

SPRING 2025

DYNAMICDRILLER

Success stories from the GEOTECHNICAL, ENVIRONMENTAL, EXPLORATION, WATER WELL, GEOTHERMAL, CATHODIC PROTECTION, DEWATERING, CONSTRUCTION, and FOUNDATION drilling industries

NEW

3135GT GEOTECH RIG

- 10,000 ft lbs of torque and 1,000 rpm
- Centerline head side shift trims time between applications to effectively compete in multiple revenue streams with a single rig
- Ideal for rock coring, tough geotechnical borings, when uncertain what geological formations will be encountered on site

See page 16 for details



Geoprobe

www.geoprobe.com



Dream to Drill

From the first Geoprobe® 8140DT sonic rig (left) to a 2024 8150LS (right), MATECO leverages the Geoprobe® sonic technology, training, and support to accomplish sonic projects like PFAS sampling.



Celebrating 50 years in business during 2024, **MATECO DRILLING COMPANY** completes geotechnical and environmental drilling from their Michigan office. They do auger, direct push, sonic, and Direct Image®.

"We've always been a mix of geotechnical and environmental. We used to do directional drilling but stopped when we bought our first sonic rig — the first Geoprobe® 8140DT," John Pitsch, general manager, said. "We saw the industry going toward sonic and wanted to be leading in the industry."

When considering getting into the sonic drilling arena, Dale Elliott, company president, looked at the options and chose Geoprobe® because of the size and features it had at the time.

"The 8140DT was a smaller footprint because at the time everything was truck- and trailer-based," Pitsch said. "The smaller footprint on the tracks was a big selling point for us."

Since adding the 8140DT in 2009 they've drilled 220-foot deep holes with the 5-foot stroke sonic drill rig. They've used the short stroke sonic for monitoring wells, vertical aquifer sampling, and PFAS sampling.

"There's lots of PFAS sampling in our area. We use 4x6 sampling to collect water samples at different intervals as we're progressing on the bore hole and then set temporary monitoring wells," Pitsch said.

Even after 16 years, the 8140DT ran 9 to 10 months during 2024.

"Since we've owned the 8140DT [16 years], we've only put on three heads and have had no major service repairs," Pitsch said.

Building on the strong demand for profitable sonic drilling work, they sought to expand their sonic services. Once again they looked to Geoprobe® due to their relationship, customer service, and availability.

"A big thing is customer service. Geoprobe® is great at troubleshooting problems we encounter. That's why we looked there first," Pitsch said. "We had projects coming up and looking to do proposals, so we were looking to expand our fleet in a timely manner. The 8150LS gives us deeper borehole capabilities as well as efficiency with the 50K head and 10-foot stroke. We can also run larger casing."

Driller Jeff Croel has been with MATECO for nine years. He finds the 8150LS and 8140DT "similar, but different operation." Croel and Pitsch both came to Salina, Kansas, to train on the 8150LS sonic rig with Jed Davis, sonic drilling specialist.

"Jed was probably the best trainer I've ever had on rigs. It was impressive to get a feel for everything from someone who had built it and run it," Croel said. "We also walked through the factory, and everyone said 'hi' and looked like they enjoyed their jobs. I was very impressed."

The training in Salina is very beneficial according to Pitsch, who started out as a driller's assistant, moving to an auger rig, and has time behind the controls of the sonic rigs during his 26 years with MATECO.

"Jed lets you in on ways to troubleshoot things you'll experience in the field versus being on the phone all the time asking questions," Pitsch said.

When comparing the 8140DT with their new 8150LS, not only is the 8150LS quieter, but the rod loader (see page 3) and remote diagnostics also simplify their fieldwork.

"The rod loader on the 8150LS reduces physical labor. We're not using winch lines to load rods, and people aren't using their backs lifting heavy casing," Croel said. "The remote diagnostics mean saving time on troubleshooting. The service team or engineers can remote in and see what's going on when we're having trouble."

Pitsch credits Geoprobe® research and development for the advancements in the sonic rigs.

"Geoprobe® actually takes suggestions from drillers and implements them. Other manufacturers haven't changed," Pitsch said. "Geoprobe® is changing, trying to stay ahead of everyone else."

These changes benefit the driller, company, and customers.

"Adding the 8150LS has increased our sonic capability to go deeper and larger. We have multiple sonic rigs so we can service clients better," Pitsch said. "We can have multiple sonic jobs at the same time or put both on the same job at the same time."

During a recent PFAS project next to the river, they encountered some larger cobbles. The 8150LS didn't hesitate thanks to the 50K GV5 head.

"The 8150LS is so smooth, nothing's been terribly difficult with it. It's a dream to drill," Croel said. "I did water well drilling for 19 years and have run a lot of rigs. Geoprobe® is probably tops."



SCAN TO WATCH

Sonic Drilling Products



GV5 SONIC HEAD PROVIDES POWER AND DURABILITY

Sonic operators worldwide have historically struggled securing a sonic head providing both performance and durability. In response, Geoprobe® engineers have focused countless hours of research, development, and testing to ensure the Geoprobe® GV5 sonic head provides not only production power but also longevity. By engineering and manufacturing GV5 heads in-house, Geoprobe® maintains not only quality but ability to continually improve the GV5. Sonic drilling operations from Turkey to New Zealand rely on the GV5 sonic head to stand the test of time, eliminating the need to tie up capital to keep an extra sonic head on the shelf.

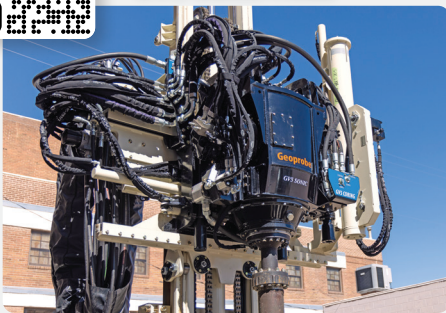
3-YEAR/1,000-HOUR HEAD WARRANTY

Continual innovation of GV5 sonic head ensures both ample power and robust head life. Regardless of formation or operator experience, Geoprobe® GV5 sonic heads receiving basic maintenance keep running.



SCAN TO WATCH

GV5 Sonic Head



HIGH-SPEED CORING HEAD

The optional coring head mounts onto the side of the GV5 sonic head, moving into place by side shifting the head. The coring head is capable of 800 rpm with 540 ft-lbs of torque in forward and 720 ft-lbs of torque in reverse for breaking tool joints. Also, the high-speed coring head incorporates a side-feed swivel, and is set up to work with our floating subs. The floating subs have 2 inches of travel simplifying make-up with the tool string.

TOP THREE REASONS TO CHOOSE GEOPROBE® SONIC SYSTEM

1. POWER: Designed and manufactured by Geoprobe®, the 50,000-pound dynamic force GV5 sonic head has the power to advance up to 12-inch tooling. And with 4,000 ft-lbf at 90 rpm, the 2-speed rotary drive has the torque needed to maintain rotation in tight formations.

“It has the necessary power to drill deeper holes or power through shallow borings. It has the power to compete with other manufacturers out there. I’ve used all of the different sonic tooling, and the Geoprobe® tooling is matched up nicely to transfer energy to the bit so it drills well. Having the same manufacturer means I can get everything — rig, tooling, service parts — from one place.

— Dennis Mayer, Drilling Operations Manager,
AARCO Environmental Services Corporation, New Jersey

2. SUPPORT: Investing in an engineered Geoprobe® sonic rig and tooling system comes with training and service support — where one phone call gets you whatever you need.

- Purchase includes factory training on rig operation and maintenance.
- Integrated systems display provides real-time analysis and built-in diagnostic tools so our sonic team can remotely troubleshoot. Built-in redundancy on key components means finishing the day, addressing the issue at one of our multiple service centers when convenient.
- Class leading 3-year/1,000-hour warranty on GV5 sonic head and standard Geoprobe® one-year unlimited hour warranty on machine chassis.

3. OPERATOR EASE AND EFFICIENCY:

- Centerline head side shift gives easy access to rod string ID.
- Hands-free auto drop hammer keeps drillers out of harm's way.
- Quickly shift from sonic to auto drop hammer or high-speed coring head without moving drill mast.
- Rod carrier, handler, and indexing racks create virtually hands-free operation, eliminating need to muscle large rods, reducing crew fatigue, and increasing production.
- Swing-arm and adjustable height control panel gets operator as close or far from the rod string as needed.
- Compact 8150LS fits inside a 40-foot shipping container for international transportation and fits into tight urban job sites.



SCAN TO WATCH

Sonic Rod Handler



**CALL FOR SONIC RIG,
TOOLING, & TRAINING
NEEDS: 785-825-1842**

VIRTUALLY HANDS-FREE SONIC JOBS

SELF-PROPELLED SONIC ROD CARRIER

- Save time using independent quick-attach, 10-foot rod magazines removed using forklift.
- Align with 8150LS using front and rear outriggers designed with +/- 7 inches of side shift.
- Achieve virtually hands-free operation when paired with 8150LS and rod loader.
- Carry combination of magazines with ability to feed additional rods from rear of carrier.
 - 300 feet of 3.5-inch OD rod
 - 250 feet of 4.5-inch OD rod
 - 200 feet of 6-inch OD rod

SRC30DT sonic rod carrier and 8150LS on dam reclamation project in west Texas.



SCAN TO WATCH

Sonic Rod Carrier



Sonic Rig Speeds Production



Simple operation of 8150LS utilizing rod rack and rod handler to maneuver rods makes for efficient production.

When JENSEN DRILLING was founded in 1967, they specialized in horizontal drainage and landslide stabilization. Through the years they've tried their hand at all kinds of other drilling, eventually narrowing their focus to what they know best.

"Competition in the area for other drilling types was driving down prices, so we focused on our own niche areas," said Kody Jensen, operations manager for the Oregon-based company.

For some of their projects, they'd been using a sonic head on an older, pieced-together rig. When they bid on a job requiring sonic a few years ago, they began researching and chatting with other drillers looking for a better, more user-friendly sonic drill rig.

"We'd worked on a job site alongside one manufacturer's sonic rigs, and they were nothing but problems. We knew we didn't want to go that route," Jensen said. "Another manufacturer's lead time was too far out for this particular job."

During their research, they discovered Geoprobe®, having several conversations with Doug Koehler, Geoprobe® sonic expert. To meet their timeline, Koehler put them in contact with a company selling a used 8150LS.

"We winged it and purchased the used 8150LS, and it's all worked out storybook-style," Jensen said. "I just love the simplicity of the machine, and the customer service is unsurpassed. We've got 20 rigs in our fleet, and I've never dealt with a manufacturer as responsive as Geoprobe®."

According to Jensen, the speed and operational ease of the 8150LS combined with less environmental impact makes it the ideal sonic rig. Ten years ago they would have been drilling in a dirtier, messier manner, using more equipment.

"The 8150LS makes our work much easier. I love the rod loader so you don't have to load rods by hand. It's just a sleek system, to use the rod rack and shuffle them into the rod loader without having to touch the rod. It just makes life easier," Jensen said.

The 8150LS went straight to work on a mining job site in Montana.

"We were able to double our production," Jensen said. "The 8150LS is light enough we put all the materials, rods, and machine on a single truck."

They find it's easy to access components for maintenance when needed.

"We've had very little downtime and our ability to keep it operational has been huge," Jensen said. "I can call Troy Bourbon [sonic rig service specialist] and walk him through a problem, and he can get us back on track so fast. His knowledge of the machine is unprecedented."

Now they're seeking ways to use sonic in other applications.

"We're looking at more and different work than we did before we had the 8150LS," Jensen said. "We're getting enough volume of work now that we could use another machine."

As they consider expanding their sonic fleet, they're once again looking to Geoprobe®. This time they're setting their sights on a new 8150LS V3 (right) and the SRC30DT self-propelled sonic rod carrier (see page 3).

"I enjoy working with Geoprobe®. They're just an organized, efficient company. The 8150LS is simple to operate and efficient. It's a compact drill yet can achieve 10- to 12-inch holes," Jensen said. "The automation of the sonic rod carrier means less handling of rods and more safety."



Sonic Tools-in-the-Ground Demonstrations Coming Your Way

Whether you're considering entering the sonic drilling market or you've been running sonic rigs for years, we've geared up to let you see first hand how our growing lineup of sonic offerings can check the boxes on your list, such as its power for relatively compact size. This includes:

- 8150LS V3 sonic rig with 50K GV5 sonic head
- Rod handler with elbow and wrist features to operate on uneven terrain and retrieve tooling for angle sonic drilling up to a 45-degree angle
- SRC30DT self-propelled sonic rod carrier
- Geoprobe® sonic casing and weighted wireline sampling system



Doug Koehler,
Sonic Expert

 **CALL TO SCHEDULE A DEMO: 785-825-1842**

RECENT GEOPROBE® 8150LS SONIC RIG UPDATES

8150LS V3 RE-ENGINEERED TO INCREASE RELIABILITY, REDUCE OPERATIONS COST



SCAN TO WATCH
Newest Sonic Innovations

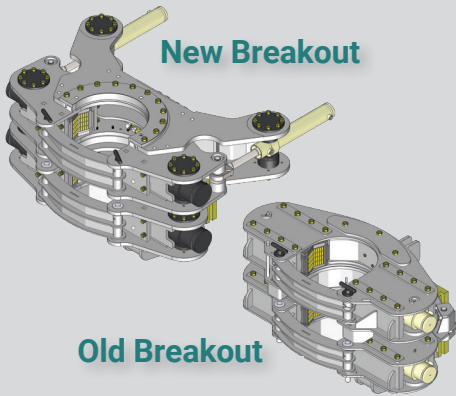


REDUCED RISK OF BREAKDOWN while maintaining accessibility by:

- moving valves out of danger zones
- removing duplicate sensors
- simplifying cooling

ROBUST BREAKOUT improves handling 2- to 14-inch tooling

- increased clamp force from 21,000 to 31,000 lbf
- increased twist force from 13,500 to 37,000 ft-lb
- replace common wear components rather than entire breakout



ADJUSTABLE HEIGHT CONTROL PANEL uses swing-arm to position control panel as close or as far from tool string as desired

- next generation controls include larger display and increased reliability
- simple weight-on-bit controls
- bank of five analog displays indicate holdback pressure, pulldown pressure, rotation torque, top clamp pressure, bottom clamp pressure



AUSTRALASIAN EXCERPT

How Geoprobe® is Shaping the Future of Sonic Rigs

October-November 2024
Australasian pages 68-74

by Jamie Wade

The Geoprobe® journey into sonic drilling began nearly two decades ago, with a commitment to research and development that continues to drive their success today. At the time, sonic drilling was still a relatively new technology, and many in the industry were skeptical of its potential. But Geoprobe® saw the possibilities and invested heavily in developing a sonic head that could deliver powerful, precise drilling across a range of geological conditions. From the 2009 introduction of the 8140DT (see page 2) and GV4 sonic head to the latest advancements in the GV5 sonic head, 8150LS V3, and SRC30DT, the company has consistently pushed the boundaries of what is possible in drilling technology.

Geoprobe® made significant strides in sonic drilling technology with enhancements that have further cemented their leadership in the market. The latest version, the 8150LS V3, incorporates several improvements based on feedback from operators in the field.

"We've made a lot of small but significant changes to the V3 version," Doug Koehler, Geoprobe® sonic expert, notes. "It's all about making the rig more resilient and easier to maintain, so operators can focus on the task at hand rather than worrying about equipment issues."

At the heart of these developments is the GV5 50K SONIC HEAD, a powerful tool that now comes with a class-leading 3-YEAR/1,000-HOUR WARRANTY. This sonic head is a culmination of years of research, feedback from the field, and relentless innovation. The sonic head delivers an impressive 50,000 pounds of dynamic force at 150 Hz and 4,000 ft-lb of torque at 90 rpm. This combination of power and durability makes it particularly effective in advancing large diameter tooling through challenging subsurface formations, which is a common requirement in many of today's drilling projects.

Geoprobe® has also introduced a MORE ROBUST DOUBLE WRENCH BREAKOUT system, a feature that has impressed operators who regularly work in tough conditions. The re-engineered breakout system now offers increased clamp force — from 21,000 to 31,000 lbf — and twist force — from 13,500 to 37,000 ft-lb. The new design also makes common wear components replaceable versus requiring replacing the entire breakout.

Drillers routinely remark on the advantages offered by the CENTERLINE HEAD SIDE SHIFT, which allows the drill head to move laterally. This feature provides operators with easy access to the casing without needing to reposition the entire machine — a significant time-saver, particularly in confined spaces such as urban drilling sites. The centerline head side shift makes an open borehole easy to access when utilizing the drill mast-mounted winches to install well materials or remove sampling tools.

"This kind of innovation is exactly what our clients have been asking for," notes Koehler. "It's about making the job easier and safer without sacrificing performance."

Responding to the need to minimize manual manipulation of casing, particularly on mining sites, Geoprobe® introduced the SRC30DT SELF-PROPELLED ROD CARRIER. When paired with the 8150LS V3, the SRC30DT (see page 3) creates a nearly hands-free job site.

