

From Concept to Full MPDR Design in 18 Months

Parker performed an extended Front End Engineering and Design (FEED) study for a Modular Platform Drilling Rig (MPDR) design for competing Engineering, Procurement, and Construction (EPC) contractors.

Challenge

Required an extended FEED study for a highly mobile modular drilling rig to be utilized on two separate Tension Leg Platforms (TLP) in a remote offshore location.

Solutions

Parker completed a FEED study focussed on optimizing rig moves between TLPs, and facilitating safe and efficient operations.

Results

Parker successfully completed the extended FEED study **on schedule and within budget**, to deliver the following results:

- Designed *Fixed Modular Derrick* concept with integrated offline stand-building
- Hands free tubular handling from the Platform Supply Vessel (PSV) to the rotary table
- Eliminated working at heights risks with platforms, stairs, and basket access
- Packaged technical procurement packages for certainty of success with factory acceptance testing and delivery
- Integrated lessons learned from similar platform designs
- MPDR design optimized for constructability and plug-and-play
- Multiple robust and efficient cuttings and liquids handling methods
- 10,000 year storm design criteria and tie down systems
- Delivered **741** MPDR related documents as approved for design

Parker utilized its rich history facing diverse challenges to deliver the customer's complex requirements for a remote operating location

This project was designed around a Modular Platform Drilling Rig (MPDR) shared between Tension Leg Platforms (TLP). Due to the remote drilling locations of the operation, the customer required an innovative rig design that could be reliably and efficiently moved between TLP's in a cost effective manner. Parker had to design solutions for optimum fixed modular derrick and plug-and-play technology operations.

Relentless optimization leads to innovative solutions meeting customer goals

Parker addressed this extended FEED project with a diverse and experienced engineering and design team, integrated with key drilling operations personnel. A key focus of the design team was modularization of the MPDR (lifting, assembly, mobilization) in order to make the project economically viable for the remote Australian location.

Parker recognized the pipe handling philosophy was fundamental to project success and utilized extensive three-dimensional modeling to optimize the layout of equipment and handling operations.

