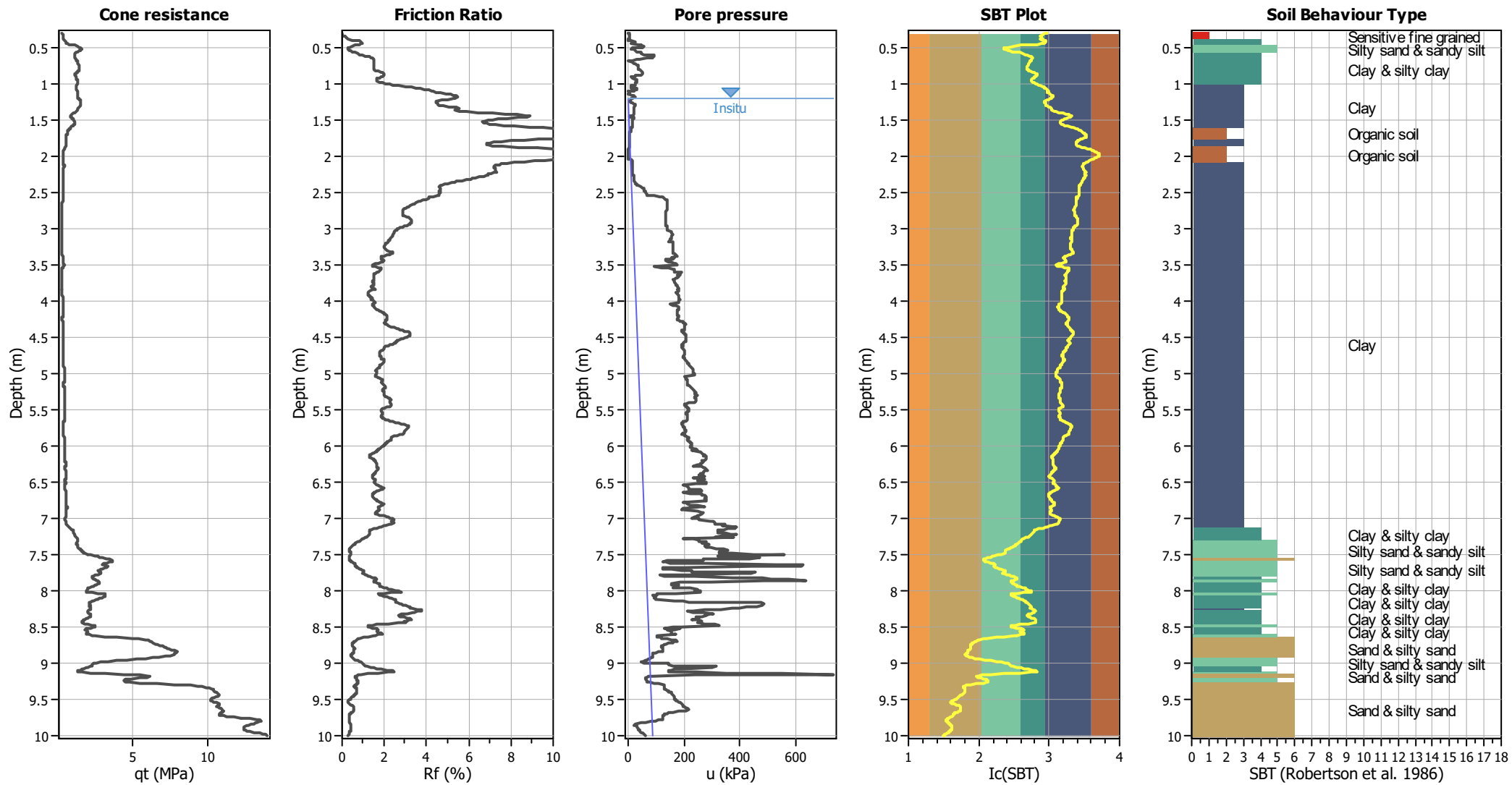
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU10bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

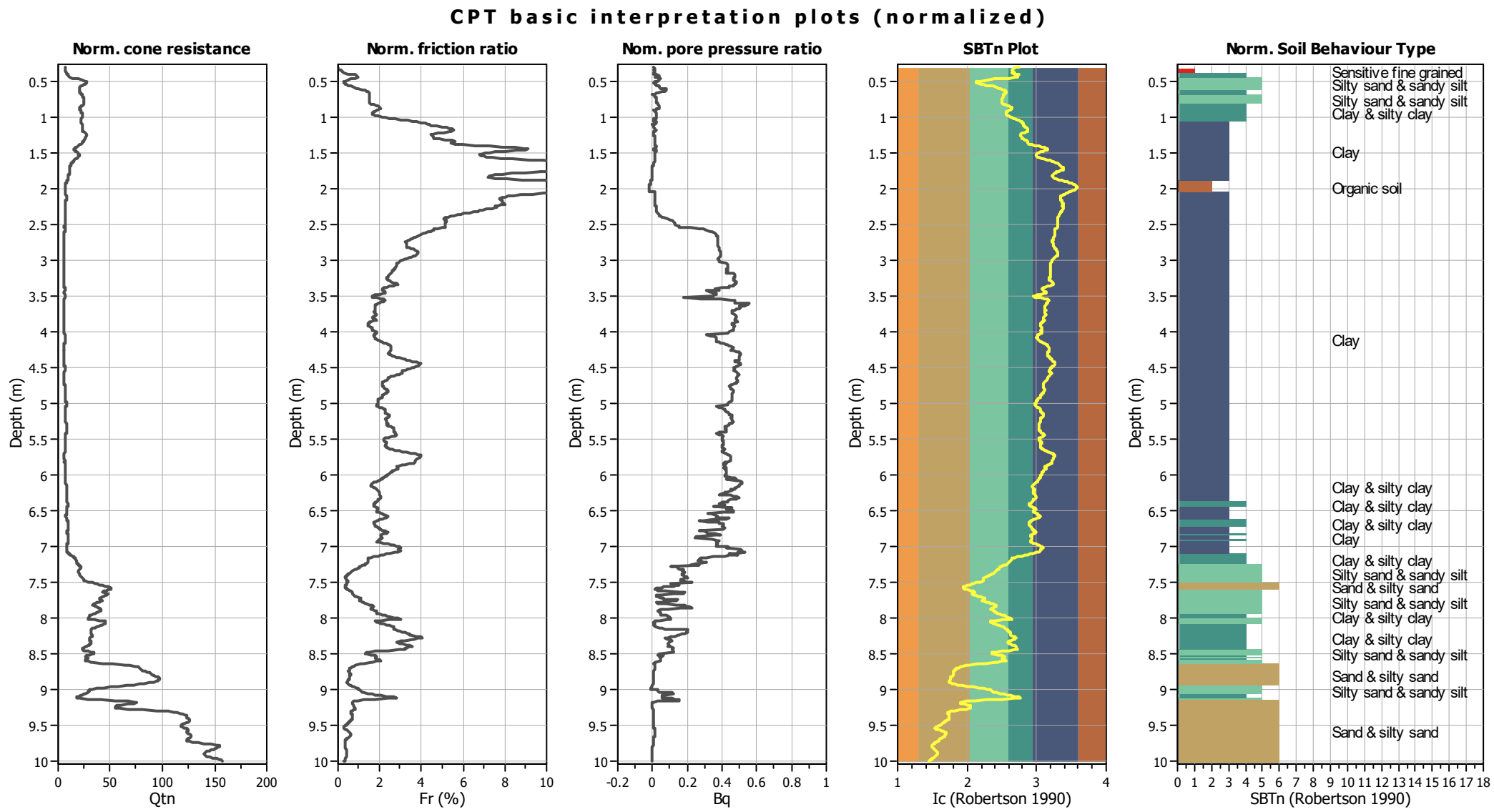


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

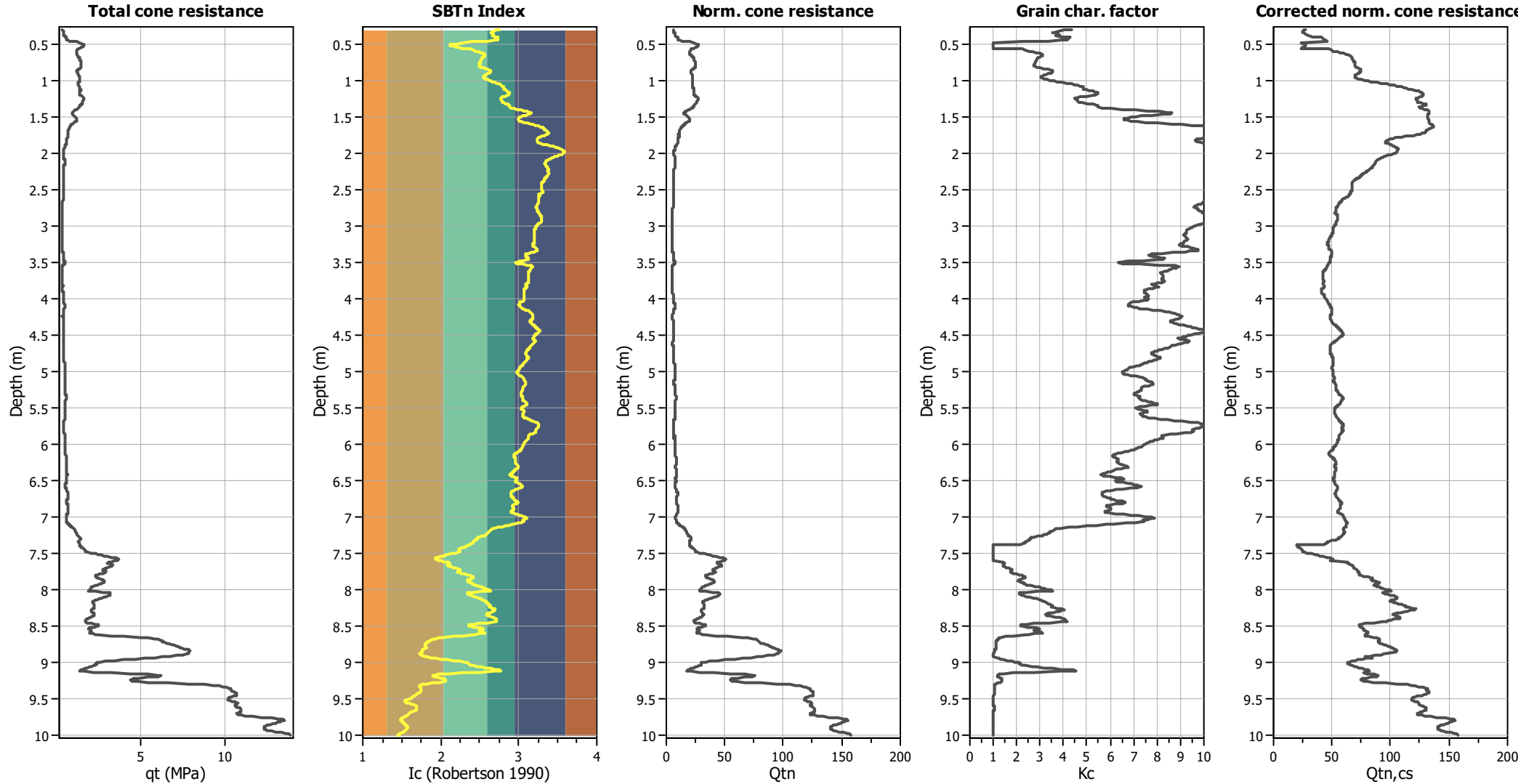


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBTn legend		
1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

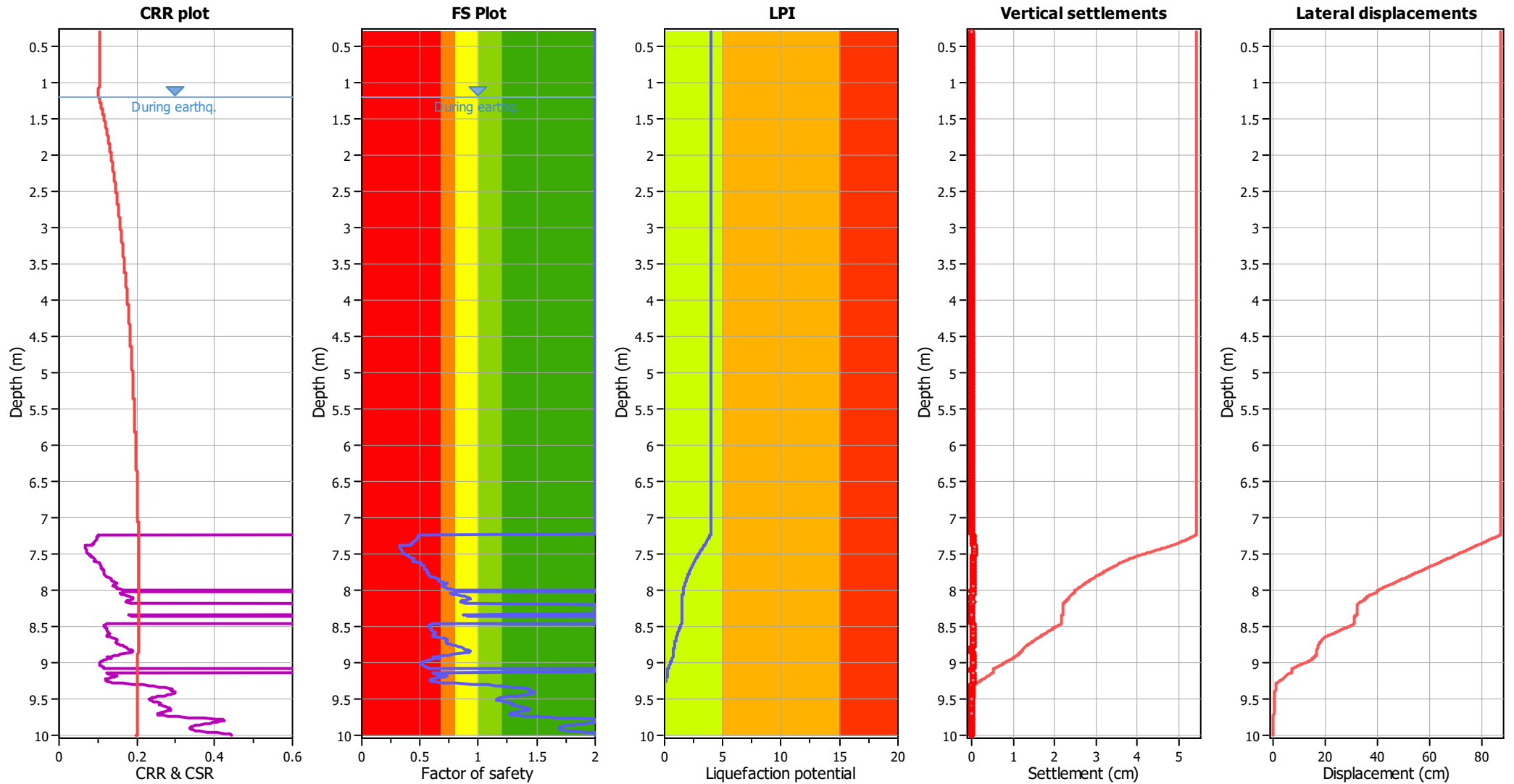
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

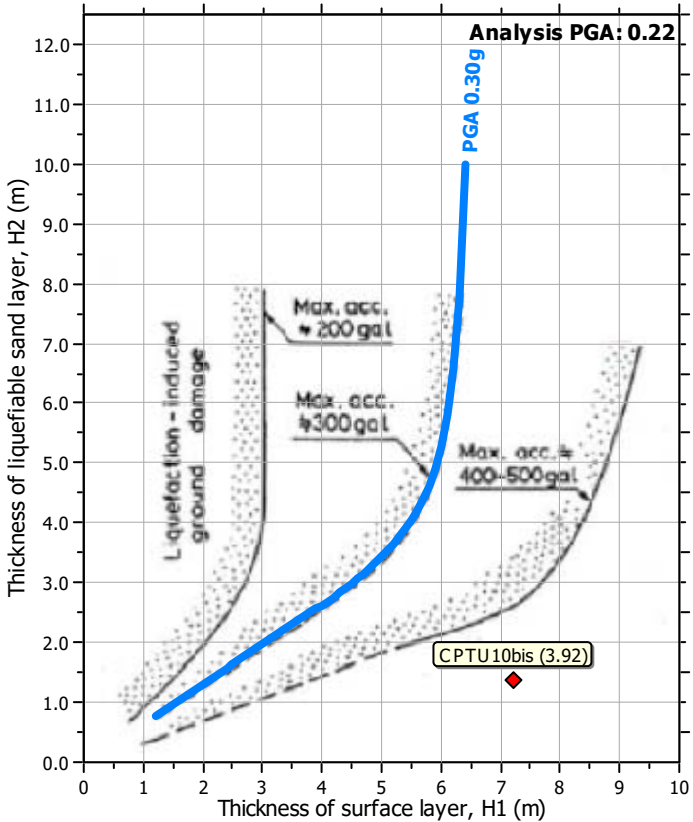
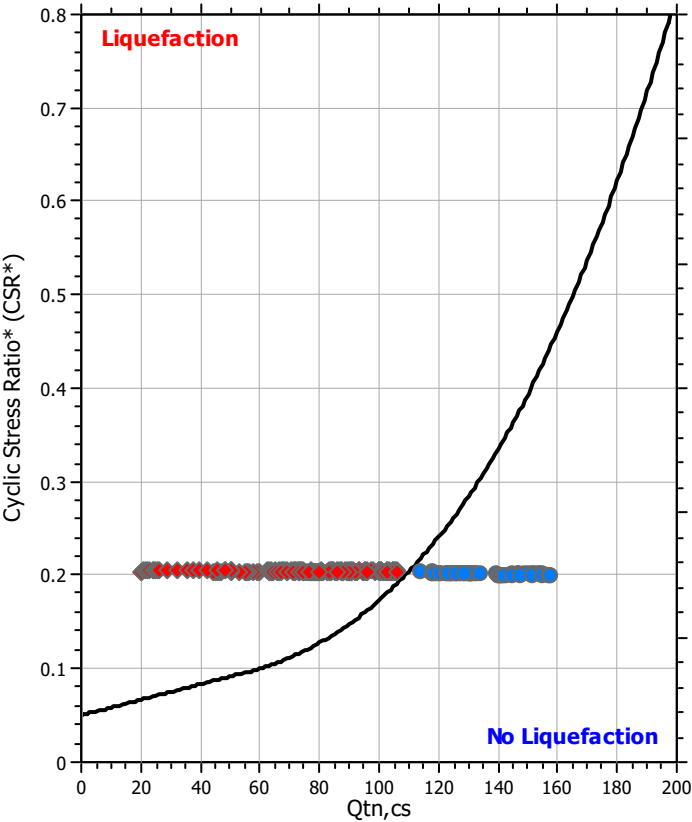
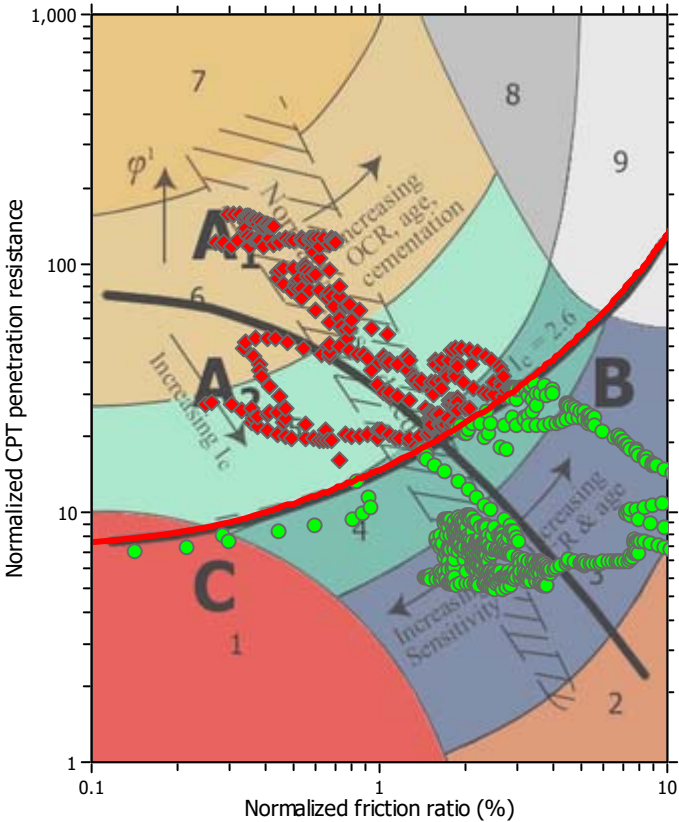
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

