MIDSTREAM Monitor

Sept. 4, 2015 | Volume 33 | Issue 35

FEATURES

Data Science Moving To Midstream

By Caryn Livingston, Hart Energy

HOUSTON – Data collection and analytics, which have typically been utilized by upstream operators, are beginning to enter the midstream. Louis Fabbi, senior data scientist with SAS, emphasized the importance of incorporating analytics into midstream operations at the recent SAS Energy Analytics Forum in Houston.

According to Fabbi, the energy industry is in a period of extreme uncertainty related to upstream supply, the economics or break-even prices of different shales, and the cost of midstream development.

Analytics can help solve planning problems created by the uncertainty, Fabbi said.

“That’s what we’re addressing in particular through the oilfield production forecasting, simulation, data mining and creating the supply envelope with statistical certainty associated with it," he told Hart Energy. "Once you've done that, you can say you have statistical confidence."

"So that's what we're bringing to the table now and we're actually implementing right now with a midstream operator."

Traditionally there has been a gap between the strategic planning of upper management and the actual engineering or building work, Fabbi said. Data science fills that gap by modeling assets and business statistically, using mathematical representations to give insight into strategic and capital planning.

The prospect of launching a data collection or analytics program can be daunting to company leadership, but doesn't need to be. According to Fabbi, smaller companies can benefit from easily applied, strategic data analysis, and relatively simple implementation can return big results.

Analytics for small companies are "just as important [as for large companies], just on a smaller scale," he said. "It doesn't have to be a $10 million implementation; it can be something more affordable for a smaller operator."

Those smaller operators can benefit from doing their own analyses of third-party data, he said. The International Energy Agency and U.S. Energy Information Administration can be useful sources for data companies, as well as vendors like IHS, for detailed well data, he said.

"Leverage that data," Fabbi said. "It's there. Use it, and you could build a whole lot more confidence into what you're trying to understand as far as risk of your capital."

Company leadership worried about a potential investment while prices remain low should understand "that doing analytics is achievable for them," he said. "They don't need a team of PhDs."

A small, high-functioning analytics team can provide some quick wins with some fairly simple analysis, Fabbi said. One such quick win relates to actually knowing how much pipeline capacity isn't being utilized.

"Understand that, and understand why you're not using that capacity," he said.

Keystone XL Permit On Verge Of Rejection?

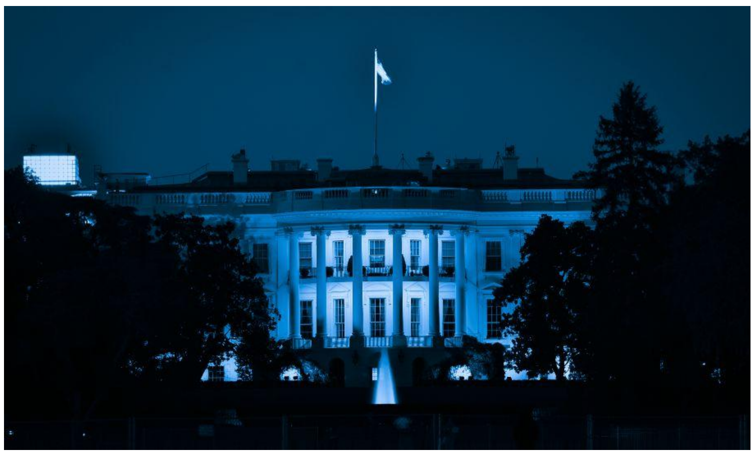
By Joseph Markman, Hart Energy

The long-anticipated rejection of permitting to build TransCanada Corp.'s Keystone XL Pipeline by the Obama administration may be announced just prior to the Labor Day weekend, according to reports in the Canadian press, which would confirm projections made earlier in the summer by Stratas Advisors, a Hart Energy company.

