TAP
Trans Adriatic Pipeline

landfall survey

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TAP
Trans Adriatic Pipeline

Document Title:

Field Report - Geotechnical Survey, Italian Landfall

Originator:

D'APPOLONIA

Contractor document number: 11-503-H13 REV. 1

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OPL00-DAP-160-Y-TRE-0007

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00

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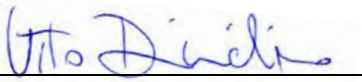
Trans Adriatic Pipeline (TAP)
Baar, Switzerland

Geotechnical Survey Field Report
Trans Adriatic Pipeline (TAP)
Italian Landfall

D'APPOLONIA

Trans Adriatic Pipeline (TAP)
Baar, Switzerland

Geotechnical Survey — Field Report
Trans Adriatic Pipeline (TAP)
Italian Landfall

Prepared by	Signature	Date
Aurelio R. Marchesini		24 May 2012
Controlled by	Signature	Date
Vito Dimichino		24 May 2012
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Paolo Ravaschio		24 May 2012
Undersigned by	Signature	Date
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FIELD REPORT
TRANS ADRIATIC PIPELINE (TAP)
GEOTECHNICAL SURVEY – ITALIAN LANDFALL

1 INTRODUCTION

This document presents the field report for the Trans Adriatic Pipeline (TAP) geotechnical survey at the Italian landfall located in San Foca, Lecce (Figure 1 at the end of the text). The survey was performed by D'Appolonia on behalf of Statoil ASA/TAP under Contract No. 4502294618 (Statoil ASA, 2011)*.

The field investigation was carried out between January 28 and February 25, 2012 from the Skate IV jack-up barge. D'Appolonia S.p.A. Genoa, Italy, was the contractor for the investigation, providing site supervision, onboard laboratory testing and site engineering. Fugro Seacore Ltd., Falmouth, United Kingdom, performed drilling, sampling and in-situ testing.

The purpose of the survey was to provide stratigraphic and geotechnical data for the TAP Italian shore approach design and installation.

The pipeline is designed to across the landfall with a microtunnel starting from about 25 m water depth offshore (KP 1 Km) to about 800 m onshore from the coast line.

The field work comprised two combined geotechnical boreholes and three continuous PCPTs along the center line and two combined geotechnical boreholes along the wing lines.

This report provides the factual results of the investigation, including:

- Project details;
- Boring logs;
- In-situ test results;
- Onboard laboratory testing;
- Soil conditions;
- Positioning report;
- Description of field operations;
- HSE Documentation.

These data are provided in Appendix A to F.

* See list of references at the end of text.

2 SCOPE OF FIELD WORK

The geotechnical investigation was carried out at the Italian Landfall from the Skate IV jack-up barge. The tug boat MTS Valour was available on site 24 hours/day to tow and assist the platform and for transfer of the crews from Port of San Foca to the site and vice versa.

The Skate IV Platform was set up with the following equipment:

- DGPS Starfix Positioning System;
- Comacchio MCS 1200 drilling system including pipes, tools, etc;
- Laboratory for sample logging;
- Top Push CPT system.

The field work comprised two combined geotechnical boreholes and three continuous PCPTs along the centre line and two combined geotechnical boreholes along the wing lines as detailed in the following:

- Center line:
  - Combined boreholes TAP_IT_1008 and 1011 to 20.5 and 29.2 m penetration respectively,
  - PCPT locations TAP_IT_1009, 1012 and 1013 to 3.9, 8.9 and 19.9 penetration respectively.
- Wing line:
  - Combined boreholes TAP_IT_1022 and 1024 to 20.0 and 19.8 m penetration respectively.

The water depth at the locations ranges from 13.4 m to 17.4 m.

The boreholes were grouted to a depth of 5 m below the seabed as requested by the Client.

Final locations with coordinates, water depth and final penetration are listed in Tables 1 and 2 at the end of the text. Boreholes location map is presented in Figure 2 at the end of the text.

During the investigation a number of sampling and testing locations were cancelled upon Client request. Cancelled locations were in the shallow water where rocky outcrops were detected during the geophysical survey, and in the portion of the corridor with water depth more than 18 m.

A total of 18 locations (13 PCPTs and 5 combined boreholes) were deleted from the original scope of work.

The following laboratory tests were performed onboard the Skate IV during the survey:

- Water content;
- Submerged unit weight;
- Carbonate content;

- Fines content;
- Point load index test.

These data are reported on the boring logs in Appendix B.
Equipment to carry out UU triaxial tests on cohesive soil was also available on site.

3 FIELD WORK METHODOLOGY

3.1 GENERAL

The field investigation was performed from the fully equipped jack up barge Skate IV. The fieldwork comprised boreholes with undisturbed sampling and in-situ testing. The equipment onboard the Skate IV and the operating procedures for the various tools are discussed in Appendix E (Doc. No. P-OFF3-H1). Pertinent details regarding the field work are given below.

The following equipment was installed on Skate IV jack up barge:

- Comacchio and CR2 Drill Mast with hydraulic winch and Pilcon free fall winch;
- Drill casing;
- Geobor S & down hole tools;
- Drilling mud mixing and batcher;
- Piston sampler;
- Retrieval device (Overshot);
- Deck clamp;
- Various hand held tools;
- Top push CPT equipment.

3.2 BORINGS AND SAMPLING

Borings were advanced using a 5 ½ inch API drill string with an open drag bit. Drilling was performed using seawater.

Sampling was performed using a wireline downhole push system. Generally 72 mm ID (3") thin walled sampling tubes were used. In some cases thick walled tubes with core catchers were necessary to improve recovery. A hammer sampler was used in the shallow sand in TAP_IT_1008 when the recovery obtained with push system was poor due to the density of the sand.

Detailed description of the tools used is provided in Appendix E (Doc. No. P-OFF3-H1).

3.2.1 In-situ Testing

PCPT were performed using a top push system operating from the drill floor. A 10 cm^2 piezocone with shoulder mounted pore pressure element (u2 type) was used. The penetration rate of the cone was 20 mm per second and ram capacity was 20 tonnes.

The tests were performed using two cones (Device type: A10F5CKE2HAW2/B, 100 bar; serial numbers 1706-1997 and 1706-2008). Detailed typical values for this type of device are given in the calibration certificate of the cone used included in the Mobilization Report (D'Appolonia, 2012a).

The PCPT data were in general of very high quality, and no particular problems were encountered during testing

The zero drift values acquired during the tests were all within allowable minimum accuracy that is respectively 400 kPa or 5% for cone resistance measurements and 50 kPa or 15% for sleeve friction and pore pressures values (ISSGME, 1999).

Plots of PCPT tests are given in Appendix C. A detailed description of the tools and of the procedure used is provided in Appendix E.

3.3 SHALLOW GAS PROCEDURES

Gas risk was considered negligible at site; no specific procedures were applied during the survey.

4 SOIL CONDITIONS

Soil conditions at the Italian landfall generally consist of thick sequences of non cohesive soil. Rock was encountered in all locations except for the combined borehole TAP_IT_1011 and continuous PCPT TAP_IT_1013. This confirms a lateral variability at the site.

The stratigraphy shows a 6-7 m thick upper layer of medium dense to dense clean sand overlaying one to two metres of moderately weak limestone and extremely weak to weak calcarenite. Below the rock layers the sequence continues to the target penetration with medium dense to dense silty sands and sandy silts, locally slightly to moderately cemented. Calcarenite was encountered below this sequence in borehole TAP_IT_1008.

Details including laboratory testing are given in the boring logs attached in Appendix B.

Plots of PCPT tests are given in Appendix C.

5 HSE DOCUMENTATION

The following HSE documents issued during fieldwork are included in Appendix G:

- HSE minutes of meetings;
- Emergency Response Plans.

During fieldwork one daily tool box talk was held by D'Appolonia Site Manager during the weather stand by days and two tool box talks a day during the operational periods.

6 CONCLUSIONS

This field report presents the results of the geotechnical investigation performed on behalf of Statoil ASA, for the Trans Adriatic Pipeline (TAP) Italian Landfall, S. Foca (LE).

Preliminary boring logs, in-situ testing results and field laboratory testing are presented.

This report will be superseded by the Factual and Final Reports including onshore laboratory testing, design soil profiles and engineering analyses.

ARM/VD/PRA:sls

REFERENCES

D'Appolonia, 2012a, Mobilization Report, Geotechnical Investigation, Trans Adriatic Pipeline, Italian and Albanian Landfall, Doc. No. 11-503-H11 Rev.0, February.

ISSMGE International Society for Soil Mechanics and Geotechnical Engineering ,1999 "International Reference Test Procedure for the Cone Penetration Test (CPT) and the Cone Penetration Test with PorePressure (CPTU): Report of the ISSMGE Technical Committee 16 on Ground Property Characterisation from In-Situ Testing", Barends, F.B.J. et al. (Eds.), Geotechnical Engineering for Transportation Infrastructure: Proceedings of the Twelfth European Conference on Soil Mechanics and Geotechnical Engineering, Amsterdam, Netherlands, 7-10 June 1999, Vol. 3, A.A. Balkema, Rotterdam, pp. 2195-2222.

Statoil ASA, 2011, "Trans Adriatic Pipeline – TSP Project – Contract No. 4502294618 – Geophysical and Geotechnical Survey", August.

Table 1
Combined Borehole Locations

BORING	LOCAL COORDINATES (m)		WGS84 COORDINATES		WATER[(1)] DEPTH (m)	DATE (d/m/y)	FINAL PEN. (m)
	Easting	Northing	Latitude	Longitude			
TAP_IT_1008	278533.52	4466238.02	40° 19' 02.3481''	18° 23' 36.7215''	13.6	10/02/2012	20.50
TAP_IT_1011	278668.14	4466358.02	40° 19' 06.3646''	18° 23' 42.2700''	16.1	15/02/2012	29.20
TAP_IT_1022	278437.63	4466486.32	40° 19' 10.3016''	18° 23' 32.3530''	15.4	20/02/2012	20.00
TAP_IT_1024	278776.79	4466114.68	40° 18' 58.5840''	18° 23' 47.1719''	15.9	19/02/2012	19.80

Table 2
Seabed PCPT Locations

PCPT	LOCAL COORDINATES (m)		WGS COORDINATES		WATER[(1)] DEPTH (m)	DATE (d/m/y)	FINAL PEN. (m)
	Easting	Northing	Latitude	Longitude			
TAP_IT_1009	278540.07	4466243.62	40° 19' 02.5357''	18° 23' 36.9916''	13.4	28/01/2012	3.88
TAP_IT_1012	278672.73	4466361.46	40° 19' 06.4803''	18° 23' 42.4601''	16.9	13/02/2012	8.90
TAP_IT_1013	278731.15	4466404.27	40° 19' 07.9232''	18° 23' 44.8793''	17.4	25/02/2012	20.00

Notes:

(1) Water depth measured by drill string at the start of boring.

APPENDIX A
PROJECT DETAILS

- Project Team
- Daily Progress Reports
- Sample and PCPT Recovery List
- Schedule of Laboratory Testing

TABLE A1
TRANS ADRIATIC PIPELINE (TAP)
GEOTECHNICAL INVESTIGATION
PROJECT TEAM

COMPANY	RESPONSIBILITY	REPRESENTATIVE
Statoil ASA	Project commissioning	Peter Watson Wim Zuijderduijn
D'Appolonia S.p.A. Genoa, Italy	Main Contractor, Project Management, Engineering and Reporting	Vito Dimichino
Fugro Seacore Ltd	In-situ testing, sampling and positioning	Rob Fraser

DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_1
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 14 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	24h	48 h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	24h	48 h

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Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	:
Activities Next 24 hrs	: Continuing mobilization
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	

On-site Personnel	**Role**
Martine De Vries	Client Representative
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino	Martine Helena De Vries	15 Jan 2012

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DAILY PROGRESS REPORT

D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_03
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 15 Jan 2012

Time		Code	Activity
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	48h	72 h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	48h	72 h

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Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	:
Activities Next 24 hrs	: Continuing mobilization
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	

On-site Personnel	Role
Martine De Vries	Client Representative
Vito Dimichino	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino	Martine Helena De Vries	16 Jan 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_04
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 16 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port
			Drilling Rig maintenance. Store Container organized. D'Appolonia Lab Container on the barge

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	72 h	96 h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	72 h	96 h

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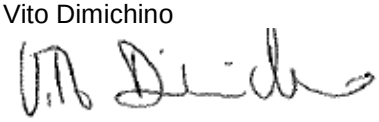
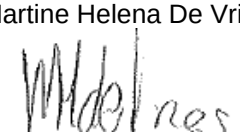
Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	:
Activities Next 24 hrs	: Continuing mobilization
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	

On-site Personnel	**Role**
Martine De Vries	Client Representative
Vito Dimichino	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Martine Helena De Vries 	17 Jan 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_05
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 17 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port
			Walkways adjusted to suit new locations of containers. FSL survey engineer installing Starfix system;

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	96 h	120 h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	96 h	120 h

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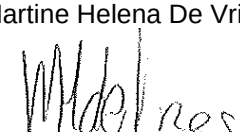
Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	:
Activities Next 24 hrs	: Continuing mobilization
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	HSE/Risk assessment meeting postponed with 24 hours by Contractor

On-site Personnel	**Role**
Martine De Vries	Client Representative
Vito Dimichino	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Martine Helena De Vries 	18 Jan 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_06
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 18 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port. CPT TOP Push Equipment arrived
12:00	13:00		Barge Master, MTS Valour Captain, D'Appolonia Site Manager, Fugro Team Leader and Statoil/TAP Representative had a site visit at S.Foca and meet S.Foca Harbour Master Antonino Mascari
17:30	18:30		HSE/Risk Assessment Meeting at Hotel Orientale with Barge Master, MTS Valour Captain, D'Appolonia Site Manager, Fugro Team Leader, Statoil/TAP Representative and Statoil/TAP Project Manager.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	120 h	144h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	120 h	144h

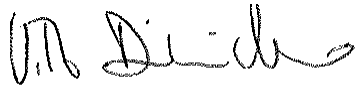
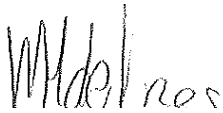
Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	: Meeting about crew change procedure and risk assessment (a QHSE Notes Report will be issued)
Activities Next 24 hrs	: Continuing mobilization
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	

On-site Personnel	Role
Martine De Vries	Client Project Manager
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Martine Helena De Vries 	18 Jan 2012

DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_07
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 19 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port. CPT TOP Push Equipment set up in the barge.
			D'Appolonia engineers arrived to Brindisi.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	144h	168h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	144h	168h

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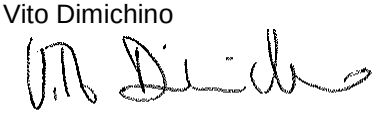
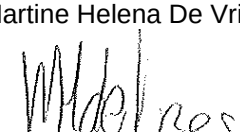
Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	: QHSE 1 – 18 January was issued
Activities Next 24 hrs	: Continuing mobilization
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	

On-site Personnel	**Role**
Martine De Vries	Client Project Manager
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Raimondo Marchesini	Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Martine Helena De Vries 	19 Jan 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_08
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 20 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port.
			Welding operations. Setting up Laboratory.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	168h	192h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	168h	192h
Weather at 24:00 hours				

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Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	:
Activities Next 24 hrs	: Continuing mobilization
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	

On-site Personnel	**Role**
Martine De Vries	Client Project Manager
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Raimondo Marchesini	Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
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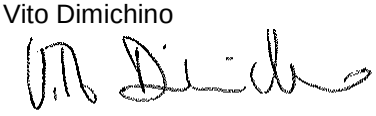
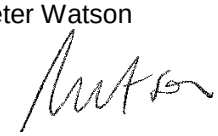
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Peter Watson 	21 Jan 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_09
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 21 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port.
			Installation and welding of CPT frame completed
			Geotechnical laboratory setting up is completed
			Statoil/TAP Representative conducted inspection on MTS Valour and Skate IV
			End of mobilization

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h	192h	216h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	192h	216h

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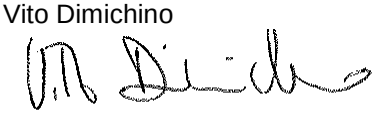
Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	:
Activities Next 24 hrs	: Standby in Brindisi Port, waiting for Otranto Port Authority work permits beginning (see D'Appolonia Remarks)
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Mobilization completed
	Ufficio Circondariale di Otranto (Otranto Port Authority) gives permits for work activities in the Corridor from 24th Tuesday. The permits allows to drill only to the points cleared by UXO survey till 20th January (all locations scheduled for Skate IV operations)
	After Otranto Port Authority communication the plan is to tow Skate IV on Monday 23rd January and starting drilling and testing activities on Tuesday 24th at daylight on TAP_IT_1009 location..

Client Remarks	

On-site Personnel	Role
Martine De Vries	Client Project Manager
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Raimondo Marchesini	Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	22 Jan 2012

DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_10
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 22 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	SO	Stand by in Brindisi port. Work permits from Ufficio Circondariale Marittimo di Otranto allows starting work activities in Tuesday 24th January.
12.30	13.30		Kick off meeting was held by D'Appolonia Site Manager and Client Representative in Hotel Orientale in Brindisi. Whole crew attended the meeting.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other	24h		24h
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			

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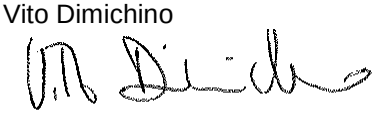
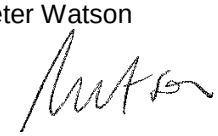
	TOTAL	24 h	216h	240h	
Weather at 24:00 hours					
Windspeed	8-12	Wind Direction	: SSE	Wave Height	: 0.5-0.8m

QHSE Notes	:
Activities Next 24 hrs	: Sailing from Brindisi to S.Foca, positioning the barge in on TAP_IT_1009 location. Starting drilling and testing activities will start on Tuesday 24th January.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Suitable window for towing on Monday. Operations should commence Tuesday but bad weather expected from Wednesday.

Client Remarks	

On-site Personnel	**Role**
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Raimondo Marchesini	Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Peter Watson 	23 Jan 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_11
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 23 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	5:30	SO	Stand by in Brindisi port. Work permits from Ufficio Circondariale Marittimo di Otranto allows starting work activities in Tuesday 24th January.
5:30	6:00	SO	Tow crew travel to berth and prepare barge for sailing
6:00	16:00	TB	MTS Valour and Skate IV depart Brindisi - tow to the work site. Remaining crew travel from Brindisi to San Foca by road.
16:00	24:00	SO	Unit arrives in San Foca area and remains offshore waiting for beginning of work permits period on the Corridor (24th January) to tow onto first location.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site	10h		10h
T	Transit from/to San Foca to/from site for crew change			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other	14h	24h	38h
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	240h	264h

Weather at 24:00 hours					
Windspeed	5-11 Knots	Wind Direction	: SW-W-NW	Wave Height	: 0.3-0.9m

QHSE Notes	:
Activities Next 24 hrs	: Tow onto first location TAP_IT_1009; Barge to jacked with large air gap due to predicted bad weather from Tuesday night; Tow Crew to then rest following extended tow time. Additional operations will be agreed with Barge Master and according the weather forecast.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Weather conditions are worsening on Tuesday evening, continuing through Wednesday, Thursday and possibly Friday.

Client Remarks	

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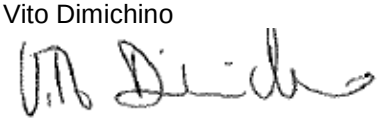
On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	24 Jan 2012

DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_12
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 24 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	7:45	SO	MTS Valour and Skate IV continue to tow offshore awaiting daylight hours to tow onto position TAP_IT_1009.
7:45	9:10	SO	Barge crew transfer from tug to Skate - check for any damage from tow. Rear mounts of Comacchio need repairing. Some wiring to be repaired Tow to site corridor
9:10	12:35	SO	On location TAP_IT_1009. RIB cradle reinstalled. All plant running, Comacchio started. Preload operations.
12:35	12:50	SO	Skate IV jacked up with 4m air gap. Barge crew transfer to MTS Valour and transit to San Foca port.
12:50	24:00	SO	Barge crew (D. Matthews, G. Matthews, A. Rowe and A. Osborne) onshore rest period for 12hrs following extended tow time. MTS Valour in port

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations	1		1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other	24h	38h	62h
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	264h	288h

Weather at 24:00 hours					
Windspeed	28-35 Knots	Wind Direction	: NNW	Wave Height	: 2.5-2.9m

QHSE Notes	:
Activities Next 24 hrs	: Few chances to work. Bad conditions are forecast. During the day possibilities to start the operation will be checked.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	12hr rest period for crew that were on the barge during the tow, including the dayshift Barge Master and the nightshift assistant bargemaster, tow ends at approx 0100 25/1/12. At that time weather had deteriorated and operations could not commence.

Client Remarks	

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On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
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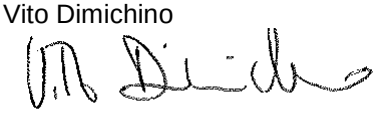
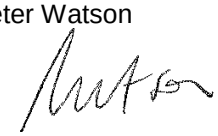
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	25 Jan 2012

DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_13
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 25 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	00:50	SO	Barge crew (D. Matthews, G. Matthews, A. Rowe and A. Osborne) onshore rest period for 12hrs following extended tow time. MTS Valour in port
00:50	24:00	SW	Weather Stand by (wind up to 30 Knots, waves up to about 3 m)

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change			
W	Work			
SW	Stand-by Weather	23h 10m		23h 10m
SO	Stand-by Other	50m	62h	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	288h	312h

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Weather at 24:00 hours					
Windspeed	18-30 Knots	Wind Direction	: NNW|N	Wave Height	: 1.75 - 2.7 m

QHSE Notes	:
Activities Next 24 hrs	: Bad conditions are forecast. During the day possibilities to start the operation will be checked.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Wind and wave height decreasing through Friday. Operations may commence on Friday PM or Saturday AM.
	Meeting held with the whole crew to define the next operations to perform and update about weather forecast

Client Remarks	

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On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
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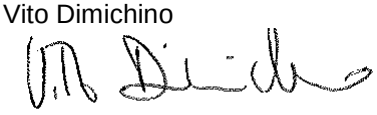
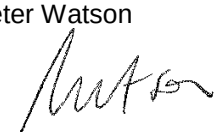
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	26 Jan 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_14
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 26 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	SW	Weather Stand by (wind up to 30 Knots, waves up to about 3 m)
	7:30		Meeting whole crew for updating on weather condition
	18:30		Meeting with D'Appolonia Site Manager and Lead Engineer, Client Representative, Barge Master and Tug Captain to discuss on the environmental and operational issues on the shallow water locations.
	19:30		Meeting whole crew for updating on weather condition and plan for Friday

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change			
W	Work			
SW	Stand-by Weather	24h	23h 10m	47h 10m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h	312h	336h

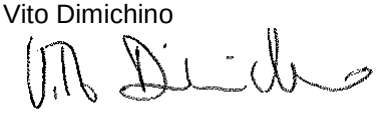
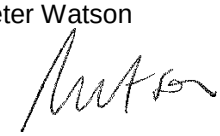
Weather at 24:00 hours					
Windspeed	9-15 Knots	Wind Direction	: N	Wave Height	: 0.7 – 1.5 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor conditions. Swell may have decreased sufficiently on Friday for Fugro Seacore crew to go onboard and conduct repairs/maintenance following tow earlier this week.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions improving through Friday with good weather through the weekend. Conditions may deteriorate from Sunday PM.
	DPR of 25 January was erroneously named as SK_12 instead of SK_13

Client Remarks	

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	27 Jan 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_15
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 27 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Weather Stand by
07:30	10:00	SW	Crew meet up. Plan to travel to barge at 10.00 to check conditions
10:00	11:15	SS	Fugro Seacore barge crew (D Matthews, G Matthews, A Rowe, A Osborne, J Barfiled, S Tiddy) transit to barge onboard MTS Valour. Assess conditions on site. Conditions suitable; transfer commences.
11:15	16:45	SS	Crew onboard. Fuel up plant and wash down deck. Repairs to Comacchio mounts and mud mixing shelter. Prepare 10.35m of 7" casing. Weld handrail to 2nd rope ladder access point on bow.
16:45	18:00	SS	Barge jacked down due to improved weather conditions. All crew transit to shore.
18:00	24:00	SS	No nightshift operation (see D'Appolonia Remarks)

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change			
W	Work			
SW	Stand-by Weather	10h	47h 10m	57h 10m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by Seacore	14h		14h
O	Other			
	TOTAL	24 h	336h	360h

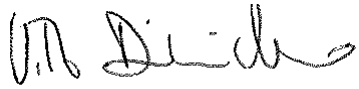
Weather at 24:00 hours					
Windspeed	5-10 Knots	Wind Direction	: SSW	Wave Height	: 0.3 – 0.5 m

QHSE Notes	:
Activities Next 24 hrs	: Commence operations at TAP_IT_1009. Move onto TAP_IT_1008.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Nightshift Bargemaster George Matthews was replaced by Mark Bray and Joe Tewin. CVs of both new personnel have been accepted by Statoil for them to work as a pair.
	The next nightshifts will be possible the day after both new people will be on S. Foca. For this reason no nightshift was scheduled today and for 29th and 30th of January.

Client Remarks	

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	27 Jan 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_16
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 28 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	08:00	SS	No nightshift operation
08:00	08:35	T	Transit from port to site .Crew transit to barge onboard MTS Valour
08:35	11:15	SS	All crew onboard Skate IV. Prepare to jack Skate IV down one stroke - problem with compressor. Repairs attempted but unsuccessful - hired compressor organised shoreside. Inductions for non-inducted crew
11:15	14:45	W	Drilling and testing operations on TAP_IT_1009 location. Refusal was obtained 3.88 m below seafloor. CPT borehole TAP_IT_1009 completed.
14:45	15:30	SS	Waiting for compressor arrival for pulling up legs and move to next location (TAP_IT_1008 combined borehole to 20 m bsf). Compressor arrived at 15:00 on S.Foca port, MTS collected and was transported on Skate IV.
15:30	17:30	W	Move to location TAP_IT_1008. On location. Pre load and jack up. Fuel up and wash down. Decision was taken by Bargemaster to terminate dayshift (see D'Appolonia remarks)
17:30	17:55	T	Transit from site to port
17:55	24:00	SS	No nisghtshift.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	1	0	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	1	3.38			1	3.38
Sampling						
Rock Coring						
Drilling						

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	1h		1h
W	Work	5h 30m		5h 30m
SW	Stand-by Weather		57h 10m	57h 10m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by Seacore	17h 30m	14h	31h 30m
O	Other			
	TOTAL	24 h	360h	384h

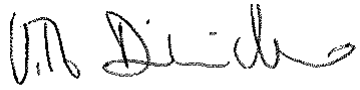
Weather at 24:00 hours					
Windspeed	10-20 Knots	Wind Direction	: SSE	Wave Height	: 0.3 – 0.5 m

QHSE Notes	:
Activities Next 24 hrs	: Drilling and sampling TAP_IT_1008
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Due to inadequate time remaining for dayshift and no nightshift, TAP_ IT_1008 sampling was not started today. The minimal meterage that could have been achieved would not provide adequate support for the string overnight resulting in possible oscillation and subsequent problems for Sunday operations. For this reason dayshift operations terminated at 17:55 instead of 20:00

Client Remarks	

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	29 Jan 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_17
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 29 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	08:00	SS	No night shift operation
08:00	08:25	T	Transit from port to site .Crew transit to barge onboard MTS Valour
08:25	16:15	W	Tool Box talk on the planned drilling operations. Commence drilling TAP_IT_1008 combined borehole location. Drilling to 3 m and sampling to 2.8 m on TAP_IT_1008 location.
16:15	16:45	T	Drilling operations suspended due to deteriorating weather. Barge jacked to storm survival height. Crew transit to Otranto port. From 16:15 to 16:45 Standard time for crew change from site to S.Foca. (see D'Appolonia Remarks)
16:45	19:00	SW	Transit to Otranto. Arrival in Otranto Port
19:00	19:30	SW	Transfer by car from Otranto to S. Foca hotel.
19:30	20:00	SW	Weather Stand by
20:00	24:00	SS	No night shift operation.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			1	3.38	1	3.38
Sampling	7	2.8			7	2.8
Rock Coring						
Drilling	N.A	3			N.A.	3

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	55m	1h	1h55m
W	Work	7h 50m	5h 30m	13h 20m
SW	Stand-by Weather	3h15	57h 10m	60h 25m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment and personnel	12h	31h 30m	43h 30m
O	Other			
	TOTAL	24 h	384h	408h

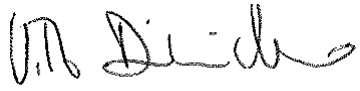
Weather at 24:00 hours					
Windspeed	4-6 Knots	Wind Direction	: VAR	Wave Height	: 1.2 – 1.7 m

QHSE Notes	:
Activities Next 24 hrs	: Mobilize MTS Valour from Brindisi on weather conditions and use of Otranto Port.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Otranto port used for crew change due to SSE swell direction at San Foca and risk mooring lines becoming snagged in vessel. Divers to remove port mooring lines Monday. Discuss berth in Otranto with local agent for periods of weather downtime
	Operational activities have been stopped due to weather worsening at 16:15. From 16:15 to 20:00 no operational activities in day shift have been carried out due to the weather. In this 3h 45m, 30 minutes have been considered as transit (normal time for crew change from site to S.Foca), and remaining time (including the additional time required for transit from S.Foca to Otranto) has been considered as weather stand-by.
	Rock bedrock was detected at 2.8 m on TAP_IT_1008 location

Client Remarks	The tug snagged the mooring lines departing for crew change and again later in the morning when departing jetty with cement bags for grouting boreholes

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	30 Jan 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_18
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 30 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	08:00	SS	No night shift operations. MTS Valour in Brindisi Port.
08:00	10:00	SW	Dayshift meet to discuss operations for day. Conditions marginal. Crew remain onshore. Otranto port agent contacted regarding berth for MTS Valour.
10:00	13:00	SW	Miarsub diver on S. Foca Port. Operations discussed. Mooring lines removed along ~25m quay. Otranto port agent confirms that berth is available for MTS Valour. Valour departs from Brindisi.
13:00	16:00	SW	Diving operations completed. Quay clear of ropes.
16:00	16:30	SW	MTS Valour at TAP_IT_1008 location (only MTS Valour crew onboard). Conditions on limitations for crew change (~1.5m). Transits to San Foca port
16:30	17:00	SW	MTS Valour in San Foca. Discussion with skipper and bargemaster on conditions Await evening forecast.
17:00	19:30	SW	Actual conditions above crew change limitations. No crew changes due to limitations on site above maximium
20:00	24:00	SW	Crew meet. No nightshift due to weather conditions. Conditions monitored

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			1	3.38	1	3.38
Sampling			7	2.8	7	2.8
Rock Coring						
Drilling			N.A	3	N.A.	3

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		1h55m	1h55m
W	Work		13h 20m	13h 20m
SW	Stand-by Weather	16h	60h 25m	76h 25m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel	8h	43h 30m	51h 30m
O	Other			
	TOTAL	24 h	408h	432h

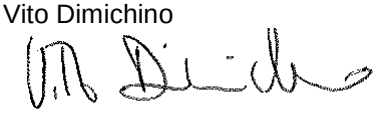
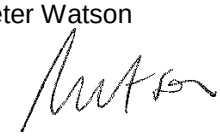
Weather at 24:00 hours					
Windspeed	5-12 Knots	Wind Direction	: ESE	Wave Height	: 1.2 – 1.5 m
				Swell Height	: 0.7 - 0.9 m

QHSE Notes	:
Activities Next 24 hrs	: Conditions to be reassessed on Tuesday morning. Meeting to hold at 7.30 Tuesday morning to plan activities according weather conditions.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	The MTS Valour did not return to site until a berth was confirmed due to the potential of not having a local safe haven should conditions deteriorate.
	.

Client Remarks	

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	31 Jan 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_19
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 31 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	08:30	SW	Dayshift meet to discuss operations for day. Conditions marginal on the weather forecast, the conditions observed were worse than marginal. Fugro Seacore crew transit out to barge on MTS Valour. One man up rope ladder to fuel generator. Crew man returns to Valour and vessel returns to San Foca port.
08:30	12:00	SW	All crew onshore. Waiting on weather continues.
12:00	19:30	SW	MTS Valour departs San Foca to take shelter in Otranto port.
19:30	24:00	SW	Crew meet to discuss operations for day. Waiting on weather .Conditions monitored

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			1	3.38	1	3.38
Sampling			7	2.8	7	2.8
Rock Coring						
Drilling			N.A	3	N.A.	3

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		1h55m	1h 55m
W	Work		13h 20m	13h 20m
SW	Stand-by Weather	24h	76h 25m	100h 25m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		51h 30m	51h 30m
O	Other			
	TOTAL	24 h	432h	456 h

Weather at 24:00 hours					
Windspeed	5-12 Knots	Wind Direction	: SE	Wave Height	: 3.0 – 4.5 m
				Swell Height	: 0.4 m

QHSE Notes	:
Activities Next 24 hrs	: Weather Stand.by.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	MTS Valour berth delayed at Otranto. Arrived at port at 13:00 but berth not available until 19:00 due to other vessel's delayed departure.
	Weather Conditions deteriorating further into Wednesday PM when they peak. Conditions expected to remain marginal through remainder of week, with possible second peak on Friday PM.
	The decision of not working was based on the assessment of the tug captain that observed that swell and wave height were too high and not suitable for a safe crew transfer.

Client Remarks	

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
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Mark Brady	Lead Driller
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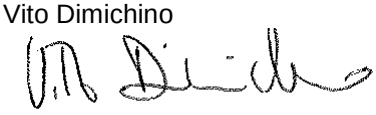
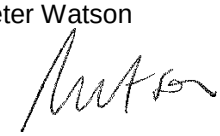
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	1 Feb 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_20
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 1 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	19:30	SW	Crew meet to discuss operations for day. Waiting on weather. Condition monitored
19:30	24:00	SW	Crew meet to discuss operations for night. Waiting on weather. Condition monitored.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			1	3.38	1	3.38
Sampling			7	2.8	7	2.8
Rock Coring						
Drilling			N.A	3	N.A.	3

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		1h 55m	1h 55m
W	Work		13h 20m	13h 20m
SW	Stand-by Weather	24h	100h 25m	124h 25m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		51h 30m	51h 30m
O	Other			
	TOTAL	24 h	456 h	480 h

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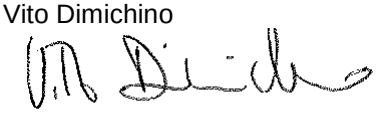
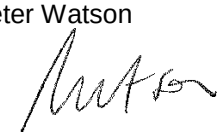
Weather for next 24:00 hours					
Windspeed	5-9 Knots	Wind Direction	: WSW/SE	Wave Height	: 1.5 – 3.3 m
				Swell Height	: 0.8 – 2.0 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor weather conditions to realize if any possibility to work
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions improving through to Friday PM when winds increase. Wave height expected to increase also. Marginal conditions expected for remainder of week.

Client Remarks	

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	1 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_21
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 2 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	09:45	SW	Crew meet to discuss operations for day. Waiting on weather. MTS Valour instructed to return to S. Foca.
09:45	10:00	SW	MTS Valour in San Foca. Fugro Seacore barge crew transit to barge to check conditions.
10:00	17:00	SS	Conditions suitable; barge crew transfer from tug to Skate IV. Hired compressor running intermittently - replacement ordered via agent. Barge crew off load hired compressor. Prepare grout spread equipment for future operations.
17:00	18:00	SS	Compressor arrives in San Foca - loaded onto MTS Valour and transported to Skate IV. Compressor off loaded onto Skate IV and installed
18:00	18:30	W	Barge jacks down in preparation for nightshift
18:30	19:00	W	Barge crew transit to shore
19:00	20:00	W	Crew meet to discuss nightshift
20:00	20:30	T	All Nightshift crew onboard MTS Valour - transit to Skate IV
20:30	24:00	W	Nightshift onboard Skate IV .Drilling and sampling operations commence from 2.8m bsf.
24:00			TAP_IT_1008 at 5.30m bsf. Conditions deteriorating - MTS skipper orders crew to transfer off barge commence jacking operations. Transit to S. Foca port at 00:00 3rd February and Weather Stand by from 00:40 3rd February

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			1	3.38	1	3.38
Sampling	1	0	7	2.8	8	2.8
Rock Coring	4	2.3			4	2.3
Drilling		2.3	N.A	3	N.A.	5.3

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	30m	1h 55m	2h 25m
W	Work	7h 30m	13h 20m	20h 50m
SW	Stand-by Weather	10h	124h 25m	134h 25m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel	6h	51h 30m	57m 30m
O	Other			
	TOTAL	24 h	480 h	504 h

Weather for next 24:00 hours					
Windspeed	22-30 Knots	Wind Direction	: S/SSE	Wave Height	: 1.5 – 3.3 m
				Swell Height	: 1.5 – 2.0 m

QHSE Notes	: Aurelio Marchesini and Mahmoud Nassar receveid induction on the Skate IV by Barge Master Joe Tewin as new comers on the platform.
Activities Next 24 hrs	: Monitor weather conditions to realize if any possibility to work. Probably Weather stand by.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	2.8m - 3.0m not sampled due to casing being set having to be re-set because the barge and the casing had been moved slightly in the bad weather.

Client Remarks	

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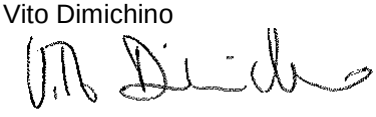
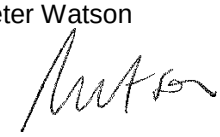
On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Peter Watson 	2 Feb 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_22
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 3 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	00:40	SW	Crew transfer from barge to MTS Valour due to deteriorating conditions and instruction from tug skipper at 00:00. Skate IV jacked up to storm survival height.
00:40	01:10	T	Transit from site to San Foca port.
01:00	19:00	SW	MTS Valour in San Foca. All crew on shore. At 9:00 MTS Valour sails to Otranto Port.
19:00	24:00	SW	Crew meet to discuss operations for day. Waiting on weather. Conditions monitored. Waiting on Weather for remainder of day due to increase in wind and wave height

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			1	3.38	1	3.38
Sampling			8	2.8	8	2.8
Rock Coring			4	2.3	4	2.3
Drilling			N.A.	5.3	N.A.	5.3

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	30m	2h 25m	2h 55m
W	Work		20h 50m	20h 50m
SW	Stand-by Weather	23h 30m	134h 25m	157h 55m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57m 30m	57m 30m
O	Other			
	TOTAL	24 h	504 h	528 h

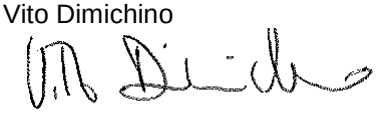
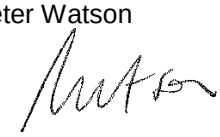
Weather for next 24:00 hours					
Windspeed	13-26 Knots	Wind Direction	: SW/NNW	Wave Height	: 2.7 – 5.0 m
				Swell Height	: 1.3 – 3.0 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor weather conditions to realize if any possibility to work. Probably Weather stand by.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions to improve from Saturday AM but conditions expected to remain over operational limitations until Sunday AM.

Client Remarks	

On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Peter Watson 	4 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_23
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 4 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	17:00	SW	Crew meet to discuss operations for day. Waiting on weather for remainder of day. Monitor conditions.
17:00	24:00	SW	Waiting on weather.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			1	3.38	1	3.38
Sampling			8	2.8	8	2.8
Rock Coring			4	2.3	4	2.3
Drilling			N.A.	5.3	N.A.	5.3

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		2h 55m	2h 55m
W	Work		20h 50m	20h 50m
SW	Stand-by Weather	24h	157h 55m	181h 55m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57m 30m	57m 30m
O	Other			
	TOTAL	24 h	528 h	552 h

Weather for next 24:00 hours					
Windspeed	13-14 Knots	Wind Direction	: N/NNE	Wave Height	: 1.5 – 2.2 m
				Swell Height	: 0.6 – 0.9 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor conditions; should be improving through Sunday
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Possible window for operations on Sunday. Forecast shows conditions improving through to Monday when they deteriorate Monday PM.
	MTS Valour in Otranto following departure from San Foca on Friday AM.

