

Major Energy Companies Use Digital Oilfield Software To Enhance Operations

By Jeannie Stell

IDC Energy Insights senior research analyst Catherine Madden: "The objective of digital oilfield software is to enhance reservoir recoverability and optimize production to adapt a measurement-model-and-execute in real-time cycles."

Energy producers face many challenges, but using global management software can reduce risk and increase profits, says Catherine Madden, senior research analyst for IDC Energy Insights.

IDC, based in Framingham, Mass., provides research-based advisory and consulting services focused on market and technology developments for the energy and utility industries.

A plethora of new challenges have emerged for this decade's crop of oil and gas producers. Everything from dollar devaluation, rig counts, tight credit, less capital investment, climate change, new offshore legislation, energy demand and profit margins are hard to manage on a real-time basis. Also, producers are experiencing declining reserves, remote and challenging environments across the board.

Using intelligent data management systems, such as digital oilfield software, can put real-time data to work to link remote and diverse assets to headquarters, ensuring the best outcomes of decision-making, she says.

The software can also ease disconnects for companies seeking to form joint ventures with suppliers or other

producers to reduce operating costs and increase efficiencies.

"The objective of digital oilfield software is to enhance reservoir recoverability and optimize production to adapt a measurement-model-and-execute in real-time cycles," she says. "Some of the companies already using digital oilfield software include Chevron, ExxonMobil, Saudi Aramco and Shell."

Madden quotes Chevron as saying it believes such technology "is the critical pillar to success for our company." Chevron uses i-Connect to integrate diverse data resources and applications through an open standard and common platform web-based application to enable users at two locations to coordinate.

She notes that Saudi Aramco believes intelligent energy software is a company-wide effort that is underpinned by technology.

"Saudi Aramco uses i-Field for real-time reservoir management and production engineering," she says. "They use key performance indicators for benchmarking data flow and productivity."

Madden says ExxonMobil has stated that standardization is an important facet of its upstream technical computing system because standards enable integration across domains and facilities that manage assets over their life cycle. She adds, "They use global systems across their entire upstream portfolio."

Madden points to Shell as a user of Relevant Workflows software for identification, prioritization and implementation. "They use both automated and guided workflows to capture incidents and results."

Return on investment (ROI) in digital oilfield services is often hard to determine, because "metrics are lagging the projects," says Madden. To quantify ROI, producers should tie the benefits of the systems to business drivers and the business plan. She cautioned that pilot testing ROI is often different from that derived from a production environment. ■

Catherine Madden is a Senior Research Analyst, Oil and Gas with IDC Energy Insights. Madden analyzes the fastest-growing information technology market in the oil and gas business — upstream — which includes exploration, upstream production, and upstream operations. Ms. Madden focuses on how technology can support business initiatives.