John Kneiss, Washington-based director for Stratas, said on Aug. 28 that the president could announce the denial of a permit to build the pipeline during his trip to Alaska early next week.

The Toronto-based *National Post* cited a "well-connected source" as predicting that the denial would come on the Thursday or Friday before the long holiday weekend, when many in the U.S. capital are out of town and political blowback would be minimized.

A spokesman for the U.S. Senate Committee on Energy & Natural Resources had no comment on the rumors, but insisted that approval of the Keystone XL permits was a "no brainer."



"Sen. [Lisa] Murkowski [R-Alaska and chairwoman of the committee] has supported this project from the very beginning," Michael Tadeo, deputy communications director for the committee, told Hart Energy. "This important energy project strengthens ties with our closest ally—Canada—and improves North American energy security."

As Stratas advised its clients in late July, Sen. John Hoeven, R-N.D., pondered adding an amendment forcing approval of Keystone XL as part of broader energy legislation that may reach the Senate floor in September. Hoeven said he had been warned by unnamed sources in the administration that the president would deny approval of the permit during Capitol Hill's summer recess.

The *Post* source anticipated what the newspaper called a "convoluted rationale" for canceling the project:

- Approving the pipeline would facilitate growth in Canadian oil sands production;
- That growth would make it difficult to generate international support for a greenhouse gas reduction deal that President Obama hopes to reach in Paris in December; and
- Increased domestic oil production renders the pipeline unnecessary.

In response, Stratas said it expected Keystone XL supporters “to leverage the viewpoint that Obama is letting Iranian crude oil enter the global marketplace—as sanctions are lifted next year under the nuclear program agreement—while slowing production from the domestic Bakken Shale play, and restricting supply output from our best trading partner, Canada.”

TransCanada could resubmit the application next year, which could make it a political rallying issue for Republican candidates stressing jobs and energy security, Stratas said. The company can also attempt to recover costs by entering a claim under the North American Free Trade Agreement, although Stratas noted that the U.S. government has not lost any of the 13 cases brought against it.

Davis Sheremata, Calgary-based manager of external communications for TransCanada, told Hart Energy that the company was “well beyond speculating” on oft-heard rumors of the project’s imminent demise.

“Every test, every hurdle has been satisfied,” he said. “If it is judged on its merits it will be approved. If it’s judged on science over symbolism it will be approved.”

Sheremata declined to speak to the company’s strategy going forward if the permit is denied, but Stratas expects TransCanada to wait until after the next U.S. presidential election in November 2016 before resubmitting its application. In this scenario, approval would likely come in mid-2018 and construction would be completed around 2020.

WPX Jumpstarts Deleveraging Plan With $185 Million Midstream Sale

By Emily Moser, Hart Energy

WPX Energy Inc. (WPX) has quickly hit the pavement, selling assets to free up capital for its newly acquired position in the Permian Basin.

WPX Energy said Aug. 31 it has agreed to sell a North Dakota gathering system to a private equity fund managed by the Ares EIF Group, a subsidiary of Ares Management LP (ARES). The transaction is worth about $185 million and is expected to close in 60 days.
The gathering system supports WPX's development in the Van Hook peninsula area in the Williston Basin. The Van Hook facility is an oil, natural gas and water gathering system.

The Tulsa, Okla.-based company is working to quickly reduce debt just two weeks after closing its acquisition of privately held RKI Exploration & Production LLC. The $2.75 billion deal added decades of drilling inventory in the core of the Permian's Delaware Basin.

“We are aggressively moving on our deleveraging plan just as we said we would do,” said Rick Muncrief, WPX president and CEO, in a statement.

In total, the company is targeting up to $1 billion of asset sale to be completed by year-end 2016.

The Van Hook system was one of several midstream assets that WPX identified as potential sale candidates, said Patrick Rigamer, vice president and senior E&P analyst for Global Hunter Securities (GHS). Other possible divestiture targets include the company's Piceance water-treatment and San Juan gathering systems.

