

US LAND DRILLING KICKS INTO HIGH GEAR, PREPARES FOR BRISK YEAR

By Linda Hsieh, assistant managing editor



Operators in the mid-continent region are seeking additional FlexRigs because of their efficiencies, said John Baer, Helmerich & Payne mid-continent operations manager.

LAST YEAR APPEARED to be a “period of pause” for US land drilling contractors as the industry absorbed a significant number of new and refurbished rigs into its fleet, said **Ron Hale**, **Grey Wolf Drilling** senior vice president international operations. Although operators didn’t slow down their drilling programs, the additional units that came into the US fleet simply lifted supply above demand. As a result, some rigs got stacked, and dayrates softened.

But that period of pause is over now, and it looks like 2008 – after a steady first quarter – is ready to make some noise.

“We’re feeling it. I think we’re going to grow some,” said **John Baer**, mid-continent operations manager for **Helmerich & Payne**, of his operating area. It had looked like a good year, without rigs getting stacked but also without many newbuilds. But by mid-April, activity had picked up significantly, he said, especially in the Texas Panhandle and the Woodford Shale in Oklahoma. Suddenly he’s seeing potential for additional newbuilds.

Mr Baer also noted that operators in the region are seeking additional FlexRigs as efficient performance from these advanced-technology rigs prove out in the field. Although the Barnett Shale has drawn a significant number of H&P’s new-build FlexRigs, he thinks “quite a few more” could be headed to the mid-continent region this year.

At Grey Wolf, two PaDSRigs (Production and Drilling System Rigs) were the only newbuilds planned for 2008 as of mid-April. The rigs already have three-year contracts to work in the Rocky Mountains – one in Colorado’s Peance Basin and one in Wyoming’s Pinedale Anti-cline Project Area (PAPA). PaDSRigs were designed around customer needs, Mr Hale said, and will be able to drill multiple wells from a single pad location. They will be able to produce while drilling.

Although Grey Wolf is seeing increasing rig demand in all regions, Mr Hale said that the Rocky Mountains (where the PaDSRigs are going to) and West Texas have been seeing especially strong growth. “We think the optimism operators are showing because of the firming up of gas prices is very positive. We think there will be an increase in demand for rigs going forward,” he said.

Other than natural gas prices, **Nabors** noted that outlook for unconventional gas plays is especially encouraging. Both existing and newly announced fields have strong growth potential, said **Ronnie Witherspoon**, Nabors senior vice president business development and marketing. “Also, the current gas storage level is encouraging as we enter storage injection season. Overall, we are optimistic that these factors will maintain and stimulate the current favorable price environment for natural gas and result in increased drilling activity and rig demand throughout 2008.”

Nabors also continues to see growing interest in its PACE rigs, he added. These new units, designed to move rapidly between wells, feature Nabors’ “Rock-It” tool, which provides two functions: oscillation control and tool face orientation. These functions are helpful when drilling deep horizontal reaches, he said, and that’s a positive as horizontal and directional drilling continue to grow in market share.

For **Bronco Drilling**, which currently has 45 rigs in the US, operations manager **Bruce Humphries** said he’s been fielding more calls from operators who are developing longer-term drilling programs of 6-12 months and even up to 18 months. “We hadn’t seen that yet this year or in the second half of last year, so it’s encouraging,” he said.

These longer-term programs tend to be for oil plays such as the Bakken Shale in North Dakota, he said. Bronco has one rig in that area and was preparing to mobilize another rig there. Contracts for additional units were in the works, according to Mr Humphries.

Mr Witherspoon also specifically mentioned the Bakken Shale. It is leading Nabors’ growth in the Rockies, he said, “an area where Nabors is well positioned and currently operates approximately 50% of the active rigs, in large part, due to operational excellence.”

ARKLATEX GROWTH

The ArkLaTex basin also continues to build momentum, mostly recently with the Haynesville Shale. In late March, **Chesapeake Energy** announced a new natural gas discovery there. After two years of research and three horizontal and four vertical wells, Chesapeake determined that the play “could potentially have a larger impact on the company than any other play in which it has participated to date.” The company has announced that it plans to increase its drilling activity level in the Haynesville Shale to approximately 10 rigs by the end of 2008 and perhaps more in 2009.

Also in the ArkLaTex Basin, research and consulting company **Wood Mackenzie** has pointed to the Deep Bossier development as another emerging focus for operators.

Hill Vaden, analyst with Wood Mackenzie’s Gulf Coast Upstream Research Team, explained that Deep Bossier wells have been yielding significantly larger initial production rates than other major plays in the Gulf Coast region. “In the Barnett Shale, an average well initially produces about 2.6 million cu ft/day, and a great well comes on at 8 million cu ft/day,” he said. Compare those with wells in the Deep Bossier’s John Amoruso field, some of which have yielded initial production rates of more than 30 million cu ft/day.

He also noted that three of the top 11 wells from 2003-2007 with the highest average gross gas production rate over three consecutive months have been drilled in the Deep Bossier.



Bronco Drilling is moving 10 rigs, including Rig 19 seen above, to Libya. They will be working for Libya-based companies Waha and Agoco.

However, these wells are expected to be the exception rather than the norm, emphasized Mr Vaden and **Robert Clarke**, lead analyst with the same Wood Mackenzie team. Wells in the Deep Bossier are expected to be more in the range of 10 million cu ft/day – though that still tops the Barnett Shale, Mr Vaden remarked.

