Middle East E&P is at its highest but region is gearing up for even more drilling activity

E&P ACTIVITY IN the Middle East is at perhaps its highest level presently, but there are several operators and countries in the area that are gearing up for even higher activity later this year and into 2006 and 2007. Part of the reason is higher commodity prices. Part of the reason is that the area is considered mature for the most part, and some operators, including national oil companies, are struggling to keep production on an even level. Additionally, while the region was well known as a major oil producing area, which it clearly still is, natural gas is playing an increasingly important role.

OD&E's Rig 25 is working for Petroleum Development Oman (PDO). PDO drilled approximately 350 wells in 2004 and expects to drill the same number of wells annually for the next several years. However, the operator's workover rig fleet may increase by 10-20% during the next few years.

"The Middle East is a market to watch because it does have incremental demand," said **Roger Hunt**, Senior Vice President, Marketing for **GlobalSantaFe**. "Saudi Arabia, Kuwait Oil Company, Qatar and Iran are the countries that the world is going to look to to increase oil production, and their ability to do that is going to impact their ability to take on more rigs."

"There are a lot of countries looking at numerous projects, all of which will require people and rigs," said **Mike Simpson**, Vice President, Eastern Hemisphere for **Precision Drilling International**, which was recently purchased by **Weatherford**. "We are just at the docking stage for a lot of these projects that are typically 1-3 years away.

"Consequently," he added, "we see a steady demand for rigs in the region over the next few years."

Mr Hunt agrees: "It is not really a 2006 story but 2007 and 2008 and beyond."

"Future opportunities look strong in the Middle East because of continued planned developments by **Saudi Aramco** and all of the oil companies in the region," echoed another drilling contractor. "There is going to be continued development offshore and on land."

REGIONAL CHALLENGES

Operators, national oil companies and drilling contractors are facing, and will continue to face, several challenges in the region. For operators, as mentioned, challenges include maintaining and/or increasing production from mature fields.

For drilling contractors, recruiting and training qualified rig crews is a major focus, particularly in light of the companies' desire to increase the percentage of the contractors' and service companies' nationals in the workforce. This can be particularly challenging as more drilling rigs, both onshore and offshore, are entering the Middle East to help boost or maintain production.

Even more qualified workers will be required as newly constructed rigs, primarily jackups under construction in Singapore, could be contracted in the region to help expand a limited rig supply.

A more complex issue facing not only drilling contractors but nearly all companies working in the Middle East is economic and social uncertainty related to people and growth in the region, according to **Ken Fischer**, IADC's Vice President–Middle East & Asia, based in Dubai.

"The people side of the equation relates to population increase, the nationalization of the workforce, recruitment, training and retention," Mr Fischer said. "The growth is the growth in demand for oil and gas.

"Where do we find the infrastructure, the rigs and the people, and how do we bring these resources in to accomplish what needs to be done?" he continued.

Mr Fischer noted the great strides made toward the nationalization of the workforce. Many drilling contractors and other companies are dealing with the issue successfully, and in some cases have 80% or more of the total rig-related workforce covered by nationals of the particular country in which they are working. Many drilling contractors train crews locally, utilizing IADC WellCAP and RIG PASS accredited training programs.

These key questions will be addressed by a panel of industry leaders during the opening session of the 2005 SPE/IADC Middle East Drilling Technology Conference & Exhibition held in Dubai 12-14 September. The session is titled *Accelerating Technology Deployment to Meet Regional Challenges: Growth, People and Uncertainty.*

RIG SUPPLY

Carl Thorne, Chairman and CEO of **ENSCO International**, said he expects to see a shortage of jackups to materialize in the Middle East by early second quarter 2006 as up to 20 additional rigs will be required to meet drilling requirements in Qatar and Saudi Arabia alone.

With many Middle Eastern countries seeking additional drilling rigs to keep production rates level, or to increase their production with new reserves, drilling rig availability is a major concern.

Facing an extremely tight rig market worldwide, both onshore and offshore, and with rig tenders indicating that the region could use as many as 20-25 more rigs in the near term, the big question is, where will the rigs come from to fulfill Middle Eastern demand?

The answer is that they will come from wherever they are available, provided they get the right dayrate and contract terms.

For example, Saudi Aramco tendered for as many as 10 jackups, but every jackup in the region is under term contract, as is the case in most other drilling arenas.

Perhaps the only market area that is not enjoying term contracts is the US Gulf of Mexico. As a result, **Rowan Companies** was able to obtain long-term contracts with Saudi Aramco for five of its Gulf of Mexico jackups.