“Additional sales will be required to meet WPX’s target for 2015, but we view this sale as an important step in protecting the company’s balance sheet,” Rigamer said in a report.

WPX built the Van Hook system to support its drilling program in the Williston Basin. During the second quarter of 2015 the company produced an average of 22,600 barrels per day (bbl/d) of oil in the Williston Basin, up 20% year-over-year.

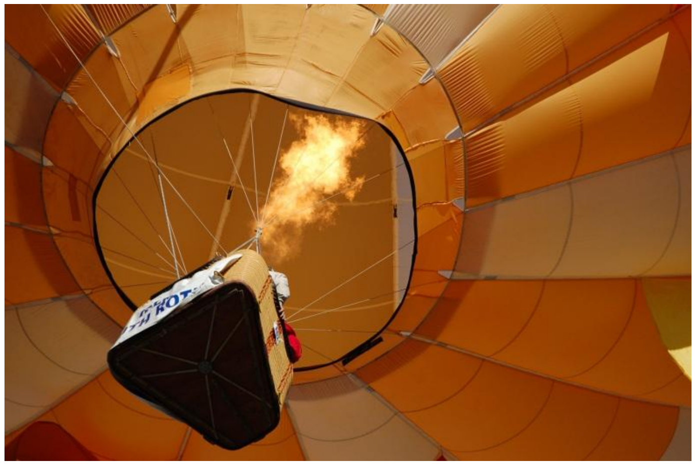
The Van Hook system currently gathers about 11,000 bbl/d of oil, about 65,000 cubic feet per day (Mcf/d) of natural gas, and about 5,000 bbl/d of water. The system can be expanded, the release said.

WPX will continue to operate the Van Hook system after closing, as part of the sale agreement. WPX’s deleveraging plan targets $400- to $500 million in asset sales by year-end 2015 and another $400- to $500 million in 2016.

Other potential divestitures include the sale of additional midstream infrastructure and nonoperated properties. The company is also evaluating creative options to unlock Piceance Basin value, the release said.

Credit Offers Alternative To Equity Markets

By Caryn Livingston, Hart Energy



As the energy industry faces continuing low commodity prices combined with tightening banking and equity markets, management is looking to other strategies to sustain continued growth. Jay Rose, managing director of newly launched Euler Hermes Energy, told *Midstream Business* that credit insurance can protect that growth.

Credit "frees up liquidity for shippers, marketing companies, commodity traders, companies servicing producers, in a credit-constrained business," he said.

"The more credit that you can deal openly increases opportunity to reach a broader open market, reducing barriers and creating opportunity to get more financing liquidity to facilitate growth."
Though companies are getting creative, particularly while prices remain low, Rose said the need for more credit protection results not only from the stressed prices, but from the shift toward increasing globalization.

"The energy industry is becoming a lot more global than it ever has been," he said.

"The forward-looking future of this industry is becoming global. LNG's hitting the water, more foreign investment is coming into the U.S., you have deregulation of Mexico and the increased possibility of crude being exported legally. New counterparties and destinations for products are emerging, which is changing the dynamic of the industry as a whole."

In the meantime, concerns about low prices are at the forefront of the list of business concerns. Those concerns are bringing the industry's attention to credit insurance and risk management offerings like those from Euler Hermes Energy, Rose said.

"It's an insurance policy on the credit risk protecting against counterparty defaults; we step in and pay the client in similar fashion to a letter of credit without typing up capital assets." Open credit is a valuable financial option for midstream operators, Rose said, because "midstream companies are very credit-constrained, and our programs open up the credit universe to more opportunity with private and non-investment grade shippers on pipeline."

Usual credit requirements in the midstream "create barriers of trade and financing that prohibit growth," he said. "By being able to facilitate liquidity in the form of open credit, it lifts barriers. The more shippers pipelines have the higher their subscription, which will lead to more demand, safer investment and, ultimately, more assets and equity growth."

