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MIDSTREAM Monitor

VOLUME 29 / ISSUE 67 / December 22, 2011 *Formerly* GAS PROCESSORS REPORT

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FEATURE

Barclays Capital: Producers Not As Vulnerable To Weak Gas Prices

Despite a natural gas market that remained depressed in 2011, the production of natural gas remained high. While this can partially be attributed to producers drilling to retain land leases, Barclays Capital reported that drilling budgets are no longer as vulnerable to weak natural gas prices because of strong prices for associated liquids.

"Revenue derived from natural gas is still a big chunk of the typical producer's business, although it is slowly shrinking. We note that most producers are already adequately hedged for 2012, providing another layer of protection to natural gas prices. The implications for this steady production and revenue shift to liquids are important. Producers are increasingly exposed to oil prices, by design. A drop in natural gas prices has less of an effect on the average producer than would have been the case in 2010," the firm said in a recent *Gas and Power Weekly Kaleidoscope.*

Barclays Capital utilized a sample of 20 producers for the report and found that the bulk of these companies are shifting from

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NGL PRICES

Mont Belvieu Butane Hits Record High

Natural gas liquids (NGL) prices continued to fall as 2011 began to draw to a close. Once again the market's only bright spots remained butane, which rose in value at both Conway and Mont Belvieu.

Butane is benefitting from an increased demand for LPG and butylene, which helped increase the price at both hubs the week of Dec. 14. The Mont Belvieu price rose 2% to $1.99 per gallon (/gal), its highest price since it was $2.04/gal the week of July 30, 2008. Although demand for butane was up in the Mid-Continent, the oversupplied nature of the Conway hub continues to push back on prices. The 1% price increase of $1.69/gal was the second-highest price in the past month.

Isobutane alkylation demand also remains high at both hubs, which has resulted in isobutane being the most valued NGL at both hubs for the past six weeks. However, it appears that prices may have hit their ceiling at both hubs. The Mont Belvieu price increased slightly to $2.44/gal while the Conway price dipped 3% to $2.06/gal. The Texas price was the highest price recorded by Hart

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NGL Prices ... *(continued from page 1)*

Energy, which dates back 12 years. However, the Conway price was the lowest at the hub since it was $1.92/gal the week of Nov. 2.

Pentanes-plus (C5+) prices remain strong at both hubs, but dipped in value at each location despite increased crude prices. While crude prices remain strong, refining margins continue to weaken, which is negatively affecting C5+ prices. The Mont Belvieu price was down 3% to $2.15/gal, its lowest price since the week of Jan. 26, when the price was $2.14/gal. The Conway price remained stagnant as it dipped 1% to $1.95/gal. This is the same level the NGL has traded at Conway for the past 10 weeks.

While heavy NGLs largely remained strong at both hubs, the opposite was true for light NGLs as both propane and ethane continued their steady plunge. The lack of a strong and consistent heating demand in much of the country has caused prices to suffer strongly at both hubs with the Mont Belvieu price dropping 6% and the Conway price decreasing 8% from the prior week. The Texas price of $1.34/gal was the lowest at the hub since the week of Feb. 9, when it was also $1.34/gal. The Kansas price of $1.16/gal was the hub's lowest price since the week of Nov. 17, 2010, when it was $1.15/gal.

Ethane prices remained the least valuable at both hubs by far. The Mont Belvieu price dropped 6% to 77¢/gal, its lowest price since it was 72¢/gal the week of Sept. 7. Conway ethane actually posted a very slight gain to 29¢/gal, but the past two weeks prices are the lowest at the hub since the week of Aug. 11, 2010. – Frank Nieto

NGL PRICES

Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
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
Nov. 30 - Dec. 6 '11	79.56	144.66	194.84	237.40	222.03	$61.10
Nov. 23 - 29 '11	80.95	145.30	183.35	222.80	217.35	$60.08
November '11	86.59	145.97	181.32	223.10	224.75	$61.43
October '11	88.04	147.23	179.87	208.39	226.82	$61.48
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
4th Qtr '10	59.07	126.07	162.01	168.24	198.89	$50.59
Dec. 15 - 21 '10	64.01	131.20	169.92	177.36	208.45	$53.27
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
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
Nov. 30 - Dec. 6 '11	31.80	129.54	169.96	220.93	205.24	$49.38
Nov. 23 - 29 '11	34.00	128.85	156.63	212.45	195.33	$48.06
November '11	35.90	130.51	154.92	212.38	194.85	$48.45
October '11	37.79	136.85	153.16	189.69	194.62	$48.80
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
4th Qtr '10	47.01	120.80	157.16	161.69	193.86	$47.80
Dec. 15 - 21 '10	51.14	125.40	169.57	171.90	205.90	$50.77

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

FRAC SPREAD

Propane Margins Suffer Significant Decreases

Frac spread margins were largely unable to make gains this week at either hub because of lower natural gas liquid (NGL) prices. The only exceptions to this rule were butane and Mont Belvieu isobutane, which continued to experience strong prices.

Mont Belvieu butane had the largest gain in margin at 2%, followed by Conway butane and Mont Belvieu isobutane each at 1%. These products continued to benefit from healthy demand levels, although it is possible that isobutane demand is beginning to level off.

For much of the second half of 2011, propane had both attractive prices and margins, but it has faced two strong headwinds. The first was a late and weak winter in terms of sustained cold weather to retain heating demand for any length of time. The second was the plunge in export demands, which had been the cause for much of the NGL's strong performance this year. Although margins at both hubs remain attractive, they experienced the greatest decreases this week as the Conway margin fell 10% and the Mont Belvieu margin dropped 7%.

