

OptiPac Alternate System Results in 100% Gravel Pack Efficiency and Longer Well Life

Strong collaboration between Shell and Schlumberger ensures successful project in Norwegian North Sea and supports continuing relationship

CHALLENGE

Control sand and ensure gravel packing efficiency in North Sea gas reservoir with depleting pressures.

SOLUTION

Complete high-rate gas wells with OptiPac* Alternate Path† openhole gravel packs and ClearPAC* fluids.

RESULTS

Achieved 100% pack efficiency and completed wells on target with no HSE incidents.



Depleted reservoir pressures, increased sand risk

Schlumberger provided completion technologies for Shell’s two high-rate gas wells in the Ormen Lange field in the Norwegian sector of the North Sea. These wells were identified as especially challenging because of depleting pressures in the reservoir, which increased the risk of sand production.

Collaborative effort to ensure pack efficiency

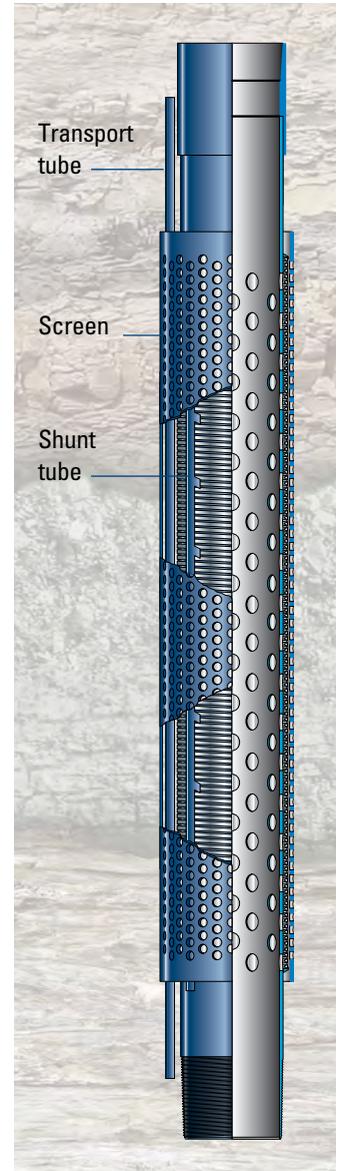
The project began after a Shell–Schlumberger collaborative planning phase. Schlumberger provided all sandface completion technologies, including the OptiPac Alternate Path gravel-pack system, which uses shunt-tube technology to maximize pack efficiency regardless of particle size and washouts. Use of this system overcomes premature screenout and prevents erosion hot spots, hardware damage, and consequent completion failure.

Specially developed ClearPAC gravel-pack fluids were provided after extensive stability and compatibility testing at both Schlumberger and Shell support laboratories. Pumping services and field support were also provided.

Additional completion components included the QUANTUM MAX* gravel-pack packer and circulating system, the QUANTUM* antiswab openhole gravel-packing service tool, and FIV* II formation isolation valves. WellWatcher* permanent gauges monitored downhole pressure and temperature.

Successful project, with additional wells planned

The two openhole wells were completed on target with full operational success and no HSE incidents, thanks in part to the strong collaborative team approach between Shell and Schlumberger and the presence of a Schlumberger project manager in-house at Shell. The OptiPac Alternate Path gravel-pack system with ClearPAC fluids ensured 100% pack efficiency and prolonged well life. In addition, Shell planned to complete two similarly configured wells.



The OptiPac Alternate Path gravel-pack system with ClearPAC fluids ensured 100% pack efficiency and prolonged well life.

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