



# JOINT PROJECT TEAM

## **STRUCTURE A & E DEVELOPMENT PROJECT NC41 BLOCK LIBYAN OFFSHORE**

### SCOPE OF WORK

## RIG WASTE MANAGEMENT SERVICES

### **COLLECTION, HANDLING TRANSPORTATION, TREATMENT & DISPOSAL SERVICES**

**January 2021**  
**MOG-JPT-SOW**



## SUMMARY

1. SCOPE OF DOCUMENT .....	3
2. INFORMATION OF THE ACTIVITY .....	3
3. DRILLING & COMPLETION PROGRAM .....	3
3.1 Rig Type.....	3
3.2 Structure A Well Data: .....	3
3.3 Structure E Well Data:.....	4
3.4 Wells Completion Design:.....	4
4. SCOPE OF WORK .....	4
4.1. List Of Drilling Waste And Generic Rig Waste .....	5
5. MINIMUM REQUIREMENT FOR QUALIFICATION .....	6
6. SERVICES DURATION: .....	6
7. SUMMARY OF PROJECT AND LOGISTIC DATA .....	7



## 1. SCOPE OF DOCUMENT

Pre-Qualification tender is open for local and international vendors specializing in RIG WASTE MANAGEMENT SERVICES and being strongly supported by professional crew are invited to register their interest to submit their document by providing the requested information as per following paragraphs.

### DISCLAIMER:

All information specified in this document are considered by the Company to be accurate at the time of issue.

The Company does not, however, accept any liability for providing such information nor does it warrant its accuracy. They are estimates only and are not a guarantee of the volume of work.

## 2. INFORMATION OF THE ACTIVITY

Mellitah Oil & Gas plans to drill 31 (thirty one) offshore development wells (subsea wet & dry tree wells) in structures A & E - block NC41.

“A” Structure is about 75 km from the Libyan coast, the target depth of the deepest well is expected to be around 2690 m. TVD, in a water depth about 95 – 105 m. It has been considered to pre-drill all the wells, then re-entry the same to be tied-back and completed with a work-over light rig working from the platform itself.

“E” structure is located in the NC41 Block around 31 km north east of the Sabratha Platform and about 110 km from the closest point on Libyan coast. The deepest well is expected to be approximately 2530 m, TVD, with surrounding water depth around 205 – 235 m, deviated/horizontal well type. Even in this development, the operations scenario envisages first pre-drilling campaign, then well re-entry, tie-back and completion with a work-over light rig once platform being installed.

Types of Drilling and Completion Fluids for Structures A & E are:

- Synthetic Oil Base Mud (SOBM)
- Water Base Mud (WBM)
- Completion Brine

The spud time of the first well in both Structures “A & E” is estimated on 1<sup>st</sup> quarter 2023.

Company Operation Bases will be located in Malta and/or Tripoli Province.

## 3. DRILLING & COMPLETION PROGRAM

MOG intends wells drilling and completion programs for A&E Structures Development Project.

The drilling and completion technical details are given below

### 3.1 RIG TYPE

For A Structure it is considered the utilization of a jack up rig for pre-drilling operations and of a Platform work-over rig for re-entry and completion operations after the installation of the fixed platform.

For E Structure drilling and completion operation strategy is different due to higher water depth (218 meters). It is required the utilization of a semisub rig for pre-drilling operations and of a Fast Move Platform rig for re-entry and completion operations after the installation of the fixed platform.

Subsea clusters will be developed by the utilization of Semisub rig for drilling and completion activities. The semisub rig shall have mooring capacity due to the shallow water depth that does not allow the use of DP system. At least a fourth generation semi sub rig type is required to ensure the minimum safety standards required by COMPANYY.

### 3.2 STRUCTURE “A” WELL DATA:

The “A” Structure reservoir will produce from 8 wells from a fixed platform. In all the cases the reservoir target is reached with 5 phases (30"- 18 5/8" – 13 3/8" – 9 5/8" – 7") with the last 7" slotted liner covering the reservoir section.



