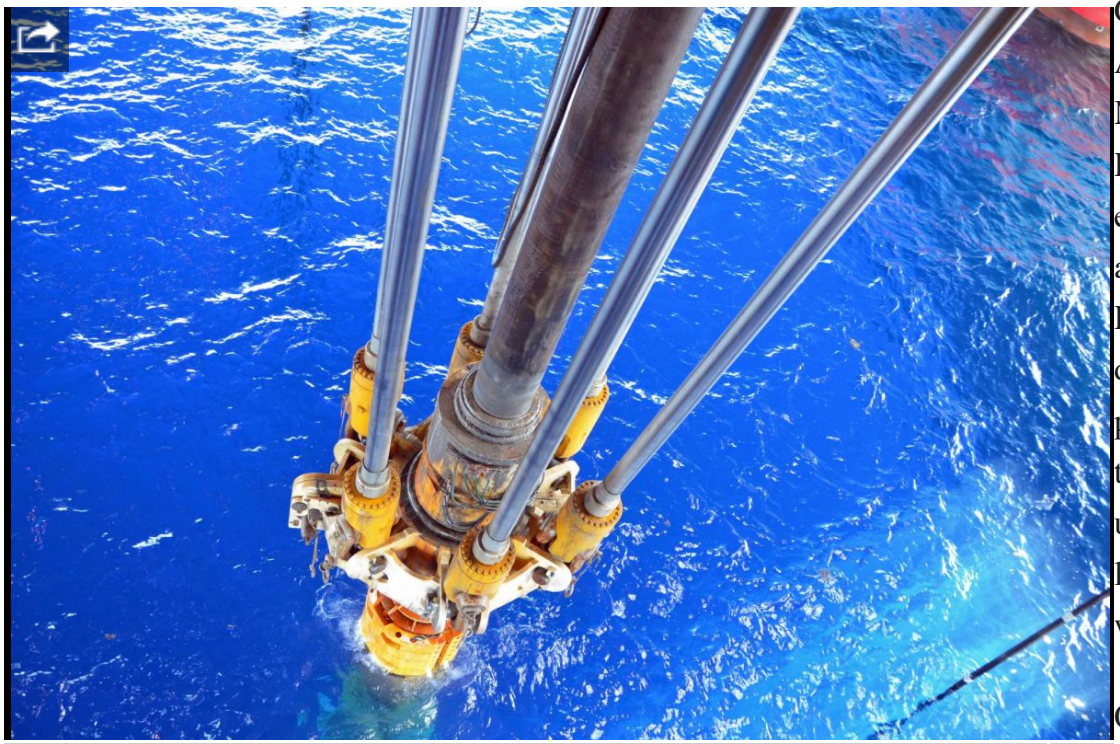
HOUSTON CHRONICLE
ENERGY

Drilling in an offshore crowd, Statoil bets big on Martin project

Norwegian company hopes Martin project will silence critics about huge price



Jennifer A. Dlouhy

The Maersk Developer rig is boring an exploratory well, with the final well expected to reach 31,400 feet below the surface.

GULF OF MEXICO, ABOARD THE MAERSK DEVELOPER - The expanse of blue-gray sea around the Maersk Developer bristles with drilling rigs and oil production platforms, their derricks reaching up into the sky and thick legs plunging into the waters below.

On a sunny day in June, at least seven other oil facilities surrounded the Developer as it bored a high-stakes exploratory well for Norway's Statoil.

There off the bow, jutting up from the horizon, was Shell's Mars platform, a hulking four-legged giant now pulling oil out of multiple wells. Shell's yellow-legged Olympus and Ursa platforms were in sight too. And just a few miles away, a box-type drilling tower soared up from the center of the Noble Bully. Also in the distance: Hess' Tubular Bells spar platform, rising from the water on a single cylinder.

Many Gulf deep-water wells are drilled in isolation, but Statoil's Martin project is in a decidedly busy neighborhood.

"There is a lot of stuff going on around here," said Statoil's vice president of exploration, Tore Loseth, gesturing around the rig. "We are sitting on a very robust prospect. It's located in a very prolific area."

Statoil is hoping the frenzy of activity near Martin is a sign of what lurks below, some 31,400 feet under the surface.

But what's happening above the waterline is no guarantee of success, even in this busy Mississippi Canyon lease area. And it will be months before Statoil knows if its big bet is likely to pay off.

Statoil's enthusiasm was evident when it pledged a record-setting $157 million for the oil and gas rights in this single, 5,760-acre tract during a government auction in June 2012. The sealed bid was five and a half times that of its nearest competitor - meaning Statoil effectively left $129 million on the table.

