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FEATURE

Marcellus Midstream 2011: MLPs Increase Focus On The Marcellus

Nowhere is the economic rebound in the midstream industry more obvious than with the market for master limited partnerships (MLP), which have returned to their pre-collapse performances and are expected to continue to grow according to a panel of MLP experts that spoke at Hart Energy's Marcellus Midstream conference this week in Pittsburgh.

In 2008, the [MLP] market began to unravel as investors fled to what they perceived were safer investments," Kenny Feng, president and chief executive officer of Alerian, said. "In 2009, the MLP sector improved because infrastructure MLPs proved their worth through their fundamentals by growing distributions and main-



(from left to right) Rob Lane, managing director, Madison Williams; Kenny Feng, president, CEO, Alerian; Mark Huhndorff, managing director – investment banking midstream, coal and alternative energy, Raymond James & Associates; Frank Nieto, editor, *Midstream Monitor*, MidstreamBusiness.com

taining their stable cash flows through the [economic] turmoil." (continued on page 3)

INSIDE LOOK AT PROCESSING

Marcellus Midstream 2011: Range, MarkWest Speed Ahead In The Wet-Gas Marcellus

Range Resources was the early pioneer in the modern Marcellus shale play in the Appalachian Basin, and today it enjoys an enviable position. Of its 1.3 million acres in the basin, it considers a whopping 700,000 acres prospective for the Marcellus, said John Pinkerton, chairman and CEO of Fort Worth-based Range Resources Corp., speaking at Hart Energy's Marcellus Midstream conference in Pittsburgh.

Range had deep roots in Appalachia, and its resources included an extensive database of existing well data and years of operating experience. Early on, one of its focus areas was the liquids-rich side of the play, centered on Washington County in southwestern Pennsylvania.

To develop this side of the emerging play, Range was interested in forging a relation-

ship with a gas processor. "We really liked the wet part of the play because of the superior economics, but we had limited capital. We also had a pretty good view of what we were good at and not good at," said Pinkerton. The firm had handled some midstream projects internally, and was well aware of the demands of that complex sector.

Another party interested in the wet-gas area of the Marcellus was MarkWest Energy. The Denver-based gas processor had been active in the Appalachian Basin for years, and had extensive local experience in processing and marketing of natural gas liquids.

"Being able to capture value from liquids is the sweet spot for us," said Frank Semple, MarkWest chairman, president and CEO. The two executives participated in a Fire- (continued on page 4)

Marcellus Midstream 2011: An Update On Private-Equity-Funded Projects

The need to match midstream infrastructure growth with fast-paced upstream development in the Marcellus Shale has attracted the attention of private-equity investors such as Energy Spectrum Capital, which was founded in 1996. At Hart Energy’s Marcellus Midstream conference, held March 22 and 23 in Pittsburgh, Pa., Ben Davis, a partner with the private-equity midstream specialist, detailed three companies it is backing in the shale play: Laser Midstream Co. LLC, based in Houston and active in Susquehanna County, Pennsylvania, and Broome County, New York; Ceritas Group, active in central Pennsylvania’s five counties beginning with the letter “C”, known as the C counties; and Stonehenge Energy Resources LP, based in Westminster, Colorado, which has projects in Butler and Beaver counties, Pennsylvania.

All are funded from Energy Spectrum’s \$612-million Fund V. Davis noted the company is about a month away from closing its sixth fund, of \$900 million to \$1 billion. It pursues both acquisition and new-build opportunities. When selecting companies for its portfolio, Davis noted that the No. 1 priority is the management team. Midstream assets are attractive to investors because they

are “real, hard and long-lived” assets, as well as being essential to energy development. Additionally, there are complex barriers to development of midstream infrastructure, so significant expertise is required for success.

Laser is involved in a dynamic project providing pipeline connections from Susquehanna County, Pennsylvania, across the southern New York border and up through Broome County, New York, where it will connect into the Millennium pipeline. The company is constructing 10 miles of pipe in New York and 23 in Pennsylvania, with an expected in-service date of this summer. Also being constructed is a 10,000-hp compression plant with expansion potential to 30,000 hp.

“This was not a quick task to get this permitted,” noted Davis. Regulatory issues in New York were extremely complex and added significant time and cost to the projects. Producer partners are Williams, Cabot Oil & Gas, and Carrizo Oil & Gas. Additionally, Laser partnered with Delphi Group.

Also under construction are laterals and interconnections to the TGP compressor station, involving 8 miles of 16-inch pipe, also expected to be in service by this summer. A further expansion will connect one of these laterals, the Montrose, with TCP laterals, involving 8 miles of 16-inch pipe, expected to be in service in January. Interconnections are also planned with Williams’ Springville project via a 32-mile stretch to Transco.

Initial project capacity is some 425 million cubic feet per day and it is nearly filled, according to Davis. Expansions 1 and 2 will add a further 500 million per day, and less than 75% of that capacity is committed so far. These three expansions will have total new capacity of 1.4 billion cubic feet per day.

The Ceritas Group, based in Houston, entered the Marcellus within the last few months. It received a \$300-million capital commitment from Energy Spectrum and Quantum Energy Partners. Its focus is central Pennsylvania, where it plans to build 20 to 30 miles of pipeline and follow-on projects. This is Energy Spectrum’s second project with Ceritas, as it is with Laser. In a Q&A session following Davis’ talk, Ceritas president Richard Sherrill noted that the company is in the final stages of securing its anchor producer for the project.

Finally, Davis highlighted the progress of Stonehenge Energy Resources LP’s gathering and processing infrastructure development to handle wet gas in Butler County, Pennsylvania. Rex Energy Corp. is the anchor producer in the project and a partner. The company’s plans involve a 40-million-cubic-feet-per-day cryogenic processing plant, NGL storage, and a number of other assets to handle the 5.4-gmp gas from the play—“a great processing opportunity,” said Davis. The company is also installing a depropanizer and a deethanizer tower as well. The compressor units are capable of using ethane as a fuel, a significant benefit where ethane take-away capacity is limited.

Stonehenge is also putting in a second, 50-million-cubic-feet-per-day cryogenic plant, a residue gas pipeline, and interconnections to Dominion’s line.

Davis noted that the structure of the deal with Rex Energy included a stake in the plant. Stonehenge formed a new JV (Keystone Midstream Services) owned 60% by Stonehenge and 40% by Rex. Additionally, Rex’s partner Sumitomo Corp. is partnering on both the upstream as well as the midstream development.

– Susan Klann

KEY NORTH AMERICAN HUB PRICES	
1:17 PM CST / March 24, 2011	
GAS HUB	CURRENT \$
Carthage, TX	4.08
Katy Hub, TX	4.17
Waha Hub, TX	4.13
Henry Hub, LA	4.18
Perryville, LA	4.15
Houston Ship Channel	4.16
Agua Dulce TX	4.17
Opal Hub, Wyo.	4.03
Blance Hub, NM	4.04
Cheyenne Hub, Wyo.	4.06
Chicago Hub	4.42
Ellisburg NE Hub	4.51
New York Hub	4.67
AECO , ALBERTA	4.01

Source: Bloomberg

MLPs Focus On The Marcellus... (continued from page 1)

Alerian was the first company to launch a real-time index for the MLP space when it introduced the Alerian MLP Index (AMZ) on June 1, 2006. The AMZ has been adopted by MLP management teams, as well as analysts and media outlets in their coverage of this asset class.

Since then the company has introduced three other MLP-focused indexes, including the Alerian MLP Infrastructure Index (AMZI), which focuses on transportation, storage and processing. The strength of the MLP market is truly reflected when comparing the AMZI index to the S&P 500. During a seven-year period from 2003 to 2010, the AMZI outperformed the S&P 500 sevenfold on a total return basis.

Rob Lane, managing director of Madison Williams, added these sort of returns have seen capital flow back into the MLP space with investors particularly attracted to MLPs in the Marcellus Shale.

"The day after announcing a project in the Marcellus, MLPs typically outperformed the AMZ. A prime example was MarkWest Energy Partners jumping 28.3% versus the AMZ after announcing its joint-venture with NGP Midstream & Resources on January 27, 2009," Lane said.

