HARTENERGY

MIDSTREAM Monitor

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*Formerly* GAS PROCESSORS REPORT

## In This Week's Edition



# FEATURE

## El Paso Separation Marks The End Of Rebuilding


At last month's annual analyst meeting, El Paso Corp.'s Chairman, President and Chief Executive Doug Foshee highlighted the company's return to strength in the eight years from the collapse of the energy merchants industry to today.

"We had a severely damaged brand. It wasn't polite social conversation in 2003 to say that you worked at El Paso, and it may have been worse to say you were a shareholder at El Paso. We were a diffused conglomerate with heavy overhead. We were leveraged to the hilt, and our attention span didn't go much further than raising the cash to pay for the $1 billion a week drain from the trade book and making payroll.

"We went from pillar-to-post and seemingly from one crisis to the next ... Now we're a company that has a purpose and a set of values that we live out everyday. We're organized around a small set of businesses that relate to one another and that we're confident in managing. We're execution focused. We're efficient and much more dependable and capable as an organization at delivering on our promises," he said.

The company's business operations focus on three operations: its pipeline segment, which Foshee said was the best in the busi-

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# INSIDE LOOK AT PROCESSING

## Wells Fargo: Marcellus Ethane Production Could Support 2-3 NGL Solutions

Ethane production out of the Marcellus shale could be two to three times greater than originally forecast, thereby supporting more than one of the proposed ethane solution projects, according to Wells Fargo Securities.

The investment firm previously estimated ethane production out of the play as increasing from 40,000 barrels per day (b/d) in 2010 to 60,000-70,000 (b/d) by 2015, but has increased this estimate due to the fast pace of processing capacity expansions from midstream companies.

Processing capacity in the Marcellus is expected to grow to more than 1,700 million cubic feet equivalent per day (MMcfe/d) by 2015 (or more than 2,700 MMcfe/d including potential projects) from 520 MMcfe/d in 2010," according to Wells Fargo's June *NGL Snapshot*.

This level of processing capacity build-out could support as many as 134,000 b/d of ethane by 2015. This could grow to 206,000 b/d if potential processing plant expansions are undertaken, Wells Fargo said.

"We had assumed ethane production in the Marcellus would be sufficient to support the construction of one Marcellus NGL solution during the next five years. However, if ethane production tracks the robust levels implied by announced processing plant expansions, we believe two Marcellus NGL projects could be supported in the near term (or even three Marcellus NGL projects, including potential processing plant expansions)," the report said.

The most likely project to be completed, according to Wells Fargo, is either an ethane pipeline to either to Sarnia, Ontario,

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## Enterprise To Build Sixth NGL Fractionator At Mont Belvieu Complex

Enterprise Products Partners L.P. (NYSE:EPD) announced it plans to construct a sixth natural gas liquids (NGL) fractionator at its Mont Belvieu, Texas facility that will increase capacity there by 75,000 barrels per day (b/d). The new fractionation facility will accommodate continued growth of liquids-rich natural gas production from the prolific Eagle Ford Shale basin in South Texas. In anticipation of the expansion, Enterprise has already obtained the necessary approvals and permits that will allow the partnership to promptly begin construction of the new facility, which is projected to begin service in early 2013. At that time, Enterprise will have the capability to fractionate more than 450,000 b/d of NGLs at its Mont Belvieu complex. System-wide the partnership's net fractionation capacity will increase to more than 780,000 b/d.

"The announcement of our third fractionator at Mont Belvieu in less than two years is yet another indication of the robust demand for Enterprise's midstream services to handle increased natural gas production from the expanding shale plays," said A.J. "Jim" Teague, executive vice president and chief operating officer of Enterprise's general partner. "As with our fifth Mont Belvieu fractionator, which is currently under construction and scheduled to be completed in the fourth quarter of 2011, the sixth unit is expected to be fully contracted when it begins service." Teague added, "The additional capacity at Mont Belvieu will give us the capability to handle approximately 75,000 b/d of mixed NGLs currently being diverted to Louisiana for fractionating, as well as an incremental 30,000 b/d of y-grade from the Phase II expansion of our Yoakum processing facility in Lavaca County, Texas."

Based on public drilling and production data, activity in the Eagle Ford Shale continues at a brisk pace. Approximately 170 rigs are presently working in the play and more than 900 wells are on production with approximately 1,400 additional wells in various stages of drilling and completion. Current production from the play is estimated at approximately 850 million cubic feet per day (MMcf/d) of natural gas and 140,000 b/d of crude oil and condensate.

Using recently built Enterprise fractionators as a template and utilizing existing infrastructure should promote greater efficiency in the design, construction, and operation of the sixth fractionator. In addition to fractionation services, Enterprise offers producers access to the world's largest petrochemical and refining market located along the Gulf Coast through the partnership's integrated network of assets. As a result, Enterprise is able to provide producers with flow assurance and market choices that maximize the value of their commodities.

Teague said, "From a demand perspective, a persistent and significant differential between natural gas and crude oil prices continues to favor NGLs over heavier crude oil derivatives as feedstocks for the petrochemical industry. Petrochemical facilities have responded with announcements of planned new construction or modifications to make greater use of NGL feedstocks. In the last 12 months alone, approximately 100,000 b/d to 150,000 b/d of heavy cracker feedstocks have been replaced with light-end feedstocks."

## Pickering: NY Times Shale Gas Pieces Wrong

I had to sigh this weekend as I began to receive emails and phone calls regarding *The New York Times* article entitled "Insiders Sound an Alarm Amid a Natural Gas Rush". I encourage you to read this article and its companions. I don't agree with many of the conclusions that are drawn, but it does serve to illustrate what critics of the energy industry are saying. And there is no doubt that the author, and evidently *The New York Times*, are indeed critics.

Having spent most of my professional career writing about energy issues, I understand and appreciate the power of the pen. Writing persuasively and interestingly can make a difference. In a world where the news cycle is 24/7 and people are swamped with information, anecdotes are king. The *Times* article wields cherry-picked anecdotes like a samurai with a sword.

