ENQUIRY for PREQUALIFICATION (NO. JPTPQ/018/21)

A&E STRUCTURES, MELLITAH COMPLEX EXPANSION & CO2 MANAGEMENT INTEGRATED DEVELOPMENT PROJECT

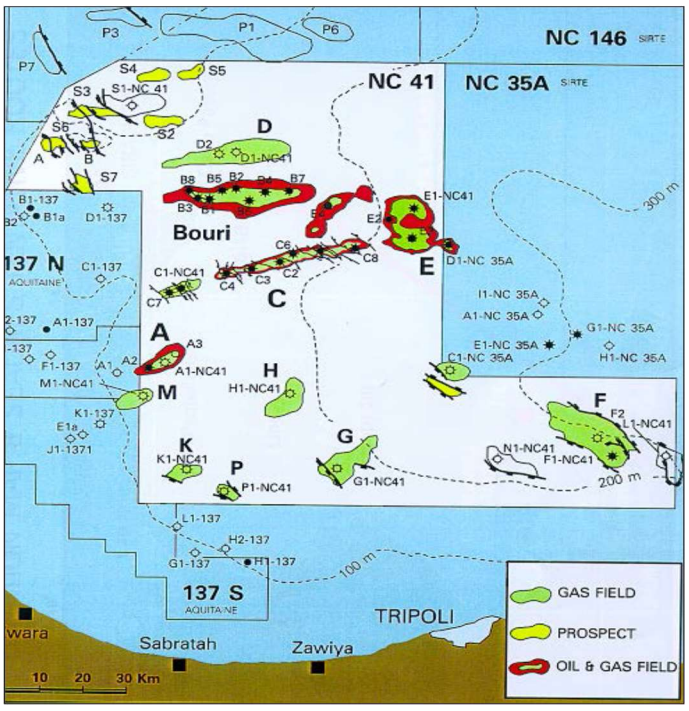
MELLITAH COMPLEX EXPANSION/MODIFICATIONS AND CO2 MANAGEMENT

Mellitah Oil & Gas B.V. (MOG) a leading oil and gas Operator in Libya, intends to avail itself of the cooperation of a qualified and experienced Contractor for Engineering,, Procurement, Construction and Installation, Pre-Commissioning, Commissioning and Start up (EPCIC) of facilities for the ONSHORE development of A&E Structures, Mellitah Complex Expansion & CO2 Management Integrated Development Project.

PROJECT OVERVIEW

The development scenario for A-Structure located in the Libyan offshore (Area D) envisages a dry tree/fixed platform development in synergy with the existing platform of Sabratha, while the E-Structure will be developed using an independent fixed production platform along with subsea wells.

E-Structure is located (see figure below) in the central-eastern part of the Area D (ex NC41 area), about 130 Km far from the Libyan coast, in a water depth ranging from 205 to 235m, while A-Structure is in the central-western part of the area, approximately 80 Km from Libyan coast, where water depth is ranging between 95 and 105m.



E-Structure and A-Structure Location – Area D (ex "NC41")

The scenario is based on:

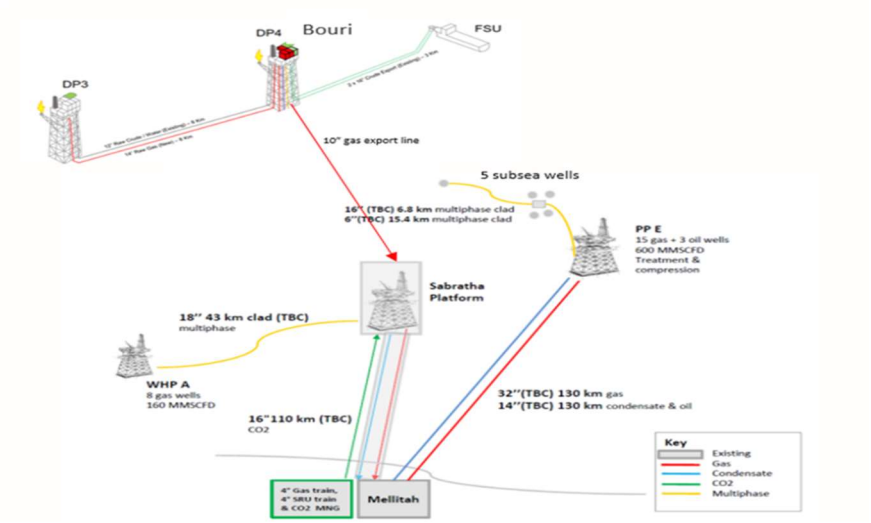
OFFSHORE

- A new wellhead platform on Structure A (WHPA) with 8 dry tree wells, designed to handle a peak production of 160 MMCFD, predrilled by jack-up and able to host a FMWR (spare risers and J-tubes for minor Structures future connections);
- A new multiphase sealine (18") 43 km to deliver A Structure production to Sabratha Platform for treatment, compression and export (A Structure needs compression after few years from start-up by using the already planned BES compression without the need for any subsequent upgrading);
- A new Production Platform on Structure E (PPE) (20 slots) with 18 dry tree wells (including 3 oil wells) and 5 subsea gas wells designed to handle a peak production of 600 MMCFD (plus condensate, plus oil production from 5 oil wells), with dedicated separation, treatment and compression facilities, able to host a FMWR and 120 POB Living Quarter. The PPE dry wells will be pre-drilled via semi-sub as well as the subsea wells;
- A new gas sealine (32" to be verified during FEED) 130 km long dceliver E Structure production to Mellitah;
- A new condensate/oil sealine (14" to be verified during FEED) 130 km to deliver E Structure production to Mellitah;
- Sabratha Platform modification (manifold and separation for A Structure production);

ONSHORE

- A new 4th gas processing train at Mellitah (including 3rd condensate train & 3rd NGL fractionation train) and 4th SRU train and associated new utilities to be tied-in to the existing facilities, upgrade of the existing gas trains and associated utility systems with the purpose of improving reliability, availability, productivity, efficiency and extending design life in line with estimated production profile and composition;
- A new full 4th Sulphur Recovery Train and upgrade of the existing 3 Sulphur Recovery Trains;
- A new CO2 management through dehydration and compression in Mellitah Complex and export for injection in 3 wells in BES field through the installation of a new sealine (16") 110 km from shore to BES field.

The overall Project scheme is summarized in the sketch drawing below.



A-Structure and E-Structure Development Scheme

The current Development Scenario considers the

- Integration of Structure A (WHPA) via multiphase trunkline with Bahr Essalam which consists of Sabratha gas processing platform – treating production from 15 platform wells and subsea wells and also the HC from Bouri field. After separation and dehydration of the fluids on the Sabratha platform, the partially treated dry gas and the unstabilized condensate are transported to Onshore Mellitah Complex treating facilities via dedicated sealines
- Integration of Structure E with its Production Platform E with Onshore Mellitah Complex via dedicated gas and condensate sealines

- Onshore Mellitah Complex (consisting in Mellitah and Wafa Coastal plants) located on the west side of Libyan Coast. It currently treats Raw Gas and Unstabilized Condensate feedstocks received from Sabratha Off-Shore Platform and it will receive also the production from Structure A and Structure E.

SCOPE OF WORK

The scope of work includes site preparation, all new facilities, tie-ins and upgrade and modification on the existing facilities of Mellitah Complex in order to meet the above Development objectives.

The following main scope items have been identified as part of the integrated project:

Site Preparation and related onshore and coastal intervention

Earth movement, Marine offloading Facilities refurbishment, dredging and surveying

New Gas Treatment Train

New 4th gas treatment train to process raw sour gas. The new train shall operate in parallel with the existing 3 Gas Treatment Trains. Three trains will be operating while any one of the four trains is either under maintenance or on standby.

The new gas treatment train will include the following units:

- Gas Sweetening Unit (54-330),
- Gas Dehydration Unit (54-311)
- Gas Dew Point Control Unit (54-340).

Plot space shall be provided for a future 5th Gas Processing Train. The new HP, Acid Gas and LP flare system (including main flare header and flare equipment) SHALL be designed for the future installation of this 5th train. No other pre-investment in terms of utilities capacity or infrastructure related to a future Gas Train shall be included in the FEED design.

New Condensate Stabilisation Train

A new 3rd Condensate Stabilisation Train shall be installed to process raw unstabilised condensate. This new train shall operate in parallel with existing two condensate stabilisation trains. Two trains will be operating while any one of the three trains is either under maintenance or on standby.

The new condensate stabilization train will include a 3rd Condensate Unit (53-210)

New NGL Fractionation

A new 3rd NGL Fractionation Train shall be installed to process the NGL components removed from the raw gas and condensate. This new train shall operate in parallel with existing two NGL Fractionation trains in a 3x50% configuration. Two trains will be operating while any one of the three trains is either under maintenance or on standby.

The new NGL Fractionation train will include a 3rd NGL Fractionation Unit (53-320)

New SRU Train

A new 4th SRU Train shall be installed to process the H2S removed from the sour gas. This new train shall operate in parallel with existing three SRU Trains. Three trains will be operating while any one of the four trains is either under maintenance or on standby.