The rigs were awarded three-year contracts, plus two one-year options, according to **William C Provine**, Vice President, Investor Relations for Rowan.

The rigs will begin mobilizing to Saudi Arabia during October and all are expected to arrive by early 2006.

The rigs are the Cecil Provine, Charles Rowan, Rowan Middletown, Rowan California and Rowan Halifax. All are Class 116-C jackups.

Not only was Rowan able to obtain term contracts (three years is the standard Saudi Aramco contract) that were unavailable in the Gulf of Mexico, but the company was also able to gain a nearly 33% increase in dayrate.

The rigs in the US Gulf were receiving an average rate in the mid-$70s. Those same rigs will be paid between $100,000 and $105,000 per day in Saudi Arabia. Operating costs, however, increase by about $10,000 in the region, Mr Provine noted.

Mr Provine also said that the company is negotiating a contract for a sixth rig that would move from the US Gulf to the Middle East, although he wouldn't specify the operator. This contract may be concluded early in 2006.

Saudi Aramco said that due to increases in demand for oil and gas, drilling and workover activities have increased during the past 12 months. Currently, the company is operating 68 rigs onshore and offshore.

By year end, the company noted, that number is expected to increase to 90 rigs and to 110 rigs by 2006.

There may not be too many more new contracts coming from Saudi Aramco, however. The company said that most of those rigs have already been contracted.

Other rigs contracted in the region were also brought in from other areas. Precision Drilling has four land rigs working in Saudi Arabia, with two additional units being refurbished in Kuwait that will begin working in Saudi Arabia in November. Those two rigs were mobilized from Precision's Venezuelan fleet.

Jackup Noble David Tinsley is drilling offshore Qatar for RasGas. Qatar, along with Saudi Arabia, is expected to see increased drilling activity as the countries begin ramping up their oil and gas production. Some industry observers believe the countries could account for an increase of as many as 20 offshore rigs between them to meet their drilling requirements.

"That is typically what is happening," Mr Simpson said. "Contractors are moving rigs into the region or they are building new rigs."

Another rig that will be available in the region in 2006 is **Thule Drilling's** Thule Power jackup. **ODS-Petrodata** in Houston reported that this rig is currently being reactivated after having been idle since November 2002.

In fact, the company said, the rig, the ex-Arabdrill 19, sank in 2002 and was declared a total loss. The rig is expected to be available for contract in mid-2006.

It is also likely that several of the jackups under construction in Singapore will fulfill rig requirements in the region. Of the approximately 40 or more jackups under construction or on order, nine are scheduled for delivery in 2006 and another 17 are set for delivery in 2007, just in time to mobilize to the Middle East for anticipated new projects.

EGYPT

Activity in Egypt is primarily development drilling and workover and is pretty straightforward drilling in the 12,000 ft range. The Egyptian market is expected to remain flat as far as overall rig activity is concerned, although there may be some increase in onshore drilling.

Egyptian Drilling recently took delivery of two of **IDM's** Quicksilver rigs and four additional units will be built. They will be working in Egypt.

Offshore, there are 10 jackups working in the Gulf of Suez. The Gulf of Suez is a mature area, with activity tending to be dependent upon commodity pricing. With weak pricing levels, operators would try to keep production on as long as they could on a marginal basis, and minimize investment in the wells.

Additionally, since it is a mature area, there has been very little in the way of new exploration concessions.

However, with high commodity prices, there appears to be some renewed interest by **BP** and **Petrobel**, among others. There may also be negotiations to extend leases and licensing terms. However, that may not mean a significant increase in activity.

"I think all that says is that a 10-rig market will likely continue to be a 10-rig market," Mr Hunt said. "It may be that another rig or two could be added to the sector over the next 12 months, however."

For example, **GUPCO** may increase the number of rigs it contracts by 1-2 units by early 2006. No bid tenders have been issued as yet, although **Egyptian General Petroleum** is encouraging operators to consider moving in a rig or two. However, dayrates are on a submarket level compared with nearly all offshore drilling markets so until dayrates improve, contractors generally are wary of moving in additional rigs.

Presently, jackup dayrates for contract renewals in the Gulf of Suez range from \$40-\$50,000, which is about \$20,000-\$30,000 below dayrates in West Africa or the Gulf of Mexico. Because operating costs are less in Egypt than most other areas, contractors expect rates to be \$10,000-\$15,000 below those in West Africa, but presently the gap is wider than that.

And while dayrates prior to contract renewals were in the \$30s, contractors still say present dayrates are much lower than other areas.