Client Remarks	

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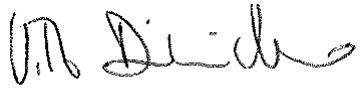
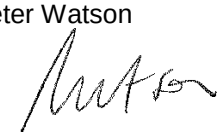
On-site Personnel	Role
Peter Watson	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Peter Watson 	5 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_24
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 5 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	08:30	SW	Crew meet to discuss operations for day. MTS Valour departed Otranto at 07:00. ETA 08:30 in San Foca.
08:30	09:45	SW	MTS Valour arrives in San Foca. Fugro Seacore dayshift crew barge on board tug and transit to site. Conditions suitable for transfer. Fugro Seacore dayshift crew barge onboard Skate IV.
09:45	10:15	T	Barge jacking down. MTS Valour returns to port to collect remaining dayshift crew
10:15	12:05	W	Dayshift crew onboard. Tool Box Talk on drilling operations. Set up for CPT operations from 5.30m bml.
12:05	19:00	W	Drilling, sampling and testing from 5.30 m to 11.80 m. CPT completed at 11.80m , hole drilled out to 10.3 m bsf.
19:00	19:30	SW	End of drilling operations due to deteriorating weather conditions. Wind built very quickly and sea very confused. Crew transfer to MTS Valour and barge jacks up to storm survival height.
19:30	20:00	T	Crew transit to San Foca port.
20:00	24:00	SW	Crew meet to discuss operations for nightshift. No nightshift due to site conditions. Waiting on weather.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	3	4.5	1	3.38	4	7.88
Sampling	2	2	8	2.8	8	4.8
Rock Coring			4	2.3	4	2.3
Drilling		5	N.A.	5.3	N.A.	10.3

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	1h	2h 55m	3h 55m
W	Work	8h 45m	20h 50m	29h 35m
SW	Stand-by Weather	14h 15m	181h 55m	196h 10m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57m 30m	57m 30m
O	Other			
	TOTAL	24 h	552 h	576h

Weather for next 24:00 hours					
Windspeed	4-23 Knots	Wind Direction	: NNE	Wave Height	: 1.2 – 2.5 m
				Swell Height	: 0.7 – 1.0 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor conditions. Recommence drilling operations at TAP_ IT_1008 if possible.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions deteriorating through Monday, peaking Monday night and decreasing through Tuesday.

Client Remarks	

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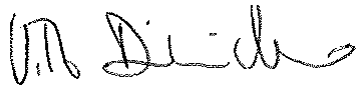
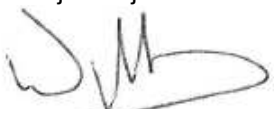
On-site Personnel	Role
Peter Watson	Client Representative
Wim Zuijderdujin	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderdujin 	6 Feb 2012

DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_25
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 6 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	19:30	SW	Crew meet to discuss operations for day – Waiting on weather. Monitor conditions for remainder of day.
19:30	24:00	SW	Crew meet to discuss operations for nightshift – Waiting on weather. Monitor conditions

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			4	7.88	4	7.88
Sampling			8	4.8	8	4.8
Rock Coring			4	2.3	4	2.3
Drilling			N.A.	10.3	N.A.	10.3

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		3h 55m	3h 55m
W	Work		29h 35m	29h 35m
SW	Stand-by Weather	24 h	196h 10m	220h 10m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57m 30m	57m 30m
O	Other			
	TOTAL	24 h	576h	600h

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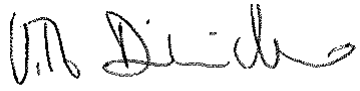
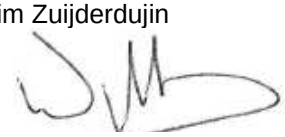
Weather for next 24:00 hours					
Windspeed	13-24 Knots	Wind Direction	: NNE	Wave Height	: 2.5 – 4.2 m
				Swell Height	: 1.3 – 1.5 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor conditions. Probably weather stand by
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions improving through Tuesday AM. Possible weather window from Wednesday PM to Friday AM.

Client Remarks	

On-site Personnel	Role
Wim Zuijderdujin	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour
Ian Sarginson	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderdujin 	7 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_26
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 7 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	19:30	SW	Crew meet to discuss operations for day – Waiting on weather. Monitor conditions for remainder of day.
19:30	19:45	SW	Crew meet to discuss operations for nightshift. Nightshift prepare to travel out to barge to check conditions
19:45	20:00	SW	MTS Valour departs port with nightshift. After departing from port MTS Valour returns early back due to conditions not suitable for transfer due to ~2m wave height
20:00	24:00	SW	All crew on shore. MTS Valour in San Foca port. Waiting on weather.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			4	7.88	4	7.88
Sampling			8	4.8	8	4.8
Rock Coring			4	2.3	4	2.3
Drilling			N.A.	10.3	N.A.	10.3

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		3h 55m	3h 55m
W	Work		29h 35m	29h 35m
SW	Stand-by Weather	24 h	220h 10m	244h 10m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57m 30m	57m 30m
O	Other			
	TOTAL	24 h	600h	624h

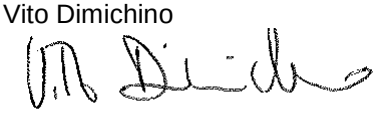
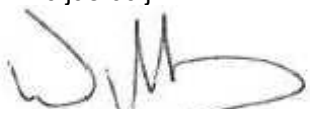
Weather for next 24:00 hours					
Windspeed	8-14 Knots	Wind Direction	: E/SE/NNE	Wave Height	: 1.8 – 2.0 m
				Swell Height	: 1.0 – 1.2 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor weather conditions.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions marginal through Wednesday but should improve further through Thursday before significantly increasing again on Friday AM.

Client Remarks	

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	8 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_27
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 8 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather. MTS Valour departed San Foca for Otranto at ~0545 due to SE swell entering port.
07:30	13:00	SW	Crew meet to discuss operations for day – Waiting on weather. Monitor conditions
13:00	16:00	SW	Condtions have improved slightly; MTS Valour requested to transit from Otranto to San Foca.
16:00	16:15	SW	MTS Valour arrives in San Foca. Fugro Seacore crew transit to barge to check condtions and fuel up generator
16:15	16:45	SW	Condtions on site not suitable to jack down and commence operations due to heavy swell. Once man boards Skate IV via rope ladder, fuels up and transfers back onto tug.
16:45	17:00	SW	Tug transits back to San Foca.
17:00	19:30	SW	All crew onshore. MTS Valour remains in San Foca. Waiting on weather. Monitor conditions
19:30	24:00	SW	Crew meet to discuss nightshift. Waiting on weather. Monitor conditions.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			4	7.88	4	7.88
Sampling			8	4.8	8	4.8
Rock Coring			4	2.3	4	2.3
Drilling			N.A.	10.3	N.A.	10.3

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		3h 55m	3h 55m
W	Work		29h 35m	29h 35m
SW	Stand-by Weather	24 h	244h 10m	268h 10m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57m 30m	57m 30m
O	Other			
	TOTAL	24 h	624h	648h

Weather for next 24:00 hours					
Windspeed	4-10 Knots	Wind Direction	: N/NNE	Wave Height	: 0.8 – 1.5 m
				Swell Height	: 0.5 – 0.8 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor conditions. Improvements through Thursday AM should allow operations to recommence.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions improving through Thursday. Low wave and winds through Fri AM when conditions deteriorate for 24-36hrs. Favorable again from Sunday AM.

Client Remarks	

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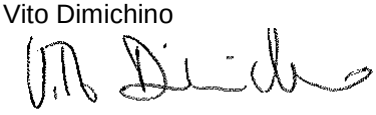
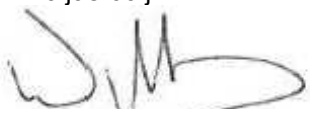
On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	9 Feb 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_28
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 9 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	08:00	SW	Crew meet to discuss operations for day. Conditions to be checked.
08:00	09:25	SW	Fugro Seacore dayshift transit to barge on Valour. Barge jacked down to working height.
09:25	10:00	T	Remaining dayshift crew transit to barge.
10:00	20:00	W	Drilling, sampling, coring and testing on TAP_IT_1008 from 10.3 m to 18.9 m bsf
20:00	20:45	T	Crew change onshore. Tool Box Talk /Handover talk Nightshift transit to barge.
20:45	21:40	W	Drilling and coring from 18.9 m to 20.5 m bsf. End of borehole.
21:40	22:30	G	Grouting operations on TAP_IT_1008 location.
22:30	24:00	W	Pulling up pipes.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	2	3	4	7.88	6	10.88
Sampling	4	2.3	8	4.8	12	7.1
Rock Coring	3	3.1	4	2.3	7	5.4
Drilling		10.2	N.A.	10.3	N.A.	20.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	1h 20m	3h 55m	5h 15m
W	Work	12h 25m	29h 35m	42h
SW	Stand-by Weather	9h 25m	268h 10m	277h 35m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57m 30m	57m 30m
G	Grouting operations	50m		50m
O	Other			
	TOTAL	24 h	648h	672h

Weather for next 24:00 hours					
Windspeed	5 - 25 Knots	Wind Direction	: SSE	Wave Height	: 0.7 – 4.2 m
				Swell Height	: 0.3 – 2.5 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor conditions.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Condtions expected to deteriorate significantly and quickly on Friday AM. Should improve through Saturday.
	For grouting operations a code G have been inserted in the time summary.

Client Remarks	

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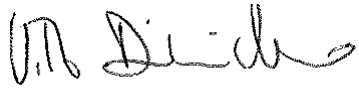
On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	10 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_29
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 10 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	00:30	SW	Instruction given by tug skipper to jack up and depart barge due to forecast weather and increasing winds
00:30	01:00	T	Barge jacked up and crew on Valour. Transit to shore
01:00	07:30	SW	All crew onshore. MTS Valour remains in port. Waiting on weather due to forecasted weather (see D'Appolonia remarks)
07:30	09:00	SW	Crew meet to discuss dayshift. Conditions calm but approaching bad weather delays move. Waiting on weather. Conditions monitored
09:00	19:30	SW	MTS Valour departs San Foca and transits to Otranto due to approaching weather
19:30	24:00	SW	Crew meet to discuss nightshift. Waiting on weather. Conditions monitored

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			6	10.88	6	10.88
Sampling			12	7.1	12	7.1
Rock Coring			7	5.4	7	5.4
Drilling			N.A.	20.5	N.A.	20.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	30m	5h 15m	5h 45m
W	Work		42h	42h
SW	Stand-by Weather	23h 30m	277h 35m	301h 05m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		50m	50m
O	Other			
	TOTAL	24 h	672h	696h

Weather for next 24:00 hours					
Windspeed	8 - 11 Knots	Wind Direction	: SSW/SSE	Wave Height	: 1.3 – 2.8 m
				Swell Height	: 0.8 – 1.4 m

QHSE Notes	:
Activities Next 24 hrs	: Monitor conditions. Move to TAP_IT_1013 if conditions suitable.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions improving through Satruday. Conditions into the week should be calm.
	Following the completion of TAP_IT_1008 location, Skate IV was jacked up to storm survival height due to forecast showing conditions deteriorating early on Friday morning. Wind speed rose slightly on site at ~0000 leading to the tug skipper ordering all crew to depart the barge due to this wind increase possibly being the bad weather arriving earlier than forecast. The decision was made to wait for the approaching weather to pass before planning a move to the next location.

Client Remarks	

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
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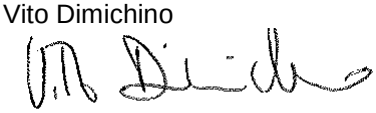
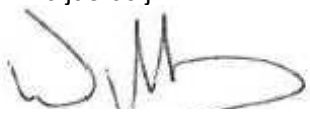
D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	11 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_30
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 11 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather.
07:30	08:30	SW	Crew meet to discuss dayshift. MTS Valour transiting from Otranto to San Foca
08:30	09:30	SW	Tug arrives in San Foca. Fugro Seacore dayshift crew board tug and transit to barge
09:30	10:45	SW	Crew onboard Skate IV.Conditions not suitable for rig move due to long period swell. Conduct maintenance whilst awaiting conditions to improve
10:45	13:50	SW	Barge jacked down into water. Conditions still not suitable
13:50	14:30	SW	Attempt move again. Swell still too large/long.
14:30	18:30	SW	Wait for conditions to improve.
18:30	19:30	SW	Crew depart barge. MTS Valour transits to shore. All crew onshore.
19:30	20:00	SW	Crew meet to discuss nightshift
20:00	20:30	SW	Fugro Seacore nightshift crew board tug and transit to barge
20:30	24:00	SW	Waiting for conditions to improve. Squalls move through with short periods of strong winds. Conditions deteriorate slightly

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	0	1	1	20

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			6	10.88	6	10.88
Sampling			12	7.1	12	7.1
Rock Coring			7	5.4	7	5.4
Drilling			N.A.	20.5	N.A.	20.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		5h 45m	5h 45m
W	Work		42h	42h
SW	Stand-by Weather	24h	301h 05m	325h 05m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance			
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		50m	50m
O	Other			
	TOTAL	24 h	696h	720h

Weather for next 24:00 hours					
Windspeed	8 - 14 Knots	Wind Direction	: NW	Wave Height	: 0.8 – 1.7 m
				Swell Height	: 0.5 – 1.0 m

QHSE Notes	: Dave Everard inducted onboard Skate IV by nightshift Barge Master.
Activities Next 24 hrs	: Monitor conditions for window to move to next location TAP_IT_1012.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions to remain marginal for move over coming days. Forecast shows possible window on Sunday when swell and wave height should decrease.
	Wave height was minimal during dayshift, swell prevented move. A long period swell prevented the move today several attempts were made by the crew but it was not deemed possible once the barge started to float.

Client Remarks	

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On-site Personnel	Role
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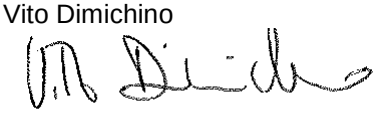
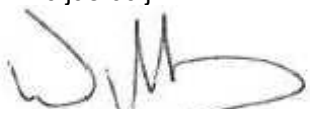
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	12 Feb 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_31
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 12 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	02:30	SW	Waiting on weather. Conditions not suitable to move barge
02:30	03:30	SW	Attempt to move, swell too large.
03:30	06:30	SW	Tug arrives in San Foca. Fugro Seacore dayshift crew board tug and transit to barge
06:30	07:30	SW	Forecast show wind and associated wave height increasing. Barge jacked up
07:30	08:00	SW	Fugro Seacore Nightshift depart barge. Transit to San Foca. Tool Box talk with dayshift crew.
08:00	11:00	SW	Dayshift transit to barge; Fugro Seacore crew jack down to allow remaining crew onboard. Conditions not suitable to move barge, transit to port
11:00	14:30	SW	All crew onshore, MTS Valour in San Foca port. Waiting on weather.
14:30	15:00	W	Fugro Seacore crew transit from San Foca to Skate IV
15:00	15:30	W	Jack barge down, commence move to TAP_IT_1012.
17:05	19:00	MT	On position TAP_IT_1012; Jacking pressure gauge hose damaged, conduct repairs Preload and jack up.
19:00	19:30	W	Fugro Seacore crew transfer to tug and transit to port
19:30	20:00	W	Toolbox meeting with the whole crew.
20:00	20:30	T	Nightshift crew transit to barge. Complete preload ops following repairs to jacking presure gauge hose
20:30	24:00	W	Set up CPT equipment, commence CPTs.
23:30	24:00	MT	Block in the casing. Adjustments. Problem solved at 01:30 on 13th February.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	1	1	11.1
5 CPT Locations	1	1	2	40

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Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			6	10.88	6	10.88
Sampling			12	7.1	12	7.1
Rock Coring			7	5.4	7	5.4
Drilling			N.A.	20.5	N.A.	20.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	30 m	5h 45m	6h 15m
W	Work	6h 35m	42h	48h 35m
SW	Stand-by Weather	14h 30m	325h 05m	339h 35m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance	2h 25m		2h 25m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		50m	50m
O	Other			
	TOTAL	24 h	720h	744h

Weather for next 24:00 hours					
Windspeed	9 - 14 Knots	Wind Direction	: NW/NNW	Wave Height	: 1.0 – 1.3 m
				Swell Height	: 0.6 – 0.8 m

QHSE Notes	:
Activities Next 24 hrs	: Complete TAP_IT_1012. Move to TAP_IT_1011.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions to remain favourable through to Thursday AM when begin to deteriorate

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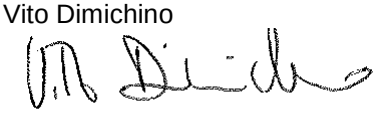
Client Remarks	

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	13 Feb 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_32
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 13 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	01:30	MT	Block in the casing. Adjustments. Problem solved.
01:30	02:10	W	Performing CPT at TAP_IT_1012. Push complete at 8.90m bml.
02:10	04:00	W	Demob CPT Kit, pulling up casing.
04:00	07:30	SW	Unable to move due to weather, Wash down and fuel up.
07:30	08:00	T	Nightshift transit to shore. Hand over talk.
08:00	08:50	W	Fugro Seacore dayshift transit to barge. Commence to move to TAP_IT_1011 location
08:50	10:20	W	On TAP_IT_1011 location. MTS Valour transits to shore to collect remaining dayshift crew.
10:20	10:50	T	Transit from port to site for remaining dayshift crew.
10:50	17:30	W	Drilling to 5.1 m bsf and sampling to 6.1 m bsf on TAP_IT_1011 location
17:30	18:45	MT	Repairs to chandelier.
18:45	19:30	W	Drilling from 5.1 m to 6.1 m bsf.
19:30	20:00	T	Dayshift crew transit from site to port.
20:00	20:30	T	Nightshift crew transit to barge.
20:30	23:00	W	Drilling and sampling from 6.1 m to 9.6 m bsf.
23:00	23:30	MT	Un-tangle sample winch cable.
23:30	24:00	W	Recommence drilling operations.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	1	1	1	22.2
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	1	8.9	6	10.88	6	19.78
Sampling	12	8.7	24	7.1	24	15.80
Rock Coring			7	5.4	7	5.4
Drilling		9.6	N.A.	20.5	N.A.	30.1

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	2h	6h 15m	8h 15m
W	Work	15h 15m	48h 35m	63h 50m
SW	Stand-by Weather	3h 30m	339h 35m	343h 05m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance	3h 15m	2h 25m	5h 40m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		50m	50m
O	Other			
	TOTAL	24 h	744h	768h

Weather for next 24:00 hours					
Windspeed	7 - 11 Knots	Wind Direction	: NE/NNW	Wave Height	: 0.8 – 1.2 m
				Swell Height	: 0.3 – 0.5 m

QHSE Notes	:
Activities Next 24 hrs	: Complete TAP_IT_1011 location.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions remain good through to Thursday AM when wind and wave increase. Increase in wind on Tuesday AM but only slight increase in wave height.

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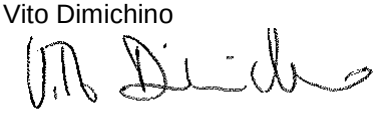
Client Remarks	

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	14 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_33
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 14 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	04:45	W	Drilling, sampling and testing at TAP_IT_1011 from 9.6 m to 11.5 m bsf.
04:45	05:15	MT	Repair hydraulic fitting on Comacchio drilling machine.
05:15	07:30	W	Drilling and sampling from 11.5 m to 12.5 m bsf.
07:30	08:00	T	Nightshift transit to shore. Hand over talk.
08:00	08:30	T	Dayshift transit to barge.
08:30	13:15	MT	Dayshift onboard – Tool Box Talk; Continue drilling operations from 12.50m bml Two attempts at conducting CPT failed.
13:15	19:30	W	Drilling, sampling and testing from 12.5 m to 17.4 m bsf.
19:30	20:00	T	Dayshift crew transit from site to port.
20:00	20:30	T	Nightshift crew transit to barge.
20:30	24:00	W	Drilling and testing from 17.4 m to 19.0 m bsf.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	2	1	22.2
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	4	6.0	6	19.78	10	25.78
Sampling	4	2.7	24	15.80	28	18.5
Rock Coring			7	5.4	7	5.4
Drilling		9.4	N.A.	30.1	N.A.	39.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	2h	8h 15m	10h 15m
W	Work	16h 45m	63h 50m	80h 35m
SW	Stand-by Weather		343h 05m	343h 05m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown	5h 15m	5h 40m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		50m	50m
O	Other			
	TOTAL	24 h	768h	792h

Weather for next 24:00 hours					
Windspeed	10 - 16 Knots	Wind Direction	: NW/WSW	Wave Height	: 1.0 – 1.3 m
				Swell Height	: 0.6 – 0.8 m

QHSE Notes	:
Activities Next 24 hrs	: Complete TAP_IT_1011 location and moving to TAP_IT_1022 location.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions due to deteriorate on Thursday AM and should improve by Saturday.

Client Remarks	

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
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Paul Foster	MTS Valour
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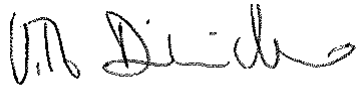
D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	14 Feb 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_34
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 15 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	05:00	W	Drilling, sampling from 19 m to 20 m bsf and testing at TAP_IT_1011 from 20 m to 29.3 m bsf (the CPT was continued to refusal in order to detect the bedrock). End of the borehole.
05:00	05:55	G	Grouting operations on TAP_IT_1001 location
05:55	07:30	W	Pulling up pipes.
07:30	08:00	T	Nightshift transit to shore. Hand over talk.
08:00	09:45	W	All crew onshore. Hand over talk. Fugro Seacore Dayshift transit to barge.
09:45	13:10	SW	Conditions not suitable to move to next location due too large swell
13:15	16:00	W	Commence rig move operations; move to TAP_ IT_1024 (not TAP_IT_1022) due to wind direction and strength
16:15	16:45	T	On location TAP_IT_1024; MTS Valour collects remaining dayshift
16:45	19:30	W	Nightshift crew transit to barge. Drilling, testing and sampling from mudline to 2.5 m bsf.
19:30	20:00	T	Dayshift transit to shore. Hand over talk.
20:00	20:30	T	Nightshift transit to site.
20:30	24:00	W	Drilling and testing to 4 m bsf.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	1	2	3	33.3
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	3	12.3	10	25.78	13	38.08
Sampling	3	1.8	28	18.5	31	20.3
Rock Coring			7	5.4	7	5.4
Drilling		5	N.A.	39.5	N.A.	44.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	2h	10h 15m	12h 15m
W	Work	17h 40m	80h 35m	98h 15m
SW	Stand-by Weather	3h 25m	343h 05m	346h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations	55h	50m	1h 45m
O	Other			
	TOTAL	24 h	792h	816h

Weather for next 24:00 hours					
Windspeed	10 - 16 Knots	Wind Direction	: NNW	Wave Height	: 0.8 – 3.7 m
				Swell Height	: 0.4 – 0.5 m

QHSE Notes	:
Activities Next 24 hrs	: Continue drilling TAP_IT_1024 if the weather allows.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions forecast to deteriorate significantly and rapidly from early Thursday morning. Should improve by Saturday.

Client Remarks	

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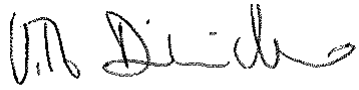
On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Joe Tewin	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Simon Oakes	CPT Operator
Matthew Roberts	MTS Valour
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	15 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_35
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 16 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	04:00	W	Drilling, sampling and testing at TAP_IT_1024 from 4.0 m to 5.8 m bsf.
04:00	04:35	SW	Due to approaching bad weather nightshift make barge safe and prepare for transit to shore
04:30	05:00	T	Nightshift transit to shore.
05:00	07:30	SW	All crew onshore; MTS Valour in port. Waiting on weather
07:30	19:30	SW	Crew meet to discuss dayshift, Conditions too bad to crew change. Waiting on weather.
19:30	24:00	SW	Crew meet to discuss nightshift, conditions too bad to crew change . Waiting on weather. Conditions monitored

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	3	3	33.3
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	1	0.8	13	38.08	14	38.88
Sampling	1	1.0	31	20.3	32	21.3
Rock Coring			7	5.4	7	5.4
Drilling		1.8	N.A.	44.5	N.A.	46.3

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	30m	12h 15m	12h 45m
W	Work	4h	98h 15m	102h 15m
SW	Stand-by Weather	19h 30m	346h 30m	366 h
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	816h	840h

Weather for next 24:00 hours					
Windspeed	20 - 26 Knots	Wind Direction	: NNW	Wave Height	: 3.8 – 2.7 m
				Swell Height	: 0.5 – 0.7 m

QHSE Notes	:
Activities Next 24 hrs	:
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions due to remain unworkable through Friday but should be decreasing through Satruday.
	Nightshift departed the barge at 04:30 due to forecast bad weather. Although conditions at the time of nightshift departure were OK for crew change and remained so for approx 3 hrs, the speed at which the bad weather builds would have meant that personnel could be crew changing outside of the limitations. i.e. the time between weather deteriorating and it reaching crew change limitations was ~30minutes (~0730-0800) .This window is not substantial enough to perform jacking operations and get all crew off safely. Furthermore at 4:00 a CPT was concluded and the following operation to perform should have been a push sample. It mean that CPT kit should have been demobilized before starting drilling and sampling operations and it need time that could be not enough due to the approaching bad weather.

Client Remarks	In my opinion operations were stopped too early. One can not only decide on the weather forecast but have to look at the actual weather as well. Also the client representative was not consulted by the decision to stop operation. For his reason 3 hours should be booked as operational hours and not as weather standby.

On-site Personnel	**Role**
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
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Jeremy Barfield	Second man
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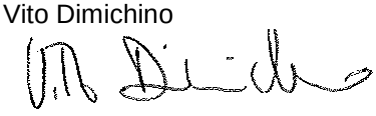
Paul Foster	MTS Valour
Peter Bound	MTS Valour

D'Appolonia Site Manager	**Client Representative**	**Date**
Vito Dimichino 	Wim Zuijderduijn 	16 Feb 2012

DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_36
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 17 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather. Conditions monitored
07:30	19:30	SW	Crew meet to discuss dayshift. Waiting on weather
19:30	24:00	SW	Crew meet to discuss nightshift. Waiting on weather. Conditions monitored

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	3	3	33.3
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			14	38.88	14	38.88
Sampling			32	21.3	32	21.3
Rock Coring			7	5.4	7	5.4
Drilling			N.A.	46.3	N.A.	46.3

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		12h 45m	12h 45m
W	Work		102h 15m	102h 15m
SW	Stand-by Weather	24h	366 h	390 h
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	840h	864h

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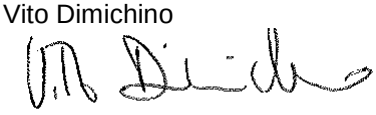
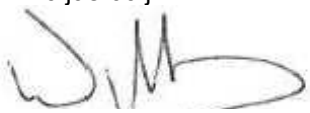
Weather for next 24:00 hours					
Windspeed	9 - 14 Knots	Wind Direction	: NW	Wave Height	: 0.8 – 1.2 m
				Swell Height	: 0.3 – 0.6 m

QHSE Notes	:
Activities Next 24 hrs	: Continue drilling, sampling and testing TAP_IT_1024 location
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions improving through Saturday and Sunday. Possible deterioration of conditions on Monday.

Client Remarks	.

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Rob Cole	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Simon Oakes	CPT Operator
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	18 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_37
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 18 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	Waiting on weather. Conditions monitored
07:30	08:30	SW	Fugro Seacore dayshift barge crew transit to barge and jack down to working height.
08:30	09:00	T	Remaining dayshift crew transit to barge
09:00	19:30	W	Drilling, sampling and testing from 5.8 m to 15 m bsf at location TAP_IT_1024.
19:30	20:00	T	Dayshift crew transit from site to port
20:00	20:30	T	Hand over talk. Nightshift crew transit from port to site.
20:30	24:00	W	Drilling, sampling and testing from 15 m to 17.5 m bsf.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	3	3	33.3
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	4	6.0	14	38.88	18	44.88
Sampling	4	4.0	32	21.3	36	25.3
Rock Coring	3	1.5	7	5.4	10	6.9
Drilling		11.6	N.A.	46.3	N.A.	58.0

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	1h 30m	12h 45m	14h 15m
W	Work	14h	102h 15m	116h 15m
SW	Stand-by Weather	8h 30m	390 h	398h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	864h	888h

Weather for next 24:00 hours					
Windspeed	5 - 8 Knots	Wind Direction	: NNW	Wave Height	: 0.5 – 0.7m
				Swell Height	: 0.3 m

QHSE Notes	: Jan Mooibroek received induction onboard by Barge Master.
Activities Next 24 hrs	: Completing TAP_IT_1024 location and move to TAP_IT_1022
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions remain calm through Sunday and deteriorate on Monday. Conditions to remain marginal through early next week.

Client Remarks	.

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On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
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Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Jan Mooibroek	CPT Operator
Simon Oakes	CPT Operator
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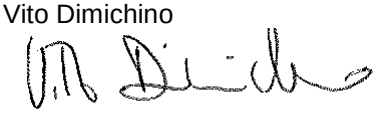
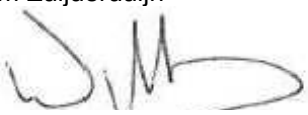
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	19 Feb 2012

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_38
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 19 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	03:30	W	Drilling, sampling and testing from 17.5 m to 20.0 m bsf. End of borehole TAP_IT_1024.
03:30	05:00	W	Move to TAP_IT_1022 location.
05:00	06:00	W	On TAP_IT_1022 location. Preloading operations, barge at working height.
06:00	07:55	W	Drilling and testing from 0.0 m to 1.5 m bsf at location TAP_IT_1022.
07:55	08:25	T	Nightshift crew transit from site to port
08:25	08:55	T	Hand over talk. Dayshift crew transit from port to site.
08:55	19:30	W	Drilling, sampling and testing from 1.5 m to 11.5 m bsf.
19:30	20:00	T	Dayshift crew transit from site to port
20:00	20:30	T	Hand over talk. Nightshift crew transit from port to site.
20:30	24:00	W	Drilling, sampling and testing from 11.5 m to 15.2 m bsf.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	1	3	4	44.4
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	7	10.5	18	44.88	25	55.38
Sampling	6	5.5	36	25.3	42	30.8
Rock Coring	2	1.0	10	6.9	12	7.9
Drilling		17.7	N.A.	58.0	N.A.	75.7

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	2h	14h 15m	16h 15m
W	Work	22h	116h 15m	138h 15m
SW	Stand-by Weather		398h 30m	398h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	888h	912h

Weather for next 24:00 hours					
Windspeed	14 - 16 Knots	Wind Direction	: SSW/SSE	Wave Height	: 0.7 – 1.2m
				Swell Height	: 0.4 – 0.7 m

QHSE Notes	:
Activities Next 24 hrs	: Completing TAP_IT_1022
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	On completion of TAP_ IT_1022 only shallow and deep water locations remain. The shallow water locations are still in the scope of work but suspended by Statoil for environmental issue. The deep water locations will require calm conditions which will in turn require a significant waiting period for suitable window.
	Conditions to deteriorate through Monday and remain above limitations or marginal through most of next week.

Client Remarks	.

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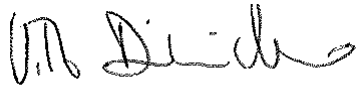
On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Rob Cole	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Jan Mooibroek	CPT Operator
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	20 Feb 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_39
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 20 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	W	Drilling, sampling and testing from 15.2 m to 20.0 m bsf. End of borehole TAP_IT_1022.
07:30	08:00	T	Nightshift crew transit from site to port
08:00	10:30	SW	Hand over talk. Fugro Seacore dayshift crew transit from port to site. Conditions not suitable for moving to TAP_IT_1013 location.
10:30	19:30	SW	All crew onshore. Waiting on weather
19:30	24:00	SW	Crew meeting for planning nightshift activities. Conditions not suitable for moving to TAP_IT_1013 location. Waiting on weather

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	2	3.0	25	55.38	27	58.38
Sampling	2	1.7	42	30.8	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling		4.8	N.A.	75.7	N.A.	80.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change	30m	16h 15m	16h 45m
W	Work	7h 30m	138h 15m	145h 45m
SW	Stand-by Weather	16h	398h 30m	414h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	912h	936h

Weather for next 24:00 hours					
Windspeed	12 - 18 Knots	Wind Direction	: SSE	Wave Height	: 1.5 – 1.7m
				Swell Height	: 0.3 – 0.4 m

QHSE Notes	:
Activities Next 24 hrs	: Moving to TAP_IT_1013 location if weather allows
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	.

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On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Rob Cole	Barge Master
Mark Brady	Lead Driller
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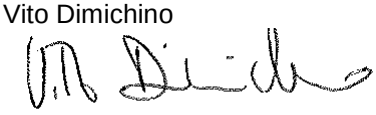
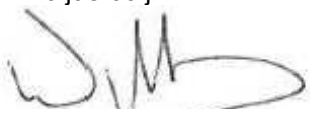
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Jan Mooibroek	CPT Operator
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	21 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_40
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 21 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	All crew onshore. Waiting on weather
07:30	19:30	SW	Crew meeting for planning dayshift activities. Conditions not suitable for moving to TAP_IT_1013 location. Waiting on weather
19:30	24:00	SW	Crew meeting for planning nightshift activities. Conditions not suitable for moving to TAP_IT_1013 location. Waiting on weather

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			27	58.38	27	58.38
Sampling			44	32.5	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling			N.A.	80.5	N.A.	80.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		16h 45m	16h 45m
W	Work		145h 45m	145h 45m
SW	Stand-by Weather	24h	414h 30m	438h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	936h	960h

Weather for next 24:00 hours					
Windspeed	9-14 Knots	Wind Direction	: SE/E	Wave Height	: 2.3 m
				Swell Height	: 0.3 – 0.4 m

QHSE Notes	:
Activities Next 24 hrs	: Moving to TAP_IT_1013 location if weather allows
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Client has formally removed all remaining seabed CPTs and boreholes from Skate and CPT barge scope of works on the Italian Landfall except for TAP_ IT_1013 (15m CPT) which will be carried out by Skate IV in the next weather window.

Client Remarks	.

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
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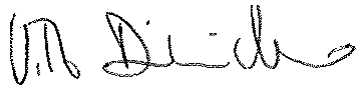
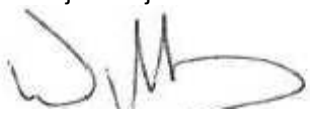
D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	22 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_41
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 22 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	All crew onshore. Waiting on weather
07:30	19:30	SW	Crew meeting for planning dayshift activities. Conditions not suitable for moving to TAP_IT_1013 location. Waiting on weather. Fugro Seacore dayshift transit to barge to check conditions. Conditions suitable for barge crew to board vessel although conditions not suitable for move. At 14:00 all crew onshore.
19:30	24:00	SW	Crew meeting for planning nightshift activities. Conditions not suitable for moving to TAP_IT_1013 location. Waiting on weather

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			27	58.38	27	58.38
Sampling			44	32.5	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling			N.A.	80.5	N.A.	80.5

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		16h 45m	16h 45m
W	Work		145h 45m	145h 45m
SW	Stand-by Weather	24h	438h 30m	462h 30m
SO	Stand-by Other		62h 50m	
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	960h	984h

Weather for next 24:00 hours					
Windspeed	6-12 Knots	Wind Direction	: NNW	Wave Height	: 1.5 – 1.8 m
				Swell Height	: 0.7 – 1.0 m

QHSE Notes	:
Activities Next 24 hrs	: Moving to TAP_IT_1013 location if weather allows
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	.

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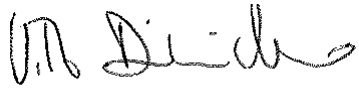
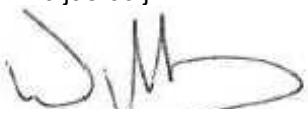
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	23 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_42
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 23 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	07:30	SW	All crew onshore. Waiting on weather
07:30	19:30	SW	Crew meeting for planning dayshift activities. Conditions not suitable for moving to TAP_IT_1013 location. Waiting on weather.
19:30	24:00	SW	Crew meeting for planning nightshift activities. Conditions not suitable for moving to TAP_IT_1013 location. Waiting on weather

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	0	2	2	40

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			27	58.38	27	58.38
Sampling			44	32.5	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling			N.A.	80.5	N.A.	80.5

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		10h	10h
T	Transit from/to San Foca to/from site for crew change		16h 45m	16h 45m
W	Work		145h 45m	145h 45m
SW	Stand-by Weather	24h	462h 30m	486h 30m
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		10h 55m	10h 55m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	984h	1008h

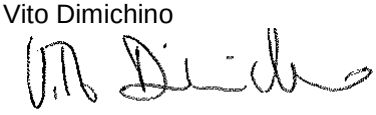
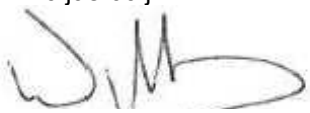
Weather for next 24:00 hours					
Windspeed	16-18 Knots	Wind Direction	: NNW	Wave Height	: 1.8 – 2.0 m
				Swell Height	: 0 – 0.2 m

QHSE Notes	:
Activities Next 24 hrs	: Moving to TAP_IT_1013 location if weather allows
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Conditions marginal until Saturday when they improve. Weather window of approximately 36 hours before conditions deteriorate significantly.

Client Remarks	.

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Gabriele Cavallini	Geotechnical Engineer
Mahmoud Nassar	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Rob Cole	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Jan Mooibroek	CPT Operator
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	24 Feb 2012

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Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_44
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 25 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	04:00	SW	Waiting on weather.
04:00	04:30	T	Transit from San Foca to Skate IV.
04:30	07:00	MT	Problems with compressor on Skate IV.
07:00	07:45	W	Positioning on Location TAP_IT_1013.
07:45	10:30	W	Performing continuous CPT on TAP_IT_1013 from 0 to 20 m.
10:30	11:00	T	Transit from site to San Foca Port for D'Appolonia personnel, Client Representative and CPT operator.
11:00	11:45	TB	Preparation for tow to Brindisi, commencement of final sea fastenings.
11:45	23:30	TB	Transit of Platform from site to Brindisi Port.
23:30	24:00	D	Demobilization in Brindisi Port.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	1	2	3	60

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing	1	20	27	58.38	28	78.38
Sampling			44	32.5	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling			N.A.	80.5	N.A.	80.5

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site	12h 30m	10h	22h 30m
T	Transit from/to San Foca to/from site for crew change	1h	16h 45m	17h 45m
W	Work	3h 30m	145h 45m	149h 15m
SW	Stand-by Weather	4h	510h 30m	514h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization	30m		30m
MC	Clearance			
MT	Maintenance or Mechanical Breakdown	2h 30m	10h 55m	13h 25m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	1032h	1056h

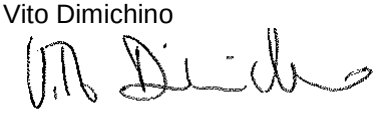
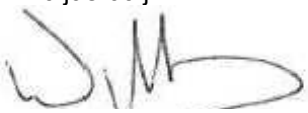
Weather for next 24:00 hours					
Windspeed	8-11 Knots	Wind Direction	: NNW	Wave Height	: 0.7– 1.2 m
				Swell Height	: 0

QHSE Notes	:
Activities Next 24 hrs	: Demobilization.
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	TAP_IT_1013 was 8.24m from target coordinates. This was agreed with the Client Representative at the time of positioning.
	Transit time TB runs from commencement of final sea fastenings to barge alongside in Brindisi.
	From tomorrow (26th of February) D'Appolonia Site Manager Vito Dimichino will be substituted by Claudio Piatti up to new communication.

