

# ON POINT

Vol 3, No. 2 February 2008



GORDON ENERGY SOLUTIONS

## Candid, Forward-Looking Analysis of the Oil & Gas Industry

### IN THE NEWS

#### Indonesia Looks to Revise Contracts

Indonesia's Energy and Mineral Resources Minister announced intent to change the terms of existing production sharing contracts (PSCs). The nature of the potential changes is unclear at this time. In related news Kazakhstan announced that it will not use PSCs in future oil and gas contracts.

#### PdVSA Profits Take Dive

First half 2007 profits at PdVSA dropped 68% compared to 2006 levels. Higher costs, including higher government royalty payments, and the burden of social programs are eating into the company's capacity to sustain production. While higher prices can partially mitigate the damages in the near-term, the cumulative effects of the government's policy choices will continue to erode PdVSA's ability to meet the government's production needs in the longer term.

#### Angola LNG

A final investment decision has been made to proceed with the Angola LNG project. Partners in the US\$4 billion project are Chevron (36.4%), Sonagas (22.8%), BP (13.6%), ENI (13.6%) and Total (13.6%). Planned capacity is 5.2 mtpa using 1 Bcf/d of gas produced from offshore Blocks 14, 15, 17 and 18. Also, 125 Mmcf/d will be supplied domestically. Another LNG plant is being evaluated by a group including Sonagas and ENI.

#### Oando PLC Acquires Shell Blocks

Shell sold its 49.8% interests in OML 125 and OML 134. The two deepwater offshore blocks were sold to Oando PLC for US\$625.7 million. ENI holds the remaining 50.2% interest. More inside ...

#### Shtokman Shareholder Agreement Signed

StatoilHydro (24%), Total (25%) and Gazprom (51%) are partners in Shtokman Development Co. The company will own the infrastructure associated with the first phase of the Shtokman project. Gazprom owns 100% of the exploration and exploitation licenses and will retain marketing rights. Current expectations are that FEED work will be completed in late 2009 at which time a final investment decision will be made. Startup of production is targeted for 2013.

#### Chukchi Sea Lease Sale

The recently completed Chukchi Sea sale provides another unambiguous indicator of the intense competition underway for access to new business development opportunities. It is all the more important in view of the problematic nature of operations in the area. As we have noted before, this competition is being driven by the industry's large cash flows and limits on access to many opportunities. To these factors we may add what appears to be an increasingly aggressive price psychology.

Figure 1 shows company working interest shares of winning bids and money left on the table in winning contested bids.

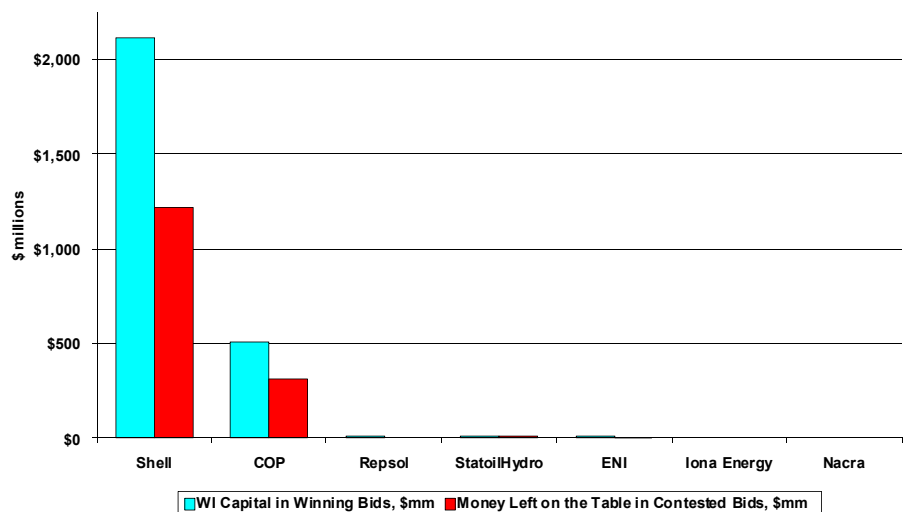
Although only seven companies participated in the sale, total capital committed to winning bids was \$2.7 billion. In addition, money left on the table by winners of contested bids totaled \$1.6 billion – 69% of the value of the winning bids on these contested blocks.

