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Midstream Adapts To Changing Face Of Energy

Development has led to increased aquisitions as companies integrate systems.

BY **FRANK NIETO** | EDITOR, MIDSTREAM MONITOR, MIDSTREAMBUSINESS.COM

The midstream has never been as fast moving, dynamic or as active as it has been in the past few years. Energy is now coming out of areas that have not traditionally been associated with it or have produced other types of hydrocarbons. As a result, the midstream has had to replace or expand current infrastructure or build new infrastructure to transport, gather, process and treat this production.

"There is a race going on among midstream operators to get into these new plays and be in a position to offer the services required for takeaway," Dale St. Denis, a director at Sapient Global Markets' commodity trading and risk management practice, told *Midstream Monitor*. He added that he has been working with operators seeking the best way to unify all of their different processes and systems across their pipeline network.

All of this development has led to increased acquisitions as companies seek to integrate their systems in order to enhance efficiency while the systems themselves are getting more complex.

READY, SET, GO | "There is a race going on among midstream operators to get into these new plays," according to Dale St. Denis, director at Sapient Global Markets (courtesy: Sapient Global Markets)

"Our customers are acquiring assets with certain legacy business processes and systems, and they now have to unify and integrate them with their existing system and processes. The transaction volume is growing, and the complexity of where the hydrocarbons are headed is also growing," he continued.

As more transportation is required, operators are required to utilize more pipeline-integrity management to ensure the safe shipment of hydrocarbons and avoid incidents like the recent spill in Arkansas from the Pegasus pipeline.

"The challenge for midstream operators is correlating all of the data they have around their pipeline and managing it in a way that allows them to make good decisions in terms of preventative and corrective measures," St. Denis said.

"I've worked in the industry for a number of years, and I still believe that operators want to do the right thing and operate assets safely and correctly. The chal-

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HIGHLIGHTS FROM TODAY'S EDITION

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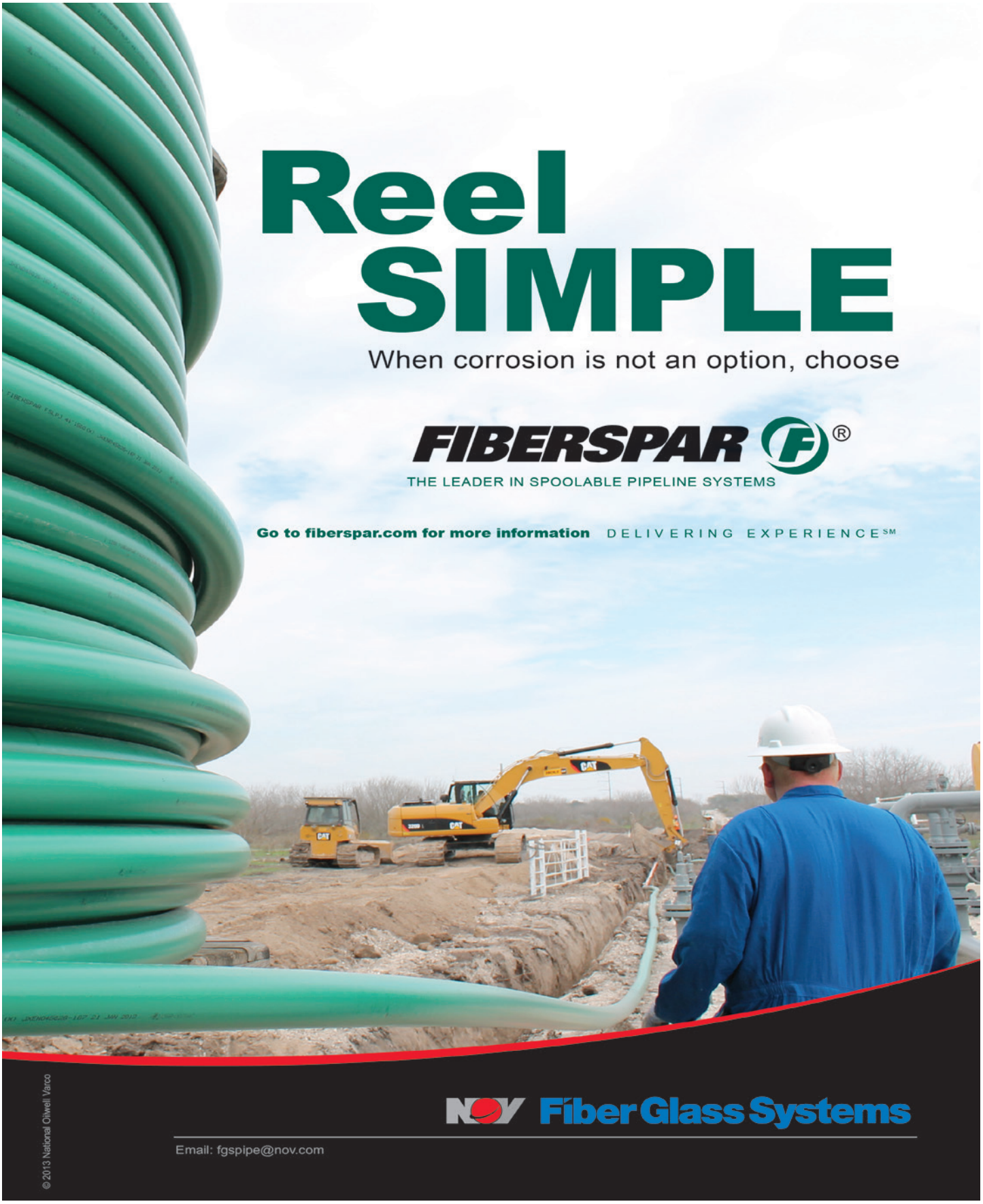
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Ethane Prices Drop At Both Hubs

BY **FRANK NIETO** | EDITOR, MIDSTREAM MONITOR, MIDSTREAMBUSINESS.COM

The improved prices for natural gas liquids (NGL) experienced throughout much of early 2013 provided producers and operators with an incentive to increase production, which has started to overwhelm the market once again.

