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New York's Kandey Company seeks out the difficult jobs — and has steadily grown because of it.

By Kyle Rogers

ON THE COVER:

Kandey Company employee Frank Owczarczak wears waterproof clothing and personal protective equipment to safely identify and locate an underground utility line. Last November the company worked on a rock drilling project near West Seneca, New York, that required new equipment. Kandey Company isn't afraid of taking on the big jobs, even if it means investing in equipment. (Photography by Bill Wippert)

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Projects of All Sizes

BIG JOBS AND SMALL JOBS ALL BRING VARYING DEGREES OF DIFFICULTY

BY CORY DELLENBACH, EDITOR

When difficult projects come along, it can test a company — both its equipment and its crews. Every issue of *Dig Different* highlights some of the toughest projects in the Down & Dirty column, but this issue is packed with stories about companies tackling challenging jobs.

Yes, every job has its own level of difficulty, but you have to admit, some simply stretch the limits.

UNDER THE BUILDING

This issue describes three jobs that took difficulty to new levels, starting with the Down & Dirty feature that highlights a hospital expansion project undertaken by Pennsylvania's Ecotech Hydro Excavation.

Crews had to move through crawl spaces under a nine-story hospital, over 17- and 20-foot walls and excavate 3,000 cubic yards of debris. This wasn't soft beach sand either; it was filled with rocks and pieces of concrete.

The hospital couldn't expand up because of city restrictions, and it didn't have room to expand laterally, so the only way to go was down. Ecotech ran into issues with the abrasive material being excavated; it would tear up hoses as it was vacuumed to the hydroexcavator. Crews had to solve that problem after finding a way to get the hose into the building — which in itself was a challenge.

It was one of the toughest jobs the company has taken on.

THROUGH MORE ROCK

Kandey Company, profiled in this issue, didn't have to excavate under a hospital, but also had rough material to drill through. The company, based in West Seneca, New York, was hired in November 2015 to install 4-inch HDPE

force main along a road in Lancaster, New York. To accomplish this, the company had to horizontally directional drill 1,800 feet.

That doesn't sound too complicated, right? Well, consider that they had to drill through bedrock. The company bought new equipment and had to use other tools besides a drill to help get the job done.

YOUNG GUNS STEP UP

Kandey Company and Ecotech had years of experience behind them to handle their tough jobs.

Wisconsin-based Poseidon Hydro Excavation, seen in this issue's Project Snapshot feature, was new to the scene upon landing a job at one of the state's busiest interstate highway interchanges. The company, celebrating one year of operation in September, was hired to dig pilot holes for the pilings. The pilot holes were required because of 96-inch sewer lines running in the area.

Each hole was dug 27 feet deep to get below the sewer system.

The work was done at the interchange of interstates 41, 94 and 894. The company is still working the job today and plans to be on it for the next couple of years.

BRING IT ON

I love hearing about the tough jobs your companies have taken on and look forward to highlighting some of them in these pages. Go ahead and email me at editor@digdifferent.com about a job your company has done. You can also call me at 800/257-7222.

Let's hear about that tough job!

Enjoy this issue. ▼



YES, EVERY JOB HAS ITS OWN LEVEL OF DIFFICULTY, BUT YOU HAVE TO ADMIT, SOME SIMPLY STRETCH THE LIMITS.

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SELECTING THE RIGHT BIT

A Drill Bit For You

Several manufacturers offer tips on what contractors should look for when selecting drill bits for their directional drills — from soil type to the size and design of the bit and their own budgets.

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UP FOR THE CHALLENGE

NEW YORK'S KANDEY COMPANY SEEKS OUT THE DIFFICULT JOBS — AND HAS STEADILY GROWN BECAUSE OF IT

STORY: KYLE ROGERS PHOTOS: BILL WIPPERT

When site and utility contractor Kandey Company took on a directional drilling job in Lancaster, New York, last November, the challenges were known from the start. It wasn't the largest of projects — 1,800 feet of drilling to install 4-inch HDPE force main — but the drilling was largely through bedrock. Kandey Company purchased new equipment through Power Mole that it had never utilized in order to tackle the job. After two months the project was completed successfully — and profitably.

That ability to take on challenging work that other companies shy away from has been an important part of Kandey's growth, says owner Joe Kandefer.

"We look for difficult projects where there's going to be a low amount of bidders," he says.

"That's been our strategy for about the last 20 years. We're not looking to increase revenues by just adding workload. We're looking for certain jobs that we can make a good profit on."

A GRADUAL PROGRESSION

Kandefer began his career as a plumbing contractor. As the complexity and size of jobs that he took on increased, Kandefer found himself acquiring more equipment. Soon a focus on commercial jobs turned into larger municipal projects. In 1984, he and his wife, Marie, formally incorporated as Kandey Company. Municipal work remained the focus as the business gradually grew.

"We just transitioned into larger projects as the years went by," Kandefer says. "Our bond-



Kandey Company West Seneca, New York

FOUNDED: 1984

OWNERS: Joe and Marie Kandefer

EMPLOYEES: Core group of 20, with others hired seasonally based on workload

SPECIALTIES: Municipal site and utility construction, hydroexcavation, sewer cleaning and inspection

SERVICE AREA: 100-mile radius around West Seneca

WEBSITE: www.kandeycompany.com

From left, Brad Beutner, Kandey Company operator; Ron Becker, StraightLine technician; and Eric Book, labor foreman, prepare to launch the directional drill.

"WE LOOK FOR DIFFICULT PROJECTS WHERE THERE'S GOING TO BE A LOW AMOUNT OF BIDDERS. **THAT'S BEEN OUR STRATEGY FOR ABOUT THE LAST 20 YEARS.**"

Joe Kandefer



From left, James Larcara, Kandey project manager; Eric Book, labor foreman; Ron Becker, StraightLine technician; and Brad Beutner, Kandey operator, set up the directional drill on a job site.



The directional drill without the tool attachment.

ing increased and our abilities increased as far as more equipment and the experience level of the people in the field.”

Today, the company has a core group of about 20 employees, which grows as the workload requires it. Other employees are hired seasonally out of the local operators and laborers unions. Kandey Company’s work covers about a 100-mile radius around its home base of West Seneca, New York. It’s a smaller area than what the company once covered.

“In years past we used to go quite a bit farther, but we learned over the years that it’s tough to manage jobs that are farther away from our home office,” Kandefer says. “We’ve done work for just about every municipality in our area.”

BRING ON THE CHALLENGES

That job management is key because of the types of jobs Kandey Company seeks out. Part of the growth strategy, Kandefer says, is to go after unusual or challenging jobs where there will be less competition from other contractors during the bidding process.

“A few years ago, we put up five wind turbines for the New York State Thruway Authority. It was a different type of job and we felt the competition wouldn’t be as tight,” Kandefer says. “Those are the jobs we look for. This is a risky business, and with a risk, there should be an award. So we look for the jobs that will have less competition and that we can make a decent dollar on.”

**“THIS EQUIPMENT
OPENS UP SOME
JOBS FOR US THAT
WE WOULDN’T HAVE
EVEN BOTHERED
BIDDING BEFORE.”**

Joe Kandefer

Winning the bid

Municipalities have rules to follow when hiring private contractors to take on public works projects, such as going through a formal bidding process when work reaches a certain price threshold. That accounts for about 90 percent of Kandey Company's workload, so to remain sustainable it's important for the company to come out on top in the bidding process as much as possible.

One method Kandey employs is purposely seeking out challenging work that will attract few bidders, increasing the company's chance of winning the job. But along with that, there are also other ways the company keeps a steady amount of work headed its way. For example, Kandey makes sure it does a thorough job on the front end estimating the cost of a project, so it can submit an accurate bid that will get the project done properly yet cost-effectively.

"You build a job on paper," says owner Joe Kandefer. "Every task has a cost, and you just add everything up. We make sure the estimate is done properly. That's how you ensure you don't make any mistakes on the job site."

And after a job, Kandey follows up to make sure the customer was satisfied with the work and the price charged.

"It's important to stay in touch with them," Kandefer says. "And for the person who is in charge, we'll buy lunch for their crew or something. Just little things like that to keep our name on their tongues."

Building that relationship and developing a track record of successful jobs can help because some municipal work is not a one-time project. For example, Kandey holds several service contracts with the Erie County Water Authority. One is a two-year contract that has to go through the bidding process every time it expires, but Kandey has been able to lock it down for more than 20 years now.

And not all municipal work has to be put out to bid. If it's under a specific price, a municipality can avoid a formal bidding process and give the work to any contractor. Kandefer says his company has many customers who will regularly call on Kandey for small projects, particularly hydroexcavation and sewer inspection or cleaning jobs — an area the company has been trying to grow in recent years.