Competition for specific targeted blocks was very intense with 84% of the capital placed on winning bids associated with contested blocks. Of these targeted prospect blocks, acreage associated with Shell's earlier Burger gas/condensate discovery captured a very large share of company budgets.

As already noted, there was very limited industry participation (only 7 bidders with bidding dominated by only two: COP and RDS). When we compare bidding by Shell and ConocoPhillips to the rest of the field, the wide disparity in budgets is clear and suggests two possibilities: (1) Shell and ConocoPhillips possessed better information as to the resource potential or prime location of the prospects and/or (2) the Chukchi Sea plays a far greater role in long-term strategy for Shell and ConocoPhillips than for the other participants or the companies that abstained from bidding.

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Figure 1: Capital Committed to Winning Bids and Money Left on the Table



# OUR PERSPECTIVE



## CONTACTS

Gordon Energy Solutions is an energy consulting firm specializing in competitor analysis, strategic decisions, political risk analysis, and global issues concerning the international, integrated oil & gas industry. We anticipate future opportunities and challenges confronting our clients and assist in exploiting those opportunities.

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Richard Gordon, Ph.D  
*President & CEO*

[rgordon@gordonenergysolutions.com](mailto:rgordon@gordonenergysolutions.com)

Steve Gordon  
*Vice President*

[sgordon@gordonenergysolutions.com](mailto:sgordon@gordonenergysolutions.com)

Gordon Energy Solutions  
11286 Hadley St  
Overland Park, KS 66210  
(913) 451-9539

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# OUR PERSPECTIVE



We believe that both factors were at work in this sale.

The case for Shell and ConocoPhillips possessing specific information is supported by (1) the extremely large bid budgets they committed to the sale and (2) the degree to which they competed for the same blocks. Of 25 contested bids won by ConocoPhillips, Shell competed for 22 blocks. Of the 83 contested bids won by Shell, ConocoPhillips competed for 39 blocks and lost but also won 22 blocks that Shell bid on but lost.

**Table 1: Number of Blocks Contested by Company**

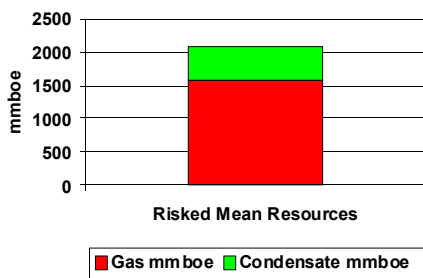
Winning Bidder on Contested Blocks	# of Contested Bids Won	Losing Competitors for the Contested Blocks				
		Shell	COP	ENI	StatoilHydro	Iona Energy
Shell	83		39	26	11	4
COP	25	22		1		2
ENI	6	5				1
StatoilHydro	7	5				2
Repsol	2		2			
Iona Energy	0					

Table 1 identifies for each company listed vertically along the left hand side that won contested bids how many blocks the companies shown horizontally also competed for but lost.

## Resource Potential in the Area

A 2004 Minerals Management Service assessment of the Burger discovery yielded the Risked Most Likely resources as shown in Figure 2. Although the prospect covers an area of nearly 190,000 acres, the report characterized Burger as a marginal development opportunity “even under a very optimistic set of assumptions”.

**Figure 2: Risked Mean Resource Estimate for the Burger Prospect, 2004**



Clearly, however, the potential appeal of the Chukchi is the presence of multiple prospects, many covering a very considerable surface area. The 2006 MMS resource assessment estimated mean risked resource potential of 29 billion boe.

The case for the proposition that Shell and ConocoPhillips feel a more severe strategic need for a Chukchi Sea position is supported by two facts. First, the fact that so few of the companies' peers competed at all suggests that Shell and ConocoPhillips feel a stronger pressure to acquire the positions for the very long-term. Second, the fact that the companies' capital budgets were so high in an area (based on past well results at least) that seems to be (1) gas prone and in (2) located in a jurisdiction where development of gas projects (even mega-projects) is extremely problematic suggests a very high level of tolerance of uncertainty as to future commerciality.

A focal point for bidding in the sales was Area NR03-02.

Nearly 56% of total capital committed to winning bids in the sale was

concentrated in just the top 25 blocks in this area.

Table 2 shows these top 25 blocks in Area NR03-02 with winning bid values color coded.