One snippet is as follows: "Money is pouring in" from investors even though shale gas is "inherently unprofitable," an analyst from PNC Wealth Management, an investment company, wrote to a contractor in a February email. "Reminds you of dot-coms." End of snippet. Wow. That is good stuff. Captivating. Entertaining. But is it the truth? Or is it an opinion? I'm not sure that PNC actually has any dedicated energy analysts (I couldn't find any on their website). So perhaps that cool quote came from a high net-worth broker? Maybe he/she is a genius with

| KEY NORTH AMERICAN HUB PRICES | |
|---|---|
| 3:21 PM CST / June 30, 2011 | |
| Gas Hub Name | Current Price |
| Carthage,TX | 4.21 |
| Katy Hub, TX | 4.34 |
| Waha Hub, TX | 4.25 |
| Henry Hub, LA | 4.28 |
| Perryville, LA | 4.20 |
| Houston Ship Channel | 4.36 |
| Agua Dulce TX | 4.67 |
| Opal Hub, Wyo. | 4.05 |
| Blance Hub, NM | 4.15 |
| Cheyenne Hub, Wyo. | 4.08 |
| Chicago Hub | 4.33 |
| Ellisburg NE Hub | 4.58 |
| New York Hub | 4.54 |
| AECO, Alberta | 4.00 |

Source: Bloomberg

reams of analysis on shale gas decline. Or maybe the observations are based on reading blogs and Internet postings. One can't tell from the anecdote. Which should I trust more: the February 2011 $4.7-plus billion purchase of Fayetteville shale gas assets by BHP Billiton or the February 2011 anecdotes from an unnamed broker of unknown quality? Follow the money is usually a good credo.

*The New York Times* also captured the eye-opening and alarming comments of Deborah Rogers, a member of the advisory committee of the Federal Reserve Bank of Dallas. Her research indicated Barnett shale wells were declining faster than expected. Fascinating. A Dallas Fed adviser has spotted an important issue. But is it the truth? Or is it an opinion? Would I be just as fascinated if the article quoted Deborah Rogers, proprietor of Deborah's Farmstead, a small Fort Worth family dairy that produces goat cheese? That's her bio from the 2008 Dallas Fed press release. Maybe Ms. Rogers is a closet petroleum engineer and excellent decline-curve analyst. Maybe not. But 2011 Barnett shale gas production is at higher levels than 2009, with rig count down by two thirds. That is not an anecdote seized by a newspaper reporter. It is a wellhead fact.

The *Times* article does make one statement that is dead on. The article says, "These companies have been making predictions based on limited data and a certain amount of guesswork, since shale is a relatively new practice." Indeed, natural gas comes from reservoirs 1-4 miles deep in the earth. It seeps out through pore spaces so tiny they can't be viewed with the naked eye. As such, almost everything about shale gas is an estimate. It is only natural that individuals inside and outside the industry are skeptical, curious, questioning and uncertain -- as the anecdotes in their e-mails prove. The debate is healthy. Early estimates about various shale plays were too conservative in some instances and too aggressive in others. The Western Barnett turned out disappointing. The Marcellus is better than people initially thought. That isn't fraud or deception, it's the oil patch.

It is this author's opinion that recovery per well in gas shales will be closer to industry forecasts than the dire predictions of gas shale skeptics. But we can't know for sure. Real money is made *before* estimates turn into facts. Just like the stock market.

Gas shale drilling has been wildly successful -- just look at the quadrupling of U.S. shale gas production in the past five years. Right now, this is the same hollow success of long-distance telephone carriers -- volumes way up, prices way down. Even as oil prices returned to triple digits, an oversupply of gas has cratered gas prices. I believe that most new drilling for shale gas is uneconomic or marginally economic at current $4-$4.50/mcf prices. So does the industry! The gassy Haynesville shale rig count is down by 30% from the peak. It will fall further during 2011 and 2012 as leasehold drilling requirements are fulfilled. Cheap prices, falling gas-focused drilling, a recovering economy, eventual LNG exports? This is why industry executives are getting more bullish on the gas macro. However, even with optimism growing, most E&P companies are still hedging 2012 gas production at $5/mcf and/or selling down gas properties to fund oil drilling. Midstream companies are building gas pipelines like crazy. Several new LNG export projects are under way. These actions by a myriad of companies, hundreds of executives and thousands of employees indicate the industry believes in both the short-term and long-term viability of shales. They are speaking with their capital budgets, their bonus pool, their acquisition budgets … not with their keyboards and chat-room postings. If there is any conspiracy or hidden agenda, it's amongst those writing articles, not drilling gas shale.

For the record, our alternative investment strategies have essentially no directional investment in gas shale producers. As an investment thesis, I believe U.S. natural gas is trapped in limbo between yesterday's news and a recovery story.

– Dan Pickering

Dan Pickering is the head of asset management and the chief energy strategist at TPH Asset Management LLC (TPHAM), which is an operating company of Tudor, Pickering, Holt & Co. LLC, separate from Tudor, Pickering, Holt & Co. Securities Inc. (TPHCSI) and is not associated with the research division at TPHCSI. Mr. Pickering is a registered representative of TPHCSI. The views expressed herein by Mr. Pickering do not constitute research, investment advice or trade recommendations and may not represent the views and/or opinions of TPHAM's portfolio managers or the research division at TPHCSI.

**El Paso ...** ***(continued from page 1)***

ness as well as the industry leader in safety; its E&P unit, which has been refocused since 2007 into a top-tier domestic E&P company that is oilier with lower cost inventory; and its MLP, which was launched in 2007 and is now one of the 10 largest in the industry.

"In many ways, our midstream story is yet to be written. We were a very successful midstream company in the past, but for balance-sheet reasons we sold that business in 2004. We always liked the business and we hoped at some point it would make sense to re-enter," he said.

Foshee noted that the company's assets in the Altamont South Texas section of the Haynesville formed the "starter kit" in the midstream and has several outstanding growth projects that it hopes to launch this year.

### Split Is Right For Business

The company's finances have improved, along with its restructuring. That has allowed it to clear its backlog of projects, which was the largest in its history. This combination of strong business operations and strong financials is the impetus for El Paso's previously announced split into two publicly traded entities: the midstream and pipeline operations, and the E&P operations.

This separation will reduce the commodity exposure for the midstream and pipeline operations while also reducing E&P's capital intensity from the rest of the business.

"We think that any discount associated with execution should largely be gone. So far our stock has outperformed quite handily, but in our minds in spite of that outperformance we are still faced with two primary interlocking strategic questions. Do these businesses have greater capacity to create value together or apart? And will investors value the businesses more highly as independent entities, not just in the short-term but over time?" Foshee said.

He added that this decision is the right one for investors with recent valuations shifting the question from why would you do this to why wouldn't you do this. "After looking at all the information we could find, case studies on other similar transactions inside and outside our industry, analysis of our own businesses and a complete review of the competitive landscape and analysis of various alternatives both on our own and with multiple outside advisors, we came to the conclusion that this was the right thing to do and that we were prepared to do it successfully."

