Cryogenic gas processing plants cropping up throughout basin

UOP Russell providing Comanche III plant to Brazos Midstream

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Honeywell subsidiary UOP Russell is providing a third cryogenic gas processing plant to Brazos Midstraem. The new plant will be similar to Brazos' Comanche II plant and will process 200 million cubic feet per
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Natural gas processing plants are cropping up throughout the Permian Basin as the business opportunities created by the area's oil and gas riches flow through the economy.

Honeywell, for example, said its UOP Russell subsidiary is providing a third cryogenic gas processing plant to Brazos Midstream. The plant, named Comanche III, will process liquids from natural gas produced in the southern Delaware Basin.

“Our company was originally Thomas Russell Co., founded by Thomas Russell," Craig Ranta, vice president for UP Russell, said in a phone interview from his Des Plaines, Illinois, office.

Russell had pioneered a standardized processing plant that was flexible enough to be designed once and then replicated for use in producing basins from the Delaware to the Marcellus. It was widely used in the shale gas boom from 2005 to 2012, when Honeywell purchased the company, Ranta said.

“The U.S. was awash in associated gas," and there was a large demand to process gas, he said.

The Permian Basin is rich in natural gas liquids, and producers and processors alike are looking for ways to maximize the extraction of those liquids and maximize revenue streams, he said.

The key to success for companies such as UOP Russell is speed-to-market, said Ranta. “The key to realizing that speed-to-market is modular plant design.

“If you look at other plants, they're engineered off-site, then all the components are ordered and then a contractor builds the plant," he said. “Ours is more an assembly process. The plants are pre-assembled before it gets to the field. Our plants are assembled in our controlled shop environment that's not susceptible to weather or susceptible to labor issues. We take the equipment, assemble in the shop on skids, drive it to the location. The skids are in place, so it's a matter of connecting the equipment."

That flexibility allows each plant to be adjusted to the particular gas composition of the basin, Ranta said.

The Comanche III unit UOP Russell is delivering to Brazos Midstream is a high recovery unit that can process 200 million cubic feet per day. High recovery units are designed to maximize the recovery of natural gas liquids for producers and processors. With 140 plants in operation in producing basins throughout the U.S., the company has developed retrofit solutions to convert each plant into high recovery units.

“That's been our focus: high recovery units, retrofit solutions and digitization – making the best use of assets (by) taking plant data and having a digital platform that offers reliability and lets operators maximize production," Ranta said. “It also offers an aspect of training, which helps train new operators and keeps reliability in place."

UOP Russell engineered, fabricated and supplied Comanche III to Brazos, bringing to 460 million cubic feet the amount of gas-processing capacity UOP has supplied Brazos Midstream. Ranta said the company has been active in midstream infrastructure in both the Midland and Delaware basins.