



Weatherford®

REAL RESULTS

Shallow Angle QuickCut™ Casing Exit System Sidetracks Well, Saves Multimillion Dollar Well Investment

Objectives

- Sidetrack around an impasse caused when an 8 ½-in. hole in an ultra-extended reach drilling well collapsed, requiring the well to be plugged. The angle of the well built to 70° in the first 6,500 feet (1,981 meters), increasing to 90° for the remaining 20,000 feet (6,096 meters).
- Minimize expensive drill-string trip time by precisely orienting the whipstock to within a fraction of an inch of the correct position near the bottom of the casing while controlling the maneuver from approximately five miles (eight kilometers) away. Pipe stretch, combined with the necessity of working the rotation down to the whipstock assembly, would make rotating the whipstock to the correct orientation especially challenging.
- Minimize drag that could prevent sufficient transfer of weight to set the whipstock and operate the milling assembly to achieve optimum performance.
- Prove that off-the-shelf technology can perform successfully in the most challenging environments.

Results

- Weatherford's single-angle *QuickCut* casing exit system with a *QuickPack*™ hydraulic-set permanent packer anchor was chosen to sidetrack the well.
- LoTAD™ torque-and-drag reduction tools significantly reduced drag, eliminating potential problems and allowing sufficient transfer of weight to the whipstock to set it.
- On the first attempt at a casing exit, the whipstock packer anchor set prematurely during orientation, causing the whipstock to shear from the milling assembly when the string was reciprocated.
- A second attempt to sidetrack the well was successful after Weatherford engineers increased the strength of the shear bolts, slowed the reciprocation rate, and changed the flow regime around the orifice.
- The operator was able to drill a sidetrack off the mainbore, run a liner, and put the well into production.



Weatherford's shallow-angle QuickCut system successfully sidetracked this ultra-extended reach well after an 8 ½-in. hole collapse, creating an obstruction in the wellbore.

Client

Major Operator

Location

Sakhalin Island, Russia

Formations

Silty sandstone

Well Type

Production

Hole Size

8 1/2 -in.

Hole Angle

Horizontal

Casing Size and Type

9.63-in., 47 lb/ft, P-110

Setting Depth

26,912 ft (7,898 m)

Products/Services

- *QuickCut* casing exit system
- *QuickPack* packer anchor
- LoTAD torque-and-drag reduction tools



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Value to Client

- Weatherford's single-angle *QuickCut* system and related technology helped save the well and the operator's multimillion dollar investment in it.



The versatile, field-proven shallow-angle *QuickCut* casing exit system combines a single-trip, full-gauge milling system with multiple anchor options. The results are faster, more reliable exits with reduced rig-floor time and increased penetration rates.