"The SRC30DT is a direct response to customer requests," explains Koehler. "It further minimizes operator contact with tool strings, not only reducing physical fatigue, but also enhancing job site safety."

Geoprobe® advancements also extend to the ADJUSTABLE HEIGHT CONTROL PANEL, designed to optimize operator comfort and safety. The panel now not only swings in and out, but also can be adjusted up and down to suit the operator's height. Operator's can choose to position close to align rods or safely away from spinning tool strings, ensuring they can work efficiently and safely, even during long shifts.

The 8150LS V3 also includes changes focused on EASE OF OPERATION AND RIG SERVICEABILITY. Simplified weight-on-bit controls and analogue gauges to monitor common rig parameters make drilling faster and easier. Sensitive components were also relocated out of harms way while still allowing accessibility.

These technological developments are more than just incremental improvements — they represent a significant leap forward in the capabilities of sonic drilling rigs. As the use of sonic technology grows in a wide range of project types, Geoprobe® latest innovations are set to play a crucial role in shaping the future of drilling. Geoprobe® is committed to continuing this tradition of innovation. The company is exploring new technologies that could further enhance the capabilities of their sonic rigs, including additional advances in hands-free operation and real-time data integration.

"We're always looking ahead," Koehler says. "Our goal is to develop rigs that are not only capable of meeting today's challenges but are also ready for whatever the future may bring."

SONIC DRILLING GROWING: WHERE YOU'LL FIND SONIC RIGS TODAY

Initially when Geoprobe® released the 8140DT sonic rigs, the work was almost entirely on environmental sites where cased hole soil and water sampling in difficult formations demanded a premium equipment and tooling solution.

"As our sonic rigs have become more robust, we now see sonic equipment going to a wide range of job sites," Doug Koehler, sonic expert, said.

Geoprobe® sonic rigs and tooling can now be found at these sites (and more):

Mining Exploration • Dewatering • Geotechnical
Environmental • Water Well • Geothermal
Cathodic Protection

"Sonic drilling is inherently more sustainable than many traditional methods," Koehler said. "It uses less water, generates fewer cuttings, and can often achieve the same results with less energy."

Other reasons to choose sonic drilling include:

- completing job regardless of subsurface conditions encountered
- casing a hole through difficult overburden
- removing the casing upon completion of work
- collecting high-quality soil, water, and rock samples
- using a wider range of casing sizes



Diversifying Services with a Single Rig

With two vertical and six horizontal rigs, DRIVER INC has spent the majority of their 20 years doing work on electricity transmission lines and substation construction within a 250-mile radius of Amarillo, Texas.

"We'd had several rigs in the past doing cathodic protection and municipal wells and wanted to move from Kelly drive rigs to top head. We were looking for a bit of the same, but something different," Brice Graham, drilling operations manager, said. "Because of the accessibility challenges of our job sites, the footprint was a big deal. We needed a small rig with big power."

For them, versatility and footprint were deciding factors. But finding a manufacturer they could collaborate with on rig configuration was also important in choosing a Geoprobe® DM450 on a Western Star chassis.

"We valued the collaboration between what we knew about trucks and what Geoprobe® engineers knew about drills to create what we needed. They were willing to work with us to achieve a common goal," Graham said. "People at Geoprobe® care about production and customers enough, that the product can evolve. They use the resource of people using the product in the field and are not afraid to try something new. They understand the risk and benefit of it."

The DM450 on a Western Star chassis allows Driver Inc. to diversify their services with a single rig.

"We can do test, municipal, and irrigation wells and cathodic protection. We can get into spaces, especially on cathodic protection jobs, where no one else can do that work, so we've been able to grow that area of the business at a premium. That we can diversify to do cathodic protection as well as old-school well stuff with a single rig is huge for our business and our guys," Graham said. "Diversifying our portfolio with this one rig versus having to have multiple rigs doesn't just benefit our business, but also our guys. We can train them on one rig versus multiple so there's no education lapse."

They're also able to achieve all these revenue streams with reduced risk for injury.

"The design of the rig also makes it safer with less pinch points so there's less opportunity to hurt themselves," Graham said.

This includes the "tool hand" loading the rod carousel from the side without touching a rod by hand.

"You can drill and trip pipe without getting out of the rhythm of the driller," Graham said.

The ability to safely diversify their revenue streams combines with efficient production, in part due to the performance of the twin centrifugal pumps they chose on their DM450.

"From the first time we drilled wide diameter wells with the two centrifugal pumps there's been little complication. They're better than most piston pumps without the wear and tear of repairs," Graham said. "We've used twin pistons, and they're great but expensive to work on. The twin centrifugal pumps out-perform piston by 10-15 percent at half the price."

Recently, they drilled a 600-foot municipal well, 20-inches wide in rough ground.

"To make that kind of hole in those conditions is impressive. The DM450 is the only rig in our world that can do that other than a reverse circulation unit," Graham said. "We were able to do it with a smaller rig and get twice the production of older reverse circulation rigs."

In addition to performance, they appreciate the availability of parts and the helpful Geoprobe® service department to ensure they can take care of their customers.

"If we run into problems, it's rectified rather quickly," Graham said. "The service we provide affects a lot of folks, and it depends on good quality equipment and good quality people. Without one or the other it doesn't work. It takes both pieces for it to be a wonderful symphony."

DM450 equipped with twin centrifugal pumps offers impressive performance for diversified drilling sites.



SCAN TO WATCH
DM450 Walkaround

Small Size, Big Power for Urban Residential Geothermal Sites

GUARDINO WELL DRILLING goes back to 1929 with fourth-generation brothers Augie and Dominic Guardino leading the way as Augie's fifth-generation son comes up the ranks. They focus primarily on domestic 4.5- to 5-inch water wells along the central coast of California along with some light irrigation wells up to 12-inch. Sprinkled in are ground source heat pump holes all over California.

"We're drilling from 150 to 1500 feet. Seventy percent is residential water wells within 60 miles of our office, going to about 300 feet," Augie, owner, said. "Twenty-five percent is residential ground source heat pumps on small sites averaging 50-feet wide by 100-feet long with several holes on those lots."

SOLVING SMALL SITE STRUGGLES

For 50 years they'd used bigger top head rigs, but during the past 20 years they have played around with smaller rigs.

"We did our own refurb of a Deep Rock rig, so we knew small rigs could work with our market," Augie said. "So we experimented before purchasing new."

Guardino has a more than 30-year relationship with Donnie Wood, Geoprobe® water well product line manager, so they had an understanding of the longevity of the DM rigs compared to other smaller rigs on the market. Dominic had also worked for Partridge Well Drilling while in school in Florida. So from a driller's perspective, he had used legacy DM rigs first-hand, understanding their capabilities. However, from an ownership standpoint, having the backing of Geoprobe® ultimately convinced Guardino to focus their attention on a DM250.

"We did a lot of talking to mechanics at other drilling companies about Geoprobe® service after the sale. So we knew that once we got the rig out here and running, we wouldn't have issues like we had with other manufacturers," Augie said. "The tutorial videos on YouTube were an invaluable asset during our research. Ultimately from experimentation, experience, and research, we knew what we were getting into with a smaller rig, and it seemed to us Geoprobe® has it down pat and has worked out all the kinks."

Optimizing efficiency and mobilization on their residential geothermal sites spurred adding the DM250.

"The sites are so confined, you can't have multiple rigs. So we needed one drill rig to be as efficient as we can," Augie said. "The DM250 will be quicker without fatiguing the driller plus have the ability to maneuver around the small sites."

SALESMEN EXPERIENCED RUNNING RIGS

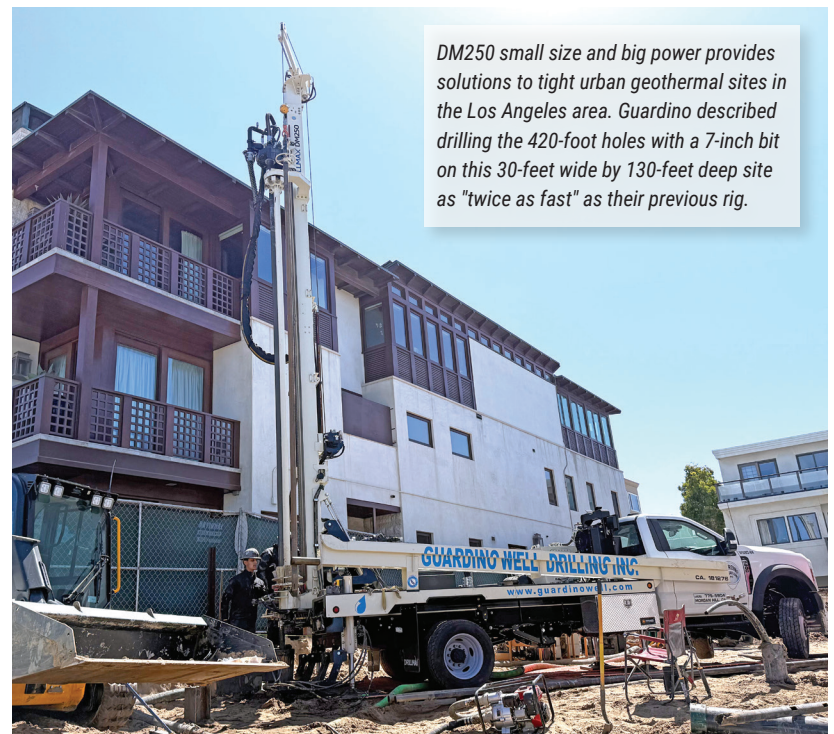
Receiving their DM250 a few weeks prior to start-up training with Wood, they put their years of experience running rigs and months of viewing Geoprobe® videos to the test ahead of his arrival.

"When we started it on our own, we were cautious because of issues we'd had with other smaller rigs. We thought we were pushing it before Donnie's arrival," Augie said. "After he arrived, we soon realized we weren't going to break the rig doing what we were doing. The DM250 is a powerful little rig for its size."

For their training they chose some of their harshest drilling geologies in order to understand the torque and mud pump limits. They drilled a 10-inch bore to 275 feet.

"The site was pretty unique with decent cobbles and small boulders in the formation along with loose alluvial. We were able to put the DM250 in extreme conditions right out of the gate to run it hard and know what to look out for," Augie said. "It worked flawlessly."

Guardino found having someone doing the training who knows the rig inside and out not only invaluable but also unusual.



DM250 small size and big power provides solutions to tight urban geothermal sites in the Los Angeles area. Guardino described drilling the 420-foot holes with a 7-inch bit on this 30-foot wide by 130-foot deep site as "twice as fast" as their previous rig.

"It's unique to see a salesman get on a rig and drill with it. He showed us what the rig could do right away," Augie said. "We could ask him questions, and he would answer right off the top of his head. Even when we tried to throw him curve balls, he was able to give real-time answers based on what he'd seen in the field."

MAKING DRILLERS' LIVES EASIER

According to Augie, key DM250 features which impress him include:

- **Hydraulic circuitry:** "When running the mud pump full out, we're not losing hydraulics somewhere else like we've seen on other smaller rigs. I had the guys study the hydraulics to see how they were put together in order to understand what they'd be getting into if servicing it in the future. We really liked how cleanly it's put together. It won't be difficult to service ourselves."
- **Under Class A/B CDL chassis:** "It's no problem to jump into the DM250 on Sunday afternoon to drive 280 miles to Southern California. We loaded it up with drill pipe, and I took the mechanic to the scales and was pleasantly surprised. With a full-body mechanic and 300-feet of drill pipe, it came in at 22,000 lbs. Other smaller rigs with equipment will max out. The DM250 still had a few thousand pounds to play with."
- **Quiet operation:** "On urban residential sites, the biggest complaint from neighbors is the noise. The DM250 is nowhere near the decibel limits of city ordinances."

As a company, Guardino has focused on making life easier on the drillers, even having extra helpers on site. The DM250 aids achieving their goals of faster, easier, safer drilling.

"The DM250 is really focused on the driller. He can easily drill and handle pipe without his helper right next to him," Augie said. "When we have had an injury on site, it's usually the helper because of too many hands in a confined area. With the DM250, the driller can handle the pipe without extra effort and without relying on the helper while going into the hole."

★ ★ ★

NEW

★ ★ ★

**WATER WELL
SALES REP:**

**Welcome
Blake Fahl**

Geoprobe® welcomes water well industry expert Blake Fahl. Learn more about his experience and why he's excited to be the newest member of the water well sales team.



SCAN TO WATCH

Blake Fahl



SCAN TO WATCH

DM250 Overview





All in the Air Rig Details

DM650 Air provides time-saving features like backloading carousel and top head side shift.

Seeking to update their fleet of rotary rigs, **MACKINNON WATER SOLUTIONS** in Ontario sought to steer clear of electronics.

"The DM series being hydraulic versus electric over hydraulic is a big plus," Rob MacKinnon, owner, said. "We're not worrying about salt on the roads affecting the electrical components."

They also sought to combine the best features of their previous rigs.

"After drilling two decades now, I've used rigs from different manufacturers. I thought it would be so nice if we could tailor a rig to our needs and use the best features of each brand," Darren Ashick, drilling manager, said. "The DM650 is the best of both worlds. It has a lot of innovative features."

Access to Team Geoprobe® engineers contributed to their decision to invest in not one, but two DM650 air rigs.

"The engineers not only listen to constructive criticism but respond with design modifications.

The feeling it's a team effort definitely won me. They're willing to listen to concerns and constructive actions are taken," Ashick said. "Our voice was heard, and you see the results of that."



SCAN TO WATCH
DM650 Air Walkaround



Factory Visit Well Worth the Flight

MACKINNON WATER SOLUTIONS began in Pembroke, Ontario, during 1970. During 1995, brothers Rob and Jamie MacKinnon commenced taking on leadership of the family-owned company started by their parents, becoming equal partners in 2005. Jamie and Rob initially visited the Geoprobe® manufacturing facilities in Salina, Kansas, during December 2023.

Takeaways from their initial visit included:

- **Growing company:** "We were surprised by how quickly they were expanding, and how well they had done so."
- **Exceptional team:** "The staff were working and had a positive attitude."
- **Stock availability:** "They had stock on parts. You don't want to spend that kind of money on equipment and then have to wait six months to get a part when it's needed."

Innovative Features on DM650 Air Rig

One favored innovative feature is the rod carousel capacity and ability to reload while drilling.

"The rod carousel has 240 feet standing with the ability to reload once past 240 feet. That's much better than the 140 feet standing we had before," Justin Montgomery, driller, said. "The machine handles the rod when you're drilling so you don't have to. The rod spinner makes life easier when pulling the rods out versus doing it by hand — it definitely saves time that way."

Ashick describes the backloading rod carousel as "fast and easy." He also finds the ability to shift the head either direction useful for clearing the path for the tool string (see next page).

"I've always been in favor of less moving parts. There's less wear items and less chance to break. But some of the things that save time like taking the rod off and moving the head either way to access something is more useful than I expected," Ashick said. "Because the head side shifts both directions and the rod handling capabilities, we're saving time."

He also appreciates the engineering that went into the table assembly and pullback capacity of the DM650.

"The table assembly is robust, open to work within. And it's designed with replaceable components so you can replace wear items rather than the whole assembly," Ashick said. "The DM650 already saves time on set up and tear down. I like the pullback capabilities for our geographic condition. It operates so smoothly and safely, it's an asset on all projects."

The DM650's air capacity plays a part in being an asset on projects.

"There's much more air than what our previous rig had," Montgomery said. "When we go deeper, there's lots of air to lift the cuttings out."

Positioning Seasoned Pros for Success

Their two new DM650 air rigs position them to be more profitable.

"We've reduced downtime having a reliable unit. It has better capacity for pullback, which means we're not stuck on a hole," Ashick said. "This all contributes to saving time, which saves money."

He also finds the space and support needed to make the repairs.

"You can tell engineering pays attention to details and has foresight to think ahead about when repairs will be needed. I appreciate the clean deck to maneuver around. I'm not wishing my fingers were three times as small so I could reach something," Ashick said. "The knowledgeable service and sales team gives you confidence they'll be able to walk you through any issues."

The switch to the new DM650 has been easy on these seasoned pros.

"I don't like change and am used to my day-to-day activities on our older rigs. So even though I liked all the new stuff, I was still skeptical," Ashick said. "It's an easy system to pick up so it makes training faster. It's straight forward and user-friendly. Now that I've taken the time to learn it, every job has won me over. It's definitely a step in the right direction."

CALL TO SCHEDULE A VISIT: 785-825-1842

For Rob, the expectation of Geoprobe® engineers to get away from the desk and get dirty contributes to the overall rig quality.

"What makes a good product are engineers who design and then build it themselves. We often joke about the engineers who design other rigs must have never run it or repaired it," Rob said. "Geoprobe® engineers design new rigs with the operator in mind and then build the first one from the ground up — that's unheard of."

