



**2 1/2" Product Line**

**Pe Density**

The Pe Spectrum Density instrument includes a pad with a Cesium source emitting gamma rays and two detectors. From the energy spectrum and count rates of the two counters, the borehole compensated formation bulk density and a photo-electric absorption index are calculated.

A caliper measurement is provided, permitting compensation for borehole effects. The pad device tool can be run in any mud. A correction curve indicates the influence of the borehole rugosity.

Specifications			
Diameter:	63.5 mm (2.5") (82 mm at pad 3.2")	Source Type:	<sup>137</sup> Cs
Length:	3590 mm (141.3")	Detector Type:	NaI Scintillation Crystal
Weight:	55 kg (120 lbs)	No of Detectors:	2
Max. Temp:	175°C (350°F)	Measure Points (from bottom):	
Max. Pressure:	140 MPa (20 000 psi)	DEN:	1538 mm (60.6")
Telemetry required:	yes	Pe:	1371 mm (54.0")
Top Connector:	yes	Caliper:	1538 mm (60.6")
Bottom Connector:	yes		

**Measuring Parameters**

<u>Measuring Range:</u>		<u>Accuracy*:</u>	
DEN:	1-3 g/cm <sup>3</sup>	DEN :	0.02 g/cm <sup>3</sup>
PE:	0-10 B/e	(for 2 - 3 g/cm <sup>3</sup> formation density)	
Caliper:	100-380 mm (3.9"-15.0")		

Logging parameters			
Recommended		Recommended	
Min. Hole Diameter:	113 mm (4.5")	Logging Speed:	6 m/min (1200 ft/hr)
Max.Hole Diameter:	380 mm (15.0")		

Displayed Standard Curves	
DNC in g/cm <sup>3</sup>	Caliper Corrected Bulk Density
COR in g/cm <sup>3</sup>	Density Correction
PEC in B/e	Caliper Corrected Photoelectric Index
Caliper in mm or in	Borehole Diameter

**Combinability**

With all 2 1/2" open hole instruments and 3 3/8" open hole instruments