"That's the most recent large investment we've made into a service," Kandefer says. "Even a lot of that is put out to bid, but we are also starting to get a lot of repeat customers who will call us in for small projects — as long as it's under a certain dollar amount, they can give us the work without going to bid. So we are gradually building that relationship up with different municipalities."

It means fewer projects overall than what some contractors might take on, but that's what allows the company to practice proper oversight and ensure that even a challenging job remains profitable, he says.

"With a limited amount of projects, we can manage them properly. If they're managed properly, we can hit the goals in our estimate as far as the labor and the production because there's nothing we've missed," Kandefer says. "It's not about the quantity of revenues for us. We're not looking at doubling our revenues over the year. We're looking at staying steady with what we can manage and make a decent markup on the projects."

Kandefer estimates that the company does about 80 jobs annually, but that's heavily dependent on the size and scope of the projects.

"They can range anywhere from a \$50,000 project to \$20 million," he says. "We've got some projects going on right now that are in their second year. We have one we're just finishing up that's been over two years, and another one that's not going to be done until mid-2017."

To take on challenging work, Kandey carefully analyzes all the possible methods in advance, and feedback from throughout the company is welcomed.

"It's not just do it my way, or do it no way," Kandefer says. "Every project is thought out, and we discuss internally all the means and methods that are possible for the project. We come up with a plan and stick to it."

And if need be, Kandey is willing to purchase new equipment specifically

for a project. It helps if it's equipment that can be utilized over the long term on other jobs, Kandefer says, but the company will still often make the investment in a one-time-use situation.

"It all depends on the type of work we have and the best way to get it done," he says. "Sometimes there's a piece of equipment we'll buy just to use on one project, and then we try to sell it."

DRILLING IN LANCASTER

A directional drilling project Kandey completed in November and December of last year is a good snapshot of the type of work the company regularly seeks out: There was a challenging component (inconsistent rock conditions) that likely deterred other contractors, yet Kandey found a way to overcome those challenges and complete it both successfully and profitably for the company.

The job called for drilling through 1,800 feet of bedrock to install 4-inch HDPE force main for a new government-funded senior housing facility in Lancaster. To accomplish that, Kandey Company first purchased new equipment built by StraightLine Professional Drilling Solutions and distributed through Pow-r Mole.

"Most rock hammers are designed for vertical drilling, and guys will try to adapt them for horizontal drilling but they just don't work the same. There are only a handful of manufacturers that make a horizontal rock hammer,



Joe Kandefer believes in building relationships with his customers and developing a track record of successful jobs performance.

"EVERY PROJECT IS THOUGHT OUT, AND WE DISCUSS INTERNALLY ALL THE MEANS AND METHODS THAT ARE POSSIBLE FOR THE PROJECT. WE COME UP WITH A PLAN AND STICK TO IT."

Joe Kandefer

StraightLine being one,” Kandefer says. “We went with them because they’re connected to Pow-r Mole (headquartered in Lancaster), so we knew we’d get excellent service and support. With Pow-r Mole we had people they put right on site to work with us and support the product they’re selling.”

That extra support was helpful as Kandey Company needed the equipment not only to complete the Lancaster job successfully, but also future projects under similar rock conditions. Although it wasn’t new technology to the market, it was new to Kandey’s workers and they had to learn along the way.

“That’s why we ended up buying the equipment and taking this job — just to get through the learning curve, because we have other projects that we are still waiting on permits for that are going to require the same kind of equipment,” Kandefer says.

Kandey Company tried to factor in that learning curve when it bid for the job. With production on untested equipment being an unknown, Kandefer says the job was priced so that it would still likely turn a profit despite any unanticipated hiccups.

“If you build enough into it and you’re able to learn something from the project, it’s a win/win situation. You learn something and the job comes out profitable. That’s my theory,” he says. “And if we bid a job, figure it this way, don’t get it, and somebody else gets it, so be it. Let that person learn the hard way.”

On the Lancaster job, a Kandey Company crew spent about a month drilling. It took another month before the site was completely restored. From what production should be under such rock conditions to what adjustments have to be made to the drilling method when those conditions change, Kandefer says his crew learned a lot that can be carried over to future jobs.

“It was something we shied away from before — drilling rock with our directional drill — because the rock in our area is very hard and abrasive,” Kandefer says. “There are not too many guys that will do it in this area because of that. This equipment opens up some jobs for us that we wouldn’t have even bothered bidding before.”

THE FUTURE

Going forward, Kandey Company plans to continue seeking out the difficult work, or at least the jobs that other contractors are less equipped to handle. The company’s biggest growth area at the moment doesn’t even involve much digging — wastewater treatment plant work.

“It seems like there’s more money being appropriated for those types of infrastructure improvements in our area and there aren’t too many contractors that have the knowledge of those systems like we do,” Kandefer says. “We’re adding new storage for sewage, replacing existing treatment plant equipment, building new pump stations.”

Since Kandey is so reliant on the knowledge and experience of its administrative team and crew out in the field — some have been with the company since the 1980s — another focus is keeping a steady stream of youth coming in as older employees retire. That way mixed demographics are maintained and younger employees can learn from those with more experience, Kandefer says. That extends all the way to the ownership.

“I have a son-in-law in the business and I have a daughter who just started in the business to work on the administrative end,” he says. “Sooner or later — within 10 years — I would hope that they have a good grasp on it so I can sort of start getting away.”

Even then, taking on challenging work will likely still be Kandey’s calling card. Kandefer says that business strategy doesn’t necessarily have to be a risky proposition.

“Every day there are challenges,” he says. “You just have to be smart about it when you run into them, take the time to assess the situation, figure out the best means and methods to take care of it, and keep moving.” ▼



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UPPER PHOTO: A crew member uses a Performix mixer (StraightLine).
LOWER PHOTO: The view through the launch pit.

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5 Tips on Caring for Your Rock Saw

KEEPING THE TEETH IN TOP SHAPE IS THE KEY TO MAINTAINING PRODUCTIVITY

BY KYLE ROGERS

Depending on the type of conditions you're digging in, a rock saw may be in your tool arsenal. It's the attachment you're putting on the tractor if it's more than just soft soil that you're dealing with. Here are some tips that will help keep a rock saw productive on the job site.

1

PROPERLY MANAGE THE TEETH

From a maintenance standpoint, a rock saw's teeth are the top item to pay attention to, says Bob Erickson, manager of engineering for Austin, Texas-based River City Manufacturing. There is no way to completely prevent the teeth from wearing, but how quickly they wear and how productive you are on a job are greatly dependent on exactly how you manage your teeth use.

For one, don't use teeth that are too large, Erickson says. He recommends a medium-sized carbide tooth — no larger than 5/16 of an inch — for most jobs.

"Whenever a customer has a problem with a saw, it seems that about 90 percent of the time it's because they've installed excessively large teeth that have rounded over. They look more like a ball-peen hammer than pointed teeth," Erickson says. "When you dig with them, you can't penetrate and you're really just trying to beat a hole in the rock."

That means extra stress on the overall machine with no real progress being made. Smaller teeth may have to be replaced at more regular intervals, but until that time they'll stay sharp enough to continue penetrating the rock, Erickson says.

Another key consideration is how many teeth to use.

"A lot of people think they're going to make the saw more aggressive by adding a bunch of teeth, but that's the wrong way to go about it," Erickson says. "If you want an aggressive saw, you remove teeth to make sure they are in the cut. It's fewer points that you're trying to drag through the ground."

With too many teeth, the saw won't be able to penetrate effectively and the teeth will prematurely wear.

"YOU CAN'T JUST ARBITRARILY REMOVE TEETH BECAUSE WHEN THE MACHINE IS REALLY DIGGING HARD, THE VIBRATION LEVEL INCREASES AS THE NUMBER OF TEETH DIMINISHES."

Bob Erickson

"You end up sand-papering a hole in the ground," Erickson says. "It's just too many points making contact with the ground."

There's a middle ground to find, though.

"You can't just arbitrarily remove teeth because when the machine is really digging hard, the vibration level increases as the number of teeth diminishes," says Erickson. "There's a balance to strike as far as how aggressive you can make the saw for maximum productivity, yet not tear the tractor apart."

There's no hard timetable on when teeth should be replaced. The best gauge



CLOCKWISE, FROM UPPER LEFT: A close-up view of the teeth on a rock saw mounted to a Ditch Witch machine. The teeth are the primary item on a rock saw that needs regular maintenance; A rock saw mounted to a Vermeer tractor. The machines are basically trenchers with the plow removed and the saw attached; A Ditch Witch tractor with a rock saw attached; A rock saw attached to a Toro tractor on a job site.

is the machine's productivity: When you're no longer able to penetrate the rock, a tooth replacement may be called for.