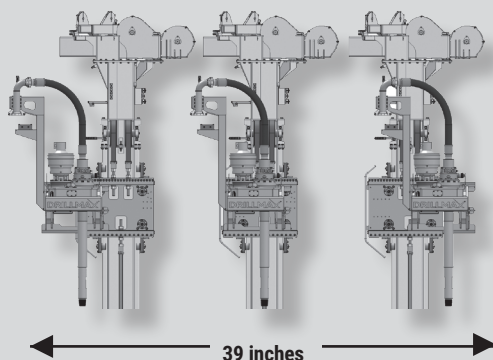
When spending money on equipment, the factory visit proved beneficial.

"From initial interest to completing the purchase, they're fair to deal with. The pricing was fair, and they worked with us on options to suit our drilling conditions," Rob said. "If you are in the market for a new drilling rig, we would definitely recommend Geoprobe® and to make the trip to the factory to see for yourself."

ADVANTAGES OF DM650 TOP HEAD AND DRILL MAST

TOP HEAD AND DRILL MAST FEATURES CONTRIBUTE TO QUICKLY AND SMOOTHLY DRILLING DEEPER, BIGGER HOLES

SHIFT TOP HEAD BOTH DIRECTIONS with 39 inches of total travel to work tools and casings with winches over centerline while head is positioned out of the way.



SCAN TO WATCH

Side Shift Top Head



2-SPEED ROTARY DRIVE provides 8,000 ft-lb rotational torque and 200 rpm with 3-inch spindle thru-bore.

DUAL PIVOT JIB

access both sides of rig with:

- two-speed primary winch, which swings and extends to the helper side; includes 17,500- or 12,000-lb options
- secondary winch, which swings and extends to driller side; secondary winch options include 1,800-lb sandline or a 5,000-lb tool handling winch



CARRIAGE ROLLERS

create quiet, smooth head travel as well as:

- simple adjustments
- fast and safe top head travel
- easy service to keep rig running like new



WATER WELL

Power, Profit from a Small Rig

A fire recently forced **KING WATER WELLS** in Michigan to replace some equipment. The first item on their list: another DM250.

"We've experienced significant growth every year. We had a single cable-tool rig nine years ago, and now we're up to four rotary rigs in addition," Kegan King, owner, said. "Our 2021 model DM250 was booked all of last year, so we wanted our first replacement to be another DM250 to give ourselves flexibility. Dollar-for-dollar, it's the most profitable platform for 95% of our residential work."

What came with the 2024 DM250 were significant enhancements compared to their 2021 model.

"We've been drilling with the 2024 DM250 for a week. I thought the 2021 DM250 was great, but I feel like this new model has more power going through bigger, coarse materials. It's just smooth operation," Mitch Briggs, driller, said. **"The F600 is a more solid truck and carries the weight better."**

According to King, the 2024 DM250 has "more power, more air, and is a stouter rig."

"Geoprobe® has done a good job of listening to customers or anticipating how to iterate or change from the 2021 model," King said. **"The amount of innovation in such a short amount of time is awesome. The bigger air and the top head redesign gives you more power and a tougher rig. You're not sacrificing anything compared to a full-size rig for 90% of the workload."**

With their 2024 DM250, they chose the rod carousel, bigger air compressor, auxiliary trash pump, and on-board grouter. All features they've found valuable for increasing production.

"Our 2021 rig had the single rod loader. So the carousel combined with the speed of the top head makes drilling so easy and quick. The bigger air compressor on the truck does a good job of developing wells that have a thicker mud and wells with a deeper static level," Briggs said. "The auxiliary trash pump makes it even easier to get set and drill as quickly as possible. You can just roll out the hoses and be able to go."

Briggs describes "babysitting" their other rigs when doing jobs in bigger material or harder clay.

"With the power of the 2024 DM250, it drills more like a big rig, and you just put pressure on it and watch it chew on through," Briggs said.

However, thanks to the compact platform, the DM250 doesn't chew through yards.

"Most homeowners don't want a 60,000-lb truck in their yard," Briggs said. "With the DM250 we can sneak it in, and the site is so clean that the well looks like it was put in 20 years ago."

The ability to access sites safely was part of the appeal in adding the additional DM250 to their fleet.

"The number one advantage of the DM250 is the ability of the smaller rig under CDL to get into job sites," King said. "Having the jacks behind the cab takes a tough job site and makes it manageable."

The smaller size also contributes to the rig's safety. For example, drillers are closer to the ground versus having to step up 6 feet in the air.

"The small size improves the safety factor because of the accessibility and not trying to get a big rig in a precarious spot," King said. **"Being on the road is also safer because of its size."**

The "user-friendly" rig is also an advantage when it comes to training the next generation of drillers.

"For new guys coming into the trade, the DM250 is less intimidating to run and maintain," King said.

Power and Versatility for Geotechnical Performance

Performing structural and geotechnical engineering, construction material testing, and drilling services for clients across Michigan, SOILS & STRUCTURES engineering company recently celebrated 50 years in business. Until recently their rig fleet was filled predominantly with mechanically-driven rigs.

"We wanted to try a hydraulic drive rig, and after looking at the options on the market, we decided on the 7822DT for the equipment size and capabilities," Chris Prell, lead driller, said. "The addition of the Geoprobe® 7822DT has allowed us to expand our drilling services into the direct push industry."

FIELDWORK SIMPLIFIED

Prell has been drilling crew chief with the company for the past eight years. He works on residential and commercial sites performing soil borings for their geotechnical group using conventional rigs and the 7822DT. He praises how the Geoprobe® 7822DT makes his fieldwork faster, easier, and safer.

"I bounce between a conventional rig and the 7822DT. It's a lot less tiring at the end of the day running the Geoprobe®," Prell said. **"The instant auger stop when releasing the controls is a valuable safety feature. The hydraulic extruder option is a game changer for liner removal, significantly improving efficiency and preventing downtime."**

Using the Geoprobe® line up of geotechnical tooling, including the spring assisted lift cap and patented* 2-inch interlocking split spoon, also contributes to simplifying his fieldwork.

"We were using slip rings, but the Geoprobe® spring assisted lift caps have made a big difference in safety and production, it's much easier to spin rods off the tool string with the spring supporting the weight," Prell said. **"The ease of spinning the 2-inch interlocking split spoons on and off translates directly to time saved in the field. I love them. These tools make jobs easier, simpler — less stressful."**

POWERFUL PERFORMANCE

The power of the Geoprobe® 7822DT has surprised Prell most.

"The power for such a small rig is unbelievable. We have mechanical driven rigs of similar size, but the 7822DT has been able to do everything we have asked of it," he said. "The size of the rig allows us to maneuver around obstacles. The combination of power and maneuverability translates to more productivity."

Recently they had the 7822DT on a gravel exploration project to assess available aggregate. They chose direct push to collect continuous liner samples to a depth of 30 to 35 feet.

"The 7822DT has the power to push through and pull back," Prell said. "In our previous work there we'd spun augers and based our findings on cuttings and split spoon intervals. With the direct push samples, we were able to see what was actually there and feel confident we did not miss any layers."

Overall, the geotechnical capabilities of the 7822DT have exceeded their production expectations and allowed them to maintain their busy schedule.

"We did not think the power needed was there or the equipment was truly set up for geotechnical drilling. We were wrong," Prell said. **"I think Geoprobe® has proven its consistency, that's why we are considering adding another 7822DT to continue to enhance our geotechnical fleet."**

MULTIFUNCTIONAL SUCCESS

Prell believes the 7822DT's versatility sets them up to succeed on a variety of projects.

"I think the range of options for taking samples really opens some doors for our future with other projects. The Geoprobe® 7822DT is designed to accommodate a wide array of sampling methods, from traditional soil sampling techniques like SPT to more specialized methods like direct push," he said. "This adaptability allows us to tackle diverse project requirements with a single machine."

* Split tube soil sampling system manufactured under U.S. Patent 9,551,188

7822DT versatility enables effective environmental and geotechnical sampling with a single machine.



SCAN TO WATCH

Spring Assisted Lift Cap



RECENT GEOPROBE® 7822DT COMBO RIG UPDATES

NEWER VERSIONS INCREASE OPERATIONAL EFFICIENCY IN MULTIPLE WAYS

- **Wide tracks:** going from 60 inches to 70 inches
- **Stability:** drill mounted more forward on carrier increases stability
- **Auto throttle:** returns to idle for fuel savings
- **Remote control:** more user-friendly
- **Option mountings:** extruder and Moyno on same side leaves other side for other options



SCAN TO WATCH
7822DT Walkaround



LOAD-SENSE HYDRAULICS AND AUTO THROTTLE

experience power you need – when needed – plus operating and fuel efficiency you require.

"V1 functions would stall when at idle, now we can tower up at idle rather than half throttle. Tier 4 engine operates functions at idle for additional fuel savings." – Todd Muench, operations manager, Parratt Wolf

ENHANCED COOLING

complete high-duty cycle operations such as coring, augering, or tracking long distances when operating in elevated ambient temperatures.

IMPROVED STABILITY

use the rear blade to transport a drop rack tool carrier when desired while the wider tracks and shifted center of gravity better facilitate stability on uneven surfaces.

MD4 DISPLAY

access important operating information:

- maintaining DPF regeneration
- enabling auto-throttle
- monitoring hydraulic fluid temperature



7822DT sets 4.25 hollow stem augers off the end of a dock on Mackinac Island. They performed mud rotary out the end and pulled the rods before taking a split spoon sample. In search of bedrock, they sampled every 5 feet.

Workhorse Updates Impress Next Generation of Drillers

SHEPLER WELL DRILLING spends 65% of their time taking soil samples and setting monitoring wells at gas stations. Second to that is oil field work when brine spills. While the work has remained essentially the same since their inception in 1992, they've been upgrading equipment. This includes adding a DM250 during 2021 to handle environmental and residential projects requiring significant travel. Last year, they added a new 7822DT V4 – the workhorse of their next generation driller.

"I drilled my first solo job with a 7822DT eight years ago and haven't slowed down since. I was basically born into it, having lived with Randy [Shepler, president] for half my life. I don't mind the work and like getting out and being active," Cole Shepler, driller, said. "Our 7822DT V1 is 15 years old and still works fine, but we wanted to see the changes in the V4. So far I've been really impressed."

The change from rocker switches to levers on the control panel means Shepler no longer spends time shuffling through switches to find the right size. This isn't the only change that saves time in the field.

"The cubbies on the side of the control panel to hold tools is a great benefit," Shepler said. "All the tools I need are right there, and I don't even need to move my feet."

The 7822DT V4 provides increased stability while still allowing the rig to sneak into small spaces.

"With the wider tracks, the V4 gets around better and gives me peace of mind when on inclines and slopes," Shepler said. **"It seems clients always put us in the most inconvenient place possible when they see me with the 7822DT, asking me to 'go around this bend and put the monitoring well between these two trees'."**

Opting for two winch lines pairs nicely with a taller mast for added convenience on the job site.

"We got the double winch line which has been a plus. I can pick up augers while still holding up the AWJ rods when doing geotechnical jobs. It also works well for developing monitoring wells," Shepler said. "It stands taller, so it's more convenient when pulling rods with the winch line."

Recently they completed a project on Mackinac Island with the 7822DT V4. They set 4.25-inch hollow stem augers off the end of the dock, did mud rotary out the end, pulled the rotary rods out, and then took a split spoon sample. They were in search of bedrock, sampling every 5 feet.

"It was lot of work for such a little rig. The job was a bear, but it wasn't anything for the 7822DT," Shepler said. **"I don't know if there's a more powerful rig pound-for-pound on the planet. I think in general it's the most versatile rig available. I have peace of mind that once I start work, she's going to do what we need her to do."**

Doubling down on two new 7822DTs to meet demand of local construction and area growth. The compact rig easily maneuvers on small sites with power, versatility, and durability for environmental or geotechnical sampling.

Best Equipment to Best Serve Clients submitted by GSE Inc.

GSE INC. is the firm you can trust with all your drilling, remediation, and environmental compliance needs. Their drilling division specializes in environmental, geotechnical, and aggregate drilling using a diversified fleet of rigs.

"We're licensed to drill in more than 20 states across the Southeast, Midwest, Northeast, and East Coast," Chris Ratley, director of operations, said. "For the past 20 years, we've been providing drilling services for soil and groundwater investigation and remediation projects across the US and Puerto Rico using Geoprobe® and conventional rigs."

With a commitment to delivering exceptional service on every project, GSE recognizes that their drilling division requires top-tier equipment. This dedication to client satisfaction prompted the purchase of two new 7822DT V4 models.

"We provide the best equipment, so our customers get the best service. We purchased two 7822DTs to replace two of our older models. We want to show up on every project with dependable equipment and qualified drill teams," Ratley said. "The 7822DT is the most versatile rig we own and the one we use most often. We use them for environmental sampling and geotechnical drilling and can do so many things with them."

The versatility and compact size of the 7822DT makes them the preferred choice for particular jobs, including:

- **Environmental sampling:** "For Phase II environmental drilling and soil sampling, we use the 7822DT because it provides high-quality soil and groundwater sampling capabilities."
- **Geotechnical drilling:** "We choose the 7822DT for shallow geotechnical borings where we collect SPT samples because it's powerful, versatile, and durable."
- **Limited access:** "We like to use the 7822DT for environmental or geotechnical projects in areas where a smaller footprint is needed because its compact design makes it easier to maneuver."

Setting up and traversing between holes quickly also tips the scales toward using their 7822DTs.

"We can set up on a new hole much quicker and more efficiently than with our conventional rigs," Ratley said. "We can get the rig level using the extend, oscillate, shift, and angle functions."

Increased demand for drilling services around their northern Alabama location also contributed to upgrading their fleet of 7822DTs.

"There's so much local construction and growth in the area. This has resulted in an increased number of Phase II and geotechnical projects that are ideal for the 7822DTs," Ratley said. "Much like a personal vehicle, maintaining and upgrading as required is key to performance."

They're used to the performance and easy operation of their 7822DTs, but their drillers recognize the little touches on the 7822DT V4, which make their jobs easier.

"The 7822DT is easy to run. We train our drillers on it because it's not as complicated as conventional rigs," Ratley said. "The drillers like the new updated MD4 touchscreen display on the control panel. They like having extra toolboxes as well."

When repairing their previous model 7822DTs, they've appreciated being able to call expert service technicians. The service support extends to staying informed through the Geoprobe® Centerpoint Connected customer portal (see page 29).

"They always answer the phones and try to help us," Ratley said. "We can access our service records using Centerpoint Connected and track the service items we've been talking to them about."

He also appreciates Geoprobe® customer service includes project advice.

"There's also the technical support when we're considering a sampling method like soil gas sampling or groundwater sampling with SP22," Ratley said. "The Geoprobe® technical support staff is a valuable partner when assessing equipment capabilities and performance. We really appreciate having the ability to consult with them to ensure we can meet our project requirements and identify and address potential problems before they happen."

Deeper in Environmental with Maximum Utilization

As AIMRIGHT Testing & Engineering progressed to doing more contract services, the full-service geotechnical engineering company formed AIMRIGHT DRILLING SERVICES.

"We do a diverse range of projects from DOT, commercial, residential, renewable energy, and what we call mission critical projects. We categorize our work into geotechnical drilling, environmental drilling, and mineral exploration doing aggregate rock coring," Jeff Coates, owner, said. "We currently operate six track or buggy-mounted rigs with a range of capabilities and employ 18 people in our drilling division."

FISCALLY-SMART PURCHASE

Increasingly the Oklahoma-based company found themselves doing permanent well installations, receiving more requests for direct push services in the environmental sector. This prompted adding a Geoprobe® 7822DT to their fleet.

"We were very particular with the make and model. We were just getting into direct push and knew we couldn't keep a rig busy 100% of the time doing environmental alone," Coates said. "We wanted a versatile rig to do geotechnical and environmental with a smaller footprint than your typical geotechnical rig since we were working in residential backyards, inside garages, etc."

They decked out their 7822DT so when they're not using it on environmental Phase II projects or installing monitoring wells, they utilize it on geotechnical projects. Out of their fleet, they picked their 7822DT to complete a 140-foot rock coring on a mineral exploration project.

"We have 4-speed head, breakout, and 3L6 pump so we felt like the 7822DT was equally suited even though our other rigs have higher torque," Coates said. "But higher torque doesn't matter on rock coring. You need high speed and a pump with capacity."

They use the 7822DT everyday – 50% environmental, 50% geotechnical.

"The whole purpose in choosing the 7822DT was to maximize the utilization rate. It's not as limited-use as a traditional geotechnical rig. We use the 7822DT in more places than other rigs," Coates said. "We can't have a rig out only 50 percent of the time; it's not a good investment. If the rig is sitting half the time, we'd still be making payments full time."

INCREASED PROFIT MARGINS

The 7822DT also has less project cost and overhead, which allows them to reduce operations costs and increase profit margins. The pavement coring system permits them to avoid sending a separate crew to core pavement ahead of a project.