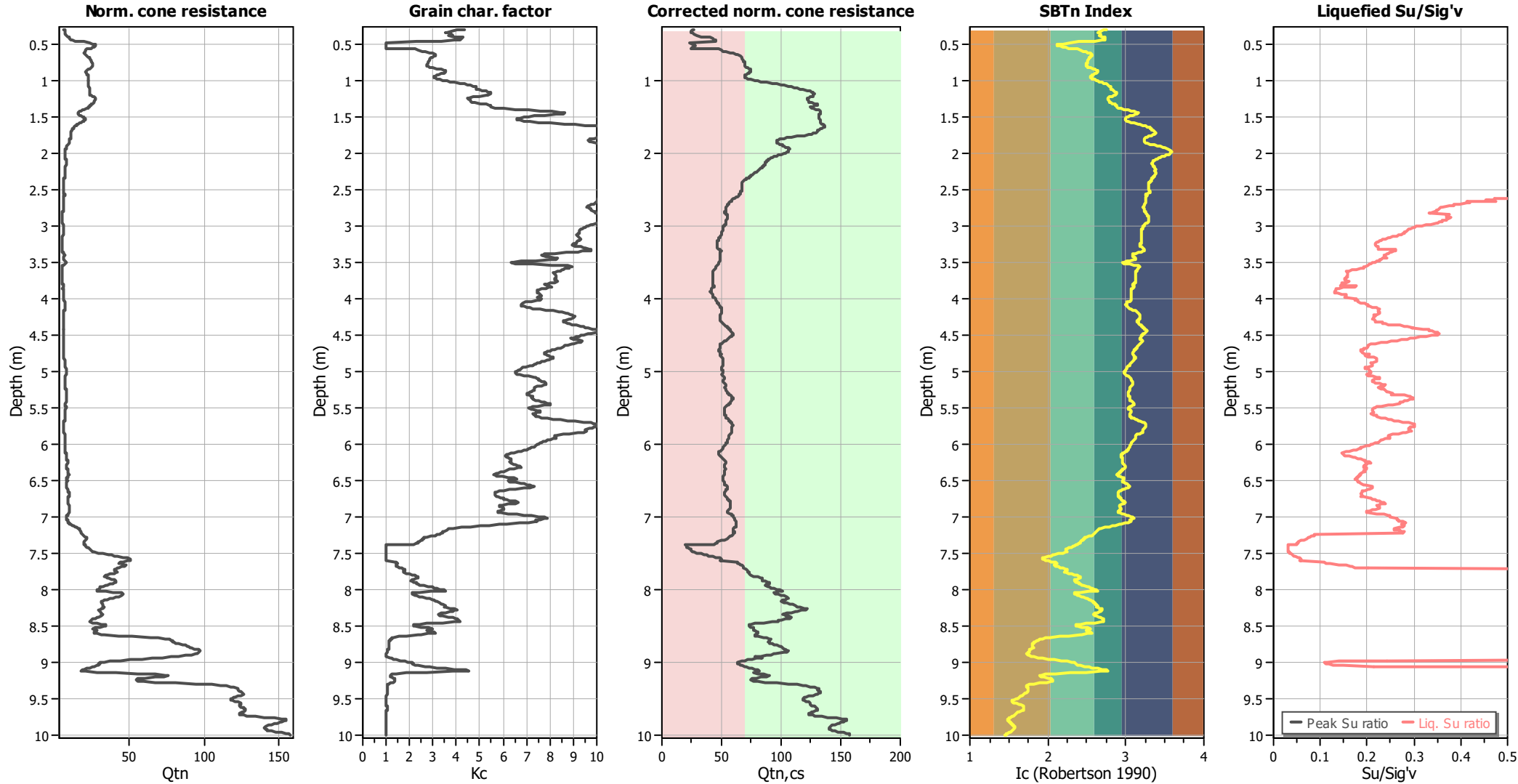
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.30	2.00	0.00	9.85	0.01	0.00	0.31	2.00	0.00	9.85	0.01	0.00
0.32	2.00	0.00	9.84	0.01	0.00	0.33	2.00	0.00	9.84	0.01	0.00
0.34	2.00	0.00	9.83	0.01	0.00	0.35	2.00	0.00	9.82	0.01	0.00
0.36	2.00	0.00	9.82	0.01	0.00	0.37	2.00	0.00	9.81	0.01	0.00
0.38	2.00	0.00	9.81	0.01	0.00	0.39	2.00	0.00	9.80	0.01	0.00
0.40	2.00	0.00	9.80	0.01	0.00	0.41	2.00	0.00	9.79	0.01	0.00
0.42	2.00	0.00	9.79	0.01	0.00	0.43	2.00	0.00	9.79	0.01	0.00
0.44	2.00	0.00	9.78	0.01	0.00	0.45	2.00	0.00	9.78	0.01	0.00
0.46	2.00	0.00	9.77	0.01	0.00	0.47	2.00	0.00	9.77	0.01	0.00
0.48	2.00	0.00	9.76	0.01	0.00	0.49	2.00	0.00	9.76	0.01	0.00
0.50	2.00	0.00	9.75	0.01	0.00	0.51	2.00	0.00	9.74	0.01	0.00
0.52	2.00	0.00	9.74	0.01	0.00	0.53	2.00	0.00	9.73	0.01	0.00
0.54	2.00	0.00	9.73	0.01	0.00	0.55	2.00	0.00	9.72	0.01	0.00
0.56	2.00	0.00	9.72	0.01	0.00	0.57	2.00	0.00	9.71	0.01	0.00
0.58	2.00	0.00	9.71	0.01	0.00	0.59	2.00	0.00	9.71	0.01	0.00
0.60	2.00	0.00	9.70	0.01	0.00	0.61	2.00	0.00	9.70	0.01	0.00
0.62	2.00	0.00	9.69	0.01	0.00	0.63	2.00	0.00	9.69	0.01	0.00
0.64	2.00	0.00	9.68	0.01	0.00	0.65	2.00	0.00	9.68	0.01	0.00
0.66	2.00	0.00	9.67	0.01	0.00	0.67	2.00	0.00	9.66	0.01	0.00
0.68	2.00	0.00	9.66	0.01	0.00	0.69	2.00	0.00	9.65	0.01	0.00
0.70	2.00	0.00	9.65	0.01	0.00	0.71	2.00	0.00	9.64	0.01	0.00
0.72	2.00	0.00	9.64	0.01	0.00	0.73	2.00	0.00	9.63	0.01	0.00
0.74	2.00	0.00	9.63	0.01	0.00	0.75	2.00	0.00	9.63	0.01	0.00
0.76	2.00	0.00	9.62	0.01	0.00	0.77	2.00	0.00	9.62	0.01	0.00
0.78	2.00	0.00	9.61	0.01	0.00	0.79	2.00	0.00	9.61	0.01	0.00
0.80	2.00	0.00	9.60	0.01	0.00	0.81	2.00	0.00	9.60	0.01	0.00
0.82	2.00	0.00	9.59	0.01	0.00	0.83	2.00	0.00	9.59	0.01	0.00
0.84	2.00	0.00	9.58	0.01	0.00	0.85	2.00	0.00	9.57	0.01	0.00
0.86	2.00	0.00	9.57	0.01	0.00	0.87	2.00	0.00	9.56	0.01	0.00
0.88	2.00	0.00	9.56	0.01	0.00	0.89	2.00	0.00	9.55	0.01	0.00
0.90	2.00	0.00	9.55	0.01	0.00	0.91	2.00	0.00	9.54	0.01	0.00
0.92	2.00	0.00	9.54	0.01	0.00	0.93	2.00	0.00	9.54	0.01	0.00
0.94	2.00	0.00	9.53	0.01	0.00	0.95	2.00	0.00	9.53	0.01	0.00
0.96	2.00	0.00	9.52	0.01	0.00	0.97	2.00	0.00	9.52	0.01	0.00
0.98	2.00	0.00	9.51	0.01	0.00	0.99	2.00	0.00	9.51	0.01	0.00
1.00	2.00	0.00	9.50	0.01	0.00	1.01	2.00	0.00	9.49	0.01	0.00
1.02	2.00	0.00	9.49	0.01	0.00	1.03	2.00	0.00	9.48	0.01	0.00
1.04	2.00	0.00	9.48	0.01	0.00	1.05	2.00	0.00	9.47	0.01	0.00
1.06	2.00	0.00	9.47	0.01	0.00	1.07	2.00	0.00	9.46	0.01	0.00
1.08	2.00	0.00	9.46	0.01	0.00	1.09	2.00	0.00	9.46	0.01	0.00
1.10	2.00	0.00	9.45	0.01	0.00	1.11	2.00	0.00	9.45	0.01	0.00
1.12	2.00	0.00	9.44	0.01	0.00	1.13	2.00	0.00	9.44	0.01	0.00
1.14	2.00	0.00	9.43	0.01	0.00	1.15	2.00	0.00	9.43	0.01	0.00
1.16	2.00	0.00	9.42	0.01	0.00	1.17	2.00	0.00	9.41	0.01	0.00
1.18	2.00	0.00	9.41	0.01	0.00	1.19	2.00	0.00	9.40	0.01	0.00
1.20	2.00	0.00	9.40	0.01	0.00	1.21	2.00	0.00	9.39	0.01	0.00
1.22	2.00	0.00	9.39	0.01	0.00	1.23	2.00	0.00	9.38	0.01	0.00
1.24	2.00	0.00	9.38	0.01	0.00	1.25	2.00	0.00	9.38	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.26	2.00	0.00	9.37	0.01	0.00	1.27	2.00	0.00	9.37	0.01	0.00
1.28	2.00	0.00	9.36	0.01	0.00	1.29	2.00	0.00	9.36	0.01	0.00
1.30	2.00	0.00	9.35	0.01	0.00	1.31	2.00	0.00	9.35	0.01	0.00
1.32	2.00	0.00	9.34	0.01	0.00	1.33	2.00	0.00	9.34	0.01	0.00
1.34	2.00	0.00	9.33	0.01	0.00	1.35	2.00	0.00	9.32	0.01	0.00
1.36	2.00	0.00	9.32	0.01	0.00	1.37	2.00	0.00	9.31	0.01	0.00
1.38	2.00	0.00	9.31	0.01	0.00	1.39	2.00	0.00	9.30	0.01	0.00
1.40	2.00	0.00	9.30	0.01	0.00	1.41	2.00	0.00	9.29	0.01	0.00
1.42	2.00	0.00	9.29	0.01	0.00	1.43	2.00	0.00	9.29	0.01	0.00
1.44	2.00	0.00	9.28	0.01	0.00	1.45	2.00	0.00	9.28	0.01	0.00
1.46	2.00	0.00	9.27	0.01	0.00	1.47	2.00	0.00	9.27	0.01	0.00
1.48	2.00	0.00	9.26	0.01	0.00	1.49	2.00	0.00	9.26	0.01	0.00
1.50	2.00	0.00	9.25	0.01	0.00	1.51	2.00	0.00	9.24	0.01	0.00
1.52	2.00	0.00	9.24	0.01	0.00	1.53	2.00	0.00	9.23	0.01	0.00
1.54	2.00	0.00	9.23	0.01	0.00	1.55	2.00	0.00	9.22	0.01	0.00
1.56	2.00	0.00	9.22	0.01	0.00	1.57	2.00	0.00	9.21	0.01	0.00
1.58	2.00	0.00	9.21	0.01	0.00	1.59	2.00	0.00	9.21	0.01	0.00
1.60	2.00	0.00	9.20	0.01	0.00	1.61	2.00	0.00	9.20	0.01	0.00
1.62	2.00	0.00	9.19	0.01	0.00	1.63	2.00	0.00	9.19	0.01	0.00
1.64	2.00	0.00	9.18	0.01	0.00	1.65	2.00	0.00	9.18	0.01	0.00
1.66	2.00	0.00	9.17	0.01	0.00	1.67	2.00	0.00	9.16	0.01	0.00
1.68	2.00	0.00	9.16	0.01	0.00	1.69	2.00	0.00	9.15	0.01	0.00
1.70	2.00	0.00	9.15	0.01	0.00	1.71	2.00	0.00	9.14	0.01	0.00
1.72	2.00	0.00	9.14	0.01	0.00	1.73	2.00	0.00	9.13	0.01	0.00
1.74	2.00	0.00	9.13	0.01	0.00	1.75	2.00	0.00	9.13	0.01	0.00
1.76	2.00	0.00	9.12	0.01	0.00	1.77	2.00	0.00	9.12	0.01	0.00
1.78	2.00	0.00	9.11	0.01	0.00	1.79	2.00	0.00	9.11	0.01	0.00
1.80	2.00	0.00	9.10	0.01	0.00	1.81	2.00	0.00	9.10	0.01	0.00
1.82	2.00	0.00	9.09	0.01	0.00	1.83	2.00	0.00	9.09	0.01	0.00
1.84	2.00	0.00	9.08	0.01	0.00	1.85	2.00	0.00	9.07	0.01	0.00
1.86	2.00	0.00	9.07	0.01	0.00	1.87	2.00	0.00	9.06	0.01	0.00
1.88	2.00	0.00	9.06	0.01	0.00	1.89	2.00	0.00	9.05	0.01	0.00
1.90	2.00	0.00	9.05	0.01	0.00	1.91	2.00	0.00	9.04	0.01	0.00
1.92	2.00	0.00	9.04	0.01	0.00	1.93	2.00	0.00	9.04	0.01	0.00
1.94	2.00	0.00	9.03	0.01	0.00	1.95	2.00	0.00	9.03	0.01	0.00
1.96	2.00	0.00	9.02	0.01	0.00	1.97	2.00	0.00	9.02	0.01	0.00
1.98	2.00	0.00	9.01	0.01	0.00	1.99	2.00	0.00	9.01	0.01	0.00
2.00	2.00	0.00	9.00	0.01	0.00	2.01	2.00	0.00	8.99	0.01	0.00
2.02	2.00	0.00	8.99	0.01	0.00	2.03	2.00	0.00	8.98	0.01	0.00
2.04	2.00	0.00	8.98	0.01	0.00	2.05	2.00	0.00	8.97	0.01	0.00
2.06	2.00	0.00	8.97	0.01	0.00	2.07	2.00	0.00	8.96	0.01	0.00
2.08	2.00	0.00	8.96	0.01	0.00	2.09	2.00	0.00	8.96	0.01	0.00
2.10	2.00	0.00	8.95	0.01	0.00	2.11	2.00	0.00	8.95	0.01	0.00
2.12	2.00	0.00	8.94	0.01	0.00	2.13	2.00	0.00	8.94	0.01	0.00
2.14	2.00	0.00	8.93	0.01	0.00	2.15	2.00	0.00	8.93	0.01	0.00
2.16	2.00	0.00	8.92	0.01	0.00	2.17	2.00	0.00	8.91	0.01	0.00
2.18	2.00	0.00	8.91	0.01	0.00	2.19	2.00	0.00	8.90	0.01	0.00
2.20	2.00	0.00	8.90	0.01	0.00	2.21	2.00	0.00	8.89	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.22	2.00	0.00	8.89	0.01	0.00	2.23	2.00	0.00	8.88	0.01	0.00
2.24	2.00	0.00	8.88	0.01	0.00	2.25	2.00	0.00	8.88	0.01	0.00
2.26	2.00	0.00	8.87	0.01	0.00	2.27	2.00	0.00	8.87	0.01	0.00
2.28	2.00	0.00	8.86	0.01	0.00	2.29	2.00	0.00	8.86	0.01	0.00
2.30	2.00	0.00	8.85	0.01	0.00	2.31	2.00	0.00	8.85	0.01	0.00
2.32	2.00	0.00	8.84	0.01	0.00	2.33	2.00	0.00	8.84	0.01	0.00
2.34	2.00	0.00	8.83	0.01	0.00	2.35	2.00	0.00	8.82	0.01	0.00
2.36	2.00	0.00	8.82	0.01	0.00	2.37	2.00	0.00	8.81	0.01	0.00
2.38	2.00	0.00	8.81	0.01	0.00	2.39	2.00	0.00	8.80	0.01	0.00
2.40	2.00	0.00	8.80	0.01	0.00	2.41	2.00	0.00	8.79	0.01	0.00
2.42	2.00	0.00	8.79	0.01	0.00	2.43	2.00	0.00	8.79	0.01	0.00
2.44	2.00	0.00	8.78	0.01	0.00	2.45	2.00	0.00	8.78	0.01	0.00
2.46	2.00	0.00	8.77	0.01	0.00	2.47	2.00	0.00	8.77	0.01	0.00
2.48	2.00	0.00	8.76	0.01	0.00	2.49	2.00	0.00	8.76	0.01	0.00
2.50	2.00	0.00	8.75	0.01	0.00	2.51	2.00	0.00	8.74	0.01	0.00
2.52	2.00	0.00	8.74	0.01	0.00	2.53	2.00	0.00	8.73	0.01	0.00
2.54	2.00	0.00	8.73	0.01	0.00	2.55	2.00	0.00	8.72	0.01	0.00
2.56	2.00	0.00	8.72	0.01	0.00	2.57	2.00	0.00	8.71	0.01	0.00
2.58	2.00	0.00	8.71	0.01	0.00	2.59	2.00	0.00	8.71	0.01	0.00
2.60	2.00	0.00	8.70	0.01	0.00	2.61	2.00	0.00	8.70	0.01	0.00
2.62	2.00	0.00	8.69	0.01	0.00	2.63	2.00	0.00	8.69	0.01	0.00
2.64	2.00	0.00	8.68	0.01	0.00	2.65	2.00	0.00	8.68	0.01	0.00
2.66	2.00	0.00	8.67	0.01	0.00	2.67	2.00	0.00	8.66	0.01	0.00
2.68	2.00	0.00	8.66	0.01	0.00	2.69	2.00	0.00	8.65	0.01	0.00
2.70	2.00	0.00	8.65	0.01	0.00	2.71	2.00	0.00	8.64	0.01	0.00
2.72	2.00	0.00	8.64	0.01	0.00	2.73	2.00	0.00	8.63	0.01	0.00
2.74	2.00	0.00	8.63	0.01	0.00	2.75	2.00	0.00	8.63	0.01	0.00
2.76	2.00	0.00	8.62	0.01	0.00	2.77	2.00	0.00	8.62	0.01	0.00
2.78	2.00	0.00	8.61	0.01	0.00	2.79	2.00	0.00	8.61	0.01	0.00
2.80	2.00	0.00	8.60	0.01	0.00	2.81	2.00	0.00	8.60	0.01	0.00
2.82	2.00	0.00	8.59	0.01	0.00	2.83	2.00	0.00	8.59	0.01	0.00
2.84	2.00	0.00	8.58	0.01	0.00	2.85	2.00	0.00	8.57	0.01	0.00
2.86	2.00	0.00	8.57	0.01	0.00	2.87	2.00	0.00	8.56	0.01	0.00
2.88	2.00	0.00	8.56	0.01	0.00	2.89	2.00	0.00	8.55	0.01	0.00
2.90	2.00	0.00	8.55	0.01	0.00	2.91	2.00	0.00	8.54	0.01	0.00
2.92	2.00	0.00	8.54	0.01	0.00	2.93	2.00	0.00	8.54	0.01	0.00
2.94	2.00	0.00	8.53	0.01	0.00	2.95	2.00	0.00	8.53	0.01	0.00
2.96	2.00	0.00	8.52	0.01	0.00	2.97	2.00	0.00	8.52	0.01	0.00
2.98	2.00	0.00	8.51	0.01	0.00	2.99	2.00	0.00	8.51	0.01	0.00
3.00	2.00	0.00	8.50	0.01	0.00	3.01	2.00	0.00	8.49	0.01	0.00
3.02	2.00	0.00	8.49	0.01	0.00	3.03	2.00	0.00	8.48	0.01	0.00
3.04	2.00	0.00	8.48	0.01	0.00	3.05	2.00	0.00	8.47	0.01	0.00
3.06	2.00	0.00	8.47	0.01	0.00	3.07	2.00	0.00	8.46	0.01	0.00
3.08	2.00	0.00	8.46	0.01	0.00	3.09	2.00	0.00	8.46	0.01	0.00
3.10	2.00	0.00	8.45	0.01	0.00	3.11	2.00	0.00	8.45	0.01	0.00
3.12	2.00	0.00	8.44	0.01	0.00	3.13	2.00	0.00	8.44	0.01	0.00
3.14	2.00	0.00	8.43	0.01	0.00	3.15	2.00	0.00	8.43	0.01	0.00
3.16	2.00	0.00	8.42	0.01	0.00	3.17	2.00	0.00	8.41	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.18	2.00	0.00	8.41	0.01	0.00	3.19	2.00	0.00	8.40	0.01	0.00
3.20	2.00	0.00	8.40	0.01	0.00	3.21	2.00	0.00	8.39	0.01	0.00
3.22	2.00	0.00	8.39	0.01	0.00	3.23	2.00	0.00	8.38	0.01	0.00
3.24	2.00	0.00	8.38	0.01	0.00	3.25	2.00	0.00	8.38	0.01	0.00
3.26	2.00	0.00	8.37	0.01	0.00	3.27	2.00	0.00	8.37	0.01	0.00
3.28	2.00	0.00	8.36	0.01	0.00	3.29	2.00	0.00	8.36	0.01	0.00
3.30	2.00	0.00	8.35	0.01	0.00	3.31	2.00	0.00	8.35	0.01	0.00
3.32	2.00	0.00	8.34	0.01	0.00	3.33	2.00	0.00	8.34	0.01	0.00
3.34	2.00	0.00	8.33	0.01	0.00	3.35	2.00	0.00	8.32	0.01	0.00
3.36	2.00	0.00	8.32	0.01	0.00	3.37	2.00	0.00	8.31	0.01	0.00
3.38	2.00	0.00	8.31	0.01	0.00	3.39	2.00	0.00	8.30	0.01	0.00
3.40	2.00	0.00	8.30	0.01	0.00	3.41	2.00	0.00	8.29	0.01	0.00
3.42	2.00	0.00	8.29	0.01	0.00	3.43	2.00	0.00	8.29	0.01	0.00
3.44	2.00	0.00	8.28	0.01	0.00	3.45	2.00	0.00	8.28	0.01	0.00
3.46	2.00	0.00	8.27	0.01	0.00	3.47	2.00	0.00	8.27	0.01	0.00
3.48	2.00	0.00	8.26	0.01	0.00	3.49	2.00	0.00	8.26	0.01	0.00
3.50	2.00	0.00	8.25	0.01	0.00	3.51	2.00	0.00	8.24	0.01	0.00
3.52	2.00	0.00	8.24	0.01	0.00	3.53	2.00	0.00	8.23	0.01	0.00
3.54	2.00	0.00	8.23	0.01	0.00	3.55	2.00	0.00	8.22	0.01	0.00
3.56	2.00	0.00	8.22	0.01	0.00	3.57	2.00	0.00	8.21	0.01	0.00
3.58	2.00	0.00	8.21	0.01	0.00	3.59	2.00	0.00	8.21	0.01	0.00
3.60	2.00	0.00	8.20	0.01	0.00	3.61	2.00	0.00	8.20	0.01	0.00
3.62	2.00	0.00	8.19	0.01	0.00	3.63	2.00	0.00	8.19	0.01	0.00
3.64	2.00	0.00	8.18	0.01	0.00	3.65	2.00	0.00	8.18	0.01	0.00
3.66	2.00	0.00	8.17	0.01	0.00	3.67	2.00	0.00	8.16	0.01	0.00
3.68	2.00	0.00	8.16	0.01	0.00	3.69	2.00	0.00	8.15	0.01	0.00
3.70	2.00	0.00	8.15	0.01	0.00	3.71	2.00	0.00	8.14	0.01	0.00
3.72	2.00	0.00	8.14	0.01	0.00	3.73	2.00	0.00	8.13	0.01	0.00
3.74	2.00	0.00	8.13	0.01	0.00	3.75	2.00	0.00	8.13	0.01	0.00
3.76	2.00	0.00	8.12	0.01	0.00	3.77	2.00	0.00	8.12	0.01	0.00
3.78	2.00	0.00	8.11	0.01	0.00	3.79	2.00	0.00	8.11	0.01	0.00
3.80	2.00	0.00	8.10	0.01	0.00	3.81	2.00	0.00	8.10	0.01	0.00
3.82	2.00	0.00	8.09	0.01	0.00	3.83	2.00	0.00	8.09	0.01	0.00
3.84	2.00	0.00	8.08	0.01	0.00	3.85	2.00	0.00	8.07	0.01	0.00
3.86	2.00	0.00	8.07	0.01	0.00	3.87	2.00	0.00	8.06	0.01	0.00
3.88	2.00	0.00	8.06	0.01	0.00	3.89	2.00	0.00	8.05	0.01	0.00
3.90	2.00	0.00	8.05	0.01	0.00	3.91	2.00	0.00	8.04	0.01	0.00
3.92	2.00	0.00	8.04	0.01	0.00	3.93	2.00	0.00	8.04	0.01	0.00
3.94	2.00	0.00	8.03	0.01	0.00	3.95	2.00	0.00	8.03	0.01	0.00
3.96	2.00	0.00	8.02	0.01	0.00	3.97	2.00	0.00	8.02	0.01	0.00
3.98	2.00	0.00	8.01	0.01	0.00	3.99	2.00	0.00	8.01	0.01	0.00
4.00	2.00	0.00	8.00	0.01	0.00	4.01	2.00	0.00	8.00	0.01	0.00
4.02	2.00	0.00	7.99	0.01	0.00	4.03	2.00	0.00	7.99	0.01	0.00
4.04	2.00	0.00	7.98	0.01	0.00	4.05	2.00	0.00	7.97	0.01	0.00
4.06	2.00	0.00	7.97	0.01	0.00	4.07	2.00	0.00	7.96	0.01	0.00
4.08	2.00	0.00	7.96	0.01	0.00	4.09	2.00	0.00	7.96	0.01	0.00
4.10	2.00	0.00	7.95	0.01	0.00	4.11	2.00	0.00	7.95	0.01	0.00
4.12	2.00	0.00	7.94	0.01	0.00	4.13	2.00	0.00	7.93	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.14	2.00	0.00	7.93	0.01	0.00	4.15	2.00	0.00	7.92	0.01	0.00
4.16	2.00	0.00	7.92	0.01	0.00	4.17	2.00	0.00	7.92	0.01	0.00
4.18	2.00	0.00	7.91	0.01	0.00	4.19	2.00	0.00	7.91	0.01	0.00
4.20	2.00	0.00	7.90	0.01	0.00	4.21	2.00	0.00	7.89	0.01	0.00
4.22	2.00	0.00	7.89	0.01	0.00	4.23	2.00	0.00	7.88	0.01	0.00
4.24	2.00	0.00	7.88	0.01	0.00	4.25	2.00	0.00	7.88	0.01	0.00
4.26	2.00	0.00	7.87	0.01	0.00	4.27	2.00	0.00	7.87	0.01	0.00
4.28	2.00	0.00	7.86	0.01	0.00	4.29	2.00	0.00	7.86	0.01	0.00
4.30	2.00	0.00	7.85	0.01	0.00	4.31	2.00	0.00	7.84	0.01	0.00
4.32	2.00	0.00	7.84	0.01	0.00	4.33	2.00	0.00	7.83	0.01	0.00
4.34	2.00	0.00	7.83	0.01	0.00	4.35	2.00	0.00	7.83	0.01	0.00
4.36	2.00	0.00	7.82	0.01	0.00	4.37	2.00	0.00	7.82	0.01	0.00
4.38	2.00	0.00	7.81	0.01	0.00	4.39	2.00	0.00	7.80	0.01	0.00
4.40	2.00	0.00	7.80	0.01	0.00	4.41	2.00	0.00	7.79	0.01	0.00
4.42	2.00	0.00	7.79	0.01	0.00	4.43	2.00	0.00	7.79	0.01	0.00
4.44	2.00	0.00	7.78	0.01	0.00	4.45	2.00	0.00	7.78	0.01	0.00
4.46	2.00	0.00	7.77	0.01	0.00	4.47	2.00	0.00	7.76	0.01	0.00
4.48	2.00	0.00	7.76	0.01	0.00	4.49	2.00	0.00	7.75	0.01	0.00
4.50	2.00	0.00	7.75	0.01	0.00	4.51	2.00	0.00	7.75	0.01	0.00
4.52	2.00	0.00	7.74	0.01	0.00	4.53	2.00	0.00	7.74	0.01	0.00
4.54	2.00	0.00	7.73	0.01	0.00	4.55	2.00	0.00	7.72	0.01	0.00
4.56	2.00	0.00	7.72	0.01	0.00	4.57	2.00	0.00	7.71	0.01	0.00
4.58	2.00	0.00	7.71	0.01	0.00	4.59	2.00	0.00	7.71	0.01	0.00
4.60	2.00	0.00	7.70	0.01	0.00	4.61	2.00	0.00	7.70	0.01	0.00
4.62	2.00	0.00	7.69	0.01	0.00	4.63	2.00	0.00	7.68	0.01	0.00
4.64	2.00	0.00	7.68	0.01	0.00	4.65	2.00	0.00	7.67	0.01	0.00
4.66	2.00	0.00	7.67	0.01	0.00	4.67	2.00	0.00	7.67	0.01	0.00
4.68	2.00	0.00	7.66	0.01	0.00	4.69	2.00	0.00	7.66	0.01	0.00
4.70	2.00	0.00	7.65	0.01	0.00	4.71	2.00	0.00	7.64	0.01	0.00
4.72	2.00	0.00	7.64	0.01	0.00	4.73	2.00	0.00	7.63	0.01	0.00
4.74	2.00	0.00	7.63	0.01	0.00	4.75	2.00	0.00	7.63	0.01	0.00
4.76	2.00	0.00	7.62	0.01	0.00	4.77	2.00	0.00	7.62	0.01	0.00
4.78	2.00	0.00	7.61	0.01	0.00	4.79	2.00	0.00	7.61	0.01	0.00
4.80	2.00	0.00	7.60	0.01	0.00	4.81	2.00	0.00	7.59	0.01	0.00
4.82	2.00	0.00	7.59	0.01	0.00	4.83	2.00	0.00	7.58	0.01	0.00
4.84	2.00	0.00	7.58	0.01	0.00	4.85	2.00	0.00	7.58	0.01	0.00
4.86	2.00	0.00	7.57	0.01	0.00	4.87	2.00	0.00	7.57	0.01	0.00
4.88	2.00	0.00	7.56	0.01	0.00	4.89	2.00	0.00	7.55	0.01	0.00
4.90	2.00	0.00	7.55	0.01	0.00	4.91	2.00	0.00	7.54	0.01	0.00
4.92	2.00	0.00	7.54	0.01	0.00	4.93	2.00	0.00	7.54	0.01	0.00
4.94	2.00	0.00	7.53	0.01	0.00	4.95	2.00	0.00	7.53	0.01	0.00
4.96	2.00	0.00	7.52	0.01	0.00	4.97	2.00	0.00	7.51	0.01	0.00
4.98	2.00	0.00	7.51	0.01	0.00	4.99	2.00	0.00	7.50	0.01	0.00
5.00	2.00	0.00	7.50	0.01	0.00	5.01	2.00	0.00	7.50	0.01	0.00
5.02	2.00	0.00	7.49	0.01	0.00	5.03	2.00	0.00	7.49	0.01	0.00
5.04	2.00	0.00	7.48	0.01	0.00	5.05	2.00	0.00	7.47	0.01	0.00
5.06	2.00	0.00	7.47	0.01	0.00	5.07	2.00	0.00	7.46	0.01	0.00
5.08	2.00	0.00	7.46	0.01	0.00	5.09	2.00	0.00	7.46	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.10	2.00	0.00	7.45	0.01	0.00	5.11	2.00	0.00	7.45	0.01	0.00
5.12	2.00	0.00	7.44	0.01	0.00	5.13	2.00	0.00	7.43	0.01	0.00
5.14	2.00	0.00	7.43	0.01	0.00	5.15	2.00	0.00	7.42	0.01	0.00
5.16	2.00	0.00	7.42	0.01	0.00	5.17	2.00	0.00	7.42	0.01	0.00
5.18	2.00	0.00	7.41	0.01	0.00	5.19	2.00	0.00	7.41	0.01	0.00
5.20	2.00	0.00	7.40	0.01	0.00	5.21	2.00	0.00	7.39	0.01	0.00
5.22	2.00	0.00	7.39	0.01	0.00	5.23	2.00	0.00	7.38	0.01	0.00
5.24	2.00	0.00	7.38	0.01	0.00	5.25	2.00	0.00	7.38	0.01	0.00
5.26	2.00	0.00	7.37	0.01	0.00	5.27	2.00	0.00	7.37	0.01	0.00
5.28	2.00	0.00	7.36	0.01	0.00	5.29	2.00	0.00	7.36	0.01	0.00
5.30	2.00	0.00	7.35	0.01	0.00	5.31	2.00	0.00	7.34	0.01	0.00
5.32	2.00	0.00	7.34	0.01	0.00	5.33	2.00	0.00	7.33	0.01	0.00
5.34	2.00	0.00	7.33	0.01	0.00	5.35	2.00	0.00	7.33	0.01	0.00
5.36	2.00	0.00	7.32	0.01	0.00	5.37	2.00	0.00	7.32	0.01	0.00
5.38	2.00	0.00	7.31	0.01	0.00	5.39	2.00	0.00	7.30	0.01	0.00
5.40	2.00	0.00	7.30	0.01	0.00	5.41	2.00	0.00	7.29	0.01	0.00
5.42	2.00	0.00	7.29	0.01	0.00	5.43	2.00	0.00	7.29	0.01	0.00
5.44	2.00	0.00	7.28	0.01	0.00	5.45	2.00	0.00	7.28	0.01	0.00
5.46	2.00	0.00	7.27	0.01	0.00	5.47	2.00	0.00	7.26	0.01	0.00
5.48	2.00	0.00	7.26	0.01	0.00	5.49	2.00	0.00	7.25	0.01	0.00
5.50	2.00	0.00	7.25	0.01	0.00	5.51	2.00	0.00	7.25	0.01	0.00
5.52	2.00	0.00	7.24	0.01	0.00	5.53	2.00	0.00	7.24	0.01	0.00
5.54	2.00	0.00	7.23	0.01	0.00	5.55	2.00	0.00	7.22	0.01	0.00
5.56	2.00	0.00	7.22	0.01	0.00	5.57	2.00	0.00	7.21	0.01	0.00
5.58	2.00	0.00	7.21	0.01	0.00	5.59	2.00	0.00	7.21	0.01	0.00
5.60	2.00	0.00	7.20	0.01	0.00	5.61	2.00	0.00	7.20	0.01	0.00
5.62	2.00	0.00	7.19	0.01	0.00	5.63	2.00	0.00	7.18	0.01	0.00
5.64	2.00	0.00	7.18	0.01	0.00	5.65	2.00	0.00	7.17	0.01	0.00
5.66	2.00	0.00	7.17	0.01	0.00	5.67	2.00	0.00	7.17	0.01	0.00
5.68	2.00	0.00	7.16	0.01	0.00	5.69	2.00	0.00	7.16	0.01	0.00
5.70	2.00	0.00	7.15	0.01	0.00	5.71	2.00	0.00	7.14	0.01	0.00
5.72	2.00	0.00	7.14	0.01	0.00	5.73	2.00	0.00	7.13	0.01	0.00
5.74	2.00	0.00	7.13	0.01	0.00	5.75	2.00	0.00	7.13	0.01	0.00
5.76	2.00	0.00	7.12	0.01	0.00	5.77	2.00	0.00	7.12	0.01	0.00
5.78	2.00	0.00	7.11	0.01	0.00	5.79	2.00	0.00	7.11	0.01	0.00
5.80	2.00	0.00	7.10	0.01	0.00	5.81	2.00	0.00	7.09	0.01	0.00
5.82	2.00	0.00	7.09	0.01	0.00	5.83	2.00	0.00	7.08	0.01	0.00
5.84	2.00	0.00	7.08	0.01	0.00	5.85	2.00	0.00	7.08	0.01	0.00
5.86	2.00	0.00	7.07	0.01	0.00	5.87	2.00	0.00	7.07	0.01	0.00
5.88	2.00	0.00	7.06	0.01	0.00	5.89	2.00	0.00	7.05	0.01	0.00
5.90	2.00	0.00	7.05	0.01	0.00	5.91	2.00	0.00	7.04	0.01	0.00
5.92	2.00	0.00	7.04	0.01	0.00	5.93	2.00	0.00	7.04	0.01	0.00
5.94	2.00	0.00	7.03	0.01	0.00	5.95	2.00	0.00	7.03	0.01	0.00
5.96	2.00	0.00	7.02	0.01	0.00	5.97	2.00	0.00	7.01	0.01	0.00
5.98	2.00	0.00	7.01	0.01	0.00	5.99	2.00	0.00	7.00	0.01	0.00
6.00	2.00	0.00	7.00	0.01	0.00	6.01	2.00	0.00	7.00	0.01	0.00
6.02	2.00	0.00	6.99	0.01	0.00	6.03	2.00	0.00	6.99	0.01	0.00
6.04	2.00	0.00	6.98	0.01	0.00	6.05	2.00	0.00	6.97	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.06	2.00	0.00	6.97	0.01	0.00	6.07	2.00	0.00	6.96	0.01	0.00
6.08	2.00	0.00	6.96	0.01	0.00	6.09	2.00	0.00	6.96	0.01	0.00
6.10	2.00	0.00	6.95	0.01	0.00	6.11	2.00	0.00	6.95	0.01	0.00
6.12	2.00	0.00	6.94	0.01	0.00	6.13	2.00	0.00	6.93	0.01	0.00
6.14	2.00	0.00	6.93	0.01	0.00	6.15	2.00	0.00	6.92	0.01	0.00
6.16	2.00	0.00	6.92	0.01	0.00	6.17	2.00	0.00	6.92	0.01	0.00
6.18	2.00	0.00	6.91	0.01	0.00	6.19	2.00	0.00	6.91	0.01	0.00
6.20	2.00	0.00	6.90	0.01	0.00	6.21	2.00	0.00	6.89	0.01	0.00
6.22	2.00	0.00	6.89	0.01	0.00	6.23	2.00	0.00	6.88	0.01	0.00
6.24	2.00	0.00	6.88	0.01	0.00	6.25	2.00	0.00	6.88	0.01	0.00
6.26	2.00	0.00	6.87	0.01	0.00	6.27	2.00	0.00	6.87	0.01	0.00
6.28	2.00	0.00	6.86	0.01	0.00	6.29	2.00	0.00	6.86	0.01	0.00
6.30	2.00	0.00	6.85	0.01	0.00	6.31	2.00	0.00	6.84	0.01	0.00
6.32	2.00	0.00	6.84	0.01	0.00	6.33	2.00	0.00	6.83	0.01	0.00
6.34	2.00	0.00	6.83	0.01	0.00	6.35	2.00	0.00	6.83	0.01	0.00
6.36	2.00	0.00	6.82	0.01	0.00	6.37	2.00	0.00	6.82	0.01	0.00
6.38	2.00	0.00	6.81	0.01	0.00	6.39	2.00	0.00	6.80	0.01	0.00
6.40	2.00	0.00	6.80	0.01	0.00	6.41	2.00	0.00	6.79	0.01	0.00
6.42	2.00	0.00	6.79	0.01	0.00	6.43	2.00	0.00	6.79	0.01	0.00
6.44	2.00	0.00	6.78	0.01	0.00	6.45	2.00	0.00	6.78	0.01	0.00
6.46	2.00	0.00	6.77	0.01	0.00	6.47	2.00	0.00	6.76	0.01	0.00
6.48	2.00	0.00	6.76	0.01	0.00	6.49	2.00	0.00	6.75	0.01	0.00
6.50	2.00	0.00	6.75	0.01	0.00	6.51	2.00	0.00	6.75	0.01	0.00
6.52	2.00	0.00	6.74	0.01	0.00	6.53	2.00	0.00	6.74	0.01	0.00
6.54	2.00	0.00	6.73	0.01	0.00	6.55	2.00	0.00	6.72	0.01	0.00
6.56	2.00	0.00	6.72	0.01	0.00	6.57	2.00	0.00	6.71	0.01	0.00
6.58	2.00	0.00	6.71	0.01	0.00	6.59	2.00	0.00	6.71	0.01	0.00
6.60	2.00	0.00	6.70	0.01	0.00	6.61	2.00	0.00	6.70	0.01	0.00
6.62	2.00	0.00	6.69	0.01	0.00	6.63	2.00	0.00	6.68	0.01	0.00
6.64	2.00	0.00	6.68	0.01	0.00	6.65	2.00	0.00	6.67	0.01	0.00
6.66	2.00	0.00	6.67	0.01	0.00	6.67	2.00	0.00	6.67	0.01	0.00
6.68	2.00	0.00	6.66	0.01	0.00	6.69	2.00	0.00	6.66	0.01	0.00
6.70	2.00	0.00	6.65	0.01	0.00	6.71	2.00	0.00	6.64	0.01	0.00
6.72	2.00	0.00	6.64	0.01	0.00	6.73	2.00	0.00	6.63	0.01	0.00
6.74	2.00	0.00	6.63	0.01	0.00	6.75	2.00	0.00	6.63	0.01	0.00
6.76	2.00	0.00	6.62	0.01	0.00	6.77	2.00	0.00	6.62	0.01	0.00
6.78	2.00	0.00	6.61	0.01	0.00	6.79	2.00	0.00	6.61	0.01	0.00
6.80	2.00	0.00	6.60	0.01	0.00	6.81	2.00	0.00	6.59	0.01	0.00
6.82	2.00	0.00	6.59	0.01	0.00	6.83	2.00	0.00	6.58	0.01	0.00
6.84	2.00	0.00	6.58	0.01	0.00	6.85	2.00	0.00	6.58	0.01	0.00
6.86	2.00	0.00	6.57	0.01	0.00	6.87	2.00	0.00	6.57	0.01	0.00
6.88	2.00	0.00	6.56	0.01	0.00	6.89	2.00	0.00	6.55	0.01	0.00
6.90	2.00	0.00	6.55	0.01	0.00	6.91	2.00	0.00	6.54	0.01	0.00
6.92	2.00	0.00	6.54	0.01	0.00	6.93	2.00	0.00	6.54	0.01	0.00
6.94	2.00	0.00	6.53	0.01	0.00	6.95	2.00	0.00	6.53	0.01	0.00
6.96	2.00	0.00	6.52	0.01	0.00	6.97	2.00	0.00	6.51	0.01	0.00
6.98	2.00	0.00	6.51	0.01	0.00	6.99	2.00	0.00	6.50	0.01	0.00
7.00	2.00	0.00	6.50	0.01	0.00	7.01	2.00	0.00	6.50	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.02	2.00	0.00	6.49	0.01	0.00	7.03	2.00	0.00	6.49	0.01	0.00
7.04	2.00	0.00	6.48	0.01	0.00	7.05	2.00	0.00	6.47	0.01	0.00
7.06	2.00	0.00	6.47	0.01	0.00	7.07	2.00	0.00	6.46	0.01	0.00
7.08	2.00	0.00	6.46	0.01	0.00	7.09	2.00	0.00	6.46	0.01	0.00
7.10	2.00	0.00	6.45	0.01	0.00	7.11	2.00	0.00	6.45	0.01	0.00
7.12	2.00	0.00	6.44	0.01	0.00	7.13	2.00	0.00	6.43	0.01	0.00
7.14	2.00	0.00	6.43	0.01	0.00	7.15	2.00	0.00	6.42	0.01	0.00
7.16	2.00	0.00	6.42	0.01	0.00	7.17	2.00	0.00	6.42	0.01	0.00
7.18	2.00	0.00	6.41	0.01	0.00	7.19	2.00	0.00	6.41	0.01	0.00
7.20	2.00	0.00	6.40	0.01	0.00	7.21	2.00	0.00	6.39	0.01	0.00
7.22	2.00	0.00	6.39	0.01	0.00	7.23	0.49	0.51	6.38	0.01	0.03
7.24	0.49	0.51	6.38	0.01	0.03	7.25	0.49	0.51	6.38	0.01	0.03
7.26	0.48	0.52	6.37	0.01	0.03	7.27	0.48	0.52	6.37	0.01	0.03
7.28	0.47	0.53	6.36	0.01	0.03	7.29	0.47	0.53	6.36	0.01	0.03
7.30	0.47	0.53	6.35	0.01	0.03	7.31	0.46	0.54	6.34	0.01	0.03
7.32	0.45	0.55	6.34	0.01	0.03	7.33	0.44	0.56	6.33	0.01	0.04
7.34	0.43	0.57	6.33	0.01	0.04	7.35	0.43	0.57	6.33	0.01	0.04
7.36	0.43	0.57	6.32	0.01	0.04	7.37	0.42	0.58	6.32	0.01	0.04
7.38	0.33	0.67	6.31	0.01	0.04	7.39	0.33	0.67	6.30	0.01	0.04
7.40	0.33	0.67	6.30	0.01	0.04	7.41	0.33	0.67	6.29	0.01	0.04
7.42	0.33	0.67	6.29	0.01	0.04	7.43	0.34	0.66	6.29	0.01	0.04
7.44	0.34	0.66	6.28	0.01	0.04	7.45	0.34	0.66	6.28	0.01	0.04
7.46	0.35	0.65	6.27	0.01	0.04	7.47	0.35	0.65	6.26	0.01	0.04
7.48	0.35	0.65	6.26	0.01	0.04	7.49	0.36	0.64	6.25	0.01	0.04
7.50	0.38	0.62	6.25	0.01	0.04	7.51	0.39	0.61	6.25	0.01	0.04
7.52	0.40	0.60	6.24	0.01	0.04	7.53	0.41	0.59	6.24	0.01	0.04
7.54	0.42	0.58	6.23	0.01	0.04	7.55	0.43	0.57	6.22	0.01	0.04
7.56	0.44	0.56	6.22	0.01	0.03	7.57	0.45	0.55	6.21	0.01	0.03
7.58	0.45	0.55	6.21	0.01	0.03	7.59	0.45	0.55	6.21	0.01	0.03
7.60	0.44	0.56	6.20	0.01	0.03	7.61	0.50	0.50	6.20	0.01	0.03
7.62	0.50	0.50	6.19	0.01	0.03	7.63	0.51	0.49	6.18	0.01	0.03
7.64	0.51	0.49	6.18	0.01	0.03	7.65	0.52	0.48	6.17	0.01	0.03
7.66	0.53	0.47	6.17	0.01	0.03	7.67	0.53	0.47	6.17	0.01	0.03
7.68	0.53	0.47	6.16	0.01	0.03	7.69	0.53	0.47	6.16	0.01	0.03
7.70	0.54	0.46	6.15	0.01	0.03	7.71	0.55	0.45	6.14	0.01	0.03
7.72	0.56	0.44	6.14	0.01	0.03	7.73	0.56	0.44	6.13	0.01	0.03
7.74	0.56	0.44	6.13	0.01	0.03	7.75	0.56	0.44	6.13	0.01	0.03
7.76	0.57	0.43	6.12	0.01	0.03	7.77	0.57	0.43	6.12	0.01	0.03
7.78	0.57	0.43	6.11	0.01	0.03	7.79	0.57	0.43	6.11	0.01	0.03
7.80	0.58	0.42	6.10	0.01	0.03	7.81	0.60	0.40	6.09	0.01	0.02
7.82	0.63	0.37	6.09	0.01	0.02	7.83	0.65	0.35	6.08	0.01	0.02
7.84	0.66	0.34	6.08	0.01	0.02	7.85	0.66	0.34	6.08	0.01	0.02
7.86	0.66	0.34	6.07	0.01	0.02	7.87	0.66	0.34	6.07	0.01	0.02
7.88	0.68	0.32	6.06	0.01	0.02	7.89	0.71	0.29	6.05	0.01	0.02
7.90	0.73	0.27	6.05	0.01	0.02	7.91	0.72	0.28	6.04	0.01	0.02
7.92	0.70	0.30	6.04	0.01	0.02	7.93	0.68	0.32	6.04	0.01	0.02
7.94	0.69	0.31	6.03	0.01	0.02	7.95	0.71	0.29	6.03	0.01	0.02
7.96	0.72	0.28	6.02	0.01	0.02	7.97	0.74	0.26	6.01	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.98	0.76	0.24	6.01	0.01	0.01	7.99	0.80	0.20	6.00	0.01	0.01
8.00	2.00	0.00	6.00	0.01	0.00	8.01	2.00	0.00	6.00	0.01	0.00
8.02	0.82	0.18	5.99	0.01	0.01	8.03	0.78	0.22	5.99	0.01	0.01
8.04	0.76	0.24	5.98	0.01	0.01	8.05	0.78	0.22	5.97	0.01	0.01
8.06	0.81	0.19	5.97	0.01	0.01	8.07	0.85	0.15	5.96	0.01	0.01
8.08	0.88	0.12	5.96	0.01	0.01	8.09	0.91	0.09	5.96	0.01	0.01
8.10	0.92	0.08	5.95	0.01	0.00	8.11	0.93	0.07	5.95	0.01	0.00
8.12	0.92	0.08	5.94	0.01	0.00	8.13	0.90	0.10	5.93	0.01	0.01
8.14	0.86	0.14	5.93	0.01	0.01	8.15	0.84	0.16	5.92	0.01	0.01
8.16	0.85	0.15	5.92	0.01	0.01	8.17	0.88	0.12	5.92	0.01	0.01
8.18	0.91	0.09	5.91	0.01	0.01	8.19	2.00	0.00	5.91	0.01	0.00
8.20	2.00	0.00	5.90	0.01	0.00	8.21	2.00	0.00	5.89	0.01	0.00
8.22	2.00	0.00	5.89	0.01	0.00	8.23	2.00	0.00	5.88	0.01	0.00
8.24	2.00	0.00	5.88	0.01	0.00	8.25	2.00	0.00	5.88	0.01	0.00
8.26	2.00	0.00	5.87	0.01	0.00	8.27	2.00	0.00	5.87	0.01	0.00
8.28	2.00	0.00	5.86	0.01	0.00	8.29	2.00	0.00	5.86	0.01	0.00
8.30	2.00	0.00	5.85	0.01	0.00	8.31	2.00	0.00	5.84	0.01	0.00
8.32	2.00	0.00	5.84	0.01	0.00	8.33	0.87	0.13	5.83	0.01	0.01
8.34	0.89	0.11	5.83	0.01	0.01	8.35	0.91	0.09	5.83	0.01	0.01
8.36	2.00	0.00	5.82	0.01	0.00	8.37	2.00	0.00	5.82	0.01	0.00
8.38	2.00	0.00	5.81	0.01	0.00	8.39	2.00	0.00	5.80	0.01	0.00
8.40	2.00	0.00	5.80	0.01	0.00	8.41	2.00	0.00	5.79	0.01	0.00
8.42	2.00	0.00	5.79	0.01	0.00	8.43	2.00	0.00	5.79	0.01	0.00
8.44	2.00	0.00	5.78	0.01	0.00	8.45	2.00	0.00	5.78	0.01	0.00
8.46	0.61	0.39	5.77	0.01	0.02	8.47	0.58	0.42	5.76	0.01	0.02
8.48	0.57	0.43	5.76	0.01	0.02	8.49	0.57	0.43	5.75	0.01	0.02
8.50	0.57	0.43	5.75	0.01	0.02	8.51	0.58	0.42	5.75	0.01	0.02
8.52	0.59	0.41	5.74	0.01	0.02	8.53	0.60	0.40	5.74	0.01	0.02
8.54	0.60	0.40	5.73	0.01	0.02	8.55	0.60	0.40	5.72	0.01	0.02
8.56	0.61	0.39	5.72	0.01	0.02	8.57	0.62	0.38	5.71	0.01	0.02
8.58	0.63	0.37	5.71	0.01	0.02	8.59	0.64	0.36	5.71	0.01	0.02
8.60	0.63	0.37	5.70	0.01	0.02	8.61	0.61	0.39	5.70	0.01	0.02
8.62	0.61	0.39	5.69	0.01	0.02	8.63	0.61	0.39	5.68	0.01	0.02
8.64	0.63	0.37	5.68	0.01	0.02	8.65	0.68	0.32	5.67	0.01	0.02
8.66	0.70	0.30	5.67	0.01	0.02	8.67	0.73	0.27	5.67	0.01	0.02
8.68	0.74	0.26	5.66	0.01	0.01	8.69	0.73	0.27	5.66	0.01	0.02
8.70	0.73	0.27	5.65	0.01	0.02	8.71	0.72	0.28	5.64	0.01	0.02
8.72	0.72	0.28	5.64	0.01	0.02	8.73	0.74	0.26	5.63	0.01	0.01
8.74	0.75	0.25	5.63	0.01	0.01	8.75	0.78	0.22	5.63	0.01	0.01
8.76	0.80	0.20	5.62	0.01	0.01	8.77	0.83	0.17	5.62	0.01	0.01
8.78	0.85	0.15	5.61	0.01	0.01	8.79	0.86	0.14	5.61	0.01	0.01
8.80	0.87	0.13	5.60	0.01	0.01	8.81	0.89	0.11	5.59	0.01	0.01
8.82	0.91	0.09	5.59	0.01	0.00	8.83	0.93	0.07	5.58	0.01	0.00
8.84	0.93	0.07	5.58	0.01	0.00	8.85	0.92	0.08	5.58	0.01	0.00
8.86	0.89	0.11	5.57	0.01	0.01	8.87	0.79	0.21	5.57	0.01	0.01
8.88	0.78	0.22	5.56	0.01	0.01	8.89	0.75	0.25	5.55	0.01	0.01
8.90	0.70	0.30	5.55	0.01	0.02	8.91	0.65	0.35	5.54	0.01	0.02
8.92	0.61	0.39	5.54	0.01	0.02	8.93	0.67	0.33	5.54	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.94	0.63	0.37	5.53	0.01	0.02	8.95	0.59	0.41	5.53	0.01	0.02
8.96	0.57	0.43	5.52	0.01	0.02	8.97	0.55	0.45	5.51	0.01	0.02
8.98	0.53	0.47	5.51	0.01	0.03	8.99	0.51	0.49	5.50	0.01	0.03
9.00	0.51	0.49	5.50	0.01	0.03	9.01	0.51	0.49	5.50	0.01	0.03
9.02	0.52	0.48	5.49	0.01	0.03	9.03	0.52	0.48	5.49	0.01	0.03
9.04	0.53	0.47	5.48	0.01	0.03	9.05	0.55	0.45	5.47	0.01	0.02
9.06	0.56	0.44	5.47	0.01	0.02	9.07	0.58	0.42	5.46	0.01	0.02
9.08	2.00	0.00	5.46	0.01	0.00	9.09	2.00	0.00	5.46	0.01	0.00
9.10	2.00	0.00	5.45	0.01	0.00	9.11	2.00	0.00	5.45	0.01	0.00
9.12	2.00	0.00	5.44	0.01	0.00	9.13	0.62	0.38	5.43	0.01	0.02
9.14	0.61	0.39	5.43	0.01	0.02	9.15	0.63	0.37	5.42	0.01	0.02
9.16	0.68	0.32	5.42	0.01	0.02	9.17	0.72	0.28	5.42	0.01	0.01
9.18	0.73	0.27	5.41	0.01	0.01	9.19	0.71	0.29	5.41	0.01	0.02
9.20	0.66	0.34	5.40	0.01	0.02	9.21	0.62	0.38	5.39	0.01	0.02
9.22	0.59	0.41	5.39	0.01	0.02	9.23	0.59	0.41	5.38	0.01	0.02
9.24	0.59	0.41	5.38	0.01	0.02	9.25	0.60	0.40	5.38	0.01	0.02
9.26	0.63	0.37	5.37	0.01	0.02	9.27	0.69	0.31	5.37	0.01	0.02
9.28	0.80	0.20	5.36	0.01	0.01	9.29	0.94	0.06	5.36	0.01	0.00
9.30	1.08	0.00	5.35	0.01	0.00	9.31	1.15	0.00	5.34	0.01	0.00
9.32	1.20	0.00	5.34	0.01	0.00	9.33	1.28	0.00	5.33	0.01	0.00
9.34	1.35	0.00	5.33	0.01	0.00	9.35	1.43	0.00	5.33	0.01	0.00
9.36	1.44	0.00	5.32	0.01	0.00	9.37	1.43	0.00	5.32	0.01	0.00
9.38	1.43	0.00	5.31	0.01	0.00	9.39	1.46	0.00	5.30	0.01	0.00
9.40	1.48	0.00	5.30	0.01	0.00	9.41	1.48	0.00	5.29	0.01	0.00
9.42	1.45	0.00	5.29	0.01	0.00	9.43	1.43	0.00	5.29	0.01	0.00
9.44	1.40	0.00	5.28	0.01	0.00	9.45	1.34	0.00	5.28	0.01	0.00
9.46	1.26	0.00	5.27	0.01	0.00	9.47	1.22	0.00	5.26	0.01	0.00
9.48	1.18	0.00	5.26	0.01	0.00	9.49	1.16	0.00	5.25	0.01	0.00
9.50	1.16	0.00	5.25	0.01	0.00	9.51	1.16	0.00	5.25	0.01	0.00
9.52	1.18	0.00	5.24	0.01	0.00	9.53	1.21	0.00	5.24	0.01	0.00
9.54	1.25	0.00	5.23	0.01	0.00	9.55	1.29	0.00	5.22	0.01	0.00
9.56	1.30	0.00	5.22	0.01	0.00	9.57	1.28	0.00	5.21	0.01	0.00
9.58	1.29	0.00	5.21	0.01	0.00	9.59	1.33	0.00	5.21	0.01	0.00
9.60	1.36	0.00	5.20	0.01	0.00	9.61	1.39	0.00	5.20	0.01	0.00
9.62	1.41	0.00	5.19	0.01	0.00	9.63	1.43	0.00	5.18	0.01	0.00
9.64	1.44	0.00	5.18	0.01	0.00	9.65	1.43	0.00	5.17	0.01	0.00
9.66	1.39	0.00	5.17	0.01	0.00	9.67	1.33	0.00	5.17	0.01	0.00
9.68	1.31	0.00	5.16	0.01	0.00	9.69	1.28	0.00	5.16	0.01	0.00
9.70	1.27	0.00	5.15	0.01	0.00	9.71	1.27	0.00	5.14	0.01	0.00
9.72	1.33	0.00	5.14	0.01	0.00	9.73	1.39	0.00	5.13	0.01	0.00
9.74	1.52	0.00	5.13	0.01	0.00	9.75	1.66	0.00	5.13	0.01	0.00
9.76	1.86	0.00	5.12	0.01	0.00	9.77	2.00	0.00	5.12	0.01	0.00
9.78	2.00	0.00	5.11	0.01	0.00	9.79	2.00	0.00	5.11	0.01	0.00
9.80	2.00	0.00	5.10	0.01	0.00	9.81	2.00	0.00	5.09	0.01	0.00
9.82	1.98	0.00	5.09	0.01	0.00	9.83	1.93	0.00	5.08	0.01	0.00
9.84	1.88	0.00	5.08	0.01	0.00	9.85	1.81	0.00	5.08	0.01	0.00
9.86	1.76	0.00	5.07	0.01	0.00	9.87	1.71	0.00	5.07	0.01	0.00
9.88	1.70	0.00	5.06	0.01	0.00	9.89	1.69	0.00	5.05	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
9.90	1.69	0.00	5.05	0.01	0.00	9.91	1.70	0.00	5.04	0.01	0.00
9.92	1.72	0.00	5.04	0.01	0.00	9.93	1.75	0.00	5.04	0.01	0.00
9.94	1.81	0.00	5.03	0.01	0.00	9.95	1.91	0.00	5.03	0.01	0.00
9.96	2.00	0.00	5.02	0.01	0.00	9.97	2.00	0.00	5.01	0.01	0.00
9.98	2.00	0.00	5.01	0.01	0.00	9.99	2.00	0.00	5.00	0.01	0.00
10.00	2.00	0.00	5.00	0.01	0.00						

