

AccuPhase horizontal production logging service

Get the complete picture in one run

The **AccuPhase™ horizontal production logging service** delivers accurate measurements of multiphase flow and fluids, including gas, oil, and water. The AccuPhase service is built on a platform that combines micro-spinners to measure flow, optical sensors to identify gas and liquid, and resistance sensors to identify hydrocarbons and water. Understanding gas-oil-water ratios and establishing flow rates for each helps you make better decisions for your horizontal wells as they mature, and can help you develop more effective long-term production plans.

The AccuPhase service uses an advanced sensor deployment platform to place an array of sensors around the circumference of the wellbore. The sensor array accurately measures multiple production fluids—along with the corresponding flow rates. The resulting data are then integrated to deliver a complete picture of well production. The service resolves historic production logging challenges such as:

- Damage to logging tools in difficult well completions
- Compromised data quality due to sensor measure points being spread across a long toolstring

- Toolstring design restrictions due to individual tool lengths

The AccuPhase platform reduces toolstring lengths by as much as half, compared to traditional toolstrings. An advanced deployment system enables the sensor arms to be positioned from a fully open diameter of 9 in down to 4 in—accommodating a wide range of completion designs. The deployment arms can close down to an outside diameter of 2 1/8-in with all sensors remaining operational.

Multiple tools can be run in the same toolstring for increased wellbore coverage. Independent deployment arms ensure the sensors remain in contact with the wellbore wall, regardless of the borehole shape or toolstring decentralization, resulting in better cross-sectional coverage. The AccuPhase platform is compatible with all Baker Hughes wireline tools in the cased hole portfolio.

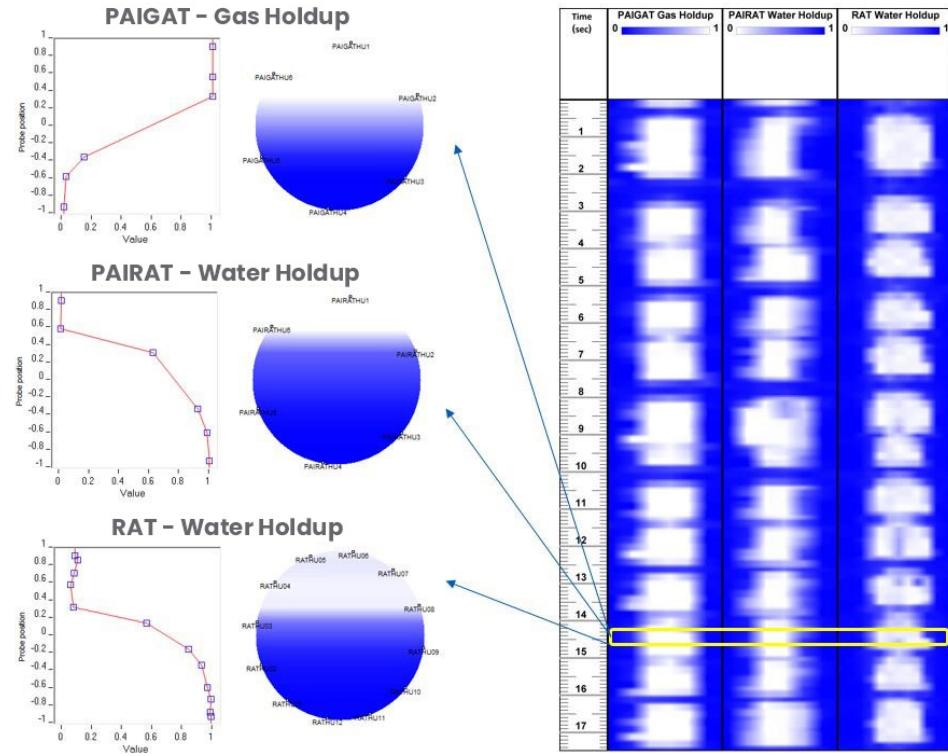
To learn more about how the AccuPhase service can improve the accuracy of your wireline production measurements, contact your Baker Hughes representative or visit bakerhughes.com.

Applications

- Horizontal and deviated wells
- Wells where oil, water, and gas identification and flow measurements are critical

Benefits

- Identifies gas-oil-water ratios and establishes flow rates for each
- Integrates data to provide a complete picture of well production
- Enables logging in difficult well completions due to reduced toolstring length
- Flexible and compatible with the entire Baker Hughes cased hole portfolio
- Improves measurement confidence from robust sensor deployment system



The three image tracks above (left) show holdup distribution on 80° deviation, uphill slug flow in a 6-in ID pipe. The three cross-sectional views above (left) show data from the air and water portion of the slug flow (at ~144 sec). Each tool probe shows similar distribution; probes on the top show gas and those at the bottom show water.

Specifications

Temperature	350° F (177° C)
Pressure	15,000 psi (103,421 kPa)
Tool diameter	2.125 in (54 mm)
Tool length	81.6 in (2073 mm)
Max. operating diameter	9 in
Top connection	Sondex, female
Bottom connection	Sondex, male
Deployment arms	6 (independent)
Sensors	6 x Micro spinners 6 x Resistance probes 6 x Optical probes
Data recovery	Surface read-out and memory compatible

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