"We can core the pavement with the 7822DT and proceed with the project. This is a cost savings by using less resources to get the job done," Coates said. "We don't need a semi to mobilize. Overall there's less cost to utilize the 7822DT than other rigs. If we can drill a project using the 7822DT with the same footage rate, and achieve the same footage per day but with less operating cost, that's more profit. We can make clients happy and make more money."

He describes their 7822DT as a "phenomenal machine" valued for having more capacity to perform deep rock coring, daily augering, or low-clearance work compared to their conventional rigs.

"That 7822DT goes anywhere for us. It's been in a dozen states and completed a 50-foot, 3.25-inch hollow stem auger renewable energy project in Texas even with half the torque of our other machines," Coates said. "There's nothing about our other machines that the 7822DT can't handle."

Having all this capacity to perform such a range of drilling applications, the 7822DT still remains simple to operate.

"We use it to train future drillers on," Coates said. "Not because it's at the bottom of the ladder; it's just easy to train on. It's a great machine for any driller to get familiar on the ins and outs of drilling."

RELIABLE PARTNERSHIP

Coates describes Geoprobe® service as "top-notch."

"All we provide to our customers is a service, so we take service pretty seriously. Just the other day we needed two mud tubs, and Geoprobe® only had one. They got one fabricated and sent out to us the same day," he said. "We're extremely grateful and appreciate Geoprobe® partnering with us. We're not just another order. When they can, they stop what they're doing when we need something."

He also recognizes the focus Geoprobe® engineers place on solving struggles for their customers through innovation. They recently purchased the new 4.25 Hollow Stem Auger Continuous Sampler (see page 27). Within a week, he received a call from the sales team to gather what he liked or any suggested changes. He's already seen engineering drawings on potential revisions.

"Geoprobe® really listens to the customer more than other tool and rig manufacturers across the industry," Coates said. "They take complaints seriously, and when they hear multiple similar concerns, they take action to offer a solution."

Decked out 7822DT performs geotechnical drilling on a mission critical project in Oklahoma. After drilling 20 feet with 3.25-inch hollow stem augers and sampling overburden soils, driller James Wright is now ready to perform confirmation rock coring per project requirements.



3126GT versatility satisfies clients seeking multiple sampling methods, all with a single rig, while smaller footprint simplifies mobilization.

Versatile Geoprobe® Rigs, Dedicated Crew Keys to Building Successful Drilling Business

During 2020 — just before COVID — Cole Bettiol relocated to Stouffville, Ontario. He left behind a place he was happy working at and launched **ACE ENVIRONMENTAL DRILLING**. He'd operated and assisted on a range of drilling rigs from probes to conventional auger rigs, but in his new business he didn't want to pick just one side of the industry over others.

"I became familiar with Geoprobe® and the ability of their rigs to do both applications seamlessly. So I started my business with a 7822DT and never looked back," Bettiol said.

After four and half years in business, Bettiol credits Geoprobe® and his crews for achieving success as a startup drilling company.

"Since starting ACE and using Geoprobe®, the crews and I have nothing but great things to say. The crews using them love them. Keeping everyone happy is important — both the drillers and the clients — and Geoprobe® makes it easier," Bettiol said. "My crews work long days and always give 100% in maintaining our image and growing our reputation. ACE wouldn't be where it is today without their dedication and hard work day in and out, and I will always be grateful for that."

Additional Geotechnical Power

While he had no complaints regarding the 7822DT, he desired just a bit more power for augering and something with more of a geotechnical focus.

"I looked into other drill rigs, but for the versatility, footprint, and price point, I couldn't justify anything other than the 3126GT," Bettiol said.

Since bringing a 3126GT into his fleet, he and his operators have achieved new personal best records with the power packed into the 3126GT.

"For some situations and sites, the 3126GT can auger deeper with a little extra power and torque to get through tough conditions. It gives you a little extra assurance on site," Bettiol said. "When doing deeper mud rotary or coring holes, there's no struggling. When going 200 feet or more in tough conditions, it doesn't seem fazed. Of course a lot of credit goes out to the brains at the controls, but we never have many issues in any conditions."

3126GT GEOTECH RIG

**POSITION FOR INCREASED
PRODUCTIVITY AND PROFIT**
(includes centerline head side shift)

Ditch the old dinosaur for a modern machine engineered with the geotechnical driller in mind. Maximize production and rig utilization relying on the power and versatility packed into a compact footprint on wide tracks.



SCAN TO WATCH

3126GT Walkaround



“We’ve brought on employees with zero drill rig experience and trained them to be solid operators in very little time. They catch on quickly because everything is laid out and labeled well with nothing overly complicated when it comes to operating the rig.

— Cole Bettiol, Owner
ACE Environmental Drilling, Ontario, Canada

PATENTED INTERLOCKING SPLIT SPOONS



SCAN TO WATCH
Interlocking Split Spoons

Tired of struggling to open your split spoon sampler, resorting to gripping with bench vises and beating with wrenches? Then you're ready to try the simplicity and speed of the patented interlocking split spoon sampler. It is built to be stronger, last longer, and save both money and field time compared to a conventional split spoon sampler. Additionally, it meets ASTM Standard D1586.



*Split tube soil sampling system manufactured under
U.S. Patent 9,551,188

Faster Production

Bettiol and crew are also impressed with the speed of drilling.

“The 3126GT is seamless and efficient to switch between applications with the side-shifting head,” Bettiol said. “They’re easy to adapt to operating, regardless of what you have operated in the past, and easy to make adjustments to operation on the fly to achieve project goals.”

He also appreciates the height of the mast to pull more rod at one time.

“This makes projects go faster, and you can be more efficient,” Bettiol said.

Bettiol also attributes Geoprobe® tooling — like the patented* interlocking split spoon — to making his jobs easier.

“The split spoons are easier to use than standard split barrel and makes lives much easier, especially in poor soil and weather conditions,” he said.

Easier Operation

Not only does the 3126GT speed up fieldwork, but it also makes assistants' and drillers' work easier.

“The 3126GT is very user-friendly. I often joke with the guys saying they get paid too much for how easy they have it with these machines. They’re spoiled operating this equipment,” Bettiol said. “Projects just go so much more smoothly with Geoprobe® rigs.”

The ease of operation also expedites training new drillers on their team.

“We’ve brought on employees with zero drill rig experience and trained them to be solid operators in very little time,” Bettiol said. “They catch on quickly because everything is laid out and labeled well with nothing overly complicated when it comes to operating the rig.”

The compact 3126GT also streamlines mobilizing onto and within sites.

“The smaller footprint means we can carry it in the back of a box truck. So we can keep it out of the weather conditions and salt and not worry about it aging quickly and rusting,” Bettiol said. “It also means we can get into tight areas that larger conventional rigs cannot, bringing a lot of power and versatility into small areas.”



Blade on 3126GT aids creating safe working environments while drill mast oscillation simplifies leveling up drill rig for projects on uneven terrain.

Safer Sites

With safety at the forefront of their operations, Bettiol appreciates the blade for helping create a safe work environment.

“When there’s snow, uneven terrain, or high grass, we can make a safe, level work environment with the blade,” Bettiol said. “We can eliminate tripping hazards for our operators and clients on the site and provide a much more comfortable working environment.”

Superb Service

When they have needed service support, he compliments the Geoprobe® international service team for getting them out of some “pretty tough binds.”

“Having called other manufacturers seeking support, nothing compares to Geoprobe® service. You can get personal, build rapport, and they always find a way to keep us going. We rarely lose much time in the field when dealing with them,” Bettiol said.

Valued Versatility

Bettiol and his clients value the versatility contained in the 3126GT.

“The versatility of the 3126GT isn’t found in many conventional rigs and means we can go to one site with one rig and do multiple sampling methods. Clients are impressed we can go between direct push for environmental sampling to taking split spoon samples for SPT with a single rig,” Bettiol said. “We can answer clients’ requests and look great by not having to bring in another machine or company to complete the project.”

By satisfying clients with a single rig they’ve realized a boost in business.

“Clients who have never seen it in action or seen its production before are always reaching out for more,” Bettiol said. “The 3126GT has created an increase in business and recognition for sure.”

He’s now added a second 3126GT with a third on the way.

“They are good-looking machines. We consistently receive compliments from our clients and the public when on site,” Bettiol said. “The 3126GT is perfect for what we do. It’s a no-brainer.”



Accelerate Rock Coring

With 10,000 ft lbs of torque and 1,000 rpm, a customer describes the Geoprobe® 3135GT as “one of the fastest five stroke rigs they’ve run.” Job site success with the compact rig stems from more power combined with proven features like:

- **Responsive hydraulics**
- **Intuitive control panel**
- **Centerline head side shift (on all 31 series geotech rigs) to quickly switch between high speed coring, augering, direct push, SPT sampling with minimal movements of the machine**
- **Enhanced safety compared to older, conventional rigs**
- **Stellar service support**

“Over some of our other competitors, we’re able to get double, sometimes triple what they were getting done in a day. Not only do we enjoy having a better, productive day, but so do our clients.

— Daniel Yoakum, Environmental Works, while rock coring with 3135GT in mostly shales and limestones to 450 feet



3135GT: Proven Geoprobe® Features

For some, rock coring or geotechnical assessments in tough geologies means sacrificing the convenience and ease of your Geoprobe® rigs for the perceived power of a giant mechanical rig. You wish you didn't have to suffer the headache of mobilizing an oversized one-trick-pony, wearing down your veteran drillers with extensive manual labor, and intimidating next generation drillers with complicated operation. Now you don't have to.

With the NEW 3135GT, the speed, ease, and safety you've come to appreciate from your Geoprobe® combination rigs now comes with additional power needed for tougher jobs.

- **10,000 ft-lb true torque**
- **1,000 rpm**

Efficiently tackle your toughest jobs with a smaller footprint and the added convenience of carrying your tooling on a drop rack.

Employ multifunctional capabilities inherent on today's Geoprobe® rigs without manipulating drill mast position or mobilizing multiple machines.

With the 3135GT, you can minimize operating costs while maximizing utilization. The end result — launching drilling production and profit ahead.



Top Right: 3135GT powers through rock coring project in Bonner Springs, Kansas. Bottom Right: 3135GT control panel display indicates capacity for more than 1,000 rpm.



SCAN TO WATCH

**3135GT Customer
Testimonial**



INNOVATION IS IN OUR DNA

By **INTRODUCING DIRECT PUSH MACHINES AND TOOLING** to the drilling industry in 1987, we revolutionized environmental site investigations with **FASTER, EASIER, SAFER DRILLING.**

Today we're simplifying fieldwork **ENGINEERING AND MANUFACTURING DIRECT PUSH, ROTARY, AND SONIC RIGS AND TOOLING** not only for environmental but also **WATER WELL, GEOTECHNICAL, EXPLORATION, DEWATERING, GEOTHERMAL, CATHODIC PROTECTION, CONSTRUCTION,** and **FOUNDATION DRILLING.**



3145GT



3135GT



3126GT



3100GT

Geotechnical



8150LS



SRC30DT



3230DT



7822DT

Sonic

Direct Push and Rotary

Plus More Power

GEOTECH RIG CHECKS ALL BOXES

- ✓ 10,000 ft-lb true torque
- ✓ 1,000 rpm
- ✓ 48,000 lbs pullback
- ✓ Centerline head side shift
- ✓ Dual hydraulic circuits
- ✓ Hands-free auto drop hammer
- ✓ Hands-free rotation
- ✓ Hands-free head feed
- ✓ CPT

FIELDWORK SIMPLIFIED™

- FASTER:**
134HP Cat C3.6 engine powers:
- GR10.1 6-speed rotary head
(10,000 ft-lb torque, 1,000 rpm)
 - GH64 percussion hammer
(36,000 lb push, 48,000 lb pull)
 - Dual hydraulic circuits
(maintain hydraulic flow and pressure for both drilling functions and fluid circulation)
- EASIER:**
Mobilize one rig, with minimal mast or machine movement to complete:
- Augering • Mud rotary • SPT
 - Shelby tubes • Hard rock cores
 - CPT • Direct push
- SAFER:**
Reduce operator strain and stay out of danger zone using:
- Hands-free automatic drop hammer
 - Hands-free rotation and head feed



SCAN TO WATCH
3135GT Overview



DM650

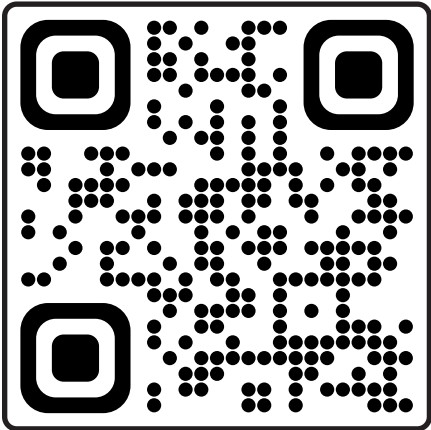


DM450



DM250

Water Well



EXPLORE
Our Complete
Line of Drill Rigs



6712DT



6011DT



540MT



420M



20CPT Press

Direct Push

CPT

Building on Business Success: New Rig Including Direct Push Capabilities

Progressing from helper to driller during his 27-year career with an engineering consulting firm, Eric Bjorn was lured away from the driller's platform by an attractive benefits package as construction manager at a local university. However, he repeatedly found himself trading vacations for drilling.

"I was working for a great company where I liked the people," Bjorn said. "So when I would receive phone calls from my previous employer asking for help to train a new driller or help with jobs, I would take vacation from one job to go drill. This went on for awhile, and my wife kept saying 'we're never taking vacations'."

When he received the request from his former employer for a bridge project, he began considering an alternative career path.

"A company I hadn't worked for in years wanted me to come get their drill rig, hire a helper, and stay overnight to complete a job," Bjorn said. "That's when I decided to go out on my own and drafted a letter to their board with an offer to buy their equipment — basically their entire drilling department — and become an independent operator, quoting all their work and taking on work for other clients."

They agreed to his terms and MICHIGAN INDEPENDENT DRILLING was born during 2021. Their work ranges from geotechnical for commercial foundation design, roadwork, and bridges; to environmental sampling and monitoring well installation. They also do some subsurface soil profiling for new water or sewer system design.

"We'll drill along where the pipe work is proposed to help determine accurate construction costs, depending on whether we find rock or shallow groundwater," Bjorn said.

Sometimes their subsurface profiling is for local road commissions looking to upgrade older sections of road where no pre-existing plans are available.

"We go in every 200 or 500 feet and drill a hole down 5 feet to assess the soil composition (asphalt, gravel, and sand thickness) along with identifying native types of soils to determine where the road embankment could be failing or in need of additional engineered fill. Thus the repair lasts longer than the patches they've been doing," Bjorn said. "We may drill in an area where the road is in really bad shape and find organic-type native material at a shallow depth, which they can replace with an engineered fill prior to repaving. If they're going to redo it, better to redo it right."

SEARCH FOR A NEW RIG

As his work took him further from the office, the older truck-mounted rig he'd purchased from his previous employer became a concern.

"It was stressful having an older rig and not wanting to let anyone down," Bjorn said. "I didn't want to break down and not be able to complete a job I'd agreed to do."

He began researching online, watching YouTube videos, and gaining interest in the Geoprobe® 3100GT truck-mounted drill rig.

"Ninety-five percent of work I do is accessible by a truck," Bjorn said.

As he was emailing with Lee Shaw, sales representative, he learned about and registered for the 2024 Geoprobe® Open House. He confirmed that not just one, but two 3100GTs would be on site. While attending, he struck up a conversation with a Geoprobe® assembly technician who disclosed another 3100GT was going through production, which didn't yet have a name on it.

"When I came to the Open House, I wasn't committed to buying a Geoprobe®, but I got to meet the people and tour the facilities," Bjorn said. "Before I left for Michigan, I sat down with Lee to discuss the process of purchasing a 3100GT. I told him 'let's put my name on it' and wrote the deposit check. I think I took him by surprise. I tease him about being a silver-tongued salesman, but he wasn't the least bit pushy and has been awesome to deal with."

3100GT FEATURES SIMPLIFY FIELDWORK

Since receiving their 3100GT, they've come to appreciate several features:

- **No deck engine:** "one less engine to worry about years down the road."
- **Easy maintenance:** "hoses and cylinders are accessible without removing other components to make a repair. We could repair it in the field if necessary versus having to get back to the shop."
- **Extendable mast:** "adds a layer of safety when drilling utility projects in town with overhead lines."

The ease of positioning and leveling up the 3100GT has been an advantage on several of their projects. On one, they were drilling where people had been driving across a creek in order to provide geotechnical assessments toward constructing a recreational trail bridge.

"We backed the truck down the valley and parked it on an angle. We just raised the drill mast up, set the outriggers, and leveled up. The 3100GT easily positions using hydraulic jacks. My son Lenny, who drills for me, and I laughed because if we had been using our old rig, we wouldn't have had enough wood blocking at the shop to level it up," Bjorn said. "We were doing a highway job where the truck was leaning on the shoulder. With the oscillating mast, we could level up safely and easily."