Theoretical NGL barrel prices dropped 3% at both hubs, with the Conway price down to $46.14 per barrel (/bbl) with a 4% drop in margin to $34.96/bbl and the Mont Belvieu price down to $59.49/bbl with a 4% drop in margin to $48.31/bbl.

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The most profitable NGL to make at both hubs remained isobutane at $1.76 per gallon (/gal) at Conway and $2.14/gal at Mont Belvieu. This was followed, in order, by C5+ at $1.61/gal at Conway and $1.81/gal at Mont Belvieu; butane at $1.38/gal at Conway and $1.68/gal at Mont Belvieu; propane at 88¢/gal at Conway and $1.06/gal at Mont Belvieu; and ethane at 8¢/gal at Conway and 57¢/gal at Mont Belvieu.

Natural gas in storage for the week of Dec. 9, the most recent data available from the Energy Information Administration, was down 102 billion cubic feet to 3.729 trillion cubic feet (Tcf) from 3.831 Tcf the previous week. This represented a 4% increase from the 3.575 Tcf reported last year at the same time and a 10% increase from the five-year average of 3.382 Tcf.

Heating demand will continue to be low during the holidays according to the National Weather Service's forecast for next week. The service anticipates the entire northern portion of the United States to experience warmer than normal weather. This warmer weather will extend down the entire coast of California on the West Coast to Texas in the Mid-Continent and to Virginia on the East Coast. The forecast anticipates two colder pockets of weather for the week in Florida and New Mexico.

– Frank Nieto

Current Frac Spread (Cents/Gal)

December 22, 2011	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	28.55		77.29	
Shrink	20.29		20.29	
Margin	8.26	-2.54%	57.00	-7.80%
Propane	116.12		134.28	
Shrink	28.03		28.03	
Margin	88.09	-10.22%	106.25	-7.22%
Normal Butane	169.36		199.44	
Shrink	31.73		31.73	
Margin	137.63	1.17%	167.71	2.30%
Iso-Butane	206.10		244.40	
Shrink	30.48		30.48	
Margin	175.62	-3.80%	213.92	0.73%
Pentane+	195.23		215.30	
Shrink	33.94		33.94	
Margin	161.29	-1.37%	181.36	-2.74%
NGL $/Bbl	46.14	-2.81%	59.49	-3.23%
Shrink	11.18		11.18	
Margin	34.96	-4.06%	48.31	-3.66%
Gas ($/mmBtu)	3.06	1.32%	3.06	-1.29%
Gross Bbl Margin (in cents/gal)	80.40	-4.56%	112.58	-3.93%
NGL Value in $/mmBtu				
Ethane	1.57	0.18%	4.26	-6.18%
Propane	4.03	-7.68%	4.66	-6.05%
Normal Butane	1.83	1.20%	2.15	1.71%
Iso-Butane	1.28	-3.07%	1.52	0.48%
Pentane+	2.52	-0.91%	2.78	-2.52%
Total Barrel Valuein $/mmbtu	11.23	-3.23%	15.37	-3.81%
Margin	8.17	-4.83%	12.31	-4.41%

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

Barclays Capital ... *(continued from page 1)*

natural gas to liquids in terms of both drilling and revenue. This sample consists of the leading gas producers, not including those with a large international presence along with those that are primarily oil producers.

At the beginning of the shale gas boom in 2007, these companies derived 49% of their total revenue from liquids production and sales. The growth in production from liquids-rich shales has resulted in revenues from liquids growing at such a rate that the firm anticipates these same companies deriving approximately 64% of their revenue from liquids. This represents a 19% increase during this five-year period.

"Starting in 2010, a major theme among gas producers has been the shift in drilling to natural gas liquids-rich plays. This has been motivated by the obvious disconnects between liquids prices and natural gas prices. If liquids prices remain closer to oil levels, the shift in drilling should continue. We expect gas to remain decoupled from oil prices for the foreseeable future," the report said.

Barclays Capital found that liquids production from the producers in its sample was approximately 26% of total production in 2010, which the report estimates will increase by 5% to 31% in 2012.

"Since oil and NGL prices are much higher than natural gas prices on an energy-equivalent basis, small growth in liquids production amplifies the effect of liquids in terms of total revenue," according to Barclays Capital. From 2010 to

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2012, the report found that only three companies in the 20-company sample will have increased their liquids revenue meaningfully from gas revenue.

While this shift from gas to liquids production has lessened the impact of natural gas prices, it has increased the exposure to oil prices for these producers. According to Barclays Capital, should gas prices drop 20% from their assumed 2012 price level of $3.80 per million Btu but assumed oil prices remain unchanged, total revenue for this sample would fall by 7% (minus hedges). However, if the reverse were to happen with assumed oil prices dropping 20% and gas prices remaining unchanged, total revenue would fall by 13%. "This underscores the greater sensitivity of producers to liquids prices while they are becoming less dependent on gas prices."

The research found that this shift is growing as revenue would have dropped 10% in 2010 if either liquids or gas prices dropped 20% and the other remained at the forecasted level. "This does not mean that producers are immune to natural gas prices. Revenue derived from natural gas is still a big chunk of the typical producer's business, although it is slowly shrinking," the report said. – Frank Nieto

KEY NORTH AMERICAN HUB PRICES	
11:30 AM CST / December 21, 2011	
Gas Hub Name	Current Price
Carthage, TX	3.01
Katy Hub, TX	3.07
Waha Hub, TX	3.06
Henry Hub, LA	3.07
Perryville, LA	3.05
Houston Ship Channel	3.16
Agua Dulce, TX	3.01
Opal Hub, Wyo.	3.17
Blance Hub, NM	3.11
Cheyenne Hub, Wyo.	3.09
Chicago Hub	3.20
Ellisburg NE Hub	3.31
New York Hub	3.34
AECO, Alberta	2.68

Source: Bloomberg

INSIDE LOOK AT PROCESSING

Western Gas Buys Red Desert Complex From Anadarko

Western Gas Partners LP has agreed to acquire the Red Desert Complex and related assets, primarily located in the greater Green River Basin, from Anadarko Petroleum Corp. for total consideration of $483 million.

