

Going rigless

Audrey Leon chats with Rod Smith of Schlumberger to learn about the latest technologies available for rigless plugging and abandonment operations.

OE: Please describe your rigless abandonment offering.



Rod Smith

in the current landscape of abandonment, higher well complexity, increasing regulation, and well integrity issues have all combined to increase the challenge of achieving full isolation using a rigless methodology. This requires portfolios of technology to address industry needs and ensure robust barrier installation and verification.

Schlumberger has leveraged a portfolio of technology for plug and abandonment (P&A) applications, such as LIVE digital slickline services, for more accurate depth control, confirmation of jarring, and risk reduction through head tension and on-demand release for stuck tools. These services provide electric line measurements and capabilities, but with the smaller footprint of slickline.

Further enablements in wireline include a mechanical services platform, ReSOLVE instrumented wireline intervention service, to retrieve stuck plugs or tools from wells and enable access. The system can also mill scale and obstructions to prepare the well for cementing.

Advancements in coiled tubing (CT) technology have also allowed more downhole confirmation of barrier placement through the use of ACTive real-time downhole coiled tubing services.

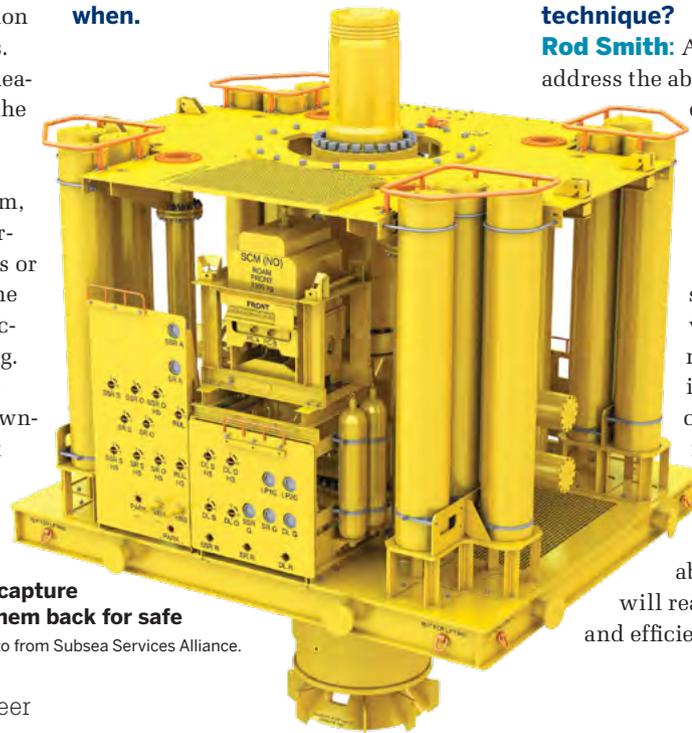
ROAM provides 18 3/4-in full-bore access with the ability to capture contaminants or gas and circulate them back for safe handling to surface. Photo from Subsea Services Alliance.

Rod Smith, integrated well abandonment global operations manager, Schlumberger:

In the current landscape of abandonment, higher well

Currently, Schlumberger is working on several new technologies focused specifically on rigless abandonment. Specific to subsea wells, the Subsea Services Alliance (a collaboration among Helix, Schlumberger, and OneSubsea, a Schlumberger company) is developing the first riserless open-water abandonment module (ROAM) system (OE: April 2017). Enhancing the capabilities of the well intervention vessel by providing 18¾-in full-bore access, ROAM is deployed after the reservoir isolation phase and allows tubing to be pulled in open water safely and with environmental containment. Once the tubing is removed, the well intervention vessel can perform the upper abandonment. The system offers a flexible and cost-effective alternative to rig-based P&A well isolation more safely and with environmental containment.

OE: Please give an example of where it has been used and when.



Rod Smith: Making the abandonment process more lean is key in reducing costs without comprising barrier integrity—and in many cases will improve verification success with less risk and HSE exposure.

LIVE digital slickline services have been used extensively in the North Sea and Gulf of Mexico for well abandonment. In some cases, the service is used only for well preparation, plug setting, and tubing cutting and punching. In other applications, it has been used for full abandonment, saving numerous trips for correlations and adding certainty to plug tagging. In the North Sea, the service was used for plug and lubricate operations as part of a well abandonment scope that saved the customer 24 hours per well.

ROAM is engineered and being built at the OneSubsea manufacturing facilities. The system is leveraging existing in-house technologies such as BOPs from Cameron, a Schlumberger company, and workover controls technologies from OneSubsea, packaged into a fit-for-purpose solution. Available later in the year, ROAM will complement existing intervention riser systems (IRS) and subsea intervention lubricators (SIL), expanding applications by enabling completions recovery in open water with environmental control and full well isolation capability without the need for a riser to surface—saving considerable running time.

OE: Please tell us the benefits of using this technology. i.e. where are the best instances for using this technique?

Rod Smith: As the industry looks to address the abandonment process in its entirety, there will probably be an application for using these Schlumberger technologies in most scenarios. The key benefit of simplifying equipment spreads with more intervention-enabled deployment methods is in reducing reliance on costly and complex drilling rigs while reducing the support costs for operations. High-cost applications such as subsea wells and complex abandonment environments will realize the greatest cost, risk, and efficiency benefits. **OE**