

## ENERGY

INDUSTRY QUARTERLY

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## January 2012

The Energy Industry Practice Group (IPG) of Corporate Finance Associates is pleased to present its Fourth Quarter Energy Newsletter. Interested parties may obtain addresses and contact numbers of members of IPG by accessing our website [www.cfaw.com](http://www.cfaw.com).

## I. Energy Industry Budgets and Forecasting

According to a new report by Barclay's Capital, strong oil prices will lead 2012 worldwide spending to a record high of USD 598 billion. This projection will be a 10% increase over 2011 E&P spending which also set a record according to the survey of 350 oil and gas firms.

Spending is forecast to increase by 8% within North America and by 11% outside it, on a global basis, strong increases in spending are generally higher in most of the large oil and gas producing countries.

The Barclay survey reports that oil and gas companies are basing their 2012 capital spending budgets on an average oil price of USD 87 a barrel for West Texas. Intermediate price index is USD of 98 a barrel for Brent crude index. According to an IHS Cambridge Energy Research analysis, we can anticipate continued strong global demand and concerns about supply constraints in some regions and higher production costs all combined to support the record level price.

Drilling in North America should continue to be strong, although low (\$2.40 per million BTU) natural gas prices have caused companies to shift away from gas and toward liquids plays. Spending growth in North America is forecast to last until at least 2015.

## II. Global Energy Supply and Demand

Forecasts of supply and demand for natural gas are not included because of the global abundance of new shale gas.

The International Energy Agency predicts global oil demand will average 90.3 million b/d in 2012, up from last year's 89 million b/d. In 2010 demand average was 88.3 million b/d.

Natural gas demand in the US will increase with an abundance of supply and low prices. Natural gas will replace the use of coal for electric power generation. US demand for nuclear energy and renewable energy sources will climb although the use of hydroelectric power generation will ease from last year's surge.

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OPEC oil supply is expected to be unchanged at 30 million b/d. Total non-OPEC oil supply will average 54 million b/d according to IEA's projections.

The Oil & gas Journal's total worldwide supply and demand statistics for OECD (Organization for Economic Cooperation and Development) is shown as follows:

	2011					2012				
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
<b>WORLDWIDE SUPPLY AND DEMAND</b>										
<b>DEMAND</b>										
<b>OECD</b>										
North America . . .	23.8	23.3	23.5	23.4	23.5	23.4	23.1	23.5	23.5	23.4
Europe . . . . .	14.2	14.1	14.7	14.3	14.3	13.9	13.8	14.5	14.3	14.1
Pacific . . . . .	8.3	7.1	7.7	8.3	7.9	8.6	7.4	7.5	8.0	7.9
<b>Total OECD . . . . .</b>	<b>46.3</b>	<b>44.5</b>	<b>45.9</b>	<b>46.1</b>	<b>45.7</b>	<b>45.9</b>	<b>44.3</b>	<b>45.5</b>	<b>45.8</b>	<b>45.4</b>
<b>Non-OECD</b>										
FSU . . . . .	4.5	4.6	4.8	4.8	4.7	4.6	4.6	4.9	4.9	4.7
Europe . . . . .	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
China . . . . .	9.5	9.5	9.3	9.6	9.5	9.9	10.1	9.9	10.1	10.0
Other Asia . . . . .	10.7	10.7	10.4	10.8	10.6	11.0	11.1	10.8	11.2	11.0
Latin America . . . . .	6.3	6.5	6.6	6.6	6.5	6.5	6.7	6.8	6.8	6.7
Middle East . . . . .	7.6	8.0	8.4	7.8	8.0	7.9	8.3	8.7	8.1	8.2
Africa . . . . .	3.4	3.3	3.2	3.4	3.3	3.5	3.5	3.5	3.5	3.5
<b>Total non-OECD . . . . .</b>	<b>42.6</b>	<b>43.3</b>	<b>43.5</b>	<b>43.7</b>	<b>43.3</b>	<b>44.0</b>	<b>44.9</b>	<b>45.2</b>	<b>45.3</b>	<b>44.9</b>
<b>Total demand . . . . .</b>	<b>88.9</b>	<b>87.8</b>	<b>89.4</b>	<b>89.8</b>	<b>89.0</b>	<b>90.0</b>	<b>89.2</b>	<b>90.8</b>	<b>91.1</b>	<b>90.3</b>
<b>Supply</b>										
<b>OECD</b>										
North America . . .	14.4	14.3	14.5	14.7	14.5	14.8	14.5	14.6	14.8	14.7
Europe . . . . .	4.1	3.8	3.6	4.1	3.9	4.1	3.8	3.7	4.0	3.9
Pacific . . . . .	0.5	0.5	0.5	0.6	0.5	0.7	0.7	0.7	0.7	0.7
<b>Total OECD . . . . .</b>	<b>19.0</b>	<b>18.6</b>	<b>18.7</b>	<b>19.4</b>	<b>18.9</b>	<b>19.5</b>	<b>19.1</b>	<b>19.0</b>	<b>19.4</b>	<b>19.3</b>
<b>Non-OECD</b>										
FSU . . . . .	13.6	13.6	13.5	13.7	13.6	13.8	13.8	13.6	13.8	13.8
Europe . . . . .	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China . . . . .	4.2	4.2	4.1	4.2	4.2	4.3	4.3	4.3	4.3	4.3
Other Asia . . . . .	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.5
Latin America . . . . .	4.2	4.2	4.2	4.3	4.2	4.4	4.4	4.5	4.5	4.4
Middle East . . . . .	1.8	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.5	1.6
Africa . . . . .	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6
<b>Total non-OECD . . . . .</b>	<b>30.1</b>	<b>29.7</b>	<b>29.6</b>	<b>29.8</b>	<b>29.8</b>	<b>30.2</b>	<b>30.3</b>	<b>30.1</b>	<b>30.3</b>	<b>30.2</b>
Processing gains . .	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.3	2.3
Global biofuels . . .	1.5	1.9	2.1	1.8	1.8	1.6	1.9	2.2	2.0	1.9
<b>Total non-OPEC . . . . .</b>	<b>52.7</b>	<b>52.3</b>	<b>52.5</b>	<b>53.3</b>	<b>52.7</b>	<b>53.6</b>	<b>53.5</b>	<b>53.6</b>	<b>54.0</b>	<b>53.7</b>
<b>OPEC</b>										
Crude . . . . .	30.0	29.5	29.9	30.3	29.9	30.0	30.0	30.0	30.0	30.0
NGL . . . . .	5.7	5.7	5.8	5.9	5.8	6.2	6.2	6.5	6.6	6.4
<b>Total OPEC . . . . .</b>	<b>35.8</b>	<b>35.2</b>	<b>35.7</b>	<b>36.2</b>	<b>35.7</b>	<b>36.2</b>	<b>36.2</b>	<b>36.5</b>	<b>36.6</b>	<b>36.4</b>
<b>Total supply . . . . .</b>	<b>88.4</b>	<b>87.5</b>	<b>88.3</b>	<b>89.5</b>	<b>88.4</b>	<b>89.8</b>	<b>89.7</b>	<b>90.1</b>	<b>90.6</b>	<b>90.1</b>
Stock change . . . .	(0.5)	(0.3)	(1.2)	(0.3)	(0.6)	(0.2)	0.5	(0.7)	(0.5)	(0.2)

Note: Totals may not add due to rounding.  
Source: International Energy Agency, OGJ estimate of OPEC crude supply 4Q 2011 through 2012

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### III. Pricing

Crude oil prices have stabilized the latter part of the 4th quarter and seem to be holding in the USD 100 per barrel range.

