



**78 MARTEAM LTD.  
(TechnipFMC)**

**KARISH GAS DEVELOPMENT  
PROJECT**

**30" GAS PIPELINE  
(DOR – ISRAEL)**

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(TechnipFMC)  
KARISH GAS DEVELOPMENT PROJECT  
30" Gas Pipeline  
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**1 General project Overview and Reference**

Energean Israel Limited (CLIENT) is developing the deep water Karish & Tanin fields, located in the eastern Mediterranean, approx. 75 km offshore Israel in 30-35 m water depth. Energean Israel has contracted Technip-FMC (MAIN CPONTRACTOR) for developing the Karish field.

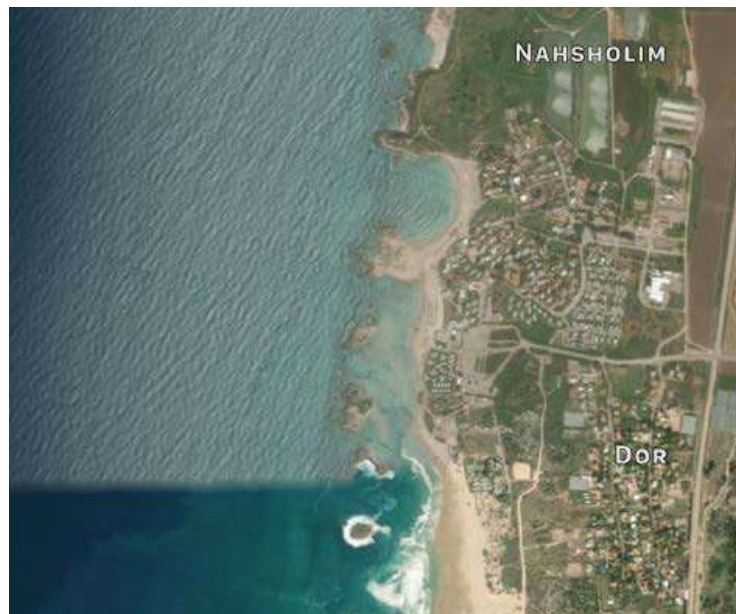


Figure 1 – Karish Field Location

The development includes a FPSO to process the reservoir fluids and deliver sales gas and light oil/condensate to the required specifications. Light oil will be exported by tandem off-loading to a shuttle tanker.

From the FPSO a 30" subsea sales gas pipeline shall export the produced gas to an onshore valve station at the Dor landfall in Israel for approximately 90 km. An onshore

pipeline section shall connect the Coastal Valve Station (CVS) to the Dor Valve Station (DVS) from which the pipeline shall tie-in to the Israeli Gas Distribution System via a new manifold to be built by INGL.

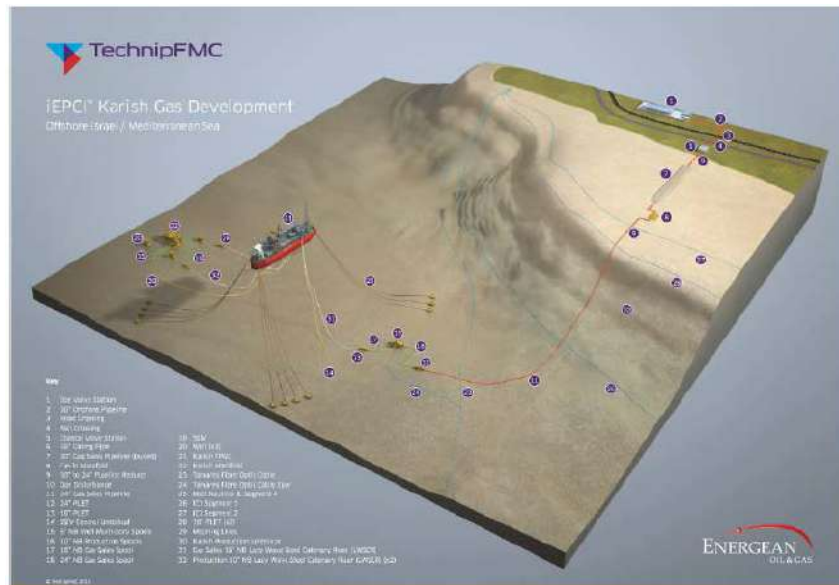


Figure 2 - Field Layout

## 2 Scope of work

MARTEAM Ltd. (CONTRACTOR) has been awarded by TechnipFMC (MAIN CONTRACTOR) for the execution of various activities (i.e. survey, trenching works etc.) of the 30" pipeline.