MLPs have committed more than \$1 billion in infrastructure funding in the

Marcellus, which Lane expects to continue along with more M&A activity.

"Thus far, the majority of the M&A activity in the Marcellus has just been co-development deals and joint-ventures. However, E&P companies would rather sell infrastructure and use these funds to support E&P activities with higher returns while midstream investors want steady growth from their assets."

MLP investors are also keen on this steady growth since the midstream remains by far the most favored MLP class, he said, while adding that the sector is poised for growth.

Lane stated that there were a number of real opportunities for MLPs given that natural gas remains undervalued since there are a number of emerging areas of demand such as transportation and new power generation. He also said that while interest rates have risen, they are still near long-term lows and this has led to more funds being contemplated and raised. "Investors still want MLPs."

Feng agreed with this assessment and said that Alerian anticipates three to six new IPOs in the MLP space per year going forward. "There's going to be increased activity from integrated majors, as well as new types of assets and product mixes moving into the sector due to more fuels being allowed in the space and more creative financing for longer projects."

For every challenge in the Marcellus, there is an opportunity, Mark Huhndorff, managing director, investment banking – midstream, coal and alternative energy at Raymond James & Associates, said.

The lack of takeaway capacity has created an NGL bottleneck and is causing ethane takeaway capacity issues. Currently there is no solution to this problem, but there are already seven projects announced or in development to alleviate this problem.

Ethane takeaway isn't the only issue associated with the Marcellus. Producers are currently blending wet gas with dry gas to meet pipeline specifications and the supply is starting to balance with demand from the Northeast.

"However, the Marcellus continues to complete, and even beat, some oil plays in terms of rate of return," Huhndorff said. These returns have caused development in the Marcellus to continue at a strong pace.

Despite the negatives the Marcellus has tremendous positives, he said. Among them are its location, its large reserve base and its strong well economics that continue to improve. Such strengths will make it hard for MLPs to not continue to focus on the play.

– Frank Nieto

Marcellus Midstream 2011: Petrochemical Firms Urged To Locate In Marcellus Shale

The Appalachian Basin now produces about 2.5 billion cubic feet of gas per day, but that number is set to rise dramatically in the future as more Marcellus shale wells are drilled in Pennsylvania, speakers said at Hart Energy's Marcellus Midstream Conference in Pittsburgh this week.

Some 2,300 shale wells have been drilled so far in Pennsylvania, according

to officials, and the estimated resource, as much as 260 trillion cubic feet of recoverable gas, could make the play the second-largest gas field in the world after fields in Qatar.

Midstream master limited partnerships alone have committed more than \$1 billion to Marcellus infrastructure, according to Robert Lane, managing director in

the energy investment banking group of Houston-based Madison Williams & Co.

"Investors love the Marcellus," he told some 1,400 attendees during the event at the David L. Lawrence Convention Center.

One bonus—and challenge—from the increased drilling activity is a rising supply of natural gas liquids that would be available to industry throughout the

Northeast, and in Sarnia, Ontario, site of several petrochemical plants.

“Ethane is a cost of doing business, and an opportunity,” he said.

“If I was running a petrochemical company today, I’d be looking at this part of the county, maybe locating somewhere along the Ohio River,” said Gary Evans, chairman, president and chief executive of Magnum Hunter Resources Corp., which plans to drill 15 horizontal Marcellus wells in 2011.

“There’s going to be a lot of natural gas. The U.S. has created a whole new natural gas industry and we can compete with anyone else in the world on petrochemicals, even China.

“We are working on a 200-year feedstock supply, the way things are going,” Evans said.

Evans conceded the petrochemical industry does not move as fast as the E&P and midstream sectors of the energy industry do, but he believes that once

petrochemical executives see the level of ethane that can be produced, “they’ll put their thinking hats on.”

“It is a changing world out there and there will be new and better deals cut.”

By making a series of acquisitions, some of which have not closed just yet, Magnum Hunter has accumulated about 95,000 net acres in West Virginia, Ohio and Kentucky, with 56,600 net Marcellus acres included. The company also has acreage in Texas’ Eagle Ford shale and the Bakken oil play in North Dakota.

The company prefers an integrated approach with both E&P and midstream operations in house. In February 2010, Magnum Hunter acquired Triad Energy LLC and with it, the Eureka Hunter Pipeline gathering system in West Virginia, with a design capacity of 200- to 300 million cubic feet of gas per day.

It is in the heart of the wet-gas area of northwestern West Virginia. The company is proving up acreage along the

pipeline route, and also, building a new cryogenic gas processing plant with a capacity of 200 million a day.

“We also hope to develop long-term relationships with other midstream companies for the future,” Evans said.

Kinder Morgan Products Pipeline is developing the Marcellus Lateral Pipeline, a 248-mile line that will connect to the company’s Cochin Pipeline that transports propane from Alberta’s gas fields to Sarnia, location of several crackers. It is to be in service in 2012.

“Why would ethane travel from the Marcellus to the U.S. Gulf Coast when other shales are closer? The ethane is needed in Sarnia where those crackers can use it year-round,” said Karen Kabin, director of business development for Kinder Morgan Products Pipelines.

– Leslie Haines

Range, MarkWest Speed Ahead In The Wet-Gas Marcellus... (continued from page 1)

side Chat at the conference, which attracted some 1,400 attendees.

The companies announced a partnership in June 2008 in the Marcellus. “Even though it’s not a formal joint venture, it operates like one,” said Pinkerton. “Trust

is crucial. We had to have confidence that our information would be kept confidential, and we trusted MarkWest.”

Range and MarkWest found they were compatible, and they quickly established a solid relationship. The two firms work

in close coordination. “We are joined at the hip with the Range team,” said Semple. The partners hold frequent meetings, from weekly gatherings for technical staffs to quarterly discussions among senior management.

For MarkWest, a hurdle it faced early on in the Marcellus play was the amount of capital needed to move ahead. The processor’s strategy is to create fully integrated solutions for producers, and it advocates

and practices long-term planning. Its blueprint for the Range area required \$300- to \$400 million, but in 2008 capital markets were not friendly. The company responded to the challenge by strengthening its balance sheet through financial engineering, the sale of some assets, and the addition of financial partners.

“We wanted to maintain our lead in the Marcellus, because we believed in the long-term development of this play,” said Semple. MarkWest found the funds to pursue its goal of building an industrial-strength system to process a significant amount of Marcellus gas.

Today, the Marcellus continues to expand at a rapid clip. Production across the entire play has reached 2.5 billion cubic feet (Bcf) per day, and conserva-

Resin Prices					
MARKET UPDATE – March 18, 2011					
Total Offers 15,285,976 lbs		Spot		Contract	
Resin	Total lbs	Low	High	Bid	Offer
LDPE - Film	3,543,244	\$.710	\$.890	\$.820	\$.860
LLDPE - Film	2,411,864	\$.700	\$.780	\$.680	\$.720
PP Homo - Inj	1,873,932	\$.780	\$.850	\$.770	\$.810
HDPE - Inj	1,634,128	\$.645	\$.700	\$.625	\$.665
HDPE - Blow Mold	1,103,564	\$.785	\$.890	\$.790	\$.830
PP Copo - Inj	1,102,300	\$.650	\$.685	\$.620	\$.660
HMWPE - Film	1,058,208	\$.690	\$.730	\$.660	\$.700
LLDPE - Inj	744,000	\$.690	\$.860	\$.800	\$.850
GPPS	702,000	\$.860	\$.950	\$.870	\$.920
HIPS	570,000	\$.760	\$.800	\$.800	\$.840
LDPE - Inj	542,736	\$.700	\$.720	\$.700	\$.740

Market Update | Source: Plastics Exchange

tive estimates call for volumes in the neighborhood of 8 Bcf a day by 2020.

Certainly, staying abreast of producers' drilling programs is a daunting challenge for the midstream sector.