Aside from heating and cooling, there hasn't been any real discernable increase in demand. However, prices were driven upwards due to improvements in both natural gas and crude oil. Although natural gas prices remain strong, crude has fallen greatly with prices the week of April 10 dropping below $90 per barrel (/bbl.).

The Conway E-P mix has been much improved thanks to increased access to other markets, primarily Sarnia, Canada, via Kinder Morgan's Cochin pipeline. However, stock levels have been increasing the past several months once again after there was a rush of product unleashed out of storage onto the market.

As a result, Conway ethane prices tumbled last week to their lowest level since the second week of January as the market once again corrected itself. The price of 22¢ per gallon (/gal) was a 13% decrease from the prior week and resulted in a huge downturn in margin as it is once again firmly negative.

CURRENT FRAC SPREAD (CENTS/GAL)				
April 15, 2013	**Conway**	**Change from Start of Week**	**Mont Belvieu**	**Last Week**
Ethane	21.52		28.48	
Shrink	27.38		27.71	
Margin	-5.86	-225.66%	0.77	-42.18%
Propane	86.32		94.08	
Shrink	37.83		38.29	
Margin	48.49	-3.71%	55.79	2.94%
Normal Butane	121.72		130.76	
Shrink	42.83		43.35	
Margin	78.89	-8.35%	87.41	-6.24%
Isobutane	128.50		133.70	
Shrink	41.13		41.63	
Margin	87.37	-7.34%	92.07	-6.72%
Pentane+	213.45		206.52	
Shrink	45.80		46.36	
Margin	167.65	-0.44%	160.16	-1.68%
NGL $/Bbl	38.11	-2.59%	40.03	-0.40%
Shrink	15.09		15.27	
Margin	23.03	-6.07%	24.76	-2.22%
Gas ($/mmBtu)	4.13	3.25%	4.18	2.70%
Gross Bbl Margin (in cents/gal)				
Ethane	1.18	-12.94%	1.57	0.60%
Propane	3.00	-0.78%	3.27	2.84%
Normal Butane	1.31	-4.58%	1.41	-3.46%
Isobutane	0.80	-4.20%	0.83	-3.98%
Pentane+	2.75	0.33%	2.66	-0.73%
Total Barrel Value in $/mmbtu	9.05	-3.09%	9.74	-0.05%
Margin	4.92	-7.85%	5.56	-2.03%

NGL PRICES						
Mont Belvieu	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
April 10 - 16, '13	28.48	94.08	130.76	133.70	206.52	$40.03
April 3 - 9, '13	28.31	91.48	135.44	139.24	208.04	$40.19
March 27 - April 2, '13	29.90	94.90	141.30	147.00	215.55	$41.87
March 20 - 26, '13	28.84	92.84	139.74	144.20	212.86	$41.12
March '13	27.95	89.66	141.09	145.14	212.62	$40.69
February '13	25.64	86.16	162.10	168.05	234.15	$43.09
1st Qtr '13	25.68	86.42	157.72	166.41	222.63	$42.07
4th Qtr '12	26.59	88.74	162.76	181.71	215.67	$42.69
3rd Qtr '12	32.34	89.27	142.76	161.88	200.54	$41.03
2nd Qtr '12	37.00	97.80	160.76	175.08	207.57	$44.54
April 11 - 17, '12	44.37	120.88	189.98	203.98	237.92	$52.78
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
April 10 - 16, '13	21.52	86.32	121.72	128.50	213.45	$38.11
April 3 - 9, '13	24.72	87.00	127.56	134.13	212.75	$39.13
March 27 - April 2, '13	26.58	89.30	134.22	143.57	221.00	$40.87
March 20 - 26, '13	25.66	88.72	131.60	143.18	218.50	$40.33
March '13	25.29	85.20	134.11	143.21	217.48	$39.91
February '13	24.13	81.76	156.45	167.85	230.84	$42.05
1st Qtr '13	23.94	81.81	153.43	160.39	222.63	$41.11
4th Qtr '12	18.45	79.24	164.46	174.39	209.16	$39.94
3rd Qtr '12	14.60	70.25	124.35	165.61	195.68	$34.99
2nd Qtr '12	11.18	72.63	135.80	161.38	203.31	$35.72
April 11 - 17, '12	15.10	93.18	161.84	194.20	231.96	$42.99

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

(Left) 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: Hart Energy

NGL PRICES & FRAC SPREAD | Week in Review

Interestingly, Mont Belvieu ethane saw a modest improvement for the week gaining 1% to 29¢/gal as the hub has more access to end-use markets than its Conway counterpart. The margin still took a 42% from the previous week and is only theoretically positive.

The downturn in margin was because of the continued improvement of natural gas prices, which remain above $4.00 per million Btu (/MMBtu) at both hubs. The Mont Belvieu price increased 3% to $4.18/MMBtu while the Conway price also rose 3% to $4.13/MMBtu.

