

MWP-6 New Lean Structure

Owner	Belayim Petroleum Company (PETROBEL)
Client	Petroleum Marine Services (PMS)
Location	Belayim Concession, Gulf of Suez, Egypt
Year / Status	2023 / Successfully Delivered
Project Type	Structural Detailed Design
Keywords	Offshore Structural Design, Minimal Platform, Early Production, Fast-Track

Scope of Work

PETROBEL initiated the MWP-6 offshore field development in the Gulf of Suez at a water depth of 38 m to enable early production from three wells using 30" conductors. UNEPP was commissioned to deliver the detailed structural design of a lean, minimal platform based on its proprietary Spider Tripod Concept. The scope included structural analysis and design of the tripod jacket, skirt pile foundations with mud-mats, single-deck topside, boat landing, riser, J-tube, and all associated appurtenances, ensuring full compliance with international codes and environmental criteria.

Technical Challenges

- Delivering a structurally sound yet minimal design for early production without onboard processing
- Ensuring foundation robustness under Gulf of Suez environmental loading with minimal fabrication cost
- Accommodating conductor insertion through tripod legs while preserving structural performance
- Designing for unmanned, low-risk exposure (L-3) with appropriate safety and failure consequence categories

Execution Strategy

UNEPP implemented a fast-track, cost-effective approach using its Spider Tripod platform concept—a compact lattice structure supporting three conductor wells with integrated skirt piles and mud-mats for stability. The design followed international standards, optimized steel usage, and integrated riser and J-tube supports to reduce fabrication effort, installation time, and overall project cost.

Strategic Outcome

The MWP-6 project demonstrates UNEPP's expertise in delivering innovative, cost-efficient offshore structural solutions. Its Spider Tripod design allowed PETROBEL to accelerate production while maintaining high standards of structural integrity, safety, and installation efficiency, reinforcing UNEPP's role as a trusted engineering partner in offshore developments.

Photos / Diagrams

