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Supreme Vac equipment operators Bryce Jeske (left) and Ryan Dorchak excavate for utilities at a home in Edmonton, Alberta. The company, which has roots in the gas and oil industry, has expanded into utility work and cleaning services. (Photography by Nick Sperounes)

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DEVELOP THE STEPS YOUR EMPLOYEES SHOULD FOLLOW IF SOMETHING TERRIBLE HAPPENS. HAVE A SHEET WITH EMERGENCY PHONE NUMBERS, COMPLETE WITH CO-WORKERS AND ORGANIZATIONS THAT NEED TO BE CONTACTED.

The Worst Just Happened. Now What?

THERE'S NO TIME TO STRESS; MAKE SURE YOU HAVE A PLAN FOR WHEN EMERGENCIES COME UP ON THE JOB

BY CORY DELLENBACH, EDITOR

You're using your directional drill when suddenly you slice through a gas line. Gas could be leaking into the apartment building nearby. What do you do?

Accidents like this can, and do, happen more often than you think. In December 2016, a restaurant in Columbus, Ohio, exploded after a directional drill operator struck a gas line. Thankfully everyone evacuated when they smelled gas and no one was seriously injured.

Other kinds of accidents happen, too. In January, a hydroexcavator fell into a sinkhole after the operator parked where a culvert had deteriorated. The ground gave out and the truck fell into the 20-foot-deep hole. The operator wasn't in the truck and no one was injured. A day later the machine was pulled from the pit using excavators and cranes.

Both of these situations could have been worse: People could have been seriously injured or killed.

STAY COOL

It pays to take time to develop an emergency plan. Having plans available, and copies in each truck, can help leaders and crew members respond effectively. There are many emergencies worth planning for: employee and non-employee incidents on job sites, utility dig-ins, equipment or vehicle crashes, and even weather-related crises.

Develop the steps your employees should follow if something terrible happens. Have a sheet with emergency phone numbers, complete with co-workers and organizations that need to be contacted. The process is simple, costs very little, and can pay off in a big way when the worst happens.

For details on creating an emergency plan you can go to OSHA's website at www.osha.gov or to www.ready.gov/business/implementation/emergency, where you'll find tips from the Department of Homeland Security.

STAY TO HELP

If you cause an emergency or witness one, be available to help. Until emergency responders arrive, you might be the expert on the scene. It may be up to you to evacuate the area or provide first aid if needed.

After emergency crews arrive, stay nearby because they might need help — either in determining what happened or knowing what is what at the scene.

BE PREPARED

As the Boy Scout motto says: Be prepared. Be ready for anything. Make sure your workers are ready, too. You could save a life — including your own.

How do you make sure your crews are ready for emergencies? You can email me at editor@digdifferent.com or call me at 800/257-7222. I would love to share what contractors are doing.

Enjoy this issue! ▼

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WHAT ARE YOU PUTTING ON YOUR WEBSITE?

5 Web Content Rules Every Business Owner Should Know

When a potential customer wants to learn more about your company, where are they most likely to head? Chances are straight to your company website, which sets the first impression that most folks will have of your business. For this reason, it's important that it not only be attractive and professional, but informative as well.

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BUYING YOUR EQUIPMENT

Busting the Top 9 Equipment Financing Myths

As a business owner, you're in constant decision-making mode. With everyone relying on you to make the right choices, even small decisions can feel consequential. And when it comes to big decisions involving trucks and equipment, it can feel downright stressful. There are some myths when it comes to buying equipment that can be busted. Here are nine of them.

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New Technology Hits the Mark at CONEXPO
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3 Common Social Media Mistakes

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BURSTING WITH SUCCESS

BY DIGGING INTO TRENCHLESS TECHNOLOGY, CALIFORNIA
CONTRACTOR BROKE GROUND IN PROFITABLE NEW MARKETS

STORY: KEN WYSOCKY PHOTOS: LEZLIE STERLING



Technician Cody Pingree reaches for equipment as he waits for the bursting head to reach his location. The company was installing a new line from a home to the main sewer system.



Express Sewer & Drain technicians, from left, Will Blake, Cody Pingree and John Rogers set up for a pipe bursting job at a home near Sacramento.

"HERE'S THE THING. CUSTOMERS ARE A LOT **HAPPIER** WHEN JOBS GET **FINISHED FAST.**"

Bill Heinselman

Trenchless excavation contractor Bill Heinselman has zero tolerance for subcontractors who don't show up on jobs. Yet ironically enough, he owes such underperformers a debt of thanks, because they're one of the main reasons why his company — Express Sewer & Drain in Rancho Cordova, California — compiled \$10 million in gross revenue in 2016.