Aside from increasing shareholder value, the main benefits of this separation are that it will allow shareholders to assess the businesses independently while simplifying each company's equity story.

"The investment proposition for the new publicly traded E&P company is that it's a larger, well-capitalized independent with a larger repeatable oily inventory at the lower end of the cost curve with a good cost structure, a mature execution model, great growth prospects and returns, and cash flow that should go up by 20% or more in 2012 after a great year in 2011.

"The investment thesis for the remaining El Paso is equally compelling: the best pipeline franchise in the business, a growing midstream business that has synergies with our existing network, a best-in-class MLP with continuing growth prospects and a high-growth, wholly-owned GP, an investment-grade balance sheet, and a substantial cash generator with remaining growth," according to Foshee.

### Pipelines Are The Core Of El Paso Corp.

While the E&P division is being separated into its own company and midstream is seen as a growing aspect of El Paso Corp., it is the pipeline assets that are held as the key to this company.

"The pipelines going forward after the separation are clearly the core of El Paso Corp., and we feel that we have the very best franchise in the business," James Yardley, executive vice president, pipeline group, said.

This declaration is backed up by the group's excellent fundamentals of stable revenue and cash flow, and its long-term growth potential due to the need for new pipeline and additional capacity throughout the country.

The ability for this segment to grow is pretty remarkable considering that its pipeline assets represent about one-fourth of the nation's interstate natural gas pipelines. The company will be bringing online about $600 million worth of projects, primarily in 2012 and 2013. These consist primarily of additional build-out of the Marcellus and the Southeast. Once these projects are completed, El Paso Corp. will generate significant cash flow.

According to Yardley, this cash will be necessary as it is anticipated that the U.S. midstream infrastructure build-up will require $100 billion to be spent over 10 years with $7 billion per year of this being spent on pipeline and its related infrastructure.

These opportunities include ties into new gas-fired power plants that will replace older coal- and oil-fired power plants, as well as some nuclear power plants. "We think this amounts in total to an opportunity set of 5 billion cubic feet per day (Bcf/d) of additional pipeline capacity," he said. This does not include new demand for electric generation.

Further build-out of the Marcellus shale will continue, which El Paso is well-positioned to benefit from due to its Tennessee Gas Pipeline (TGP). This system transports about two-third of all production out of the Pennsylvania section of the Marcellus. Yardley noted that the company is also well-positioned for growth in the Utica shale in Eastern Ohio as well due to available capacity in the region.

### Midstream Segment Growing Fast

El Paso's recent re-entry into the midstream is now in full swing after starting slowly, D. Mark Leland, the company's executive vice president, said. The segment is now receiving revenue and cash flow from three operating assets and managing $135 million in growth capital projects.

"Our long-term vision for midstream at El Paso is pretty simple. We want to be a substantial midstream player in the key basins where El Paso operates. We want to be an important and visible growth driver for El Paso Corp.," Leland said.

The midstream group will continue to seek growth opportunities created by the actions of the E&P group as well as the pipeline segment. "We'll continue to try to provide value-added services for [E&P] even though we won't necessarily be in the same company. We'll be in the same building and we'll have the same DNA."

Although a smaller group than other midstream companies, the synergistic opportunities presented from these other two segments will provide the midstream group with a competitive advantage, according to Leland.

He added that this competitive advantage is necessary to succeed due to the heavy competition in the sector, and that El Paso's midstream segment will utilize the pipeline and E&P footprint to garner a significant share of the midstream infrastructure projects that will be put in place by 2020.

The midstream segment's projects will be funded in part through its 50/50 El Paso Midstream Investment Co. partnership with Kohlberg Kravis Roberts & Co. (KKR). "KKR is committed to co-invest with El Paso $500 million over the next four years, making it a very capital efficient way to grow our midstream business, which is consistent with our promise to be balance-sheet friendly," Leland said.

The Altamont Gathering and Processing System in the conventional oil Uintah basin is the segment's largest asset and will continue to be a focal point for growth projects due to increased activity based on higher oil prices.

The system currently gathers casing head gas from the Altamont-Bluebell field, but Leland said the system can easily be expanded. In addition to gathering services, the company also offers producers compression, treating, processing, third-party fractionation and NGL marketing in the area. The company is in the midst of a $25 million expansion of the system, which includes a 50% increase in plant capacity and a 25-mile extension.

The Eagle Ford shale is another region targeted for growth in the midstream by El Paso. The largest project in this regard currently being undertaken is the Camino Real oil and gas gathering system for the E&P group's development in LaSalle County. Once operational, this system will have a capacity of 150 million cubic feet per day (MMcf/d) to 170 MMcf/d of natural gas and 80,000 barrels per day (b/d) of oil.

He added that the segment is also working on potential projects in the Marcellus and Utica shales, most significantly the Marcellus Ethane Pipeline System (MEPS). "We partnered with Spectra Energy and will abandon about 1,000 miles of one of four lines in TGP's main line that traverse the country through there and we'll convert that to ethane service. We'll collect purity ethane in southwestern Pennsylvania and northern West Virginia and redeliver into one of the three main ethane consuming areas: Mont Belvieu, Lake Charles, or Baton Rouge, depending on where the ultimate market wants to take it."

MEPS will have an initial capacity of 60,000 to 80,000 b/d and will be expandable to 100,000 b/d and has an estimated cost of $1 billion and a targeted in-service date of 2014.

– Frank Nieto

## NEWS & TRENDS

### El Paso, Spectra Energy Holds Open Season For MEPS

El Paso Corp. and Spectra Energy Corp., Houston, has reported their jointly developed project, Marcellus Ethane Pipeline System (MEPS), is holding a 30-day open season in an effort to secure binding commitments from potential shippers that desire ethane transportation service from West Virginia and Pennsylvania Marcellus Shale supply areas to destination interconnect points with third party ethane pipelines or storage facilities in the Gulf Coast area. The MEPS project is being designed to transport up to 90,000 barrels per day and has an anticipated in-service date of 4th Quarter 2014. The open season will begin at 10 a.m. on June 27 and will close at 5 p.m. on July 27.

In October 2010, El Paso Midstream Group Inc. and Spectra Energy Transmission LLC announced that they had entered into a Memorandum of Understanding to pursue joint development of the MEPS project. Under the terms of the MOU, El Paso Midstream and Spectra Energy will each own a 50% interest in MEPS. For more information about the MEPS project visit *www.elpaso.com/midstream*.

