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**FEATURE**

**2012 Price Outlook: NGLs, Oil To Remain Strong; Gas To Hit The Floor**

Though we're one month into 2012, there are still quite a bit of uncertainties when it comes to energy prices. Can oil maintain or surpass the \$100 per barrel (/bbl) threshold? Have gas prices hit their floor and can they recover in the next 11 months? Can liquids continue their winning streak? To better assess this outlook, Midstream Monitor organized a panel of experts for the recent webinar Energy Outlook 2012: Where Are Oil, Gas and NGL Prices Headed? to tackle these subjects.

The consensus from the panel was that gas prices have little chance to improve substantially in 2012, oil prices will remain strong and NGLs may get even stronger as the U.S. petrochemical industry will maintain



its pricing advantage on the global market because of low gas prices.

“What makes NGLs so interesting and sometimes so complicated is that each NGL

*(continued on page 8)*

**NGL PRICES**

**Petral Consulting: Ethane Demand From Ethylene Market Remains Strong**



Despite Mont Belvieu ethane prices falling for the fourth straight week and Conway ethane prices remaining stagnant, the outlook for ethane in 2012 remains strong.

The Conway price seems to have found its floor and is now listing between 25¢-30¢/gal. This week the price improved 3% to 27¢/gal. The Mont Belvieu price dropped 5% to

55¢ per gallon (/gal), its lowest price since it was 54¢/gal the week of Feb. 2, 2011. The depressed nature of Mont Belvieu ethane is expected to remain only in the short-term because of scheduled turnarounds at several ethane crackers.

Indeed, these turnarounds include capacity increases that will add another 30,000 barrels per day to the total U.S. cracking capacity. The downturn in prices occurred after the ethylene industry had a record-setting month of December for ethane demand.

According to Petral Consulting Co.'s monthly survey of ethylene producers for Dec. 2011, ethane demand increased to 1.04-1.05 million b/d in the month. “This volume of demand for ethane was a new record high and December was the fourth month in

2011 for ethane demand at or higher than 1 million b/d,” Daniel Lippe, founder and managing director of Petral Consulting, said.

This demand saw operating rates at LPG plants average 96-97% for the month with multifeed plants averaging 89-91% operating rates for the month. This resulted in 4.67 billion pounds of ethylene being produced in December, which equated to 150.7 million pounds per day. Petral Consulting’s survey results showed that ethylene production for the year was 53.5 billion pounds, which was 1.6 billion pounds, or 3.2%, greater than in 2010.

“Since exports of the important derivatives (polyethylene and ethylene glycol) were both lower in 2011 than in 2010, the increase in ethylene demand was due to higher consumption rates in the domestic market,” Lippe said.

He also noted that ethane accounted for approximately 70% of total ethylene production in Q4 2011. Petral Consulting is forecasting that ethane demand will average 990,000 to 1 million barrels per day (b/d) in Q1 2012 and 975,000 to 985,000 b/d in Q2 2012. Lippe stated that the expected decrease in demand is based on the assessment that Gulf Coast inventories will decline, which will limit consumption and not because of a negative market outlook.

“Considering that ethane prices crashed during mid-January and economic incentives versus all other feedstocks were very favorable, economic factors will remain favorable for ethane demand in February, and we estimate demand will again average 1 million b/d or more,” he said.

Propane prices appear to have stabilized after being negatively affected by low heating demand and a decrease in export demand. Both the Mont Belvieu and Conway price was largely unchanged with the Texas price increasing slightly to \$1.29/gal and the Kansas price falling slightly to \$1.02/gal.

According to Petral Consulting’s December survey, propane demand surprisingly increased in the month to between 305,000 to 315,000 b/d. The company’s forecast for propane demand for the first half of 2012 anticipates demand to dip below this average, hovering between 280,000-310,000 b/d.

Heavy NGL prices also remained relatively stable the final week of January due to stable crude prices. Despite a drop in alkylation demand from its peak in late 2011, isobutane prices seemed to rebalance this week. The Mont Belvieu price rose 5% to \$2.03/gal and the Conway price increased slightly to \$1.80/gal.

Both butane and prices were a mixed bag between the hubs. Mont Belvieu butane improved slightly to \$1.91/gal while Conway butane decreased 5% to \$1.60/gal. The Conway price

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Jan. 25 - 31, '12	55.43	128.70	190.94	203.20	227.94	\$54.77
Jan. 18 - 24, '12	58.36	128.10	190.32	192.66	232.95	\$55.17
Jan. 11 - 17, '12	65.45	125.20	202.18	212.85	233.55	\$57.12
Jan. 4 - 10, '12	76.05	133.24	205.84	232.28	235.74	\$60.57
January '12	64.67	129.56	197.46	212.13	232.57	\$57.18
December '11	79.10	139.28	202.63	243.70	221.78	\$60.95
4th Qtr '11	84.49	144.13	188.16	227.18	224.44	\$61.34
3rd Qtr '11	76.03	153.87	188.27	208.52	237.59	\$61.59
2nd Qtr '11	75.14	149.59	186.75	202.07	248.23	\$61.42
1st Qtr '11	63.74	137.32	175.07	186.15	228.46	\$55.82
Jan. 26 - Feb. 1, '11	58.12	134.38	168.84	179.04	214.12	\$53.11
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Jan. 25 - 31, '12	27.32	101.88	159.96	180.20	212.60	\$44.24
Jan. 18 - 24, '12	26.58	102.10	168.52	179.75	212.08	\$44.55
Jan. 11 - 17, '12	27.98	96.98	175.83	183.50	211.90	\$44.64
Jan. 4 - 10, '12	31.16	104.26	184.68	194.50	207.20	\$46.46
January '12	28.59	102.17	171.36	182.59	210.31	\$44.99
December '11	29.17	121.10	174.48	213.18	198.87	\$47.54
4th Qtr '11	34.29	129.43	160.82	204.27	196.08	\$48.23
3rd Qtr '11	46.69	143.07	166.30	199.68	210.98	\$53.06
2nd Qtr '11	52.63	139.38	170.76	192.47	236.00	\$55.34
1st Qtr '11	46.30	128.26	164.69	186.06	225.91	\$51.80
Jan. 26 - Feb. 1, '11	44.44	125.54	161.82	181.83	208.80	\$49.75

Data Provided by Intercontinental Exchange. Individual product prices in cents per gallon. NGL barrel in \$/42 gallons | Source: Frank Nieto

increased slightly to \$2.13/gal while the Mont Belvieu price dropped 2% to \$2.28/gal.

