

RIGZONE Q4

LAND RIG REVIEW

Land Rig Count Recovery Continues

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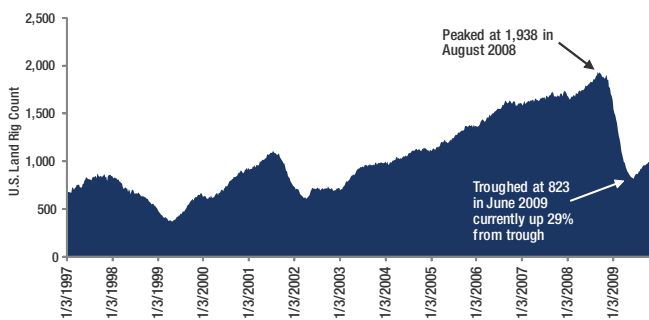
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Oil Fuels Rebound

Land Rig Count on the Rise

After bottoming in early June at 823 rigs, the Lower 48 land rig count has been creeping steadily higher, adding an average of 10 rigs per week, and now stands about 29% (241 rigs) above the nadir. While the recovery certainly gives drilling contractors something to be thankful for this season, the industry still has a good amount of idle capacity to deal with considering that the land rig count peaked at 1,938 rigs about 15 months ago. Although quite a few of the rigs stacked during the downturn may never return to the field, simply taking the peak rig count as a proxy for available supply implies that industry wide utilization remains below 60%.

Historical U.S. Land Rig Count

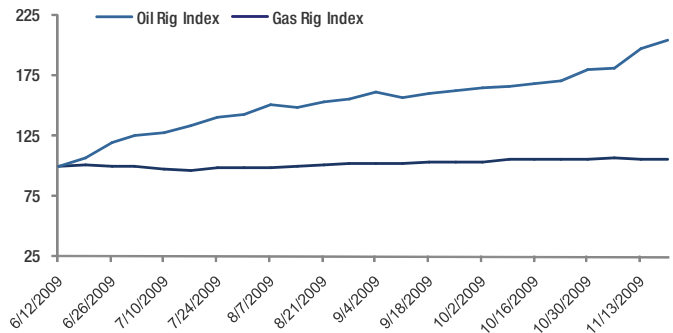


Source: Baker Hughes

The Return of Oil Rigs is Behind the Land Rig Count Gains

With crude oil prices rallying 80% year-to-date while natural gas prices are still down for the year, operators have focused their drilling efforts on oil rich plays. A closer look at the land drilling recovery bears out this observation, as just over 80% of the rig count gains since the June bottom have been oil driven. It is worth noting that the drift in rig count mix towards oil has been somewhat exacerbated by the lack of any recovery to date for the offshore rig count, which contributes to the total BHI rig count and is largely gas oriented. Over the last 10 years, the BHI offshore rig count has averaged around 100 rigs, but this count stands at 36 rigs today and has actually fallen further since the overall rig count bottomed in June. The oil-weighted recovery is evident in the chart below, which indexes each of the oil and gas rig counts to 100 in June when the rig count bottomed.

Oil Rigs vs. Gas Rigs During the 2009 Recovery (indexed to 100 at bottom)

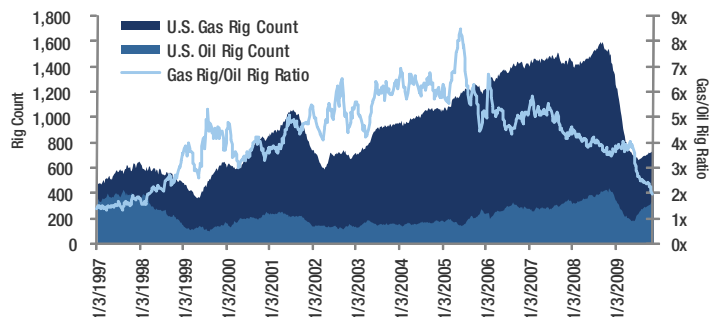


Source: Baker Hughes, Rigzone calculations

Currently, for every U.S. rig drilling for oil there are only two rigs drilling for natural gas, well below the average this decade of five natural gas rigs to each oil rig. In fact, the last time the ratio was as low as current levels was in mid-1998. Of course, the widely touted 10:1 crude oil to natural gas price ratio has also broken free of historical norms, surging into the 20s in September and standing in the mid-teens today.