## Looking Forward

The Chukchi Sea results come on the heels of the very heavy bidding for deep and ultra-deepwater acreage in 2007 Gulf of Mexico lease sales.

The Chukchi results point to continuing future intense competition not only in the US but all leading prospective areas still open to the international oil companies.

**Table 2: Prospect Focal Point in Area N03-02**

0051	0052	0053	0054	0055	0056	0057	0058	0059	0060	0061	0062	0063	0064	0065	0066	0067	0068	0069	0070	0071	0072	0073
0701	0702	0703	0704	0705	0706	0707	0708	0709	0710	0711	0712	0713	0714	0715	0716	0717	0718	0719	0720	0721	0722	0723
0751	0752	0753	0754	0755	0756	0757	0758	0759	0760	0761	0762	0763	0764	0765	0766	0767	0768	0769	0770	0771	0772	0773
0801	0802	0803	0804	0805	0806	0807	0808	0809	0810	0811	0812	0813	0814	0815	0816	0817	0818	0819	0820	0821	0822	0823
0851	0852	0853	0854	0855	0856	0857	0858	0859	0860	0861	0862	0863	0864	0865	0866	0867	0868	0869	0870	0871	0872	0873
0901	0902	0903	0904	0905	0906	0907	0908	0909	0910	0911	0912	0913	0914	0915	0916	0917	0918	0919	0920	0921	0922	0923
0951	0952	0953	0954	0955	0956	0957	0958	0959	0960	0961	0962	0963	0964	0965	0966	0967	0968	0969	0970	0971	0972	0973
7001	7002	7003	7004	7005	7006	7007	7008	7009	7010	7011	7012	7013	7014	7015	7016	7017	7018	7019	7020	7021	7022	7023
7051	7052	7053	7054	7055	7056	7057	7058	7059	7060	7061	7062	7063	7064	7065	7066	7067	7068	7069	7070	7071	7072	7073
7101	7102	7103	7104	7105	7106	7107	7108	7109	7110	7111	7112	7113	7114	7115	7116	7117	7118	7119	7120	7121	7122	7123

Color Code

Blue: Winning Bid > \$20 million but less than \$50 million; Yellow: Winning Bid > \$50 million but less than \$75 million; Red: Winning Bid > \$75 million.

## Oil Prices and Expectations

We are at a critical juncture in the current oil price cycle.

A growing body of evidence suggests that oil price expectations which are driving the decisions of industry, government and the financial community are being revised upward in two key ways. First, the recent price increases have generated a growing consensus that more is to come. Second, the cautious skepticism as to long-term expectations appears to be giving way to the view that not only are prices going to rise again but that they will remain permanently high. These emerging consensus views have critical implications for future strategy and performance.

Anecdotal evidence for shifting expectations can be found in recent analyses suggesting that world economies can continue to grow despite recent price increases. Practical evidence for the expectations shift is provided by (1) the costs of gaining access to new business development opportunities including reserve acquisition costs and (2) the lengthening

planning horizons for key inputs such as deepwater drilling rigs.

We agree that conditions are in place to drive oil prices to much higher levels as the industry cycle continues to play itself out. We believe that this is true even if, as we suspect, recession in the US could cause a near-term pause or correction from the most recent levels.

On Point follows many of the factors that are root causes of the next price increases: rising costs, lengthening lead times, government limits on access to new business development opportunities. Add to these delayed demand responses to higher prices, economic growth and demographic pressures.

However, we also believe that the coming price increases will, in retrospect, be recognized as being part of the second and final phase of this cyclical expansion in the world petroleum industry.

