

ORCA for WBM: Horizontal well treatment delivers a PI ten times that of vertical wells in the same field, without running the risk of over-acidizing



"We needed to clean up drill-in fluid damage to bring the well to production and realize its potential, but we were worried about possible collapse of the sandstone formation if we used hydrochloric acid. ORCA for WBM in-situ acid generation made sure we didn't have the over-acidizing problems associated with traditional treatments. It delivered excellent production performance at or near the potential of the well, and justified the expense of drilling the horizontal well."

Petroleum Engineer, Operator, Czech Republic

ORCA for WBM clean up treatment improved production at a horizontal well in the Czech Republic by ten times compared with vertical wells in the same field. The achievement secured the operator's business case for drilling the horizontal well. ORCA for WBM also ensured the well's poorly consolidated sandstone formation avoided collapse – a serious risk with conventional acidizing treatments.

The challenge

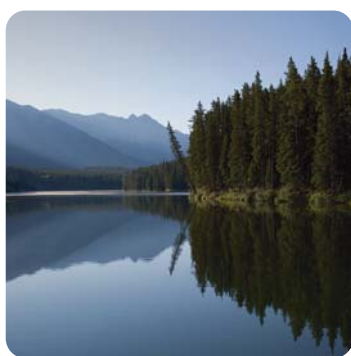
The operator needed an effective clean up of filter cake to ensure the well's high production potential was achieved – something that's critical to the business case for drilling a horizontal well in the field. However, if conventional hydrochloric acid treatment was used for the clean up, the risk was not just about production achievement. There would be a real danger that the poorly consolidated sandstone formation could be over-acidized and collapse.

The solution

ORCA for WBM employed in-situ acid generation, ensuring that exactly the same amount of acid was delivered to each part of the wellbore. This prevented over-acidizing and the risk of formation collapse. The ORCA for WBM formulation offered a highly effective clean up solution, as it contained polymer breaking enzymes to attack the polymeric components of the carbonate polymer mud, as well as acidizing the carbonate.

ORCA for WBM in action

Following drilling of the 400m horizontal section, the ORCA for WBM treatment fluid was placed from the toe to the heel of the well through the drill string and bottomhole assembly, as the drill string was pulled out of the hole. Following the required soak period of 48 hours, the clean up process was complete, and the well was gradually brought into production.



The result

The operator measured bottomhole static and flowing pressure as the well began production. Those measurements indicated a 0.15 bar drawdown, with production running at 80 m³ of oil per day. Production was at or near the well's potential, with a Productivity Index (PI) "at least 10 times higher than the PI of vertical wells at the same field." So the business case for drilling a more costly horizontal well was met decisively.

The well's production performance was due to the ORCA for WBM treatment's effectiveness, achieved without risk of formation collapse.

Get in touch

Cleansorb has a team of ORCA for WBM specialists to advise you on the best strategy for your circumstances. Please e-mail contact@cleansorb.com for more information.