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FEATURE

Ethane Led The Charge In 2011 NGL Price Recovery

NGL prices began to regain strength in 2011, most notably heavy NGLs and Mont Belvieu ethane. However, as the year drew to a close propane prices lost much of their gains from the previous 12 months and the Conway market was feeling the negative effects from transportation bottlenecks and an oversaturated market.

The biggest NGL story for much of 2011 was ethane, which witnessed a significant gain in demand from the North American petrochemical industry that resulted in vastly improved prices.

The North American petrochemical industry found itself with a significant price advantage for ethylene compared to the rest of the world in 2011 due to the vast amount



of ethane being produced from shale plays. This resulted in ethylene crackers operating at capacities above 90% for much of the year and quickly consuming as many barrels of ethane that producers could deliver.

Indeed, Mont Belvieu ethane hit a peak of 94¢ per gallon (/gal) the week of Oct. 19, which (continued on page 5)

TOP NEWS

Enterprise Receives Commitments For ATEX Express Marcellus Ethane Pipeline

Enterprise Products Partners LP (NYSE: EPD) announced it will commence construction on the 1,230-mile Appalachia to Texas pipeline (ATEX Express) after receiving sufficient transportation commitments from producers to support the project. The pipeline will transport up to 190,000 b/d ethane from the Marcellus and Utica shales to the Gulf Coast. The committed shipper transportation rate will range between 14.5 cents per gallon and 15.5 cents per gallon.

"The willingness of shippers to commit to a term of at least 15 years reflects the long-term potential of shale development in the Appalachian region and provides us with the assurance necessary to build the midstream infrastructure that will facilitate further development of this important domestic resource," Michael A. Creel, president and chief executive of Enterprise's general partner, said in a news statement. "In addition to providing valuable takeaway capacity that gives producers access to the most attractive markets, the ATEX Express pipeline will also serve as an economic driver for the country and the communities in which it will be located. This project is expected to directly create approximately 4,000 jobs during and after construction, which will increase the need for local goods and services and generate incremental state and local tax revenue. This is in addition to the jobs related to increased production in the Marcellus and Utica basins and those resulting from new and expanded ethylene plants in the United States.

The pipeline will originate in Washington County, Pa., with the first leg running 595 miles to Cape Girardeau, Mo. At Cape Girardeau, Enterprise will reverse a 16-inch *(continued on page 7)*

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MIJSIKEAM Monitor

NGL PRICES

NGL Prices Largely Hold Firm As 2011 Ends, 2012 Begins

Natural gas liquid (NGL) prices largely remained flat the week of Dec. 28, which is normally the case for this time of year as trading is slower than throughout the rest of the year given the holidays.

The biggest surprise was that while Mont Belvieu and Conway prices moved in largely the same direction, individual prices moved in largely opposite directions. The most improved prices at Mont Belvieu were ethane and propane with butane and isobutane experiencing the only decreased prices at the hub. At Conway, isobutane and butane had the largest price gains with propane having the largest price decrease and ethane being flat.

The price of ethane increased 3% to 80¢ per gallon (/gal) at Mont Belvieu, its highest price in a month. The Conway price remained flat at 29¢/gal, which is largely the same level it has been trading at for the past month at the hub. However, the price had increased to its highest single-day trading level of 35¢/gal on January 3 since it was also 35¢/gal on Nov. 29. Ethane prices should continue to increase in the next few weeks as more ethylene crackers are brought back online following scheduled maintenance and several outages.

Mont Belvieu propane increased 2% to \$1.39/gal, its highest price since it was \$1.43/gal the week of Dec. 7 when it was \$1.43/gal. By comparison, Conway propane fell 2% to \$1.15/ gal, its lowest price since it was the same price the week of Oct. 21, 2010. There is an advantage to the stagnant/depressed nature of propane prices as En*Vantage is reporting that propane is gaining ground as an ethylene feedstock. Currently, propane only trails ethane as the most preferred feedstock. Although it is unlikely to surpass ethane in this respect, its increased usage should help to improve its price.

Conway isobutane and butane each improved 2% as demand remains high for both products. Isobutane improved to \$2.18/ gal, its highest price since it was \$2.21/gal the week of Nov. 30, while the butane price rose to \$1.88/gal, the highest price at the hub since it was \$2.13/gal the week of July 16, 2008. This increase was largely based on the market being short of the butanes due to the composition of the gas stream being produced in most of the shale plays, which is heavy in ethane and propane.