### 3.3 STRUCTURE “E” WELL DATA:

The “E” Structure reservoir will produce from 23 wells, 18 from a fixed platform and 5 from 2 subsea clusters divided as follows:

Platform; Gas wells: 15 wells

Oil wells: 3 wells

North SS-Cluster; 4 wells (Gas)

West SS-Cluster; 1 well (Gas)

For E-structure wells, the casings profiles have been considered Standard profile (30"- 18 5/8" – 13 3/8" – 9 5/8" – 7") for 13 wells (dry/wet) wellhead gas wells, meanwhile Lean profile (30"- 18 5/8" – 13 3/8" – 16" – 13 3/8" 9 5/8" – 7") for 10 wells (Oil/Gas) dry wellhead.

### 3.4 WELLS COMPLETION DESIGN:

The current section includes the details of the completion profiles for the three wells typologies:

- Structure A: Gas well from platform
- Structure E: Gas well from platform/subsea
- Structure E: Oil well

Two completion profiles can be distinguished based on hydrocarbon produced, as follows:

- ✓ Gas wells: Structure A / Structure E gas wells: 7" slotted liner across 8 ½" reservoir section and production tubing will be 4 ½" with 9-5/8" production packer.
- ✓ Oil wells: 4 ½" slotted liner across 6" reservoir section. Production tubing will be 3 ½" with 7" production packer.

## 4. SCOPE OF WORK

The service required from qualified vendors will include but will be not limited to the collection, handling, transportation, treatment and disposal of Drilling Waste and Generic Rig wastes produced during Offshore Drilling Operation in compliance with Local and International environmental regulation.

Drilling operation will be zero discharges.

Marine base will be in Tripoli Abusetta, with alternative base of Malta MedServ.

The services foresee to disposal the followings:

- Oil Base mud cutting dried.
- Water Base mud drill cuttings.
- Contaminated oil base mud fluid.
- Contaminated water base mud fluid.
- Generic Rig waste.
- Waste Lab Testing Analysis.



#### 4.1. LIST OF DRILLING WASTE AND GENERIC RIG WASTE

ITEM	DESCRIPTION
<b>1. DRILLING WASTE:</b>	
1.1	Drill Cutting & Barite + 5% Synthetic Oil
1.2	Cuttings & Barite + 5% Water Based Mud
1.3	Contaminated Oil Based Mud Fluid
1.4	Contaminated Water Based Mud Fluid
<b>2. GENERIC WASTE</b>	
2.1	Waste Skip
2.2	Waste Oil
2.3	Container
2.4	Compactor
2.5	Big bags
2.6	Card Board
2.7	Empty Chemical Bags
2.8	Empty Oil & Grease Cans/Tins
2.9	Empty Paint Cans/Tins
2.10	Plastic Waste (Non Contaminated)
2.11	Rope Waste
2.12	Rubber Waste
2.13	Empty Contaminated Steel Drums (210 Ltr.)
2.14	Empty Contaminated Plastic Drums (210 Ltr.)
2.15	Empty Plastic Drum (60 Ltr.)
2.16	Empty Cube Tank (1000 Ltr.)
2.17	Cooking Grease
2.18	Fluorescent Tubes
2.19	Glass
2.20	Oil Filters
2.21	Oil Rags
2.22	Paint Rags
2.23	Paint Scales
2.24	Waste Food
2.25	Thinners
2.26	Various Sizes Empty Tins/cans
2.27	Wood Pallets
2.28	Cement
2.29	Used Tires
2.30	Used Cartridges for Printers, Fax machine and Photocopier Cartridges.
2.31	Used accumulators Batteries



## 5. MINIMUM REQUIREMENT FOR QUALIFICATION

The qualified-vendor contractor shall have or access to the following Handling and Treatment Facilities at the minimum and provide the followings as minimum requirements:

- The Contractor must be registered in Libya and must have valid license for all types of contaminated / oil field waste treatment/disposal/recycling facilities as per Libyan Government requirements to undertake all project activities including transportation, treatment/ processing and disposal etc., and the facilities shall meet Libyan environmental regulatory requirements and provide same to the company;
- The aim of the required services of collection, handling, transportation, treatment and disposal of the waste is to avoid pollution and eliminate /minimize environmental impact in compliance with local government, MOG and EGA Guidelines and regulations.
- Experiences of similar contracts ( client name/project details) & references in Libya / Worldwide;
- Thermal Desorption Unit / Treatment Plant located in Libya equipped with antipollution equipment in compliance with relevant Libyan /EGA environmental standards, with capacity suitable to treat the volume of the project contaminated soil.
- The layout and technical specification of the proposed treatment facilities.
- Lifting equipment (Crane/Forklift) to load/unload Skips, container, and others as required.
- Contractor shall submit complete detail of EGA approved treatments methods rig waste and disposal facilities for the final disposal of treated soil and the approval status of these facilities from EGA;
- Provide performance / test reports of the treatment facility for air emission parameters and TPH of both pre-treated and treated soil / cuttings of the treatment facilities to be used for the contract.
- Access to the recognized/ accredited laboratory capable of compliance testing and analysis for required parameters including TPH, Heavy metals etc., in accordance with Libyan environmental standards and international standards for the proposed methods;
- Must be capable to provide presentable laboratory test and analysis results in compliance with Libyan Environmental Standards.
- Contractor shall have advance knowledge of local and international environmental regulations to the undertake the project activities;
- Final disposal arrangements for treated drill cuttings / soil and all other wastes in accordance with EGA approved methods.
- Qualified personnel / professional (plant operator/supervisor) to provide technical support/ assistance to operate/maintain the proposed treatment plant;
- Other necessary arrangements to avoid / minimize all kinds of contaminations;
- Transporting facilities / arrangements along with the specifications and numbers of suitable trucks to transport contaminated soil in compliance with local government law, recognized industrial practices i.e. proper packaging and labelling of the waste for transportation.
- Contractor shall have a valid approval license for the required services by the concerned authorities;
- Contractor shall be ready to work with all equipment and materials necessary for drill cuttings disposal services.

## 6. SERVICES DURATION:

The provision of the services shall be for a period of 4 years starting from Q1 20223 until Q1 2027.



**7. SUMMARY OF PROJECT AND LOGISTIC DATA**

<b>Operations Commencement:</b>	Structure "A": 1 <sup>st</sup> quarter 2023.		
	Structure "E": 1 <sup>st</sup> quarter 2023.		
<b>Water Depth at operations area (to be confirmed):</b>	Structure "A": 95 m ssl		
	Structure "E": Platform Wells: 218 m ssl	Subsea Cluster: 192 m	
<b>Drilling Rigs:</b>	Structure "A": TBN		
	Structure "E": TBN		
<b>COMPANY's Logistics Bases:</b>	MedServ Base (Malta Freeport) – Malta Busetta Port, Tripoli – Malta		
<b>Distance Logistics Bases to Rig Site (nautical miles):</b>	Structure "A" Tripoli: 55 nm      Malta: 175 nm		
	Structure "E" Tripoli: 57 nm      Malta: 142 nm		
<b>COMPANY's Heliport Locations:</b>	Luqa Airport – Malta Mitiga Airport – Tripoli, Libya		
<b>Distance from Heliports to Rig Site (kilometres):</b>	Structure "A" Mitiga: 102 km      Luqa: 323 km		
	Structure "E" Mitiga: 106 km      Luqa: 263 km		
<b>COMPANY's Planned Operations Office Location:</b>	<b>Tripoli Offices:</b> Dat El Imad Complex Tower-1 9 <sup>th</sup> Floor P.O. Box 91651 Tripoli, Libya		
	<b>Malta Offices:</b> Medserv Marine Base Malta Freeport Port of Marsaxlokk Birzebuggia BBG3011, Malta		

**END OF SCOPE**