

Case study: North Sea, Norway

# CICM ultrasonic services eliminated dedicated wireline run, HSE concerns in North Sea P&A operation

An operator performing plug and abandonment (P&A) operations in the North Sea needed to correctly position a cut operation relative to the actual casing collar location. This was to avoid any non-productive time associated with cutting close to or actually through the casing collar. Past experience in this field has proven this to be problematic, as the casing at this point is thicker than the nominal casing body. Traditionally this has been carried out by wireline, but it can be a challenge to compare wireline depth with depth from drillpipe—especially in deviated wells. Up until now the other option was to run a logging while drilling (LWD) tool containing a nuclear source. However, the time, safety, and environmental aspects of handling nuclear sources at the rig site, combined with the slow logging speeds needed to identify casing collars with this technique has proven to be ineffective.

The operator contacted Baker Hughes for a solution, who recommended its **CICM (casing integrity and cement mapping services)**—the industry's only cased-hole, pipe-conveyed ultrasonic casing and cement evaluation service. This means, you no longer have to make dedicated wireline runs to obtain

the needed measurements to confirm well integrity. With CICM, you can get this data any time you run pipe in the well. Additionally the ultrasonic tool can measure the position of casing collars at logging speeds up to 10 times faster than the nuclear sourced tools, plus it has the ability to identify not only conventional casing collars, but semi flush and flush joint casing collars as well.

The operator chose to run the CICM services in real time during a pre-planned clean out run—thus logging without interfering or adding to planned rig time. The operator then used the same operational parameters (RPM) in the cleanout run, to exactly mimic the cut run to minimize depth discrepancy between the runs.

Pleased with the CICM services, our customer was able to eliminate the HSE concerns and processes necessary for handling radioactive sources and eliminate a dedicated wireline run. Real-time collar locations were detected and sent to surface, allowing the client to confidently cut in the correct place. Our customer has subsequently continued to run this service in its wells in the North Sea.

## Challenges

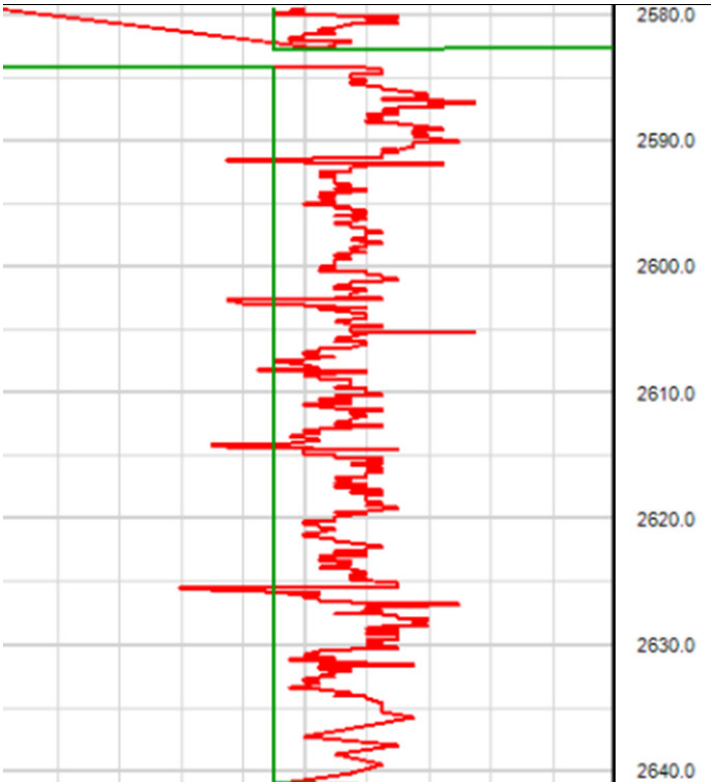
- Highly deviated well
- Finding a sourceless technology to provide drillpipe deployed CCL

## Results

- Eliminated the need for radioactive sources on the rigsite
- Saved 12-18 hours of rig time by eliminating a dedicated wireline run
- Reduced NPT by avoiding cutting through a casing collar



The CICM (casing integrity and cement mapping services) tool eliminates the HSE concerns and processes necessary for handling radioactive sources.



This real-time thickness measurement clearly identifies the collar locations.