

# DRILLING PROJECT MANAGEMENT CASE STUDY

MPRL E&P - Pyi Thar-1

Onshore Southern Rakhine Basin, Myanmar

## AWT DISCIPLINES

**Drilling Engineering**

**Drilling Operations**

**Geoscience**

**Well Test Engineering**



## PROJECT BACKGROUND

Block A-6, covering nearly 10,000 km<sup>2</sup> from the shore to more than 2,400 m water depth, only had some 1,330 km of old vintage 2D seismic data when MPRL E&P signed the production sharing contract in January 2007.

MPRL E&P undertook extensive geological studies which included four field study expeditions all along the Western Ayeyarwady coast and acquired nearly 2,000 km of 2D seismic in 2009. This was followed by the acquisition of the first 3D seismic survey in the block.

MPRL contracted AWT to provide drilling project management services to fulfil the contractual obligations of the Initial Exploration Period which was extended by one year to allow MPRL E&P to integrate the results of 2D and 3D seismic campaigns and minimize exploration and drilling risks on the drilling of the Pyi Thar prospect.

**Rig:**  
Semi-submersible mobile offshore drilling unit (MODU) Doo Sung

## AWT WORKSCOPE

To drill one vertical exploration well to appraise three seismic amplitude anomalies that were assumed to be gas filled and to drill one side track well to probe at least one or more seismic amplitude anomaly also assumed to be gas filled.

The AWT well project team was responsible for:

- Basis for Design
- Detailed Well Design
- Well Cost Estimates, AFE and Cost Monitoring
- Technical Specifications for Tender Documents
- Technical Evaluation and Award Recommendation of Tender Submissions
- Drilling Contract
- Emergency Response Plans and HSE Bridging Documents
- Logistics Planning and Execution
- Risk Identification and Mitigations
- Day to Day Management and Supervision of Drilling Operations
- Project Close Out and Reporting.

## AWT ADDED VALUE

The Pyi Thar-1 and sidetrack wells were successfully drilled and resulted in a gas discovery.

- The final well cost was USD 25.8 million, approximately 25% under the approved AFE of USD 34.6 million.
- This saving of USD 8.8 million was primarily due to:
  - Detailed engineering and critical review to optimise the well design – a slimmed casing design was implemented which met all required objectives and enabled full evaluation of formations drilled by wireline logging
  - A detailed and efficient logistics plan which in the absence of any shore based infrastructure in Myanmar eliminated the need for a floating warehouse. The components of this logistics plan included mobilisation of contingency equipment to Thailand and also incorporated the AHSVs into the rig tow
  - Pre-job quality assurance efforts (QA/QC) of critical tools and equipment resulting in minimal NPT
  - Rig inspection and verification/commissioning checks of all equipment refurbished, replaced or repaired;
  - Higher than planned high penetration rates and drilling practices which minimised hole problems
  - The application of critical drilling practices when the leak-off obtained at the 13-3/8" shoe was significantly less than anticipated
  - Reduction in logging programme over 8 1/2" sidetrack after encountering tectonically overstressed shales.