Client Remarks	I agreed with the offset of the positioning to be sure that the CPT could be finished in time.

On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Vito Dimichino	Site Manager
Aurelio Ramondio Marchesini	Lead Geotechnical Engineer
Claudio Piatti	Geotechnical Engineer
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Rob Cole	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Jan Mooibroek	CPT Operator
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino 	Wim Zuijderduijn 	26 Feb 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_45
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 26 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	D	Maintenance and preparations for repair of Comacchio mounts.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	0	3	3	60

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			28	78.38	28	78.38
Sampling			44	32.5	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling			N.A.	80.5	N.A.	80.5

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		22h 30m	22h 30m
T	Transit from/to San Foca to/from site for crew change		17h 45m	17h 45m
W	Work		149h 15m	149h 15m
SW	Stand-by Weather		514h 30m	514h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization	24 h	30m	24h 30m
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		13h 25m	13h 25m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	1056h	1080h

Weather for next 24:00 hours					
Windspeed	24-27 Knots	Wind Direction	: N	Wave Height	: 4.0 – 4.5 m
				Swell Height	: 0

QHSE Notes	:
Activities Next 24 hrs	: Demobilization/Mobilization.
Toolbox Talk	: 1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Today Vito Dimichino, Jan Mooibroek and Aurelio Raimondo Marchesini depart site.

Client Remarks	

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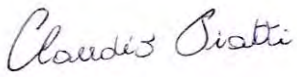
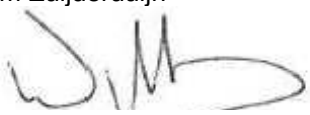
On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Claudio Piatti	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Rob Cole	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Jan Mooibroek	CPT Operator
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Claudio Piatti 	Wim Zuijderduijn 	27 Feb 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_46
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 27 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	D	Maintenance and preparations for repair of Comacchio mounts.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	0	3	3	60

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			28	78.38	28	78.38
Sampling			44	32.5	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling			N.A.	80.5	N.A.	80.5

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		22h 30m	22h 30m
T	Transit from/to San Foca to/from site for crew change		17h 45m	17h 45m
W	Work		149h 15m	149h 15m
SW	Stand-by Weather		514h 30m	514h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization	24 h	24h 30m	48h 30m
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		13h 25m	13h 25m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	1080h	1104h

Weather for next 24:00 hours					
Windspeed	21-23 Knots	Wind Direction	: N-NNW	Wave Height	: 3.3 – 3.7 m
				Swell Height	: 0.3 – 0.5 m

QHSE Notes	:
Activities Next 24 hrs	: Demobilization/Mobilization.
Toolbox Talk	: 1
Lost and Damaged Equipment	:

D'Appolonia Remarks	Note: Jan Mooibroek left the site on Sunday 27th February 2012.

Client Remarks	

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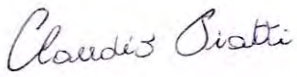
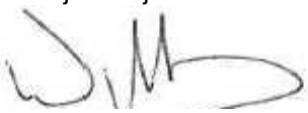
On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Claudio Piatti	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Dave Everard	CPT Operator
Vic Burgos	Lifting Inspector
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Claudio Piatti 	Wim Zuijderduijn 	28 Feb 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_47
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 28 Feb 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	D	Demobilisation.

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations	0	4	4	44.4
5 CPT Locations	0	3	3	60

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing			28	78.38	28	78.38
Sampling			44	32.5	44	32.5
Rock Coring			12	7.9	12	7.9
Drilling			N.A.	80.5	N.A.	80.5

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Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization		216h	216h
TB	Transit of Platform from/to Port of Mobilization to/from site		22h 30m	22h 30m
T	Transit from/to San Foca to/from site for crew change		17h 45m	17h 45m
W	Work		149h 15m	149h 15m
SW	Stand-by Weather		514h 30m	514h 30m
SO	Stand-by Other		62h 50m	62h 50m
D	Demobilization	24 h	48h 30m	72h 30m
MC	Clearance			
MT	Maintenance or Mechanical Breakdown		13h 25m	13h 25m
SS	Stand-by waiting for equipment or personnel		57h 30m	57h 30m
G	Grouting operations		1h 45m	1h 45m
O	Other			
	TOTAL	24 h	1104h	1128h

Weather for next 24:00 hours					
Windspeed	23-26 Knots	Wind Direction	: NW-NNW	Wave Height	: 4.0 – 4.3 m
				Swell Height	: 0.5 – 1.0 m

QHSE Notes	:
Activities Next 24 hrs	: Mobilization for Albania.
Toolbox Talk	: 1
Lost and Damaged Equipment	:

D'Appolonia Remarks	At the moment there is no gangway to board the Skate IV in a safe way. Before sailing to Albania, scheduled for Friday, an industry standard gangway should be available.

Client Remarks	At the moment there is no gangway to board the Skate IV in a safe way. Before sailing to Albania, scheduled for Friday, an industry standard gangway should be available.

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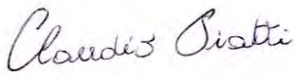
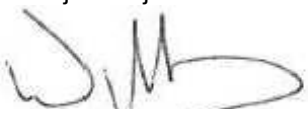
On-site Personnel	Role
Wim Zuijderduijn	Client Representative
Claudio Piatti	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
Mark Brady	Lead Driller
Andy Rowe	Driller
Scott Tiddy	Second man
Vic Burgos	Lifting Inspector
Anthony Gennings	MTS Valour
Paul Foster	MTS Valour
Michael Becconsall	MTS Valour

D'Appolonia Site Manager	Client Representative	Date
Claudio Piatti 	Wim Zuijderduijn 	29 Feb 2012

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DAILY PROGRESS REPORT D'APPOLONIA

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: SK_1
Project Name	: TAP – Geotechnical Survey				
Client	: TAP			**Date**	: 13 Jan 2012

Time		**Code**	**Activity**
From	To		
00:00	24:00	M	Mobilization Skate IV Platform in Brindisi Port

Set up Locations Progress				
Activity	Today	Previous	Total	% Complete
9 Borehole Locations				
5 CPT Locations				

Drilling, Sampling and Testing Performance						
Activity	Today		Previous		Total	
	No	Meters	No	Meters	No	Meters
CPT Testing						
Sampling						
Rock Coring						
Drilling						

Time Summary				
Code	**Activity**	Today	Previous	Total
M	Mobilization	24 h		24 h
TB	Transit from Brindisi Port to Italian Site			
T	Transit from/to Crew Change Port to/from Site			
W	Work			
SW	Stand-by Weather			
SO	Stand-by Other			
D	Demobilization			
MC	Clearance			
MT	Maintenance			
O	Other			
	TOTAL	24 h		24 h

Weather at 24:00 hours					
Windspeed		Wind Direction	:	Wave Height	:

QHSE Notes	:
Activities Next 24 hrs	:
Toolbox Talk	:1
Lost and Damaged Equipment	:

D'Appolonia Remarks	

Client Remarks	

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On-site Personnel	Role
Martine De Vries	Client Representative
Vito Dimichino	Site Manager
Rob Fraser	Fugro Team Leader
Don Matthews	Barge Master
George Matthews	Lead Driller
Andy Rowe	Driller
Alex Osborne	Driller/Second man
Scott Tiddy	Second man
Jeremy Barfield	Second man
Patrick Wesemann	CPT Operator
Simon Oakes	CPT Operator
Wil Shave	Surveyor
Owen Scott	Electrician

D'Appolonia Site Manager	Client Representative	Date
Vito Dimichino	Martine Helena De Vries	14 Jan 2012

D'APPOLONIA

RECOVERY LIST

Project No. :	**11-503**	**Report No.**	**1**
Project Title :	**TAP - Skate IV - Italian Landfall**		
Client :	**Statoil/TAP**	**Date :**	**28-Jan-2012**

Location	Test Type	Number	Depth [m]	Penetration [m]	Recovery [m]	Remarks
TAP_IT_1009	CPT	1	0.0	3.88		Top Push CPT
				3.88	0.00	Totals 3.88

Client Representative	D'Appolonia Representative
Wim Zuijderduijn	Vito Dimichino

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D'APPOLONIA

RECOVERY LIST

Project No. : **11-503** **Report No. 2**

Project Title : **TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA**

Client : **Statoil/TAP** **Date : 10-Feb-2012**

Location	Test Type	Number	Depth [m]	Penetration [m]	Recovery [m]	Remarks
TAP_IT_1008	PU	1	0.0		0.00	No Recovery
TAP_IT_1008	HA	2	0.0		1.00	
TAP_IT_1008	HA	3	1.0		0.68	
TAP_IT_1008	HA	4	1.7		0.60	
TAP_IT_1008	HA	5	2.4		0.35	
TAP_IT_1008	RC	1	3.0		0.30	
TAP_IT_1008	RC	2	3.5		0.35	
TAP_IT_1008	RC	3	4.5		0.45	
TAP_IT_1008	RC	4	5.0		0.25	
TAP_IT_1008	PU	6	5.3		0.00	No Recovery
TAP_IT_1008	CPT	1	5.3	1.50		
TAP_IT_1008	PU	7	6.8		0.90	
TAP_IT_1008	CPT	2	7.8	1.48		
TAP_IT_1008	PU	8	9.3		0.70	
TAP_IT_1008	CPT	3	10.3	1.49		
TAP_IT_1008	PU	9	11.8		0.15	
TAP_IT_1008	PU	10	12.3		0.35	
TAP_IT_1008	CPT	4	12.7	1.45		
TAP_IT_1008	PU	11	14.2		0.70	
TAP_IT_1008	CPT	5	14.9	1.46		
TAP_IT_1008	RC	5	16.4		1.50	
TAP_IT_1008	RC	6	17.9		0.00	No Recovery
TAP_IT_1008	HA	12	17.9		0.70	
TAP_IT_1008	RC	7	18.9		1.60	
				7.38	10.58	Totals 17.96

Client Representative

Wim Zuijderduijn

D'Appolonia Representative

Vito Dimichino

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D'APPOLONIA

RECOVERY LIST

Project No. :	**11-503** **Report No. 3**
Project Title :	**TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA**
Client :	**Statoil/TAP** **Date : 13-Feb-2012**

Location	Test Type	Number	Depth [m]	Penetration [m]	Recovery [m]	Remarks
TAP_IT_1012	CPT	1	0.0	8.90		Top Push CPT
				8.90	0.00	Totals 8.90

Client Representative	D'Appolonia Representative
Wim Zuijderduijn	Vito Dimichino

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D'APPOLONIA

RECOVERY LIST

Project No. : **11-503** **Report No. 4**

Project Title : **TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA**

Client : **Statoil/TAP** **Date : 15-Feb-2012**

Location	Test Type	Number	Depth [m]	Penetration [m]	Recovery [m]	Remarks
TAP_IT_1011	HA	1	0.0		0.45	
TAP_IT_1011	PU	2	1.0		0.40	
TAP_IT_1011	PU	3	1.5		0.53	
TAP_IT_1011	PU	4	2.5		0.50	
TAP_IT_1011	PU	5	3.5		0.60	
TAP_IT_1011	PU	6	4.2		0.60	
TAP_IT_1011	PU	7	5.1		0.75	
TAP_IT_1011	PU	8	6.1		0.61	Tube damaged
TAP_IT_1011	PU	9	7.1		0.85	Tube damaged
TAP_IT_1011	PU	10	8.1		0.60	
TAP_IT_1011	PU	11	9.1		0.30	
TAP_IT_1011	PU	12	9.6		0.20	
TAP_IT_1011	CPT	1	10.0	1.50		
TAP_IT_1011	PU	13	11.5		0.80	
TAP_IT_1011	CPT	2	12.5	1.50		
TAP_IT_1011	PU	14	14.0		0.70	
TAP_IT_1011	CPT	3	15.0	1.50		
TAP_IT_1011	PU	15	16.5		0.65	Tube damaged
TAP_IT_1011	CPT	4	17.5	1.50		
TAP_IT_1011	PU	16	19.0		0.85	
TAP_IT_1011	CPT	5	20.0	9.23		
				15.23	9.39	Totals 24.62

Client Representative

Wim Zuijderduijn

D'Appolonia Representative

Vito Dimichino

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D'APPOLONIA

RECOVERY LIST

Project No. : **11-503** **Report No. 5**

Project Title : **TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA**

Client : **Statoil/TAP** **Date : 15-Feb-2012**

Location	Test Type	Number	Depth [m]	Penetration [m]	Recovery [m]	Remarks
TAP_IT_1024	CPT	1	0.0	1.50		
TAP_IT_1024	PU	1	1.5		0.30	
TAP_IT_1024	PU	2	2.0		0.50	
TAP_IT_1024	CPT	2	2.5	1.50		
TAP_IT_1024	PU	3	4.0		0.80	
TAP_IT_1024	CPT	3	5.0	0.77		Refusal
TAP_IT_1024	RC	1	6.0		0.45	
TAP_IT_1024	RC	2	7.0		0.50	
TAP_IT_1024	CPT	4	7.5	1.48		
TAP_IT_1024	PU	4	9.0		0.90	
TAP_IT_1024	CPT	5	10.0	1.50		
TAP_IT_1024	PU	5	11.5		0.90	
TAP_IT_1024	CPT	6	12.5	1.50		
TAP_IT_1024	PU	6	14.0		0.90	
TAP_IT_1024	CPT	7	15.0	1.50		
TAP_IT_1024	PU	7	16.5		0.75	
TAP_IT_1024	CPT	8	17.5	1.49		
TAP_IT_1024	PU	8	19.0		0.80	
				11.24	6.80	Totals 18.04

Client Representative

Wim Zuijderduijn

D'Appolonia Representative

Vito Dimichino

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D'APPOLONIA

RECOVERY LIST

Project No. : **11-503** **Report No. 6**

Project Title : **TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA**

Client : **Statoil/TAP** **Date : 19-Feb-2012**

Location	Test Type	Number	Depth [m]	Penetration [m]	Recovery [m]	Remarks
TAP_IT_1022	CPT	1	0.0	1.50		
TAP_IT_1022	PU	1	1.5		0.55	
TAP_IT_1022	CPT	2	2.5	1.50		
TAP_IT_1022	PU	2	4.0		0.70	
TAP_IT_1022	CPT	3	5.0	1.50		
TAP_IT_1022	RC	1	6.5		0.17	
TAP_IT_1022	RC	1	7.0		0.45	
TAP_IT_1022	CPT	2	7.6	1.50		
TAP_IT_1022	PU	3	9.1		0.90	
TAP_IT_1022	CPT	5	10.1	1.48		
TAP_IT_1022	PU	4	11.7		0.83	Tube damaged
TAP_IT_1022	CPT	6	12.7	1.47		
TAP_IT_1022	PU	5	14.2		0.85	
TAP_IT_1022	CPT	7	15.2	1.44		
TAP_IT_1022	PU	6	16.7		0.00	No recovery
TAP_IT_1022	PU	7	16.7		0.85	
TAP_IT_1022	CPT	8	17.7	1.47		
TAP_IT_1022	PU	8	19.2		0.80	
				11.86	6.10	Totals 17.96

Client Representative

Wim Zuijderduijn

D'Appolonia Representative

Vito Dimichino

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D'APPOLONIA

RECOVERY LIST

Project No. :	**11-503** **Report No. 7**
Project Title :	**TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA**
Client :	**Statoil/TAP** **Date : 25-Feb-2012**

Location	Test Type	Number	Depth [m]	Penetration [m]	Recovery [m]	Remarks	
TAP_IT_1013	CPT	1	0.0	19.91			
				19.91	0.00	Totals	19.91

Client Representative	D'Appolonia Representative
Wim Zuijderduijn	Vito Dimichino

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D'APPOLONIA

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1008

CLIENT Statoil/TAP

PROJECT NAME TAP Geotechnical Investigation

PROJECT NUMBER 11-503

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
			Depth (m)																									
Borehole ID	Sample ID	Specimen ID	From	To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
TAP_IT_1008	02	2BAGA	0.00	0.50	Sand																							
TAP_IT_1008	02	2BAGB	0.50	1.00	Sand																							
TAP_IT_1008	03	3BAGA	1.00	1.20	Sand																							
TAP_IT_1008	03	3WAXA	1.20	1.40	Sand				1			1							1				1					
TAP_IT_1008	03	3BAGB	1.40	1.68	Sand																							
TAP_IT_1008	04	4BAGA	1.70	2.00	Sand																							
TAP_IT_1008	04	4BAGB	2.00	2.30	Sand																							
TAP_IT_1008	05	5BAGA	2.40	2.60	Sand				1					1														
TAP_IT_1008	05	5BAGB	2.60	2.75	Sand																							
TAP_IT_1008	C01	RC1	3.10	3.20	Rock	1																			1	1		
TAP_IT_1008	C04	RC4BAGA	5.00	5.25	Sand																							
TAP_IT_1008	07	7BAGA	6.80	7.20	Sand																							
TAP_IT_1008	07	7WAXA	7.20	7.50	Sand				1			1							1				1					
TAP_IT_1008	07	7BAGB	7.50	7.70	Sand																							
TAP_IT_1008	08	8BAGA	9.30	9.70	Sand																							
TAP_IT_1008	08	8BAGB	9.70	9.85	Sand				1																		1	1
TAP_IT_1008	08	8BAGC	9.85	10.00	Sand																							
TAP_IT_1008	09	8BAGA	11.80	11.95	Silt																							
TAP_IT_1008	10	10BAGA	12.60	12.70	Silt																							
TAP_IT_1008	10	10WAXA	12.70	12.90	Silt				1			1		1						1								
TAP_IT_1008	10	10BAGB	12.90	13.00	Silt																						1	1
TAP_IT_1008	11	11BAGA	14.40	14.60	Sand																							

(Continued Next Page)

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1008

D'APPOLONIA

CLIENT Statoil/TAP

PROJECT NAME TAP Geotechnical Investigation

PROJECT NUMBER 11-503

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
			Depth (m)																									
Borehole ID	Sample ID	Specimen ID	From	To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
TAP_IT_1008	11	11BAGB	14.80	15.10	Sand				1			1																
TAP_IT_1008	C05	RC2	17.00	17.20	Rock	1																		1	1	1		
TAP_IT_1008	C05	RC3	17.45	17.65	Rock	1																		1	1	1		
TAP_IT_1008	12	12BAGA	17.90	18.30	Sand																							
TAP_IT_1008	12	12BAGB	18.30	18.60	Sand																							
TAP_IT_1008	C06	RC4	19.70	19.90	Rock	1																		1	1	1		
TAP_IT_1008	C06	RC5	20.10	20.30	Rock	1																		1	1	1		
TOTAL:						5			6			4		2					2	1			2	4	5		2	2

Client Representative: _____

D'Appolonia Representative: Vito Dimichino

Date

Template: OFFSHORE - LAB TEST SCHEDULE Database: 11_503 TAP.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: 28 February 2012

D'APPOLONIA

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1011

CLIENT Statoil/TAP

PROJECT NAME TAP Geotechnical Investigation

PROJECT NUMBER 11-503

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
Borehole ID	Sample ID	Specimen ID	Depth (m) From	Depth (m) To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
TAP_IT_1011	01	1BAGA	0.00	0.20	Sand																							
TAP_IT_1011	01	1BAGB	0.20	0.45	Sand				1																			
TAP_IT_1011	02	2BAGA	1.00	1.40	Sand																							
TAP_IT_1011	03	3BAGA	1.50	1.80	Sand																							
TAP_IT_1011	03	3BAGB	1.80	2.03	Sand																							
TAP_IT_1011	04	4BAGA	2.50	2.75	Sand																							
TAP_IT_1011	04	4BAGB	2.75	3.00	Sand				1																		1	1
TAP_IT_1011	05	5BAGA	3.50	3.80	Sand																							
TAP_IT_1011	05	5BAGB	3.80	4.10	Sand																							
TAP_IT_1011	06	6BAGA	4.20	4.30	Sand																							
TAP_IT_1011	06	6WAXA	4.30	4.50	Sand				1			1		1	1				1				1					
TAP_IT_1011	06	6WAXB	4.50	4.70	Sand										1				1									
TAP_IT_1011	07	7BAGA	5.10	5.50	Sand																							
TAP_IT_1011	07	7WAXA	5.50	5.70	Sand																							
TAP_IT_1011	07	7BAGB	5.70	5.85	Sand																							
TAP_IT_1011	08	8BAGA	6.10	6.30	Sand																							
TAP_IT_1011	08	8BAGB	6.30	6.50	Sand				1																			
TAP_IT_1011	08	8BAGC	6.50	6.70	Sand																							
TAP_IT_1011	09	9BAGA	7.10	7.40	Sand																							
TAP_IT_1011	09	9BAGB	7.40	7.65	Sand																							
TAP_IT_1011	09	9BAGC	7.65	7.95	Sand																							
TAP_IT_1011	10	10BAGA	8.10	8.45	Sand				1			1								1								

(Continued Next Page)

D'APPOLONIA

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1011

CLIENT Statoil/TAP

PROJECT NAME TAP Geotechnical Investigation

PROJECT NUMBER 11-503

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
			Depth (m)																									
Borehole ID	Sample ID	Specimen ID	From	To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
TAP_IT_1011	10	10BAGB	8.45	8.70	Sand																							
TAP_IT_1011	11	11BAGA	9.10	9.25	Sand																							
TAP_IT_1011	11	11BAGB	9.25	9.40	Sand																							
TAP_IT_1011	12	12BAGA	9.60	9.80	Sand																							
TAP_IT_1011	13	13BAGA	11.50	11.70	Sand				1																		1	1
TAP_IT_1011	13	13BAGB	11.70	11.90	Sand																							
TAP_IT_1011	13	13BAGC	11.90	12.10	Sand																							
TAP_IT_1011	13	13BAGD	12.10	12.30	Sand																							
TAP_IT_1011	14	14WAXA	14.00	14.20	Silt				1			1		1					1				1					
TAP_IT_1011	14	14WAXB	14.20	14.40	Silt														1									
TAP_IT_1011	14	14WAXC	14.40	14.60	Silt																							
TAP_IT_1011	14	14BAGA	14.60	14.74	Silt																							
TAP_IT_1011	15	15BAGA	16.50	16.80	Sand																							
TAP_IT_1011	15	15BAGB	16.80	17.15	Sand																							
TAP_IT_1011	16	16BAGA	19.00	19.35	Sand																							
TAP_IT_1011	16	16WAXA	19.35	19.55	Sand				1			1								1								
TAP_IT_1011	16	16BAGB	19.55	19.75	Sand																							
TAP_IT_1011	16	16BAGC	19.75	19.85	Sand																							
TOTAL:									8			4		2	2				4	2			2				2	2

Client Representative: _____

D'Appolonia Representative: Vito Dimichino

Date

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1022

D'APPOLONIA

CLIENT Statoil/TAP

PROJECT NUMBER 11-503

PROJECT NAME TAP Geotechnical Investigation

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
			Depth (m)																									
Borehole ID	Sample ID	Specimen ID	From	To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
TAP_IT_1022	01	1BAGA	1.50	1.80	Sand																							
TAP_IT_1022	01	1BAGB	1.80	2.05	Sand				1																			
TAP_IT_1022	02	2BAGA	4.00	4.30	Sand																							
TAP_IT_1022	02	2BAGB	4.30	4.70	Sand				1			1								1								
TAP_IT_1022	C01	RC1BAGA	6.50	6.67	Rock	1						1											1					
TAP_IT_1022	C02	RC2BAGA	7.00	7.45	Rock	1						1											1					
TAP_IT_1022	03	3BAGA	9.10	9.40	Sand																							
TAP_IT_1022	03	3WAXA	9.40	9.60	Sand				1																			
TAP_IT_1022	03	3BAGB	9.60	10.00	Sand																							
TAP_IT_1022	04	4WAXA	11.80	12.00	Sand				1			1			1				1				1					
TAP_IT_1022	04	4WAXB	12.00	12.20	Sand														1									
TAP_IT_1022	04	4BAGA	12.20	12.35	Sand																							
TAP_IT_1022	04	4BAGB	12.35	12.53	Sand																							
TAP_IT_1022	05	5BAGA	14.20	14.40	Sand																							
TAP_IT_1022	05	5BAGB	14.40	14.60	Sand																							
TAP_IT_1022	05	5BAGC	14.60	14.85	Sand				1			1		1														
TAP_IT_1022	05	5BAGD	14.85	15.05	Sand																							
TAP_IT_1022	07	7BAGA	16.70	16.90	Sand																							
TAP_IT_1022	07	7BAGB	16.90	17.10	Sand																							
TAP_IT_1022	07	7BAGC	17.10	17.30	Sand				1			1																
TAP_IT_1022	07	7BAGD	17.30	17.55	Sand															1								
TAP_IT_1022	08	8BAGA	19.20	19.50	Sand																							

(Continued Next Page)

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1022

D'APPOLONIA

CLIENT Statoil/TAP

PROJECT NAME TAP Geotechnical Investigation

PROJECT NUMBER 11-503

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
Borehole ID	Sample ID	Specimen ID	Depth (m) From	Depth (m) To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
TAP_IT_1022	08	8BAGB	19.50	19.80	Sand				1			1																
TAP_IT_1022	08	8BAGC	19.80	20.00	Sand																							
TOTAL:						2			7			7		1	1				2	2			1	2				

Client Representative: _____

D'Appolonia Representative: Vito Dimichino

Date

Template: OFFSHORE - LAB TEST SCHEDULE Database: 11_503 TAP.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: 28 February 2012

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1024

D'APPOLONIA

CLIENT Statoil/TAP

PROJECT NUMBER 11-503

PROJECT NAME TAP Geotechnical Investigation

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
			Depth (m)																									
Borehole ID	Sample ID	Specimen ID	From	To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
TAP_IT_1024	01	1BAGA	1.50	1.80	Sand				1			1		1						1								
TAP_IT_1024	02	2BAGA	2.00	2.25	Sand																							
TAP_IT_1024	02	2BAGB	2.25	2.50	Sand																							
TAP_IT_1024	03	3BAGA	4.00	4.20	Sand																							
TAP_IT_1024	03	3BAGB	4.20	4.40	Sand																							
TAP_IT_1024	03	3BAGC	4.40	4.60	Sand				1																			
TAP_IT_1024	03	3BAGD	4.60	4.80	Sand																							
TAP_IT_1024	C01	RC1BAGA	6.00	6.45	Rock	1																		1				
TAP_IT_1024	C02	RC2BAGA	7.00	7.20	Silt																							
TAP_IT_1024	C02	RC2WAXA	7.20	7.35	Silt																							
TAP_IT_1024	C02	RC2BAGB	7.35	7.50	Silt				1			1																
TAP_IT_1024	04	4WAXA	9.05	9.20	Sand																							
TAP_IT_1024	04	4WAXB	9.20	9.35	Sand																							
TAP_IT_1024	04	4WAXC	9.35	9.50	Sand																							
TAP_IT_1024	04	4BAGA	9.50	9.90	Sand																							
TAP_IT_1024	05	5WAXA	11.55	11.70	Silt				1			1			1				1									
TAP_IT_1024	05	5WAXB	11.70	11.85	Silt										1				1									
TAP_IT_1024	05	5BAGA	11.85	12.25	Silt																							
TAP_IT_1024	05	5WAXC	12.25	12.40	Silt																							
TAP_IT_1024	06	6BAGA	14.00	14.15	Sand																							
TAP_IT_1024	06	6WAXA	14.15	14.30	Sand																							
TAP_IT_1024	06	6BAGB	14.30	14.45	Sand																							

(Continued Next Page)

D'APPOLONIA

SCHEDULE OF LABORATORY TESTS BH :TAP_IT_1024

CLIENT Statoil/TAP

PROJECT NAME TAP Geotechnical Investigation

PROJECT NUMBER 11-503

PROJECT LOCATION Italian Landfall

SAMPLE						CLASSIFICATION										SHEAR STRENGTH					CONSOLIDATION		OTHER TESTS					
Borehole ID	Sample ID	Specimen ID	Depth (m) From	Depth (m) To	Specimen Material	Unit Weight	Water Content	Fines Content	Sieve	Hydrometer	Atterberg Limits	Carbonate Content	Organic Content	Specific Gravity	Max-Min Density	Lab Vane	UU Triaxial	CU Triaxial	CD Triaxial	DS Direct Shear	Oedometer	Pressures (kPa)	Permeability	Point Load	Unconfined Compr.	Sonic Velocity	Microscopic Exam.	Chemical Tests
AP_IT_1024	06	6WAXB	14.45	14.60	Sand				1	1		1							1				1					
AP_IT_1024	06	6WAXC	14.60	14.75	Sand														1									
AP_IT_1024	06	6BAGC	14.75	14.90	Sand																							
AP_IT_1024	07	7BAGA	16.50	16.70	Sand																							
AP_IT_1024	07	7BAGB	16.70	16.90	Sand																							
AP_IT_1024	07	7BAGC	16.90	17.10	Sand																							
AP_IT_1024	07	7BAGD	17.10	17.25	Sand																							
AP_IT_1024	08	8WAXA	19.00	19.20	Sand																							
AP_IT_1024	08	8BAGA	19.20	19.40	Sand																							
AP_IT_1024	08	8BAGB	19.40	19.60	Sand				1	1		1																
AP_IT_1024	08	8BAGC	19.60	19.80	Sand																							
TOTAL:						1			6	2		5		1	2				4	1			1	1				

Client Representative: _____

D'Appolonia Representative: Vito Dimichino

Date

Template: OFFSHORE - LAB TEST SCHEDULE Database: 11_503 TAP.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: 28 February 2012

APPENDIX B
BORING LOGS

Doc. No. 11-503-H13
Rev. 1 - May, 2012

BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 29 Jan 12	Coordinates (Local): E 278,533.52 m N 4,466,238.02 m	Water Depth: 13.6 m
Project Number: 11-503	Boring Number: TAP_IT_1008	End Date: 10 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1008
Location: Italian Landfall
Sheet: 1 of: 3

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD (%)	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
0		Dense to very dense dark grey (N4) calcareous silica fine to medium SAND trace silt, with few to some shell fragments.	01	PU		25 50 75	25 50 75	25 50 75			24.9	6.9								
			02	HA							24.1	8.4	25	5						
1											24.2	8.2								
			03	HA							25.2	7.4								
											25.9	7.9	20	16						
		From 1.7 to 2.3 m: very dark grey (N3)									27.4	7.9								
2											24.7	7.9								
		From 2.0 to 2.1 m: with many shell fragments	04	HA							23.6	8.3								
											26.1	8.4	25	4						
			05	HA							26.3	5.8	41	12						
		From 2.6 to 2.9 m: moderately cemented to well cemented sand, with presence of pebbles of well cemented sand, with many shell fragments							2.9 m											
3		2.9 m	C01	RC					*From 2.9 to 5.0 m: closely to medium spaced joints, planar rough, clean.*				88							
		Weak to moderately weak very thinly bedded pale yellow (2.5Y-8/2) fresh to slightly weathered LIMESTONE.										14.5							6.3	
4			C02	RC									82							
		4.3 m							4.3 m											
		Very weak pale yellow (2.5Y-8/6) distinctly weathered to destructured CALCARENITE. Recovered as very sandy coarse gravel and cobbles.	C03	RC									89							
5		5.0 m	C04	RC					5.0 m											
		Medium dense to dense pale yellow (2.5Y-8/6) to light grey (2.5Y-7/2) calcareous silica to siliceous carbonate fine to medium silty SAND. *From 5.0 to 5.5 m: dark greenish grey (10Y-4/1), with some shell fragments* *From 6.1 to 6.6 m: stiff clay (inferred from cpt data)*	06	PU							35.0	7.8		18						
6																				
7		*From 6.8 to 7.7 m: with lenses of moderately cemented sand*	07	PU							20.7	7.7								
											40.5	3.7		66						
8											45.5	4.3	54							
9											38.5	5.5								
		9.9 m	08	PU					9.9 m		72.4	7.0	51							

SLEEVE FRICTION (MPa) 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa) 0 8 16 24 32 40
EXCESS PORE PRESSURE u_2 (MPa) -1 0 1 2 3

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
Rev. 1 - May, 2012

BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 29 Jan 12	Coordinates (Local): E 278,533.52 m N 4,466,238.02 m	Water Depth: 13.6 m
Project Number: 11-503	Boring Number: TAP_IT_1008	End Date: 10 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1008
Location: Italian Landfall
Sheet: 2 of: 3

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%) 25 50 75	SOLID CORE RECOVERY (%) 25 50 75	RQD (%) 25 50 75	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
10		Medium dense pale yellow (2.5Y-7/3) to light olive brown (2.5Y-5/3) carbonate sandy SILT.*(continued)*									22.6	9.5		77						
11																				
12		*From 11.8 to 12.0 m: light olive brown (2.5Y-5/3) clayey silt some sand*	09	PU							18.3			71						
			10	PU							26.7	8.6	94							
13											33.3	7.8		41						
14		14.2 m							14.2 m											
		Medium dense to dense light olive brown (2.5Y-5/3) moderately cemented carbonate medium SAND some silt.	11	PU							34.1									
15											40.6		91							
											34.8			18						
16		16.4 m							16.4 m											
		Extremely weak to very weak thinly bedded to medium bedded light grey (2.5Y-7/2) to light olive brown (2.5Y-5/3) fresh CALCARENITE.	C05	RC					*From 16.4 to 20.5 m: closely to medium spaced joints, planar rough, clean.*											
17													86							
												7.8							0.1	
18			12	HA								10.9								
												6.8	96	14						
													97	7						
19		*From 18.9 to 19.2 m: moderately weathered to highly weathered*	C06	RC																
												7.8							0.2	

SLEEVE FRICTION (MPa) 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa) 0 8 16 24 32 40

EXCESS PORE PRESSURE u_2 (MPa) -1 0 1 2 3

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
Rev. 1 - May, 2012

BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 29 Jan 12	Coordinates (Local): E 278,533.52 m N 4,466,238.02 m	Water Depth: 13.6 m
Project Number: 11-503	Boring Number: TAP_IT_1008	End Date: 10 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1008	
Location: Italian Landfall	
Sheet: 3 of: 3	

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%) 25 50 75	SOLID CORE RECOVERY (%) 25 50 75	RQD (%) 25 50 75	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)	SLEEVE FRICTION (MPa) 0 0.2 0.4 0.6 0.8 1 / CONE RESISTANCE (MPa) 0 8 16 24 32 40	EXCESS PORE PRESSURE u_2 (MPa) -1 0 1 2 3
20		20.5 m							20.5 m			8.3										
		End of borehole at 20.5 meters.																				
21																						
22																						
23																						
24																						
25																						
26																						
27																						
28																						
29																						

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
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BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 13 Feb 12	Coordinates (Local): E 278,668.14 m N 4,466,358.02 m	Water Depth: 16.1 m
Project Number: 11-503	Boring Number: TAP_IT_1011	End Date: 15 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1011
Location: Italian Landfall
Sheet: 1 of: 3

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD (%)	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
0		Medium dense to dense dark greenish grey (4/1 5GY) to very dark greenish grey (3/1 10Y) calcareous silica fine SAND trace silt, with some shell fragments.	01	HA							22.2	8.8								
		From 0.7 to 2.0 m: medium dense									21.6	9.1	26	10						
1			02	PU							17.9	9.1								
											24.2	9.4	21	3						
			03	PU							23.1	8.1								
2											28.6	9.1								
											27.8	8.9	24	8						
											26.7	9.0								
											28.7	10.0								
		From 2.5 to 4.5 m: dense to very dense	04	PU							27.2	8.4								
3											26.7	8.1	29	2						
											26.1	8.5								
											22.5	9.5								
			05	PU							23.9	9.5								
											29.1	8.1								
4											41.0	7.2	37	6						
			06	PU							29.8	8.4								
											23.9	9.3	26	17						
5											27.2	8.3								
			07	PU							28.2	7.6								
											31.3	7.0	34	5						
											31.8	7.5								
6		*From 6.0 to 7.0 m: medium dense silty sand*									30.9	8.5								
			08	PU							38.5									
											36.2	6.4	54	5						
		7.0 m							7.0 m		33.8	7.3								
7		Medium dense dark greenish grey (5GY 4/1) slighty to moderately cemented siliceous carbonate medium to coarse gravelly SAND trace to some silt, with some shells and shell fragments.	09	PU							28.4		65	6						
											40.2									
											36.3									
8											37.8		72	12						
			10	PU							24.6									
											33.7		73	22						
											26.4									
9		9.1 m							9.1 m											
		Medium dense to dense pale yellow (2.5Y 8/4) siliceous carbonate fine silty SAND, locally slightly cemented.	11	PU							40.5									
											41.4	7.9	68	23						
			12	PU							35.9	7.5	72	35						
											37.2									

SLEEVE FRICTION (MPa) — 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa) — 0 8 16 24 32 40

EXCESS PORE PRESSURE u_2 (MPa) — -1 0 1 2 3

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
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BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 13 Feb 12	Coordinates (Local): E 278,668.14 m N 4,466,358.02 m	Water Depth: 16.1 m
Project Number: 11-503	Boring Number: TAP_IT_1011	End Date: 15 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1011
Location: Italian Landfall
Sheet: 2 of: 3

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD (%)	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
10		Medium dense to dense pale yellow (2.5Y 8/4) siliceous carbonate fine silty SAND, locally slightly cemented.*(continued)*				25 50 75	25 50 75	25 50 75												
11																				
12			13	PU							37.9 23.5 23.6 25.0	8.4 10.0	82	40 49						
13		*From 13.3 to 15.0 m: sandy silt, locally slighty cemented*																		
14			14	PU								9.0 8.5 8.1								
15											35.5	6.7	75	61						
16																				
17			15	PU							18.9 39.3 41.8 37.9 38.6 33.2	9.7 7.7 7.9 8.0 8.1 8.6	73	45						
18																				
19		*From 19.1 to 19.2 m: fine sandy gravel some silt*	16	PU							22.7 27.0 35.7 32.7	8.0 7.7	88 89	38 42						

SLEEVE FRICTION (MPa): 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa): 0 8 16 24 32 40

EXCESS PORE PRESSURE u_2 (MPa): -1 0 1 2 3

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
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BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 13 Feb 12	Coordinates (Local): E 278,668.14 m N 4,466,358.02 m	Water Depth: 16.1 m
Project Number: 11-503	Boring Number: TAP_IT_1011	End Date: 15 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1011
Location: Italian Landfall
Sheet: 3 of: 3

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD (%)	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
20		Medium dense to dense pale yellow (2.5Y 8/4) siliceous carbonate fine silty SAND, locally slightly cemented.*(continued)*				25 50 75	25 50 75	25 50 75												
21		21.2 m Medium dense SAND (inferred from CPT data)							21.2 m											
22																				
23		*From 23.5 to 24.0 m: dense to very dense*																		
24																				
25		25.3 m Medium dense sandy SILT to silty SAND, with some layers of clay (inferred from CPT data). At top loose.							25.3 m											
26																				
27																				
28																				
29		29.2 m End of borehole at 29.2 meters.							29.2 m											

SLEEVE FRICTION (MPa) — 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa) — 0 8 16 24 32 40

EXCESS PORE PRESSURE u_2 (MPa) — -1 0 1 2 3

Doc. No. 11-503-H13
Rev. 1 - May, 2012

BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 19 Feb 12	Coordinates (Local): E 278,437.63 m N 4,466,486.32 m	Water Depth: 15.4 m
Project Number: 11-503	Boring Number: TAP_IT_1022	End Date: 20 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1022
Location: Italian Landfall
Sheet: 1 of: 2

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD (%)	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
0		Dense greenish grey (5GY 4/1) to very dark greenish grey (5GY 3/1) calcareous silica fine to medium SAND, with few shell fragments.				25 50 75	25 50 75	25 50 75												
1																				
2			01	PU							26.9 30.5 30.1 31.1 25.5	9.1 8.5 8.6 8.4 9.3	26							
3																				
4			02	PU							28.6 27.4 30.3 30.4 29.6	7.2 7.3 7.3 7.6 8.2	34	3						
5		*From 5.5 to 6.2 m: medium dense*																		
6		6.5 m							6.5 m											
7		Moderately strong light brownish grey (2.5Y 6/2) slighty weathered LIMESTONE.	C01	RC								14.2	91							
		7.0 m							7.0 m											
		Extremely weak light grey (5Y 7/2) highly to completely weathered CALCARENITE to well cemented SAND.	C02	RC									82							
		7.5 m							7.5 m											
8		Medium dense pale yellow (2.5Y 7/3) siliceous carbonate fine silty SAND, locally slightly cemented. *From 7.5 to 9.0 m: sand (inferred from CPT data)*																		
9			03	PU							31.3 35.6 32.2	8.1 8.2 8.3	74	46						

SLEEVE FRICTION (MPa): 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa): 0 8 16 24 32 40

EXCESS PORE PRESSURE u_2 (MPa): -1 0 1 2 3

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
Rev. 1 - May, 2012

BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 19 Feb 12	Coordinates (Local): E 278,437.63 m N 4,466,486.32 m	Water Depth: 15.4 m
Project Number: 11-503	Boring Number: TAP_IT_1022	End Date: 20 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1022
Location: Italian Landfall
Sheet: 2 of: 2

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%) 25 50 75	SOLID CORE RECOVERY (%) 25 50 75	RQD (%) 25 50 75	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
10		Medium dense pale yellow (2.5Y 7/3) siliceous carbonate fine silty SAND, locally slightly cemented.*(continued)*									32.3	7.7								
11																				
12			04	PU							23.9 21.9	9.5	70	60						
13		*From 12.8 to 13.5 m: loose to medium dense*									33.5 33.1	9.7								
14											39.7									
15		*From 15.0 to 16.5 m: dense sand (inferred from CPT data)*	05	PU							39.2 40.6 33.8	6.4	85	39						
16																				
17			06 07	PU PU							25.5 24.8	9.7	77	43						
18																				
19		*From 19.0 to 20.0 m: locally moderately cemented sand*	08	PU							25.9 38.0 38.7 28.7		70	38						
		20.0 m							20.0 m											

End of borehole at 20.0 meters.

