



DATE TEHNICE / ENGINEERING DATA														
ELEMENTE TRASEU		ORIENTARE (°N) / RAZA CURBURI (m)		ROUTE ITEMS	STRAIGHT HEADING (°N) / BEND RADIUS (m)		5,000		18° 5' 38"		7,000		5° 25' 47"	
TRAVERSARE CONDUCTA / CABLU					CABLE / PIPELINE CROSSING									
TIP SOL LA SUPRAFATA FUNDULUI MARI					SURFACE SEABED SOIL									
DATE CONDUCTA	TIP OTEL / DIAM. EXT. (mm) / GROSIME PERETE (mm)		PIPELINE DATA	STEEL GRADE / O.D. (mm) / WALL THICKNESS (mm)								ZONA 4 - NISIP (NOTE 9) / ZONE 4 - SAND (NOTE 9)		
	GROS.PERETE DISP. ANTIDEFORMARE (mm)/ INTERVAL (m)			BUCKLE ARRESTOR W.T. (mm) / SPACING (m)								DNV SAWL 450 FDU / 762 / 17.5		
	STRAT ANTI-COROZIV/GROS (mm)/DENSITATE(kg/m³)			ANTI-CORR. COAT / THICK (mm) / DENSITY (kg/m³)								NU EXISTA / NONE		
	STRAT INT. PROT. / GROSIME (µm) / DENSITATE (kg/m³)			INTERNAL COAT. / THICK (µm) / DENSITY (kg/m³)								FBE / 0.38 - 0.815 / 1,350		
	STRAT BETON- GROSIME (mm) / DENSITATE (kg/m³)			CONCRETE COATING: THICK (mm) / DENSITY (kg/m³)								STRAT INTERIOR PROTECTIE (NOTE 10) / 50 / 1,500 / INTERNAL FLOW COAT (NOTE 10) COATING / 50 / 1,500		
	TIP SUDURA / TIP UMPLUTURA / DENSITATE (kg/m³)			FIELD JOINT TYPE / INFILL / DENSITY (kg/m³)								75 / 3,050		
	TIP ANOD / MASA (Kg) / INTERVAL MONTAJ (segmente)			ANODE BRACELETS TYPE / MASS (kg) / SPACING (joints)								FBE + POLIURETAN 128 - 224 / FBE + POLYURETHANE / 128 - 224		
												ALUMINIU (40x800) / 161 / 1 LA 10 SEGMENTE / Al (40x800) / 161 / 1 EVERY 10 JOINTS		
	GREUTATE CONDUCTA (kN/m)			PIPELINE WEIGHT (kN/m)								9.070		
	IN APA			SUBMERGED								6.693 / 2.03		
IN FUNCTIUNE (kN/m) / SG		OPERATION (kN/m) / SG								2.701 / 142				
LUCRARI PRE-INSTALARE CONDUCTA		ADANCIME DRAGARE (m) / LATIME (m)		PRE-LAY INT. WORKS	DREDGING DEPTH (m) / WIDTH (m)						NU EXISTA / NONE			
SUPPORTI / SALTELE BETON					SLEEPERS / MATTRESSES						NU EXISTA / NONE			
LUCRARI POST-INSTALARE CONDUCTA		ADANCIME SANT (m)		POST-LAY INT. WORKS	TRENCHING DEPTH (m)						NU EXISTA / NONE			
TIP UMPLUTURA / STRAT ACOPERITOR (m)					BACKFILLING TYPE / COVER TOP (m)						NU EXISTA / NONE			
STRAT PIETRIS				GRAVEL DUMPING								NU EXISTA / NONE		
LUNGIME TRONSON ADMISA		INSTALARE (m)		ALLOWABLE SPAN LENGTH	INSTALLATION (m)						70.6			
FUNCTIONARE (m)					HYDROTEST (m)						44.0			
CERINTE SPECIFICE		TOLERANTA LA INSTALARE (m)		SPECIFIC REQUIREM.	LAY TOLERANCE (m)						45.0			
AL TELE					OTHER						±10			

SE APLICA PREVEDERILE PRIVIND CONFIDENTIALITATEA DIN CONTRACTUL DE CONCESIUNE NEPTUN DEEP SI A CONTRACTULUI DE OPERATIUNI COMUNE APERENT SI/SAU CONTRACTELOR DE CONFIDENTIALITATE APLICABILE IN NOMELE EXXONMOBIL EXPLORATION AND PRODUCTION ROMANIA LIMITED

SUBJECT TO CONFIDENTIALITY PROVISIONS OF THE NEPTUN DEEP CONCESSION AGREEMENT AND RELATED JOINT OPERATING AGREEMENT AND/OR THOSE OF THE APPLICABLE NON-DISCLOSURE AGREEMENT ON BEHALF OF EXXONMOBIL EXPLORATION AND PRODUCTION ROMANIA LIMITED.

