

# Hurricanes impact US Gulf drilling activity, but market conditions are strengthening

**THERE MAY BE** some mixed signals emanating from the US Gulf of Mexico E&P and drilling market lately, but overall the region appears to be at its strongest ever in terms of rig demand and dayrates as a result of manmade and natural events. In mid-October, the Gulf rig count was at its lowest in nearly a year, while at the same time dayrates were increasing significantly, resulting from a rig supply that had dwindled by about 10 units due to storms and 4 to 5 more that would be exiting the Gulf to other regions. Additionally, a rig-sharing consortium agreed to charter a newly constructed ultra-deepwater semisubmersible for four years. The new rig won't be delivered until 2007.

Meantime, the US Gulf is still reeling and trying to recover from two back-to-back Category 5 hurricanes that swept through the middle of the Gulf's densely populated oil and gas producing areas. As a result, the Gulf's entire production of oil and natural gas was shut in, and in mid-October, more than a month after the first storm, Hurricane Katrina, and

several weeks after Hurricane Rita, nearly 65% of oil production and 52% of natural gas production remained shut in, primarily as a result of damaged refining capacity, although several major offshore producing facilities were severely damaged or destroyed during the hurricanes, as well as several offshore pipelines.

## THE GULF MARKET

The Gulf of Mexico is the largest drilling and production activity area offshore the US and one of the world's major rig markets. In 1995, the Gulf's total oil production was just under 1 million b/d. That figure rose to more than 1.5 million b/d by 2004, where it stands presently. The US Minerals Management Service (MMS) predicts that by 2011, the Gulf will provide more than 2.2 million b/d of oil. Deepwater (1,000 ft and greater is MMS' criteria for deepwater) oil production increased to a high of 348 million barrels per year during 2002 and 2003, but that figure decreased to 337 million barrels annually in 2004. Deepwater natural gas production in 2002 was 1,320 bcf per year in 2002, rose to 1,420

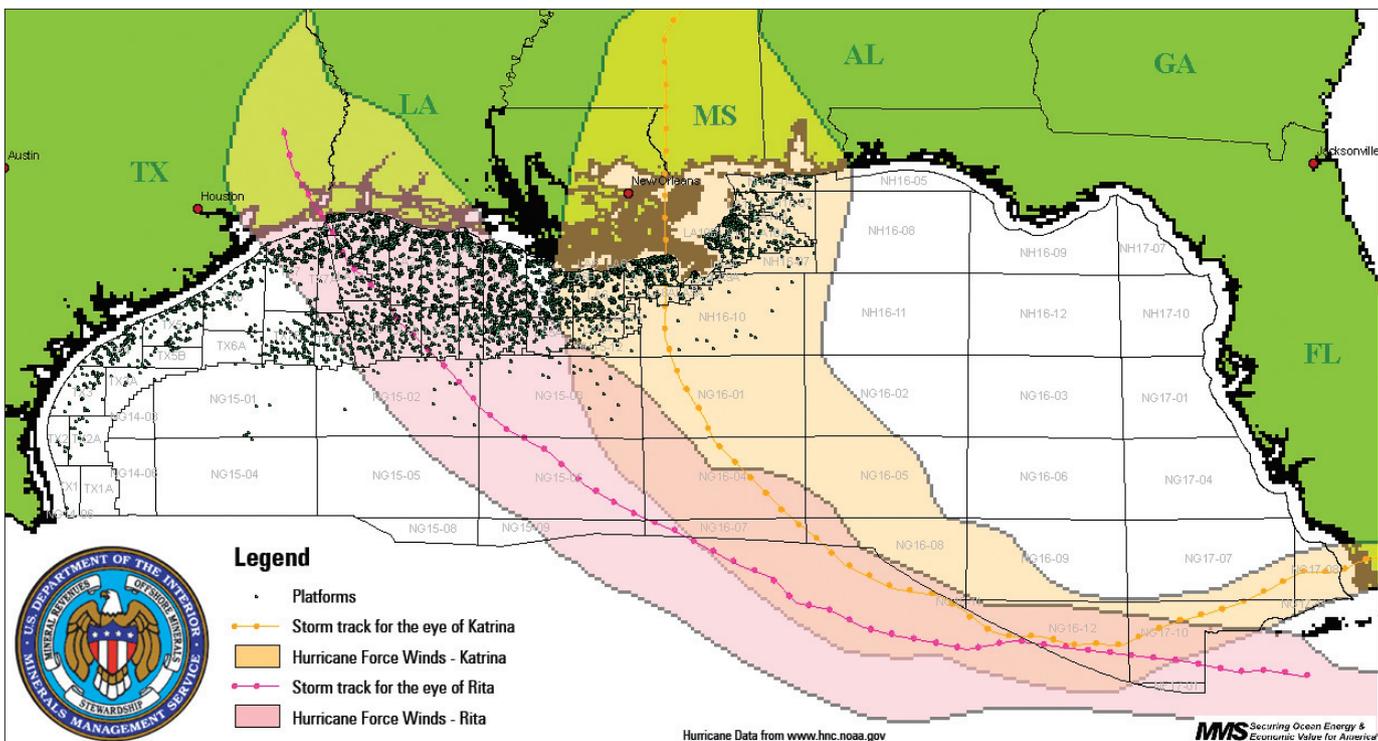
bcf annually in 2003 and remained at that level in 2004. MMS said that total Gulf of Mexico gas production in 2002 was 12.44 bcf/d and is expected to increase to 13.24 bcf/d by 2011.

