### Northeast Driller •

# Contractor presents new idea to natural gas industry

BY JOHNNY WILLIAMS

Staff Writer

The natural gas industry is constantly evolving. Given the growing popularity and support for natural gas, new ideas abound as more people try to capitalize on opportunities to make the process easier and safer while growing their own businesses.

D.A. Nolt Inc., a New Jersey based contracting firm specializing in roof construction, was the latest company to seize this opportunity. That's why, on May 10 in New Albany, the company held a demonstration for its new well pad containment and water management system, the event being attended by both local and industry officials.

"The D.A. Nolt Inc. well pad containment and water management system (CWMS) is installed below the well pad, and consists of a reservoir and control system for storage and management of fresh water," according to a press release provided by the company. "The system also has the capability to contain fluids that may occur or are produced at the well pad surface and will prevent them from getting into the ground water supply."

"This system uses rainwater as a resource instead of an enemy," Vice President Richard O'Brien said. "It's basically a water impoundment beneath a well pad. What we're introducing is one of the first green containment systems for well pads."



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David Nolt, second from right, discusses the technical plans and features of the CWMS with industry representatives.

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O'Brien also noted that the CWMS is a patent pending technology.

According to O'Brien, on a typical four-acre well pad that consists of three wells, the system could capture two to 2.5 million gallons of water in a five to

six month period.

"On average, a well takes 700,000 gallons of water for drilling and five million gallons for fracing," O'Brien continued. "So, in over a year's time, there will be enough water to drill and frac

a well, eliminating the need for water trucks, therefore reducing traffic and damaged roads.

"The implementation of this system would also reduce the environmental footprint of the

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Adam Black (left), senior technician of International Leak Detection, LLC, demonstrates how the leak detection system for the CWMS works. "With the leak detection system in place, a leak can be found electronically and the location can be zeroed down to a specific location on the pad," he said.



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Also displayed at the demonstration was a model to illustrate the layers of rock and membrane used for the system.

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A number of people, including local and industry officials, attended the demonstration of a new well pad containment and water management system, or the CWMS, in New Albany on May 10.



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The filtering of the CWMS was demonstrated by releasing water onto the pad and allowing the system to drain the water into the underground impoundment.





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D.A. Nolt displayed the manhole feature of their new system, which would allow water to be pumped from the underground reservoir or be tested.

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gas industry since it reduces the need for the construction of water reservoirs and the need to take water from natural freshwater sources for the drilling and fracing processes," he added.

The CWMS is constructed with a "nonpermeable TPO (thermoplastic olefin) membrane that is 100 percent watertight and includes a leak detection system," according to the press release.

The membrane is manufactured by Carlisle Construction Materials, which is based in Carlisle, Pa. According to the company's website, Carlisle Construction Materials is a "diversified manufacturer and supplier of premium building products for the commercial and residential construction markets," particularly for the roofing industry.

The leak detection system was demonstrated on-site by Adam Black, senior technician for International Leak Detection LLC.

"With the leak detection system in place, a leak can be found electronically and the location can be zeroed down to a specific location on the pad," he said. "Thus, instead of ripping apart the entire pad to find a leak, only the place that the leak is actually located at can be excavated to repair it."

Another feature of the CWMS is its manhole system, which allows water to be

"That's another key component for this system," David Nolt, president of the contracting firm, said. "If there is any kind of spill at a well site in which this system is located, it will be captured and contained, while the manhole system would provide easy access for the water to be tested."

Also present for the demonstration was Stephen Brokenshire, mineral resources program specialist for the Department of Environmental Protection.

"Representatives from DEP's Office of Oil and Gas Management are here to see the demonstration for the system and see how it may help to protect the environment," he said. "We are always reviewing new and innovative technologies that could be applied to the oil and gas industry. DEP can also offer insight, using our knowledge of any applicable commonwealth law, regulation and permit requirements that may pertain to the proposed activity. This is to aid in the process of developing these designs.

"Here is an example of a general contracting firm with a specialty in roof construction that has found products commonly used in their industry, which can be incorporated into the gas industry," he continued. "It just goes to show what opportunities the gas industry unlocks across other industries, as well."

Johnny Williams can be reached at (570) 265-