## Eastman To Acquire Sterling Chemicals

Eastman Chemical Company entered into a definitive merger agreement to acquire Sterling Chemicals Inc, a single site North American petrochemical producer, for $100 million in cash, subject to modest deductions at closing as provided in the merger agreement. The transaction, which includes Sterling's plasticizer and acetic acid manufacturing assets in Texas City, Texas, is expected to be accretive to Eastman's full-year 2012 earnings per share in excess of Eastman's cost of capital.

Eastman plans to modify and restart Sterling's currently idled plasticizer manufacturing facility to produce non-phthalate plasticizers, including Eastman 168 non-phthalate plasticizers. This additional capacity will enable the company's Performance Chemicals and Intermediates (PCI) segment to serve the growing market demand for non-phthalate alternatives. In the North American and European non-phthalate plasticizers markets, total sales volume is expected to increase at a compounded annual rate of approximately 7% over the next five years.

"This acquisition supports our growth strategy for our plasticizer product line, and will enable us to keep pace with the growing demand for non-phthalate alternatives, like our Eastman 168™," said Ron Lindsay, executive vice president, performance chemicals and intermediates, and fibers. "We look forward to working with Sterling employees as we bring this additional capacity online and continue to grow this business."

The acquisition also includes Sterling's acetic acid production facility and its supply to BP Amoco Chemical Company under a long-term production agreement.

The transaction, which has been approved by both boards of directors, is expected to be completed after receipt of required regulatory approvals, approval of Sterling's stockholders, and satisfaction of other customary closing conditions. It is expected to be funded with available cash. Oppenheimer & Co. Inc. is acting as exclusive financial advisor to Eastman on this transaction and Eastman's legal counsel is Jones Day.

## Williams Responds To Southern Union's Decision To Authorize Discussions

Williams, Tulsa, Okla., has commented on the announcement by Southern Union Co. that the special committee of its board of directors has authorized Southern Union to enter into discussions with Williams regarding Williams' $39.00 per share all-cash proposal to acquire all the outstanding shares of Southern Union. The Special Committee of Southern Union made the determination to authorize discussions and to provide information to Williams pursuant to Section 5.4 of Southern Union's merger agreement with Energy Transfer Equity, LP.

"We are pleased that the Special Committee has acted in the best interest of its shareholders by promptly authorizing discussions in connection with Williams' $39 per share all-cash proposal," said Alan Armstrong, Williams' president and chief executive. "Our proposal provides an extremely attractive premium for Southern Union shareholders, and given the highly complementary nature of our respective asset portfolios we expect the combination to further strengthen our ability to deliver value and growth for all Williams stakeholders. Williams has a track record of successfully completing and integrating acquisitions as well as successfully completing large financings. We look forward to working closely with Southern Union to quickly execute a definitive merger agreement."

As previously announced, on June 23, 2011, Williams made a proposal to the Special Committee of Southern Union's Board of Directors to acquire all of Southern Union's outstanding common stock for $39.00 per share in cash. The Williams proposal represents a premium of approximately 18% over the nominal purchase price in Southern Union's proposed transaction with Energy Transfer Equity, LP, announced on June 16, 2011, in which Southern Union shareholders would receive optionally redeemable Series B MLP partnership units of Energy Transfer with a stated value of $33.00 per share. The Williams proposal also represents a premium of 38% over Southern Union's closing share price the day prior to the Energy Transfer announcement. Williams is confident that it could consummate the proposed transaction on a timeline consistent with the proposed Energy Transfer transaction.

Barclays Capital and Citi are serving as financial advisors to Williams and Cravath, Swaine & Moore LLP and Gibson, Dunn & Crutcher LLP are serving as its legal advisors.

## Eco-Energy Announces Terminal Expansion

Eco-Energy Inc., Franklin, Tenn., has reported that its operating entity, Eco Distribution Charlotte, along with minority partner Charlotte Terminal 1 Inc., will reopen the petroleum storage and sales terminal located at 7720 Old Mt. Holly Road in Charlotte, N.C.

"Eco-Energy has been active in the ethanol industry for over 20 years and we are excited to expand our distribution footprint into the petroleum terminal side of the business," says Paul Melgaard, vice president of Fuels Supply for Eco-Energy Inc. "Eco will convert the Charlotte terminal into a first-class operation from which we will build our fuel distribution business. We are convinced Charlotte is the ideal entry point for our expansion; it is a rapidly growing community, is home to many high-quality fuel retailers, and Eco-Energy currently markets ethanol in Charlotte. We look forward to the reopening of this terminal," Melgaard said.

"The opening of this terminal will enable Eco-Energy to get further down the bio-fuel supply chain, diversify the company's revenues, and set the foundation for a more vertically integrated platform for growth," said Eco-Energy chief executive Chad Martin.

| Resin Prices – Market Update – June 30, 2011 | | | | | |
|---|---|---|---|---|---|
| TOTAL OFFERS: 19,549,616 lbs | | SPOT | | CONTRACT | |
| Resin | Total lbs | Low | High | Bid | Offer |
| HDPE - Blow Mold | 3,979,680 | 0.64 | 0.74 | 0.63 | 0.67 |
| PP Homopolymer - Inj | 2,892,000 | 0.74 | 0.88 | 0.79 | 0.83 |
| PP Copolymer - Inj | 2,032,276 | 0.80 | 0.88 | 0.81 | 0.85 |
| LDPE - Film | 1,645,036 | 0.73 | 0.86 | 0.74 | 0.78 |
| LLDPE - Film | 1,284,920 | 0.66 | 0.80 | 0.70 | 0.74 |
| HDPE - Inj | 590,000 | 0.71 | 0.73 | 0.66 | 0.70 |
| HMWPE - Film | 570,000 | 0.70 | 0.76 | 0.66 | 0.70 |
| GPPS | 402,000 | 0.82 | 0.90 | 0.83 | 0.88 |
| HIPS | 220,460 | 0.98 | 0.98 | 0.91 | 0.96 |
| LLDPE - Inj | 180,000 | 0.74 | 0.76 | 0.71 | 0.75 |
| LDPE - Inj | 176,368 | 0.82 | 1.08 | 0.75 | 0.79 |

Source: Plastics Exchange – www.theplasticsexchange.com

# PIPELINES & TECHNOLOGY

## NuStar, Velocity Sign LOI To Develop Eagle Ford Pipeline

NuStar Logistics, L.P., and Velocity Midstream Partners have reported that they have signed a letter of intent to develop a joint pipeline solution to transport west Eagle Ford Shale condensate from Velocity's Gardendale Hub to NuStar's North Beach Corpus Christi, Texas terminal facility.