These increases are almost entirely being driven by spot-price demand for cooling demand and previously heating demand. According to Barclays Capital's *Gas and Power Kaleidoscope* for April 16, the natural gas front curve is growing three-times faster than the back of the curve.

KEY NORTH AMERICAN HUB PRICES

2:30 PM CST / April 19, 2013

Gas Hub Name	Current Price
Carthage, TX	4.30
Katy Hub, TX	4.37
Waha Hub, TX	4.25
Henry Hub, LA	4.37
Perryville, LA	4.33
Houston Ship Channel	4.37
Agua Dulce, TX	3.59
Opal Hub, Wyo.	4.17
Blance Hub, NM	4.13
Cheyenne Hub, Wyo.	4.20
Chicago Hub	4.47
Ellisburg NE Hub	4.33
New York Hub	4.53
AECO, Alberta	3.75

Source: Bloomberg

The other light NGL—propane—also experienced a difference in price movements between the two hubs. The price at Mont Belvieu increased 3% to 94¢/gal, its second-highest price since the week of October 31, 2012. The Conway price fell 1% to 86¢/gal, its lowest price in a month. The reason for the Conway decrease was due to the decrease in West Texas Intermediate crude prices. Mont Belvieu propane was able to overcome this because of the continued export of liquefied petroleum gas (LPG).

Heavy NGL prices were largely down at both hubs, with the exception of C_{5+}, which gained value at Conway. Butane and isobutane continue to experience a downturn in demand as refiners switch to summer-grade gasoline.

Butane fell 5% at Conway to $1.22/gal, its lowest price since it was $1.08/gal the week of August 1, 2012. The Mont Belvieu price fell 3% to $1.31/gal, its lowest price since it was $1.30/gal the week of July 11, 2012.

Isobutane dropped 4% at both hubs with the Mont Belvieu falling to $1.34/gal and the Conway price decreasing to $1.29/gal. The Texas price was the lowest since the week of October 7, 2009 when it was $1.29/gal. The Kansas price was the lowest since it was $1.26/gal the week of June 20, 2012.

RESIN PRICES – MARKET UPDATE – APRIL 18, 2013

TOTAL OFFERS: 19,795,700 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
LDPE - Film	4,003,864	0.62	0.76	0.62	0.76
LLDPE - Film	3,864,232	0.69	0.75	0.69	0.75
HDPE - Blow Mold	3,689,992	0.65	0.72	0.65	0.72
PP Copolymer - Inj	2,396,552	0.655	0.78	0.655	0.78
HMWPE - Film	1,350,024	0.72	0.75	0.72	0.75
GPPS	1,012,000	0.88	0.94	0.88	0.94
HIPS	844,000	1.02	1.05	1.02	1.05
PP Homopolymer - Inj	833,564	0.68	0.79	0.68	0.79
LLDPE - Inj	780,000	0.69	0.74	0.69	0.74
HDPE - Inj	582,644	0.65	0.7	0.65	0.7
LDPE - Inj	396,828	0.68	0.755	0.68	0.755

Source: Plastics Exchange – www.theplasticsexchange.com

Pentanes-plus (C_{5+}) prices improved very slightly at Conway to $2.14/gal and decreased 1% to $2.07/gal. This was the seventh-straight week that the Conway price outpaced its Mont Belvieu counterpart.

Due to this strength, C_{5+} remained the most profitable NGL to make at both hubs at $1.68/gal at Conway and $1.60/gal at Mont Belvieu. This was followed, in order, by isobutane at 87¢/gal at Conway and 92¢/gal at Mont Belvieu; butane at 79¢/gal at Conway and 87¢/gal at Mont Belvieu; propane at 49¢/gal at Conway and 56¢/gal at Mont Belvieu; and ethane at negative 6¢/gal at Conway and 1¢/gal at Mont Belvieu.

The theoretical NGL bbl. price dropped 3% at Conway to $38.11/bbl. with a 6% decrease in margin to $23.03/bbl. The Mont Belvieu price was flat at $40.03/bbl. with a 2% decrease to $24.76/bbl.

Natural gas in storage experienced a 31 billion cubic feet injection to 1.704 trillion cubic feet (Tcf) from 1.673 Tcf the week of April 12, according to the Energy Information Administration. This was 32% below the 2.498 Tcf figure posted last year at the same time and 4% below the five-year average of 1.778 Tcf.

It is likely that storage levels will increase again this week as cooling demand should be limited according to the National Weather Service's forecast. The forecast anticipates colder-than-normal spring temperatures throughout the Midwest and East Coast. The West Coast is expected to experience much warmer-than-normal temperatures and be the primary driver for cooling demand this week.

Winter Erased Storage Overhang

BY **FRANK NIETO** | EDITOR, MIDSTREAM MONITOR, MIDSTREAMBUSINESS.COM

The month of March was very good for natural gas producers, public utilities and pipeline operators, but it saw a downturn in heavy natural gas liquid (NGL) prices.

Both natural gas and light NGL prices benefited from increased heating and export demand. Fall and winter arrived late, but they had a huge impact as a sustained cold front lasted just as spring arrived.

This caused natural gas prices to increase 15% at Conway in the month of March to $3.97 per million Btu (/MMBtu) and the Mont Belvieu price rose 17% to $4.03/MMBtu. The week of March 29 saw storage levels finally fall below their five-year average for the first time since September 16, 2011. According to the Energy Information Administration, the storage level fell to 1.687 trillion cubic feet (Tcf), which was 2% below the five-year average of 1.724 Tcf.

