

SED™ Six Arm Dipmeter

The SED™ six arm dipmeter is an electric logging tool that provides data used to compute formation dip. It provides six formation micro-resistivity measurements, tool orientation data, and six caliper curves. The six micro-resistivity measurements are taken at 60° increments around the borehole. This data is then correlated to identify bedding and other features in the formation.

Applications

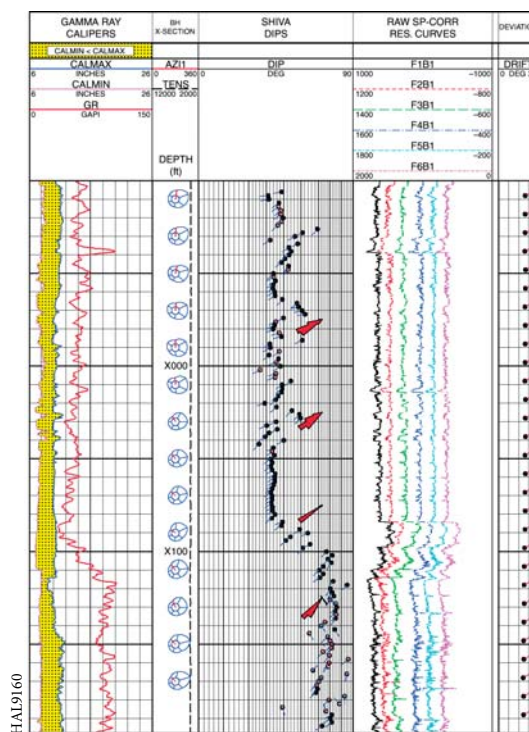
- Evaluate magnitude and direction of structural and stratigraphic dip events for offset well placement, reservoir modeling, and reservoir management decisions
- Improved evaluation of thinly laminated sand/shale sequences
- Fracture detection
- Directional data to provide TVD, drift surveys, and bottomhole location
- Caliper data as input to 2D and 3D borehole profile plots as well as integrated borehole volumetrics

Features

- High resolution micro-resistivity measurements sampled at 0.1-in.
- Independent arm linkage and swiveled pads provide optimum pad contact with a minimum of pad force
- Tri-axial accelerometers and three magnetometers are employed to compute borehole drift, azimuth, and corrections for tool rotation and irregular motion
- Available oil-based mud pads for acquiring dip logs in non-conductive drilling fluids
- Six independent caliper measurements describe borehole washout and breakout in precise detail

Associated Answer Products

- SHIVA™ program – standard analysis package to correlate raw micro-resistivity data and evaluate it for planar structural or sedimentological features. Results presented as vector (tadpole) plots. Available at the wellsite as well as in the computing centers
- Omnidip – module of SHIVA program uses the tool's high sampling density to identify nonplanar surfaces and describe current bedding characteristics and other nonplanar sedimentary structures
- Resmapa – borehole imaging program that interpolates between the six micro-resistivity curves to produce a color oriented image of structural and sedimentological features



Standard processed SED™ log showing the raw resistivity data and results of dip analysis.

SED™ Six Arm Dipmeter Specifications

Length ft (m)	Diameter in. (mm)	Maximum Pressure psi (Mpa)	Maximum Temperature °F (°C)	Weight lb (kg)
22.3 (6.8)	4.5 (114.3)	20,000 (137.9)	350 (176.7)	470 (213.2)