Petral Consulting reported that consumption of heavy NGLs increased in December to an average of 250,000-260,000 b/d; however, the company anticipates this consumption level to fall in the next few months. “We had previously forecast an increase in demand for heavy feeds during November through February based on a normally cold winter and a significant decline in feedstock demand for propane. These factors would have resulted in increased consumption of heavy feeds but winter weather was persistently mild and we now see no reason to expect a winter uptick in demand for January and February,” Lippe said.

– Frank Nieto

## FRAC SPREAD

### Improved Gas Prices Push Margins Down

Frac spread margins were once again largely down this week as natural gas feedstock prices improved on the back of news that Chesapeake Energy was decreasing its natural gas production this year.

This resulted in a 3% increase in natural gas prices at Conway to \$2.62 per million Btu (/MMBtu) and a 4% increase at Mont Belvieu to \$2.68/MMBtu. These gains are expected to be short-lived as associated gas produced from liquids-rich plays will continue to help increase gas production.

Only two NGLs experienced an increase in margin this week: Conway ethane and Mont Belvieu isobutane. Both increases were approximately the same as the price improvements both products experienced this week as Conway ethane improved 3% in both price and frac spread margin and Mont Belvieu isobutane improved 5% in price and 6% in margin.

The largest decrease in margin of any NGL this week was for Mont Belvieu ethane, which decreased 9% due to lower prices at the hub because of ethane cracker turnarounds that have lessened demand on a short-term basis.

The theoretical NGL barrel price was relatively stable as prices dropped 1% at both hubs. The Conway price was down to \$44.24 per barrel (/bbl) with a 2% drop in margin to \$34.67/bbl. The Mont Belvieu price was down to \$54.77/bbl with a 2% drop in margin to \$44.97/bbl.

Pentanes-plus (C<sub>5+</sub>) remained the most profitable NGL to make at both hubs with the Conway margin coming in at \$1.84 per gallon (/gal) and the Mont Belvieu margin being \$1.98/gal. This was followed, in order, by isobutane at \$1.54/gal at Conway and \$1.77/gal at Mont Belvieu; butane at \$1.33/gal at Conway and \$1.63/gal at Mont Belvieu; propane at 78¢/gal at Conway and \$1.04/gal at Mont Belvieu; and ethane at 10¢/gal at Conway and 38¢/gal at Mont Belvieu.

Natural gas in storage for the week of January 27, the most recent data available from the Energy Information Administration, was down 132 billion cubic feet to 2.966 trillion cubic feet (Tcf) from 3.098 Tcf the previous week. This was 25% above both the storage figure of 2.380 Tcf reported last year at the same time and the five-year average of 2.365 Tcf.

Heating demand is expected to remain flat according to the forecast issued by the National Weather Service with normal weather expected for much of the country. The lone outliers for this forecast are parts of the Southeast and Gulf Coast, which are expected to experience colder than normal weather, and the West Coast, which will be warmer than normal.

— Frank Nieto

Current Frac Spread (Cents/Gal)

February 3, 2012	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	27.32		55.43	
Shrink	17.37		17.77	
Margin	9.95	2.85%	37.66	-8.86%
Propane	101.88		128.70	
Shrink	24.00		24.55	
Margin	77.88	-1.09%	104.15	-0.39%
Normal Butane	159.96		190.94	
Shrink	27.17		27.79	
Margin	132.79	-6.54%	163.15	-0.32%
Iso-Butane	180.20		203.20	
Shrink	26.10		26.69	
Margin	154.10	-0.16%	176.51	5.65%
Pentane+	212.60		227.94	
Shrink	29.06		29.72	
Margin	183.54	-0.14%	198.22	-3.05%
NGL \$/Bbl	44.24	-0.68%	54.77	-0.73%
Shrink	9.57		9.79	
Margin	34.67	-1.59%	44.97	-1.76%
Gas (\$/mmBtu)	2.62	2.75%	2.68	4.28%
Gross Bbl Margin (in cents/gal)	79.07	-1.57%	104.43	-1.72%
<b>NGL Value in \$/mmBtu</b>				
Ethane	1.50	2.78%	3.05	-5.02%
Propane	3.54	-0.22%	4.47	0.47%
Normal Butane	1.73	-5.08%	2.06	0.33%
Iso-Butane	1.12	0.25%	1.26	5.47%
Pentane+	2.74	0.25%	2.94	-2.15%
Total Barrel Value in \$/mmbtu	10.63	-0.47%	13.79	-0.95%
Margin	8.01	-1.47%	11.11	-2.14%

Price, Shrink of 42-gal NGL barrel based on following: Ethane, 36.5%; Propane, 31.8%; Normal Butane, 11.2%; Isobutane, 6.2%; Pentane+, 14.3%, Fuel, frac, transport costs not included. Conway gas based on NGPL Midcontinent zone, Mont Belvieu based on Houston Ship Channel.

Shrink is defined as Btus that are removed from natural gas through the gathering and processing operation. Source: Frank Nieto

## Frac Spread 2011: Ethane Margins Had Wide Differentials Between Mont Belvieu, Conway

Looking back at the frac spread for 2011, two things are apparent – ethane had one heck of a year at Mont Belvieu and a terrible year at Conway.

Of course this chart is an examination of where margins wound up over the course of 12 months and not how they got there. It is also not entirely representative of the spreads throughout the year, but a comparison to where the spread finished compared to where it started.

We know that for the first half of 2011, Conway ethane margins were strong before nose-diving throughout the second half of the year. The reason for this discrepancy between the two hubs was because of two things: demand and capacity.

Mont Belvieu has such large capacities for ethane transportation and cracking that it is able to handle virtually all of the volumes that the market sends its way. Conway is very much limited as a market due to the lack of cracking capacity or petrochemical demand in the region. In addition, it is capacity constrained when it comes to transportation out of the region into other markets. The margin for ethane increased 83% at Mont Belvieu from the start of 2011 to the end of the year, while it fell 56% at Conway throughout the same period.

Propane margins told a similar story with the Conway margin only increasing 1% over 12 months compared to a 20% gain posted at Mont Belvieu in the one-year period. Propane benefited from strong prices and demand in the beginning and middle of the year because of increased heating demand in much of the country combined with larger export levels to Asia and Europe.