MMS estimates that in 2005 deepwater production will account for 26% of the Gulf's total gas production while oil from deepwater will account for 51% of total Gulf production.

## GULF RIG ACTIVITY

**ODS-Petrodata** reported in mid-October that the Gulf of Mexico rig demand was at its lowest level since December 2004, with 125 of the Gulf's 158 rigs contracted for a utilization rate of just above 79%. However, the company also reported that rigs under contract in mid-October 2004 totaled only 122 units for a utilization rate of just over 78%.

One possible reason for decreasing rig activity is that operators are just not ready to go back to work yet after the storms, as many are still assessing and repairing damage to their facilities. The



Swath of destruction: Hurricanes Katrina and Rita moved through the most densely populated areas of the US Gulf of Mexico. While both storms were downgraded to Category 3 by landfall, during their life offshore they were Category 5, hence many platforms were damaged by high winds and waves.

MMS reported as of 19 Oct that 211 platforms and four rigs still remained evacuated. That translates to more than 25% of the manned platforms and 3% of the rigs currently operating in the Gulf.

It should not be read into these figures that the region is in a decline. In fact, the present and future Gulf rig market cannot be assessed without including the impact of the two storms. The region will be affected by the hurricanes for some time to come.

More than 30 fixed structures and mobile drilling rigs were reported lost, and that was only from Hurricane Katrina, which formed into a Category 5 hurricane during its voyage through the central Gulf. Three weeks later, Hurricane Rita wreaked havoc in the western area of the Gulf, also as a Category 5 storm, with even more mobile rigs reported damaged or lost. More than a month after Hurricane Rita, some drilling contractors have yet to locate rigs that had been blown off of their original locations.

So, as a result of the storms, operators are still regrouping to a degree, assessing the damage, determining what should be repaired and then assembling the materials and equipment to make those repairs before they get back into the job of hiring rigs again to continue with their exploration program.

On a similar note, both hurricanes combined in a one-two punch that either destroyed or severely damaged support base facilities essentially along the entire Louisiana coast as well as offshore support areas in Mississippi and Alabama, making it even more difficult and troublesome for operators, drilling contractors and construction companies to transport materials, supplies and equipment to where they are required in order to make necessary repairs.