A saw working in consistent, nonabrasive rock conditions in a quarry may be able to run 24 hours a day for an entire week on a single set of teeth, says Erickson. The opposite extreme may be a utility construction job where beyond the top layer of soil a contractor encounters several variants of hard rock or other abrasive materials, and teeth have to be changed out every few hours.

2

CONSIDER THE ROCK CONDITIONS

Carefully monitoring the saw's productivity and tooth wear against the rock conditions will dictate what size tooth you should go with. "Start out with a carbide in the medium-sized range and see what it does under your conditions," Erickson says.

Although he sees more issues with contractors using too large of a tooth, there are instances where a larger size may be necessary. For example, there are parts of the country where contractors might encounter sand rock.

"It digs pretty readily, but then it comes apart and becomes almost like sand," Erickson says. "The particles that are created are horribly abrasive and will really erode teeth. That's where a larger carbide is good because you're trying to just prevent wear rather than needing a lot of penetration."

PHOTOS COURTESY OF RIVER CITY MANUFACTURING



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If tooth consumption is high, generally the suggestion is to go with a larger tooth size, but that isn't always the best idea. Sometimes high tooth consumption is just the side effect of difficult digging conditions, and a lesser-size tooth is still the better option.

"If you get too big of a tooth and it becomes rounded and blunt, when you get into hard digging you won't be going anywhere," Erickson says. "When digging gets hard is when you usually need a smaller, more pointed tooth. Now, tooth consumption might go up because you're in tough digging, but that's just the way it is. I don't know of any tooth that magically has carbide you can't destroy. Typically there are more problems with too big of a carbide than too small of one."

3 WATCH THE MATERIAL FLOW

As you're digging, watch the spoils coming out of the ditch. That will be a top indicator of any problems, Erickson says.

"If that material is flowing out of the ditch as you're moving along, things are happening, you are cutting. If that flow stops, you know something is wrong," he says.

Over time, an operator will get a good feel for the machine and the way it vibrates when it's working properly. That's another way to key in on any potential issues, Erickson says.

4 OPERATING TIPS

One way to avoid excessive tooth wear and overstressing the machine when digging in particularly hard rock is to move the saw in reverse.

"This is assuming you're using a standard upcutting saw, where the teeth are going from the bottom to the top as you're moving forward," Erickson says. "If you back up, the teeth will be coming down on the cut at the rear of the saw. Rock breaks easier when you're cutting down on the edge of it, especially when it's really hard cutting. It's a condition that doesn't happen on

every job, but it's one trick you can use."

Also be aware of the way you're attempting to dig a curve with the machine. "Once it's running, a saw wants to go straight. The rear of the saw tries to follow the front of the blade," says Erickson.

That means when the saw is being turned, the front portion is making the cut and the trailing portion is rubbing up against the sides of the ditch as it attempts to follow that exact same straight-line path.

"You can get excessive wear on the sides of blocks and the band," Erickson says. "It's better if you can go straight and do a curve in chunks. Pull the saw out, reposition it and go again. This is less of a problem when you have a wider saw, but for narrow saws it's tough to cut curves."

5 TAKE CARE OF ADDITIONAL ROUTINE MAINTENANCE

Outside of the teeth, maintenance is fairly routine for rock saws. "It seems like the teeth are the only potential problem, and there is some truth to that," Erickson says.

Before a job, do the usual walk-around and make sure there aren't any machine components that are cracked or showing excessive wear. Most rock saws manufactured today are hydraulically driven, says Erickson, so keep an eye on that hydraulic oil level.

"And do all the normal maintenance that comes with the tractor and is covered in the operator's manual," he says. "Really the machine is just a trencher that you removed the trencher from and replaced with a saw." ▼

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Lighting Up the Job

PROJECT LOCATION PLAYS ROLE IN SELECTING PORTABLE LIGHTING SOLUTION

BY MARYBETH MATZEK

When it comes to lighting a job site, finding the right portable solution is vital to getting the job done right and safely.

Contractors need to evaluate the situation and where the light is needed when choosing their lighting options, says Deree Bivins, project marketing manager of lighting systems for Doosan Portable Power of Statesville, North Carolina.

And solutions focusing on safety are essential, she adds.

MANY CONDITIONS TO CONSIDER

“Overhead clearance is very important and a well-lit area helps keep employees safe on the job,” Bivins says. “In addition, customers need to answer several questions related to the job site — is there a need for just light on the job site, power only, or is there a need for both light and power? Also, what is the size of the area where lighting is needed?”

Beyond those basic questions, other questions that need to be answered include determining the amount of time the light is needed and if there are any lighting restrictions for the area, Bivins says. Some of today’s light towers have large fuel tanks that can illuminate a work site for 70 or more hours — an attractive option in a remote area, she adds. Depending on the work site, there may be rules about using glare-free lights at night and restrictions regarding fluid containments and noise level.

“If a job site has containment regulations, it’s a good idea to select a portable light tower that offers containment as part of the machine frame so it’s

“CUSTOMERS NEED TO ANSWER SEVERAL QUESTIONS RELATED TO THE JOB SITE — IS THERE A NEED FOR JUST LIGHT ON THE JOB SITE, POWER ONLY, OR IS THERE A NEED FOR BOTH LIGHT AND POWER?”

Deree Bivins

easier to comply with those regulations, while avoiding the additional cost associated with a separate containment tray or spill pad,” she says.

Bivins says weather conditions are another consideration when choosing a light tower since cold weather may affect performance.

“If a light tower is needed to provide lighting in colder climates, a cold weather kit is a necessity to ensure there are no startup issues,” says Bivins, adding that the cold weather kit ensures the lights will work in subzero temperatures since it includes a block heater, battery blanket and fuel line heater.

LOOKING AT SOME OPTIONS

Doosan’s L8 light tower is a popular option for the industry, Bivins says. The L8 features internal light storage and has a wide body. “Another thing to remember is that a low-fuel shutdown or electric fuel pump will reduce startup time if the light tower runs out of fuel,” she says.



Portable lights from Doosan sit on a job site. There are several options of lighting available to contractors, from how much light is emitted to the power source of the lights.



Other light tower options, such as the Doosan LSC light tower, are more compact and have a smaller footprint, making it easier to transport multiple towers to a single location.

Doosan Portable Power offers balloon lights in addition to standard light towers. Balloon lights plug into any three-prong, 12-volt, 20-amp outlet and provide 2,000 watts of quiet, glare-free light that create fewer reflections and shadows.

“When a glare-free light is required, the balloon light may be a good choice, such as operating near traffic to provide illumination for drivers or equipment operators,” she says.

Bivins says it all comes down to contractors looking at their situation and deciding which light option would work best. ▼



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Trenching

BY CRAIG MANDLI

Track trencher used to bust through Kentucky limestone

PROBLEM

G&W Construction, based out of Morehead, Kentucky, bid on a municipal waterline project, which called for 48,000 feet of 24-inch ductile iron pipe to be installed in Winchester. The trench needed to be 42 inches wide and 7 feet deep. Owner Darrell Alderman knew he'd have to upgrade his fleet because of the limestone that's prevalent in the area.

SOLUTION

Alderman purchased a **Vermeer T1255 Commander 3 trencher**. The work is ongoing, but Alderman says the track trencher has been a difference-maker in getting through the limestone, which is typically 2 to 5 feet deep, with clay on top.

RESULT

"When you are cutting a trench that is 42 inches wide and 7 feet deep, it's a lot slower in limestone than other ground, and you're wearing out a lot of teeth," Alderman says. "But this



big track trencher does a very nice job." G&W Construction bought the Vermeer T1255 trencher specifically for this job. An alternative would have been hoe ramming, but that wouldn't have given the company the production it needed to get the project done on time. "With the trencher, we can cut 400 to 600 feet of trench a day, and there's some cross-country work that we might get 800 feet in one day." 641/628-3141; www.vermeer.com. ▼



B&G Oilfield Services

Williston, North Dakota,
and Longmont, Colorado



OWNERS: One Eighty Capital

NUMBER OF EMPLOYEES: 175

SERVICES: Well site maintenance and construction; pipeline construction and repair; pipeline inspection and condensate removal; hydrovacuum services; utility, well site locations and pipeline locating; horizontal directional drilling

SERVICE AREA: Western North Dakota, central and eastern Wyoming, northeastern Colorado, northwestern Nebraska

WEBSITE: bgoilfieldservices.com

The team at B&G Oilfield Services includes, from left, Drew McDaniel, HDD foreman; Alex de Vogel, HDD operator/locator; John Baltes, executive vice president for North Dakota operations; Matt Carter, hydrovac superintendent; Zach Meyer, roustabout; Pat Bertagnolli, human resources representative; and Jimmy Garrard, pipeline foreman.