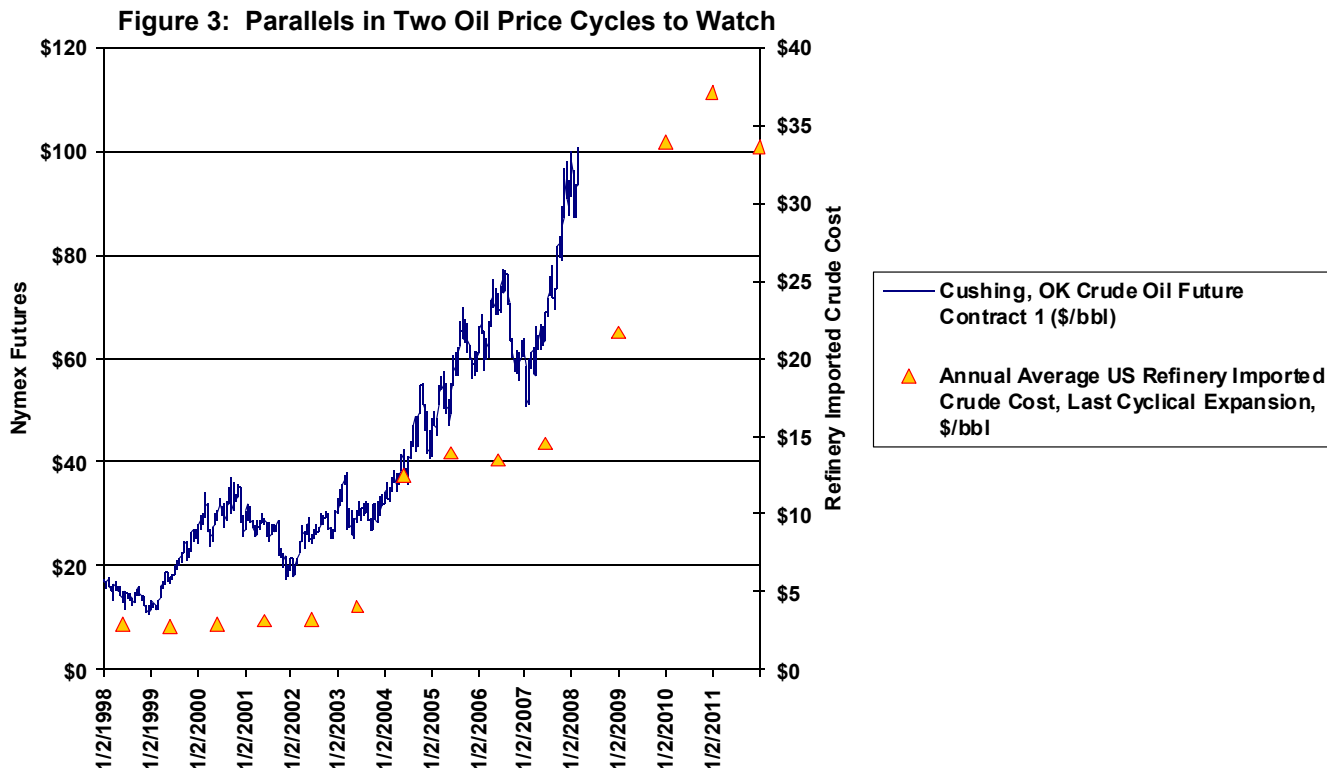
In short, be careful in your long-term strategy not to over-commit to the assumption that prices will indefinitely remain much higher than in the past.

Figure 3 uses the cyclical expansion of the 1970s to illustrate both why we see prices moving higher and why we believe they will later peak and fall very substantially.

The chart shows the daily 1 month WTI futures contract price since January 1998. The triangles on Figure 2 are the US refinery acquisition cost for imported crude oil starting in 1968 and ending in 1982 superimposed on the futures price series. (The import price shown in 2011 is the price in 1981.)

The two-phase cyclical expansion of the 1970's is clear: an initial run-up, a "pause" or stabilization as markets react, and a final run-up when markets failed to eliminate the upward pressures on prices. The process is more continuous now since there are fewer political rigidities this time around. However, the same market and industry processes are at work today and will have the same result.

We cannot present a complete analysis of these forces in a single issue of On Point. However, more will be coming.



# MERGERS, ACQUISITIONS, & DIVESTITURES



## Woodside Acquires Shell's Oil Assets on NW Shelf

In a US\$398.5 million deal, Woodside will acquire Shell's 16.67% interest in the oil assets associated with the NW Shelf project. These include Cossack, Wanaea, Lambert and Hermes producing oil fields. The deal also includes the Egret oil discovery and the remaining exploration acreage within tieback range to the Cossack Pioneer production facility.

Estimated proved and probable reserves associated with the assets were reported to be 21.3 million boe. Woodside also reported an additional 9.3 million boe of contingent resources.

Based on reported reserves, the deal involves a purchase price of US\$18.71/boe.

