

## LOOK AT OPTIMIZING WELLBORE PLACEMENT WITH NEW EYES.

Sometimes the clearest way to introduce and explain the implications of a breakthrough technology such as INTEQ's AziTrak™ Deep Azimuthal Resistivity system is through analogies. Hop in the car. You're about to go for a drive.

### **How not to drive a car in the dark.**

You are driving on a very narrow road that is dipping, climbing, twisting and turning in front of you. You need to get to your destination as quickly as possible, so you can't afford to slow down or stop for directions. Oh, and it's late at night and very dark and you don't have any headlights. You can't see more than a few feet in any direction and you definitely can't see the changes in the road ahead of you until you're right upon them. Sounds like a recipe for disaster, doesn't it?

### **How not to drill a well in the dark.**

Now imagine you are drilling offshore at a depth of 10,870 ft (3,313 m) along and through a sand/shale boundary into a thin oil column. Once again, you need to get to your destination as quickly as possible, since the rig alone is costing upwards of half a million dollars a day to operate. But, if you were to stray off the desired path, it could cost even more in lost

productivity. And, just like in the car, you can only "see" the formation images a few inches in any direction. Even when using conventional sensors, including those that claim to be "forward looking," it's nearly impossible to determine if the bed boundary you are approaching is above you or below you. Another recipe for disaster? Not any longer.

### **AziTrak Deep Azimuthal Resistivity.**

Now, with the introduction of the AziTrak Deep Azimuthal Resistivity service, INTEQ is completely changing the process, visibility and precision of reservoir navigation, bringing you a 360° view of the downhole environment and giving you the capability to detect, measure and visualize—in other words, see—bed boundaries and oil-water contact zones hours before they can be "seen" with conventional sensors.

That's an unparalleled, far-reaching depth of investigation and the source of directional data and real-time formation imaging that enables real-time navigation and field evaluation decisions. INTEQ Reservoir Navigation with AziTrak is like a GPS system for subsurface navigation.



> To learn more about the AziTrak service—including third-party papers and detailed case studies—visit [www.AnswersWhileDrilling.com](http://www.AnswersWhileDrilling.com), contact INTEQ at 713.625.4200 or e-mail [AziTrakAnswers@INTEQ.com](mailto:AziTrakAnswers@INTEQ.com)