HALF-CENTURY STRONG

B&G OILFIELD SERVICES CELEBRATES 50 YEARS AND RELIES ON ITS DECADES OF EXPERIENCE TO MAKE THE MOST OF THE LATEST DOWNTURN

STORY: PAUL NICOLAUS PHOTOS: ANDREW CULLEN

It's a birthday party for B&G Oilfield Services, and a big one at that. With roots running deep in the Bakken Shale play, the company is in the midst of its 50th anniversary celebration.

"Initially and traditionally, we've always been a midstream oil and gas servicing company," says John Baltes, executive vice president of North Dakota operations. "That's been our sweet spot, and that's where our customers have been."

When the going was good, the Williston, North Dakota-based company capitalized right along with so many others. From quarter one of 2014 through most of that year, the growth was tremendous. "People were flocking from all over the country to come here and see what it was all about and to chase opportunity," Baltes says. "When things were crazy and we were growing, it was relatively easy to make money."

Now, however, the price that B&G can charge for its services is down right along with the price of oil. As a result, efforts to add efficiencies, reduce costs and find new routes to success have been ramped up. As a company with half a century of experience under its belt, it only makes sense that B&G and its people know a thing or two about the cyclical nature of the business and how to make the most of the good times and the bad.

"IF I'M AN HDD RIG, I DON'T CARE IF I'M PULLING PIPELINE THAT'S GOING TO CARRY WATER OR GAS OR SEWER OR ELECTRICAL."

John Baltes

FINDING OPPORTUNITY IN DOWNTURN

In fact, Baltes argues that the latest downturn has actually benefitted the company in a number of ways — and he makes a good case. New roads, infrastructure and plenty of added prospects were paved right along with the 2014 oil boom, and B&G has made a point of continuing to capitalize on those opportunities.

"If I'm an HDD rig, I don't care if I'm pulling pipeline that's going to carry water or gas or sewer or electrical," Baltes says. As a result, the company began to take on customers that extend beyond just the oil and gas industry. "So what we've seen both out of opportunity and more recently out

Matt Carter prepares the company's Vactor HXX hydroexcavator unit for a job at the company's equipment yard in Williston.



of necessity is not only customer diversification but also industry diversification.”

Honing in on human resources has also proven advantageous. When the industry cooled off, a lot of companies left the area and many good workers were left without jobs. B&G was savvy enough to spot it as an opportunity. “That allowed us to snatch up a lot of talent,” he says. “So we were able to trade up our talent pool, if you will.”

Director of human resources and safety Pat Bertagnolli says the company prides itself on its strong team of workers. “We’ve got employees who have been here as long as 18 years,” he says. “We’ve got a solid military presence of folks who’ve served our country, and we’re very transparent and big on communication.”

It helps that Bertagnolli has a fantastic working relationship with the director of Job Service North Dakota, which allows him to keep a finger on the pulse of labor pool hiring trends. But a strong company culture has been a big boon to recruiting efforts, too.

“We learned a long time ago that birds of a feather flock together,” Bertagnolli says. “I would say that traditionally most folks out here have had a very hard time recruiting people in, but with the culture that we’ve built here at B&G, our people find people.”

Yet another upside that has stemmed from the sluggish oil prices has been the decision to cross-train some of the company’s most talented employees in an effort to do more with less. Even though there are several separate company divisions, Baltes explains, when people start to work in other areas and get exposed to leadership in other divisions it begins to breed a culture of confidence.

ONE-STOP SHOP

“I think everybody agrees that this downturn is temporary,” Baltes says. “It will recover. Oil prices will stabilize.” And the single cheapest way to get oil or gas downstream to the refineries is not rail and it’s not truck. “It is and



B&G Oilfield Services does hydroexcavation work, horizontal directional drilling, pigging and other jobs in the oilfields of the Bakken.

will always be pipeline. The pipeline companies know that, and the operating companies know that. So pipeline is going to continue to go into the ground.”

B&G features six main service divisions: well site maintenance and construction (roustabout division), pipeline construction and repair (pipeline division), pipeline inspection and condensate removal (pigging division), hydroexcavation services (hydrovac division), utility, well site locations and pipeline locating (line locating division), and horizontal directional drilling (boring division). In addition, a full human resources and safety team, a maintenance shop and a welding shop round out the company.

It's that breadth of offerings that helps set the business apart, according to Baltes. “We compete in a lot of those spaces, but there are very few companies up here that offer all of those,” he says. “It's one-stop shopping, if you will.” And it's a setup that bodes well during a stretch of time when customers are cutting costs wherever possible.

In the past, there was such a supply and demand mismatch that all sorts of fly-by-night companies came in to take on the work, he explained. Once the market cooled, however, companies cut their budgets, became much more

selective with their projects, and started scrutinizing every penny spent along the way. As upstream companies tightened budgets in order to make ends meet, that obviously rolled downstream to B&G, Baltes says, but he's also quick to point out that with every challenge comes opportunity.

“These companies are looking for highly technical, well-trained, good-safety-program companies that have multiple service offerings and can bundle and package all of that together with the proprietary IT system and billing,” he says, which puts B&G in an excellent position. “They don't have to worry about outsourcing the

hydrovac to one company, and the horizontal directional drilling to another company, and the pigging to another.”

The interesting dynamic is that in several cases entire company divisions sprouted out of nothing more than a single request from an existing customer. “I think it's that approach that has really allowed us to continue to be successful and to grow and to diversify our customer base,” he says.

START TO FINISH SERVICE

When a company intends to install a pipeline, one of the very first steps

“WHEN THINGS TAKE OFF AGAIN WE’LL HAVE THE DISCIPLINE AND PROCESSES IN PLACE TO BE THAT MUCH MORE PROFITABLE. I LOVE THE POSITION WE’RE IN, AND I LOVE WHERE WE’RE HEADED.”

John Baltes



Drew McDaniel prepares a Vermeer 36x50 Navigator drill unit for a job by connecting a hose for the drilling fluid.

Anything but boring

B&G sees something special in its fleet of Vermeer directional drills, which includes three 60x90s and two 36x50s, and it doesn't hurt that they are one of the company's highest profit margin service offerings.

“Our horizontal directional drilling machines are just really cool pieces of equipment and I think essential for what we have going on out here,” says John Baltes, executive vice president of North Dakota operations.

They're sophisticated pieces of equipment, and in order to be considered a foreman on one of the company's HDD machines there's a

gradual progression through several different positions that employees need to go through. “So for the operators there's a healthy appreciation for what the equipment can do,” he says.

An interesting aspect of these machines is the relationship they create between the operator and the work that's carried out, noted Baltes. A pigger puts something inside a pipeline and then grabs it at the other end but cannot see what's going on in between. A utility locator marks lines that are beneath the ground but cannot physically touch them.

“The HDD operators, on the other hand, receive immediate feedback on their work,” Baltes says.

"I WOULD SAY THAT TRADITIONALLY MOST FOLKS OUT HERE HAVE HAD A VERY HARD TIME RECRUITING PEOPLE IN, BUT WITH THE CULTURE THAT WE'VE BUILT HERE AT B&G, OUR PEOPLE FIND PEOPLE."

Pat Bertagnolli



ABOVE: Alex de Vogel calibrates a drill unit. RIGHT: Collin Rhode, mechanic, performs maintenance work on equipment at the company's main office and equipment yard.

involved is to provide notification so that everyone with an existing line along that proposed route — water, sewer, electric, fiber, gas, other oil pipelines, and so forth — will come out and mark their existing infrastructure that's beneath the ground.

"That's also one of the service offerings that we happen to offer," Baltes says.

What began 15 years ago with one truck has since evolved into a full fleet of 14 Vactor HXX hydroexcavators.

"All of our hydroexcavating machines are made by the same manufacturer," Baltes says, and that's a company philosophy that leads to a variety of benefits. Each of the operators can go out and work on any machine, all of the maintenance technicians can work on each piece of equipment with a sense of continuity, and the inventory of parts kept on hand can be reduced as well.

Once that work has been completed, the horizontal directional drilling team can come in and pull new pipeline in underneath the existing utilities. To handle this work, B&G relies on five Vermeer bore rigs — three 60x90s and two 36x50s — as well as Cat 420 backhoes, Kenworth water trucks and Dodge 5500 crew trucks.