SLEEVE FRICTION (MPa) 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa) 0 8 16 24 32 40

EXCESS PORE PRESSURE u_2 (MPa) -1 0 1 2 3

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
Rev. 1 - May, 2012

BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 15 Feb 12	Coordinates (Local): E 278,776.79 m N 4,466,114.68 m	Water Depth: 15.9 m
Project Number: 11-503	Boring Number: TAP_IT_1024	End Date: 19 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1024
Location: Italian Landfall
Sheet: 1 of: 2

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD (%)	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)	SLEEVE FRICTION (MPa) / CONE RESISTANCE (MPa)	EXCESS PORE PRESSURE u_2 (MPa)
						25 50 75	25 50 75	25 50 75													0 0.2 0.4 0.6 0.8 1 / 0 8 16 24 32 40	-1 0 1 2 3
0		Dense to very dense dark gray (5Y-4/1) to greenish gray (10Y-5/1) calcareous silica fine to medium SAND trace silt, with some shell fragments.																				
1																						
			01	PU							24.5	8.7	24	2								
2			02	PU							31.0 28.3 27.0	8.2 8.6 8.3	29	4								
3																						
4			03	PU							32.9 33.0 34.8 29.5	5.3 4.4	39 38	11 4								
5		5.8 m							5.8 m													
6		Moderately weak to moderately strong greenish gray (10Y-6/1) to light gray (5Y-7/1) slightly weathered to moderately weathered LIMESTONE. Presence of layers of extremely weak calcarenite.	C01	RC								13.1	78									
		6.8 m							6.8 m													
7		Medium dense light gray (2.5Y-7/2) to light olive brown (2.5Y-5/4) siliceous carbonate sandy SILT, locally slightly cemented. At top slightly to moderately cemented.	C02	RC							35.5 37.7	7.8 7.7	88	62								
8																						
9		*From 9.0 to 10.0 m: medium dense light gray (2.5Y-7/2) fine sand and silt*	04	PU							28.9 40.5 40.6 38.5	8.4 7.7 7.4 7.9	73	46								

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

Doc. No. 11-503-H13
Rev. 1 - May, 2012

BORING LOG AND TEST RESULTS

D'APPOLONIA

Project: TAP Geotechnical Investigation	Location: Italian Landfall	Start Date: 15 Feb 12	Coordinates (Local): E 278,776.79 m N 4,466,114.68 m	Water Depth: 15.9 m
Project Number: 11-503	Boring Number: TAP_IT_1024	End Date: 19 Feb 12		Sampler Type: PI = Piston, PU = Push
Remarks: Skate IV - Adriatic Sea				Sampler ID: 72 mm - 102 mm

Boring Number: TAP_IT_1024	
Location: Italian Landfall	
Sheet: 2 of: 2	

DEPTH (m)	SOIL PROFILE	DESCRIPTION	SAMPLE No.	SAMPLE TYPE	BLOW COUNT	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD (%)	DISCONTINUITIES	CLASSIFICATION TESTS: USCS	WATER CONTENT (%)	SUBMERGED UNIT WEIGHT (kN/m³)	CARBONATE CONTENT (%)	FINES CONTENT (%)	UNDRAINED SHEAR STRENGTH (kPa): POCKET PENETROMETER	TORVANE	HAND VANE	UU TRIAXIAL	ROCK TESTS: POINT LOAD INDEX - I_{s50} (MPa)	UNCONFINED COMPRESSION (MPa)
10		Medium dense light gray (2.5Y-7/2) to light olive brown (2.5Y-5/4) siliceous carbonate sandy SILT, locally slightly cemented. At top slightly to moderately cemented. *(continued)*				25 50 75	25 50 75	25 50 75												
11																				
12			05	PU							38.4 39.2 36.9	7.3 7.7 8.2	63	69						
		12.4 m							12.4 m											
13		Loose to medium dense pale olive (5Y-6/3) siliceous carbonate clayey fine SAND, locally slightly to moderately cemented, with traces of shell fragments.																		
14		*From 14.0 to 15.0 m: with lenses of silt*	06	PU							33.9	8.5 8.2	68	63						
15											34.5	8.2								
16																				
17			07	PU							40.6 42.5 35.4	8.1	74							
18											37.5	8.3	86	32						
19			08	PU							35.6 32.5 36.2	8.8 8.4	80	40						
		19.8 m							19.8 m											
		End of borehole at 19.8 meters.																		

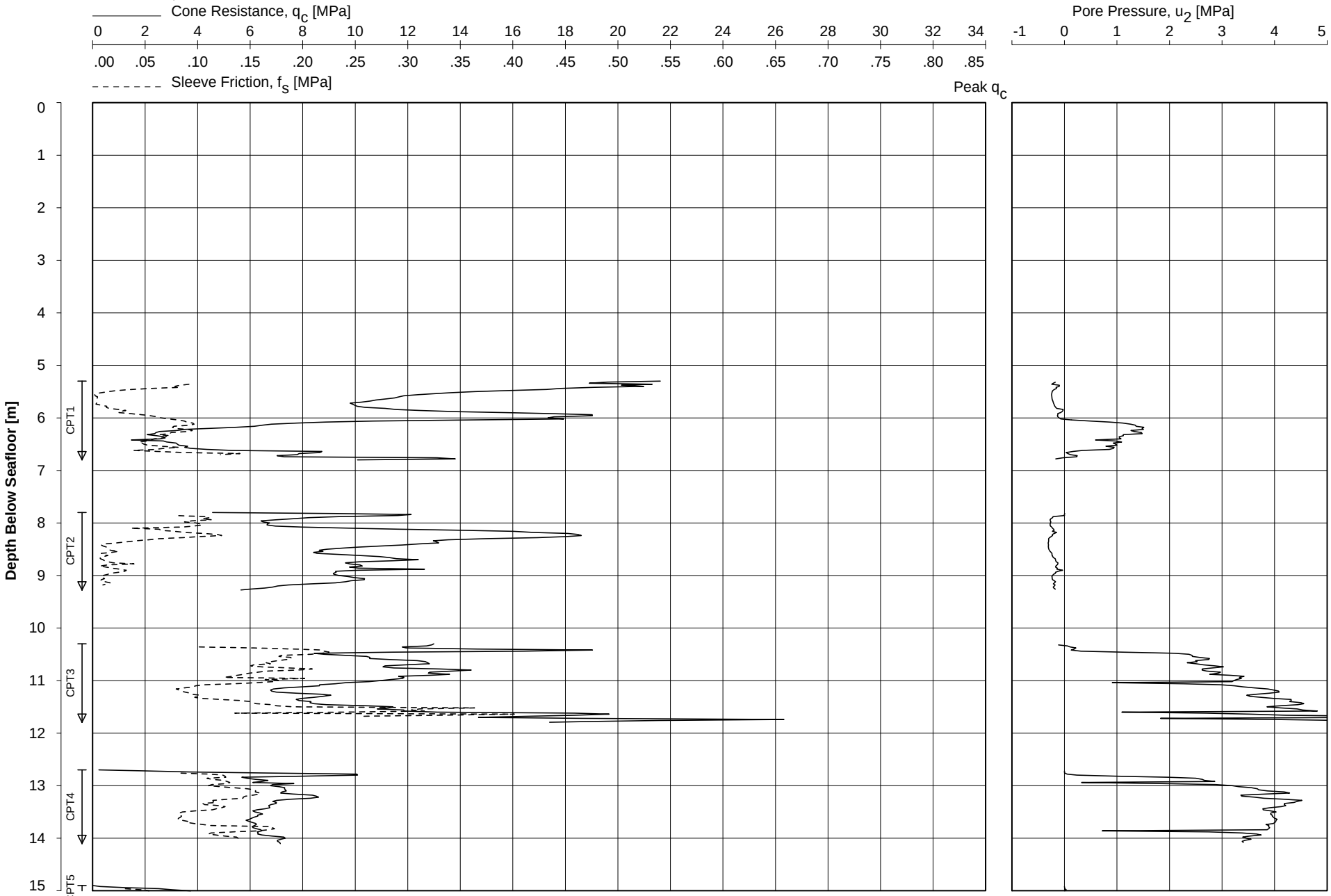
SLEEVE FRICTION (MPa): 0 0.2 0.4 0.6 0.8 1
CONE RESISTANCE (MPa): 0 8 16 24 32 40

EXCESS PORE PRESSURE u_2 (MPa): -1 0 1 2 3

Template: OFFSHORE-SOIL&ROCK SAMPLING&CORING Database: 11_503 TAP_ITALIAN LANDFALL.GPJ Data Template: OFFSHORE_SOIL & ROCK SAMPLING-CORING.GDT Date: March 8, 2012

APPENDIX C
IN-SITU TESTING

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 14:46:14



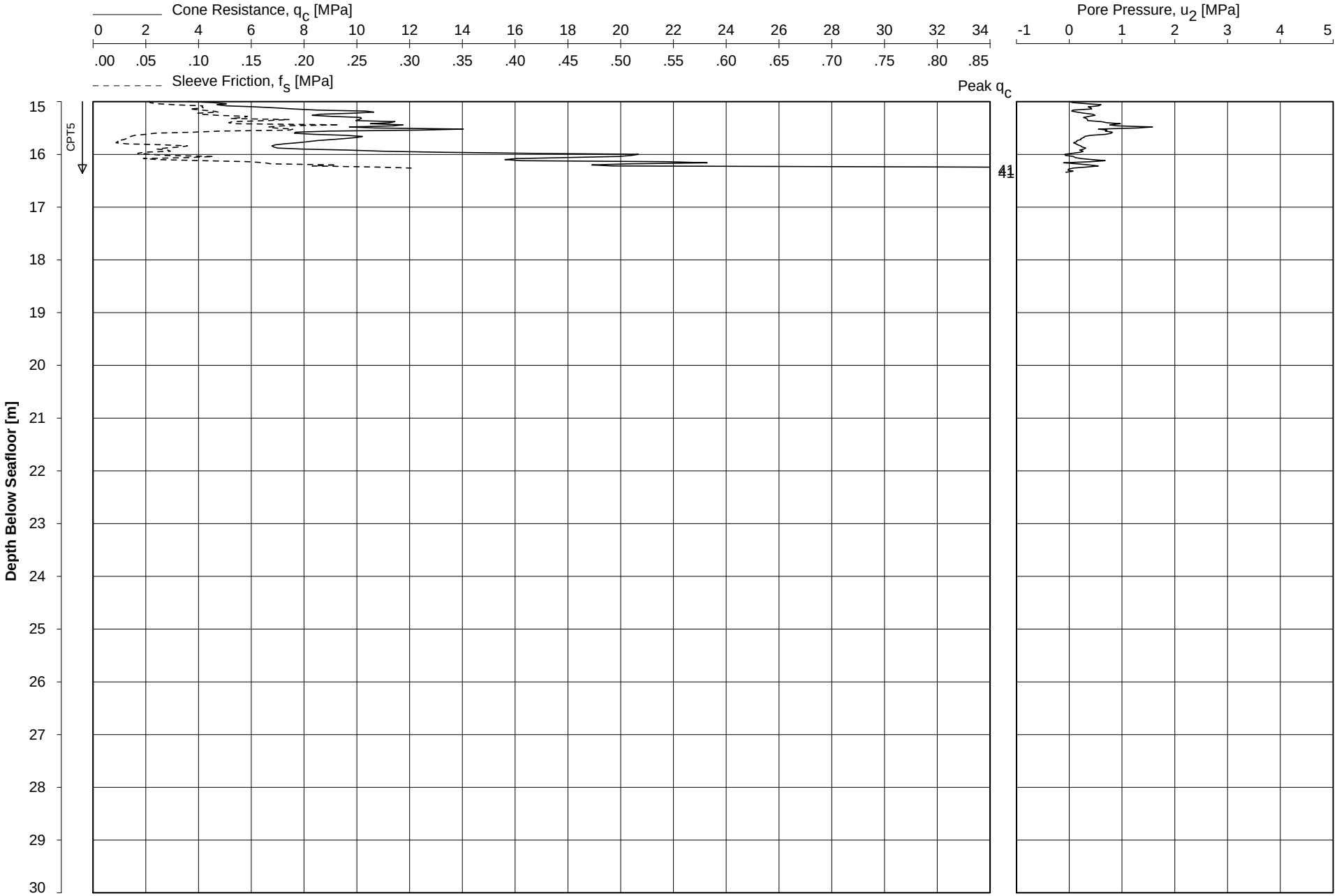
Date Of Testing : 5 February 2012
Water Depth [m] : 13.6
Coordinates [m] : E278534 N4466238

CONE PENETRATION TEST

TAP_IT_1008

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 14:46:14



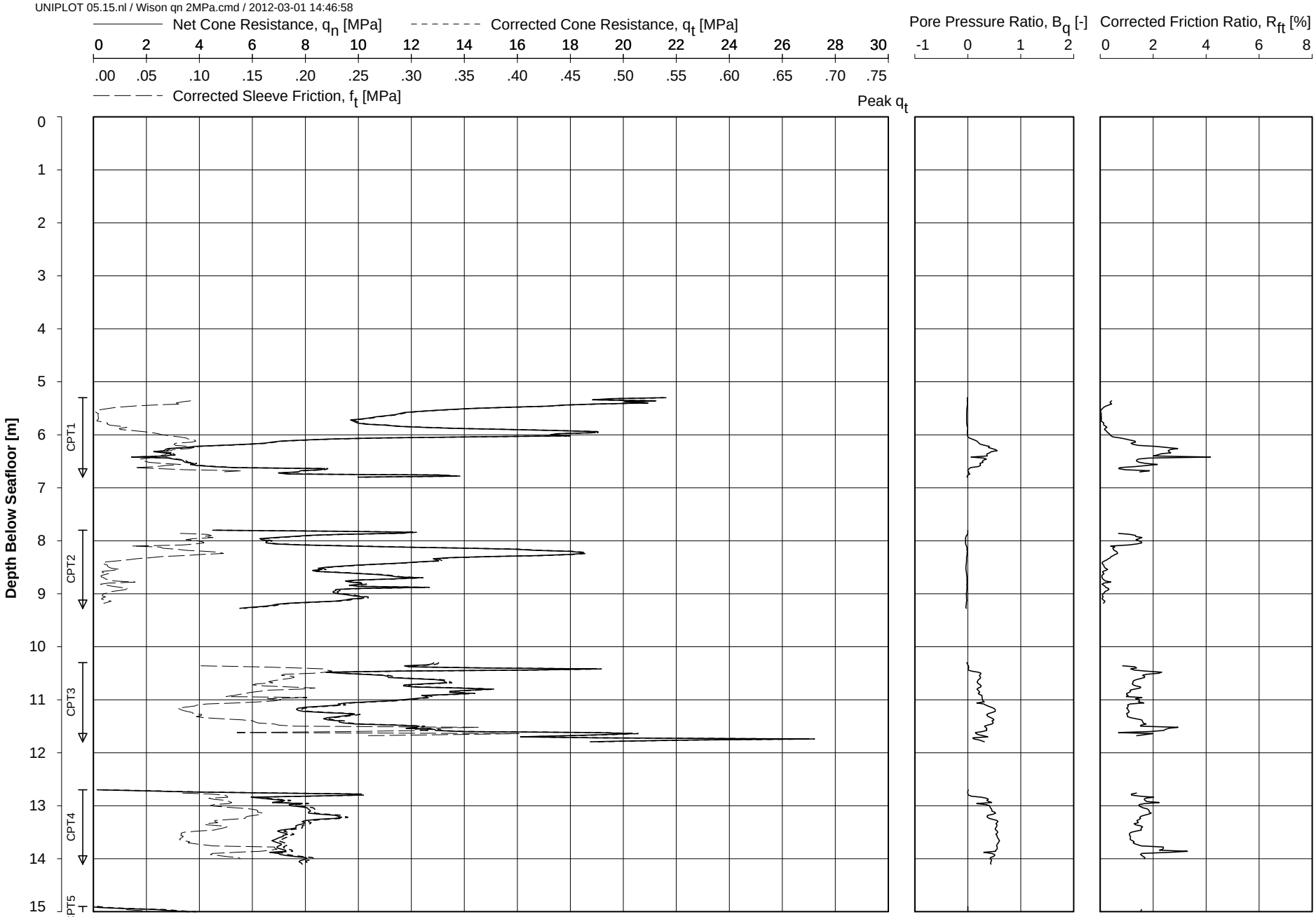
Date Of Testing : 9 February 2012
Water Depth [m] : 13.6
Coordinates [m] : E278534 N4466238

CONE PENETRATION TEST

TAP_IT_1008

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 14:46:58



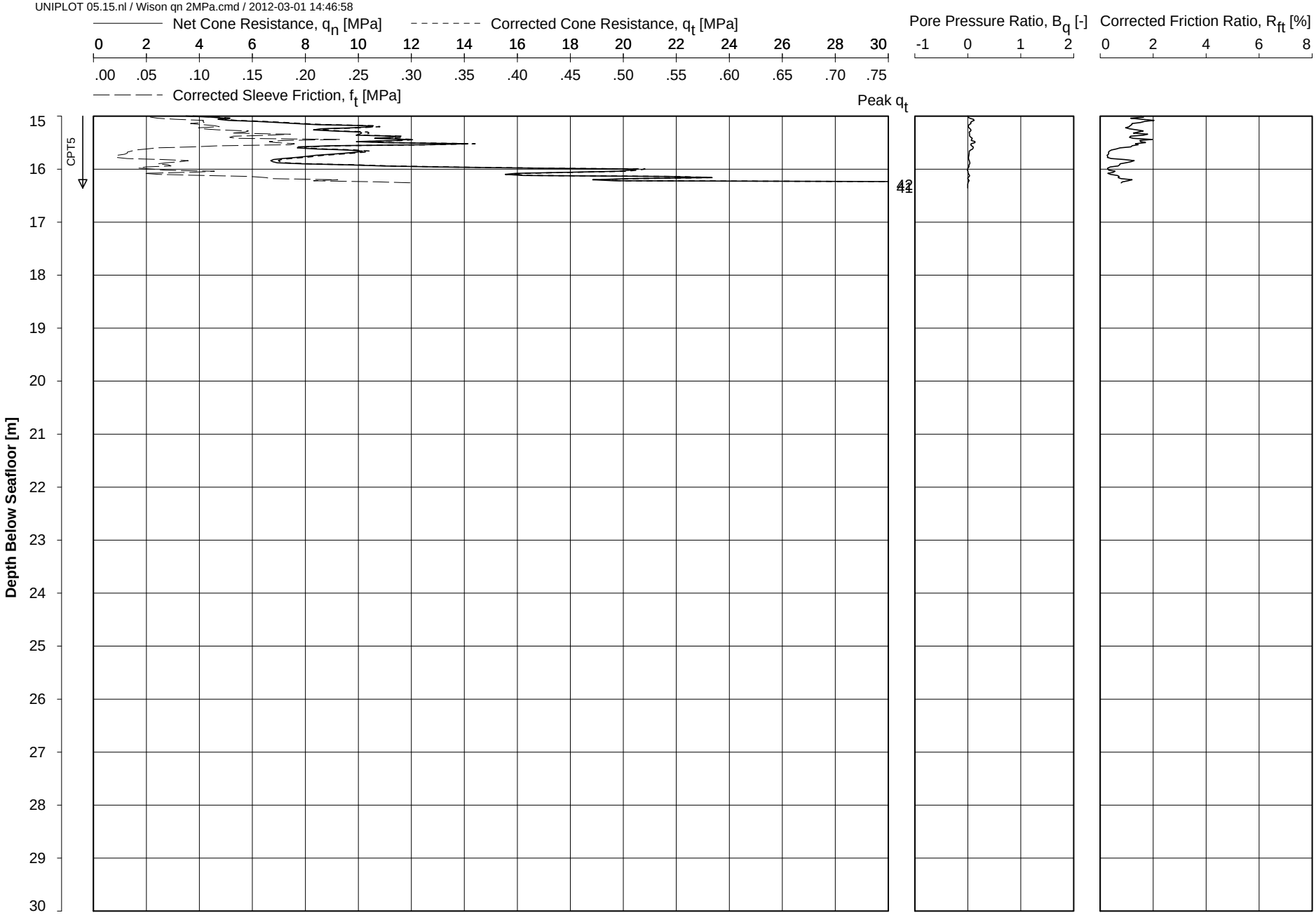
Date Of Testing : 5 February 2012
Water Depth [m] : 13.6
Coordinates [m] : E278534 N4466238

CONE PENETRATION TEST

TAP_IT_1008

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 14:46:58



Date Of Testing : 9 February 2012
Water Depth [m] : 13.6
Coordinates [m] : E278534 N4466238

CONE PENETRATION TEST

TAP_IT_1008

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

CONE PENETRATION TEST - ZERO DRIFT

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

Borehole/ Location	Test No.	Zero Reading at Start of Test			Zero Drift			Probe	Net Area Ratio Cone Tip [-]	Net Area Ratio Friction Sleeve [-]
		q_c [MPa]	f_s [MPa]	u [MPa]	q_c [MPa]	f_s [MPa]	u [MPa]			
TAP_IT_1008	CPT1	0.424	0.001	0.024	-0.001	0.000	-0.001	F5CKE2HAW$_2$/B P10 1706-2008	0.750	0.00000
TAP_IT_1008	CPT2	0.404	0.001	0.024	0.013	0.000	-0.001	F5CKE2HAW$_2$/B P10 1706-2008	0.750	0.00000
TAP_IT_1008	CPT3	0.413	0.001	0.026	-0.054	0.003	-0.002	F5CKE2HAW$_2$/B P10 1706-2008	0.750	0.00000
TAP_IT_1008	CPT4	0.461	0.002	0.025	0.027	-0.001	-0.001	F5CKE2HAW$_2$/B P10 1706-2008	0.750	0.00000
TAP_IT_1008	CPT5	0.499	0.000	0.026	-0.057	0.003	-0.001	F5CKE2HAW$_2$/B P10 1706-2008	0.750	0.00000

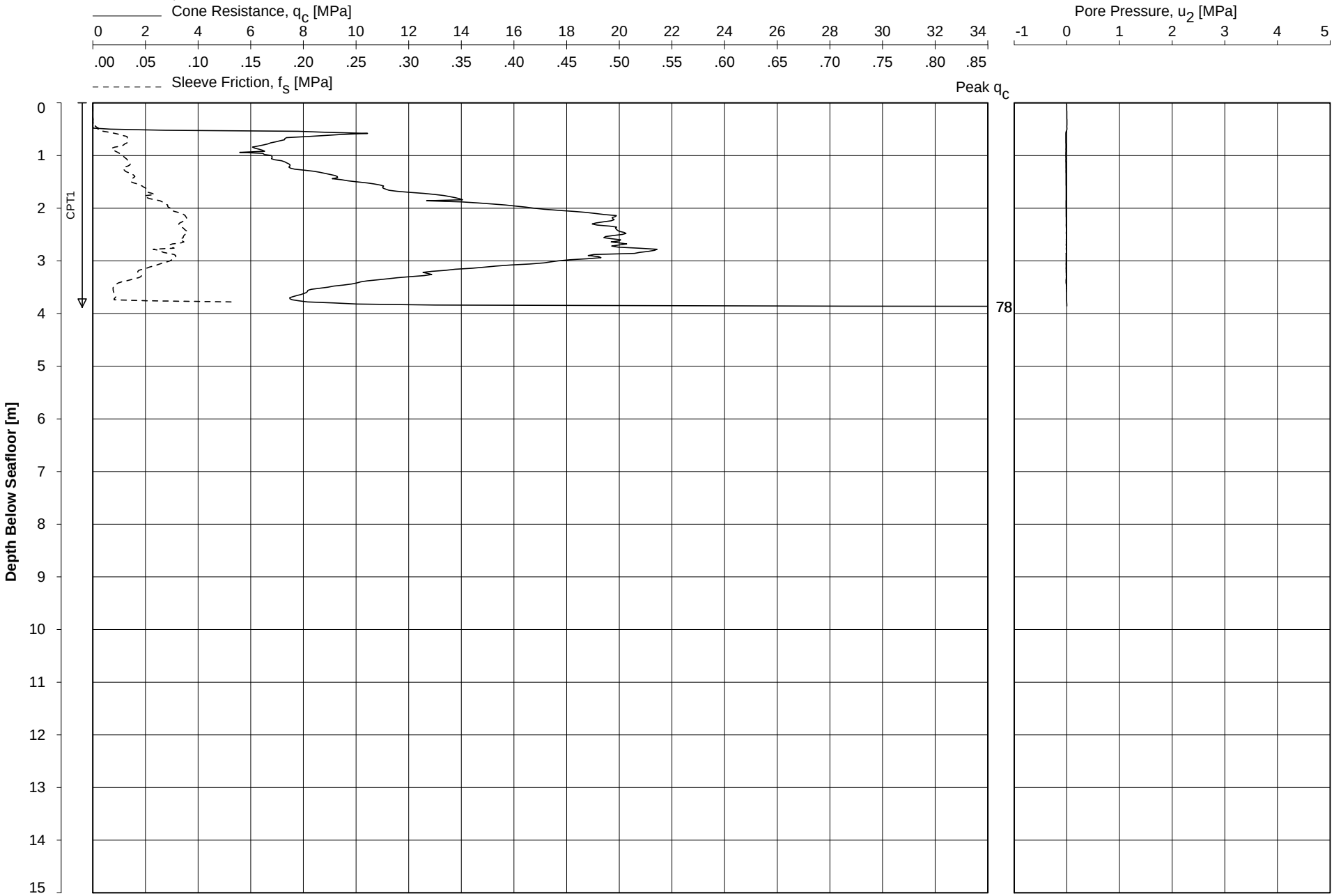
Key:

q_c : cone resistance f_s : sleeve friction u : pore water pressure

Note:

1. Zero Drift is the difference between the zero output at the start of the test and the zero output at the end of the test. Offshore tests may show Reference Readings. The Zero Reading or Reference Reading at Start of Test is a value presented in units of measurement result. The value itself is a conversion from system output, usually in mV or in digital counts. It has no explicit physical meaning.
2. --- : Zero Drift was not monitored. The drift can be assessed from the start values of successive tests.

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 14:52:14



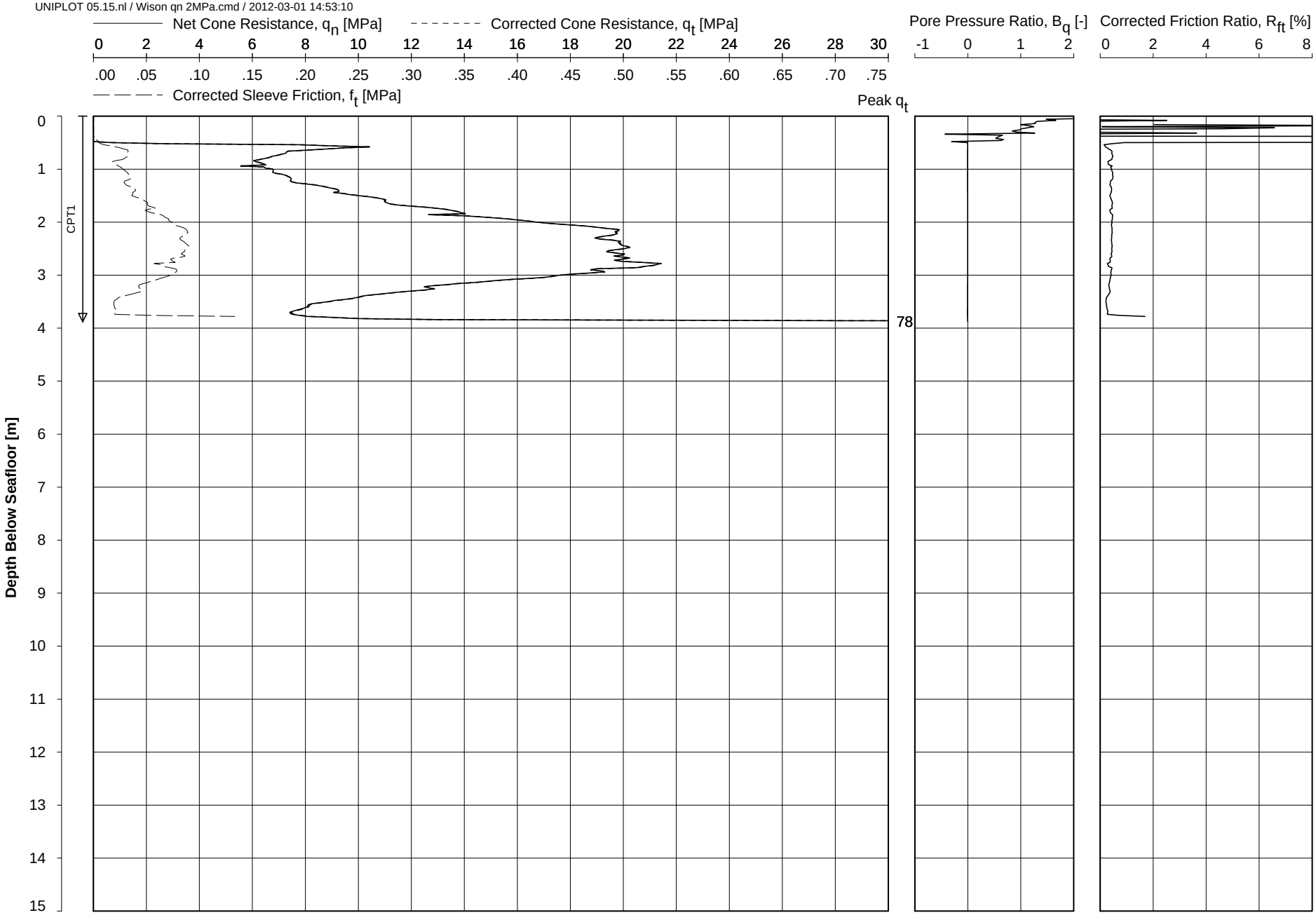
Date Of Testing : 28 January 2012
Water Depth [m] : 13.4
Coordinates [m] : E278540 N4466244

CONE PENETRATION TEST

TAP_IT_1009

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 14:53:10



Date Of Testing : 28 January 2012
Water Depth [m] : 13.4
Coordinates [m] : E278540 N4466244

CONE PENETRATION TEST

TAP_IT_1009

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

CONE PENETRATION TEST - ZERO DRIFT

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

Borehole/ Location	Test No.	Zero Reading at Start of Test			Zero Drift			Probe	Net Area Ratio Cone Tip [-]	Net Area Ratio Friction Sleeve [-]
		q_c [MPa]	f_s [MPa]	u [MPa]	q_c [MPa]	f_s [MPa]	u [MPa]			
TAP_IT_1009	CPT1	0.375	0.002	0.027	-0.019	-0.001	-0.003	F5CKE2HAW$_2$/B P10 1706-2008	0.750	0.00000

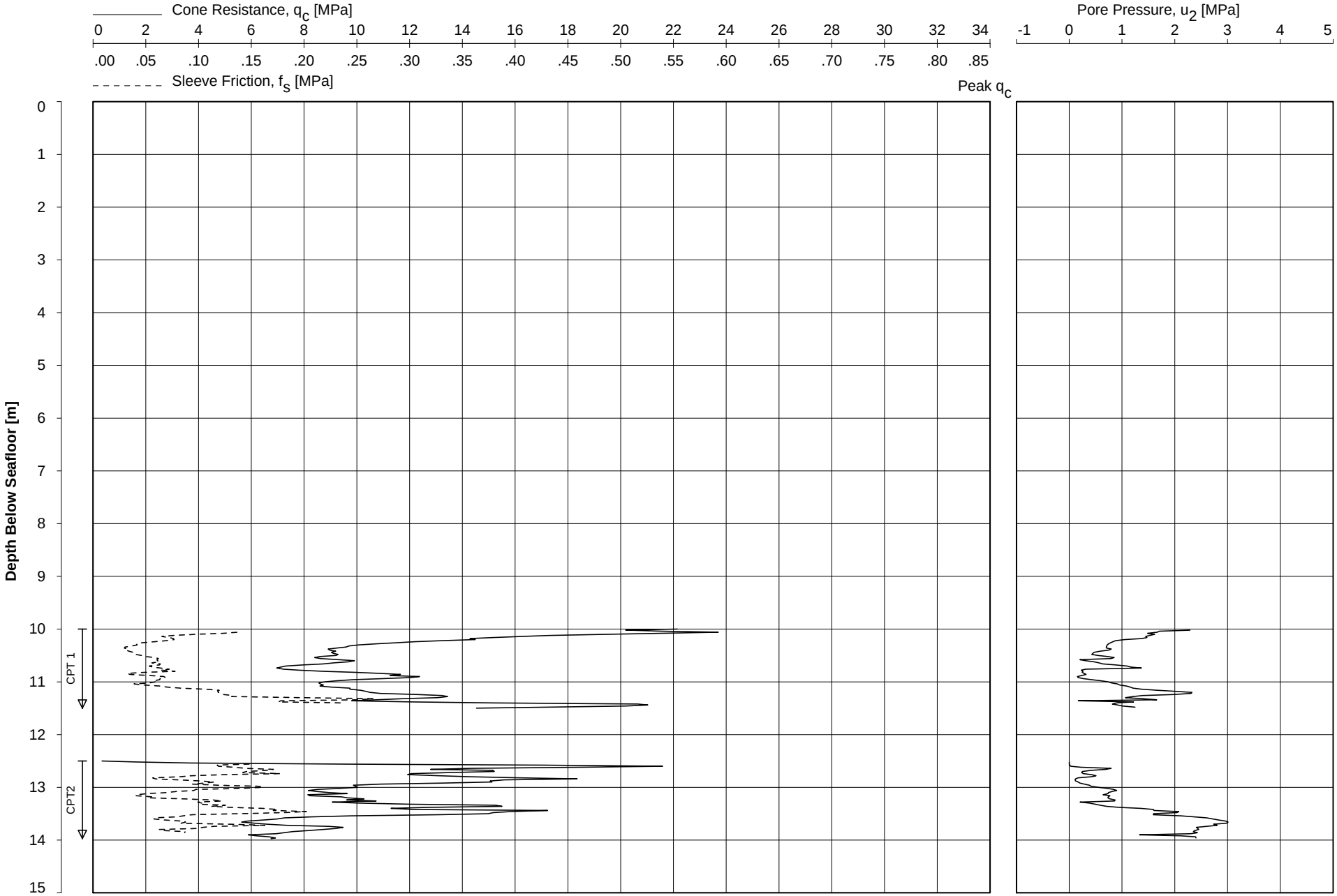
Key:

q_c : cone resistance f_s : sleeve friction u : pore water pressure

Note:

1. Zero Drift is the difference between the zero output at the start of the test and the zero output at the end of the test. Offshore tests may show Reference Readings. The Zero Reading or Reference Reading at Start of Test is a value presented in units of measurement result. The value itself is a conversion from system output, usually in mV or in digital counts. It has no explicit physical meaning.
2. --- : Zero Drift was not monitored. The drift can be assessed from the start values of successive tests.

