

Los Alamos, Chevron to Revolutionize Oil and Gas Exploration

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LANL's industry partner, Chevron Texaco, and its partner, Transocean Inc., achieved an industry record when Transocean's drillship, Discoverer Deep Seas, used LANL technology to drill Tonga, the deepest well ever drilled in the Gulf of Mexico, at a total vertical depth of 31,824 feet.

brainstorm solutions to problems it sees in its day-to-day operations. The alliance gives LANL the opportunity to quickly move an innovation from the lab to an actual product used by industry. The alliance is initially focusing on advanced well systems and solutions.

It gives Chevron the chance to test and incorporate a cutting-edge approach to oil well drilling that could revolutionize the oil exploration and retrieval industry.

More than a dozen additional projects are currently being evaluated by LANL and Chevron, all to be conducted under CRADAs.

Each of these projects is fundamental to the discovery of breakthrough technologies that help address the energy security challenges of our nation.

A partnership like this gives LANL the opportunity to move from modeling and simulation for its electronics package to "proof of principle" using real data in a real-time industrial situation.

For more information:

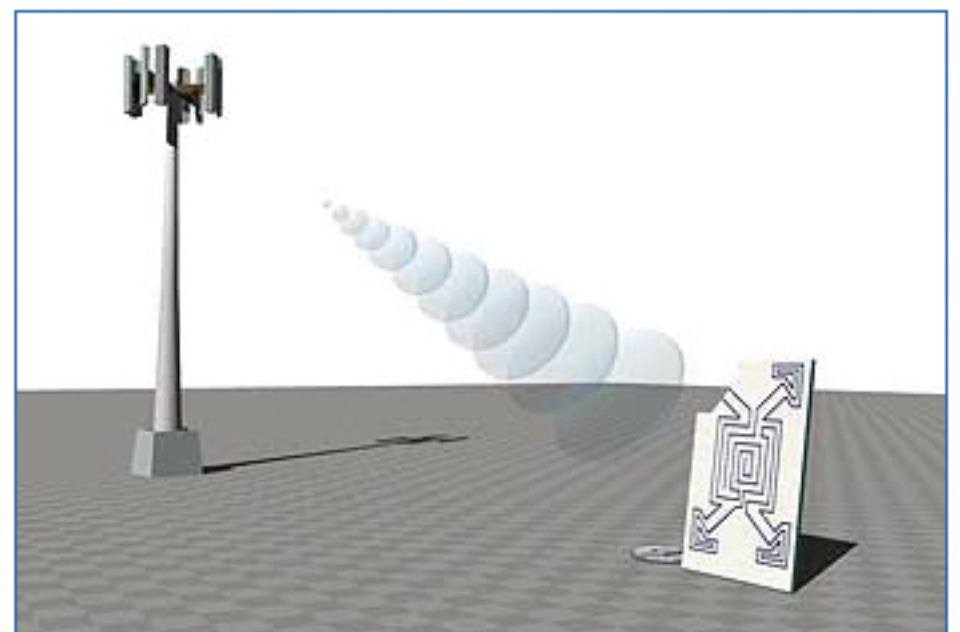
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Los Alamos National Laboratory (LANL) and Chevron Energy Technology Company (ETC) developed the Advanced Energy Solutions Alliance in late 2004 to address critical technological needs of the oil and gas industry. A Cooperative Research and Development Agreement (CRADA) established early in 2004 between the partners to develop and commercialize LANL's patented radio frequency (RF) and sensor innovations quickly led to establishment of the alliance.

Under the alliance, the partners are investigating and plan to demonstrate "proof of principle" using LANL's INFICOMM (wireless communications) technology for collection and transmission of oil well data. From the well to a central data collection station, and from down-hole sensors to above the ground, this project is exploring data gathering both in the drilling operation and producing wells. The importance of being able to enhance such data gathering is vital to improving well yields and, ultimately, to the economic and energy security of the United States, by promoting a diverse supply and delivery of reliable, affordable and environmentally sound energy.

In addition to unique patented and patent-pending technologies, LANL brings to the partnership electronics support facilities not available elsewhere. ETC, the technology development and deployment branch of Chevron U.S.A. Inc., is responsible for making technology available to Chevron's operating companies under a business model in which it works with oil and gas suppliers to develop, demonstrate, and deploy new technologies and products. Chevron expects that select LANL technologies will be further developed, demonstrated, and deployed to the entire energy industry.

Chevron is using the alliance to collaborate with LANL and to



LANL's INFICOMM wireless receiver-reflector device modulates and reflects the transmitter-receiver base unit's radio frequency carrier wave to complete half the "conversation." The other half is transmitted from the base unit using conventional techniques.