## JACKUP ACTIVITY

The bottom line is that the decrease in rig contracting activity is only temporary and is expected to increase again. When that occurs, drilling contractors are expected to see significantly higher dayrates for their jackup rigs due to the fewer number of rigs available as a result of the storms. Additionally, rigs are continuing to mobilize from the US Gulf to other regions in search of better

## **Katrina/Rita GOM Snapshot**

### **Relevant statistics on the storms' impact on OCS E&P operations**

**25,000-30,000**

Number of personnel employed in drilling and production activities in the US Gulf of Mexico (NOIA)

**90**

Number of MODUs and platforms evacuated due to Hurricanes Katrina and Rita as of 9/23/05. (MMS)

**0**

Number of storm-related injuries and fatalities to OCS personnel (MMS)

**101**

Number of MODUs in the path of Katrina/Rita (MMS)

**18**

Number of MODUs losing station as a result of the storms (MMS)

**2 (Plus 3 missing)**

Number of MODUs permanently lost (MMS)

**1.5 MMBOPD Oil**

**3.65 Tcf Gas**

Volume of pre-storm production in the US Gulf of Mexico (MMS)

**1.5 MM b/d Oil (100%)**

**7.856 Bcf/d Gas (78.6%)**

Volume and percent of OCS production shut in due to the storms (MMS)

**0 (no significant amount)**

Volume of OCS oil spilled from GOM wells due to the storms (MMS)

contract terms and higher dayrates. Most of the equipment leaving the Gulf are jackups.

However, drilling contractors may not have to go through that exercise too much longer.

While deepwater and ultra-deepwater rigs have been enjoying record high dayrates and drilling contracts with term durations not seen for 15 years, drilling contractors with jackups are now beginning to get a piece of that action. Longer term contracts have been offered for jackups recently, likely a result of the scarcity of the rigs resulting from the hurricanes, as well as mobilizations out of the area. High dayrates, not typically seen to accompany term contracts, are also being offered in conjunction with the charter.

Now both term and high dayrates are being offered in an effort to keep the rigs where they are and make it less lucrative for drilling contractors to mobilize to other market areas. **Rowan Companies'** announcement earlier this year that it was mobilizing five jackups from the US Gulf to Saudi Arabia against long-term contracts (three years) and dayrates in the \$100s certainly had an effect on the operators' mentality in this case.

A result is a jackup market that is stretched extremely tight due not only to rigs destroyed in the storms but rigs leaving the Gulf. Additionally, two of Rowan's rigs that were contracted in Saudi Arabia were damaged, meaning the contractor may replace those units with others in the Gulf, resulting in an even tighter jackup market.

In some cases more recently, operators reportedly are offering similar rates and term contracts for rigs in the US Gulf. ODS-Petrodata reported that some operators are increasing the size of the carrot to \$120,000 per day for the premium jackups. The company also said that there is speculation that this particular rate could soon be applied to standard jackups, with premium rigs going for \$140,000 daily. These types of dayrates have only been seen for deepwater rigs in the Gulf previously. Some mid-water depth semisubmersibles aren't being paid these rates.

With jackup dayrates and terms like these, who needs to move to the Middle East, or any other region, for that mat-

ter? And that's just what some operators are willing to pay for.

Some drilling contractors are already seeing their dayrates approach those levels. **ENSCO International**, for example, operates several jackups that are presently being paid rates in the low \$80s but will turn over to new contracts