Of course, other factors also play a large role in his company's rapid growth: a willingness to invest in advanced technology, providing excellent customer service, an uncompromising do-the-job-right-or-don't-do-it-at-all philosophy, and an emphasis on developing diversified but complementary services that make the company more attractive to customers who prefer dealing with just one contractor.

But in the end, Heinselman's impatience with undependable subcontractors helped the 42-year-

old entrepreneur reach a tipping point in 2009 that prompted him to invest in a pipe bursting system made by TRIC Tools. That calculated gamble helped him turn a business that primarily centered on plumbing and drain cleaning into a multifaceted company.

In fact, Express now owns a fleet of equipment worth about \$4 million, and does everything from pipe lining and lateral reinstatements to traditional excavating and waterline replacements, to inspecting, cleaning and repairing mainline and lateral sewer lines for residential, commercial and municipal customers. The company is even equipped to do its own asphalt repaving, which saves time — and even further reduces Heinselman's dependence on subcontractors.

"I get easily annoyed with subcontractors that always let us down and don't do work that meets our standards," explains Heinselman, who started his company in 2007. "That's how we got into pipe bursting and pipelining and asphalt repairs. Everything was born of necessity.

"In fact, we got into pipe bursting because I complained to a subcontractor who kept failing to show up on jobs," he continues. "He said, 'If you

don't like it, why don't you go out and buy your own equipment.' So I did.

"It was the best thing he could've said to me — and the best move I ever made," he adds. "Now we do pipe bursting every day and sometimes three or four times a day. And trenchless excavation generates about 35 percent of our annual revenue."

A GO-GETTER GETS GOING

Heinselman has been working in the sewer industry ever since he took a summer job at a sewer district in northern California at age 19, doing sewer maintenance and repair. "I liked it a lot," he recalls. "The work was challenging and it was something I understood and was good at. I stayed there for 14 years and was promoted multiple times. But I finally reached a point where I wanted something more."

That "something more" turned out to be plumbing and drain cleaning. Heinselman was motivated

Pipe bursting systems bring on the power — and boost profitability

The last thing a pipe bursting contractor wants to deal with is a bursting head stuck in a tangle of tree roots or a dense, hardpan layer of soil, courtesy of an under-powered bursting system. But thanks to TRIC Tools, that's rarely a concern for Bill Heinselman, the founder, owner and president of Express Sewer & Drain in Rancho Cordova, California.

Express Sewer owns four TRIC Tools pipe bursting systems: two X20 models (20 tons of pulling force at 9,600 psi), one X30 (29.5 tons at 6,000 psi) and one M50 (48 tons at 5,000 psi). "TRIC Tools pipe bursters are one of my favorite machines," Heinselman says. "They're the best pulling systems on the market.

"One reason I say that is they work really well — they don't break down," he explains. "And they pull with a lot of force. In addition, they're easy to set up. ... The design is very user friendly." Employees can set up the X30s in just five or 10 minutes, he notes.

Another advantage: The machines' small footprints allow Heinselman to use them in confined spaces — even in manholes — where other systems might not fit. "That's extremely important," he says. Moreover, the units are light enough that employees can load and unload them manually, which eliminates the expense associated

with bringing to a job site a backhoe or an excavator to do the heavy lifting, he adds.

All these time-saving benefits also reduce job costs, which in turn make it easier to submit winning bids on municipal projects. "If your system enables you to cut, say, \$5,000 from the cost of a project, you just ensured you're going to win the bid because your competitors' costs will be higher," Heinselman says.

At Express Sewer, crews using an X30 machine for residential work have pulled up to four new lateral lines in a day, each one roughly 60 to 80 feet long. "Most companies can typically pull just one line a day," he says.

When pulling in 8- or 10-inch-diameter mainline sewer pipe, crews bust out the M50, with its 96,000 pounds of pulling force. But Heinselman notes that while most jobs never require that much power, it's good to know it's available when needed.

"If you run into hard ground, you need almost every pound of that force," he explains. "If you don't have enough power and get stuck, you're screwed because now you have no mainline (sewer) service. So you have to dig out the bursting head, make a line repair, use bypass pumps and repave a road, plus possibly pay fines imposed by regional water-quality control boards for sewer overflows."

by the high prices he saw other contractors charge for replacing residential sewer laterals; he figured he could gain market share while charging much less — and still generate a decent profit. "It was a tough decision, because I had a great job with great pay and benefits," he recalls. "But it has paid off."

