Engineering firms learn to match speed of Marcellus drillers

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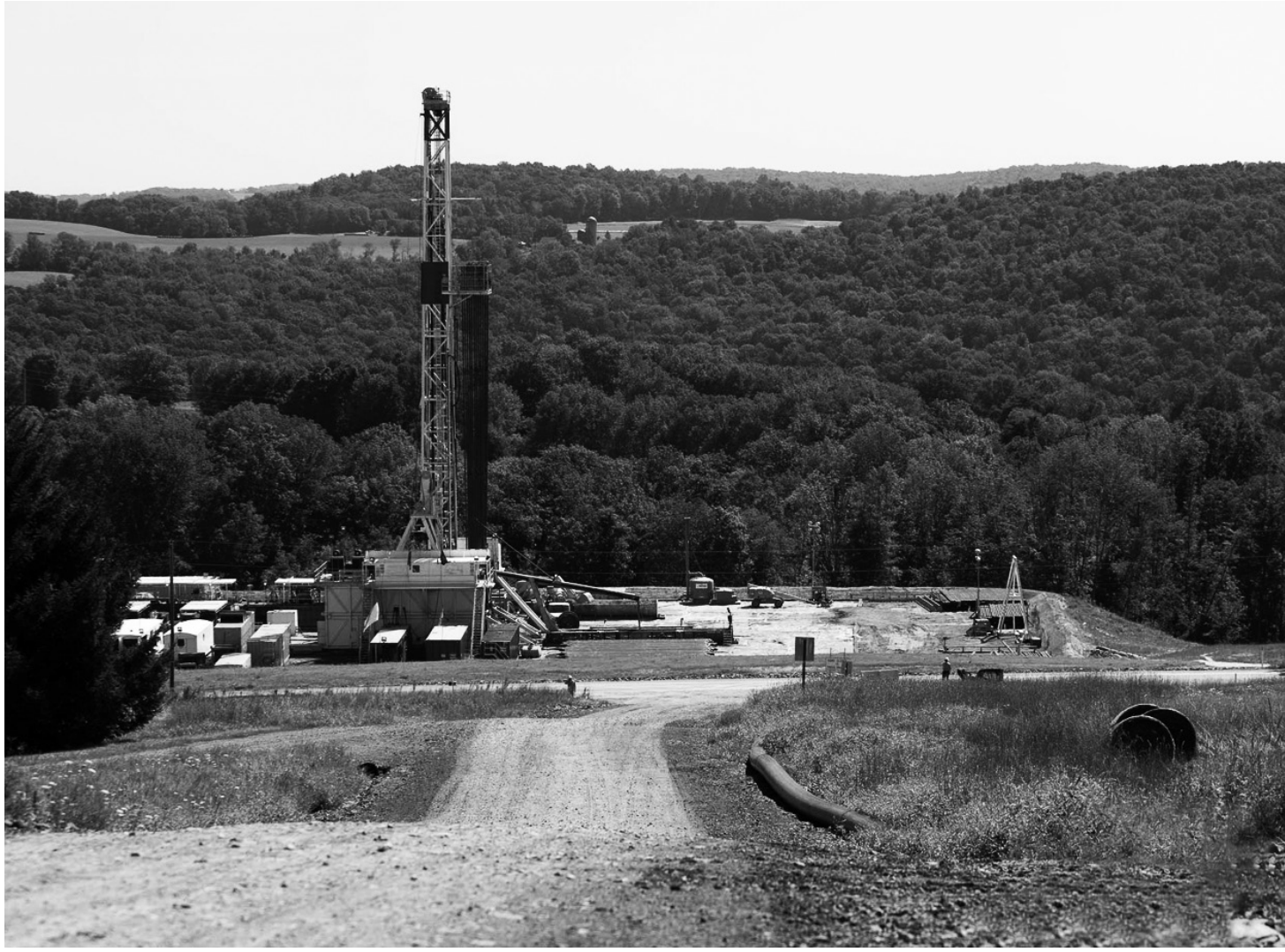
For Marcellus Business Central



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Engineering firms have had to adjust to the rapid pace at which gas drilling companies move, especially in the Marcellus Shale.