Western Gas expects the acquisition to be financed by $160 million of cash, $300 million from its revolving credit facility, and the issuance of common and general partner units. The transaction should close in January 2012, with an effective date of January 1, 2012.

The Red Desert assets are in Sweetwater and Carbon counties, Wyoming. The complex gathers, compresses, treats, processes and fractionates natural gas and NGLs produced in the Red Desert and Washakie basins. The assets include two cryogenic gas processing plants that have a current capacity of 170 MMcf/d, according to Anadarko.

RESIN PRICES – MARKET UPDATE – DECEMBER 21, 2011					
TOTAL OFFERS: 19,481,976 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
PP Homopolymer - Inj	2,710,484	0.66	0.76	0.65	0.69
HDPE - Inj	2,697,920	0.63	0.69	0.59	0.63
LLDPE - Film	2,512,024	0.61	0.7	0.59	0.63
HDPE - Blow Mold	1,377,748	0.6	0.64	0.58	0.62
LDPE - Film	909,104	0.6	0.7	0.65	0.69
GPPS	654,000	0.69	0.875	0.81	0.86
HIPS	612,000	0.91	0.96	0.9	0.95
LLDPE - Inj	546,092	0.64	0.69	0.62	0.66
PP Copolymer - Inj	542,736	0.68	0.68	0.67	0.71
LDPE - Inj	380,000	0.72	0.78	0.64	0.68
HMWPE - Film	308,644	0.64	0.71	0.64	0.68

Source: Plastics Exchange – www.theplasticsexchange.com

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Enbridge Acquires Interests In Horn River Processing Complex

Enbridge Inc. has closed its acquisition of a 71% interest in Phases 1 and 2 of the Cabin Gas Plant Development, which together will be capable of processing 800 million cubic feet per day (Mmcf/d) of natural gas. Upon completion of Phases 1 and 2, Enbridge's total investment is expected to be approximately $1.1 billion.

The Cabin Gas Plant Development is a natural gas processing facility located approximately 60 kilometers northeast of Fort Nelson, B.C. in the Horn River Basin. Phase 1 of the development will have 400 Mmcf/d of natural gas processing capacity. The plant is currently under construction and is expected to be in-service in the third quarter 2012. Phase 2 will add an additional 400 Mmcf/d of capacity and has been sanctioned by producers and received regulatory approval. The Phase 2 plant is expected to be ready for service in the third quarter 2014. Capacity for both Phases 1 and 2 has been fully taken up by Horn River producers.

Superior Pipeline To Build Mississippian Processing Plant

Superior Pipeline Co. LLC, Unit Corp.'s midstream subsidiary, announced plans to build a 30 million cubic feet per day (MMcf/d) cryogenic natural gas processing plant in Kay County, Okla. to handle production from the Mississippian oil and gas play. The facility, set to come online in Q2 2012, will bring the company's total processing capacity in the play to 100 MMcf/d.

"The construction of this new plant is consistent with Superior's strategic plan to build 'greenfield' gathering and processing assets in the Mississippian trend," Bob Parks, president of Superior Pipeline, said in a news statement. "We are constructing this plant with the flexibility to accommodate future expansions as we contract to receive additional gas volumes in northern Oklahoma."

Kinder Morgan To Build Condensate Processing Facility On Houston Ship Channel

Kinder Morgan Energy Partners L.P. will build, own and operate a $130 million petroleum condensate processing facility on the Houston Ship Channel. The facility, scheduled to come online in January 2014, will be located near its Galena Park terminal and have an initial throughput of 25,000 barrels per day (b/d) and feature the capability to expand to a capacity of up to 100,000 b/d. Officials stated that a "major oil industry customer" is underwriting, through a fee structure, the initial throughput of the facility.

"The location of our new facility, when combined with our recently announced $220 million crude/condensate pipeline, will provide customers with unparalleled connectivity to crude oil and clean products markets including refineries, chemical companies, gasoline blenders, finished product storage, outbound pipelines and marine facilities on the Texas Gulf Coast," KMP Products Pipelines president Tom Bannigan said in a news release.

This pipeline will transport crude/condensate from the Eagle Ford shale to the Houston Ship Channel and is expected to be in service in the second quarter of 2012.

East Africa, Asia Pacific/Australia Poised To Become Leaders In LNG Exporting

The East Africa and Asia Pacific/Australia regions are primed to be leaders in the exporting of liquid natural gas (LNG), according to panelists at a Dec. 13 forum in Houston sponsored by King & Spalding.

East Africa -- particularly Mozambique, Kenya and Tanzania -- is poised to become a major exporter of LNG, according to Brad Defenbaugh, manager of international gas business development for Anadarko Petroleum Corp. in The Woodlands, Texas.

"Mozambique could become one of the world's largest LNG players," Defenbaugh said. "As early as 2020, Mozambique is projected to become No. 3 in global liquefaction capacity behind Australia and Qatar."

Defenbaugh traced the history of LNG in Mozambique back to the 1950s, when exploration began. A decade later, the Pande and Temane onshore gas wells were discovered, he said, adding that exploration began to cool in the 1970s because of political unrest.

