



DATE TEHNICE / ENGINEERING DATA									
ELEMENTE PE TRASEU	ORIENTARE (°N) / RAZA CURBA (m)		ROUTE ITEMS	STRAIGHT HEADING (°N) / CURVE RADIUS (m)		3,880		77° 33' 43"	
	TRAVERSARE	CONDUCTA		CROSSING	PIPELINE	NU SE APLICA / N.A.		NU SE APLICA / N.A.	
		CABLU			CABLE	NU SE APLICA / N.A.			
DATE SISTEM OMBILICAL	TIP SOL PE SUPRAFATA FUNDULUI MARI		SEA BED GROUND SOIL	ZONA 4 - ARGILA PRAFOASA, GRI CU REZISTENTA SCAZUTA SPRE MEDIE (USOR SUPRACONSOLIDATA) (NOTA 4) / ZONE 4 - LOW TO MEDIUM STRENGTH (SLIGHTLY OVER CONSOLIDATE) GREY SILTY CLAY (NOTE 4)					
	DIAMETRU EXTERIOR (mm)		OD (mm)	160					
	GREUTATE IN AER (USCATA)		DRY WEIGHT	347					
	GREUTATE IN APA		SUBMERGED WEIGHT	144					
	RAZA MINIMA CURBA (m) INSTALARE / FUNCTIUNE		MIN. CURVE RADIUS (m) INSTALLATION / OPERATION	6.6 / 9.5					
SAPATURA & UMPLERE	ADANCIME SANT (m)		TRENCHING DEPTH (m)	VA FI CONFIRMAT (NOTA 14) / TBD (NOTE 14)				NU EXISTA / NONE	
	TIP UMPLUTURA / STRAT ACOPERIRE (m)		BACKFILLING TYPE / COVER TOP (m)	UMPLUTURA NATURALA (TBC) / 0.2 (MIN.) (NOTA 14) / NATURAL BACK FILLING (TBC) / 0.2 (MIN.) (NOTE 14)				NU EXISTA / NONE	
CERINTE SPECIFICE	TOLERANTA LA INSTALARE (m)		LAY TOLERANCE (m)	±10					
	STRAT PIATRA / SALTELE		ROCK DUMP / MATTRESSES	NU SE APLICA / N.A.					