"I'm pleased with how quickly we have ramped up," said Semple. "But it will take continued diligence, and it is critical that we try to anticipate challenges and problems. It's an extraordinary play, but we are doing it very fast. Scale is an issue. We have to create value safely, and what we

are doing is very complex." The extent of the play is both a blessing and challenge for Range as well. "The play is bigger than anyone thought," said Pinkerton. Range has sold assets and marshaled its capital to concentrate on the Marcellus; from one person in 2007 it now employs 350 people in Pennsylvania. "Last month, we hired 28 people, all from the state of Pennsylvania," he said. Indeed, the quality of the wells and the size of the Marcellus fairway have greatly exceeded initial

expectations. And now, early indications are that other shales and tight sands in the Appalachian Basin could also be productive if horizontal drilling and multi-stage fracture treatments are applied. Range has already drilled test wells in the Utica and Upper Devonian that are encouraging.

"We're just in the initial innings," said Semple. — **Peggy Williams**

Gastech Conference: Natural Gas Will Fuel The Energy Needs Of The Future

The changes and challenges of the past decade led to progress and growth for the natural gas industry, Linda DuCharme, director, Gas & Power Marketing, Europe, Russia and Caspian, ExxonMobil International Limited, said March 22 in a keynote address at the Gastech Conference and Exhibition in Amsterdam.

DuCharme presented the keynote commercial address on "Natural Gas: A Decade of Change and Challenge." She noted that by examining the changes in the commercial landscape from 2000 to 2010, stakeholders can better understand how natural gas has evolved in the overall energy mix. "Natural gas has a viable role in filling the energy needs of the future," she said. "Just look how it's adapted to filling the energy needs of the past. Two hundred years ago it was used for lighting; then for heating and cooking; then for widespread industry and power use; and

more recently as a global, flexible fuel and a contributor in emissions reduction."

In the past decade, technological and commercial innovations expanded the flexibility of the LNG market, DuCharme said. "In a sense, 10 years ago, LNG was a boutique business, with deliveries point-to-point and no flexibility in the contracts. But a decade later, we've seen a significant linkage of global markets fueled by a doubling of production. We now have the ability to divert cargoes quickly and easily based on market conditions."

DuCharme also noted that the role of unconventional gas has changed significantly in the past 10 years. "In 2000, production of unconventional resources was nonexistent for the most part, and security of supply was a major concern. But today, the expansion of natural gas – both in its use across sectors, as well as in the quantity of available, affordable supplies – is a

prime example of how technology enables energy sources to adapt to the world's changing needs."

For natural gas to maintain its prominent role in fueling the energy needs of the future, DuCharme concluded that creating the right fiscal and regulatory environment for continued investment and innovation is critical. "Because natural gas is abundant, affordable and clean-burning, it plays an essential role in helping to meet our collective economic and environmental goals. We expect its broad use to continue as we move into the future, contributing more than 25 percent of the world's energy needs by 2030. There is no question that a sizable investment is required to bring this natural gas to market. As such, our industry needs a long-term, predictable investment climate to make that happen."

NEWS & TRENDS

ETP, Regency To Purchase Midstream-Focused LDH For \$1.925B

Energy Transfer Partners L.P. (NYSE: ETP) and Regency Energy Partners LP (Nasdaq: RGNC) have formed a joint venture to purchase LDH Energy Asset Holdings LLC from Louis Dreyfus High-

bridge Energy LLC for approximately \$1.925 billion in cash.

LDH owns and operates a natural gas liquids, or NGL, storage, fractionation and transportation business. LDH's stor-

age assets are primarily located in Mont Belvieu, Texas, one of the largest NGL storage, distribution and trading complexes in North America. Its West Texas Pipeline transports NGLs through a

1,066-mile intrastate pipeline system that originates in the Permian Basin in west Texas, passes through the Barnett Shale production area in north Texas and terminates at the Mont Belvieu storage and fractionation complex. LDH also owns and operates fractionation and processing assets located in Louisiana.

The acquisition of LDH is expected to significantly expand ETP's and Regency's asset portfolios, adding an NGL platform with storage, transportation and fractionation capabilities. Additionally, this acquisition will provide both ETP and Regency with additional consistent fee-based revenues.

At closing, ETP will contribute \$1.35 billion in exchange for a 70-percent ownership interest in the joint venture, while Regency will contribute \$578 million in exchange for a 30-percent ownership interest in the joint venture. The joint venture will be managed by a two-person board of directors, with ETP and Regency each having the right to appoint one director. ETP will operate the assets

on behalf of the joint venture with the existing LDH employees.

"With increased producer activity in the liquid-rich shale plays, we believe the LDH assets give ETP and Regency a tremendous advantage in the NGL business within our existing geographic footprints, a goal we have both been working toward for some time," said Mike Smith, vice president of mergers and acquisitions for ETP. "This acquisition, combined with our existing natural gas infrastructure, will allow ETP and Regency to provide and profit from a full array of midstream services required by our customers."

"We see a number of exciting growth opportunities for these assets, which will allow both partnerships to compete in a new business platform of the midstream value chain, add downstream capabilities and capitalize on favorable NGL market fundamentals," said Mike Bradley, president and chief executive officer of Regency. "In addition, we anticipate that Louis Dreyfus will remain an important

customer of LDH, and that this transaction will present possibilities to partner with Louis Dreyfus on existing and future growth opportunities."

ETP and Regency expect to initially fund their respective ownership interests in the joint venture under their revolving credit facilities, to be followed by permanent financing that is commensurate with ETP's commitment to maintain, and Regency's goal to achieve, investment grade credit ratings.

Completion of the acquisition is subject to customary closing conditions, including customary regulatory approvals, and the transaction is expected to close in the second quarter of 2011.

ETP's owner, Energy Transfer Equity (NYSE: ETE) acquired 100% interest in Regency's general partner in May 2010. Today, ETE owns the general partner of both ETP and Regency, both of which remain independent publicly traded partnerships.

Anadarko Announces Acquisition Of Wattenberg Plant

Anadarko Petroleum Corp., The Woodlands, Texas, has reported it has agreed to purchase BP America Production Company's 93% interest in the Wattenberg Processing Plant (Wattenberg Plant) for approximately \$575.5 million. The Wattenberg Plant, located in Adams County in northeast Colorado, has the capacity to process approximately 195 million cubic feet per day (MMcf/d) of natural gas and 15,000 barrels per day of natural gas liquids and gas condensate. Upon closing, Anadarko will operate and have 100-percent ownership of the plant.

"With Anadarko volumes representing about 70 percent of the current throughput, the Wattenberg Plant is a strategic acquisition that further aligns our midstream and upstream assets

in one of our expanding core areas," said Chuck Meloy, Anadarko's Sr. Vice President, Worldwide Operations. "We are the largest producer in the Wattenberg field, with current sales volumes of approximately 63,000 BOE (barrels of oil equivalent) per day, and our early efforts in the emerging horizontal Niobrara play are very encouraging. With the anticipated growth in the DJ Basin, we expect this acquisition to improve field recoveries, allow for future expansion and capture efficiencies that enable us to reduce operating expenses.

"The Wattenberg Plant, when combined with Western Gas Partners, LP's ownership position in the Fort Lupton Plant and the recently acquired Platte Valley Plant, gives Anadarko and other

area producers exceptional midstream options for development within the Wattenberg field and growth in the greater DJ Basin. Given our flexibility to offer this asset to WES, it is possible that we will recapture the initial and subsequent capital investments in the future, while continuing to benefit from operational improvements in the basin," added Meloy.

Anadarko has approximately 900,000 net acres in the DJ Basin, and the company expects to be running a total of nine operated rigs, including three horizontal rigs, in the basin by the end of March.

The transaction is expected to close by mid-year, subject to applicable regulatory approvals and other contractual conditions.

Enterprise To Transport Oil In Eagle Ford

Enterprise Products Partners L.P., Houston, has reported it has entered into a 10-year agreement with two producers in the Eagle Ford Shale play of South Texas to provide firm crude oil transportation and marketing services. The transaction represents a commitment of 50,000 barrels per day (BPD) of capacity on the new 140-mile, 24-inch diameter crude oil pipeline being constructed by Enterprise. Scheduled to begin service in the second quarter of 2012, the pipeline has a capacity of 350,000 BPD and will offer shippers the flexibility to access major storage hubs and refining centers.