Overall liquefaction potential: 3.92

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

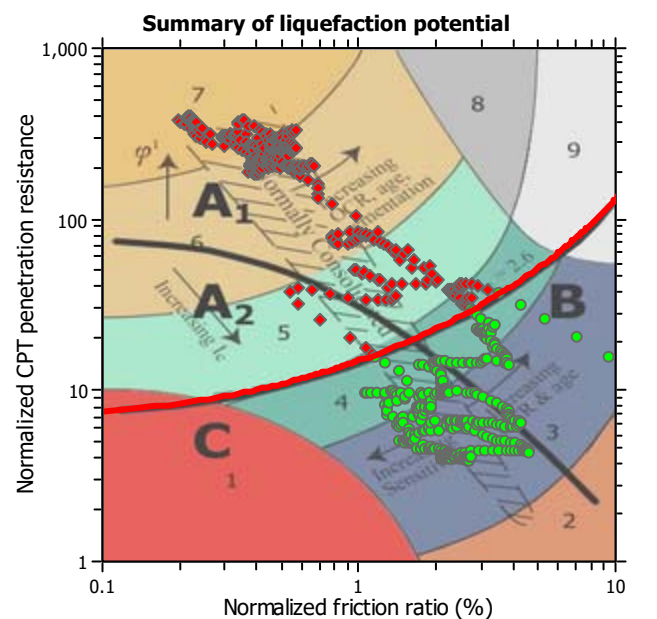
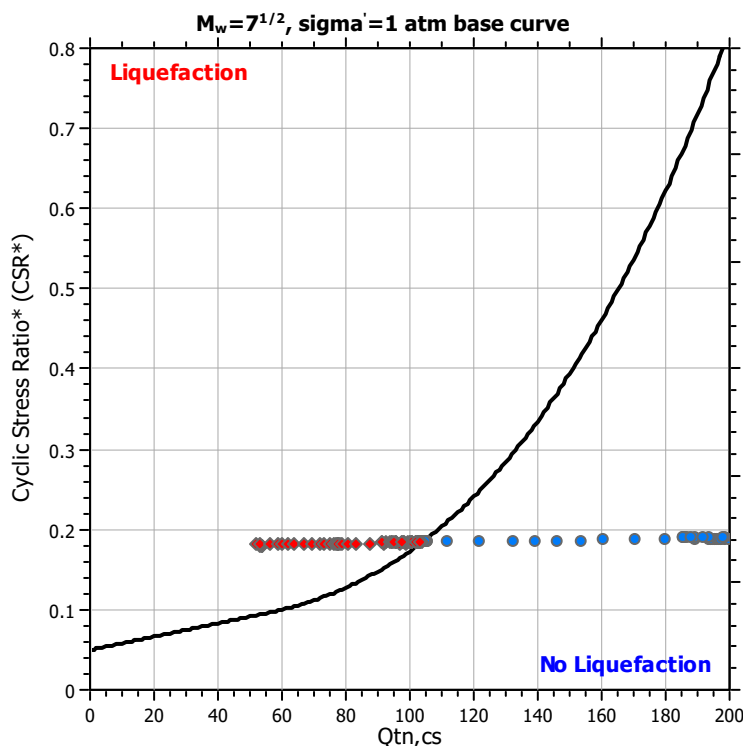
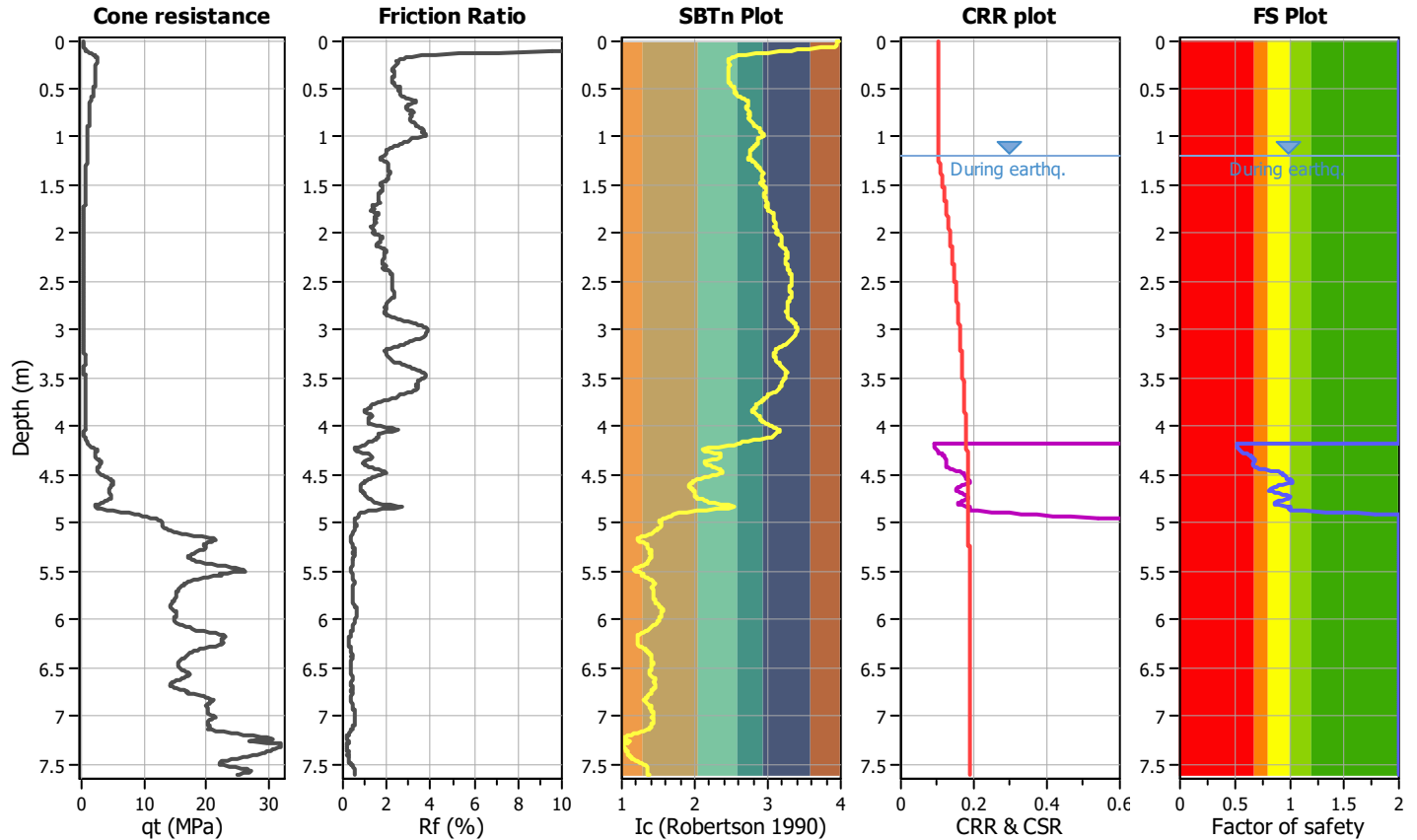
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

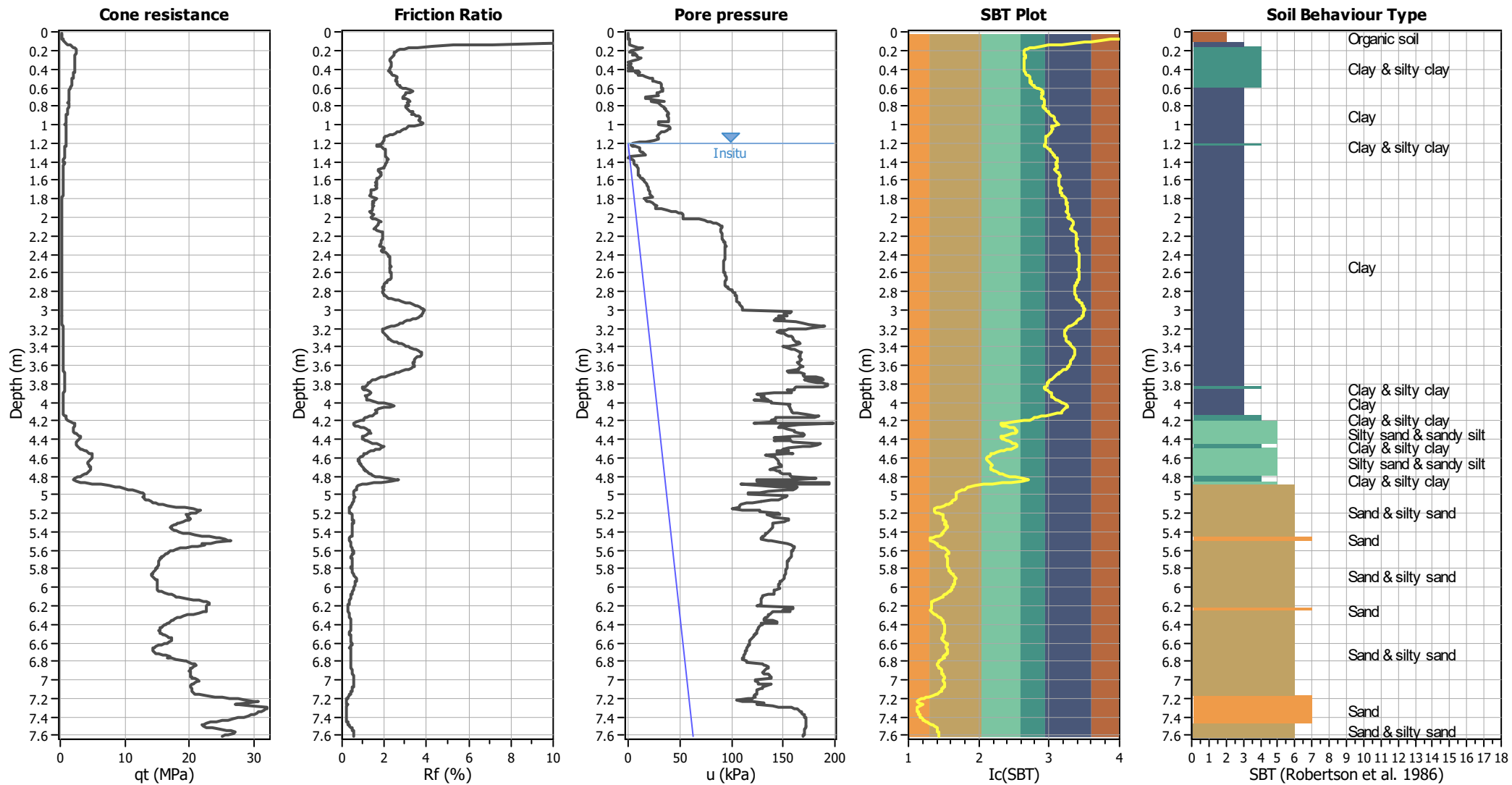
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU11bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

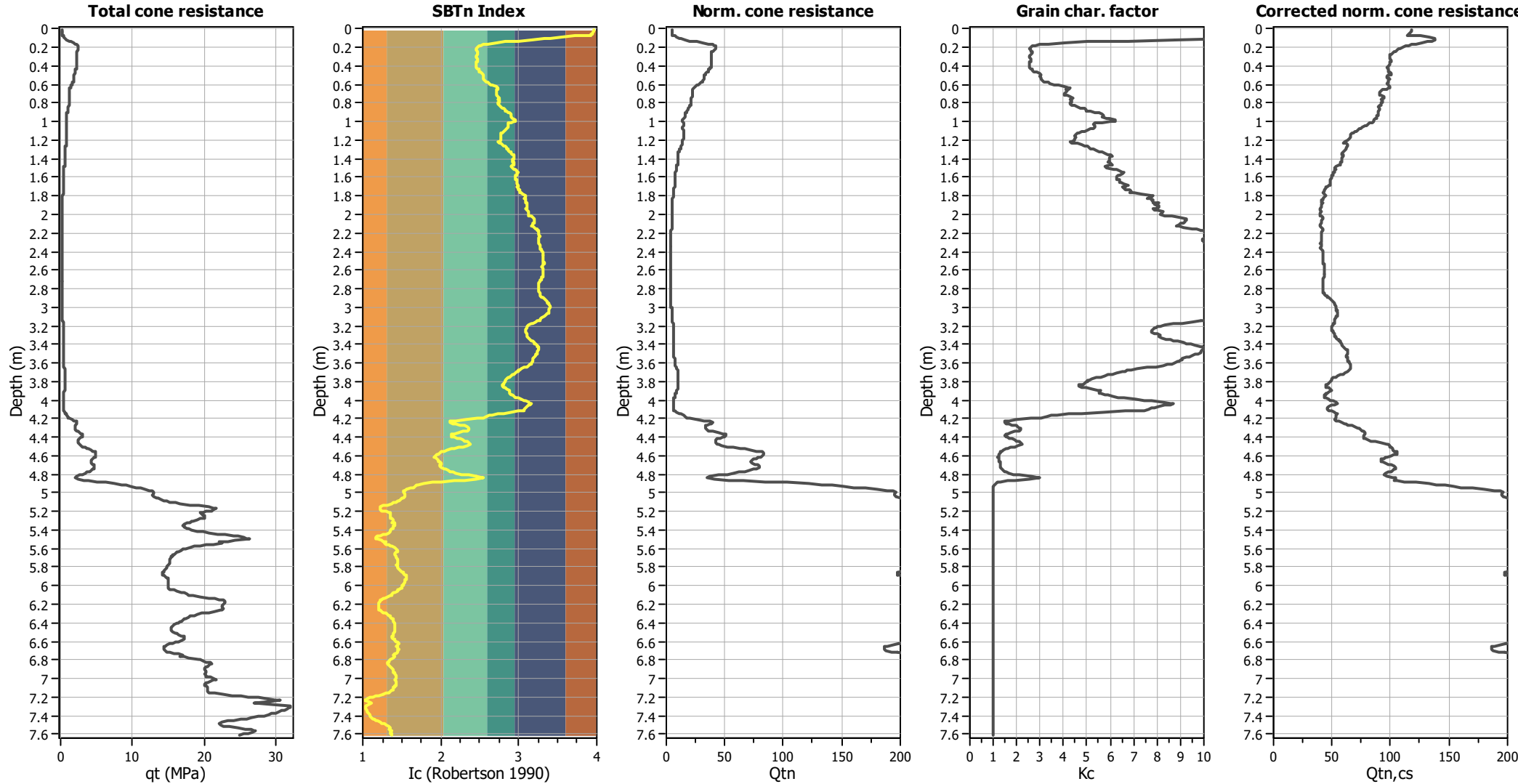
SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

	1. Sensitive fine grained		4. Clayey silt to silty		7. Gravely sand to sand
	2. Organic material		5. Silty sand to sandy silt		8. Very stiff sand to
	3. Clay to silty clay		6. Clean sand to silty sand		9. Very stiff fine grained

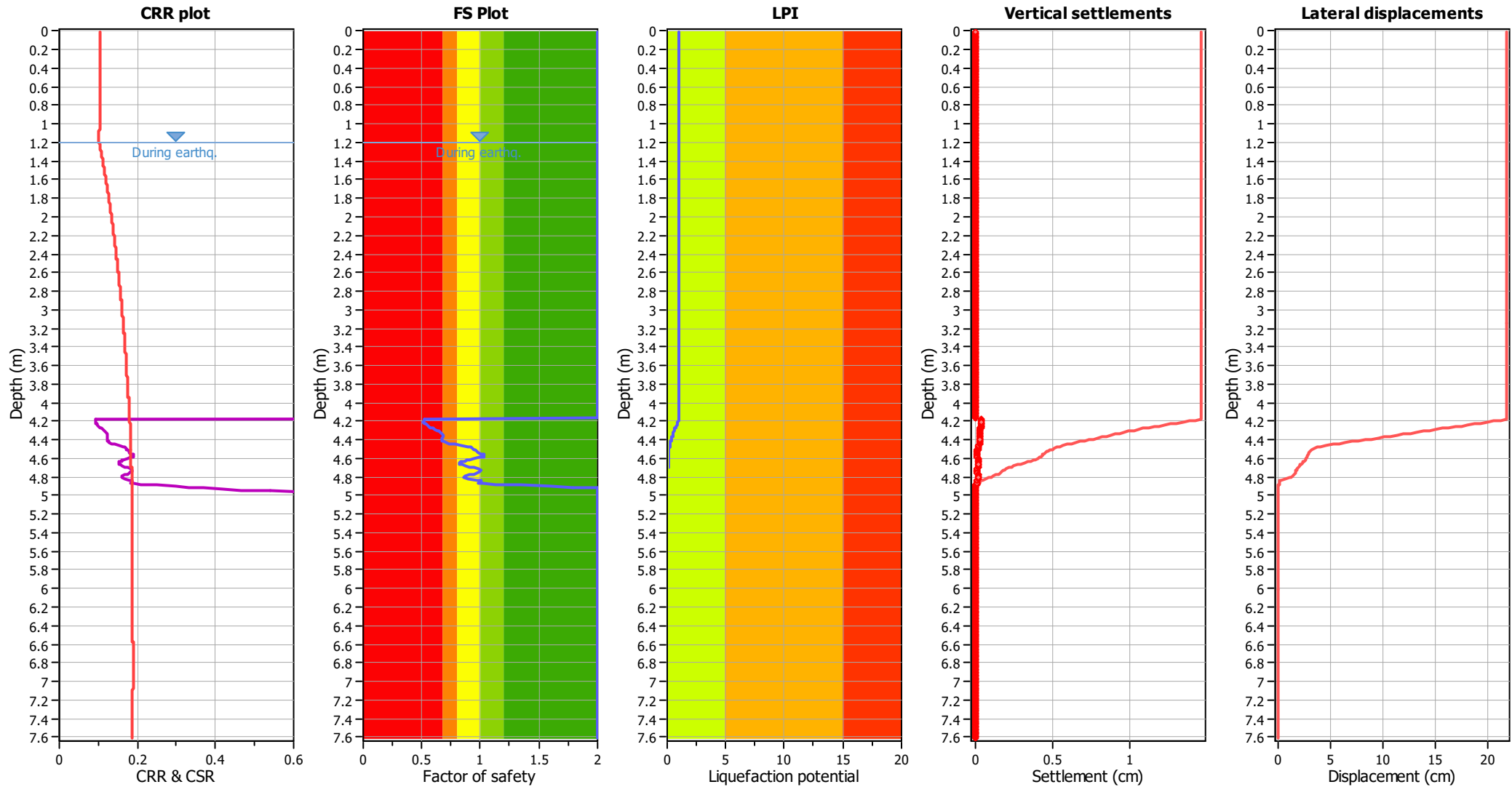
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

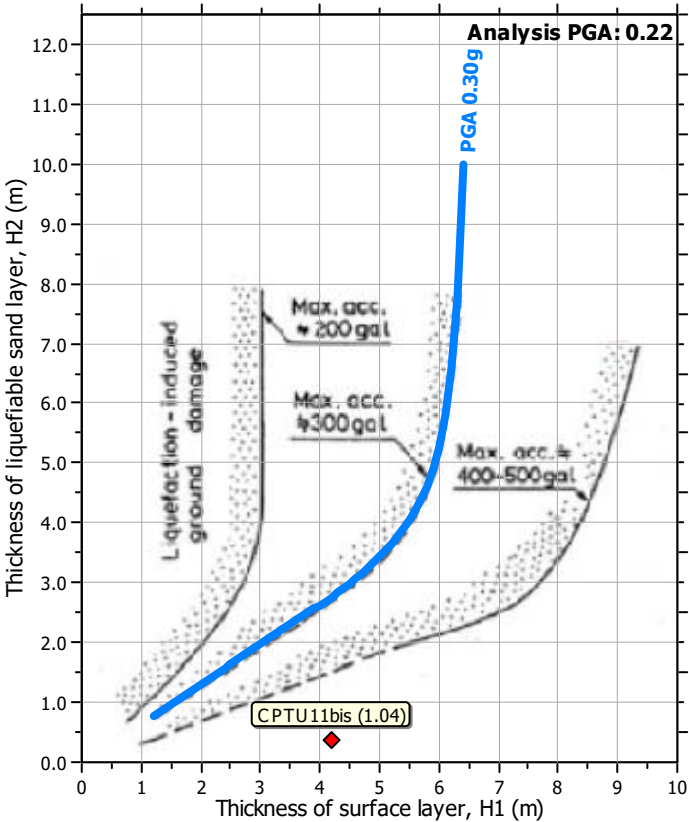
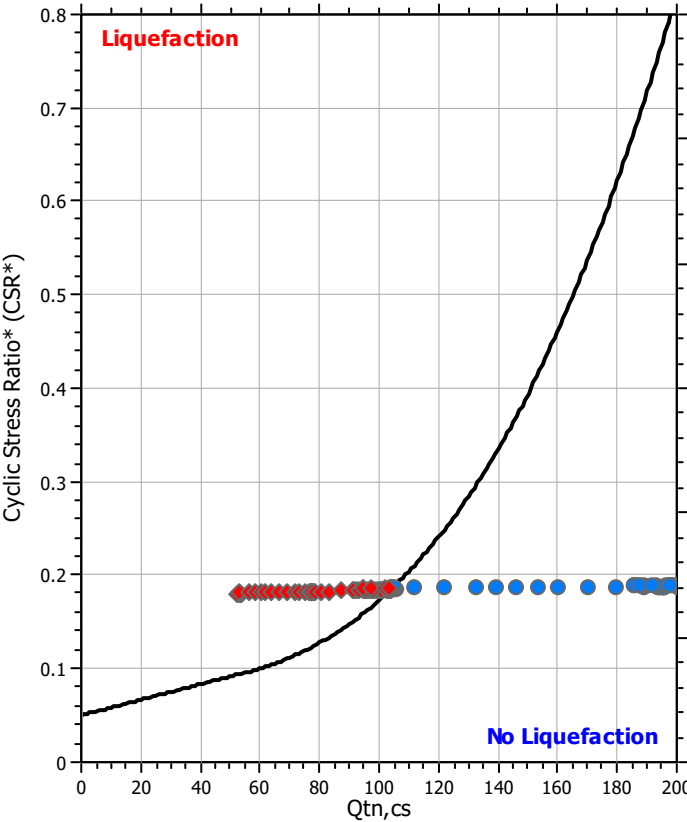
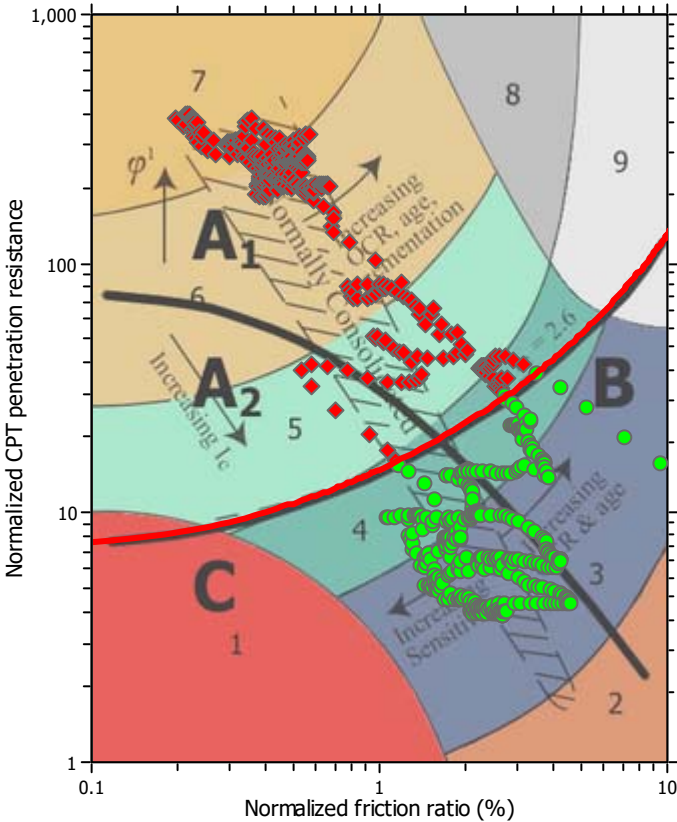
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

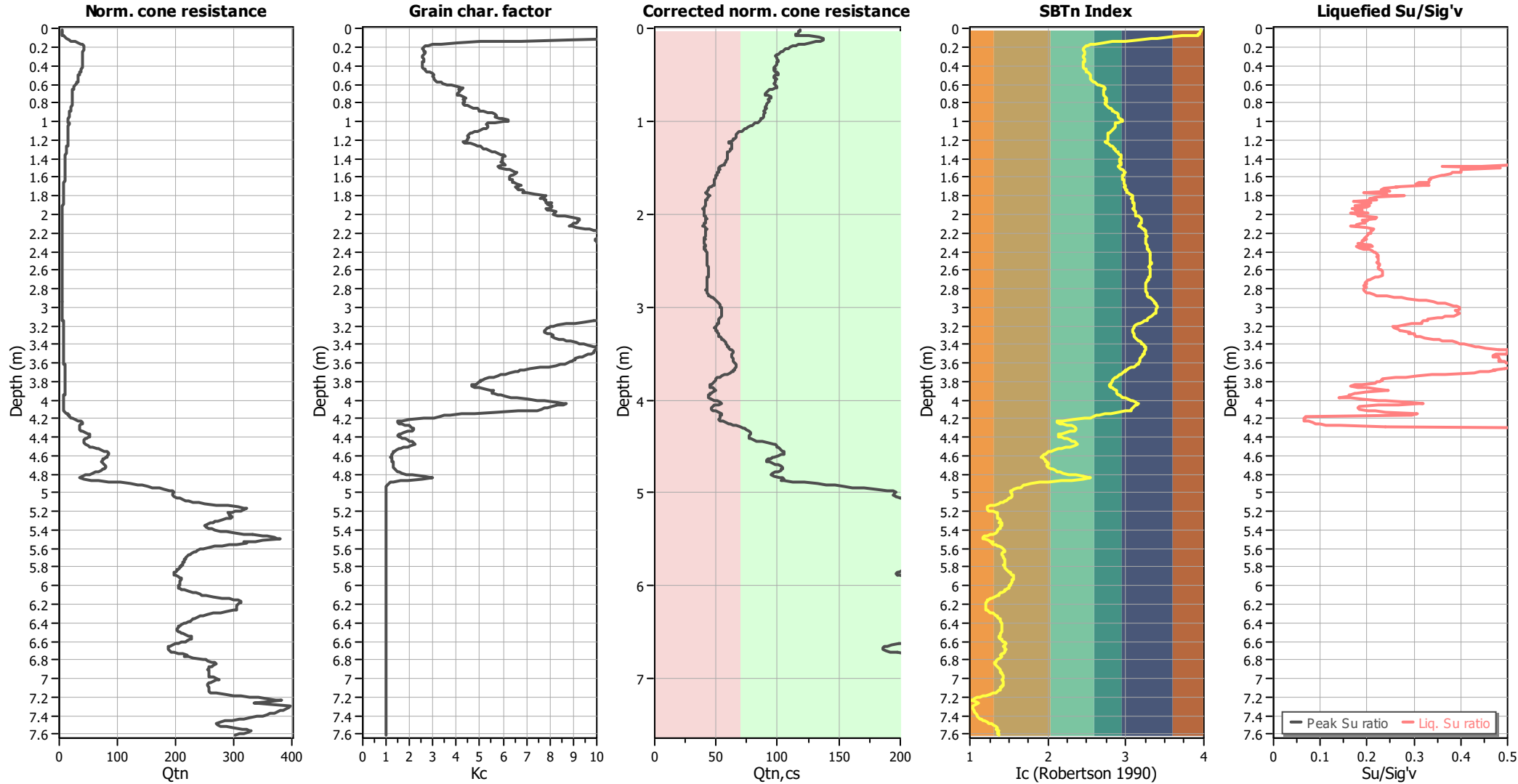
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	0.52	0.48	7.91	0.01	0.04
4.19	0.52	0.48	7.91	0.01	0.04	4.20	0.52	0.48	7.90	0.01	0.04
4.21	0.52	0.48	7.89	0.01	0.04	4.22	0.52	0.48	7.89	0.01	0.04
4.23	0.53	0.47	7.88	0.01	0.04	4.24	0.54	0.46	7.88	0.01	0.04
4.25	0.55	0.45	7.88	0.01	0.04	4.26	0.56	0.44	7.87	0.01	0.03
4.27	0.57	0.43	7.87	0.01	0.03	4.28	0.59	0.41	7.86	0.01	0.03
4.29	0.61	0.39	7.86	0.01	0.03	4.30	0.63	0.37	7.85	0.01	0.03
4.31	0.64	0.36	7.84	0.01	0.03	4.32	0.66	0.34	7.84	0.01	0.03
4.33	0.67	0.33	7.83	0.01	0.03	4.34	0.68	0.32	7.83	0.01	0.03
4.35	0.68	0.32	7.83	0.01	0.03	4.36	0.68	0.32	7.82	0.01	0.02
4.37	0.68	0.32	7.82	0.01	0.03	4.38	0.68	0.32	7.81	0.01	0.03
4.39	0.67	0.33	7.80	0.01	0.03	4.40	0.67	0.33	7.80	0.01	0.03
4.41	0.67	0.33	7.79	0.01	0.03	4.42	0.68	0.32	7.79	0.01	0.02
4.43	0.70	0.30	7.79	0.01	0.02	4.44	0.73	0.27	7.78	0.01	0.02
4.45	0.78	0.22	7.78	0.01	0.02	4.46	0.83	0.17	7.77	0.01	0.01
4.47	0.90	0.10	7.76	0.01	0.01	4.48	0.93	0.07	7.76	0.01	0.01
4.49	0.93	0.07	7.75	0.01	0.01	4.50	0.94	0.06	7.75	0.01	0.00
4.51	0.95	0.05	7.75	0.01	0.00	4.52	0.97	0.03	7.74	0.01	0.00
4.53	0.97	0.03	7.74	0.01	0.00	4.54	0.98	0.02	7.73	0.01	0.00
4.55	1.00	0.00	7.72	0.01	0.00	4.56	1.03	0.00	7.72	0.01	0.00
4.57	1.03	0.00	7.71	0.01	0.00	4.58	1.03	0.00	7.71	0.01	0.00
4.59	0.99	0.01	7.71	0.01	0.00	4.60	0.95	0.05	7.70	0.01	0.00
4.61	0.90	0.10	7.70	0.01	0.01	4.62	0.88	0.12	7.69	0.01	0.01
4.63	0.86	0.14	7.68	0.01	0.01	4.64	0.83	0.17	7.68	0.01	0.01
4.65	0.82	0.18	7.67	0.01	0.01	4.66	0.82	0.18	7.67	0.01	0.01
4.67	0.85	0.15	7.67	0.01	0.01	4.68	0.87	0.13	7.66	0.01	0.01
4.69	0.91	0.09	7.66	0.01	0.01	4.70	0.94	0.06	7.65	0.01	0.00
4.71	0.98	0.02	7.64	0.01	0.00	4.72	1.00	0.00	7.64	0.01	0.00
4.73	1.01	0.00	7.63	0.01	0.00	4.74	1.00	0.00	7.63	0.01	0.00
4.75	0.99	0.01	7.63	0.01	0.00	4.76	0.97	0.03	7.62	0.01	0.00
4.77	0.94	0.06	7.62	0.01	0.00	4.78	0.91	0.09	7.61	0.01	0.01
4.79	0.87	0.13	7.61	0.01	0.01	4.80	0.86	0.14	7.60	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	0.86	0.14	7.59	0.01	0.01	4.82	0.90	0.10	7.59	0.01	0.01
4.83	0.97	0.03	7.58	0.01	0.00	4.84	1.01	0.00	7.58	0.01	0.00
4.85	1.01	0.00	7.58	0.01	0.00	4.86	0.98	0.02	7.57	0.01	0.00
4.87	1.02	0.00	7.57	0.01	0.00	4.88	1.13	0.00	7.56	0.01	0.00
4.89	1.34	0.00	7.55	0.01	0.00	4.90	1.61	0.00	7.55	0.01	0.00
4.91	1.78	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	2.00	0.00	6.91	0.01	0.00	6.20	2.00	0.00	6.90	0.01	0.00
6.21	2.00	0.00	6.89	0.01	0.00	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	2.00	0.00	6.58	0.01	0.00	6.84	2.00	0.00	6.58	0.01	0.00
6.85	2.00	0.00	6.58	0.01	0.00	6.86	2.00	0.00	6.57	0.01	0.00
6.87	2.00	0.00	6.57	0.01	0.00	6.88	2.00	0.00	6.56	0.01	0.00
6.89	2.00	0.00	6.55	0.01	0.00	6.90	2.00	0.00	6.55	0.01	0.00
6.91	2.00	0.00	6.54	0.01	0.00	6.92	2.00	0.00	6.54	0.01	0.00
6.93	2.00	0.00	6.54	0.01	0.00	6.94	2.00	0.00	6.53	0.01	0.00
6.95	2.00	0.00	6.53	0.01	0.00	6.96	2.00	0.00	6.52	0.01	0.00
6.97	2.00	0.00	6.51	0.01	0.00	6.98	2.00	0.00	6.51	0.01	0.00
6.99	2.00	0.00	6.50	0.01	0.00	7.00	2.00	0.00	6.50	0.01	0.00
7.01	2.00	0.00	6.50	0.01	0.00	7.02	2.00	0.00	6.49	0.01	0.00
7.03	2.00	0.00	6.49	0.01	0.00	7.04	2.00	0.00	6.48	0.01	0.00
7.05	2.00	0.00	6.47	0.01	0.00	7.06	2.00	0.00	6.47	0.01	0.00
7.07	2.00	0.00	6.46	0.01	0.00	7.08	2.00	0.00	6.46	0.01	0.00
7.09	2.00	0.00	6.46	0.01	0.00	7.10	2.00	0.00	6.45	0.01	0.00
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	2.00	0.00	6.40	0.01	0.00
7.21	2.00	0.00	6.39	0.01	0.00	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	2.00	0.00	6.38	0.01	0.00	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	2.00	0.00	6.33	0.01	0.00
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	2.00	0.00	6.21	0.01	0.00	7.58	2.00	0.00	6.21	0.01	0.00
7.59	2.00	0.00	6.21	0.01	0.00	7.60	2.00	0.00	6.20	0.01	0.00
7.61	2.00	0.00	6.20	0.01	0.00						