Isobutane margins had the best 12-month performance of any NGL at both

hubs because of a late pricing run on the product caused by increased alkylation demand ahead of planned turnaround at several isobutane alkylation units at the start of 2012. This resulted in the both the price and margins for isobutane to exceed their C<sub>5+</sub> counterparts for much of the final six weeks of 2011. This resulted in the overall frac spread margin to increase 50% at Conway and 57% at Mont Belvieu.

Butane margins didn't improve at quite the same level as isobutane, but they were perhaps the steadiest of the NGLs as they continued to improve throughout the year. While there was a price spike for butane at both hubs in November due to traders getting caught short of their butane positions, for the most part this increase in value wasn't linked to short-term price gains or demand increases. Rather, it was the result of the market regaining strength on a regular basis. On a year-on-year basis, the Conway margin improved 36% while the Mont Belvieu margin saw a 40% improvement.

A solid year for crude prices helped C<sub>5+</sub> prices and margins improve to the point of being the most profitable NGL at both hubs for much of the year until a late surge in isobutane prices saw this status change. While the Mont Belvieu margin increased 17%, the Conway improvement was lower at 5% because of a smaller market and constrained capacity out of the region. In the early going of 2012, C<sub>5+</sub> has once again returned to its ranking at the top of the NGL food chain in terms of value on a Btu basis.

2011 Frac Spread (Cents/Gal)				
January 1 Through December 31, 2011	Conway	Change from Start of Year	Mont Belvieu	Start of Year
Ethane	27.50		78.88	
Shrink	18.90		19.76	
Margin	8.60	-56.43%	59.12	82.80%
Propane	115.00		138.83	
Shrink	26.11		27.30	
Margin	88.89	1.35%	111.53	19.76%
Normal Butane	188.23		208.00	
Shrink	29.55		30.90	
Margin	158.68	36.39%	177.10	40.27%
Iso-Butane	217.50		241.87	
Shrink	28.39		29.68	
Margin	189.11	50.23%	212.19	56.62%
Pentane+	196.33		229.80	
Shrink	31.61		33.05	
Margin	164.72	4.51%	196.75	16.59%
NGL \$/Bbl	47.20	-6.71%	61.64	13.99%
Shrink	10.41		10.89	
Margin	36.79	7.48%	50.75	34.08%
Gas (\$/mmBtu)	2.85	-36.38%	2.98	-32.88%
Gross Bbl Margin (in cents/gal)	84.46	7.63%	118.17	34.15%
NGL Value in \$/mmBtu				
Ethane	1.51	-44.39%	4.34	27.68%
Propane	3.99	-10.68%	4.82	3.76%
Normal Butane	2.03	15.62%	2.25	20.72%
Iso-Butane	1.35	27.57%	1.51	34.60%
Pentane+	2.53	-5.29%	2.96	5.41%
Total Barrel Value in \$/mmBtu	11.42	-9.93%	15.88	14.75%
Margin	8.57	4.51%	12.90	37.26%

Price, Shrink of 42-gal NGL barrel based on following: Ethane, 36.5%; Propane, 31.8%; Normal Butane, 11.2%; Isobutane, 6.2%; Pentane+, 14.3%, Fuel, frac, transport costs not included. Conway gas based on NGPL Midcontinent zone, Mont Belvieu based on Houston Ship Channel.

Shrink is defined as Btus that are removed from natural gas through the gathering and processing operation. Source: Frank Nieto

Frac spread margins were strongly supported by the staggeringly poor year for natural gas prices, which saw them fall below \$3 per million Btu (/MMBtu) at both hubs. The Conway price decreased 36% to \$2.85/MMBtu and the Mont Belvieu price fell 33% to \$2.98/MMBtu.

The most profitable NGL to make at both hubs in this 12-month period was isobutane at \$1.89 per gallon (/gal) at

Conway and \$2.12/gal at Mont Belvieu. It should be noted again that for 10 months of the year this was not the case and C<sub>5+</sub> held this distinction at both hubs. As it was, isobutane was followed, in order, by C<sub>5+</sub> at \$1.65/gal at Conway and \$1.97/

gal at Mont Belvieu; butane at \$1.59/gal at Conway and \$1.77/gal at Mont Belvieu; propane at 89¢/gal at Conway and \$1.12/gal at Mont Belvieu; and ethane at 9¢/gal at Conway and 59¢/gal at Mont Belvieu.

– Frank Nieto

## INSIDE LOOK AT PROCESSING

### Plains All American Plans Bakken Shale Processing Plant

Plains All American Pipeline LP (NYSE: PAA), announced that its wholly owned subsidiary Plains Gas Solutions LLC plans to construct a cryogenic gas processing plant with deep cut ethane plus recoveries and specification product fractionation capability at its multiproduct Ross Complex near Ross, N.D.

The Ross Gas plant is expected to be sized to process 50-75 million cubic feet per day of gas and is scheduled to be in service in the spring of 2013. PGS has executed a letter of intent with an anchor customer to provide long-term natural gas supply for the plant, and is in active negotiations with additional potential customers to appropriately size the facility.

“The addition of gas processing and fractionation capability at our Ross Complex complements our expanding Bak-

ken area crude oil and NGL operations, strengthening PAA’s ability to provide a wide range of services for hydrocarbons produced in the region,” stated Harry N. Pefanis, president and chief operating officer of PAA.

The Ross Gas Plant will be capable of producing stabilized condensate, purity ethane, specification propane, as well as a butane plus raw-make NGL stream, and will deliver pipeline quality residue gas into Williston Basin Interstate Pipeline Co.’s transmission system at the tailgate of the facility. In addition to the gas plant, PAA’s Ross Complex includes rail-loading and storage facilities. The NGL portion and the first phase of the crude oil portion of the rail facility were recently commissioned with a design capacity to trans-load 8,500 barrels per day of NGLs and 20,000 barrels per

KEY NORTH AMERICAN HUB PRICES	
2:30 PM CST / February 2, 2011	
Gas Hub Name	Current Price
Carthage, TX	2.25
Katy Hub, TX	2.24
Waha Hub, TX	2.22
Henry Hub, LA	2.30
Perryville, LA	2.28
Houston Ship Channel	2.19
Agua Dulce, TX	3.01
Opal Hub, Wyo.	2.38
Blance Hub, NM	2.26
Cheyenne Hub, Wyo.	2.24
Chicago Hub	2.48
Ellisburg NE Hub	2.46
New York Hub	2.55
AECO, Alberta	2.04

Source: Bloomberg

day of crude oil. The second phase of the crude oil facility, which is targeted to be in service by the fourth quarter of 2012, will provide unit train loading capability of up to 65,000 barrels per day and will be served by a new 16-mile, 10” crude oil pipeline extending from PAA’s Robinson Lake pipeline near Stanley, N.D., to the Ross Complex.

