

Seadrill, Rowan, KCA DEUTAG

Contractors see challenges ahead in European operations but believe in strength of drilling market

By Linda Hsieh, associate editor

SEADRILL HAS BIG ambitions — ambitions that are backed up by US\$5.1 billion in newbuild investments — not shabby at all.

The Norway-based company was established in 2005 and acquired industry veteran **Smedvig** just a year later. With 35 drilling units in its current fleet and 15 newbuilds on the way, Seadrill appears well-poised to take advantage of the strong global drilling market.

“Our goal is to create a world-leading drilling contractor within five years,” said **Sveinung Lofthus**, Seadrill senior vice president deepwater units Europe, Africa and Asia. “We are already a market leader in tender rigs, and when our newbuilds are delivered, we’ll be the industry’s second-largest ultra-deepwater player.”

Two drillships and four semisubmersibles are currently under construction in South Korea. Three more semis are being built in Singapore, as well as four jackups. Delivery schedules span from 2008-2010, and Seadrill is confident there won’t be major delays — the company will pay 70% of their fixed turnkey contracts on delivery. “That’s quite an incentive for these yards to get these units out,” he said.

One philosophy behind the newbuild designs, he explained, is to use existing and proven technologies. The two deepwater drillships are identical rigs, and six of the semisubmersibles consist of three pairs of identical rigs. All newbuild semisubmersibles and drillships will be capable of operating in water depths up to 10,000 ft.

Seadrill ordered all of its newbuilds on speculation, including the most recent semi, announced in May 2007. The yet-to-be-named ultra-deepwater rig will be built at the Jurong Shipyard in Singapore. The turnkey contract has a net value of US\$531.5 million, with delivery scheduled for April 2010.

“We already have contracts in place for five of our eight deepwater units, so we



Seadrill’s West E-drill semisubmersible is in the final stages of construction at Samsung in South Korea. It is contracted to TOTAL E&P through March 2011 and is one of nine deepwater newbuilds Seadrill expects to take delivery of between 2008-2010.

ordered a new one. We believe in the market strongly, especially the growth of the deepwater market,” Mr Lofthus said.

CURRENT OPERATIONS

In May 2007, the first Ormen Lange well was completed using the West Navigator drillship. On the west coast of Norway, Ormen Lange is Europe’s second-largest offshore gas field and is expected to come on stream in October 2007.

According to **Shell**, the West Navigator drilled 9 3/8-in. wells at a water depth of 850 m (2,789 ft) in the harsh North Atlantic — all without a lost-time incident since 2005. The wells were drilled to a depth of about 2,700 m through sub-sea templates. A total of 24 deepwater wells are planned for Ormen Lange.

“The Ormen Lange wells represent incredible technology, confirming our position as a leader in deepwater developments. Full credit to all involved for a truly great team effort in completing the world’s largest gas well to date,” said Shell executive vice president Europe **Tom Botts**.

For Seadrill’s semisubmersibles, the West Alpha is performing HPHT work for Shell in the North Sea, and the West Venture continues to work in the Troll

field for **Norsk Hydro**. Five other semisubmersibles are working outside Europe in Malaysia, Congo and Brunei.

On the jackup side, the ultra-large West Epsilon is the only one working in the North Sea, for **Statoil** (see Page 20). Four other jackups are working internationally in Nigeria, Malaysia, Tunisia and Indonesia. Nine tender-assist rigs also remain active in Asia and Africa.

“We are growing in all areas, but the biggest growth will be international,” Mr Lofthus said.

WELL SERVICES

Seadrill also carries out well services activities on 22 platforms. In Norway, it worked for Statoil on the Statfjord, Veslefrikk and Gullfaks platforms, and for BP on the Ula and Valhall platforms, and for **Talisman** on the Gyda field. In the UK, it performed drilling and maintenance activities for Shell on various platforms.

Alf Ragnar Løvdal, executive vice president, oversees Seadrill’s platform work as well as engineering/modification and wireline operations. He noted that with the age of most North Sea platforms averaging between 15-30 years,

engineering and modification work has become an increasingly important part of the business.

