

LEADING TECHNOLOGY FROM LEADING PROVIDERS

Set bridge plug & test, place cement, dress/tag & cut casing in a single trip



Ardyne & Major Service Provider collaborated on a casing recovery operation for a Major Operator in Norway.

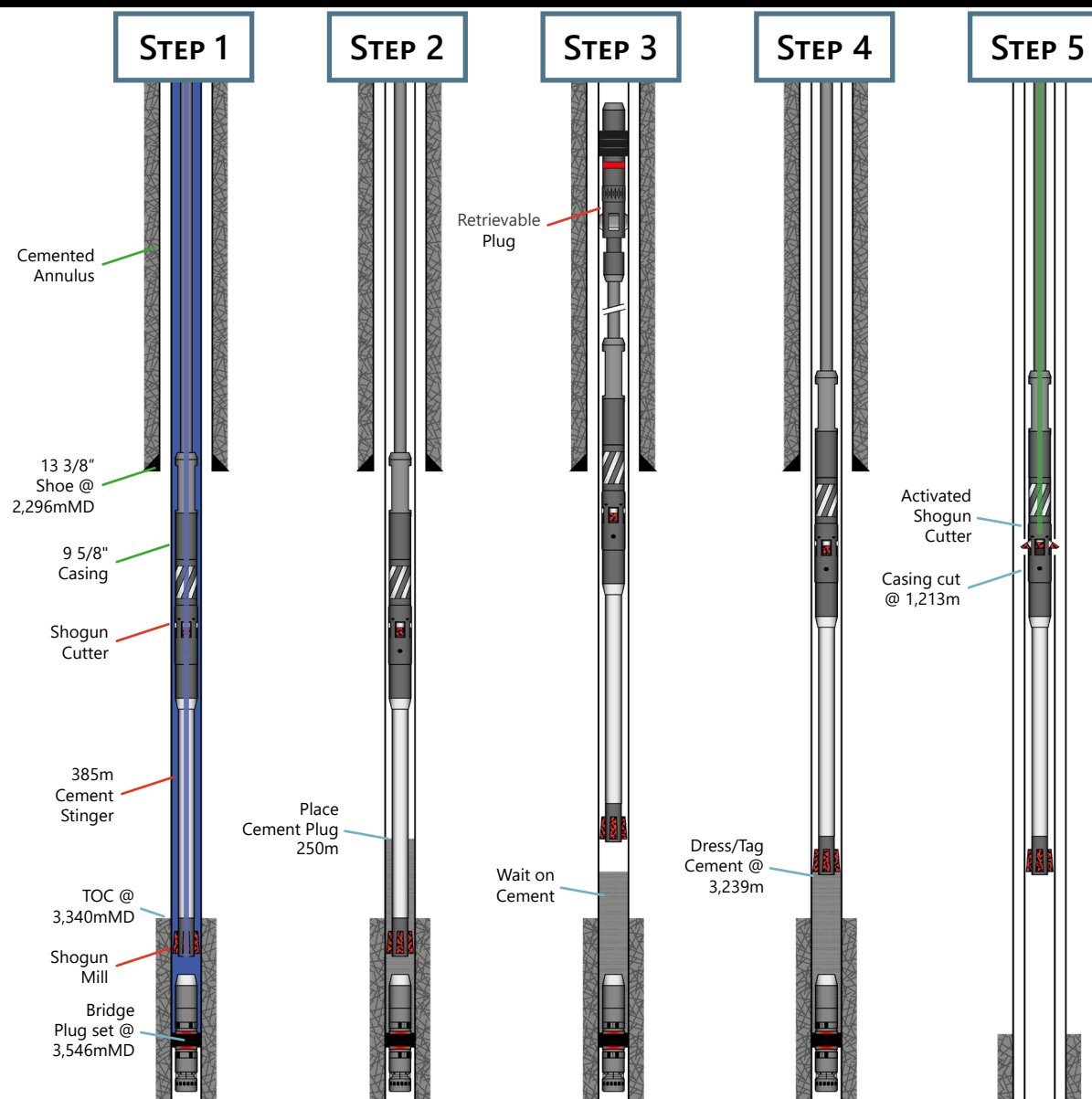
The operation included the setting of a bridge plug, placing cement barrier & cutting of the 9 5/8" casing in a single trip.

