

DIRECTIONAL DRILLING TECHNOLOGY

Anton Directional Drilling possess leading directional drilling technologies, strong service capabilities and distinctive technical features in China, and has strong foot prints in international markets. Anton Directional Drilling is supported by self-owned high-end resources and shared global advantageous resources. With integrated domestic and foreign leading drilling technology, along with its comprehensive in-depth study, Anton is best known for its experiences in solving directional drilling problems of complex wells.

Service Scope:

- Provide directional drilling well design and consulting services.
- Advanced MWD technology, including conventional MWD, HTHP MWD and LWD.
- Provide directional drilling on horizontal wells of different types, including HTHP horizontal well, thin-bed formation horizontal well, SAGD horizontal well, etc.
- Provide sidetrack directional drilling, well navigation and performance drilling.
- Provide geological logging and remote support drilling services.

No.	Services	No.	Services
1	Dir./Hori. well drilling	5	Geo-steering
2	HTHP MWD	6	Sidetracking
3	LWD	7	Compact Logging
4	Vertical Drilling	8	Performance drilling

Type	Positive Pulse MWD	Negative Pulse MWD	LWD	RSS
Quantity	42	22	18	3

Service Performance:

Anton DD team have completed over 1150 wells in the last 5 years with the following records:

- China's deepest vertical well onshore: Tarim LunTan-1 well (well depth 8882m).
- China's deepest horizontal well onshore: ZG 13-3H (well depth 7849m, TVD 6524.43m).
- China's largest displacement well onshore: NP 13-1706 (6387m MD, 4940.99m horizontal displacement).
- China's longest horizontal section of shale gas in Sichuan regio n: YS113H1-7 well (2512m horizontal section).
- Daqing\Karamay\Yumen oilfield's first Φ 118mm casing/double-casing windowing job (deepest windowing depth 6535m, deepest sidetracking depth 6775m); and
- FIRST HTHP deep exploration well MWD+GR job in Tarim oilfield (bottom pressure 20500 psi, working temperature 168°C) and in Sichuan (bottom pressure 22600 psi, working temperature 146°C).