The mix shift towards oil appears likely to hold and possibly strengthen near-term given a variety of factors including i) better crude oil price performance (and arguably fundamentals) relative to natural gas, ii) only a modest gas production response to the rig count decline thus far (although production declines lag drilling activity declines and are likely to materialize in the coming months) and iii) shallow decline rates observed in growing gas shale plays like the Marcellus and the Haynesville. ■

Historical Oil and Gas Rig Count vs. Gas/Oil Rig Ratio



Source: Baker Hughes, Rigzone calculations

What Goes Down MUST COME UP

Historical Context for the Recent Downturn and Ongoing Recovery

Driven by a confluence of factors including the credit crunch, commodity price collapse and widespread economic malaise, the U.S. land rig count decline witnessed between August 2008 and June 2009 was by far the most devastating downturn of the last 20 years. On a percentage basis, the recent downturn was similar to the 1998-1999 downturn, it just occurred in half the time. In absolute terms, more than twice as many rigs fell out of the rig count in the 2008-2009 downturn than in each of the last two major collapses.

However, the recovery so far has been promising, and in the five months since the downturn, the rig count has recovered by 241 rigs or 29%. In absolute terms, this is more than in the first five months of either of the prior two recoveries. On a percentage basis, the current rebound is unfolding faster than the 2001-2002 recovery but not as quickly as the 1998-1999 recovery. The table below summarizes the last three downturns and the five-month periods following the troughs.

Major Downturns in Recent U.S. Land Rig History

	<u>1998-99</u>	<u>2001-2002</u>	<u>2008-2009</u>
Peak to Trough Change			
Duration of Decline	19 mos.	9 mos.	10 mos.
Peak Count To Trough Count	881 to 380	1,114 to 613	1,938 to 823
Absolute Rig Count Decline	(501)	(501)	(1,115)
Percent Rig Count Decline	-57%	-45%	-58%
Recovery 5 Mos. Post Trough			
Trough Count To 5 Mos. Count	380 to 602	613 to 728	823 to 1,064
Absolute Rig Count Increase	222	115	241
Percent Rig Count Increase	58%	19%	29%

Rig Count Likely Headed Higher, but Risks Abound

Although a general consensus has formed that the land rig count will continue to increase during 2010, it would be wise to balance optimism with a sense of caution in the current recovery. While the recovery periods in each of the last two cycles generally exhibited an up and to the right pattern (for two and six years respectively), the present upturn is occurring in a noisy environment where multiple variables could take a course that would result in a plateauing rig count or possibly even a second bottom. That said, we would hasten to note that any material retrenchment appears unlikely in the near term given the increased inquiry levels being received by drilling contractors and the expected uptick in E&P capex next year.

The most visible and pervasive threat to the onshore recovery is a significant setback in the progression of the U.S. economic recovery and the adverse impact that would have on hydrocarbon demand. After showing signs of leveling off a few months ago, recent data released on the U.S. housing market as

well as some other economic indicators has resulted in the phrase “double dip recession” popping up more frequently in the mainstream financial media. With industrial demand for natural gas already crippled by the downturn in the U.S., any major setback in the broader economic recovery would adversely impact natural gas demand, prices and ultimately, rig activity.

