**LOT 1**

**One (1) New and Unused ESP Xmas Tree System (delivered in July 2020) comprising:**

* One (1) New and Unused TechnipFMC EHXT2 ASSY 5-1/8 X 2-1/16 5K, 18-3/4 TORUS IV 15K BTM X 18-3/4 H4 TOP Subsea ESP XMAS Tree Assembly, SI 913 compliant; and
* One (1) New and Unused TechnipFMC MK II 620 Subsea Control Module (SCM) (FITTED); and
* One (1) New and Unused Fishing Friendly Structure (FFS) with Canopy

1. **SUBSEA TREE SYSTEM DESCRIPTION:**

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1. 18-3/4” Horizontal Subsea System configured for dual ESP completions
2. SCM & SCMMB
3. Dual ESP Tubing Hanger System

1 MQC Bridging Plate

1 MQC Tree System Outboard Flushing Plate

1 MQC IWOCS Parking Plate

1 MQC Flying ISOWCS stab plates

1 Tronic DHPT Flying Connectors

1 Diamould Tubing Hanger feed through components

1 Diamould Xmas tree and JDM electrical jumper cables

1 DG O Brien DHPT Gauge Tubing Hanger feed through system

1 Tree system inboard MQC plates

1 PT/TT sensors c/w harnesses to SCMMB

Table

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1. **WELLHEAD SYSTEM INTERFACE**

Tree guide funnel / isolation sleeve designed to interface with Baker Hughes MS700 design with enhanced 36.00” LP Wellhead housing..

1. **TEMPERATURE RATING**

The Subsea Tree rated to Temperature Class U, (2degC to 121degC).

Choke and internals specified as Temperature Class P-U, (-29degC to 121degC).

1. **METALLURGY**

The base components of the Subsea Tree System material specification comply with the following:

i. Production wetted – H-H

ii. Production Valves – H-H

iii. Crossover – E-E

iv. Annulus – E-E

v. Annulus Valves – F-F

vi. Production Choke – H-H

1. **TUBING HANGER PENETRATIONS, (DHSV, DHCI, DHPT)**

Tubing hanger configured for dual ESP artificial lift, with 3 x hydraulic control line penetrations for the DHSV and two DHCIVs. The tubing hanger also accommodates 1 x electrical feedthrough for a DHPT gauge.

1. **TREE CHEMICAL INJECTION (CIV)**

The production wing block accommodates two independent penetrations (CIV1 & CIV 2) between the PMV, PWV and XOV complete with associated fail-safe actuated gate valves and inboard check valves.

The production isolation valve block accommodates one independent penetration (CIV3) between the choke and outlet flange complete with associated fail-safe actuated gate valve and inboard check valve.

1. **DHPT**

The Subsea Tree System is configured to incorporate a Tronic DHPT connector to allow communication with the downhole gauge during system installation at surface on the drilling MODU independently of the SCM / SCMMB.

1. **PT/TT SENSORS**

Pressure and Temperature Sensors with dual redundancy complete with associated harnesses back to the SCMMB at the following locations:

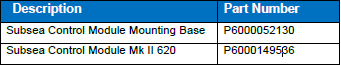
i. Between PMV and PWV

ii. Between Choke and FIV

iii. Between AMV and AAV

1. **SCM / SCMMB**

The SCM will control the hydraulic valve actuators at the Subsea Tree and relevant valves on the manifold. The system control fluid is Oceanic HW443 / HW443R



1. **SEABED PRESSURE SENSOR**

The Subsea Tree System can incorporate seabed pressure sensors with outputs communicated via the SCM to the surface MCS display.

1. **WEIGHTS AND DIMENSIONS**

* **Subsea Tree c/s SCM:**
* Dimensions: 151.88" Long x 149.84" Wide x 172.52" High, Weight (in air) 35,596 KG
  + - **Over-trawlable Fishing Friendly Structure (FFS) c/w Canopy:**
* FFS structure: 193.87" Long x 193.87" Wide x 140.81" High, Weight (in air) 30,977 KG
* FFS canopy: 117.82" Long x 136.52" Wide x 70" High, Weight (in air) 3010 KG

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