"I have 300 engineers doing modifications on just drilling facilities," Mr Løvdal said. He added that because depleted fields in the North Sea demand new techniques to get the oil out, Seadrill is focusing on new niches. "There's a lot of work to be done with re-drilling, re-completing and well maintenance. Plug and abandon is another niche. It's all part of the cycle."

PEOPLE

Looking at Seadrill's newbuild delivery schedules, it's not hard to see that the company has busy years ahead, especially 2008-2009. Eight deepwater units will go into operation between February 2008 and May 2009, a tough challenge for any drilling contractor company.

"What is important," Mr Lofthus said, "is that we have already been investing in capital spares to make these units work over time. We're also investing in people. Since January 2006 we have hired about 35 people every month to prepare for this growth."

Seadrill currently has about 5,100 employees around the world, 4,300 of which were acquired through the Smedvig merger. Over the next couple of years, it expects to grow to about 7,000 employees, much of which will be on Seadrill's international teams. "We believe in employing people in the area of operation," Mr Løvdal noted.

"Our philosophy is that good people combined with a modern fleet and a good management system will attract even more good people. What we've seen so far is quite impressive — a lot of good people with experience showing interest in a newcomer like us," Mr Lofthus said. "The fact that major oil companies such as **TOTAL** and **Exxon** have signed contracts with us on our newbuilds also signals a trust."

MARKET CONDITIONS

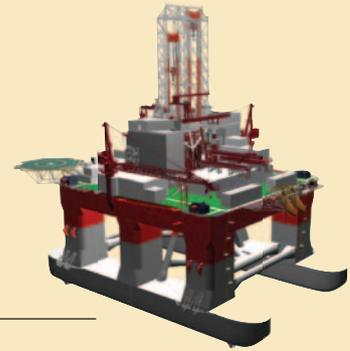
Both Mr Løvdal and Mr Lofthus noted that although the North Sea market may have flattened slightly in the first quarter of 2007, demand remains strong and there are no signs of weakening.

More and more independent oil companies are entering the Norwegian market as well. For example, **Talisman** was one of the earliest newcomers to the country and has maintained high drill-

Seadrill deepwater newbuild program

West E-drill and West Eminence

- Two semisubmersibles
- Builder: Samsung
- Delivery: 1Q/3Q 2008
- Design: DP drilling vessel
- Rated water depth: 10,000 ft
- Rated drilling depth: 30,000 ft
- Dual derrick



West Sirius and West Taurus

- Two semisubmersibles
- Builder: Jurong
- Delivery: 2Q/4Q 2008
- Design: Friede Goldman ExD
- Rated water depth: 10,000 ft
- Rated drilling depth: 35,000 ft

A third semi has been contracted at Jurong with a similar design. Delivery is scheduled for April 2010.

West Hercules and West Aquarius

- Two semisubmersibles
- Builder: Daewoo
- Delivery: 2Q/3Q 2008
- Design: GVA 7500
- Rated water depth: 10,000 ft
- Rated drilling depth: 35,000 ft



West Polaris and West Capella

- Two deepwater drillships
- Builder: Samsung
- Delivery: 2Q/4Q 2008
- Design: Samsung 10000
- Rated water depth: 10,000 ft
- Rated drilling depth: 35,000 ft

ing and production activity levels. "They showed that it's possible as a smaller, newcomer company to get into Norway. That opened the door for many others," Mr Lofthus explained.

Seadrill acknowledged that it can be tough persuading operators to commit to 5-year contracts for a rig that won't be delivered until 2009. However, as long as oil prices stay relatively high, activities will stay high, and Seadrill has no overbuilding worries.

"Firstly, the number of units that are 30 years or older is high," Mr Løvdal said.

"Secondly, we've seen in the past that when the market goes down, it's the old rigs that get stacked."

Mr Lofthus added: "If you put all the units the industry has today into programs already approved by operators, every unit has a 2- to 2½-year contract. However, we all know that the market in the future will balance itself."

