An artist's rendering shows the intermodal capabilities of New Mexico's new, 300-acre RIO Hub. The terminal will start operations in October. *Source: Rangeland Energy LLC*

RIO's Magic

Lessons learned in the Bakken allow Rangeland Energy to think big as it completes its new Delaware Basin terminal.

By Chris Sheehan, *Senior Financial Analyst*

The magic of an independent, equity-backed midstream company usually lies in its ability to move quickly to connect upstream players with access to markets. But it is rare when midstream players themselves take on a project that is as large as creating a brand new regional market hub, designed to provide parties with as many commercial options as possible and plenty of liquidity to transact business.

Yet that is what Rangeland Energy LLC is undertaking with its Rangeland Integrated Oil System, or RIO System, in the Permian's Delaware Basin. Under construction is an integrated system of terminals and pipe designed to aggregate crude and then transport it either by pipe to Midland, Texas, and then typically on to the Gulf Coast or the Cushing, Okla., trading hub—or take it by rail to western markets, primarily California and the Pacific Northwest.

"Our goal is building supply area infrastructure to allow all stakeholders to move their product to the market of their choice, by pipe or rail, so they can optimize netbacks," Rangeland's president and CEO, Chris Keene, told *Midstream Business*.

Lack of infrastructure

The Rangeland team knew what it was looking for when it selected its Loving, N.M., site for the RIO Hub. The site lies near the center of horizontal drilling activity in the Delaware Basin, an area characterized by a relative lack of midstream infrastructure in spite of rapidly growing drilling and production activity.

These were two of the major factors that had earlier proven so successful in Rangeland's prior COLT Hub located in Williams County, N.D.

Sold for $425 million in late 2012, the COLT Hub was developed in the heart of the Bakken and Three Forks shale oil-producing area, long before anyone could forecast production reaching its current level of 1 million barrels (bbl) of oil equiv-

alent per day. Under the project, near the town of Epping, Rangeland created a new hub by bringing together key assets into a single integrated network, including a crude oil rail terminal, a crude oil tank farm and gathering and pipeline facilities.

Scale equals success

COLT owed a good part of its success to its scale. At the time of its sale, the hub had 720,000 bbl of crude oil storage and was capable of moving more than 120,000 bbl per day (bbl/d) by rail. COLT had two 8,700-foot rail loops and could accommodate 120-car unit trains. A 21-mile, 10-inch, bi-directional pipeline connects the COLT hub to nearby Enbridge and Tesoro pipelines.

Customers sourced product via an eight-bay truck unloading rack, as well as pipelines and gathering system interconnects.

"It has been estimated that as much as 20% of the crude produced in North Dakota is going through that facility," said Keene. Given that facilities continue to be added at COLT, the hub, in retrospect, could have been planned on an even larger scale, he added.

Drawing on their experience with COLT—albeit with modifications to reflect the particular circumstances of the Delaware Basin—Rangeland's management team is likewise building the RIO System to achieve scale.

"We've purchased approximately 300 acres here—it's a large site. Having the land to develop scale is critical," said Keene. "The key characteristic of RIO Terminal near Loving is its ability to grow and take advantage of the efficiencies that scale and the unit train access provide. If you do it with scale, it may require more capital investment upfront, but it results in significant, long-term operating cost savings for our customers."

What gives Rangeland the confidence to push for such economies of scale?

Rangeland's launching of the RIO project reflects its assessment of the Delaware's growth prospects.

When looking at entering a new area, the level of existing production is obviously important, noted Keene. "But equally, if not more important to us, is where that production will be in five, even 10 years from now," he added. "We want to be in the heart of it. We want the ability to touch the majority of output being produced within a basin when looking at a 75-mile radius around our selected site."

Bullish on the Delaware

"We're very bullish on the geology in the Delaware," continued Keene. With potentially eight or more pay zones to tap, Rangeland estimates the basin offers viable drilling programs extending out as far as 20 to 30 years. "It's a massive exploitation activity as opposed to exploration," said Keene. "Producers know the zones are there. It's largely a matter of drilling the wells and making it happen."

To take advantage of the ramp in drilling, the RIO project is being built with one very significant facet that differentiates it from COLT—the additional capacity to inbound frack sand by rail, which may be stored at the Loving terminal and moved out by truck as

Terminal construction moves ahead through a hot, New Mexico summer to keep the project on schedule.
Source: Rangeland Energy LLC

needed. The growing need for frack sand reflects not just more wells being drilled, but also the use of longer laterals, more frack stages and a greater intensity of sand pumped per stage.

"The demand for sand is huge," said Keene. "We see demand doubling over the next 10 years."

Importantly, demand for frack sand also helps Rangeland expand its presence in the Delaware Basin in advance of the startup of its crude oil transportation segment. "Right now, the demand is for sand. It's a good business. As we start positioning for crude oil, sand service establishes our footprint. When the time is right to start moving crude oil out of the Delaware Basin by rail, we'll have the rail infrastructure in place so we'll be ready."

So what services and facilities can Rangeland offer when the new RIO System is up and running?

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– **Chris Keene**, *president and CEO, Rangeland Energy*

Multiple markets

In essence, RIO allows shippers to reach not only the traditional Midland market by pipeline, with options to move from there to the Gulf Coast or Cushing markets, but also to access western markets—primarily California and the Pacific Northwest—by rail.