On the flip side, Mont Belvieu prices for both products remain strong, but decreased in value. In the case of butane this was because traders are no longer driving prices up to cover

NGL PRICES							
Mont Belvieu	Eth	Pro	Norm	lso	Pen+	NGL Bbl	
Dec. 28, '11 - Jan. 3, '12	79.76	139.18	207.25	241.78	230.95	\$61.85	
Dec. 21 - 27 '11	77.53	135.98	216.48	249.33	226.13	\$61.48	
Dec. 14 - 20 '11	77.29	134.28	199.44	244.40	215.30	\$59.49	
Dec. 7 - 13 '11	82.38	142.92	196.08	243.24	220.86	\$61.47	
December '11	79.10	139.28	202.63	243.70	221.78	\$60.95	
November '11	86.59	145.97	181.32	223.10	224.75	\$61.43	
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	
Dec. 29, '10 - Jan. 4, '11	61.17	133.02	167.37	175.86	218.00	\$53.52	
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl	
Dec. 28, '11 - Jan. 3, '12	29.25	114.83	188.23	217.50	198.05	\$47.59	
Dec. 21 - 27 '11	29.23	117.63	185.17	212.50	199.17	\$47.70	
Dec. 14 - 20 '11	28.55	116.12	169.36	206.10	195.23	\$46.14	
Dec. 7 - 13 '11	28.50	125.78	167.36	212.63	197.03	\$47.48	
December '11	29.17	121.10	174.48	213.18	198.87	\$47.54	
November '11	35.90	130.51	154.92	212.38	194.85	\$48.45	
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	
Dec. 29, '10 - Jan. 4, '11	50.46	128.36	162.56	170.50	206.52	\$50.65	

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

shortages they had, while isobutane prices retreated from their record high price level from the previous week.

The price of butane decreased 4% to \$2.07/gal, which is still the second-highest price at the hub since it was \$2.31/gal the week of July 16, 2008. The isobutane price fell 3% to \$2.42, which is the fifth-highest price at the hub in the 12 years that Hart Energy has been reporting NGL prices.

Mont Belvieu C5+ prices increased 2% to \$2.31/gal in response to improved crude prices and increased production of gasoline. This was the highest price at the hub since it was \$2.32/gal the week of Oct. 12. However, the Conway price failed to follow suit as it fell 1% to \$1.98/gal because of the limited market for the product in the Mid-Continent.

- Frank Nieto

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FRAC SPREAD

Sharp Drop In Natural Gas Prices Helps Improve Margins

A sharp drop in natural gas prices at both Mont Belvieu and Conway combined with largely stagnant natural gas liquid (NGL) prices saw frac spread margins improve the week of Dec. 28.

Gas prices fell below \$3.00 per million Btu (/MMBtu) at both hubs with the Conway price dropping 6% to \$2.82/MMBtu and the Mont Belvieu price down 3% to \$2.97/MMBtu.

The largest increase in margin for any NGL was for ethane at both hubs as it improved 14% at Conway and 5% at Mont Belvieu as it experienced a price increase ahead of the anticipated return to service of several ethylene crackers. The Conway frac spread for isobutane was the second most improved this week at 4% followed by Mont Belvieu propane at 4%.

The biggest decrease in margin was for Mont Belvieu butane at 5%, followed by Mont Belvieu isobutane at 3% as both products experienced similar price decreases at the hub. Conway propane was the only other NGL to experience a decrease in its frac spread as it dropped 1% from the previous week.

The theoretical NGL barrel price was down very slightly at Conway because of the stagnant ethane price at the hub. For the week, the barrel price was down less than 1% to \$47.59 per barrel (/bbl); however, the large improvement in the ethane margin caused the barrel margin to increase 2% to \$37.28/bbl. The Mont Belvieu barrel improved 1% to \$61.85/bbl with a 1% gain in the frac spread to \$51.00/bbl.

The most profitable NGL to make at both hubs remained isobutane due to

alkylation demand remaining strong. The frac spread margin at Conway was \$1.89 per gallon (/gal) compared to the Mont Belvieu margin of \$2.12/ gal. This was followed, in order, by C5+ at \$1.67/gal at Conway and \$1.98/ 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 11¢/gal at Conway and 60¢/gal at Mont Belvieu.

Natural gas in storage for the week of Dec. 30, the most recent data available from the Energy Information Administration, was down 76 billion cubic feet to 3.472 trillion cubic feet (Tcf) from 3.548 Tcf the previous week as heating demand continued to negatively impact withdrawals. This was 11% greater than the storage level of 3.116 Tcf posted last year at the same time and 15% higher than the fiveyear average of 3.014 Tcf.

There should be an increase in heating demand next week according to the National Weather Service's forecast, which is calling for colder than normal weather for the Southeast and parts of the Mid-Atlantic region. However, the Tri-State region is expecting normal temperatures for this time of year along with much of the rest of the country. The lone exception, besides the aforementioned Southeast, is the Southwest, which is expected to experience warmer than normal winter temperatures.

Frank Nieto

Current Frac Spread (Cents/Gal)							
January 6, 2012	Conway	Change from Start of Week	Mont Belvieu	Start of Week			
Ethane	29.25		79.76				
Shrink	18.70		19.69				
Margin	10.55	13.80%	60.07	4.94%			
Propane	114.83		139.18				
Shrink	25.83		27.21				
Margin	89.00	-1.18%	111.97	3.73%			
Normal Butane	188.23		207.25				
Shrink	29.24		30.80				
Margin	158.99	3.27%	176.45	-4.49%			
Iso-Butane	217.50		241.78				
Shrink	28.09		29.58				
Margin	189.41	3.78%	212.20	-3.04%			
Pentane+	198.05		230.95				
Shrink	31.27		32.94				
Margin	166.78	0.60%	198.01	3.03%			
NGL \$/Bbl	47.59	-0.24%	61.85	0.60%			
Shrink	10.30		10.85				
Margin	37.28	1.59%	51.00	1.38%			
Gas (\$/mmBtu)	2.82	-6.31%	2.97	-2.94%			
Gross Bbl Margin (in cents/gal)	85.55	1.50%	118.77	1.54%			
NGL Value in \$/mmBtu							
Ethane	1.61	0.07%	4.39	2.88%			
Propane	3.99	-2.38%	4.83	2.35%			
Normal Butane	2.03	1.65%	2.24	-4.26%			
Iso-Butane	1.35	2.35%	1.51	-3.03%			
Pentane+	2.55	-0.56%	2.98	2.13%			
Total Barrel Val- uein \$/mmbtu	11.54	-0.40%	15.94	0.95%			
Margin	8.72	1.68%	12.97	1.88%			