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 14:55:45



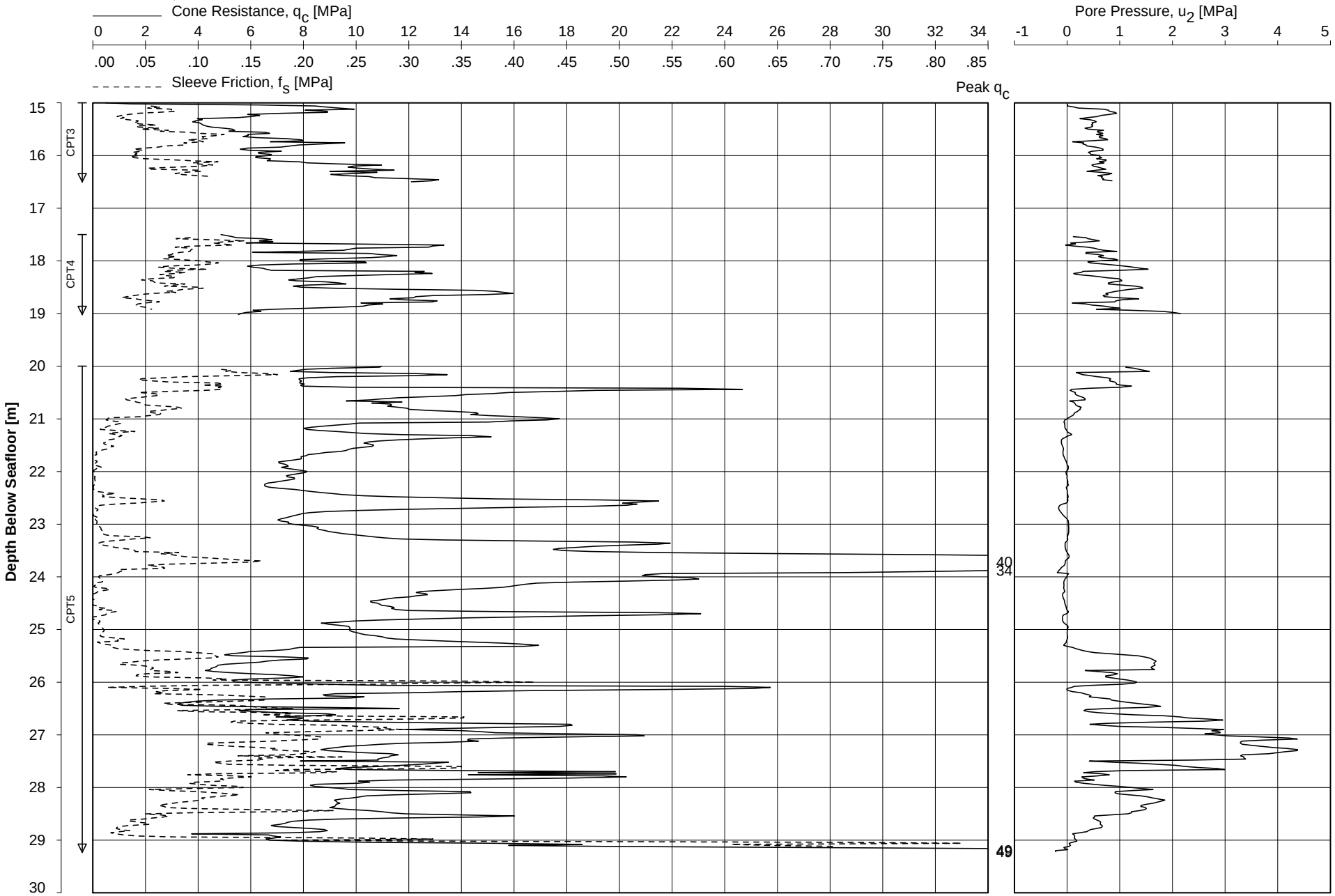
Date Of Testing : 14-Feb-2012
Water Depth [m] : 16.1
Coordinates [m] : E278668 N4466358

CONE PENETRATION TEST

TAP_IT_1011

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 14:55:45



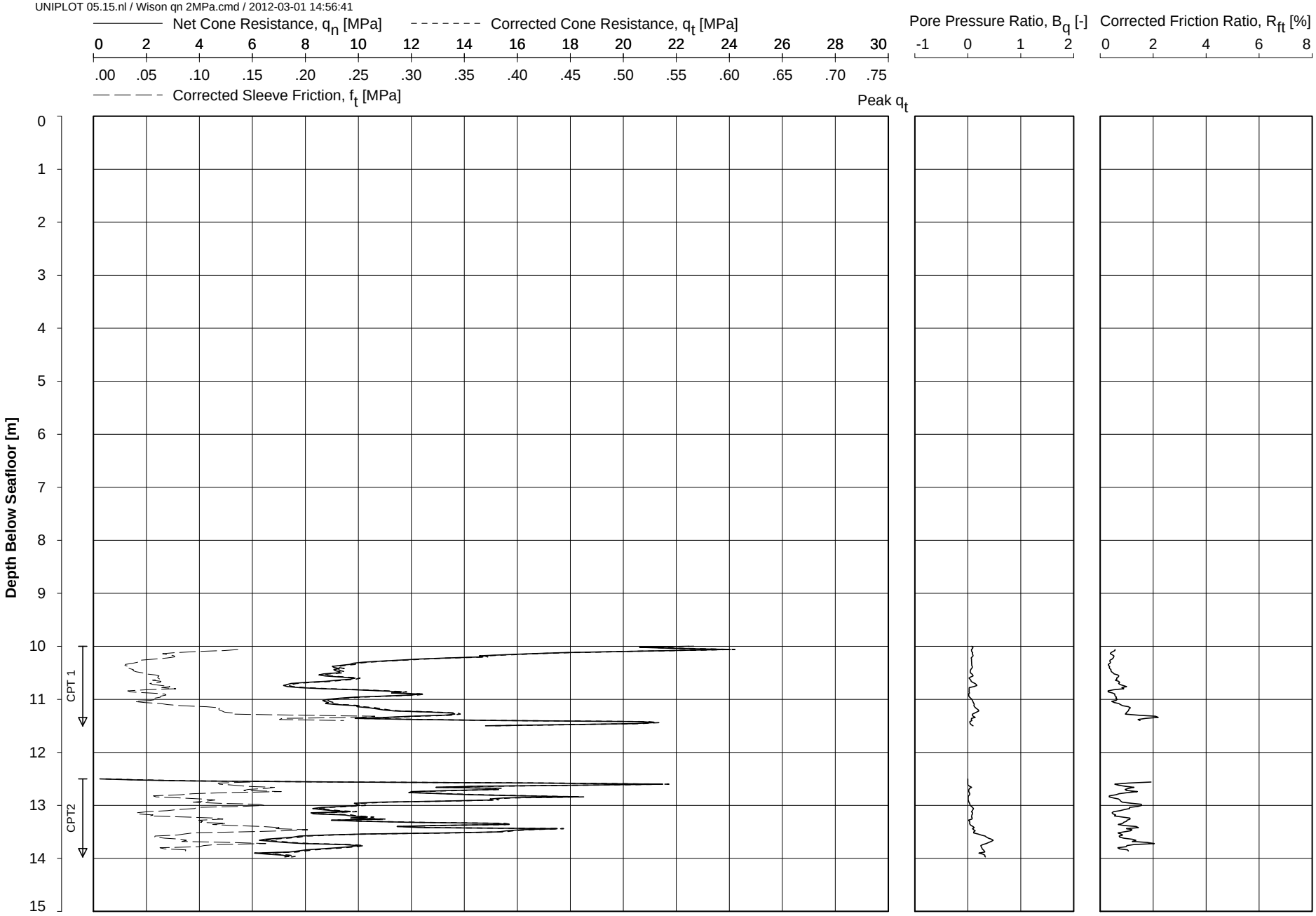
Date Of Testing : 14 February 2012
Water Depth [m] : 16.1
Coordinates [m] : E278668 N4466358

CONE PENETRATION TEST

TAP_IT_1011

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 14:56:41



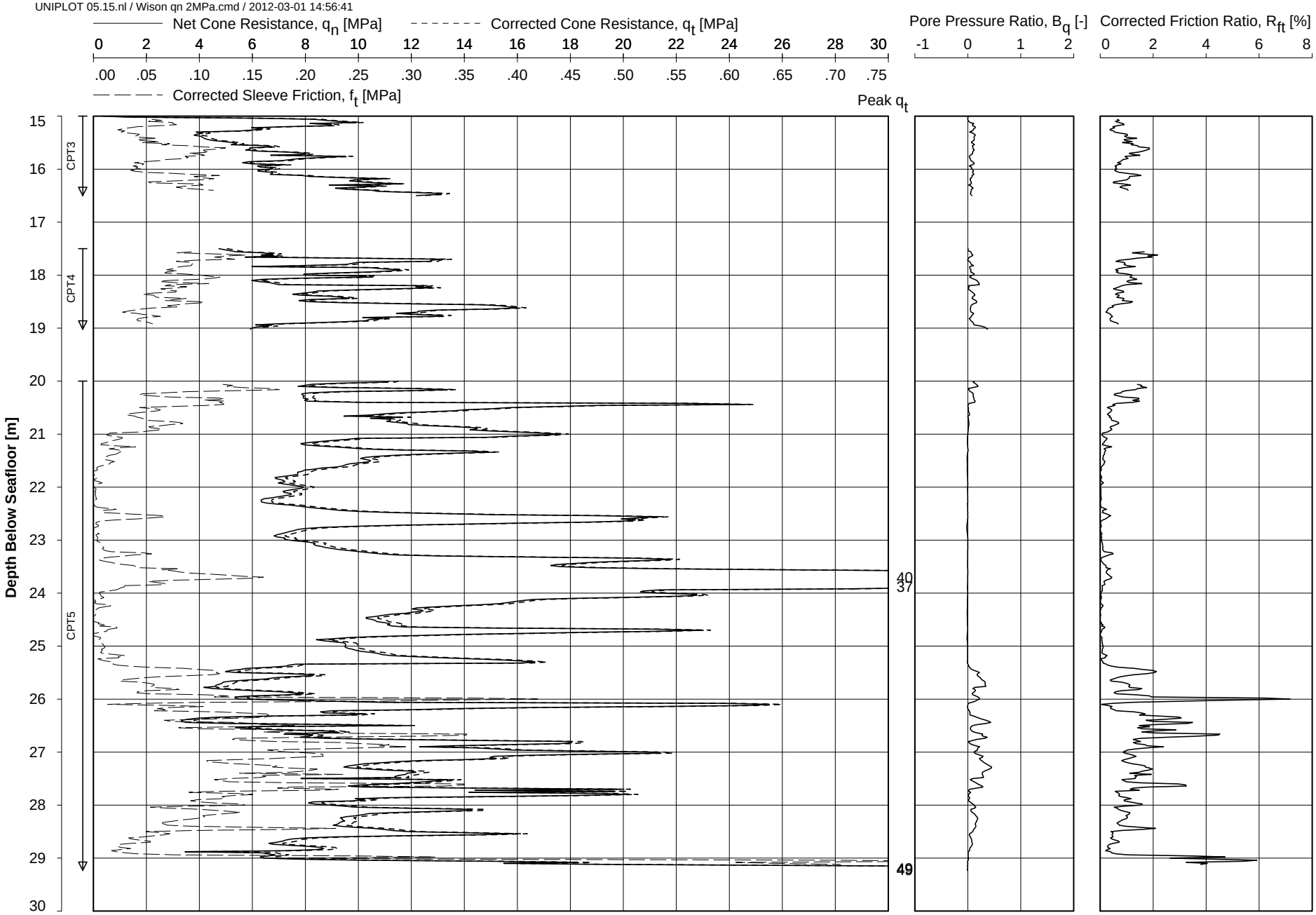
Date Of Testing : 14-Feb-2012
Water Depth [m] : 16.1
Coordinates [m] : E278668 N4466358

CONE PENETRATION TEST

TAP_IT_1011

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 14:56:41



Date Of Testing : 14 February 2012
Water Depth [m] : 16.1
Coordinates [m] : E278668 N4466358

CONE PENETRATION TEST

TAP_IT_1011

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

CONE PENETRATION TEST - ZERO DRIFT

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

Borehole/ Location	Test No.	Zero Reading at Start of Test			Zero Drift			Probe	Net Area Ratio Cone Tip [-]	Net Area Ratio Friction Sleeve [-]
		q_c [MPa]	f_s [MPa]	u [MPa]	q_c [MPa]	f_s [MPa]	u [MPa]			
TAP_IT_1011	CPT 1	-0.007	0.004	0.007	0.027	-0.002	0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1011	CPT2	0.039	0.004	0.011	-0.010	0.000	-0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1011	CPT3	0.025	0.005	0.009	0.007	-0.001	0.000	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1011	CPT4	0.002	0.005	0.006	0.026	-0.001	0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1011	CPT5	-0.023	0.005	0.007	0.002	-0.001	0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000

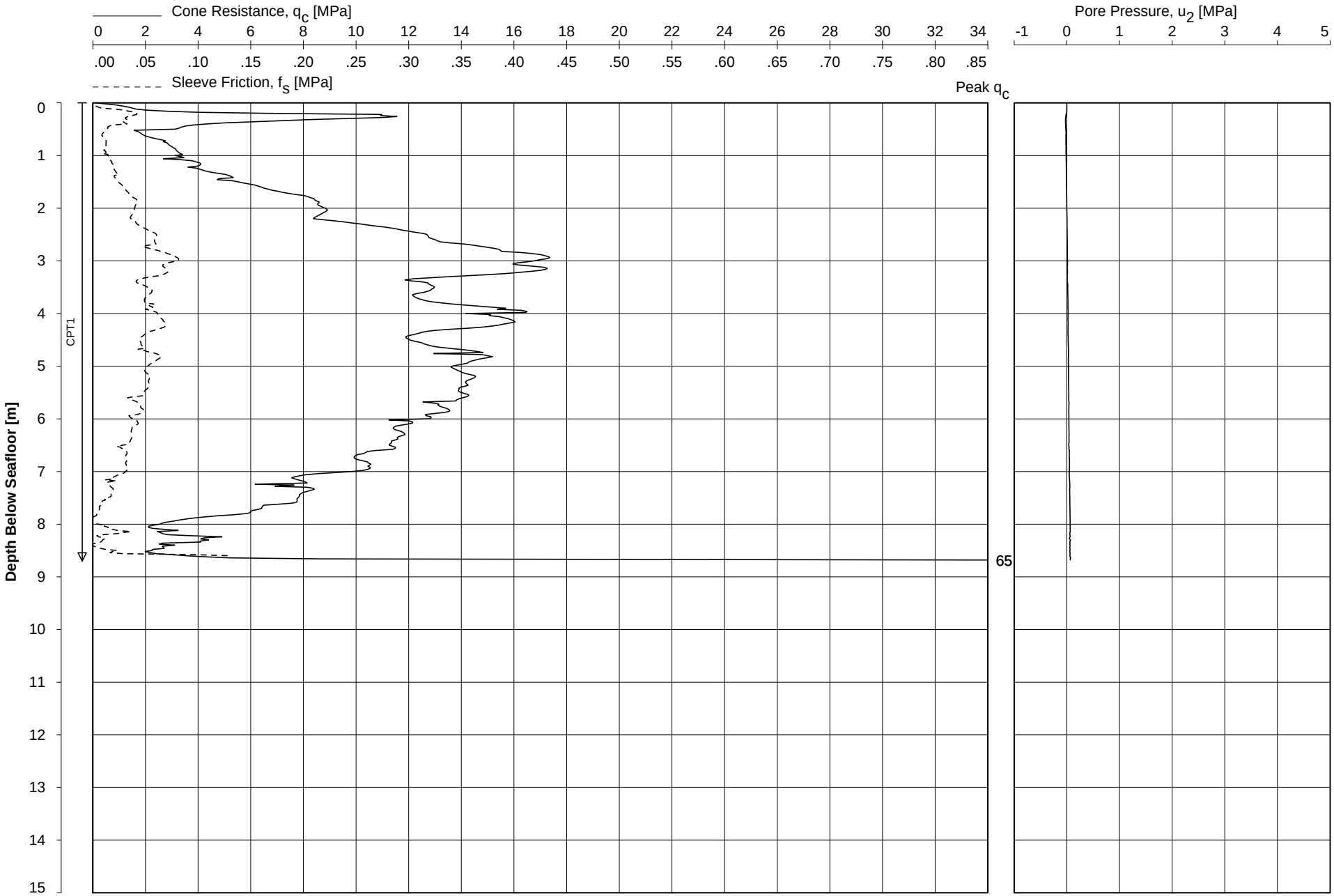
Key:

q_c : cone resistance f_s : sleeve friction u : pore water pressure

Note:

1. Zero Drift is the difference between the zero output at the start of the test and the zero output at the end of the test. Offshore tests may show Reference Readings. The Zero Reading or Reference Reading at Start of Test is a value presented in units of measurement result. The value itself is a conversion from system output, usually in mV or in digital counts. It has no explicit physical meaning.
2. --- : Zero Drift was not monitored. The drift can be assessed from the start values of successive tests.

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 14:58:51



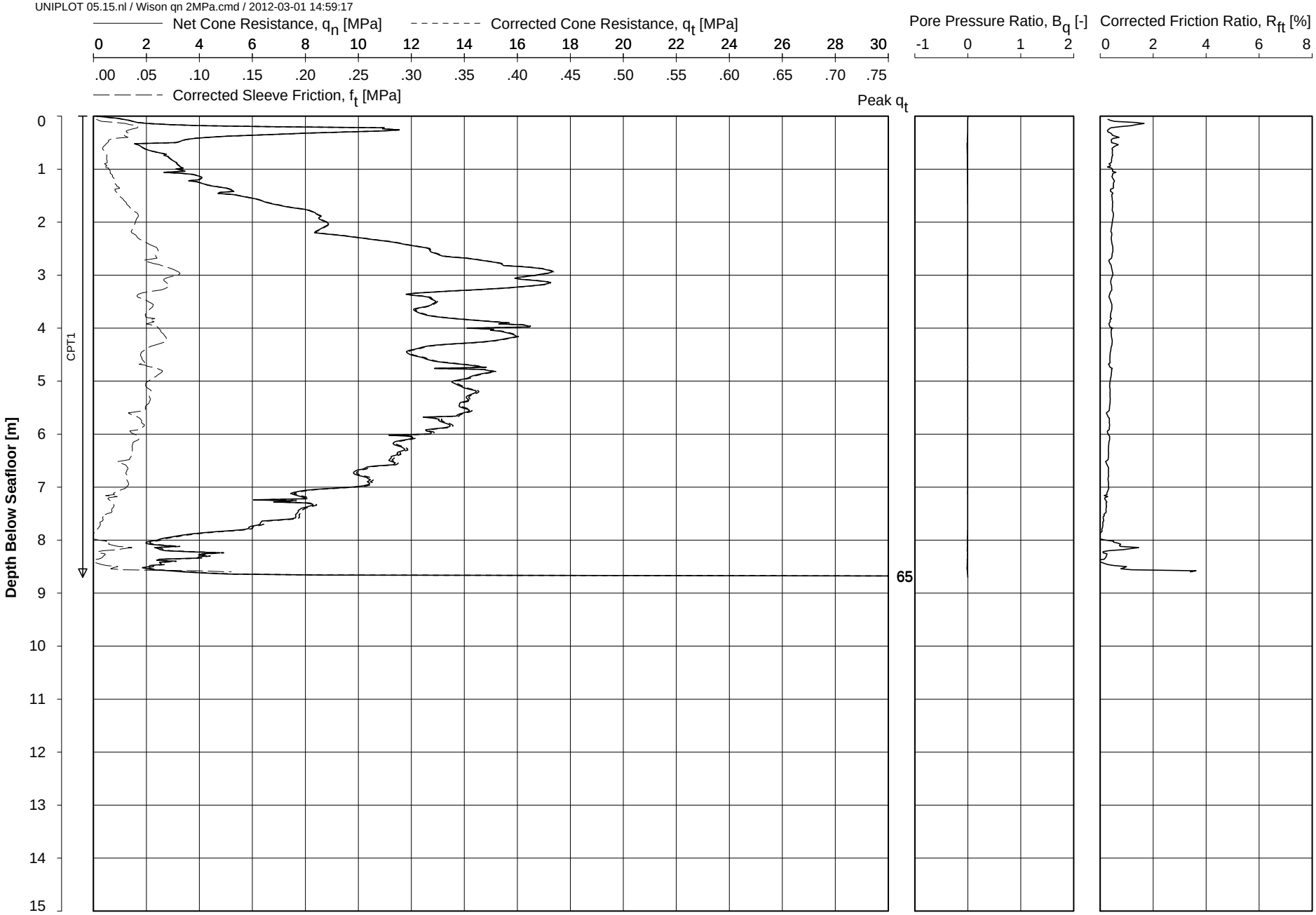
Date Of Testing : 13-Feb-2012
Water Depth [m] : 16.9
Coordinates [m] : E278673 N4466361

CONE PENETRATION TEST

TAP_IT_1012

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 14:59:17



Date Of Testing : 13-Feb-2012
Water Depth [m] : 16.9
Coordinates [m] : E278673 N4466361

CONE PENETRATION TEST

TAP_IT_1012

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

CONE PENETRATION TEST - ZERO DRIFT

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

Borehole/ Location	Test No.	Zero Reading at Start of Test			Zero Drift			Probe	Net Area Ratio Cone Tip [-]	Net Area Ratio Friction Sleeve [-]
		q_c [MPa]	f_s [MPa]	u [MPa]	q_c [MPa]	f_s [MPa]	u [MPa]			
TAP_IT_1012	CPT1	-0.005	0.007	0.007	0.007	-0.004	0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000

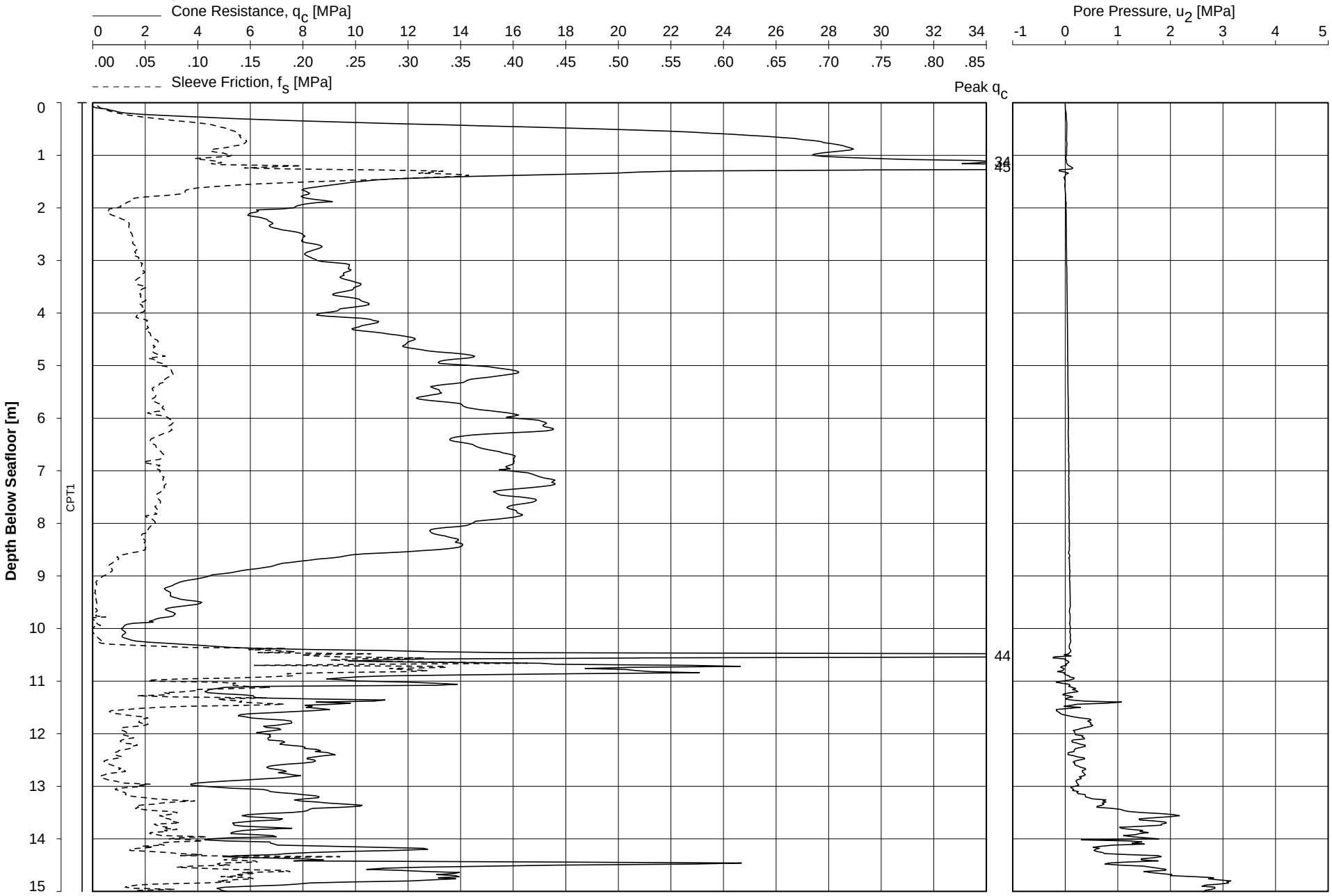
Key:

q_c : cone resistance f_s : sleeve friction u : pore water pressure

Note:

1. Zero Drift is the difference between the zero output at the start of the test and the zero output at the end of the test. Offshore tests may show Reference Readings. The Zero Reading or Reference Reading at Start of Test is a value presented in units of measurement result. The value itself is a conversion from system output, usually in mV or in digital counts. It has no explicit physical meaning.
2. --- : Zero Drift was not monitored. The drift can be assessed from the start values of successive tests.

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 15:01:03



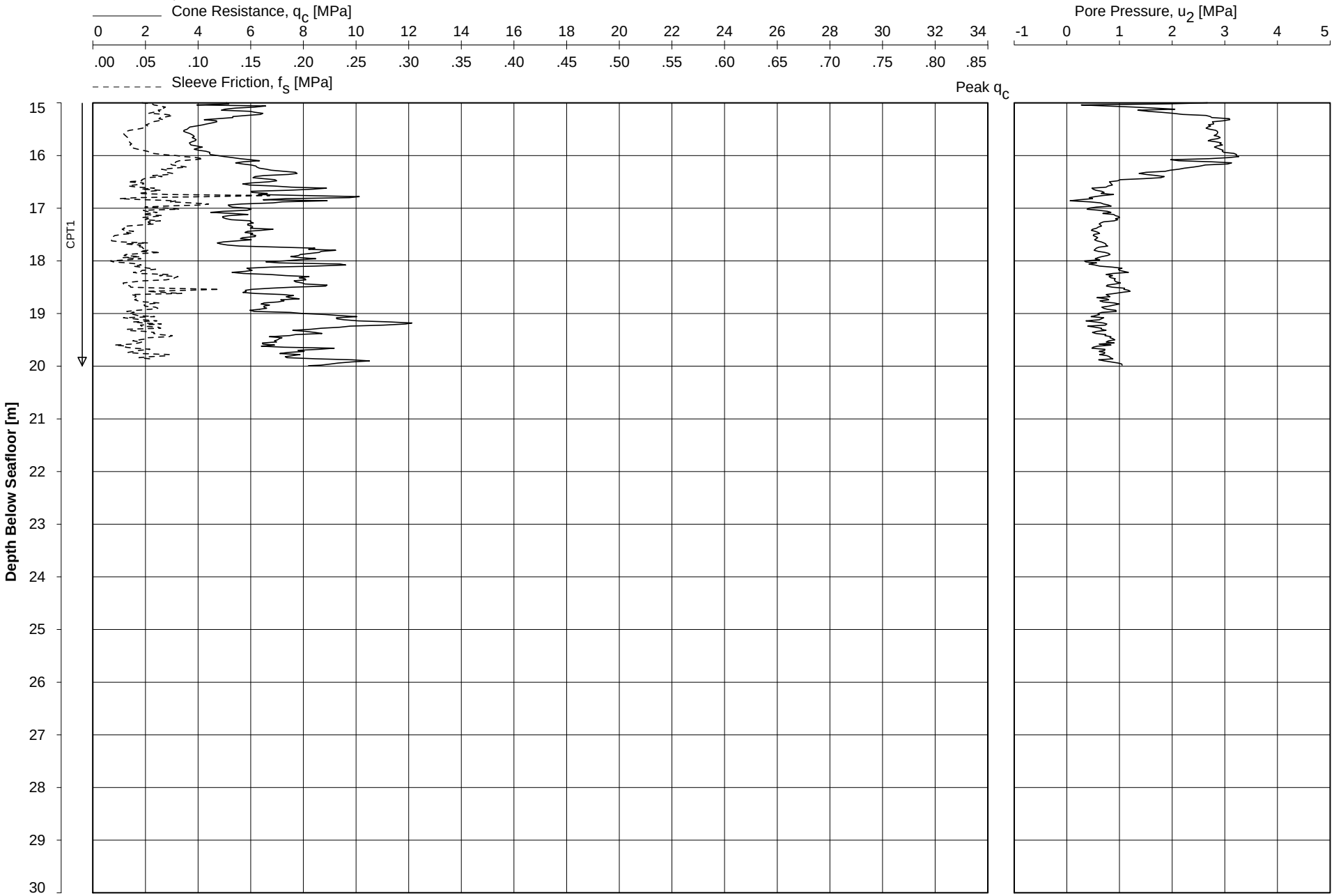
Date Of Testing : 25 February 2012
Water Depth [m] : 17.4
Coordinates [m] : E278731 N4466404

CONE PENETRATION TEST

TAP_IT_1013

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 15:01:03



Date Of Testing : 25 February 2012
Water Depth [m] : 17.4
Coordinates [m] : E278731 N4466404

CONE PENETRATION TEST

TAP_IT_1013

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

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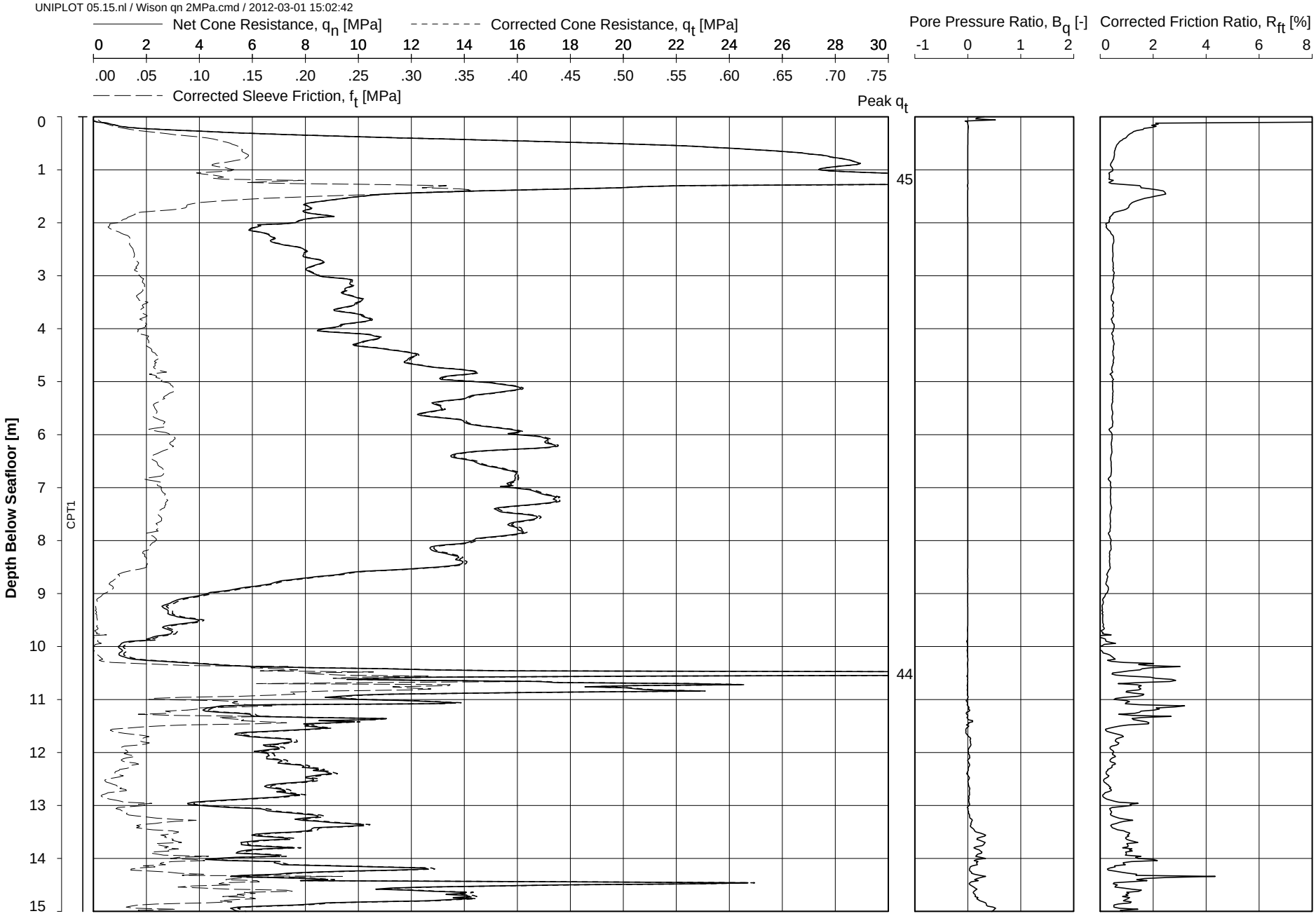


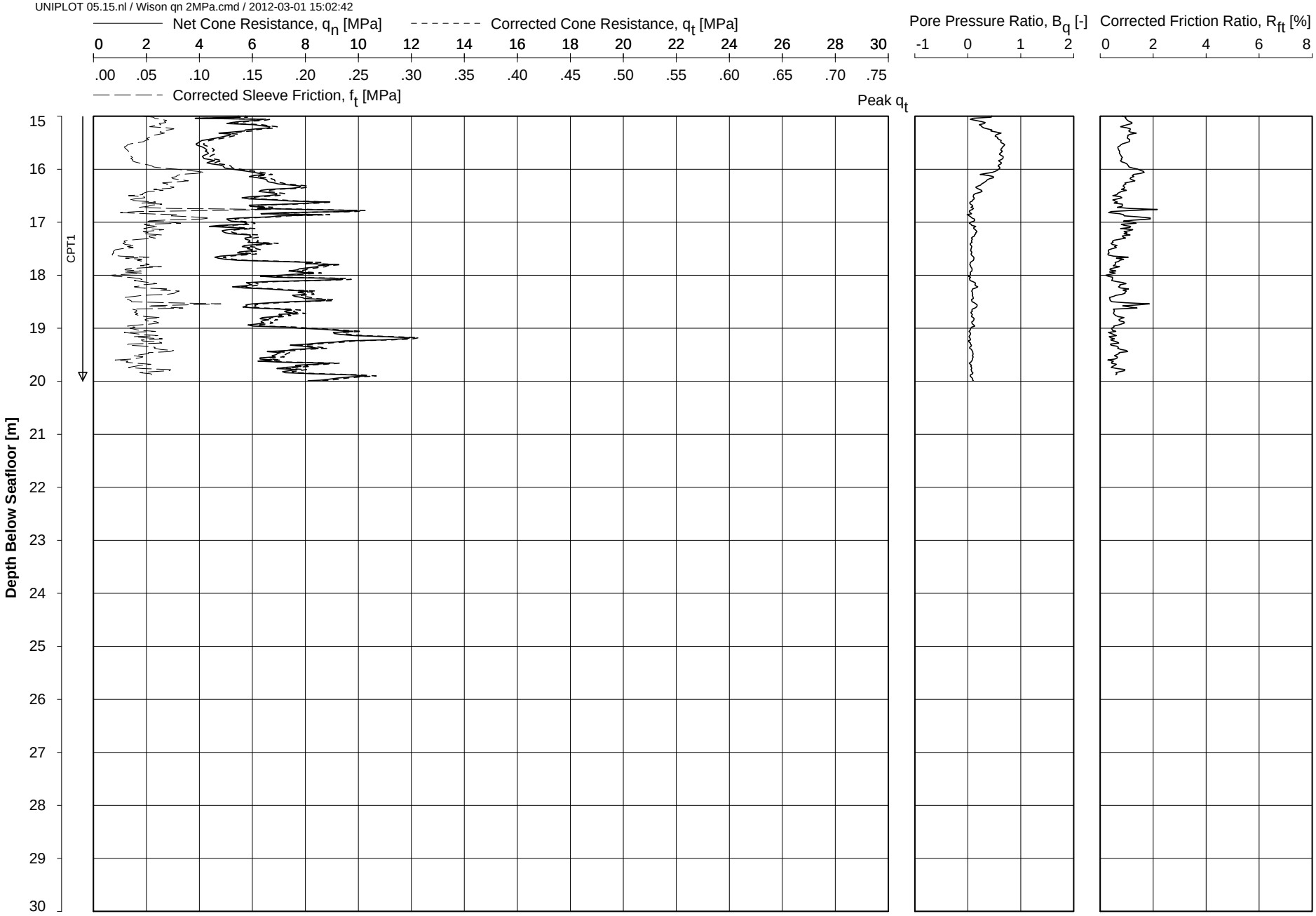
Date Of Testing : 25 February 2012
Water Depth [m] : 17.4
Coordinates [m] : E278731 N4466404

CONE PENETRATION TEST

TAP_IT_1013

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 15:02:42



Date Of Testing : 25 February 2012
Water Depth [m] : 17.4
Coordinates [m] : E278731 N4466404

CONE PENETRATION TEST

TAP_IT_1013

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

CONE PENETRATION TEST - ZERO DRIFT

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

Borehole/ Location	Test No.	Zero Reading at Start of Test			Zero Drift			Probe	Net Area Ratio Cone Tip [-]	Net Area Ratio Friction Sleeve [-]
		q_c [MPa]	f_s [MPa]	u [MPa]	q_c [MPa]	f_s [MPa]	u [MPa]			
TAP_IT_1013	CPT1	0.125	0.001	0.011	-0.035	0.000	-0.001	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000

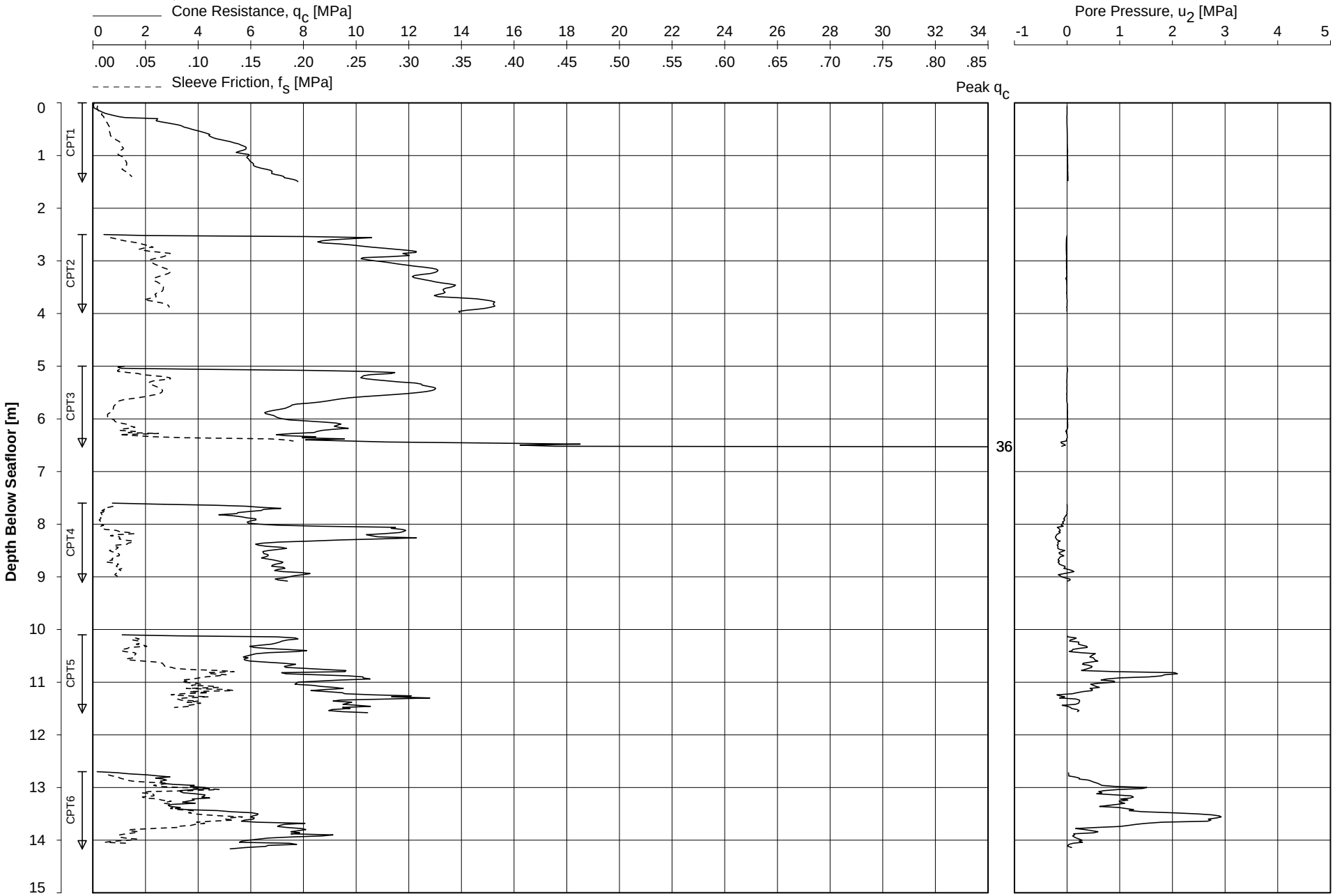
Key:

q_c : cone resistance f_s : sleeve friction u : pore water pressure

Note:

1. Zero Drift is the difference between the zero output at the start of the test and the zero output at the end of the test. Offshore tests may show Reference Readings. The Zero Reading or Reference Reading at Start of Test is a value presented in units of measurement result. The value itself is a conversion from system output, usually in mV or in digital counts. It has no explicit physical meaning.
2. --- : Zero Drift was not monitored. The drift can be assessed from the start values of successive tests.