Not right away, however. Heinselman says he cleared less than \$150,000 during his first full year of operation. But by capitalizing on high demand for replacing aging and failing sewer lines, the business quickly gained traction. In fact, the company's gross revenue roughly doubled nearly every year for the last six or seven years, he says.

A big chunk of that business comes from upsizing undersized, 4-inch-diameter sewer mains (mostly installed in the 1950s and '60s) to 6- or 8-inch-diameter mains — a job that's tailor-made for pipe bursting. The company's first big capital investment was a TRIC Tools pipe bursting system, which Heinselman notes was a huge financial gamble at the time. But with help from Alpine Leasing (now Alpine Equipment Funding,) he signed a lease-to-buy contract that made it more affordable.

"It's ironic because we used to hire a subcontractor to do our pipe bursting," he says. "Now we pipe burst (as a subcontractor) for 20 or 30 companies in the Sacramento area."

It wasn't hard to get customers — both homeowners and municipalities — to buy into the trenchless pipe bursting approach. "Here's the thing," he explains. "Customers are a lot happier when jobs get finished fast. Plus, when you work fast, you can dramatically lower your overall costs." That gives the company a better chance at winning job bids and also leads to word-of-mouth referrals.

Moreover, there are a lot of aging Orangeburg pipes in the area, and



Technician Will Blake works with pipe bursting equipment (TRIC Tools).

Express Sewer & Drain Rancho Cordova, California

OWNER: William "Bill" Heinselman

FOUNDED: 2007

EMPLOYEES: 50

SPECIALTIES: Pipe bursting and drain cleaning

SERVICE AREA: 50-mile radius around Sacramento

WEBSITE: www.expresssewer.com



more and more of them are failing as they reach the end of their life cycles. And pipe bursting is the cheapest, least intrusive and fastest way to repair them. "We pull a new line, then get it inspected and restored the next day," Heinselman explains.

A BURST OF PRODUCTIVITY

In and of itself, the pipe bursting process is relatively simple. In essence, a hydraulically powered winch — capable of generating tens of thousands of pounds of pressure — pulls a bullet-shaped bursting head through an existing pipe via a metal cable. The bursting head breaks up the pipe, displacing the pieces into the surrounding soil. At the same time, the cable also pulls a PVC pipe (behind the bursting head) that then becomes the new host pipe.

But there are many nuances involved in safe and efficient pipe bursting. Heinselman says he attended training classes held by manufacturers, then took "baby steps" out in the field.

"As you work, you learn," he says. "You have to learn how to burst next to waterlines, for instance, or anticipate potential issues if you have to pull under a big tree. Experience also teaches you how to burst in sandy, hardpan or cobble soil.

"THE BEST WAY TO GET GOOD EMPLOYEES IS TO TRAIN THEM YOURSELF. THEY'RE LIKE A LUMP OF CLAY THAT YOU CAN MOLD YOURSELF."

Bill Heinselman

"The best way to get good employees is to train them yourself," he continues. "They're like a lump of clay that you can mold yourself. Sometimes more experienced workers are almost a detriment because they're so certain that they know how to do things, but it's not how we do things."

Heinselman says the most important asset for pipe bursters is the ability to make good, smart decisions and be open-minded. "When you pipe burst, no two jobs are alike," he notes. "So you want employees that are sensible and have good judgment."

MORE SERVICES IN STORE

The company's next big purchase was a Vac-Con V230 combination sewer vacuum truck. Prior to that, Heinselman had relied on a waterjetting trailer made by US Jetting. While that machine was a solid investment, it was too small to efficiently handle a large municipal contract that Express Sewer won to clean 50,000 feet of mainline sewers.

"That Vac-Con was our next big whoa, what-the-hell-are-we-doing purchase," he recalls. "Lenders don't want to give you a loan for a Ferrari when you're self-employed, so I had to put 50 percent down to get a loan.

"But by looking at the local bid boards, we knew that sewer districts around here have to clean so many miles of pipe a year," he continues. "So there was a ton of work out there. You can clean 8,000 to 10,000 feet of pipe a day if you have a crew that actually works hard, and that kind of productivity can provide a really good return on your investment."

As work picked up, the company bought another Vac-Con truck, plus a pipeline inspection camera truck outfitted by CUES Inc. and a pipe lining system made by Perma-Liner Industries Inc.

Over the years, Express Sewer's fleet of equipment continued to grow dramatically. Today it owns four TRIC Tools pipe bursting systems; three US Jetting trailer jetters; one Caterpillar backhoe; seven Caterpillar excavators; and three Vac-Con 309 combination sewer trucks equipped with hydroexcavating packages and featuring 9-cubic-yard debris tanks, 1,000-gallon water tanks, Vac-Con three-stage centrifugal fan compressors and water pumps by Giant Industries.

