

# BrightStar® Look-Ahead Resistivity Service

## REVEAL THE PATH AHEAD

### OVERVIEW

The BrightStar® look-ahead resistivity service from Sperry Drilling reveals structure and fluid boundaries ahead of the bottom hole assembly (BHA). Using a novel antenna design, the technology detects upcoming geological changes, enabling proactive drilling and steering decisions to reduce operational risks and optimize section target depth. The service provides resistivity changes ahead of the bit and near-borehole resistivity measurements in one compact collar. The service also provides near-borehole anisotropy for greater reservoir characterization.

### INCREASE GEOSTOPPING CONFIDENCE

The BrightStar look-ahead resistivity service detects changes in formation resistivity ahead of the bit and reduces the uncertainty of the formation boundary positions. By looking ahead in low-angle wells, the service provides operators higher confidence to avoid unwanted formation entry or exit. The operational value increases with the option to integrate the BrightStar service transmitter into the iCruise® intelligent rotary steerable system collar. This service combination delivers both a near-bit resistivity solution and the industry's closest ultra-deep azimuthal resistivity sensor measure point, which leads to greater distance of detection in look-ahead mode and additional time to adjust the well path and avoid early exit when navigating the reservoir.

### ACCELERATE DRILLING DECISIONS

The BrightStar service combines ultra-deep azimuthal resistivity measurements with best-in-class inversion processing to resolve upcoming bed and fluid boundaries for well inclinations up to 40 degrees. The high signal-to-noise sensitivity enables the system to detect resistivity changes up to 100 feet (30 meters) ahead of the bit. Detecting changes earlier allows proactive drilling decisions, such as selecting casing points, adjusting mud properties before entering a specific formation, or precisely locating the top of the reservoir.

### CHARACTERIZE THE FORMATION FARTHER

The BrightStar service provides operators a compact and comprehensive solution to characterize the formation and fluids near the borehole and farther into the well. The BrightStar service transmitter delivers 500 kHz and 2 MHz phase shift and attenuation resistivity from 16-, 24-, and 32-in. spacings. The 24-in. spacing uses a proprietary crossed-transmitter antenna from which the inverted measurements provide the formation's anisotropy and dip in real time. This capability eliminates the need for additional characterization tools, which can further reduce the BHA length.

For more information, contact your local Halliburton representative or visit us on the web at [www.halliburton.com](http://www.halliburton.com)



### BENEFITS

- » Enable proactive drilling decisions by detecting upcoming boundaries
- » Reduce formation entry/exit uncertainty, such as salt
- » Streamline casing shoe placement and section TD
- » Reduce the environmental footprint with compact collar
- » Enhance formation and fluid characterization
- » Adjust to previously unknown geological changes
- » Optimize coring operations

### FEATURES

- » Detect resistivity changes up to 100 ft. ahead of bit in low angle wells
- » Visualize upcoming formation tops
- » Near-bit phase shift and attenuation resistivity with three spacings and two frequencies
- » Measure anisotropy ( $R_v$ ,  $R_h$ ) and relative dip at any hole angle
- » Near-bit sensor measurements
- » Near-borehole and ultra-deep resistivity measurements in one compact collar

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

H014348 09/22 © 2022 Halliburton. All Rights Reserved.