

**TITLE: - ENGINEERING AND FABRICATION OF EWT MODULE FOR FSU
NAUTICA MUAR**

Noor Rashidawani Md Noor
MTC Engineering Sdn. Bhd

ABSTRACT

The Extended Well Test (EWT) Module installed as a topside facility onboard the Nautica Muar for the KMSE and AJK project is a proprietary solution developed by NGL Tech Sdn Bhd in collaboration with PETRONAS Group Technical Solution (GTS) . The EWT Module acts as the ‘heart’ of the FSU Nautica Muar, where it functions as the crude oil stabilization and separation system for Full Well Stream (FWS) fluid from the WellHead Platform (WHP). The three-phase liquid and sand is separated with produced water and hydrocarbon gas as by-products, while the stabilized crude is stored in the cargo oil tank available in the FSU. The process module was designed to cater for the maximum oil production of up to 10000 bopd for the KMSE and AJK Fields. The EWT Module mainly consists of a slug handling system, a crude separation system and a fuel gas scrubber. There are a number of processes involved in the Engineering, Procurement, Construction, Installation and Commissioning (EPCIC) phases towards the EWT Module completion. The most crucial phase is the Engineering phase, which defined all the design parameters in accordance with field data. The Construction stage then comprised fabrication of pressure vessel, electrical, piping and structural works. The Commissioning stage ensured that all the instruments installed were functioning as per their intended design and were ready for startup. MTCE successfully managed to complete the EPCIC of the EWT module within 4 month from the start date of the project. This presentation will share the experience gained by MTCE during this period.