Four decades later, Anadarko made large gas discoveries in 2010 and 2011 in the Windjammer, Barquentine, Lagosta, Tubarao and Camarao fields, according to Defenbaugh.

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The company is now planning to bring in a second rig, he said. The company will continue the appraisal of existing discoveries and explore additional prospects in what it calls Area 1, which is located in the northern tip of Mozambique. Defenbaugh said other companies are planning to drill in areas to the south.

Anadarko is calling Area 1 a world-class discovery with 15-30 trillion cubic feet of recoverable resources. Area 1 is ideally suited for LNG development, Defenbaugh said, as he cited high-quality, thick, continuous sands; low drip rates; combination traps; and structural advantages.

Looking into the future, Defenbaugh foresees Anadarko having a "two-rig, accelerated drilling program and a two-train LNG facility that is expandable to six trains." Initial production is expected to be in 2018, he said.

Also in the region, deepwater exploration off Kenya's coast is creating a buzz. Deepwater leasing activity has increased, he said, and drilling is expected to commence soon.

Defenbaugh provided the following LNG information about Tanzania: More than 54 wells have been drilled since the 1950s; the industry has two producing gas fields in the Songo Songo and Mnazi Bay; two discoveries were reported in 2010 and another in April 2011; and additional exploration activity is planned in 2012.

LNG Market In Asia Pacific/Australia

Dan Rogers, a partner in King & Spalding's global transactions practice group who works out of the firm's Singapore office, had this to say about LNG activity in the Asia Pacific/Australia region:

"The most exciting thing going on in Asia right now is the rise of unconventional gas to LNG. Most of it right now is coalbed methane, and a lot of that activity is in Australia. But to be fair to our Indonesian friends, there's actually coalbed methane that's being produced into LNG today. There's a project in Bontang that's producing very small quantities."

He said that five to seven years ago, when looking at final investment decisions (FIDs) in Asia, no unconventional projects would have been on the list. But that has changed in a relatively short period of time.

"You've got three [unconventional projects] that have now taken FID. There's another one that's going to be taking FID pretty soon. My bet is that in another five years most of this list will be of the unconventional nature rather than the conventional nature," Rogers said.

Offshore LNG projects "really will be the next generation of LNG project facilities," he added. "Shell's offshore Prelude facility will be the size of three football fields. It has reached FID and is moving forward. I'm told there are hundreds of new patents involved in developing this facility."

Another LNG trend is a new class of project sponsors. "What you saw in the past were the super vendors -- the ExxonMobils, the Chevrons, the Shells. Do you see any super majors up there?" he asked as he pointed to a PowerPoint image titled "New Class Of Asian Export Project Sponsors." The image listed such companies as PetroChina Co. Ltd., Inpex Corp., Encana, Apache and EOG Resources.

Rogers also talked about what he said "may be a uniquely Asian phenomenon." He was referring to the concept of intra-country export-import deals. The concept involves the "exporting" of LNG from one part of a country and "importing" it to buyers in another part of the same country.

For example, Rogers said that at least one import terminal in Indonesia is expected to be served in part by Indonesia LNG production. Meanwhile, Malaysia has announced that two to three import terminals will be served in part by Malaysian LNG production.

– Mike Madere

E&Ps, Midstream Operators Launch 7 Of 13 December IPOs

Energy-company IPOs have dominated the new-stock scene this month, launching seven of the 13 new U.S.-exchange listings through Dec. 15. The six others capturing investor interest as 2011 wanes and many portfolios are being righted for tax purposes are a social-gaming-service, fashion house Michael Kors Holdings Ltd., a REIT, a social-business software firm and two healthcare-industry operators.

Among the energy IPO pricings this month, onshore-U.S.-focused E&Ps and pipeline operators whet stock-buyers' appetites.

- Inergy Midstream LP (NYSE: NRGM) priced 16 million units at $17 each. The new natural gas storage and transportation company is a product of John Sherman's propane-distribution-focused Inergy LP, based in Kansas City, Missouri.
- Randy Foutch's Laredo Petroleum Holdings Inc. (NYSE: LPI) sold 17.5 million shares at $17 each. Tulsa-based Laredo focuses on oil and gas E&P in the Permian Basin and Midcontinent.
- Michael Starzer's Bonanza Creek Energy Inc. (NYSE: BCEI) sold 10 million shares at $17 each. Denver-based Bonanza owns oil-producing assets in the San Joaquin Basin of California.

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- Randy Olmstead's Mid-Con Energy Partners LP (Nasdaq: MCEP) sold 5.4 million units at $18 each. Tulsa-based Mid-Con focuses on oil and gas E&P in the Midcontinent.
- Antonio Sanchez III's Sanchez Energy Corp. (NYSE: SN) sold 10 million shares at $22 each. Houston-based Sanchez has leasehold over Eagle Ford shale in South Texas, over Haynesville in northwestern Louisiana and in Lewis and Clark, Meagher, and Cascade counties, Montana.
- John Weinzierl's Memorial Production Partners LP (Nasdaq: MEMP) sold 9 million units at $19 each. Houston-based Memorial operates oil and gas properties in South Texas and East Texas.
- Norman Szydlowski's Rose Rock Midstream LP (NYSE: RRMS) sold 7 million units at $20 each. Tulsa-based Rose Rock owns oil gathering, transportation, storage and marketing assets in Colorado, Kansas, Montana, North Dakota, Oklahoma and Texas.

These IPOs follow several November energy-stock pricings.

