

# PROJECT SHEET

**INSPECTION, REPAIR, MAINTENANCE & LIGHT CONSTRUCTION**  
DUBAI, UNITED ARAB EMIRATES

## INTRODUCTION

Boskalis Subsea Services provides "Provisions of Subsea Services" along with a Diving Support Vessel (SMIT Komodo) to the Dubai Petroleum Establishment (DPE). The breakdown of services involved range from a Boskalis Survey Package, saturation diving, air diving and surface supplied gas diving. 24 hours ROV diving with data processing suite.

A 30Te Active Heave Compensated (AHC) Crane provides field support for lifts from vessels and includes complex lifts on and off Client Marine Assets.

## DPE HISTORY

The DPE Field is located approximately 53 NM of the coast line of Dubai, United Arab Emirates. The DPE Field consist of five sections being Fateh, Southwest Fateh, Falah, Jalilah and Rashid Fields. The Fateh oil field is the largest and the oldest of five adjacent oil fields and has been continuously developed since its discovery in 1966. Fateh has processing facilities, gas lift compression, a Waterflood facility and three unique underwater oil storage facilities called 'Khazzans'. Oil is exported via dual SPM systems. Southwest Fateh was discovered in 1970 and is the second largest DPE field. Oil production is transferred by pipeline to the Fateh Field for storage and export.

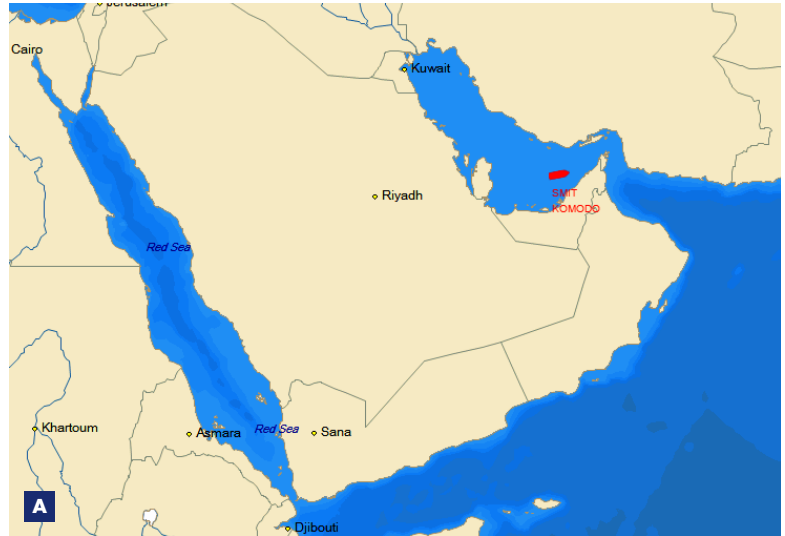
## SCOPE OF WORK

Our specific scope of work includes, but is not limited to, the following IRM and Light Construction;

- Integrity assessment of approximately 92 platforms and tripods, subsea detailed level 2 inspections of wellhead jackets, production platforms, oil storage Khazzans and other subsea assets, involving subsea NDT techniques like, ACFM, MPI, UT, CP, FMD etc. This includes standard planned maintenance activities PSV cleaning, Water caisson restoration.
- Integrity assessment of approximately 850km of pipelines between 4"/42" diameter, subsea pipeline inspections and maintenance free span and hard crossing correction, weight coat damage retification by means of mattress stabilisation.
- Drilling, subsea operations such as conductor guide installation, live slot survey, spud-can penetration checks, Rig Access Surveys and debris removal.
- Operations, provision for Emergency Pipeline Repairs activated within seven day notice period methods used Smart Flange, corridor spool and closing spool.

## FEATURES

Main Client	Dubai Petroleum Establishment (DPE)
Contract Location	Dubai, United Arab Emirates
Contractual Period	January 2011 – January 2017



**A** Location map.

**B** DSV SMIT Komodo Sat Diving Operations ROV & Sat Bell deployed subsea.

- Integrity assessment of Single Point Mooring (SPM) Buoys maintenance and hose section change-outs.
- Operations, light construction scope, platform and tripod life extension, retrofit anode installations, 4"/10" riser installation, platform and tripod subsea structural member correction, replacement of damaged members with retrofit members, removal and recovery of decommissioned pipelines sections, installation of riser guards and riser clamps, support with caisson installation and heavy subsea construction support services.
- Operations, heavy offshore lifts and personnel transfer solutions.