### MarkWest Energy Adds Processing, Fractionation Capacity In Marcellus, Utica Shales

MarkWest Energy Partners LP (NYSE: MWE) will add more than 600 million cubic feet per day (MMcf/d) of processing capacity and 140,000 barrels per day (b/d) of incremental fractionation capacity in the Marcellus and Utica shales. This will bring the company’s total Northeast processing capacity to 2.3 billion cubic feet per day and the total fractionation capacity in the region to nearly 300,000 b/d. Its Northeast region includes operations in the Huron, Marcellus and Utica shales.

These expansions include adding 400 MMcf/d of processing capacity at its Majorsville processing complex via two 200 MMcf/d trains, which will increase the complex’s total capacity to 670 MMcf/d. This additional capacity is expected to come online in 2013.

“We are very excited to announce significant midstream projects that are critical to the full development of the liquids-rich areas of the Marcellus shale in southwest Pennsylvania and northern West Virginia and the Utica shale

in eastern Ohio,” said Frank Semple, chairman, president and chief executive of MarkWest. “Over the past four years, MarkWest has established a market-leading position as the largest provider of natural gas midstream and NGL infrastructure in the Marcellus, and the Marcellus midstream infrastructure projects announced will drive substantial incremental value to MarkWest and our producer customers. We are also very pleased to work closely again with EMG to establish a leading presence in the

liquids-rich corridor of the Utica Shale through the development of significant natural gas processing and NGL transportation, fractionation, storage, and marketing infrastructure. The full

spectrum of natural gas midstream services, particularly the fractionation and marketing of NGLs at world-scale fractionation complexes, is critical to the success of Utica and Marcellus producers,

and MarkWest will continue to be a leading provider of integrated midstream services in the Northeast.”

## West Virginia Passes Bill Offering Tax Breaks For Ethane Cracker

The West Virginia House of Delegates passed House Bill 4086, which will provide substantial tax breaks for any company that spends at least \$2 billion to build an ethane cracker in the state. Currently, any such facility would be taxed at 5% of its original value for 10 years. This bill would extend that 5% salvage tax valuation for 25 years.

The proliferation of shale gas rich in ethane produced from the Marcellus and Utica shales has made the region a very attractive market for ethylene producers to potentially build a world-scale cracker. State representatives from West

Virginia, Pennsylvania and Ohio are seeking to lure these companies to build such a facility in their state.

“[This bill] is probably one of the most important bills we’ll consider during this legislative session,” Sen. Roman Prezioso (D), chairman of the Senate Finance Committee, said. “We’re going to move this bill through as quickly as possible to give the governor the opportunity to negotiate the possibility of one or two cracker plants in the state of West Virginia.”

The bill was signed into law by Gov. Earl Ray Tomblin on Jan. 26.

“I want to extend my gratitude to members of the legislature and their respective clerk’s offices for not only passing this important piece of legislation, but for speedily reviewing the bill. Today we are sending a message that West Virginia wants to be a partner with potential investors and bring jobs to West Virginia,” Gov. Tomblin said. “I believe this legislation, coupled with the historic Horizontal Well Act relating to Marcellus Shale development, speaks clearly to our state’s intent and commitment to rebuilding our manufacturing base, right here.”

— Frank Nieto

## Senators Prep Legislation To Approve Keystone XL



U.S. Senators John Hoeven (R-N.D.), Richard Lugar (R-Ind.), David Vitter (R-La.) and a total of 44 senators announced that they will introduce legislation to approve the Keystone XL pipeline project under Congress’s authority enumerated

in the Commerce Clause of the U.S. Constitution, Article 1, Section 8.

The legislation authorizes TransCanada to construct and operate the Keystone XL pipeline from Alberta, Canada, to the U.S. Gulf Coast, transporting an additional

830,000 barrels of oil per day to U.S. refineries, which includes 100,000 barrels a day from the Bakken region of North Dakota and Montana. The bill allows the company to move forward with construction of the pipeline in the United States while the state of Nebraska works to determine an alternative route.

The Keystone XL pipeline project has been under review for more than three years, but President Obama rejected it last week, saying the 60-day provision authored by Lugar, Hoeven and Vitter included in the payroll tax cut extension bill passed in December didn’t give him enough time to review the project.

“Our legislation not only acknowledges the vital national interest this project represents on many levels, but also works in a bipartisan way to begin

construction,” Hoeven said. “It will create thousands of jobs, help control fuel prices at the pump and reduce our reliance on Middle East oil and it can be accomplished with congressional authority, just as the Alaska Pipeline was nearly 40 years ago. The reality is that if America doesn’t build the Keystone project the Canadian oil will still be produced and shipped, but instead of being refined in the United States by American workers and benefiting American consumers, it will be shipped by tanker across the Pacific to China.”

“The job creation, economic and energy security arguments are overwhelmingly in favor of building the pipeline. A majority of Americans support it. President Obama’s opposition is not in the best interest of the United States. The president has failed to lead but we will not stop trying to complete this critical supply line,” Lugar said.

“This new bill is a lot like the old one, but it makes it definitive that Congress has the authority to push the Keystone XL Pipeline forward,” said Vitter. “Everyone in Washington talks about saving the economy and creating jobs – the Keystone XL project will actually do something about that. And it would be pure politics for the president not to support it.”

“The president said recently that he was for an ‘all of the above’ approach to energy, yet he rejected the one bipartisan energy project that is shovel-ready and can produce thousands of new jobs almost immediately – the Keystone XL Pipeline,” Senate Republican Leader Mitch McConnell said. “While it’s clear that the president was appealing to his liberal environmental base when he blocked Keystone, this legislation would move us toward the creation of thousands of jobs and energy security for our nation.”

The Hoeven-Lugar-Vitter legislation builds off the completed Environmental Impact Statement, which was finished by the State Department on Aug. 26, 2011. Additionally, it requires the U.S. State Department to cooperate with the state of Nebraska to assist in rerouting in that state, which will be subject to the Nebraska governor’s agreement on the route within the state. However, it allows Nebraska all the time it needs to identify a new route within the state to strengthen the completed Environmental Impact Statement.