This heating demand also resulted in propane prices saw significant gains throughout the month as they rose 13% to close the month at 96¢ per gallon (/gal) at Mont Belvieu and increased 10% to close at 89¢/gal at Conway.

While heating demand didn't have a noticeable impact on ethane sales, the product experienced solid price gains in March. Consistent rejection at most hubs finally resulted in supply and demand fundamentals reaching near equilibrium. In addition, ethane benefitted from having crackers online in the start of 2013 unlike the situation in 2012, when many crackers were offline due to turnarounds and expansions.

According to Wells Fargo Securities, ethane supplies in 2013 are expected to be 1.191 million barrels (bbl.) per day with approximately the same level of demand. By comparison, 2012 supplies were estimated to be 1.007 million bbl. per day with only 985 million bbl. per day of demand.

Ethane prices improved 9% at Mont Belvieu from an average of 26¢/gal in February to an average of 28¢/gal in March. The Conway price for E-P mix increased at a slower rate of 5% from an average of 24¢/gal in February to an average of 25¢/gal in March.

Heavy NGL prices took a downturn in the month due to refiners switching from winter-grade gasoline to summer-grade gasoline along with stagnant crude prices. However, C5+ remained the most profitable NGL to make at both hubs in the month at $1.79/gal at Conway and $1.71/gal at Mont Belvieu. This was followed, in order, by isobutane at $1.06/gal at Conway and $1.07/gal at Mont Belvieu; butane at 94¢/gal at Conway and $1.02/gal at Mont Belvieu; propane at 54¢/gal at Conway and 59¢/gal at Mont Belvieu; and ethane at 1¢/gal at Conway and 4¢/gal at Mont Belvieu.

MONTHLY FRAC SPREAD (CENTS/GAL)

March, 2013	Conway	Change from Start of Month	Mont Belvieu	Start of Month
Ethane	26.95		30.50	
Shrink	26.32		26.72	
Margin	0.63	-79.69%	3.78	-9.76%
Propane	90.57		95.87	
Shrink	36.37		36.91	
Margin	54.20	12.07%	58.96	11.37%
Normal Butane	134.97		143.60	
Shrink	41.17		41.79	
Margin	93.80	-7.67%	101.81	-5.55%
Isobutane	145.35		147.15	
Shrink	39.54		40.14	
Margin	105.81	-6.15%	107.01	-4.74%
Pentane+	223.25		216.00	
Shrink	44.03		44.69	
Margin	179.22	0.55%	171.31	-2.20%
NGL $/Bbl	41.32	4.31%	42.23	5.05%
Shrink	14.50		14.72	
Margin	26.82	-0.71%	27.51	-0.19%
Gas ($/mmBtu)	3.97	15.07%	4.03	16.47%
Gross Bbl Margin (in cents/gal)	60.16	-0.34%	62.66	0.34%
NGL Value in $/mmBtu (Basket Value)				
Ethane	1.48	3.77%	1.68	12.42%
Propane	3.14	13.25%	3.33	13.28%
Normal Butane	1.46	-1.75%	1.55	-0.05%
Isobutane	0.90	-1.19%	0.92	0.24%
Pentane+	2.88	3.12%	2.79	1.16%
Total Barrel Value in $/mmbtu	9.87	5.02%	10.26	6.31%
Margin	5.90	-0.80%	6.23	0.63%

(Left) 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: Hart Energy

Atlas To Acquire Eagle Ford Business From TEAK Midstream

Atlas Pipeline Partners LP has executed a definitive agreement to acquire 100% of the equity interests of TEAK Midstream LLC (TEAK), a privately owned midstream operator, for $1 billion in cash. TEAK is a natural gas gathering and processing company with assets located in the core of the Eagle Ford Shale, a liquids-rich, highly prolific oil and gas area of south Texas. The transaction is expected to close in the second quarter of 2013 and is subject to certain regulatory approvals and customary closing conditions.

Highlights

- The assets being acquired include a 200 million cubic feet (MMcf) per day cryogenic processing plant (Silver Oak I), 265 miles of 20"-24" high pressure rich gas gathering lines with 750 MMcf per day of throughput capacity, and a second 200 MMcf per day cryogenic processing plant (Silver Oak II), which is expected to be delivered to the partnership for installation in May of 2013 and be in service during the first quarter of 2014.

Upon the closing of this transaction, the partnership will own 100% of the following TEAK assets:

- 200 MMcf per day of cryogenic processing capacity;
- A second 200 MMcf per day cryogenic processing facility to be in service in the first quarter of 2014;
- 265 miles of primarily 20" to 24" gathering and residue lines with 750 MMcf per day of throughput capacity; and
- 275 miles of low pressure gathering lines.

Additionally, the partnership will acquire a 50% to 75% interest in various joint venture agreements that currently exist between TEAK and TexStar Midstream Services LP (TexStar). It is anticipated that the partnership will be the operator of the joint venture assets following the transaction, which include:

- 235 miles of pipeline, including rich gas gathering, header, and residue pipelines;
- 3 miles of NGL pipeline; and
- A co-gen facility, which will produce power for the Silver Oak complex as well as the ability to sell power to third-parties and back to the grid during peak season.

Williams, Shell Create Midstream Joint Venture

Williams Partners LP agreed to launch a new midstream joint venture with Shell to provide gas gathering and gas processing services for production located in northwest Pennsylvania. The venture will invest in both wet-gas handling infrastructure and dry gas infrastructure serving Marcellus and Utica Shale wells in the area.

