

CHALLENGE

One of the biggest challenges faced by oil and gas operators is the formation of scale which inhibits flow in the near wellbore, perforations, tubulars, downhole control systems and surface equipment. Barium sulfate (BaSO₄) scale is a particularly challenging type of hard scale, as it is highly resistant to conventional chemical and mechanical remedial techniques.

An operator in the North Sea suspected that a large section of sand screen across a productive zone was plugged by barium sulfate scale. However, the relatively low production rate, coupled with a small, unmanned production platform, precluded most other intervention solutions.

HIGHLIGHTS

- Offshore Production platform
- Horizontally drilled
- Premium screens
- Wireline tractor
- Conventional oil

LOCATION

North Sea

CONDITIONS

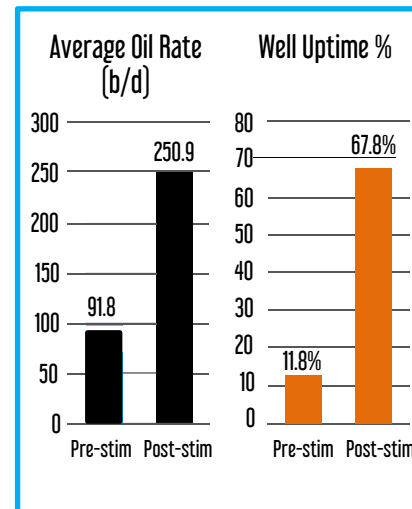
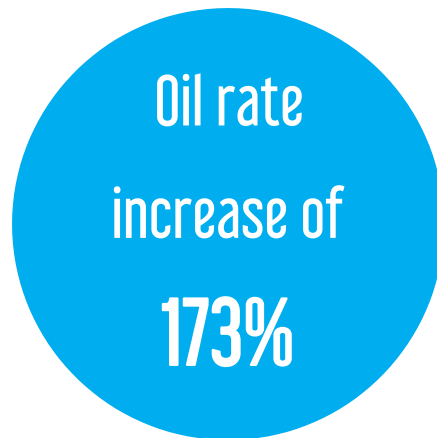
Depth: 3400 mKB (11155 ft.)
 Deviation: 86 degrees
 Temperature: 120°C (248°F)



Scale Removal

OUTCOME

- Post WASP[®], oil production increased 173% from 91.8 b/d to 250.9 b/d
- Well uptime increased from 11.8% to 67.8%
- Improved production was sustained for more than 6 months following treatment
- The operator elected to maintain the well as a producer, now that its production rate was economical
- Confirmed effectiveness of WASP[®] to remove BaSO₄ scale from completion equipment. Client is looking for additional candidates to apply WASP[®]



SOLUTION

Use electro-hydraulic stimulation to extend the economic life of a well on the Norwegian continental shelf

- Upon consultation with Blue Spark, the operator decided to improve communication with the reservoir by treating the sand screen with Blue Spark WASP[®] (Wireline Applied Stimulation Pulsing) technology
- A secondary objective was to clean a section of perforated liner
- Both treatments were accomplished in the same run in the hole
- Production after the treatment was monitored for rate and pressure