

61 PETROFAC TUNISIA–MEDITERRANEAN SEA– 8” CHERGUI PROJECT

General project Overview and Reference

1 Scope of work

Various free spans, due to the irregularity of the seabed, were encountered during the pipeline laying operations. For safety reasons, before trenching the pipeline, the free span correction operations were performed. Free span correction means to lower the free span slopes by levelling the seabed irregularities in order to allow the pipe safely laying down.

The free span correction started from KP 0 (Hagounah) up to KP 28364 (Chergui) and each free span area correction followed an exact procedure of how to position the PTM and how to trench the free span. Table 1.2 describes all original 47 free span interventions required.

Note: the pipe could not be filled, therefore the trenching operations were carried out on an empty pipe.

After a preliminary free span correction activity was carried out, several smaller free span corrections (total 15) were no longer necessary as they were levelled out during the normal subsequent post-trenching operations.

The following is the post-trenching scope of work:

Pipeline	Trench Cover (T.O.P.)	KP		Water Depth	
		From	To	Min	Max
8" Gas Pipeline	1m	0.000	28.364	0	11

Table 1

2 Soil condition encountered

Zone	Prevailing material encountered
Hagounah approach	Fine/Medium shelly sand – calcareous rock-Posidonia grass
nearshore	Fine/Medium shelly sand – calcareous rock-
Chergui (Kerkennah Island) approach	Fine/Medium shelly sand – calcareous rock-Posidonia grass

3 Photos at worksite



The modular pontoon for shore approach



The Jolly PTM



The Jolly PTM launching from pontoon 1



The Jolly PTM launching from pontoon 2



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Table 1.2

SEA		8" CHERGUI SUBMARINE PIPELINE				P
SPAN No.	COORDINATES		SPAN Length (m)	SPAN Max. Depth (m)	Graph No.	Distance between spans
	Northing WGS84	Easting WGS84				
KP.0 Haggouneh (El Awabed - Tunisia) - Outside of inshore excavation bund						
						602
A	34°50.634'N	10°53.779'E	5	0,50	1	861
B	34°50.409'N	10°54.277'E	7	0,63	1	287
C	34°50.348'N	10°54.443'E	10	0,80	1	710
1	34°50.162'N	10°54.848'E	3	0,36	1	294
2	34°50.079'N	10°55.021'E	5	0,50	1	112
3	34°50.054'N	10°55.077'E	19	0,90	1	228
4	34°49.995'N	10°55.190'E	19	0,70	1	
RIDGE						
5	34°49.871'N	10°55.441'E	15	0,83	1	369
						199
6	34°49.834'N	10°55.510'E	25	0,89	1	28
7	34°49.819'N	10°55.546'E	25	0,92	1	114
8	34°49.780'N	10°55.667'E	25	0,90	1	109
9	34°49.760'N	10°55.727'E	12	0,49	1	84
10	34°49.740'N	10°55.744'E	6	0,40	1	87
11	34°49.742'N	10°55.787'E	13	0,70	1	64
12	34°49.731'N	10°55.827'E	9	0,70	1	47
13	34°49.726'N	10°55.846'E	12	0,72	1	1057
14	34°49.494'N	10°56.491'E	10	0,35	2	231
15	34°49.471'N	10°56.621'E	14	0,40	2	3643
16	34°48.571'N	10°58.729'E	7	0,40	6	306
17	34°48.509'N	10°58.912'E	6	0,40	6	31
18	34°48.509'N	10°58.918'E	20	1,15	6	169
19	34°48.457'N	10°58.999'E	11	1,30	6	333
20	34°48.312'N	10°59.190'E	33	1,00	7	437
21	34°48.194'N	10°59.415'E	20	1,00	7	55
22	34°48.182'N	10°59.481'E	15	1,00	7	

SEA		8" CHERGUI SUBMARINE PIPELINE				P
SPAN No.	COORDINATES		SPAN Length (m)	SPAN Max. Depth (m)	Graph No.	Distance between spans
	Northing WGS84	Easting WGS84				
23	34°48.177'N	10°59.445'E	10	1,00	7	36
						31
24	34°48.177'N	10°59.445'E	15	2,00	7	782
25	34°47.927'N	10°59.912'E	30	2,10	7	258
26	34°47.847'N	11°00.050'E	10	1,01	7	316
27	34°47.775'N	11°00.225'E	10	0,51	8	163
28	34°47.713'N	11°00.319'E	30	0,80	8	442
29	34°47.556'N	11°00.589'E	10	1,51	8	131
30	34°47.529'N	11°00.620'E	12	0,71	8	87
31	34°47.511'N	11°00.675'E	15	1,01	8	292
32	34°47.426'N	11°00.836'E	40	2,50	8	595
33	34°47.248'N	11°01.161'E	25	0,70	8	529
34	34°47.093'N	11°01.453'E	18	1,29	9	116
35	34°47.047'N	11°01.507'E	15	0,70	9	103
36	34°47.026'N	11°01.571'E	10	0,80	9	313
37	34°46.930'N	11°01.740'E	20	1,40	9	36
38	34°46.922'N	11°01.762'E	12	1,00	9	492
39	34°46.775'N	11°02.031'E	17	0,80	9	757
40	34°46.556'N	11°02.450'E	10	0,60	10	582
41	34°46.378'N	11°02.765'E	15	0,81	11	110
42	34°46.334'N	11°02.809'E	7	0,81	11	343
43	34°46.239'N	11°03.015'E	10	0,40	11	74
44	34°46.221'N	11°03.053'E	8	0,50	11	397
45	34°46.108'N	11°03.274'E	8	0,70	11	135
46	34°46.069'N	11°03.349'E	20	0,70	11	10754
47	34°43.462'N	11°09.613'E	18	0,70	15	33
Final KP Kerkena beach (Chergui Island) - Outside of bounded insore trench						

Ref.: PTU_CER_JBS_SEA_09_0001_V1

February 19, 2009


COMPLETION CERTIFICATE

Petrofac Energy Developments International Limited hereby confirms that:

SEA srl, registered address via Mariani 44/46 – 48100 Ravenna, was awarded contract PTU_PRO_CON_0001_2007 with Petrofac Energy Developments International Limited, which covered the correction of thirty-two (32) free spans and the subsequent post-lay trenching of approximately 29 km of 8" concrete coated offshore pipeline belonging to the Chergui Gas Development Project in the Republic of Tunisia.

The works have been performed and completed in full compliance with the final provisions of the abovementioned CONTRACT and to the complete satisfaction of Petrofac.

For Petrofac:


Brad J Singer
General Manager
Petrofac Tunisia

