

Intelligent Array Induction (iAI)



The iAI produces accurate measurements of open-hole-formation conductivity as a function of radial distance and depth. The tool uses one transmitter coil providing excitation signals at multiple frequencies into the formation, while an array of receiving coils senses the return signal from the formation. The multi-channel signal-processing technology provides a robust and stable tool response with enhanced radial and vertical resolution despite borehole conditions and formation environments.

LOGGING APPLICATIONS:

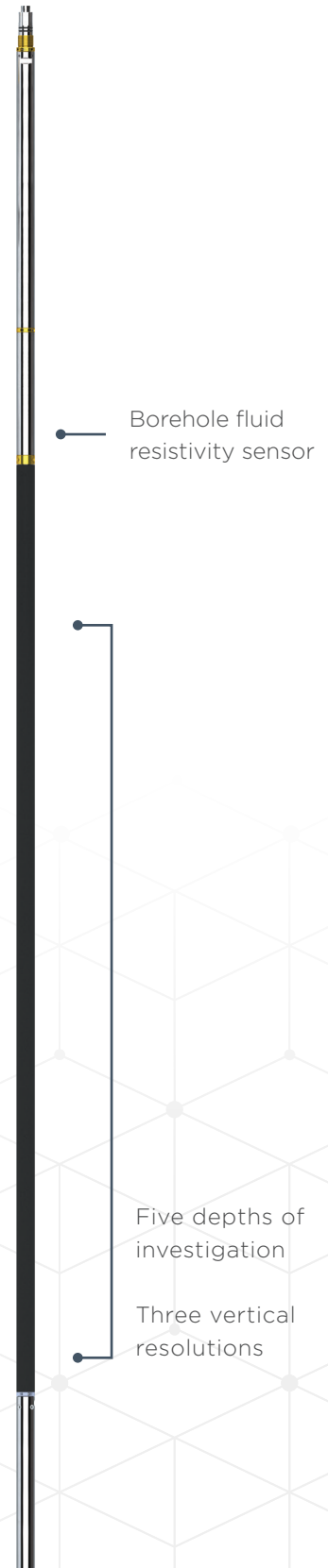
- Determination of true formation resistivity R_t
- Determination of Water Saturation S_w
- Movable fluids identification
- Invasion profiling
- Thin-bed analysis
- Well-to-well correlation
- Borehole fluid resistivity measurement

MECHANICAL:

LENGTH	16.2 ft (4.9 m)
DIAMETER	2.25 in (57 mm)
WEIGHT	105 lbs (47 kg)
PRESSURE RATING	20,000 psi (140 Mpa)
TEMP RATING	350 °F (175 °C)
MAX HOLE SIZE	14 in
TENSILE STRENGTH	20,000 lbs (88,964 N)

MEASUREMENT:

OUTPUT	Induction Resistivity, Mud Resistivity, optional SP
RANGE	0.2 to 2000 ohm-m
VERTICAL RESOLUTION	1 ft, 2 ft, 4 ft
ACCURACY	+/-1.0 mS/m or +/-2%
DEPTH OF INVESTIGATION	10 in, 20 in, 30 in, 60 in, 90 in



Borehole fluid resistivity sensor

Five depths of investigation

Three vertical resolutions