Baker Hughes
Rewriting The Energy Equation™

VisiTrak UHD high-definition geospatial navigation and mapping service

Place your well in the most productive zone with precise, real-time reservoir mapping

Drilling horizontal and extended-reach wells is particularly challenging in geologically complex reservoirs. Thin layers, conductive formations, and uncertain boundaries increase the risk of exiting the target zone, encountering unstable formations, or drilling into nonproductive zones.

The **VisiTrak™ UHD high-definition geospatial navigation and mapping service** from Baker Hughes was developed to address these issues directly. This service delivers ultra-high-definition bed boundary detection—both distance and direction—and mapping at depths of up to 200 ft (60.96 m) away from the wellbore under favorable conditions.

By providing a real-time, 360-degree view of the reservoir around the wellbore, the VisiTrak UHD service gives operators the necessary insights to optimize well placement in complex, productive formations while steering clear of nonproductive boundaries.

Core capabilities

The VisiTrak UHD service combines advanced hardware and 3D software that enables geosteering, lookahead, and mapping capabilities for improved oil and gas production and recovery.

- The VisiTrak UHD service uses deep-reading antennae arranged orthogonally around the drill string. This configuration collects omnidirectional and deep azimuthal resistivity measurements at a high signal-to-noise ratio, enabling confident real-time decision-making. The technology affords deeper investigation with shorter transmitter-receiver spacing, while sensors placed closer to the drill bit shorten steering response.
- The VisiTrak UHD service integrates data with visualization and inversion modeling software to provide dynamic, 3D views of the subsurface. Using both deterministic and stochastic methods in a hybrid approach, the reservoir navigation service's inversion software produces real-time, high-definition earth models.

Maximize value with improved mapping

Deep mapping helps detect bed boundaries early, allowing operators to maintain the wellbore within the most productive intervals. This improves production while reducing the nonproductive time (NPT) associated with unintended reservoir exits, sidetracks, and unstable

Applications

- Horizontal navigation, mapping, and lookahead services in geologically complex reservoirs
- Wellbore placement in thin layers and conductive formations
- Deepwater, horizontal, and deviated wells

Benefits

- Maintain the wellbore within the planned zone while drilling extended-reach and complex 3D horizontal wells.
- Improve drilling accuracy in geologically uncertain reservoirs
- Map remote boundaries in resistive formations up to 200 ft (60.96 m) away from the wellbore

shale exposure. Mapping of fluid fronts also supports effective completions design, reducing risks of early water breakthrough and improving recovery efficiency.

Drive performance at lower cost

The VisiTrak UHD service's deep and ultradeep azimuthal resistivity measurements help build detailed, seismic-scale maps of reservoir architecture while drilling, without the cost of drilling pilot holes. With better information available in real time, drilling can proceed at higher rates of penetration without sacrificing well placement.

Using an operator's offset data, the VisiTrak UHD service provides pre-well modeling to predict possible responses and decision points before drilling begins. This helps the reservoir navigation engineer adopt the required scenario on the fly without delays in the evaluation and decision-making process.

Enhance geological understanding

The VisiTrak UHD service provides real-time updates to geological, petrophysical, and reservoir models. The resulting 3D visualizations and full geologic interpretations enhance reservoir understanding for optimized well placement in the productive zone.