Velocity will build and operate a new 70-mile, 12-inch pipeline with the capacity to move over 100,000 barrels per day of condensate from Gardendale to Oakville, Texas. Velocity's 12-inch pipeline will interconnect with NuStar's new Oakville Storage Facility near Three Rivers, Texas. This storage facility will be connected to NuStar's existing 16-inch pipeline, which has the capacity to transport approximately 200,000 barrels per day of crude and condensate into NuStar's Corpus Christi North Beach Terminal. The North Beach terminal has approximately 2 million barrels of storage capacity, large-scale marine loading facilities, and access to several Corpus Christi refinery markets. NuStar also has a land lease option for 15 acres contiguous to the existing property, which will provide terminal expansion capabilities.

Velocity is currently constructing 65 miles of pipeline and 150,000 barrels of storage to transport condensate to Velocity's Gardendale Terminal for producers, including Shell E&P, Chesapeake, SM Energy and Rosetta Resources. The addition of the NuStar partnership allows Velocity to quickly offer these and other producers a downstream solution to transport condensate from the Gardendale Terminal to end markets with strong purchaser demand. Construction of Velocity's 12-inch pipeline and NuStar's Three Rivers storage facility will begin this summer and the system is expected to be in service by April of 2012.

"We are pleased to be partnering with NuStar on this transportation project. Given the steep ramp in condensate production, the western portion of the Eagle Ford Shale has an immediate need for transportation solutions to the Gulf Coast markets," said Rick Wilkerson, president of Velocity Midstream. "Given the difficult trucking conditions, it is the next 18-24 months that our customers are most concerned about. Several crude oil projects have been announced and will be needed, however, the Velocity – NuStar system will offer producers a near-term solution for transportation of condensate directly to Corpus Christi markets and other markets accessible from Corpus Christi."

"We're excited about working with Velocity to offer this much-needed logistics solution to our customers," said Curt Anastasio, NuStar's president and chief executive. "This project is part of a larger strategy to give our customers even greater logistical flexibility by moving the crude and condensate from the Eagle Ford region to Corpus Christi. Our customers are excited about the project because it provides them with access to a great market that offers waterborne access to major refining and trading hub markets throughout the Gulf Coast."

## Wells Fargo... *(continued from page 1)*

Canada or to the Gulf Coast; or a new steam cracker in the Appalachian region.

Wells Fargo anticipates that companies that will likely build these projects would be either Enterprise Products Partners or Spectra Energy/El Paso Corp. for transportation to the Gulf Coast; or Sunoco Logistics and MarkWest Energy's Mariner West project that would transport volumes to Sarnia.

The report added that out of the five petrochemical companies that have announced plans to build a world-scale ethylene cracker in the Appalachia region, the most likely company to do so is Shell.

Wells Fargo anticipates that a shell steam cracker project would also include associated polyethylene derivative units. "In total, Shell could invest more than $2 billion of capital on the project ... If constructed, a 1 million ton per year ethylene plant could consume approximately 60,000 b/d of ethane."

MarkWest Energy Partners and Caiman Energy are expected to build a sizable portion of this new processing capacity in the play. MarkWest plans on increasing processing capacity in the play from 558 MMcfe/d to 945 MMcfe/d, but this figure could increase to 1,400 MMcfe/d if several announced projects were to be completed. Caiman Energy's announced projects would increase capacity in the Marcellus from 120 MMcfe/d to 520 MMcfe/d, and this could rise to as much as 720 MMcfe/d based on potential projects.

Should processing capacity rise to Wells Fargo's forecast of 160,000 b/d by 2015, the investment bank stated than an equal amount of ethane fractionation capacity could also be readily constructed.

"While the NGL mix in the Marcellus is likely to be weighted more heavily to ethane (potentially more than 60%), we believe a certain amount of ethane (up to 60,000 b/d) will continue to be blended and therefore not require fractionation," according to the report.

"To construct ethane fractionation capacity significantly higher than the 160,000 b/d level would likely require the build-out of additional C3+ fractionation trains. This is a higher cost and more time-intensive process relative to simply constructing new C2 towers, in our view ... However, if ethane production tracks levels implied by announced plus potential processing plant expansions, midstream companies may need to construct additional fractionation capacity, in our view," the report added.

– Frank Nieto

## Pengrowth Energy Corp. Confirms Pipeline Leak At Judy Creek Field

Pengrowth Energy Corp., Calgary, Alberta, Canada, and local authorities responded to a gathering system pipeline leak and fire at Pengrowth's Judy Creek field, approximately 23 kilometers southwest of the Town of Swan Hills, Alberta.

Pengrowth personnel and the local fire department responded, contained and extinguished the fire at the site of the leak. Pengrowth has shut-in and depressurized the pipeline and the spill has been contained. There were no injuries resulting from the incident nor does Pengrowth believe that the incident presents any danger to the public. Pengrowth is working closely with all of the regulatory, safety and health authorities to ensure timely clean-up of the resulting spill.

Pengrowth has shut-in the pipeline which affects only a portion of the Pengrowth owned and operated Judy Creek oil field. The main production facilities remain unaffected. As a result, Pengrowth has shut-in approximately 3,000 barrels of oil equivalent (boe) per day from the affected part of the Judy Creek oil field.

Pengrowth will continue to monitor the situation and will provide updates as necessary.

## Enbridge Receives NEB Approval For Crude Oil Mainline System Toll

Enbridge Inc. announced that the National Energy Board (NEB) has approved the 10-year Competitive Toll Settlement (CTS) agreement reached with shippers on its crude oil mainline system.

The NEB determined that the 2011 CTS is consistent with the revised guidelines for negotiated settlements. The CTS was effective July 1, 2011.

"We are pleased with the decision of the NEB and look forward to using this long-term agreement to the mutual benefit of Enbridge and our shippers," said Enbridge President and Chief Executive Officer, Patrick D. Daniel. "The CTS will provide a simplified toll structure, certainty and stability for crude volumes received in Canada, as well as competitive long-term tolls for the Enbridge Mainline System."

The CTS covers the local tolls to be charged for service on the Canadian portion of the mainline system held by wholly owned subsidiary Enbridge Pipelines Inc. (EPI). Local tolls for service on the U.S. portion of the system, held by affiliate Enbridge Energy Partners L.P. (EEP) (NYSE: EEP), will not be affected by the CTS and will continue to be established by EEP's existing toll agreements. The CTS also provides for an International Joint Tariff (IJT) for crude oil shipments originating in Canada on the EPI system, and delivered in the U.S. off the EEP system. The IJT is designed to provide mainline shippers with a stable and competitive long-term toll, preserving and enhancing throughput on both the EPI and EEP systems.

