HyperBlade Bit Raises Performance Standard in DJ Basin, Colorado

Bit with 3D cutting element technology achieves field performance record

**CHALLENGE**
- Improve ROP in vertical, curve, and lateral sections.

**SOLUTION**
- Deploy a HyperBlade* hyperbolic diamond element bit.

**RESULTS**
- Achieved an average ROP increase of 20% versus offset wells drilled with bits using conventional cutters.
- Set field performance record for operator.

**Achieve higher ROP to TD**
Colorado’s Denver-Julesburg (DJ) Basin is characterized as a soft formation with low abrasion levels. Typical well designs drill vertical, curve, and lateral sections in one run, using one bit and one BHA. The operator needed a bit design that would achieve higher ROP in the vertical, retain consistent steerability and build up in the curve, and have enough durability to drill 10,000 ft to 13,000 ft of the lateral section.

**Use the HyperBlade bit to improve field drilling performance**
Schlumberger recommended a BHA fitted with a HyperBlade bit. The bit incorporates a 3D cutting element from Schlumberger, the Hyper* hyperbolic diamond cutting element. The Hyper element has a distinctive profile that cuts 20% deeper into soft and plastic formations and reduces cuttings size to minimize bit balling. In addition to substantial ROP increases, the element profile is proven to deliver better tracking and help the HyperBlade bit maintain steerability in curve and lateral sections.

*The Hyper element features a distinctive hyperbolic profile that improves performance in soft and plastic formations.*

**Drilling**

The HyperBlade bit significantly increased ROP while setting a rig record for the field.
CASE STUDY: HyperBlade Bit improves average ROP by 20% while setting operator performance record in Denver-Julesburg Basin

Bit with distinctive hyperbolic profile delivers substantially improved results
The HyperBlade bit achieved an average ROP increase of 20% in three wells on two separate pads within the same field. One well experienced as much as a 50% improvement in ROP in the vertical, saving the operator 7.5 hours of drilling time versus offset wells using conventional bits. Additionally, this was the fastest well drilled to TD by a specific rig in the DJ Basin. The dull condition of each of the HyperBlade bits was superior to conventional bits from offset wells. Consequently, the HyperBlade bit has become the operator’s preferred cutting technology for the application.

The HyperBlade bit consistently improved ROP versus conventional bits used in offset wells within the same pad.