ROWAN

Rowan Companies currently has three Super Gorilla-class, harsh-environment jackups working in the North Sea with



Rowan currently has three Super Gorilla-class harsh-environment jackups working in the North Sea, and its two newbuilds — 240-C class jackups — may well mobilize to Europe upon delivery depending on the strength of the market.

three operators. The Gorilla V is performing HPHT work for TOTAL and will stay on through at least the third quarter of 2008. The Gorilla VI has been working for Talisman since February 2007 and will continue through November 2007. It will then move to a contract with BG for work in both the UK and Norwegian sectors.

According to **Glenn White**, operations manager in the UK for Rowan, the company has been working on its Acknowledgement of Compliance (AOC) for Norway's Petroleum Safety Authority (PSA) since late 2006. He sees no major hurdles in the process and predicts a smooth re-entry to Norway for Rowan.

The Gorilla VII's contract with **Maersk Oil & Gas** ends in September 2007, but according to Mr White, several companies are already vying to hire a Rowan rig. "We have interest on a daily basis. As far as we can see, the North Sea will stay busy. There's been a slight decline in activity in the Gulf of Mexico jackup market, but that's not happening here. Dayrates appear to be stabilizing," he said.

Rowan's average dayrates are approximately US\$147,000-\$157,000, and for the harsh-environment units, they go up to US\$250,000-\$300,000.

"There may be a dip or two, but we don't expect severe dips like those we saw in the early and late '80s," he said. "Rowan's standing fast and building new rigs."

Those new rigs include two 240-C class jackups, dubbed "the next workhorse." They're under construction at the **Marathon LeTourneau** shipyard in Vicksburg, Miss., for delivery in June

2008 and February 2009. Both will be powerful 12,900-hp machines and be capable of drilling in up to 350 ft of water, making them suitable for areas such as the North Sea.

With the strength of the North Sea market, Mr White said, he wouldn't be surprised to see these newbuilds mobilize to Europe upon delivery.

STRONG MARKET

He also noted that despite across-the-board cost increases in the North Sea, most operators continue to stay active. "There are a few standing back due to overall costs, and others are hesitant because of weaker gas prices. However, you need to put costs in line with the price of oil, and gas prices have remained stable," he said.

The reason, then, that operators are holding back? "I think it's a lack of people. The industry just doesn't have the people available with the required expertise and education. If they had the right people, all projects should be going."

For Rowan, however, personnel has not been a big issue. Rowan rigs that were brought into the North Sea came with experienced crews; when jackups in the Gulf of Mexico left for long-term Middle East contracts, many UK employees on the crews were transferred back to Aberdeen. "We've been very fortunate with retaining our longtime employees," Mr White said.

On the other hand, he noted, retaining employees on the roustabout level has been a tougher challenge — especially with Aberdeen's low unemployment rate of just 1%-2%. "It's the same with all drilling contractors, not just Rowan. It's tough to find qualified people and tougher to keep them. The ones who stay, we work with them as much as we can to get them trained."

HSE

Citing the Step Change in Safety organization's vision of making the UK the safest place to work in the worldwide oil and gas industry by 2010, Mr White said he believes everyone is coming onboard to work towards that goal.

Operators continue to ask for increased automation on rigs that reduce manual handling for employees, especially at the drill floor area and manriding activities. "It's not just the operators. The drilling contractors themselves are moving towards these types of improvements.

These are safety improvements that all parties, operators and contractors, are in favor of."

He added that although he hasn't seen vast reductions in the number of incidents due to automation yet, "we are hopeful it will improve safety in the long term."

KCA DEUTAG

Of the 19 platform rigs in the UK that KCA DEUTAG has under contract, only eight are currently operating. In Norway, of the nine contracted platforms, seven are operating. It's a situation that embodies one of the biggest challenges platform drilling contractors are facing in the North Sea — especially the UK sector, said **Roger Hodgson**, manager of UK and Norway for KCA DEUTAG.

"With the North Sea platform operations being development and infill drilling, and most fields having already reached their plateaus, one of our biggest challenges is getting consistent drilling sequences," he said. Operators are likely to take "drilling breaks" lasting anywhere from six months to several years — even with the current environment of high oil prices.

