CASE STUDY

Energy Projects
COMPAGNIE DES PETROLES TOTAL- LIBYE MABRUK PHASE 4

Country
Libya

Owner
Total Libya

EPC Contractor
J&P (Overseas) Ltd

Dates
2004 - 2006

Overall Project Value
69.000.000 USD

ENOIA's Consulting Value
4.800.000 USD

The Project Development of the Great Mabruk Area included the following facilities:

- •Oil & Water Wells
- Flowlines / Trunklines
- Satellites & Node facilities (6 No.)
- Power Generation Plant (3x8 MW) and power distribution system
- New GOSP Plant

GREAT MABRUK field consisted of four oil accumulations:

- West MABRUK oil production field
- East/Central MABRUK oil production field
- DAHRA North oil production field
- GARIAN North oil production field

WEST MABRUK field had been developed and it had been exploited by the GOSP facilities operated by CPTL at the MABRUK area. Target of the project is the Development and exploitation of the rest of the oil fields in the GREAT MABRUK area.

"Scenario 2" of the MABRUK PHASE 4 project covers the West MABRUK infill program plus the development of the East & Central MABRUK fields. New process train at GOSP dedicated to the treatment of the MABRUK oil and related common facilities as well as new oil field facilities (satellites) are foreseen for subject phase.

At some point in the future, the DAHRA & GARIAN fields will be developed, and connected to the common facilities in this project. Future development of the DAHRA/GARIAN oil fields and new process train at GOSP has been defined as "Scenario 1".

The new GOSP facilities developed in order to treat higher flow rates and meet the exported oil specifications of RVP, BSW, H2S content and Salt content.

The new GOSP facilities consisted of two new process trains. The first was dedicated to the treatment of West/East/Central MABRUK fields' production and it was part of the project development phase (Scenario 2). A second train will be constructed at some point in the future (Scenario 1), dedicated to the treatment of DAHRA and GARIAN fields production.

Common facilities are part of the current project development (Scenario 2) and include mainly the following:

- Crude Oil Storage and export pumping to BAHI
- Centralised Hot Oil System
- Fuel Oil and Fuel Gas
- Closed and Open Drains
- LP and LLP Flare networks
- Oily Water Treatment and produced water disposal
- Firewater
- Air and nitrogen systems
- Power generation
- Instrumentation Control and Safety System (ICSS)

Scope of Services

ENOIA participated in the project as Engineering Consultant with the following Scope of Services:

- Basic Design
- Detailed Engineering (all Disciplines)
- 3D Model (AutoPLANT)
- Engineering services for Procurement
- Pre-commissioning & Commissioning procedures
- Operating Manual
- Start-up assistance