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI

Overall liquefaction potential: 1.04

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

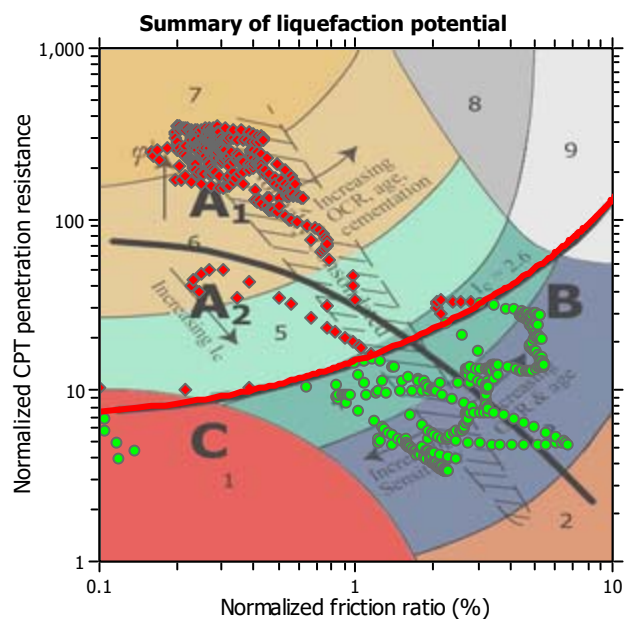
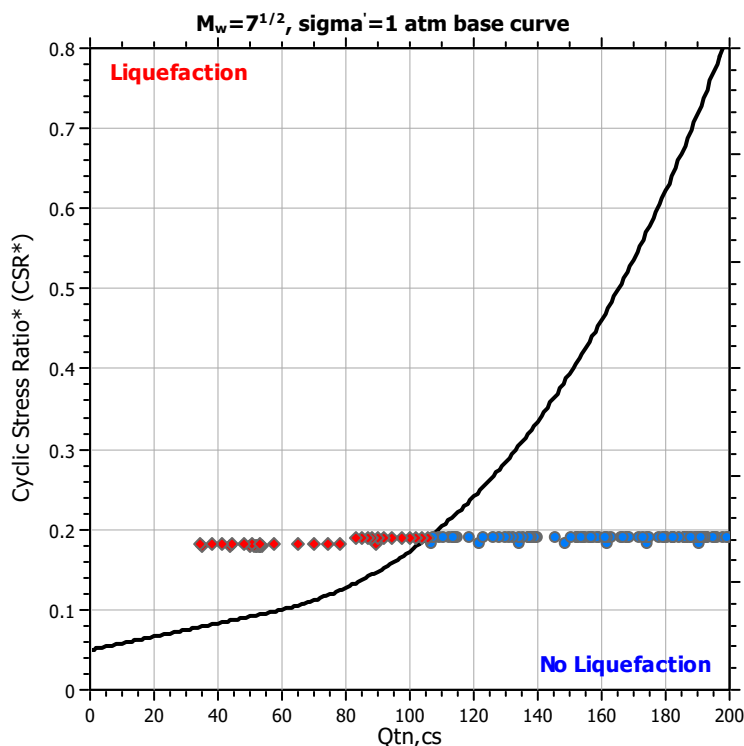
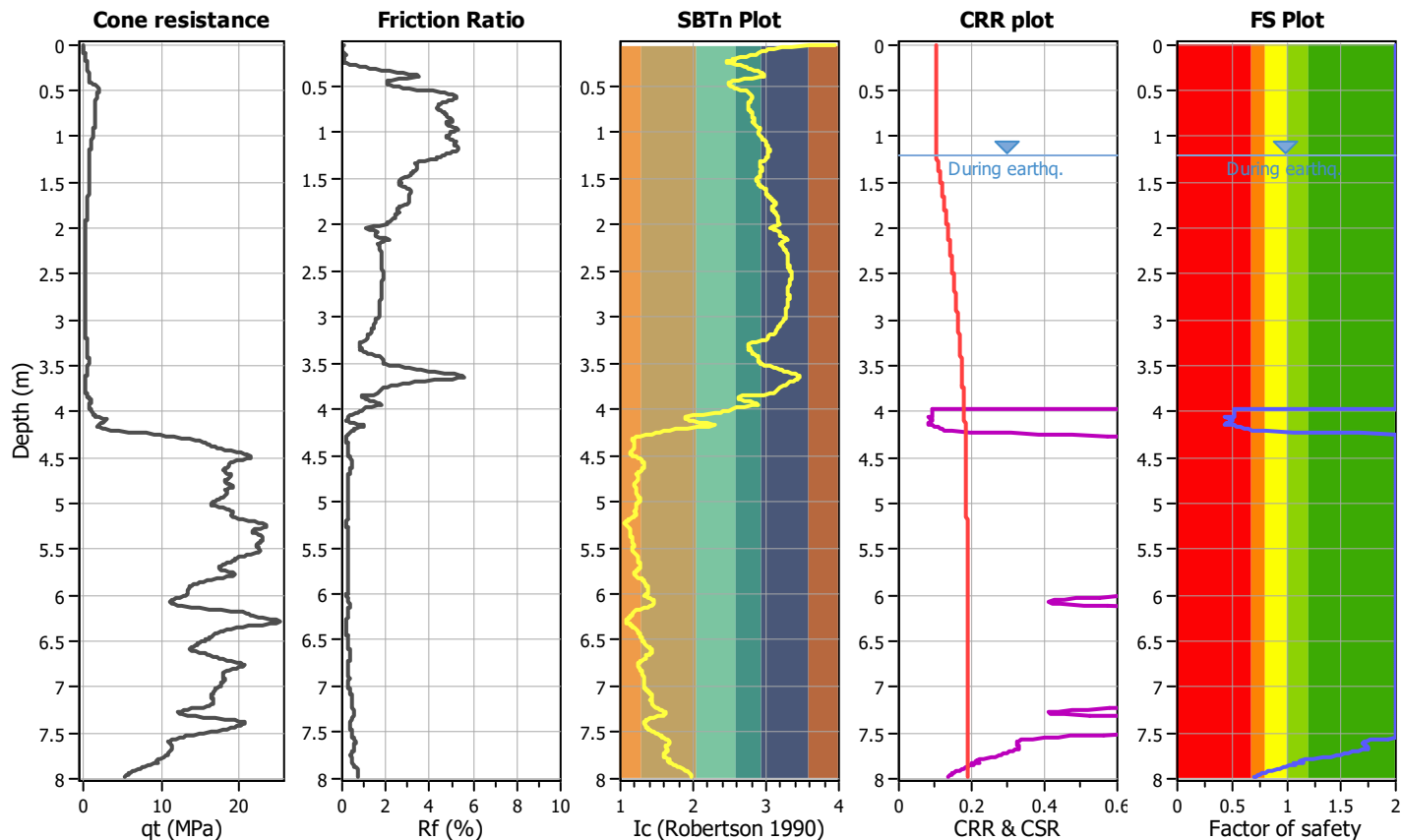
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

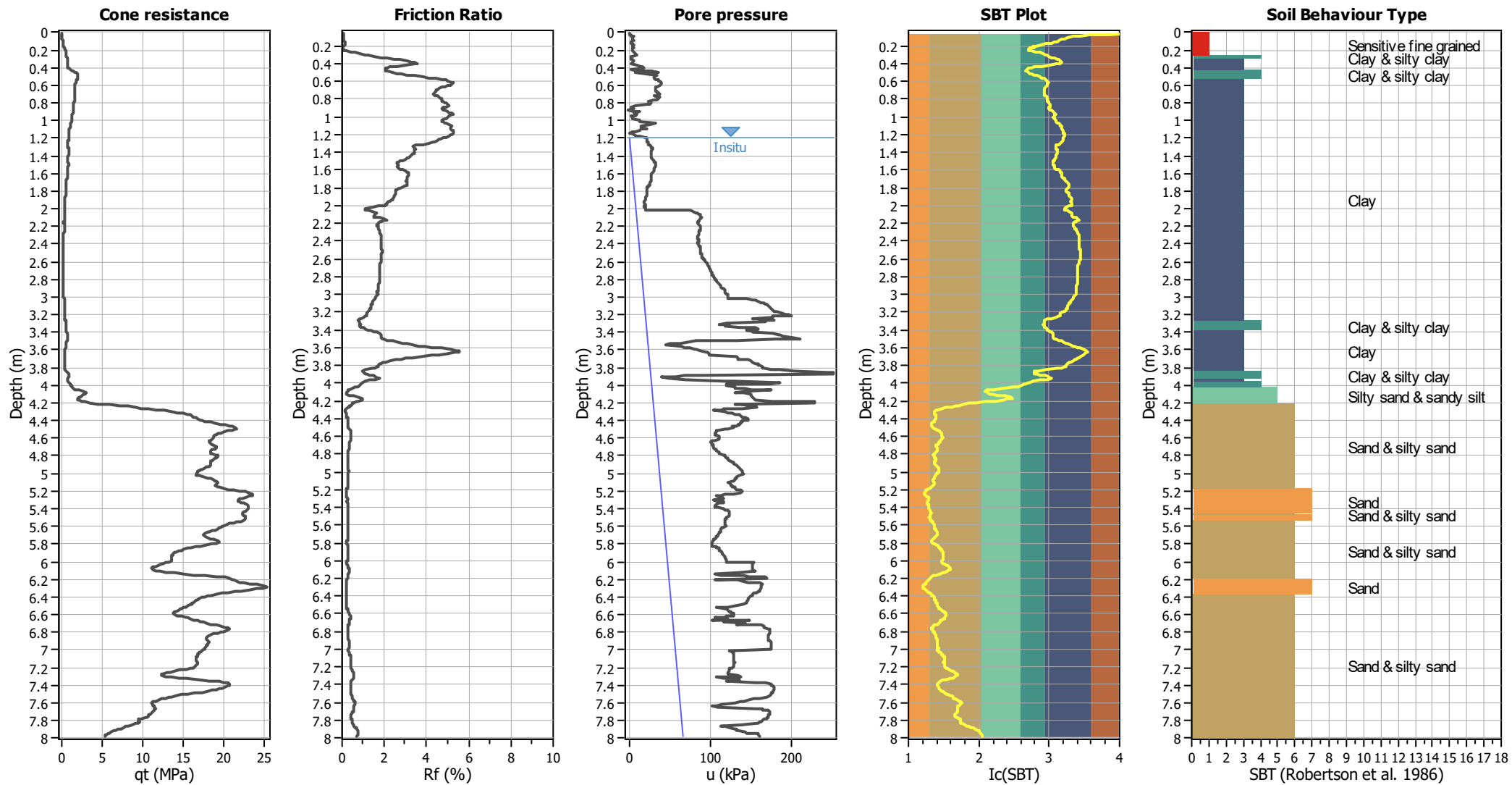
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU12bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes		



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
 Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
 Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
 Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

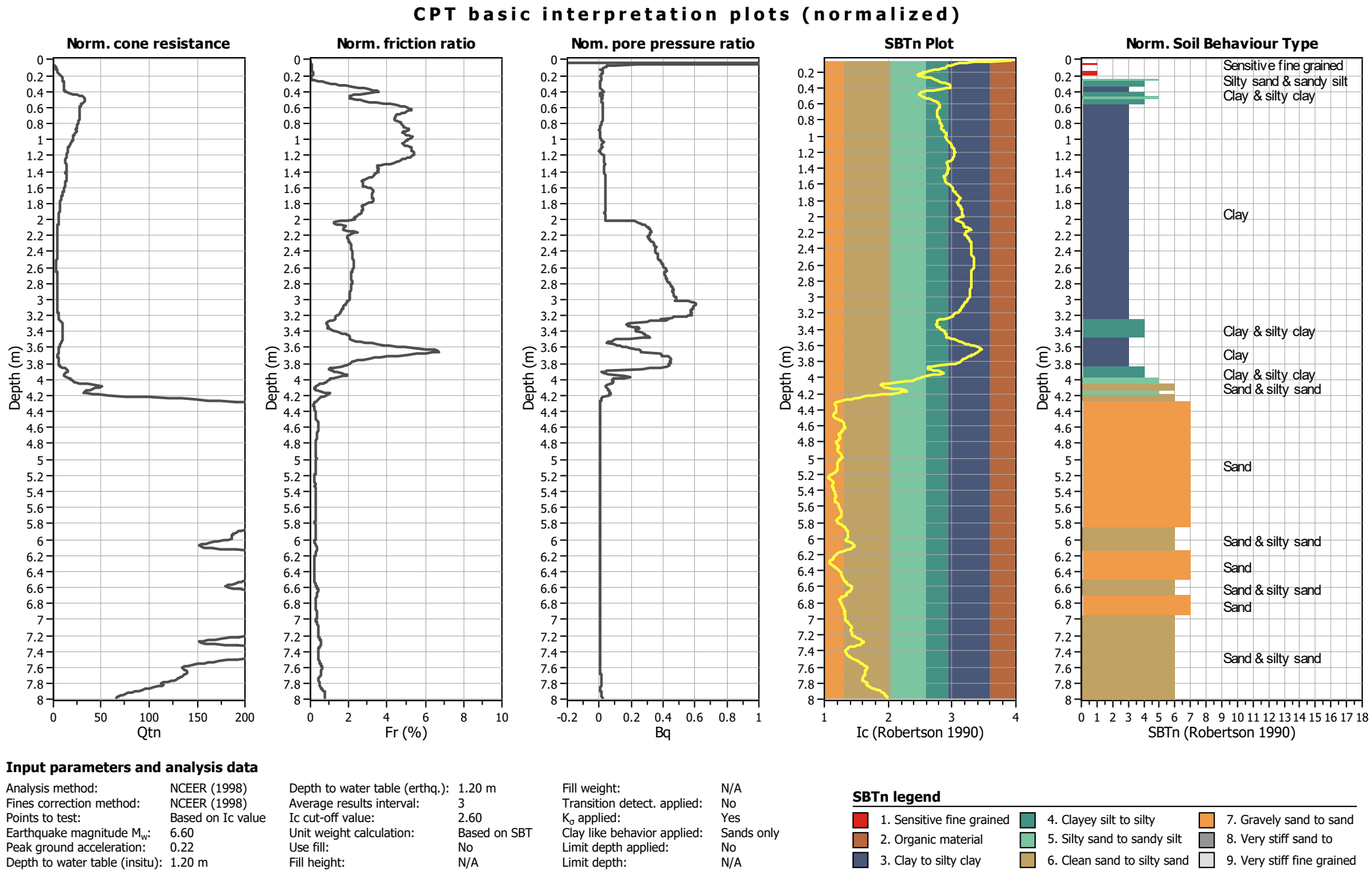


Input parameters and analysis data

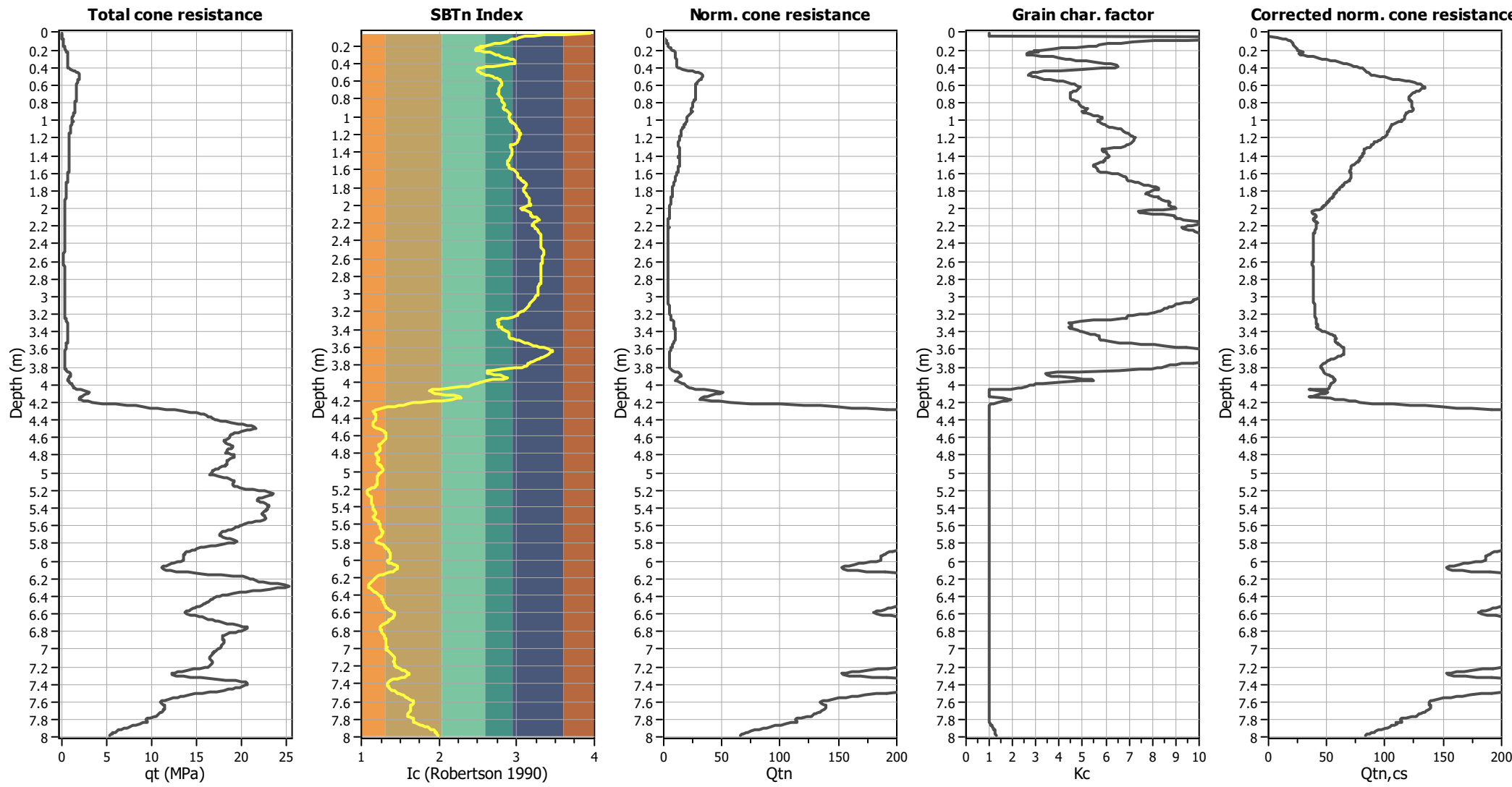
Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



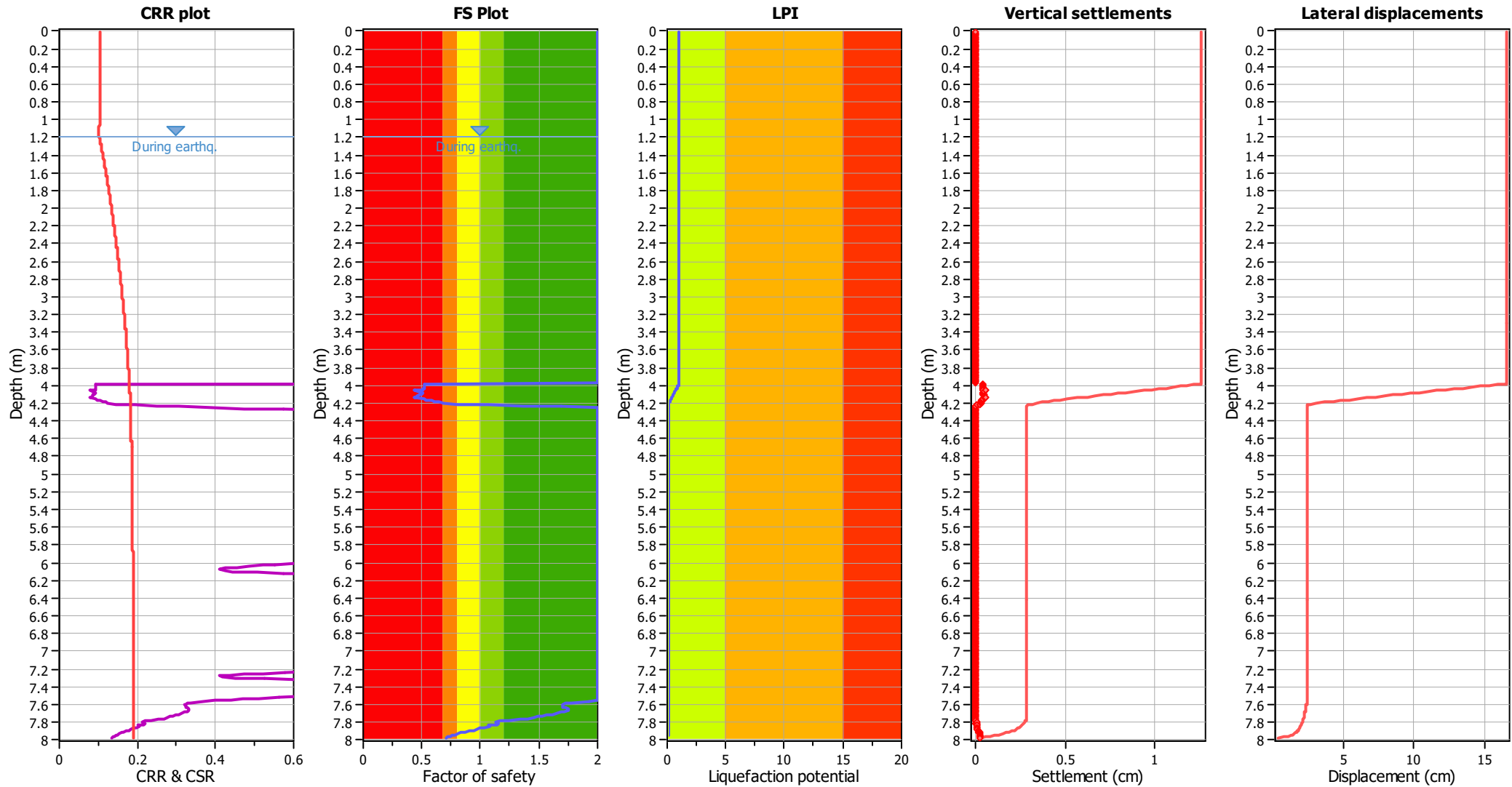
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _G applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

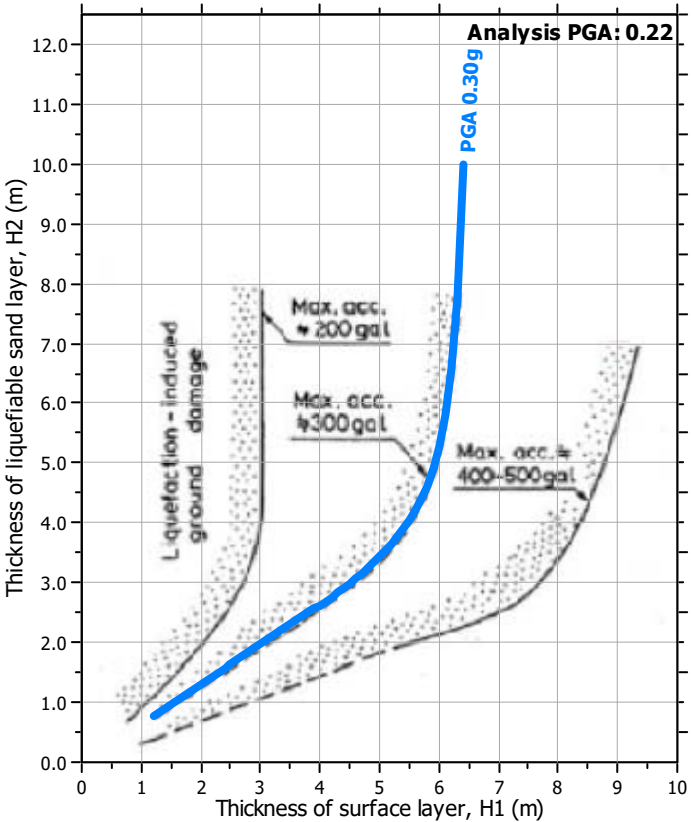
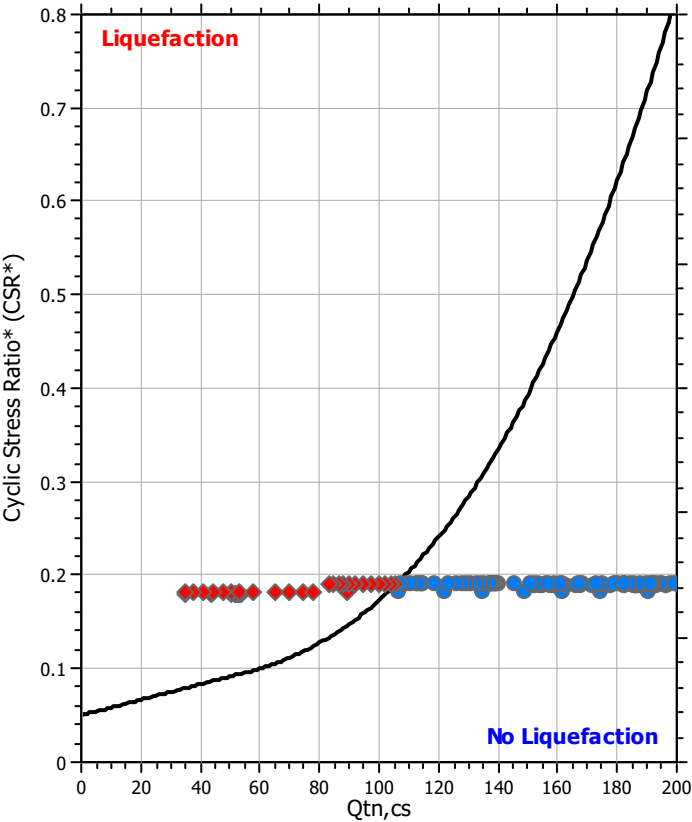
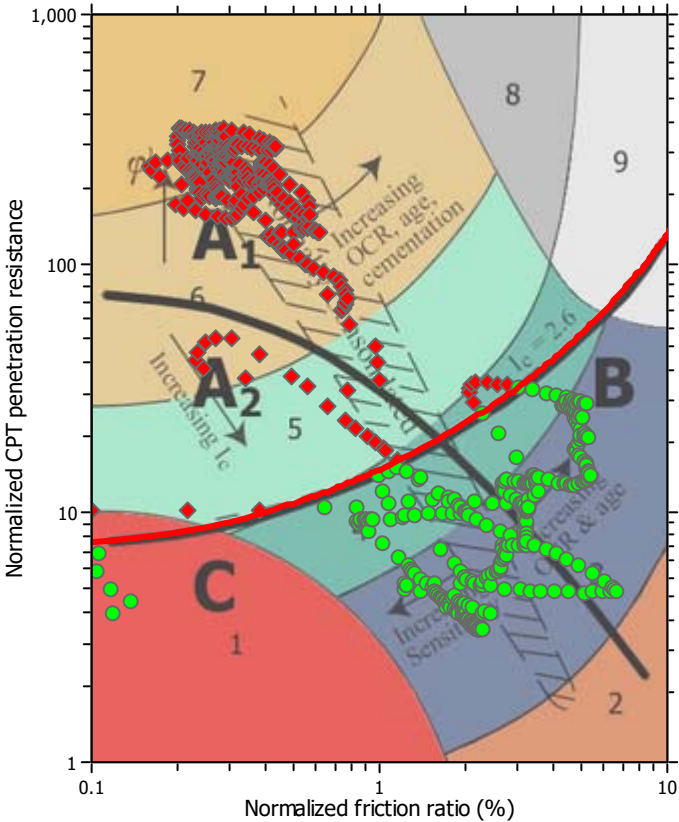
F.S. color scheme

Red	Almost certain it will liquefy
Orange	Very likely to liquefy
Yellow	Liquefaction and no liq. are equally likely
Light green	Unlike to liquefy
Dark green	Almost certain it will not liquefy

LPI color scheme

Red	Very high risk
Orange	High risk
Yellow	Low risk

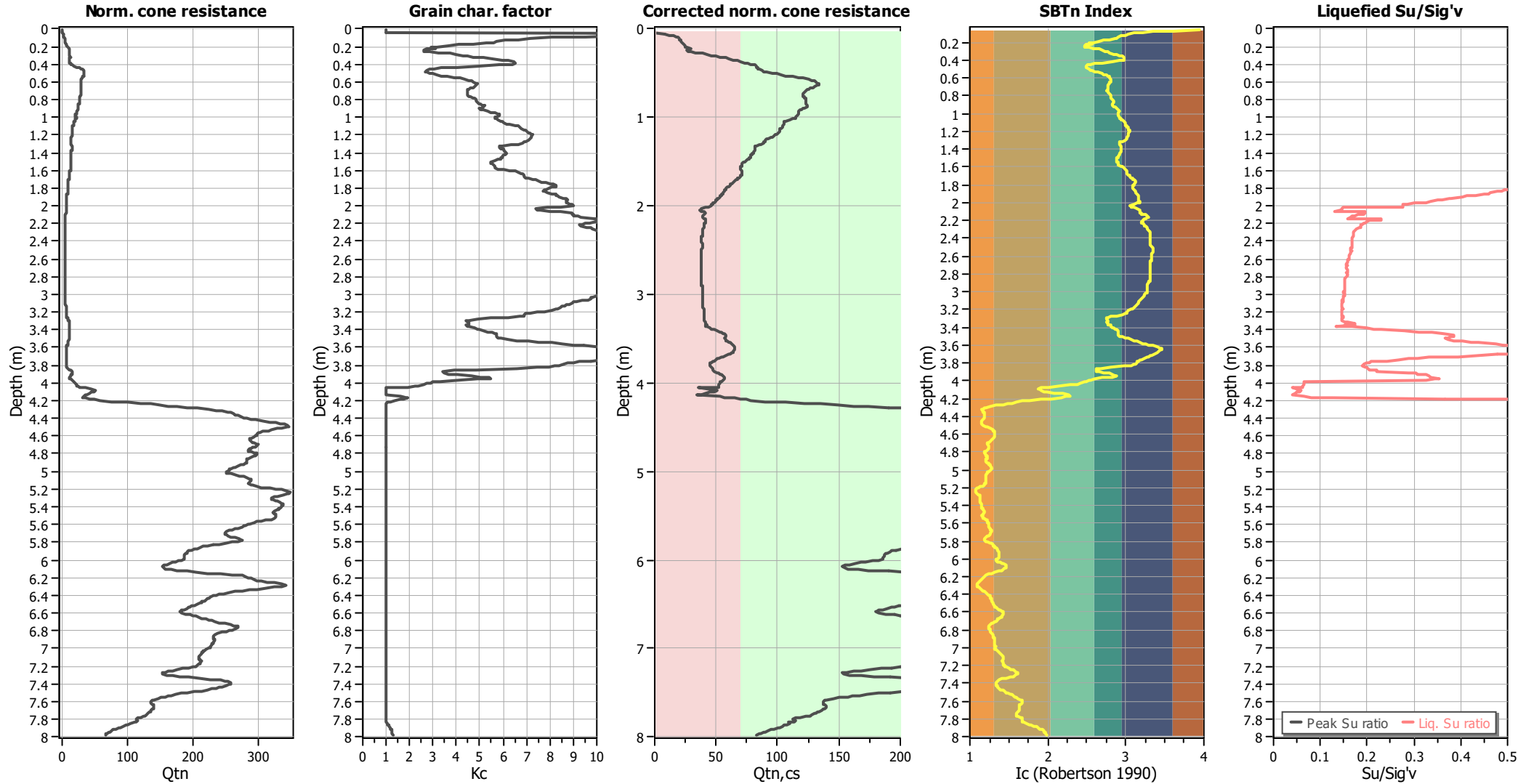
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _G applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	0.53	0.47	8.01	0.01	0.04
3.99	0.52	0.48	8.01	0.01	0.04	4.00	0.52	0.48	8.00	0.01	0.04
4.01	0.52	0.48	8.00	0.01	0.04	4.02	0.52	0.48	7.99	0.01	0.04
4.03	0.52	0.48	7.99	0.01	0.04	4.04	0.52	0.48	7.98	0.01	0.04
4.05	0.51	0.49	7.97	0.01	0.04	4.06	0.44	0.56	7.97	0.01	0.04
4.07	0.48	0.52	7.96	0.01	0.04	4.08	0.51	0.49	7.96	0.01	0.04
4.09	0.51	0.49	7.96	0.01	0.04	4.10	0.50	0.50	7.95	0.01	0.04
4.11	0.48	0.52	7.95	0.01	0.04	4.12	0.46	0.54	7.94	0.01	0.04
4.13	0.45	0.55	7.93	0.01	0.04	4.14	0.43	0.57	7.93	0.01	0.04
4.15	0.52	0.48	7.92	0.01	0.04	4.16	0.54	0.46	7.92	0.01	0.04
4.17	0.58	0.42	7.92	0.01	0.03	4.18	0.61	0.39	7.91	0.01	0.03
4.19	0.65	0.35	7.91	0.01	0.03	4.20	0.68	0.32	7.90	0.01	0.03
4.21	0.80	0.20	7.89	0.01	0.02	4.22	1.06	0.00	7.89	0.01	0.00
4.23	1.36	0.00	7.88	0.01	0.00	4.24	1.68	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	2.00	0.00	7.80	0.01	0.00	4.40	2.00	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	2.00	0.00	7.42	0.01	0.00	5.16	2.00	0.00	7.42	0.01	0.00
5.17	2.00	0.00	7.42	0.01	0.00	5.18	2.00	0.00	7.41	0.01	0.00
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	2.00	0.00	6.91	0.01	0.00	6.20	2.00	0.00	6.90	0.01	0.00
6.21	2.00	0.00	6.89	0.01	0.00	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	2.00	0.00	6.58	0.01	0.00	6.84	2.00	0.00	6.58	0.01	0.00
6.85	2.00	0.00	6.58	0.01	0.00	6.86	2.00	0.00	6.57	0.01	0.00
6.87	2.00	0.00	6.57	0.01	0.00	6.88	2.00	0.00	6.56	0.01	0.00
6.89	2.00	0.00	6.55	0.01	0.00	6.90	2.00	0.00	6.55	0.01	0.00
6.91	2.00	0.00	6.54	0.01	0.00	6.92	2.00	0.00	6.54	0.01	0.00
6.93	2.00	0.00	6.54	0.01	0.00	6.94	2.00	0.00	6.53	0.01	0.00
6.95	2.00	0.00	6.53	0.01	0.00	6.96	2.00	0.00	6.52	0.01	0.00
6.97	2.00	0.00	6.51	0.01	0.00	6.98	2.00	0.00	6.51	0.01	0.00
6.99	2.00	0.00	6.50	0.01	0.00	7.00	2.00	0.00	6.50	0.01	0.00
7.01	2.00	0.00	6.50	0.01	0.00	7.02	2.00	0.00	6.49	0.01	0.00
7.03	2.00	0.00	6.49	0.01	0.00	7.04	2.00	0.00	6.48	0.01	0.00
7.05	2.00	0.00	6.47	0.01	0.00	7.06	2.00	0.00	6.47	0.01	0.00
7.07	2.00	0.00	6.46	0.01	0.00	7.08	2.00	0.00	6.46	0.01	0.00
7.09	2.00	0.00	6.46	0.01	0.00	7.10	2.00	0.00	6.45	0.01	0.00
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	2.00	0.00	6.40	0.01	0.00
7.21	2.00	0.00	6.39	0.01	0.00	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	2.00	0.00	6.38	0.01	0.00	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	2.00	0.00	6.33	0.01	0.00
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	1.93	0.00	6.21	0.01	0.00	7.58	1.77	0.00	6.21	0.01	0.00
7.59	1.73	0.00	6.21	0.01	0.00	7.60	1.70	0.00	6.20	0.01	0.00
7.61	1.70	0.00	6.20	0.01	0.00	7.62	1.70	0.00	6.19	0.01	0.00
7.63	1.71	0.00	6.18	0.01	0.00	7.64	1.73	0.00	6.18	0.01	0.00
7.65	1.75	0.00	6.17	0.01	0.00	7.66	1.75	0.00	6.17	0.01	0.00
7.67	1.75	0.00	6.17	0.01	0.00	7.68	1.72	0.00	6.16	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	1.69	0.00	6.16	0.01	0.00	7.70	1.65	0.00	6.15	0.01	0.00
7.71	1.61	0.00	6.14	0.01	0.00	7.72	1.56	0.00	6.14	0.01	0.00
7.73	1.52	0.00	6.13	0.01	0.00	7.74	1.49	0.00	6.13	0.01	0.00
7.75	1.46	0.00	6.13	0.01	0.00	7.76	1.41	0.00	6.12	0.01	0.00
7.77	1.34	0.00	6.12	0.01	0.00	7.78	1.24	0.00	6.11	0.01	0.00
7.79	1.16	0.00	6.11	0.01	0.00	7.80	1.13	0.00	6.10	0.01	0.00
7.81	1.15	0.00	6.09	0.01	0.00	7.82	1.16	0.00	6.09	0.01	0.00
7.83	1.14	0.00	6.08	0.01	0.00	7.84	1.06	0.00	6.08	0.01	0.00
7.85	1.09	0.00	6.08	0.01	0.00	7.86	1.03	0.00	6.07	0.01	0.00
7.87	1.00	0.00	6.07	0.01	0.00	7.88	0.97	0.03	6.06	0.01	0.00
7.89	0.94	0.06	6.05	0.01	0.00	7.90	0.91	0.09	6.05	0.01	0.01
7.91	0.87	0.13	6.04	0.01	0.01	7.92	0.84	0.16	6.04	0.01	0.01
7.93	0.80	0.20	6.04	0.01	0.01	7.94	0.78	0.22	6.03	0.01	0.01
7.95	0.76	0.24	6.03	0.01	0.01	7.96	0.74	0.26	6.02	0.01	0.02
7.97	0.72	0.28	6.01	0.01	0.02	7.98	0.70	0.30	6.01	0.01	0.02