As a practical matter the deal is a relatively modest shuffling of ownership interests. Shell, after all, retains 34.27% of outstanding Woodside shares. Moreover, the volume of reserves associated with the assets is relatively small for both companies.

However, the deal is best seen as part of the broader sweep of strategic changes at both Woodside and Shell. Through a combination of moves Woodside is dramatically increasing its focus on Australian operations and, in particular, the Pacific Basin LNG potential from its discovered but undeveloped Australian resource base.

In the process, Woodside is rationalizing its international portfolio (the sale of Mauritania, for example). In fact a noteworthy element of the deal being discussed here is that Shell is granted right of final offer to acquire Woodside's Libyan assets if a divestiture occurs. We suspect that Woodside's drilling results at this Libyan operations have been disappointing. The future status of Woodside's Gulf of Mexico operations seems uncertain at this time as well.

The irony in the current rationalization process is not lost on those of us who remember reports of Shell's significant opposition some years ago to

Woodside's moves into international E&P.

The Libyan option embedded in this deal is also of interest in view of Shell's extraordinarily aggressive moves of late to build major new business development opportunities in the Gulf of Mexico, the Chukchi Sea and several other areas.

## Shell Acquires 3 Exmouth Plateau Blocks off NW Australia

Just a little over a week after the announced sale to Woodside, Shell acquired a 100% interest in 3 exploration blocks on the Exmouth Plateau.

Octanex has reported that Shell paid US\$5 million for each of the blocks (payment for Octanex's 50% interest).

Shell acquired WA-384-P, WA-385-P and WA-394-P from Octanex NL and Strata Resources NL. The three blocks stretch across a contiguous area south of the major oil producing fields of Enfield and Stybarrow.

The first two blocks were awarded on a 50/50 basis to Octanex and Strata in August 2006. The third block was awarded in April 2007. Work obligations included

- WA-384-P: 1,400 km of 2D seismic at an estimated cost of A\$2.5 million in the first 3 years and one exploration well at an estimated cost of A\$20.6 million afterwards
- WA-385-P: 250 km of 2D seismic at a cost of A\$1.25 million in the first 3 years and one well at a cost of A\$20.6 million afterwards
- WA-394-P: 375 km 2D seismic at an estimated cost of A\$0.7 million with one well at an estimated cost of A\$20.6 million afterwards

There were no other bids for these blocks.

Octanex had previously mentioned its expectation of the oil potential of these blocks. However, in buying these blocks Shell commented that it is seeking to grow its Australian portfolio through exploration for integrated gas.

Two key points should be made concerning this deal. First, there is an important parallel with what we are seeing in a number of recent North American deals. Specifically, the

acquisition of acreage from small, land-rich players is a major tool at this time for building new business development portfolios. Second, Shell's drive to build its new business development portfolio is ongoing. This is a strategic fact illustrated by this deal, the Chukchi Sea sale, the last central Gulf of Mexico sale and elsewhere. It is also a potential warning to others that Shell's aggressiveness will impact the likely cost of their expansion programs.

## XTO Acquires Multiple US Lower 48 Assets

In multiple transactions XTO has spent US\$1 billion to (1) expand its operations in its Eastern area of operations and the San Juan Basin and (2) to acquire additional acreage in several key shale gas plays.

The combined proved reserves are estimated at 212 Bcfe (67% in the San Juan). About 60% of these reserves were reported to be developed. Current production from the acquired assets is 35 Mmcfe/d (77% in the San Juan).

Another important element of the deal is the continued accumulation of gas shale acreage.

Figure 4 on the following page compares XTO acreage in the Woodford, Fayetteville and Barnett shale plays prior to the latest acquisitions with acreage just acquired. As shown there, the deal substantially increased the company's Woodford shale position in Oklahoma and also added to the Fayetteville land inventory. Barnett acreage acquired in the deal was very small.

