PRIMEHORIZONTAL

ParaTrack-2

ParaTrack is an underground tracking system with unique up to date capabilities. This offers considerably more flexibility in coil positionand dimensions than older magnetic guidance systems. ParaTrack's surface deployment will normally be along centreline with a return cable placed well offline, where its signal is nominal.

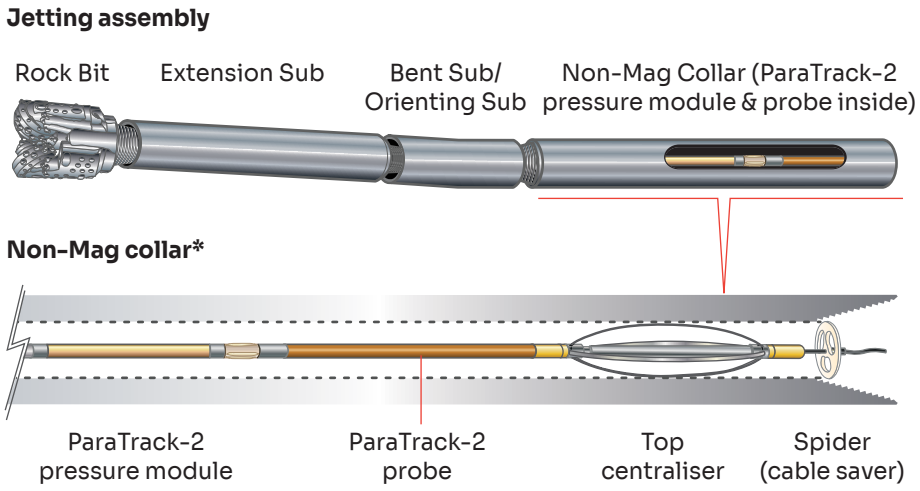
Benefits

- Can be set up as a single cable from entry to exit
- Can range against other pipelines in certain circumstances
- Can use alternative magnetic sources in order for technical guidance solutions to be tailored to each job:
  - Rotating magnetic sub
  - Single centerline cable
  - MGT Source
  - AC Beacon
- Can measure annulus and internal pipe pressure
- Has positively guided large 110 degree curves
- Has guided a number of pilot holes in magnetic environments where it was not possible for other systems
- Guided a number of parallel crossings where center to center spacing was of paramount importance
- Has positively guided underground intersects from each side

In specific circumstances, the centreline cable may be earthed on each side of the crossing, negating the need for a return path and its significant loss of time.

ParaTrack can be deployed underground in an offset parallel borehole and earthed thus creating a known magnetic field to use for guidance. Each pilot hole thereafter will use the same original bore location as the base line. Parallel bores may now be drilled with confidence, all the way from entry to exit.

ParaTrack is the only tracking system able to utilise many different magnetic sources. Not only can we use guide wires on surface or underground, we also utilise the AC Beacon, a Rotating Magnet tool and MGT tool. One or a combination of these choices will fit the exact needs of most crossings.



ParaTrack which utilises a DC or AC secondary locating system, has been operated in the HDD market by Prime Horizontal since 1999. Primarily developed as an underground parallel drilling locating system, it's use has been enhanced by development of the Rotating Magnet (RM) Sub and lately by inclusion of Pressure while Drilling (PWD) gauges measuring not only the pilot hole annulus but also the internal pipe pressure at the steering tool.

The addition of non-wire based magnetic sources allows better approach accuracy for intersecting another bore by developing a known magnetic field down hole essentially to act as a target for final intersect drilling.

By measuring the pilot hole annulus pressure, the driller has much better control of down hole pressures to limit the incidence of formation fractures causing environmental damage.

ParaTrack operations gives HDD operators the confidence to plan and execute the most challenging drilled crossings in the market.

PRIMEHORIZONTAL

ParaTrack-2

Shock mounted triaxial accelerometers and magnetometers, temperature sensor and digitising circuitry contained in 1.750 in. dia. x 55 in. long beryllium copper pressure barrel. Telemetry and power via single conductor wire line.

ParaTrack-2
pressure module

ParaTrack-2
probe

LCD driller's display

LCD Digital Display with Operator Selectable Screens

RS232 Communications

Wireless or Wired for Ease of Operation

Pressure Module

Length: 600 mm (24")

Drill Pipe annulus gauge: 350 bar (5000 psi)

Pilot hole annulus gauge: 35 bar (500 psi)

Orienting pressure sub: 600 mm (24")

Specifications

Temperature Rating: 85°C (185°F)

Pressure Rating: 1200 bar (17400 psi)

Sensor Accuracy:

- Inclination: ± 0.1°
- Azimuth: ± 0.3°
- Tool face: ± 0.25°
- OD: 450 mm (1.75")
- Length: 1405 mm (55")

Maximum Wire line Length: 5000 meters (16000 ft)

Interface unit

Small footprint Probe Power Supply and interface between probe, laptop and driller's display face controls mounted in front while all wire connections are side mounted for ease of hook up and worktop organization.

Input: 85-265 VAC 50-60 HZ

Output: 48VDC, 50 mA—1000 mA

Power Fused on Input and Output

Analog Amperage Display

Connection for secondary laptop used as drillers display

Connection for existing driller's display

Guide wire supply

Small footprint guide wire supply for location on top of the interface unit in the control cab or on the exit side to power the guide wire.

Unit Input: 85-265 VAC 50-60 HZ

Unit Output: 3 or 6 Amps p-p max.

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