

## Production Control Services expands, rebrands nitrogen fleet

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Five years after developing a mobile nitrogen procedure that helps clear produced fluids from wells, Production Control Services saw the need to unify its brand and to expand its nitrogen fleet.

"We were servicing customers in several local offices and were starting to see demand in other areas of the country," said Darryl Polasek, vice president of business development for the Frederick, Colorado-based company. "Our units are very compact and mobile - we're not really geographically limited to where we're currently operating," he continued. Since trucks from any office could go to any location, it was important to have a single, recognizable brand name. They chose "Nitro2Go Nitrogen Generation" for that purpose.

"Also, we've expanded our fleet - we've almost doubled in size - and we can handle more capacity," Polasek continued. PCS now owns seven trucks, most of which work out of the company's Weatherford office, but which can go anywhere in the country. Damascus, Arkansas, in the midst of the Fayetteville Shale play, is the company's second "home" for the nitrogen trucks.

PCS's trucks use state-of-the-art membrane technology to separate air into nitrogen gas and oxygen. The nitrogen is injected into a well by way of a high-pressure booster compressor while the oxygen is released back into the atmosphere. Units have a capacity of up to 600 scfm (standard cubic feet per minute) at 5,000 psi. The process is housed in a single semi-trailer unit operated by a crew of two.

Because the units use atmospheric nitrogen as opposed to the cryogenic variety, they can hook up to a well and be injecting nitrogen, Polasek said, in about 30 minutes from the time the truck arrives. He adds that the PCS nitrogen procedure usually gets wells going five-10 times faster than most others, with the ability to remove 1-3,000 barrels of produced water per day.

Polasek related that the process came about in response to issues seen in the Barnett Shale.

"In most shale applications - the Barnett Shale is one of the pioneers of shale applications - we were first on the ground running gas lift, that was our primary focus in de-watering the shale applications."

Shale plays require huge volumes of "slick" water in hydraulic fracturing, injecting a large amount of sand to keep the formation's fractures open. For the well to produce - gas, in most cases - that injected water must be produced and gotten out of the way. "The quicker the operator can produce that fluid back, the quicker they can get their well to sell and the quicker they can start making money," Polasek stated.

Because there are also other reasons for removing produced water quickly, PCS began looking for a way to speed up the removal process. For several reasons, nitrogen seemed to fill the bill.

"One (reason) being that it's inert and the second being that it's not corrosive," he explained.

"The second best alternative to our application is foam air, and foam air is really bad for several reasons. It's not inert, it's combustible because it's just oxygen with a little foam, and it corrodes the pipes that are involved." He also listed swabbing and the use of liquid nitrogen as alternatives that were slower or more costly than Nitro2Go. Liquid nitrogen involves lost time required by bringing the liquid from a processing plant to the well.

Their strategy was to use their experience in gas lift to find an alternative that would be faster and that would allow them to price themselves in a way that would let them quickly capture a large market share.

PCS has mostly operated in two large regions. From North Texas into Oklahoma is one region and the other extends from West Texas northward into the Panhandle. In recent months, however, they are covering new territory. "We've started scooting out into East Texas, in that region and down into Houston. So really we're covering the majority of Texas itself and Oklahoma," Polasek said.

In the Permian Basin this procedure is primarily used in the Strawn formation, in the Fort Stockton extrusions of the Barnett Shale and in the Wolfberry play.

While most of PCS's customers have focused on natural gas, many are shifting to oil because of the current price differential. Polasek noted that, when the price of both oil and gas crashed last year that business did slow down, but that his company seized the opportunity to upgrade equipment with the non-boom advantage of lower prices and shorter lead times. He feels this has made them more ready for the recent resurgence in business.