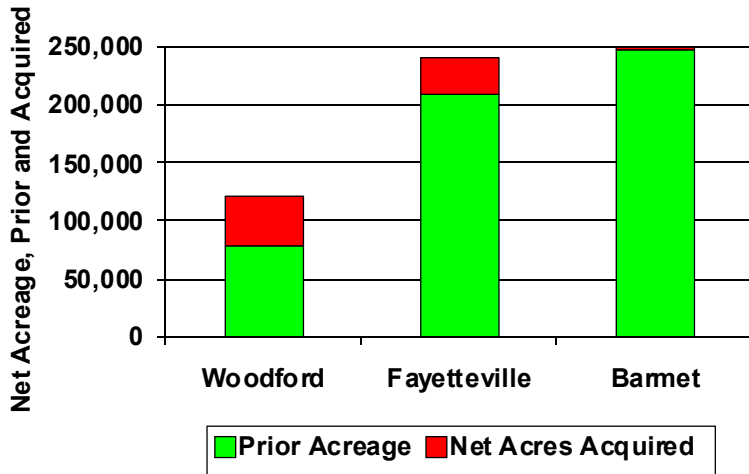
## Oando PLC Acquires OML 125 and OML 134 from Shell

OML 125 (previously part of OPL 316) includes the Abo field which is currently producing 18 Mb/d (down substantially from peak output of 30 Mb/d). Abo began production in April 2003 by means of an FPSO. Initial expectations of nearly 800 Mmbbls reserves were revised down sharply to 112 mmbbls.

# MERGERS, ACQUISITIONS, & DIVESTITURES



Figure 4: XTO Shale Gas Acreage: Pre-Deal and Acreage Acquired in the Deal



OML 134 (previously part of OPL 211) has been the site of some discoveries (two known gas discoveries) but is still in an exploratory phase.

It was reported that PetroChina and CNOOC had also bid for the assets, placing a losing bid of US\$400 million.

The economics of the Oando acquisition are summarized in Table 3 using the GES \$70/bbl WTI mid-cycle case and forecast models for the Abo field. This analysis does not include any potential allocation of the acquisition cost to acreage or discovered but undeveloped

resources on the two blocks. On a per boe basis the acquisition cost is \$18.33.

Our estimates of the remaining value of Abo suggest that the Chinese companies' offer was very close to full value.

Oando's much higher bid suggests that (1) Oando anticipates much higher prices than our \$70 case, (2) has assigned a significant portion of the acquisition cost to acreage, and/or (3) is using a much lower cost of capital in its economic runs.

Oando is an interesting example of emergent local companies in established producing countries. It is somewhat unique among its peers in Nigeria and elsewhere in the developing world in its approach. Specifically, a substantial part of its business operations is focused on downstream and other integrated operations.

Other E&P assets include interests in OPL 236 and OPL 278 (both onshore), OPL 282 (with ENI) and OML 56 (45% interest in the marginal field Obodeti-Obodugwa).

### 10% Share in Cepu Project Sold

ExxonMobil's position in the Cepu project continues to be whittled down. In the latest instance, ExxonMobil and Pertamina have sold a 10% interest in the Cepu oil and gas field to four regional state-owned companies.

Following the deal ExxonMobil and Pertamina will each own 45% shares. The value of the deal was not disclosed.

Table 3: Economics of the Oando/Shell Deal

	Mmbbls	Deal & Asset Value	Acquisition Cost \$/boe
		\$ millions	
Estimated Net Remaining Reserves mmbbls	69		
Oando Share (49.8%)	34		
Transaction Value		\$625.7	\$18.33
Remaining NPV (10% discount rate)		\$423.7	
PetroChina/CNOOC Offer		\$400.0	

Notes: Estimated remaining reserves are those attributable to the Abo field based on GES forecasts using a \$70 WTI mid-cycle price case. Remaining NPV is also based on these forecasts for Abo. The value of remaining exploration potential associated with the acreage is not factored into the analysis

# MERGERS ACQUISITIONS & DIVESTITURES



## US Asset Sale Value Indicators

### EnergyNet Regional Sales Data 2006

Working Interests 6:1

	Average \$/BOE/D	Average \$/MCFE/D	Average Multiple (Average Income)	Average Multiple (Last Income)
Appalachians	\$73,565	\$12,261	43.62	50.38
Central Texas	\$48,902	\$8,150	37.81	40.12
East Texas	\$62,972	\$10,495	44.78	49.16
Gulf Coast	\$45,285	\$7,248	37.19	45.30
Michigan Basin	\$44,347	\$7,391	41.24	40.58
Mid Continent	\$52,819	\$9,148	50.14	54.44
Panhandle	\$43,592	\$7,028	43.84	51.81
Permian Basin	\$62,599	\$10,433	45.32	46.10
Rockies	\$66,418	\$11,070	45.93	68.58
South Texas	\$37,688	\$5,484	34.34	44.28
<b>National Average</b>	<b>\$53,819</b>	<b>\$8,871</b>	<b>42.4</b>	<b>49.1</b>

EnergyNet data on US deal metrics is shown on the following page.

