

Halliburton East Coast Canada Supports Client to Deliver Significant Savings on Platform P&A Project

MULTI-PSL TEAM DELIVERS LARGE P&A PROJECT AHEAD OF SCHEDULE, SAVING TIME AND MONEY

EASTERN CANADA

CHALLENGES

- » Execute safe and efficient P&A of 22 platform wells
- » Reduce P&A costs through optimization in personnel without impact on HSE or operational performance
- » Reduce operator risk by risk sharing across all contractors

SOLUTION

- » Assign Halliburton well intervention engineers to the project to optimize operations, present abandonment solutions to the client, and drive efficiencies and planning
- » Implement time- and cost-saving technologies and methodologies and methodologies
- » Assign multi-skilled crews to the project

RESULTS

- » Completed project with no HSE incidents or LTIs
- » Delivered P&A of 22 platform wells, including 194 days of SIMOPS
- » Used multi-skilled crews to carry out all required services, resulting in significant efficiency improvements, in addition to time and cost savings

OVERVIEW

Halliburton was awarded a multi-services contract from an independent oil company to provide plug and abandonment (P&A) services for 22 wells on five platforms located offshore Canada. The project operations started in December 2017, and were estimated to take approximately three years to complete.

P&A PROJECT
DELIVERED WITH
194 DAYS OF
SIMOPS

REDUCE RISK AND COST WITHOUT IMPACT TO SAFETY AND SERVICE QUALITY

The risks associated with conducting these multi-platform well P&A operations included:

- » No local team, equipment, or support available at the tender stage
- » Small-sized rig
- » Harsh environment
- » Need to reduce number of operating days
- » Uncertain downhole conditions on several wells
- » Contingency equipment requirements for possible downhole scenarios
- » Simultaneous operations (SIMOPS) in two separate wells

These challenges had the potential to add significant cost to the project economics.

The Halliburton Project Management team was also tasked with leveraging its well abandonment expertise during planning and operational phases.

Given the sensitive nature of the worksite and the potential for incidents on an offshore installation, all possible exposures related to health, safety, and the environment (HSE) were treated with the expected due diligence, and this drove the implementation of scope-specific HSE key performance indicators (KPIs).

SIMULTANEOUS OPERATIONS DRIVE EFFICIENCIES

Halliburton was awarded a multi-services contract to provide services involving cementing, abandonment fluids, coiled tubing, slickline, e-line, tubing-conveyed perforating, and completions on a time and materials type of contract. This contract also included third-party nitrogen, milling, tubing handling, and fishing services.

Halliburton's solution was in the development of a moonpool conversion of the rig with a skidding system to enhance overall operations permitting simultaneous operations of intervention and rig activities on two different wells at the same time.

Alignment was key between all project stakeholders, and common project delivery durations meant that all were accountable for performance and were mutually incentivized to collaborate to achieve. Similarly, alignment for HSE at the worksite drove a safety "one team" culture offshore.

A Halliburton team comprising a project manager, well intervention engineers, a performance development coordinator, and various Halliburton product service line (PSL) representatives were assigned to the project. The project manager was tasked with driving project efficiencies, and recommending and recommending Halliburton technologies and updated industry methodologies.

Successful implementation of the above included:

- » Assigning multi-skilled crews to reduce personnel on board (POB) costs including PSL- specific supervisors to oversee cross-trained crew members for all operations (cementing, abandonment fluids, coiled tubing, slickline, and e-line)
- » Implementing perforation, washing, and cementing operations to remediate sustained casing pressure and/or poor cement
- » Using cement support tools (CSTs) to eliminate a trip in or trip out of the wellbore for a bridge plug
- » Utilizing a fluids test kit while offshore to verify allowable specifications for discharge

The Halliburton team captured lessons learned and opportunities for improvement, and leveraged experience from previous projects to help foster a safe work environment focused on continuous improvement.

PROJECT TARGETS DELIVERED AHEAD OF SCHEDULE WITH ZERO INCIDENTS

The project was completed safely and efficiently – well ahead of the original planned schedule. It was delivered under budget and with zero HSE incidents or lost-time incidents (LTIs).

The alignment of all contractors, including Halliburton as the main contractor, and the efficiencies gained resulted in the project being delivered with 194 days of SIMOPS – ultimately reducing total project delivery time from three to two years.

The Halliburton team's ability to work closely with the client to provide applicable solutions and to implement cost- and time-saving technologies were major contributing factors to the project's overall success.

This successful project delivery has allowed Halliburton to gain the first integrated well abandonment project for offshore well work in Eastern Canada, while adding to our already robust P&A track record.

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