Running southeast from the RIO Terminal and then parallel to the New Mexico-Texas border is the RIO Pipeline, with a capacity of 85,000 bbl/d, allowing shippers to send crude from the RIO State Line terminal eastward to Midland. This will in turn allow access to the Gulf Coast and Cushing markets by way of interconnects with existing pipelines, as well as the various pipelines due to come on in the second half of this year, including Cactus (Plains), BridgeTex (Magellan) and Permian Express II (Sunoco).

In addition to eastern flows, from the RIO Terminal at Loving to the RIO State Line terminal and on to Midland, the bi-directional line between Loving and the State Line terminal allows shippers the option to access western markets by moving crude northwest to Loving and then westward via the Hub's rail facilities. The Hub is served by BNSF Railway Co.

Transload service at the RIO Hub is expected to begin in October for outbound crude and condensate and for inbound frack sand. For crude and condensate, truck-to-rail transload operations will have an initial capacity of 10,000 bbl/d. Capacity is anticipated to grow to more than 100,000 bbl/d over a couple of years, as Rangeland accommodates increasing customer demand by building high-speed unit train-loading facilities.

For incoming frack sand, initial rail-to-truck transload capacity will be more than 500,000 tons of sand annually. When unit train service becomes available, and as demand increases, Rangeland has plans to expand the frack sand infrastructure at the RIO hub to more than 1 million tons annually. The use of unit trains at the hub is projected to lower the inbound frack sand transportation costs by more than $10 per ton.

With unit trains, "the efficiencies, both operationally and in terms of costs, are much better," said Keene. "If going from transloading to a unit train facility saves over $10 per ton, and you're bringing in hundreds of thousands of tons per year, that's millions of dollars of savings," he observed. "And the same dynamic exists with oil."

Equity backing

So far, the market response to the RIO project, which is backed by a $200 million equity commitment from EnCap Flatrock Midstream, has been "very good," according to Keene, adding that discussions have been held with a "handful of different parties considering anchor commitments."

Customers typically include crude oil marketers and refiners, as well as producers. Among producers, those with associations with MLPs have, in some cases, shown interest, reflecting a desire for greater security of market access and for future asset investment opportunities.

With a growing portion of U.S. crude production comprised of light sweet grades and condensate—emanating most notably from the Eagle Ford, but also from the Midland, Delaware, Bakken and certain Midcontinent basins—the concern is the Gulf Coast market will become awash with light sweet crude. That oil no longer meets the 42° to 44° API gravity upper limit for pipeline transportation, said Keene.

And in the absence of being able to "blend down" grades to meet pipeline standards, greater emphasis will be on finding alternative market outlets.

Light oil options

For light grades and especially condensate—not a favored feedstock for most Gulf Coast refiners—options have historically been somewhat limited.

The new RIO Hub is a big operation, covering 300 acres. *Source: Rangeland Energy LLC*

Railing condensate to Canada for use as a diluent for heavy oil sands has been one option, noted Keene, while another has been processing condensate through a number of condensate splitters located on the Gulf Coast. This produces refined products that are then eligible for export to international markets.

Keene views accessing the West Coast market by rail as an alternative outlet for light crudes and condensate, particularly if the Gulf Coast is at risk of becoming saturated by light grades. Refiners in Los Angeles, for example, typically pay a substantial premium over Midland West Texas Intermediate grades when purchasing Alaska North Slope (ANS) or other international crudes as a feedstock. For Delaware Basin producers, the relative economics of tapping alternative markets by rail, as compared to more traditional Gulf Coast or Cushing markets by pipeline, are enhanced by the avoided transportation cost to Midland of about $1.50 to $2 per barrel.

How much could West Coast markets potentially absorb?

"Rail has created a more diverse national market for crude oil. If light sweet becomes distressed in any supply area, it's going to price to move and will seek out the highest-value market, whether domestic refinery or potential international export," said Keene. "We provide the facilities that allow our customers that flexibility. Ultimately, we can move more than 100,000 bbl/d out of the RIO Hub. There's certainly enough market to absorb that."

Of late, much discussion has revolved around a possible relaxation of the export ban on crude as it specifically relates to condensate. Several observers have described as a trial balloon the recent move by the U.S. Commerce Department in which it gave private-letter rulings to both Pioneer Natural Resources and Enterprise Product Partners LP, stating that condensate that has been lightly processed or "stabilized" qualifies as a petroleum product that may be exported.

Stabilizer infrastructure

What implications, if any, would exist for RIO, if this helped lessen the pressure buildup from excess light crudes and condensate supplies and also helped narrow differentials?

In terms of stabilizing condensate—a process in which the most easily vaporized of the light ends are removed to create a more stable liquid—"that can happen at the wellhead or it can happen at a more centralized point in a supply area, like RIO," said Keene. "We have explored building stabilizing infrastructure at RIO and providing services to produce a liquid that is more easily moved not only in pipelines but also in rail. We are open to that and talking to customers about it now."

Importantly, noted Keene, producers will continue to ramp production and continue to seek out the destinations that offer the highest netbacks for its output.

Either production will find its way to a refinery, to a splitter to produce a refined product for export, or directly to an export terminal—assuming an export ban is relaxed for condensate—to pursue the option of a higher-value international market. In the latter case, the set of existing U.S. export terminals on the Gulf Coast may be expanded to include similar terminals on the West Coast, serving Latin America or Asian markets, added Keene.

"Whether it's light sweet crude or condensate, it's going to be produced one way or another and moved somewhere, said Keene. "The product will price itself to move to the highest-priced market. Either way, our goal is to provide an efficient and reliable conduit." ■

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