More details of the CTS are available at: www.enbridge.com/DeliveringEnergy/Shippers/Competitive-Tolling-Settlement

# NGL PRICES

## Ethane Prices Drop As All Ethylene Plants Back Online

All U.S. ethylene plants have been brought back online and are estimated to be operating at 95% capacity, which helped to lower ethane prices slightly at Mont Belvieu. However, as the bottleneck has eased and volumes begin to flow back into the Gulf Coast, the Conway price rose for the third straight week as ethane has become more scarce in the Mid-Continent.

The Conway price the week of June 22 improved 2% to 55¢ per gallon (/gal), the highest it has been since it was 57¢/gal the week of May 4. While volatility was greater in Mont Belvieu, demand wasn't as great due to the increase in volumes available to crack in the Gulf Coast. This resulted in the Mont Belvieu price dropping 1% to 73¢/gal, the second-lowest price at the hub in a month.

En*Vantage anticipates the market for ethane to tighten as the summer continues with August supply levels falling to 19 days of available supply. According to the Energy Information Administration's (EIA) monthly inventory numbers for ethane, levels in April increased 859,000 barrels (bbls) to 21.441 million bbls. However, this was down from the April 2010 storage level of 27.081 million bbls. The April 2011 days-of-supply were 24 days compared with 34 days in April 2010.

"Looking forward, we are looking for ethane inventories to increase in May by 600,000 bbls but start declining in June, July and August. By the end of August we expect ethane inventories to be at 18.6 million bbls. ... If our forecast is correct this would

**NGL PRICES**

| Mont Belvieu | Eth | Pro | Norm | Iso | Pen+ | NGL Bbl |
|---|---|---|---|---|---|---|
| June 22 - 28 '11 | 73.34 | 150.00 | 176.45 | 196.42 | 227.22 | $59.07 |
| June 15 - 21 '11 | 74.24 | 153.18 | 184.12 | 200.06 | 237.03 | $60.75 |
| June 8 - 14 '11 | 75.36 | 154.22 | 187.98 | 201.52 | 246.05 | $61.90 |
| June 1 - 7 '11 | 73.25 | 151.80 | 180.50 | 197.64 | 241.20 | $60.47 |
| May '11 | 75.69 | 152.10 | 189.34 | 204.72 | 252.68 | $62.31 |
| April '11 | 75.74 | 144.44 | 189.72 | 203.15 | 256.33 | $61.63 |
| 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 |
| 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 |
| June 23 - 29, '10 | 44.35 | 99.14 | 139.32 | 151.72 | 168.37 | $41.42 |
| **Conway, Group 140** | **Eth** | **Pro** | **Norm** | **Iso** | **Pen+** | **NGL Bbl** |
| June 22 - 28 '11 | 55.06 | 141.28 | 160.58 | 187.00 | 215.44 | $53.89 |
| June 15 - 21 '11 | 53.20 | 142.06 | 166.50 | 187.90 | 220.00 | $54.32 |
| June 8 - 14 '11 | 49.48 | 143.32 | 168.42 | 184.00 | 228.75 | $54.45 |
| June 1 - 7 '11 | 46.52 | 139.52 | 164.80 | 182.13 | 229.12 | $53.30 |
| May '11 | 52.63 | 142.00 | 173.01 | 192.24 | 240.62 | $56.08 |
| April '11 | 54.31 | 134.59 | 175.54 | 199.58 | 246.21 | $56.18 |
| 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 |
| 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 |
| June 23 - 29, '10 | 28.44 | 90.38 | 126.16 | 136.90 | 164.80 | $36.88 |

Data Provided by Intercontinental Exchange. Individual product prices in cents per gallon. NGL barrel in $/42 gallons | Source: Frank Nieto indicate a reasonably tight ethane market," the company said in its *Weekly Energy Report* for June 30.

Wells Fargo Securities stated that this undersupplying of the ethane market is primarily due to feedstock switching by petrochemical producers away from heavier crude oil-based products to ethane.

There was also significant volatility in propane prices the week of June 22 at both Mont Belvieu and Conway, but this did not have a positive impact on prices at either hub. The Mont Belvieu price fell 2% to $1.50/gal, the lowest price at the hub since it was also $1.50/gal the week of May 25. The Conway price was down slightly to $1.41/gal, its lowest price in a month.

While propane inventory levels are still at five-year lows, they have been increasing on a year-on-year basis. En*Vantage noted that propane cracking economics aren't as favorable as those for ethane and butane and that it is possible ethylene producers are selling additional propane into the market.

In addition, PetroLogistics' PDH plant, which can consume approximately 25,000 barrels per day of propane, is having operational problems. Once the plant is fully operational, it will help to tighten the propane market.

Butane prices had the largest decreases at both hubs the week of June 22, as the Mont Belvieu price fell 4% to $1.77/gal and the Conway price dropped 3% to $1.61/gal as heavy NGL prices continued to fall along crude oil prices.

The Mont Belvieu price was the lowest at the hub since it was $1.76/gal the week of March 9 and the Conway price was the lowest since it was $1.59/gal the week of Feb. 9.

The NGL with the closest relationship to crude, C5+, had a similar drop in price at both hubs with the Mont Belvieu price down 4% to $2.27/gal and the Conway price down 2% to $2.15/gal. The Mont Belvieu price was the lowest it has been since it was $2.22/gal the week of Feb. 16, while the Conway price was the lowest it has been since it was $2.09/gal the week of Jan. 26.

Isobutane prices performed the strongest of any of the heavy NGLs the week of June 22 due to its smaller supply levels. The Conway price fell slightly to $1.87/gal, which was the second-highest price at the hub in a month. The Mont Belvieu price dropped 2% to $1.96/gal, which was its lowest price since the week of March 16, when it was $1.96/gal.

– Frank Nieto

## FRAC SPREAD

### Conway Ethane Margin Up 9%

Conway ethane was the lone NGL to experience an increase in frac-spread margin the week of June 22, as it was also the only NGL at either Conway or Mont Belvieu to experience a gain in price value.

The margin rose 9% from the prior week due to a 2% price increase at the hub. The frac spread was also helped by a 1% drop in price for feedstock natural gas at the hub to $4.24 per million Btu (/MMBtu).

The opposite was true at Mont Belvieu, where prices fell across the board for NGLs and there was a 1% gain in price for feedstock natural gas, as it improved to $4.43/MMBtu.