SE APLICA PREVEDERILE PRIVIND CONFIDENTIALITATEA DIN CONTRACTUL DE CONCESIUNE NEPTUN DEEP SI A CONTRACTULUI DE OPERATII COMUNE AFERENT SI/SAU CONTRACTORUL DE CONFIDENTIALITATE APPLICABLE IN NUMELE EXXONMOBIL EXPLORATION AND PRODUCTION ROMANIA LIMITED.									
NOTE									
1. DACA NU SE PRECIZEAZA ALT FEL TOATE DIMENSIUNILE SUNT EXPRIMATE IN METRI. 2. DATELE BATIMETRICE PROVIN DIN BAZA DE DATE GEOTEHNICE SI GEOFIZICE GIS ACTUALIZATE IN 2014, DOCUMENT FUGRO J3193-R-00103). PENTRU PROIECTUL NEPTUN DEEP. BATIMETRIA PENTRU ACCESUL LA LOCATIA PLATFORMEI A FOST ACTUALIZATA PRIN DOCUMENTUL FUGRO 160424.V3 (2017) 3. DATELE DESPRE SOLUL DE PE FUNDUL MARI PROVIN DIN RAPORTUL INTEGRAT NEPTUN DEEP. ROND-EW-GRPT-00-0015-001. A SE VEDEA DOCUMENTUL CU NUMARUL ROND-EW-YB08M-20-0002 PENTRU DATE DESPRE SOL LA LOCATIA PLATFORMEI ACTUALIZAT CU MASURATORILE FUGRO 2017. 4. PENTRU DETALII PRIVIND CONEXIUNILE DINTRE PLATFORMA SI SONDELE SUBMARINE, SE VOR CONSULTA PLANSELE: -ROND-EW-YDLAY-22-0012 - PLAN ACCES SISTEM OMBILICAL CONDUCTA ADUCTIUNE DOMINO LA DODC1. -ROND-EW-YDLAY-22-0005 - PLAN ACCES SISTEM OMBILICAL CONDUCTA ADUCTIUNE DOMINO LA DODC2. -ROND-EW-YDPAL-22-0011 - PLAN ACCES CONDUCTA ADUCTIUNE SI CONDUCTA GAZE NATURALE LA PLATFORMA DE PRODUCTIE (SWP) 5. IN ZONA PLATFORMEI DE PRODUCTIE, SISTEMUL OMBILICAL VA FI PROTEJAT CU SALTELE DIN BETON. 6. SISTEMUL OMBILICAL VA FI AMPLASAT IN SANT, DE LA PLATFORMA DE PRODUCTIE, PANA LA O ADANCIME DE 200m. 7. LUNGIMEA TOTALA A SISTEMULUI OMBILICAL NU INCLUDE LUNGIMEA TUBULUI J SI LUNGIMEA SURPLUSULUI DE PE FUNDUL MARI PENTRU TRACTARE SAU SITUATII NEPREVAZUTE. 8. DATELE SISTEMULUI OMBILICAL TREBUIE SA FIE CONFIRMATE DUPA DESEMNAREA FURNIZORULUI. VALORILE CURENTE SUNT INDICATIVE SI VOR FI ADOPTATE CAND VOR FI STIUTE. 9. ORIENTARILE INDICATE DUPA NOROUL STEREO 70. 10. LUNGIMEA FINALA A SISTEMULUI OMBILICAL DOMINO DE LA SWP LA DODC-1 ESTE EGALA CU 26.010m. ACEASTA EXCLUDE LUNGIMEA DE 130m A TUBULUI J SI APROXIMATIV 60m LUNGIMEA SURPLUSULUI. 11. CURBA DE COMPENSARE DE APROXIMATIV 60m. AJUSTAREA FINALA A LUNGIMII CURBEI DE COMPENSARE VA FI DETERMINATA IN PROIECTUL DETALIAT. AJUSTAREA FINALA A SISTEMULUI OMBILICAL DE 3m. DACA ESTE NECESARA PENTRU ALINARE. 12. DISTANTA MINIMA DE 100m INTRE CONDUCTA DE ADUCTIUNE SI SISTEMUL OMBILICAL (120m INCLUZAND TOLERANTE) DATORITA CERINTELOR INCALZIRII ELECTRICE DIRECTE DEHL. 13. TIPUL DE UMPLUTURA VA FI CONFIRMAT IN PROIECTUL DETALIAT.									
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 J3193-R-00103) FOR THE NEPTUN DEEP DEVELOPMENT. PLATFORM LOCATION APPROACH BATHYMETRY UPDATED BY FUGRO DOCUMENT NUMBER 160424.V3 (2017) 4. SEABED SOIL DATA FROM NEPTUN DEEP INTEGRATED REPORT ROND-EW-GRPT-00-0015-001. 5. SEE DESIGN DOCUMENT NUMBER ROND-EW-YB08M-20-0002 FOR PLATFORM LOCATION SOIL DATA UPDATED BY FUGRO SURVEY 2017. 6. FOR DETAILS OF TIE-INS TO THE PLATFORM AND THE SUBSEA WELLS REFER TO DRAWINGS: - ROND-EW-YDLAY-22-0012 - DOMINO FLOWLINE UMBILICAL WELL APPROACH LAYOUT DODC1 - ROND-EW-YDLAY-22-0005 - DOMINO FLOWLINE UMBILICAL WELL APPROACH LAYOUT DODC2 - ROND-EW-YDPAL-22-0011 FLOWLINE AND PRODUCTION LINE PLATFORM (SWP) APPROACH ARRANGEMENT. 7. AT THE SHALLOW WATER PLATFORM LOCATION THE UMBILICAL WILL BE PROTECTED BY CONCRETE MATTRESSES. 8. THE UMBILICAL WILL BE TRENCHED FROM THE SHALLOW WATER PLATFORM TO A WATER DEPTH OF 200m. 9. TOTAL LENGTH OF UMBILICAL DOES NOT INCLUDE J-TUBE LENGTH AND OVERAGE LENGTH ON THE SEABED FOR PULL-IN OR CONTINGENCY. 10. UMBILICAL DATA TO BE CONFIRMED AFTER UMBILICAL SUPPLY AWARDED. CURRENT VALUES ARE INDICATIVE AND WILL BE UPDATED WHEN KNOWN. 11. HEADINGS INDICATED ARE RELATIVE TO STEREO 70 NORTH. 12. TOTAL LENGTH OF DOMINO UMBILICAL FROM SWP TO DODC-1 IS EQUAL TO 26.010m. THIS EXCLUDES 130m J-TUBE LENGTH AND APPROX. 60m OVERAGE LENGTH. 13. SLACK LOOP OF APPROX. 60m FINAL SLACK ADJUSTMENT TO BE DETERMINED DURING DETAIL DESIGN. FINAL ADJUSTMENT OF UMBILICAL OF 3m, IF NEEDED FOR ALIGNMENT. 14. MINIMUM DISTANCE OF 100m BETWEEN THE FLOWLINE AND THE UMBILICAL (120m NOMINAL INCLUDING TOLERANCES) DUE TO DEH REQUIREMENTS. 15. TYPE OF BACKFILL TO BE CONFIRMED DURING DETAILED DESIGN.									