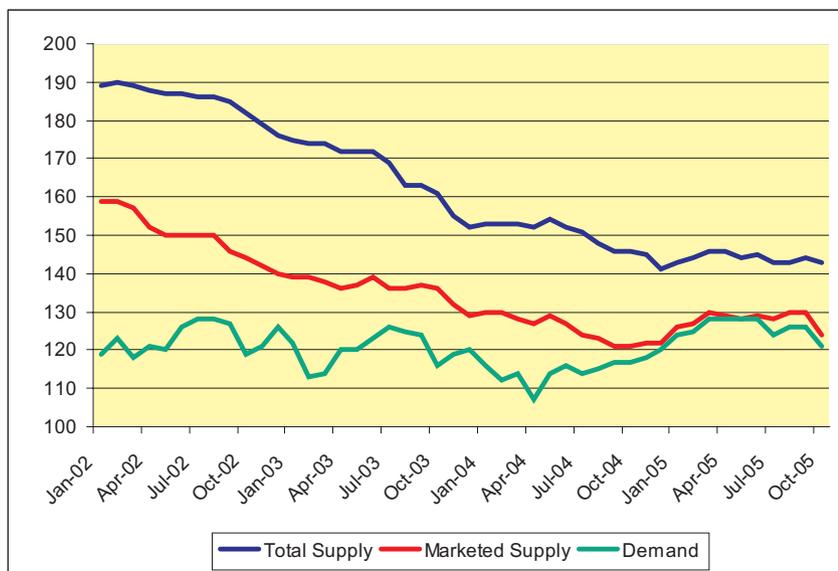
ket? A consortium of **Anadarko, Dominion E&P** and **Kerr-McGee** signed a four-year rig-sharing agreement with **ENSCO International** calling for a new ultra-deepwater semisubmersible to be built with a delivery date in mid-2008. That brings the contract term to 2012. If the contract's four one-year options are exercised, the contract could run

ianas begins a one-year contract with **BP** in February 2006 at a rate of \$250,000. The previous rate, also under a BP contract, was \$180,000.

Not all of the contractor's semisubmersibles are commanding such high dayrates. The contractor's mid-water depth semisubmersibles, rated for 2,500-3,500 ft of water, are seeing rates that range from the low \$100s to \$135,000 for its **Transocean Amirante** semisubmersible rated for 3,500 ft of water, to as high as \$180,000 for the **Falcon 100**, a semisubmersible rated for 2,400 ft of water. The \$180,000 dayrate is for a contract that begins in December 2005 and runs through March 2007 with **Petrobras** in the US Gulf. The rig will also drill a well scheduled for next February and March at a rate of \$140,000 per day, then returns to **Petrobras** at the higher rate until March 2007. Prior to the **Petrobras** contract, the rig was being paid \$105,000 per day.

## US Gulf of Mexico

### Competitive Mobile Rig Fleet Supply & Demand



Source: ODS-Petrodata Offshore Rig Locator

in the low \$100s. The contractor's **ENSCO 105**, a premium jackup, is presently working in the mid \$80s, then goes to a contract in the low \$100s and then to another contract beginning in 2006 in the low \$140s.

There are some jackups moving into the Gulf of Mexico, but not many, and not soon, and they are already contracted. **Shell** contracted with **Noble Drilling** for two new jackup rigs to be built in China for work in the US Gulf upon delivery in the fourth quarter of 2007 and first quarter 2008. **Shell** contracted the rigs for two firm years plus five one-year options.

Presently, other than these two new **Noble** jackups, **TODCO** is essentially the only company that has cold-stacked jackups to possibly be reactivated. Those rigs, however, are mainly shallow water units, and while **TODCO** has reactivated a couple of them recently, they were mobilized for contracts outside the US Gulf.

### DEEPWATER RIGS

Just how tight is the deepwater and ultra-deepwater Gulf of Mexico rig mar-

ket through 2016. **Anadarko** committed to 50% of the rig time at a cost of about \$200 million over the four-year term.

**Anadarko** also committed to a three-year contract for the deepwater drillship **Belford Dolphin** for use in the Gulf. The contract is valued at \$459 million, and it is anticipated that the rig will begin its contract with the operator in mid-2007.

Other drilling contractors with deepwater and ultra-deepwater semisubmersibles and drillships are seeing rates at around \$200,000 per day. **Transocean** is contracting its drillship **Discoverer Spirit** to **Shell** beginning in December at a rate of \$270,000. The rig is presently drilling for **Chevron** at a rate of \$204,000 daily. The **Shell** contract runs until June 2007.