In addition, the company also relies on a Sidekick easement cart made by PipeHunter Inc. and used to carry vacuum-truck hose out to remote manhole locations for sewer cleaning; two CUES camera trucks; 26 RIDGID SeeSnake pipeline inspection camera systems; more than 40 Ford trucks, ranging from F-150 pickups to F-450s with contractor bodies; three dump trucks featuring Ford and Peterbilt chassis and dump bodies made by Godwin Manufacturing Co. Inc.; and one horizontal boring machine, made by Ditch Witch (a Charles Machine Works Co.) and used to bore water and gas lines. *(continued)*

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Bill Heinselman

Will Blake, back, holds the line as John Rogers guides it in after the bursting head.

The company even owns an asphalt roller and a cold planer, both made by Caterpillar. This enables the company to tear up and repave streets on jobs that require traditional excavation techniques, as well as maintain better control of job schedules and quality. Express Sewer has also invested in lateral tap liners made by Cosmic Engineering GmbH and Interfit USA, and two lateral reinstatement systems.

FURTHER GROWTH EXPECTED

Heinselman believes it's possible for Express Sewer to generate \$20 million in gross revenue within the next two to three years. But in order to achieve that, the company must be able to find good employees, which is increasingly hard to do. Even though the company provides workers with modern, well-maintained equipment and offers benefits such as medical, dental and visions insurance, plus 401(k) plans with matching company contributions, too many prospective employees don't pass drug tests or background checks, he notes.

Furthermore, Heinselman wants to build a more structured company and streamline processes for things such as payroll, time sheets and project management. He also wants to develop a more formal management structure, which would allow him to delegate some of his responsibilities, which in turn would carve out more time for him to do other things — or even take some time off, he says.

"I'm just not sure how big I want to get without more structure," he explains. "Right now, we go through work so fast, and because all the municipal jobs go to the low bidder, I have to be sure we're keeping our pencils sharp and always bidding on new jobs.

"Right now I do all the bidding and a big portion of the project management, and I honestly can't do anything more than what I already do now," he continues. "So we're concentrating on hiring more project managers and have promoted a foreman to manage projects. I want my project managers to have the same philosophy that I have about the kind of customer service we provide. Eventually, I'd like this company to be like a machine that runs by itself." ▼



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John Rogers lowers equipment to Cody Pingree in the manhole as they set up for a pipe bursting job.

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OPENING UP OPPORTUNITIES

CANADIAN CLEANING COMPANY BRANCHES INTO NEW SERVICES AND BUILDS A BIGGER, MORE STABLE CUSTOMER BASE

STORY: KEN WYSOCKY PHOTOS: NICK SPEROUNES

Beset by difficult challenges in its early years, Supreme Vac is now a veteran player in the oilfield services industry in Alberta. The journey from just surviving to outright thriving wasn't easy, but owner Terry Jeske cites two key factors in the company's turnaround: investments in productivity-enhancing equipment and a reinvigorating influx of ideas and energy from his twin sons, Braydon and Bryce.

"They turned the company around. ... I take no credit at all for it," Jeske says. "They had all the good ideas."

The company's near fall and eventual rise underscores the importance of business diversification and sound investments in equipment that opens up

new markets and increases operating efficiencies. But it also speaks to the value of family ties in the face of adversity, as well as the power of old-fashioned determination and resilience.

Things looked promising when Jeske established the business in 2005, just as the oilfield boom was starting to heat up. Buoyed by assurances from oilfield companies that there'd be work available if he invested in a vacuum truck, Jeske took the plunge — and then quickly found himself just trying to stay afloat.

The first bad-luck break: The vac truck was delivered months later than promised. "Any work we had lined up just vaporized," Jeske recalls. "We made a financial commitment to buy the equipment and were left standing there with our hands in



The Supreme Vac team includes, from left, equipment operator Ryan Dorchak (kneeling), mechanic Al Charest, equipment operator Braydon Jeske, owners Glenda and Terry Jeske, equipment operator Bryce Jeske, safety coordinator Dan Lin (kneeling), and safety administrator Andrew Herman.

"IT WAS A REALLY SHAKY, TUMULTUOUS TIME. ... I HAD SO MUCH INVESTED IN THE BUSINESS, AND I THOUGHT IF THE BOYS TOOK OVER, THEY'D TURN IT AROUND."

Terry Jeske

our pockets." When the truck finally arrived, problem No. 2 emerged: lack of quality employees. "Things were busy in the oil patch and there just weren't many good drivers available," he says. "We definitely were not getting the cream of the crop."