"That's why we have a unique value proposition for a lot of our customers because we can do the utility locating, we can do the hydroexcavating, and we can turn right around and do the horizontal directional drilling," he says. "And by the way, once the pipeline is complete and in service, we can do the pigging for you."

As B&G has worked to become an even more efficient company, Baltes says, it has allowed the business to thrive in the current environment, but



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what's really exciting to consider is the next market uptick. "When things take off again we'll have the discipline and processes in place to be that much more profitable," he says. "I love the position we're in, and I love where we're headed." ▼

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PROJECT SNAPSHOT

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POSEIDON HYDRO EXCAVATION TAKES CARE OF BUSY INTERCHANGE IN MILWAUKEE WITH ITS RAMVAC HX

Even though Poseidon Hydro Excavation is still a young company — having formed in September 2015 — the company, with just the two founders working for it, has lined up some big jobs. One of the biggest is currently taking place in downtown Milwaukee, Wisconsin, where the hydroexcavation company is working on the Milwaukee Zoo interchange project (interstates 94, 894 and 41 intersect at this location). The company, using its 2016 Ramvac HX12/27, is digging pilot holes for pilings that are running near 96-inch sewer lines. The company has had to dig holes up to 27 feet deep as the Department of Transportation is requiring the pilings to be below the sewer before they can be driven to the required depth. Louis Kelly and Bill Lietzke, owners of Poseidon, say the soil was unstable, which caused cave-ins of the original holes dug and now they are using casings in holes to help complete the job. So far, the company has done 30 holes for pilings ranging from 20 to 27 feet deep and 24 inches in diameter. The project kicked off in February 2016 and there is no end date in sight for Poseidon. Read more on this job at www.digdifferent.com/featured. ▼

PHOTO COURTESY OF POSEIDON HYDRO EXCAVATION



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Inflatable Safety

LIGHTWEIGHT, PORTABLE SHORING SYSTEM MAKES TRENCH SAFETY A SIMPLE PROPOSITION

BY DOUG DAY

Shoring systems can be heavy, awkward and inconvenient. If you choose not to use it, there's a good chance you or one of your co-workers will end up dead at some point. Luckily, there is a better alternative.

Used in Europe for more than six years, an inflatable trench shoring system from Pronal-USA has caught on in the U.S. over the last three years.

"It's very compact; you can roll it up and carry it under your arm," says Pronal-USA sales manager Tony Simunac. Each section weighs in at only 29 pounds. "You can throw it in the back of your pickup truck or the trunk of your car as opposed to having plywood boards or aluminum boxes."

Stemmler Plumbing Repair has been using the Smartshore system for a couple years now. It has purchased nine of the portable shoring devices for its plumbing, electrical, utility and septic system installation company serving the Richmond, Virginia, area.

Bill Schooley, operations manager at Stemmler, started with three Smartshore sets and recently bought six more. He now has three of the small size, for trenches up to 6.5 feet deep, and six of the larger model for 8-foot trenches. Each set includes two inflatable panels that are 4.5 feet wide and can be used together to protect trenches up to 20 feet in length.

According to Pronal-USA, the double-wall, rubber-coated NPVC fabric is resistant to punctures and provides up to 300 pounds per square foot of soil pressure resistance with inflation of just 10 psi and the struts in place. Smartshore is certified to comply with OSHA standard 29 CFR, part 1926, subpart P for soil types A, B or C-60.

"SMARTSHORE WEIGHS SO LITTLE THAT IT'S EASY FOR ONE PERSON TO MOVE THEM AROUND. THEY SET UP IN MINUTES AND ARE EASY TO ADJUST WITH A COUPLE OF TURNS OF THE WRENCH."

Bill Schooley

Simunac says typical customers include municipal public works departments, sanitary and water districts, contractors, private water companies, and gas, sewer and water utilities. The kit includes four or six adjustable struts available in four sizes (24 to 36 inches, 32 to 43 inches, 43 to 55 inches and 36 to 60 inches) and a 13-foot inflation hose with shut-off valve. A venturi vacuum pump is available to speed up deflation of the panels.

"I was looking at buying some trench boxes," explains Schooley. Then he saw Smartshore at the Water & Wastewater Equipment, Treatment & Transport Show. "Every year there's that one thing that makes the trip worthwhile, and that year it was Smartshore."

Now the company uses them often since most of Stemmler's work involves excavations deeper than 4 feet.

"We have four excavators and a hydroexcavator and were doing more and more work where we were using the hydraulic shoring and steel-framed shoring, which is a pain. Excavators don't always have the weight capability to lower them into the holes. Smartshore weighs so little that it's easy for one person to move them around. They set up in minutes and are easy to adjust with a couple of turns of the wrench."



PHOTOS COURTESY OF PRONAL



The Smartshore system sets up in as little as 10 minutes. With each section weighing only 29 pounds, it is easy for workers to transport and set in place.



Now that Schooley has enough to go around, every excavator travels with Smartshore, two sets for each of the large excavators and a single set for the small one. The inflatable panels and equipment are stored in plastic boxes Schooley picked up at a big-box store with the struts packed on top of the box. They are carried in the pickups that haul the excavators.

The first time Stemmler workers used Smartshore was at a power plant project. "The guys fell in love with it because it is so light, easy to get into the holes, and strong," Schooley says.

On a recent sewer connection job, Schooley says the 20-foot-long trench kept undermining until the Smartshore was installed. "We were able to work in there and a couple of times the base fell in and didn't even move the shoring because it was locked in place. I got Smartshore because it is so easy to handle and work with that the guys would be more apt to use them, and they have been."

About 20 workers die annually in trenching accidents, all of which can be prevented with proper equipment and work practices. ▼

BY CRAIG MANDLI

Tracked Trenchers

Morbark Boxer 120

The Boxer 120 gasoline-powered compact trencher from Morbark boasts up to 740 ft-lbs of torque output for ample power in tough digging conditions. It is designed as a ride-on unit, allowing better visibility to the trencher assembly and the job being completed. The ergonomically designed operator's control station has all controls accessible for two-hand operation. It has a planetary trencher drive and a spring-loaded trencher boom and standard crumber assembly. It is offered with a 6-inch-wide combo chain and 24- or 36-inch bar.

800/831-0042; www.boxerequipment.com



Walk-Behind/Hand-Held Trenchers

Ditch Witch CX-Series

CX-Series walk-behind trenchers from Ditch Witch share a common, compact frame, equipped with engines ranging from 16 to 30 hp, and offer up to 48 inches of digging depth. Designed with a CX track system with a longer right-side track, the trenchers can help



increase job site traction and production. The tighter design improves versatility, allowing the machines to maneuver in confined spaces, and easily fits on a variety of trailer options. They can be equipped with the OptiCut digging system. The integrated chain design on the system creates less friction, provides smoother operation and is maintenance-free, reducing downtime.

800/654-6481; www.ditchwitch.com

MiniTrencher GeoRipper

The GeoRipper hand-held commercial and portable trencher from MiniTrencher can be used for irrigation, electrical, fiberoptics, landscape edging, root barriers and dog fencing. With a starting weight of 30 pounds, it can be used as a hand-held trencher or placed on an EZ Kart for longer trenching and consistent digging depths. Available in three different sizes, it can be used to easily dig trenches in tight radiuses, and rapidly dig with little turf or ground disturbance for fast backfilling and quick site cleanup. It works in various soil conditions, such as clay, fractured rock and sand. It can cut a trench up to 27 inches deep and 1.5 inches wide. Its self-sharpening digging chains can cut tree roots up to 3 inches in diameter.

800/694-0141; www.minitrencher.com



Wheeled Trenchers

The Toro Company RT600

The RT600 riding trencher from The Toro Company is built to deliver smooth, consistent performance in tough digging conditions. Its PowerTrench trencher drive incorporates a flywheel, torsion shaft and planetary gear-set design. The planetary gearset multiplies the hydrostatic motor torque, while the flywheel and torsion shaft design stores inertial energy, which is then released in tough conditions to deliver powerful and consistent trenching performance. It has a 65 hp Cummins B3.3 four-cylinder, liquid-cooled diesel engine. The dual hydrostatic system provides optimal performance for trenching and plowing. It has four-wheel steering for maneuverability and incorporates crab steering for improved handling on slopes.

855/493-0088; www.toro.com



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Working Under Tough Conditions

PENNSYLVANIA'S ECOTECH HYDRO EXCAVATION REMOVES 3,000 CUBIC YARDS FROM BELOW A HOSPITAL FOR AN EXPANSION PROJECT

BY CORY DELLENBACH

Ecotech Hydro Excavation crews got a big challenge when they took on a job to expand a Philadelphia hospital. The job called for removal of 3,000 cubic yards of debris using 400-plus feet of hose and pipe, working in tight spaces and finding a way to break up the material.