Further, the legislation requires strong environmental and safety requirements by incorporating the environmental and safety standards required and finalized by the Secretary of State. At the same time, the bill protects state and local laws

relating to the protection of private property rights by ensuring those laws are not changed in this process.

In addition to Senators Hoeven, Lugar, and Vitter, other original co-sponsors of the bill are Minority Leader Sen. Mitch McConnell (R-Ky.), Mike Johanns (R-Neb.), Rob Portman (R-Ohio), John Barrasso (R-Wyo.), John McCain (R-Ariz.), John Cornyn (R-Texas), Kay Bailey Hutchison (R-Texas), John Thune (R-S.D.), Jeff Sessions (R-Ala.), Lamar Alexander (R-Tenn.), Jerry Moran (R-Kan.), Kelly Ayotte (R-N.H.), John Boozman (R-Ark.) Jim DeMint (R-S.C.), Rand Paul (R-Ky.), Lisa Murkowski (R-Ala.), Jon Kyl (R-Ariz.); Joe Manchin (D-W.Va.), Mike Lee (R-Utah), Roy Blunt (R-Mo.), Jim Inhofe (R-Okla.), Patrick Toomey (R-Penn.), Orrin Hatch (R-Utah), Richard Burr (R-N.C.), Saxby Chambliss (R-Ga.), Dan Coats (R-Ind.), Bob Corker (R-Tenn.), Tom Coburn (R-Okla.), Thad Cochran (R-Miss.), Mike Crapo (R-Idaho), Lindsey Graham (R-S.C.), Mike Enzi (R-Wyo.), Chuck Grassley (R-Iowa), Dean Heller (R-Nev.), Johnny Isakson (R-Ga.), Ron Johnson (R-Wis.), John Risch (R-Idaho), Pat Roberts (R-Kan.), Marco Rubio (R-Fla.), Richard Shelby (R-Ala.), and Roger Wicker (R-Miss.).

## President Obama Proposes Tax Credit For Natural Gas Trucks

At a campaign stop at a UPS natural gas refueling facility in Las Vegas, President Barack Obama stated that he favored issuing tax breaks to companies to switch their fleets from diesel or gasoline to natural gas. The president’s proposal would provide companies making such a conversion with a tax credit covering approximately 50% of the costs involved.

“[Natural gas can] power our cars and our homes and our factories in a cleaner and cheaper way,” Obama said. “We, it turns out, are the Saudi Arabia of natural gas. We’ve got a lot of it.”

Such a tax credit is a key component of T. Boone Pickens’ “Pickens Plan,” which outlines a way to increase the use of natural gas in the U.S.

“I’ve accomplished my goal of achieving legislation and proposed policies to help solve the OPEC oil crisis,” Pickens said in a news release. “The ball’s now in Washington’s court. What we need is leadership. Despite the political partisanship that divides Washington, I am hopeful and confident Congress will put America’s best energy future first.”

“While we can take a victory lap, the work is not done. It’s great to see the president engaging in important and meaningful dialogue on this subject. But

proposals are not enacted policies. The pressure needs to remain on. We can’t let the special interests do what they’ve done for 40 years, and that’s block a

long-term energy plan for America,” Pickens added.

## 2012 Price Outlook ... (continued from page 1)

has its own set of fundamental drivers and pricing mechanisms,” said Peter Fasullo, principal at En\*Vantage. “However, some NGLs can compete for the same market and NGL markets can be highly variable and elastic. They can also be influenced by global, economic and seasonal factors.”

He noted that natural gas liquids (NGLs) have little actual influence on their own markets because they compete with petroleum-derived products and must seek a competitive price against these products. The macro drivers for NGL supply and demand is greater gas production, gas surplus, low gas prices, increased drilling activity out of rich gas play and increased NGL extraction.

In 2011, each of the macro drivers necessary to support improved NGL prices combined for a record year for frac spread margins. The next 12 months might be even better for NGLs, Fasullo stated as the NGL markets are gaining confidence that NGLs will be available and competitively priced.

### Petrochemical Demand To Rise With Capacity Increases

Many analysts were taken by surprise by the petrochemical industry’s ability to absorb the amount of liquids being produced. “A lot of people just focus on the supply side and ask how we’re going to absorb all of these liquids. What we’re seeing is a great expansion of the NGL markets...NGL consumption is rising with plans to add even more petrochemi-

cal capacity to consume more NGLs, particularly ethane,” he said.

In addition to the response by the petrochemical industry, U.S. NGL producers have also benefitted from large demand for propane, butanes and natural gasoline (C<sub>5+</sub>) from foreign markets. The U.S. had traditionally been an importer of these products until last year. Ethane has yet to be exported because of the petrochemical industry’s ability to absorb all of the volumes produced domestically.

“As we bring more ethane onto the market, ethane will always find a price to where it is the most preferred ethylene feedstock. This gives the incentive to maximize ethane cracking as ethane extraction grows,” Fasullo said.

The only negative for the NGL market in 2011 was at Conway, where transportation bottlenecks and a lack of cracking infrastructure hindered prices in the market. For much of the year, Conway prices and margins were much lower than at Mont Belvieu. Fasullo said that these differentials should narrow in the coming years because of the pipeline projects under way. While it is unlikely that these differentials will return to their 2005 levels when they were at their most narrow, they should improve by approximately 50% in the next few years.

Looking further out, En\*Vantage doesn’t anticipate an ethane supply glut in 2013 despite several high profile infrastructure projects coming online. “We have been swimming upstream against a lot of analysis. We didn’t think there was

going to be a glut of ethane going into 2011 and we don’t think there will be in 2013...Some of the analyses assume these assets will operate at 100%, but not all pipelines will be full on day one and not all fractionators being built represent all incremental ethane,” Fasullo said.

### Gas Prices Will Continue To Struggle

The outlook for gas prices isn’t as rosy going forward as our panelists stated that there won’t be much change from the price environment from 2011. This is especially true with the mild winter season that has carried over from late 2011. The panel noted that this late in the season it is unlikely that a cold front across the nation would have a long-term effect on prices.

While 2012 looks to be a weak year for gas prices, there are several factors that should bode well for the market going forward. Several producers, namely Chesapeake Energy, announced they will be severely dialing back production by shutting in several producing wells. “We have definitely reached a pricing model that we have not seen before in the last several years. This not only dictates our drilling, but curbs our production,” Chris Faulker, president and chief executive of Breitling Oil & Gas, said.