3100GT right-side control panel creates distance between driller and traffic while oscillating mast and integrated outriggers simplify leveling on site.

DIRECT PUSH ADVANTAGES

On another site, they knew from previous work they'd encounter soft clay. So they chose to use the direct push capabilities of the 3100GT to push casing, sample, and continue to depth. Direct push technology has allowed them to become "immensely more efficient," depending on the site conditions.

"In the past with augering, we'd bring the augers out, and they were filthy. We'd peel the clay off, which meant our gloves were dirty. And the augers are still half dirty when you load the truck, so the truck is filthy. And then you have to fill the hole," Bjorn said. "Doing the job with direct push is an amazing time saver and much cleaner with no clay on the surface anywhere. We'll drill in clay all day long now using direct push."

According to Bjorn, the 3100GT has exceeded their expectations on anything they've done.

"Everything about the rig exceeds what we were working with," Bjorn said. "When we've needed technical support or had issues or concerns, everyone has been very helpful. I've been very happy with Geoprobe®."

MWD INTEGRATION ON 31 SERIES GEOTECHNICAL RIGS

ALL Geoprobe® geotech drill rigs (3135GT, 3126GT, 3145GT, 3100GT) now come off the production line ready to add Measurement While Drilling (MWD) components. Leverage this emerging technology, backed by expert technician support to diagnose problems with parts available to solve them. Should you opt to add the capabilities in the future, the machine harness, mounting points, and program are already set up to make it a straightforward install.

- Utilizes a data logger to record drilling and machine parameters with depth or time
- Follows ISO Standard 22476-15
- Sensors and measurements implemented by Team Geoprobe®
- Measurements and calculations output by CAN Bus J1939 to logging system

Data valuable to:

- Record drilling and operation parameters
- Identify course lithology changes
- Identify voids in soil or rock



SCAN TO WATCH

MWD





3100GT with direct push capabilities provides more accurate assessments during mine exploration.

Aggregate Sampling Success, Streamlined Mobilization

Using solid stem augers under a conventional rig and assessing the clay extruded by the augers during their mine exploration phases, **WYO BEN INC** was concerned the accuracy of those samples was not where it needed it to be. To achieve desired sample integrity, they added a 3100GT for its direct push capabilities. The 3100GT has given them added confidence when sampling their bentonite pits.



"We always suspected stabbing was inaccurate due to discrepancy with assessment of material once in the plant," Darin Henderson, manager, said. "We're still doing both ways to compare the data, and so far the data when direct push coring is the same as seen in the plant."

Using the 3100GT for direct push sampling provides a true assessment of the material in the pit. They sample the pit on a 50-foot grid, using Geoprobe® MC5 sample tubes (see page 26) and dividing the 60-inch sample into foot increments.

"We can better know what we're getting into. The higher-quality material goes to oil wells. The lower-quality material goes to kitty litter," Henderson said. "The mill will actually know what's coming in to best service customers, so fewer customer complaints."

Going with the truck-mounted 3100GT also allowed them to streamline their rig mobilization.

"Our operations are spread out with a lot of traveling on a daily basis, so a rig this size is easy to get down the road," Mark Crumrine, driller, said. "The comfort and driveability of the truck compared to traditional rigs is a plus."

Drillers also appreciate the switch to direct push versus solid stem augers.

"The percussion hammer versus augers is less wear and tear on the operator compared to throwing augers all day," Crumrine said.

31 SERIES GEOTECH RIGS

ECONOMICS DRIVE GROWTH

Maximize utilization rates and expand service lines to withstand market fluctuations with a single rig. Whether bidding rate-per-foot or daily production, Geoprobe® geotechnical drill rigs capable of swiftly sliding from rotary to automatic drop hammer, even to CPT or direct push — without having to move drill mast or machine — position you for increased production and profit.



SCAN TO WATCH

31 Series Rigs



CHOOSE BEST CHASSIS FOR YOU
(all include centerline head side shift)

- 3145GT CRAWLER CARRIER
- 3135GT TRACK-MOUNTED with additional torque, rpm and pullback
- 3126GT TRACK-MOUNTED
- 3100GT F600 TRUCK

Prepared to Pivot Projects



3145GT GEOTECH RIG DETAILS

COMFORT OF CRAWLER CARRIER, 6 MPH TRAVEL HOLE-TO-HOLE, PLUS...



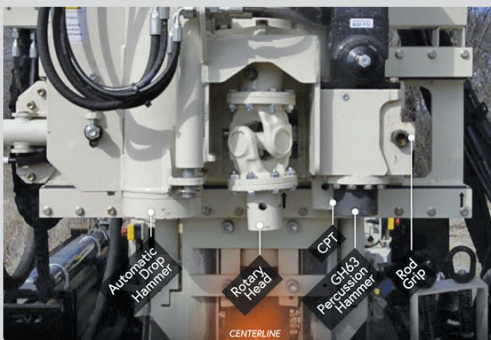
SCAN TO WATCH

3145GT Overview



CENTERLINE HEAD SIDE SHIFT

(included on all 31 series geotech rigs) aligns all head functions and winches over the bore hole without moving the drill mast.



TALLER STANDARD WINCH

pulls 20-foot tool string with attached split spoon above the breakout.

The **TERRACON** office in Lodi, California, focuses predominantly on geotechnical work and a little bit of environmental. They perform mud rotary, air rotary, CPT and some direct push. While heavily involved in solar farm work, they added a Geoprobe® 3145GT to their fleet.

"Originally we looked at a 3230DT. We chose the 3145GT for the solar farm work because it would be easier to get from point A to point B on the Terramac versus following behind a rig with a remote," said Daniel Del Castillo, local exploration manager.

To him the crawler carrier is "unstoppable."

"It's a little tank. It goes anywhere. We can attach a trailer to it and tow equipment we wouldn't be able to get to remote areas otherwise, sometimes eliminating the need to bring a skid steer or forklift," Del Castillo said. "Plus you have air conditioning, heater, windshield — all the creature comforts while on site. You kind of look forward to the next boring."

Since running the rig, he finds the 3145GT offers several other advantages:

- **Centerline head side shift:** "It allows ease of use when changing different drilling methods."
- **Telescoping winch mast:** "It is helpful for giving us access to areas with lower clearance. I like the quick connect winch hook feature that lets you switch between a hook and the overshot."
- **Drill mast oscillation:** "It helps you setup on difficult terrain and different angles."
- **Control panel:** "The 3145GT gives you a lot of useful real time data on the screen, including rotation and pump speed."

These features were key to doing two 150-foot, 30-degree angle borings to collect intercept cores.

"We drilled from one side at an angle, and then the other to basically make a cone to hopefully intercept one another to collect cores," Del Castillo said. "We used air rotary at an angle and were able to get the samples right where we needed them."

While the 3145GT was purchased for solar farms, the Lodi office's workload has shifted to doing more California Department of Transportation and Department of Health projects.

"Even though our contracts changed from doing the solar farms, we've kept the 3145GT moving with these new projects as well," Del Castillo said. "We're now doing more work for various state agency projects consisting of more mud rotary and coring work."

These projects have permitted him to test out the range of capabilities for simplifying fieldwork engineered into the 3145GT.

"The 3145GT does very well with direct push work, as well as CPT work if in the right conditions. It does well with coring HQ3 and 134mm," Del Castillo said. **"Using the 325 OTE for environmental is great, we can get enough sample and still push SPT as well. We can do combination geotechnical and environmental to get blow counts on SPT as well. This can also reduce cuttings when soil conditions are right."**

According to him, the overall versatility is the reason he would recommend the 3145GT.

"We can do a lot of different things and to change from one thing to another is really simple. You don't have to break down to do something else," Del Castillo said. **"We can auger and move to direct push or OTE when conditions permit."**

Multifunctional Rigs Make Inroads into Mining Sector



SCAN TO WATCH

3230DT Walkaround

EXPLORATION

Robert and his brother Michel established TECHNOFOR in February 2003 with Michel completing environmental work with their first drill rig — a Geoprobe® 6610DT. When Robert's son, Aimé Emard, joined the company in 2021, they sought a way to add rock coring to their skillsets.

"We were missing 90% of jobs, which were predominantly in the mining sector," Emard, operations manager, said. "Needing to get into that sector and looking for our first rock coring drill, we purchased a Geoprobe® 7822DT."

However, the company located in Quebec, Canada, didn't have anyone with diamond tooling experience. Emard, a self-described engineer and mechanic, stepped up to the challenge.

"I learned at the back of the 7822DT," Emard said.

According to him, their 7822DT outperforms the competition.

"We were on site with a competitor where our 7822DT completed 0 to 100 feet faster than three other drills. The customer called and couldn't understand how we were doing it," Emard said. "It was because we were using more than one drilling method thanks to the multifunctionality of the drill."

During 2022, they took their next step in the mining sector by purchasing a used Geoprobe® 8040DT.

"The 8040DT provided more power, increasing our ability to go deeper in tough soils," Emard said. "It hit the right spot to go forward at not too steep a price."

The 2009 model 8040DT was in need of extensive repairs, but with the help of Geoprobe® International Service Rig Specialist Roman Burrows, they completed the majority of the rebuild in Quebec.

"With his help, we changed the motor and surrounding components," Emard said.

Technoform leveraged the versatility of their used 8040DT to become even more competitive for rock coring contracts. According to Emard, they're in the top three for rock coring in their area thanks to the 8040DT (no longer in production).

"Geoprobe® offers multipurpose rigs that give us an edge over a traditional rig. It's better and faster for that size of drill," Emard said. "The first time a client saw the 8040DT, they thought it was too small, but realized if used right with diamond coring it can do the job even better."

3230DT FOR PEACE OF MIND

With two drilling teams and two rigs, Technoform desired extra assurance they could take care of customers. So during 2024, they expanded their fleet — once again with Geoprobe®.

"Because Geoprobe® rigs are multifunctional, it's rare to be stuck in a field without knowing what to do. You can combine two methods of drilling in the same borehole. We've learned to drive casing using the percussion hammer for the first 1/3 of a job. This is fast with less hassle of water and gives client quick information," Emard said. "We next complete rock coring, which requires managing water so it's slower. With the Geoprobe® rigs we can switch faster between the two methods, saving 25% in time and better serving our clients."

The majority of their job sites entail woods, rock, swamp, or deep snow, so the tracks on their next rig were critical. They also wanted the maximum head power. This led them to the 3230DT.

"The 3230DT would give us the ability to drill a deeper hole plus the ability to get into smaller jobs," Emard said. "We received it at the end of 2024, immediately drilling in cold, wet weather."

Beyond tracks and power, the 3230DT provides Technoform additional advantages.

- **Patented CB combo head with centerline head side shift:** "The head incorporates multiple functions combined with the 4-speed that's easy to change. When working, you can move the head assembly out of the way to have clear access to the center of the tool string."
- **Triple winch with telescoping mast and outriggers:** "The outriggers and mast maneuverability mean we can position the drill before drilling and easily correct position without totally moving the drill using the easy control panel functions."
- **Built-in patented hydraulic head clamp:** "The clamp on the top head and the jaw assembly means whatever conditions we're in, we can pull it out. With conventional rigs we would still be stuck. With the 3230DT there's no slipping of the tooling, it just comes right out."
- **Movable, adjustable control panel:** "There's so much detail from the 3230DT control panel regarding rig performance you can modify your approach to the boring so you can manage a successful project even in the worst conditions. You can do all kinds of miracles with these drills if you know how to use them."

SUPPORTIVE SERVICE

Because Technoform often drills in extremely cold temperatures, international service support from Geoprobe® helped them make some modifications to overcome cold weather challenges.

"Rather than having to ship it back across the border and deal with all that paperwork, Roman found us a shop in Toronto to help us," Emard said. "The mechanic there was new on the 3230DT, but with Roman's help was able to help us solve our cold functionality problems."

Technoform now has 22 years of environmental and geotechnical experience — all with Geoprobe® rigs.

"We've chosen to stay with Geoprobe® because they are strong and easy to repair, but for drilling, the 3230DT is like a Cadillac," Emard said. "It's not overpowered and can drill all the time really smoothly. I could almost drill from home because it's so easy."

MINING SECTOR JOBS

Tailings: "We install, via direct push, instrumentation into the mining waste beds to assess soil pressure."

Mine expansion: "We characterize the top soil and rock. We'll come in after the exploration, traversing the woods in deep snow trying to minimize support equipment to complete all geotechnical borings. They want big samples through the fill to let them know what type of minerals are present."

Exploration: "Most of the time we use diamond tooling for rock coring 100 feet into rock to ensure they could fulfill the exploration picture."

Grouting: "We're grouting all the time so there's no connection between the ground layers for groundwater to move into. Sometimes we install piezometers or monitoring wells, but most of the time it's grouting."

Multifunctional 3230DT provides power for additional depth with ability to quickly switch between drilling methods to achieve efficient completion of mining sector projects.



A Geoprobe® 6712DT being prepared to advance HPT and Geoprobe® 1.75 Groundwater Profiler. The entire data system is contained in the rugged, waterproof box (right side of blade basket), with the generator and probe rods/trunkline also contained on the basket. The rod rack is placed at an angle to help operators easily feed rods to the probe location, reducing operator fatigue. The all-contained blade basket was designed and built by Daniel Park of Discovery Drilling, one of their drillers and Direct Image® specialists.

Diverse Groundwater Tools Collect High-quality Data

by DJ Wardwell

The Geoprobe® line of Direct Image® and traditional water sampling tools have transformed how **DISCOVERY DRILLING** conducts geotechnical and environmental investigations. Alaska's diverse and often unforgiving geology demands versatile solutions, and the array of Geoprobe® tools ensures Discovery can collect high-quality data regardless of subsurface challenges.

"The blend of Geoprobe® Direct Image® and traditional tools has empowered Discovery to tackle Alaska's subsurface complexities and meet diverse client needs," DJ Wardwell, manager, said. "Whether it's detailed groundwater profiling or discrete sampling, having the right Geoprobe® tool ensures we deliver — no matter the project or terrain."

Operating across Alaska, often in remote sites many miles from their Anchorage base with no road access, Discovery relies on these tools for countless projects.

Hydraulic Profiling Tool (HPT)

"HPT has proven a game changer for both geotechnical and environmental applications. It shines where traditional water sampling falls short, providing detailed insights clients demand," Wardwell said.

At one site with groundwater heavily influenced by tidal swings, HPT mapped migration zones where free product moved through loose, sandy layers interspersed with firm silts. This precision guided the placement and screening of monitoring wells, turning what was once a guessing game into a data-driven process. Both the client and project owner were thrilled with the results.

"The real value lies in the wealth of data from a single HPT push," Wardwell said. "With dissipation tests, we log injection pressure, relative formation permeability, absolute piezometric pressure, and even hydraulic conductivity (K)—all with minimal investigation-derived waste (IDW) compared to conventional methods. Clients love the detailed post-event-logs, and we're eager to share them."

GWP 1.75 Groundwater Profiler

Discovery first encountered this tool at a Geoprobe® Open House Direct Image® Workshop, attended by Wardwell and Keeter Brown, Discovery president.

"We were hooked by its ability to deliver HPT-level data while also collecting multiple high-quality water samples in a single push at varying depths in permeable zones—without cross-contamination risks," Wardwell said. "It's since become a staple for investigations like PFAS or LNAPL sampling, where multiple depth-specific samples are needed at one location."

By reducing mechanical sampling drives and IDW, GWP 1.75 Groundwater Profiler system boosts production rates, cuts costs (often significantly), and elevates data quality for their clients.

Screen Point 19 Groundwater Sampler (SP19)

Discovery historically relied on the SP16 for single-drive water sampling, either from the surface or ahead of advanced tooling.

"Upgrading to SP19, which uses the same 1.75-inch probe rods as HPT and GWP 1.75, streamlined operations by eliminating multiple toolstrings," Wardwell said. "The sturdier rods also handle tougher materials with less risk of bending or breaking, enabling water sampling in permeable zones beneath challenging geology that might otherwise require pre-drilling."

Simple to operate, maintain, and cost-effective, SP19 remains a go-to for discrete environmental water sampling. Like its Direct Image® counterparts, it generates minimal IDW, further reducing client costs.



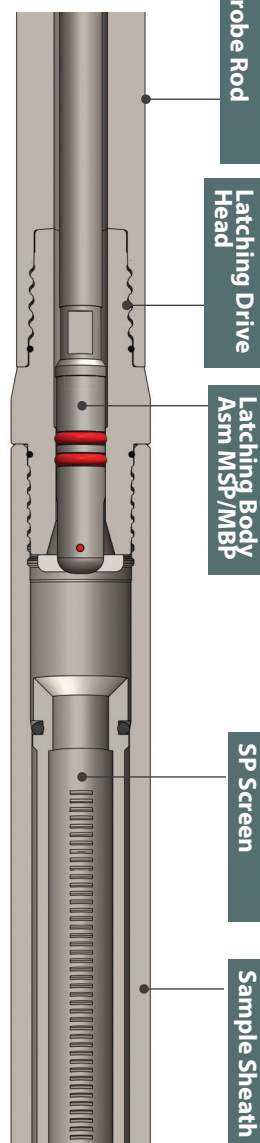
SCAN TO WATCH

SP Latching Head



Groundwater Screenpoint Latching Samplers Assure Integrity

The latching sampler system allows the operator to deploy a screen point (SP) sampler in the formation and then insert a sampler and tubing down the rods and connect or "latch" to the SP drive head. The latching sampler system uses O-ring seals to isolate the sample zone (the SP screen) from water in the drive rods above the SP drive head. Mechanical Syringe Pumps (MSP) and Mechanical Bladder Pumps (MBP) can be used as screen point latching samplers.