"It was definitely a challenge," says Ryan Frank, operations manager. "We just needed to think outside the box and get creative."

The air excavation and hydroexcavation company based in Quarryville, Pennsylvania, wasn't afraid to tackle the job, which spanned nine months. The company takes on work throughout Pennsylvania, New York, New Jersey, Delaware, Maryland and other areas of the Northeast.

"This has been one of our biggest and toughest jobs," Frank says. "It was a lot of the worst-case scenarios of every aspect of what we do."

TAKING ON THE JOB

The downtown Philadelphia hospital was undergoing an expansion, but it couldn't go any higher than its nine stories because of ordinances, and there was no room to expand laterally. "The best option was to expand down," Frank says. "There was an area in the center of the hospital that was just a crawl space and not a full basement, so that is where they would add extra offices."

The general contractor was given the option of building a temporary hallway within a permanent hallway; laborers would hand-dig the soil into 50-gallon drums. The drums would then be carted out of the building and emptied into a dumpster. After the drums were cleaned out and brought back in, the process would repeat.

"One of their guys thought about vacuum excavation and they contacted us," says Frank. "A total of 3,000 cubic yards of dirt, rocks and bricks had to be removed. Our estimate for the job was around \$650,000 and the bid for doing it with the drums came in at \$1.3 million, just to get the material out of the hospital. So there was a substantial cost savings going with vacuum excavation."

"IT WAS DEFINITELY A CHALLENGE. WE JUST NEEDED TO THINK OUTSIDE THE BOX AND GET CREATIVE."

Ryan Frank

set up the vacuum truck outside at their loading dock area and ran 400 feet of pipe and hose into the center of the hospital," Frank says.

The company's GapVax HV-56 hydroexcavator was parked on the opposite side of the road away from the hospital, and its boom was stretched over the road to allow cars to pass underneath. The hose was positioned over scaffolding on the sidewalk closest to the hospital, giving pedestrians a safe place to walk.



A crew member from Ecotech Hydro Excavation carries the hydrovac hose — with stronger hose and PVC piping for extra strength — through the basement of the hospital in Philadelphia.

PHOTOS COURTESY OF ECOTECH HYDRO EXCAVATION

- PROJECT:** Remote dig under hospital to expand facilities
- CONTRACTOR:** Ecotech Hydro Excavation, Quarryville, Pennsylvania
- OWNERS:** Blake and Mitch Huber
- EMPLOYEES:** 16
- EQUIPMENT:** GapVax HV-56 hydroexcavator; electric mini-excavator (unknown manufacturer)
- RESULTS:** 3,000 cubic yards of sand, rock and debris cleared out from under the hospital so crews could finish the addition

DOWN & DIRTY

A NEED FOR STRONGER PIPE

Crews used 6-inch PVC pipe connected to 6-inch hoses from the hydro-excavator to the center of the hospital.

In the first few days on the job, workers were already running into issues. "Our initial problem was that everywhere there was a bend in the pipe, the pipe would want to blow apart from the rocks," Frank says.

Crews also had two elevation changes to contend with: a 17-foot drop into the work area, and a 20-foot upward incline out of the work area. "Trying to keep productivity up in that long-distance remote excavation was a big factor," Frank says. "One thing we found is that the elevation changes made a tremendous difference."

Debris going down the hose became more of an adversity than the material going back up. "You had to have so much cfm to get the material to pull



Ecotech Hydro Excavation had to park its truck across the driveway from where the work was being done and string the hose over the roadway and sidewalk to allow for vehicle and pedestrian traffic.



This is the work area crews from Ecotech Hydro Excavation of Pennsylvania had to contend with. Crews had to excavate under a hospital to allow it to expand.



One of the challenges of the job was getting the hose into the building with a 17-foot drop at one point and a 20-foot upward incline in another. Crews also had to move the pipe through several crawlways under the hospital to get to the job site in the basement.

400 feet, but you couldn't have the cfm up too high," Frank says. "When that material would hit the downslope it would come screaming down that hill, build up too much velocity and damage everything it came into contact with.

"Anything plastic or metal on the hose was just wearing through because the material was dry and very abrasive. The pipe also had to be light enough for two men to carry it through a crawl space."

To deal with these challenges, crews switched to 5/8-inch thick-walled pipe made for waterline installation and used heavy rubber elbows to make the bends.

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FINDING EASIER WAYS TO WORK

Finding a way to break up dirt to vacuum was another challenge.

"An air knife wasn't a possibility and other air-spade tools like jackhammers were incredibly slow," Frank says. "We ended up finding an electric mini-excavator that we pushed through the hallways of the hospital on a wood skid and dolly."

Crews connected the mini-excavator to the available power source and as one worker used the machine to break up dirt, another vacuumed it.

"The GapVax kept up," Frank says. "The material we were able to pull out of the building was going faster than what we could get broken up, so the truck and mini-excavator worked well in tandem."

Ecotech was allowed just one truck on the job site. Two vacuum boxes were set up near the truck.

"Once we had the material in the truck, all we had to do in the middle of the day was switch hoses and move it to one of the two vacuum boxes," Frank says. "We didn't have to move the truck and we could just keep on working."

GAINING CONFIDENCE

The new offices in the hospital's basement were completed in late 2015.

"Inside the hospital no one even knew Ecotech was there working or that there was construction going on," Frank says. "We all worked really hard and did a great job. All parties involved were impressed and happy with the end result."

"More than anything it gave us confidence knowing there wasn't a job we couldn't successfully do." ▼

See the crews in action on the
hospital project at **digdifferent.com**

Efficient Control

UPGRADED CONTROL SYSTEM FROM VAC-CON PUTS ALL FUNCTION IN OPERATOR'S HAND

BY CRAIG MANDLI

Efficiency means profit in the hydroexcavation industry. Not only must equipment be fuel-efficient, it also must be easy to operate. The ability for one person to operate the system is an added bonus that can potentially free up man-hours for additional work.

For one person to perform hydroexcavation jobs, though, total control has to be at that operator's fingertips. That's exactly what Vac-Con is offering with the Omnibus Precision Power Control System, on display at the 2016 Water & Wastewater Equipment, Treatment & Transport Show.

POWER OVER ALL FUNCTIONS

The system gives the operator control authority over all vacuum, water and engine functions from one centralized location. One simple control operates all of the vacuum and water system functions of Vac-Con combination machines and hydroexcavators, allowing the operator to use only as much power as needed, saving time and fuel while allowing precise movements of the hydraulic components.

"This is a system that gives you that convenience factor," says Phil Curnalia, product improvement specialist with Vac-Con. "Because all the controls and displays are in one location, the operator doesn't have to move. That enables them to get the job done as quick and efficient as possible."



PHOTO BY CRAIG MANDLI

Phil Curnalia, left, product improvement specialist with Vac-Con, explains the operation of the Omnibus Precision Power Control System with 2016 WWETT Show attendees. One control operates all of the vacuum and water system functions of combination machines and hydroexcavators, allowing the operator to use only as much power as needed, saving time and fuel while allowing precise movements.



Water & Wastewater Equipment,
Treatment & Transport Show
www.wwettshow.com

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Exhibits: Feb. 23-25, 2017
Indiana Convention Center, Indianapolis

"EVERY QUALITY HYDROEXCAVATION BUSINESS NEEDS TO KEEP DETAILED JOB RECORDS, AND THIS SYSTEM MAKES THAT EFFORTLESS."

Phil Curnalia

UPGRADED SYSTEMS

The Precision Power system is Vac-Con's second generation of its Omnibus Control System, which made its debut approximately seven years ago. It uses an upgraded electrical system (CANbus) that improves hydraulic performance and optimizes hydrostatic vacuum efficiencies, which include lower engine rpm and increased vacuum performance. Curnalia says the changes were necessitated by changes in the way the control system is powered.

"The Omnibus controls the power of the hydroexcavator's engine to operate and maintain presets," he says. "Newer units are designed to operate more efficiently without sacrificing power and work capability, so it makes sense that the control system takes those efficiencies into account."

The system includes an easy-to-use, full-color operator display that contains all necessary operator functions on a single screen, along with a dedicated diagnostics page, chassis page and virtual circuit breaker. All vacuum and water system functions are controlled on a single, central-joystick-style controller for one-hand operation.

The system also includes telematics, and provides the user with data on fuel usage, GPS coordinates and fleet tracking capability. Stats are recorded and are available instantly, helping operators maintain efficiencies during the job.