"This agreement marks our third major crude oil transportation deal with Eagle Ford Shale producers in less than a year," said A.J. "Jim" Teague, Enter-

prise executive vice president and chief operating officer. "More than half of the available capacity on our new pipeline is already under commitment for the next 10 years as producers have clearly come to recognize the value our integrated midstream network provides them in maximizing the value of their growing crude oil output. The demand for our services remains brisk and we are currently in discussions with other producers for additional long-term commitments."

Approximately 150 rigs are presently working in the Eagle Ford Shale, which have drilled more than 500 wells. Current production from the play is approximately 80,000 BPD of crude oil and condensate.

Further highlighting the versatility and strategic importance of Enterprise's Eagle Ford Shale crude oil pipeline sys-

tem is its capability to link producers to a new crude oil storage facility the partnership is constructing on a 150-acre tract in southeast Houston. Scheduled to begin operations in mid-2012, the Crude Houston Terminal will feature access to major Texas Gulf Coast refiners in Texas City, Pasadena/Deerpark, Baytown and on the Houston Ship Channel. Besides providing Eagle Ford Shale producers with a market for their crude oil, refiners gain access to reliable, local sources of supplies to support expansion projects. In addition, domestic crude oil from the Eagle Ford Shale reduces the nation's dependence on foreign sources to produce gasoline and other refined products.

GL Noble Denton Secures Major Agreement For Gas Storage Facility

GL Noble Denton, London, England, reported it has signed an agreement with TAQA Energy BV, a subsidiary of Abu Dhabi National Energy Company PJSC (TAQA), to provide a business-critical Gas Management System for the commercial operations of its Bergermeer Gas Storage facility near Alkmaar in the Netherlands.

The contract will see GL Noble Denton implement its Access Manager software in Bergermeer Gas Storage, which is set to become Europe's largest third party access underground gas storage facility. Bergermeer Gas Storage will offer more than four billion cubic metres of seasonal gas storage capacity when it begins operations in 2013.

GL Noble Denton's Access Manager will provide Bergermeer Gas Storage with an Information and Communication platform

to manage its third party contracts, allowing client transactions to meet industry best practice and regulatory requirements.

The web-enabled system is specifically designed to support the end-to-end commercial operations of natural gas storage and LNG facilities, using a series of modules to meet the current and future needs of GL Noble Denton's clients.

In addition to managing Bergermeer Gas Storage's storage capabilities and informing operations, Access Manager will automate key business processes and catalogue client transactions.

Using Access Manager's Rules Engine, TAQA will be able to implement new business processes, as well as implement and model rules for Bergermeer Gas Storage in a fraction of the time it would have taken with traditional systems, helping the com-

pany to react swiftly to changing regulatory and customer demands.

Colin Weir, GL Noble Denton's Vice President for Software Solutions, said: "We are delighted that TAQA has chosen GL Noble Denton's Access Manager to manage Bergermeer's client transactions. The facility will make a significant contribution towards the Netherlands' position as the 'gas roundabout' of North-western Europe and we are excited to be continuing our strong relationship with TAQA through this project."

GL Noble Denton will also provide maintenance support and consultancy services to TAQA, ensuring that Access Manager continues to deliver industry-leading results throughout the lifespan of the Bergermeer Gas Storage facility.

Wood Mackenzie: World's Gas Markets Continue To Influence Regional Gas Pricing

Taking to the podium at Gastech 2011 in Amsterdam, Wood Mackenzie's Noel Tomnay, Head of Global Gas Research, outlined the future interdependencies of regional markets and the implications for pricing in the global gas market over the next decade. Mr Tomnay posited that the possibility of North America exporting LNG, the continuation of a tight market in Asia, and Europe wrestling with security of supply signals that historic interdependencies will remain at play.

"In recent history, we've seen linkages between the US, Europe and Asia in various forms and looking out to 2020, each region's gas market dynamics will continue to influence supply and demand, and regional gas prices," Mr Tomnay began.

Wood Mackenzie's paper suggested that North America will remain disconnected as oversupply results in depressed Henry Hub prices, but it will not be isolated. "As North America moves towards becoming a potential exporter,

this will have an implicit impact on price even before the first molecule of LNG is loaded on a ship," Tomnay stated. "North America LNG exports presents a number of questions for the global gas market. How much LNG volume can be exported before it becomes self-limiting? What will choke volumes first – rising US gas prices that make it sub-economic or the fear of price rises which might drive vested interests to persuade regulators to restrict exports? And will the threat of North America LNG exports present a future ceiling for European gas prices?"

In contrast to North America being awash with gas, the challenge for the Asia Pacific market is a lack of supply: with proximate Pacific based LNG insufficient to meet growing demand in the medium term, we can anticipate a growing reliance on Middle East and Atlantic LNG imports. "Particularly between 2013 and 2016, the market in Asia is looking tight, and recent events may increase this

tightness which in turn would have repercussions for Europe," Tomnay continued, "If Europe also tightens in the same time frame, as we think is increasingly likely, then we may see a pronounced price spike. Further out, Tomnay suggested that the high cost of new Australian LNG projects will keep Asia Pacific long term contract prices high.

Europe remains the most vulnerable to supply issues, especially in the medium term; "The last few years of oversupply may have resulted in European complacency regarding supply security. However our analysis suggests that Europe could be as much as 100bcm short of gas within as little as 7 years. To address this, new supply projects over and above that presently on the drawing board are required. In the medium term the likelihood is that Europe will compete with Asia for LNG supply and become more reliant on supply from Russia."

PIPELINES & TECHNOLOGY

MarkWest, Sunoco Expand Pipeline Deal

MarkWest Liberty Midstream & Resources, LLC, Denver, Colo., a partnership between MarkWest Energy Partners, L.P. and The Energy & Minerals Group, and Sunoco Logistics Partners L.P., Philadelphia, Penn., have reported the development of Project Mariner West, a pipeline project to deliver Marcellus Shale ethane from MarkWest Liberty's Houston, Pennsylvania processing and fractionation complex to Sarnia, Ontario, Canada markets. Mariner West, which is being developed at the request of Marcellus producer customers and is supported by Sarnia ethane consumers, will utilize new and existing pipelines and is anticipated to have a maximum capacity to transport up to

65,000 barrels per day of ethane by the third quarter of 2012. Mariner West is an expansion of Project Mariner, a pipeline and marine project developed to transport ethane produced in the Marcellus Shale basin to US Gulf Coast and international markets by mid-2013.

To support deliveries to Canadian markets in 2012, MarkWest Liberty will make minor modifications to its natural gas processing complexes and will install ethane extraction facilities at its Houston complex to deliver ethane to Mariner West earlier than will be required for deliveries to Project Mariner. In addition, MarkWest Liberty will construct a 25-mile pipeline from the Houston

complex to an interconnection with an existing Sunoco Logistics pipeline at Vanport, Pennsylvania. The ethane will then be transported from Vanport to markets in Sarnia utilizing existing Sunoco Logistics pipelines, which will be modified for ethane service. Project Mariner and Mariner West are both designed to provide Marcellus producers with access to multiple ethane markets to match the growing rich-gas production in the Marcellus.

"When combined with our growing NGL pipeline network in the Marcellus and our highly integrated Houston fractionation and marketing complex, Mariner West provides a very significant

advantage to Marcellus producers,” said Frank Semple, Chairman, President and Chief Executive Officer of MarkWest. “MarkWest and The Energy & Minerals Group are very pleased to partner again with Sunoco Logistics to further expand the midstream services we provide to our producer customers.”

“Project Mariner West has the advantage of allowing us to modify our existing pipeline facilities to reach Sarnia, Canada where there is a market for Marcellus ethane. We are pleased to participate in Project Mariner West and to partner with MarkWest Liberty in serving Marcellus producer customers,”

said Lynn L. Elsenhans, Chairman and Chief Executive Officer of Sunoco Logistics. “Our existing infrastructure is well positioned to provide an efficient solution for producers to move ethane to Sarnia as well as across Pennsylvania to a Delaware River marine port to access multiple markets.”