EnergyNet provides a way to high-grade a portfolio of assets, maximizing value for each individual property or field, without expending significant time and effort. EnergyNet maximizes value by efficiently offering the elemental properties (single well, lease, or field) to the largest audience of qualified and accredited oil and gas investors. There are simply more Buyers in the marketplace capable of competing to win a \$1MM property than a \$100MM package of properties, and EnergyNet has established relationships with over 12,500 Buyers. Geographically diverse packages benefit by being broken down into their elemental parts. By marketing and selling properties in the most logical, elemental pieces, Sellers maximize value for each part of the package and do not exclude Buyers from the process.

### EnergyNet Regional Sales Data 2007

Working Interests 6:1

	Average \$/BOE/D	Average \$/MCFE/D	Average Multiple (Average Income)	Average Multiple (Last Income)
Appalachians	\$47,237	\$7,873	38.72	34.44
Central Texas	\$52,151	\$8,281	45.56	44.93
East Texas	\$49,862	\$6,599	50.39	56.93
Gulf Coast	\$32,371	\$12,734	37.56	44.08
Michigan Basin	\$50,574	\$8,429	31.79	75.45
Mid Continent	\$55,110	\$8,491	52.60	58.43
Panhandle	\$39,728	\$6,621	45.60	50.09
Permian Basin	\$49,800	\$7,609	51.07	47.98
Rockies	\$43,093	\$7,182	40.92	41.95
South Texas	\$33,828	\$5,032	38.56	50.07
<b>National Average</b>	<b>\$45,375</b>	<b>\$7,885</b>	<b>43.3</b>	<b>50.4</b>

EnergyNet can prepare, market, and close a set of property transactions much faster than any other divestment-focused company in the industry. The Continuous Model allows EnergyNet to handle as much for a company as requested, including gathering data, preparing properties, filing the conveyance documents, escrow and post-closing services.

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# COST WATCH



Preliminary January estimates show a continuing decline in drilling costs compared to levels of the same month last year. Evidence of a similar pattern of decline also seems to have emerged in oil and gas support activities. In other segments, oil field and rotary drilling machinery, costs continue to rise on a year over year basis but at lower rates.

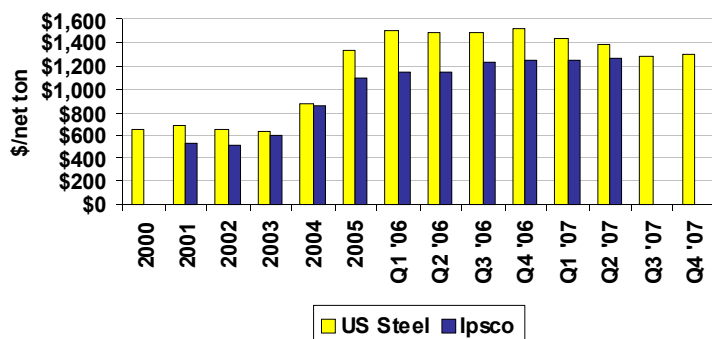
Tubular steel product prices (at US Steel) appear to have stabilized at just short of \$1,300 per ton.

## Annualized Cost Inflation Rates, 2006 and 2007

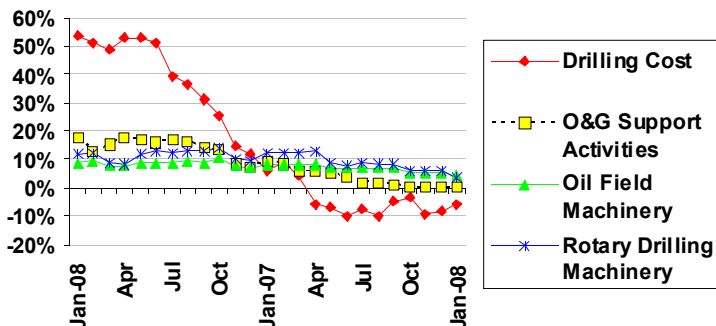
Cost Component	2006/2005	2007/2006
Drilling Cost	37.8%	-4.0%
O&G Support Activities	13.1%	3.5%
Oil Field Machinery	8.7%	7.1%
Rotary Drilling Machinery	11.5%	9.1%