The new venture, Three Rivers Midstream, signed a long-term fee-based dedicated gathering and processing agreement for Shell's production in the area, including approximately 275,000 dedicated acres. The joint venture also plans to pursue gathering and processing agreements with other producers in the liquids-rich areas of northeast Ohio in addition to northwest Pennsylvania.

Three Rivers plans to construct a 200 million cubic feet (MMcf) per day cryogenic gas processing plant and related facilities. The location will be determined at a later date. The planned large-scale gas processing complex would be expandable as Three Rivers' business grows. The initial plant is expected to be placed into service by second quarter 2015.

Williams Partners will initially own substantially all of Three Rivers Midstream and operate the assets. Shell has the right to invest capital and increase its ownership prior to mid-2015.

Williams Partners' portion of initial capital expenditures on the Three Rivers plant, not including the gathering system, is expected to be approximately $150 million. Subsequent capital investment is expected as the joint venture's business and scale increases.

Gas Prices, Forecasts Sunny After Mercury Falls In March

BY **DARREN BARBEE** | HART ENERGY

Finally, it got cold enough for long enough: U.S. natural gas prices gained ground after a chilly March ate into billions of cubic feet of gas.

Many analysts think prices will hold up in 2013, ranging between $3.25 and $4.50. Year to date, Henry Hub has averaged about $3.50, an analyst noted.

Natural gas working inventories ended March 2013 at an estimated 1.69 trillion cubic feet (Tcf), about 0.79 Tcf below the level a year ago and 0.41 Tcf below the five-year average (2008-2012), according to the Energy Information Administration (EIA).

Long term, gas fundamentals should continue to be relatively tight as cheap U.S. natural gas prices encourage solid demand growth, Raymond James analyst J. Marshall Adkins said on April 8.

Adkins predicts 2013 gas prices to range between $3.25 per thousand cubic feet (Mcf) and $3.85 Mcf. Low-cost shale gas should allow 2014 gas prices to balance the supply and demand at $4, a $0.25 increase from his previous forecast.

"We remain convinced that both U.S. gas demand and U.S. gas supply can grow profitably at a $4.25 Mcf gas price," Adkins said.

In March, natural gas spot prices gained $0.48, averaging $3.81 per million Btu (MMBtu) compared to the previous three-month average of $3.33, EIA said.

Analysts at Raymond James, Tudor, Pickering, Holt & Co., Wells Fargo and others have recently predicted higher natural gas prices going forward. EIA forecasted Henry Hub prices will increase to $3.52 in 2013 from an average of $2.75 in 2012.

Weather was March's MVP.

"The colder winter ending weather has made us more bullish on gas prices for 2013, thus we are raising our 2013 gas price forecast by sixty cents," Adkins said in an energy report.

Adkins' price increases are based on the need to ensure full year-end gas storage in 2013. Higher winter prices will encourage a reversal in coal-to-gas switching through spring 2013. By summer, natural gas prices will strengthen as the market struggles to re-fill gas storage, Adkins said.

Johan Spetz, commodities research analyst with Goldman Sachs, said April 4 he estimates 2.0 billion cubic feet (Bcf) per day of coal-to-gas switching will be required on average to reach a storage level of about 3.65 Tcf, which will allow prices to continue to recover over the course of this year.

He raised his natural gas price forecast to $4.40 MMBtu for the balance of 2013, up from $3.75 MMBtu.

"In particular, we now expect prices to average $4.50 MMBtu over the second half of this year, as a return to growing production is required to balance the market after this summer," he said.

However, Spetz cautioned that infrastructure constraints will continue to limit the pace of growth in coming years.

"While production growth from relatively price-insensitive sources like Marcellus and associated gas continues at a fast pace, the momentum has likely peaked as rigs have dropped even in the Marcellus and liquids-rich gas and oil drilling has stabilized and NGL[natural gas liquid] prices have been under pressure over the past year," he said. "Importantly, both Marcellus natural gas production and U.S. oil production in general face infrastructure constraints."

STRONG DEMAND | Natural gas storage was withdrawn at a fast pace in March due to increased heating demand

Jeff Dietert, managing director, head of research for Simmons & Co. International, said with the "right cocktail" of a hot summer, lower than expected nuclear utilization and coal plant outages could give prices an additional leg higher.

Dietert expects gas prices to range between $3.50 and $4.50 in 2013 and that additional gas production is necessary to keep the market balanced.

"The net result is that we are more positive on the 2013 gas outlook than when we last updated in February," he said. "However, the positive fundamentals underpinning the gas market could begin to fray later in 2013, tempering our enthusiasm."

Dietert expects gas production growth to accelerate in the second half of the year, possibly leaving it on weaker footing.

Global Hunter Securities said the Climate Prediction Center's short-term temperature forecast indicated a more limited opportunity for cold temperatures. A band of lower-than-typical temperatures was expected in the northern latitudes of the US, but New England was expected to join most of the rest of the Lower 48 with warmer-than-typical temperatures during the indicated period.

READ FULL ARTICLE ONLINE

Sand Hills Pipeline Will Help Relieve Constraints In Permian

BY **MARY HOGAN** | HART ENERGY

With the Permian Basin experiencing growth as a result of robust drilling and increased use of technology, NGL processing capacity has become constrained in the area. Additionally, NGL takeaway will be required to meet the needs of producers, Greg Smith, president of Permian and Midcontinent for DCP Midstream, said during a presentation at Hart Energy's DUG Permian Basin Convention in Fort Worth, Texas.