Marcellus Midstream 2011: Sensor-based Technologies Are A Focus For Pipeline Research

Technology unlocked the gas resources in the Marcellus play, and now rigs marching across the Appalachian Basin are delivering startling new supplies to the nation. Happily, technological advancements are also helping the midstream side of the business. As new pipelines begin to move down the valleys and around the ridges of the U.S. Northeast, research and development are ongoing to improve the safety and reliability of these vital systems.

The Pipeline Research Council International (PRCI) is a group of pipeline operators and technology and service companies that spearheads the application of science and technology to all elements of energy pipeline operation. Natural gas, liquids, CO₂ and biofuels all move via pipelines, and PRCI implements research programs that address pipeline corrosion, design, materials, and integrity. “These are the backbones of pipeline operations,” said Mark Piazza, senior program manager for PRCI, speaking at Hart Energy’s Marcellus Midstream conference in Pittsburgh.

Two topics of pipeline research highlighted by Piazza were aerial surveillance of rights of way and development of semi-smart pigs.

“The concept with aerial surveillance is to use a suite of sensors to detect machinery threats and leaks and right-of-way changes,” he said. “Third-party

damage is still the leading cause of pipeline incidents.”

PRCI is looking at ways to automate right-of-way monitoring, so that pipelines could be scanned from the air.

Currently, pipeline operators often use small aircraft with a solo pilot scanning the ground for issues. Sometimes, the pilot is accompanied by an observer or spotter.

If appropriate sensors and programs can be developed to provide continuous, real-time detection and reporting from the air, the response rate to address unauthorized right-of-way encroachment or intrusion would be greatly improved, and the number of third-party damage events reduced. An automated system could also create archives of data, which operators could use for several purposes. In the challenging terrain of New York, Pennsylvania and West Virginia, such systems could quickly prove to be quite effective.

The development of semi-smart pigs is another area of interest for PRCI. Its work focuses on developing and validating a cleaning tool that has the capability of gathering data. Sensors that detect temperature, velocity, pressure and wall thickness would be integrated into a cleaning pigging tool. The idea is that valuable information could be collected for an incremental cost during routine cleaning operations, and pipeline operators could easily “plug and

play” a particular sensor into a tool to gain specific data.

In addition to these efforts, PRCI conducts research in areas including corrosion, pipeline fatigue assessment, and quality management systems for pipeline construction, said Piazza. The 60-member group also works closely with the U.S. Department of Transportation; that agency awarded \$800,000 in funding to the aerial monitoring study.

“We are also global,” said Piazza. “We have members in countries around the world, and we are currently working with pipeline groups in Europe and Australia on various research projects.” While pipeline-related topics account for about two-thirds of its studies, PRCI also conducts research into related areas such as compression, measurement and underground storage.

“Many of the companies involved in the Marcellus play would benefit from belonging to our group,” he said. “Leak detection is hugely important, and retrofitting existing systems is very challenging.” Research into damage prevention and into building new systems in populated areas is also quite relevant to Marcellus pipeliners.

“Many aspects of pipeline construction have not changed in a long time, and we are working to modernize the construction process, and to document and standardize those practices.”

— Peggy Williams

Magellan Enters Next Phase Of Potential Reversal, Conversion Of Houston-To-El Paso Pipeline

Magellan Midstream Partners, L.P., Tulsa, Okla., has reported that it is proceeding with permitting and final engineering for the potential reversal and conversion of a portion of the partnership's Houston-to-El Paso pipeline to crude oil service. The reversed pipeline system would have a capacity of up to 200,000 barrels per day. Recent expressions of interest received from potential shippers indicate sufficient support exists to justify the project. However, the partnership will make a definitive deci-

sion on this project once binding agreements are executed.

"Recent market dynamics continue to favor the reversal and conversion of Magellan's Houston-to-El Paso pipeline to crude oil service as new outlets for West Texas crude oil are sought by producers," said Mike Mears, chief executive officer. "We believe our pipeline system coupled with the crude oil distribution system purchased last year would provide the most direct and cost-efficient route to deliver West Texas crude oil to the

refineries on the Houston Ship Channel and Texas City."

Management continues to finalize the scope of this project and to negotiate binding agreements with shippers and expects to make a decision on this project within the next 2 months. If the project is approved and this schedule is maintained, the partnership expects the reversed crude oil pipeline to be operational within 18 to 24 months.

Magal Receives R&D Contract To Enhance Its Pipeguard Technology

Magal Security Systems, Ltd., Yahud, Israel, reported it has received a contract from a research organization, associated with a large US gas utility, to enhance the capabilities of its PipeGuard system - a sophisticated system, developed by Magal, that warns and protects buried pipes and cables against excavations.

The research organization has evaluated various technologies for mitigating and proactively alerting personnel when excavations are occurring in the vicinity of buried gas pipes, to enable effective and early response for prevention of potentially hazardous and catastrophic events. The rigorous testing included the ability

to distinguish between the various types of excavation equipment in the proximity of pipelines, particularly in noisy environments such as busy highways.

The PipeGuard system has so far shown to be the most promising technology; with the contracted improvements it is expected to provide a cost effective solution for the proactive monitoring of gas pipelines to prevent third party damage.

Hagai Katz, Senior VP of Marketing & Business Development of Magal S3, commented: "Historically this system was designed to protect long distance pipelines against terrorist and criminal activity. Contractors all over the world

are inadvertently digging or drilling into buried pipes, disrupting service, risking lives and may also cause environmental catastrophes. Our distributed system layout covers dispersed risk areas and is the perfect solution for this challenge. This financed development agreement is an excellent opportunity to develop the product for this important application and make it the preferred choice."

"This is an important step in our corporate strategy to supply sophisticated sensors and solutions beyond our traditional security market; in this case it is to preserve outdoor safety and green ecology," added Mr. Katz.

DCP Midstream Ups Total Credit Capacity To \$1.25B

Denver-based DCP Midstream LLC has closed on a four-year, \$800-million credit facility, increasing the company's total credit capacity to \$1.25 billion.

"Closing on this credit facility is very exciting for us," says Rose M. Robeson, group vice president and chief financial officer of DCP Midstream. "This new facility significantly increases our liquidity and provides us with greater flexibility

in how we manage our business and execute on our growth plans."

The new facility, which runs through March 2015, replaces a \$350-million facility that was due to mature in April 2012. DCP Midstream also has a \$450-million credit facility maturing in April 2012.

DCP Midstream leads the midstream segment as one of the nation's top three

largest natural gas gatherers and processors, and the largest natural gas liquids producer and one of the largest marketers in the U.S. DCP Midstream is an equally owned joint venture between Spectra Energy and ConocoPhillips.

NGL PRICES

NGL Prices Rise As Petrochemical Demand Up In Japan

Natural gas liquids (NGL) prices rose due to the expected increase in demand from Japan following the earthquake and tsunami that have decimated much of the northwest portion of that country, as well as political upheaval and unrest in portions of the Middle East that have caused crude prices to rise.

Ironically the lone NGL to drop in price the week of March 16 was C₅₊, which has the closest relationship to crude prices and has dropped for the past two weeks. Prices did continue to rise throughout the week of March 16 as they followed an upward price trend for crude.

Despite these gains late in the week, C₅₊ prices were down 1% overall to \$2.39 at Mont Belvieu and 2% overall to \$2.38 at Conway. This was the first time in more than a month that the price in the Gulf Coast was greater than that in the Midcontinent, which has been an unusual trend.

The NGL to experience the greatest gains this week was propane, which was up 7% to \$1.46 at Mont Belvieu and 4% to \$1.32 as demand for propylene appeared to be up the week of March 16. An exact cause for this increase in demand wasn't clear as we went to press, but both propane and propylene inventories were down across the U.S. so there was a definite run on supplies.

However, this increased demand was not from the heating sector as much of the U.S. had relatively mild weather for this time of year. It is probable that the petrochemical markets are experiencing increased demand since the incidents in Japan and with ethylene plants operating at high capacities that have seen demand for both propane and butane increase as a feedstock.

Butane experienced a 5% price increase to \$1.85 at Mont Belvieu and a 4% price increase to \$1.71 at Conway. The Mont Belvieu price was the highest at the hub since it was \$1.94 the week of August 27, 2008 while the Conway price was the highest in a month. These price increases are primarily due to increased usage of butane from the petrochemical industry, which increases as refining demand winds down for butane as a winter-grade gasoline.