Other variables include more efficient drilling technology, shallow decline rates for wells drilled in new shale plays, the threat of additional LNG

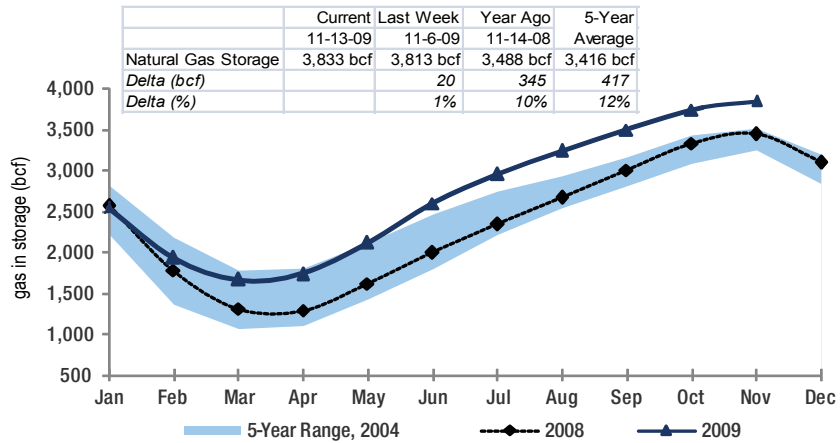
imports and the ultimate magnitude of the production response to the rig count decline. In addition, high natural gas inventories remain a significant concern. Gas in storage currently stands at 3,833 bcf, 10% above the year ago level and 12% higher than the five-year average.

It is also worth noting that there is a substantial backlog of uncompleted wells that have been drilled but deferred. With industry sources indicating that as many as 1,500 wells may fall into this category, completing these wells to bring “easy” production online may take priority over drilling new exploratory wells – good for the well servicing rigs which usually perform this work due to their lower cost, bad for land drilling rigs.

Furthermore, a substantial backlog of deferred well maintenance and workover jobs may take operators’ focus off of new drilling activities and result in relatively easy production gains. These activities present a compelling, low risk and low cost economic proposition to operators. While not extremely capital intensive, workover and maintenance jobs may take priority over drilling new exploration wells given some operators’ risk adverse psychology after the recent downturn. In fact, based on today’s crude oil price and well servicing costs, a maintenance job for a mature oil well can pay for itself in under two months while the payback on investment for a workover job is about half a year.

Not a surprise given the rig count decline, data from the EIA reveals that total oil and gas well completions so far this year are tracking about 40% below the same period last year. This should eventually lead to a nice production response, however the extent of the response may be somewhat muted by multiple factors including the backlog of uncompleted wells and high IP rates observed in growing shale plays. ■

U.S. Natural Gas Storage



Source: EIA, Rigzone calculations

Average Mature Oil Well Maintenance and Workover Economics

Well Service Maintenance Job

Investment	
Assumed Well Service Rig Rate/Hour	\$325
x Approximate Hours Required	15
Total Investment	\$4,875

Incremental Cash Flow

Oil Price/Barrel	\$75
- Lifting Cost	\$20
Cash Flow/Barrel	\$55
x Assumed Production Gain (Barrels/Day)	2
Daily Incremental Cash Flow	\$110

Days Required to Pay Off Investment **44**

Workover Job

Investment	
Assumed Well Service Rig Rate/Hour	\$325
x Approximate Hours Required	150
Total Investment	\$48,750

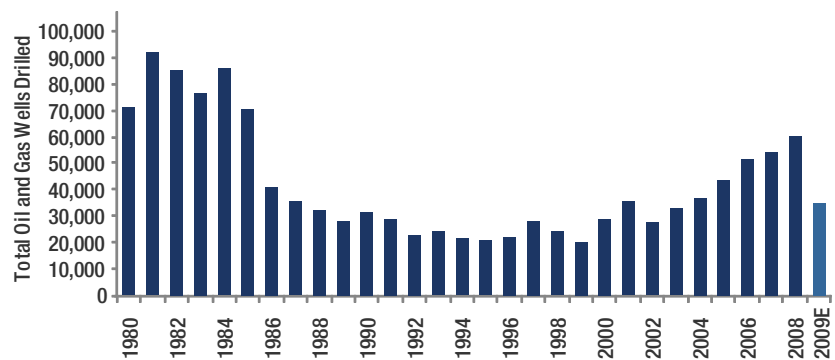
Incremental Cash Flow

Oil Price/Barrel	\$75
- Lifting Cost	\$20
Cash Flow/Barrel	\$55
x Assumed Production Gain (Barrels/Day)	5
Daily Incremental Cash Flow	\$275