Still, the play is considered to be in the exploration phase, and many challenges remain. For one, formation conditions can be extreme, with temperatures running above 400°F, Mr Clarke said. “Operators are still learning how to best drill and complete wells.”

Well costs are also a challenge. Depending on depth, one well can cost between \$9 million and \$14 million to drill and complete, and that translates into significant investment requirements.

Finally, Deep Bossier geology differs from other tight gas plays in the basin that have contiguous reservoirs. Mr Vaden characterized it as more of a statistical play, where you can hit with one well, then move 5 yards over not hit anything.

Currently, **EnCana** is one of the most aggressive players in the Deep Bossier and “holds the most promising acreage in



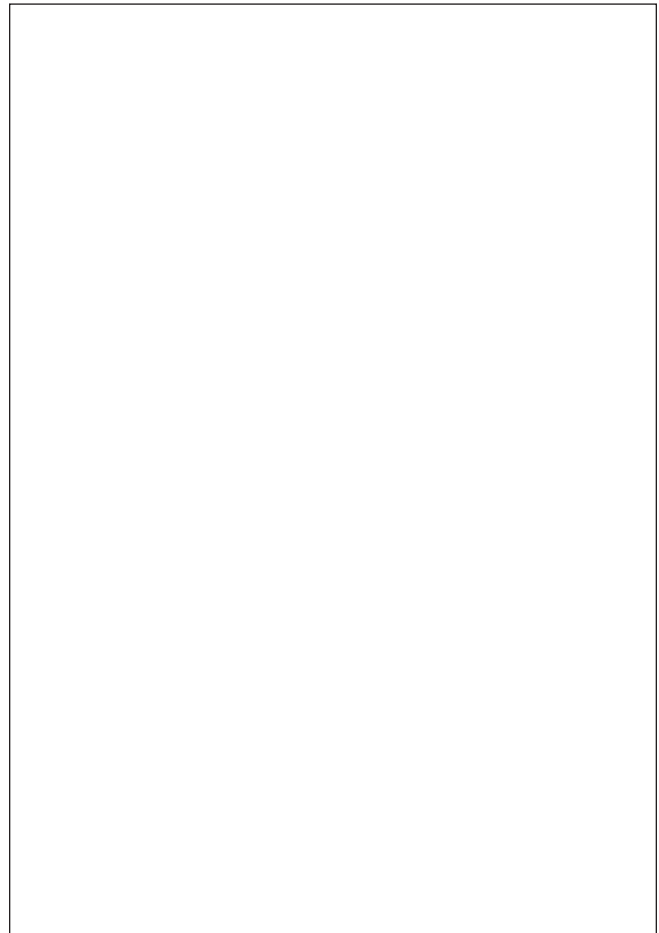
Grey Wolf said it is seeing increasing rig demand in all regions, but especially so in the Rocky Mountains and West Texas.

play,” as estimated by Wood Mackenzie. EnCana drilled 18 wells on the Amoruso field in 2007 and has said it plans to increase Deep Bossier drilling by 30% this year.

FINDING PEOPLE

As rosy as the 2008 outlook is for drilling activities and rig demand, drilling contractors agree that one trouble spot remains: recruiting and training rig crews. Demand for competent people has stayed high, and drilling companies say the personnel challenge has not gotten any easier, though they continue to search for new sources of labor and better ways to train.

At Nabors, training has become an especially critical focus, and simulators are being widely used to prepare new recruits as well as train existing personnel in skills required for their next job level, said Mr Witherspoon. There’s a PACE simulator in its Houston facility to address the challenge of introducing new AC technology, and a PACE Rig support team provides 24-hr engineering and technical assistance, he said. Training centers in Casper, Wyo., and Tyler, Texas, also have fully operational training rigs.



OUTSIDE THE US

Although optimism appears to be running high among drilling contractors on outlook for the US land market, that hasn't stopped many of them from pursuing growth plans outside the US, including Grey Wolf and Bronco.

Grey Wolf currently has just two rigs of its 121-rig fleet working outside the US, in Villahermosa, Mexico, but that may change soon, Mr Hale said. "We're bidding on a number of projects outside of North America," he said, without giv-

ing specifics. "We're seeing significant opportunities."

Bronco so far has decided to move 10 rigs, ranging from 450-hp to 2,000-hp, to Libya. Three of the 10 are already there and preparing to spud, and Mr Humphries said the other seven should be on a ship headed for Libya within six weeks. The rigs will be working for Libya-based companies **Waha** and **Agoco**.

Although Mr Humphries declined to discuss the ongoing acquisition of Bronco

by **Allis-Chalmers Energy**, announced in January 2008, he noted that Bronco had been considering international growth for more than a year, well before any merger discussions.

Challenges with moving rigs to Libya have included language barriers and a lack of a developed infrastructure (rig moving trucks, supply stores, etc) to service drilling contractors. On the other hand, the appeal of higher dayrates and more stable work internationally has been hard to miss.

As for how long Bronco will keep the 10 rigs in the international market, he said, "We're committed to stay the duration. We have no intent of pulling them out of there in the near future at all."

PaDSRig is a trademark of Grey Wolf Drilling.



Nabors continues to see growing interest in its PACE rigs, which are designed to move rapidly between wells.