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 VOLUME 30 / ISSUE 1 / January 6, 2012

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INSIDE LOOK AT PROCESSING

Wells Fargo Adjusts Ethane Supply/Demand Model Following ATEX Express Announcement

The recent announcement by Enterprise Products Partners LP (NYSE: EPD) that it will construct the ATEX Express Pipeline to transport ethane from the Marcellus and Utica shales to the Gulf Coast caused Wells Fargo Securities to slightly revise its supply/demand model.

These revisions are primarily due to an assumed increase in the utilization rate of the ATEX Express along with a reduction in the assumed utilization rate of fractionators outside of Mont Belvieu, specifically Louisiana.

When the ATEX Express is brought online in 2014, the investment firm is forecasting that utilization will be 50% of its 190,000 barrels per day (b/d) capacity before increasing to 70% utilization in 2015, then 85% utilization in 2016 before hitting 100% of capacity in 2017. Although production continues to grow in the Marcellus and Utica shales, Wells Fargo Securities does not anticipate this growth reaching high enough levels to support the pipeline's full capacity for years given that it is only tied to the Appalachian Basin and no other supply basins.

Fractionators outside of Mont Belvieu are also likely to experience a drop in utilization as more volumes of y-grade NGLs are diverted to the new fractionators being built in Mont Belvieu. Consequently, the firm is now forecasting a drop of 34,000 b/d of ethane supply between 2011 and 2013 as Mont Belvieu fractionation expansions are placed into service.

"We estimate that midstream companies are currently transporting roughly 50,000 to 100,000 b/d of y-grade NGLs to fractionators in Louisiana and South Texas. Fractionators outside of Mont Belvieu are currently being utilized to clear any excess supply of y-grade NGLs entering Mont Belvieu, in our view. As newer, more efficient fractionators at Mont Belvieu are constructed, NGL logistics companies are likely to divert volumes away from Louisiana fractionators and back towards Mont Belvieu," the firm said in its Dec. 2011 NGL Snapshot.

However, the investment firm's pricing outlook remains unchanged as it continues to forecast a price drop between 2013 and 2017 because midstream companies are building fractionators faster than petrochemical companies are adding ethane cracking.

"Directionally, our overall outlook for ethane prices remains unchanged. While we have shaved our peak ethane oversupply estimates by almost 100,000 barrels per day based on the aforementioned changes, we continue to anticipate a period of ethane pricing weakness beginning in 2013 and persisting for several years until new worldscale ethylene crackers are placed into service," according to the report.

In the near-term, Wells Fargo Securities is forecasting ethane prices will remain strong in 2012 because of the faster-than-forecasted pace of heavy-tolight end stream cracker conversions.

Should the two to three potential worldscale ethylene crackers be brought online by 2017, Wells Fargo is forecasting that ethane prices could regain strength with the market short of ethane. "Accordingly, we envision additional longterm NGL infrastructure opportunities (e.g., processing and NGL transportation/ fractionation) for integrated midstream players," the report said.

The firm stated that its supply/demand model could be off if utilization rates of petrochemical plans either increase or fall from the 90% rate it assumed in the six years being forecasted. In terms of increased utilization, the report said that this is a possibility given the recent strength of cracker utilization that saw rates vary between 91% and 93% in November. Additionally, there are signs of a gradual domestic and global economic recovery that would further benefit the petrochemical industry.

"The ramp-up in ethane supply over the next several years could be slower than the buildout of fractionation capacity. New incremental fractionation capacity could be less than 100% utilized, as customers have committed capacity only at the fractionator and not actual volume. This, in turn, implies that the oversupply projections provided in our ethane supply and demand analysis could be overstated, as volume on growth projects is likely to ramp-up over time rather than start at 100% utilization, as assumed in our model," the report said.

On the flip side, utilization rates could be lower than the 90% Wells Fargo Securities has forecasted if the U.S. loses its ethylene cash cost advantage due to a narrowing of the crude-to-gas ratio. This ratio could be narrowed as more U.S. LNG terminals are approved to export volumes since this will result in higher U.S. natural gas prices, which could help improve NGL prices and lower the crudeto-gas ratio. This would result in U.S. ethylene derivative exports being less competitive globally.

There is also the possibility that the U.S. and global economies could suffer another setback from the continuing debt crisis in Europe.