- Jonny Brumley's Enduro Royalty Trust (NYSE: NDRO) sold 13.2 million units at $22 each. Austin, Texas-based Enduro buys net-profits interests in Brumley's Enduro Resource Partners LLC properties in Texas, Louisiana and New Mexico.
- Eric Mullins and Charles Adcock's LRR Energy LP (NYSE: LRE) sold 9.4 million units at $19 each. Houston-based LRR has 30 million BOE of proved reserves in the Permian Basin, Midcontinent and Gulf Coast.
- Chesapeake Energy Corp.'s Chesapeake Granite Wash Trust (NYSE: CHKR) sold 20 million units at $19 each. It holds interests in production from a portion of Chesapeake's Granite Wash-play leasehold in the Anadarko Basin.
- Christian Beckett's Pacific Drilling SA (NYSE: PACD) sold 6 million shares at $8.25 each. Houston-based Pacific operates ultra-deepwater drillships.

Prior to pricings this week, Gabriele Sorbara, vice president, E&P research, for Caris & Co., forecast, "We believe these transactions will be well received by the market, given their exposure to oily plays, including the Permian Basin, the Eagle Ford shale and Niobrara, to name a few."

Foutch's Laredo Petroleum Holdings is particularly eye-catching, "given its exposure to the horizontal Wolfcamp/Cline shales in the Midland Basin. While Laredo's IPO pricing and valuation should be positive for the Permian players—especially the horizontal Wolfcamp players—we believe this week's...flurry of IPO activity would bring excitement to the entire E&P sector into year-end."

– Nisssa Darbonne

Gas Bears Unite

As far back as early 2011, some voices in the industry were recommending a long position on natural gas in the face of a weak domestic gas market. Even though the oil-to-gas price ratio has widened, and gas volumes have not fallen off despite rig redeployments to oily plays, it hasn't been hard to find contrarian investors willing to buy gas now.

Private-equity firms, for example, have already started to back management teams having long-gas business plans, particularly in the wake of 2011's big-name corporate mergers—deals primarily driven by buyers' desire for shale-gas plays.

But recent reports from Barclays Capital and Simmons & Co. International suggest a gas-market turnaround won't occur in 2012, and it may not surface in 2013, either. Barclays' analysts believe market circumstances in the near future will put the Nymex gas price at $3.80 per thousand cubic feet (Mcf) for 2012, and even lower for 2013. Prices might only begin to retake $4 by 2015. At press time, the 12-month strip was still below $4.

Growing U.S. supply has been offset by declining LNG deliveries to North America, growing exports to Mexico, and falling exports from Canada.

One Big Problem

There is only one problem with natural gas: there is too much of it. According to Barclays, U.S. supply growth has exceeded demand growth significantly and consistently for the past several years. And the firm's analysts don't look for a change any time soon.

"The biggest factor driving the change in the outlook is where we thought there could be a migration away from dry gas to oil," says Michael Zenker, managing director of commodities research for Barclays Capital, the investment banking division of Barclays Bank Plc. Zenker now says such a transition is unlikely. More new rigs are coming to market, and the economics are not sufficient to lure rigs away from gas. Further, the associated gas content of liquids-rich wells is stacking up more supply.

In a recent update on the gas market, Zenker's group reported that U.S. supply has ratcheted up by 10 billion cubic feet (Bcf) per day from 2007 through 2011,

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while demand has grown by less than 1 Bcf per day. The gas-rig count has been constant, despite an expected gas price of $12 per million cubic feet calculated to make drillers indifferent to pursuing dry gas or liquids.

At a recent industry gathering in Houston, Pearce Hammond, managing director at Simmons & Co. International, put forth a similar view of gas prices for 2012. When asked when prices would strengthen, he said, "2012 is not that year."

Nearly a quarter of U.S. gas is now produced from shales, where drilling efficiencies are just hitting their stride. Further, companies are at work in the most ideal parts of the plays—the sweet spots—so production will keep climbing. Hammond noted that Devon Energy Corp. indicates its Barnett shale production can be held flat as far out as 2022 with just a dozen rigs.

Shales currently contribute close to 16 Bcf per day to U.S. supply. That contribution also fuels what Hammond expects to be 1.3 Bcf per day of U.S. gas oversupply in 2011, attenuated to only 0.6 Bcf per day of excess supply by midyear 2012. Barclay's most recent update forecasts supply growth of 2.2 Bcf per day in 2012, overwhelming the modest 0.6 Bcf of expected demand increase.

For many companies, the rationale for continued gas drilling is a lack of oil prospects. Also, investors demand production-volume growth, and companies need to drill to hold acreage by production. Finally, associated gas production from the booming oil and liquids-rich plays is on the rise.

Barclays' analysts say completing and connecting gas wells is the only bottleneck holding back supply. That inventory of wells waiting on completion will persist, implying yet more volume waiting in the wings.

"The supply pause we thought might occur in late 2012 may never happen," says Zenker.

Associated gas has been particularly worrisome to Simmons & Co. International analysts. They noted in July 2011 the difficulty of measuring associated gas, as it has been flared in emerging plays like the Eagle Ford, Bakken, and Mississippi Lime, due to lack of infrastructure. Those plays are receiving an influx of midstream attention, introducing yet more gas into the system. Associated gas made up the bulk of the firm's projected production increase of 1.2 Bcf per day for 2012, up from this year's 62.7 Bcf per day of U.S. dry-gas production.

Barclays' Zenker notes he is often asked whether all this gas will cause a revenue shortfall for producers, driving their cash flow negative and forcing them to reduce drilling. But this isn't likely in the near future, he says.

"Capital constraints could be a factor, but we don't see that in 2012. Producers are hedged and cash-flow neutral right now," he says.

The only major supply-side surprise has been reduced imports in response to domestic supply growth since 2009. Barclays Capital and Simmons & Co. note Canadian and LNG imports have fallen noticeably through 2011, and both expect the trend to continue.