Overall liquefaction potential: 1.01

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

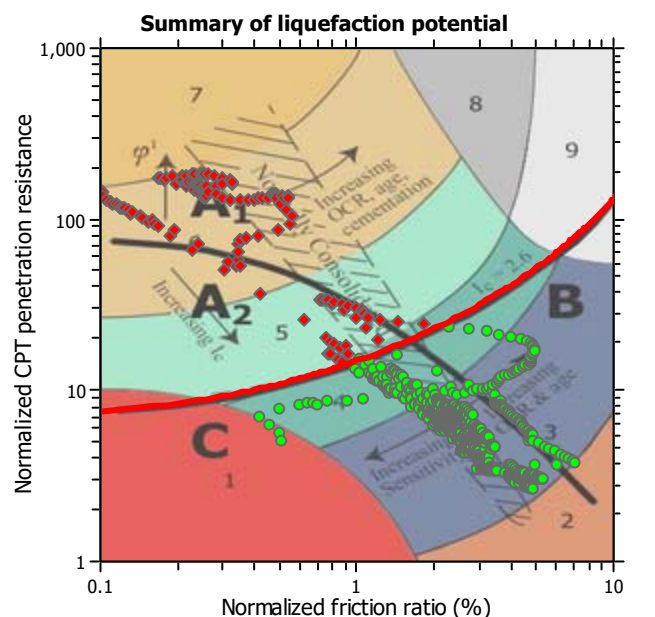
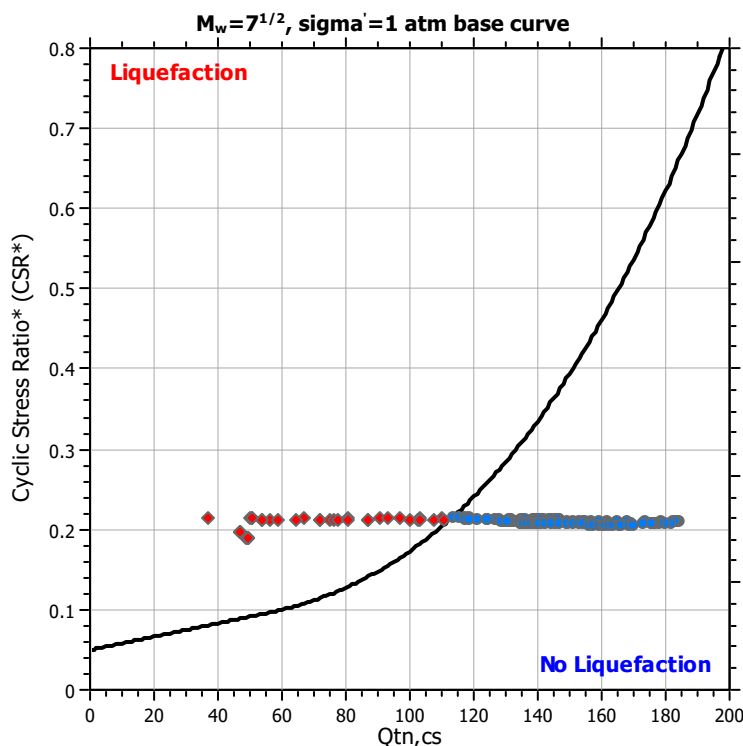
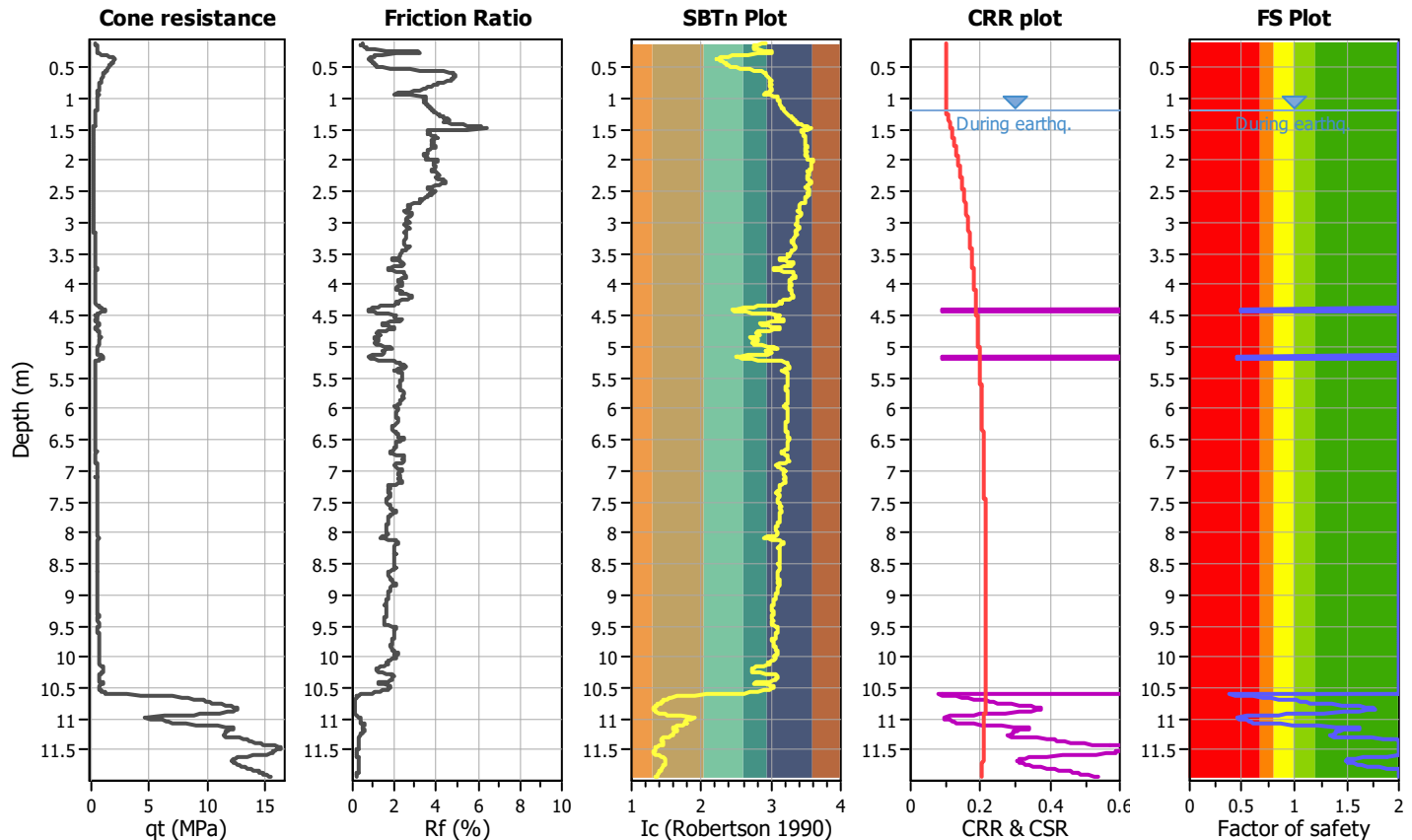
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

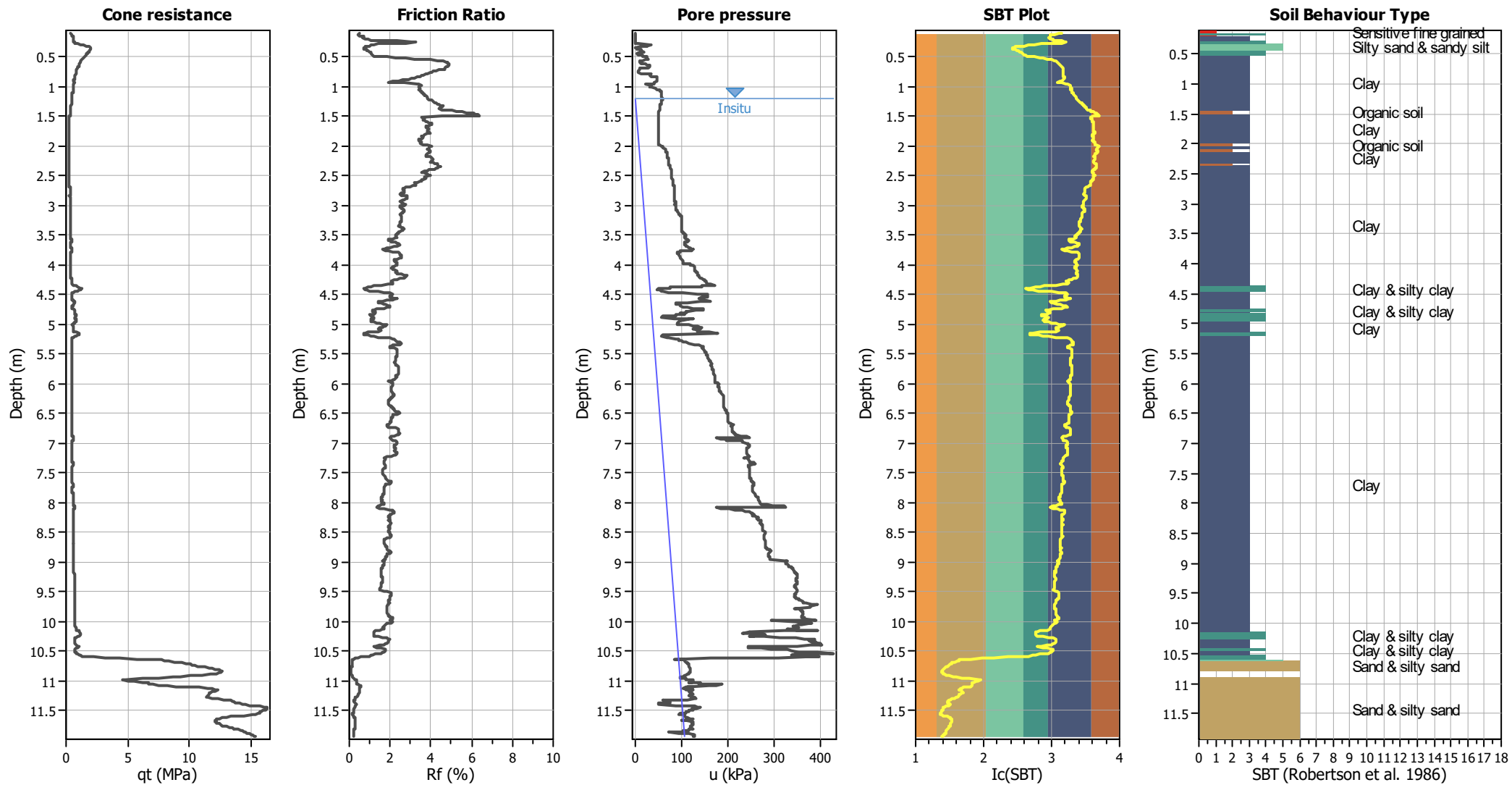
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU13bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots

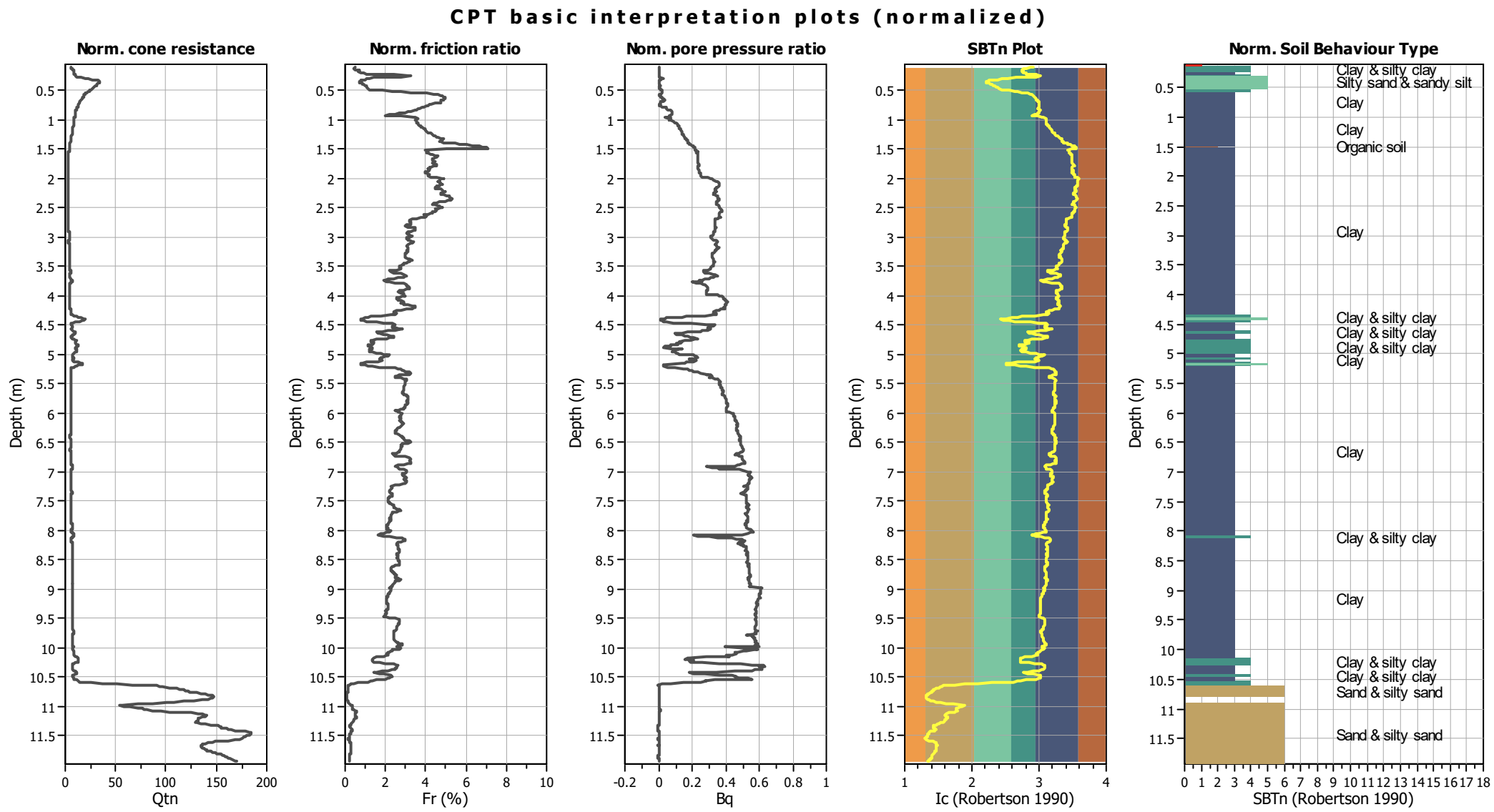


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _g applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

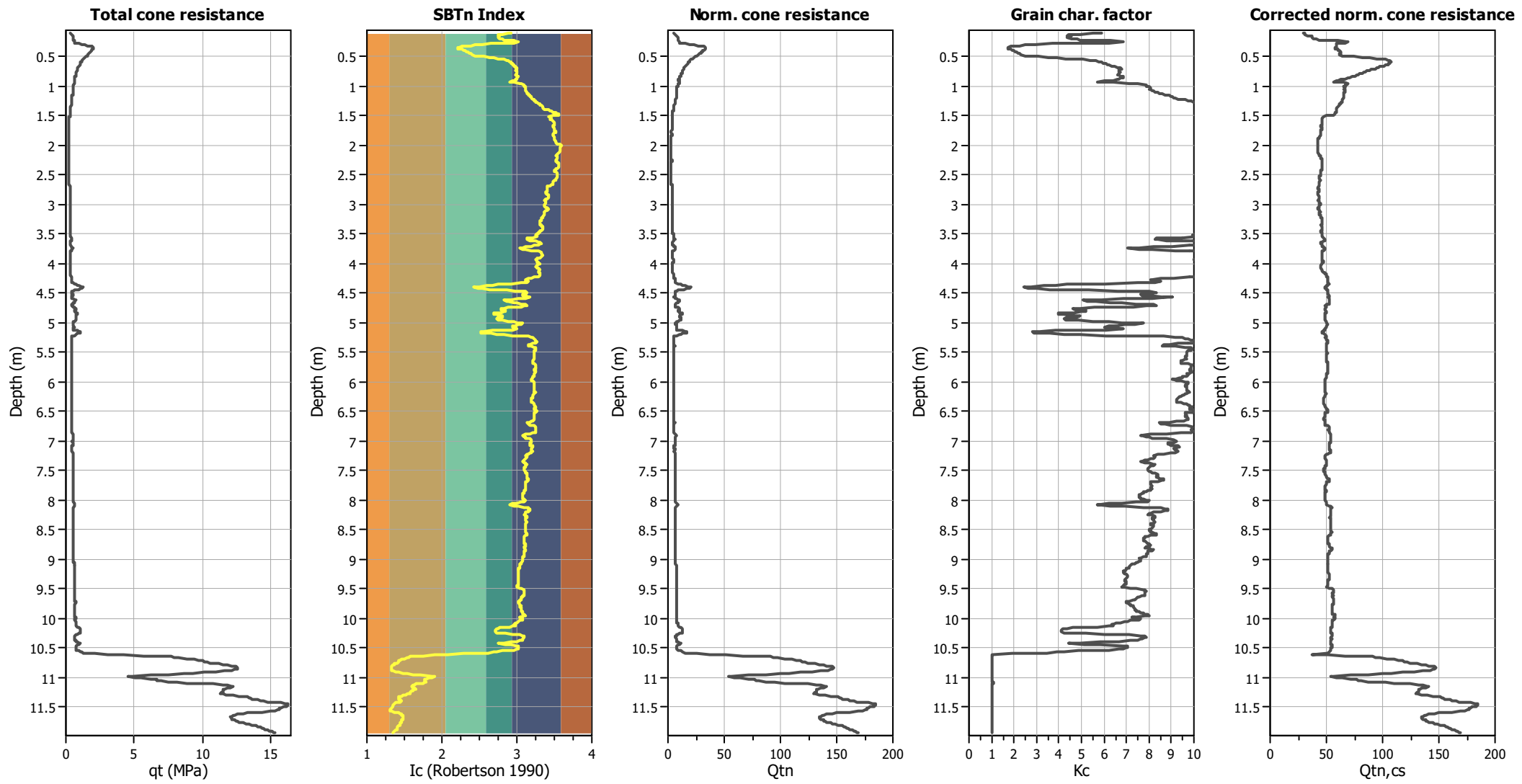


Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K ₀ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBTn legend		
1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

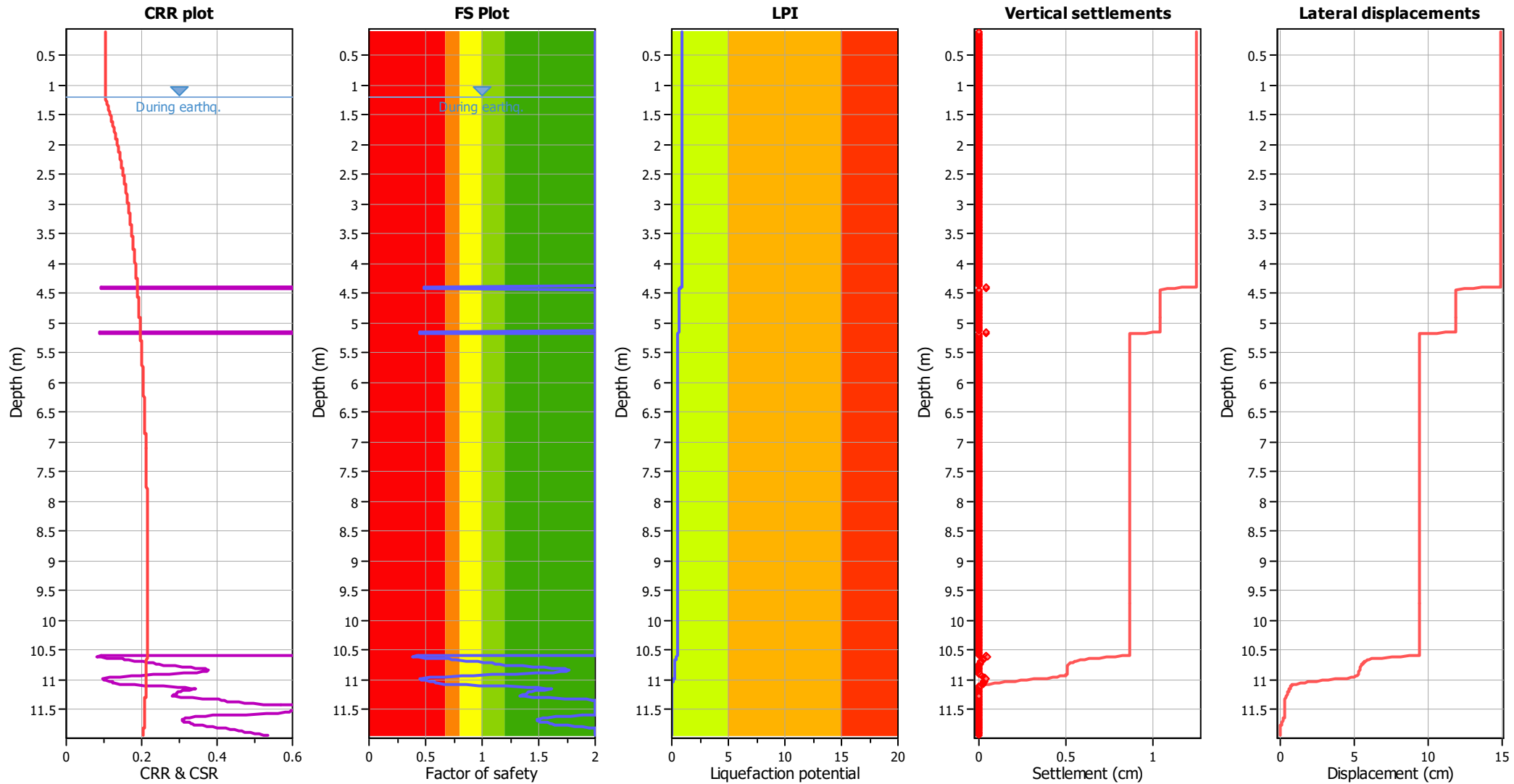
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (earthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

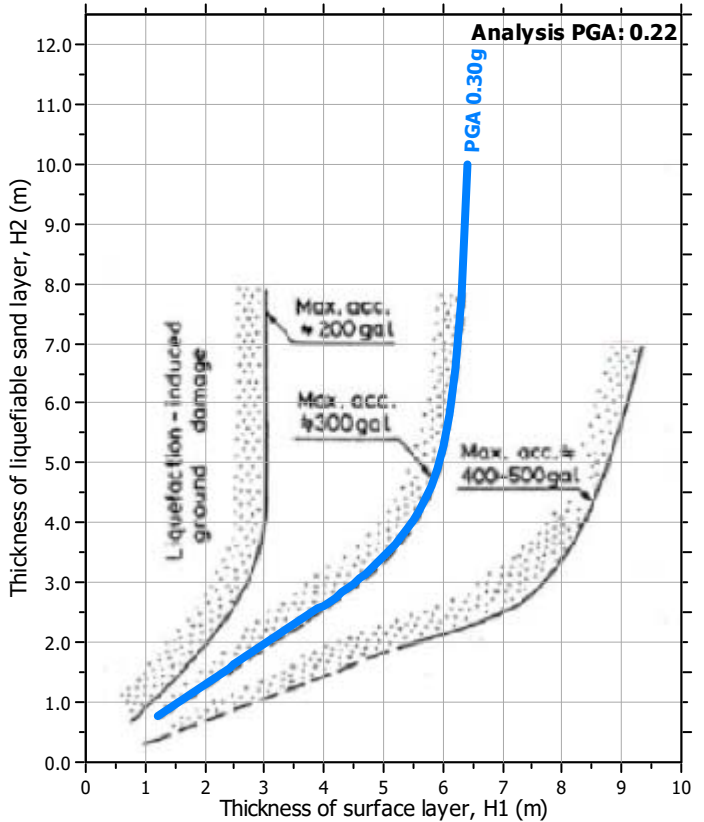
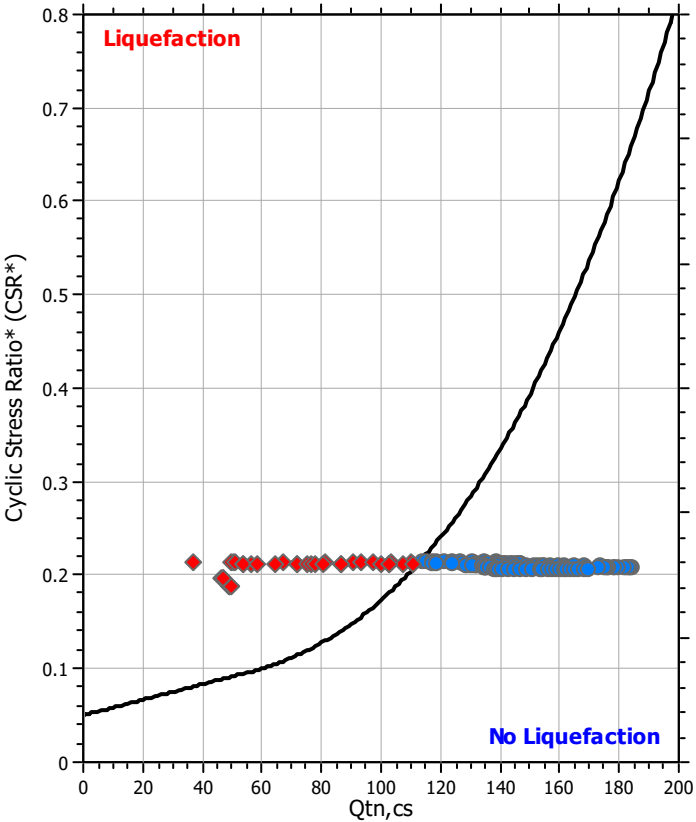
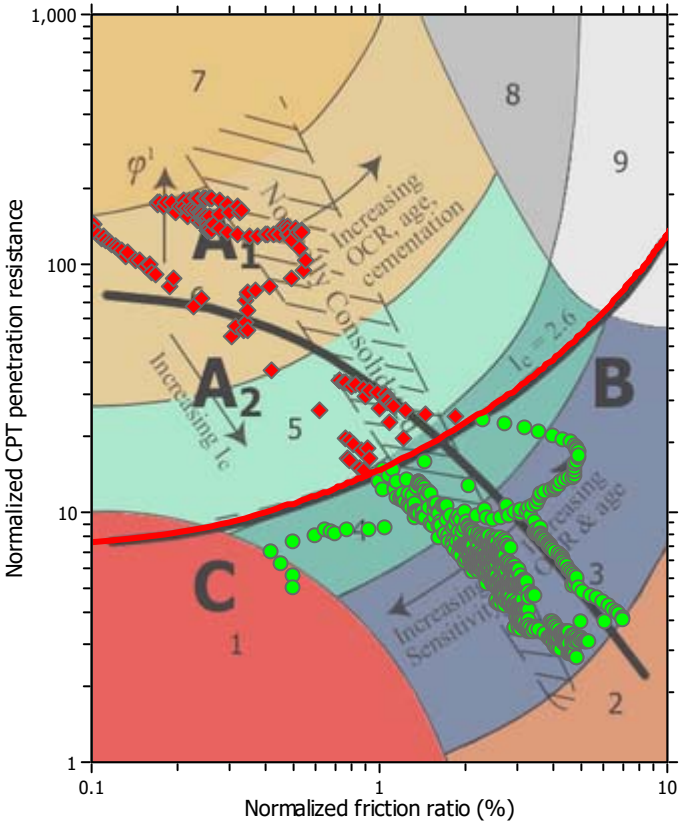
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