Days Required to Pay Off Investment **177**

Wall Street Research, Rigzone estimates

Historical U.S. Oil and Gas Wells Drilled



*2009 estimate assumes September levels continue for remainder of the year
Source: EIA, Rigzone calculations

Land Driller Earnings Season INSIGHTS

Optimistic Onshore Driller Conference Calls Reveal Some Positive Indications

The latest round of quarterly conference calls for the large publicly traded onshore drillers concluded last week with Helmerich & Payne's report. The recovery was visible in reported numbers, guidance and commentary. Most management teams were positive on the strength of land rig demand in shale plays like the Haynesville and Marcellus and are seeing increased inquiry levels in multiple markets.

Although pricing leverage still lies with operators given the idle capacity on the sidelines, some contractors like Patterson-UTI noted that dayrates have actually crept up in some cases and Helmerich & Payne noted that dayrates have stabilized.

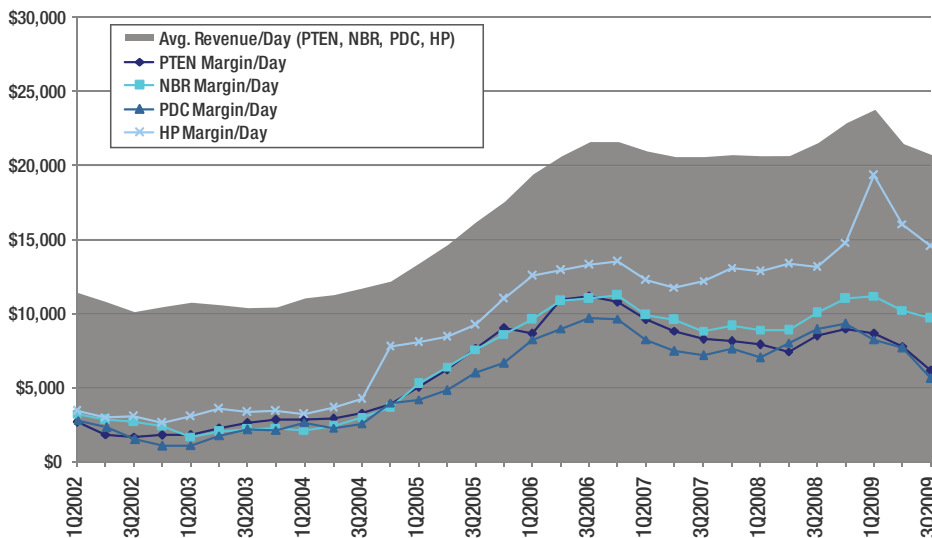
Additionally, Patterson-UTI has recently been able to secure additional term contracts for some of its newbuild rigs, and the contractor noted that the spot market for available rigs has returned.

Reported Daily Rig Revenue and Margin Still Trending Lower

Given the backlog of term contracts secured near the top of the cycle, lump sum termination payments and the stacking of marginal rigs, reported land drilling margin per rig day and revenue per rig day have remained somewhat buffered from the spot market collapse. As such, these metrics generally do not provide a good real-time read on land rig market price declines. However, as the chart below shows, margin per rig day, which represents the daily cash flow a land rig generates for its owner, has declined in each of the last two quarters for the public

drilling contractors we track. We would note that in some spot markets, margin per rig day has recently been reported as low as \$1,500-\$2,500 per day, which is similar to 2003-2004 levels. As their backlog of term contracts begins roll off over the next several quarters, some of these drillers will likely continue to report lower revenue/rig day and margin/rig day.