Faulkner added that he anticipates gas prices to hover in the \$3-4 per million Btu (/MMBtu) range, but doesn’t foresee prices returning to the \$5/MMBtu threshold for the next five to seven years. Although production will be curtailed for



the next year, there are several plays in which producers can still make money in a \$3.50/MMBtu to \$4/MMBtu price range.

In addition to curtailed production, LNG exports should begin next year, which will support gas prices. Faulkner was also hopeful that gas demand would increase from the power generation industry as more coal-fired plants switched to gas-fired generation because of the lower costs and lower emissions being offered by natural gas.

### Asia Pacific Leading The Increase In Global Oil Prices

Although oil prices aren't expected to approach the heady days of 2008 this year, they should continue to remain strong, the panel said because of improvements in the global economy and demand in Asia Pacific.

Conrad Barnes, manager, pricing at Hart Energy Consulting, stated that demand out of Asia Pacific is expected to

increase by 56% by 2030, which will increase the region's global demand from its current rate of 31% to 36%. The vast majority of this demand will come from China.

In the near-term, oil prices could see a price spike in 2012 due to several geopolitical risks. The most notable of these risks involves Iran, which is threatening to close the Strait of Hormuz. Although the U.S. does not import crude from Iran, the removal of all Iranian crude from the global market would have a strong impact on the global market as other countries would seek to secure volumes currently directed to the United States.

"Saudi Arabian spare crude would not be able to offset the loss of all Iranian crude on the global market. Non-OPEC supply growth from the U.S., Canada and Brazil is also not enough to offset the loss of these supplies," Barnes said.

Should Iranian volumes remain on the market, the U.S. should continue to

see lower prices than other regions of the world as domestic oil production increased for the first time in many years. In 2011, domestic production increased to 5.6 million b/d with December crude oil supplies increasing 5% to an eight-year high for the month.

"This increase is a symptom of a higher oil price environment, as well as a result of the natural gas revolution in the United States. Fracing and horizontal drilling led to a record gas-to-crude ratio and incentivized producers to switch to oil plays," Barnes noted.

Minus a major geopolitical event and/or a major global economic downturn, Hart Energy Consulting is forecasting WTI crude to have an average price of \$96.50/bbl and Brent crude to come in at \$104.50/bbl. In 2013, these prices will increase to \$101/bbl and \$105/bbl, respectively.

[A full replay of this webinar](#) is available.

— Frank Nieto

## PIPELINES & TECHNOLOGY

### CenterPoint Energy Proposes Mississippi Lime Gathering System

CenterPoint Energy Field Services LLC (CEFS), an indirect, wholly owned natural gas gathering and treating subsidiary of CenterPoint Energy Inc. (NYSE: CNP), has begun initial routing activities for a proposed gas gathering and processing system in the heart of the Mississippi Lime area of north central Oklahoma and south central Kansas. The proposed White Eagle Gathering System would include up to 300 miles of high-pressure gas gathering lines and up to 200 million cubic feet per day of processing capacity with amine treating and nitrogen removal, depending on customer requirements.

The proposed system would interconnect to intrastate and interstate markets with natural gas liquids deliveries to the Medford Hub in Grant Co., Okla. Additional ancillary gathering and transportation services, such as low pressure service at producer interconnects, a crude oil pipeline with interim trucking options or electric service for submersible pumps, could also be provided.

"The White Eagle Gathering System would provide critical take-away capacity for the growing natural gas, NGL and crude oil production in the Mississippi Lime formation," said Bill May, senior vice president and chief commercial of-

ficer of CEFS. "This project would further solidify CEFS's position as one of Oklahoma's premier midstream companies and one of the largest independent midstream service providers in the shale plays of the mid-continent region."

The proposed project is scalable and the level of capital investment will depend on producer interest. Contingent on ultimate customer commitments, portions of the system could be operational later this year or early next year.

**Magellan Midstream Announces Open Seasons For West Texas Crude Shipments**

Magellan Midstream Partners L.P. (NYSE: MMP) launched two separate binding open seasons to solicit capacity commitments from shippers to transport crude oil from West Texas to the partnership's East Houston terminal for further delivery to Houston and Texas City-area refineries through Magellan's distribution system.

As previously announced, Magellan is in the process of reversing and converting its pipeline from Crane, Texas, to Houston for crude oil service. The initial pipeline capacity will be 135,000 barrels per day (bpd) but can be expanded up to 225,000 bpd if warranted by committed capacity from these open seasons.

Subject to receiving the necessary permits and regulatory approvals, the partnership expects the reversed pipeline to be operational by early 2013. The open season for the Crane-to-Houston crude oil pipeline ends on Feb. 23.

**Technip Wins Design Contract For Wheatstone Offshore Platform**

A \$110 million, detailed-design contract for the Wheatstone gas processing platform in offshore Western Australia was awarded to Technip Oceania, Perth, Australia, by Daewoo Shipbuilding and Marine Engineering (DSME) for Chevron's Wheatstone project.

The offshore portion of the project includes the development of gas fields in

the WA-17-R and WA-253-P petroleum licenses located on the Northwest Shelf at water depths of 70 to 200 m (231 to 660 ft).

Subsea gas-gathering systems will transport production to the processing platform, where the gas and condensate will be treated. It will then be exported to the onshore liquefied natural gas (LNG) plant located at Ashburton North, 12 km

west of Onslow, on the Pilbara Coast of mainland Western Australia.

Technip's operating centers in Perth and Kuala Lumpur, Malaysia, will execute the contract, which is scheduled to be completed in the second half 2012.

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## Uson Introduces Optima vT Leak And Flow Tester

Uson introduced its Optima vT Leak and Flow Tester this week, which allows oil and gas companies to custom configure their leak detection equipment to their unique test applications without added costs.

Uson's Optima vT includes one or two test channels with four sensors each, totally customizable pneumatics, multiple built-in automated calculators, myriad data handling and storage options and other features that combine to make the Optima best-match test technology for the greatest number of leak and flow test applications.

R&D for the multifunction single or dual channel configured Optima vT Leak and Flow Tester began in 2009 and incorporates Uson's knowledge base of the wide-ranging requirements for leak detection and flow testing in medical,

automotive and other industrial parts testing using the unique and adaptable two-channel 8-sensor technology in its core to deliver best-in-class test technology without a premium price tag.