Natural gas prices have declined to a two-year low. Current prices are approximately \$2.50 per million BTU's. Natural gas traded as high as \$13.00 per million BTU in July 2008. In recent years domestic production boomed with horizontal drilling techniques and hydraulic fracturing or "fracking" helping producers in numerous states. Operators who can afford to take gas off the market will shut-in natural gas wells to the extent that their leases provide for a satisfactory shut-in clause. EOG Resources Inc. Chief Executive officer, Mark Papa told an energy conference in late November that his company will direct 90% of its company's spending to oil production in 2012, drilling for gas only when it is necessary to hold acreage. The over-supply of natural gas on the North American continent is due to the massive shale gas development and improved technology in horizontal drilling as well as new frac techniques in the shales. The shale gas plays have spread in Europe as well as other foreign countries.

### IV. Current Activity

- Last month a panel of experts appointed by the DOE said that while shale gas has great potential for the nation's energy needs, immediate steps are necessary to cut air pollution, protect groundwater supplies and share best practices.
- Shell Oil Company is taking steps at its Pinedale Wyoming project to reduce the environmental impact of gas drilling and the extraction process called hydraulic fracturing. Shell now recycles more than half the water it uses in fracturing local wells. The installation of special equipment also has shrunk its surface locations use by drilling more wells at a single site rather than spacing the locations on a checkerboard style.
- The Wall Street Journal reported December 9, 2011 that the EPA has linked the drilling and treating (Frac process) of wells near Pavilion, Wyoming with tainting the water supply. The gas bearing rock was only 1,200 feet deep whereas in Texas and Pennsylvania the shale formations are several thousand feet deeper. The producing zone is a sandstone rather than shale which would be much more porous than the dense shales. In any event, more information is needed by the EPA to fully evaluate the potential damage. This is among the first complaints reported and must be investigated thoroughly.
- Anadarko Petroleum Corp. reports that the vast land in control in Northern Colorado may hold more than a billion barrels of recoverable oil and natural gas. This disclosure could move Colorado's Wattenberg Field into another major oil development in the US along with the Bakken Shale in North Dakota and the Eagle Ford in South Texas. These new sources of oil are reversing four decades of declining domestic production as previously mentioned and this major development can be attributed to improving technology in hydraulic fracturing and horizontal drilling.

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- Frontier areas beckoning explorers are the Arctic offshore regions bordering the US, Canada, Europe, and Russia, with growing interest in Greenland. Not far behind in potential are new provinces showing success off East Africa, the eastern Mediterranean and in newly developing plays off South America, both north and south of Brazil.

According to Andrew Reid, CEO of energy analysts Douglas Westwood, the next offshore discovery frontier is the Arctic. "More than 400 fields have been discovered to date in the Arctic," Reid said, speaking at a recent IADC drilling conference, "providing reserves in excess of 240 Bboe. There is no doubt that further drilling activity in this region could have major impact on offshore production in the foreseeable future."

Reid said 412 Bboe in undiscovered resources might be found there, and that 84% of that would be offshore.

## **V. Outstanding M&A Exploration and Production Deals**

- The Wall Street Journal reported on January 17, 2012 that Pembina Pipeline Corp. agreed to buy natural gas liquids infrastructure company Provident Energy LTD for \$3.2 billion Canadian dollars (U.S. \$3.1 billion) in stock, in what would create Canada's third-largest energy infrastructure company.
- The Pembina purchase comes as natural gas producers move away from so-called dry gas fields, which produce just natural gas to those that also produce petroleum liquids including ethane, propane, butane and condensate. The deal would combine Pembina's crude oil pipeline and natural gas gathering system in Western Canada with Provident's NGL processing, storage and marketing operations located along major pipeline routes connecting Western Canada with markets in the US and Eastern Canada.
- At year end the Houston Chronicle reported the most recent move by international companies to jump at the US shale drilling and development.
- China's Sinopec International Petroleum Exploration & Production Corp. invested 2.2 billion in shale gas plays in Devon's Utica Shale, Michigan Basin, the Mississippian shale in Oklahoma and the Tuscaloosa Marine shale in Louisiana and the Niobrara in Wyoming.
- Total, the French company signed its second shale deal with Chesapeake Energy for an interest in Ohio's Utica shale. Total got 25% interest in 619,000 acre joint venture with Chesapeake and Enervest for \$700 million cash plus a commitment to fund 60% or about \$1.63 billion of the group's drilling and well completion costs in Utica.