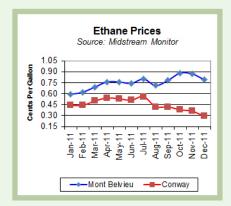
The firm pointed out that its supply/ demand model may result in an over-

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statement of this outlook as it focuses on working capacity for ethane supply and demand in an effort to present a more theoretical supply and demand forecast.

"We do not believe ethane supply will significantly exceed ethane demand

Ethane... (continued from page 1)



was the largest price for the product in more than three years when the market crashed along with the overall U.S. economy in the fall of 2008. This price level helped give October the peak monthly average price for 2011 at 88¢/gal. This represented a 49% price increase from the January average of 59¢/gal.

Although the average suffered a 10% drop to an average of 79¢/gal in December, it began to ramp back up in price in the first days of trading in 2012. According to various forecasts, ethane is expected to retain much of its strength throughout 2012 as cracking capacity will remain greater than fractionation capacity.

Conway ethane prices were moving in the same direction as their Mont Belvieu counterparts until August when the lack of transportation capacity out of the hub stunted its growth. In the first seven months of 2011, Conway ethane had grown 27% from an average of 44¢/ gal in January to its peak of 56¢/gal in July. By August, the average price had lost all of this growth and fallen to 42¢/ gal. Conway ethane closed 2011 with a 29¢/gal average price in December, a 48% decrease from its July peak and a 34% overall decrease for the 12 months. However, in the first few days of 2012, it had its highest one-day price of 35¢/gal in over a month.

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given the limitations of storage and the

reality that each barrel of ethane must

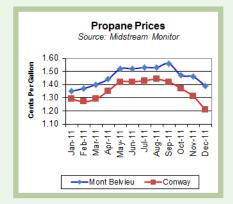
eventually find an end market," the firm

said. While ethane may be rejected in

some parts of the country because of

lower ethane prices, this would help to

Propane also experienced significant price gains in the first half of 2011 due to strong demand from the petrochemi-



cal industry, specifically from the export market. In the first nine months of 2011, the Mont Belvieu price increased 16% from an average price of \$1.35/gal in January to an average price of \$1.56/gal in September.

Ironically, the turn to the fall and winter, typically propane's strongest months, saw a drop in its fortunes as the export market fell off and a mild heating season caused demand to drop. By December, the average price had fallen 11% from the September peak to \$1.39/gal.

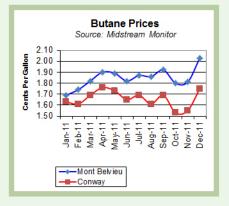
The Conway propane price experienced a similar price arc as its Mont Belvieu counterpart for much of the year as the average price improved 12% from the January price of \$1.29/gal to its peak



bring balance back to the market rather than lead to a vastly oversupplied one. – Frank Nieto

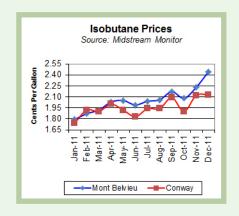
price of \$1.44/gal in August. However, once again the lack of capacity out of the hub, along with limited heating demand, caused the price to crater in December. By the close of 2011, the price had fallen to an average of \$1.21/gal, which was a 6% decrease from the January price and a 16% drop from the August peak. Unlike ethane, Conway propane prices continued to fall in the first few days of 2012.

For much of 2011, heavy NGL prices at both hubs moved along with crude prices as they seemed to traverse between a set floor and ceiling price. This changed in the fall as butane and isobutane prices experienced increased demand that helped drive prices up to record levels.



In the case of butane, this was primarily the result of traders being caught short of butane, which increased the price as they sought to cover their positions as the year drew to a close. In addition, there was increased demand for butylene and LPG that helped push prices higher. For the 12-month period from January to December, the Mont Belvieu price increased 20% from \$1.69/gal VOLUME 30 / ISSUE 1 / January 6, 2012

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to \$2.03/gal, its highest monthly average since 2008.

The Conway price also experienced a similar price increase as it improved 7% from the average price of \$1.63/gal in January to an average of \$1.75/gal in December. It is unlikely that this price surge can be sustained in 2012. In fact, throughout much of the fall of 2011 the price of butane was actually decreasing at both hubs before this late surge. The average price for November was \$1.81/ gal at Mont Belvieu and \$1.55/gal at Conway, which is a strong indicator that this increase is a short-lived one.

While the late increase in butane prices is likely short-lived, the same is likely not

true of isobutane, which experienced a continued ramp-up in prices at both Mont Belvieu and Conway with the exception of slight decreases in June and October.

Isobutane prices benefitted from both improved crude prices along with strong alkylation demand due to increased production of gasoline. This demand caused the Mont Belvieu price to hit a record of \$2.49/gal the week of Dec. 21. The monthly average of \$2.44/gal in December wasn't far behind this record and represented an increase of 36% from the average price of \$1.79/gal in January.

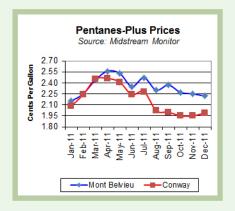
Although the Conway price didn't approach these highs, it did experience a similar price arc for much of 2011 before plateauing at the end of the year. The price improved 22% from the January average of \$1.74/gal to the December average of \$2.13/gal.

