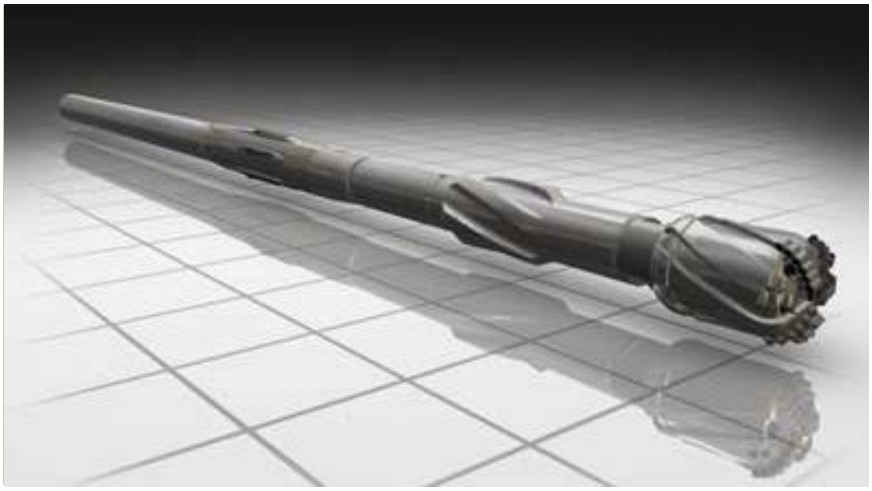
Revolution® Heat RSS Saves 2 Days of Rig Time Per Well on Five-Well Project



The Revolution Heat uses high-viscosity oils and high-temperature-rated Kalsi seals to maintain the integrity of the hydraulics in high-temperature, high-pressure environments.

Objectives

- Minimize rig time while drilling multiple wells in a high-temperature environment. Circulating wellbore temperatures in the Black Hawk field of the Eagle Ford formation exceed 320˚F (160˚C).
- Build from vertical to a right angle curve in one run.

Our Approach

- Weatherford Drilling Services analyzed memory logs and other data from previous runs in the Eagle Ford to determine drilling parameters, improve performance, maximize tool life, and increase ROP.
- The Revolution Heat RSS was chosen for its smooth borehole quality, high rate of penetration (ROP), and vertical curve-building capability, as well as its ability to perform in extreme, high-temperature environments.
- Weatherford deployed the Revolution Heat RSS along with the hostile-environment-logging (HEL™) measurement-while-drilling system. In the best-performing well, the RSS kicked off from vertical, built to a 93.46˚ curve, and then drilled a 15,033-ft (4,582-m) horizontal section to a total depth of 18,862 ft (5,749 m) in a single run.
- The Drilling Services team monitored torque, drag, and hydraulic models using Weatherford drilling optimization software, which allowed them to track all five wells in real time.

CLIENT
BHP Billiton

LOCATION
Central Texas

FIELD/FORMATION
Eagle Ford Shale, Black Hawk field

WELL TYPE
Onshore, horizontal, oil

NUMBER OF WELLS
5

STATISTICS FOR FEATURED WELL:

HOLE SIZE
8-1/2 in.

SECTION LENGTH
15,033 ft (4,582 m)

DEPTH
In: 3,840 ft (1,140 m)
Out: 18,862 ft (5,749 m)

INCLINATION
In: 6.31°
Out: 93.46°

MAXIMUM DOGLEG
10.65°/100 ft (30 m)

MAXIMUM TEMPERATURE
320˚F (160˚C)

MAXIMUM PRESSURE
4,300 psi

AVERAGE ROP
130 ft (37 m)/hr

RUNS
1

PRODUCTS/SERVICES
- Revolution Heat RSS
- HEL system
- Drilling Services

Weatherford®

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Value to Client

- The best-performing well was drilled in less than 137 hours, placing it in the top 10 percent of all wells drilled for BHP Billiton in terms of speed, according to their figures.
- The drilling parameters recommended by Weatherford Drilling Services and the ability of the Revolution Heat RSS to drill each well in a single run enabled BHP Billiton to drill more wells with fewer rigs per month than comparable wells drilled by competitors. Together, the tool performance and drill plan saved BHP Billiton 2 days per well.