

NEWSCO

Resistivity Tool

Resistivity

The answer to thin-bed resolution

“Newsco has integrated two industry proven systems—NEWSCO MWD with APS technology Wave Propagation Resistivity system—to offer a robust and diverse Wave Propagation Resistivity tool suite.

This tool provides high resolution and accuracy recording for Geosteering and LAS file modeling.”

Our Challenge

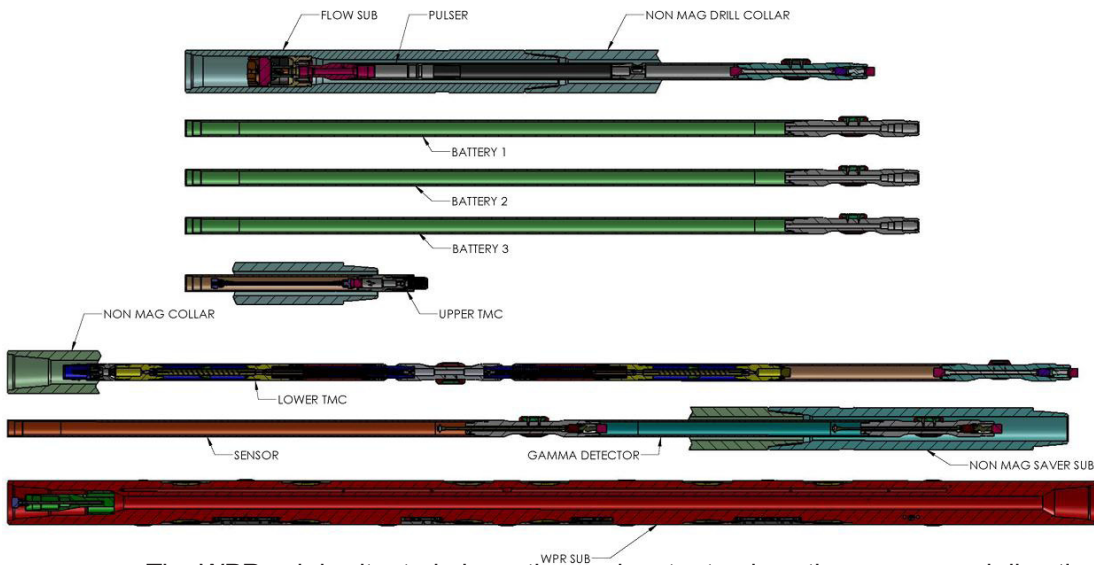
It's difficult to get an accurate picture of down-hole formations with gamma only.