The end result was, as Jeske puts it, a lot of sleepless nights. "It was a really shaky, tumultuous time. I had all those payments to make and little revenue coming in," he says. "Eventually I had to refinance the truck. I just rode it out."

KEEPING THE FAITH

Why didn't Jeske just cut his losses by selling the truck and moving on? "I had so much invested in the business, and I thought if the boys took over, they'd turn it around," he explains.

At the time, Braydon and Bryce, now 27 years old, had recently graduated from high school. While Bryce was gaining valuable experience working for a company that replaced water and sewer lines, Braydon was busy taking business administration courses at a local technical institute. "I asked them to come on board, but they declined," Jeske says. "But I kept pecking away and pecking away and they finally agreed to do it."

MISSION ACCOMPLISHED

The boys did, indeed, lead a dramatic turnaround. Today the company employs eight people and owns about \$1.7 million worth of equipment, including three vacuum trucks, a hydroexcavating truck and two steam cleaning units.

Advance Engineered Products outfitted two of the vac trucks, built on

Supreme Vac Edmonton, Alberta

OWNERS: Terry and Glenda Jeske

FOUNDED: 2005

EMPLOYEES: 8

SERVICES: Industrial and municipal pipeline cleaning and inspections, oilfield services

SERVICE AREA: Province of Alberta

WEBSITE: www.supremevac.com



tandem-axle Kenworth T800 chassis and featuring a 3,434-gallon carbon steel tank and a 1,400 cfm blower manufactured by Hibon. Cusco built out the third vacuum truck on a tri-axle 2014 Freightliner Coronado SD chassis. It's equipped with a 4,226-gallon carbon steel tank and a 1,600 cfm Hibon blower.

Foremost built the hydroexcavating truck on a 2015 Freightliner 122 SD chassis with a 13-cubic-yard debris tank, a 2,000-gallon water tank and a 4,000 cfm blower made by ROBUSCHI USA. Hot and Mighty (a division of T. George Podell & Co.) built the two steam pressure-washing units, each housed in an



Supreme Vac owner Terry Jeske looks for employees who want to make a positive difference in the success of the company.

Secrets to a strong staff

Good employees can make a decent company great. Bad employees can ruin one. Just ask Terry Jeske, the owner of Supreme Vac in Edmonton, Alberta, a company that suffered greatly in its early years due to poor employee performance.

As such, the firm, which cleans municipal and industrial pipelines and also performs oilfield services work, was especially motivated to develop ways to increase the odds of finding not only qualified, but quality employees. Part of the solution came from his twin sons, Braydon and Bryce, who joined the company in 2009 and 2010, and recruited friends to come and work with them. They also obtained word-of-mouth referrals about reputable workers from their friends.

"You need good people working for you," Braydon says. "You can have all the best equipment in the world, but having competent employees to operate the equipment is the most important thing. And they're hard to find.

"We try to hire guys we know or have known," he continues. "We're not looking for guys who just want to get a paycheck. We want guys who really want to make a difference — want to do a job right and generate repeat business."

To attract that kind of employee, Supreme Vac pays competitive salaries and offers annual performance-based financial bonuses. The company also tries to create a family-like atmosphere where employees feel valued and respected. For example, when employees work unusually long shifts — say, 12 hours — the company will buy them meals. The company also periodically takes employees out for team-building dinners, Braydon says.

"We've even sent employees on vacations as a reward for great performance," he notes. "We try to maintain a small-company feel. We don't want to treat our guys like numbers. If you have employees who respect you, they'll also respect the equipment and your customers. So you have to treat them with dignity and respect."

In instances where the company interviews prospective employees without a word-of-mouth reference, it requires a drug test. The company also obtains a driver's abstract that shows traffic violations, accidents and such. "We also ask them point blank if they do drugs, drink or smoke," Bryce says. "And if they say, 'No,' I blatantly ask them, 'Why not?' You get the vibe. ... You can tell if they're telling the truth or not."

enclosed trailer. The company also relies on a RIDGID SeeSnake pipeline inspection camera system and one RIDGID SeekTech SR-20 pipeline locator.

The fleet of equipment enables Supreme Vac to offer customers a wide range of services. The vacuum trucks handle everything from drilling-mud collection and disposal to vacuuming out tanks and vessels to cleaning up environmental spills. The hydroexcavating truck does daylighting, trenching and potholing. And the steam-cleaning units are used to wash down vehicles and drilling rigs, and thaw out lines and valves, along with other de-icing efforts, such as thawing out mud pits.