"Every quality hydroexcavation business needs to keep detailed job records, and this system makes that effortless," says Curnalia. "The ability to make adjustments while still performing the job is a valuable feature as well, which can lead to substantial time and money savings in the long run."

DEBUTING AT THE SHOW

Vac-Con is a longtime regular exhibitor at WWETT, and according to Curnalia, the company decided to roll out its upgraded Omnibus Precision Power Control System especially at the 2016 show.

"This is easily the biggest show of the year for us, and always gives us a great opportunity to see a lot of our core customers," he says. "The 2016 show was fantastic yet again."

For next year, Curnalia says Vac-Con plans to continue down the efficiency road, finding additional ways for customers to work faster and smarter.

"We are looking at ways to increase fuel savings on our hydroexcavation models, and increase automation to become more efficient," he says. "That idea is the name of the game now: working smarter, not harder." 904/284-4200; www.vac-con.com. ▼

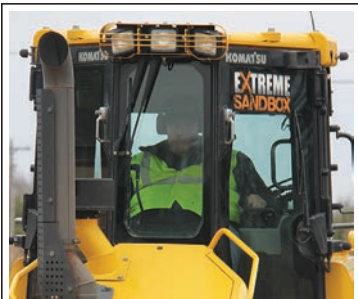
THE LATEST: News

GapVax names sales rep

GapVax named Terry Brown sales representative for the Southeast territory. He has 25 years of experience in operations, construction and business development in the utility and gas markets.



Terry Brown



Komatsu America Corp sponsors Extreme Sandbox

Komatsu America Corp is the exclusive equipment sponsor of Extreme Sandbox, a heavy-equipment adventure company. The alliance is an opportunity to transform construction machines into an informative, exciting and hands-on experience.

Woolpert names president

Scott Cattran was named president and CEO of Woolpert. Cattran has been with the national architecture, engineering and geospatial firm for 17 years, joining the company as phase manager in 1999.

The Toro Company exec named 2017 ICUEE Show chair

The Toro Company's Rick Rodier, general manager of the company's Site-work Systems business, was named 2017 chairperson for the International Construction and Utility Equipment Exposition. ICUEE is held every two years in Louisville, Kentucky.



Rick Rodier

Sauereisen launches website

Sauereisen, a producer of protective linings, coatings and ceramics for industrial users, launched a new website, www.sauereisen.com. The site is available in 12 languages and offers easy viewing and navigation from mobile devices.

Hydra-Flex relocates headquarters

Hydra-Flex, manufacturer of fluid handling equipment, moved its office and manufacturing facility to a larger site in Eagan, Minnesota.

BASE Engineering appoints industrial specialist

Alex Prosser was named industrial specialist for BASE Engineering. Prosser has worked with a diverse range of oil and gas projects throughout Canada.



Alex Prosser

Loftness Specialized Equipment names territory manager

Blake Eavenson was named territory manager for Loftness Specialized Equipment. Eavenson will be responsible for growing the VMLogix product line.

Wastequip announces dealer network for OEM parts division

Wastequip's Go To Parts division signed exclusive agreements with 10 dealers covering the South, Southeast, Midwest and Mid-Atlantic regions.

SubSurface Instruments acquires distributorship for Fuji Tecom locators

SubSurface Instruments acquired the master distributorship for the entire range of Fuji Tecom pipe and cable locators.

Virgo Fleet releases new catalog

Virgo Fleet, a retail supplier of truck accessories, released a new 84-page

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product catalog. Buyers can browse items in the catalog on the company's website, www.virgofleet.com.

Amthor International sponsors Global Tank Truck Conference

The first Global Tank Truck Conference, sponsored by Amthor International, will be held Oct. 6-8 at the Grandover Resort and Conference Center in Greensboro, North Carolina. The purpose of the event is to bring leaders, business owners and managers in the refined fuel, propane, portable restroom, vacuum and septic pumping industries together to share ideas about growth and diversification. ▼



Jamie Myers

Jim Hall

Talbert Manufacturing appoints two vice presidents

Talbert Manufacturing promoted Jamie Myers to vice president of purchasing, and promoted Jim Hall to vice president of operations. Myers and Hall have more than 40 years' combined experience in the manufacturing industry.

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THE LATEST: Products



2



1



3

1. SubSurface Instruments locators

The AML Pro and AML+ all-material locators from SubSurface Instruments use ultrahigh radio frequencies to locate buried plastic, metal, wood, cable and pipe in any soils at depths of more than 20 feet. Locators feature digital microprocessor technology, a lithium rechargeable battery pack and GPS reporting, eliminating the need for an auxiliary piece of tracking equipment on the job site. 855/422-6346; www.ssilocators.com.

2. Paladin Attachments Walk-Thru pallet fork

Walk-Thru pallet forks from Paladin Attachments feature an open design that allows the operator to step through the frame upon entry and exit for safe access to the loader. The design is available on the company's line of Bradco pallet forks. 800/456-7100; www.paladinattachments.com.

3. Vac2Go ceramic-lined porthole elbows

Ceramic-lined porthole elbows from Vac2Go are designed to last longer than steel porthole elbows and reduce downtime. Ceramic-lined elbows feature wear resistance, extending the life of vacuum truck fittings. Elbows are available in 45 and 90 degrees. 855/822-7426; www.vac2go.com.

This Issue's Feature:

DSC Marlin Class underwater mining dredge can exceed 200-foot digging depths

BY ED WODALSKI

The Marlin Class underwater mining dredge from DSC Dredge is designed for digging depths ranging from 20 to 200 feet. Standard pump sizes range from 12 to 24 inches and custom designs include up to 30-inch-diameter discharges.

"The DSC Marlin Class dredge is outfitted with a submersible dredge pump," says Charles Sinunu, director of international sales, DSC Dredge. "The deeper it goes, the better it performs because it doesn't have to fight atmospheric pressure."

Standard digging depths are 56, 76 and 96 feet.

"We have clients that need to go very deep, such as one several years ago that needed a 200-foot digging depth. It had not been done before but we did it," Sinunu says. "There's really no maximum depth. It's just a matter of being economically viable. We have the technology to go as deep as our clients need."

Available with diesel or electric power, drive systems include the Caterpillar ACERT diesel engine with inline direct marine-style transmission for dredge pump reduction or TEFC electric motor, variable-frequency AC dredge pump motor drive and double-helical gear reducer for dredge pump reduction.

"On some of the units, we outfit the dredge with a dual pump," Sinunu says. "It has a submersible dredge pump on the ladder and on the stern of the dredge we have a hull-mounted booster pump. That way you get a high concentration of solids and you can pump it a very long distance. For example, most process plants want a high concentration of solids with a constant slurry flow rate. With our technology, we can dial in whatever the plant needs."

Pipeline distances can extend 7,000 feet when using the dual pump system or 1,000 to 1,500 feet without a booster.

"It really depends on the grain size and density of the material you're pumping," Sinunu says. "We've had Marlin dredges in many types of mining projects, from copper tailings in Chile to sand and gravel in Nigeria. In New



ELECTRIC

Marlin Class underwater mining dredge from DSC Dredge

Orleans, a custom Marlin is doing maintenance dredging on the Mississippi River."

All models feature a portable logic control operating system, magnetic flowmeter, electro-proportional hydraulic circuits, high-capacity service water system, maximize suction dilution valves and three-wire mooring system.

"Most of the Marlin Class dredges, because they will stay at a mining site for many years, are shore-powered electric," Sinunu says. "In Third World countries, power is a problem, so they are diesel-powered. But most of the Marlin Class dredges in the U.S. are electric powered. Electric may be slightly more expensive on the front end, but that is quickly recouped in decreased maintenance costs. It's also quiet and environmentally friendly."



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4. McLaughlin utility locator

The Vermeer Verifier G3 utility locator from McLaughlin features a durable design with antennas mounted in rubber isolators for tough job site conditions. A new combination screen eliminates the need for users to toggle between two screens. Users can engage the semiautomatic gain on urban or congested job sites where signal distortion is common, or use the manual gain method when working in less congested areas. Estimated depth is automatically displayed instead of having to manually press a button. A compass icon provides straightforward visual representation of a utility's position in reference to the receiver. 800/435-9340; www.mclaughlinunderground.com.



