TECH REPORT

EASTERN EUROPE
CASPIAN SEA

Casing size, in	5
Casing weight, lbm/ft	18
Intervention zone 1, m [ft]	4,014–4,062 [13,169–13,327]
Intervention zone 2, m [ft]	3,874–3,898 [12,710–12,789]
Downhole temperature, degC [degF]	60 [140]

Background

An operator with an openhole gravel-packed well determined that screens in two sand-producing zones were damaged. To avoid pulling the completion or plugging back the whole lateral, the operator wanted to patch the damaged sections measuring 48 and 24 m [157 and 79 ft], respectively. Coiled tubing (CT) was available to run the patches but had never been used at this depth. In addition, the riser length limited the maximum patch length to 14 m [46 ft].

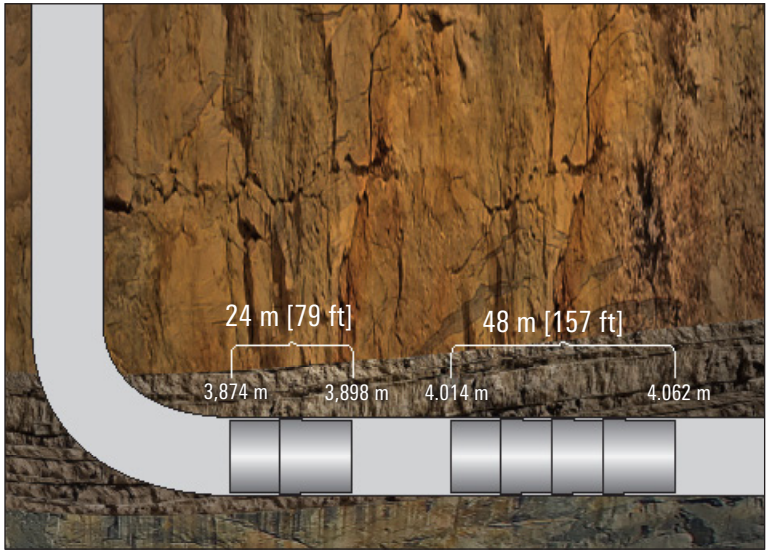
Technology

- 4½-in reinforced expandable steel patch from Saltel, a Schlumberger company

Schlumberger

Saltel Expandable Steel Patches Overlapped to Repair Damaged Screen in Offshore Well

Six patches conveyed and set via coiled tubing in long horizontal well with damaged sand screens deeper than 4,000 m [13,100 ft], Caspian Sea



After a test run, the CT was used to run four overlapping patches to cover the lower zone and two patches to cover the upper zone. The CT was also pressurized to inflate the inflatable packer and expand the patches so they could mold to the exact ID of the damaged screen sections—even across overlaps. The operation marked the first time a 4½-in patch was set in 5-in, 18-lbm/ft casing; the first time six patches were set in a single well with four overlaps; and the first horizontal screen repair at a depth of more than 4,000 m [13,100 ft] on CT.

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