Joe Pustka, Uson technical specialist said, "No matter what you want to achieve in your test application Uson can do it, and now the Optima vT will most often be the leak detector of choice. You want production speed on the order of a million parts a year including highly accurate and multiple tests? We can configure the Optima to be that throughput king. You want a variety of tests done in sequence such as a pressure decay followed by a series of flow tests in different ranges? That is doable, too. Add in custom pneumatic configurations allowing you to select best-match regulators, valves and additional sensors

plus a wide range of built-in automated calculators such as those used for temperature compensation or total leakage calculators that can eliminate needs for added test sequences, and other built-in math and you have Optima vT, which hands down is the most versatile leak detector design to ever be released. Optima vT configures to the highly varied specifications for testing that Uson has helped engineer test solutions for ever since we first developed dry air leak testers for NASA almost 50 years ago and then introduced to commercial applications. With Optima vT you not only get a leak and flow tester that is best-match for your application today but also will be configurable to your changing test requirements of tomorrow."

## NEWS & TRENDS

### J-W Energy Consolidates Midstream Operations

J-W Energy Co. announced the formation of J-W Midstream Co., which will consolidate J-W Energy Co.'s midstream activities currently conducted by J-W Gathering Co., J-W Pipeline Co. and Q-West Energy Co. J-W Midstream will have the goal of expanding J-W Energy's presence as a full-service provider of midstream services to the upstream natural gas sector.

"J-W Midstream is committed to being a premier natural gas gathering, treating, processing and marketing company. This restructuring allows us to better communicate our full offering of services to our customers," said Larry Carpenter,

president of J-W Midstream Co. "With expertise at every segment, I'm confident our customers will receive the quality service and focus they desire."

J-W Midstream has its history deeply rooted as a pipeline company that has been active in the gathering, marketing, compression, dehydration, treating, processing and transmission of natural gas for more than 30 years in the Ark-La-Tex region. The company has the capacity to gather and treat over 600 million cubic feet of natural gas per day and currently operates over 400 miles of pipeline systems and seventeen processing and treating facilities.

"Not only is our name changing, but more importantly our mission is changing to be the go-to midstream provider for third parties across the United States. This includes gathering, compression, dehydration, treating, processing and remote monitoring of natural gas. This expanded midstream focus is a new step in the company's 30-year history. We understand the producer's needs and are committed to providing an uninterrupted flow of gas at competitive pricing," said Brian Best, director of gas supply.

## Sieminski To Be Nominated For EIA Post

President Obama announced his intent to nominate several individuals to key administration posts. The list included Adam E. Sieminski, who will be nominated for administrator, Energy Information Administration, Department of Energy.

Sieminski is currently the chief energy economist for Deutsche Bank,

where he has served since 2005. Prior to this, he was the director and energy strategist for Deutsche Bank's global oil and gas equity team, a position he has held since 1998. Sieminski was vice president and senior oil analyst for NatWest Securities from 1995 until 1998 and vice president and oil analyst for Washington Analysis Corp. from 1973 until 1995. In

2006, Secretary of Energy Sam Bodman appointed Sieminski to the National Petroleum Council, where he still serves as a member. Sieminski received his B.S. and M.P.A. from Cornell University.

## Cheniere Signs Up KOGAS For U.S. LNG Exports

Cheniere Energy Partners took its latest step toward solidifying its efforts to move U.S.-produced liquefied natural gas from the Gulf Coast to Asian markets. The next step is to arrange financing for the project.

Sabine Pass Liquefaction LLC, Cheniere's subsidiary, entered into a liquefied natural gas (LNG) sale and purchase agreement (SPA) with Korea Gas Corp. (KOGAS) under which KOGAS has agreed to purchase approximately 3.5 million metric tons per year (MMmt/y) of LNG upon the commencement of Train 3 operations.

Under the SPA, KOGAS will purchase LNG on an FOB basis for a purchase price indexed to the monthly Henry Hub price plus a fixed component. LNG will be loaded onto KOGAS' vessels.

The SPA has a term of 20 years starting on the date of first commercial delivery for Train 3, and an extension option of up to 10 years. Deliveries from Train 3 are expected to occur as early as 2017.

The SPA is subject to certain conditions precedent, including but not limited to Sabine Liquefaction receiving regulatory approvals, securing necessary financing arrangements and making a

final investment decision to construct the second phase of the liquefaction project.

"KOGAS is our fourth foundation customer. We have now sold 16 MMmt/y of the 18 MMmt/y being developed at the Sabine Pass LNG terminal," said Charif Souki, Cheniere chairman and chief executive officer. "We look forward to finalizing all necessary steps in order to begin construction of the first phase of our project early this year."

## Coal-Seam Gas Fuels Queensland LNG Bonanza

Liquefied natural gas (LNG) is set to become Queensland's second largest export behind coal. The Port of Gladstone will become one of the major LNG export hubs in the world – which will be quite an accomplishment for a city of 40,000 to 50,000 people.

"In terms of exports, it is expected that by 2016 the first three projects will be up and running. LNG projects have the potential to generate over 50 million metric tons per year (MMmt/y) of LNG exports," said Chris Rodwell, Queensland trade and investment commissioner for the Americas, at the 2012 Australian

American Chamber of Commerce Energy Conference in Houston on Jan. 20.

"The feedstock will be from coal-seam gas (CSG) fields in the Surat Basin, which will be transported by 500-km pipelines to liquefaction plants in Gladstone," he continued. "We're looking to exceed \$17 billion in exports when these three plants are operating."

Bechtel Corp. is the contractor for all three projects, noted Dick McIlhattan, senior vice president and LNG general manager for the company.

"This is an unprecedented concentration of construction work that is going

on. That's three major jobs, all with full trains," he emphasized.

The three projects are Queensland Curtis LNG (BG Group and Queensland Gas Co. Ltd.), Gladstone LNG (Santos and Petronas) and Australia Pacific LNG (ConocoPhillips, Origin Energy and Sinopec). Two other projects are being evaluated – Arrow LNG (Shell and PetroChina) and Fisherman's Landing LNG (LNG Ltd. and CNPC).

Rodwell noted that the final investment decision on Arrow LNG will hopefully be made later this year. Another announcement regarding Australia Pa-

cific LNG was also expected. The first train was already approved and the decision on the second train is eminent.

On Jan. 23 after the conference, Australia Pacific LNG and Sinopec signed a binding agreement increasing the latter's equity interest to 25% from 15% for a net consideration of \$1.1 billion as of Jan. 1, 2011. On completion, ownership will be ConocoPhillips, 37.5%, Origin, 37.5%, and Sinopec, 25%.