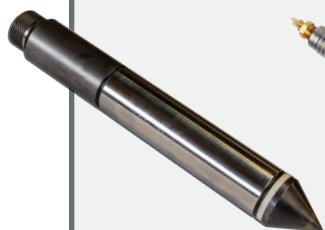
Latching SP16

The latching sampler allows the user to connect a pump directly to the top of the downhole SP sampler. This isolates the SP sampler from water in the rod string above the sampler, thereby assuring sample integrity.

Latching SP19

Designed for 1.75 rods for additional durability along with O-ring seal at the rod joints compared to 1.5 inch rods, SP19 has a modified drive head with 59% more area included in the sheath head making it stronger and more durable. Utilizing the latching sampler, connect a pump directly to the top of the SP19, isolating the SP19 from water in the rod string above to assure sample integrity.

DIRECT IMAGE®: SEE THE SUBSURFACE FOR REAL-TIME GEOTECHNICAL AND ENVIRONMENTAL LOGGING



ASTRA CPT AND SEISMIC MODULE



GROUNDWATER PROFILER (GWP)



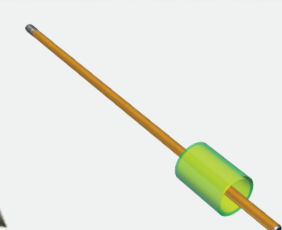
MEMBRANE INTERFACE PROBE (MIP)



OPTICAL IMAGE PROFILER (OIP)



HYDRAULIC PROFILING TOOL (HPT)



NUCLEAR MAGNETIC RESONANCE (NMR)

GEOPROBE® BUILT ASTRA CPT

IN-HOUSE MANUFACTURING EQUATES TO ADDED VALUE

STRENGTH

"The neck of ASTRA, where the threads are, is more robust and reduces the potential of breaking."

INTERCHANGEABLE

"It's easy to transition between NOVA and ASTRA if necessary, so we keep our NOVA system as a backup."

SUPPORT

"Geoprobe® is responsive. There are good people you can call who will listen to you. They've really invested in making a really good product."

SIMPLE

"I've used other systems and I like the simplicity of the Geoprobe® software. It has simple buttons and user-interface."

— Ryan Ward,

Stable Ground In-Situ, Delaware



SCAN TO WATCH

ASTRA CPT



Stronger, Cost-Conscious ASTRA CPT Cone

When Geoprobe® announced manufacturing their own ASTRA CPT cone, Todd Ives, drilling operator for AMDRILL in Florida, initially hesitated on pursuing a purchase.

"I'm not sure why I was leery, because if Geoprobe® puts out a product you know it's going to be top notch," Ives said. "We got down to one CPT cone and needed to buy another. Geoprobe® let us try out the ASTRA set up for a month or two, and we decided to replace our old systems with Geoprobe® ASTRA."

Ives approaches his work with the mindset that it's not whether you'll break a cone, but when, advising his boss to expect an average of one break per year. Through his use of Geoprobe® ASTRA CPT cone, he has discovered enhanced strength to withstand difficult geologies.

"I just try to go as deep as I can as efficiently as I can without breaking it. I've definitely put the ASTRA cone in situations where other manufacturer's cones would have had a breakage, and I've yet to break the Geoprobe® ASTRA," Ives said. "I've put it in dense soils and limestone. With the Geoprobe® ASTRA cones, I'm more comfortable pushing the envelope if I'm confident in the data I'm getting, and I'm anchored well."

Without realizing it, Ives actually pushed his ASTRA CPT cone a little too far.

"Instead of breaking, it flexed causing an undetectable crack," Ives said. "Moisture intrusion caused the pore pressure to act up."

He valued being able to send the cone back to the Geoprobe® experts to diagnose and repair the problem.

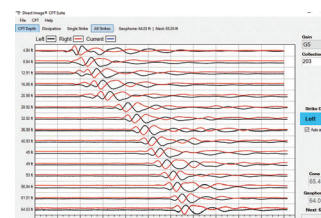
"We can send our cones back to Salina, Kansas, for repairs versus overseas. We can stay on site and keep working with the backup cone while they get it repaired and back to me quickly," Ives said.

Sending it to Salina saved him both time and money.

"We were able to remove and repair the sensor, which performed and calibrated like normal in the end. Being capable of performing a cone repair in-house is part of our mission," said Troy Schmidt, Direct Image® product line manager. "At the end of the day, this was a several hundred dollar repair with a 3-day turnaround. Our goal is to manage cost and minimize the time a CPT probe is in-house for repair."



Strength of Geoprobe® manufactured ASTRA CPT cone withstands difficult geologies at an attractive price point.



Seismic CPT log displaying the increased time signal of when the surface impacts reached the cone seismic adapter at increasing depths.

Ives also relies on the Geoprobe® seismic module for his shear wave logging.

"We use the seismic module, which is much cheaper than the older model and is super easy to use," Ives said. "The seismic and CPT coexist all bundled in the same software."

He depends on Geoprobe® for his CPT because:

- **Quality product:** "They always have good quality tooling."
- **Support:** "Geoprobe® support is always fantastic."
- **Simple operation:** "New software is super easy to use. Someone who's never done CPT could get trained on it."
- **Cost conscious:** "More economical from initial investment to upkeep."
- **Durable:** "I put them through the paces, sometimes a little overboard. I'm taking a risk, but to me it's just wear and tear."

CPT MADE EASY: RIGS, TOOLS, TRAINING, PLUS IN-HOUSE SERVICE SUPPORT

GEOPROBE® HAS THE TECHNICAL TEAM AND EQUIPMENT TO SUPPORT YOUR CPT ENDEAVORS

CPT READY RIGS: Geoprobe® CPT-ready rigs incorporate:

- 15 tons of downforce, sufficient to execute the work. The 3230DT and 20CPT Press are rated for 20-tons of downforce.
- automatic head feed rate control to provide a consistent 2 cm/sec CPT push rate, meeting ASTM standards.

CONES, RODS, ANCHORS: Geoprobe® manufactures the ASTRA CPT cone and a seismic module from their headquarters in Kansas, providing the service advantage of in-country support but also added strength at the CPT cone neck to survive tough soil conditions. Geoprobe® also offers 10 cm² and 15 cm² NOVA cone options, cabled or cordless options. You'll have access to all the accessories required to easily run your CPT system with your Geoprobe® rig — anchors, rods, and polyfilters.

EXPERT TRAINING: Geoprobe® CPT experts spend classroom and field time — in Kansas or your location — setting you up to succeed with your CPT equipment. Complete training with confidence to tackle your first job.

IN-HOUSE SERVICE AND SUPPORT: Geoprobe® service and support extends beyond the rig to the cone system. Cone calibrations and repairs are handled in-house by CPT experts who quickly answer the phone when trouble arises in the field.



Troy Schmidt,
CPT Specialist



Cory Harvey,
CPT Specialist



CALL FOR CPT RIG, TOOLING, & TRAINING NEEDS: 785-825-1842



Blade on 6712DT serves as rear outrigger when leveling up for pushing cone with 20CPT Press.



Small footprint permits 6712DT to access tight urban locations for shallow logging and soil investigation.

Blowing Efficiency Out of the Water

UNIVERSAL ENGINEERING SERVICES (UES) Wichita, Kansas, office sought a replacement of similar size to their beloved 15-year-old 6620DT, which they admit had become a hassle to keep running.

"We didn't want to upgrade the footprint. We liked the agility of the smaller rig. Plus staying below CDL weight when mobilizing equals efficiency for Phase II," Ian Smith, P.G., drilling manager, said. "We do a lot of CPT in the Midwest, so we saw the 6712DT with the 20CPT Press as a way to keep the rig running more days. Basically the 6712DT with the 20CPT Press is two rigs in one that's very similar to the 6620DT."

Colin Parker, P.E., lead project engineer, has been running the CPT cone for the last decade. According to him, the efficiency of the 6712DT with 20CPT Press "blows what we were doing out of the water."

"My only experience is CPT, and we wanted something similar to what we had in the 6620DT, but 100% the 6712DT with 20CPT Press is an upgrade. It's a higher-quality product for sure. There was just more manual labor than necessary with the 6620DT, and the 6712DT with 20CPT Press turned the half-hour set up to two minutes," Parker said. "It's a lot less back breaking versus carrying each anchor out and carrying the bridge over. The anchor and bridge are part of the 20CPT Press. This makes it much safer. Instead of requiring two guys, one guy could set up, push cone, and run computer."

He also appreciates the switch from pushing cone using the attachment at the top of the 6620DT.

"The 6712DT with 20CPT Press uses jaws on the side of the rods," Parker said. "This gives us the opportunity to push from different points on the rod, so not bending the rods in dense materials or having to call refusal earlier than we bid to do."

To him, another advantage of the 6712DT is the rear blade.

"The blade makes leveling easier, using it as a rear outrigger before anchor," Parker said. "It also clears topsoil or grass for a clean work area."

The tracked 6712DT with 20CPT Press proved to be a faster, easier, safer choice when completing a job drilling levies in Tulsa, Oklahoma, on 2-to-1 slopes along the Arkansas River.

"Rather than doing extensive cribbing for a larger rig, we used the 6712DT with 20CPT Press. It took 4-5 days versus the 10 days it would have taken to do cribbing, repairs, and SPT with a conventional rig," Smith said. "Plus everyone was safer versus carrying the weight of tooling down the slope. Overall it was extremely more efficient, provided better data, and in the long run was safer for everyone."

According to Smith, who runs more direct push work, the top advantages of the 6712DT are efficiency and no investigation derived waste (IDW).

"It's effective for shallow logging and soil investigation as far as timeliness getting in and out of sites. It does jobs in one day, generating maybe a 5-gallon bucket of waste, versus one day and 10 soil drums of waste," Smith said. "IDW is harder to get rid of, and fewer people want to deal with it."

He also appreciates the 6712DT for keeping their schedule on track compared to the challenges of mobilizing a conventional rig.

"In winter weather, when we wouldn't be able to get into a site with a conventional rig because the site's wet, we can send the 6712DT with tracks and do the job," Smith said. "This has helped utilization, keeping guys working versus sending a truck rig two weeks later."

He describes the 6712DT as an upgraded version of the 6620DT with a slightly smaller track system.

"The 6620DT felt like an unbeatable machine, but the 6712DT hasn't skipped a beat. It's been everything I've needed it to be," Smith said. "It's easy to service. Oil changes and fuel filters couldn't be any simpler. We have our least mechanically-inclined employee doing maintenance to keep it running, and he has no problem."

Switching between standard mast and 20CPT Press also poses no difficulties.

"At first it was a little intimidating switching the mast, but the employee in charge of keeping it running can do it in 20 minutes," Parker said.

UES also values Geoprobe® service and ability to get a wide range of tooling types, quickly, adding to their drilling efficiency.

"Geoprobe® service is a huge advantage — answering calls, getting parts and supplies to us. The human interaction is second to none in the drilling industry," Smith said. "They offer so many forms of tooling — groundwater sampling, wireline, Direct Image® — which give invaluable information when sites require it."



SCAN TO WATCH

6712DT, 20CPT Press



Rig's Power and Size Satisfies Clients' Needs

Beginning his drilling career during 2007, Whit Martin learned the trade at the controls of a Geoprobe® 54DT. This was the same rig the Overland Park, Kansas, company was using when acquired by SCS ENGINEERS out of Long Beach, California, during 2013.

"I learned on that machine as a driller helper, progressing to driller," Martin said. "I like that every week there's something new and new challenges, whether it's remediation systems or landfill investigation work."

Needing better drilling equipment, they convinced corporate leaders during 2022 to invest in something more powerful and durable for soil sampling, landfill gas collection, and monitoring well installation.

"We were still using a Geoprobe® 54DT that had a nice patina to it," Martin said. "We wanted something very small. Lots of our work is on landfill slopes and Phase II ground around residences and businesses where it's difficult to get larger rigs."

They chose a Geoprobe® 6712DT.

6712DT Sized Right

"Larger rigs can't get to the sites we do, and with the 6712DT, we have more options for installing monitoring wells," Martin said.

Even though the 6712DT is a little larger than the 54DT, they've found the perfect footprint for their workload.

"We can still traverse landfills but can now also get soil samples below foundations," Martin said. "It's lightweight, so can get on a trailer with a UTV as we travel across the country for jobs. It has the power, but is still small enough to travel reasonably priced and safety-wise as none of the people who drive it must have their CDL."

Other differences include:

- **Longer stroke:** "Went from 4-foot to 5-foot Macro-Core®"
- **Stronger hammer:** "We can get through different soils and move on to the next boring faster."
- **Winch:** "It's helpful on well abandonments. It's really helped having those extra features."
- **Control panel display:** "It provides different maintenance or error codes to get it repaired in a timely manner."

Power to Perform

For him, the more powerful hammer on the 6712DT is the biggest difference with the 54DT.

"The first soil investigation job, I got into fat clays and the 6712DT just sliced through it," Martin said. "I had to get used to the power. I thought I'd reached a shale layer but actually bent the Macro-Core® rod in limestone."

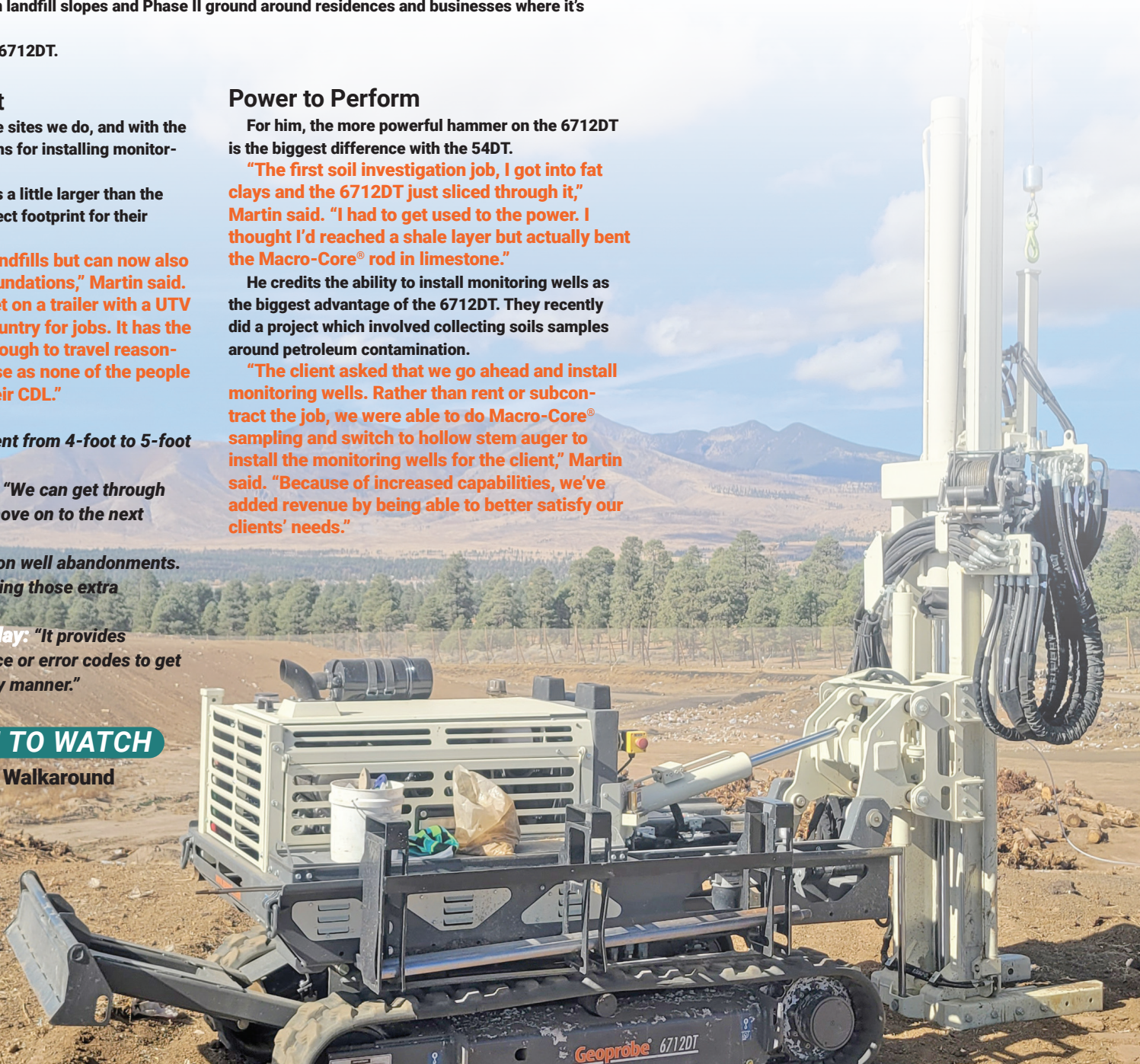
He credits the ability to install monitoring wells as the biggest advantage of the 6712DT. They recently did a project which involved collecting soils samples around petroleum contamination.