"In short, producers need more processing capacity," Smith said. To help address that need, DCP is currently developing the Sand Hills pipeline in the Permian to deliver NGL to fractionators located in Mont Belvieu, Texas. The $1 billion project will provide takeaway capacity for both the Permian and Eagle Ford basins and began receiving product in the Eagle Ford in October 2012. The company plans for the pipeline to begin receiving product from the Permian by the second-quarter 2013.

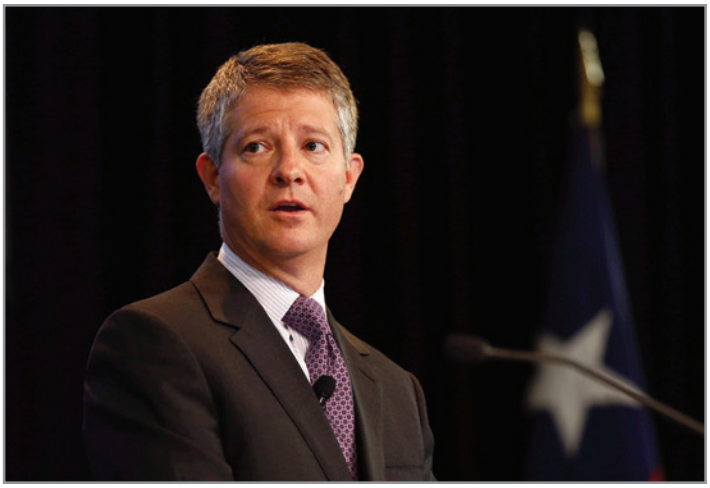
"Robust drilling in response to high crude prices and the use of technology constrained the basin, and NGL takeaway was needed," Smith said. "We felt that this was the best way for DCP to meet the needs of the producing community, get their liquids to Mont Belvieu and reduce the curtailments that have occurred in the Permian."

The Sand Hills pipeline will have a takeaway capacity of 200,000 barrels (bbl.) per day, which can be expanded to 300,000 bbl. per day with the inclusion of additional pump stations.

In addition to the pipeline, DCP, which currently operates 17 gas processing plants in the Permian, has added more than 150 million cubic feet (MMcf) of gas processing capacity in the last two years. Smith said the company is currently building its eighteenth gas processing plant in the area, Rawhide, which will come on stream this summer with a processing capacity of 75 MMcf.

"The Permian itself counts for about a third of DCP's NGL production at 130,000 bbl. per day, so it's obviously a very large part of DCP's business," Smith said. Specific to the Permian Basin, the company noted that it has seen strong drilling in the Wolfberry, Bone Springs and Wolfcamp plays.

Strong drilling in the Permian is driven by two main reasons. "One, the fact that it's predominantly a crude play, and with $90-plus crude, that's driving a lot of drilling," Smith explained. "In addition to that, producers are taking the technology that they learned through shale drilling of natural gas and reallocating that to the crude side of the business." Multistage fracturing and horizontal drilling also continue to have a major impact on production in the Permian.



MOVING PARTS | DCP Midstream's Greg Smith said that the company's $1 billion Sand Hills pipeline will provide Permian producers with processing capacity on the Gulf Coast (Courtesy: Hart Energy)

"Many of the producers that I've talked to since assuming responsibility for the Permian have indicated that the Permian – if not the best – is certainly one of the best opportunities for their drill bit capital and for their acreage across the United States," Smith added.

He noted that new petrochemical facilities are the "next domino that needs to fall." With producers having found new resources in the ground in shale gas and tight oil plays through the use of new technology, midstream companies are now working on building infrastructure to handle the increased production.

In the short term, ethane and propane commodity prices have been driven down by oversupply. With the late winter in the northeast and Midwest, however, as well as additional export out of the Gulf Coast of propane, Smith said there has been some relief on propane prices. "In the long term, demand for propane and ethane will increase due to new petrochemical facilities being constructed and being brought online on the Gulf Coast as well as additional propane export facilities being placed into service," Smith said.

With low natural gas prices, low liquids prices, and high demand for plastics across the world, the petrochemical industry

should now focus on shipping products out of the Gulf Coast. "It's the last domino that needs to fall in order to get all of the products ultimately to the markets," Smith said.

Rail Rides Shotgun In The Bakken, Other Oil-Producing Areas

BY **DARREN BARBEE** | HART ENERGY

Before the railroad came to the Williston Basin, much of the oil produced in the Bakken was held hostage to overloaded or out of reach pipeline.

Since 2009, the amount of crude shipped by U.S. railcars has increased 50 fold and vigorous growth appears to be ahead for rails, according to Raymond James' J. Marshall Adkins, director of energy research.

Pipelines, by far, are the dominate mover of oil in the United States and Canada. But rail offers several advantages. For one, it's a faster mode of delivery than traditional pipelines, particularly when configurations of up to 120 cars—enough for 60,000 to 72,000 barrels of crude oil—carry a single commodity.

A single unit train traveling from Alberta to the U.S. Gulf Coast requires eight to 10 days for delivery. A pipeline delivering the same amount of product is estimated to require 40-50 days. From the Bakken to U.S. Gulf Coast, train time is about five to six days, for pipe about 40 days.

The net effect for E&P producers means many with several hundred million dollars in product inventory could see significantly faster working capital turns and a lower cost of carry, Raymond James' reports said.

