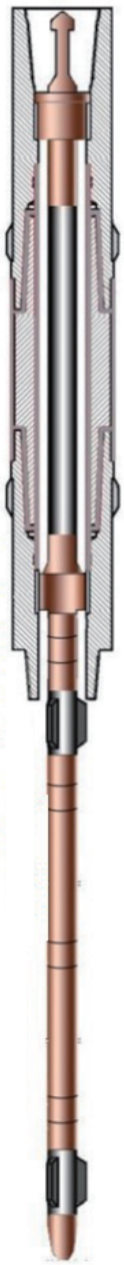
中国石化
SINOPEC

Product Introduction

Electromagnetic MWD System (SNM-150EMMWD)

Introduction

The Electromagnetic MWD System (EM-MWD) is specially designed for complex oil and gas reservoirs with low pressure, low permeability, easy collapse, and leakage conditions. This system uses electromagnetic wave transmission, eliminating dependence on drilling fluid, suitable for underbalanced drilling, air drilling, foam drilling, and high permeability formations where traditional MWD systems are inadequate. The system provides real-time critical data including inclination, azimuth, and toolface for precise guidance, significantly improving drilling efficiency and safety.



Features

- Equipped with electromagnetic signal repeaters, effectively increasing transmission depth by over 90%
- Stop-and-measure capability, with survey time only 1/4~1/3 that of pulse MWD
- Advanced technology antennas with mechanical strength identical to same-specification drill collars, lifespan ≥1000h
- Supports adjustable transmission rates from 2~12bit/s, meeting downhole big data transmission requirements

中国石化 SINOPEC Beijing ShiGongZhiKong Technology Co., Ltd.
Address: Sinopec Research Institute of Science and Technology, 197 Baisha Road, Changping District, Beijing
Tel: 010-56606392
E-mail:support@sgzkgs.com

中国石化
SINOPEC

Product Introduction

Application

The EM-MWD System has been successfully applied in 68 wells, with cumulative failure-free operation time of 14839h, total footage exceeding 87000m, and maximum continuous downhole failure-free operation time exceeding 220h.

System Specifications		
OD of Antenna	ϕ121mm, ϕ165mm, ϕ203mm	
Suitable Borehole Size	149.2mm and larger boreholes	
Tool OD	ϕ45mm	
Downhole Tool Length	6.5m or 7.5m (with natural gamma)	
Continuous Working Time	≥150h	
Working temperature	-40 ~ 150℃	
Max. Working Pressure	20kpsi	
Shock	1000g@0.5ms	
Vibration	25g RMS	
Measurement Parameters		
Data Rate	2 ~ 12bit/s (adjustable)	
Parameter	Range	Accuracy
Inclination	0 ~ 180°	±0.1°
Azimuth	0 ~ 360°	±1.0°
Toolface	0 ~ 360°	±1.0°
Natural Gamma	0 ~ 500API	±5% F.S. (optional)

中国石化 SINOPEC Beijing ShiGongZhiKong Technology Co., Ltd.
Address: Sinopec Research Institute of Science and Technology, 197 Baisha Road, Changping District, Beijing
Tel: 010-56606392
E-mail:support@sgzkgs.com