Companies not utilizing these options to mitigate risk could be missing key opportunities to grow their business, Rose said.

"Credit provides opportunity to businesses, and more tools and more solutions that businesses can use to help grow their business," he said.

"In today's environment, you have volatile prices, collapsing balance sheets, nervous shareholders, higher regulation with banks, yet executives are still tasked to grow their business."

Taking steps to protect yourself from default on the part of your customers "is a way to help businesses grow while also mitigating significant amounts of risk currently on the balance sheets," he added.

FRAC SPREAD

Breathing Easier

Improvements in the U.S. stock market helped West Texas Intermediate (WTI) crude improve to more than $45 per barrel (/bbl), which helped push heavy NGL prices back to the same levels they held prior to last week's market downturn.

Though both the financial and commodities markets improved the final week of August, the outlook remains bearish with fears of a collapse in China's economy along with an oversupplied global crude market.

"Financial market turmoil is undermining global economic growth and reducing the demand for inventory, which is especially negative for oil prices given [more than] 300 million bbl of surplus inventory," PIRA Energy Group said in an Aug. 28 research note. "This surplus is hardly eroded in the fourth quarter, making prices vulnerable to weakness if [the] financial turmoil worsens," the note continued.

Not all of the news was bad though, as PIRA noted that the lower prices are now the stronger they will be later. Additionally, global light product demand remains strong. The increased demand for refined products is further supporting heavy NGL prices.

CURRENT FRAC SPREAD (CENTS/GAL)				
September 4, 2015	Conway	Change from Start of Week	Mont Belvieu	Last Week
Ethane	14.63		17.93	
Shrink	17.64		17.70	
Margin	-3.01	-202.42%	0.23	73.90%
Propane	35.64		38.98	
Shrink	24.37		24.46	
Margin	11.27	9.83%	14.52	12.33%
Normal Butane	46.66		52.00	
Shrink	27.58		27.69	
Margin	19.08	6.31%	24.31	8.99%
Isobutane	55.50		53.38	
Shrink	26.49		26.59	
Margin	29.01	8.55%	26.79	8.16%
Pentane+	93.26		90.80	
Shrink	29.50		29.61	
Margin	63.76	6.16%	61.19	1.18%
NGL $/Bbl	16.91	3.99%	17.72	2.57%
Shrink	9.72		9.75	
Margin	7.19	2.47%	7.97	3.90%
Gas ($/mmBtu)	2.66	5.14%	2.67	1.52%
Gross Bbl Margin (in cents/gal)	15.54	2.53%	17.84	4.23%
NGL Value in $/mmBtu (Basket Value)				
Ethane	0.81	-7.29%	0.99	-2.08%
Propane	1.24	6.58%	1.35	5.29%
Normal Butane	0.50	5.61%	0.56	4.88%
Isobutane	0.35	6.90%	0.33	4.75%
Pentane+	1.20	5.83%	1.17	1.29%
Total Barrel Value in $/mmbtu	4.09	3.24%	4.41	2.40%
Margin	1.43	-0.11%	1.74	3.79%

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.

Indeed, butane, isobutane and C5+ prices each rose at least 6% at Conway with butane and isobutane improving 5% at Mont Belvieu from the previous week. This was somewhat tempered by C5+ only up 1% at Mont Belvieu, but prices were once above $1.00 per gallon (/gal) by the end of the week.

Propane prices surged at both hubs due to the combination of improved crude prices along with increased demand for LPG. PIRA reported that U.S. LPG prices are outperforming WTI due to an anticipated increase in seasonal demand.