Despite the coming of high-capacity North American pipelines during the next two or three years, such as the Keystone XL, North American crude-by-rail (CBR) will increase by 150% during the same period, reaching a 740,000 carloads/year annualized run-rate by the fourth quarter of 2015, said Raymond James analyst Steven P. Hansen in a March 25 crude-by-rail study.

"In no uncertain terms, we believe E&P producers seek to land in the market with the highest net-back—period," Hansen said, referring to costs such as shipping of moving crude to market. "As such in today's new world of evolving regional pricing differentials, which we believe is sustained as a byproduct of our aggressive U.S. supply forecast, we also believe that rail will often provide the highest net-back opportunity."

However, a recent contraction in regional U.S. oil price spreads has prompted some investors to call an end to the CBR theme.

"We believe that CBR is here to stay," Adkins said in an April 1 industry brief. "In fact, we believe (rail) is positioned to grow as a long-term, strategic complement to pipelines (not necessarily a replacement), providing a strategic source of diversification for both light-sweet and heavy grades of crude."

Though many investors think rail use will erode as new pipeline capacity emerges, Raymond James says railroad flexibility has become important in gaining strategic value for producers.

CBR's meteoric rise over the past three years has been driven primarily out of necessity, fueled by the explosion of oil production from non-traditional basins with limited pipeline infrastructure.

With oil stranded in the Bakken, an enormous incentive developed to create an alternative takeaway solution.

CBR capitalized on its ability to rapidly deploy loading infrastructure on well-established networks, offering a "critical relief valve for this widening production-pipeline gap," Hansen said.

The Bakken problem illustrates how "needs-based" demand can quickly create a foundation for what has become the epicenter for rail growth during the past three years. The basin's current production-pipeline gap is nearly 400,000 barrels per day. Pipeline additions such as the Enbridge Sandpiper aren't likely to come online until 2015 or later.

Since the beginning of 2012, the price differential between crude oil produced in the Bakken and West Texas Intermediate (WTI) crude oil varied because of transportation constraints, according to the U.S. Energy Information Administration. Rapidly growing production in the Bakken coupled with lagging takeaway infrastructure (pipelines and rail capacity) contributed to Bakken prices that were as much as $28 per barrel lower than WTI in early 2012.

But as rail capacity increased, Bakken crude briefly sold at a premium to WTI. Projected increases in pipeline capacity will grow to more than 650,000 barrels (bbl.) per day while rail will expand to nearly 900,000 bbl. per day in 2013.

"Interestingly, we do not foresee such a large gap forming in other prolific North American oil plays," Hansen said.

Report: Huge Increase In Gas Resources

BY **MICHELLE THOMPSON** | ASSOCIATE EDITOR, MIDSTREAM BUSINESS

Citing the highest resource evaluation in its history, the Potential Gas Committee (PGC) says a new natural gas assessment shows the U.S. has a potentially recoverable gas resource base of 2,384 trillion cubic feet (Tcf).

It's a 26% increase from 2010, when the committee's biennial assessment was 1,898 Tcf, the PGC noted in a recently-released study. The latest results were the highest resource evaluation in the committee's 48-year history.

"The PGC's year-end 2012 assessment reaffirms the committee's conviction that abundant, recoverable natural gas resources exist within our borders, both onshore and offshore, and in all types of reservoirs—from conventional, 'tight' and shales, to coals," Dr. John B. Curtis, geology and geological engineering professor at the Colorado School of Mines, said in a public statement.

However, Curtis noted that the assessment does not assume a market price for the discovery and production of future gas supply or a time schedule.

The increase is being attributed largely to new evaluations of shale resources in the Atlantic, Rocky Mountain and Gulf Coast regions, the report says.

Breaking down the figures, the committee says the latest assessment of 2,384 Tcf includes 2,226 Tcf of gas that could potentially be recovered from traditional reservoirs. The remaining 158 Tcf could be recovered from coalbed reservoirs.

With an assessment of 1,073 Tcf, shale gas accounts for about 48% of the country's total potential resources, PGC added.

The report ranks the Atlantic as the richest resource area in the U.S. It accounts for 33% of total U.S. traditional resources. The Gulf Coast and Rockies, meanwhile, together make up 76% of traditional resources.

"Our knowledge of the geological endowment of technically recoverable gas continues to improve with each assessment," said Curtis. "Furthermore, new and advanced exploration, well drilling, completion and stimulation technologies are allowing us increasingly better delineation of and access to domestic gas resources—especially 'unconventional' gas—which, not all that long ago, were considered impractical or uneconomical to pursue.

"Consequently, our present assessment, strengthened by robust domestic production levels, demonstrates an exceptionally strong and optimistic gas supply picture for the nation."

ArcLight Acquires Interest In American Midstream

American Midstream Partners LP announced that High Point Infrastructure Partners LLC, a portfolio company of ArcLight Capital Partners LLC, acquired 90% of American Midstream GP LLC, the general partner of American Midstream, and 100% of the subordinated units of American Midstream, from AIM Midstream Holdings LLC, an affiliate of American Infrastructure MLP Funds LP. The transaction resulted in a change of control of American Midstream.

American Midstream concurrently announced the issuance of $90 million of Series A convertible preferred units to High Point in exchange for the contribution of High Point's operating assets and approximately $15 million of cash. High Point includes approximately 700 miles of onshore and offshore gathering and transmission assets providing Gulf of Mexico producers with fee-based midstream services. The Series A convertible preferred units were priced at $17.50 per unit, a 3.8% premium to the 30-day volume weighted average price of American Midstream's common units as of April 12

In connection with the transaction, Stephen W. Bergstrom, former president and chief operating officer of Dynegy, Inc., has been appointed executive chairman of the board of directors of American Midstream's general partner. In addition, Daniel R. Revers and Jake F. Erhard, both of whom are affiliated with ArcLight, were appointed to the board. Robert B. Hellman, Jr. and Edward O. Diffendal, each of whom is affiliated with AIM, and L. Kent Moore resigned from the Board immediately prior to the appointments of the new directors.

