

Expandable Steel Packers Reduce Costs 30% During Stage Cementing in Argentina

Lost circulation zone successfully isolated in deviated, undergauge boreholes

CHALLENGE

Provide a cost-effective means of enabling stage cementing by isolating a lost circulation zone in deviated, undergauge wells.

SOLUTION

Deploy Saltel Xpandable ECP* cementing operations external casing packers.

RESULTS

Operator successfully cemented 10 wells while saving rig time and 30% in packer costs.



Lost circulation hindered cementing in Argentinian wells

Thief zones—commonly caused by fractured or highly permeable formations—can lead to lost circulation, which disrupts well cementing, jeopardizes the wellbore, and increases costs due to lost or delayed production. It also often results in NPT and costs associated with the implementation of various remedial measures. In Argentina's Anticlinal Grande Field, an operator was encountering such losses during a multiwell drilling campaign. A solution was required that would isolate the lost circulation zone after the wellbore below it was cemented and enable placement of a second cement stage above the thief zone, back to surface.

Any packer used for the purpose had to set in open hole and withstand tough running-in conditions in the deviated and undergauge boreholes. The ability to rotate and place weight on the packer while running in was also essential. The operator had used swell packers in some wells but wanted a more cost-effective solution.

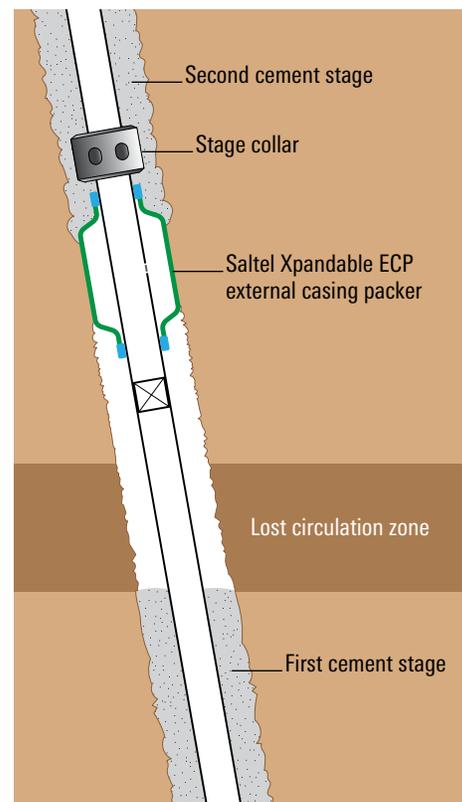
Expandable steel packers provided a remedy

Saltel Xpandable ECP cementing operations external casing packers are robust expandable stainless steel devices that can withstand reciprocation and rotation to pass through doglegs and tight spots. They can be used for any stage cementing operation to provide zonal isolation and prevent fluid migration in the annulus.

The packer was made up to the casing string, run in, and subsequently set in open hole by applying pressure in the casing. The pressure caused the integral stainless steel sleeve to expand outward, conforming to the shape of the borehole. A patented thin layer of bonded elastomer ensured sealing despite any irregularities in the borehole wall.

Operator cemented 10 wells with 30% saving in packer costs

Ten 5.5-in packers were installed in 9.2-in open holes, at depths ranging from 1,968 ft [600 m] to 5,577 ft [1,700 m]. The cementing campaign was a complete success. In each well, the packer isolated the thief zone and enabled cementing operations to resume; cement was pumped back to surface through a stage collar above the packer. The operator saved 30% in packer costs in addition to the rig time saved through on-demand expansion and immediate sealing.



A Saltel Xpandable ECP packer isolated the thief zone in each well and enabled placement of a second cement stage to surface.