◆ LDI Density logging tool while drilling

LDI sends gamma rays to the formation via the 137Cs gamma ray source mounted on the instrument, the instrument detector measures the amount of the gamma-ray photon reaching the instrument after formation attenuation, and calculates to obtain the formation density and photoelectric absorption index. The instrument adopts Cs-137 gamma ray source and NaI crystal counter, and is equipped with 16-sector azimuthal measurement imaging technology, and is installed with ultrasonic transducer for clearance detection and compensation calculation.

- Existing dimensions
  - 6.75″
- Maximum outer diameter of instrument: 210 mm
- Applicable borehole size: 8.5～9.875″
- Maximum working temperature: 150℃
- Maximum working pressure: 20,000 psi
- Applicable displacement: 225～650 gpm
- Applicable vibration: ≤20 grms(5Hz-1 kHz)
- Applicable impact: 500 g@1ms half sine
- Formation density measurement
  - Measuring range: 1.0～3.0 g/cm3
  - Measuring accuracy: ±0.025 g/cm3(1.7～3.0 g/cm3)
  - Longitudinal resolution: 6.5″ (vertical formation)
  - Imaging: 16 sectors (≤120 rpm)
- Formation PE measurement
  - Measuring range: 1~20
  - Measurement accuracy: ±5%
  - Longitudinal resolution: 6.5″ (vertical formation)
  - Imaging: 16 sectors (≤120 rpm)
- Sidewall clearance measurement
  - Measuring range: 1～50 mm
  - Measurement accuracy: ±2 mm(2~50 mm)
- System application
  - Formation density measurement
  - Measurement of formation photoelectric absorption index