The increased petrochemical demand caused ethane prices to experience strong gains as well the week of March 16 with

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
March 16 - 22, '11	70.01	146.42	185.10	196.28	238.60	\$59.35
March 9 - 15, '11	65.11	134.36	175.62	191.04	240.83	\$56.68
March 2 - 8, '11	66.55	140.06	176.04	181.52	250.38	\$58.00
Feb. 23 - March 1, '11	68.53	147.35	182.46	194.13	241.68	\$59.25
February '11	61.86	137.14	173.64	187.12	224.73	\$55.21
January '11	59.41	134.69	168.71	178.54	214.96	\$53.39
4th Qtr '10	59.07	126.07	162.01	168.24	198.89	\$50.59
3rd Qtr '10	44.99	106.98	138.23	143.25	171.45	\$42.37
2nd Qtr '10	50.97	108.43	145.01	157.23	178.04	\$44.64
1st Qtr '10	70.80	123.84	151.72	165.09	183.29	\$50.45
March 17 - 23, '10	56.90	112.28	147.13	149.75	186.13	\$46.47
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
March 16 - 22, '11	50.45	132.18	170.54	185.75	238.28	\$54.09
March 9 - 15, '11	47.36	125.60	162.70	182.50	242.70	\$52.60
March 2 - 8, '11	49.50	129.78	166.70	188.50	252.95	\$54.52
Feb. 23 - March 1, '11	47.06	135.85	172.00	189.50	253.83	\$55.20
February '11	44.36	126.61	161.11	191.61	224.17	\$51.13
January '11	44.01	128.53	162.52	174.39	207.59	\$49.79
4th Qtr '10	47.01	120.80	157.16	161.69	193.86	\$47.80
3rd Qtr '10	31.16	101.46	132.39	141.93	163.91	\$39.04
2nd Qtr '10	31.56	103.03	130.96	145.20	172.55	\$39.90
1st Qtr '10	59.82	123.81	143.58	160.70	181.55	\$48.69
March 17 - 23, '10	40.83	106.83	133.67	145.83	182.50	\$42.71

Data Provided by Intercontinental Exchange.

Individual product prices in cents per gallon. NGL barrel in \$/42 gallons

Mont Belvieu ethane up 5% to 70¢, the highest price at the hub since it was 73¢ the week of February 24, 2010. The Conway price rose 3% to 51¢, the hub's highest price since it was just slightly higher the week of December 29, 2010.

Isobutane demand was relatively flat this week, but this was not reflected in its price, which benefited more from higher crude prices than actual demand. Mont Belvieu isobutane was up 3% to \$1.96, which was the highest price in Texas since it was \$1.98 the week of August 6, 2008. While the Conway price for isobutane rose 2% from last week to \$1.86, it was the second lowest price at the hub in the past six weeks.

— Frank Nieto

FRAC SPREAD

Natural Gas Injection Season May Be Pushed Back

Despite significant natural gas feedstock price increases at both Mont Belvieu and Conway, frac spread margins largely experienced gains at both hubs the week of March 16 due to sizable price improvements for natural gas liquids (NGL).

The largest improvements were at Mont Belvieu, where propane margins jumped 10% and ethane margins were up 8% from the prior week. Propane and ethane also had the largest gains at Conway, albeit at a smaller rate with ethane improving by 5% and propane improving by 4%.

These gains were reflected by the theoretical barrel prices at both Conway and Mont Belvieu the week of March 16. The Conway theoretical barrel price rose 3% to \$54.09 per barrel (bbl) with a margin improvement of 1% to \$39.55/bbl. The Mont Belvieu theoretical barrel price improved by 5% to \$59.35/bbl with a margin improvement of 4% to \$44.63/bbl.

The lone NGL to experience a downturn in margin the week of March 16 at both hubs was C5+, which not coincidentally was also the lone NGL to experience a drop in price during this time period. The Conway margin fell 4% while the Mont Belvieu margin was down 3%.

However, C5+ remained the most profitable NGL to make at both hubs at \$1.94 per gallon (/gal) Conway and Mont Belvieu. This

was followed, in order, by isobutane at \$1.46/gal at Conway and \$1.56/gal at Mont Belvieu; butane at \$1.29/gal at Conway and \$1.43/gal at Mont Belvieu; propane at 96¢/gal at Conway and \$1.10/gal at Mont Belvieu; and ethane at 24¢/gal at Conway and 43¢/gal at Mont Belvieu.

Natural gas in storage for the week of March 24, the most recent data available from the Energy Information Administration, was down 6 billion cubic feet to 1.612 trillion cubic feet (Tcf) from 1.6 Tcf the previous week as the winter withdrawal season is coming to an end. This was 1% less than the storage figure of 1.624 Tcf reported last year at the same time and 2% greater than the five-year average of 1.578 Tcf.

The U.S. National Weather Service's forecast for the week of March 30 may see the natural gas injection season pushed back a bit further than normal due to an expected cold front along the East Coast, much of the Midwest and into the Gulf Coast. The rest of the country is expected to experience normal weather for this time of year with parts of the Pacific Northwest and the Southwest experiencing warmer than normal temperatures.

— Frank Nieto

Current Frac Spread (Cents/Gal)				
MARCH 25, 2011	Conway	Change from Start of Month	Mont Belvieu	Start of Month
Ethane	50.45		70.01	
Shrink	26.39		26.72	
Margin	24.06	4.49%	43.29	7.74%
Propane	132.18		146.42	
Shrink	36.46		36.91	
Margin	95.72	4.07%	109.51	9.59%
Normal Butane	170.54		185.10	
Shrink	41.27		41.79	
Margin	129.27	3.71%	143.31	4.89%
Iso-Butane	185.75		196.28	
Shrink	39.64		40.14	
Margin	146.11	0.11%	156.14	1.66%
Pentane+	238.28		238.60	
Shrink	44.14		44.69	
Margin	194.14	-3.89%	193.91	-2.62%
NGL \$/Bbl	54.09	2.82%	59.35	4.72%
Shrink	14.54		14.72	
Margin	39.55	0.90%	44.63	3.93%
Gas (\$/mmBtu)	3.98	8.45%	4.03	7.18%
Gross Bbl Margin (in cents/gal)	90.52	1.08%	104.08	4.35%
NGL Value in \$/mmBtu				
Ethane	2.78	6.52%	3.85	7.53%
Propane	4.59	5.24%	5.08	8.98%
Normal Butane	1.84	4.82%	2.00	5.40%
Iso-Butane	1.16	1.78%	1.22	2.74%
Pentane+	3.07	-1.82%	3.08	-0.93%
Total Barrel Value in \$/mmBtu	13.44	3.44%	15.23	5.50%
Margin	9.46	1.46%	11.20	4.91%

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 NGL 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

SNAPSHOT

Gulf South Is One Of The Largest Pipeline Systems In U.S.

Gulf South Pipeline is a “web-like” interstate natural gas pipeline system that transports gas between south and east Texas, Louisiana, Alabama, Mississippi, and Florida. Headquartered in Houston, it is one of the largest interstate pipeline systems in the U.S. It is approximately 6,532 miles and has a peak-day delivery capacity of about 6.8 Bcf/d, according to its website.

A wholly owned subsidiary of Boardwalk Pipeline Partners, LP, the principal sources of supply for the pipeline system are unconventional shale plays, such as the Haynesville and Barnett shales; regional supply hubs and market centers, such as offshore Louisiana, Henry Hub; Agua Dulce, Texas, and Carthage, Texas; conventional wellhead supplies in East Texas, northern and southern Louisiana, and Mississippi; and imported liquefied natural gas (LNG) through the Lake Charles, La., LNG terminal.