**Transocean's** drillship **Deepwater Millennium** is contracted to **Anadarko** at a rate of \$286,500 to June 2007. This contract began last June. The rig's previous rate was \$200,000. In another high rate **Transocean** contract, the company's semisubmersible **Transocean Mar-**

### IMPACT OF HURRICANES

Since Hurricane **Ivan** had such a disastrous affect on the Gulf's oil and gas industry, numerous studies have been undertaken to study the hurricane's impact on structures and mobile rigs.

Hurricane **Ivan** moved through the Gulf as a Category 4 storm in September 2004, carrying high winds and large waves that matched or exceeded the 100-year design criteria for oil and gas facilities in its path. Of the 4,000 oil and gas structures and 33,000 miles of pipelines in the Gulf's Federal waters, approximately 150 facilities and 10,000 miles of pipelines were in Hurricane **Ivan's** direct path. Despite the 140 mph winds, there was no loss of life and no significant pollution reported, a testament to the top priority of personal and environmental safety of the industry.

As a result of Hurricane **Ivan**, more than 10% of the Gulf's production was interrupted for at least four months, according to the **MMS**. That almost seems like a minor nuisance compared with Hurricanes **Katrina** and **Rita**.

As a result of Hurricane **Ivan**, however, the **MMS** awarded six contracts valued at more than \$600,000 to study the hurricane's impact on the Gulf's oil and gas structures. These studies will assess the actual wind, wave and current forces that were present during the hurricane; analyze and assess the consequential damage to structures

and pipelines; determine the effectiveness of current design standards and pollution-prevention systems; and develop recommendations for changes to industry standards and MMS regulations, if necessary.

These studies are ongoing and cover such topics as *Assessment of Drilling and Workover Rig Storm Sea Fastenings on Offshore Floating Platforms During Hurricane Ivan* and *Examination and Review MODU Loss of*

*Stationkeeping Ability During Hurricane Ivan and Assess Mooring Standards and Criteria to Prevent Similar Failures.*

Unfortunately, this latter study was not yet completed when Hurricanes Katrina and Rita struck the Gulf.

At a 2005 Offshore Hurricane Readiness and Recovery Conference last July, **Chris Oynes**, MMS Regional Director for the Gulf of Mexico Region, brought up numerous questions during

his presentation that the oil and gas industry and drilling contractors should consider when assessing hurricane preparedness.

Emphasizing that rigs adrift are unacceptable, he asked if API RP 2SK mooring design standards were adequate and what assumptions were used in performing risk analysis for mooring near an infrastructure. Are current standards for anchor and synthetic mooring systems adequate? Are current storm preparation and evacuation procedures adequate and are operators allowing enough time to properly secure facilities and equipment and prepare the facility for evacuation?

Regarding platforms, Mr Oynes asked if platforms should be installed in mudslide areas and should MODUs be removed from the vicinity of high volume facilities prior to a storm. He again brought up the question of synthetic mooring systems, asking if they are adequate for floating facilities.

About pipelines, he brought up for consideration whether current design standards are adequate, should pipelines be laid in mudslide areas, and should all pipelines be buried.

These are all good questions, and their answers could significantly change the way the oil and gas industry and drilling contractors operate in the future. Whether the answers to these questions would have made a difference on the impact to the industry by Hurricanes Katrina and Rita is anyone's guess.

#### HURRICANE DAMAGE

Major damage was reported to Shell's Mars platform during Hurricane Katrina. During Hurricane Rita, Chevron's Typhoon tension-leg platform (TLP) was broken from its moorings and capsized in about 2,000 ft of water.

By mid-September following Hurricane Katrina, MMS reported that 56% of oil production and 34% of natural gas production was still shut in. A week later, on September 23, Hurricane Rita headed for the Texas/Louisiana border, and 100% of the Gulf's oil production and 75% of its natural gas production was shut in.

A week after Rita, shut in oil production was at 98%, but natural gas production shut in rose to approximately 80%. ■

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