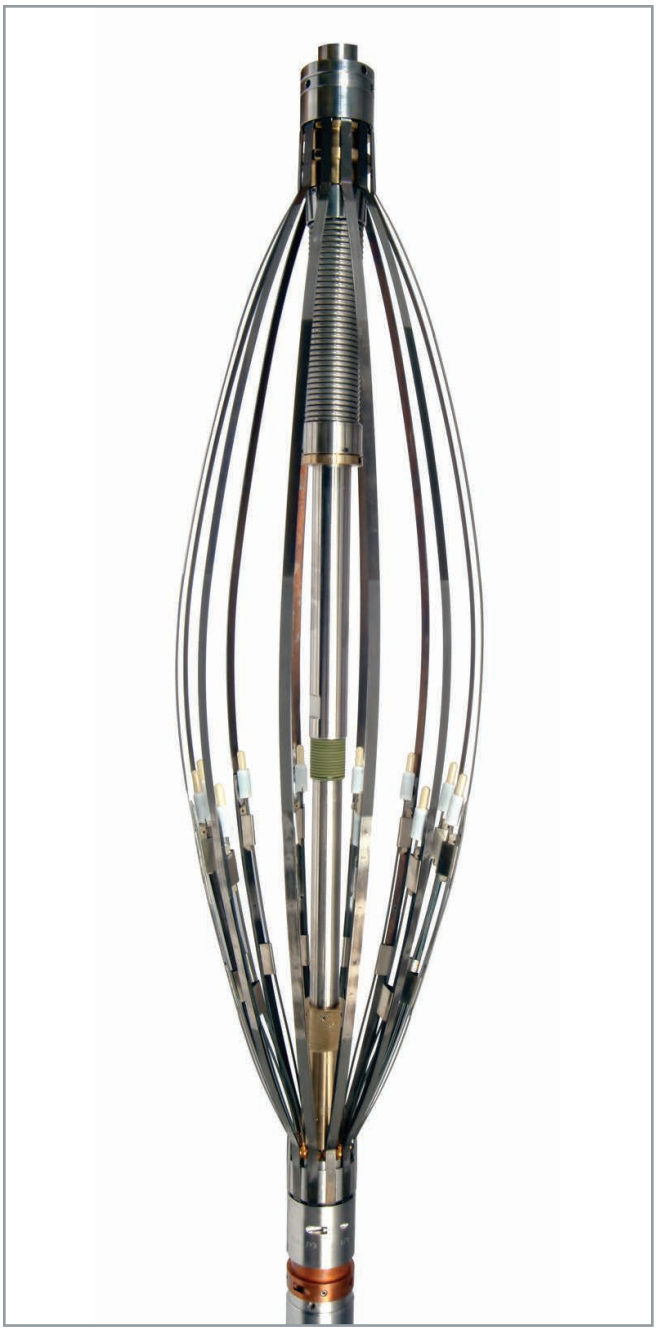
Capacitance Array Tool (CAT™) Technology

Identifies production phases around the wellbore in highly deviated and horizontal wells

The Halliburton Capacitance Array Tool (CAT™) technology helps identify fluid phases in highly deviated and horizontal wells. Its 12 miniature capacitance sensors are placed on flexible bowsprings that cover the entire diameter of the wellbore.

By taking measurements in a single plane across the wellbore, the CAT tool measures the capacitance of the fluid around the 12 sensors. Since each sensor can distinguish between water, oil, and gas, the holdup around the wellbore can be determined. Using the built-in directional information, the location of each sensor is known, which will enable the determination of the holdups in the wellbore. In addition, combined with data from the Spinner Array Tool (SAT) and the Resistance Array Tool (RAT), the CAT tool enables quantitative estimates of the volumetric flow rate for each fluid phase. This provides information on the reservoir and completion by characterizing production from the contributing individual entry points. This gives the engineer insight into the reservoir and how to possibly improve production.



Benefits

- Provides in-depth fluid-phase analysis
- Determines gas, oil, and water holdups
- Determines holdups in both casing and tubing

Features

- Array of 12 radial capacitance sensors
- Tool orientation determined by internal relative bearing sensor
- Simultaneous operation with other Halliburton tools
- Collapsible bowspring arms
- Combinable with the SAT and RAT tools for complete fullbore production analysis
- Complete 3D imaging of the holdups
- Surface readout or memory logging operations
- Optional rotational alignment sub (RAS) to align reference sensor with other multiple-array tools

Capacitance Array Tool (CAT™) Technical Specifications	
Temperature Rating	350°F (177°C)
Pressure Rating	15,000 psi (103.4 MPa)
Tool Diameter	1-11/16 in. (43 mm)
Tool Length	51.43 in. (1.306 m)
Tool Weight	19.0 lb (8.62 kg)
Pipe Range	3-in. to 7-in. casing
Number of Sensors	12
Sensor Measure Point	18.2 in. (462 mm)
Relative Bearing Accuracy	5°
Relative Bearing Dev Range	5° to 170°
Materials	Corrosion resistant throughout

Developed in part through cooperation with Sondex.

For more information, contact your local Halliburton representative.

H06275 7/15