"We just got into hydrovac last year," says Braydon. "We were working on a pipeline construction project and we agreed that it would be a good idea to buy a hydrovac not only for that project, but to diversify our services, too."

Breaking into new markets was not easy. "It's highly competitive," says Jeske. "It seems like everyone has a vac truck — a number of people

"GOOD DRIVERS AND OPERATORS ARE THE KEY TO THE WHOLE THING. EQUIPMENT IS JUST A PILE OF METAL IF YOU DON'T HAVE EMPLOYEES WITH THE PROPER SKILL SET OR AN INTEREST IN THE BUSINESS AND SOLVING PROBLEMS."

Terry Jeske

service (oilfield) rigs part time. And it's tough to compete with guys like that because sometimes they have marginal or substandard equipment and don't charge what they need to because they tend to view and treat it as a job, not a business."

But the twins brought a powerful new ally into play: the internet. In 2011, Braydon created a website that gave the company widespread exposure and still consistently generates business leads. "The website is a huge asset to the company," Bryce points out. "It gives us a ton of exposure. A lot of new customers that call us find us on the internet. And if people call you for one service, then you can promote your other services, too."

The boys also resolved one of the company's biggest problems at the time: finding qualified workers. They brought in friends as well as other workers they found through word-of-mouth referrals from friends.

"Good drivers and operators are the key to the whole thing," Jeske says. "Equipment is just a pile of metal if you don't have employees with the proper skill set or an interest in the business and solving problems."

CUSTOMER SERVICE COUNTS

But while marketing and new technologically advanced equipment will nudge open the doors to new

business, providing excellent customer service keeps those doors wide open, the Jeskes emphasize. "You have to do the job right," Braydon notes. "You can't do half a job and expect customers to be happy. When I go out and do a job, I do it as if I was doing it for myself."

To keep customers happy, the Jeskes also rely on a very simple and basic principle: Always answer the phone. "We pick up our phones all the time — even on long weekends and holidays," Jeske says. "I've actually had customers tell us that they called 10 or 15 vac companies before they called us, and we were the first ones to pick up the phone."

(continued)



Ryan Dorchak (right) secures the hydroexcavator vacuum tube (Foremost) as Bryce Jeske uses the digging wand to break up dirt. (Roughneck Series safety gloves by Ringers Gloves.)

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Bryce Jeske (left) and Ryan Dorchak change digging wands as safety coordinator Dan Lin looks on.



The leadership team at Supreme Vac includes, clockwise, from bottom, Bryce, Terry, Glenda and Braydon Jeske.

“WE ALWAYS ANSWER OUR PHONES, REGARDLESS OF HOW BUSY WE ARE OR HOW LATE IT IS — EVEN 3 A.M. AND WE’LL TRY TO FIND ANOTHER CONTRACTOR FOR A CUSTOMER IF WE’RE TOO BUSY TO DO THE WORK.”

Braydon Jeske

“It’s a huge differentiator,” adds Braydon. “We always answer our phones, regardless of how busy we are or how late it is — even 3 a.m. And we’ll try to find another contractor for a customer if we’re too busy to do the work.”

Jeske says another significant asset — his sons’ ability to solve problems — always keeps customers coming back. “That’s another key to our success,” he says.

Another less obvious but equally important factor in customer service revolves around keeping abreast of new technology. “We read publications and always keep an eye out for equipment that can expand what we do,” Jeske notes.

SLOW AND STEADY GROWTH

The Jeskes see more growth ahead, even as the market for industrial and municipal cleaning becomes increasingly competitive. “With oil prices dropping, more and more guys are coming in from other provinces to service and put pressure on the oilfield and construction markets, or they’re trying to get more work by branching into things we already do,” Braydon points out.

Many companies might see that as a bad thing, but Braydon disagrees. “It’s good for the industry because it will weed out guys who undercut on price and don’t provide good-quality service,” he says. “And when oil prices go back up, those companies will go back to serving the oil industry.”

During the next three to five years, the Jeskes envision slow, evenly paced growth. Another possibility: buying land and building a shop in or near Edmonton. “Right now we rent two different buildings a few blocks apart,” Braydon explains. “But we need time to evaluate and better assess the state of the economy going forward before expanding further into land and equipment.”