Reported U.S. Land Drilling Revenue and Margin Per Rig Day

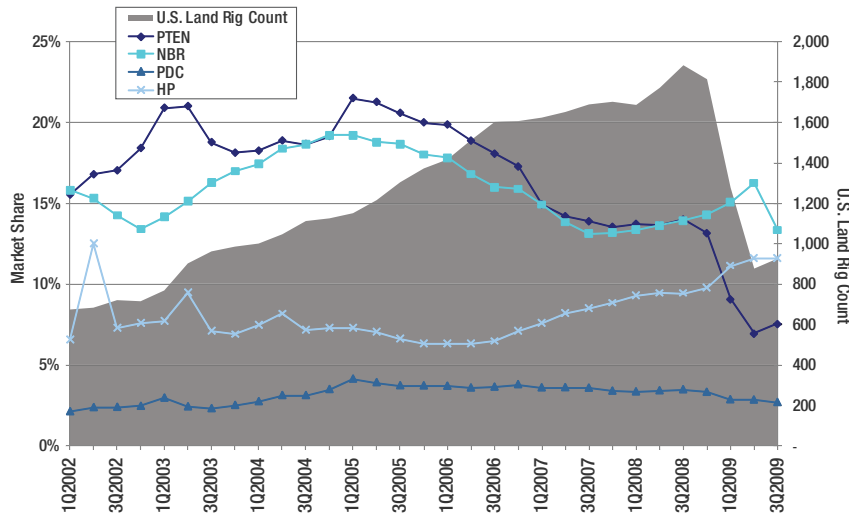


Source: Company filings, Rigzone estimates

Market Share Shifts Favor High Spec Rigs

For the publicly traded contractors we track, the downturn has resulted in market share changes as those contractors with more term contracts and a concentration of higher spec

U.S. Land Rig Market Share (as a Percent of BHI U.S. Land Rig Count)



Baker Hughes, Company filings, Rigzone calculations

units have generally outperformed their peers in this category. As shown below, Helmerich & Payne has been able to snag a nice market share increase as term contracts and shale drilling demand for their rigs has helped the company maintain a relatively high level of utilization. The ideal horsepower requirement for growing shale plays like the Woodford, the Marcellus, and the Eagleford

is at least 1,000, and the ideal horsepower requirement for the Bakken shale and the Haynesville shale is 1,500. Thus, Helmerich & Payne's investment in their high spec rig fleet through their proprietary Flex rig design (recently constructed, high horsepower units) is paying off. Pioneer Drilling, which also owns a fleet weighted towards higher horsepower rigs, has maintained its market share well in the downturn. As these contractors gained or maintained, Nabors Industries and Patterson-UTI have given up some ground, although Patterson has benefited disproportionately as the rig count has recovered so far. Patterson had 88 rigs working in the U.S. in October, up from the low 60s this summer.

Devon Betting On Land

Last week, Devon announced plans to exit its offshore and international operations in order to focus solely on its core North American land operations. With the sale expected to yield proceeds between \$4.5-\$7.5 billion, over \$2 billion of the sale price is earmarked for onshore spending over the next two years. After spending about 30% of its 2009 capital expenditure program on offshore projects in the GOM and internationally, which together only account for only about 11% of the Devon's production, the independent is going after the low hanging fruit it sees in its onshore prospects and exiting longer-term, higher risk offshore prospects.

Given Devon's shale assets in the Barnett, Haynesville, and Woodford (Cana and Arkoma), drilling contractors like

Helmerich & Payne and Nabors with higher spec rigs in or near those regions and a good working relationship with Devon are the likely beneficiaries of the strategic shift. A breakdown of Devon's contracted U.S. rig fleet compared to year ago levels is shown below, and it is worth noting that, like the rest of the industry, Devon's rig count is currently well below year ago levels (23 today vs. 79 a year ago). In contrast to Devon's rig count in

other regions, the operator has actually put more rigs to work in Oklahoma over the last twelve months as Devon focused on its Woodford prospects. ■

Devon's Contracted U.S. Land Rig Fleet

Devon's Contracted U.S. Land Rig Fleet		
	Current Fleet	Year Ago Fleet
Drilling Contractors		
H&P	15	27
Nabors	5	17
Patterson-UTI	2	15
Other	1	20
Total	23	79
Rig Drilling Depth		
20,000 ft.	2	9
16-20,000 ft.	5	26
10-15,000 ft.	5	20
0-10,000 ft.	11	24
Total	23	79
State		
Texas	8	55
Oklahoma	14	11
Wyoming	1	5
New Mexico	0	6
Louisiana	0	1
Montana	0	1
Total	23	79

Source: Smith International