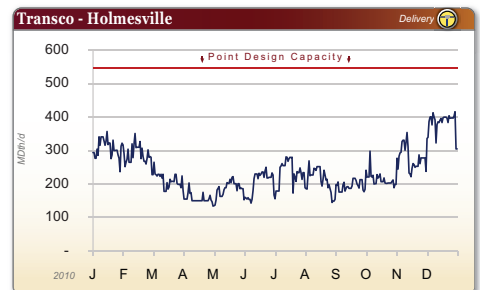
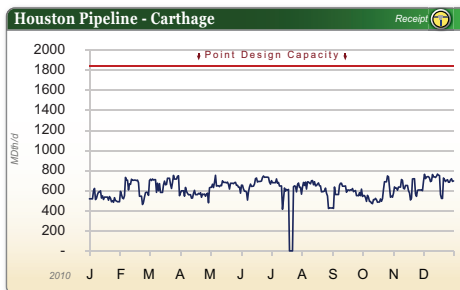
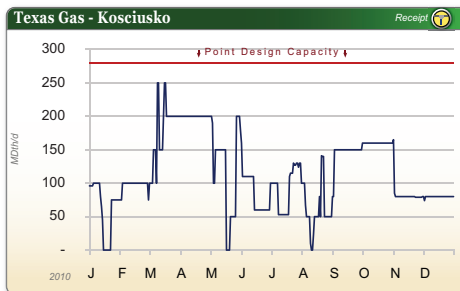
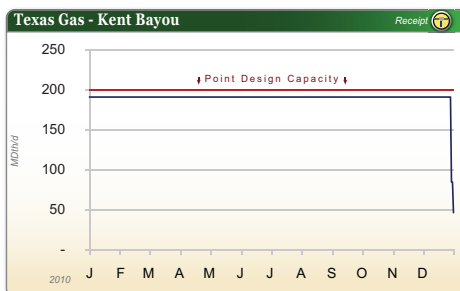
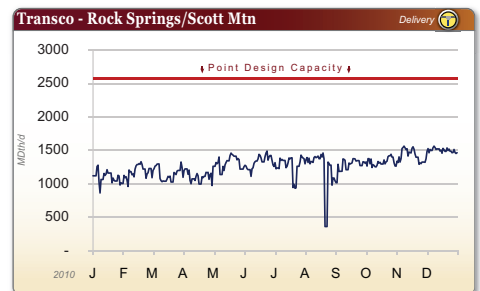
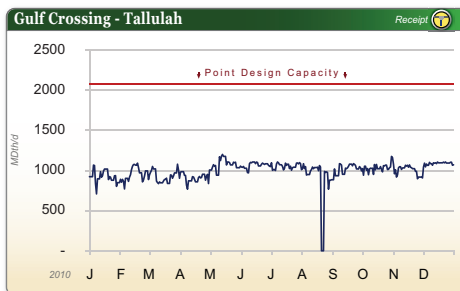
According to Hart Energy Mapping and Data Services, the system has a capacity of 3 Bcf/d, a seasonal storage of 84.2 Bcf, and 29 compressor stations. EOG Resources Inc. is its highest transport customer with 460,000 dekatherms per day (Dth/d) of capacity; followed by Devon Gas Services, LP with 345,000 Dth/d. The rest of the top 10 are BG Energy Merchants, LLC, with 225,000 Dth/d; Centerpoint Energy Resources Corp. with 219,000 Dth/d; Encana Marketing with 180,000 Dth/d; Merrill Lynch Commodities Inc. with 172,000 Dth/d; HK Transportation LLC with 150,000 Dth/d; Shell Energy North America (US) LP with 115,000 Dth/d; Sequent Energy Management, LP 103,000 Dth/d; and Southern Company Services Inc. with 100,000 Dth/d.

(continued on page 16)

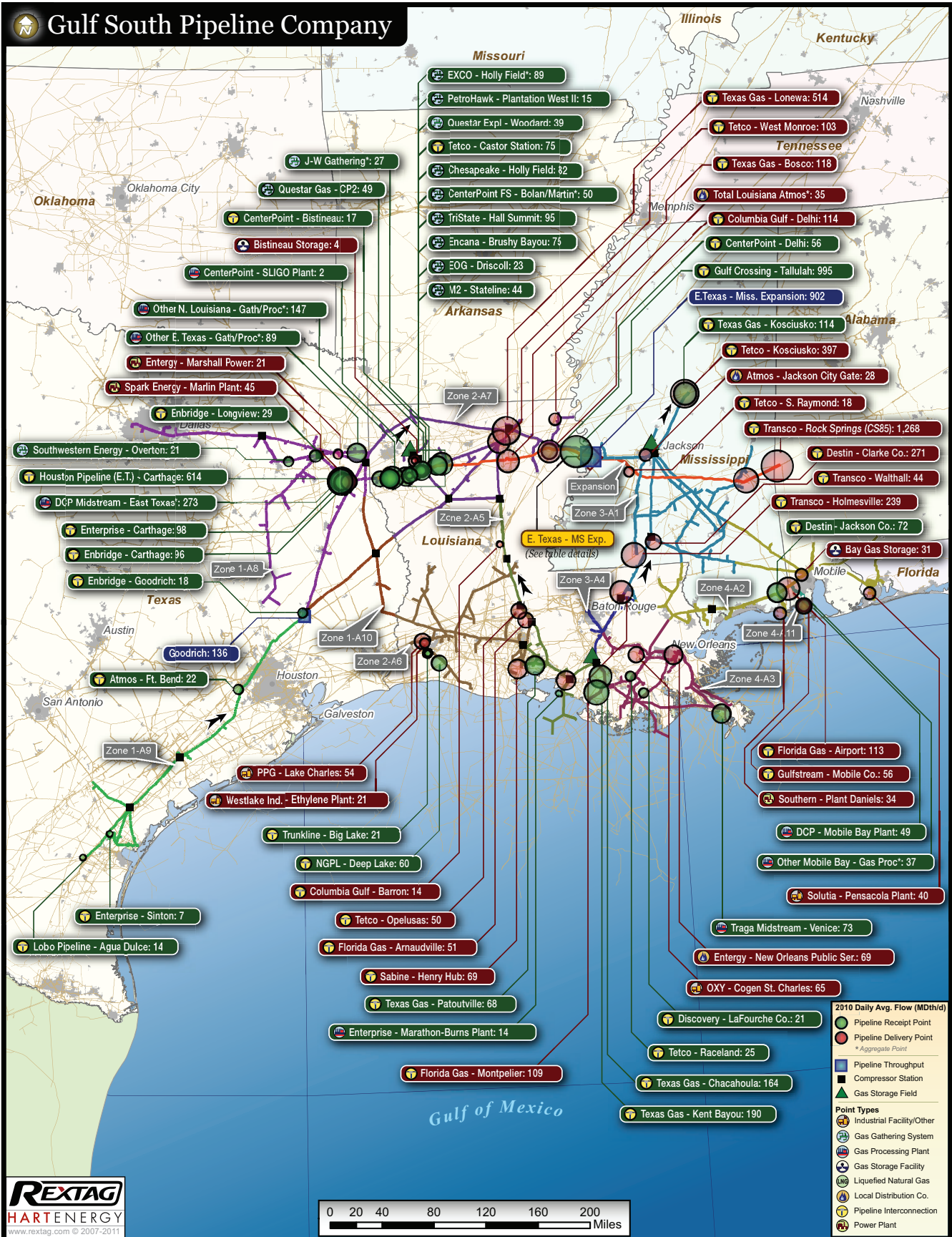
General Information				FERC Code: 011
Owner:	Boardwalk Pipelines	System Capacity:	3 Bcf/d	
Operator:	GulfSouth Pipeline Company	Seasonal Storage:	84.2 Bcf	
Miles of Pipeline:	6,532	Compressor Stations:	29	

Top 10 Transport Customers			Capacity (MDth/d)
Rate	Customer Name	Capacity	
FTS	EOG Resources, Inc	460	<div style="width: 46%;"></div>
FTS	Devon Gas Services, LP	345	<div style="width: 34.5%;"></div>
FTS	BG Energy Merchants, LLC	225	<div style="width: 22.5%;"></div>
NNS	Centerpoint Energy Resources Corp.	219	<div style="width: 21.9%;"></div>
FTS	Encana Marketing (USA) Inc	180	<div style="width: 18%;"></div>
Rate	Customer Name	Capacity	
FTS	Merrill Lynch Commodities, Inc.	172	<div style="width: 17.2%;"></div>
FTS	HK Transportation, LLC	150	<div style="width: 15%;"></div>
FTS	Shell Energy North America (US), LP	115	<div style="width: 11.5%;"></div>
FTS	Sequent Energy Management, LP	103	<div style="width: 10.3%;"></div>
FTS	Southern Company Services, Inc.	100	<div style="width: 10%;"></div>

