

Expro Excellence CETing the standard on Lihua Subsea development in China

Subsea Well Access



Objectives and background

- Expro was contracted by China JV COSL- Expro Testing Services (CETS) to provide two simplified landing string systems suitable for Electrical Submersible Pump (ESP) completions and to interface with an FMC Tubing Hanger Running Tool (THRT)
- The well parameters defined the completion design required ESP to artificially pump the oil from the reservoir. This created the need for electrical monitoring conduits through the subsea landing string system to monitor the continuity of the ESP pumps when installing the completion into the well
- The project had a fast track work program to be completed utilising two rigs simultaneously so system reliability and robustness were critical
- Expro utilised the systems on the Nanhai 5 and Nanhai 6 mobile offshore drilling units and installed new completions over the 26 well development project on CNOOC's Lihua 20-2 and 16-2 fields
- CETS and CNOOC are long standing partners and clients of Expro, providing Subsea Riser solutions across multiple projects over the last ten years

Value to the client

- Expro / CETS were awarded a job performance score of 97% across the 27 well operational scope of work
- The equipment was delivered on schedule from Expro's global Subsea support hub in Aberdeen in September 2019 and transported to China by CETS for assembly and integration testing
- First operations started in December 2019 and finished in June 2021 with 26 new wells and one workover well completed during the COVID19 pandemic
- The key value was the partnership between Expro and CETS. The combined strengths and capabilities supported the ability to design, prepare, test and deliver a time and cost effective solution and overcome COVID19 challenges

Expro Excellence

- The project scope involved designing and building bespoke subsea landing string systems to suit the required rig and tree vendor interfaces and providing the necessary electrical feeds for monitoring the electrical continuity of the ESP pumps
- The solution utilised our continued partnership. Expro designed and provided the subsea landing string systems while CETS provided the Direct Hydraulic Control Systems, personnel support and the facilities in China to assemble the equipment and perform System Integration Testing (SIT) and maintenance
- Both landing strings were configured to fit each rig and were fully inter-changeable to provide natural back up to each other should the need arise
- COVID19 impacted China as operations started in January 2020, restricting Expro's ability to move expat subsea supervisors back into China between March and October 2020. CETS covered all operations in this period with remote support from Expro. COSL-Expro continued to execute operations to the same high-quality standards allowing CNOOC to complete the Lihua wells as planned without disruption
- The ability to work with the COSL-Expro Chinese JV minimised personnel requirements and allowed some equipment to be locally sourced avoiding unnecessary equipment and transportation costs



Safety



Safety



Bespoke solution



Contact

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