Firms in the heart of Pennsylvania that have been successful at working with natural gas firms know firsthand that the industry is unlike any other. Engineering firms who have flourished, especially, have learned that efficiency, proximity, skill and capacity are key to working with the business.

Hailing mainly from the Southwest and Midwest, oil and gas companies have depended heavily on a slew of local firms — especially engineering and consulting firms — to make their operations in Pennsylvania's Marcellus region successful. With natural gas projects emerging at breakneck speed, however, companies who are reaping the rewards of working in the Marcellus have had to adjust in big ways.

Traditionally known for their structured pace, engineering and consulting firms involved in successfully supporting Marcellus operations have retooled their business model to deliver around the clock, a far cry from the 9-to-5 model of yesteryear. In some ways, careful planning and planned processes prepared engineering businesses for the intense Marcellus work by increasing their agility and response time.

"The speed at which companies realized Marcellus was going to be an important part of our economy required firms like ours to strategize seriously and quickly for how we would become an integral part of the developments," said Mark Lauriello, PE, president of RETTEW Associates, Inc.

Companies like RETTEW are finding that accommodating the natural gas industry means setting up shop where the drilling actually takes place and where the clients are located. The firm opened an office in Williamsport in 2010 and subsequently in Athens and Pittsburgh. Although engineering firms throughout the state may have the capacity and technical skills to serve the industry, many might not have been adjusted to how rapidly natural gas clients move.

The planning and design process for projects in the Marcellus play is complex and intensive, requiring permitting, preliminary site work, a water management plan, contingency plan, erosion and sediment control plan, feasibility analysis for pipeline construction and a restoration plan. Depending on the complexity of the site, the project may also involve steps such as water pipeline design, roadway and bridge design and water impoundments. Having a local office in addition to a network of offices from which other staff can assist keeps projects moving.

"We realized early on that our clients were going to be highly demanding, as they were excited about the economic opportunity in the shale," said Clayton Bubeck, PE, RETTEW's vice president for the oil and gas sector. "Our vision as a company focuses on delighting our clients, so we needed to mobilize our services where and how the clients needed us."

A close working relationship with the various permitting agencies also helps. For instance, most engineering firms provide not only design and planning work, but also permitting paperwork and agency coordination on behalf of the client. To operate a well and/or pipelines in the Marcellus region, a client might need permits ranging from a general oil and gas permit, a highway occupancy permit or a groundwater withdrawal permit. Any engineering firm involved in the natural gas business is likely well-connected with the Pennsylvania Department of Transportation, Pennsylvania Department of Environmental Protection and many others to provide clients with the quick turnarounds they need.

Aside from an extensive network of office professionals who tackle all the technical aspects to get an operation off the ground, companies must have a brigade of field staff ready for deployment to onsite operations. To further keep up with the pace, RETTEW has established a vast network of sub-consultants on which they can call as needed. These subconsultants are vetted to assure the same client focus and meet tight deadlines.

Contacts with government agencies for permitting and planning, with subcontractors who can help complete the job with dedication and attention to detail and strong communication between firms and clients provide the fluency needed to bring projects to fruition. The better the established relationship, the more likely the project can move, with ease, through each step of the process and be completed on time and to the client's satisfaction.

And of course, quality of project tasks is just as important as being able to increase the speed of work. Engineering firms have had to beef up the guidelines in place to assure the same quality of services is provided, especially for many of the natural gas projects with fast turnarounds. For some, that might have been as simple as putting all of the procedures in writing with easy accessibility for employees.

For other companies, it might have meant providing regular training to ingrain the quality process as second-nature to staff. Some businesses might have brought in additional project managers who have specific expertise to oversee the details for the natural gas industry.

All of these steps have taken engineering firms to the next level while participating in the Marcellus Shale, and possibly opened further opportunities.

"For RETTEW, we've realized how responsive we can be while working with natural gas clients," added Lauriello. "It has helped us as much as it has helped them."

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