Statoil and project partner LLOG Exploration launched drilling in April, just 20 months after winning the lease - less than half the customary four to five years it typically takes companies to analyze a new Gulf acquisition, design a well and send drill bits spinning into the seabed.

And now, Statoil is spending roughly $1.1 million a day to drill the well, a sum that includes renting the Developer, supplying the rig and paying for other contractors at the site.

All of that is a sign that the company "thinks they have a game changer," said University of Texas Austin geologist John Snedden, who has reviewed seismic imaging that suggests Statoil could find its prize in a large structure underneath a ribbon of salt in 24-million-year-old Miocene rock.

"At the end of the day, if Statoil has a huge success here in a billion-barrel field, they can silence all the critics," Snedden said. "If they open up a new play or set up a large field, it will have been worth it. If Statoil has a big Miocene sub-salt discovery here, then no one will remember the 'money left on the table.' "

The project is a testament to oil companies' abiding interest in the Gulf - despite a domestic oil boom unfolding on land - and its confidence in the Miocene trend to keep delivering crude three decades after the industry began tapping it.

Martin is also a test of Statoil's broadened foothold in the Gulf, marking the first well in a new offshore exploration campaign that could take the Norwegian company to some of the basin's oldest (and most prospective) geological trends as well as the more well-established Miocene. Statoil plans to drill all of the new Gulf targets with the Maersk Developer, a semi-submersible rig it has under contract through November 2015.

Beefed up in U.S.

Statoil has rapidly beefed up its U.S. portfolio in recent years, with onshore assets in North Dakota's Bakken formation, Texas' Eagle Ford and the Marcellus in the Northeast. Offshore, Statoil is a partner in some of the biggest Gulf fields - including Chevron's Tahiti, Jack and St. Malo, as well as Exxon Mobil's Julia - but it will be the lead operator in the coming exploration projects.

"We've built a good and growing business here in a relatively short period of time, expanding into onshore from our strong experience base as the world's largest offshore operator," said Jason Nye, Statoil's senior vice president for U.S. offshore.

The company's U.S. oil and gas production has increased tenfold over the past decade, going from about 25,000 barrels of oil equivalent per day to nearly 250,000.

Its swelling North American portfolio and production is matched by a climb in U.S. employees - from just a handful a decade ago to nearly 900 in Houston today. The company is expanding its headquarters at Houston's CityWest complex to accommodate the growth.

Martin's home is about 43 miles from the Louisiana coast, not far from where BP drilled its failed Macondo well in 2010. Here in the Mississippi Canyon, most existing wells stop before reaching a subterranean salt canopy and pull high-quality oil from especially porous Miocene rock.

But Statoil is aiming below the 1,500-foot-thick layer of salt - burrowing deeper than BP did when it drilled another well at the same site years ago. BP ultimately relinquished the property without developing it.

Although the Martin well is in only modestly deep water - nearly 3,000 feet - it is set to penetrate more than five miles below the seabed.

"This is a complex well," Nye said.

Like many other Gulf of Mexico drilling projects that go deep underground, the geological challenges of the site include a slim drilling margin - the difference between the hydrostatic pore pressure exerted by oil, gas and other fluids in the underground formation and the amount of force it can take before cracking

open. Companies like Statoil aim to stay inside that narrow window, by circulating just enough drilling fluids to exert just enough pressure and keep hydrocarbons at bay without fracturing the formation.

To maintain that delicate balance, Statoil designed Martin with seven strings of casing, or reinforcing pipe, that steadily narrow as the well goes deeper. But more casing strings generally mean more expense, as well as a narrower channel at the bottom of a well.

The company also is employing new technology - previously used in Norwegian waters - to keep pressure at the bottom of the well constant by adjusting the level of drilling mud in the marine drilling riser. Known as ECD-M or Equivalent Circulating Density Management, Statoil's system involves specialized pumps placed on the riser to circulate out drilling fluids without simultaneously boosting pressures as conventional drilling systems can.

'***All eyes on Martin***'

That pumping system was being used in early June, as Maersk driller Adriano Tiberi circulated fluids through the riser and filtered out cuttings, the broken bits of rock left in the wake of the drill bit. From his vantage point in the "doghouse," or control room, Tiberi could see pipe spinning on the drill floor a few feet away and, courtesy of a computer screen, mud flowing far downhole.

At the time, Statoil had already made it through more than 20,000 feet - and five of its seven planned casing strings - but some of its toughest work (and the real test of success) is yet to come.

Loseth stressed that Statoil's Gulf of Mexico portfolio is strong overall, and its exploration success can't be defined by any single prospect. Still, he admitted that "right now, all eyes are on Martin."