Note: 2007 inflation estimates subject to revision

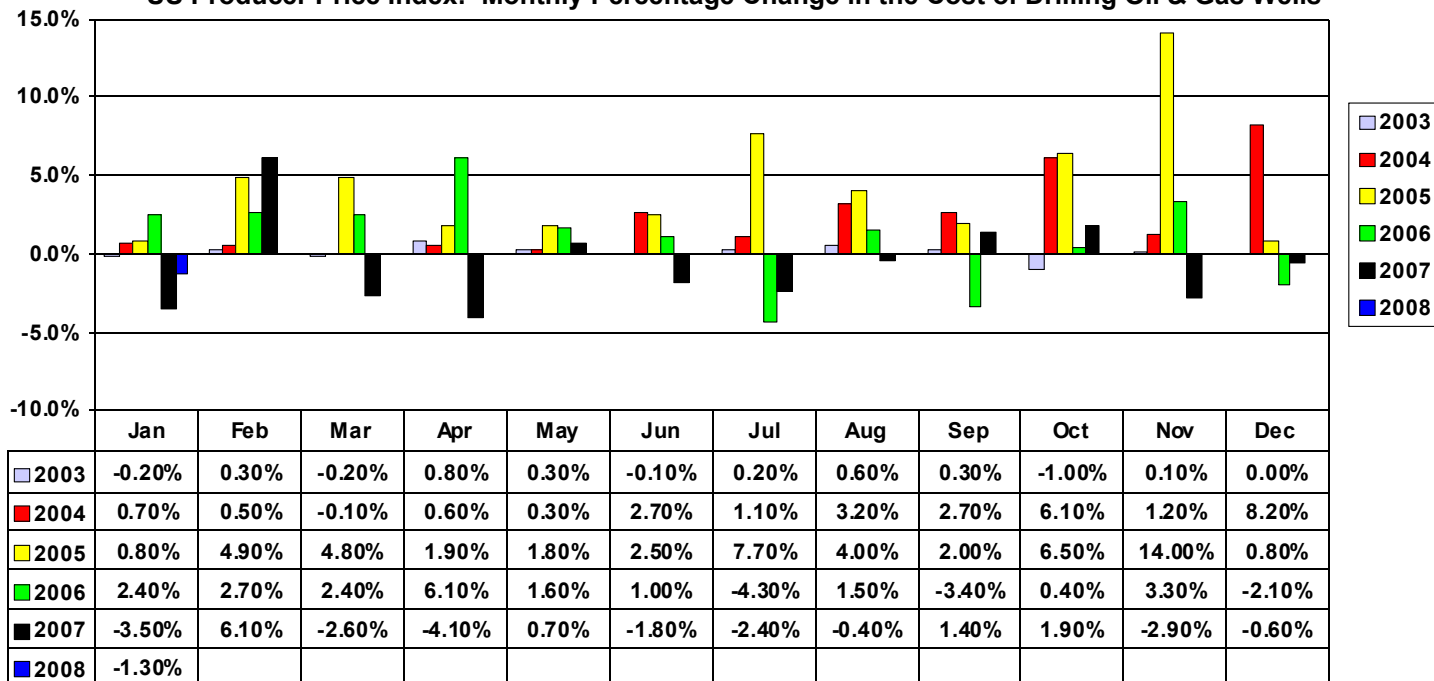
## Tubular Steel Products Price



## Annual Inflation of Selected Industry Costs



## US Producer Price Index: Monthly Percentage Change in the Cost of Drilling Oil & Gas Wells



## Year over Year Percentage Change

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2006	53.3%	51.1%	48.7%	53.0%	52.7%	51.3%	39.2%	36.7%	31.3%	25.2%	14.5%	11.6%	37.8%
2007	5.7%	9.1%	4.2%	-6.1%	-7.0%	-9.8%	-7.9%	-9.8%	-5.0%	-3.5%	-9.6%	-8.1%	-4.0%
2008	-6.0%												