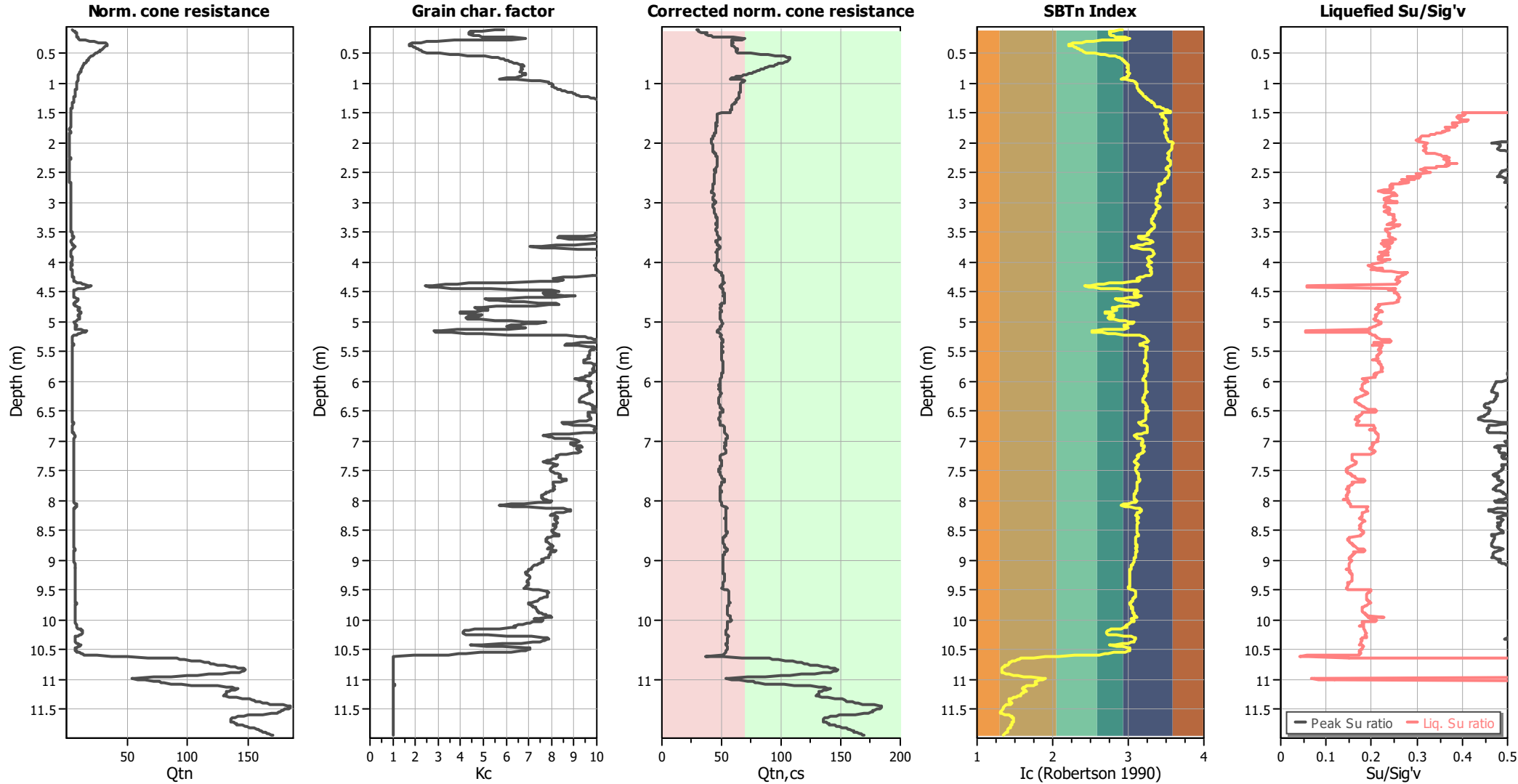
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_g applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	2.00	0.00	7.82	0.01	0.00	4.38	2.00	0.00	7.81	0.01	0.00
4.39	0.48	0.52	7.80	0.01	0.04	4.40	0.48	0.52	7.80	0.01	0.04
4.41	0.48	0.52	7.79	0.01	0.04	4.42	0.48	0.52	7.79	0.01	0.04
4.43	0.48	0.52	7.79	0.01	0.04	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	2.00	0.00	7.65	0.01	0.00
4.71	2.00	0.00	7.64	0.01	0.00	4.72	2.00	0.00	7.64	0.01	0.00
4.73	2.00	0.00	7.63	0.01	0.00	4.74	2.00	0.00	7.63	0.01	0.00
4.75	2.00	0.00	7.63	0.01	0.00	4.76	2.00	0.00	7.62	0.01	0.00
4.77	2.00	0.00	7.62	0.01	0.00	4.78	2.00	0.00	7.61	0.01	0.00
4.79	2.00	0.00	7.61	0.01	0.00	4.80	2.00	0.00	7.60	0.01	0.00
4.81	2.00	0.00	7.59	0.01	0.00	4.82	2.00	0.00	7.59	0.01	0.00
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	2.00	0.00	7.54	0.01	0.00	4.94	2.00	0.00	7.53	0.01	0.00
4.95	2.00	0.00	7.53	0.01	0.00	4.96	2.00	0.00	7.52	0.01	0.00
4.97	2.00	0.00	7.51	0.01	0.00	4.98	2.00	0.00	7.51	0.01	0.00
4.99	2.00	0.00	7.50	0.01	0.00	5.00	2.00	0.00	7.50	0.01	0.00
5.01	2.00	0.00	7.50	0.01	0.00	5.02	2.00	0.00	7.49	0.01	0.00
5.03	2.00	0.00	7.49	0.01	0.00	5.04	2.00	0.00	7.48	0.01	0.00
5.05	2.00	0.00	7.47	0.01	0.00	5.06	2.00	0.00	7.47	0.01	0.00
5.07	2.00	0.00	7.46	0.01	0.00	5.08	2.00	0.00	7.46	0.01	0.00
5.09	2.00	0.00	7.46	0.01	0.00	5.10	2.00	0.00	7.45	0.01	0.00
5.11	2.00	0.00	7.45	0.01	0.00	5.12	2.00	0.00	7.44	0.01	0.00
5.13	2.00	0.00	7.43	0.01	0.00	5.14	2.00	0.00	7.43	0.01	0.00
5.15	0.45	0.55	7.42	0.01	0.04	5.16	0.45	0.55	7.42	0.01	0.04
5.17	0.45	0.55	7.42	0.01	0.04	5.18	0.45	0.55	7.41	0.01	0.04
5.19	2.00	0.00	7.41	0.01	0.00	5.20	2.00	0.00	7.40	0.01	0.00
5.21	2.00	0.00	7.39	0.01	0.00	5.22	2.00	0.00	7.39	0.01	0.00
5.23	2.00	0.00	7.38	0.01	0.00	5.24	2.00	0.00	7.38	0.01	0.00
5.25	2.00	0.00	7.38	0.01	0.00	5.26	2.00	0.00	7.37	0.01	0.00
5.27	2.00	0.00	7.37	0.01	0.00	5.28	2.00	0.00	7.36	0.01	0.00
5.29	2.00	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	2.00	0.00	7.12	0.01	0.00
5.77	2.00	0.00	7.12	0.01	0.00	5.78	2.00	0.00	7.11	0.01	0.00
5.79	2.00	0.00	7.11	0.01	0.00	5.80	2.00	0.00	7.10	0.01	0.00
5.81	2.00	0.00	7.09	0.01	0.00	5.82	2.00	0.00	7.09	0.01	0.00
5.83	2.00	0.00	7.08	0.01	0.00	5.84	2.00	0.00	7.08	0.01	0.00
5.85	2.00	0.00	7.08	0.01	0.00	5.86	2.00	0.00	7.07	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.87	2.00	0.00	7.07	0.01	0.00	5.88	2.00	0.00	7.06	0.01	0.00
5.89	2.00	0.00	7.05	0.01	0.00	5.90	2.00	0.00	7.05	0.01	0.00
5.91	2.00	0.00	7.04	0.01	0.00	5.92	2.00	0.00	7.04	0.01	0.00
5.93	2.00	0.00	7.04	0.01	0.00	5.94	2.00	0.00	7.03	0.01	0.00
5.95	2.00	0.00	7.03	0.01	0.00	5.96	2.00	0.00	7.02	0.01	0.00
5.97	2.00	0.00	7.01	0.01	0.00	5.98	2.00	0.00	7.01	0.01	0.00
5.99	2.00	0.00	7.00	0.01	0.00	6.00	2.00	0.00	7.00	0.01	0.00
6.01	2.00	0.00	7.00	0.01	0.00	6.02	2.00	0.00	6.99	0.01	0.00
6.03	2.00	0.00	6.99	0.01	0.00	6.04	2.00	0.00	6.98	0.01	0.00
6.05	2.00	0.00	6.97	0.01	0.00	6.06	2.00	0.00	6.97	0.01	0.00
6.07	2.00	0.00	6.96	0.01	0.00	6.08	2.00	0.00	6.96	0.01	0.00
6.09	2.00	0.00	6.96	0.01	0.00	6.10	2.00	0.00	6.95	0.01	0.00
6.11	2.00	0.00	6.95	0.01	0.00	6.12	2.00	0.00	6.94	0.01	0.00
6.13	2.00	0.00	6.93	0.01	0.00	6.14	2.00	0.00	6.93	0.01	0.00
6.15	2.00	0.00	6.92	0.01	0.00	6.16	2.00	0.00	6.92	0.01	0.00
6.17	2.00	0.00	6.92	0.01	0.00	6.18	2.00	0.00	6.91	0.01	0.00
6.19	2.00	0.00	6.91	0.01	0.00	6.20	2.00	0.00	6.90	0.01	0.00
6.21	2.00	0.00	6.89	0.01	0.00	6.22	2.00	0.00	6.89	0.01	0.00
6.23	2.00	0.00	6.88	0.01	0.00	6.24	2.00	0.00	6.88	0.01	0.00
6.25	2.00	0.00	6.88	0.01	0.00	6.26	2.00	0.00	6.87	0.01	0.00
6.27	2.00	0.00	6.87	0.01	0.00	6.28	2.00	0.00	6.86	0.01	0.00
6.29	2.00	0.00	6.86	0.01	0.00	6.30	2.00	0.00	6.85	0.01	0.00
6.31	2.00	0.00	6.84	0.01	0.00	6.32	2.00	0.00	6.84	0.01	0.00
6.33	2.00	0.00	6.83	0.01	0.00	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	2.00	0.00	6.79	0.01	0.00	6.42	2.00	0.00	6.79	0.01	0.00
6.43	2.00	0.00	6.79	0.01	0.00	6.44	2.00	0.00	6.78	0.01	0.00
6.45	2.00	0.00	6.78	0.01	0.00	6.46	2.00	0.00	6.77	0.01	0.00
6.47	2.00	0.00	6.76	0.01	0.00	6.48	2.00	0.00	6.76	0.01	0.00
6.49	2.00	0.00	6.75	0.01	0.00	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.83	2.00	0.00	6.58	0.01	0.00	6.84	2.00	0.00	6.58	0.01	0.00
6.85	2.00	0.00	6.58	0.01	0.00	6.86	2.00	0.00	6.57	0.01	0.00
6.87	2.00	0.00	6.57	0.01	0.00	6.88	2.00	0.00	6.56	0.01	0.00
6.89	2.00	0.00	6.55	0.01	0.00	6.90	2.00	0.00	6.55	0.01	0.00
6.91	2.00	0.00	6.54	0.01	0.00	6.92	2.00	0.00	6.54	0.01	0.00
6.93	2.00	0.00	6.54	0.01	0.00	6.94	2.00	0.00	6.53	0.01	0.00
6.95	2.00	0.00	6.53	0.01	0.00	6.96	2.00	0.00	6.52	0.01	0.00
6.97	2.00	0.00	6.51	0.01	0.00	6.98	2.00	0.00	6.51	0.01	0.00
6.99	2.00	0.00	6.50	0.01	0.00	7.00	2.00	0.00	6.50	0.01	0.00
7.01	2.00	0.00	6.50	0.01	0.00	7.02	2.00	0.00	6.49	0.01	0.00
7.03	2.00	0.00	6.49	0.01	0.00	7.04	2.00	0.00	6.48	0.01	0.00
7.05	2.00	0.00	6.47	0.01	0.00	7.06	2.00	0.00	6.47	0.01	0.00
7.07	2.00	0.00	6.46	0.01	0.00	7.08	2.00	0.00	6.46	0.01	0.00
7.09	2.00	0.00	6.46	0.01	0.00	7.10	2.00	0.00	6.45	0.01	0.00
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	2.00	0.00	6.40	0.01	0.00
7.21	2.00	0.00	6.39	0.01	0.00	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	2.00	0.00	6.38	0.01	0.00	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	2.00	0.00	6.33	0.01	0.00
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	2.00	0.00	6.21	0.01	0.00	7.58	2.00	0.00	6.21	0.01	0.00
7.59	2.00	0.00	6.21	0.01	0.00	7.60	2.00	0.00	6.20	0.01	0.00
7.61	2.00	0.00	6.20	0.01	0.00	7.62	2.00	0.00	6.19	0.01	0.00
7.63	2.00	0.00	6.18	0.01	0.00	7.64	2.00	0.00	6.18	0.01	0.00
7.65	2.00	0.00	6.17	0.01	0.00	7.66	2.00	0.00	6.17	0.01	0.00
7.67	2.00	0.00	6.17	0.01	0.00	7.68	2.00	0.00	6.16	0.01	0.00
7.69	2.00	0.00	6.16	0.01	0.00	7.70	2.00	0.00	6.15	0.01	0.00
7.71	2.00	0.00	6.14	0.01	0.00	7.72	2.00	0.00	6.14	0.01	0.00
7.73	2.00	0.00	6.13	0.01	0.00	7.74	2.00	0.00	6.13	0.01	0.00
7.75	2.00	0.00	6.13	0.01	0.00	7.76	2.00	0.00	6.12	0.01	0.00
7.77	2.00	0.00	6.12	0.01	0.00	7.78	2.00	0.00	6.11	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.79	2.00	0.00	6.11	0.01	0.00	7.80	2.00	0.00	6.10	0.01	0.00
7.81	2.00	0.00	6.09	0.01	0.00	7.82	2.00	0.00	6.09	0.01	0.00
7.83	2.00	0.00	6.08	0.01	0.00	7.84	2.00	0.00	6.08	0.01	0.00
7.85	2.00	0.00	6.08	0.01	0.00	7.86	2.00	0.00	6.07	0.01	0.00
7.87	2.00	0.00	6.07	0.01	0.00	7.88	2.00	0.00	6.06	0.01	0.00
7.89	2.00	0.00	6.05	0.01	0.00	7.90	2.00	0.00	6.05	0.01	0.00
7.91	2.00	0.00	6.04	0.01	0.00	7.92	2.00	0.00	6.04	0.01	0.00
7.93	2.00	0.00	6.04	0.01	0.00	7.94	2.00	0.00	6.03	0.01	0.00
7.95	2.00	0.00	6.03	0.01	0.00	7.96	2.00	0.00	6.02	0.01	0.00
7.97	2.00	0.00	6.01	0.01	0.00	7.98	2.00	0.00	6.01	0.01	0.00
7.99	2.00	0.00	6.00	0.01	0.00	8.00	2.00	0.00	6.00	0.01	0.00
8.01	2.00	0.00	6.00	0.01	0.00	8.02	2.00	0.00	5.99	0.01	0.00
8.03	2.00	0.00	5.99	0.01	0.00	8.04	2.00	0.00	5.98	0.01	0.00
8.05	2.00	0.00	5.97	0.01	0.00	8.06	2.00	0.00	5.97	0.01	0.00
8.07	2.00	0.00	5.96	0.01	0.00	8.08	2.00	0.00	5.96	0.01	0.00
8.09	2.00	0.00	5.96	0.01	0.00	8.10	2.00	0.00	5.95	0.01	0.00
8.11	2.00	0.00	5.95	0.01	0.00	8.12	2.00	0.00	5.94	0.01	0.00
8.13	2.00	0.00	5.93	0.01	0.00	8.14	2.00	0.00	5.93	0.01	0.00
8.15	2.00	0.00	5.92	0.01	0.00	8.16	2.00	0.00	5.92	0.01	0.00
8.17	2.00	0.00	5.92	0.01	0.00	8.18	2.00	0.00	5.91	0.01	0.00
8.19	2.00	0.00	5.91	0.01	0.00	8.20	2.00	0.00	5.90	0.01	0.00
8.21	2.00	0.00	5.89	0.01	0.00	8.22	2.00	0.00	5.89	0.01	0.00
8.23	2.00	0.00	5.88	0.01	0.00	8.24	2.00	0.00	5.88	0.01	0.00
8.25	2.00	0.00	5.88	0.01	0.00	8.26	2.00	0.00	5.87	0.01	0.00
8.27	2.00	0.00	5.87	0.01	0.00	8.28	2.00	0.00	5.86	0.01	0.00
8.29	2.00	0.00	5.86	0.01	0.00	8.30	2.00	0.00	5.85	0.01	0.00
8.31	2.00	0.00	5.84	0.01	0.00	8.32	2.00	0.00	5.84	0.01	0.00
8.33	2.00	0.00	5.83	0.01	0.00	8.34	2.00	0.00	5.83	0.01	0.00
8.35	2.00	0.00	5.83	0.01	0.00	8.36	2.00	0.00	5.82	0.01	0.00
8.37	2.00	0.00	5.82	0.01	0.00	8.38	2.00	0.00	5.81	0.01	0.00
8.39	2.00	0.00	5.80	0.01	0.00	8.40	2.00	0.00	5.80	0.01	0.00
8.41	2.00	0.00	5.79	0.01	0.00	8.42	2.00	0.00	5.79	0.01	0.00
8.43	2.00	0.00	5.79	0.01	0.00	8.44	2.00	0.00	5.78	0.01	0.00
8.45	2.00	0.00	5.78	0.01	0.00	8.46	2.00	0.00	5.77	0.01	0.00
8.47	2.00	0.00	5.76	0.01	0.00	8.48	2.00	0.00	5.76	0.01	0.00
8.49	2.00	0.00	5.75	0.01	0.00	8.50	2.00	0.00	5.75	0.01	0.00
8.51	2.00	0.00	5.75	0.01	0.00	8.52	2.00	0.00	5.74	0.01	0.00
8.53	2.00	0.00	5.74	0.01	0.00	8.54	2.00	0.00	5.73	0.01	0.00
8.55	2.00	0.00	5.72	0.01	0.00	8.56	2.00	0.00	5.72	0.01	0.00
8.57	2.00	0.00	5.71	0.01	0.00	8.58	2.00	0.00	5.71	0.01	0.00
8.59	2.00	0.00	5.71	0.01	0.00	8.60	2.00	0.00	5.70	0.01	0.00
8.61	2.00	0.00	5.70	0.01	0.00	8.62	2.00	0.00	5.69	0.01	0.00
8.63	2.00	0.00	5.68	0.01	0.00	8.64	2.00	0.00	5.68	0.01	0.00
8.65	2.00	0.00	5.67	0.01	0.00	8.66	2.00	0.00	5.67	0.01	0.00
8.67	2.00	0.00	5.67	0.01	0.00	8.68	2.00	0.00	5.66	0.01	0.00
8.69	2.00	0.00	5.66	0.01	0.00	8.70	2.00	0.00	5.65	0.01	0.00
8.71	2.00	0.00	5.64	0.01	0.00	8.72	2.00	0.00	5.64	0.01	0.00
8.73	2.00	0.00	5.63	0.01	0.00	8.74	2.00	0.00	5.63	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.75	2.00	0.00	5.63	0.01	0.00	8.76	2.00	0.00	5.62	0.01	0.00
8.77	2.00	0.00	5.62	0.01	0.00	8.78	2.00	0.00	5.61	0.01	0.00
8.79	2.00	0.00	5.61	0.01	0.00	8.80	2.00	0.00	5.60	0.01	0.00
8.81	2.00	0.00	5.59	0.01	0.00	8.82	2.00	0.00	5.59	0.01	0.00
8.83	2.00	0.00	5.58	0.01	0.00	8.84	2.00	0.00	5.58	0.01	0.00
8.85	2.00	0.00	5.58	0.01	0.00	8.86	2.00	0.00	5.57	0.01	0.00
8.87	2.00	0.00	5.57	0.01	0.00	8.88	2.00	0.00	5.56	0.01	0.00
8.89	2.00	0.00	5.55	0.01	0.00	8.90	2.00	0.00	5.55	0.01	0.00
8.91	2.00	0.00	5.54	0.01	0.00	8.92	2.00	0.00	5.54	0.01	0.00
8.93	2.00	0.00	5.54	0.01	0.00	8.94	2.00	0.00	5.53	0.01	0.00
8.95	2.00	0.00	5.53	0.01	0.00	8.96	2.00	0.00	5.52	0.01	0.00
8.97	2.00	0.00	5.51	0.01	0.00	8.98	2.00	0.00	5.51	0.01	0.00
8.99	2.00	0.00	5.50	0.01	0.00	9.00	2.00	0.00	5.50	0.01	0.00
9.01	2.00	0.00	5.50	0.01	0.00	9.02	2.00	0.00	5.49	0.01	0.00
9.03	2.00	0.00	5.49	0.01	0.00	9.04	2.00	0.00	5.48	0.01	0.00
9.05	2.00	0.00	5.47	0.01	0.00	9.06	2.00	0.00	5.47	0.01	0.00
9.07	2.00	0.00	5.46	0.01	0.00	9.08	2.00	0.00	5.46	0.01	0.00
9.09	2.00	0.00	5.46	0.01	0.00	9.10	2.00	0.00	5.45	0.01	0.00
9.11	2.00	0.00	5.45	0.01	0.00	9.12	2.00	0.00	5.44	0.01	0.00
9.13	2.00	0.00	5.43	0.01	0.00	9.14	2.00	0.00	5.43	0.01	0.00
9.15	2.00	0.00	5.42	0.01	0.00	9.16	2.00	0.00	5.42	0.01	0.00
9.17	2.00	0.00	5.42	0.01	0.00	9.18	2.00	0.00	5.41	0.01	0.00
9.19	2.00	0.00	5.41	0.01	0.00	9.20	2.00	0.00	5.40	0.01	0.00
9.21	2.00	0.00	5.39	0.01	0.00	9.22	2.00	0.00	5.39	0.01	0.00
9.23	2.00	0.00	5.38	0.01	0.00	9.24	2.00	0.00	5.38	0.01	0.00
9.25	2.00	0.00	5.38	0.01	0.00	9.26	2.00	0.00	5.37	0.01	0.00
9.27	2.00	0.00	5.37	0.01	0.00	9.28	2.00	0.00	5.36	0.01	0.00
9.29	2.00	0.00	5.36	0.01	0.00	9.30	2.00	0.00	5.35	0.01	0.00
9.31	2.00	0.00	5.34	0.01	0.00	9.32	2.00	0.00	5.34	0.01	0.00
9.33	2.00	0.00	5.33	0.01	0.00	9.34	2.00	0.00	5.33	0.01	0.00
9.35	2.00	0.00	5.33	0.01	0.00	9.36	2.00	0.00	5.32	0.01	0.00
9.37	2.00	0.00	5.32	0.01	0.00	9.38	2.00	0.00	5.31	0.01	0.00
9.39	2.00	0.00	5.30	0.01	0.00	9.40	2.00	0.00	5.30	0.01	0.00
9.41	2.00	0.00	5.29	0.01	0.00	9.42	2.00	0.00	5.29	0.01	0.00
9.43	2.00	0.00	5.29	0.01	0.00	9.44	2.00	0.00	5.28	0.01	0.00
9.45	2.00	0.00	5.28	0.01	0.00	9.46	2.00	0.00	5.27	0.01	0.00
9.47	2.00	0.00	5.26	0.01	0.00	9.48	2.00	0.00	5.26	0.01	0.00
9.49	2.00	0.00	5.25	0.01	0.00	9.50	2.00	0.00	5.25	0.01	0.00
9.51	2.00	0.00	5.25	0.01	0.00	9.52	2.00	0.00	5.24	0.01	0.00
9.53	2.00	0.00	5.24	0.01	0.00	9.54	2.00	0.00	5.23	0.01	0.00
9.55	2.00	0.00	5.22	0.01	0.00	9.56	2.00	0.00	5.22	0.01	0.00
9.57	2.00	0.00	5.21	0.01	0.00	9.58	2.00	0.00	5.21	0.01	0.00
9.59	2.00	0.00	5.21	0.01	0.00	9.60	2.00	0.00	5.20	0.01	0.00
9.61	2.00	0.00	5.20	0.01	0.00	9.62	2.00	0.00	5.19	0.01	0.00
9.63	2.00	0.00	5.18	0.01	0.00	9.64	2.00	0.00	5.18	0.01	0.00
9.65	2.00	0.00	5.17	0.01	0.00	9.66	2.00	0.00	5.17	0.01	0.00
9.67	2.00	0.00	5.17	0.01	0.00	9.68	2.00	0.00	5.16	0.01	0.00
9.69	2.00	0.00	5.16	0.01	0.00	9.70	2.00	0.00	5.15	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
9.71	2.00	0.00	5.14	0.01	0.00	9.72	2.00	0.00	5.14	0.01	0.00
9.73	2.00	0.00	5.13	0.01	0.00	9.74	2.00	0.00	5.13	0.01	0.00
9.75	2.00	0.00	5.13	0.01	0.00	9.76	2.00	0.00	5.12	0.01	0.00
9.77	2.00	0.00	5.12	0.01	0.00	9.78	2.00	0.00	5.11	0.01	0.00
9.79	2.00	0.00	5.11	0.01	0.00	9.80	2.00	0.00	5.10	0.01	0.00
9.81	2.00	0.00	5.09	0.01	0.00	9.82	2.00	0.00	5.09	0.01	0.00
9.83	2.00	0.00	5.08	0.01	0.00	9.84	2.00	0.00	5.08	0.01	0.00
9.85	2.00	0.00	5.08	0.01	0.00	9.86	2.00	0.00	5.07	0.01	0.00
9.87	2.00	0.00	5.07	0.01	0.00	9.88	2.00	0.00	5.06	0.01	0.00
9.89	2.00	0.00	5.05	0.01	0.00	9.90	2.00	0.00	5.05	0.01	0.00
9.91	2.00	0.00	5.04	0.01	0.00	9.92	2.00	0.00	5.04	0.01	0.00
9.93	2.00	0.00	5.04	0.01	0.00	9.94	2.00	0.00	5.03	0.01	0.00
9.95	2.00	0.00	5.03	0.01	0.00	9.96	2.00	0.00	5.02	0.01	0.00
9.97	2.00	0.00	5.01	0.01	0.00	9.98	2.00	0.00	5.01	0.01	0.00
9.99	2.00	0.00	5.00	0.01	0.00	10.00	2.00	0.00	5.00	0.01	0.00
10.01	2.00	0.00	5.00	0.01	0.00	10.02	2.00	0.00	4.99	0.01	0.00
10.03	2.00	0.00	4.99	0.01	0.00	10.04	2.00	0.00	4.98	0.01	0.00
10.05	2.00	0.00	4.97	0.01	0.00	10.06	2.00	0.00	4.97	0.01	0.00
10.07	2.00	0.00	4.96	0.01	0.00	10.08	2.00	0.00	4.96	0.01	0.00
10.09	2.00	0.00	4.96	0.01	0.00	10.10	2.00	0.00	4.95	0.01	0.00
10.11	2.00	0.00	4.95	0.01	0.00	10.12	2.00	0.00	4.94	0.01	0.00
10.13	2.00	0.00	4.93	0.01	0.00	10.14	2.00	0.00	4.93	0.01	0.00
10.15	2.00	0.00	4.92	0.01	0.00	10.16	2.00	0.00	4.92	0.01	0.00
10.17	2.00	0.00	4.92	0.01	0.00	10.18	2.00	0.00	4.91	0.01	0.00
10.19	2.00	0.00	4.91	0.01	0.00	10.20	2.00	0.00	4.90	0.01	0.00
10.21	2.00	0.00	4.89	0.01	0.00	10.22	2.00	0.00	4.89	0.01	0.00
10.23	2.00	0.00	4.88	0.01	0.00	10.24	2.00	0.00	4.88	0.01	0.00
10.25	2.00	0.00	4.88	0.01	0.00	10.26	2.00	0.00	4.87	0.01	0.00
10.27	2.00	0.00	4.87	0.01	0.00	10.28	2.00	0.00	4.86	0.01	0.00
10.29	2.00	0.00	4.86	0.01	0.00	10.30	2.00	0.00	4.85	0.01	0.00
10.31	2.00	0.00	4.84	0.01	0.00	10.32	2.00	0.00	4.84	0.01	0.00
10.33	2.00	0.00	4.83	0.01	0.00	10.34	2.00	0.00	4.83	0.01	0.00
10.35	2.00	0.00	4.83	0.01	0.00	10.36	2.00	0.00	4.82	0.01	0.00
10.37	2.00	0.00	4.82	0.01	0.00	10.38	2.00	0.00	4.81	0.01	0.00
10.39	2.00	0.00	4.80	0.01	0.00	10.40	2.00	0.00	4.80	0.01	0.00
10.41	2.00	0.00	4.79	0.01	0.00	10.42	2.00	0.00	4.79	0.01	0.00
10.43	2.00	0.00	4.79	0.01	0.00	10.44	2.00	0.00	4.78	0.01	0.00
10.45	2.00	0.00	4.78	0.01	0.00	10.46	2.00	0.00	4.77	0.01	0.00
10.47	2.00	0.00	4.76	0.01	0.00	10.48	2.00	0.00	4.76	0.01	0.00
10.49	2.00	0.00	4.75	0.01	0.00	10.50	2.00	0.00	4.75	0.01	0.00
10.51	2.00	0.00	4.75	0.01	0.00	10.52	2.00	0.00	4.74	0.01	0.00
10.53	2.00	0.00	4.74	0.01	0.00	10.54	2.00	0.00	4.73	0.01	0.00
10.55	2.00	0.00	4.72	0.01	0.00	10.56	2.00	0.00	4.72	0.01	0.00
10.57	2.00	0.00	4.71	0.01	0.00	10.58	2.00	0.00	4.71	0.01	0.00
10.59	0.43	0.57	4.71	0.01	0.03	10.60	0.43	0.57	4.70	0.01	0.03
10.61	0.38	0.62	4.70	0.01	0.03	10.62	0.43	0.57	4.69	0.01	0.03
10.63	0.51	0.49	4.68	0.01	0.02	10.64	0.61	0.39	4.68	0.01	0.02
10.65	0.70	0.30	4.67	0.01	0.01	10.66	0.73	0.27	4.67	0.01	0.01

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
10.67	0.77	0.23	4.67	0.01	0.01	10.68	0.86	0.14	4.66	0.01	0.01
10.69	0.96	0.04	4.66	0.01	0.00	10.70	1.02	0.00	4.65	0.01	0.00
10.71	1.05	0.00	4.64	0.01	0.00	10.72	1.08	0.00	4.64	0.01	0.00
10.73	1.11	0.00	4.63	0.01	0.00	10.74	1.16	0.00	4.63	0.01	0.00
10.75	1.21	0.00	4.63	0.01	0.00	10.76	1.27	0.00	4.62	0.01	0.00
10.77	1.36	0.00	4.62	0.01	0.00	10.78	1.45	0.00	4.61	0.01	0.00
10.79	1.55	0.00	4.61	0.01	0.00	10.80	1.62	0.00	4.60	0.01	0.00
10.81	1.68	0.00	4.59	0.01	0.00	10.82	1.73	0.00	4.59	0.01	0.00
10.83	1.76	0.00	4.58	0.01	0.00	10.84	1.77	0.00	4.58	0.01	0.00
10.85	1.75	0.00	4.58	0.01	0.00	10.86	1.70	0.00	4.57	0.01	0.00
10.87	1.63	0.00	4.57	0.01	0.00	10.88	1.58	0.00	4.56	0.01	0.00
10.89	1.48	0.00	4.55	0.01	0.00	10.90	1.29	0.00	4.55	0.01	0.00
10.91	1.09	0.00	4.54	0.01	0.00	10.92	0.92	0.08	4.54	0.01	0.00
10.93	0.85	0.15	4.54	0.01	0.01	10.94	0.82	0.18	4.53	0.01	0.01
10.95	0.66	0.34	4.53	0.01	0.02	10.96	0.54	0.46	4.52	0.01	0.02
10.97	0.46	0.54	4.51	0.01	0.02	10.98	0.45	0.55	4.51	0.01	0.02
10.99	0.45	0.55	4.50	0.01	0.03	11.00	0.47	0.53	4.50	0.01	0.02
11.01	0.50	0.50	4.50	0.01	0.02	11.02	0.54	0.46	4.49	0.01	0.02
11.03	0.56	0.44	4.49	0.01	0.02	11.04	0.57	0.43	4.48	0.01	0.02
11.05	0.58	0.42	4.47	0.01	0.02	11.06	0.61	0.39	4.47	0.01	0.02
11.07	0.67	0.33	4.46	0.01	0.01	11.08	0.86	0.14	4.46	0.01	0.01
11.09	0.98	0.02	4.46	0.01	0.00	11.10	1.11	0.00	4.45	0.01	0.00
11.11	1.22	0.00	4.45	0.01	0.00	11.12	1.40	0.00	4.44	0.01	0.00
11.13	1.49	0.00	4.43	0.01	0.00	11.14	1.57	0.00	4.43	0.01	0.00
11.15	1.62	0.00	4.42	0.01	0.00	11.16	1.62	0.00	4.42	0.01	0.00
11.17	1.55	0.00	4.42	0.01	0.00	11.18	1.47	0.00	4.41	0.01	0.00
11.19	1.44	0.00	4.41	0.01	0.00	11.20	1.41	0.00	4.40	0.01	0.00
11.21	1.40	0.00	4.39	0.01	0.00	11.22	1.40	0.00	4.39	0.01	0.00
11.23	1.40	0.00	4.38	0.01	0.00	11.24	1.39	0.00	4.38	0.01	0.00
11.25	1.36	0.00	4.38	0.01	0.00	11.26	1.34	0.00	4.37	0.01	0.00
11.27	1.33	0.00	4.37	0.01	0.00	11.28	1.37	0.00	4.36	0.01	0.00
11.29	1.45	0.00	4.36	0.01	0.00	11.30	1.59	0.00	4.35	0.01	0.00
11.31	1.73	0.00	4.34	0.01	0.00	11.32	1.86	0.00	4.34	0.01	0.00
11.33	1.92	0.00	4.33	0.01	0.00	11.34	1.98	0.00	4.33	0.01	0.00
11.35	2.00	0.00	4.33	0.01	0.00	11.36	2.00	0.00	4.32	0.01	0.00
11.37	2.00	0.00	4.32	0.01	0.00	11.38	2.00	0.00	4.31	0.01	0.00
11.39	2.00	0.00	4.30	0.01	0.00	11.40	2.00	0.00	4.30	0.01	0.00
11.41	2.00	0.00	4.29	0.01	0.00	11.42	2.00	0.00	4.29	0.01	0.00
11.43	2.00	0.00	4.29	0.01	0.00	11.44	2.00	0.00	4.28	0.01	0.00
11.45	2.00	0.00	4.28	0.01	0.00	11.46	2.00	0.00	4.27	0.01	0.00
11.47	2.00	0.00	4.26	0.01	0.00	11.48	2.00	0.00	4.26	0.01	0.00
11.49	2.00	0.00	4.25	0.01	0.00	11.50	2.00	0.00	4.25	0.01	0.00
11.51	2.00	0.00	4.25	0.01	0.00	11.52	2.00	0.00	4.24	0.01	0.00
11.53	2.00	0.00	4.24	0.01	0.00	11.54	2.00	0.00	4.23	0.01	0.00
11.55	2.00	0.00	4.22	0.01	0.00	11.56	2.00	0.00	4.22	0.01	0.00
11.57	2.00	0.00	4.21	0.01	0.00	11.58	2.00	0.00	4.21	0.01	0.00
11.59	2.00	0.00	4.21	0.01	0.00	11.60	1.88	0.00	4.20	0.01	0.00
11.61	1.78	0.00	4.20	0.01	0.00	11.62	1.65	0.00	4.19	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
11.63	1.58	0.00	4.18	0.01	0.00	11.64	1.53	0.00	4.18	0.01	0.00
11.65	1.51	0.00	4.17	0.01	0.00	11.66	1.50	0.00	4.17	0.01	0.00
11.67	1.49	0.00	4.17	0.01	0.00	11.68	1.49	0.00	4.16	0.01	0.00
11.69	1.50	0.00	4.16	0.01	0.00	11.70	1.52	0.00	4.15	0.01	0.00
11.71	1.54	0.00	4.14	0.01	0.00	11.72	1.57	0.00	4.14	0.01	0.00
11.73	1.60	0.00	4.13	0.01	0.00	11.74	1.62	0.00	4.13	0.01	0.00
11.75	1.64	0.00	4.13	0.01	0.00	11.76	1.70	0.00	4.12	0.01	0.00
11.77	1.75	0.00	4.12	0.01	0.00	11.78	1.82	0.00	4.11	0.01	0.00
11.79	1.89	0.00	4.11	0.01	0.00	11.80	1.94	0.00	4.10	0.01	0.00
11.81	2.00	0.00	4.09	0.01	0.00	11.82	2.00	0.00	4.09	0.01	0.00
11.83	2.00	0.00	4.08	0.01	0.00	11.84	2.00	0.00	4.08	0.01	0.00
11.85	2.00	0.00	4.08	0.01	0.00	11.86	2.00	0.00	4.07	0.01	0.00
11.87	2.00	0.00	4.07	0.01	0.00	11.88	2.00	0.00	4.06	0.01	0.00
11.89	2.00	0.00	4.05	0.01	0.00	11.90	2.00	0.00	4.05	0.01	0.00
11.91	2.00	0.00	4.04	0.01	0.00	11.92	2.00	0.00	4.04	0.01	0.00
11.93	2.00	0.00	4.04	0.01	0.00						

Overall liquefaction potential: 0.85

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

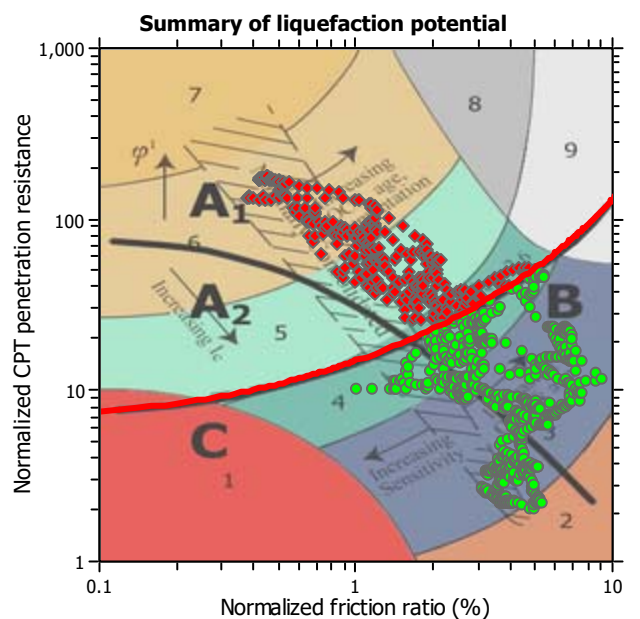
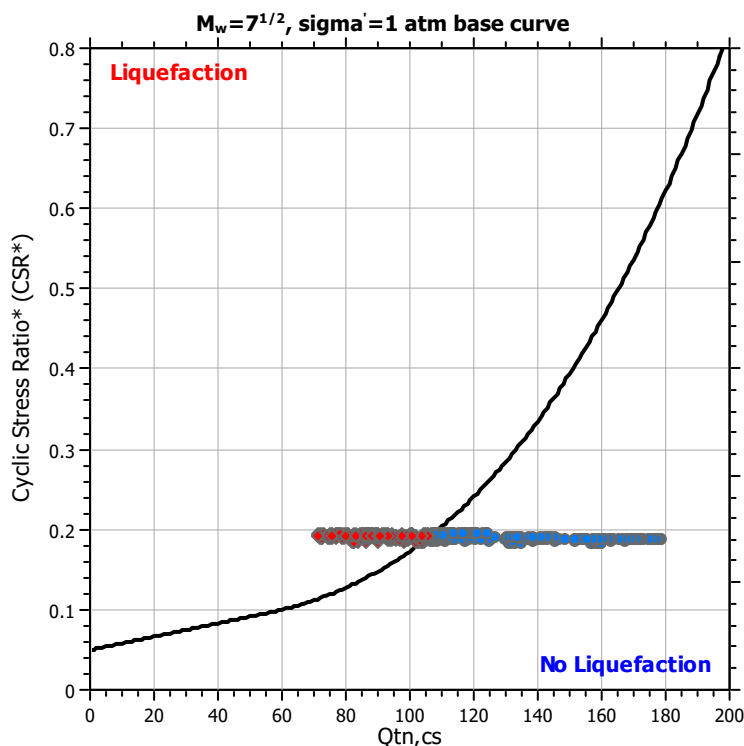
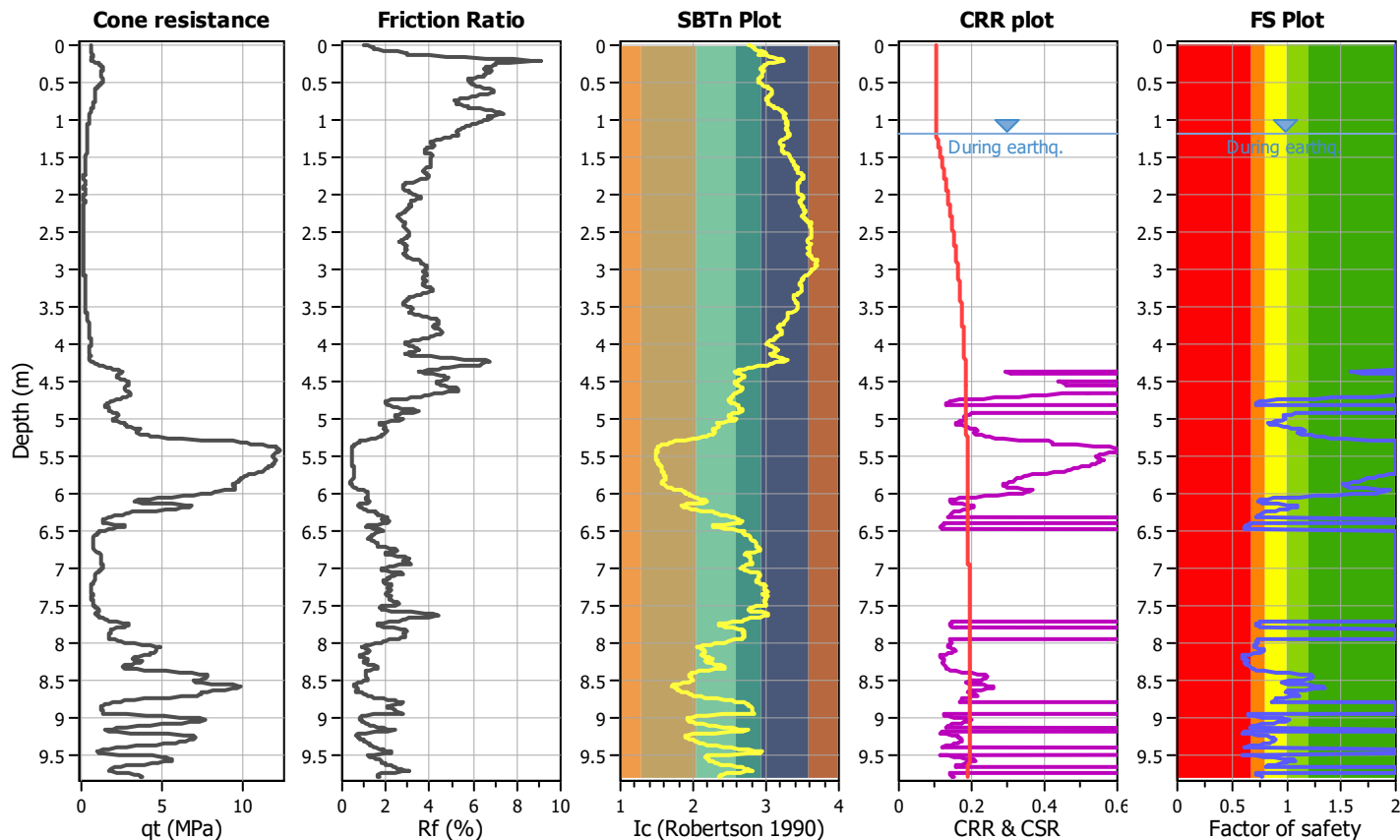
F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

LIQUEFACTION ANALYSIS REPORT

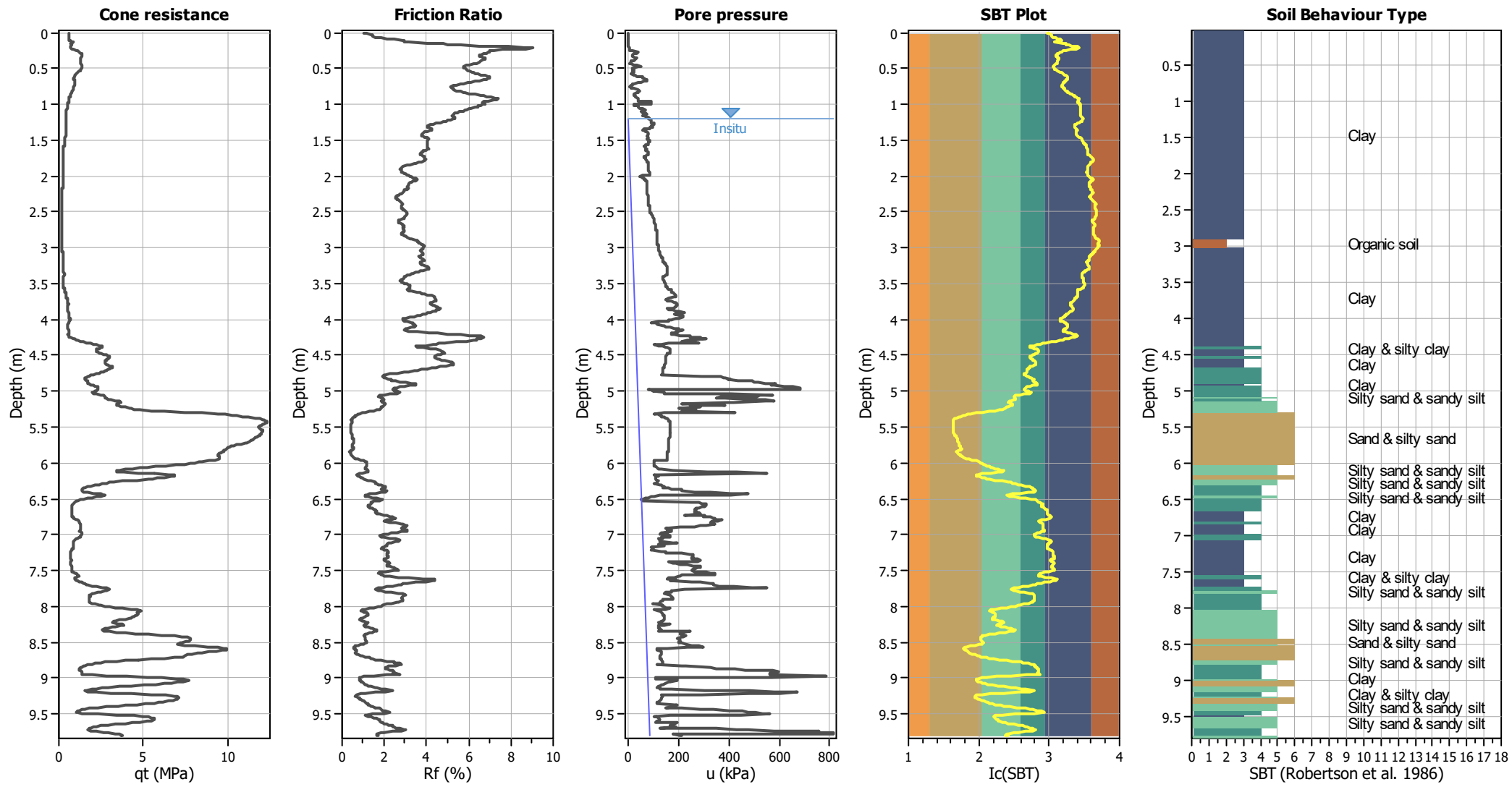
Project title : Greenplan Engineering S.r.l.
Location : Aquileia (UD)
CPT file : CPTU14bis
Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	1.20 m	Use fill:	No	Clay like behavior	
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	1.20 m	Fill height:	N/A	applied:	Sands only
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	Limit depth:	N/A
Peak ground acceleration:	0.22	Unit weight calculation:	Based on SBT	K_0 applied:	Yes	MSF method:	Method based



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A₂: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