NGL PRICES						
Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Aug. 26 - Sept. 1, '15	17.93	38.98	52.00	53.38	90.80	**$17.72**
Aug. 19 - 25, '15	18.31	37.02	49.58	50.96	89.64	**$17.27**
Aug. 12 - 18, '15	18.97	37.68	51.42	52.54	98.56	**$18.20**
Aug. 5 - 11, '15	19.03	37.12	50.40	51.58	97.78	**$18.01**
August '15	18.55	37.35	50.57	51.80	94.58	**$17.76**
July '15	17.59	40.40	53.80	54.94	108.91	**$19.20**
2nd Qtr '15	17.93	46.30	58.11	59.66	126.14	**$21.48**
1st Qtr '15	18.38	53.01	66.35	67.81	110.53	**$21.94**
4th Qtr '14	20.22	76.90	96.73	98.28	149.25	**$30.10**
3rd Qtr '14	23.19	103.92	123.69	128.39	212.20	**$40.27**
Aug. 27 - Sept. 2, '14	22.90	102.28	121.88	126.20	211.90	**$39.85**
Conway, Group 140	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
Aug. 26 - Sept. 1, '15	14.63	35.64	46.66	55.50	93.26	**$16.91**
Aug. 19 - 25, '15	15.78	33.44	44.18	51.92	88.12	**$16.26**
Aug. 12 - 18, '15	16.35	34.46	45.88	51.96	95.76	**$17.08**
Aug. 5 - 11, '15	16.48	32.64	44.20	50.78	96.10	**$16.79**
August '15	15.71	33.52	44.88	51.94	93.63	**$16.67**
July '15	14.51	32.64	47.53	49.40	106.60	**$17.32**
2nd Qtr '15	15.50	40.55	52.40	56.80	121.50	**$19.89**
1st Qtr '15	17.81	49.00	66.13	76.84	106.32	**$21.49**
4th Qtr '14	18.69	78.64	102.72	113.19	146.37	**$30.77**
3rd Qtr '14	20.38	104.99	123.51	140.07	207.90	**$40.18**
Aug. 27 - Sept. 2, '14	20.80	101.78	122.60	136.25	206.70	**$39.63**

RESIN PRICES – MARKET UPDATE – SEPTEMBER 2, 2015					
TOTAL OFFERS: 13,125,344 lbs		SPOT		CONTRACT	
Resin	**Total lbs**	**Low**	**High**	**Bid**	**Offer**
HDPE - Inj	3,232,348	0.54	0.61	0.53	0.57
LDPE - Film	2,589,864	0.51	0.695	0.55	0.59
HDPE - Blow Mold	2,024,048	0.56	0.585	0.52	0.56
LLDPE - Film	1,923,220	0.54	0.63	0.52	0.56
PP Copolymer - Inj	1,099,104	0.59	0.725	0.58	0.62
HMWPE - Film	705,472	0.575	0.61	0.54	0.58
PP Homopolymer - Inj	600,460	0.625	0.65	0.56	0.6
LLDPE - Inj	542,736	0.49	0.62	0.56	0.6
LDPE - Inj	408,092	0.5	0.655	0.58	0.62

Source: Plastics Exchange – www.theplasticsexchange.com

The price rose 7% to 36 cents per gallon (/gal) at Conway, its highest price since it was 37 cents/gal the week of May 27, while the Mont Belvieu price rose 5% to 39 cents/gal, its highest price since it was 41 cents/gal the week of July 22. These improvements are impressive since storage remain at record levels. However, this could lead to another steep decline if demand doesn't approach forecasts or if LPG export demand falls off.

The other light NGL, ethane, was down at both hubs as it fell 7% to 15 cents/gal at Conway and 2% to 18 cents/gal at Mont Belvieu. Both prices were the lowest they had been since the week of July 15. Once again there is a silver lining as PIRA reported that ethane prices are approaching trading levels relative to gas prices that will incentivize incremental production.

The theoretical NGL bbl price improved 4% at Conway to $16.91/bbl with a 3% gain in margin to $7.19/bbl. It was up 3% at Mont Belvieu to $17.72/bbl with a 4% improvement in margin to $7.97/bbl.

