

PRECISION MECHANICAL APPLICATIONS

WELLBORE CLEANOUT

Country: Norway
Field: Staffjord
Year: 2016
Technologies: PowerTrac 218 ● PrecisionCollector 250

MAKING INTERVENTION
SMARTER

PrecisionCollector removes severe $BaSO_4$ scale obstruction, restoring well production.

- 154 litres of $BaSO_4$ scale recovered in 24 runs
- Well access and well production restored

CHALLENGE

To remove the severe build-up of hard $BaSO_4$ scale that had amassed in the inner string of a shut-in well, impairing completion component integrity and preventing intervention access. The top most Sliding Slide Door (SSD), located at 2,523 metres measured depth, experienced related closure problems. The $BaSO_4$ had to be cleaned out from the top of the SSD with an available drift ID of only 2.797". Slickline broaches were initially run to clear the obstruction but were unable to advance beyond 2,518 metres. Well access was required to run a tubing punch to establish communication with the target reservoir and restore well production.

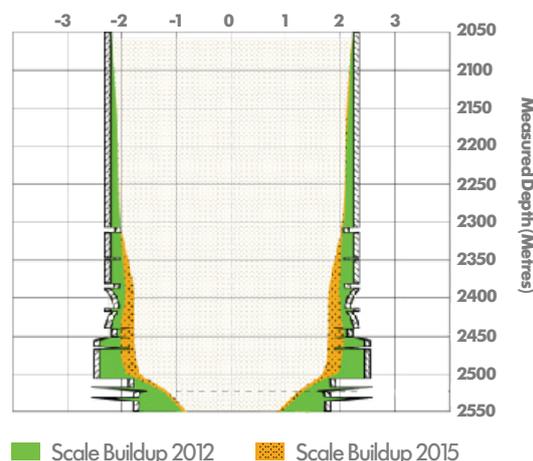
SOLUTION

An E-line deployed 2.5" OD **PrecisionCollector** was selected to resolve this challenge. This technology provided a viable and cost-effective solution which compared favourably against the more time-consuming coiled tubing deployed option. Feasibility was confirmed after rigorous testing in the Altus Intervention Engineering Facility. Furthermore, a surface Wellsite Washout System was engineered to provide effective removal and collection of debris from the **PrecisionCollector** chambers ensuring a time efficient multi-run operation.

RESULTS

The **PrecisionCollector** removed 154 litres of $BaSO_4$ at 2,512 metres over 24 runs. Rapid turnaround between each run was secured by the Wellsite Washout System. The **PrecisionCollector** progressed where the Slickline option could not, effectively removing the $BaSO_4$ scale from this small ID. A multi-finger caliper log confirmed the obstruction had been effectively removed, enabling the subsequent tubing puncher run to perforate the inner tubing at 2,520 metres. This established communication to the zone of interest and production was restored with significantly improved oil and gas rates.

Scale Buildup From Multi Finger Caliper Logs
(Average Caliper Radius - inches)



Before Debris Milling After Debris Milling