NOTE

1. DACA NU SE PRECIZEAZA ALTELP TOATE DIMENSIUNILE SUNT EXPRIMATE IN METRI.
2. TOATE COTELE DE NIVEL SUNT IN METRI, RELATIV LA NIVELUL MARI.
3. DATELE BATIMETRICE PROVIN DIN BAZA DE DATE GEOTEHNICE SI GEOFIZICE GIS ACTUALIZATA IN 2014, DOCUMENT FUGRO J3135-R-001031 ACTUALIZAT PENTRU PROIECTUL NEPTUN DEEP. BATIMETRIA PENTRU ACCES PLATFORMA ACTUALIZATA PRIN DOC. FUGRO 160424.V3 (2017).
4. DATELE DE SOL PROVIN DIN RAPORTUL INTEGRAT NEPTUN DEEP ROND-EW-GRPT-00-0015-001 A SE VEDEA DOCUMENTUL CU NUMARUL ROND-EW-YBDBM-20-0002. DATELE DE SOL LA LOCATIA PLATFORMEI ACTUALIZATE CU MASURATORILE FUGRO 2017.
5. DIRECTIILE SUNT INDICATE IN RAPORT CU NORDUL STEREO 70.
6. PENTRU DETALII PRIVIND MODUL DE CONECTARE LA LOCATIA PLATFORMEI SE VA CONSULTA PLANSA ROND-EW-YDPAL-22-0011 - ARANJAMENT CONDUCTA DE ADUCIUNE SI CONDUCTA DE GAZE NATURALE LA PLATFORMA (SWP).
7. STERS.
8. PENTRU DETALII PRIVIND ANOZI CONSULTATI PLANSA ROND-EW-YDCPD-24-0002 SI DOCUMENTUL ROND-EW-YRSTY-24-0002.
9. CARACTERIZAREA SOLULUI ESTE BAZATA PE NOTA TEHNICA 408009-00349-TN-003 (A SE VEDEA SI NOTA 4).
10. STRAT INTERIOR CONDUCTA CONFORM SPECIFICATIEI STRAT EPOXIDIC INTERN ROND-EW-YSPDS-20-0039.
11. A SE NOTA CA GROSIMEA ANOZILOR SI DISTANTA ADMISA DINTRE EI VOR FI RE-EVALUATE IN DETALIILE DE EXECUTIE, IN BAZA GROSIMII ACTUALE A STRATULUI DE BETON.

NOTES

1. ALL DIMENSIONS ARE IN METERS, UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS ARE IN METERS AND RELATIVE TO MSL.
3. BATHYMETRY DATA FROM 2014. GEOTECHNICAL AND GEOPHYSICAL GIS DATABASE UPDATE, FUGRO DOCUMENT J3135-R-001031 FOR THE NEPTUN DEEP DEVELOPMENT. PLATFORM APPROACH BATHYMETRY UPDATED BY FUGRO DOC. 160424.V3 (2017).
4. SEABED SOIL DATA FROM NEPTUN DEEP INTEGRATED REPORT ROND-EW-GRPT-00-0015-001, SEE DESIGN DOCUMENT NUMBER ROND-EW-YBDBM-20-0002. PLATFORM LOCATION SOIL DATA UPDATED BY FUGRO SURVEY 2017.
5. HEADINGS INDICATED ARE RELATIVE TO STEREO 70 NORTH.
6. FOR DETAILS OF TIE-INS AT PLATFORM LOCATION REFER TO DRAWING: ROND-EW-YDPAL-22-0011 - FLOWLINE AND PRODUCTION LINE PLATFORM (SWP) APPROACH ARRANGEMENT.
7. DELETED.
8. FOR ANODE DETAILS REFER TO DRAWING ROND-EW-YDCPD-24-0002 & DOCUMENT ROND-EW-YRSTY-24-0002.
9. SOIL CHARACTERIZATION BASED ON TECHNICAL NOTE 408009-00349-TN-003 (SEE ALSO NOTE 4).
10. INTERNAL FLOW COAT AS PER INTERNAL EPOXY COATING SPECIFICATION ROND-EW-YSPDS-20-0039.
11. NOTE THAT ALLOWABLE SPANS AND ANODE THICKNESSES ARE TO BE RE-ASSESSED IN DETAILED DESIGN BASED UPON ACTUAL CONCRETE COATING THICKNESSES.

