

# MULTIPLE FREQUENCY PROPAGATION WAVE RESISTIVITY (MFPWR RESISTIVITY®)

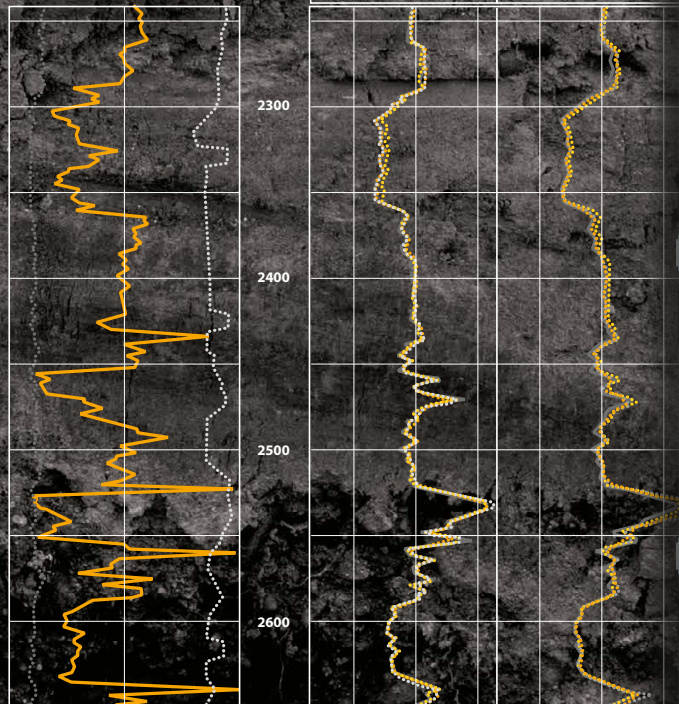
MFPWR Resistivity® is a spatially compensated, dual-frequency (2 MHz & 400 kHz), dual-spacing device designed for wire-line-equivalent Logging-While-Drilling (LWD) services in all well types.

Applications include geosteering, correlation, casing point selection, logging while tripping & reservoir evaluation.

- Operates in all mud types including oil-based and salt-saturated and provides real-time resistivity to surface via MP or EM transmission
- Quad Transmitter/Dual Receiver arrangement provides 16 individual resistivity measurements which are combined to produce 8 compensated measurements
- 8 curves transmitted in real time (user selectable)
- 8 curves available from tool memory
- Tools are powered by Lithium Thionyl Chloride Batteries (replaceable at the rig site) or by Turbine Generator



LWD Gamma Ray		Depth	NEAR 2 MHz PHAZE RES	NEAR 2 MHz ATTERN RES
0	gapi	250	0.2 ohmm	200
LWD Caliper			FAR 2 MHz PHAZE RES	FAR 2 MHz ATTERN RES
5	inch	15	0.2 ohmm	200
ROP			NEAR 400 KHz PHAZE RES	NEAR 400 KHz ATTERN RES
1000	ft/hr	0	0.2 ohmm	200
			FAR 400 KHz PHAZE RES	FAR 400 KHz ATTERN RES
			0.2 ohmm	200



