

Case History



GeoVolve HYPERDRIVE GeoVolve TERRABIT

2022 Bench Test | 2023 Field Trials

GeoVolve HYPERDRIVE is a percussion-enhanced rotary drilling system expertly engineered to radically enhance the rate of penetration (ROP) and extend bit life whilst drilling in hard, ductile or interbedded rock in geothermal and conventional wells.

GeoVolve TERRABIT is an advanced high performance PDC bit design specifically to operate with the GeoVolve HYPERDRIVE to maximise operational gains from drilling faster for longer.

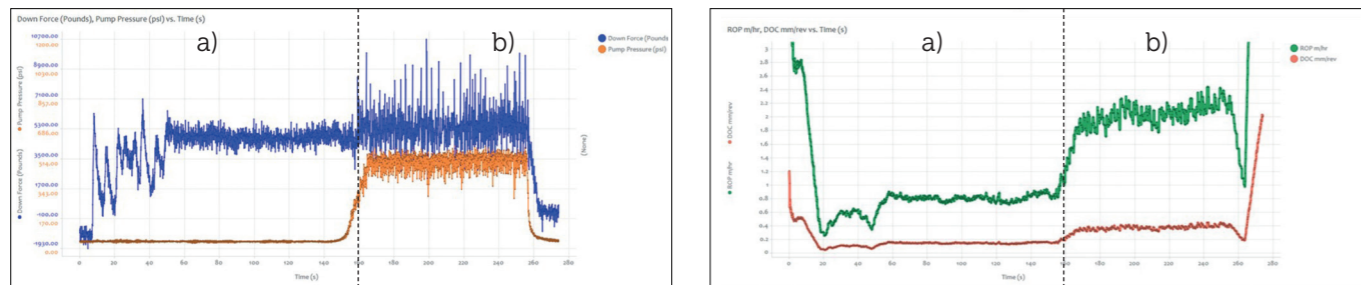
Real Results

- Step Change rate of penetration (ROP) gain (x 2.6) demonstrated during bench testing
- Deployed in three sizes across three wells: 6", 8-1/2", 12-1/4"
- Delivered fastest ROP ever recorded in an extensively drilled basin.
- Achieved the longest drilled interval ever recorded in an extensively drilled basin.
- Achieved ROP three times the minimum pre-deployment success criteria.
- Achieved a drilled distance more than double the minimum pre-deployment success criteria.
- Demonstrated doubling of field average ROP across multiple bit providers.
- Demonstrated near-triple distance achieved over field average across multiple bit providers.
- Demonstrated flow durability with over 350hrs circulating with 2.1Sg mud in a single deployment.
- Demonstrated thermal stability with over 28days on bottom at > 220degreesC.
- Demonstrated mechanical reliability with >250hrs drilling time in one run at >220degrees C.
- Drilled >600m interval, shoe-to-shoe in one run, against best offset well of 220m interval.
- Successfully drilled out a shoe track.
- Proved design integrity and reliability of the GeoVolve TERRABIT

Bench Testing: 6" GeoVolve HYPERDRIVE c/w TERRABIT

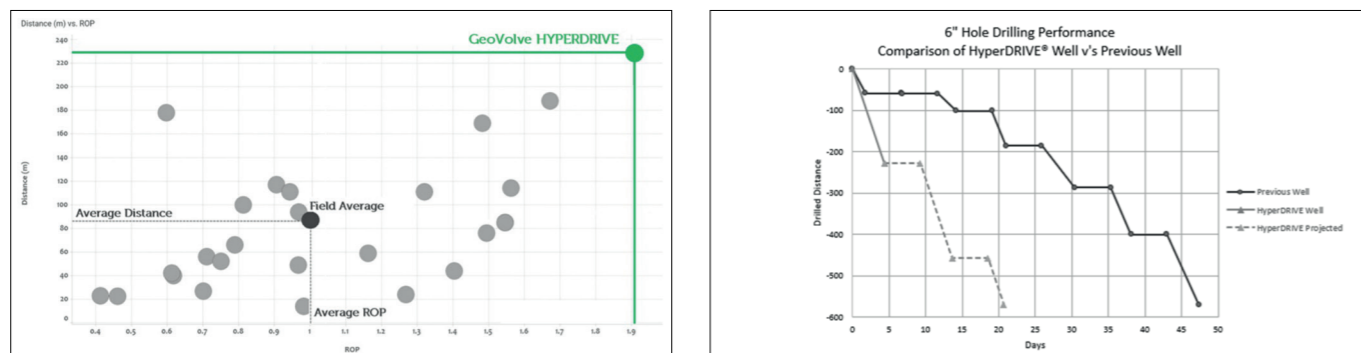


Testing at HydroVolve drilling test centre: 550Tonne (1,200,000lbf) push-pull test rig, 120RPM Drive @ 13.5kNm (10,000ft.lb) Torque, 350Bar (5000psi) Flow Loop.



Test results of GeoVolve HYPERDRIVE drilling high UCS Rubislaw Granite.
GeoVolve HYPERDRIVE: a) deactivated b) activated. Rate of Penetration Gain x2.6

Field results: 6" GeoVolve HYPERDRIVE c/w TERRABIT



GeoVolve HYPERDRIVE c/w TERRABIT actual performance against all offset data from same field.

GeoVolve HYPERDRIVE c/w TERRABIT performance (actual and projected) against nearest previous offset well.



Technical Features

