

The Marcellus Boom / Origins: the story of a professor, a gas driller and Wall Street

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By Jonathan D. Silver, Pittsburgh Post-Gazette



Andrew Rush/Post-Gazette

A natural gas drilling rig contracted by Range Resources in Washington County.

Before Marcellus Shale became the second biggest natural gas field in the world and a household term in Pennsylvania, it was just another obscure, ancient rock layer.

But a convergence of Wall Street interests, corporate money and academia helped transform Marcellus almost overnight from rock to rock star, spurring predictions of a natural gas bounty in the U.S. and unleashing a massive land rush across the commonwealth.

Anchoring one end of the story of Marcellus Shale's migration from textbook nerd to the darling of prospectuses is Range Resources, the energy company that first successfully harvested gas from the rock, and two local boys -- president Jeffrey L. Ventura, who hails from Penn Hills, and Baldwin Borough native and University of Pittsburgh graduate William Zagorski, the company's vice president of technology.

At the other end is Terry Engelder, 65, a Penn State University geologist who calculated that mind-boggling amounts of natural gas could be extracted from the shale.

"It was almost an out-of-body experience to realize that there may be something here that was a real game changer in terms of America's energy portfolio," Mr. Engelder said.

Operating independently but on parallel paths, Range and Penn State presented back-to-back reports in December 2007 and January 2008, respectively, that put Marcellus on the map.



Terry Engelder

Range's Dec. 10, 2007, news release to investors debuted production results for five horizontal wells drilled into the rock stratum. Figures for four of the wells were impressive.

Until then, Range had obliquely referred only to drilling in the Appalachian Basin or its "Pennsylvania shale play." Now Range put a name to the potential moneymaker: Marcellus Shale.

Then on Jan. 17, 2008, Penn State issued a news release headlined "Unconventional natural gas reservoir could boost U.S. supply," courtesy of Mr. Engelder's calculations.

Those dual results battered standard notions about producing natural gas from the Marcellus Shale, a nearly 400-million-year-old geologic layer long thought to be, literally, a tough rock to crack.

By 2000, Range already had large land holdings in southwestern Pennsylvania. That position included acreage in Washington County being used to explore two rock formations -- Oriskany Sandstone and Lockport Dolomite -- for gas. Range sank \$6