"There are basically two issues," Mr Hodgson explained. "Gas prospects are under threat at the moment due to lower gas prices, yet costs in the North Sea remain high. Secondly, there can be quite a long lead time with reservoir engineers trying to maximize mature or depleted reservoirs. It takes time to work up the prospects for three to five wells to be drilled in one campaign."

One possible solution to the lack of continuity in work and aging infrastructure could be modular rigs. These mobile units have small footprints and can potentially reduce the cost of maintaining older platforms. The KCA DEUTAG-owned Rubicon 2000 is a modular rig currently warm-stacked on Talisman's Montrose platform in the UK sector of the North Sea, having performed a drilling campaign in 2006 and awaiting resumption of drilling operations later in 2007.

Some operators are considering the use of modular rigs, due to the intermittent nature of their drilling programs and aging existing equipment, Mr Hodgson said, and the concept is great for the North Sea. The reality, however, is that they've yet to gain any significant popularity.

“Many operators are interested in them, but they want the rig specifically designed for their wells. That means the rig may not be suitable for another footprint on another platform,” he said. “Right now there still lacks a critical mass for them. Operators will be the ones deciding when to bite the bullet on taking off the platform rig and bringing in a modular rig.”

TECHNOLOGICAL SOLUTIONS

Among new technologies finding homes in the North Sea, rotary steerables have become “very common,” Mr Hodgson said. Through-tubing drilling is also emerging as a key technology, with at least three of his clients looking closely at the technique. “I’d say it’s replaced coiled-tubing drilling here.”

Sidetracks also are gaining popularity, he added, to access new locations by using old wells. Similar to that, on platforms with slot constraints, KCA DEUTAG has seen operators “split slots” to drill two or even three wells from one conductor slot, as well as adding additional slots to existing facilities.

From a drilling contractor perspective, Mr Hodgson said, DART has been KCA DEUTAG’s main technological step-change. Its drilling simulator training, or DART, uses computer-generated 3D graphics and real-time simulation with sound effects to simulate drilling and well engineering problems. Managing six simulator training facilities worldwide, DART has become a key performance enhancement tool not only for KCA DEUTAG’s North Sea operations but also for its global operations.

Especially at a time when competency levels in the industry have become stretched due to the influx of new personnel, DART has proven an exceptional training tool for new crews on new rigs, he said. “We use DART to train crews not only for a trouble-free startup of new rigs, but also later on, crews use the simulators to practice with cuttings build-up, stuck pipe and well control issues.” Additionally, if there’s a well with potentially difficult challenges, KCA DEUTAG invites clients to practice drilling techniques on DART before drilling the well on location.

HSE

Mr Hodgson, who’s currently serving as chairman of the IADC North Sea Chapter, said that HSE performance in the North



Modular rigs, such as KCA DEUTAG’s Rubicon 2000, could potentially address the lack of continuity in drilling work and reduce costs.

Sea — while still substantially lower than the IADC average — has flattened out in the North Sea after several years of improvement. “I haven’t seen a consistent reason for that. Some people attribute it to the new people coming in, but that has not been our experience. We’re still seeing incidents with experienced personnel.”

GLOBAL EXPANSION

Worldwide, KCA DEUTAG has more than 60 land rigs, 38 offshore platforms, three jackups and four self-erecting tenders. Just five years ago, the North Sea made up over 50% of the company’s business, and although North Sea operations itself expanded through additional Norwegian activity, global growth in recent years has reduced the North Sea percentage to around 10%.

“Operators in the North Sea are competing for capital against other projects elsewhere in the world even as operational costs increase. We do see clients beginning to curtail their drilling programs,” he said.

On the positive side, however, the strong presence of smaller, independent oil companies such as Apache and CNR have helped to keep North Sea activity levels up.

“The North Sea remains a very important area for us strategically,” Mr Hodgson added. “It allows us to build relationships with key operators as they expand to other areas, such as BP in the Caspian and Shell in Sakhalin.” ♠