Surprisingly, the heavy NGL that had the greatest price weakness was C5+. Despite having the closest pricing relationship to crude oil, it peaked in April at both Conway and Mont Belvieu with prices largely declining throughout the rest of the year.

DCP Midstream Partners Completes East Texas Dropdown Acquisition

DCP Midstream Partners LP (NYSE: DPM) completed its dropdown acquisition for the remaining 49.9% interest in DCP East Texas Holdings LLC from DCP Midstream LLC for \$165 million. The agreement was financed through a long-term loan and the issuance of 727,520 DPM common units to DCP Midstream LLC.

The East Texas system includes a natural gas plant that is currently processing 550 million cubic feet per day, 900 miles of gathering and transportation pipelines. In addition, the system has access to the Carthage Hub. "This transaction will provide immediate cash flows to support continued distribution growth," Mark Borer, president and chief executive of the Partnership, said in a news release. "It is yet another example of how we are co-investing and effectively partnering with our general partner. With the accelerating growth opportunities announced by our general partner, we remain optimistic about our growth outlook."



Monitor

MIUSIRF

In the first four months of 2011, the Mont Belvieu price increased 19% from the January average of \$2.15/gal to \$2.56/ gal in April and the Conway price rose 18% from \$2.08/gal to \$2.46/gal in the same time. The Mont Belvieu price fell 13% from the April peak to an average price of \$2.22/gal in December. The Conway price dropped 19% from its peak in April to \$1.99/gal in December. It appears as though C5+ is gaining in strength though as both hubs experienced improved prices in the first few days of 2012.

- Frank Nieto

KEY NORTH AMERICAN HUB PRICES					
2:30 PM CST / January 4, 2011					
Gas Hub Name	Current Price				
Carthage,TX	2.86				
Katy Hub, TX	2.91				
Waha Hub, TX	2.88				
Henry Hub, LA	2.96				
Perryville, LA	2.90				
Houston Ship Channel	2.91				
Agua Dulce TX	3.01				
Opal Hub, Wyo.	2.90				
Blance Hub, NM	2.87				
Cheyenne Hub, Wyo.	2.83				
Chicago Hub	3.05				
Ellisburg NE Hub	2.96				
New York Hub	3.49				
AECO , Alberta	2.59				

Source: Bloomberg

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Enterprise... (continued from page 1)

diameter pipeline and place it into ethane service.The company will build a 55-mile, 16-inch pipeline that will connect the southern terminus of the ATEX Express to the company's NGL storage complex at Mont Belvieu.

The company is currently negotiating right-of-way agreements with residents,

landowners and community leaders along the proposed pipeline route. The system is expected to begin commercial operations in the first quarter of 2014.

MarkWest Acquires Remaining 49% Interest In Liberty JV

MarkWest Energy Partners L.P. (NYSE: MWE) has closed the acquisition of 49% interest in MarkWest Liberty Midstream & Resources LLC, held by The Energy & Minerals Group. The acquisition included approximately \$1 billion of cash and the issuance of 19.95 million unregistered MWE Class B Units to EMG.

MarkWest and EMG are also entering into a new Utica Shale midstream joint venture to develop natural gas processing and NGL fractionation, transportation, and marketing infrastructure in eastern Ohio beginning in 2012. Under the terms of the Utica joint venture, EMG will fund a majority of the initial capital expenditures required to develop the Utica midstream infrastructure.

"We are very pleased to complete the acquisition of EMG's interest in the Liberty joint venture," said Frank Semple, chairman, president and chief executive officer of MarkWest. "The Liberty joint venture has been very successful in leveraging its first-mover advantage to become the largest provider of worldclass midstream infrastructure critical to the development of the liquids-rich area

Williams Completes E&P Spin-Off

Williams (NYSE: WMB) completed its separation into two stand-alone, publicly traded corporations as 2011 came to a close with the process being completed on Dec. 31. WPX Energy Inc., its former E&P business, is now being traded on the New York Stock Exchange

RESIN PRICES – MARKET UPDATE – JANUARY 6, 2012 TOTAL OFFERS: 16,050,412 lbs CONTRACT SPOT Resin **Total lbs** Low High Bid **Offer** LLDPE - Film 4.011.348 0.61 0.73 0.60 0.64 HDPE - Blow Mold 3,405,980 0.60 0.67 0.59 0.63 PP Homopolymer - Inj 0.74 2,451,748 0.66 0.64 0.68 LDPE - Film 0.66 1,685,932 0.60 0.74 0.70 HDPE - Inj 0.63 0.67 0.60 0.64 1,354,288 PP Copolymer - Inj 1,259,736 0.68 0.78 0.70 0.66 661,380 HMWPE - Film 0.62 0.68 0.65 0.69 GPPS 380.000 0.86 0.87 0.81 0.86 HIPS 380,000 0.95 0.96 0.90 0.95 LLDPE - Inj 270,000 0.65 0.67 0.63 0.67 LDPE - Inj 190.000 0.72 0.65 0.72 0.69

Source: Plastics Exchange - www.theplasticsexchange.com

of the Marcellus. Given the quality and compelling producer economics of the Marcellus shale, we anticipate significant additional growth in our producers' volumes and our midstream assets for years to come. We are also pleased to be forming a joint venture with EMG to develop integrated midstream infrastructure in the liquids-rich corridor of the Utica Shale and look forward to providing more details in early 2012."