Jeske also plans to sell the company to the twins in the next five to eight years, bringing to fruition what he first envisioned back in 2005. “I was hanging in there for my boys,” he says of the company’s turmoil-filled early years. “I knew that if I had a family-run business, I could eliminate all the babysitting and headaches I was dealing with.” ▼

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Vactor Manufacturing has updated the RamJet 850 Series truck jetter, offering an optional aluminum rear shroud with heavy-duty, see-through Lexan windows that keep the hose and components warm

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The JT10 horizontal directional drill from Ditch Witch provides power in a compact form. Powered by an air-cooled, Tier 4 66 hp Deutz diesel engine, it provides 10,000 pounds of pullback force and a standard 16 gpm mud pump. The drill is equipped with an onboard 40-gallon fluid tank, with onboard drill-pipe capacity of 324 feet and quicker cycle times. The JT10 also features an ergonomic operator station with a traversing seat that positions the operator in the center of the pipe rack for easy-to-reach pipe handling and comfort for long hours on the job. **800/654-6481; www.ditchwitch.com** ▼

This Issue's Feature:

VACMASTERS SYSTEM 5000 air-vacuum excavation system built with operators in mind

BY CORY DELLENBACH

The VACMASTERS SYSTEM 5000 is built to haul those heavy loads, but also small enough to fit in tight areas.

"This unit would be for anybody and everybody really," says Trevor Connolly, vice president of VACMASTERS. "Primarily our trucks service the utility industry, the oil and gas industry, telecommunications, as well as environmental and engineering firms among many other fields. It's becoming a very, very popular truck."

It is VACMASTERS' second-largest air-vacuum excavation system, falling in place as the next largest from the popular SYSTEM 4000 and smaller than the largest SYSTEM 6000 unit.

"The 4000 is such a wildly popular unit because it does pack a lot of power, but it sits on a non-CDL chassis, which people like a lot," Connolly says. "There are limitations though of the SYSTEM 4000 in order to keep it under CDL. The 4000 has a 19-inch manway at the rear of the system that opens up and you have to dump out of that. Depending on soil type, that can mean longer dumping times."

The SYSTEM 5000 fixes that limitation. The unit has a standard 550-gallon spoils tank (upgradable to 700 gallons) with hydraulic hoist and full-opening rear door. This full-opening rear door means disposing of spoils is instantaneous. There is also an 85-gallon freshwater tank.

The unit sits on a 33,000 GVW chassis and is powered by a 173 hp six-cylinder turbo diesel John Deere engine. The unit's positive displacement blower



(Tuthill) is capable of vacuuming at 1,400 cfm at 15 inches Hg with a 4-inch hose. The built-in air compressor (Vanair) offers 300 cfm at 220 psi digging power.

"The SYSTEM 5000 also has the larger blower because it can have the larger John Deere engine on it due to the extra GVW on the chassis," Connolly says. "It means faster digging times, faster disposal times and faster completion of the job."

Connolly says all of the company's units are designed around the usefulness for the operators. "With the amount of storage available on the truck, along with all the functioning pieces like the spoils tank and the enclosed compartment that has the engine, compressor and blower in it, operators find our systems extremely simple to use," Connolly says.

The 5000, like other VACMASTERS units, have safety in mind with a built-in LED traffic directional board, two flashing beacons, work lights and a digging shield.

"When somebody orders a truck from us, it shows up at their door ready to rock and roll," Connolly says. "There are, of course, bells and whistles they can put on if they want, but there are none that are needed to make this unit operational and functional."

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Microtrenchers Fill Unique Need

CONTRACTORS INSTALLING FIBER-OPTIC LINES TO HOMES HAVE AN EASY, INEXPENSIVE WAY TO KEEP CUSTOMERS HAPPY

BY MARYBETH MATZEK

For contractors looking to dig a small, shallow trench for fiber-optic lines leading to homes, using traditional digging methods can add time and additional cost to the project.

That's where microtrenchers come in. Microtrenchers have a specialized saw that goes 16 inches, or less, into the ground. "The cut is more shallow and more narrow than what it would be with usual trenching equipment," says Steve Seabolt, product manager for Ditch Witch. "The cut is also completed much faster."

Microtrenchers are primarily used for installing fiber-optic lines to homes. These lines are thinner and do not go as deep as other utilities.

"THESE MACHINES ARE FASTER, QUIETER AND LESS DISRUPTIVE."

Steve Seabolt

"The telecommunications industry is definitely a big driver in using microtrenching," says Seabolt.

Contractors are interested in microtrenchers since they provide another revenue stream. "It opens up a chance to get new jobs," Seabolt says. "These machines are faster, quieter and less disruptive. With a traditional trenching system, you may also need a broom out there to help clean up the spoils."

The cost of fiber line installation is a big selling point for contractors using microtrenchers, as the price-per-home to install a gigabyte internet connection can be excessive using traditional trenching methods.