Natural gas prices made modest improvements as cooling demand was up in much of the country. Though the oil-to-gas ratio has closed this year and there has been increased drilling in certain parts of the country, crude production economics are still favored by most producers.

These largely static gas prices saw margins improve at both hubs with C5+ remaining the most profitable NGL to make at 64 cents/gal at Conway and 61 cents/gal at Mont Belvieu. This was followed, in order, by isobutane at 29 cents/gal at Conway and 27 cents/gal at Mont Belvieu; butane at 19 cents/gal at Conway and 24 cents/gal at Mont Belvieu; propane at 11 cents/gal at Conway and 15 cents/gal at Mont Belvieu; and ethane at negative 3 cents/gal at Conway and nil at Mont Belvieu.

Even with increased cooling demand, the U.S. Energy Information Administration reported a hefty 94 billion cubic feet increase for the week of Aug. 28. This pushed the storage level to 3.193 trillion cubic feet (Tcf) from 3.099 Tcf the previous week. This represented a 18% increase from the 2.698 Tcf posted last year at the same time and a 4% increase over the five-year average of 3.071 Tcf. Cooling demand should be above-average for early September as the National Weather Service is forecasting warmer-than-normal temperatures throughout much of the country.

MORE TOP STORIES

Enterprise Completes Second Segment Of Aegis Pipeline

Enterprise Products Partners LP said Sept. 2 that construction of the Texas-to-Louisiana segment of the Aegis Pipeline is complete and ready to deliver ethane to additional Gulf Coast petrochemical facilities. The segment runs from Beaumont, Texas to Lake Charles, La.
The segment is 48 miles long, and the initial 60-mile segment is currently in service. The final leg of Aegis, which totals 270 miles, will extend the pipeline from Lake Charles to the Mississippi River and is expected to be completed by the end of 2015.

Combined with Enterprise's existing South Texas system, Aegis will provide shippers access to a 500-mile ethane header system between Corpus Christi, Texas, and the Mississippi River in Louisiana.

Customer commitments support more than 300,000 barrels per day (Mbbl/d). The capacity can expand to about 400Mbbl/d with additional pumps.

A.J. (Jim) Teague, COO of Enterprise's general partner, said Aegis' route will serve about 20 petrochemical facilities representing more than 90% of the nation's ethylene capacity by 2020.

Enterprise's Mont Belvieu complex is the end point for more than 3MMbbl/d of NGL supply pipeline capacity. It is connected to more than 2MMbbl/d of industry NGL fractionation capacity and more than 110MMbbl salt dome storage capacity, owned by Enterprise.

Houston-based Enterprise Products Partners LP is a domestic-focused midstream company.
– BUSINESS WIRE

Enbridge Income Fund Closes Canadian Liquids Pipelines Business Acquisition

Enbridge Income Fund Holdings Inc. (the company) and Enbridge Income Fund (the fund) closed the acquisition of Enbridge Inc.'s Canadian Liquids Pipelines business, the company said Sept. 1. Enbridge Pipelines Inc. (EPI) and Enbridge Pipelines Athabasca Inc. (EPA) comprised the business. An indirect subsidiary of the fund acquired the business for CA$30.4 billion and incentive/performance rights, the company said. Certain renewable energy assets were included.

The company's shareholders approved the transaction at an Aug. 20 special meeting. The transaction provides a source of long-term growth based on CA$15 billion of low-risk, commercially secured growth projects associated with the acquired assets. Of that amount, CA$3 billion are already in service and the balance is scheduled to be in service by 2018.

The Canadian Liquids Pipelines business consists of the Canadian Mainline system held in EPI and the regional oil sands system held in EPA, according to a June 19 press release.

The Canadian Mainline system has several large-diameter crude oil, NGL and refined products pipelines receiving hydrocarbon liquids at, and making deliveries to, various locations in western Canada and connecting to the U.S. Mainline system owned by Enbridge Energy Partners LP near Gretna, Manitoba.