This may become an important factor in the future as other Middle East countries seek jackups as they ramp up drilling activity. Rigs in the Gulf of Suez could possibly shift to the Arabian Gulf.

SAUDI ARABIA

Saudi Arabia is perhaps the most active country in the region in terms of E&P operations, and it is expected to increase its drilling and workover activity in the future. As mentioned earlier, Rowan Companies was recently awarded long-term contracts for five of its Gulf of Mexico jackups.

Saudi Aramco is reported to have tenders out for three additional jackups to begin in the second quarter 2006. ODS-Petrodata also reports that **Khafji Oil & Gas** is expected to tender for at least one more jackup in the Kingdom.

Additionally, **ENSCO International's** jackups ENSCO 76, 95 and 97 are scheduled to begin working offshore Saudi Arabia under long-term contracts this year.

Dayrates for these rigs also indicate that Saudi Aramco is willing to pay the high dayrates necessary for equipment. The ENSCO 76 is contracted in the low-\$100s while the ENSCO 97 is in the low-\$80s.

GlobalSantaFe's Rig 103 is drilling for Occidental offshore Qatar. Much of the country's offshore activity is driven by drilling for natural gas for feedstock for Qatar's LNG complex. Qatar may add as many as 4-5 more rigs to its fleet as additional development projects are negotiated and sanctioned.

Still, Saudi Aramco is said to be seeking another handful of jackups, and reportedly visited some drilling contractors actively recruiting for rigs, indicating that there was plenty of potential work in the country, and asking the contractor to participate in the upcoming work.

Setting the pace of Saudi Aramco's demand is going to be its ability to start up new operations. Essentially all of the operator's drilling activity will be development work with perhaps one or two deep gas exploration programs.

Onshore is a similar situation. For example, **Nabors Drilling** has 22 land rigs in Saudi Arabia, all working for Saudi Aramco. Nabors has two rigs contracted to Lukoil for a drilling program slated to begin in the Kingdom in early 2006. Those rigs presently are in Dubai for refurbishment.

Nabors will significantly add to its working fleet in Saudi Arabia. "We just finished adding 12 rigs," said **Dennis Smith**, Director of Corporate Development for **Nabors Industries**.

"There are bids pending for about eight more now, so I would say that Saudi Arabia is going to have about 100 rigs running from 34 in mid-2004."

To fulfill onshore rig demand in Saudi Arabia, rigs would likely have to be reactivated or new units built. As far as Nabors is concerned, it has several rigs in the US that could be reactivated and refurbished but due to rates increasing in the US, dayrates in Saudi Arabia and other countries likely would have to rise as well to entice those rigs.

Additionally, according to Mr Smith, drilling contractors are beginning to see term contracts in the US, making it even more difficult to entice a contractor to move a rig to international areas.

Like jackup rigs, dayrates for onshore equipment have also risen. Onshore rigs are receiving around \$20,000 per day in Saudi Arabia, which is about a 15% increase from a year ago.

Not all of that goes to the bottom line, however. One contractor noted that labor costs are higher. Steel and supply costs are also higher. This contractor said that while new contracts or renewals also carry higher dayrates, about 10-20% higher, most of that relates to the higher costs.

"We have the same internal hurdles we

had last year," the contractor said, "but we have to meet the higher costs."

OMAN

Oman is a mature area with approximately 4,000 wells, of which about 3,500 are producing, according to **Petroleum Development Oman (PDO)**.

According to the company's 2004 annual report, PDO's ultimate objective is to build PDO production levels, positive annual net reserves additions and total savings of $2 billion over the five-year period 2004-2008.

The company's annual report also noted that through monitoring and managing its existing wells and reservoirs, the production decline rate had measurably slowed during 2004. Additionally, those wells drilled in 2004 produced more oil than the wells drilled in 2003.

The company is adding around 350 wells per year. PDO drilled about the same number of wells during 2004 as it expects to drill this year and for the next five years as well.In terms of drilling activity, PDO operates more than 30 drilling rigs, 17 workover units and 17 frac, test and other standalone units. The number of rigs it has under contract has grown by 20% since 2000.

"This activity rate may rise a little during the next two years," said **Eamon Gorman**, Well Engineering Director for PDO in Muscat, "but it is essentially holding.

"The workover fleet will probably grow by 10-20%."

When PDO solicits bids for drilling rigs or other services, it increasingly does so using single shot on-line bidding. The country recently opened up contractually from a relatively small pool of contractors to public open tendering.