Ardyne's newly developed Shogun Cement Thru System was run for the first time, in conjunction with the other service providers Bridge Plug and the Retrievable Plug.

This combination not only reduces operational time it reduces trips downhole, providing an HSE benefit with less time spent in the redzone.

OPERATIONAL SEQUENCE

- 1 - Set Bridge Plug @ 3,546m and pressure test
- 2 - Place 250m cement plug
- 3 - Short trip Retrievable Plug, hang off and wait on cement
 - Complete surface operations;
 - Wash, pull and re-install BOP
- 4 - Dress/tag cement @ 3,239m
- 5 - Pick up and cut 9 5/8" casing @ 1,213m
 - Pull Shogun BHA to surface
- Not Shown*
- 6 - RIH with FRM Spear & Packoff
 - Recover 10 3/4" x 9 5/8" casing to 1,213m



Single Trip
capabilities enable
operational time
saving



Up to **14 hours**
time saving vs
conventional
approach



Increase Safety
Reduced time spent
in the Redzone

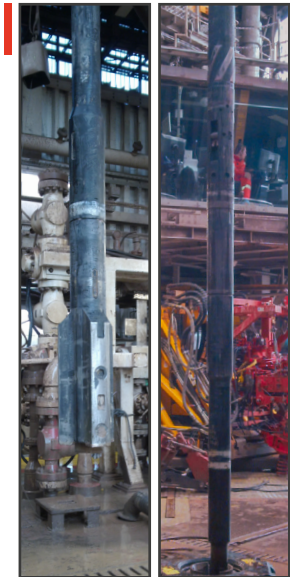
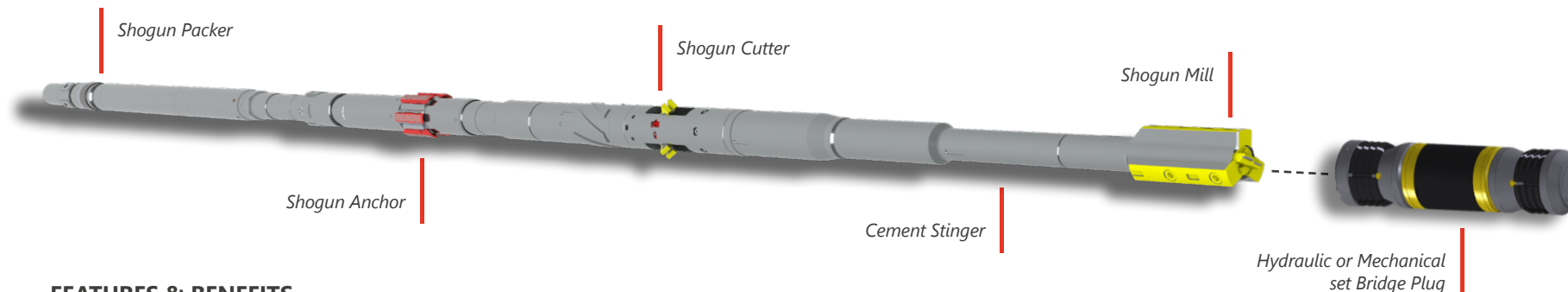
SHOGUN - CEMENT THRU SYSTEM

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New technology delivering enhanced capabilities on cementing operations for Slot Recovery / Plug & Abandonment

Shogun Mill & Cutter
at the rigfloor



FEATURES & BENEFITS

The **SHOGUN System** is a modular single trip multi-function cement through cut and pull BHA.

It allows for a number of time and trip saving benefits including:

- Hydraulic or mechanically set Bridge Plug & tag / pressure test
- Pumping cement
- Hang off for surface operations while waiting on cement
 - ◇ Nipple Up/Down the BOP
 - ◇ BOP Testing
 - ◇ Removal of Casing Spool/Head
 - ◇ Derrick Management
- Tagging / dressing cement plugs
- Displacing the well to the desired well fluid
- Performing multiple casing cuts as required by the chosen casing cutting strategy
 - ◇ Anchoring on demand for depth control when cutting on floating surface packages
 - ◇ No need to run a marine swivel
- Pulling and recovering casing:
 - ◇ Verify casing is free by pulling at the cutting depth
 - ◇ Pulling from the hanger and recovering to surface

Shogun Data Sheets
available on request



View Ardyne Shogun System Webpage
[Click to Open](#)

