



## PLACE YOUR WELL ACCURATELY WITH THE INDUSTRY'S FIRST AT-BIT TOOL THAT OFFERS BOTH AZIMUTHAL RESISTIVITY AND AZIMUTHAL GAMMA IMAGES.

Make quick well-placement decisions with the most versatile at-bit geosteering technology.

Maximize the value of an asset by performing accurate wellbore placement in response to reservoir lithology variations or formation fluids changes.

Both standard version (150°C) and high-temperature version (175°C) are available.

### FEATURES & BENEFITS

- Provides both compensated azimuthal propagation resistivity and azimuthal gamma measurements near the bit from one sub
- Capable of measuring 16 sectors of gamma and resistivity in memory and up to 4 quadrants of each in real time
- Measures both bulk resistivity and total gamma near the bit
- Designed to run below motor or above RSS
- Compatible with virtually any type of muds including oil-base mud

### APPLICATIONS

- Stop precisely at desired casing or coring points
- Illuminate thin beds with high-resolution resistivity images
- Detect formation resistivity heterogeneity or fluid contacts via azimuthal resistivity images near the bit
- Navigate reservoirs with 3D bedding variations
- Improve well placement reaction time with less risk of drill-out

**GeoTracker DUO** provides near bit azimuthal resistivity and azimuthal gamma, whether in rotating or sliding mode, to give early warning of approaching bed boundaries before the target zone is exited.

**GeoTracker DUO** provides bulk resistivity and total gamma measurements near the bit which may give early indication of an overpressured zone or lithology change.

**GeoTracker DUO**, when run below a mud motor, transmits data across the motor, via a field-proven EM short-hop communication system, to the MWD system above the motor for further transmission to the surface in real time.

**GeoTracker DUO** performs in any type of wells drilled with water-base mud, oil-base mud, or other types of drilling fluids.

### TOOL FEATURE HIGHLIGHTS

- Compatible with virtually any type of muds, which makes it a suitable choice to run in complex hole conditions
- Very short length (2.92 ft. or 0.89 m) enables very close sensor-to-bit distance
- High-capacity tool memory to record days of measurement data
- Drop-in EM short-hop receiver module retains MWD tool string retrievability
- Available in 6-3/4 in. or larger collar sizes

### SPECIFICATIONS

Tool Size	4.75 in. (120.65mm)	6.75 in. (171.45mm)	8 in. (203.2mm)
Length	35 in. (889mm)		
Nominal OD/MAX OD/MAX ID	5.0 in./ 5-1/4 in. / 1.313"	6-3/4 in. / 7 in. / 2 in.	8 in. / 8-1/4 in. / 3-1/4 in.
Connection Pin Up	3-1/2 REG (IF Option)	4-1/2 REG (IF Option)	5-1/2 REG (IF Option)
Connection Box Down	3-1/2 REG	4-1/2 REG	5-1/2 REG
Yield Strength	15,140 lbf-ft.	29,900 lbf-ft.	50,000 lbf-ft.
Make-Up Torque	12,000 lbf-ft.	24,000 lbf-ft.	46,000 lbf-ft.
Max DLS	Rotating	15°/100 ft.	8°/100 ft.
	Sliding	30°/100 ft.	16°/100 ft.
Max Downhole Drilling Torque	12,000 lbf-ft.	24,000 lbf-ft.	46,000 lbf-ft.
Max RPM (Downhole)	200		
Max Flow Rate	340 gpm	750 gpm	1,000 gpm
Max Operating WOB	25,000 lbs	50,000 lbs	75,000 lbs
Max Sand Content	<1%		
Max Number of Recuts	4		

### RECEIVER SUB

Collar Gap Length	35 in. (889mm)		
Collar Gap Max OD	4.75 in.	6.75 in.	8 in.
Collar Gap Connection	3-1/2 IF	4-1/2 IF	5-1/2 IF
Collar Gap Yield Strength	18,000 lbf-ft.	34,000 lbf-ft.	75,000 lbf-ft.
Collar Gap Make-Up Torque	12,000 lbf-ft.	24,000 lbf-ft.	58,000 lbf-ft.
Receiver Electronics Housing OD	1.875 in.		

### MEASUREMENT

Inclination @ Bit	
Range/Accuracy	0 – 180 degrees / ±0.2 degrees (sliding)
Measurement Point to Bit	12 in.
Azimuthal Res. @ Bit	
Range/Accuracy	0.2 – 2,000 ohmm, 10% (<10ohmm) or 10 mmhos (>10 ohmm)
Depth of Investigation	Up to 30 in. (0.76m)
Azimuthal Gamma @ Bit	
Range/Accuracy	0-1000 AAPI, ±5 API @ 250 API
Azimuthal Res. & Gamma @ Bit	
Number of Sectors	16
Measure Point to Bit	16 in. (0.41m)

### RECOMMENDED OPERATING PARAMETERS

Battery Life	up to 150 hours
RPM	Max 200 for Minimum Fatigue
Formation/Mud Resistivity	2 – 200 ohmm for optimal short-hopping
Vibration	Max 20 grms, 50 – 100 Hz
Shock	Max 500 G, 0.5ms (z-axis), 1000 G, 0.5ms (x- or y-axis)

### RUNNING BELOW A MUD MOTOR<sup>1</sup>

Max Bend Setting	1.50°	1.50°
Max DLS Rotating	8°/100 ft.	6°/100 ft.
Max Surface RPM	60	60
Max Mud Motor RPM	180	180

<sup>1</sup> Do not run any motor stabilization with Geo Tracker sub.