The site has been cleared for the project and about 40% of the site work has been completed, McIlhattan said. Currently, that project is focused on getting the marine work done.

Queensland Curtis LNG (QCLNG) is the furthest along. The site is cleared and all of the earth works are done. "They are pouring the concrete for the first of the LNG tanks," he continued.

Gladstone LNG has gotten its site cleared and 70% to 80% of all the rough batch plants are finished. Site camps are under construction. The first concrete should be poured in about three months, he added.

In its development policy for CSG projects, the government of Queensland set down a list of requirements: there must be sufficient gas in the future for Queensland; electricity and gas prices have to be reasonable; groundwater cannot be adversely affected; CSG water should not be environmentally damaging; benefits must be acceptable to rural communities; there must be fair financial return through royalties; and the CSG/LNG infrastructure must not be funded by the state, said Rodwell.

With CSG development, both water and land access issues are key challenges. In 2010, laws were enacted to protect the groundwater for farmers who rely heavily on that source of water.

RESIN PRICES – MARKET UPDATE – FEBRUARY 2, 2012					
TOTAL OFFERS: 15,085,852 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Blow Mold	2,910,072	0.62	0.74	0.64	0.68
LDPE - Film	2,364,140	0.69	0.81	0.72	0.76
HDPE - Inj	1,768,944	0.63	0.71	0.65	0.69
HMWPE - Film	1,512,760	0.73	0.74	0.69	0.73
PP Homopolymer - Inj	1,282,828	0.68	0.86	0.73	0.77
PP Copolymer - Inj	1,109,104	0.7	0.88	0.75	0.79
LLDPE - Inj	1,060,024	0.64	0.72	0.68	0.72
LLDPE - Film	760,000	0.66	0.73	0.66	0.7
HIPS	464,000	0.93	0.96	0.94	0.99
GPPS	380,000	0.86	0.87	0.84	0.89
LDPE - Inj	132,276	0.69	0.69	0.7	0.74

Source: Plastics Exchange – www.theplasticsexchange.com

"In terms of land access issues, those have been significant given the expanse of the CSG resources," he explained.

James Fahey, partner, Malleson Stephen Jaques, pointed out that these were the world's first CSG-LNG projects. "The drivers for CSG projects are the maturity of conventional gas fields in Australia combined with demand in Asia for export LNG and increasing domestic demand. This didn't exist five years ago."

These projects have major land access concerns. There is a need for a significant number of wells over the 20-year life of the project. The average CSG well life is only 15 years. The Australia Pacific LNG project will need to drill 10,000 wells. BG's QCLNG will need 6,000 wells.

"These projects need to have continuing development of reserves during the project. These will need coordinated production across a large geographic area with thousands of wells. That's 16,000 wells for two projects. You start to get a sense of the scale involved. And, then you have to build multiple pipelines.

"You start to see that land access becomes a very, very significant issue," Fahey emphasized.

Rodwell noted, "In terms of land access issues, the government had to develop a framework to streamline the process to allow gas companies access to respective resources."

Another factor in developing CSG resources is hydraulic fracturing. Laws had to be developed for fracing and use of chemicals. For example, CSG operators are not allowed to use petroleum compounds such as benzene, ethyl benzene and xylene in fracing.

There are other environmental concerns facing the projects, such as the impact of dredging on sea grasses that affect fisheries.

Logistically, the companies are facing major challenges as well. "Just the ability to move 6,000 people per day across the harbor on a peak day is a challenge," McIlhattan said. "We move somewhere between 5,000 and 10,000 tons of equipment on a daily basis."

Bechtel created a central service organization in Gladstone to deal with sup-

port of all three jobs. The company put into place a centralized field office for procurement, marshalling and logistics for this effort, he added.

In developing these projects, Queensland has three priorities: 1) encouraging

investment in the CSG industry; 2) protecting the natural resources; and 3) maximizing the economic and social ventures for the state, Rodwell noted.

“CSG looks like a very buoyant industry. Royalty revenues will be around

\$850 million for the state. Queensland will be able to make pretty sizeable shifts in public policy to support education and health initiatives, which contributes to the social and economic well-being of the state,” he emphasized. — **Scott Weeden**

## SNAPSHOT

### Texas NGL Extraction Levels Topped 300 Million Barrels In 2010

Though it's still open to debate in other aspects, when it comes to gas processing it really is a certainty that everything is bigger in Texas. When it comes to processing totals, the state doesn't just outpace other states to processing capacity and volumes, it dominates the national market.

According to data obtained from Sulpetro's 2011 NGL Supply Yearbook, more than 302 million barrels of NGLs were extracted at the state's processing plants in 2010. This was a 6% increase over the 286 million barrels extracted at the facilities in 2009.

The largest reason for this increase was because of the growth in production from oily plays, such as the Eagle Ford and Bakken shales, directed to these plants. In 2010, there was a 16% increase in C<sub>5+</sub> production, up to 44 million barrels from 38 million barrels in 2009.

Ethane had the second-largest increase in extraction of any NGL in 2010, as it improved 6% to 128 million barrels from 121 million barrels in 2009. The only NGLs to experience a drop in extraction levels were butane and isobutane, which Sulpetro combines in their findings. Extraction levels for butanes decreased 3% to 48 million barrels in 2010 from 49 million barrels in 2009.

Reviewing data from 2001 to 2010, the yearly NGL extraction levels hovered between a low of 241 million barrels in 2001 to 290 million barrels in 2009 before surpassing the 300 million barrel threshold in 2010.

Dialing this data down further it becomes more apparent that the production and processing levels of heavier NGLs was the definite driver behind the increased extraction level achieved in 2010. Ethane, propane and butanes lev-

els in 2010 were well within their average yearly extraction levels dating back to 2001. However, C<sub>5+</sub> levels were nearly 7 million barrels above the previous yearly high of 38 million in 2009 and 9 million barrels above the second-highest extraction level of 34 million barrels in 2008.

The two largest plants in the state in 2010 were Devon Gas Services' Bridgeport plant in Wise County and DCP Midstream's East Texas plant in Panola County. The Bridgeport plant had an extraction level of 18.2 million barrels in 2010, up from 17.7 million barrels in 2009. The East Texas plant's 2010 extraction level was down to 10.4 million barrels from 10.8 million barrels in 2009.

— **Frank Nieto**

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