SCALA									
0 100 500 1,000 METERS									
SCALA ORIZONTALA 1:10,000 (FORMAT "A1")									
PARAMETRI GEODEZIE SI DE 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

PROIECT NEPTUN DEEP / NEPTUN DEEP PROJECT									
1-D	12.02.21	EMIS PENTRU VERIFICARE	M. DUMITRU	P. STEFAN	N. EREMA				
1-C	21.01.21	EMIS PENTRU VERIFICARE	M. DUMITRU	C. STEFAN	N. EREMA				
1-B	29.05.20	EMIS PENTRU VERIFICARE	M. DUMITRU	C. STEFAN	N. EREMA				
1-A	03.02.20	EMIS PENTRU VERIFICARE	O. MOISE	C. STEFAN	N. EREMA				
REV	DATE	REZUMATUL REVIZIILOR	DESEMNAT	PROIECTAT	SEF PROIECT				
REV	DATE	ISSUE, SCOPE OF REVISION	PREPARED	DESIGNED	APPROVED				
VERIFICATOR			I. BUTNARIU			ANRE			
CHECKER			REFERAT NR. / EXPERTIZA NR. / DATA			NUME			
CHECKER REPORT / EXPERTISE NO. / DATE			Nume			SEMANTURA			
			PROIECTANT / ENGINEERING CONTRACTOR			ILF CONSULTING ENGINEERS ROMANIA			
			ILF CONSULTING ENGINEERS ROMANIA			S.T. NEPTUN / RD 2005-02-10104, P.0001			
			S.G. JEREMY PROMASTER S.R.L.			STR. CUCUBULEULUI, NR. 14A, PLOESTI,			

1	13OCT17	RE-ISSUED FOR IFD	RO EP SS JG
0	21JUN17	ISSUE FOR IFD	RO EP SS JG
REV.	REV. DATE	REV. DESCRIPTION	DRG. REV. APP. PROJ. OFF.

ExxonMobil

Exploration and Production Romania Limited

SISTEM OMBILICAL DOMINO SWP - DODC-1 DOMINO UMBILICAL SWP - DODC-1

FISA ALINIAMENT ALIGNMENT SHEET

FISA 2 DIN 6 SHEET 2 OF 6

1 : 10000 ROND-EW-YDPAL-22-0004-C DTAC 1-D

SCALA / SCALE NR. PLANSA / DWG. NO. Faza / PHASE, REV. / REV. A1+ (1092694)