PDO manages the resulting higher interest of contractors by filtering the companies showing interest at the front end. The on line bid award then goes to the technically qualified lowest bidder.

For more commodity type services and equipment, such as wellheads and slickline, PDO conducts a reverse auction. Winning companies are qualified post-bid, and if they fail to make the qualification, then the contract goes to the next bidder.

"We do our technical qualifying at the back instead of the front end," Mr Gorman said.

This is done to keep the bidding and tendering process simple and it is also more transparent, according to Mr Gorman.

PDO utilizes online bidding in one form or the other for nearly everything pertaining to well engineering and well services. "We must have a very good reason to go to a single bidder or single source negotiation."

OD&E crews prepare to move the company's RIG 25 to its next location for PDO in Oman.

That could occur if a contractor or service company is already working for PDO and has an excellent performance record or good pricing and changing companies would require a learning curve from a new company. That could result in loosing more during the change than any gain by improved pricing.

"We look at each contract with an eye toward value and the best way to lock in that value," Mr Gorman said.

Generally, drilling contractors receive three-year contracts, although recent workover units have been contracted for 5 years or longer, resulting in a stable drilling and workover fleet going forward.

PDO has been under pressure to reduce its costs due to the mature nature of its operations and has been seeking various ways to make drilling and workover packages more attractive to the market.

"We have been bundling services in some of the rig campaigns," Mr Gorman explained, "so we are looking for integrated services.

"We have talked with some of the bidders on the larger contracts and asked what would make the packages more interesting for them. As a result, every major contract we have let in the last year and a half has delivered significant savings, which is against the market trend."

PDO's well servicing activities and operations are growing fast due to the maturity of it's fields.

For example, PDO's well servicing spending is about half the amount currently spent on its drilling activities, but this is expected to grow by about 40-50% during the next five years.

Well servicing activity will begin to equal drilling activity in terms of spending by the end of 2010, according to Mr Gorman, and that increase is a major challenge for PDO as it tries to contain its costs.

The focus is on containing these costs via new technology or a different way of operating or perhaps different contracting terms.

Apart from brownfield activites, PDO's program includes an active exploration program of 1-2 rig years annually, a large natural gas development scope going forward and several large oil developments that are currently being worked.

These will keep the company busy for the next 5-10 years, according to Mr Gorman.

"Behind all of that we have difficult HPHT wells coupled with enhanced oil recovery developments that are quite challenging," he explained.

"Value engineering and performance delivery are the common thread across this wide portfolio ranging from low tech brownfield to very challenging high tech developments at the leading edge of well delivery."

Occidental Petroleum is also active in Oman and recently was issued a Royal Decree approving a contract for the development of the Mukhaizna oil field, one of the largest in Oman.

The field was discovered in 1975 by PDO and is presently producing about 10,000 b/d of oil. Occidental and its partners intend to invest more than $2 billion to implement a large-scale steam flood program to increase production to 150,000 b/d during the next few years and to recover approximately 1 billion barrels of oil over the life of the project. The steam flood project is set to begin in 2006.

The project could require as many as 6-7 rigs, according to **Dean Hills**, Area Manager for **Oil Drilling & Exploration LLC (OD&E)** in Oman.

Mr Hills noted that Occidental is discussing possible newbuild rigs with project specific designs but he is not convinced that the operator will find contractors willing to commit purpose-built rigs to the project.

EnCana is also active in Oman and has recently contracted a rig from OD&E for a short program.

As far as drilling contractors are concerned, there are several future opportunities in Oman, with some bids out presently, according to Mr Smith with Nabors.

Dayrates for onshore rigs can be as low as $10,000 for small 700-800 hp units, although more sensible rates for those rigs are in the $14,000-$15,000 range. Larger, 2,000 hp rigs are working at $16,000-$18,000 per day.

QATAR

Much of the activity in Qatar is driven by the huge North gas field in the Arabian Gulf as feedstock for the country's liquefied natural gas (LNG) complex.

Major operators active in the country include **RasGas**, with **Maersk**, **Oxy**, **Dolphin**, **ConocoPhillips** and **Total** also active. A total of 18 jackups are currently operating offshore the country, but that could likely increase.

"When you look at the gas development projects being negotiated and possibly sanctioned," said GlobalSantaFe's Mr Hunt, "they may add 4-5 rigs to the mix."

Those development projects include the country's large LNG complex and gas-to-liquids projects.

Three companies have pending developments, including RasGas, Maersk and **Shell**, which is not currently operating in Qatar but does have a potential gas-to-liquids project.