"The client asked that we go ahead and install monitoring wells. Rather than rent or subcontract the job, we were able to do Macro-Core® sampling and switch to hollow stem auger to install the monitoring wells for the client," Martin said. "Because of increased capabilities, we've added revenue by being able to better satisfy our clients' needs."



SCAN TO WATCH
6712DT Walkaround

6712DT's size and power is perfect for not only soil sampling and landfill gas collection but also monitoring well installation.



POST YOUR USED RIGS ON GEOPROBE® WEBSITE

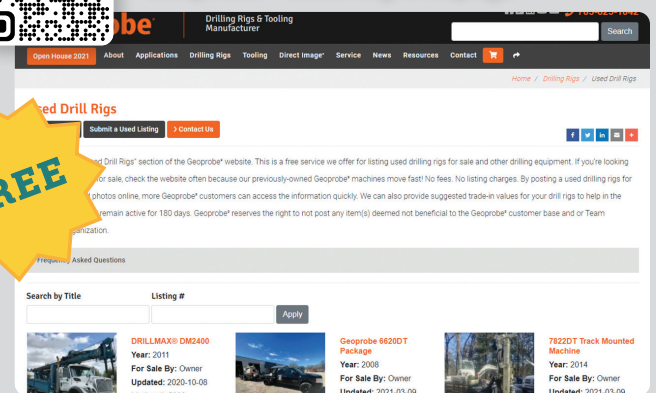
LET US HELP CLEAR OUT SOME OLDER EQUIPMENT, MAKE ROOM FOR NEW

- **Hundreds of eyes from around the world view the used rigs page on a daily basis.**
- **Includes used machines of any make or model and other drilling-related equipment.**
- **Add your listing for FREE as a service to our customers.**
 - VISIT used machine page
 - CLICK submit a new listing
 - COMPLETE required information



SCAN TO VIEW

Geoprobe® Used Rig Webpage





Indoor, low-clearance sites are no match to the power of the GH63 hammer on the 6011DT.

Atom Smashing Success

by Dirk Barry

CISCO GEOTECHNICAL put their new 6011DT to work at Yale University's Wright Laboratory collecting soil characterization samples from around the bunker buildings housing the 100-foot long Van De Graaff Particle Accelerator. The particle accelerator was constructed in 1966. For 50 years the building rumbled to life, operating at 22 million volts to propel atoms at 10 million miles per hour as researchers anxiously awaited solutions to the great mysteries in nuclear physics. The accelerator was operated until it was decommissioned in 2011.

"The lab is undergoing major construction projects to make way for the next ground breaking innovations in science," Dirk Barry, operations manager, said.

Cisco chose the 6011DT machine for its ability to work in low clearance and narrow work areas.

"Major construction activities and a very congested work area demanded we think small," Barry said. "Even with the limited access abilities of the 6011DT, the powerful GH63 hammer might not be able to smash atoms but was definitely able to collect the samples required by the engineering team."

The drillers used a combination of traditional 5-foot Macro-Core® sleeves to work in narrow areas around the lab as well as short 2-foot tooling that allowed them to operate inside the adjacent parking garage (right), which had just 9 feet of overhead clearance.

"Unfortunately, the only dark matter Cisco was able to find on this project was in the Macro-Core® sleeves collected during the two weeks on site," Barry said. "The 6011DT can stick to the heavy soil sampling and leave the heavy ion work to the Yale scientists."

The Cisco team also completed the install of 15, 2-inch injection wells with their 6011DT, operating in the bottom level of a parking garage in downtown Boston's theater district (below).

"The crew was 50-feet below street level, pushing through Boston's blue clay with just 9 feet of overhead clearance in the drilling locations. Even less clearance was required when tracking between the locations," Barry said. "Short 2-foot sections of 3.75-inch tooling were utilized to drive in the wells."



6011DT LIMITED ACCESS RIG

Drillers seeking a lightweight, small footprint drill rig choose the 6011DT for their small- to medium-direct push projects. Comes with proven GH63 hammer and sized to efficiently track into tight spots.

- 48-inches wide, 4,800 lb direct push platform
- 44 horsepower engine
- GH63 percussion hammer
- Uses 5-foot tooling
- Optional low clearance cylinder



SCAN TO WATCH

6011DT



SCAN TO WATCH

Innovation of
Macro-Core®



Macro-Core® System for Discrete and Continuous Soil Sampling

Times have changed since the first Macro-Core® soil sampling tooling was developed by Geoprobe® in 1994. Machines are larger, hammers are more powerful, and field operators push tool strings deeper into the subsurface. The formula to meet these demands began with designing a larger MC Sample Tube (increased the OD from 2.125 in. to 2.25 in.) which led to beefing up the thread design. These improvements to the already robust Macro-Core® soil sampling system make a great product perform even better in the field. These single rod systems are robust, dependable, and efficient methods at collecting shallow soil samples.

MC5 Macro-Core® Sampler

Uses the 1.25-inch center rod system and a 2.25-inch sample tube.

- Collects samples in consolidated materials, including soils, sediments, and waste materials or a mixture of these.
- Works well in medium- to fine-grained cohesive materials such as silty clay soils or sediment.

MC7 Macro-Core® Sampler

Can use standard Geoprobe® 2.25-inch probe rods and 1.25-inch probe rods (for closed piston use).

- Collects samples in coarse sands or gravels too large for MC5 system.
- Large diameter soil core (3 inch or approximately 70 mm).

Key Features

- Robust thread design
- Discrete and continuous soil sampling
- Quick operation (no stop-pins required)



CALL TO DISCUSS YOUR
SAMPLING CHALLENGES:

785-825-1842

Sampler Saves Time

Headquartered in Sun Prairie, Wisconsin, **ON-SITE ENVIRONMENTAL SERVICES** has been a member of the Geoprobe® family for three decades. They provide service to Wisconsin, Illinois, and Michigan with a fleet of four Geoprobe® rigs, including two 7822DTs which serve as their primary workhorses.

"Our expertise lies in environmental services, including soil boring, water sampling, well installations, and well abandonment," Anthony Kapugi, owner/operator, said. "Over the past few years, we have expanded our scope to include some standard penetration testing (SPT) work, while still maintaining a primary focus on environmental-related services."

While attending the 2024 Geoprobe® Open House, he witnessed the demonstration of the 4.25 Hollow Stem Auger (HSA) Continuous Sampler.

"This device exhibited potential to expedite drilling operations and facilitate the collection of substantial soil sample volume for logging and sampling purposes," Kapugi said.

Randy Shepler president of **SHEPLER WELL DRILLING** in Michigan thought the same thing when he saw the Open House demonstration.

"I figured it would be quicker if it worked," Shepler said. "I wish I'd tried it years ago — it works great."

For Kapugi, they start a job with the sample barrel set to the middle position and make adjustments as necessary. In most instances, no changes are required.

"The sampling system is user-friendly and easy to clean, even if the available liner is not used," Kapugi said. "In my opinion, the sampling system has not only provided time savings but has increased sample volume, making logging and sampling more efficient."

Recently Shepler did a job using the 4.25 HSA Continuous Sampler to 100 feet, which not only satisfied the client but was also easier on the equipment.

"We would usually drive an MC sampler out the end using the SPT hammer. Using the 4.25 HSA Continuous Sampler is easier on equipment, and we don't have to run a center bit when going down," Shepler said. "We can get more stuff done. More and more people are wanting a continuous sample now, and this allows us to get the sample faster and keep going."

Adding the 4.25 HSA Continuous Sampler system allows companies to provide yet another option to satisfy client needs.

"While we continue to provide MC5 and DT22 samplers to consultants who prefer them for 2-inch well installation, we will offer them the opportunity to sample and log using the 4.25 HSA sampler," Kapugi said.

Both Kapugi and Shepler acknowledge the engineering behind making the 4.25 HSA Continuous Sampler faster, easier, and safer.

"I really like the bearing on top so the rods aren't spinning and getting so tight you can't get them apart," Shepler said. "Any tooling that can save time is money well spent."

Durability also plays a significant role in their preference for Geoprobe® tooling.

"Geoprobe® tooling is a game changer because it lasts so long. The milling and heat-treating processes are top-notch," Kapugi said. "And guess what? The little details about the tooling, like where to put the handle or what shape it should be, are all thanks to the engineers who actually use the equipment while they're still in R&D. Everyone else just copies, but Geoprobe® is the innovator!"

4.25 HSA CONTINUOUS SAMPLER

SAVES TIME AND WEAR ON EQUIPMENT

- Can be used with solid or split barrel samplers to adapt to sampling conditions.
- Lightweight build puts less strain on drillers.
- Keeps materials contained, leading to a cleaner worksite and more precise sampling.
- Optional PVC liners are compatible with both solid and split barrel assemblies.



SCAN TO WATCH

4.25 HSA Continuous Sampler



Geoprobe® 1.75-inch and 1.5-inch probe rods.

Reliable Tooling Worth a Little More Money

Industry veteran, Joe Fleck, **ENVIROCORE LLC** owner, has tried his share of direct push tooling.

"If you are comparing tooling costs, I think some drillers might buy aftermarket (non-Geoprobe®) drill rods to save money. For example, saving \$20 a rod sounds good. In reality, after 20 years of experimenting, I've learned the aftermarket guys are going to cut you short somewhere in their process. That's the reason they can sell you a rod for \$20 less," Fleck said. "Some of those short cuts include thinner steel, a different thread pattern, or untempered steel ends. I think I've seen it all."

Having experienced the headaches firsthand, the Ohio-based company now relies on Geoprobe® tooling almost entirely for their environmental jobs.

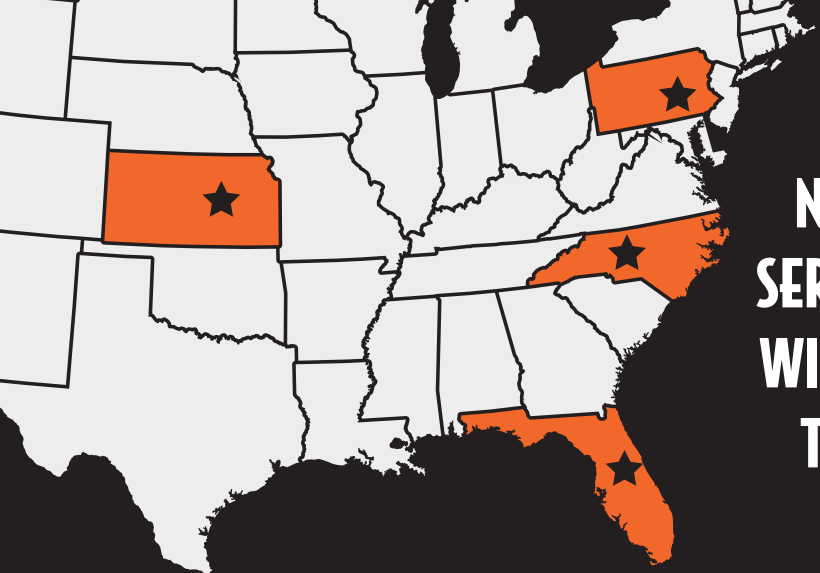
"Ultimately, I've never had these so-called 'cheaper versions' save me any money. That's why I switched back to ordering actual Geoprobe® tooling," Fleck said. "In terms of the quality, Geoprobe® spends a lot of energy researching their product and then building a manufacturing system around that. The aftermarket guys haven't done their homework in the same way as Geoprobe®. This is why Geoprobe® continues to make the best materials on the market. No one really comes close to producing what they do."

According to him, the Geoprobe® engineering and in-house manufacturing practices result in a better overall product

"The in-house CNC machine shop, dedicated R&D staff, and relentless commitment to field testing are what allows Geoprobe® to produce the highest quality products in the drilling industry. The tooling Geoprobe® makes is a massive commitment of time, energy, and resources by the folks at Geoprobe®," Fleck said. "You want the highest-quality steel material, timely deliveries, customer support, various options, durability? The word 'Geoprobe®' to me represents a remarkable group of people who serve the drilling needs of their customers day-in and day-out. Really no one else does it quite so well, from manufacturing, to size options, to support and delivery."

He also cautions against the extra cost of retooling when other manufacturers discontinue their potentially less expensive product line.

"The advantage of using Geoprobe® is having products on your shelf or on your truck so that you know you can get the job done every time and to the customer's satisfaction," Fleck said. "After 25 years of drilling, we know you can count on Geoprobe® to be there. It's a remarkable, well-run company that serves me well."



**GROWING
NETWORK OF
SERVICE CENTERS
WITH EXPERTISE
TO KEEP YOU
RUNNING!**



**We're here to help, no
matter the make or model**

Geoprobe® • DRILLMAX® • Schramm
REICHdrill • Ingersoll Rand
Boart Longyear • Sandvik

SOUTHEAST SERVICE CENTER

Quick Conventional Drill Rig Engine, Pump Repairs

Driller Mike Bump relies on a series of CME and Diedrich drill rigs to complete exploration and foundation work for **UNIVERSAL ENGINEERING** in Sarasota, Florida. However, when his CME45 rig stopped running due to an electrical interlock, the machine was out of commission for almost a month as they waited to get it repaired.

After being recommended to the Geoprobe® Southeast Service Center (SESC) in Ocala, Florida, by an engineer, Bump dropped off the CME45 on a Monday afternoon. That Wednesday afternoon, the rig was ready for pickup. Not only was the engine running again, but they had repaired a hydraulic pump that wasn't providing enough pressure.

"I've worked with many people over the 11 years that I've been drilling, and rigs are a whole different animal than the equipment they typically work on," Bump said. "The SESC did a good job and did it in good time."

Since getting the CME45 back in house, Bump has taken two Diedrich D25s to get repairs done as well — one to fix the rotation and replace a couple of parts, the other an older unit to get a cylinder upgrade and hoses made in-house.

"I've had rigs sitting there in [other] shops for a month," Bump said. "Geoprobe® has usually done it in a week or so, and if it's going to be longer, they let me know."

As a part of their commitment to servicing any make or model of machines, the SESC team has been working to streamline the repair process for non-Geoprobe® rigs. This includes staying in conversation with drillers about the rigs they operate and asking for insight, as well as creating their own in-house "spec sheets".

"When working on other manufacturers' units, we start with the components on the rig and add those to the spec sheet with model and serial number. Then we source parts like filters, fluids, etc.," Seth Sammons, SESC manager, said. "As we identify those parts, we add them to the spec sheet and into our parts system. Then, later down the road when a customer calls asking about service items for their unit, we can assist them without having to source the part again."

Bump has his rigs back in the field and feels confident in having the SESC available to help.

"They do an amazing job. They're quick, they call me if they have questions. It is a good experience all around," Bump said. "It's hard to find someone to service our rigs. If [Geoprobe® service] gets into other rigs, it would be awesome."



ACCESSIBLE SUPPORT TEAM

Work directly with an experienced rig specialist

- Live person answers phone or returns messages the same day
- Spends time required to ensure problem is resolved
- Focuses on getting rig operational, not on selling unnecessary parts
- Consistent communication ensures problems get solved as soon as possible



TEAM OF EXPERT TECHNICIANS

In-depth product knowledge means actual solutions

- As manufacturers, we understand how the rig should function
- Customer feedback shapes future products and the manufacturing process
- Capable of maintenance, repair, and refurb
- Access to design engineers, drawings, specs, machine type, and machine history
- We'll help get a rig running to finish the day, then examine when it's back in the shop



PARTS STOCKED IN-HOUSE

Downtime is minimized whenever possible

- Typically, same-day shipping when call before 2 p.m. local time
- On-time delivery
- Parts stocked in-house to reduce wait times
- Work to get every part as soon as we can
- Company-wide priority on getting high-quality OEM service parts shipped to keep you running



CUSTOMER CENTERED

Multiple locations to better meet your needs

- Partnering with you to provide top service that suits your budget
- Engineers and/or service techs travel to sites
- Service other brands beside our own
- Growing network of service centers located near our customers
- Free inspections and cost transparency
- Honest about our skills and ability to help you



SELF-SERVICE RESOURCES

Customers are equipped to maintain their own machines

- Maintenance video library detailing procedures
- Owner's manuals — physical and digital
- Service training available, working alongside our service technicians
- Centerpoint Connected customer portal helps track parts, ordering, and notes

NORTH CAROLINA SERVICE CENTER

Access to Expert Technicians at Geoprobe® Regional Service Center Saves Company Resources

CATAWBA VALLEY ENGINEERING AND TESTING operates out of Hickory, North Carolina. With a focus on geotechnical and environmental engineering, as well as material testing, they rely on their pair of 7822DTs and their 3126GT heavily to get the job done. When they learned a Geoprobe® North Carolina Service Center (NCSC) was opening in their own town, they knew it was going to be a good thing.

