

Manufacturers Speak Up

Drill rig manufacturers share their biggest concerns and how they've adapted to a changing economy.

By Mike Price

Like all segments of the water well industry, the process of manufacturing drill rigs has evolved due to the uncertain housing market and lackluster economy.

Every rig manufacturer faces unique challenges, but issues such as the ever-increasing amount of lead time on materials, matching production capacity to demand, and continuing to look at reducing costs are felt by all manufacturers these days.

This month, four rig manufacturer representatives from the United States and Canada weigh in on their biggest concerns, how they've adapted to a changing industry and economy, and what they're hearing most from their customers.

Water Well Journal: How has business been for you through the first half of this year?

Jackie Innes: We've been busy completing orders for our regular clients, and the phones have been really busy. Overall, business has been steady, and we think we're seeing an upward trend.



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We've added more third-party products to our lineup, and as word is getting out, more folks who may not be familiar with us are checking us out. We sense greater optimism from our clients, even though certainly most are being cautious with new equipment purchases.

Tom Omli: We are thankful for the number of customers who have recently chosen Geoprobe Systems as their equipment of choice. "Steady" would be the one word to best describe our current tempo.

Kevin Reimer: The first quarter was somewhat slow although inquiries remained strong, just not purchases. However, now we're selling into Russia, New Zealand, the eastern seaboard of the United States, Australia, and we're very close to closing a deal in Europe. These are not new markets for us as we already have customers in all those locations and more. However, for the past couple of years, we've made more sales by being creative with custom tailored packages to suit a customer's specific requirement instead of standard rig models.

Bob Grimes: Business has been steady through the first half of the year. Quotation activity has increased dramatically; however, the market is still "soft."

Our Roundtable

Jackie Innes, MARL Technologies Inc. marketing and communications manager in Edmonton, Alberta, Canada

Tom Omli, Geoprobe Systems director of sales in Salina, Kansas

Kevin Reimer, Sonic Drill Corp. sales and operations manager in Chilliwack, British Columbia, Canada

Bob Grimes, GEFCO Inc. sales manager in Enid, Oklahoma

WWJ: What is your biggest concern as a rig manufacturer?

Jackie: Lead times for materials have been getting increasingly long. It used to be that our local suppliers of components such as hydraulics and motors kept a good inventory on hand, but now many companies have gone to a no-inventory system where they don't initiate anything until the order comes in. This is frustrating for us because it can add time to our delivery date for custom-built equipment. To counter the problem, we've started adding more products to our own inventory so the customer doesn't have to wait.

Tom: Matching production capacity to demand is a never-ending challenge.

Kevin: The customer is always looking for something that is in stock. They ask,

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Jackie Innes



Tom Omli



Kevin Reimer



Bob Grimes

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“What’s in the yard?” Unfortunately, carrying inventory is a huge investment, and quite frankly, if I had a sonic rig sitting in the yard, it would be sold instantly. Because we’re a medium-sized company, we don’t carry inventory but we’re always looking for ways to speed up production times.

Bob: A general lack of customer confidence in the economy in general even where we are seeing growth; customers are still concerned about sustainability.

WWJ: How has the economy affected your business strategy?

Jackie: The clients who come to us understand that more than ever, especially in a tough economy, it pays to invest in quality. They know they get their return on investment through better production, less downtime, and less operator fatigue. For example, we sold drills to a mining company in Chile 10 years ago. Once a year, they put in a parts order for maintenance items. That’s it. That’s all they need. Our strategy remains the same as when we started in 1977: By understanding client needs and building solid relationships, we provide outstanding equipment that is uniquely suited to each client’s business.

Tom: Geoprobe Systems is an engineering-heavy company focused on developing new, innovative machines and tools for subsurface sampling. Our list of new products we’d like to design and get to production is currently larger than at any other time in the history of the company.

