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NOBLE ENERGY MEDITERRANEAN LTD

LEVIATHAN ONSHORE DEVELOPMENT

CATHODIC PROTECTION CLOSING ACTIVITIES

Client:

Noble Energy Mediterranean Ltd

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1. Introduction

Noble Energy Mediterranean Ltd Initiated and construct the Leviathan project in the Mediterranean Sea.

As part of the Leviathan project, onshore pipelines, stations and other facilities for natural gas and condensate been design and constructed.

N. ELIAV Infrastructure & Corrosion Engineering Ltd been hired to supervise on the onshore Cathodic Protection (CP) activities at Leviathan project.

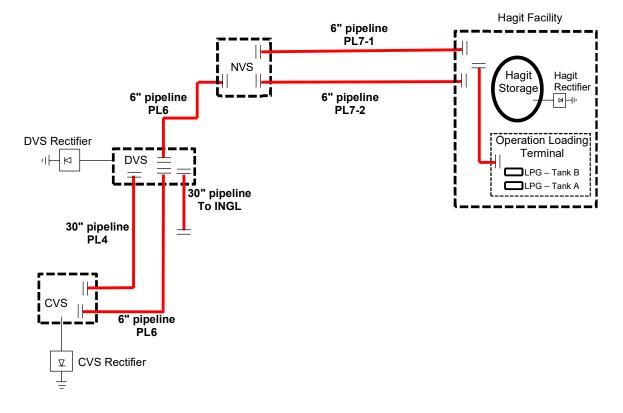
this report is the summary of N. ELIAV Infrastructure & Corrosion Engineering Ltd activities in this project.

2. <u>Activity Duration</u>

N. ELIAV Infrastructure & Corrosion Engineering Ltd activities in this project started on June 2018 and closed in July 2020.

3. <u>General Overview</u>

Schematic sketch of the project



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4. <u>List of CP Activities</u>

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List of CP activities that N. ELIAV Infrastructure & Corrosion Engineering Ltd conducted in the project:

- ► CP pre-design guideline, measurements and advisory.
- ▶ CP design review.
- CP design approval.
- ► CP contractor's coordination.
- ► CP contractor's inspection.
- CP punch lists preparation
- ▶ Conducting the commissioning for the CP systems.
- Conducting the commissioning for the pipelines CP.
- CP contractor's bills of quantities approval.
- Preparation and writing CP maintenance plans.

5. Project's CP in Numbers

- ► Two CP engineering companies.
- Three CP contractors.
- ► Three ICCP rectifiers and anode-beds.
- ▶ Natural gas pipeline 1,581 m length, 32" diameter.
- Condensate pipeline 25,750 m length, 6" diameter.
- Condensate tank bottom diameter 36.6 m.