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 15:05:07



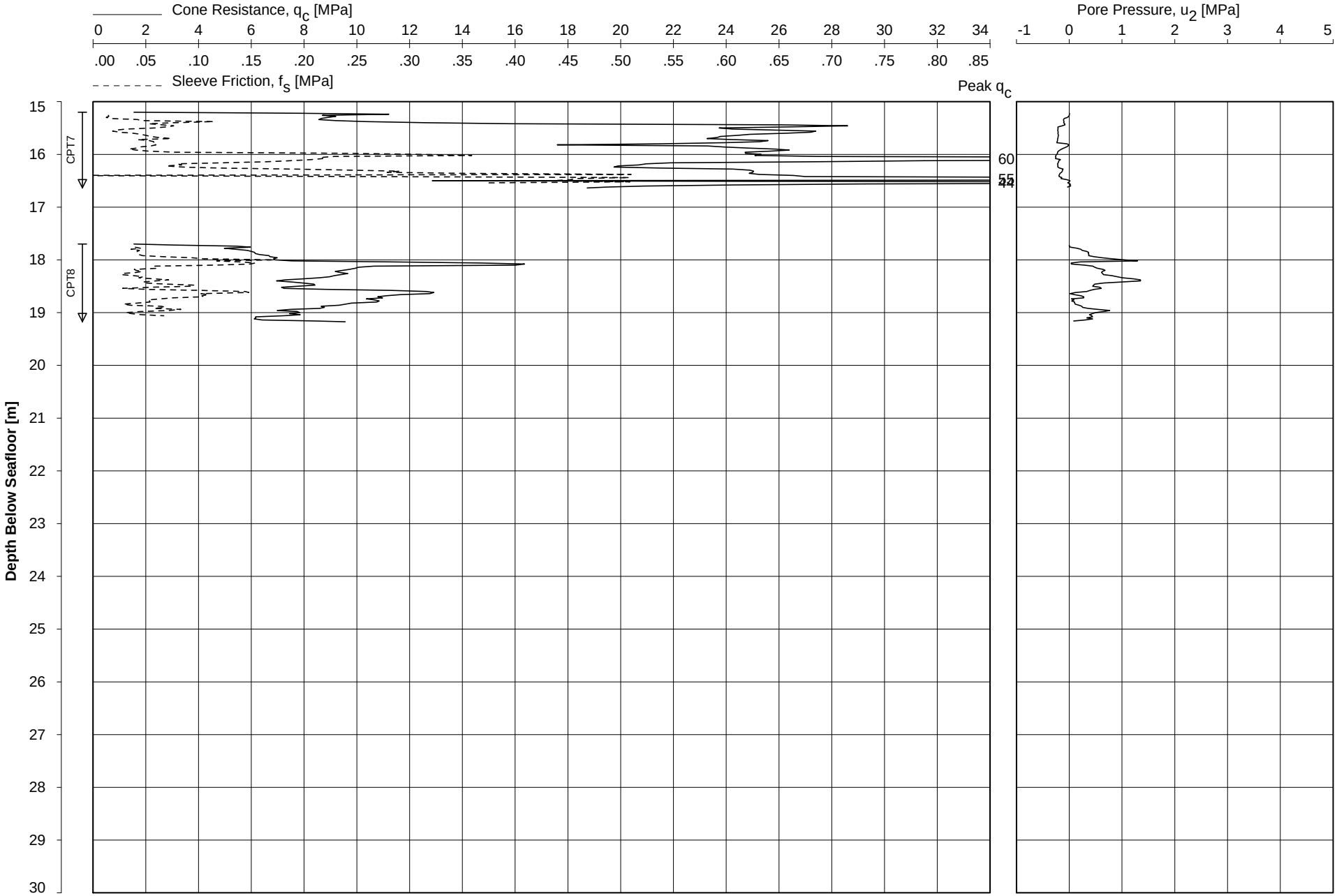
Date Of Testing : 19 February 2012
Water Depth [m] : 15.4
Coordinates [m] : E278438 N4466486

CONE PENETRATION TEST

TAP_IT_1022

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 15:05:07



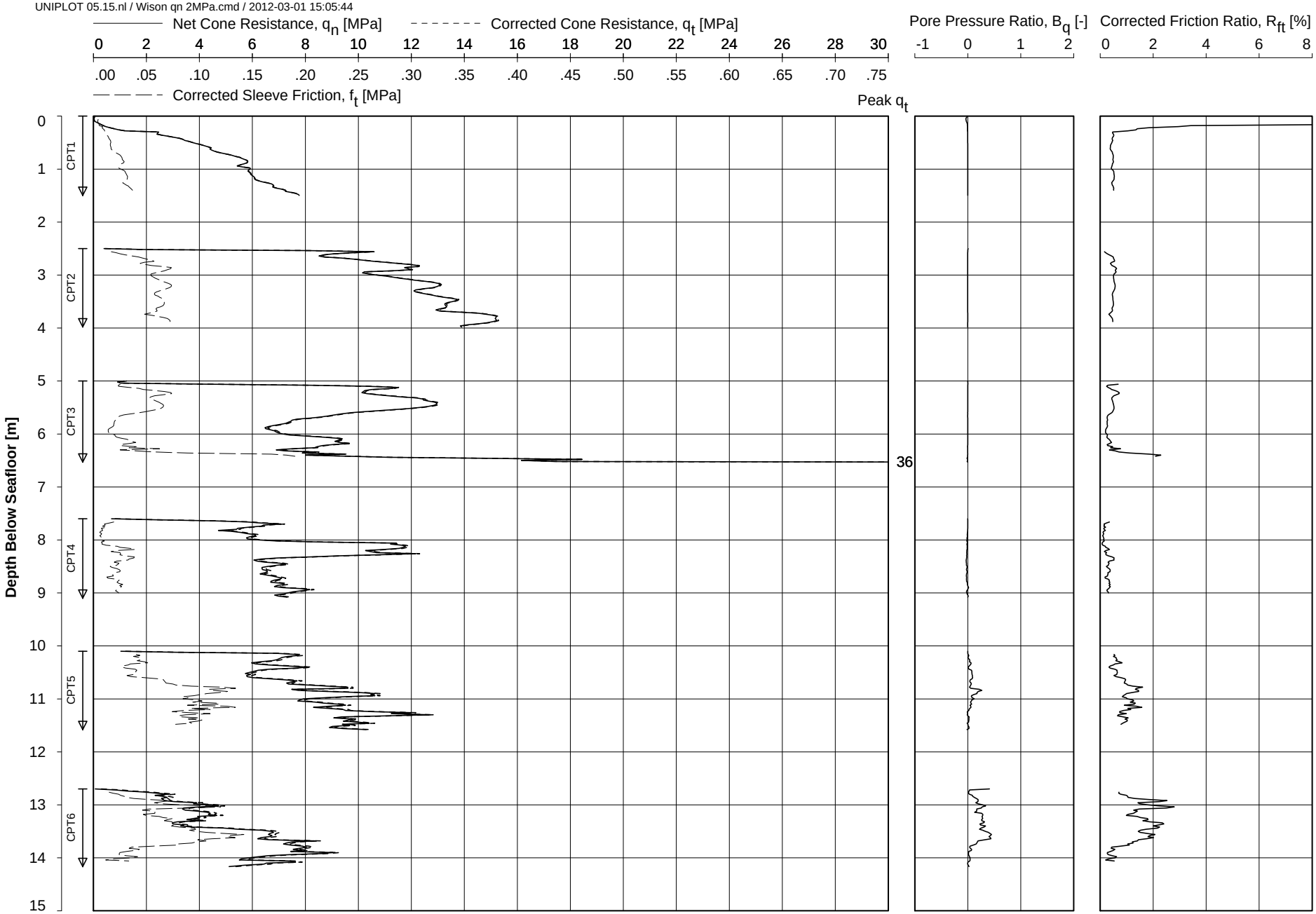
Date Of Testing : 20 February 2012
Water Depth [m] : 15.4
Coordinates [m] : E278438 N4466486

CONE PENETRATION TEST

TAP_IT_1022

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 15:05:44



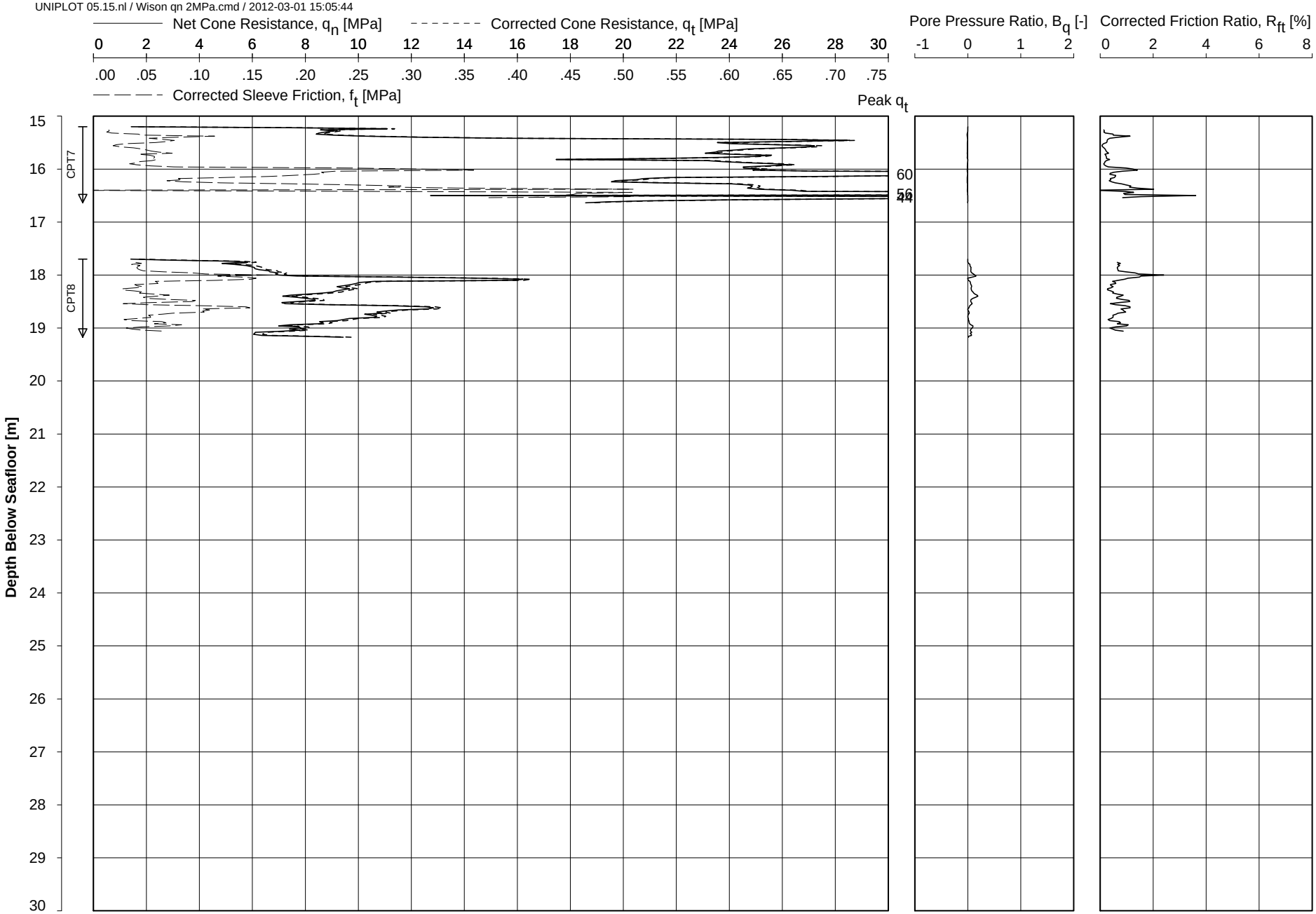
Date Of Testing : 19 February 2012
Water Depth [m] : 15.4
Coordinates [m] : E278438 N4466486

CONE PENETRATION TEST

TAP_IT_1022

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 15:05:44



Date Of Testing : 20 February 2012
Water Depth [m] : 15.4
Coordinates [m] : E278438 N4466486

CONE PENETRATION TEST

TAP_IT_1022

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

CONE PENETRATION TEST - ZERO DRIFT

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

Borehole/ Location	Test No.	Zero Reading at Start of Test			Zero Drift			Probe	Net Area Ratio Cone Tip [-]	Net Area Ratio Friction Sleeve [-]
		q_c [MPa]	f_s [MPa]	u [MPa]	q_c [MPa]	f_s [MPa]	u [MPa]			
TAP_IT_1022	CPT1	0.033	0.005	0.008	0.015	-0.001	0.001	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1022	CPT2	0.084	0.002	0.012	-0.043	0.002	-0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1022	CPT3	0.082	0.002	0.012	-0.034	0.001	-0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1022	CPT4	0.068	0.003	0.012	-0.021	0.001	-0.001	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1022	CPT5	0.075	0.003	0.013	-0.013	0.001	-0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1022	CPT6	0.052	0.005	0.011	0.001	0.000	0.000	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1022	CPT7	0.060	0.004	0.011	0.000	0.003	0.000	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1022	CPT8	0.081	0.001	0.011	0.013	0.000	0.000	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000

Key:

q_c : cone resistance f_s : sleeve friction u : pore water pressure

Note:

1. Zero Drift is the difference between the zero output at the start of the test and the zero output at the end of the test. Offshore tests may show Reference Readings. The Zero Reading or Reference Reading at Start of Test is a value presented in units of measurement result. The value itself is a conversion from system output, usually in mV or in digital counts. It has no explicit physical meaning.
2. --- : Zero Drift was not monitored. The drift can be assessed from the start values of successive tests.

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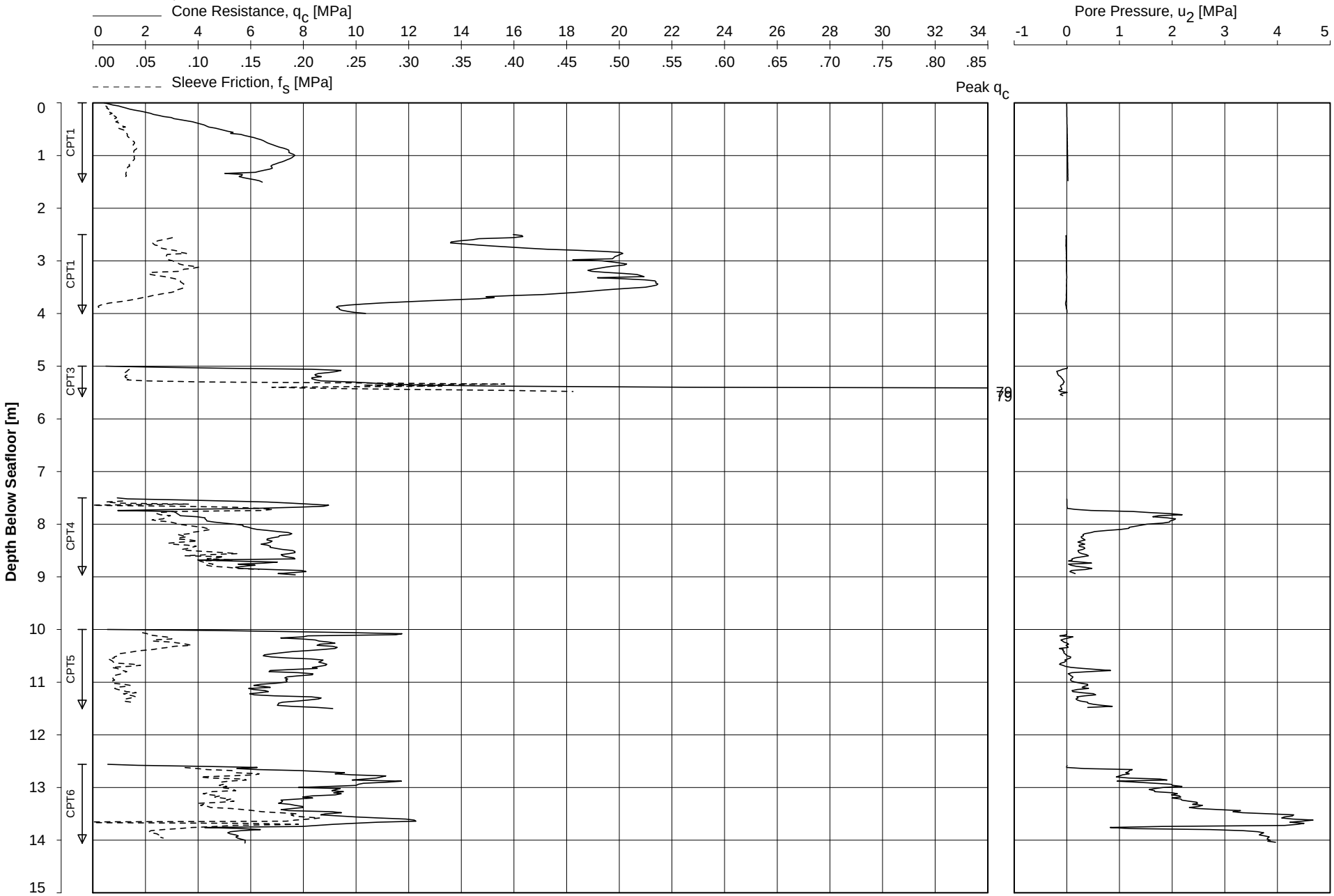


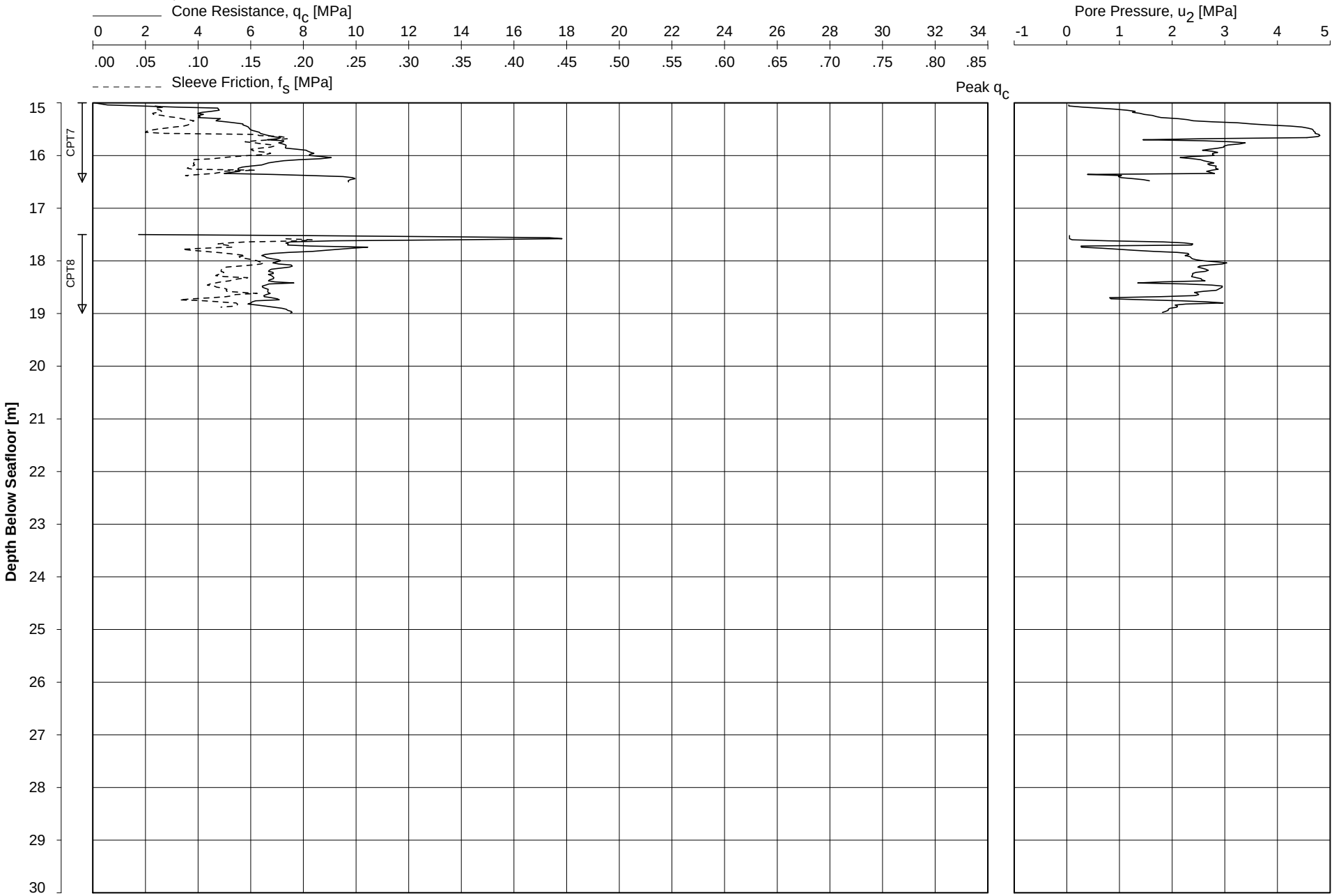
Date Of Testing : 15 February 2012
Water Depth [m] : 15.9
Coordinates [m] : E278777 N4466115

CONE PENETRATION TEST

TAP_IT_1024

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qc 2MPa.cmd / 2012-03-01 15:34:53



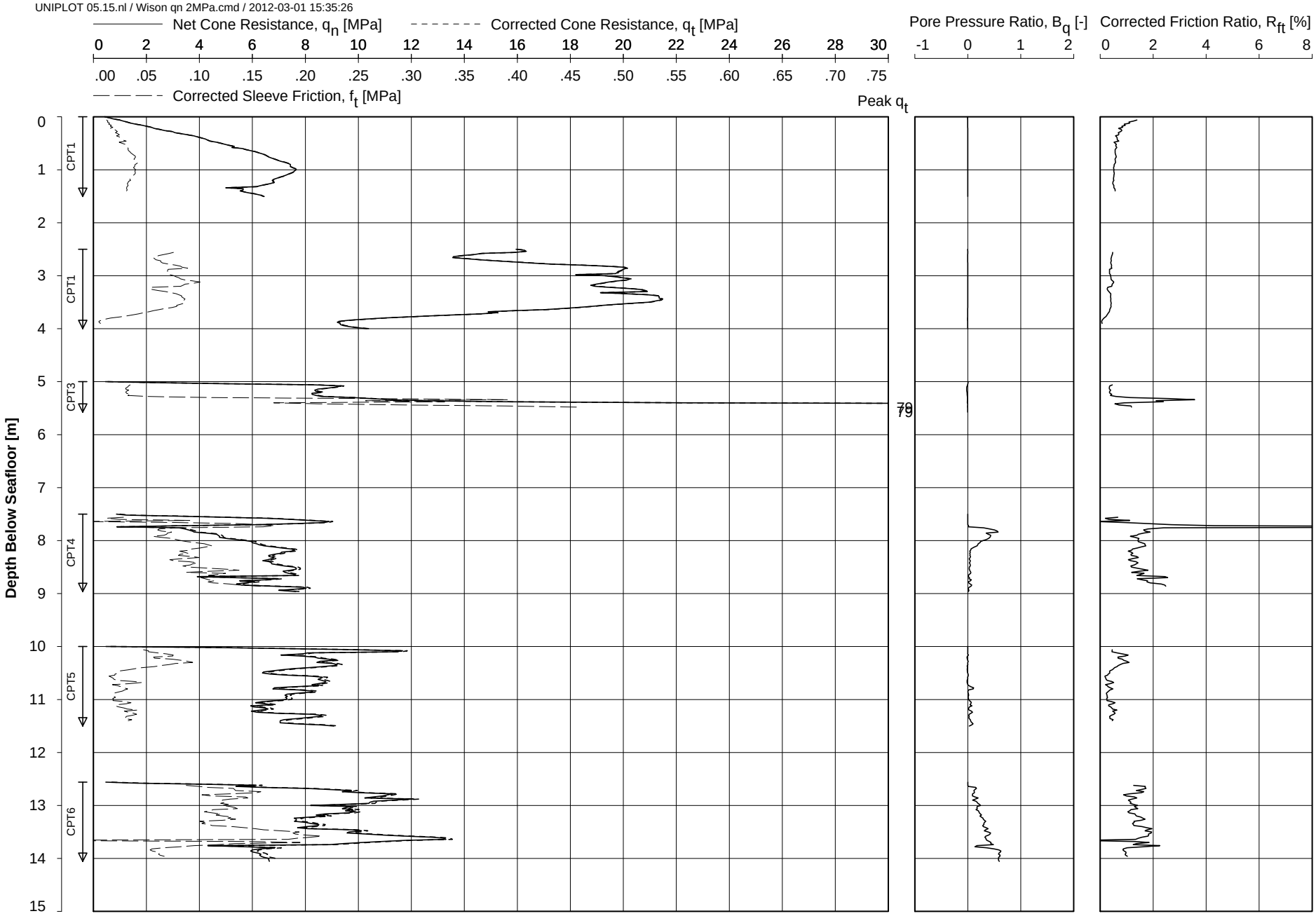
Date Of Testing : 18 February 2012
Water Depth [m] : 15.9
Coordinates [m] : E278777 N4466115

CONE PENETRATION TEST

TAP_IT_1024

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 15:35:26



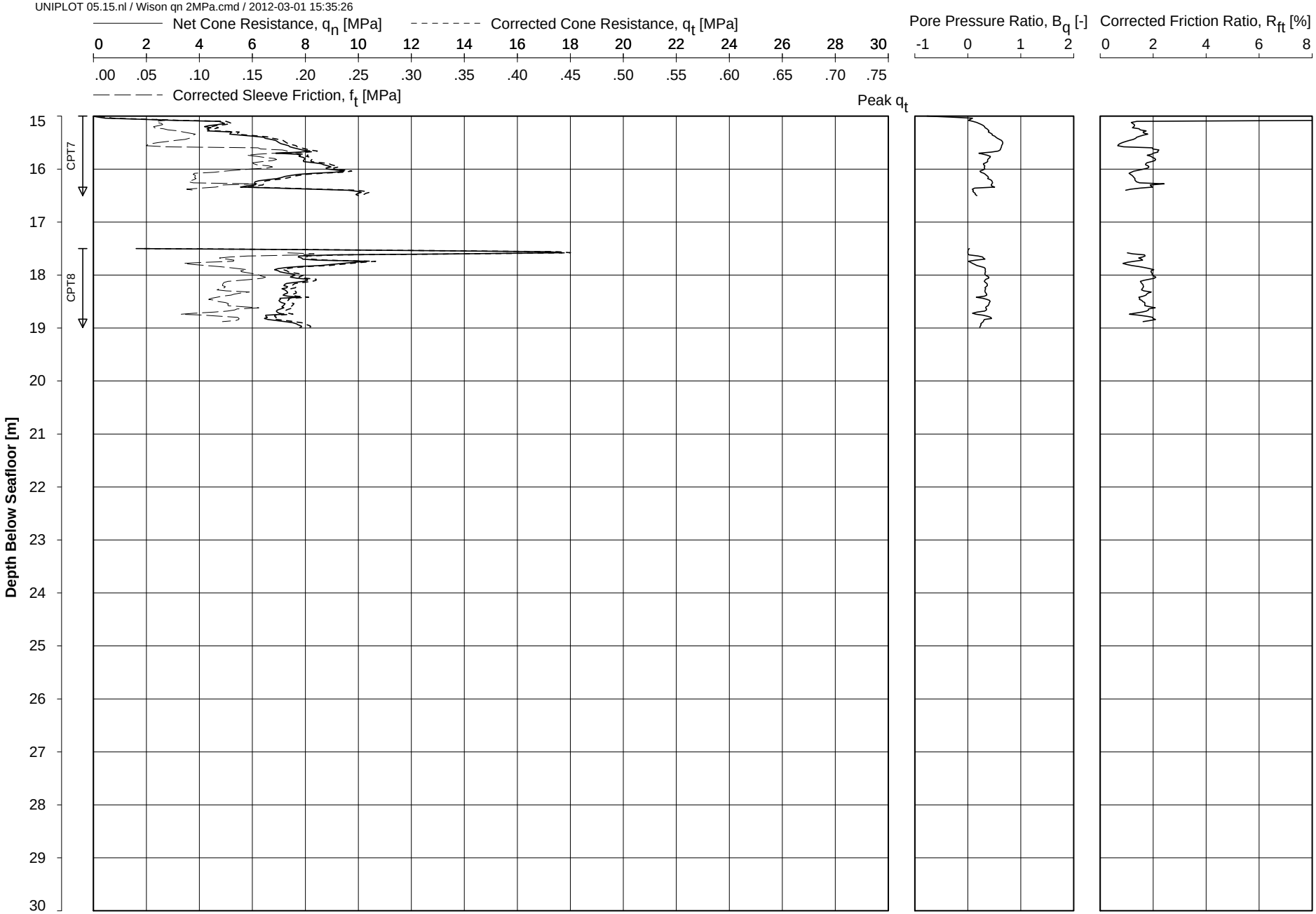
Date Of Testing : 15 February 2012
Water Depth [m] : 15.9
Coordinates [m] : E278777 N4466115

CONE PENETRATION TEST

TAP_IT_1024

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

UNIPLOT 05.15.nl / Wison qn 2MPa.cmd / 2012-03-01 15:35:26



Date Of Testing : 18 February 2012
Water Depth [m] : 15.9
Coordinates [m] : E278777 N4466115

CONE PENETRATION TEST

TAP_IT_1024

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

CONE PENETRATION TEST - ZERO DRIFT

TAP GEOTECHNICAL INVESTIGATION - SKATE IV - ITALIAN LANDFALL, ADRIATIC SEA

Borehole/ Location	Test No.	Zero Reading at Start of Test			Zero Drift			Probe	Net Area Ratio Cone Tip [-]	Net Area Ratio Friction Sleeve [-]
		q_c [MPa]	f_s [MPa]	u [MPa]	q_c [MPa]	f_s [MPa]	u [MPa]			
TAP_IT_1024	CPT1	-0.012	0.006	0.008	0.070	-0.005	0.000	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1024	CPT1	-0.014	0.006	0.006	0.031	-0.001	0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1024	CPT3	-0.023	0.007	0.005	0.050	-0.004	0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1024	CPT4	0.106	0.002	0.014	-0.034	0.000	-0.004	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1024	CPT5	0.097	0.001	0.013	-0.033	0.000	-0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1024	CPT6	0.074	0.001	0.012	-0.028	0.001	-0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1024	CPT7	0.017	0.004	0.009	0.013	0.000	0.001	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000
TAP_IT_1024	CPT8	0.016	0.005	0.008	0.027	-0.002	0.002	F5CKE2HAW$_2$/B P10 1706-1997	0.750	0.00000

Key:

q_c : cone resistance f_s : sleeve friction u : pore water pressure

Note:

1. Zero Drift is the difference between the zero output at the start of the test and the zero output at the end of the test. Offshore tests may show Reference Readings. The Zero Reading or Reference Reading at Start of Test is a value presented in units of measurement result. The value itself is a conversion from system output, usually in mV or in digital counts. It has no explicit physical meaning.
2. --- : Zero Drift was not monitored. The drift can be assessed from the start values of successive tests.

APPENDIX D
POSITIONING REPORT

Fugro Seacore Limited

Geotechnical Investigations on TAP Italy to Albania

Positioning Services on “Skate IV”

Mobilisation and Position Check Report
Document Number 00570R04.00

FSLTD Contract Reference No:	**39-00570**
Customer Reference No:	**C1446**

		Signature	Date
Compiled:	W. Shave		19.01.12
Checked:	M. Cox		26.01.12
FSLTD Project Manager	D. Parsons		26.01.12
Company Representative	R. Fraser		

Issue	Change No.	Date	Description	By	Approved
00	0	26.01.12	For Client Comment	WS	DP

Fugro Survey Limited, Morton Peto Road, Harfreys Industrial Estate, Great Yarmouth, Norfolk. NR31 0LT
Tel: 01493 440320 Fax: 01493 440319

CONTENTS

APPENDICES

1.0 INTRODUCTION

1.1 Project Description

Fugro Seacore Ltd intend to locate the nearshore jack-up rig “**Skate IV”** at a number of locations in close proximity to the East coast of Italy and then at the West coast of Albania to carry out site investigation geotechnical operations, as part of the TAP project. The intention is to map the strata of the nearshore sections of the route route linking the landfalls locations.

Fugro Survey Limited will provide rig positioning and heighting services on board the rig. Fugro Seacore will utilise the FSLTD supplied equipment for all operations at the locations.

Primary positioning and heighting will be by Fugro StarFix.GHP, secondary positioning will be supplied by Fugro StarFix.GHP.

The rig mobilisation was completed in Brindisi on the 16th and 17th Jan 2012. The DGPS antennae, cable and helmsman monitors were still in situ from a previous mobilisation.

This report contains details of the mobilisation and calibration checks carried out over the two days.

1.2 Scope of Work

The Scope of Work, is based on the end client supplied documentation and on the requirement detailed in Fugro Seacore’s Project Plan.

FSLTD were contracted to conduct the following scope of work:

- Mobilise personnel to install positioning equipment on board Skate IV.
- Measure any offsets where relevant and verify against available GA plans.
- Conduct DGPS and gyro compass system checks and calibrations.
- Provide navigational displays to rig helmsman’s monitor.
- Provide position and elevation of vessel drill centre.
- Provide equipment training to relevant Seacore personnel.

1.3 References

FSLTD Survey Procedures:
The relevant procedures were detailed in the Quality Plan in Section 11.

Fugro Seacore Supplied Documents:
TAP Skate IV Positioning Requirements – received 13.12.12

Fugro Seacore Supplied Drawings:
Supplied by GeoConsulting after nearshore survey

1.4 Abbreviations and Definitions

Abbreviation	Definition
AHV	Anchor Handling Vessel(s)
Company	Fugro Seacore Limited (FSLTD)
Contractor	Fugro Survey Limited
CD	Chart Datum
CM	Central Meridian
COP	Configurable Output
C-O	Computed minus Observed
CRP	Central Reference Point
CSi	CSI VectorPro GPS Compass
DGPS	Differential Global Positioning System
DWL	Deck to waterline
FSLTD	Fugro Survey Limited
FOSPA	Fugro Oceansismica
GHP	Fugro StarFix Glonass & High Performance DGPS Solution
GPS	Global Positioning System
HDOP	Horizontal Dilution of Precision
HP	StarFix High Performance Correction Delivery System
HSE	Health, Safety and Environment
LAT	Lowest Astronomical Tide
MSL	Mean Sea Level
PC	Personal Computer
PDOP	Positional Dilution of Precision
RO	Reference Object
RTK	Real Time Kinematic DGPS
Sd	Standard Deviation
SEIS	Fugro navigation software package
SV	Space Vehicle
TMS	Tug Management System
UKCS	United Kingdom Continental Shelf
UTM	Universal Transverse Mercator
VBS	Virtual Base Station
WGS84	World Geodetic System 1984
XP	Fugro StarFix.XP DGPS system

2.0 PERSONNEL AND EQUIPMENT SCHEDULES

2.1 Personnel

The following FSLTD personnel were utilised on the mobilisation

FSLTD	Position	Embark	Disembark
W. Shave	Engineer (mob + cal)	16 January 2012	18 January 2012

2.2 Equipment

The following equipment is installed on the rig.

	Item	No.
‘Modularised’ Boxes’ containing		
Primary Positioning	StarPack DGPS receiver + I/F Cables	2
& Computer System	Laptop PC system c/w SEIS software – latest version	2
	Gigabyte network ports, Moxa Ethernet to serial convertor	2
Additional Items		
DGPS Positioning	InterDigital antennae	2
	30m lengths Belden	5
	Scaff pole, HP manual	2
Tertiary Positioning	CSI VectorPro (EGNOs or Beacon position)	1
and GPS Compass		
Display	Ruggedised external Monitor c/w VGA cable	2
Power Equipment	UPS (240v available on board)	2
FANS System	DigiConnect WAN modem, Juniper Box and cabling	1
Sundries	Set of basic rig consumables	1
Calibration	Hemisphere EGNOS DGPS	1

3.0 EQUIPMENT MOBILISATION

The mobilisation was commenced on 16 January 2012 at Brindisi, Italy. The rig was jacked slightly but not fully pinned in Brindisi port, therefore the height did vary slightly during the calibration.

The navigation equipment was installed in a container towards the rear of the rig, which had beeen used before. The ‘Jack Rack’ boxes, containing the navigation PC’s and StarPack DGPS receivers were installed on the racking and the remainder of the cabling installed. The systems were updated to the latest firmware and the latest satellite downlink frequencies tested and the position taken from the StarFix.GHP systems into IOWIN was the NMEA GGA string at 1Hz, (network solution).

The antennae and cable runs to the main derrick were still in place and no access was possible. The cable runs on the deck were re-routed as the container had been moved to the rig starboard side.

Two ruggedised external monitors were still in-situ from the previous mobilisation. The CSI VectorPro GPS Compass was fitted onto the rear corner of the container along with the FANS box.

The ‘Jack Rack’ boxes were installed on the new racking and the remaining cabling installed. Differential stations of ESat satellite and IOR were selected in the StarPack DGPS units and the corrections crossed over internally to try and ensure no loss of corrections during any vessel manoeuvres.

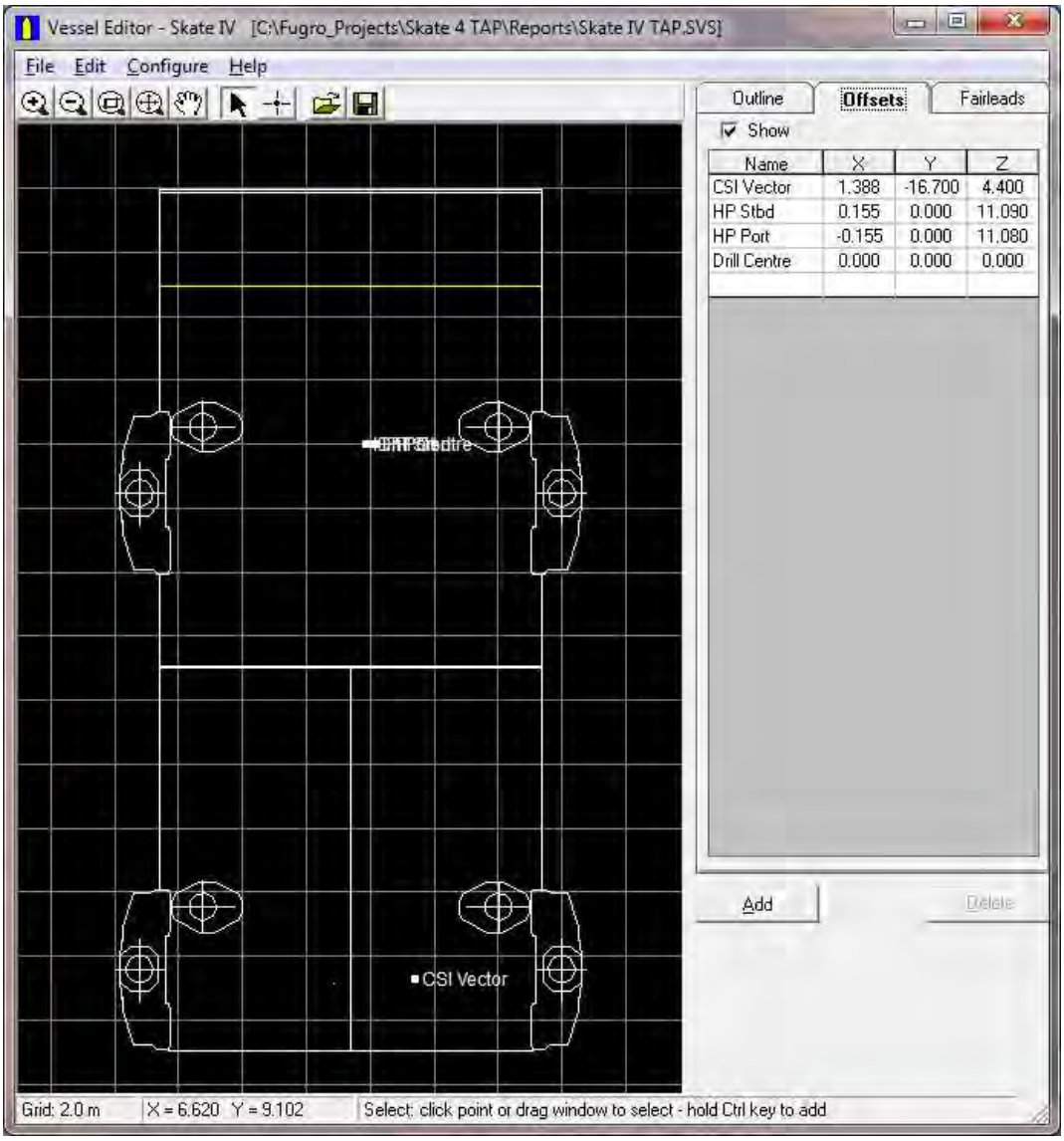
All offsets were re-measured, including height, for GPS antennas with respect to the rig Common reference point (C.R.P). In this case the rig CRP point for display on the PC’s will be the centre of the rotary table over the moonpool.