Midcontinent Express Pipeline - Major Receipt & Delivery Points



Source: Hart Energy Mapping and Data Services



Source: Hart Energy Mapping and Data Services

Midcontinent Express Pipeline - Ranked Averages

Top Receipt Point Averages for 2010

Averages in MDth/d

No.	Point Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	TALLULAH (FROM GULF CROSSING)	938	879	942	894	1095	1051	1077	909	1000	1054	988	1108
2	ENERGY TRANSFER - CARTHAGE (EXPANSION)	541	569	690	558	675	658	566	627	583	564	615	718
3	DCP EAST TEXAS PLANT (EXPANSION AREA 16)	219	201	192	258	300	288	212	246	241	245	293	255
4	KENT BAYOU / SOUTH GIBSON (FROM TXGT)	195	176	195	188	195	188	195	195	188	195	188	183
5	CHACAHOUA (FROM TEXAS GAS)	153	138	152	168	173	163	173	173	168	173	168	164
6	KOSCIUSKO (FROM TEXAS GAS)	64	90	178	197	123	86	94	63	143	163	82	81
7	MAGNOLIA CDP (CEFS)	6	56	54	98	114	146	155	130	125	139	184	76
8	ENTERPRISE - CARTHAGE (EXPANSION)	104	106	82	1	133	99	106	127	89	101	92	140
9	SAMPLE 9-1 WELL	108	86	109	103	104	93	92	93	87	98	103	91
10	ENBRIDGE - CARTHAGE (EXPANSION)	89	60	53	109	82	94	62	105	123	136	136	102
11	HALL SUMMIT C P	96	85	106	96	99	82	123	113	103	110	70	53
12	HOLLY FIELD CP - CHESAPEAKE	111	83	64	43	86	120	118	94	76	66	63	65
13	CASTOR STATION (FROM TET)	76	69	76	74	76	74	76	76	74	76	74	76
14	BRUSHY BAYOU CP - ENCANA	71	71	91	78	73	61	87	82	111	114	44	11
15	VENICE PLT (FROM TARGA MIDSTREAM)	115	120	99	52	65	57	43	98	91	90	1	49
16	JACKSON COUNTY (FROM DESTIN)	113	66	89	65	45	58	60	41	57	44	111	117
17	PATOUTVILLE FROM TEXAS GAS (T)	71	64	71	69	71	61	71	69	67	71	66	60
18	DEEP LAKE (FROM NGPL)	65	48	81	19	33	26	65	79	51	85	84	87
19	DELHI (FROM CENTERPOINT)	51	47	52	74	77	83	61	63	50	52	49	16
20	HOLLY FIELD C P 3	123	64	79	75	66	41	40	35	36	36	30	38
21	KATY STORAGE (FROM KATY)	43	37	5	10	86	96	106	64	1	7	5	143
22	BOLAN 27-1 WELL	97	123	77	65	43	71	35	6	5	1	18	59
23	QUESTAR C P #2	50	50	56	55	53	45	46	47	58	38	47	45
24	DUKE - MOBILE BAY	48	61	58	46	33	38	75	35	23	46	56	67
25	MARLIN PLANT REC - CARTHAGE (EXPANSION)	59	44	50	49	53	52	48	51	49	28	29	35

* "0" values may also include smaller units less than 1 MDth/d ** "Point Name" as filed originally by pipeline company

Top Delivery Point Averages for 2010

Averages in MDth/d

No.	Point Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	ROCK SPRINGS/SCOTT MTN (TO TRANSCO 85)	1116	1096	1170	1095	1336	1308	1300	1248	1260	1353	1402	1531
2	LONEWA (TO TEXAS GAS)	545	534	615	634	569	503	528	497	432	383	428	497
3	KOSCIUSKO (TO TET)	491	460	405	380	389	327	398	363	326	392	386	446
4	CLARKE COUNTY (TO DESTIN)	259	242	269	260	293	282	252	280	282	285	257	286
5	HOLMESVILLE (TO TRANSCO)	314	266	217	155	189	201	237	216	192	218	273	391
6	DESTIN - GULFSTREAM INTERCONNECT	120	116	121	126	118	117	111	156	140	137	124	124
7	BOSCO (TO TEXAS GAS)	97	64	80	74	85	64	75	51	224	250	207	145
8	DELHI (TO COLUMBIA GULF)	134	116	96	94	111	79	73	92	70	90	197	215
9	AIRPORT (TO FLORIDA GAS)	48	62	61	47	72	137	205	173	107	88	153	198
10	MONTPELIER/ST HELENA (TO FGT)	103	125	120	68	142	111	124	150	114	78	81	94
11	WEST MONROE (TO TET)	115	103	107	100	102	99	104	110	114	75	102	105
12	HENRY HUB (TO SABINE)	107	91	63	66	61	151	83	109	101	101	58	129
13	BAYOU SALE/SHADYSIDE (TO SNG)	106	62	81	88	55	123	105	62	70	23	66	61
14	NOPSI AGGREGATE - NEW ORLEANS PUBLIC SER	90	57	63	46	56	49	56	69	88	91	83	86
15	OXYCHEM COGEN (ST CHARLES PARISH)	61	55	60	65	67	70	72	72	69	61	58	70
16	DESTIN - FGT INTERCONNECT	19	47	66	47	75	82	58	87	92	74	30	30
17	GULFSTREAM INTERCONNECT	0	0	0	0	113	152	122	81	118	86	0	0
18	PPG INDUSTRIES: LAKE CHARLES PLANT	47	44	55	50	55	53	58	57	57	59	57	58
19	ARNAUDVILLE/ST LANDRY (TO FGT)	37	54	49	46	56	60	61	56	58	46	38	49
20	OPELOUSAS (TO TET)	41	28	19	46	38	39	57	36	47	78	111	56
21	AIR PRODUCTS HYDROGEN @ GARYVILLE	33	33	50	52	53	45	46	47	46	52	51	52
22	BISTINEAU STORAGE PATHING SLN	4	1	18	88	51	23	62	61	60	95	89	4
23	BISTINEAU INJECTION	4	1	18	88	51	23	62	61	60	92	89	4
24	MARLIN PLANT DEL - CARTHAGE JUNCTION	52	44	51	50	54	53	56	52	50	27	25	32
25	WALTHALL (TO TRANSCO)	38	45	33	10	29	29	36	61	31	88	68	63

* "0" values may also include smaller units less than 1 MDth/d ** "Point Name" as filed originally by pipeline company

Gulf South Is One Of The Largest Pipeline Systems In U.S.... (continued from page 13)

Throughout the year Boardwalk Pipeline's interconnection at Tallulah, La., with the Gulf Crossing pipeline was the most active receipt point throughout the year with a drastic by short-lived drop in mid-August. The most active delivery point was the system's interconnection with the Transco pipeline.

The pipeline system directly serves markets including LDC and municipality load serving communities including New Orleans, La.; Jackson, Miss.; Mobile, Ala.; and Pensacola, Fla.; natural gas-fired

power plants located across the Gulf South system; and industrial end-users located across the system, including the Baton Rouge to New Orleans industrial corridor and Lake Charles.

It also has multiple interconnections with other interstate and intrastate pipelines and storage facilities the provide access to off-system markets throughout the northeast, Midwest, and southeast.

The pipeline system contains two natural gas storage fields. The facility in Bistineau, La., is for commercial use. Its working

gas storage capacity is 78 Bcf with a maximum injection rate of 480 MMcf/d and a maximum withdrawal rate of 870 MMcf/d. The facility in Jackson, is for operational use only. It has a working gas storage capacity of 5 Bcf, a maximum injection rate of 100 MMcf/d and a maximum withdrawal rate of 250 MMcf/d.

– **Rebecca Torrellas**



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