### DIVING TECHNIQUES

Boskalis uses the following diving techniques within this project scope:

- Surface Supplied Air Diving  
Maximum depth of 50 meters.
- Surface Supplied Mixed Gas Diving  
Maximum depth of 75 meters, benefit extended bottom time for deep dives 50-75 m, maximum bottom time is 30 minutes.
- Closed Bell Saturation Diving  
Shallowest depth 18 meters, benefit long dive times 8 hour bell runs, good for deep scope and shallow light construction scopes.

### DIVING PLATFORM

- DP-DSV Extended Umbilical Diving.  
Known as Golden Gate diving, increases the outward excursion of the diver from the DP-DSV to access the Worksite when on DP mode, the method is set up on the Portside, midship.
- Scuba Replacement Package (SRP)  
Mini mobile commercial diving unit, can be positioned on platforms, barges, SPMs and RIBs, diving, with tooling, limited to a maximum depth of 30 metres.
- SAT Diving  
Sat system is a 6 man mini saturation diving system positioned on the starboard side next to the ROV XT Cougar deployment stage.

### ROV PLATFORM

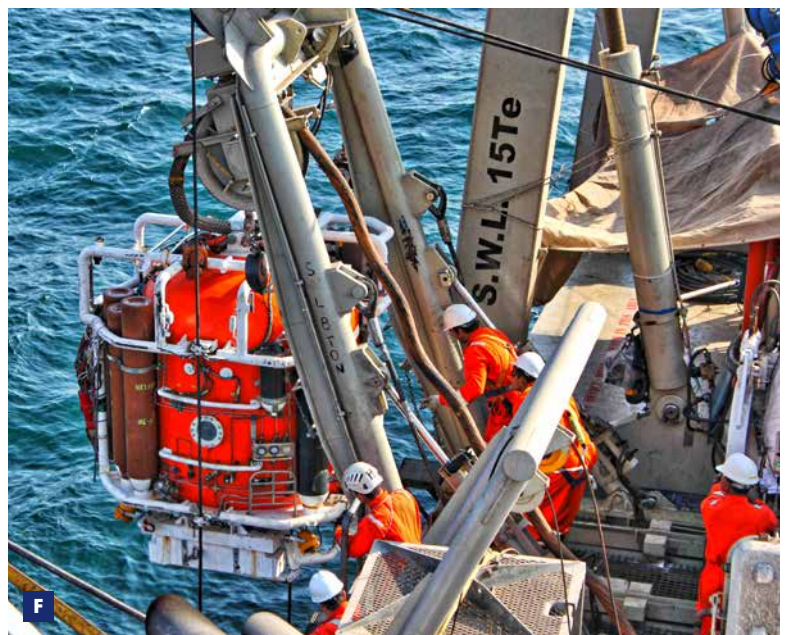
- Cougar XT ROV pipeline Inspection  
The Cougar XT ROV used for mainly for pipeline inspection and has a speedy FMD capability. The Cougar comes with various tooling skids. The vehicle has manipulator, boom camera and pipe tracker functions.
- Cougar XT ROV Survey support  
Cougar ROV is extensively used during rig access surveys in conjunction with the Boskalis survey package. The ROV is able to accurately fix using DGPS any debris, spudcan depressions or any subsea anomaly,



that may interfere with Rig positioning. A full grid survey can be completed within 48hrs

### VESSEL PLATFORM

- SMIT Komodo setup has been specifically designed to maximise the deliverables to our Client with maximising the capabilities through a variety of complex scopes from basic subsea inspections to detailed subsea asset analysis and from caisson cleaning to emergency subsea pipeline repair provisions.
- SMIT Komodo has SPM capabilities from the stern roller to a purpose built gunnel gate on portside that gives the available to position the SPM hose on the deck of SMIT Komodo for routine maintenance.
- SMIT Komodo working deck is 120 m2 with a hydraulic tooling/ umbilical deployment skid positioned on the portside.



- D** Air Diver being deployed portside SMIT Komodo.
- E** Platform T2 Life Extension project, transfer of brace from supply vessel.
- F** Sat3 Bell deployment starboard side SMIT Komodo.

Royal Boskalis Westminster N.V.  
PO Box 43  
3350 AA Papendrecht  
The Netherlands  
T +31 78 69 69 000  
F +31 78 69 69 555  
royal@boskalis.com  
www.boskalis.com