"We are pleased to announce the completion of the sale of EMG's interest in the Liberty joint venture to Mark-

under the "WPX" symbol with the company distributing one share of WX Energy common stock for every three shares of Williams common stock held by Williams shareholders.

This separation makes Williams, including assets held through Williams West," stated John Raymond, managing partner and CEO of EMG. "By virtue of this transaction, MarkWest has captured the strategic value associated with the consolidated interest in the joint venture and EMG will become a significant equity owner of MarkWest."

Citigroup acted as the exclusive financial advisor and Locke Lord LLP served as legal counsel to EMG in connection with the transaction.

Partners LP (NYSE: WPZ), is now a pure energy infrastructure company with a focus on connecting North American hydrocarbon resource plays with natural gas, NGL and olefins markets.

"We've now fully executed on our plans to create two separate and strong

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companies, each with a clear focus," Alan Armstrong, Williams' president and chief executive, said in a news release. "This effort has been all about unlocking value for shareholders and creating the best possible growth prospects for our businesses. Williams now has an intense focus on providing our customers with the reliable infrastructure services that will help them optimize the value of North America's significant and growing resource plays. And we offer a clear focus for our investors - we are a highdividend, high-growth energy infrastructure company with investment-grade credit ratings."

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These assets include 15,000 miles in three major interstate gas pipelines --Transco, Northwest Pipeline and Gulfstream -- that deliver roughly 14% of the natural gas consumed in the United States. These systems have more than 14 billion cubic feet per day (Bcf/d) of capacity. Williams Partners' assets also include approximately 1,000 miles of NGL transportation pipe and more than 10,000 miles of oil and gas gathering pipelines combined with a daily processing capacity of 6.6 Bcf/d and 200,000 barrels per day (b/d) of NGL production.

In addition, Williams owns a growing Canadian midstream and domestic olefins production business. These operations process the off-gas created by the oil sands production into 14,000 (b/d) of an NGL/olefins mixture. These facilities are currently being expanded along with construction of a new Canadian NGL pipeline. On the petrochemical front, Williams' Geismar facility in Louisiana currently produces 1.35 billion pounds of ethylene annually. It is also in the process of being expanded to further serve the petrochemical industry.

PIPELINES & TECHNOLOGY Enterprise, Genesis To Build GOM Crude Pipeline

Enterprise Products Partners LP (NYSE: EPD) and Genesis Energy LP (NYSE: GEL) secured agreements with a consortium of six oil producers in the Gulf of Mexico for transportation on a 149-mile crude oil gathering pipeline in the Lucius development area of the Keathley Canyon. These agreements have ensured that the project will be undertaken with an inservice target date of mid-2014.

The pipeline will be constructed and owned by Southeast Keathley Canyon Pipeline Company LLC (SEKCO), a 50/50 joint venture between Enterprise and Genesis with Enterprise serving as construction manager and operator of the new pipeline. The 18-inch diameter pipeline will be located in approximately 7,100 feet of water and will have a capacity to transport 115,000 barrels per day (b/d) from the Lucius-truss spar floating production platform to an existing junction platform at South Marsh Island 205, which is part of Enterprise's Poseidon pipeline system. The Lucius-truss platform has the capacity to produce 80,000 b/d of crude and 450 million cubic feet per day of natural gas.

The producers that secured transportation capacity on the SEKCO Pipeline were Anadarko U.S. Offshore Corporation, Apache Deepwater Development LLC, Exxon Mobil Corporation, Eni Petroleum US LLC, Petrobras America Inc., and Plains Offshore Operations Inc.

"We are very pleased to work with our partner and customers to develop this project, which will allow for the continued safe and reliable delivery of vital domestic crude oil supplies to Gulf Coast refineries," Michael A. Creel, president and chief executive of Enterprise's general partner, said in a news release. "Additionally, we expect the SEKCO Oil Pipeline to provide capacity for additional projects in the deepwater Gulf of Mexico that will feed Enterprise's downstream crude oil pipeline value chain."

Plains All American Acquires Yorktown Terminal, Jal Pipeline

Plains All American Pipeline, L.P. (NYSE: PAA) completed the previously announced acquisitions of the Yorktown (Va.) Terminal and the 82mile, 100,000 barrels per day (b/d) Jal crude oil pipeline in New Mexico from Western Refining for approximately \$220 million.

The acquisition a 128,000 b/d refinery at Yorktown, which has been idle since Sept. 2010. In addition, it includes a terminal with 6.6 million barrels of crude oil, biofuels, refined products and LGP storage capacity. The company plans on disassembling the refinery and selling it in segments while bringing the terminal back online, likely within the next two years.



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MIDSTREAM

Baker Hughes Names Craighead As President, CEO

Martin Craighead has assumed the role of Baker Hughes' president and chief executive. Craighead will build upon the successful seven-year tenure of Chad Deaton, who will remain chairman of the board.