The NGL with the smallest drop in margin at Mont Belvieu was isobutane, which dropped 3% from the previous week. The largest drop in margin at both hubs was for butane, which was down 5% at Conway and 6% at Mont Belvieu from the prior week.

The theoretical NGL barrel price was down 1% to $53.89 per barrel (/bbl) at Conway with a margin decrease of 1% to $38.40/bbl. The theo-

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

**Current Frac Spread (Cents/Gal)**

| June 30, 2011 | Conway | Change from Start of Week | Mont Belvieu | Start of Week |
|---|---|---|---|---|
| Ethane | 55.06 | | 73.34 | |
| Shrink | 28.11 | | 29.37 | |
| Margin | 26.95 | 8.56% | 43.97 | -2.58% |
| Propane | 141.28 | | 150.00 | |
| Shrink | 38.84 | | 40.58 | |
| Margin | 102.44 | -0.40% | 109.42 | -3.14% |
| Normal Butane | 160.58 | | 176.45 | |
| Shrink | 43.97 | | 45.94 | |
| Margin | 116.61 | -4.51% | 130.51 | -5.83% |
| Iso-Butane | 187.00 | | 196.42 | |
| Shrink | 42.23 | | 44.12 | |
| Margin | 144.77 | -0.35% | 152.30 | -2.58% |
| Pentane+ | 215.44 | | 227.22 | |
| Shrink | 47.02 | | 49.13 | |
| Margin | 168.42 | -2.39% | 178.09 | -5.44% |
| NGL $/Bbl | 53.89 | -0.79% | 59.07 | -2.77% |
| Shrink | 15.49 | | 16.18 | |
| Margin | 38.40 | -0.74% | 42.89 | -4.09% |
| Gas ($/mmBtu) | 4.24 | -0.93% | 4.43 | 0.91% |
| Gross Bbl Margin (in cents/gal) | 88.53 | -0.66% | 100.37 | -3.99% |
| NGL Value in $/mmBtu | | | | |
| Ethane | 3.03 | 3.50% | 4.04 | -1.21% |
| Propane | 4.90 | -0.55% | 5.21 | -2.08% |
| Normal Butane | 1.73 | -3.56% | 1.91 | -4.17% |
| Iso-Butane | 1.16 | -0.48% | 1.22 | -1.82% |
| Pentane+ | 2.78 | -2.07% | 2.93 | -4.14% |
| Total Barrel Value in $/mmbtu | 13.61 | -0.39% | 15.30 | -2.50% |
| Margin | 9.37 | -0.14% | 10.87 | -3.82% |

  

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retical barrel at Mont Belvieu was down 3% to $59.07/bbl with a 4% drop in margin to $42.89/bbl.

The most profitable NGL to make at both hubs remained C5+ at $1.68 per gallon (/gal) at Conway and $1.78/gal at Mont Belvieu. This was followed, in order, by isobutane at $1.45/gal at Conway and $1.52/gal at Mont Belvieu; butane at $1.17/gal at Conway and $1.31/gal at Mont Belvieu; propane at $1.02/gal at Conway and $1.09/gal at Mont Belvieu; and ethane at 27¢/gal at Conway and 44¢/gal at Mont Belvieu.

Natural gas in storage for the week of June 24, the most recent data available from the Energy Information Administration, continued to grow at a slightly reduced rate for injection season. Storage levels rose 78 billion cubic feet to 2.423 trillion cubic feet (Tcf) from 2.354 Tcf the previous week. This was 9% below the storage level of 2.675 Tcf recorded last year at the same time and 3% below the five-year average of 2.495 Tcf.

Barclays Capital reported in its *Natural Gas Weekly Kaleidoscope* for June 28 that the worst of the natural gas oversupply is likely over, but cautioned that bullish sentiments for 2011 are premature.

"Still-growing gas supply this year will continue to narrow the storage deficit, while continuing to displace coal in size, keeping price upside in check. U.S. supply growth is expected to plateau and fall slightly in the second half of 2012 when the rig count falls sufficiently next year. While far from a 'balanced market,' lower supply dampens the need to displace coal, allowing price to tick moderately higher. By Q4 2012, we believe the market will begin pricing in a turn lower in supply," according to the report.

Consequently, Barclays is increasing its natural gas price outlook from $3.88/MMBtu to $4.40/MMBtu for the second half of 2011 and from $4.50/MMBtu to $4.55/MMBtu in 2012.

Increased cooling degree days are likely to keep storage injections lower than normal in the coming week, according to the National Weather Service's forecast for the week of July 5. The weather report is forecasting a heat wave that will extend along the West Coast into the southern half of the U.S. and much of the East Coast. Normal temperatures for early July are anticipated in the Northeast and parts of the Midwest. Cooler than normal temperatures are expected in the Great Lakes region.

– Frank Nieto

## SNAPSHOT

### North Baja Pipeline Delivers Gas To And From Mexico Into U.S.

The North Baja Pipeline System was acquired in 2009 by TC PipeLines, LP, and is managed by TransCanada PipeLines Limited. The system is bi-directional and allows gas to be exported from the United States into Mexico and from Mexico into the United States.

According to Hart Energy Mapping and Data Services, the 220-mile pipeline system – only 80 miles are in the U.S. – has a capacity of 5 million cubic feet per day (MMcf/d) and a compressor station near Ehrenberg, Ariz. The North Baja Pipeline consists of 30- and 36-inch-diameter pipeline, predominantly in La Paz County, Arizona, and in Riverside and Imperial counties, California.

In April 2008 an expansion was completed that allowed natural gas arriving at terminals in Mexico from the Pacific Rim to be delivered into California and other southwestern U.S. markets, according to the TransCanada website.

