

WellTracer II

WellTracer II is a Vertical Monitoring System designed to provide azimuth and survey data optimized for straight hole drilling operations. The tool also provides toolface orientation in wells with less than 10° inclination to allow steering back to vertical.

Description

The WellTracer II relies on a bottom mounted, retrievable/reseatable pulser to transmit survey data to surface by actuating a pilot valve which momentarily restricts mud flow through the drill string interior creating a positive pressure pulse. The pilot valve is actuated by a motor working in conjunction with a gear and leadscrew arrangement which exerts 100 lbs seating force providing exceptional tolerance to LCM. The unique WellTracer II Orientation Module combines dual-axis orthogonally mounted IC magnetometers and Q-Flex type accelerometers for stability and optimum performance in vertical wells.

Features

- Can remain mounted in its collar and moved with the rig to increase operating efficiencies.
- Full Retrievability and Reseatability minimize LIH liability.
- Design and functionality allow unmanned operation.
- Primary Measurement: Inclination.
- Secondary Measurement: Azimuth (Toolface also available in wells with up to 10° inclination).
- Highly efficient gear-leadscrew configuration provides battery life of 400 to 1000 hrs (depending on tool/battery configuration).
- The servo motor assembly exerts up to 100 lbs-force to minimize plugging and increase tolerance to LCM.
- Single tool configurable for 3½ in to 12in O.D. Collars and a range of flow rates.

Specification

MEASUREMENT	Range	Accuracy
Azimuth	0-360°	+/- 1.0°
Inclination	0-80°	+/- 0.2°
Toolface (up to 10° Inc only)	0-360°	+/- 0.5°
MECHANICAL		
	Imperial Units	Metric Units
UBHO Sub O.D.	3.5 to 12in	89 to 305mm
UBHO Sub Length	36in (longer on request)	914mm
Probe O.D.	1 7/8in	47.625mm
Tool Length	16ft 9in / 22ft 1in (Single Battery / Dual Battery)	5101mm / 6731mm
Minimum Flow Rate	130 GPM in water	0.5 m ³ /min
Maximum Flow Rate	1060 GPM in water	4 m ³ /min
Max Temperature	150°C	302°F
Operating Pressure	20,000 psi	137.9Mpa
Shock	1000g/0.5 millisecond	
Vibration	25g RMS 30-500Hz Random, 30g 50-300Hz Sine	
Mud Sand Content	Less than 1% recommended	
Lost-circulation Material	Up to 50lb/bbl premixed Medium Nut Plug or Cedar Fiber	