"We think imports will be near minimums of 700 million cubic feet (MMcf) per day via liquefied natural gas (LNG)," says Zenker, partly driven by prices in North America, and partly by LNG demand in other parts of the world. Simmons' analysts believe 0.9 Bcf per day is the level of imports needed to maintain re-gasification facilities.

The last factor in supply is the amount of gas in storage. Both firms have pegged 2012 storage numbers at close to 4 trillion cubic feet (Tcf). Barclays has revised that forecast to 3.96 Tcf. Simmons suggests that with an oversupply greater than 0.8 Bcf per day, gas could hit maximum storage capacity of 4.15 Tcf in 2012.

The power sector will need to take a growing chunk of the burden of balancing the market in the years ahead.

Counting On Demand

Domestic gas oversupply and resulting low prices occurred despite an abnormally cold 2010-2011 winter and an excruciatingly hot 2011 summer throughout much of the U.S. Both weather patterns ameliorated supply and price concerns to some extent.

"Demand has been a hero," said Hammond, noting demand was up 1 Bcf per day in the wake of the Japanese nuclear disaster and re- bounding U.S. petrochemical demand. He forecasts demand will grow to 14 Bcf per day on the back of coal retirements and petrochemical use, but it will take eight years to get there.

Barclays' Zenker doesn't envision any significant demand upside outside of weather patterns. "Weather is about the only big surprise we could get in demand for the foreseeable future," he says. Low gas prices incentivizing additional industrial use could deliver the next-biggest surprise, but he isn't counting on it.

"There isn't a lot of industrial capacity out there ready to absorb gas," he says.

There is, however, regulatory activity that will significantly impact gas demand: the Environmental Protection Agency's Cross-State Air Pollution Rule, slated to go into effect January 1, 2012. The CSAPR, as it is known, requires 27 states to improve air quality by reducing power-generation emissions. The targeted emissions are SO2 and NOX. A further seasonal ozone and NOX reduction kicks in on May 1, 2012. According to the EPA, through CSAPR and other rule implementations power plant SO2 emis-

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sions will be cut by 73% and NOX by 54% from 2005 levels.

Zenker says there will be a noticeable impact on coal-fired generation, though the impact of coal-plant retirements will be gradual.

"We do fully expect CSAPR and HAPs-MACTS will result in some coal-plant retirements, but not as much yet in 2012," Zenker says. These are the EPA's Hazardous Pollutants/Maximum Achievable Control Technology rules, a corollary to CSAPR mainly targeting a 91% reduction in mercury releases from coal plants.

The reason for the projected staid near-term impact of this aggressive regulation is that the power facilities most vulnerable to CSAPR are already underutilized. Thus, while the rules won't result in much incremental gas demand now, Barclays predicts demand could reach 30 gigawatts over the next several years.

"By 2015, this could result in gas demand of 2 Bcf per day, but for next year, just 0.6 Bcf," Zenker says. CSAPR is evolving, so projected results from its implementation vary.

"There is no CSAPR expert. Others have calculated different numbers, and the reality of how utilities operate those plants could vary wildly," he notes. That translates to upside risk.

The final demand question mark is LNG exports from North America. Barclays has already modeled 2 Bcf of LNG export into demand, but not until 2016-2017.

"We could be surprised by a large number of (export) facilities coming online. We pegged the number at two," says Zenker. "The reality is, resource owners could monetize a lot more gas through LNG than expected." However, the firm doesn't believe any projects will achieve first LNG before 2015.

Go Long?

How does this wet-blanket prediction square with industry participants advocating aggressive, long-gas stances?

"The reality is there are some people who are more optimistic than we are," notes Zenker. "North of a $5 gas price, a lot of development becomes highly economic. Since 2008, there has been an expectation of rational producer behavior, but that's not how they operate." He also notes some gas plays are economic even at Barclays' low gas-price forecast. And, there is always liquids production, which even some new entrants are pursuing.

"We've seen a dearth of interest from joint venture money in dry gas," Zenker says, noting that all the JV activity is on the liquids side. He believes that $5.50 per Mcf is an equilibrium price at which demand and rate of return are met for most projects. Barclays has advised clients who are long gas to sell forward.

Buyside consultant Energy Solutions Inc. has a less pessimistic view of U.S. oversupply.

In a recent missive, the 15-year-old firm predicted production growth of 1.6 Bcf per day, rather than the 4.5 Bcf per day it forecast for 2011.

This is 0.6 Bcf per day less than Barclays' expectation of 2.2 Bcf per day production growth in 2012, and more bearish than Simmons & Co.'s midyear estimate of 1.2 Bcf per day growth for the same year. Even though many forecasters agree on the upward direction of U.S. natural gas supply, not everyone agrees on the degree.

The price question will come down to producers' responses, Zenker cautions.

"I'd still point out that the primary driver of prices is how suppliers approach the market."

– Brian K. Tully

PIPELINE & TECHNOLOGY

TransCanada Receives Additional Support For Keystone XL Pipeline

TransCanada Corporation, Calgary, (NYSE, TSX: TRP) has received additional binding commitments in support of the Keystone XL pipeline following the successful conclusion of the Keystone Houston Lateral Open Season.

Subject to regulatory approvals, TransCanada will proceed with an approximate 80 kilometer (48 mile) pipeline extension from the proposed Keystone XL system to facilitate deliveries into the Houston refining market (the Houston Lateral) and increase the capacity of Keystone XL to 830,000 barrels per day. The Keystone Pipeline System has now secured long-term firm contracts in excess of 1.1 million barrels per day.