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## VI. Alternative Sources of Energy

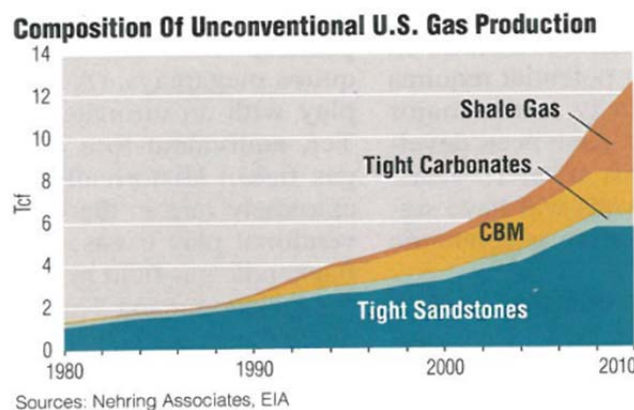
- The January 2012 issue of Journal of Petroleum Technology contains an interesting article on oil shale. We quote from the article as follows: "As much as 6 trillion bbl of in place resources of oil shale are estimated worldwide with world proved recoverable reserves of crude oil estimated at 1.3 trillion barrels, why does oil shale remain a scarcely touched resource?"

The following quoted facts as mentioned in the article may help to explain the dilemma.

1. A deposit of oil shale having economic potential is generally one that is at or near enough to the surface to be developed open pit or conventional underground mining or by in situ methods.
2. "The entire oil shale column could ultimately produce more than 1 million BOE/acre over its productive life." The Energy Information Administration (EIA) states (for comparative purposes) that Canada's oil sands deposits are expected to produce about 100,000 BOE/acre.
3. Oil shale is neither crude oil nor coal. It is not directly fungible with either crude oil or coal though it shares characteristics of each.
4. Oil shale kerogen must be heated to 700° F (in situ pyrolysis) or approximately 950° F (surface retorting) so it can yield petroleum liquids and methane.
5. World production is limited to countries with no conventional oil and gas reserves. As technology develops and the price of crude oil stays high enough to justify its use, it will become economic reality. Also, a number of things such as transportation, water availability and processing infrastructure must fall in place to make oil shale recovery competitive.

## VII. Impact of Shale Gas Resource Plays

This newsletter contains many references to the US Shale Gas Plays.



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The American Oil & Gas Reporter in its December issue brings the global picture in focus. We quote from the special report as follows:

“On a global scale, shale gas wells already have been drilled in China, Australia, England and India, and a shale play has been discovered in Israel. It is clear that there is more at stake than US energy independence. The development of shale gas will impact global security, global energy trade and global economics, and should have a net positive effect on greenhouse gas emissions until the day comes when renewable energy becomes non-intermittent and capable of competing without incentives. The transformation potential of shale gas is abundant and the impact may be profound.”

## **VIII. Recent M&A Deals in Equipment and Services Impact of Shale Gas Resource Plays**

- **HOUSTON, TX - Jan 2012** - Select Energy Services (SES), a leading provider of engineered water solutions to the oil and gas industry, announced its acquisition of Elite Wellsite Services LLC (Elite), an oilfield services company based in Bridgeport, Texas servicing primarily the Barnett Shale.

Elite provides customers in North Texas's Barnett Shale market with a variety of oilfield services including water hauling services, frack tank rental and saltwater disposal. SES's acquisition of Elite represents its entry into the tank truck market in the Barnett Shale. This acquisition strengthens its Texas position.

- **HOUSTON, TX - 2012** - Allied Oil & Gas Services, a cementing and acidizing business headquartered in Fort Worth, Texas, has been acquired by Intervale Capital, a private equity firm focused on investments in middle-market oilfield services companies. With locations in Kansas, Pennsylvania and West Virginia, Allied provides cementing and acidizing services to customers in the Mid-Continent and Marcellus Shale regions. Allied has a broad customer base of exploration and production companies and has distinguished itself as a provider of choice over its 45 year operating history. Wells Fargo & Company provided debt financing to support the transaction.