"During Chad's tenure, Baker Hughes has undergone a significant transformation positioning us well to execute in the marketplace," Craighead said. "It is an honor to succeed him as CEO. The combination of the Baker Hughes geomarket structure, our talented workforce and our commitment to deliver the innovative products and solutions required to help find and produce hydrocarbons all contribute to meeting our promise to shareholders." Craighead, whose tenure with the company dates back to 1986, most recently served as Baker Hughes' president and chief operating officer since 2010, its chief operating officer since 2009 and senior vice president from 2009 to 2010. Prior to that, Craighead had various global and regional operational and management responsibilities for an array of the company's business units. He has worked in North America, Latin America and Asia Pacific.

"With Martin at the helm, I am confident that Baker Hughes has the right management team going forward," Deaton said. "Martin is a strong leader with an excellent technical and commercial acumen. With the Board of Directors, we have been working on this transition for some time, and we are confident that Martin's knowledge of Baker Hughes' business and depth of experience within our company will serve our investors and customers well."

Craighead has a Bachelor of Science degree in Petroleum and Natural Gas Engineering from the Pennsylvania State University and a Master of Business Administration from Vanderbilt University. The recipient of the 2010 C. Drew Stahl Distinguished Achievement Award at Penn State, Craighead serves his community in a variety of charitable organizations.

NEWS & TRENDS

CHKM To Acquire Appalachia Midstream Services

Chesapeake Midstream Partners, L.P. (NYSE:CHKM) reached an agreement to acquire Appalachia Midstream Services, L.L.C., which has midstream assets in the Marcellus shale, from Chesapeake Midstream Development, L.P. for \$865 million. This deal will make CHKM the largest gathering and processing MLP as measured by throughput volumes. All three companies are subsidiaries of Chesapeake Energy Corp. (NYSE:CHK).

The assets in this acquisition includes approximately 200 miles of gathering pipeline in the Marcellus. As of Dec. 15, the throughput on this system was just over 1 billion cubic feet per day and are operated under 15-year fixed fee gathering agreements with Marcellus gas and liquids producers. CHK has committed to generating EBITDA of not less than \$100 million in 2012 and \$150 million in 2013 from the Marcellus assets for the benefit of CHKM. CHKM will finance the acquisition, set to close by Dec. 30, 2011, through \$600 million from its revolving credit facility and equity consideration of \$265 million or 9.8 million CHKM common units. This will increase CHK's limited partnership ownership of CHKM to 46.1% from 42.3%.

"We are excited to expand our footprint into the Marcellus Shale, further increasing our basin diversification and, more importantly, exposing us to the increased drilling activity in the liquid-rich regions in the Marcellus South," J. Mike Stice, CHKM's chief executive, said in a news release. "With the closing of this transaction, we will have completed two significant acquisitions from Chesapeake in just 18 months since our IPO and will have created the industry's largest gathering and processing MLP. Given Chesapeake's dynamic growth potential and industry-leading leasehold position in the Lower 48, CHKM expects to pursue a substantial number of asset dropdowns from Chesapeake in the years ahead."

"We are pleased to announce our second gathering asset sale to CHKM. Combined with our Springridge Haynesville asset sale of \$500 million in December 2010, we have now dropped down gathering assets of approximately \$1.4 billion into CHKM," Aubrey K. McClendon, CHK's chief executive, said, "Combined with the \$1.2 billion Barnett, Permian and Mid-Continent gathering assets contributed to the formation of CHKM's predecessor in September 2009, Chesapeake has successfully monetized \$2.6 billion of its extensive midstream asset portfolio at a more attractive valuation than if these assets had stayed on Chesapeake's balance sheet.

"These Marcellus assets are a truly unique platform for growth that will benefit CHKM for decades. An asset of

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this scale and quality highlights the significant value CHKM realizes as an MLP sponsored by the most active driller in the U.S. and the largest leasehold owner

Kinder Morgan Increases Ownership In BOSTCO Project To 98%

Kinder Morgan Energy Partners LP (NYSE: KMP) acquired TransMontaigne Partners LP's 50% interest in the Battleground Oil Specialty Terminal Co. LLC (BOSTCO) project for an undisclosed sum. The agreement gives Kinder Morgan a 98% interest in the \$430 million oil terminal located on the Houston Ship Channel with the remaining 2% held by an unnamed terminal customer.

Chesapeake Reveals Total As New Utica Shale JV Partner

Chesapeake Energy Corp., Oklahoma City, (NYSE: CHK) has completed its sale of a 25% interest in an Ohio Utica shale joint venture operated with Houstonbased EnerVest Ltd. and its affiliates assets to Total E&P USA Inc., a subsidiary of Total SA, Oklahoma City, (NYSE: TOT) for \$2.32 billion.

Chesapeake received approximately \$2.03 billion and EnerVest received the remaining \$290 million. Approximately \$610 million was paid to Chesapeake in cash at closing and approximately \$1.42 billion will be paid in the form of a drilling and completion cost carry, which Chesapeake anticipates fully receiving by year-end 2014.

Of the JV acreage, approximately 542,000 net acres were contributed to the JV by Chesapeake and approximately 77,000 net acres were contributed by EnerVest.