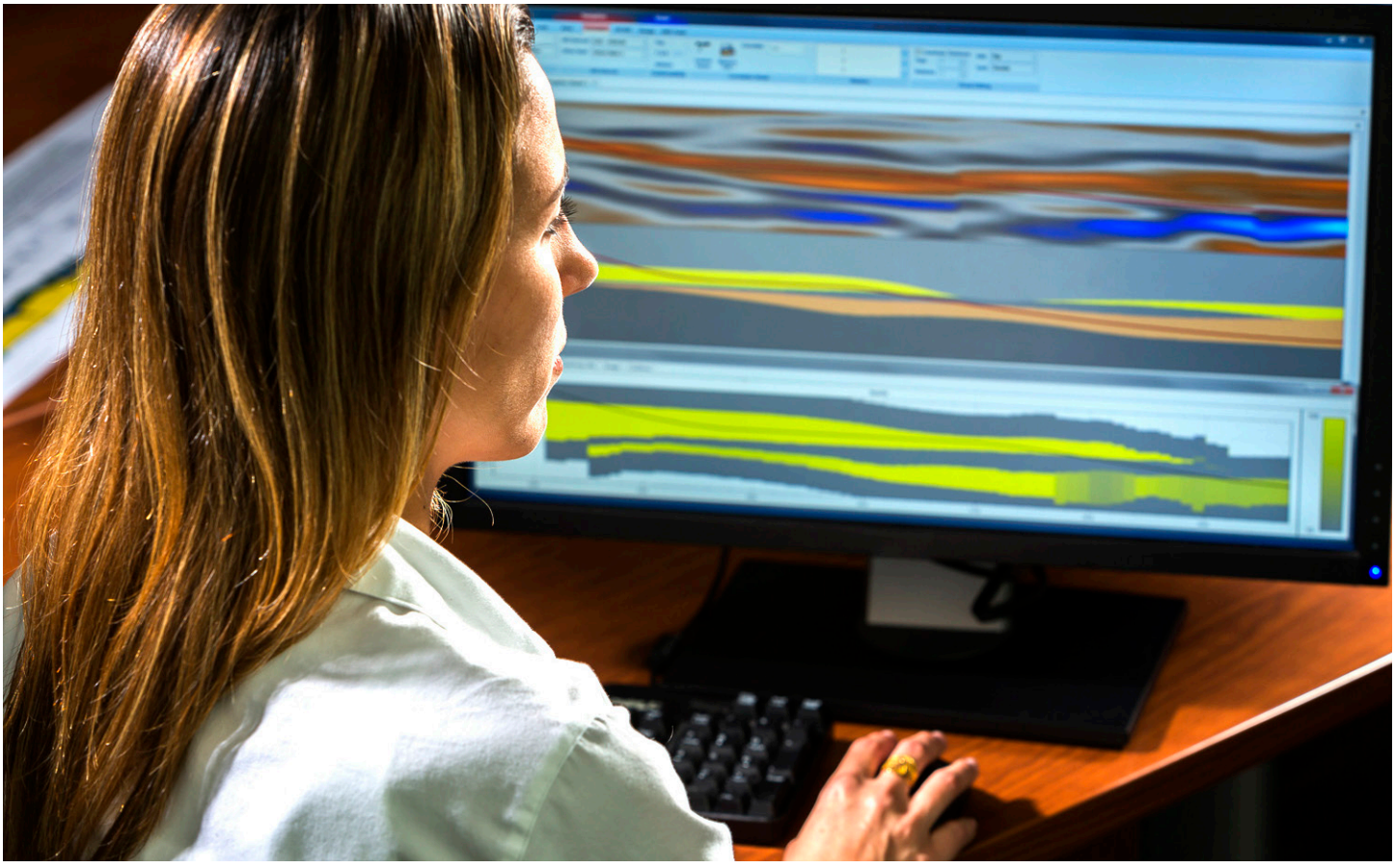
The VisiTrak UHD service's visualization software also delivers a full interpretation of structurally complex geological scenarios.

More efficient field development

The VisiTrak UHD service's reservoir-scale mapping supports well placement decisions across the field. Fewer, more strategically placed wells can be planned to reach production goals, while the placement of producers and injectors can be optimized to maximize sweep efficiency and recovery.

The service's lookahead capabilities help provide efficient geo-stopping and landing to minimize overpressure or depletion concerns and maintain well safety.

Contact Baker Hughes to learn how the VisiTrak UHD high-definition geospatial navigation and mapping service can help you minimize drilling risk, improve reservoir navigation, and maximize production from your wells.



Expert analysis of the VisiTrak™ UHD inversion.

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