"This significant demand and additional long-term customer commitments confirm the continued strong shipper support of TransCanada and the need for Keystone XL to move forward," says Russ Girling, TransCanada's president and chief executive officer. "Proceeding with the extension of the Keystone XL system to Houston and increasing capacity on the pipeline system will further enhance the connection of a secure, growing and reliable supply of Canadian crude oil and domestic U.S. crude oil with the

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largest refining market in North America while providing additional flexibility to our shippers."

The Keystone Houston Lateral facilities will more than double the U.S. Gulf Coast refining market capacity directly accessible from the Keystone Pipeline System to over four million barrels per day by providing access to the key refining market in the Houston area.

The Keystone Houston Lateral and capacity expansion are included in the original scope of the Keystone XL U.S. Presidential Permit application process which received a Final Environmental Impact Statement in August. Based on the Department of State's announcement that further assessment of an alternative route for Keystone XL is needed in Nebraska to move forward with the National Interest Determination by the first quarter of 2013, Keystone XL including the Houston Lateral, is expected to be in service by the end of 2014 subject to regulatory approvals.

Williams Partners Seeks Additional Capacity For Transco

Williams Partners L.P. announced that its Transco pipeline has filed an application with the Federal Energy Regulatory Commission (FERC) to provide 250,000 dekatherms per day of incremental, year-round firm natural gas transportation capacity to serve growing markets in the Northeast region by November 2013.

The Northeast Supply Link project is designed to expand certain segments of the existing Transco pipeline in Pennsylvania and New Jersey to transport robust domestic supplies of natural gas to growing markets in the Northeast.

"Because of its existing location, the Transco pipeline is well positioned to connect vast domestic natural gas supplies with growing markets in New York, New Jersey and Pennsylvania," said Randy Barnard, president of Williams' natural gas pipeline business. "This increased access will not only enhance reliability of natural gas service, but should contribute to a more stable gas and electric pricing environment in markets served by the project."

The proposed expansion will primarily consist of approximately 12 miles of new pipe at various locations in Pennsylvania and New Jersey, in addition to a new 25,000 horsepower compressor facility in Essex County, N.J., along with other facility modifications. The capital cost of the project is estimated to be $341 million.

Most of the new pipe will be installed either entirely within or parallel to existing pipeline and utility rights-of-way. The new Essex County compressor facility will be constructed on land already owned by Williams. All other compression-related activities will be performed entirely within existing compressor station facilities.

If approved, compressor station construction would begin in November 2012 with pipeline construction following in the spring of 2013.

Shell's Westward Ho Crude Pipeline Generates Interest

Shell Pipeline has received a very encouraging response to its non-binding solicitation of interest period for firm capacity on its proposed Westward Ho pipeline project. The indicative response from shippers supports a 30-inch pipeline build from St. James, LA to the Port Neches/Nederland, TX area. Based on the favorable response, Shell Pipeline plans to seek binding firm capacity commitments from shippers for the project through an open season in early 2012.

Shell Pipeline's Westward Ho project would enhance access for US Gulf of Mexico refiners to the anticipated increased domestic production and foreign crude available at St. James, LA. Additionally, the Westward Ho would complement the new storage and logistics infrastructure that is currently being built in the St. James and Clovelly, LA areas.

The Westward Ho could enable the distribution of approximately 600,000 bbls per day of crude across the region depending upon crudes types shipped. SPLC estimates that the expansion could be completed and commissioned by early 2015.

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MIDSTREAM Monitor

VOLUME 29 / ISSUE 67 / December 22, 2011 *Formerly* GAS PROCESSORS REPORT

Koch Pipeline Terminal Receives Eagle Ford Crude

Koch Pipeline Co. L.P. is receiving Eagle Ford crude oil at its Helena Terminal in Karnes County, Texas.

"This new terminal is serving a growing area of Eagle Ford production," said Kim Penner, president of Koch Pipeline Co. "The terminal will allow more efficient transportation of crude oil by eliminating the distance trucks have to travel. The crude oil will be transported from Helena to Pettus via a new 16-inch pipeline to be commissioned soon. That 24-mile pipeline ties into our existing lines in Pettus for transportation to Ingleside and Corpus Christi."

Six Koch Pipeline employees support this terminal and the new line. As a result of the company's ability to quickly adapt to customer needs, Koch Pipeline has added 24 employees at its Corpus Christi operations headquarters and has 29 positions open.

"We need more talent," said Larry Van Horn, vice president of South Texas operations. "From operators to inspectors to engineers, Eagle Ford is creating career opportunities with Koch Pipeline."

With this new 16-inch pipeline, and the other investments Koch Pipeline has made in terminals, lines and lease agreements with other companies, the company will have increased transportation capability significantly into Corpus Christi and Ingleside.

"We are also working with producers to develop gathering lines, either to common tank batteries or through tie-ins to our existing system," Penner said.

Koch Pipeline's 20-inch line from Karnes County to San Patricio County that ultimately will tie into Ingleside is progressing. The line is expected to be in service in mid-2012.

The company is the largest transporter of South Texas crude oil.

NEWS & TRENDS

Market Changes Contribute To Growing Marcellus Spot Trading

Marcellus-area spot natural gas trading has more than doubled from under 1 billion cubic feet per day (Bcfd) to almost 2 Bcfd on average since 2005, reported the U.S. Energy Information Administration.

