

Array Induction Logging Tool (AILT)

GOWell's Array Induction Logging Tool (AILT) forms part of the Gallop suite. The AILT accurately measures open borehole formation conductivity at different borehole conditions. The tool uses an Array of induction coils operating at various frequencies, generating resistivity logs that have five (5) different depths of investigation.

DESCRIPTION

The measurement is particularly suitable for high resistivity formations. Both deep and shallow readings allow for visual identification of permeable formations.

The Tool is made up of three sections:

1. The Power Supply section (Electronic section 1)
2. The Data Acquisition section (Electronic section 2)
3. The Sonde section (Electronic section 3)

APPLICATIONS

- Determines water saturation
- Delineates reservoirs
- Identifies hydrocarbon and moveable hydrocarbons
- Provides thin-bed analysis
- Qualitatively evaluates invasion profile
- Provides correlation
- Identification of fluid contacts

FEATURES

- Can be combined with other Gallop formation porosity tools.
- Rt determination accuracy is improved due to the tool's enhanced vertical resolution and radial profiling capabilities. This allows for precise reserve estimates.
- Borehole corrections and deconvolution to achieve three (3) sets of curves (1, 2 and 4 ft. vertical resolution).



1. Power Supply

2. Data Acquisition

3. Sonde

SPECIFICATIONS

AILT - Array Induction Logging Tool	
General Specs	
Maximum Pressure	20,000 PSI (140 Mpa)
Maximum Temperature	350 °F (175°C)
Diameter	3.54 in. (8.99 cm)
Length	24.52 ft. (7.47 m)
Weight	394 lbs (178.7 kg)
Minimum measurement	0.1 Ωm
Maximum measurement	2000 Ωm
Accuracy	±1.5mS/m or ≤±3%
Max. logging speed	66 ft/m (20.1 m/h)
Data transmission rate	1152KHz(CAN)
Minimum hole size	4.50 in. (11.5 cm)
Maximum hole size	20 in. (50.8 cm)
Borehole Conditions	
Borehole Fluids	Any, except high salinity
Tool Position	Centralized or stand off
Measurement	
Principle	Electromagnetic Induction
Vertical Resolution	1,2,4 ft
Depth of investigation	10, 20, 30, 60, 90 in
Primary Curves	AT10, AT20, AT30, AT60, AT90
Secondary Curves	SP

*Specifications are subject to change as tools are constantly being improved