"We were aware something was coming, but we weren't sure that's what it was," David M. LeGrand Jr, P.E., owner, said. "On the day it opened, I brought in every single one of [my rigs]. At the time, we had three machines: two 7822DTs and a 3126GT. All three got a full service and detailed maintenance."

In the past, LeGrand sent his machines to the Geoprobe® Kansas Service Center in Salina, Kansas, when needed. Since the opening of NCSC, he's taken advantage of the convenient location to send their rigs more frequently for basic maintenance and service,

especially since the NCSC began stocking parts in-house.

One thing they especially appreciate is that despite being in a different location, they're getting the same quality of Geoprobe® service they're familiar with.

"We had something going on with the drive head in our 3126GT. Wear and tear, and a little bit of neglect. We sent it over two or three days before we had to leave [for the project]. It got flushed out, cleaned out," LeGrand said. "They're always willing to give us a hand and work us in to get us a repair as quickly as possible."

LeGrand is grateful to be saving his company time and energy thanks to the service center nearby.

"Before, we've done all of our stuff internally. [The NCSC] gives us the means to keep working and not having people allocated to fix stuff," LeGrand said. "We're grateful that we have the relationship that we do."

NCSC FIRST ANNIVERSARY CUSTOMER APPRECIATION EVENT

Geoprobe® North Carolina Service Center
2515 US Highway 70 SW, Hickory, NC 28602

Join us **JUNE 12, 2025**, to network with regional drilling companies while you tour our shop and meet the team.

- **9:30 a.m. registration**
- **10 a.m. service presentation**
- **11 a.m. lunch provided**

REGISTRATION INFORMATION COMING SOON!

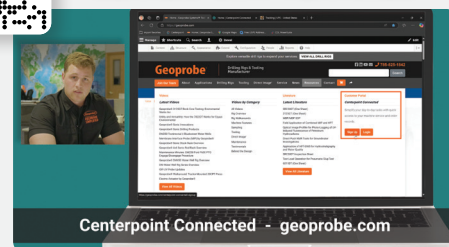
CENTERPOINT CONNECTED: TRACKING OF SERVICE NOTES, ORDERS

"If we have a piece of equipment down, I can look it up in Centerpoint Connected to see when parts will be in and communicate with our scheduler accurate dates when the rig should be ready to return to the field.

— Bo Barnes, Fleet Manager,
Walker Hill Environmental Inc, Mississippi



**SCAN TO WATCH
CENTERPOINT FEATURES**



Centerpoint Connected - geoprobe.com

KANSAS SERVICE CENTER

Factory Refurb Offsets Costs of Labor, Downtime

DISCOVERY DRILLING, based in Anchorage, Alaska, operates a fleet of six 6712DT machines among several other Geoprobe® rigs. With the 6712DTs being their main machine for remote jobs, they take a heavy amount of damage beyond the basic wear-and-tear of fieldwork due to extensive transportation, extreme environments, and more.

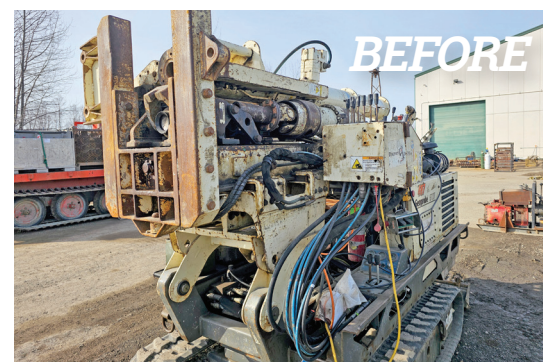
"It had been a serious challenge for our mechanics and welding/fabrication staff to keep up with the abuse our Geoprobe® 6712DTs were enduring," DJ Wardwell, manager, said. "Keeter [Brown, Discovery Drilling president] and I decided, despite Kansas being approximately 2,500 miles from our home base, that we would begin to cycle our 6712DTs, one at a time, through the Geoprobe® Kansas Service Center for full refurbishments."

They sent their 6712DT that had suffered the most damage for the first refurbishment. Both he and Brown were pleasantly surprised by how fast and cost-efficient the process was compared to their initial expectations.

"Frankly, the machine was in such bad shape from the abuse it had endured, we were almost embarrassed to send it," Wardwell said. "I still remember the look on Keeter's face when the machine showed back up in Anchorage, and I am sure my expression was similar. We simply couldn't believe it was the same machine that we originally sent. It was essentially brand new."

Structural damage, hydraulic and electrical system repairs, and even decals and paint were completely overhauled to look brand new. Seeing how their first rig ended up after a refurbishment, they knew they had to continue sending the rest of their fleet through the Kansas Service Center.

"It has relieved a massive burden from our mechanics, welders, and fabricators, and offset the cost of the refurbishment in our labor hours and reduced downtime in the field," Wardwell said. "Not to mention that our clients always have a better initial impression when we show up with a 'new' machine, even though it has logged thousands of hours of work. We encourage everyone with a machine that needs a little love to look into Geoprobe® refurbishment service."



Whether completing geothermal, monitoring wells, or municipal wells, expertise of Geoprobe® East Coast Service Center technicians keeps fleet of Schramm rigs in prime condition to maintain busy job schedule.

EAST COAST SERVICE CENTER Stellar Schramm Service

FE BUEHLER & SONS is a family-owned company based in Warrington, Pennsylvania. Currently owned by John Buehler and his brother Russell, the business was started by Buehler's great grandfather with a few wooden rigs and a primary focus on water wells.

"Now we do a little bit of everything — water wells, monitoring wells, municipal wells, full pump service, water treatment. That's been our focus for as long as I can remember," Buehler said.

FE Buehler & Sons has used Schramm rigs since 1965 when they purchased a used 1961 TMDR107. They had the additional benefit of being near Schramm's service center in West Chester, Pennsylvania.

"It was very convenient for us," Buehler said. "But ever since the Schramm [shop] closed, we had nowhere else to go for service."

But when Buehler learned that some of the people from Schramm started up their own business near Philadelphia in Oxford, Pennsylvania, now the Geoprobe® East Coast Service Center (ECSC), they immediately turned to them for their service needs. They've stuck with the ECSC since then.

"I never had any issues of them not performing the duties I've requested," Buehler said. "We've had top heads replaced, exhaust work, light compressor work done, hoses here and there, and blowdown cable — a bunch of different things. We go to get a tune up every once-and-a-while to make sure everything is okay and nothing breaks down."

No matter the type of service they request, they feel confident that the service team knows what they're doing.

"Usually there's someone overseeing the project on what they're doing. Dave [Harrison] is usually out there keeping an eye on things, making sure things are done to their standards," Buehler said. "It's important when you take a machine out there that they're not just sticking someone on it to fill a spot. There's a qualified person there."

Buehler appreciates having not just experienced technicians working on his rigs, but also their integrity when it comes to taking care of their customers.

"Everybody on the Internet nowadays is about doing it for cheaper, but then they charge you so much. Other companies would charge us for the parts, or have us find the parts, and we'd have to do the repairs ourselves," Buehler said. "Whenever a rig shuts down — any kind of machine can do that — the ECSC sends someone out to help it run right away. It's a real peace of mind to know if something catastrophic happens, someone has our backs."



Always Searching for Schramm Parts?

Our East Coast Service Center (ECSC) team has extensive expertise sourcing parts and servicing Schramm drill rigs. With their history within the Schramm organization, they can offer you:

- **60-YEARS COMBINED SCHRAMM EXPERIENCE:** engineering, service, assembly, operations
- **SPECIALTY TOOLS**
- **PARTS INVENTORY & SOURCING CONNECTIONS**

"We stock not only filters and slides, but also maintenance parts to make sure customers stay up and running," David Sim, ECSC manager, said. "If we have the part in stock, which most of the time we do, we aim for same-day shipping."



David Sim,
East Coast Service
Center Manager

AVAILABLE PARTS INCLUDE

- Geoprobe®
- DRILLMAX®
- Schramm
- REICHdrill
- Ingersoll Rand
- Boart Longyear
- Sandvik
- Sullair
- Eaton
- Timken
- Lovejoy
- American Mfg Company

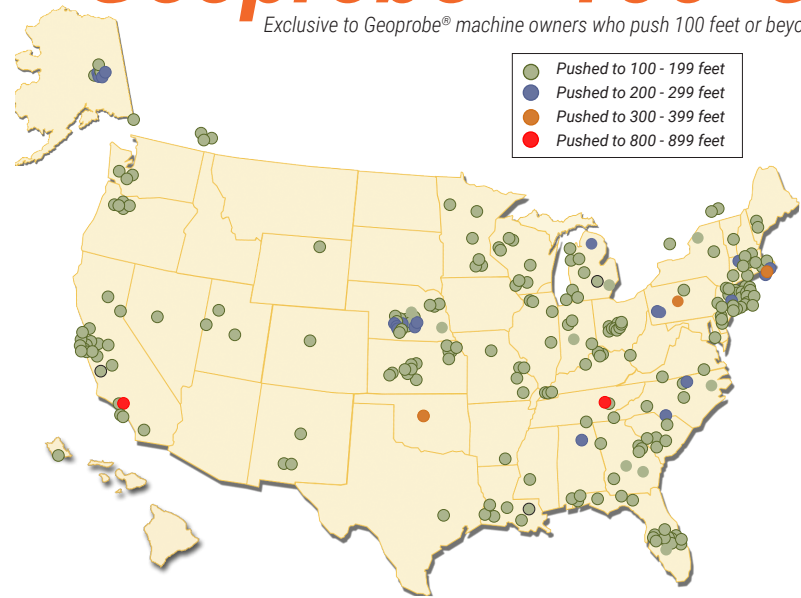


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100 feet

CS Drilling
Field Team: L-R Patrick Cox and Chris Tremblay
Field Site: Hammond, IN
Depth/Date: 100 feet / Dec. 5, 2024



100 feet

Soils & Structures, Inc.
Field Team: L-R Hunter Spangler and Chris Prell
Field Site: Brimley, MI
Depth/Date: 100 feet / Oct. 14, 2024



105 feet

Penecore Drilling
Field Team: L-R Jose Luis Ambriz, Juan Castro, and Juan Munoz
Field Site: Bradley, CA
Depth/Date: 105 feet / Aug. 24, 2024



115 feet

Geo Lab Drilling
Field Team: L-R Austin Speas and Lat Sorensen
Field Site: Cordele, GA
Depth/Date: 115 feet / Mar. 4, 2024

111.8 feet

NIRAS Denmark
Field Team: Peder Englund, Lars Prinds, and Reza Mashhad
Field Site: Silkeborg, Denmark
Depth/Date: 111.8 feet / Mar. 8, 2024



130 feet

Cascade Remediation Services
Field Team: L-R Aaron Zapf, David Johnson, Henry Villalobos, Josh Sinclair, and Mitchell Curtis
Field Site: Mead, NE
Depth/Date: 130 feet / Oct. 1, 2024

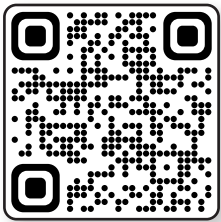
120 feet

BlackBit Drilling Inc.
Field Team: Paul Blackburn
Field Site: Mount Dora, FL
Depth/Date: 120 feet / June 3, 2024



302 feet

Eichelbergers Inc.
Field Team: L-R Jack Zerembo and Jim Casselberry
Field Site: Confluence, PA
Depth/Date: 302 feet / June 27, 2024



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660 Feet of CPT Despite the Odds

The 100 Foot Club typically highlights traditional direct push drilling that surpasses 100 feet. However, its true spirit is celebrating drillers who go above and beyond to accomplish something out of the ordinary.

David Gannfors, driller, and Austin Grant, drilling assistant, both work at the TERRACON office out of Baton Rouge, Louisiana. While performing a site characterization for an apartment complex, they were able to push 660 feet of CPT in one single day, using a 20CPT Press mounted on the back of a John Deere tractor.

“This site was not cleared, and it was raining off and on throughout the day. The equipment had to be covered,” Brian Alexander, operations manager, said. “Usually you can get about 300, 350, 400 feet a day. And this was in adverse conditions. That makes it even more remarkable.”

Alexander credits the project’s success to Gannfors and Grant’s characters.

“Both guys show a lot of initiative and a lot of drive on every project they are placed on. They don’t slack off any days,” Alexander said. “They want to do a good job and get it done in a timely manner.”

PROBING TIMES

Information for GEOTECHNICAL, ENVIRONMENTAL, EXPLORATION, WATER WELL, GEOTHERMAL, CATHODIC PROTECTION, and CONSTRUCTION Industries



I grew up on a primarily dry land wheat farm in central Kansas, with a small percent of other crops like milo, soybeans, and alfalfa. As a farm kid, I naturally liked to look at farm equipment and was interested in other farmers' various farming practices and crops.

I remember my first time seeing "corn country," visiting dairy farms, driving by a tobacco farm, and going through areas that were primarily irrigated crops. On family road trips, we commonly drove through ag dealerships to see the various types of equipment offered. I've always enjoyed ag museums, learning the history of farming and development of farming equipment used by many generations.

In short, as a farm kid, I enjoy learning about all aspects of the ag world even though my family and I were "wheat farmers." I will come back to this topic shortly.

During fall 1990, one of our founders, Tom Christy, started a Geoprobe® direct mail publication called *THE PROBING TIMES*®. The simple goal: to keep Geoprobe® customers and prospects up-to-date on the latest business developments, product innovations, and industry trends. This first publication was four pages, and, I'm guessing, went to approximately 100 companies. For 34 years we've released new editions of *THE PROBING TIMES*, expanding both the circulation size and the breadth of field innovations shared as Geoprobe® product acceptance grew.

During 2020, we started a new publication initially focused on the water well drilling industry called *DYNAMIC DRILLER*. In a rather short period of time, we learned drillers and drilling companies like to learn about their peers around the world and how they "put holes in the ground," regardless of the type of drilling they perform at their business. Many Geoprobe® customers asked, "Can we receive both *THE PROBING TIMES* and the *DYNAMIC DRILLER*?" Our response was, "of course!"

Now back to farming and drilling... It is my observation that farmers and drillers have a lot in common:

- They're hardworking.
- They spend time outside, working the soil.
- Most have their areas of expertise.
- All must be resourceful to overcome field and business challenges.

I've also observed that most drillers, like farmers, are genuinely interested to see how drilling work is done by other drilling companies, in different industries, and in other geographic regions. With this in mind, we have decided to merge our two publications into one.

The *DYNAMIC DRILLER* will be our Geoprobe® publication direct mailed to everyone, regardless of your drilling industry focus. *DYNAMIC DRILLER* will continue to have field stories from around the world of Geoprobe® users completing unique projects. You'll still find news of Geoprobe® innovations that our engineers are working on to make your lives faster, easier, and safer. When you open a *DYNAMIC DRILLER* publication, expect to see stories of Geoprobe® users doing something similar to your normal work. You should also expect to see how drilling is done in a subsurface formation you've never encountered, and the drilling method could be new to you.

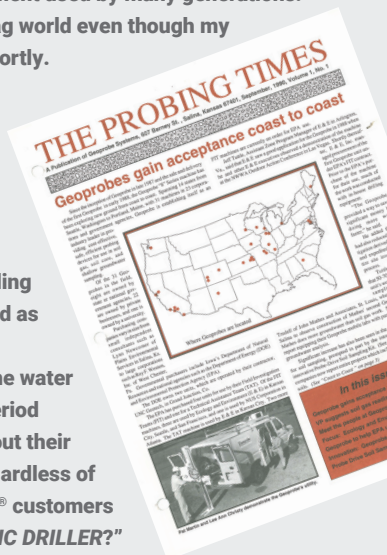
Our hope is that the *DYNAMIC DRILLER* will be a publication you open expecting to see something new, innovative, and helpful to your drilling efforts. Maybe it will spawn a new idea on how you can tackle a difficult project or nudge you to consider growing your business into a new drilling segment. If you have any questions, give us a call. Team Geoprobe® is here to help.

Tom Omli

Tom Omli,
President

For more information on what you have read in this issue, contact us at

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Team Geoprobe® is Growing

Our product line, service center network, and customer base is growing and we're ready to invest in hands-on, technical experts to represent and service our products.

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If you check 'yes' to the questions below, **explore our open positions at:** geoprobe.com/jointeam

I WOULD LIKE TO USE MY DRILLING BACKGROUND TO...

- ✓ **run rigs in the field, teaching new techniques.**
- ✓ **connect drillers to solutions, interacting daily.**
- ✓ **provide top customer service, contributing ideas for innovation.**
- ✓ **engage industry leaders, traveling to help customers.**



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