Schramm reigns supreme

Natural-gas driller Gene D Yost & Son has expanded its business on the back of Schramm drills, explains Rodney Evans Garrett

IT HAS been about three years since *GDI* reported on Gene D Yost & Son Inc (Yost), the North American natural-gas driller, and since then, the company, based in Mt Morris, Pennsylvania, has expanded, adding more Schramm T130XD Rotadrills in the process.

In 2002, Yost was the first company to purchase the new-model T130XD drill and *GDI* asked eponymous president, Duane Yost, why he selected this drill rig with its unique mast. He is still explicit as to why he purchased not only the first drill, but has since added four more: "I wanted a drill rig with a deep-drilling capacity that could handle range III casing yet feature a much more compact mast than the other drill rigs in our fleet. There are other make drill rigs that can meet the first two features but not the last feature of being compact. That is where the Schramm T130XD reigns superior over all others."

Duane and his father Gene, the founder of the company, have had a lot of experience with drill rigs over the past 21 years of operating. They have owned 27 different drill rig models sourced from nine different manufacturers. Eleven of these drills are still in the fleet.

Yost is a drilling contractor specialising in drilling wells for natural gas. Despite its continued growth in recent years, the company has not increased the territory it serves, which includes southwestern Pennsylvania, West Virginia and small area of southeastern Ohio. Duane says, "our business is growing substantially because of increased demand from natural gas producers for us and other drillers to drill more wells."

In 2003, the company drilled, using six drills, 171 wells averaging 3,365 ft per well, for a total of 575,415 ft. In 2004, again using six drills, 240 wells were drilled averaging 4,316 ft each and totaling 1,035,840 ft. Last year was the best yet, with eight drills drilling 328 wells, averaging 4,030 ft each, totaling 1,321,840 ft. In terms of total footage drilled, Yost was rated in 2003 as the 48th largest natural gas company in North America, according to RigData, a reporting service company that tracks and publishes information on oil and gas drilling activity. In 2005, Yost accelerated to 28th position.

As Yost has been growing, so has its equipment fleet. Throughout 2005, all new Schramm drill rigs added were T130XD Rotadrills. However, this past February, the company interrupted that buying pattern by taking possession of Schramm's new-model T90XD Rotadrill. It is a compact clone of the larger capacity T130XD Rotadrill.

Here is what the two model drills have in common, and those aspects they do not share. Both are heavy duty, heavy hoist, truck-mounted drill-rigs. Both feature the latest in Schramm's 'telemast' design and technology which enables the upright mast to telescope up and down, thus permitting longer drill travel and greater working heights for longer casing placement. The telemast enables range III casing to be utilised with the T130XD drill and range II casing to be used with the T90XD drill. Despite the large capacities of the masts, they can be minimised by telescoping them in, which allows them to give very modest overhangs when the drill rig is in transport mode (cradled in a horizontal position).

Both drill rigs feature impressive pullback capacities (see table) so they are suitable for oil and gas shallow-well drilling applications. An optional removable casing rotator gives the T90XD greater versatility and the ability to handle tough overburden drilling conditions by simultaneously rotating the casing string and the drill string independently.

According to Yost, the telemast design has been instrumental in optimising the efficient use of the Schramm drill rigs because of the reduction in mobilisation times when transporting the rigs from site to site. Most of the territory serviced by Yost has

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numerous towns and villages where more traditionally-designed range III casing-capacity drills cannot be driven because of their long mast overhang at the front of the truck cab when in the transport mode.

The long overhang precludes the rig from being turned right or left in tight areas of a town as the mast will not clear street-lined trees, utility poles and street signs. This means a traditionally-designed mast drill rig would have to be detoured around most towns.

The only major differences between the two Schramm drill rigs are their capacities for handling casing sizes and their maximum drilling depths. There is, of course, a purchase price difference as well.

However, Duane says that the price difference was not the main issue in deciding on the smaller drill rig; rather, it was the issue of timely model availability. Schramm says it is swamped with rig orders, especially for the T130XD model. That means longer delivery dates on new rigs.

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While the wait-time for a new T130XD is not unreasonably long, Yost has been inundated with a surge of contracts from its customers so Duane decided to opt for the more readily available T90XD. "This year, we are experiencing greater demands from our customer base [gas producers] by their requesting even more wells be drilled than last year," says Duane.

"In fact, I project that we will drill 1.6 Mft this year, which is a 25% increase over last year. Every week we would not have had a new drill rig would have meant a significant loss in revenue that could not have been made up later. The customer would have simply gone to another natural gas well driller to get the job done."

Duane says that opting for the smaller rig really will not negatively affect the company's overall drilling production since this model has, according to him, a drilling depth of up to 4,500 ft. While this capacity does not compare with the larger model's capacity, which he says will go to at least 7,000 ft under the company's typical drilling conditions, the smaller drill can handle around three quarters of all the company's drilled wells. "There are still many wells we drill that are less than 4,500 ft so I do not foresee any production problems using the smaller drill rig," he says.

While Duane is confident the T130XD can drill wells at least 7,000 ft deep, the deepest well the company has drilled so far was 6,500 ft. This was accomplished by drilling the first 1,500 ft with an 8.75 in diameter button drill bit to accommodate 7 in diameter casing and the next 5,000 ft was drilled 6.25 in diameter for accommodating 4.5 in diameter casing. The production rate was very satisfactory to Duane, who says the entire operation was completed within six days.

Duane says the T130XD drill-rigs can penetrate rock at 100 ft/hour or more, depending on the rock conditions encountered. The rock types vary as shale, quartz, limestone and sandstone with unconfined compressive tests resulting in a range from 12,000 to 55,000 psi. The harder rock is found primarily in West Virginia.

Before Yost purchased the Schramm Rotadrills fitted with the telemasts, the company did little business with Schramm compared with some other manufacturers. Early on, Duane had some trepidation about what quality of service he would receive from Schramm during and after the purchase of the product.

"I had my concerns whether Schramm's service would be of high quality and in a timely manner," he says. "We cannot put production on hold very long just because one of the drill rigs goes down. It costs us about US$1,100/hour in lost revenue if a drill rig is not operating on schedule.

"Now that we have made the experience with Schramm's service, I must say it has been very good. For example, if I have a problem, I can call directly one of the executives in the company, including Ed Breiner, the CEO.

"They make things happen and put 110% into their service responses. Another thing I like is they are constantly improving little issues associated with these new-model drills. By now, they seem to have gotten most of the issues corrected."

All this said, Duane emphasises that his company does not buy only Schramm products. Depending on the application, the company still occasionally buys other makes. In fact, one will be delivered this summer. However, he says, "we buy the make and model drill we think best fits our needs and not by brand alone. In recent years we find that the Schramm drill rigs fit most of our drilling applications best."

COMPARATIVE SPECIFICATIONS FOR SCHRAMM T130DX AND T90XD DRILL RIGS

T130XD	T90XD
130,000 lb (59,090 kg) actual pull-up	90,000 lb (40,824 kg) actual pull-up
28 in (711 mm) table opening	28 in (711 mm) table opening
760 hp deck engine	760 hp deck engine
1350/350-1150/500 variable volume compressor	1350/350 - 1150/500 variable volume compressor
(38 cu m/min @ 25.2 bar & 32.6 cu m/min @ 35.5 bar)	(38 cu m/min @ 25.2 bar & 32.6 cu m/min @ 35.5 bar)
50 ft (15.25 m) of clear head travel	38 ft (11.58 m) of clear head travel
Range III casing	Range II casing