

# Control of Your Well Placement

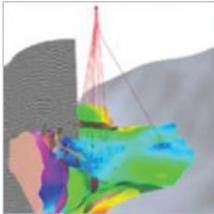
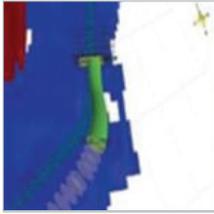
## The Challenge

Geosteering takes place during directional drilling activities, with the aim of keeping the borehole within a specific horizontal or near-horizontal formation. This service is often delivered by the company performing the directional drilling. A national oil company in the Middle East decided to take back control of their geosteering operations to improve their well placement. The company needed an independent methodology to accurately adjust well trajectory using real-time measurements, and

the solution needed to be accessible to its drilling engineers, geologists and petrophysicists in a collaborative environment.

## The Assessment

Well placement was previously managed by a directional drilling contractor with a disappointing outcome. Therefore, the customer required a more accurate and cost-effective method to control well placement and maximize its potential through the active participation of its own experienced staff.

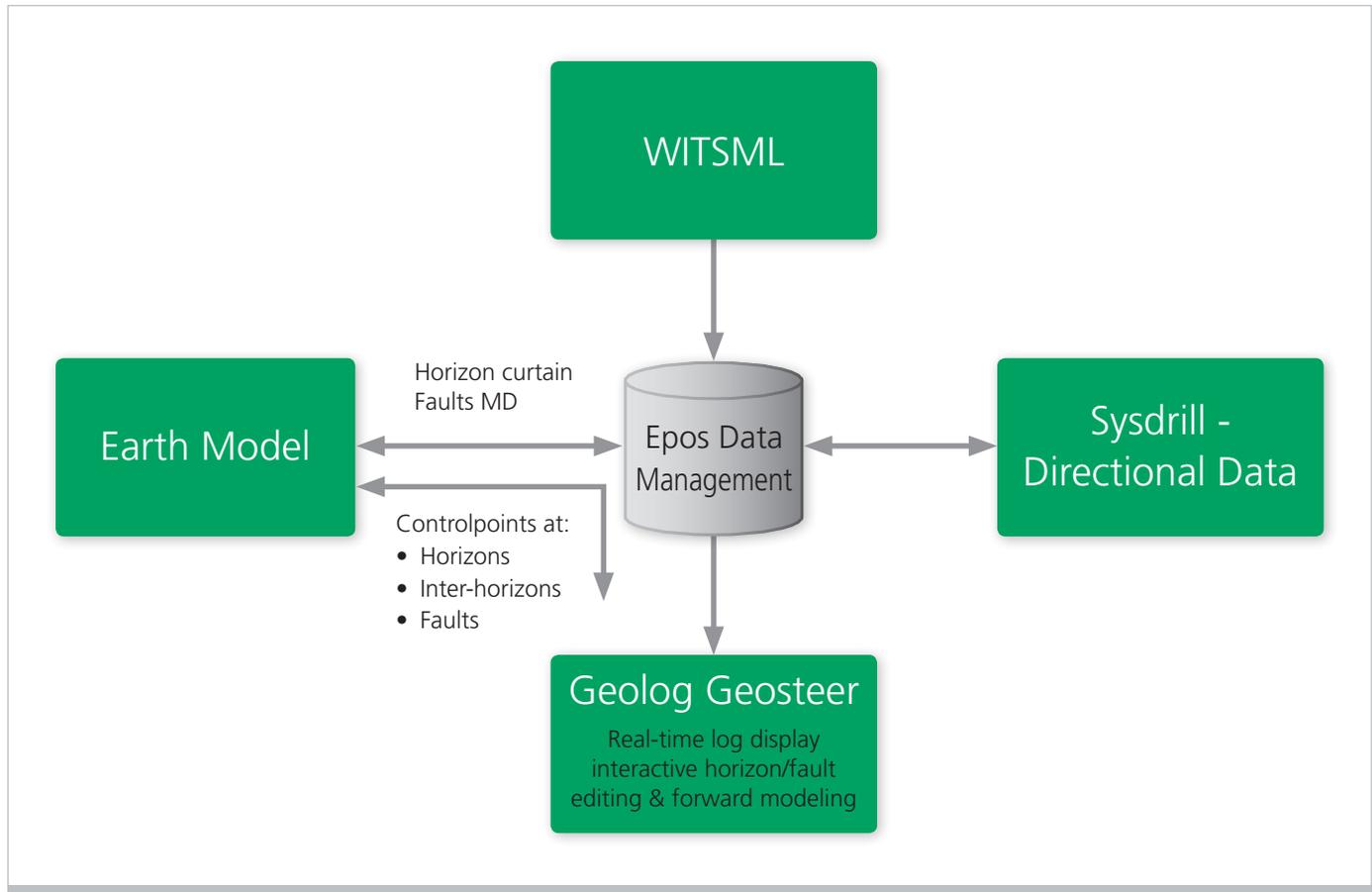
	<ul style="list-style-type: none"> <li>• Import data and sources from 3D modeling package</li> </ul>
	<ul style="list-style-type: none"> <li>• Import planned directional well trajectory</li> </ul>
	<ul style="list-style-type: none"> <li>• Real time data feed loading information from the borehole LWD tool</li> </ul>

▲ Data sources for the reservoir included a geological 3D model, planned well trajectory, borehole modelling, and LWD/MWD data.

### The Solution

The Paradigm™ Geolog® Geosteer® module is linked with the Paradigm Sysdrill® drilling engineering solution for the integration of well trajectory analysis and planning. This enables modeling ahead of the bit and ensures that steering decisions are fast and effective. The engineering staff was able to fully control well placement with maximum precision.

The correlation between real-time and modeled log responses ensured optimal entry into the reservoir, obtaining a precise position of the wellbore relative to the geology.



▲ Depiction of data flow to real-time well trajectory.

### The Results

- Enhanced productivity - Geosteering increased productivity, reduced drilling risk and optimized wellbore positioning in the reservoir.
- Full quality control - Geosteering gave our client an independent means of QC monitoring as drilling progressed.
- Effective interpretation of log data - Geolog Geosteer provided an effective way to interpret log data in highly deviated wells.
- Advanced analysis of well information - Geolog Geosteer technology and Paradigm consulting expertise guided this advanced workflow. Geosteer is embedded within Geolog, which is a highly developed and utilized petrophysical and geological package for the analysis of well information.