Energy Drives The Creation Of Wealth, Powell Says

BY **KEEFE BORDEN** | HART ENERGY

Energy is a key ingredient that leads to the creation of wealth and the formation of modern democracies, former Secretary of State Gen. Colin Powell said recently.

Speaking at the DUG Permian Basin Conference in Fort Worth, Texas, Powell told an audience that 20 years ago, when he was National Security Advisor, energy security was a huge national concern. With the development of new technologies that can develop unconventional resources, the industry has facilitated the creation of large amount of wealth that can be used to develop emerging economies.

"You all have shown what is possible with investment, technology, with the ability to think out of the box," he said. Powell won over the audience with a wide-ranging speech that was frequently humorous, always engaging and occasionally self-effacing.

Powell said the rise of modern democracies across the globe has helped create a vast amount of economic wealth that meets basic human needs. "This is wealth that will bring whole societies up and bring people out of poverty," he said.

Authoritarian governments do not allow for wealth creation. He cited China as an example of what can happen when the country opens up its economic system: About 400 million people were lifted out of poverty over the long haul. He recognized that another 600 million Chinese are still waiting for significant changes.

"Every country which has come out of this authoritarian leadership has to go through this process," he said. Energy is a key ingredient that enables this process to happen. Energy allows societies to build factories, bridges, schools, highways and railroads that drive this economic transformation, he said.

As his speech turned to a more domestic focus, Powell lamented the current state of U.S. politics, particularly the bitter debates that have enveloped Congress and the media, which he called more polarized than he had seen in years.

ECONOMIC FORCE | Former Secretary of State Colin Powell praised the energy industry economic benefits at Hart Energy's DUG Permian Basin Conference. (Courtesy: Hart Energy)

"You can't run a 7-Eleven store the same way we're trying to run this country," he said.

Powell noted that one of the problems in Washington is the inability to compromise when developing a national agenda. "You have to compromise to reach a consensus and to move forward," he said.

Powell also criticized the media, which he said had grown more diverse, omnipresent and more one-sided than he had ever seen when he was in public life. He encouraged people to step back from their computer screens and 24-hour television newscasts. "We've got to get a little bit of distance from this or it will eat us up."

Keefe Borden Here in the U.S., the top concern for many Americans is the lackluster economic recovery. Economics, energy and environment are three challenges facing every modern industrial country. The challenge for the energy industry is to produce as much as possible as cleanly as possible.

"I congratulate you for what you are doing," he said.

Continued from Page 1

lenge they have is the complexity and the amount of data coming out of these systems is hard to correlate," he added.

Midstream expansion to continue

Opportunities continue to abound for operators, which is resulting in more companies adding new services in order to add value. As a result, there are now companies that have primarily been pipeline companies that are now operating processing, storage and/or fractionation assets in order to provide producers with everything they need from wellhead to market.

More midstream operators are starting to add blending services due to the heavy bitumen-based hydrocarbons being produced in Canada and being shipped to the Lower 48 states. This production has to be blended in order to be both transported, but also to meet the standards of refineries in the U.S.

Blending operations also require significant tankage, which is leading midstream operators to add more storage and blending facilities at hubs such as Hardisty, Patoka, Cushing and St. James where this heavier crude is being shipped.

"The ability to have the storage capacity at major hubs is to ensure the tankage for blending to allow shippers to get their heavier crudes into new markets and take advantage of quality differentials," St. Denis said.

Besides these traditional midstream facilities, companies are also adding services that haven't been as widely used in the sector, such as transloading due to the increased usage of rail transportation out of the Bakken and Eagle Ford shale as well as increased barge usage.

Because of the specialized infrastructure required in transloading, railway companies aren't typically involved in this construction. Instead it has provided another aspect of the value chain for midstream operators to add to their portfolio.

While transloading presents new opportunities, it also presents new challenges since midstream operators haven't had to take the commercial steps involved in the custody transfer, which are required to keep accurate inventory records and balances. "Typically you're moving title from a producer to a marketer or from a producer to another handler. That custody transfer has to be properly recorded, settled and priced," he said.

Renewed focus on public education

The increased financial opportunities available in the midstream has undoubtedly been a positive for operators, but the increased attention on energy and its infrastructure from the general population has been a mixed bag, to say the least. On the one hand, a public that is educated about energy and the role it has in society can only be good; on the other, misinformation often works in favor of opposition to hydrocarbons.

As unconventional energy sources have become a dominant force in the North American energy story, the industry has increased its public awareness campaigns to educate the public on such topics as fracing, natural gas, crude production from tar sands and pipelines. The Common Ground Alliance's 811 "call before you dig" safety number campaign is a great idea in making the public aware that it is necessary to call before digging to ensure that a pipeline isn't hit. However, there is still room for improvements in many public messages, St. Denis said.

He noted that the industry can do a better job of letting the public know what it is doing in terms of maintenance activities and other "good steward" actions. "We should be making people aware that we're working hard to make sure the pipes are operating safely. "Some companies do this better than others, and there are probably some best practice ideas in this area that could be shared."

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