Our Solution

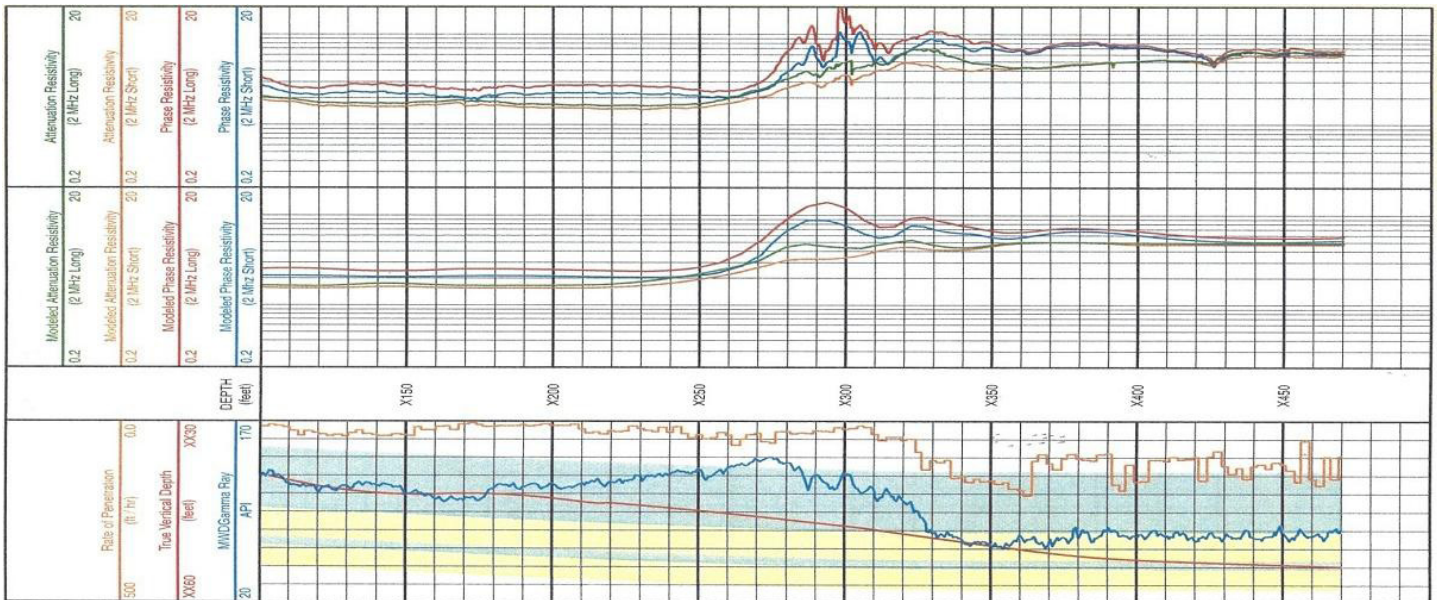
We integrated a wave propagation tool operating at multiple frequencies and spacings with our robust MWD system. This will measure down-hole formation densities and record as well as telemeter real-time data.



R _r = 1 ohm-m R _{x0} = 0.5 ohm-m	Depth of Investigation		Vertical Resolution**
	Short Spacing Radius	Long Spacing Radius	
2 MHz Phase	21 in. (533 mm)	28 in. (711 mm)	8 in. (203 mm)
400 kHz Phase	30 in. (762 mm)	39 in. (991 mm)	12 in. (305 mm)
2 MHz Amplitude	34 in. (866 mm)	44 in. (1,118 mm)	8 in. (203 mm)
400 kHz Amplitude	52 in. (1,321 mm)	66 in. (1,676 mm)	12 in. (305 mm)
R _r = 10 ohm-m R _{x0} = 0.5 ohm-m	Depth of Investigation		Vertical Resolution**
	Short Spacing Radius	Long Spacing Radius	
2 MHz Phase	26 in. (660 mm)	37 in. (940 mm)	8 in. (203 mm)
400 kHz Phase	36 in. (914 mm)	49 in. (1,245 mm)	12 in. (305 mm)
2 MHz Amplitude	40 in. (1,016 mm)	53 in. (1,346 mm)	8 in. (203 mm)
400 kHz Amplitude	60 in. (1,524 mm)	76 in. (1,930 mm)	12 in. (305 mm)



The WPR sub is situated above the mud motor to place the gamma and directional modules as close to the bit as possible. A NEWSCO LCM-tolerant, top-mounted, positive-pressure pulsar is used that will function well for all flow rates or LCM concentrations and types of material.



Resistivity measurements in high and low resistance formations unaffected by drilling fluids.

Frequency	Measurement	Range	Accuracy
2 MHz	Phase Difference	0.1 – 3,000 ohm-m	± 1% [0.1 – 50 ohm-m] ± 0.5 mmho/m [above 50 ohm-m]
	Amplitude Ratio	0.1 – 500 ohm-m	± 2% [0.1 – 25 ohm-m] ± 1.0 mmho/m [above 25 ohm-m]
400 kHz	Phase Difference	0.1 – 1,000 ohm-m	± 1% [0.1 – 25 ohm-m] ± 1.0 mmho/m [above 25 ohm-m]
	Amplitude Ratio	0.1 – 200 ohm-m	± 5% [0.1 – 10 ohm-m] ± 5.0 mmho/m [above 10 ohm-m]



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