DOCUMENTE REFERINTA

NUMAR PLANSA	DESCRIERE
ROND-EW-YDCPD-24-0002	DETALII TIPICE ANOZI CONDUCTA DE GAZE NATURALE

REFERENCE DOCUMENTS

DRAWING NUMBER	DESCRIPTION
ROND-EW-YDCPD-24-0002	PRODUCTION PIPELINE TYPICAL ANODE DETAILS

SCALA

0 200 1,000 2,000 METRI
SCALA ORIZONTALA 1:20,000 (IN FORMAT "A1")

SCALE BAR

0 200 1,000 2,000 METERS
HORIZONTAL SCALE 1:20,000 (AT "A1" SIZE)

PARAMETRI GEODEZIE SI PROIECTIE

DATE GEODEZICE	STEREO 70
PROIECTIE	Dublu Stereografica
Meridianul central (MC)	25.0
Latitudine Origine	46.0
Falsa origine estica	500,000.0
Falsa origine nordica	500,000.0
Factor de scala la MC	0.99975
DATE VERTICALE	MSL (NIVELUL MARI)

GEODETIC & PROJECTION PARAMETERS

GEODETIC DATUM	STEREO 70
PROJECTION	Double Stereographic
Central meridian (CM)	25.0
Latitude of Origin	46.0
False Easting at origin	500,000.0
False Northing at origin	500,000.0
Scale factor at CM	0.99975
VERTICAL DATUM	MSL

PLAN DE REFERINTA / KEY PLAN

ACRONIME

TP - PUNCT SCHIMBARE DIRECTIE
KP - POZITIE KILOMETRICA (CONDUCTA)
IP - PUNCT INFLEXIUNE

ACRONYMS

TP - TURN POINT
KP - KILOMETRIC POINT
IP - INFLEXION POINT

Conform legislatiei romanesti, virgula si punctul sunt utilizate invers, pentru definirea zecimalelor.

Dimensiunile in sistem US au fost definite astfel: Simbolul virgula a fost folosit pentru separarea cifrelor din interiorul numerelor care definesc sute, mii sau zeci in functie de caz. Subunitatile de masura (zecimalele) au fost separate prin punct. Prin urmare zecimalele vor fi cifrele din interiorul numerelor aflate dupa simbolul punct.

According to the Romanian legislation, the comma and the point are used in reverse, for the definition of decimals.

The dimensions in the US system have been defined as follows: The comma symbol has been used to separate digit inside the numbers when the digit define hundreds, thousands or tens depending on the case. The digit of decimals are separated by a point. In according with the rules in Romania the coma and point are use in opposite way for defined the digit inside of number. For this reason all the digit inside of number after point will be read like decimals.

PROIECT NEPTUN DEEP / NEPTUN DEEP PROJECT

REV.	REV. DATE	REV. DESCRIPTION	ORIG.	REV.	APP.	REV.	APP.
2	15DEC17	RE-ISSUED FOR IFD				FK	EP SS JG
1	26SEP17	RE-ISSUED FOR IFD				FK	EP SS JG
0	04AUG17	ISSUE FOR IFD				RO	EP SS JG

CONDUCTA DE GAZE NATURALE 30" 30-INCH PRODUCTION PIPELINE

FISA ALINIAMENT
ALIGNMENT SHEET

FISA NR. 007 DIN 016
SHEET 007 OF 016

1 : 20,000 NR. PLANSA / DWG. NO. DTAC 2-D FAZA / PHASE REV. / REV. A1+ (1092x594)