In 2020, a first post-trenching campaign was performed by TechnipFMC: unfortunately, the 30" pipeline did not reach the project quota along the entire trenching route.

For this reason, MARTEAM Ltd. has contracted SEA S.R.L. (SUBCONTRACTOR - SEA) for the execution of remedial free-span correction and post-trenching activities of the 30" pipeline, in the sections where the pipeline did not reach the project trenching quota during the first campaign.

The area bathymetry ranged from approx. 21 m to 32 m.

The project execution started at the end of February 2021, as previously planned, and was completed at the beginning of March 2021.

The trenching works were performed by means of GEO Post-Lay Trenching Machine. The trenching machine was supported by the AHTS vessel "EAS", supplied by Contractor.

The 30" Gas Pipeline had the following characteristics:

Description	Gas Pipeline
PIPE DESIGNATION	DNV SAWL 450D
OD	762 mm
WT	21.5 mm
MATERIAL GRADE	X65 / 450D
EXTERNAL COATING	60 mm Concrete Coating
	3 mm 3PLE + FBE/Adhesive
INTERNAL COATING	60 um epoxy
STOCK LENGTH	12.2 m nominal
PIPE SIZE	888 mm

Table 1: Pipeline details

The pipeline was flooded and unpressurized when post-trenching operations were performed.

The following table summarizes the Post-Trenching SOW:

Product	Operation	From		To		Total Length (Km)	DOL (m)	TTD (m)
		KP	WD (m)	KP	WD (m)			
30" Subsea pipeline	Post Lay Trenching	88.571	21.4	87.501	31.2	1.048	1.4m T.O.P.	2.3

Table 2: SEA's scope of work

In particular, the pipeline section has met the necessary 1.4 m depth T.O.P. of lowering requirements, as per table below:

Location		Remediation Length	Description	Mean Seabed Level	Lowering Requirement (Min to Max)
KP Start	KP End				
<i>Eastings &amp; Northing, (m)</i>					
88.571 <i>678036.89, 3608054.11</i>	88.558 <i>678023.93, 3608055.05</i>	14m	30" GSP on Surface (CWC damage area)	21.4m to 21.5m	-0.1m to -0.4m
88.557 <i>678022.93, 3608055.13</i>	88.458 <i>677924.22, 3608062.70</i>	100m	Trench Transition In (Section A)	21.5m to 22.6m	-0.5m to -1.0m
88.457 <i>677923.22, 3608062.77</i>	88.269 <i>677735.76, 3608077.08</i>	189m	Trenching (Section A)	22.6m to 24.4m	-0.2m to -0.5m
88.268 <i>677734.77, 3608077.16</i>	88.186 <i>677653.01, 3608083.47</i>	83m	Trench Transition Out (Section A)	24.4m to 25.3m	-0.3m to -2.1m
88.185 <i>677652.01, 3608083.55</i>	87.852 <i>677319.54, 3608102.08</i>	334m	30" GSP on Surface (Seabed Scour Section) <b>Note: Pipeline freespans in this region</b>	25.3m to 28.3m	-1.7m to -2.2m
87.851 <i>677318.54, 3608102.13</i>	87.776 <i>677243.63, 3608105.89</i>	76m	Trench Transition In (Section B)	28.3m to 28.9m	-0.4m to -1.7m
87.775 <i>677242.64, 3608105.94</i>	87.501 <i>676966.94, 3608118.78</i>	252m	Trenching (Section B) – divided in 4-off section	28.9m to 31.2m	-0.1m to -0.5m
<b>Total remediation length</b>		<b>1048m</b>			