Sempra LNG International, LLC, is its highest transport customer with 395,000 dekatherms per day (Dth/d) of capacity; followed by Gazprom Marketing & Trading USA Inc. with 207,000 Dth/d. The rest of the Top seven are Energia Azteca with 120,000 Dth/d; Sempra LNG Marketing, LLC, with 105,000 Dth/d; Arizona Public Service Co. with 77,000 Dth/d; Energia De Baja California

**North Baja Pipeline - Pipeline Statistics**

General Information — FERC Code: 181

| | | | |
|---|---|---|---|
| Owner: | TransCanada | System Capacity: | 0.5 Bcf/d |
| Operator: | TransCanada | Seasonal Storage: | None |
| Miles of Pipeline: | 80 | Compressor Stations: | 1 |

Top 10 Transport Customers — Capacity (MDth/d)

| Rate | Customer Name | Capacity |
|---|---|---|
| FTS1 | Sempra Lng International, Llc | 395 |
| FTS1 | Gazprom Marketing & Trading Usa, Inc. | 207 |
| FTS1 | Energia Azteca | 120 |
| FTS1 | Sempra Lng Marketing, Llc | 105 |
| FTS1 | Arizona Public Service Company | 77 |

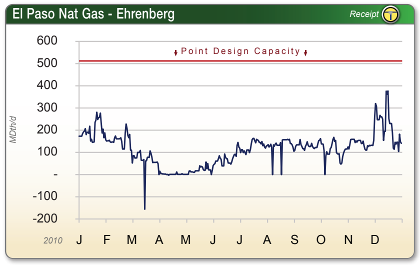
| Rate | Customer Name | Capacity |
|---|---|---|
| FTS1 | Energia De Baja California | 52 |
| FTS1 | Toyota Motor Manufacturing De BC | 1 |

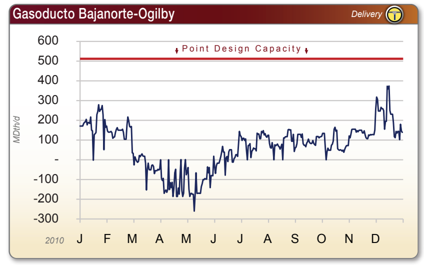
Source: Hart Energy Mapping and Data Services with 52,000 Dth/d; and Toyota Motor Manufacturing De BC with 1,000 Dth/d.

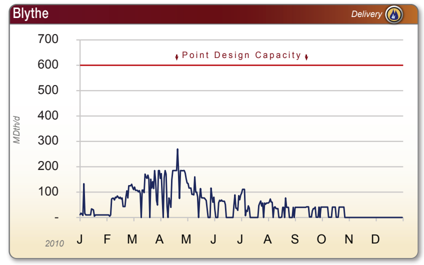
The top receipt point for 2010 was Ehrenberg, followed by the Yuma Border. The top delivery point for 2010 was Ogilby, followed by Blythe.

– Rebecca Torrellas

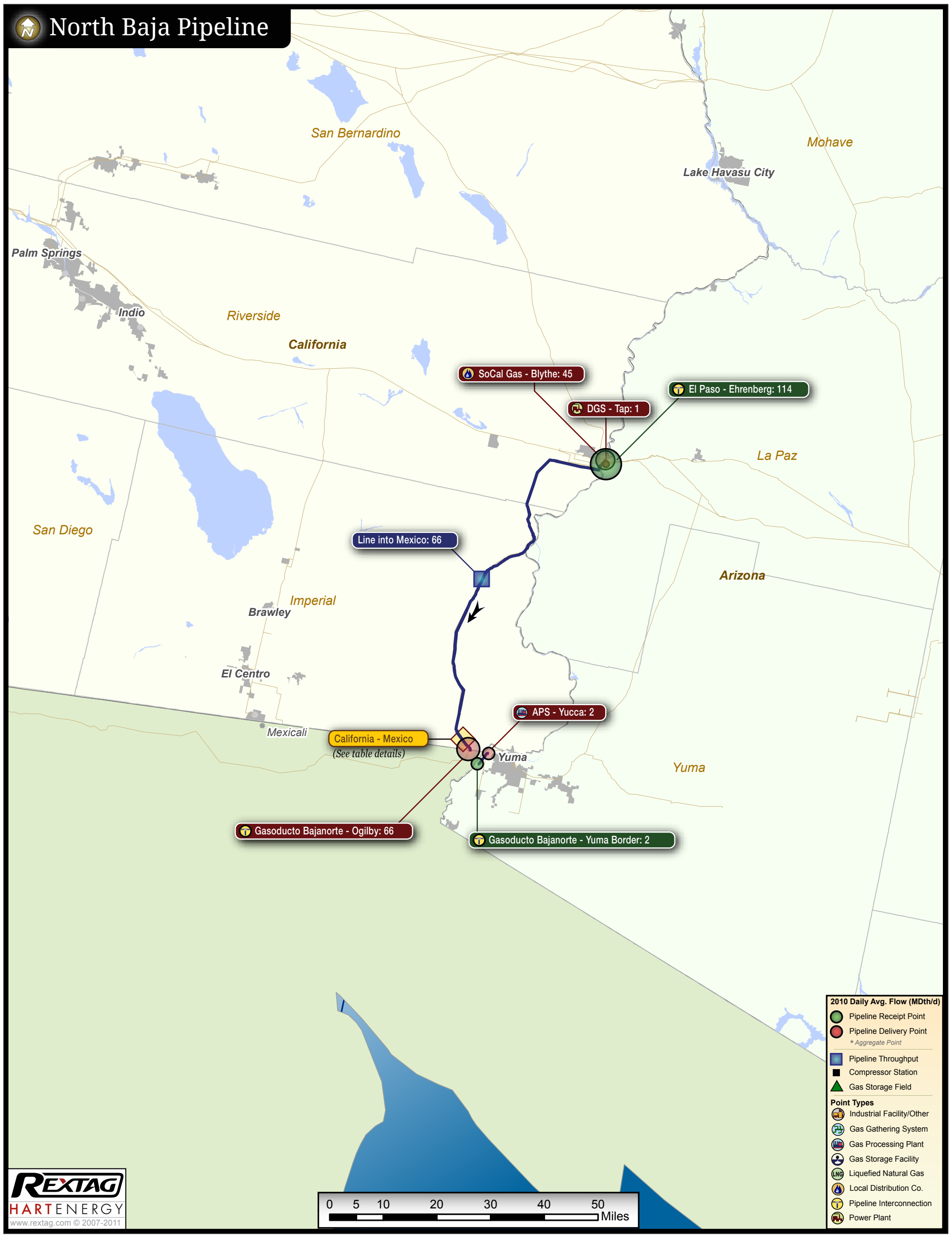
## North Baja Pipeline - Major Receipt & Delivery Points




Source: Hart Energy Mapping and Data Services

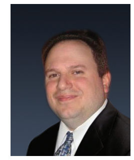



Source: Hart Energy Mapping and Data Services

## Contact Information:

FRANK NIETO Editor
fnieto@hartenergy.com

REBECCA TORRELLAS
Online News Editor
rtorrellas@hartenergy.com



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SHARON COCHRAN Circulation Coordinator
E-mail: scochran@hartenergy.com
Mail: Hart Energy Publishing, LP
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Houston, TX 77057 USA

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