5. Ditch Witch digging system for walk-behind trenchers

The OptiCut digging system from Ditch Witch, a Charles Machine Works Company, is made to enhance walk-behind trencher productivity in all soil conditions. Designed for depths up to 36 inches and 3.5 inches wide, the digging system uses a low-profile tooth design for a smoother cut with less chain wear. Configurations include a four-pitch DuraTooth, a two-pitch Shark and a two-pitch DuraTooth/Shark combination. The digging system is compatible with Ditch Witch C12, C14, C16, C16X, C24X and C30X walk-behind trenchers and can be adapted to other makes and models with a special conversion sprocket. 800/654-6481; www.ditchwitch.com.

6. General Pump hydroexcavation nozzle

HX hydroexcavation nozzles from General Pump are urethane-coated for durability and operator protection. Featuring a stainless steel body, the nozzles are rated for up to 30 gpm and 1,000 to 4,000 psi. 888/474-5487; www.generalpump.com.

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Are Constant Deals and Discounts a Good Strategy?

ENSURING A PROFIT IS JOB ONE FOR A SMALL BUSINESS. HOW CAN YOU OFFER SALE PRICES AND NOT CRIPPLE YOUR CASH FLOW?

BY ERIK GUNN

Take a look at the advertising circulars that come with your Sunday newspaper and it's not hard to find yourself asking this question — does anything sell for “full price” anymore?

Retailers bombard us with Black Friday bargains during the holiday season. Online booksellers tout prices for best-sellers 40 percent below what is posted on the inside jacket flap. Brick-and-mortar stores slash prices to try to keep up with the deep discounts offered by web-based merchants like Amazon.

And it's not just in retail. In a world where consumers seem to feel entitled to a deep discount everywhere they turn, the pressure is mounting on service businesses like yours.

Competition and a fundamental change in consumer psychology are posing challenges to the old model, when the price structure was supposed to adequately cover the cost of operation and ensure a reasonable return for the work delivered.

This change can be especially vexing, because if you're not careful, you could wind up in a no-win situation: Refuse to offer any discounts or deals at all, and you risk falling by the wayside to aggressively priced competitors. Slash

“THE TACTIC OF OFFERING DEALS IS A PSYCHOLOGICAL INDUCEMENT TO ENCOURAGE CUSTOMERS TO TAKE ACTION. IT TAPS INTO THE PERSON'S EMOTIONS AND MAY INCITE THEM TO ACTION BECAUSE OF THEIR FEAR OF MISSING OUT ON A GREAT DEAL.”

Wendy Kenney

prices indiscriminately, and you're in danger of training your customers to devalue your work — and cutting your own throat in the marketplace.

TAP INTO EMOTIONS

I posed questions about this issue to a cross section of marketing experts. My correspondents came from outside the industry, yet their niche businesses have some things in common with the readers of this column, and their insights are easily translatable.

Wendy Kenney, who advises auto repair shops and other businesses, explains how deals can serve as a positive force in generating sales.

“The tactic of offering deals is a psychological inducement to encourage customers to take action,” says Kenney, who operates the consulting firm 23 Kazoos based in Sitka, Alaska. “It taps into the person's emotions and may incite them to action because of their fear of missing out on a great deal.”

The way these practices can train customers is demonstrated in the recent turbulent history of retailer J.C. Penney. A few years ago, J.C. Penney tried to



shift away from a model of frequent sales in favor of “everyday low prices” — and wound up driving away customers in the process, Kenney notes. J.C. Penney is recovering from that misstep, but the power of the promotional sale is evident today on any Saturday morning at the department store, “when they offer their ‘Door Buster Deals’ to a store full of ‘hungry shoppers,’” she observes.

BUNDLE IT

Kenney — who in addition to her consulting work is the author of *How to Build Buzz for Your Biz, Tap into the Power of Social Media, Publicity, and Relationship Marketing to Grow Your Business* — suggests many more circum-spect approaches that can tap into the customer's instinct to grab a deal and won't send your business in a race to the bottom.

“Offer a package deal,” says Kenney. “Instead of just discounting one common service, bundle together a package of services with one price.”

You can see that at your local auto repair shop, which may offer deals such

as an oil change, an air filter replacement and an alignment at a bundled rate lower than the individual services would cost on their own.

“Because it’s two or more services bundled together, the customer is less likely and less able to associate a certain price with a certain service, therefore not locking that price in their mind and devaluing your service,” Kenney points out.

If you take that tactic, she adds, “Make sure you always let customers know how much they are saving, or what the value is.” For example, let’s say the individual services combined in the bundle would normally add up to \$100, while your bundled price is \$59.95. “Don’t just say the bundled service is \$59.95,” Kenney says. “Say that service is \$59.95 — a \$100 value. Give them context about just how great a deal it is.”

PARTNERS, REFERRALS, SEASONALITY

Perhaps you can team up with other vendors whose product niches don’t compete with yours, yet still complement the sort of work you do.

“Offer a package deal together so that there is added value and reach,” says Margo Schlossberg, marketing manager for JumpIt Pass, a subscription-based service that helps families find classes for their children in activities ranging from the arts to sports in the Washington, D.C., area.

Schlossberg also suggests offering customers incentives to refer other potential customers.

The medical spa business might not seem to have much in common with what you do, but Julia Avalon, who runs Avalon Medical Spa in Miami, Florida, offers some sensible ideas that aren’t limited to laser removal or Botox injections.

If you find your business has ups and downs that follow the calendar, Avalon says, it might be worthwhile to tie deals to certain days of the week or months of the year — discounting routine procedures during slow seasons.

ADD SERVICE

Service contracts can be another way to offer limited discounts without devaluing your main business. One approach would be to provide a contract for continuing service with a low introductory price for the first visit, while the regular maintenance visits that follow would reflect the service’s standard price.

Like Kenney, Avalon also suggests package deals “with add-ons a client may not have thought of but do not require a lot of time.”

A variation on that approach would be “complimentary add-ons that would bring value to the client and set you apart from the competition,” Avalon adds. “This can be done even without lowering the initial price.”

Kenney, too, is a fan of throwing in a small — but not meaningless — “added value” bonus. When the customer buys a certain service, give them an extra freebie, not just a token trinket, Kenney says.

“The key is to give something of tangible value. The dollar value of the freebie item doesn’t matter, it’s the perceived value to the customer,” says Kenney. “Basically, give them something they want.”

MAKE IT WORK




So are deals and discounts a good strategy? In the current environment, they might be unavoidable. The bottom line is, don’t just hand them out like Monopoly money. Be strategic about them and find ways to make them help your business, not just for short-term revenue but long-term sustainability.

If your deals live up to that standard instead of being a no-win burden, they truly can be a win-win opportunity — for your customer and for you.

ABOUT THE AUTHOR

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Happenings

CALENDAR

Sept. 24-28

89th Technical Exhibition and Conference (WEFTEC); New Orleans Morial Convention Center, New Orleans, www.weftec.org.

Sept. 27-29

International Associations of Directional Drilling (IADD) Annual Technology Forum Series – MWD Solutions; La Cima Club/Pioneer Natural Resources, Irving, Texas, www.iadd-intl.org.

Oct. 22-23

Utility Contractors' Association of New England 62nd Annual Banquet; Boston Marriot Newton Hotel, Boston, www.ucane.com.

Nov. 2-3

WJTA-IMCA Conference & Expo; Ernest N. Morial Convention Center, New Orleans, www.wjta.org.

Nov. 6-9

Cutting Edge: Advances in Tunneling Technology; The Concourse Hotel at Los Angeles Airport, Los Angeles, www.ucaofsmecuttingedge.com.

Nov. 10

Minnesota Utility Contractors Association Annual Meeting; Mystic Lake Hotel, Prior Lake, Minnesota, www.muca.org.

Jan. 22-27, 2017

Underground Contractors Association of Illinois Annual Convention; Fiesta Americana Grand Los Cabos Resort, Cabo San Lucas, Mexico, www.uca.org.

Jan. 31-Feb. 2, 2017

Underground Construction Technology (UCT) International Conference & Exhibition; Fort Worth, Texas, www.uctonline.com.

Feb. 22-25, 2017

Water & Wastewater Equipment, Treatment & Transport (WWETT) Show; Indiana Convention Center, Indianapolis, Indiana, www.wwettshow.com.

March 4-6, 2017

AEMP 34th Annual Conference; Tuscany Suites & Casino, Las Vegas, www.aemp.org.

March 7-11, 2017

CONEXPO-CON/AGG; Las Vegas Convention Center, Las Vegas, www.conexpoconagg.com.

March 14-16, 2017

Common Ground Alliance (CGA) Excavation Safety Conference & Expo; Rosen Shingle Creek, Orlando, Florida, www.cgaconference.com.

March 23-25, 2017

Mid-America Trucking Show; Kentucky Expo Center, Louisville, Kentucky, www.truckingshow.com.



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