The JV area covers all or a portion of 10 counties in eastern Ohio. To date, 13 wells have been drilled across the acreage with promising results seen from each well in terms of productivity and liquid content. The joint venture plans to ramp up the drilling activities in the com-

of storage capacity has been contracted. The facility will have 52 storage tanks that will be capable of handling residual fuel, feedstocks, distillates and other black oils. Construction is expected to complete in Q1 2014. "The project will include one of the

in the Lower 48. We look forward to

continuing to build Chesapeake's mid-

stream systems in the Haynesville,

Eagle Ford, Greater Anadarko (includ-

Nearly all of the capacity for the first

phase of the project's 6.6 million barrels

deepest vessel drafts in the Houston

ing three years with 25 rigs planned to be mobilized by 2014 to fully appraise and develop the acreage. SEC production in Total's share is expected to reach 100,000 barrels of oil equivalent per day by the

end of the decade.

Additionally, Total, Chesapeake and EnerVest have agreed to jointly develop the construction of the necessary midstream facilities to export the production from this acreage.

Total E&P president Yves-Louis Darricarrere says, "This JV will provide us with a material position in a valuable long-term resource base under attractive terms and with a top-class operator. Total is conscious of the environmental aspects linked to developing shale acreage and is confident in Chesapeake's capacity to manage the Utica shale operations in a responsible manner, utilizing the highest industry standards in this respect."

Chesapeake will be operator of the JV and conduct all leasing, drilling, completing, operating and marketing activities for the project. The agreement provides that Total will acquire a 25% share of all additional acreage acquired by Chesapeake in Ship Channel and position Kinder Morgan extremely well for the growing trend of exporting petroleum related products overseas," Kinder Morgan Terminals president Jeff Armstrong said in a news release.

the joint venture area of mutual interest. Total will also participate with Chesapeake and EnerVest in midstream infrastructure related to production generated from the assets with a 25% interest.

Total previously teamed up with Chesapeake in exchange for a 25% stake in Chesapeake's Texas Barnett shale assets in January 2010 for \$2.25 billion. The assets included approximately 270,000 net acres in the core and tier 1 areas of the Barnett.

Chesapeake chief executive Aubrey K. McClendon says, "We believe that the Utica shale is a world-class asset with world-class returns and now we have a world-class partner to help develop the play more aggressively than we could have with our own resources. This Utica transaction is our seventh significant JV and in these seven JVs, Chesapeake has sold approximately 1.5 million net acres for total leasehold consideration of \$14.8 billion while retaining 3.6 million net acres as of the JV date with an indicated value by the JV partners of \$45.7 billion."

Jefferies & Co. Inc. was financial advisor to Chesapeake.

The deal is effective as of Nov. 1, 2011.



future dropdowns."

ing the Cleveland, Tonkawa and Missis-

sippian), Niobrara and Utica plays, all of which will be available to CHKM for

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MIDSTREAM Monitor

Mitsui OSK Wins Indonesian Domestic LNG Transport Contract

A contract for the first domestic transport of Indonesian LNG was awarded to Mitsui OSK Lines Ltd. Due to growing domestic demand for natural gas, Indonesia has several LNG import terminals under construction.

Mitsui OSK will transport ups to 3.0 million metric tons per year of LNG from the Bontang LNG plant and other Indonesian facilities to a floating, storage and regasification unit (FSRU) operated by PT Nusantara Regas off Jakarta.

The project marks Indonesia's first domestic transport of LNG and Mitsui OSK's first offshore business in Indonesia.

Mitsui OSK established a joint venture with Indonesian shipping company PT Trada Maritime Tbk, which owns and operates the 126,000-cubic-meter LNG carrier *LNG Aquarius*. The joint venture is 51% owned by Trada Maritime and 49% by Mitsui OSK.

Operation is scheduled to start in late January 2012, and the transport contract runs through the end of 2022.

Nusantra Regas is owned by Pertamina, 60%, and Perusahaan Gas Negara (Persero) Tbk., 40%.

SNAPSHOT Mojave Pipeline Transports Wyoming Gas Supplies To California

California isn't a large market for natural gas yet, but El Paso Corp. is prepared for an increased demand for natural gas power generation in the region with its Mojave Pipeline.

The 362-mile pipeline is designed to transport up to 1.2 billion cubic feet per day of natural gas from the Kern River Transmission Co. pipeline system in northern Arizona. The Kern River system delivers gas from southwestern Wyoming through Utah and Nevada to Arizona.

Both pipelines were the first interstate natural gas pipelines to extend into California in 1992. Previously, the state had limited its pipeline service to intrastate service. Because of the relative lack of demand in the state, there is no storage associated with the pipeline.

According to Hart Energy's Mapping & Data Services, the system's top transport customers are El Paso Natural Gas at 510,000 dekatherms per day (Dth/d) and Occidental Energy Marketing at 40,000 Dth/d. These contracts extend to 2015.

Although demand may increase in the future, from 2006 to 2009 the system's usage and revenue decreased. In 2006, the

Mojave Pipeline's revenue was \$42 million with 461,000 Dth/d of annual throughput. By 2009, these figures had decreased to \$21 million and 378,000 Dth/d.

The system's top receipt points in 2010 were Kern River-Daggett followed by El Paso-Topock. Its top delivery points that same year were Wheeler Ridge followed by El Paso-Cadiz.

Click <u>here</u> to download map and charts.

- Frank Nieto

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