

Field extension: wellhead control panels



Client:

ADNOC Offshore / NPCC

Location:

Umm Al Dalkh, UAE

Equipment:

Wellhead control panels

Project background

Umm Al Dalkh is an offshore shallow water oil field 20 kilometres off the coast of Abu Dhabi. It lies a few kilometres east of the Umm Al Lulu field. ADNOC engaged National Petroleum Construction Company (NPCC) to boost output by 5,000 b/d. To do this, ADNOC needed to double the number of wells from six to twelve.

Proserv manufactured the wellhead control panel (WHCP) that controlled the six original wells for Umm Al Dalkh. The panel had been running reliably and without incident for several years. This fact, coupled with our recent success remediating OEM control panels for the operator in a nearby field, convinced ADNOC of our controls expertise. What's more, we were able to offer an alternative solution that significantly reduced CAPEX and installation downtime over the alternative. As a result, ADNOC recommended that the contractor engage Proserv for this project.

Solution

ADNOC had two apparent options: procure an OEM six slot wellhead control panel (WHCP) to extend the panel's capabilities or purchase a new 12 slot panel to replace the original WHCP. The 12 panel option would involve significant CAPEX and would require the well to be shutdown for 30-45 days to allow for installation and commissioning. However, ADNOC was only allowing a shutdown period of seven days. Adding a stand-alone six slot panel to increase the total slots to 12 was another option. However, this would double all the controls, tubing, pumps and associated components, adding significant complexity to the control room and doubling the maintenance and certification required.

Rather than scrap and replace the existing Proserv WHCP, which was still performing well, Proserv proposed to

supply an additional six slot WHCP with a built-in 12 slot hydraulic power unit (HPU) that could integrate with the existing WHCP to support the operation of the entire 12 wells. By integrating the two Proserv WHCPs with the HPU, the entire WHCP worked as a single panel, simplifying operations and enabling the customer to reduce the components under frequent maintenance.

Scope

The WHCP with six slot well control module section was built in our service centre of excellence in Abu Dhabi using local content staff. The new WHCP contained an integrated HPU to support the existing six slots in addition to the current expansion. On site installation, integration and commissioning with the original WHCP (including removal of its original HPU) took place within the required seven day shutdown window. Proserv also fully refurbished the existing accumulator to ensure it remained fully operational for the extended period of life.

Conclusion

Proserv was specifically chosen for this project by ADNOC because of our successful relationship with the operator delivering controls expertise and associated services. Proserv delivered the project on time, further strengthening our relationship with this operator, paving the way for further projects with the client.

Benefits

- Fast turnaround project from our local content staffed service centre of excellence in Abu Dhabi
- Reduced potential downtime from 30-45 days to seven days, saving the operator millions
- Simplified operations and reduced maintenance with one panel from one supplier for the full field extension
- 50% reduction in cost against the purchase of a new 12 slot WHCP
- Our solution avoided significant wastage as it avoided scrapping a fully functional WHCP

