

Quasar Rolls Out New Sensor for Undersea Explorations

TECHNOLOGY: Detection Device Could Cut The Costs of Oil and Gas Drilling

■ By NED RANDOLPH

Quasar is rolling out deepwater sensors used to detect gas and oil deposits beneath the ocean floor originally developed through military-related research.

Known as Quantum Applied Science and Research, or Quasar, the Sorrento Mesa company says its deepwater sensor uses a low-frequency electromagnetic sensor technology popular in oil and gas field surveys.

However, the sensor is more sensitive than current devices, the company claims. It's also 200 pounds lighter and requires fewer people to hoist from the water, company executives say.

All of that improves operational efficiencies of ocean surveys, which are often conducted in rough seas.

Current sensors weigh 700 pounds and operate with 23 feet to 33 feet arms assembled on the ship deck and lifted by crane into the water.

A typical field survey of 100 sensor pods takes a week to deploy and a week to collect, which limits their efficacy due to battery life, says George Eiskamp,

CEO of Quasar Geophysical Technologies, the division com-



George Eiskamp

mercializing the technology.

The new QMax brand sensor requires no extended arms or assembly (however, a user can add arms to increase sensitivity). It could be deployed on an autonomous conveyer belt much like depth charges dropped by warships, says Thomas Nielsen, the chief scientist behind the project.

That would be a big help in the open waters such as the North Sea, which is a hotbed of deep sea oil and gas exploration.

Unit costs will vary between \$125,000 and \$150,000, depending on the size of the order. Survey companies would typically deploy as many as 30 to 100 during a single ocean floor survey, says Eiskamp, who envisions a dozen potential customers.

New Division

Quasar Geophysical Technologies was formed a year and a half ago specifically to commercialize the QMax. The division has five full-time staff members and access to scientists throughout the Quasar companies, which combined employ 90 people full time.

The 11-year-old, privately held Quasar generates \$12 million in sales annually,



Thomas Nielsen

mostly from its oldest two divisions — Quasar Federal Systems and Quasar Inc. — which were split in 2005 to focus on defense, surveillance and geoscience monitoring; and biomedical instruments.

The company has been developing low-frequency electromagnetic sensing technology — known as EM — over the past five years. Applications vary from using small sensors to measure a soldier's heart rate in the field, to detecting underground smuggling infrastructure, to measuring electrostatic charges on semiconductor lines, says spokeswoman Caroleen Williams.

Quasar's goal is to use the government research money to seek out commercial applications.

Applications

While the oil and gas industry still relies heavily on 50-year seismic technology, it also looks for ways to minimize the risk of losing money on expensive deepwater drillings, says Nielsen.

"There's an active debate about how to apply the knowledge gained from EM. We hope it works as an exploration tool,

but more people see it as an integrated tool to 'de-risk' their prospects," he said. "It's one more useful piece of information to put into an analysis."

By the time a company drills, they've sunk \$200 million into the project. And only 25 percent to 40 percent of them yield commercially viable oil finds.

"Anything you can do to improve that 25 percent to 40 percent, even marginally, there is a great desire to undertake," says Eiskamp.

While the QMax is ready for commercial production, the global financial crisis has delayed orders, the company says.

"The global financial collapse sucks all the capital money and research money," says Nielsen. "We're still moving forward with significant numbers, getting requests for evaluations, and delivery decisions are in the works."

The company expects its first orders to be delayed until early next year. At that point, it expects a six month turnaround for delivery of the first orders, and about three months for deliveries once the production line is established.

Barnhart Starts School's \$1.5 Million Renovation Project

San Diego-based Barnhart and the Tustin Unified School District held a ceremony to announce the beginning of Tustin High School's construction and renovation.

The project renovations include the campus quad, and outdoor meeting and traffic areas that connect the school's

buildings. New entryways, walkways, benches and overhangs will be built, including landscaping and a new clock tower.

Designed by NTD Architecture, the \$1.5 million renovation project is slated for completion Dec. 31.

— Molly Pappas