Kevin: Everyone’s looking for the best price and the fastest delivery. One of the ways we’ve accomplished this is through partnerships. Recently, we partnered with Dando Drilling International in the United Kingdom and Drilltechniques in Australia. These partnerships allow us to offer faster rig delivery and lower prices. Lower prices also help because since the 2008 economic crisis we’ve found that it’s more difficult for customers to secure financing.

Bob: We continue to look at lower cost alternatives on our products and improved delivery times to help our customers take advantage of market opportunities.

WWJ: The unpredictability of fuel costs seems to be a constant in the United States. How has this factored into your rig and engine designs?

Jackie: We’ve been focused on smarter drill design and hydraulic systems since 1977. This enables us to do more with less horsepower and fuel consumption. It’s just what we’ve always done.

Tom: Fuel efficiency can significantly affect the profitability of a machine, and it is an area we believe our machines excel in. Geoprobe Systems has built compact machines that maximize the production of small horsepower engines for 25 years—and going forward, we’re working to squeeze even more out.

Kevin: We’re now able to offer a full-capacity sonic rig that can be powered by as low as 173 horsepower up to 225 horsepower. In the past, the full sonic rigs were 250 horsepower but our new

engines, with their increased efficiency, allow the operator to save on fuel.

Bob: Fuel costs are a major concern to our customers; we are always looking for improvements in both hydraulic and mechanical design to improve the fuel efficiency of our offerings. Things such as compressor drive clutches and the ability to operate the machines at a lower rpm will soon become standard practice.

WWJ: What type of impact have the Tier 4 diesel emissions standards that have been established by the U.S. Environmental Protection Agency had on production?

Jackie: These standards have a disproportionate effect on costs.

Tom: The new diesel emissions standards are difficult for low-volume manufacturers like Geoprobe Systems to implement. They require additional regulatory paperwork, added inventory, and significant engineering to accommodate the emission after-treatment hardware on Tier 4 final engines. To date, we have been able to minimize the effects on our customers, but there is no question that, long term, these new standards will increase the cost of new machines.

Kevin: They’ve definitely had an impact on all manufacturers. We’ve had to comply, and to do so, we work closely with our engine dealer to ensure that the engine complies with the state or territory that it will be working in. Because we use smaller horsepower engines, we’re not affected as much by the stan-

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dards, which are more strict for larger engines.

Bob: Now that people and products have settled down somewhat, and the Tier 4 engines are becoming more commonplace, this should return to a no “deal breaker” point. The EPA is here to stay. We just need to find a way to exist with it.

WWJ: Are contractors reaching out to you to retrofit their old rigs so they can lower the emissions in their older rigs?

Jackie: Yes.

Tom: No. Retrofitting old rigs with new engines is really not a feasible option. The Tier 4 final diesel engines require much more space for the same output power.

Kevin: No, they don't retrofit due to emissions, but they do reach out to us to retrofit their rig to become an SDC sonic rig. Due to performance issues, Tervita [formerly Beck Drilling and Coring] recently retrofitted four sonic rigs that were made by a competitor into Sonic Drill Corporation sonic rigs. In other cases, we've retrofitted standard rigs to become sonic rigs.

Bob: We've always had customers interested in doing retrofits to older equipment, but normally those are to stay away from the lower emission engines rather than switching to them. At this point, most of the equipment seems to be relocating to areas with less restrictions rather than being updated.

WWJ: Clearly customer feedback is essential for research and development of any product. How do you elicit feedback from customers or potential customers?

Jackie: We don't elicit feedback so much as we work closely with each client and potential client, so it's more like an ongoing conversation. We don't stop talking to them once the drill is sold. We have a relationship, so we don't feel the need to elicit information. Feedback is an organic and natural part of what we do.

Tom: Geoprobe Systems has always spent time with our customer base listening to their current challenges, and we take their input seriously. One way we gather their feedback is through our

“There is always constant pressure to reduce costs, so manufacturers have to be vigilant in providing economical drilling solutions for the customer.”

open house events. At these events many key customers share their thoughts on our products. At the open house we also field demonstrate some new machine and tooling concepts that are not ready for production, just to see what customers recommend from their field experience viewpoint.