Table 3 – Depth of Lowering (DOL) requirement summary

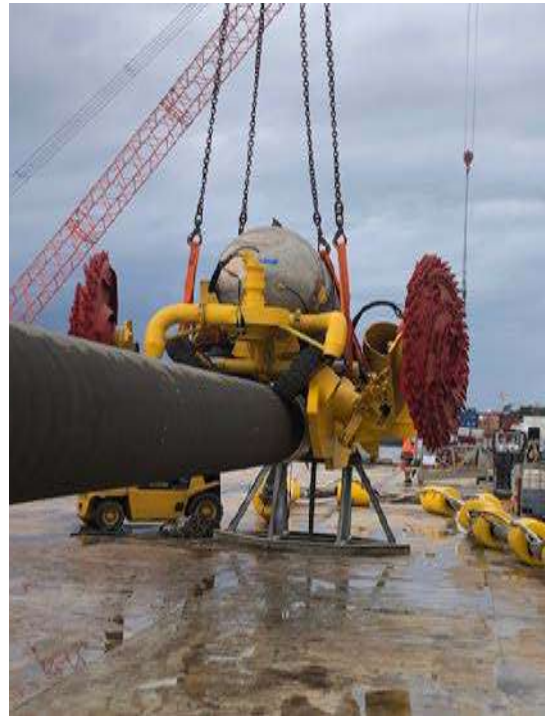
### 3 Encountered Soil condition

Sandy soil, which maximum hardness is 10-14 Mpa qc (which corresponds to 1.0-1.4 Mpa UCS value), can be considered as very dense sandy soil.

#### 4 Photos at worksite



PTM lifting arrangement



PTM Dry Test



TSV on support basement



PTM monitoring instruments in the control cabin



#### 5 Reference

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## Final Settlement Letter

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**BETWEEN**

**MARTEAM LTD.**

**AND**

**SEA S.R.L.**

This Final Settlement letter is made effective 14, March 2021 between:

Marteam Ltd. (hereinafter referred to as "Contractor"), a company incorporated in Israel and having its principal place of business at 9 Pinkas David St., Netanya, Israel, registered in the commercial register under number 500438239, and represented by its attorney in fact Mr. Miki Peleg,

and

SEA S.R.L. (hereinafter referred to as "Subcontractor"), a company incorporated in Italy and having its principal place of business at Via Mariani 44/46, 48121 Ravenna, Italy, registered in the commercial register under number (P.IVA) 01200650390, and represented by its attorney in fact Mrs. Adriana Rossana Marangoni.

The Contractor and Subcontractor are also referred to herein individually as "Party" and together as "Parties" as appropriate.

### **WHEREAS:**

- The Subcontractor executed trenching services for the Contractor for the Pipe Lowering at Karish Gas Development as signed via an agreement between the parties on Feb, 01<sup>st</sup>, 2021.
- Due to several reasons the project schedule was extended behind any expectation and the parties agree in good faith to settle a final price to be paid to the Subcontractor - the Settlement Amount. The Settlement Amount will be the final and binding.
- The Contractor confirms that the work executed by the Subcontractor is completed and in full compliance to the signed agreement.

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**IT IS AGREED AS FOLLOWS:**

1. For the total services executed by the Subcontractor for the Pipe Lowering at Karish Gas Development, the Contractor agrees to pay a total of €750,000 euro, the Settlement Amount.
2. Up to date, the Subcontractor received payment of €150,000 euro from the Contractor.
3. The Settlement Amount balance to date is €600,000 euro.
4. Within the next 7 calendar days, the Contractor will pay to Subcontractor a sum of €200,000 euro.
5. The Settlement Amount balance of €400,000 will be paid by the Contractor to the Subcontractor by May 25<sup>th</sup>, 2021.
6. Both parties hereby irrevocably waive any and all of its claims with respect to any other payment and any other consideration of any type whatsoever, as well as any other claims in connection with the project known to date or such cause of actions arisen prior to the date hereof.

Confirmation

We hereby confirm and agree to the abovementioned letter.

SEA S.R.L.

*Borck*

SEA srl

Via Mariani, 44/46

48121 RAVENNA

P. IVA 01206570390

By: *Guido Borck*

Date: 14/03/2021

Marteam Ltd.

By: *Miki Perle*

Date: \_\_\_\_\_



14.3.2021