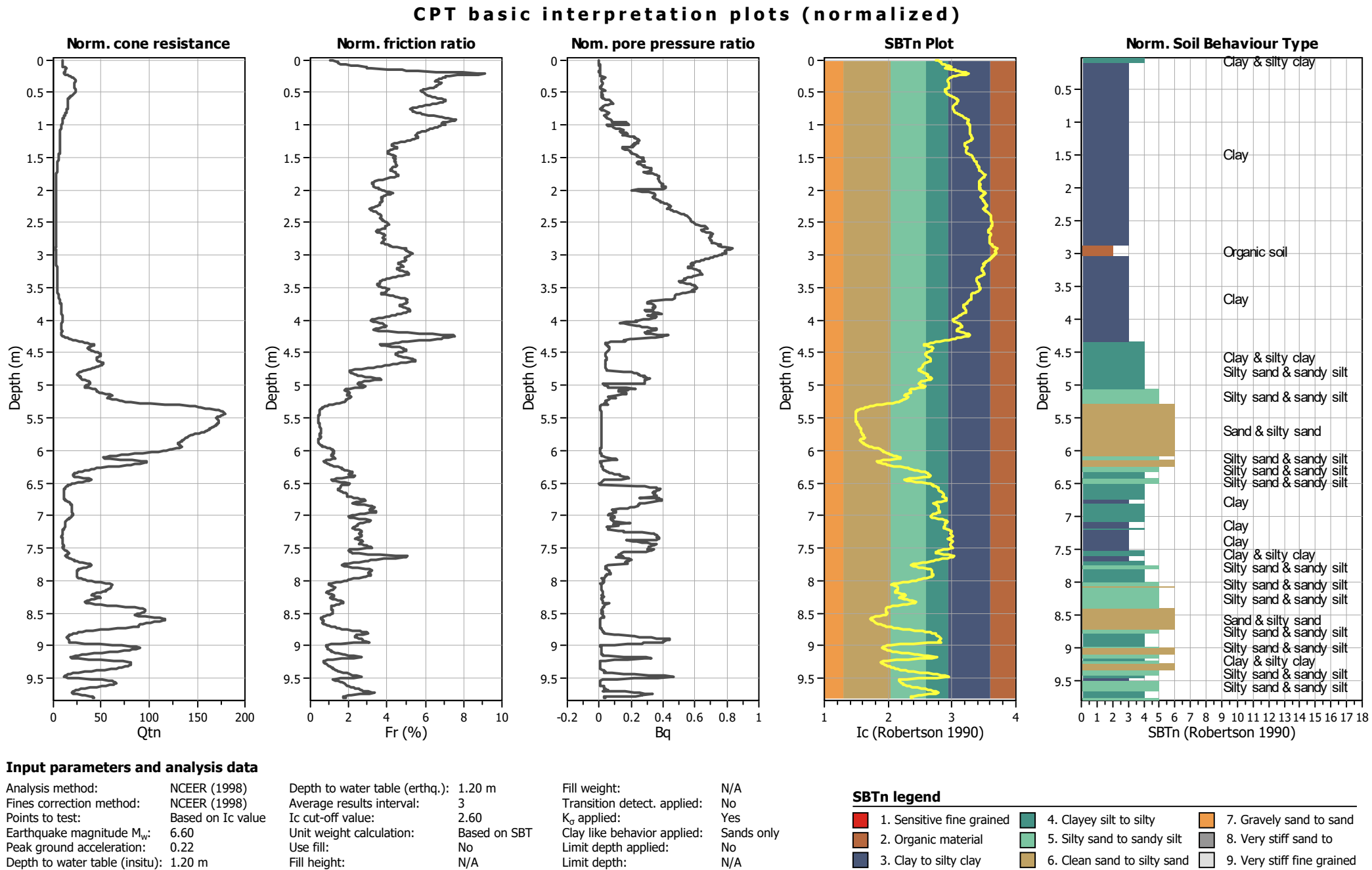
CPT basic interpretation plots



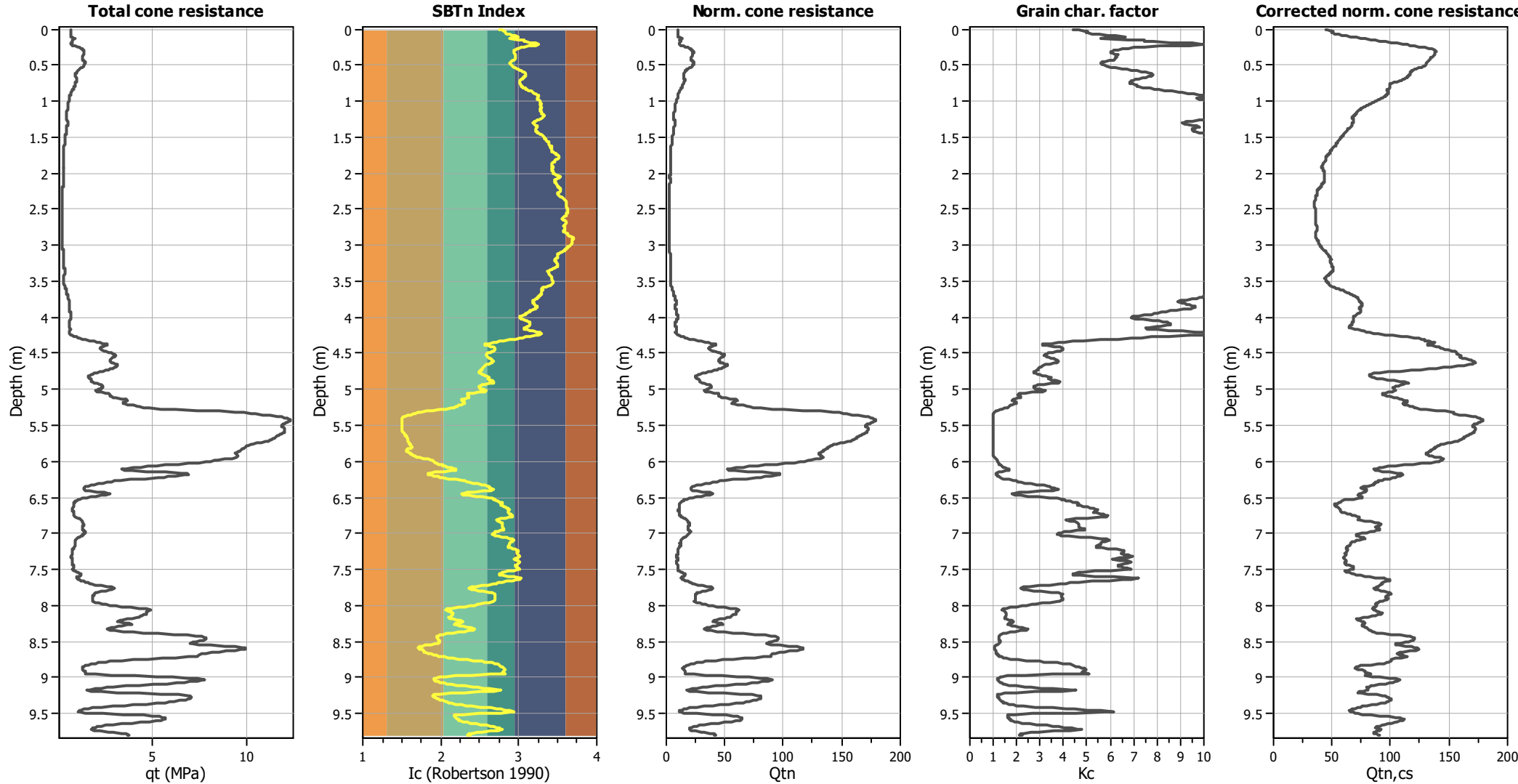
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

SBT legend		
1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained



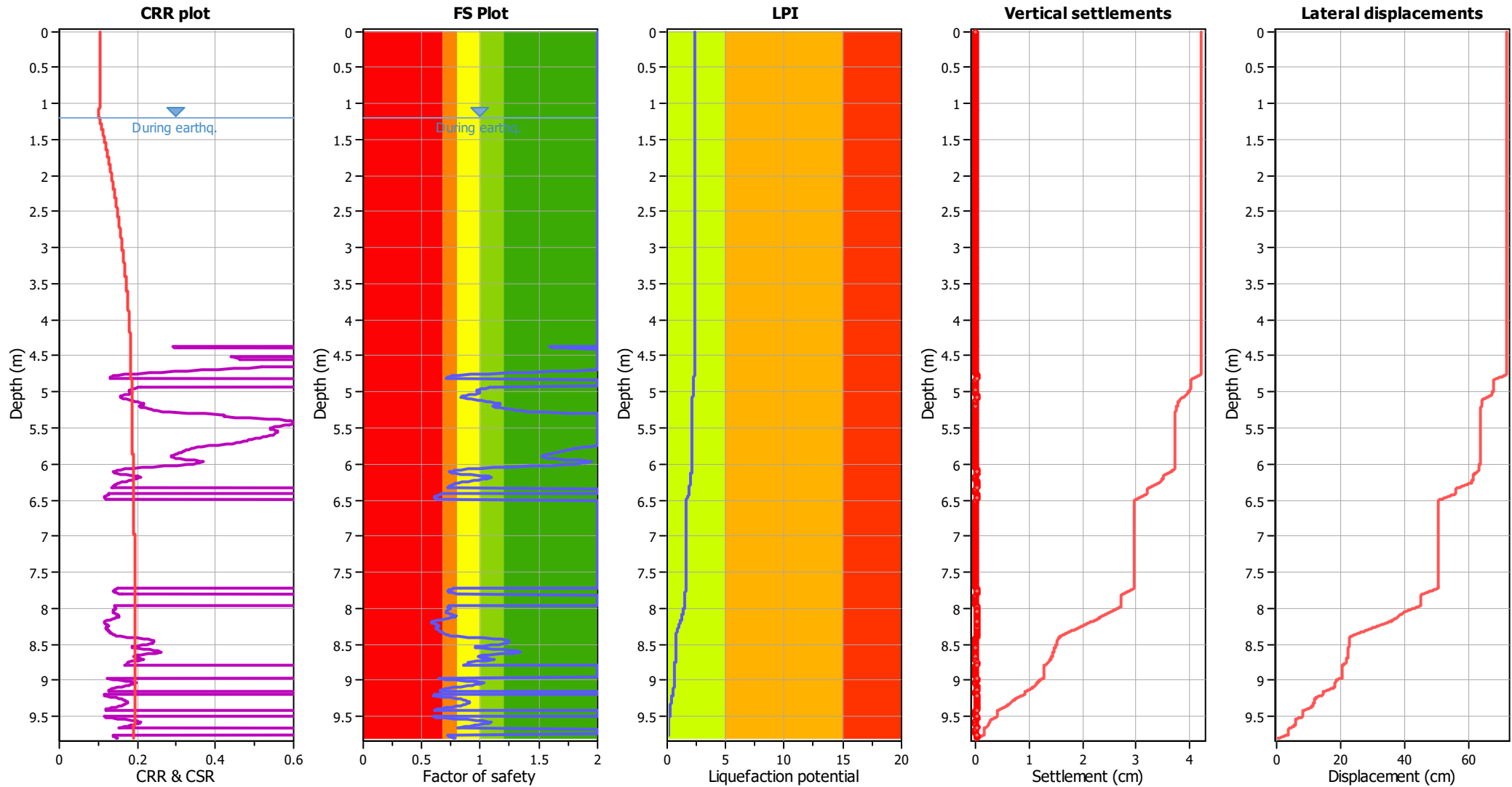
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

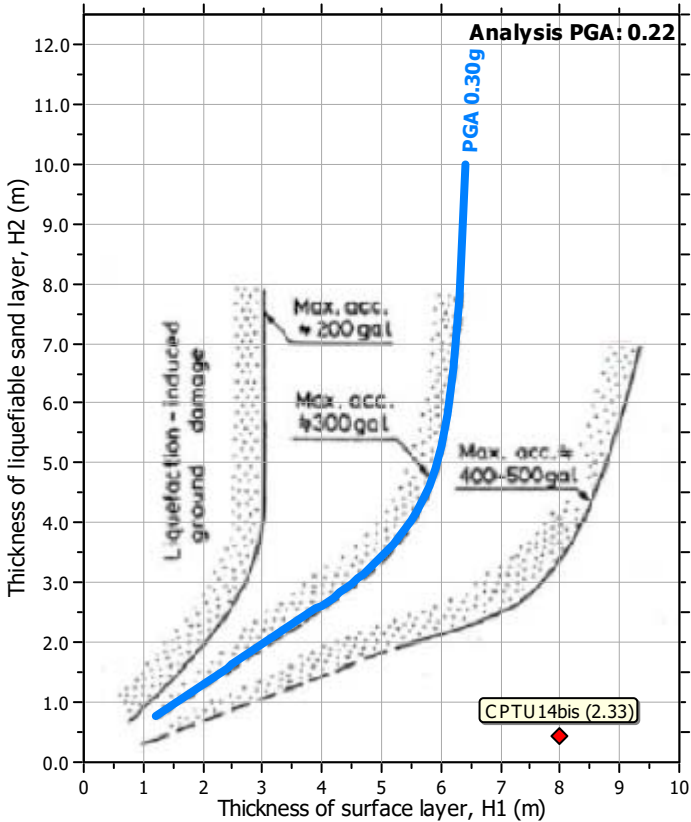
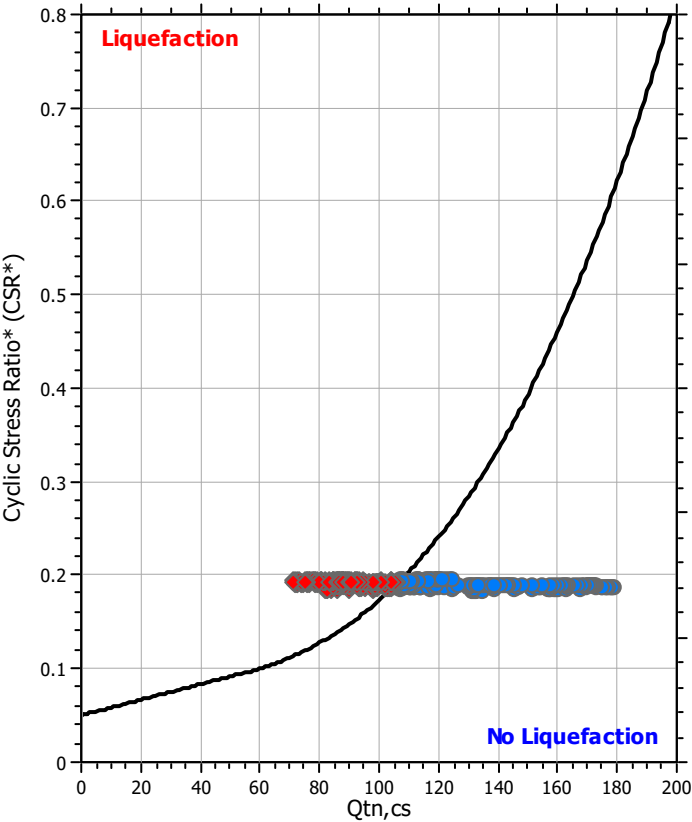
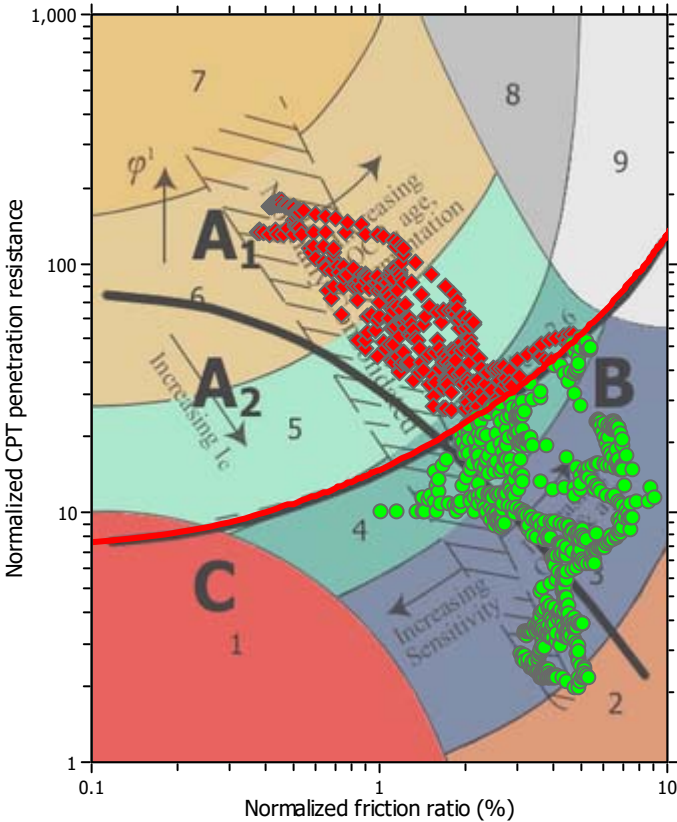
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

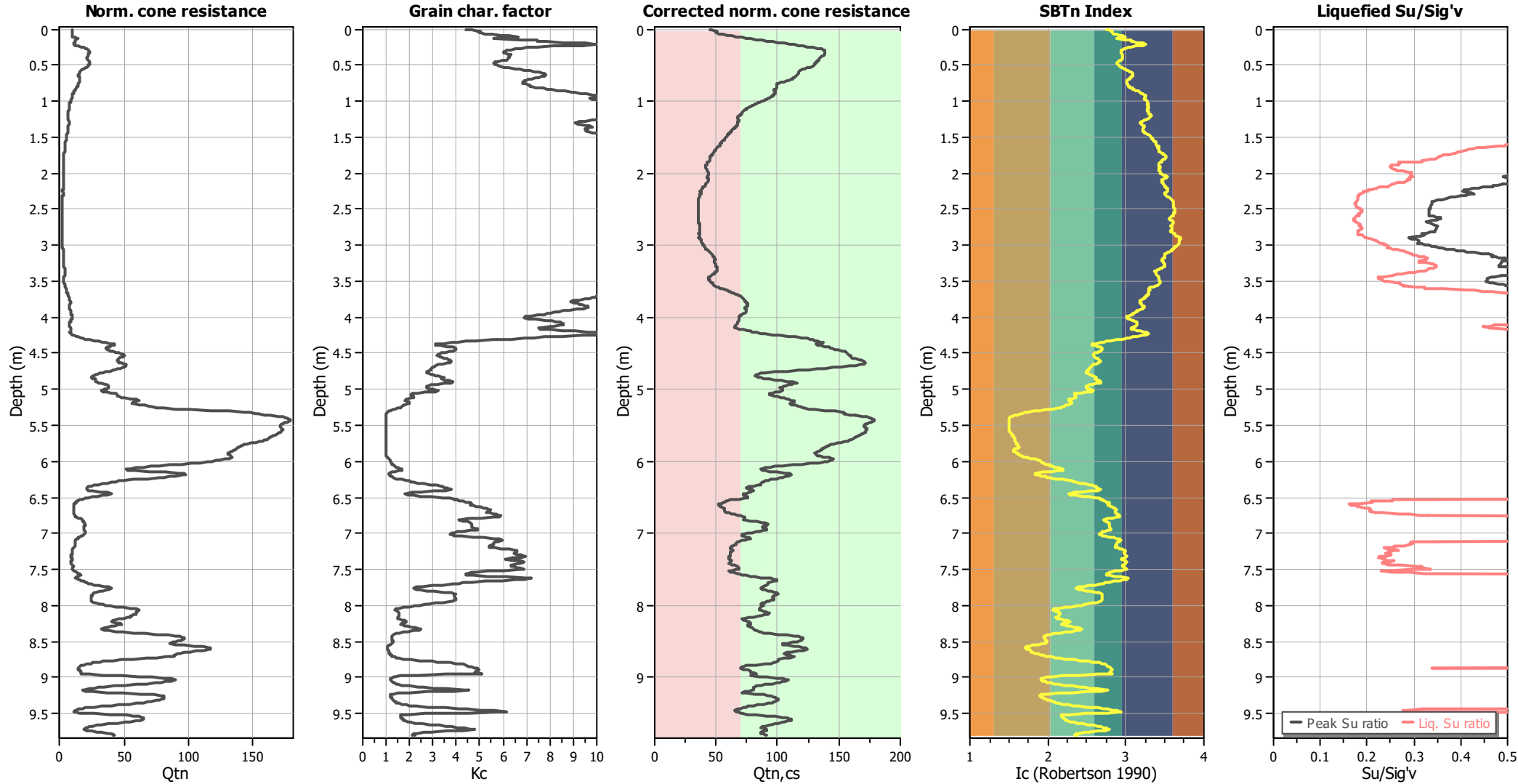
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on I_c value	I_c cut-off value:	2.60	K_G applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	1.20 m	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _o applied:	Yes
Earthquake magnitude M _w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.22	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.20 m	Fill height:	N/A	Limit depth:	N/A

:: Liquefaction Potential Index calculation data ::											
Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.01	2.00	0.00	9.99	0.01	0.00	0.02	2.00	0.00	9.99	0.01	0.00
0.03	2.00	0.00	9.98	0.01	0.00	0.04	2.00	0.00	9.98	0.01	0.00
0.05	2.00	0.00	9.97	0.01	0.00	0.06	2.00	0.00	9.97	0.01	0.00
0.07	2.00	0.00	9.96	0.01	0.00	0.08	2.00	0.00	9.96	0.01	0.00
0.09	2.00	0.00	9.96	0.01	0.00	0.10	2.00	0.00	9.95	0.01	0.00
0.11	2.00	0.00	9.95	0.01	0.00	0.12	2.00	0.00	9.94	0.01	0.00
0.13	2.00	0.00	9.94	0.01	0.00	0.14	2.00	0.00	9.93	0.01	0.00
0.15	2.00	0.00	9.93	0.01	0.00	0.16	2.00	0.00	9.92	0.01	0.00
0.17	2.00	0.00	9.91	0.01	0.00	0.18	2.00	0.00	9.91	0.01	0.00
0.19	2.00	0.00	9.90	0.01	0.00	0.20	2.00	0.00	9.90	0.01	0.00
0.21	2.00	0.00	9.89	0.01	0.00	0.22	2.00	0.00	9.89	0.01	0.00
0.23	2.00	0.00	9.88	0.01	0.00	0.24	2.00	0.00	9.88	0.01	0.00
0.25	2.00	0.00	9.88	0.01	0.00	0.26	2.00	0.00	9.87	0.01	0.00
0.27	2.00	0.00	9.87	0.01	0.00	0.28	2.00	0.00	9.86	0.01	0.00
0.29	2.00	0.00	9.86	0.01	0.00	0.30	2.00	0.00	9.85	0.01	0.00
0.31	2.00	0.00	9.85	0.01	0.00	0.32	2.00	0.00	9.84	0.01	0.00
0.33	2.00	0.00	9.84	0.01	0.00	0.34	2.00	0.00	9.83	0.01	0.00
0.35	2.00	0.00	9.82	0.01	0.00	0.36	2.00	0.00	9.82	0.01	0.00
0.37	2.00	0.00	9.81	0.01	0.00	0.38	2.00	0.00	9.81	0.01	0.00
0.39	2.00	0.00	9.80	0.01	0.00	0.40	2.00	0.00	9.80	0.01	0.00
0.41	2.00	0.00	9.79	0.01	0.00	0.42	2.00	0.00	9.79	0.01	0.00
0.43	2.00	0.00	9.79	0.01	0.00	0.44	2.00	0.00	9.78	0.01	0.00
0.45	2.00	0.00	9.78	0.01	0.00	0.46	2.00	0.00	9.77	0.01	0.00
0.47	2.00	0.00	9.77	0.01	0.00	0.48	2.00	0.00	9.76	0.01	0.00
0.49	2.00	0.00	9.76	0.01	0.00	0.50	2.00	0.00	9.75	0.01	0.00
0.51	2.00	0.00	9.74	0.01	0.00	0.52	2.00	0.00	9.74	0.01	0.00
0.53	2.00	0.00	9.73	0.01	0.00	0.54	2.00	0.00	9.73	0.01	0.00
0.55	2.00	0.00	9.72	0.01	0.00	0.56	2.00	0.00	9.72	0.01	0.00
0.57	2.00	0.00	9.71	0.01	0.00	0.58	2.00	0.00	9.71	0.01	0.00
0.59	2.00	0.00	9.71	0.01	0.00	0.60	2.00	0.00	9.70	0.01	0.00
0.61	2.00	0.00	9.70	0.01	0.00	0.62	2.00	0.00	9.69	0.01	0.00
0.63	2.00	0.00	9.69	0.01	0.00	0.64	2.00	0.00	9.68	0.01	0.00
0.65	2.00	0.00	9.68	0.01	0.00	0.66	2.00	0.00	9.67	0.01	0.00
0.67	2.00	0.00	9.66	0.01	0.00	0.68	2.00	0.00	9.66	0.01	0.00
0.69	2.00	0.00	9.65	0.01	0.00	0.70	2.00	0.00	9.65	0.01	0.00
0.71	2.00	0.00	9.64	0.01	0.00	0.72	2.00	0.00	9.64	0.01	0.00
0.73	2.00	0.00	9.63	0.01	0.00	0.74	2.00	0.00	9.63	0.01	0.00
0.75	2.00	0.00	9.63	0.01	0.00	0.76	2.00	0.00	9.62	0.01	0.00
0.77	2.00	0.00	9.62	0.01	0.00	0.78	2.00	0.00	9.61	0.01	0.00
0.79	2.00	0.00	9.61	0.01	0.00	0.80	2.00	0.00	9.60	0.01	0.00
0.81	2.00	0.00	9.60	0.01	0.00	0.82	2.00	0.00	9.59	0.01	0.00
0.83	2.00	0.00	9.59	0.01	0.00	0.84	2.00	0.00	9.58	0.01	0.00
0.85	2.00	0.00	9.57	0.01	0.00	0.86	2.00	0.00	9.57	0.01	0.00
0.87	2.00	0.00	9.56	0.01	0.00	0.88	2.00	0.00	9.56	0.01	0.00
0.89	2.00	0.00	9.55	0.01	0.00	0.90	2.00	0.00	9.55	0.01	0.00
0.91	2.00	0.00	9.54	0.01	0.00	0.92	2.00	0.00	9.54	0.01	0.00
0.93	2.00	0.00	9.54	0.01	0.00	0.94	2.00	0.00	9.53	0.01	0.00
0.95	2.00	0.00	9.53	0.01	0.00	0.96	2.00	0.00	9.52	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
0.97	2.00	0.00	9.52	0.01	0.00	0.98	2.00	0.00	9.51	0.01	0.00
0.99	2.00	0.00	9.51	0.01	0.00	1.00	2.00	0.00	9.50	0.01	0.00
1.01	2.00	0.00	9.49	0.01	0.00	1.02	2.00	0.00	9.49	0.01	0.00
1.03	2.00	0.00	9.48	0.01	0.00	1.04	2.00	0.00	9.48	0.01	0.00
1.05	2.00	0.00	9.47	0.01	0.00	1.06	2.00	0.00	9.47	0.01	0.00
1.07	2.00	0.00	9.46	0.01	0.00	1.08	2.00	0.00	9.46	0.01	0.00
1.09	2.00	0.00	9.46	0.01	0.00	1.10	2.00	0.00	9.45	0.01	0.00
1.11	2.00	0.00	9.45	0.01	0.00	1.12	2.00	0.00	9.44	0.01	0.00
1.13	2.00	0.00	9.44	0.01	0.00	1.14	2.00	0.00	9.43	0.01	0.00
1.15	2.00	0.00	9.43	0.01	0.00	1.16	2.00	0.00	9.42	0.01	0.00
1.17	2.00	0.00	9.41	0.01	0.00	1.18	2.00	0.00	9.41	0.01	0.00
1.19	2.00	0.00	9.40	0.01	0.00	1.20	2.00	0.00	9.40	0.01	0.00
1.21	2.00	0.00	9.39	0.01	0.00	1.22	2.00	0.00	9.39	0.01	0.00
1.23	2.00	0.00	9.38	0.01	0.00	1.24	2.00	0.00	9.38	0.01	0.00
1.25	2.00	0.00	9.38	0.01	0.00	1.26	2.00	0.00	9.37	0.01	0.00
1.27	2.00	0.00	9.37	0.01	0.00	1.28	2.00	0.00	9.36	0.01	0.00
1.29	2.00	0.00	9.36	0.01	0.00	1.30	2.00	0.00	9.35	0.01	0.00
1.31	2.00	0.00	9.35	0.01	0.00	1.32	2.00	0.00	9.34	0.01	0.00
1.33	2.00	0.00	9.34	0.01	0.00	1.34	2.00	0.00	9.33	0.01	0.00
1.35	2.00	0.00	9.32	0.01	0.00	1.36	2.00	0.00	9.32	0.01	0.00
1.37	2.00	0.00	9.31	0.01	0.00	1.38	2.00	0.00	9.31	0.01	0.00
1.39	2.00	0.00	9.30	0.01	0.00	1.40	2.00	0.00	9.30	0.01	0.00
1.41	2.00	0.00	9.29	0.01	0.00	1.42	2.00	0.00	9.29	0.01	0.00
1.43	2.00	0.00	9.29	0.01	0.00	1.44	2.00	0.00	9.28	0.01	0.00
1.45	2.00	0.00	9.28	0.01	0.00	1.46	2.00	0.00	9.27	0.01	0.00
1.47	2.00	0.00	9.27	0.01	0.00	1.48	2.00	0.00	9.26	0.01	0.00
1.49	2.00	0.00	9.26	0.01	0.00	1.50	2.00	0.00	9.25	0.01	0.00
1.51	2.00	0.00	9.24	0.01	0.00	1.52	2.00	0.00	9.24	0.01	0.00
1.53	2.00	0.00	9.23	0.01	0.00	1.54	2.00	0.00	9.23	0.01	0.00
1.55	2.00	0.00	9.22	0.01	0.00	1.56	2.00	0.00	9.22	0.01	0.00
1.57	2.00	0.00	9.21	0.01	0.00	1.58	2.00	0.00	9.21	0.01	0.00
1.59	2.00	0.00	9.21	0.01	0.00	1.60	2.00	0.00	9.20	0.01	0.00
1.61	2.00	0.00	9.20	0.01	0.00	1.62	2.00	0.00	9.19	0.01	0.00
1.63	2.00	0.00	9.19	0.01	0.00	1.64	2.00	0.00	9.18	0.01	0.00
1.65	2.00	0.00	9.18	0.01	0.00	1.66	2.00	0.00	9.17	0.01	0.00
1.67	2.00	0.00	9.16	0.01	0.00	1.68	2.00	0.00	9.16	0.01	0.00
1.69	2.00	0.00	9.15	0.01	0.00	1.70	2.00	0.00	9.15	0.01	0.00
1.71	2.00	0.00	9.14	0.01	0.00	1.72	2.00	0.00	9.14	0.01	0.00
1.73	2.00	0.00	9.13	0.01	0.00	1.74	2.00	0.00	9.13	0.01	0.00
1.75	2.00	0.00	9.13	0.01	0.00	1.76	2.00	0.00	9.12	0.01	0.00
1.77	2.00	0.00	9.12	0.01	0.00	1.78	2.00	0.00	9.11	0.01	0.00
1.79	2.00	0.00	9.11	0.01	0.00	1.80	2.00	0.00	9.10	0.01	0.00
1.81	2.00	0.00	9.10	0.01	0.00	1.82	2.00	0.00	9.09	0.01	0.00
1.83	2.00	0.00	9.09	0.01	0.00	1.84	2.00	0.00	9.08	0.01	0.00
1.85	2.00	0.00	9.07	0.01	0.00	1.86	2.00	0.00	9.07	0.01	0.00
1.87	2.00	0.00	9.06	0.01	0.00	1.88	2.00	0.00	9.06	0.01	0.00
1.89	2.00	0.00	9.05	0.01	0.00	1.90	2.00	0.00	9.05	0.01	0.00
1.91	2.00	0.00	9.04	0.01	0.00	1.92	2.00	0.00	9.04	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
1.93	2.00	0.00	9.04	0.01	0.00	1.94	2.00	0.00	9.03	0.01	0.00
1.95	2.00	0.00	9.03	0.01	0.00	1.96	2.00	0.00	9.02	0.01	0.00
1.97	2.00	0.00	9.02	0.01	0.00	1.98	2.00	0.00	9.01	0.01	0.00
1.99	2.00	0.00	9.01	0.01	0.00	2.00	2.00	0.00	9.00	0.01	0.00
2.01	2.00	0.00	8.99	0.01	0.00	2.02	2.00	0.00	8.99	0.01	0.00
2.03	2.00	0.00	8.98	0.01	0.00	2.04	2.00	0.00	8.98	0.01	0.00
2.05	2.00	0.00	8.97	0.01	0.00	2.06	2.00	0.00	8.97	0.01	0.00
2.07	2.00	0.00	8.96	0.01	0.00	2.08	2.00	0.00	8.96	0.01	0.00
2.09	2.00	0.00	8.96	0.01	0.00	2.10	2.00	0.00	8.95	0.01	0.00
2.11	2.00	0.00	8.95	0.01	0.00	2.12	2.00	0.00	8.94	0.01	0.00
2.13	2.00	0.00	8.94	0.01	0.00	2.14	2.00	0.00	8.93	0.01	0.00
2.15	2.00	0.00	8.93	0.01	0.00	2.16	2.00	0.00	8.92	0.01	0.00
2.17	2.00	0.00	8.91	0.01	0.00	2.18	2.00	0.00	8.91	0.01	0.00
2.19	2.00	0.00	8.90	0.01	0.00	2.20	2.00	0.00	8.90	0.01	0.00
2.21	2.00	0.00	8.89	0.01	0.00	2.22	2.00	0.00	8.89	0.01	0.00
2.23	2.00	0.00	8.88	0.01	0.00	2.24	2.00	0.00	8.88	0.01	0.00
2.25	2.00	0.00	8.88	0.01	0.00	2.26	2.00	0.00	8.87	0.01	0.00
2.27	2.00	0.00	8.87	0.01	0.00	2.28	2.00	0.00	8.86	0.01	0.00
2.29	2.00	0.00	8.86	0.01	0.00	2.30	2.00	0.00	8.85	0.01	0.00
2.31	2.00	0.00	8.85	0.01	0.00	2.32	2.00	0.00	8.84	0.01	0.00
2.33	2.00	0.00	8.84	0.01	0.00	2.34	2.00	0.00	8.83	0.01	0.00
2.35	2.00	0.00	8.82	0.01	0.00	2.36	2.00	0.00	8.82	0.01	0.00
2.37	2.00	0.00	8.81	0.01	0.00	2.38	2.00	0.00	8.81	0.01	0.00
2.39	2.00	0.00	8.80	0.01	0.00	2.40	2.00	0.00	8.80	0.01	0.00
2.41	2.00	0.00	8.79	0.01	0.00	2.42	2.00	0.00	8.79	0.01	0.00
2.43	2.00	0.00	8.79	0.01	0.00	2.44	2.00	0.00	8.78	0.01	0.00
2.45	2.00	0.00	8.78	0.01	0.00	2.46	2.00	0.00	8.77	0.01	0.00
2.47	2.00	0.00	8.77	0.01	0.00	2.48	2.00	0.00	8.76	0.01	0.00
2.49	2.00	0.00	8.76	0.01	0.00	2.50	2.00	0.00	8.75	0.01	0.00
2.51	2.00	0.00	8.74	0.01	0.00	2.52	2.00	0.00	8.74	0.01	0.00
2.53	2.00	0.00	8.73	0.01	0.00	2.54	2.00	0.00	8.73	0.01	0.00
2.55	2.00	0.00	8.72	0.01	0.00	2.56	2.00	0.00	8.72	0.01	0.00
2.57	2.00	0.00	8.71	0.01	0.00	2.58	2.00	0.00	8.71	0.01	0.00
2.59	2.00	0.00	8.71	0.01	0.00	2.60	2.00	0.00	8.70	0.01	0.00
2.61	2.00	0.00	8.70	0.01	0.00	2.62	2.00	0.00	8.69	0.01	0.00
2.63	2.00	0.00	8.69	0.01	0.00	2.64	2.00	0.00	8.68	0.01	0.00
2.65	2.00	0.00	8.68	0.01	0.00	2.66	2.00	0.00	8.67	0.01	0.00
2.67	2.00	0.00	8.66	0.01	0.00	2.68	2.00	0.00	8.66	0.01	0.00
2.69	2.00	0.00	8.65	0.01	0.00	2.70	2.00	0.00	8.65	0.01	0.00
2.71	2.00	0.00	8.64	0.01	0.00	2.72	2.00	0.00	8.64	0.01	0.00
2.73	2.00	0.00	8.63	0.01	0.00	2.74	2.00	0.00	8.63	0.01	0.00
2.75	2.00	0.00	8.63	0.01	0.00	2.76	2.00	0.00	8.62	0.01	0.00
2.77	2.00	0.00	8.62	0.01	0.00	2.78	2.00	0.00	8.61	0.01	0.00
2.79	2.00	0.00	8.61	0.01	0.00	2.80	2.00	0.00	8.60	0.01	0.00
2.81	2.00	0.00	8.60	0.01	0.00	2.82	2.00	0.00	8.59	0.01	0.00
2.83	2.00	0.00	8.59	0.01	0.00	2.84	2.00	0.00	8.58	0.01	0.00
2.85	2.00	0.00	8.57	0.01	0.00	2.86	2.00	0.00	8.57	0.01	0.00
2.87	2.00	0.00	8.56	0.01	0.00	2.88	2.00	0.00	8.56	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
2.89	2.00	0.00	8.55	0.01	0.00	2.90	2.00	0.00	8.55	0.01	0.00
2.91	2.00	0.00	8.54	0.01	0.00	2.92	2.00	0.00	8.54	0.01	0.00
2.93	2.00	0.00	8.54	0.01	0.00	2.94	2.00	0.00	8.53	0.01	0.00
2.95	2.00	0.00	8.53	0.01	0.00	2.96	2.00	0.00	8.52	0.01	0.00
2.97	2.00	0.00	8.52	0.01	0.00	2.98	2.00	0.00	8.51	0.01	0.00
2.99	2.00	0.00	8.51	0.01	0.00	3.00	2.00	0.00	8.50	0.01	0.00
3.01	2.00	0.00	8.49	0.01	0.00	3.02	2.00	0.00	8.49	0.01	0.00
3.03	2.00	0.00	8.48	0.01	0.00	3.04	2.00	0.00	8.48	0.01	0.00
3.05	2.00	0.00	8.47	0.01	0.00	3.06	2.00	0.00	8.47	0.01	0.00
3.07	2.00	0.00	8.46	0.01	0.00	3.08	2.00	0.00	8.46	0.01	0.00
3.09	2.00	0.00	8.46	0.01	0.00	3.10	2.00	0.00	8.45	0.01	0.00
3.11	2.00	0.00	8.45	0.01	0.00	3.12	2.00	0.00	8.44	0.01	0.00
3.13	2.00	0.00	8.44	0.01	0.00	3.14	2.00	0.00	8.43	0.01	0.00
3.15	2.00	0.00	8.43	0.01	0.00	3.16	2.00	0.00	8.42	0.01	0.00
3.17	2.00	0.00	8.41	0.01	0.00	3.18	2.00	0.00	8.41	0.01	0.00
3.19	2.00	0.00	8.40	0.01	0.00	3.20	2.00	0.00	8.40	0.01	0.00
3.21	2.00	0.00	8.39	0.01	0.00	3.22	2.00	0.00	8.39	0.01	0.00
3.23	2.00	0.00	8.38	0.01	0.00	3.24	2.00	0.00	8.38	0.01	0.00
3.25	2.00	0.00	8.38	0.01	0.00	3.26	2.00	0.00	8.37	0.01	0.00
3.27	2.00	0.00	8.37	0.01	0.00	3.28	2.00	0.00	8.36	0.01	0.00
3.29	2.00	0.00	8.36	0.01	0.00	3.30	2.00	0.00	8.35	0.01	0.00
3.31	2.00	0.00	8.35	0.01	0.00	3.32	2.00	0.00	8.34	0.01	0.00
3.33	2.00	0.00	8.34	0.01	0.00	3.34	2.00	0.00	8.33	0.01	0.00
3.35	2.00	0.00	8.32	0.01	0.00	3.36	2.00	0.00	8.32	0.01	0.00
3.37	2.00	0.00	8.31	0.01	0.00	3.38	2.00	0.00	8.31	0.01	0.00
3.39	2.00	0.00	8.30	0.01	0.00	3.40	2.00	0.00	8.30	0.01	0.00
3.41	2.00	0.00	8.29	0.01	0.00	3.42	2.00	0.00	8.29	0.01	0.00
3.43	2.00	0.00	8.29	0.01	0.00	3.44	2.00	0.00	8.28	0.01	0.00
3.45	2.00	0.00	8.28	0.01	0.00	3.46	2.00	0.00	8.27	0.01	0.00
3.47	2.00	0.00	8.27	0.01	0.00	3.48	2.00	0.00	8.26	0.01	0.00
3.49	2.00	0.00	8.26	0.01	0.00	3.50	2.00	0.00	8.25	0.01	0.00
3.51	2.00	0.00	8.24	0.01	0.00	3.52	2.00	0.00	8.24	0.01	0.00
3.53	2.00	0.00	8.23	0.01	0.00	3.54	2.00	0.00	8.23	0.01	0.00
3.55	2.00	0.00	8.22	0.01	0.00	3.56	2.00	0.00	8.22	0.01	0.00
3.57	2.00	0.00	8.21	0.01	0.00	3.58	2.00	0.00	8.21	0.01	0.00
3.59	2.00	0.00	8.21	0.01	0.00	3.60	2.00	0.00	8.20	0.01	0.00
3.61	2.00	0.00	8.20	0.01	0.00	3.62	2.00	0.00	8.19	0.01	0.00
3.63	2.00	0.00	8.19	0.01	0.00	3.64	2.00	0.00	8.18	0.01	0.00
3.65	2.00	0.00	8.18	0.01	0.00	3.66	2.00	0.00	8.17	0.01	0.00
3.67	2.00	0.00	8.16	0.01	0.00	3.68	2.00	0.00	8.16	0.01	0.00
3.69	2.00	0.00	8.15	0.01	0.00	3.70	2.00	0.00	8.15	0.01	0.00
3.71	2.00	0.00	8.14	0.01	0.00	3.72	2.00	0.00	8.14	0.01	0.00
3.73	2.00	0.00	8.13	0.01	0.00	3.74	2.00	0.00	8.13	0.01	0.00
3.75	2.00	0.00	8.13	0.01	0.00	3.76	2.00	0.00	8.12	0.01	0.00
3.77	2.00	0.00	8.12	0.01	0.00	3.78	2.00	0.00	8.11	0.01	0.00
3.79	2.00	0.00	8.11	0.01	0.00	3.80	2.00	0.00	8.10	0.01	0.00
3.81	2.00	0.00	8.10	0.01	0.00	3.82	2.00	0.00	8.09	0.01	0.00
3.83	2.00	0.00	8.09	0.01	0.00	3.84	2.00	0.00	8.08	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
3.85	2.00	0.00	8.07	0.01	0.00	3.86	2.00	0.00	8.07	0.01	0.00
3.87	2.00	0.00	8.06	0.01	0.00	3.88	2.00	0.00	8.06	0.01	0.00
3.89	2.00	0.00	8.05	0.01	0.00	3.90	2.00	0.00	8.05	0.01	0.00
3.91	2.00	0.00	8.04	0.01	0.00	3.92	2.00	0.00	8.04	0.01	0.00
3.93	2.00	0.00	8.04	0.01	0.00	3.94	2.00	0.00	8.03	0.01	0.00
3.95	2.00	0.00	8.03	0.01	0.00	3.96	2.00	0.00	8.02	0.01	0.00
3.97	2.00	0.00	8.02	0.01	0.00	3.98	2.00	0.00	8.01	0.01	0.00
3.99	2.00	0.00	8.01	0.01	0.00	4.00	2.00	0.00	8.00	0.01	0.00
4.01	2.00	0.00	8.00	0.01	0.00	4.02	2.00	0.00	7.99	0.01	0.00
4.03	2.00	0.00	7.99	0.01	0.00	4.04	2.00	0.00	7.98	0.01	0.00
4.05	2.00	0.00	7.97	0.01	0.00	4.06	2.00	0.00	7.97	0.01	0.00
4.07	2.00	0.00	7.96	0.01	0.00	4.08	2.00	0.00	7.96	0.01	0.00
4.09	2.00	0.00	7.96	0.01	0.00	4.10	2.00	0.00	7.95	0.01	0.00
4.11	2.00	0.00	7.95	0.01	0.00	4.12	2.00	0.00	7.94	0.01	0.00
4.13	2.00	0.00	7.93	0.01	0.00	4.14	2.00	0.00	7.93	0.01	0.00
4.15	2.00	0.00	7.92	0.01	0.00	4.16	2.00	0.00	7.92	0.01	0.00
4.17	2.00	0.00	7.92	0.01	0.00	4.18	2.00	0.00	7.91	0.01	0.00
4.19	2.00	0.00	7.91	0.01	0.00	4.20	2.00	0.00	7.90	0.01	0.00
4.21	2.00	0.00	7.89	0.01	0.00	4.22	2.00	0.00	7.89	0.01	0.00
4.23	2.00	0.00	7.88	0.01	0.00	4.24	2.00	0.00	7.88	0.01	0.00
4.25	2.00	0.00	7.88	0.01	0.00	4.26	2.00	0.00	7.87	0.01	0.00
4.27	2.00	0.00	7.87	0.01	0.00	4.28	2.00	0.00	7.86	0.01	0.00
4.29	2.00	0.00	7.86	0.01	0.00	4.30	2.00	0.00	7.85	0.01	0.00
4.31	2.00	0.00	7.84	0.01	0.00	4.32	2.00	0.00	7.84	0.01	0.00
4.33	2.00	0.00	7.83	0.01	0.00	4.34	2.00	0.00	7.83	0.01	0.00
4.35	2.00	0.00	7.83	0.01	0.00	4.36	2.00	0.00	7.82	0.01	0.00
4.37	1.64	0.00	7.82	0.01	0.00	4.38	1.59	0.00	7.81	0.01	0.00
4.39	1.61	0.00	7.80	0.01	0.00	4.40	1.70	0.00	7.80	0.01	0.00
4.41	2.00	0.00	7.79	0.01	0.00	4.42	2.00	0.00	7.79	0.01	0.00
4.43	2.00	0.00	7.79	0.01	0.00	4.44	2.00	0.00	7.78	0.01	0.00
4.45	2.00	0.00	7.78	0.01	0.00	4.46	2.00	0.00	7.77	0.01	0.00
4.47	2.00	0.00	7.76	0.01	0.00	4.48	2.00	0.00	7.76	0.01	0.00
4.49	2.00	0.00	7.75	0.01	0.00	4.50	2.00	0.00	7.75	0.01	0.00
4.51	2.00	0.00	7.75	0.01	0.00	4.52	2.00	0.00	7.74	0.01	0.00
4.53	2.00	0.00	7.74	0.01	0.00	4.54	2.00	0.00	7.73	0.01	0.00
4.55	2.00	0.00	7.72	0.01	0.00	4.56	2.00	0.00	7.72	0.01	0.00
4.57	2.00	0.00	7.71	0.01	0.00	4.58	2.00	0.00	7.71	0.01	0.00
4.59	2.00	0.00	7.71	0.01	0.00	4.60	2.00	0.00	7.70	0.01	0.00
4.61	2.00	0.00	7.70	0.01	0.00	4.62	2.00	0.00	7.69	0.01	0.00
4.63	2.00	0.00	7.68	0.01	0.00	4.64	2.00	0.00	7.68	0.01	0.00
4.65	2.00	0.00	7.67	0.01	0.00	4.66	2.00	0.00	7.67	0.01	0.00
4.67	2.00	0.00	7.67	0.01	0.00	4.68	2.00	0.00	7.66	0.01	0.00
4.69	2.00	0.00	7.66	0.01	0.00	4.70	1.99	0.00	7.65	0.01	0.00
4.71	1.79	0.00	7.64	0.01	0.00	4.72	1.61	0.00	7.64	0.01	0.00
4.73	1.43	0.00	7.63	0.01	0.00	4.74	1.26	0.00	7.63	0.01	0.00
4.75	1.06	0.00	7.63	0.01	0.00	4.76	0.91	0.09	7.62	0.01	0.01
4.77	0.80	0.20	7.62	0.01	0.01	4.78	0.76	0.24	7.61	0.01	0.02
4.79	0.73	0.27	7.61	0.01	0.02	4.80	0.72	0.28	7.60	0.01	0.02

