Consortium aims to improve production from stripper wells
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A well producing 10 barrels of crude oil or less a day may seem insignificant in the face of the nation's energy demand. But multiply those 10 barrels by an estimated 400,000 wells across the nation and those "stripper" wells contribute about 30 percent of the nation's domestic oil production.

To help keep these marginal wells -- many operated by small "mom and pop" producers --- on production, the Department of Energy and Pennsylvania State University teamed to form the Stripper Well Consortium. Consortium officials and companies conducting consortium-sponsored projects traveled to Midland recently for a day-long workshop on technological advances to benefit marginal producers.

"We promote technology to improve stripper well production, any technology that can be developed that's feasible within stripper well economics," said Joel Morrison, executive director of the Stripper Well Consortium.

In a few weeks, he said, the consortium will be issuing requests for proposals, allowing operators to submit proposals for new technology and request funding from the consortium to test and develop that technology.

Among those making presentations at the meeting was Glenn Weatherbee, who with brother Paul operates W&W Vacuum & Compressors Inc. in Abilene. He demonstrated a vacuum pump compressor designed to enhance production from stripper wells, a technology supported by the consortium. The Weatherbees have four patents on the device and six patents are pending.

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The consortium, he said, funded their concept of a vacuum pump compressor, which is now at the prototype stage. Weatherbee said he expects to have a working prototype in the field within 120 days. Several companies have expressed interest in testing the prototypes and "we're looking to place prototypes on various wells in Texas and Pennsylvania."

Weatherbee also brought along an artificial heart the brothers designed utilizing that same technology.

"We used that same technology to develop an artificial heart that was used in a live animal study at Texas Heart Institute," he said. "It's important to know that technology developed for the stripper well industry is spilling over into the medical industry and benefiting people in other ways."
"We started with production brine," Burnett said. "A third of production brine has low enough salinity that we can convert it to fresh water for less than it costs the producer to have it hauled away."

He said the producer would save a significant portion of the cost of hauling the brine water away, it keeps the brine out of the environment and, by turning it into fresh water, it can be used for livestock, irrigation or, if it is high-quality enough, for drinking water.

Burnett said he has been conducting his research for four years and is at the point of seeking a company willing to license the technology he has developed to build desalination units from A&M.

There has been a lot of interest, he added.

The Texas Water Resource Institute, he noted has been focusing on desalination of brackish brown water.

"The dream is to drought-proof cities in West Texas who are dependent on surface water," he explained. "Brackish brown water is easier to desalinate."

There is a pending project in Andrews, he said, which has limited long-term water resources, leaving brackish brown water as an option. If his desalination units are successful in making the brown water fresh, he said, it would provide Andrews sufficient water and help extend the life of the Ogallala Aquifer. He expects the project to get underway in the next 12 months.

His research, he said, has been eased by clarifying regulations covering what happens to the water produced by the desalination unit. Standards are different if the water is to be used for drinking, in fields or returned to a stream.

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