A measurement of deck to water line (DWL) was taken at 12:50 GMT and was recorded as 0.90m.

Containerised Navigation Jack Racks

4.0 VESSEL OFFSETS

The Skate IV outline and sensor offsets were configured in StarFix.SEIS as follows:-



Rig Offsets

To	X Offset [m]	Y Offset [m]	Z Offset [m]	Description / Location
Drill Slot (CRP)	+00.00	+00.00	+00.00	Centre of Drill Hole
RTK/GHP Antenna Stbd (Phase Centre)	+00.16	+00.00	+11.09	On top of drilling derrick
RTK/GHP Antenna Port (Phase Centre)	-00.16	+00.00	+11.08	---------- “ ----------
GPS Gyro System (CSI Vector)	1.39	- 16.70	N/A	On top of container

5.0 GEODETIC AND SURVEY DATA

5.1 Geodetic Parameters

Location centre co-ordinates are given on drawings and data sheets provided by Seacore Ltd.

GPS Positioning Datum Parameters : WGS84 (European Terrestrial Reference Frame 1989)	
Datum	WGS84 Satellite Datum related to ETRF89
Project Spheroid Parameters : WGS84	
Ellipsoid	WGS84
Semi major axis	6 378 137.000 Metres
1 / Flattening	298.257 223 563
Project Projection Parameters : UTM	
Grid Projection	Universal Transverse Mercator, Northern Hemisphere
UTM Zone	34 N
Central Meridian	21°East
Latitude of Origin	0°
Longitude of Origin	21°East
False Easting	500 000
False Northing	0
Scale factor on Central Meridian	0.9996

5.2 Height Datum

The following COP template was configured on the StarFix.SEIS navigation computer display for the reduction of elevations to local datum.

In the absence of a location specific WGS84 to Local datum separation value at the time of writing, GPS observed heights on the rig will be reduced to MSL using the EGM96 model. The sequence of Rig datum height and reduction will be computed and displayed in COP as follows:-

		Italian Landfall	***Brindisi***
Derived in ‘COP’	WGS84 ANTENNA ELEVATION	*(From SEIS)*	*(From SEIS)*
Pre-configured	WGS84 TO MSL SEPARATION (EGM96)	38.80	41.19
Derived in ‘COP’	MSL ANTENNA ELEVATION	*(Computed)*	*(Computed)*
Onsite Measurements	ANTENNA TO DATUM HEIGHT	*11.09*	*11.09*
Derived in ‘COP’	DATUM HEIGHT ABOVE MSL	*(Computed)*	*(Computed)*
Pre-configured	MSL TO CD SEPARATION	0.16	0.20
Derived in ‘COP’	DATUM HEIGHT ABOVE CHART DATUM	*(Computed)*	*(Computed)*

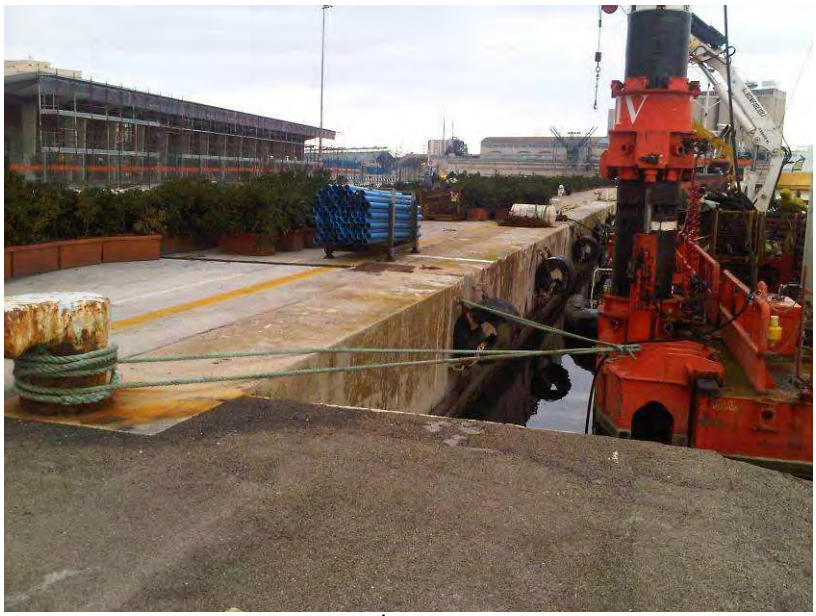
6.0 CALIBRATION CHECKS OF NAVIGATION SENSORS

6.1 Survey Control

The position of the ‘Corner Bollard’ being 40º 38.08583’N, 17º 56.94197’E was derived by averaged logged EGNOS DGPS data using a handheld Hemisphere GPS receiver and was confirmed by satellite imagery from Google Earth.

These positions were transformed into the following UTM grid values using StarFix.SEIS and were checked independently by the FSLTD GTY office.

	UTM Zone 34 Easting [m]	UTM Zone 34 Northing [m]
Corner Bollard	241 979.08	4 502 689.77
2nd Bollard	241 995.52	4 502 706.32



GPS Corner Bollard (2nd Bollard is behind life-raft.)

6.2 GPS Compass Check

The Quayside heading was derived by computing the azimuth between the 2 bollards.

Quayside Heading: **43.01°(T)**

The gyro compass heading was confirmed with respect to azimuth of the quayside by laser measurement of rig bow and stern. The installed CSI VectorPro GPS Compass was logged for 15 minutes to provide the following spreadsheet computation:-.

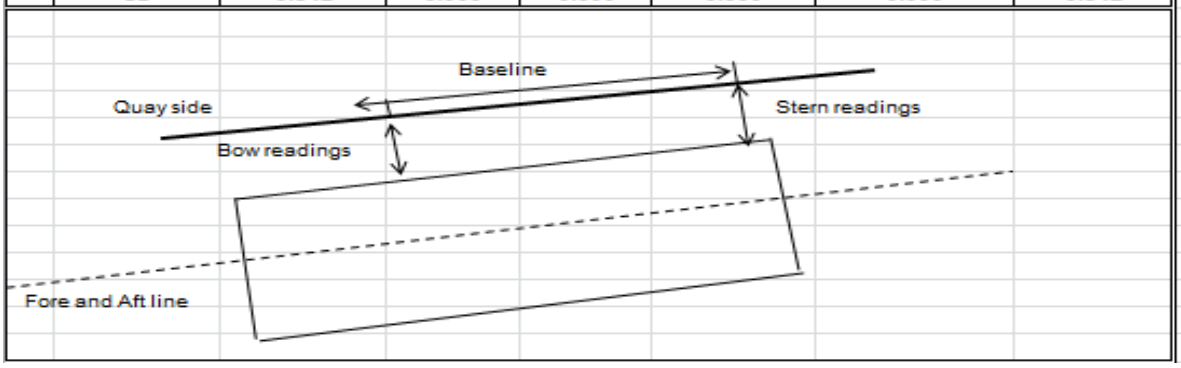
Fugro Survey, Morton Peto Road Great Yarmouth Norfolk

GYRO VERIFICATION

Extra to add if not but zero	Add to Bow	2.04	Add to Stern	1.328

Vessel		Gyro	Location		Date
Skate 4		Skate 4	Brindisi		17-Jan-12
Quay heading	(True)	Baseline length (m)	Convergence		Quayside on:
43.01		27	N/A		Port

	Observations				Calculations		
No	Time	Gyro (True)	Bow	Stern	Calc. angle	Calculated Hdg	C-O
1	10:30:00	42.3	1.970	3.21	-1.120	41.890	-0.410
2	10:31:00	42.8	1.970	3.21	-1.120	41.890	-0.910
3	10:32:00	43.09	1.970	3.21	-1.120	41.890	-1.190
4	10:33:00	43.17	1.970	3.21	-1.120	41.890	-1.280
5	10:34:00	42.94	1.970	3.21	-1.120	41.890	-1.050
6	10:35:00	42.73	1.970	3.21	-1.120	41.890	-0.840
7	10:35:00	42.65	1.970	3.21	-1.120	41.890	-0.760
	Average	**42.810**	**1.970**	**3.210**	**-1.120**	**41.890**	**-0.920**
	SD	**0.342**	**0.000**	**0.000**	**0.000**	**0.000**	**0.342**



Results of the GPS Compass verification are as follows;-

	Bearing (°T)
Computed Rig Heading	41.89°
Observed Gyro Reading	42.81°
(C-O) Correction	**-0.92°**

6.3 DGPS Health Check using StarFix.GHP

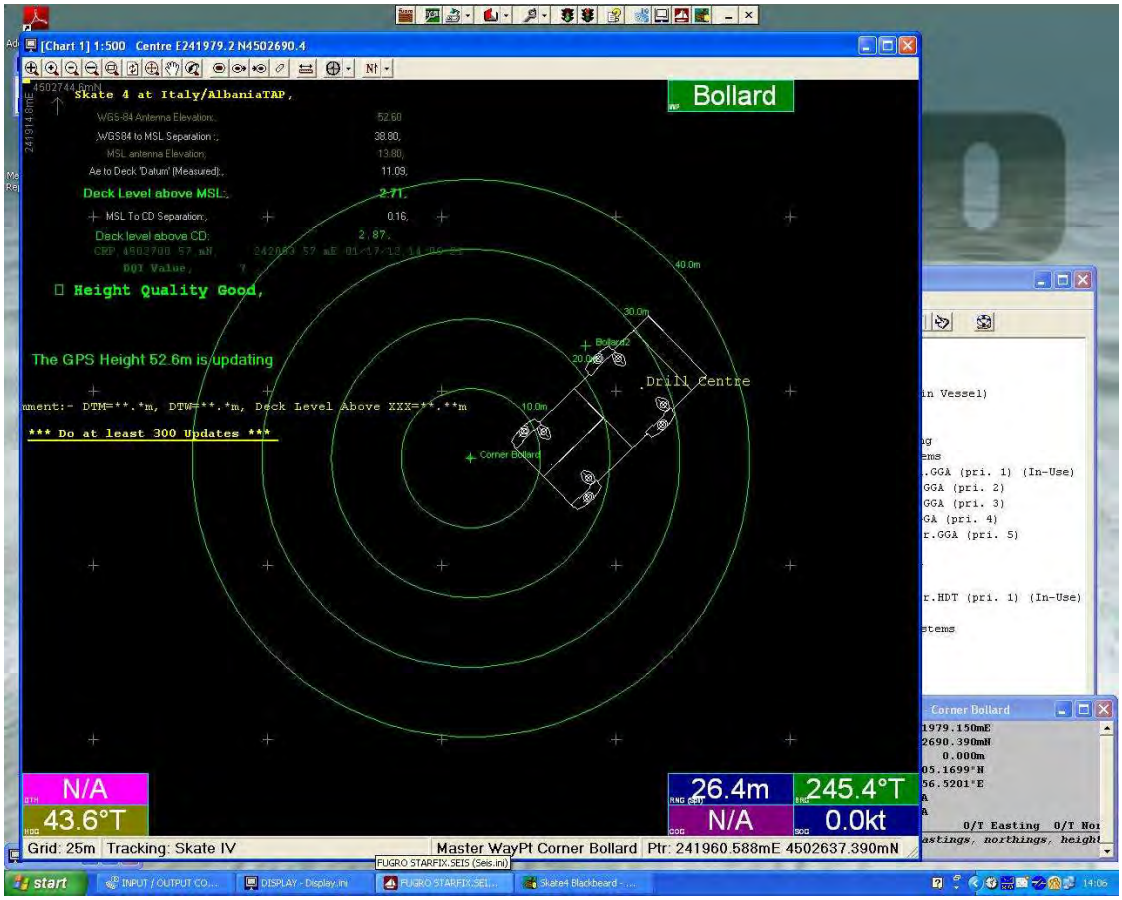
Taped measurements from the CRP (Moonpool) to the corner bollard were

X= - 9.50m, Y=24.60m

This was entered as an offset into StarFix.SEIS and its calculated position over an average of 600 fixes using GHP was

	UTM Zone 34 Easting [m]	UTM Zone 34 Northing [m]
Computed Position Corner Bollard	241 979.08	4 502 689.77
Observed Corner Bollard Position	241 979.56	4 502 689.73
C-O	**-0.48**	**+0.04**

This was considered to be within specification, bearing in mind the minimal time spent in establishing the survey control and indicated all systems were working effectively.



DGPS Health Check Verification Schematic layout

6.4 Gross Error Height Check

Although the rig was slightly afloat and some motion was inherent, a gross error check of the derived rig deck level elevation was undertaken in Brindisi.

A measurement of deck to water line was carried out at 12:50 GMT was recorded as 0.90m.

At the same time, the primary StarFix.SEIS system (Buccaneer) recorded a deck elevation of 41.66m, see Appendix A3.

Deck Level using GPS

WGS84 height 52.75m minus antenna height (11.09m)	41.66m (deck WGS84)
Minus Separation (EGM96 at Brindisi	41.19m
	0.47m (deck above MSL)
Plus Separation (MSL to LAT at Brindisi)	0.20m
	0.67m (deck above LAT)

Deck Level using Tides

Predicted Tide at 1300 **(**extrapolated from Otranto gauge)	-0.01 (Relative to LAT)
Plus DWL measurement of 0.90m	**0.89m** (deck above LAT)
Difference between methods	**0.22m**

On completion, all parameters in the COP template were reset to the work site.

The results of the calibrations and integrity checks specified above indicate that all sensors were working within specification at the time of the mobilisation.

7.0 QUALITY ASSURANCE, ACTIVITY CHECK LISTS AND QUALITY PLAN

FSLTD operates an Integrated Management System (IMS) covering all key processes carried out by the company including operational, commercial, HSE and financial activities. The system satisfies the requirements of BS EN ISO 9001:2000. Specific FSLTD procedures and business processes are referenced in Section 4 of this document and the Quality Plan.

7.1 Activity Check List 2000 – Mobilisation and Calibration

Client : **Fugro Seacore**
Project : **Skate IV at TAP**
FSLTD Job Number : **39-00570**

Task	Description	Completed by	Witnessed by	Remarks
2001	Attend safety induction, complete vessel Risk Assessment and document any Toolbox Talks	**WS**		
2002	Install/test DGPS positioning systems	**WS**		
2003	Measure offsets from antenna to reference points as required.	**WS**		
2004	Carry out GPS compass check as soon as practically possible.	**WS**		
2005	Carry out DGPS Health Check as soon as practically possible.	**WS**		
2006	Carry out test logging and forward results to GTY office for checking	**WS**	**DP**	
2007	Obtain acceptance of mobilisation for proposed location.			

This is to confirm that this phase of the survey works has been completed in accordance with these survey procedures: -

	Name	Signature	Date
FSLTD			
Client Representative			

A. MEAN POSITION REPORTS

A1 Mean Position Report 017 13 32 38 – GHP Bollard computed position
A2 Mean Position Report GHP CRP (Blackbeard)
A3 Mean Position Report GHP CRP (Buccaneer)
A4 Final Fix Report GHP CRP (Blackbeard)
A5 Final Fix Report GHP CRP (Buccaneer)

A1 Mean Position Report GHP Bollard Position (Blackbeard)

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	Brin Bollard
Sampling Started	17-Jan-2012 13:22:12 (local)
Sampling Ended	17-Jan-2012 13:27:14 (local)
Comment	Test point Brindisi

Results

	Mean	Standard Deviation
Local Latitude	40°38'05.1491"N	
Local Longitude	17°56'56.5384"E	
Ellipsoidal Height	41.52 m	
Local Easting	241979.56 m	0.06 m
Local Northing	4502689.73 m	0.15 m
Orthometric Height	41.52 m	0.04 m
WGS84 Latitude	40°38'05.1491"N	
WGS84 Longitude	17°56'56.5384"E	
Ellipsoidal Height	41.52 m	
Quality	1.10	0.00 m
Depth	0.00 m	0.00 m
Heading	42.59°T	0.35°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	Corner Bollard
Chainage	N/A	Range TO	0.77 m
Cross Track	N/A	Bearing TO	326.10°T

Observations

Total 300
Used 300

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°59'16.7526"		
Calculation Mode	Spheroidal		

Mean Position Report 017 13 32 38.pdf 13:32 January 17, 2012

A2 Mean Position Report GHP CRP (Blackbeard)

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	CRP
Sampling Started	17-Jan-2012 12:42:14 (local)
Sampling Ended	17-Jan-2012 12:53:27 (local)
Comment	Test point Brindisi Deck to waterline @ 12:50GMT 0 .90m

Blackbeard

Results

	Mean	Standard Deviation
Local Latitude	40°38'05.5284"N	
Local Longitude	17°56'57.5424"E	
Ellipsoidal Height	41.49 m	
Local Easting	242003.55 m	0.01 m
Local Northing	4502700.61 m	0.01 m
Orthometric Height	41.49 m	0.03 m
WGS84 Latitude	40°38'05.5284"N	
WGS84 Longitude	17°56'57.5424"E	
Ellipsoidal Height	41.49 m	
Quality	1.27	0.27 m
Depth	0.00 m	0.00 m
Heading	42.09°T	0.32°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	N/A
Chainage	N/A	Range TO	N/A
Cross Track	N/A	Bearing TO	N/A

Observations

Total 600
Used 600

Geodetic Parameters

Geodetic Datum	**WGS84**		
Ellipsoid	**WGS84**		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	**Transverse Mercator (UTM) Zone: 34**		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°59'16.1130"		
Calculation Mode	Spheroidal		

Mean Position Report 017 13 15 35.pdf 13:15 January 17, 2012

A3 Mean Position Report GHP CRP (Buccaneer)

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	CRP
Sampling Started	17-Jan-2012 12:42:22 (local)
Sampling Ended	17-Jan-2012 12:53:22 (local)
Comment	Test point Brindisi Deck to waterline @12:50 GMT 0 .90m

Buccaneer

Results

	Mean	Standard Deviation
Local Latitude	40°38'05.5287"N	
Local Longitude	17°56'57.5418"E	
Ellipsoidal Height	41.66 m	
Local Easting	242003.54 m	0.02 m
Local Northing	4502700.62 m	0.01 m
Orthometric Height	41.66 m	0.02 m
WGS84 Latitude	40°38'05.5287"N	
WGS84 Longitude	17°56'57.5418"E	
Ellipsoidal Height	41.66 m	
Quality	1.13	0.11 m
Depth	0.00 m	0.00 m
Heading	42.08°T	0.33°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	N/A
Chainage	N/A	Range TO	N/A
Cross Track	N/A	Bearing TO	N/A

Observations

Total 600
Used 600

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°59'16.1134"		
Calculation Mode	Spheroidal		

Mean Position Report 017 13 17 30.pdf 13:17 January 17, 2012

A4 Final Fix Report GHP CRP (Blackbeard)

Starfix Final Fix Report

```
Fugro Job Number                3900570 TAP
Job Name
Fugro Personnel
Client Name
Client Representative
Sampling Started                17 Jan 2012 13:35:31 (local)
Sampling Ended                  17 Jan 2012 13:45:30 (local)
Comment

Intended Offset / Well Location
Geodetic Datum      WGS84
      Latitude       40°38'05.1699"N
      Longitude      17°56'56.5201"E
Projection          Transverse Mercator (UTM) Zone: 34
      Easting         241979.150 m
      Northing       4502690.390 m
Intended Rig Heading     0.00 °T

Final DGPS Position Fix Summary for Skate IV

CRP computed from GHP Blackbeard.GGA (Primary)

CRP Offset From CRP
      Starboard        0.000 m
      Forward          0.000 m
      Up               0.000 m
Geodetic Datum      WGS84
      Latitude       40°38'05.5265"N
      Longitude      17°56'57.5449"E
Projection          Transverse Mercator (UTM) Zone: 34
      Easting         242003.610 m
      Northing       4502700.553 m
      Height              41.565 m (ellipsoidal)
Final Rig Heading    42.68 °T
                     44.67 °G (Convergence -1.99° World Standard)
Gyro C-O             -0.18 °
Position is 26.48 m @ 65.45 °T (67.44 °G) FROM intended location

CRP computed from GHP Buccaneer.GGA (Secondary)

Geodetic Datum      WGS84
      Latitude       40°38'05.5270"N
      Longitude      17°56'57.5460"E
Projection          Transverse Mercator (UTM) Zone: 34
      Easting         242003.636 m
      Northing       4502700.567 m
      Height              41.511 m (ellipsoidal)
Position is 26.51 m @ 65.44 °T (67.43 °G) FROM intended location

Positioning System Comparison (System 2 minus System 1)
      Delta Easting          0.026 m
      Delta Northing         0.014 m
      Delta Height          -0.053 m

Party Chief:_____ Client Representative:_____
```

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A5 Final Fix Report GHP CRP (Buccaneer)

Starfix Final Fix Report

```
Fugro Job Number                3900570 TAP
Job Name
Fugro Personnel
Client Name
Client Representative
Sampling Started                17 Jan 2012 13:36:03 (local)
Sampling Ended                  17 Jan 2012 13:46:02 (local)
Comment

Intended Offset / Well Location
Geodetic Datum      WGS84
      Latitude        0°00'00.0000"N
      Longitude       0°00'00.0000"E
Projection          Transverse Mercator (UTM) Zone: 34
      Easting               0.000 m
      Northing              0.000 m
Intended Rig Heading     0.00 °T

Final DGPS Position Fix Summary for Skate IV

CRP computed from GHP_Buccaneer.GGA (Primary)

CRP Offset From CRP
      Starboard         0.000 m
      Forward           0.000 m
      Up                0.000 m
Geodetic Datum      WGS84
      Latitude       40°38'05.5271"N
      Longitude      17°56'57.5460"E
Projection          Transverse Mercator (UTM) Zone: 34
      Easting         242003.638 m
      Northing       4502700.569 m
      Height              41.511 m (ellipsoidal)
Final Rig Heading    42.69 °T
                     44.68 °G (Convergence -1.99° World Standard)
Gyro C-O             -0.18 °
Position is 0.00 m @ 0.00 °T (1.99 °G) FROM intended location

CRP computed from GHP Blackbeard.GGA (Secondary)

Geodetic Datum      WGS84
      Latitude       40°38'05.5266"N
      Longitude      17°56'57.5450"E
Projection          Transverse Mercator (UTM) Zone: 34
      Easting         242003.611 m
      Northing       4502700.554 m
      Height              41.568 m (ellipsoidal)
Position is 0.00 m @ 0.00 °T (1.99 °G) FROM intended location

Positioning System Comparison (System 2 minus System 1)
      Delta Easting        -0.026 m
      Delta Northing       -0.016 m
      Delta Height          0.057 m

Party Chief:_____ Client Representative:_____
```

Page 1 of 7 3900570 TAP - 14:02 January 17, 2012

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	**Skate IV**
Project Name	
Project Number	**3900570 TAP**
Offset Name	**Drill Centre**
Sampling Started	**29-Jan-2012 08:47:18 (local)**
Sampling Ended	**29-Jan-2012 08:52:19 (local)**
Comment	**dtm=16.70m dtw=3.40m deck level above msl=2.46**

Results

	Mean	Standard Deviation
Local Latitude	**40°19'02.3481"N**	
Local Longitude	**18°23'36.7215"E**	
Ellipsoidal Height	**41.15 m**	
Local Easting	**278533.52 m**	**0.02 m**
Local Northing	**4466238.02 m**	**0.01 m**
Orthometric Height	**41.15 m**	**0.04 m**
WGS84 Latitude	**40°19'02.3481"N**	
WGS84 Longitude	**18°23'36.7215"E**	
Ellipsoidal Height	**41.15 m**	
Quality	**1.00**	**0.00 m**
Depth	**0.00 m**	**0.00 m**
Heading	**177.69°T**	**0.43°**

Line Navigation Data		**Point Navigation Data**	
Line Name	**N/A**	Point Name	**TAP IT 1008**
Chainage	N/A	Range TO	1.81 m
Cross Track	N/A	Bearing TO	301.14°T

Observations

Total	300
Used	300

Geodetic Parameters

Geodetic Datum	**WGS84**		
Ellipsoid	**WGS84**		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	**Transverse Mercator (UTM) Zone: 34**		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°41'13.6357"		
Calculation Mode	Spheroidal		

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	Drill Centre
Sampling Started	28-Jan-2012 13:58:26 (local)
Sampling Ended	28-Jan-2012 14:03:30 (local)
Comment	dtm=17.4m dtw=4.00m deck level above msl=3.03

Results

	Mean	Standard Deviation
Local Latitude	40°19'02.5357"N	
Local Longitude	18°23'36.9916"E	
Ellipsoidal Height	41.85 m	
Local Easting	278540.07 m	0.03 m
Local Northing	4466243.62 m	0.04 m
Orthometric Height	41.85 m	0.02 m
WGS84 Latitude	40°19'02.5357"N	
WGS84 Longitude	18°23'36.9916"E	
Ellipsoidal Height	41.85 m	
Quality	0.90	0.00 m
Depth	0.00 m	0.00 m
Heading	147.88°T	0.91°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	TAP IT 1009
Chainage	N/A	Range TO	2.38 m
Cross Track	N/A	Bearing TO	356.71°T

Observations

Total	300
Used	300

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°41'13.4673"		
Calculation Mode	Spheroidal		

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	Drill Centre
Sampling Started	13-Feb-2012 09:37:52 (local)
Sampling Ended	13-Feb-2012 09:42:54 (local)
Comment	dtm=19.50m dtw=3.40m dl above msl=2.28

Results

	Mean	Standard Deviation
Local Latitude	40°19'06.3646"N	
Local Longitude	18°23'42.2700"E	
Ellipsoidal Height	41.04 m	
Local Easting	278668.14 m	0.03 m
Local Northing	4466358.02 m	0.07 m
Orthometric Height	41.04 m	0.03 m
WGS84 Latitude	40°19'06.3646"N	
WGS84 Longitude	18°23'42.2700"E	
Ellipsoidal Height	41.04 m	
Quality	0.92	0.08 m
Depth	0.00 m	0.00 m
Heading	321.85°T	0.68°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	TAP IT 1011
Chainage	N/A	Range TO	4.55 m
Cross Track	N/A	Bearing TO	206.33°T

Observations

Total	300
Used	300

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°41'10.1806"		
Calculation Mode	Spheroidal		

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	Drill Centre
Sampling Started	13-Feb-2012 07:31:32 (local)
Sampling Ended	13-Feb-2012 07:36:34 (local)
Comment	dtm=19.9m dtw=3.00m dl above msl=2.25m

Results

	Mean	Standard Deviation
Local Latitude	40°19'06.4803"N	
Local Longitude	18°23'42.4601"E	
Ellipsoidal Height	41.08 m	
Local Easting	278672.73 m	0.01 m
Local Northing	4466361.46 m	0.02 m
Orthometric Height	41.08 m	0.04 m
WGS84 Latitude	40°19'06.4803"N	
WGS84 Longitude	18°23'42.4601"E	
Ellipsoidal Height	41.08 m	
Quality	1.22	0.04 m
Depth	0.00 m	0.00 m
Heading	344.60°T	0.31°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	TAP IT 1012
Chainage	N/A	Range TO	1.35 m
Cross Track	N/A	Bearing TO	108.13°T

Observations

Total	300
Used	300

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°41'10.0615"		
Calculation Mode	Spheroidal		

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	Drill Centre
Sampling Started	25-Feb-2012 07:46:57 (local)
Sampling Ended	25-Feb-2012 07:51:59 (local)
Comment	dtm=20.40m dtw=3.00m dl above msl=1.87

Results

	Mean	Standard Deviation
Local Latitude	40°19'07.9232"N	
Local Longitude	18°23'44.8793"E	
Ellipsoidal Height	40.69 m	
Local Easting	278731.15 m	0.01 m
Local Northing	4466404.27 m	0.02 m
Orthometric Height	40.69 m	0.04 m
WGS84 Latitude	40°19'07.9232"N	
WGS84 Longitude	18°23'44.8793"E	
Ellipsoidal Height	40.69 m	
Quality	0.81	0.03 m
Depth	0.00 m	0.00 m
Heading	302.09°T	0.20°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	TAP IT 1013
Chainage	N/A	Range TO	8.24 m
Cross Track	N/A	Bearing TO	18.58°T

Observations

Total	300
Used	300

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°41'08.5442"		
Calculation Mode	Spheroidal		

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	Drill Centre
Sampling Started	19-Feb-2012 07:41:41 (local)
Sampling Ended	19-Feb-2012 07:46:58 (local)
Comment	dtm=18.5m dtw=3.1m dl above msl=2.15m

Results

	Mean	Standard Deviation
Local Latitude	40°19'10.3016"N	
Local Longitude	18°23'32.3530"E	
Ellipsoidal Height	40.97 m	
Local Easting	278437.63 m	0.01 m
Local Northing	4466486.32 m	0.01 m
Orthometric Height	40.97 m	0.06 m
WGS84 Latitude	40°19'10.3016"N	
WGS84 Longitude	18°23'32.3530"E	
Ellipsoidal Height	40.97 m	
Quality	1.00	0.00 m
Depth	0.00 m	0.00 m
Heading	216.84°T	0.36°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	TAP IT 1022
Chainage	N/A	Range TO	2.41 m
Cross Track	N/A	Bearing TO	193.53°T

Observations

Total	300
Used	300

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°41'16.7416"		
Calculation Mode	Spheroidal		

Starfix Mean Position Report v4.02.21

Vessel

Vessel Name	Skate IV
Project Name	
Project Number	3900570 TAP
Offset Name	Drill Centre
Sampling Started	15-Feb-2012 14:57:38 (local)
Sampling Ended	15-Feb-2012 15:02:38 (local)
Comment	dtm=19.6m dtw=3.7m dl above msl=2.26m

Results

	Mean	Standard Deviation
Local Latitude	40°18'58.5840"N	
Local Longitude	18°23'47.1719"E	
Ellipsoidal Height	41.51 m	
Local Easting	278776.79 m	0.01 m
Local Northing	4466114.68 m	0.02 m
Orthometric Height	41.51 m	0.03 m
WGS84 Latitude	40°18'58.5840"N	
WGS84 Longitude	18°23'47.1719"E	
Ellipsoidal Height	41.51 m	
Quality	1.20	0.00 m
Depth	0.00 m	0.00 m
Heading	24.80°T	0.29°

Line Navigation Data		Point Navigation Data	
Line Name	N/A	Point Name	TAP IT 1024
Chainage	N/A	Range TO	2.80 m
Cross Track	N/A	Bearing TO	274.89°T

Observations

Total	300
Used	300

Geodetic Parameters

Geodetic Datum	WGS84		
Ellipsoid	WGS84		
Semi-Major Axis	6378137.000		
Inverse Flattening	298.2572235630		
Eccentricity^2	0.006694379990141		
DX	0.0000m	RX	0.0000 arc seconds
DY	0.0000m	RY	0.0000 arc seconds
DZ	0.0000m	RZ	0.0000 arc seconds
D Scale	0.0000ppm		
Rotation Convention	+RZ=-RLongitude		
Projection	Transverse Mercator (UTM) Zone: 34		
Latitude of Origin	0°00'00.0000"N		
Longitude of Origin	21°00'00.0000"E		
False Easting	500000.000m		
False Northing	0.000m		
Convergence	- 1°41'06.7355"		
Calculation Mode	Spheroidal		

APPENDIX E
DESCRIPTION OF FIELD OPERATIONS

Doc. No. P-OFF3-H1
Rev. 0 - MAY 2012

Self Elevating Platform Skate IV

Technical Specifications

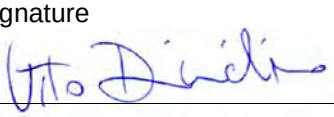
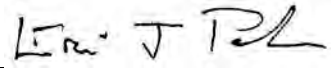
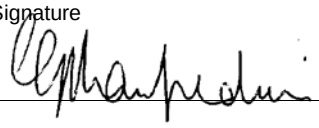
Barge, Equipment and Field Operations

D'APPOLONIA

Self Elevating Platform Skate IV

Technical Specifications

Barge, Equipment and Field Operations

Prepared by	Signature	Date
Vito Dimichino		02 May 2012
Controlled by	Signature	Date
Paolo Ravaschio		02 May 2012
Approved by	Signature	Date
Eric J. Parker		02 May 2012
Undersigned by	Signature	Date
Gian Maria Manfredini		02 May 2012

Rev.	Description	Prepared by	Controlled by	Approved by	Undersigned by	Date
0	First Issue	VD	PRA	EP	GMM	May 2012

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SELF ELEVATING PLATFORM SKATE IV
TECHNICAL SPECIFICATIONS
BARGE, EQUIPMENT AND FIELD OPERATIONS

1 JACK UP BARGE SKATE IV

Name	SKATE IV
IMO Number	N/A
I.N.S.B. Number	5120
Official Number	10338
Call Sign	N/A
Year & Port of Registry	2008, Kingstown
Type of Vessel	Modular Jack Up Platform
Name, Residence of Owner	Fugro Seacore Limited, Falmouth, UK
Flag	St. Vincent and the Grenadines

Skate IV is a self elevating platform fitted with drilling, sampling and testing equipment (Figure 1).

Figure 1: Skate IV Self Elevating Platform

1.1 GENERAL DATA

The main Skate IV characteristics are the following:

- Length Over All (LOA): 24 m;
- breadth: 12 m;
- moulded depth: 2 m;
- leg length: 27 m;
- leg diameter: 863 mm;
- gross tonnage: 147;
- net tonnage: 107.

1.2 PRIMARY SPECIFICATIONS

Primary specifications include:

- floats: (8) 12*3*2m;
- 4 spud legs 2*15m sections;
- 1*hydraulic power pack;
- payload capacity: 120 tons;
- fully modular for transport.

1.3 DRILLING AND GEOTECHNICAL EQUIPMENT

The barge is normally fitted with the equipment listed in Table 1. Additional/alternive equipment can be added according to project requirements.

Table 1: List of Geotechnical Equipment

ITEM	DESCRIPTION
DRILLING SYSTEM	
Comacchio MC-S1200 drilling rig	System includes power swivel, heavy lift winch and sample winch.
CR2 derrick	12 m derrick allowing the lifting and positioning of drill casing via Comacchio and Pilcon winches
Pilcon winch	Freefall winch used primarily for shell and auger drilling techniques
Mud and grout mixing system	Used to mix and hold drilling muds and grouts that can be used to stabilise or fill a borehole.
Heavy duty 7" casing	Thick walled casing used as a conductor casing from the barge to mudline (or required depth so that a seal is made).
DOWNHOLE SAMPLING AND TESTING	

ITEM	DESCRIPTION
Geobor S	Triple barrel rotary casing with 145mm external diameter.
NWY and HWY rods	Used for hammer sampling operations and CPT conduct or casing. Also used for grouting operations
Sampling System	• Type Wip push/piston system; • 76 mm (3") and 51 mm (2") Shelby tubes, 1 m long; • Core barrel; • Optional core catcher.
Top Push Cone Penetration Testing	• Gouma rams with 20 tonnes capacity; • Hydraulics supply 70 lpm @ 210 bar; • 20 mm per second penetration rate; • 3 channel Piezocone Penetrometer, cone tip area 10 cm^2 , 150 cm^2 sleeve, u2 type.
SPT	SPT kit in accordance with BS 1377 (1990)

1.4 POSITIONING SYSTEM

The following positioning equipment is installed on theplatform:

Table 2: List of Positioning Equipment

ITEM	DESCRIPTION
MODULARISED BOXES	
Primary Position and Computer System	• No. 2 StarPack DGPS receveir + I/F Cables; • No. 2 Laptop PC System c/w SEIS software; • No. 2 Gygabyte Network Port, Moxa Ethernet to serial convertor.
ADDITIONAL ITEMS	
DGPS Positioning	• No. 2 InterDigital antennae; • No. 5 30m lengths Belden; • No. 2 Scaff pole, HP Manual.
Tertiary Positioning and GPS Compass	CSI VectorPro
Display	No. 2 Ruggedised external Monitors c/w VGA cable
Power Equipment	No. 2 UPS (240v available onboard)
FANS System	DigiConnect WAN modem, Juniper Box and cabling

ITEM	DESCRIPTION
Sundries	Set of basic rig consumables
Calibration	Hemisphere EGNOS DGPS

1.5 OPERATING CONDITIONS AND STAND-BY

The Skate platform can work on a 24 hours per day, 7 days a week schedule.

Marine operating limits for the Skate IV jack-up are provided in Table 3.

Table 3: Marine Operating Limits

ITEM	DESCRIPTION	SEA STATE, H_{MAX}	WIND SPEED (M/S)
1	Crew Evacuations	1.5m	Wind Force 6
2	Crew Changes	1.5m	Wind Force 6
3	Moving Between BH locations	0.7m	Wind Force 5

These values are realistic limits based on experience for when conditions are likely to become unworkable. They are indicative guidelines only and can vary up or down subject to compounding effects and other environmental conditions e.g. wave shape, wave period. At all times the decision of the Barge Master and/or Senior Marine Supervisor is final in determining the suitability of the conditions for the operation.

For work in the night and locations close to shore, the Barge Master and tug's Captain will evaluate if more stringent conditions shall be met to ensure safety of operations.

2 POSITIONING

The DGPS Starfix-Positioning System is installed onboard. The system is based on a worldwide network of reference stations transmitting correction signals via the INMARSAT or EMS satellites.

2.1 CALIBRATION

Calibration of the positioning system is performed in port during mobilization. The calibration activities include:

- measurement of offsets: physical measurement of offsets of DGPS antenna from moonpool;
- gyro calibrations: comparison of gyro reading to known heading on quayside or sun azimuth observation;
- position verification: position of primary DGPS antenna computed from navigation system is compared to position derived by land survey if required by project specifications;
- position comparison: comparison of primary and secondary DGPS for minimum of 20 fixes.

Calibration results are included in the Mobilization report.

3 TOWING AND JACK UP

Towing of Skate IV from a mobilization port to the survey site or from a survey location to another is carried out using a dedicated tug vessel.

Figure 2: Skate IV towed by MTS Valour

3.1 TOWING

Prior to move the platform from a safe position, the Bargemaster with the assistance of the Project Manager and Supervisor assess the next location and apply the relevant method statements. Weather conditions and forecasts are reviewed, and a suitable timeframe for the move allocated. The Bargemaster at all times ensures that there is a sufficient weather window to allow a return to a safe haven. A safe position is a location where Skate IV has previously jacked up to "Storm Survival Height" and when the soil stratigraphy allows the jacking operations. If no safe position is available, the port shall be used.

The tug tows the barge towards the specified coordinates of the planned hole location.

Manoeuvring instructions to bring Skate IV onto the correct position are given by the Bargemaster.

Location and the current position of the Skate IV are shown on the navigation software display. Final position will be reached by Skate IV using the installation DGPS positioning system.

Communication between crew, Bargemaster and tug skippers will be achieved using the VHF and UHF radios installed on Skate IV and the tug. The Bargemaster has the overall responsibility of operations.

Once Skate IV is on position and at least four legs are spudded in the ground, or they can hold the rig weight, the tug is released and jacking operations can commence.

3.2 PRELOADING AND JACKING UP

After the final confirmation of the position the preloading operations can start.

Constant monitoring of leg penetrations is required to ensure the platform remains stable. This is done at the beginning or end of every shift as a minimum and records kept in the daily records or drill logs. Once preloading is complete Skate IV can be jacked to working height.