Kevin: There's a number of ways we get feedback, but mainly during the training phase when our trainer is on-site with the customer and through regular after-sale follow-ups. We collect information on how the machine is performing and changes that the customer might want. Because we are a medium-sized manufacturer, we are flexible enough to also make changes on the fly while the rig is being built if the customer needs it. Customers' requests have often driven new modifications or product offerings such as safety cages, hands-free rod handling, and a high-speed diamond drill coring head.

Bob: We gather customer feedback information from direct face-to-face contact with our customer base and also are in contact with customers through direct mail surveys and online inquiries.

WWJ: What changes or improvements do you see in the future for the rig manufacturing industry?

Jackie: Increased focus on safety features. We are always looking for ways to reduce operator risk and strain without compromising performance.

Tom: At Geoprobe Systems we continue to see a growing need for our machines and tools to work well and be supportable at locations around the world. We no longer look at designs that will only function well in the United States.

Kevin: I see more collaboration between other manufacturers, compared to the past where everything was done in-house. Today, there is more outsourcing occurring to offer improved service and cover larger markets globally and I see that continuing. There is always constant pressure to reduce costs, so

manufacturers have to be vigilant in providing economical drilling solutions for the customer.

Bob: Major improvements are being made in pipe handling and safety equipment on a daily basis. There is also development of smaller, lower horsepower equipment to do the same work.

WWJ: When you talk with those in the groundwater industry, what are the most common questions they ask you?

Jackie: They want to know what the latest advancements are in drill design, and which of our products best suit their operation. We also get a lot of questions about the MARL SubSea drill, which is now in its second year of deep sea drilling.

Tom: What new things is Geoprobe releasing this year? When and where can we see your new products in operation?

Kevin: First of all, they want a better understanding of how the sonic rig installs a geothermal loop, which is different and can be accomplished in one operation. I also get a lot of questions on the speed of the drill, how many feet it can do in a day, as well as the daily cost of running the rig. Many customers also seem very interested in rod-handling options, but in essence, it's all about production, speed, and profitability.

Bob: Most common questions are: What is new in drilling equipment technology, what is coming in the future in terms of regulatory issues, and what are we doing to help with these issues?

WWJ: What are the big advancements you've seen in the drilling industry over the last few years, and what do you see in the future?

Jackie: From the start, we've focused on productivity advancements through better drill design. We eliminated high-maintenance components such as deck engines, clutches, transmissions, kellys, kelly bearings, and right-angle drives. Owners appreciate the fact they never have to repair these old technology items, or worry they will let them down on a job. Today's drillers have more choice than ever when buying equipment and they want drills that are reliable, deliver exceptional performance, are operator-friendly, and are adaptable to different types of conditions.

Advancements in design and technology are making it easier for owners to find the perfect drill for their needs. For example, the MARL SubSea drill combines modern terrestrial drill technology with marine technology to allow for efficient sampling at depths up to 9842 feet below sea level. This is a big advancement over what was previously available.

Now as for the future, we love designing drills that perform well in harsh environments, whether it is the high Arctic, a blazing hot desert, or deep down in the ocean.

Tom: We see customers and the companies they work for becoming even more serious with safety initiatives. Geoprobe has always taken a leading stance on safety, and we like our ability to meet the requests of our customers in the safety arena.

Kevin: In the past few years, we've seen a lot of innovation in rod-handling systems and more compact, economical drills have appeared on the market. The future may also bring more options for the shallower driller—projects that are 200 feet or less.

I also believe a lot more variety of sonic drill heads will become available, not only for vertical drilling applications, but horizontal as well. Currently, we have three vertical sizes available and two horizontal sizes, which is more than most.

Bob: The start of safety improvements in pipe handling and operator safety is finally coming to the top in the industry, plus improvements in downhole tooling and methods. *WWJ*

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