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
4.81	0.71	0.29	7.59	0.01	0.02	4.82	0.72	0.28	7.59	0.01	0.02
4.83	2.00	0.00	7.58	0.01	0.00	4.84	2.00	0.00	7.58	0.01	0.00
4.85	2.00	0.00	7.58	0.01	0.00	4.86	2.00	0.00	7.57	0.01	0.00
4.87	2.00	0.00	7.57	0.01	0.00	4.88	2.00	0.00	7.56	0.01	0.00
4.89	2.00	0.00	7.55	0.01	0.00	4.90	2.00	0.00	7.55	0.01	0.00
4.91	2.00	0.00	7.54	0.01	0.00	4.92	2.00	0.00	7.54	0.01	0.00
4.93	1.12	0.00	7.54	0.01	0.00	4.94	1.08	0.00	7.53	0.01	0.00
4.95	1.04	0.00	7.53	0.01	0.00	4.96	1.01	0.00	7.52	0.01	0.00
4.97	0.98	0.02	7.51	0.01	0.00	4.98	0.97	0.03	7.51	0.01	0.00
4.99	0.97	0.03	7.50	0.01	0.00	5.00	0.99	0.01	7.50	0.01	0.00
5.01	1.00	0.00	7.50	0.01	0.00	5.02	0.99	0.01	7.49	0.01	0.00
5.03	0.96	0.04	7.49	0.01	0.00	5.04	0.91	0.09	7.48	0.01	0.01
5.05	0.87	0.13	7.47	0.01	0.01	5.06	0.84	0.16	7.47	0.01	0.01
5.07	0.83	0.17	7.46	0.01	0.01	5.08	0.85	0.15	7.46	0.01	0.01
5.09	0.89	0.11	7.46	0.01	0.01	5.10	0.92	0.08	7.45	0.01	0.01
5.11	0.98	0.02	7.45	0.01	0.00	5.12	1.01	0.00	7.44	0.01	0.00
5.13	1.05	0.00	7.43	0.01	0.00	5.14	1.08	0.00	7.43	0.01	0.00
5.15	1.13	0.00	7.42	0.01	0.00	5.16	1.17	0.00	7.42	0.01	0.00
5.17	1.17	0.00	7.42	0.01	0.00	5.18	1.14	0.00	7.41	0.01	0.00
5.19	1.11	0.00	7.41	0.01	0.00	5.20	1.10	0.00	7.40	0.01	0.00
5.21	1.13	0.00	7.39	0.01	0.00	5.22	1.17	0.00	7.39	0.01	0.00
5.23	1.23	0.00	7.38	0.01	0.00	5.24	1.27	0.00	7.38	0.01	0.00
5.25	1.30	0.00	7.38	0.01	0.00	5.26	1.34	0.00	7.37	0.01	0.00
5.27	1.41	0.00	7.37	0.01	0.00	5.28	1.52	0.00	7.36	0.01	0.00
5.29	1.75	0.00	7.36	0.01	0.00	5.30	2.00	0.00	7.35	0.01	0.00
5.31	2.00	0.00	7.34	0.01	0.00	5.32	2.00	0.00	7.34	0.01	0.00
5.33	2.00	0.00	7.33	0.01	0.00	5.34	2.00	0.00	7.33	0.01	0.00
5.35	2.00	0.00	7.33	0.01	0.00	5.36	2.00	0.00	7.32	0.01	0.00
5.37	2.00	0.00	7.32	0.01	0.00	5.38	2.00	0.00	7.31	0.01	0.00
5.39	2.00	0.00	7.30	0.01	0.00	5.40	2.00	0.00	7.30	0.01	0.00
5.41	2.00	0.00	7.29	0.01	0.00	5.42	2.00	0.00	7.29	0.01	0.00
5.43	2.00	0.00	7.29	0.01	0.00	5.44	2.00	0.00	7.28	0.01	0.00
5.45	2.00	0.00	7.28	0.01	0.00	5.46	2.00	0.00	7.27	0.01	0.00
5.47	2.00	0.00	7.26	0.01	0.00	5.48	2.00	0.00	7.26	0.01	0.00
5.49	2.00	0.00	7.25	0.01	0.00	5.50	2.00	0.00	7.25	0.01	0.00
5.51	2.00	0.00	7.25	0.01	0.00	5.52	2.00	0.00	7.24	0.01	0.00
5.53	2.00	0.00	7.24	0.01	0.00	5.54	2.00	0.00	7.23	0.01	0.00
5.55	2.00	0.00	7.22	0.01	0.00	5.56	2.00	0.00	7.22	0.01	0.00
5.57	2.00	0.00	7.21	0.01	0.00	5.58	2.00	0.00	7.21	0.01	0.00
5.59	2.00	0.00	7.21	0.01	0.00	5.60	2.00	0.00	7.20	0.01	0.00
5.61	2.00	0.00	7.20	0.01	0.00	5.62	2.00	0.00	7.19	0.01	0.00
5.63	2.00	0.00	7.18	0.01	0.00	5.64	2.00	0.00	7.18	0.01	0.00
5.65	2.00	0.00	7.17	0.01	0.00	5.66	2.00	0.00	7.17	0.01	0.00
5.67	2.00	0.00	7.17	0.01	0.00	5.68	2.00	0.00	7.16	0.01	0.00
5.69	2.00	0.00	7.16	0.01	0.00	5.70	2.00	0.00	7.15	0.01	0.00
5.71	2.00	0.00	7.14	0.01	0.00	5.72	2.00	0.00	7.14	0.01	0.00
5.73	2.00	0.00	7.13	0.01	0.00	5.74	2.00	0.00	7.13	0.01	0.00
5.75	2.00	0.00	7.13	0.01	0.00	5.76	1.94	0.00	7.12	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
5.77	1.88	0.00	7.12	0.01	0.00	5.78	1.83	0.00	7.11	0.01	0.00
5.79	1.80	0.00	7.11	0.01	0.00	5.80	1.76	0.00	7.10	0.01	0.00
5.81	1.73	0.00	7.09	0.01	0.00	5.82	1.71	0.00	7.09	0.01	0.00
5.83	1.69	0.00	7.08	0.01	0.00	5.84	1.66	0.00	7.08	0.01	0.00
5.85	1.63	0.00	7.08	0.01	0.00	5.86	1.61	0.00	7.07	0.01	0.00
5.87	1.58	0.00	7.07	0.01	0.00	5.88	1.55	0.00	7.06	0.01	0.00
5.89	1.52	0.00	7.05	0.01	0.00	5.90	1.53	0.00	7.05	0.01	0.00
5.91	1.55	0.00	7.04	0.01	0.00	5.92	1.58	0.00	7.04	0.01	0.00
5.93	1.64	0.00	7.04	0.01	0.00	5.94	1.72	0.00	7.03	0.01	0.00
5.95	1.85	0.00	7.03	0.01	0.00	5.96	1.92	0.00	7.02	0.01	0.00
5.97	1.95	0.00	7.01	0.01	0.00	5.98	1.90	0.00	7.01	0.01	0.00
5.99	1.87	0.00	7.00	0.01	0.00	6.00	1.82	0.00	7.00	0.01	0.00
6.01	1.74	0.00	7.00	0.01	0.00	6.02	1.61	0.00	6.99	0.01	0.00
6.03	1.43	0.00	6.99	0.01	0.00	6.04	1.26	0.00	6.98	0.01	0.00
6.05	1.12	0.00	6.97	0.01	0.00	6.06	0.99	0.01	6.97	0.01	0.00
6.07	0.89	0.11	6.96	0.01	0.01	6.08	0.83	0.17	6.96	0.01	0.01
6.09	0.79	0.21	6.96	0.01	0.01	6.10	0.76	0.24	6.95	0.01	0.02
6.11	0.74	0.26	6.95	0.01	0.02	6.12	0.75	0.25	6.94	0.01	0.02
6.13	0.78	0.22	6.93	0.01	0.02	6.14	0.83	0.17	6.93	0.01	0.01
6.15	0.91	0.09	6.92	0.01	0.01	6.16	1.01	0.00	6.92	0.01	0.00
6.17	1.07	0.00	6.92	0.01	0.00	6.18	1.10	0.00	6.91	0.01	0.00
6.19	1.09	0.00	6.91	0.01	0.00	6.20	1.05	0.00	6.90	0.01	0.00
6.21	1.01	0.00	6.89	0.01	0.00	6.22	0.98	0.02	6.89	0.01	0.00
6.23	0.95	0.05	6.88	0.01	0.00	6.24	0.90	0.10	6.88	0.01	0.01
6.25	0.84	0.16	6.88	0.01	0.01	6.26	0.81	0.19	6.87	0.01	0.01
6.27	0.78	0.22	6.87	0.01	0.02	6.28	0.77	0.23	6.86	0.01	0.02
6.29	0.75	0.25	6.86	0.01	0.02	6.30	0.74	0.26	6.85	0.01	0.02
6.31	0.73	0.27	6.84	0.01	0.02	6.32	0.73	0.27	6.84	0.01	0.02
6.33	0.72	0.28	6.83	0.01	0.02	6.34	2.00	0.00	6.83	0.01	0.00
6.35	2.00	0.00	6.83	0.01	0.00	6.36	2.00	0.00	6.82	0.01	0.00
6.37	2.00	0.00	6.82	0.01	0.00	6.38	2.00	0.00	6.81	0.01	0.00
6.39	2.00	0.00	6.80	0.01	0.00	6.40	2.00	0.00	6.80	0.01	0.00
6.41	0.67	0.33	6.79	0.01	0.02	6.42	0.66	0.34	6.79	0.01	0.02
6.43	0.64	0.36	6.79	0.01	0.02	6.44	0.63	0.37	6.78	0.01	0.03
6.45	0.61	0.39	6.78	0.01	0.03	6.46	0.61	0.39	6.77	0.01	0.03
6.47	0.61	0.39	6.76	0.01	0.03	6.48	0.62	0.38	6.76	0.01	0.03
6.49	0.63	0.37	6.75	0.01	0.02	6.50	2.00	0.00	6.75	0.01	0.00
6.51	2.00	0.00	6.75	0.01	0.00	6.52	2.00	0.00	6.74	0.01	0.00
6.53	2.00	0.00	6.74	0.01	0.00	6.54	2.00	0.00	6.73	0.01	0.00
6.55	2.00	0.00	6.72	0.01	0.00	6.56	2.00	0.00	6.72	0.01	0.00
6.57	2.00	0.00	6.71	0.01	0.00	6.58	2.00	0.00	6.71	0.01	0.00
6.59	2.00	0.00	6.71	0.01	0.00	6.60	2.00	0.00	6.70	0.01	0.00
6.61	2.00	0.00	6.70	0.01	0.00	6.62	2.00	0.00	6.69	0.01	0.00
6.63	2.00	0.00	6.68	0.01	0.00	6.64	2.00	0.00	6.68	0.01	0.00
6.65	2.00	0.00	6.67	0.01	0.00	6.66	2.00	0.00	6.67	0.01	0.00
6.67	2.00	0.00	6.67	0.01	0.00	6.68	2.00	0.00	6.66	0.01	0.00
6.69	2.00	0.00	6.66	0.01	0.00	6.70	2.00	0.00	6.65	0.01	0.00
6.71	2.00	0.00	6.64	0.01	0.00	6.72	2.00	0.00	6.64	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
6.73	2.00	0.00	6.63	0.01	0.00	6.74	2.00	0.00	6.63	0.01	0.00
6.75	2.00	0.00	6.63	0.01	0.00	6.76	2.00	0.00	6.62	0.01	0.00
6.77	2.00	0.00	6.62	0.01	0.00	6.78	2.00	0.00	6.61	0.01	0.00
6.79	2.00	0.00	6.61	0.01	0.00	6.80	2.00	0.00	6.60	0.01	0.00
6.81	2.00	0.00	6.59	0.01	0.00	6.82	2.00	0.00	6.59	0.01	0.00
6.83	2.00	0.00	6.58	0.01	0.00	6.84	2.00	0.00	6.58	0.01	0.00
6.85	2.00	0.00	6.58	0.01	0.00	6.86	2.00	0.00	6.57	0.01	0.00
6.87	2.00	0.00	6.57	0.01	0.00	6.88	2.00	0.00	6.56	0.01	0.00
6.89	2.00	0.00	6.55	0.01	0.00	6.90	2.00	0.00	6.55	0.01	0.00
6.91	2.00	0.00	6.54	0.01	0.00	6.92	2.00	0.00	6.54	0.01	0.00
6.93	2.00	0.00	6.54	0.01	0.00	6.94	2.00	0.00	6.53	0.01	0.00
6.95	2.00	0.00	6.53	0.01	0.00	6.96	2.00	0.00	6.52	0.01	0.00
6.97	2.00	0.00	6.51	0.01	0.00	6.98	2.00	0.00	6.51	0.01	0.00
6.99	2.00	0.00	6.50	0.01	0.00	7.00	2.00	0.00	6.50	0.01	0.00
7.01	2.00	0.00	6.50	0.01	0.00	7.02	2.00	0.00	6.49	0.01	0.00
7.03	2.00	0.00	6.49	0.01	0.00	7.04	2.00	0.00	6.48	0.01	0.00
7.05	2.00	0.00	6.47	0.01	0.00	7.06	2.00	0.00	6.47	0.01	0.00
7.07	2.00	0.00	6.46	0.01	0.00	7.08	2.00	0.00	6.46	0.01	0.00
7.09	2.00	0.00	6.46	0.01	0.00	7.10	2.00	0.00	6.45	0.01	0.00
7.11	2.00	0.00	6.45	0.01	0.00	7.12	2.00	0.00	6.44	0.01	0.00
7.13	2.00	0.00	6.43	0.01	0.00	7.14	2.00	0.00	6.43	0.01	0.00
7.15	2.00	0.00	6.42	0.01	0.00	7.16	2.00	0.00	6.42	0.01	0.00
7.17	2.00	0.00	6.42	0.01	0.00	7.18	2.00	0.00	6.41	0.01	0.00
7.19	2.00	0.00	6.41	0.01	0.00	7.20	2.00	0.00	6.40	0.01	0.00
7.21	2.00	0.00	6.39	0.01	0.00	7.22	2.00	0.00	6.39	0.01	0.00
7.23	2.00	0.00	6.38	0.01	0.00	7.24	2.00	0.00	6.38	0.01	0.00
7.25	2.00	0.00	6.38	0.01	0.00	7.26	2.00	0.00	6.37	0.01	0.00
7.27	2.00	0.00	6.37	0.01	0.00	7.28	2.00	0.00	6.36	0.01	0.00
7.29	2.00	0.00	6.36	0.01	0.00	7.30	2.00	0.00	6.35	0.01	0.00
7.31	2.00	0.00	6.34	0.01	0.00	7.32	2.00	0.00	6.34	0.01	0.00
7.33	2.00	0.00	6.33	0.01	0.00	7.34	2.00	0.00	6.33	0.01	0.00
7.35	2.00	0.00	6.33	0.01	0.00	7.36	2.00	0.00	6.32	0.01	0.00
7.37	2.00	0.00	6.32	0.01	0.00	7.38	2.00	0.00	6.31	0.01	0.00
7.39	2.00	0.00	6.30	0.01	0.00	7.40	2.00	0.00	6.30	0.01	0.00
7.41	2.00	0.00	6.29	0.01	0.00	7.42	2.00	0.00	6.29	0.01	0.00
7.43	2.00	0.00	6.29	0.01	0.00	7.44	2.00	0.00	6.28	0.01	0.00
7.45	2.00	0.00	6.28	0.01	0.00	7.46	2.00	0.00	6.27	0.01	0.00
7.47	2.00	0.00	6.26	0.01	0.00	7.48	2.00	0.00	6.26	0.01	0.00
7.49	2.00	0.00	6.25	0.01	0.00	7.50	2.00	0.00	6.25	0.01	0.00
7.51	2.00	0.00	6.25	0.01	0.00	7.52	2.00	0.00	6.24	0.01	0.00
7.53	2.00	0.00	6.24	0.01	0.00	7.54	2.00	0.00	6.23	0.01	0.00
7.55	2.00	0.00	6.22	0.01	0.00	7.56	2.00	0.00	6.22	0.01	0.00
7.57	2.00	0.00	6.21	0.01	0.00	7.58	2.00	0.00	6.21	0.01	0.00
7.59	2.00	0.00	6.21	0.01	0.00	7.60	2.00	0.00	6.20	0.01	0.00
7.61	2.00	0.00	6.20	0.01	0.00	7.62	2.00	0.00	6.19	0.01	0.00
7.63	2.00	0.00	6.18	0.01	0.00	7.64	2.00	0.00	6.18	0.01	0.00
7.65	2.00	0.00	6.17	0.01	0.00	7.66	2.00	0.00	6.17	0.01	0.00
7.67	2.00	0.00	6.17	0.01	0.00	7.68	2.00	0.00	6.16	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
7.69	2.00	0.00	6.16	0.01	0.00	7.70	2.00	0.00	6.15	0.01	0.00
7.71	2.00	0.00	6.14	0.01	0.00	7.72	2.00	0.00	6.14	0.01	0.00
7.73	0.76	0.24	6.13	0.01	0.01	7.74	0.75	0.25	6.13	0.01	0.02
7.75	0.74	0.26	6.13	0.01	0.02	7.76	0.72	0.28	6.12	0.01	0.02
7.77	0.72	0.28	6.12	0.01	0.02	7.78	0.73	0.27	6.11	0.01	0.02
7.79	0.76	0.24	6.11	0.01	0.01	7.80	0.79	0.21	6.10	0.01	0.01
7.81	0.82	0.18	6.09	0.01	0.01	7.82	2.00	0.00	6.09	0.01	0.00
7.83	2.00	0.00	6.08	0.01	0.00	7.84	2.00	0.00	6.08	0.01	0.00
7.85	2.00	0.00	6.08	0.01	0.00	7.86	2.00	0.00	6.07	0.01	0.00
7.87	2.00	0.00	6.07	0.01	0.00	7.88	2.00	0.00	6.06	0.01	0.00
7.89	2.00	0.00	6.05	0.01	0.00	7.90	2.00	0.00	6.05	0.01	0.00
7.91	2.00	0.00	6.04	0.01	0.00	7.92	2.00	0.00	6.04	0.01	0.00
7.93	2.00	0.00	6.04	0.01	0.00	7.94	2.00	0.00	6.03	0.01	0.00
7.95	2.00	0.00	6.03	0.01	0.00	7.96	2.00	0.00	6.02	0.01	0.00
7.97	0.74	0.26	6.01	0.01	0.02	7.98	0.73	0.27	6.01	0.01	0.02
7.99	0.73	0.27	6.00	0.01	0.02	8.00	0.74	0.26	6.00	0.01	0.02
8.01	0.74	0.26	6.00	0.01	0.02	8.02	0.73	0.27	5.99	0.01	0.02
8.03	0.72	0.28	5.99	0.01	0.02	8.04	0.71	0.29	5.98	0.01	0.02
8.05	0.71	0.29	5.97	0.01	0.02	8.06	0.71	0.29	5.97	0.01	0.02
8.07	0.73	0.27	5.96	0.01	0.02	8.08	0.74	0.26	5.96	0.01	0.02
8.09	0.76	0.24	5.96	0.01	0.01	8.10	0.79	0.21	5.95	0.01	0.01
8.11	0.80	0.20	5.95	0.01	0.01	8.12	0.78	0.22	5.94	0.01	0.01
8.13	0.76	0.24	5.93	0.01	0.01	8.14	0.72	0.28	5.93	0.01	0.02
8.15	0.70	0.30	5.92	0.01	0.02	8.16	0.66	0.34	5.92	0.01	0.02
8.17	0.63	0.37	5.92	0.01	0.02	8.18	0.60	0.40	5.91	0.01	0.02
8.19	0.59	0.41	5.91	0.01	0.02	8.20	0.59	0.41	5.90	0.01	0.02
8.21	0.60	0.40	5.89	0.01	0.02	8.22	0.62	0.38	5.89	0.01	0.02
8.23	0.63	0.37	5.88	0.01	0.02	8.24	0.64	0.36	5.88	0.01	0.02
8.25	0.64	0.36	5.88	0.01	0.02	8.26	0.64	0.36	5.87	0.01	0.02
8.27	0.62	0.38	5.87	0.01	0.02	8.28	0.62	0.38	5.86	0.01	0.02
8.29	0.63	0.37	5.86	0.01	0.02	8.30	0.64	0.36	5.85	0.01	0.02
8.31	0.65	0.35	5.84	0.01	0.02	8.32	0.66	0.34	5.84	0.01	0.02
8.33	0.67	0.33	5.83	0.01	0.02	8.34	0.68	0.32	5.83	0.01	0.02
8.35	0.69	0.31	5.83	0.01	0.02	8.36	0.70	0.30	5.82	0.01	0.02
8.37	0.72	0.28	5.82	0.01	0.02	8.38	0.75	0.25	5.81	0.01	0.01
8.39	0.80	0.20	5.80	0.01	0.01	8.40	0.90	0.10	5.80	0.01	0.01
8.41	1.02	0.00	5.79	0.01	0.00	8.42	1.12	0.00	5.79	0.01	0.00
8.43	1.18	0.00	5.79	0.01	0.00	8.44	1.22	0.00	5.78	0.01	0.00
8.45	1.24	0.00	5.78	0.01	0.00	8.46	1.25	0.00	5.77	0.01	0.00
8.47	1.24	0.00	5.76	0.01	0.00	8.48	1.23	0.00	5.76	0.01	0.00
8.49	1.21	0.00	5.75	0.01	0.00	8.50	1.16	0.00	5.75	0.01	0.00
8.51	1.10	0.00	5.75	0.01	0.00	8.52	1.02	0.00	5.74	0.01	0.00
8.53	0.96	0.04	5.74	0.01	0.00	8.54	0.96	0.04	5.73	0.01	0.00
8.55	1.01	0.00	5.72	0.01	0.00	8.56	1.11	0.00	5.72	0.01	0.00
8.57	1.20	0.00	5.71	0.01	0.00	8.58	1.26	0.00	5.71	0.01	0.00
8.59	1.31	0.00	5.71	0.01	0.00	8.60	1.34	0.00	5.70	0.01	0.00
8.61	1.34	0.00	5.70	0.01	0.00	8.62	1.27	0.00	5.69	0.01	0.00
8.63	1.17	0.00	5.68	0.01	0.00	8.64	1.07	0.00	5.68	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
8.65	1.02	0.00	5.67	0.01	0.00	8.66	0.98	0.02	5.67	0.01	0.00
8.67	0.98	0.02	5.67	0.01	0.00	8.68	1.02	0.00	5.66	0.01	0.00
8.69	1.05	0.00	5.66	0.01	0.00	8.70	1.10	0.00	5.65	0.01	0.00
8.71	1.12	0.00	5.64	0.01	0.00	8.72	1.12	0.00	5.64	0.01	0.00
8.73	1.05	0.00	5.63	0.01	0.00	8.74	0.97	0.03	5.63	0.01	0.00
8.75	0.91	0.09	5.63	0.01	0.01	8.76	0.90	0.10	5.62	0.01	0.01
8.77	0.90	0.10	5.62	0.01	0.01	8.78	0.91	0.09	5.61	0.01	0.01
8.79	0.86	0.14	5.61	0.01	0.01	8.80	2.00	0.00	5.60	0.01	0.00
8.81	2.00	0.00	5.59	0.01	0.00	8.82	2.00	0.00	5.59	0.01	0.00
8.83	2.00	0.00	5.58	0.01	0.00	8.84	2.00	0.00	5.58	0.01	0.00
8.85	2.00	0.00	5.58	0.01	0.00	8.86	2.00	0.00	5.57	0.01	0.00
8.87	2.00	0.00	5.57	0.01	0.00	8.88	2.00	0.00	5.56	0.01	0.00
8.89	2.00	0.00	5.55	0.01	0.00	8.90	2.00	0.00	5.55	0.01	0.00
8.91	2.00	0.00	5.54	0.01	0.00	8.92	2.00	0.00	5.54	0.01	0.00
8.93	2.00	0.00	5.54	0.01	0.00	8.94	2.00	0.00	5.53	0.01	0.00
8.95	2.00	0.00	5.53	0.01	0.00	8.96	2.00	0.00	5.52	0.01	0.00
8.97	0.64	0.36	5.51	0.01	0.02	8.98	0.64	0.36	5.51	0.01	0.02
8.99	0.71	0.29	5.50	0.01	0.02	9.00	0.78	0.22	5.50	0.01	0.01
9.01	0.88	0.12	5.50	0.01	0.01	9.02	0.95	0.05	5.49	0.01	0.00
9.03	1.02	0.00	5.49	0.01	0.00	9.04	1.03	0.00	5.48	0.01	0.00
9.05	0.99	0.01	5.47	0.01	0.00	9.06	0.95	0.05	5.47	0.01	0.00
9.07	0.93	0.07	5.46	0.01	0.00	9.08	0.89	0.11	5.46	0.01	0.01
9.09	0.83	0.17	5.46	0.01	0.01	9.10	0.77	0.23	5.45	0.01	0.01
9.11	0.72	0.28	5.45	0.01	0.02	9.12	0.69	0.31	5.44	0.01	0.02
9.13	0.68	0.32	5.43	0.01	0.02	9.14	0.66	0.34	5.43	0.01	0.02
9.15	0.66	0.34	5.42	0.01	0.02	9.16	2.00	0.00	5.42	0.01	0.00
9.17	2.00	0.00	5.42	0.01	0.00	9.18	2.00	0.00	5.41	0.01	0.00
9.19	2.00	0.00	5.41	0.01	0.00	9.20	0.61	0.39	5.40	0.01	0.02
9.21	0.59	0.41	5.39	0.01	0.02	9.22	0.61	0.39	5.39	0.01	0.02
9.23	0.67	0.33	5.38	0.01	0.02	9.24	0.75	0.25	5.38	0.01	0.01
9.25	0.80	0.20	5.38	0.01	0.01	9.26	0.83	0.17	5.37	0.01	0.01
9.27	0.85	0.15	5.37	0.01	0.01	9.28	0.88	0.12	5.36	0.01	0.01
9.29	0.89	0.11	5.36	0.01	0.01	9.30	0.90	0.10	5.35	0.01	0.01
9.31	0.90	0.10	5.34	0.01	0.01	9.32	0.89	0.11	5.34	0.01	0.01
9.33	0.87	0.13	5.33	0.01	0.01	9.34	0.85	0.15	5.33	0.01	0.01
9.35	0.84	0.16	5.33	0.01	0.01	9.36	0.80	0.20	5.32	0.01	0.01
9.37	0.75	0.25	5.32	0.01	0.01	9.38	0.70	0.30	5.31	0.01	0.02
9.39	0.66	0.34	5.30	0.01	0.02	9.40	0.63	0.37	5.30	0.01	0.02
9.41	0.61	0.39	5.29	0.01	0.02	9.42	2.00	0.00	5.29	0.01	0.00
9.43	2.00	0.00	5.29	0.01	0.00	9.44	2.00	0.00	5.28	0.01	0.00
9.45	2.00	0.00	5.28	0.01	0.00	9.46	2.00	0.00	5.27	0.01	0.00
9.47	2.00	0.00	5.26	0.01	0.00	9.48	2.00	0.00	5.26	0.01	0.00
9.49	2.00	0.00	5.25	0.01	0.00	9.50	0.59	0.41	5.25	0.01	0.02
9.51	0.62	0.38	5.25	0.01	0.02	9.52	0.69	0.31	5.24	0.01	0.02
9.53	0.78	0.22	5.24	0.01	0.01	9.54	0.88	0.12	5.23	0.01	0.01
9.55	0.96	0.04	5.22	0.01	0.00	9.56	1.02	0.00	5.22	0.01	0.00
9.57	1.06	0.00	5.21	0.01	0.00	9.58	1.09	0.00	5.21	0.01	0.00
9.59	1.07	0.00	5.21	0.01	0.00	9.60	1.03	0.00	5.20	0.01	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F _L	w _z	d _z	LPI	Depth (m)	FS	F _L	w _z	d _z	LPI
9.61	0.98	0.02	5.20	0.01	0.00	9.62	0.96	0.04	5.19	0.01	0.00
9.63	0.91	0.09	5.18	0.01	0.00	9.64	0.87	0.13	5.18	0.01	0.01
9.65	0.82	0.18	5.17	0.01	0.01	9.66	0.81	0.19	5.17	0.01	0.01
9.67	2.00	0.00	5.17	0.01	0.00	9.68	2.00	0.00	5.16	0.01	0.00
9.69	2.00	0.00	5.16	0.01	0.00	9.70	2.00	0.00	5.15	0.01	0.00
9.71	2.00	0.00	5.14	0.01	0.00	9.72	2.00	0.00	5.14	0.01	0.00
9.73	2.00	0.00	5.13	0.01	0.00	9.74	2.00	0.00	5.13	0.01	0.00
9.75	0.73	0.27	5.13	0.01	0.01	9.76	0.73	0.27	5.12	0.01	0.01
9.77	0.73	0.27	5.12	0.01	0.01	9.78	0.75	0.25	5.11	0.01	0.01
9.79	0.77	0.23	5.11	0.01	0.01	9.80	0.78	0.22	5.10	0.01	0.01

Overall liquefaction potential: 2.33

LPI = 0.00 - Liquefaction risk very low

LPI between 0.00 and 5.00 - Liquefaction risk low

LPI between 5.00 and 15.00 - Liquefaction risk high

LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point

F_L: 1 - FSw_z: Function value of the extend of soil liquefaction according to depthd_z: Layer thickness (m)

LPI: Liquefaction potential index value for test point

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ALLEGATO 6

DOCUMENTAZIONE FOTOGRAFICA



FOTO 1: POSIZIONAMENTO **CPTU1**



FOTO 2: POSIZIONAMENTO **CPTU2**



FOTO 3: POSIZIONAMENTO **CPTU3**



FOTO 4: POSIZIONAMENTO **CPTU4**



FOTO 5: POSIZIONAMENTO **CPTU5**



FOTO 6: POSIZIONAMENTO **CPT6**



FOTO 7: POSIZIONAMENTO **CPTU7**



FOTO 8: POSIZIONAMENTO **CPT8**

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FOTO 9: POSIZIONAMENTO **MASW**



FOTO 10: POSIZIONAMENTO **CPTU1Bis**



FOTO 11: POSIZIONAMENTO **CPTU2Bis**



FOTO 12: POSIZIONAMENTO **CPTU3Bis**



FOTO 13: POSIZIONAMENTO **CPTU4Bis**



FOTO 14: POSIZIONAMENTO **CPTU5bis**



FOTO 15: POSIZIONAMENTO **CPTU6bis**



FOTO 16: POSIZIONAMENTO **CPTU7Bis**



FOTO 17: POSIZIONAMENTO **CPTU8Bis**



FOTO 18: POSIZIONAMENTO **CPTU9Bis**



FOTO 19: POSIZIONAMENTO **CPTU10Bis**



FOTO 20: POSIZIONAMENTO **CPTU11BIS**



FOTO 21: POSIZIONAMENTO **CPTU12BIS**



FOTO 22: POSIZIONAMENTO **CPTU13BIS**



FOTO 23: POSIZIONAMENTO **CPTU14BIS**