The western Canada segment includes the Canadian segment of the Alberta Clipper Pipeline; the Canadian segment of the Line 3 replacement project; the Edmonton-to-Hardisty expansion program; and the Canadian Mainline system terminal flexibility and connectivity program. There are also several pipelines in eastern Canada, the press release said.

The regional oil sands system includes a number of trunk line and lateral pipelines collecting synthetic crude oil and diluted bitumen from eight different oil sands for delivery to the hubs at Edmonton and Hardisty.

This system also includes Enbridge's 70% interest in the Norlite diluent pipeline currently under development. The regional oil sands system growth capital program also includes the Norealis Pipeline, Surmont Phase 2 expansion, Sunday Creek expansion, Woodland Pipeline extension, regional oil sands optimization project, AOC Hangingstone lateral and Jacos lateral.

Navitas Midstream Acquires Midland Basin Gathering, Processing Assets

Navitas Midstream Partners LLC acquired Texas natural gas gathering and processing assets from a subsidiary of DCP Midstream LLC, the company said Sept. 1.

About 1,000 miles of low- and high-pressure natural gas gathering pipelines and a cryogenic processing plant will serve Martin, Midland and Glasscock counties. The plant's capacity is more than 60 million cubic feet per day, Navitas said.

Private-equity firm Warburg Pincus financed the transaction.

"We are excited to acquire such an extensive footprint, which is in the core of the Midland Basin and will provide the foundation for additional growth opportunities," said R. Bruce Northcutt, founder and CEO. "Our strategy is to revitalize the assets through an extensive capital program designed to improve system capacity and efficiencies. We intend to leverage our management team's experience in the Permian Basin to find the best solutions for customers."

Navitas Midstream Partners is based in The Woodlands, Texas.

DCP Midstream LLC is based in Denver.

Twin Eagle Breaks Ground On Permian Rail Park

Twin Eagle Sand Logistics LLC said Sept. 1 that is has has broken ground on the Permian Rail Park, a terminal which will initially be used for frack sand transloading services.

The Permian Rail Park is Houston-based Twin Eagle's fifth terminal development and is centrally located to serve the eastern side of the Permian Basin. The 530 acre rail park is located on the Union Pacific Railway about 80 miles west of Big Spring, Texas.

Phase one of the project calls for more than 33,000 feet of track and is expected to be completed in the first quarter of 2016.

The rail park will initially be used for rail-to-truck sand trans-loading services. Twin Eagle also has phase two plans to develop a loop track capable of supporting crude-by-rail market activity as well as infrastructure to handle trucking solutions for both crude and sand.

The project is currently supported by a sand transloading contract with a major E&P anchor tenant, said Griff Jones, Twin Eagle's CEO.

"The Permian Basin has demonstrated remarkable resilience in the face of a challenging price environment and will likely perform well into a recovery cycle," Jones said in a statement.

"We believe the industry will continue to demand unit train terminaling infrastructure that demonstrate size and scope as they efficiently manage their supply chain," he added.

Twin Eagle Sand Logistics is a subsidiary of Twin Eagle Resource Management LLC. The company is one of the largest third-party frack sand terminal developers and operators in the country, according to the release. **– BUSINESS WIRE**

Long Lake Oil Sands Operations Shut Down

Nexen Energy, the Canadian subsidiary of Chinese state-owned CNOOC Ltd, is shutting down its Long Lake oil sands operations in response to an emergency regulatory order, a company spokeswoman said on Sept. 1.

Nexen estimated the shutdown process would take up to two weeks as it suspends pipeline operations and attempts to demonstrate to the Alberta Energy Regulator that its pipelines are safe.

The provincial regulator ordered Nexen to shut in 95 pipelines at the Long Lake facility Aug. 28 as part of an ongoing investigation into a large oil-related pipeline spill discovered in July.

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