The proposed working height is minimal for drilling operations. The amount of air gap is managed and decided by the Bargemaster, taking into consideration site conditions and crew change procedures.

All leg jacking rams are to be left at half stroke giving the opportunity to be able to jack the barge level, up towards storm survival height or to jack down pull legs and take on a tow.

Leg penetrations and loads estimated by the hydraulic systems are recorded and verified by the Client Representative.

Each one of the four legs is required to be pre-loaded as out lined in the operating manual. The pre-load pressure is applied until a constant pressure is obtained. The order that legs are lowered and preloaded is not set and is determined by the Bargemaster on each individual location. Due to varying types of ground condition after initial preloading, it is necessary to monitor the pressures on each leg to maintain end bearing.

The working height of the platform will be determined by the Bargemaster taking in to consideration:

- the tidal range;
- the actual weather;

- the forecasted and predicted weather;
- the amount of works to be carried out at the location (anticipated duration);
- the ability to jack to storm survival height;
- size and frequency of passing ships and potential wash.

In the event of adverse weather conditions, the Bargemaster takes the decision if Skate IV will stay on position at storm survival height or jacks down and tows to a known safe haven.

4 DRILLING, SAMPLING AND TESTING METHODS

Based on the technical specifications and scope of work, the following guidelines are followed. Detailed methodologies for drilling, sampling and testing are given below.

4.1 DRILLING PROCEDURE

Drilling generally proceeds in accordance with normal offshore operating practice. The steps usually followed are described below:

- a casing section is lowered into the moon pool using a hydraulic winch and held in place with the hydraulic clamps;
- further sections are added with the aid of the hydraulic winch until enough sections are in place to touch down on the sea bed;
- if necessary the casing can be advanced using cable tool techniques. (ie. lowering and raising of a "shell", up and down the boring on a free-fall wireline) or by rotary drilling. Advancement of the casing can take place after each sample/test;
- this is repeated until the casing is suitably set to prevent movement and flush returns are adequate (with necessary tests at required depths).

4.2 DOWNHOLE SAMPLING

4.2.1 Push Sampling

Methodology for push sampling is described below:

- the drill string is pulled back by 1m;
- the push sample tool has a 76 mm Shelby tube attached to it (thin or thick walled depending on ground conditions);
- the drill string is pulled back by 1 m;
- the tool is lowered into the Geobor drill string and allowed to free fall into position, latching in the barrel;
- the drill string is pushed 1 m;
- the tool and Shelby tube (now containing the sample) is retrieved using the overshot device;

- the Shelby tube can then be disconnected from the tool and handed to the geotechnical engineer;
- the borehole can then be cleaned out using the NCD which is lowered into the drill string and advanced using rotary techniques.

4.2.2 Geobor S Rotary Coring

Methodology for Geobor S Rotary Coring is described below:

- a Geobor S core barrel is lowered down inside the borehole with the aid of the hydraulic winch and clamped in place;
- further sections are added with the aid of the hydraulic winch until enough sections are in place to touch down on to the base of the hole;
- drilling operations can now be progressed by connecting the rotary power swivel to the top of the drill string, turning on the flush and rotating the drill string. The driller is carefully coordinates the bit weight, rotation speed and pump flows / pressures to optimize sample quality and advancement of the borehole;
- the drilling is carried out using sea water as the flushing medium;
- drilling additives can be introduced to act as a viscosifier or to stabilise the borehole as is necessary. The additive is mixed aboard the jack-up in the fully agitated mud batching system;
- rotation speed varies depending by the geology;
- the Geobor S system drills a 146 mm O/D hole and recovers a 102 mm core. Clear core liners are used;
- once the borehole has been advanced by up to 1.5 m the sample can be retrieved by following the procedures below:
  - halting rotation and mud flow,
  - clamping the drill string,
  - disconnecting and raising clear the power swivel,
  - lowering an inner barrel retrieval device (overshot), upon wire line cable until it has latched,
  - retrieving the inner barrel to the drill deck;
- the sample tube is handed to the Geotechnical Engineer for cutting the liner, removing any water, removing any cuttings, labelling, photographing, describing and sealing in accordance with the contract requirements;
- the drill string is now clear to allow testing or sampling as per procedures. More Geobor Pipes may need to be added to the string to progress the borehole to the next test depth;
- during the drilling process the drilling flush is released back into the sea.

4.2.3 Piston sampling

Piston sampling is performed in very soft to soft cohesive formations. A 1 m long piston sampler is used to obtain the sample. The sampler is a hydraulically (water) operated unit incorporating a thin walled seamless sample tube for obtaining 76mm diameter undisturbed samples.

To obtain high quality undisturbed piston samples the driller needs to ensure that the piston sample is taken from below the casing. When a piston sample has been taken, the casing will be allowed to advance under its own weight into the soil to the depth of the base of the previous sample.

The casing is then be retained at this position and the material inside the casing is cleaned out (method dependant on ground conditions). The drill equipment is removed and a further piston sample taken below the casing. This cycle continues until denser ground is encountered.

Methodology for Piston sampling is described below:

- preparation for the piston sampling is carried out on deck in the horizontal plane;
- check piston sampling tube is clean, circular in section along the full length and free from dents, rust, burrs and pitting,
- check the piston sampler is in good working order;
- connect piston sampling tube to the floating piston;
- set the fixed piston to the leading edge of the piston sample tube and check that the floating piston is retracted back to the sampler head;
- throughout the sampling process, the water level in the borehole is balanced to be equal to or slightly greater than measured sea level;
- raise the piston sampler off the deck and lower into the casing using a hydraulic winch;
- piston sampler supported in the casing by rod spanner;
- NWY rods connected to the piston sampler head and the whole assembly is lowered gently to the seabed;
- further NWY rods to be added as required;
- rods supported on the nearest rod joint using a rod spanner or clamp;
- secure the NWY rods with chain shackled to the deck of the jack-up;
- connect water pump to the top of the protruding NWY rod;
- engage pump and pump water down the rods to activate the piston sampler, which then forces the floating piston downwards. As far as is reasonably practicable, the water pressure is gradually increased to progressively penetrate the sampling tube into the soil. Monitor the water pressure gauge;
- when the pump pressure reaches a stable value and water returns up the casing, halt pumping;
- leave the tube in the ground to 'sweat' in the tube and aid with sample recovery;
- break the suction at the base of the sample by pumping air down the vacuum breaker duct;
- gently pull back, drawing the piston sampler from the ground;
- pull NWY rods back and disconnect as required. This should be done as gently as possible to avoid the sample slipping due to excess vibration through the rods;
- when the sample is at the surface and out of the casing the assistant driller places a cap on the end of the piston tube to retain the sample;
- lower the sample to the deck and remove the tube. Care to be taken when handling the piston sampler to avoid contact with the cutting edge of the sample tube;

- the sample is then handed to the Geotechnical Engineer;
- the casing is lowered, cleaned out and the piston sampling operation repeated as required.

4.3 IN SITU TESTING

The Barge is fully equipped to perform SPT and PCPT in situ testing.

4.3.1 SPT Procedure

Methodology for SPT testing is described below:

- the SPT equipment and testing carried out in general accordance with BS1377 (1990) Part 9. SPT (split cone) is carried out in both cohesive and non-cohesive soils, where possible;
- the SPT split-spoon sampler assembly is lowered to the bottom of the borehole on the NWY drive rods, the rods being tightly coupled together by screw joints;
- the lowering of test equipment is carried out by the driller operating a hydraulic headline winch;
- on reaching the bottom of the borehole, the drive assembly (trip hammer), is connected to the top drive rod with a screw joint;
- care must be taken when connecting the trip hammer weight (67 kg) to the top rods as the trip assembly has to be activated;
- the penetration of the sampler is achieved by operating the trip hammer. The blows required to penetrate the sampler are counted at increments of 75 mm (x6) and recorded in two stages: the seating blows for 150 mm of penetration or 25 blows, whichever is reached first and the test drive for 300 mm penetration, or 50 blows;
- prior to the operation of the trip hammer the leading driller marks the increments on the top NWY drive rod. The marks are clearly made with chalk;
- if 25 blows are reached before 150 mm penetration, then the driller remarks the 75 mm increments (x4) starting from the 25th blow penetration depth;
- on completion of the test, the drive assembly is removed from the rods; the rods with the SPT split-spoon sampler assembly is withdrawn from the borehole;
- the SPT split-spoon sampler assembly is then be disassembled, the sample documented and the results recorded;
- all results are recorded within the borehole log;
- the SPT split-spoon sampler assembly is then be prepared for further tests.

4.3.2 CPT Procedure

In order to carry out Static Cone Penetration Tests over water, a purpose built steel frame comprising of a set of hydraulic powered rams and rod clamps is provided and securely fastened to the deck of a Jack-up Platform over the moonpool.

The rams and clamps are designed to transfer a maximum 20 tonnes thrust on the Cone Penetration rods and electric friction cone. Power for the rams is supplied by an on board

diesel hydraulic power pack and a generator is provided to run the computer used for processing the data obtained from the electric fiction cone.

Prior to commencing Cone Testing a rigid steel tube (HWY Drill Rod) is lowered from the Jack-up deck level to penetrate the sediment at seabed level. This tubing forms a guide or a "conductor tube" centralising and supporting the 25mm CPT rods as they are fed in to the tubing from deck level until they reach the seabed. The tubing is then checked for verticality and the cone penetrometer testing commenced.

On commencement of the test a calibrated electric cone is pushed into the soil using one metre long threaded rods. During each test measurements of local side friction are made in addition to cone end resistance. In general, tests are terminated when either the required penetration is achieved or the maximum available safe thrust capacity of the equipment is reached.

The cone end resistance and local side friction are registered by load cells in the cone and transmitted by an umbilical cable through hollow push rods to a laptop computer. During the test the computer plots continuous graphical records of cone end resistance, local side friction and friction ratio. The data is recorded on magnetic media at 2 cm depth intervals and this facility provides for automatic computer controlled processing and drawing of cone end resistance, local side friction and friction ratio. The rate of penetration is kept constant at approximately 2 cm per second. On completion of the test the cone string is pulled out of the soil.

VD/PRA/EP/GMM:tds

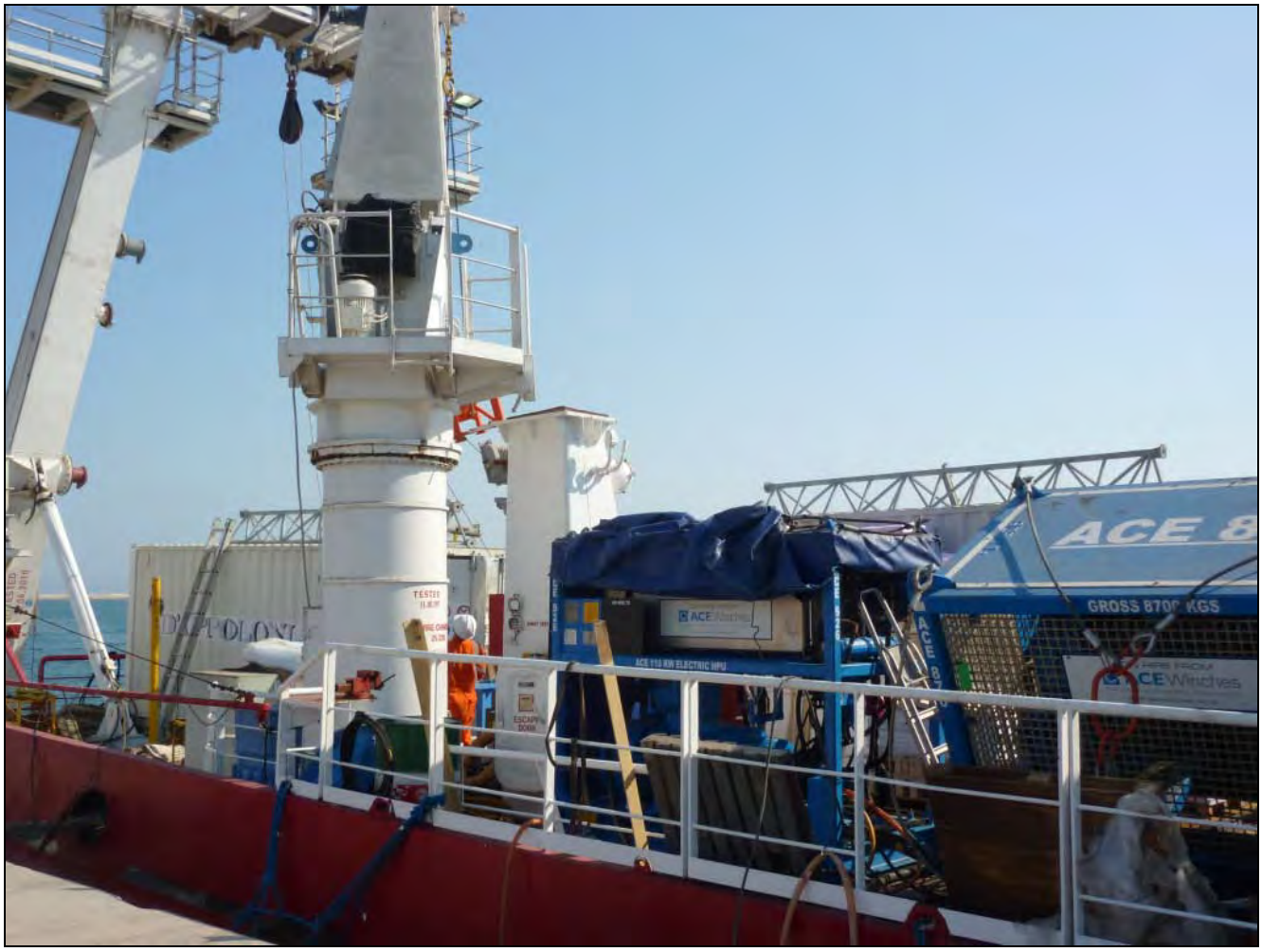
Doc. No. P-OFF-H45
Rev. 0 – DECEMBER 2011

D'APPOLONIA

D'Appolonia S.p.A.
Genoa, Italy

Geotechnical Field Laboratory

Container XTCU 222613/0
Technical Specifications



D'APPOLONIA

D'Appolonia S.p.A.
Genoa, Italy

Geotechnical Field Laboratory

Container XTCU 222613/0
Technical Specifications

Prepared by	Signature	Date
Aurelio R. Marchesini		14 December 2011
Controlled by	Signature	Date
Lorenzo Paoletti		14 December 2011
Approved by	Signature	Date
Gian Maria Manfredini		14 December 2011
Undersigned by	Signature	Date
Roberto Carpaneto		14 December 2011

Rev.	Description	Prepared by	Controlled by	Approved by	Undersigned by	Date
0	First Issue	ARM	LP	GMM	RC	December 2011

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GEOTECHNICAL FIELD LABORATORY
CONTAINER XTCU 222613/0
TECHNICAL SPECIFICATION

1 MAIN CHARACTERISTICS

Container number: XTCU 222613/0
Container type: 1 CC DRY VAN
Model: A20-09DE

Figure 1: Geotechnical Field Laboratory

Length: 6058 mm (20')
Width: 2438 mm (8')
Height: 2591 mm (8.5')
Approximate weight: 3 tons including equipment
Manufacturing date: June 2010

Containers certificates are provided in Appendix A.

2 EQUIPMENT

D'Appolonia field laboratory container is provided with the geotechnical equipment listed in Table 1.

Table 1: List of Equipment

No.	ITEM	MANUFACTORER
1	Laboratory Vane	Wykeham Farrance
2	Drying Ovens	Quincy Lab.
3	UU Triaxial System	Humboldt
4	Wax Melter	-
5	Extruder	G.E.T. Genoa
6	Triple Beam Balance	Ohaus
7	Point Load	Controls

List of equipment may change as described in the specific D'Appolonia proposal.

The laboratory layout is presented in Figure 2.

ARM/LP/GMM/RC:tds

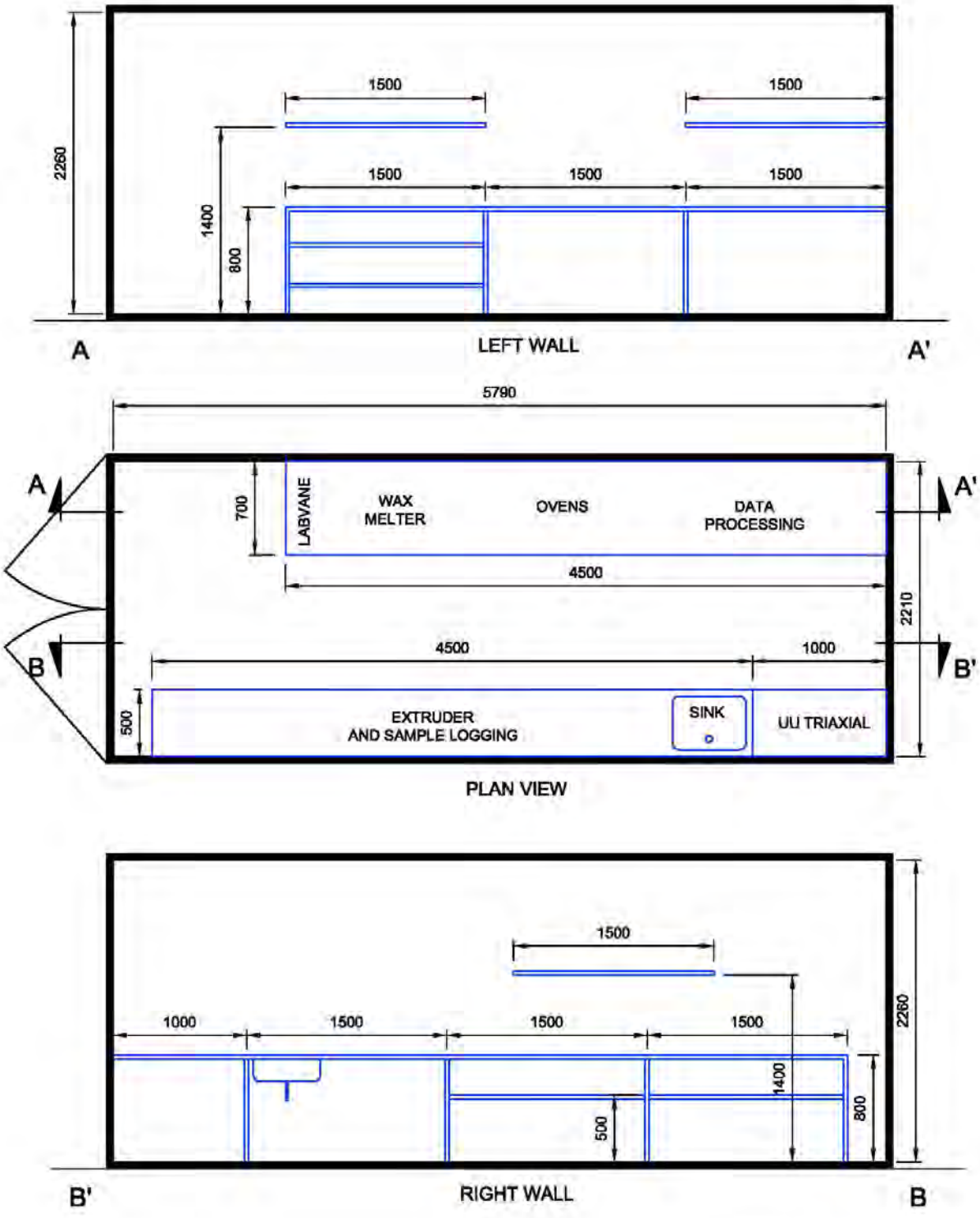


FIGURE 2

GEOTECHNICAL FIELD LABORATORY
LAYOUT

NOTE:
ALL QUOTES IN MILLIMETERS

APPENDIX A
CONTAINER CERTIFICATES

This appendix includes the following certificates:

No.	DESCRIPTION	DATE ISSUED	DATE EXPIRY	PAGES
1	Freight Containers Certificate	04 June 2010	-	1
2	Certificate of Compliance	18 July 2011	31 January 2014	1
3	Electric Installation Certificate (in Italian)	04 July 2011	-	1

FREIGHT CONTAINERS CERTIFICATE
CERTIFICATO DI CONTROLLO CONTENITORI

No. 10-932-16927-15

RINA file No. / *Pratica RINA N.*	10-932-16927
Manufacturer or Supplier / *Fabbricante o Fornitore*	Yangzhou Runyang Logistic Equipment Co.Ltd. Jiangsu P.R.China
Owner/Operator / *Proprietario/Utilizzatore*	EXTRCONT LTD, Succursale di Gravesano
Container type / *Tipo di contenitore*	1 CC DRY VAN
Model / *Modello*	A20-09DE
Size: Length (mm) / *Dimensioni: Lunghezza*	6058
Width (mm) / *Larghezza*	2438
Height (mm) / *Altezza*	2591
Type approved with certificate No. / *Prototipo omologato con certificato N.*	10-932-16927
disegno / *drawing*	A20-09DE-000
Max. gross weight (kg) / *Massa lorda massima*	30480
Allowable stacking (kg) / *Impilaggio ammissibile*	192000
Transversal racking (kN) / *Rigidità trasversale*	150
Side wall strength (kg) / *Resistenza pareti laterali*	0,5 P
End wall strength (kg) / *Resistenza pareti di estremità*	0,4 P
Manufacturing number / *Numero di costruzione*	from RY10009781 to RY 10009880
Registration number / *Numero di registrazione*	from XTCU222601 to XTCU222700(n.100 units)
Manufacturing date / *Data di costruzione*	June 2010

The undersigned certifies that the above mentioned containers have been manufactured and inspected in compliance with the approved type
Il sottoscritto dichiara che i contenitori sopra descritti sono stati costruiti e controllati in conformità al prototipo omologato.

Date June 04, 2010
Data

THE MANUFACTURER / *IL FABBRICANTE*

THIS IS TO CERTIFY that the above mentioned containers have been inspected in compliance with the RINA Rules.
***SI CERTIFICA CHE** i contenitori sopra descritti sono stati controllati in accordo alle norme del RINA.*

Markings / *Marche apposte*: **CSC n.: F/BV/10533/09**

Testing date / *Data collaudo*: June 04, 2010

TIR: GB/C 7954 BV/2009 **UIC: IC 83**

Note / *Remarks*: floor treatment- IM/RADALEUM FHP -60, in compliance with ISO 1496/1 & CSC rules

Issued at / *Rilasciato a:* Genoa(Italy) & Jiangsu (P.R.China) on / *il* June 04, 2010

RINA

***Via G.D'Annunzio 91 ***

CERTIFICATO DI CONFORMITÀ
CERTIFICATE OF COMPLIANCE

N. 11-932-18192/396

Pratica RINA N. 932-18192
RINA file No.

The undersigned,
surveyors to Registro Italiano Navale, (technical body authorized by Ministero dei Trasporti/Navigazione-Gazzetta Ufficiale della Repubblica Italiana n.301 del 29-12-1997) acting within the scope of RINA industrial branch (general conditions) ,according to RINA containers rule 1999 para 2.7.1and ISO standard states that, at the request of

Messrs Sogeco S.p.A. – Genoa – Italy

On 18th July 2011 at Bentivoglio (BO) c/o Carmacoring depot the following 20' special purpose steel container intended for fixed installation, has been inspected to verify its condition according to C.S.C. rule

Identification n.	CSC n.	Manuf. Date	Tare (kg)
XTCU 222613/0	**F/BV/10533/09**	**06/2010**	**2.000**

Above mentioned unit can be considered "freight" container; it can be used for a Max Gross weight limited to 24.000 Kgs for overseas ocean freight;
Allow. stacking: 144.000 kg
Transversal racking: 150 kN

Goods inside must be uniformly distributed and duly lashed; they must be handled by portainer, transtainer or anyway by top corner fittings vertically & simultaneously; (applicable standard for ISO container serie 1: ISO 3874 last edition).
Owner and Operator will be responsible in case of future damages and relevant maintenance/repairs according to CSC criteria in order to keep valid this certificate till to expiring date.

This statement is valid until **31st January 2014**
Note: Any other Marking, value and rating quoted on eventual C.S.C plate must be disregarded.

Allegati: NIL
Enclosures

Rilasciato a: Genoa Italy il: 18th July 2011
Issued at *on*

RINA
A. Capurro
RINA

E-mail: 07/07/2011

DICHIARAZIONE DI CONFORMITA' DELL'IMPIANTO ALLA REGOLA DELL'ARTE

Il sottoscritto CUCCHI ISIDORO, titolare o legale rappresentante dell'impresa CUCCHI ISIDORO S.r.l., operante nel settore installazioni elettriche, con sede in G. Facheris n. 7, comune di TRUCCAZZANO (MI), tel. 029583635, part. IVA 03136370966
☒ iscritta nel registro delle imprese (d.P.R. 7/12/1995, n. 581) della Camera C.I.A.A. di Milano n. 1645763
☒ iscritta all'albo Provinciale delle imprese artigiane (l. 8/8/1985, n. 443) di Milano n. 362510

esecutrice dell'impianto (descrizione schematica) Ipianto elettrico illuminazione+emergenza+prese Container inteso come:
☒ nuovo impianto ☐ trasformazione ☐ ampliamento ☐ manutenzione straordinaria ☐ altro

commissionato da: SO.GE.CO S.p.A., installato nei locali siti nel comune di TRUCCAZZANO (MI), V ia Monte Nero n. 2, di proprietà di SO.GE.CO S.p.A., Via S. Luca 4/6 GENOVA, in edificio adibito ad uso:
☐ industriale ☐ civile ☐ commercio ☒ altri usi;**Container XTCU 222613-0**

L'impianto ha una potenza massima impegnabile di 3 kW.

DICHIARA

sotto la propria personale responsabilità, che l'impianto è stato realizzato in modo conforme alla regola dell'arte, secondo quanto previsto dall'art. 6, tenuto conto delle condizioni di esercizio e degli usi a cui è destinato l'edificio, avendo in particolare:
☐ rispettato il progetto redatto ai sensi dell'art. 5 da
☒ seguito la norma tecnica applicabile all'impiego: DM 37/08; norma CEI 64-8
☒ installato componenti e materiali adatti al luogo di installazione (artt. 5 e 6)
☒ controllato l'impianto ai fini della sicurezza e della funzionalità con esito positivo, avendo eseguito le verifiche richieste dalle norme e dalle disposizioni di legge

Allegati obbligatori:
☐ progetto ai sensi degli articoli 5 e 7
☐ relazione con tipologie dei materiali utilizzati
☐ schema di impianto realizzato
☐ riferimento a dichiarazioni di conformità precedenti o parziali, già esistenti
☒ copia del certificato di riconoscimento dei requisiti tecnico-professionali
☐ attestazione di conformità per impianto realizzato con materiali o sistemi non normalizzati

Allegati facoltativi:
.....

DECLINA

ogni responsabilità per sinistri a persone o a cose derivanti da manomissione dell'impianto da parte di terzi ovvero da carenze di manutenzione o riparazione.

data 04/07/2011

Il responsabile tecnico
cucchi isidoro s.r.l.
(timbro e firma)

Il dichiarante
cucchi isidoro s.r.l.
(timbro e firma)

AVVERTENZE PER IL COMMITTENTE: responsabilità del committente o del proprietario, art. 8

APPENDIX F
HSE DOCUMENTATION

- HSE Minutes of Meetings
- Emergency Response Plans

QHSE NOTES

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: 1
Project Name	: TAP – Geotechnical Survey – Skate IV				
Client	: TAP			**Date**	: 18 Jan 2012

CREW CHANGE Summary/Observation:

On 18th January 2012 a meeting was held at Orientale Hotel in Brindisi during Skate IV geotechnical survey mobilization.

The meeting was attended by the following people:

- Statoil/TAP Project Manager Martine H. De Vries;
- Statoil/TAP Client Representative Peter Watson;
- Statoil/TAP Client Representative Chris Chisholn;
- D'Appolonia Site Manager Vito Dimichino;
- Fugro Seacore Team Leader Rob Fraser;
- Fugro Seacore Barge Master Don Matthews;
- MTS Valour Master.

During the meeting the main issue discussed was the crew change procedure.

On the late morning Fugro Seacore key personnel had a site visit at at S.Foca Landfall. After site visit a meeting was held at Local Port Authority at the presence of Captain Antonino Mascari (S. Foca Delegazione Spiagge Master). The meeting was attended also by Vito Dimichino and Peter Watson. Marine procedure concerning the jobs were discussed with Capt. Mascari.

Results of this site visit and of the meeting at S.Foca harbour were summarized to Martine De Vries.

Tug boat MTS Valour has a 2.2 m draft. It can enter in S.Foca touristic Port. All crew change will be held at S. Foca along quay. MTS Valour will pick up people onboard. The Tug boat will communicate to the harbor the entrance and the exit to the Port.

Due to the winter time one crew change will be without daylight.

There are two locations at approximately 3.5 m water depth, good weather will need to perform those locations.

A request has been to UXO team to perform photographies and reporting the seafloor condition on the shallower locations where presence of outcrops could be possible

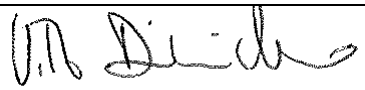
For contingency a small boat convenient for shallow water depths (fit for seven people, with lights for the night and with cabins) will be located in S.Foca harbor.

Risk assessment concerning the crew change vessel (MTS Valour) will be delivered to Statoil on 19th January.

Statoil asks to update the risk assessment procedure on the base of the crew change methodology discussed today.

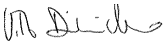
Actions

- **Provide to Statoil update risk assessment for crew change methodology (D'Appolonia/Fugro)**
- **Provide Statoil audit or inspection held on Skate IV and MTS Valour (D'Appolonia/Fugro)**
- **Try a convenient small boat for contingency in S.Foca Port (D'Appolonia/Fugro)**

Talk Conducted by			
POSITION	PRINT NAME	SIGNATURE	DATE
Site Manager	Vito Dimichino		19 January 2012

MINUTES OF MEETING

PROJECT No. 11-503-C28	MEETING LOCATION San Foca di Melendugno (LE)	DATE January 27, 2012
SUBJECT Kick off Meeting – Shallow water and Deep Water Geotechnical Locations Investigation Skate IV		Prepared by: VD

Participant	Company	Signature	Distribution List
Mr. P. Watson	Client Representative		
Mr. V. Dimichino	D'Appolonia		
Mr. A.R. Marchesini	D'Appolonia		
Mr. R. Fraser	Fugro Seacore		
Mr. D. Matthews	Barge Master		
Mr. M. Roberts	Tug Captain		

AGREEMENTS		
No.	Description	ACTION (Responsible/Due Date)

1	**Shallow locations** A kick off meeting was held on 26th January between D'Appolonia, Client and Fugro Seacore Representatives to discuss the possibilities to position the barge and perform drilling operations on the shallow locations. Seafloor in shallow locations (TAP_IT_1002, TAP_IT_1003, TAP_IT_1005 and TAP_IT_1006) is made by made by an heterogeneous surface with many rocks and carbonate reefs of height up to 2 m from seabed; These surfaces has been detected by geophysical survey and confirmed by photos carried out by divers during UXO survey. Two issues have been underlined for the approach of Skate IV to these locations: 1. Operational difficulties to reach the locations and to jack up Skate IV on the rocky seafloor; 2. Environmental issues relating to the access of Skate IV at the above locations. <u>Operational issues</u> Fugro Seacore has analysed the detailed bathymetry provided by D'Appolonia after the multibeam survey. Furthermore the side scan sonar data have been checked. Locations to be carried out have been positioned on the bathymetric chart and the divers photos have been observed. Their evaluation is that they can technically jack up in these locations and perform drilling and testing, basically by crushing the rocks to get on position with the jack up legs. The leg penetration in rocks will depend by the rock strength. They cannot access to the locations TAP_IT_1002, TAP_IT_1003, TAP_IT_1005 and TAP_IT_1006 without damage to the rocky outcrops by the legs of the jack up and the drill string operation. <u>Environmental issues</u> The possibilities to create environmental damages during operations have been analysed. Statoil/TAP (Ref. EM-C200-DAP-0063) outlined that their coral experts looked at the rocky outcrops photographed by divers during UXO survey. They have been defined these outcrops as carbonate reefs which are very sturdy and difficult to damage. The only damage could be inflicted by legs of the platform or drill string in contact with the outcrops. It is therefore by TAP TSP West evaluated that based on this	

	environmental evaluation that locations where rocky outcrops have been identified can be carried out. D'Appolonia feedback have been requested by TAP. D'Appolonia environmental engineers exclude the presence of white coral on the area. The white coral is possible to find only in water deeper than 200m. On the outcrops bioconstructions are visible. During the operations the particular care will be used to avoid damage, but they cannot be completely exclude during leg penetrations. It has been observed it is important the analysis of this subject on the basis on the perception of the project of the local population and on the an attention of media to our operations. D'Appolonia asks Statoil to provide their comments on the environmental issues on the basis of the operational procedure described in the section below. **Deep Locations** Barge Master considers that to perform the deepest water locations (TAP_IT_1025, water depth 19.5m and TAP_IT_1023, water depth 18.5 m) is needed very good weather conditions. When the best weather will be obtained the TAP_IT_1025 location will be performed. The Barge Master considers that the deeper water boreholes should be done ahead of the shallower water CPT and borehole location in any good weather, **Statoil Representative Comments:** 1. In the TAP TSP West evaluation, in the section on Environmental issues above, Statoil may consider that mechanical damage to the carbonate reefs and associate plants and animals as an environmental issue. Statoil may not wish to be seen to endorse what some may see as wilful damage to the environment in the full gaze of the local public and newspapers; 2. If the locations 1002, 1003, 1005 and 1006 cannot be accessed by the Skate IV without serious mechanical damage to the carbonate reef and the environmental issues associated with that, Statoil may propose that alternative locations, which can be accessed without mechanical damage, are chosen and that these locations should be cleared by UXO divers when they return to complete the outstanding UXO work when Skate IV vacates the Italian Landfall.	

	Fugro Seacore Comments: The Bargemaster is satisfied that the shallow locations are accessible based on the water depth and some photos seen. However, there is still an operational risk when locating the platform in areas with gullies and boulders (e.g. damage to legs/bearings)	

QHSE NOTES

Project No.	: 11-503	**Location**	Italian Landfall	**Report No.**	: 2
Project Name	: TAP – Geotechnical Survey – Skate IV				
Client	: TAP			**Date**	: 28 Jan 2012

PROJECT/SITE HEALTH AND SAFETY INDUCTION:

On 28th January 2012 the Health and Safety Induction was carried out for new comers on the Skate IV by Bargemaster. In particular Gabriele Cavallini and Claudio Piatti first and Vito Dimichino and Peter Watson later were conducted through the barge and explained by the Bargemaster about activities on the barge and associated risks. All equipment present on the Skate IV and associated risks were explained in detail by Bargemaster. Explanations were referred to the following issues:

SAFETY:

- **Contract/Project Details**: high risk activities, method statements, work procedures;
- **Access & Boat Transfer**: transit suits, emergency equipment in boat, approaching the rig & disembarking, rope ladder;
- **Vessel Layout**: emergency/evacuation master point; VHF, rest room, workshops. Emergency Response Plan location;
- **Man Overboard**: what to do, location of life buoys. Bargemaster is planning to hold a simulation of man overboard in next days;
- **Liferaft**: location, operation, access;
- **Lifejackets**: location, operation, donning, entry into water;
- **Fire Extinguishers & Procedures**: type, location;
- **Mechanical/Electrical Plant and Equipment**: danger, guarding, isolation, standing clear;
- **Cranes**: lifting equipment, slinging & load security;
- **Working & jack-up operations**: drill deck, working at height, over the side work, harnesses, fall arrestors, standing clear, lifejackets, hotwork: safety signs;.
- **Housekeeping**: cleaning, hygiene, washing facilities, stowage of plant, equipment & tools, slips, trips and falls;
- **Use and Maintenance of Personal Protective Equipment**: stowage, overalls, hard hat, footwear, eye protection, gloves, ear protection.

HEALTH:

- **Noise & Vibration**: plant/equipment, ear protection;
- **Hazardous Substances**: lubricants, grout;
- **First Aid**: location of equipment: stretcher, first aid kits, eye wash, firs aiders;
- **Accident & Incident Reporting**: procedures and report forms;
- **Manual Handling**: casing, stores etc.

ENVIRONMENT:

- **Waste/Pollution**: oil spills, emergency spill kits, rubbish

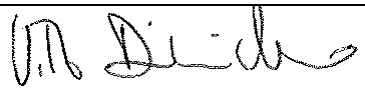
Bargemaster highlighted the importance of asking him any question about operations, equipment and procedures in any moment in case of doubt or indecision. Bargemaster highlighted the right of everyone to stop the work at any time if something wrong is noted.

New comers of the night shift personnel (Aurelio Marchesini and Mahmoud Nassar) will attend the same induction as soon as onboard.

Actions

- **Bargemaster is planning to hold a simulation of man overboard in next days (Fugro)**

- **Ask clarifications to bargemaster/stop the work in case of doubt or indecision (All)**
- **Inductions shall be carried out for nightshift people new comers on the Skate IV when the first night shift will be performed (Night shift Bargemaster)**

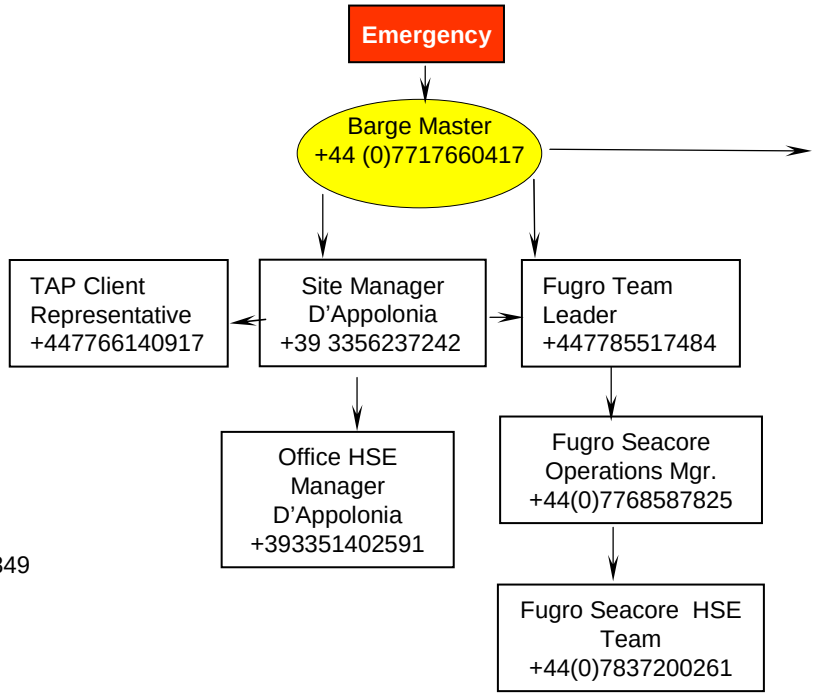
Reported by			
POSITION	PRINT NAME	SIGNATURE	DATE
Site Manager	Vito Dimichino		31 January 2012

Skate IV Platform

Contact: Barge Master
Don Matthews
Phone: +44 (0)7717 660 417
Skate Rig Phone: 44 (0)7785 397 849

Platform Operator: Fugro Seacore

Emergency Contacts Numbers



Coast Guard of San Foca

Com. Mascali
Phone: +39 3204365658
VHF 16

Assistance in Lecce:

Hospital: Ospedale Vito Fazzi
73100 Lecce - P. F.
Muratore
Telephone Centre: 0832
661111
Police: 113
Medical: 118
Fire: 115

CLIENT TAP

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Duty Manager – Steve Williams:
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Cell: +44 (0)7785 950472
HSE Advisor – Steve Dadd
Phone: +44 1326 254 500
Cell: + 44 (0)7837200261
Operations Manager – Marcus Rampley
Phone: +44 1326 254 500
Cell: +44 (0)7768 587825