## TECHNICAL SPECIFICATIONS

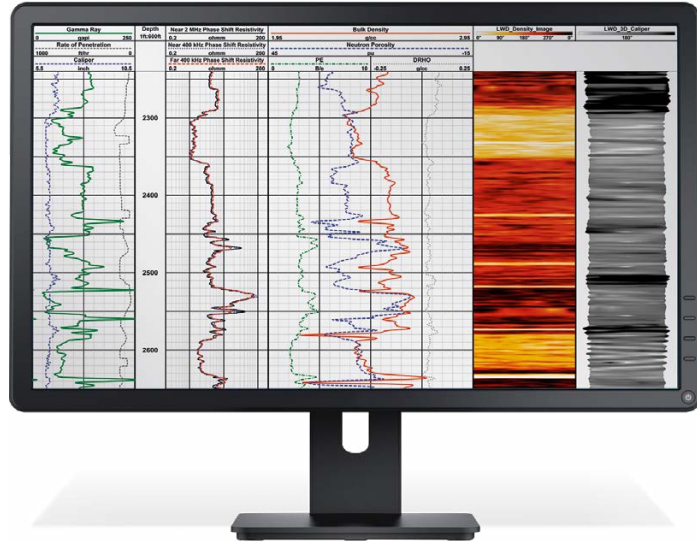
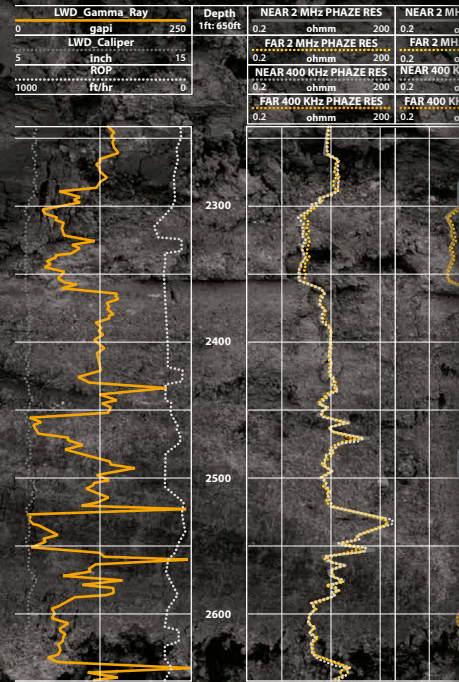
Nominal Tool Sizes	3 1/2" [89 mm]	4 3/4" [121 mm]	6 3/4" [171 mm]	8 1/4" [209 mm]	9 1/2" [241 mm]
Length	10.26' [3.13m]	12.4' [3.79 m]	12.4' [3.79 m]	12.4' [3.79 m]	12.4' [3.79 m]
DLS Slide [deg/30m]	25	30	20	15	15
DLS Rotate [deg/30m]	15	15	10	8	8
Flow Rate	150gpm [11.36 l/s]	480gpm [36.37 l/s]	800gpm [60.61 l/s]	1100gpm [83.34 l/s]	1200 gpm [90.92 l/s]
Temperature	347 °F [175 °C]				
Pressure	20,000 psi [137 MPa]				
Transmitter-Receiver Spacings	22.835" (0.58m), 39.37" (1m)				
Frequencies	2 MHz and 400 kHz				
Compensation	Symmetrical Compensation				
Accuracy (2 MHz Phase Shift Resistivity Measurement)	+/- 2% to 50 Ωm +/- 10% to 200 Ωm				
Sand % Limitation	≤0.5%				
LCM Limitation	No limit				
Memory	512MB. 242,128 full records = 56d:1h:9m:12s @ 12 second sample rate				
Sampling Rate	20s minimum, user configurable depending on data resolution vs battery life requirements.				
Max RPM	No limit				
Voltage input	20V to 48V				

Imperial UOM [Metric UOM]



# HIGH-QUALITY FORMATION EVALUATION

Combining the MFPWR Resistivity® with our LWD gamma ray and litho neutron density caliper sensors provides an LWD “triple-combo” logging service for optimal wellbore placement and evaluation of reservoir lithology, porosity, fluid type, and oil/water/gas saturation.



Remote Measurement Systems Limited is a subsidiary of NewTech Services Holding Limited, an international oilfield services company founded in 2009.

NewTech Services Holding Limited develops technology and expertise within 4 Business Divisions: Drilling Services, Completion Systems, Integrated Project Management, and Capital Equipment.

NewTech Services Holding Limited supplies technology products and services to the oil and gas exploration and production industry in Russia and CIS, Europe, Middle East, North and South America. Remote Measurement Systems Limited is a subsidiary of NewTech Services Holding Limited specializing in innovative drilling technology products such as MWD/LWD.

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