Several factors are likely contributing to increased natural gas spot trading in the Marcellus area, including Marcellus production gains, new trading points, and greater reliance on natural gas for electricity generation. Bentek Energy LLC estimates that Marcellus natural gas production now exceeds 4 Bcfd, up significantly in recent years. In addition to several new Marcellus production area trading points, the extension of the Rockies Express Pipeline (REX) to Clarington, Ohio, led to new natural gas trading points formed to facilitate commercial transactions. REX deliveries to Clarington, Ohio averaged over 1 Bcfd from January through December of 2011. Furthermore, falling natural gas prices coupled with historically high spot coal prices created incentives for generators to use more natural gas to fuel their plants. Pennsylvania is one state that has seen significant growth in natural gas-fired electric generation.

The largest gains in Marcellus area trading volumes were at the Tetco M3 trading point, up 178% to 0.5 Bcfd, and at the Dominion South trading point, up 168% to 0.7 Bcfd since 2005.

TNK-BP Will Invest $10B In Russian Midstream Infrastructure

TNK-BP has signed a long-term contract with OJSC Transneft for the transportation of oil through the Zapolyarye-Purpe pipeline, which will connect Yamal fields with the East Siberia–Pacific Ocean oil pipeline.

The company intends to commence supplies of oil from new fields in the Yamalo-Nenets Autonomous Area and northern Krasnoyarsk region in 2016 and plans to increase volumes in the midterm future.

TNK-BP will be the largest supplier of hydrocarbons to the Zapolyarye-Purpe pipeline. The oil reserves and resources of the company's fields in this region under 3P + 3C categorization are estimated at approximately 5 billion barrels. TNK-BP will invest up to $10 billion in the midterm for the construction of necessary infrastructure at the fields, including the construction of feed pipelines.

"TNK-BP is the first oil company to sign a contract for transportation of oil through the Zapolyarye-Purpe pipeline, construction of which will open a new stage in development of the oil and gas province of Yamal and northern Krasnoyarsk region. Mutually beneficial cooperation between the state and oil and gas companies is one of the most important conditions for putting new fields into development and efficiently developing the abundant resources of the region," said German Khan, Executive Director of TNK-BP.

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Buccaneer Energy Inks Gas-Supply Agreement For Kenai LNG Facility

Buccaneer Energy Ltd. has executed a gas sales contract withConocoPhillips to supply natural gas to ConocoPhillips' LNG facility on the Kenai Peninsula, located approximately 10 miles northwest of Buccaneer's 100% owned Kenai Loop project.

The contract with ConocoPhillips commences when Kenai Loop # 1 starts production in December 2011. The contract is expected to conclude on 30 April 2012, with the potential to end earlier, if construction of the Cook Inlet Natural Gas Storage ("CINGSA") facility is completed prior to this date.

Once the CINGSA facility is on line, Buccaneer has a gas sales contract in place with ENSTAR - the largest gas utility in Alaska. ENSTAR will purchase the Kenai Loop gas and inject into CINGSA for storage and use at a later date.

Buccaneer is not obligated to sell any gas under the ConocoPhillips contract, however it gives the Company both flexibility and surety as it will allow the Kenai Loop # 1 well to flow continuously from the commencement of production, while being able to sell gas either into the ConocoPhillips gas contract or the daily auction to supply local peak demand requirements during the Northern Hemisphere winter. The daily auction to supply gas does not provide guaranteed daily volumes.

Buccaneer has the ability to sell up to 2.5 BCF to ConocoPhillips under the contract. The pricing as part of the gas sales contract is consistent with recently executed gas contracts.

"This gas sales contract with ConocoPhillips is another milestone for Buccaneer, " said Buccaneer Director Dean Gallegos. "With secured contracts for the gas produced at Kenai Loop #1 from the time of first production, and the flexibility to be able to sell into the peak demand daily auction market, places Buccaneer in a strong position with substantial cash flows from December 2011 rather than April 2012. Further, the ability to flow the well continuously will give us the opportunity of assessing the reservoir performance prior to the commencement of the ENSTAR gas contract in April 2012. If the reservoir performs as testing has indicated, it will give us the ability to increase the production rate from the anticipated minimum of 5.0 MMCFD."

SPOTLIGHT

Great Lakes Transmission: Serving Western Canada Since 1967

As natural gas production out of Western Canada increases, pipelines out of the region will continue to experience increased usage. One of these pipelines is the Great Lakes Gas Transmission Pipeline, which travels 2,115 miles from Emerson, Manitoba, Canada, to markets in the Midwest.

The system, owned by TransCanada Corp. and TC Pipeline LP, is one of the oldest out of the region as it's been in operation since 1967. The system features 14 compressor stations that allow it to transport up to 2.5 billion cubic feet per day of gas to markets in Minnesota, Wisconsin, Michigan and eastern Canada.

According to Hart Energy's Mapping & Data Services, the pipeline's top transport customers in 2010 were TransCanada Pipelines at 1.3 million dekatherms per day (Dth/d). This was followed by Shell Energy North America (US) LP at 201,000 Dth/d; ANR Pipeline at 191,000 Dth/d; Consumers Energy Co. at 150,000 Dth/d; Gavilon LLC at 88,000 Dth/d; BP Canada Energy Marketing Corp. at 81,000 Dth/d; Michigan Consolidated Gas Co. at 80,000 Dth/d; Dynergy Marketing & Trade LLC at 64,000 Dth/d; Cargill Inc. at 61,000 Dth/d; and Virginia Power Energy Marketing Inc. at 58,000 Dth/d.

While the system's revenue increased from $268 million in 2006 to $293 million in 2009, its annual throughput dropped from 2.24 billion cubic feet (Bcf) in 2006 to 2 Bcf in 2010. These changes in transportation volumes reflect increased volatility on the pipeline. In 2010, the system's top receipt point was Emerson, followed by Farwell. The top delivery point was St. Clair followed by Fortune Lake.

• Click here to download map and charts.

– Frank Nieto

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