



**3 3/8" 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 density correction curve indicates the influence of the borehole rugosity.

| Specifications      |                      |                       |                                |
|---------------------|----------------------|-----------------------|--------------------------------|
| Diameter:           | 86 mm (3.39")        | 124 mm at pad (4.89") | Source Type: <sup>137</sup> Cs |
| Length:             | 3284 mm (129.3")     |                       | Detector Type: NaI             |
| Weight:             | 157 kg (346 lbs)     |                       | Number of Detectors: 2         |
| Max. Temp:          | 175°C (350°F)        |                       | Measure Point (from bottom):   |
| Max. Pressure:      | 140 MPa (20 000 psi) |                       | LS: 753 mm (29.6")             |
| Telemetry required: | yes                  |                       | SS, Caliper: 971 mm (38.2")    |
| Top Connector:      | yes                  |                       |                                |
| Bottom Connector:   | yes                  |                       |                                |

**Measuring Parameters**

| Measuring Range: |                             | Accuracy:                                       |                          |
|------------------|-----------------------------|---|--------------------------|
| DEN:             | 1.5 - 3.5 g/cm <sup>3</sup> | DEN:  | ±0.025 g/cm <sup>3</sup> |
| PE:              | 0 - 15 B/e                  | (for 2 - 3 g/cm <sup>3</sup> formation density) |                          |
| Caliper:         | 125 - 550 mm (4.9"-21.6")   | PE:   | ±0.2 B/e                 |
|                  |                             | Caliper:  | ±5 mm (0.2")             |

**Logging Parameters**

|                                 |                |                            |                               |
|---------------------------------|----------------|----------------------------|-------------------------------|
| Recommended Min. Hole Diameter: | 153 mm (6.0")  | Recommended Logging Speed: | 6-9 m/min (1200 - 1800 ft/hr) |
| Max Hole Diameter:              | 560 mm (22.1") | Sample Rate:               | selectable                    |

**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 other 3 3/8" instruments