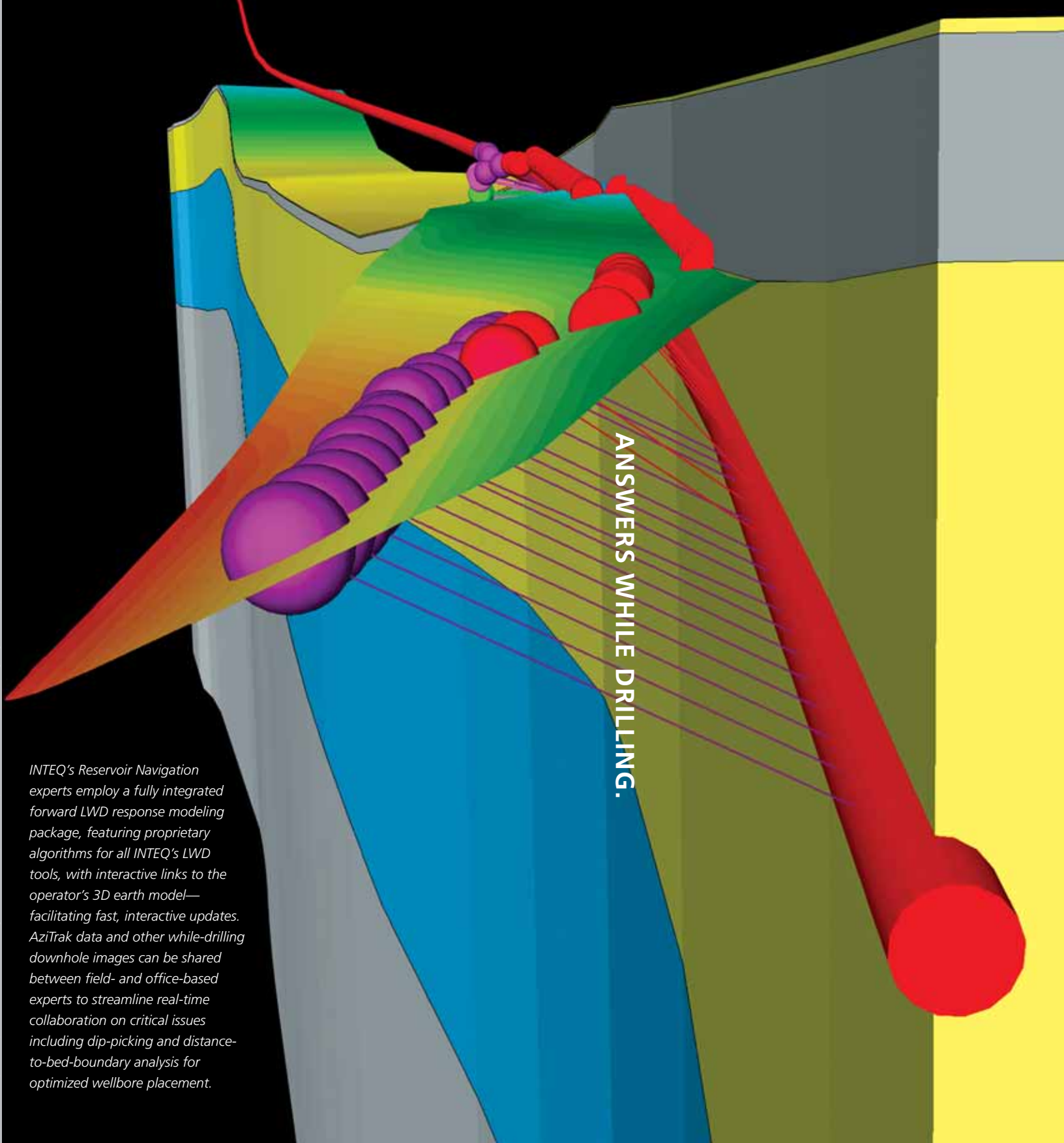


PRECISE WELL PLACEMENT. RIGHT NOW.



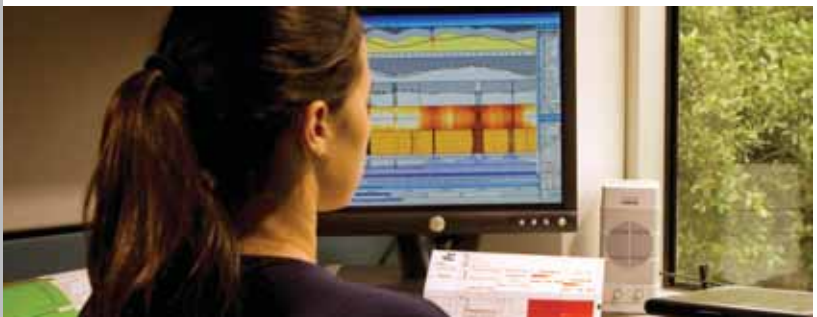






ANSWERS WHILE DRILLING.

*INTEQ's Reservoir Navigation experts employ a fully integrated forward LWD response modeling package, featuring proprietary algorithms for all INTEQ's LWD tools, with interactive links to the operator's 3D earth model—facilitating fast, interactive updates. AziTrak data and other while-drilling downhole images can be shared between field- and office-based experts to streamline real-time collaboration on critical issues including dip-picking and distance-to-bed-boundary analysis for optimized wellbore placement.*





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INT-08-15053 06/08

### **INTEQ ANSWERS WHILE DRILLING<sup>SM</sup>**

INTEQ, a division of Baker Hughes, is the energy industry's premier choice for oil field and directional drilling expertise and services. INTEQ has applied that expertise to develop the innovative, automated directional drilling and real-time formation evaluation services that serve as the basis of INTEQ's Answers While Drilling<sup>TM</sup> services. Offering new solutions at the farthest reaches of drilling depth, complexity and range, Answers While Drilling integrates advanced drilling and evaluation services, designed to deliver real-time answers from accurate and reliable while-drilling information. These answers allow operators, geoscientists and drilling personnel to make informed drilling decisions on the spot, leading to fast and accurate well placement, enhanced drilling efficiency and maximum recovery.