SK-TMWD Pro+AziR LWD

SK-TMWD Pro+AziR Azimuthal resistivity Log while drilling has the functions of boundary detection, gamma imaging, compensated resistivity, annular pressure (ECD), temperature, wellbore orientation, vibration, and dynamic wellbore inclination measurement. Suitable for precise geological guidance operations in deep and ultra deep wells, it can be widely used for exploration and development of shale oil and gas, tight oil, thin layers. It is a powerful tool for real-time evaluating the properties of drilling formations and improving the drilling ratio at sweet spots.

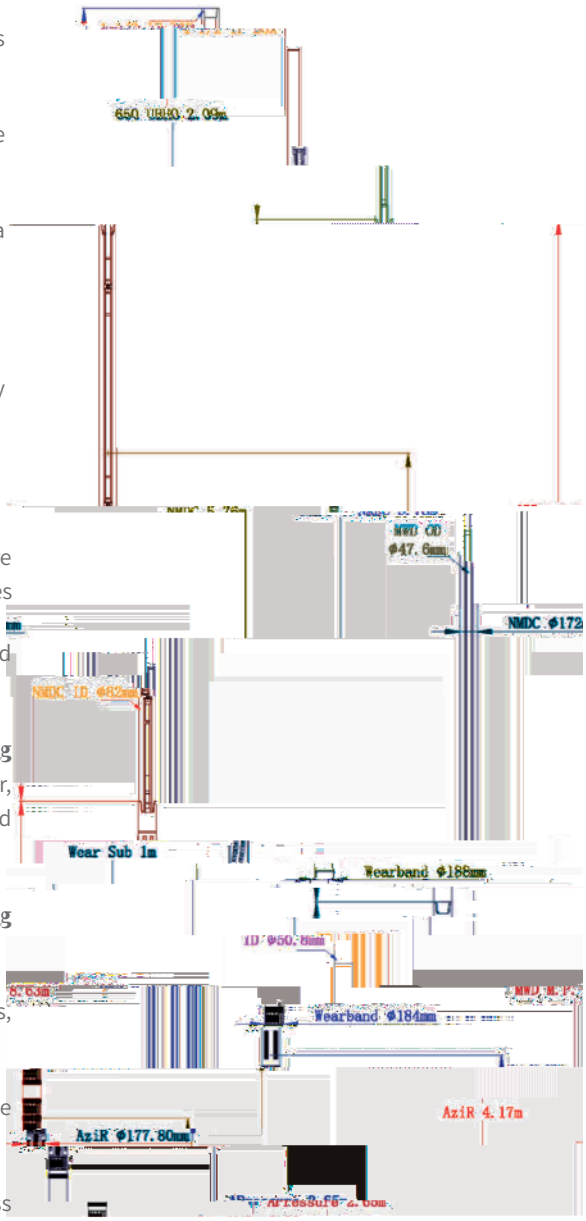
Product Features

- Real-time boundary detection and positioning to ensure precise geological guidance
- Ultra low noise ratio circuit, direct sampling technology ensures measurement speed and accuracy
- Real-time imaging function, display the distance and direction of the boundary
- Multi parameter measurement, providing stick-slip, BHA RPM, and ECD data to ensure drilling safety
- High temperature and high pressure resistance (175°C, 20000psi)
- Compatible with Tensor standards, can be customized with third-party MWD, LWD, RSS

Special Technology

- The 4 transmitter & 3 receiver vertical orthogonal antenna system structure and detection method, achieving precise detection of geological boundaries
- Unique boundary display interface, visually displaying the distance and direction of the drill bit relative to the boundary of the oil and gas layer
- The friendly visual output interface that intuitively identifies the drilling trajectory of the drill bit relative to the boundary of the oil and gas layer, facilitating timely adjustment and ensuring continuous drilling in the oil and gas layer
- Modular design, using Qbus and RS485, and matching different drilling measurement instruments according to usage conditions
- Downlink technology enables monitoring and change of working modes, improving drilling conditions applicability
- Dynamic well inclination measurement technology reduces the time required for inclination measurement
- Adaptive filtering and denoising technology to improve decoding success rate and environmental adaptability
- Automatic switching technology between sliding and rotating sequences to improve transmission efficiency

SK-TMWD Pro+AziR Measurement Point Length



Technical Specification

Mechanical Specificaton	
Hole size	8 1/2″-9 1/2″
Tool OD	6.75 in
Tool ID	2 in
Upper connection	4-1/2 IF BOX
Lower connection	4-1/2 IF BOX
Antenna long spacing	38.5 in
Antenna short spacing	17.5 in
Receiving antenna spacing	7 in
Azimuth antenna spacing	28 in
Main power supply	Mud driven turbine generator

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Operating norms and limitations	
Mud type	WBM/OBM
Mud pump	14.2-47.3 L /s
Max. Temperature-Operating	175°C
Max.Temperature-Survival	185 °C
Max.Pressure	20000 Psi
Mud Sand Content	<1%
Vibration	25G RMS 30-500 H
Shock	1000G/0.5millisecond
Make Up Torque	40600-44600 N^2m
Max.Dogleg	18 (Sliding) 9.8 (Rotating) °/30m
Notes: The maximum wellbore dogleg degree that the tool passes through is for reference only, and the actual size varies depending on the BHA structure.	

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Range	Resolution
0-180°	0 18°
0-180°	0 P°
0-360°	
0-360°	

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RPNH						
RPHL						
PANH						
RANL						
RPFH						
RPFL						
RAFH						
RAFL						

SK-AziR Azimuthal resistivity logging tool while drilling adopts advanced data compression algorithms to extract the characteristics of the 16 sector formation response signals collected during rotation and compress them. Real-time transmission is carried out through MWD, and the powerful analysis and mapping software for high-quality data recovery makes real-time images almost as excellent as in memory data images, fully meeting the key and challenging tasks of reservoir navigation and formation evaluation.

During geological guidance, Azimuthal resistivity tool near the lower boundary of the reservoir at a depth of 5740 meters and 5780 meters, and ormation evaluation.