The new 4th Sulphur Recovery Train shall be designed by LICENSOR under the EPC CONTRACTOR SoW and is expected to include the following units:

- H2S Enrichment Unit (54-581)
- Sulphur Recovery Unit (54-582)
- Sulphur Degassing Unit (54-585)
- Tail Gas Treating Unit (TGCU) (54-583)
- Thermal Incineration Unit (54-584)
- Sour Water Stripper Unit (53-587)
- Amine Storage and handling (54-586)

New CO2 Management

New CO_2 compression and treatment units will remove and dispose of CO_2 gas into an offshore reservoir for disposal. CO2 is processed in 2 x 50% trains. The onshore CO2 management facilities will include:

- Wet/Dry CO2 Compression Unit (51/52-360)
- CO2 Dehydration Unit (51/52-310)
- Launching Trap Unit (50-190)
- Cold Vent Facilities (50-230)

Sour water developed by the CO2 Management systems will be treated by the existing/new SWS Units (51/52/53-587).

New CO_2 Booster Compressors (51/52-584) will also be required to transfer waste gas from the existing H_2S Enrichment Units (51/52/53-581) to the new CO_2 Management Facilities.

Control Systems

New ICSS Control Systems (DCS, ESD, F&G) for the MCX Expansion, revamping of the existing Control Systems (DCS, ESD, F&G) in line with existing system's Vendor proposal and final integration of both in one system.

New UTILITIES

The following new utility systems are required as part of the integrated project, the new independent utility systems shall be designed with appropriate capacities to cover the requirements of all new facilities at their design capacities. Where appropriate the new utility systems will be integrated with existing utility systems via a normally closed connection. The sizing basis for the new utility systems shall consider zero transfer between new and existing utility systesm. The following utility systems are required:

- New Flare Systems (50-230)
- New Air System (50-460)
- New Sea Water & Hypochlorite System (50-500)
- New Cooling Water System (50-520)
- New Desalinated Water System (50-530)
- New Demineralized Water System (50-530)
- New Open Drain System (50-540)
- New Process Area HC Closed Drain Unit (50-550)
- New Waste Water Treatment Unit (50-560)
- New Inert Gas System (50-600)
- Steam & Condensate System (50-620)
- New Fuel Gas System (50-420)
- New Caustic and Acid Storage (50-650)
- New 4th GTG located in the Wafa Coastal Plant as part of the existing power generation system (Expansion of UNIT 40-470)
- Telecommunication Systems
- New Control Building and additional Substations
- An extension of the existing Fire Water Ringmain will be required to cover new process areas
- Extension of site road network and perimeter fencing (HESCO barriers)

Shore Approach and near shore activities

Water Intake and near shore CO2 export sealines installation

Upgrade of Existing Gas Trains 1 - 3

Unit 51/52/53 - 340 - Gas HC Dew Point Control - Modifications to existing Gas Trains (additional Propane Chiller and Refrigeration capacity)
Unit 50-210 Off Gas Compression (Upgrading of cooler)

Upgrade of Existing SRU Trains 1 – 3

Unit 51/52/53 – 585 Sulphur Degassing Unit - Replacement of instrumentation and CV at inlet to sulphur degassing tower.

Unit 51/52/53 – 581 MDEA Regenerator

- Enriched acid gas shall be recycled from the amine regenerator to the absorber to boost the H2S concentration requiring additional 20" recycle line.
- Existing Amine Solvent MDEA solvent shall be upgraded and changed to a more selective solvent (50%wt Ucarsol HS-103).

51/52/53 – 582 Sulphur Recovery Unit - New 3" Fuel Gas Lines required to Thermal Reactors to allow co-firing of acid gas, new mixers and relevant ancillaries.

Upgrade of Wafa Coastal Plant

Unit 41/42-320 - Modification to LPG Dehydration/Mercaptan Removal Units (Upgrade of existing Absorber vessels)

General Brownfield area works

- Execution of all Piping tie-ins required for interconnections
- Execution of all tie-ins and interconnecting pipework for process and utility lines associated with items described above.
- All required power supply, instrumentation and control associated with items described above.
- All foundations and structural steel required associated with items described above.

Participants shall demonstrate successful experience in similar Greenfield Onshore Projects, brownfield onshore modification and proved capabilities and competences to minimize operations disruption.

The scope of work to be performed includes, but is not limited to:

- Management and Project Control
- Detailed Engineering, Technical Specifications and Data Sheets
- Management of Licensor and interfaces
- Detail Design Drawings (AFC)
- Certification
- Procurement
- Fabrication
- Material
- Inspection
- Quality Assurance
- Qualified HSE Management
- Procedures and Guidelines
- Transportation
- Installation
- Establishment of Temporary Facilities
- Facilities for Company personnel
- Operators Training
- Testing
- Pre-commissioning
- Commissioning
- Start-up