Existing Intervale portfolio companies include Ulterra Drilling Technologies (PDC drill bits and downhole tools), Casedhole Solutions (wireline services), Proserv Group (offshore and subsea equipment and services), Team Oil Tools (completions equipment and services) and Impact Fluid Solutions (drilling fluids additives).

- **HOUSTON, TX - Jan 2012** - Greene's Energy Group (GEG), a leading provider of integrated testing, rentals and specialty services, has acquired the assets of Guardian Wellhead Services, Inc., Guardian Pipe & Rentals, LLC and the legal entity of Guardian WP, LLC, GEG Chief Executive Officer Bob Vilyus announced.

Guardian, founded by Murray Erickson in 1993, is headquartered in Odessa, Texas. Erickson, an expert in casing and tree saver design and well respected industry entrepreneur, will remain as special projects consultant. Guardian and its affiliates

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offer casing and tree saver services, well testing and flow-back services, oilfield rental equipment and other well intervention support. The acquisition will establish two new GEG divisions and increase GEG's presence to 35 locations in the United States. Guardian Wellhead Protection & Rentals, headquartered in Odessa, Texas, and managed by Adam Doyle, will offer casing and tree saver services and a wide variety of well intervention rental equipment.

- **GLASGOW, Scotland - Jan 2012** - The Weir Group PLC ("Weir") has agreed to acquire Novatech LLC, a US manufacturer of well service pump valves and valve seats for upstream oil and gas applications, for US\$176m in cash.

Based in Dallas, Texas, Novatech, a family-owned business, produces a wide variety of proprietary valves and valve seats for high pressure applications such as frac, cement and mud pumps used in unconventional upstream oil and gas operations. The business is well known to Weir, being a long standing local supplier to Weir SPM. Novatech achieved proforma revenues and EBITDA of US\$61.6m and US\$25.2m respectively for the most recent fiscal year ending September 30, 2011, with associated annual revenue growth of 88%.

- **HOUSTON, TX - Dec 2011** - Mustang, a Wood Group company, said that it has acquired a majority stake in ISI Solutions for an initial consideration of US\$5.2 million. ISI Solutions is a Latin American provider of automation and control engineering and consulting services to the oil & gas, power and pipeline industries in Latin America.

ISI, which will be rebranded ISI Mustang, has approximately 240 employees in six countries: Argentina, Bolivia, Chile, Colombia, Mexico and Peru.

The acquisition is a key strategic move for Mustang into the Latin American automation and control market. With a core competency of providing automation services to the pipeline sector, ISI complements MAC's business, which focuses on refining, petrochemical and oil & gas production facilities.

"This is a strategic move to increase our automation and control capabilities in Latin America," said Steve Knowles, president of Mustang. "ISI's strong management team and proven track record provides Mustang with a robust platform for growth across South America and in Mexico."

- **HOUSTON, TX - Nov 2011** -Greene's Energy Group (GEG), a company that provides of integrated testing, rentals and specialty services, has acquired the assets of Houston, Texas, and Magnolia Springs, Ala., based Synergy Services from owner Mark Mattox, announced Greene's Energy Group CEO Bob Vilyus.

The acquisition will broaden the offerings of GEG's Pipeline Division and many of its drilling and production base locations. Greene's Synergy Services will offer chemical cleaning - including patented chemistry and processes; large volume product separation units; mechanical cleaning equipment; and other support equipment for cleaning various types of pipe, vessels and facilities.



The Energy Practice Group is a multi-disciplinary group of investment banking advisors within Corporate Finance Associates. Collectively, the Energy Practice Group provides M&A advice to independent and integrated energy companies in all sectors of the energy industry, including power generation, oil & gas, utilities, mining and natural resources, renewable energy and businesses that serve the energy industry, in all aspects of oil and gas land-based transactions, mergers, acquisitions, joint ventures and financial resources. For more information contact your local Corporate Finance Associates office.

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