THE CUTTING TOOL

Saw blades are the key to what makes the microtrencher different than other trenching equipment. The small blades are designed to cut through asphalt or concrete, creating a trench in one quick pass. The smaller blade allows



ABOVE: The MT12 microtrencher is attached to an RT80 tractor from Ditch Witch. Microtrenchers are becoming more common as a way to install fiber-optic lines to homes. RIGHT: The floating saw shroud produces a sharp-edged cut. Blades can be quickly changed out to adapt to the job.



PHOTOS COURTESY OF DITCH WITCH

microtrenchers to trench in the public right-of-way next to curbs or gutters.

"When utility companies have to go in people's yards, they get a lot of complaints, but if you can do it in the right-of-way, they do not need to worry about that," Seabolt says. "Our blade has a tighter cut radius so operators can cut on a 90-degree street corner or go around a cul-de-sac."

"THE TELECOMMUNICATIONS INDUSTRY IS DEFINITELY A BIG DRIVER IN USING MICROTRENCHING."

Steve Seabolt

Ditch Witch's MT12 has a floating saw shroud that follows the ground contour with constant pressure to help clean out the soil, producing a sharper-edged cut. The company offers several blades from standard carbide-tipped to its PDC with diamond embedded carbide. "Our microtrencher also has blades that can be easily changed out depending on the job," he says. "Being able to quickly swap out the blades improves productivity."

Vermeer's microtrencher includes its Yellow Jacket cutter system that offers teeth with reversible edges, says Jason Zylstra, marketing manager for Vermeer. When an edge is worn, contractors can slip the tooth to access a new cutting edge to help lengthen tooth life and increase cutting time.

Vermeer's rotary tooth configurations are compatible for wider cutting specifications and a shark tooth wheel is available for narrow cutting specifications.

ADDING OTHER TOOLS

Microtrenchers include a hydraulic plunge to provide variable depth control, ranging from 6 to 12 inches, eliminating the need for contractors to manually adjust the equipment. They can also be manually tilted 6 degrees to the right or left, allowing contractors to maintain a true vertical trench on uneven surfaces.

Both Vermeer and Ditch Witch designed their microtrenchers to be part of a larger system that includes other equipment such as a tractor and vacuum system. Both have their advantage. With the tractor, the contractor is going to get more horsepower. "The more horsepower you have, the more strength available for the tough jobs," Seabolt says. "The additional horsepower also provides more stability."

Microtrenchers can also be fitted with an attachment that easily removes spoils from the work site. Vermeer's cyclonic high cfm vacuum system is connected to the microtrencher with a 4-inch hose that simultaneously removes the material as it is cut, leaving a clean trench for placement of the fiber. Zylstra says it has a three-stage filtration system and can easily handle dry material.

Once the trench is dug, it is backfilled with a grout compound. ▼



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Pulling Out All the Stops

SLIPLINING PROJECT OVERCOMES TORRENTIAL CHALLENGES TO KEEP A STONE QUARRY AND ASPHALT PLANT IN OPERATION

BY SCOTTIE DAYTON

A collapsing 72-inch corrugated metal pipe jeopardized operations at a stone quarry in Stafford, Virginia. The 800-foot pipe was the main dewatering system for the pit, and the quarry dewatered every other day. Beginning in a 20-foot-deep swale, the pipe also collected stormwater and carried a continuous flow of ground water.

Large rocks and 3- to 5-foot-diameter boulders rolling into the sinkhole compressed the downstream pipe, backing up runoff. Workers who discovered the situation cut back 50 feet into an 85-foot-high sand hill to expose and remove the bad section, but the attempt failed. Opencutting without shoring and frequent rains accelerated erosion.

Fearing erosion would undermine and collapse an asphalt plant 40 feet away on the hill, quarry officials called Aaron Enterprises, a boring, tunneling and directional drilling company in York, Pennsylvania. When engineers arrived, they found the downstream invert missing, the badly rusted walls curled up, and the pipe compressed to 2 feet by the weight of soil and debris. They decided to encase and remove the bad section, then slipline the entire pipe.

"SAND SHIFTED DOWN CONSTANTLY AND UNDERMINED THE OCCASIONAL PINE TREE. FURTHERMORE, EVERYTHING IN THE PIT DRAINED TO THIS AREA, MAKING WORKING CONDITIONS LIKE LIVING IN A FISH BOWL."

Glenn Grove

Glenn Grove, P.E., walked the pipeline, plotting coordinates with a hand-held Trimble global navigation satellite system. "The coordinates enabled us to keep the 10-foot-long, 96-inch tunneling shield centered and on grade," says Grove. "We hit the good section of CMP dead center."

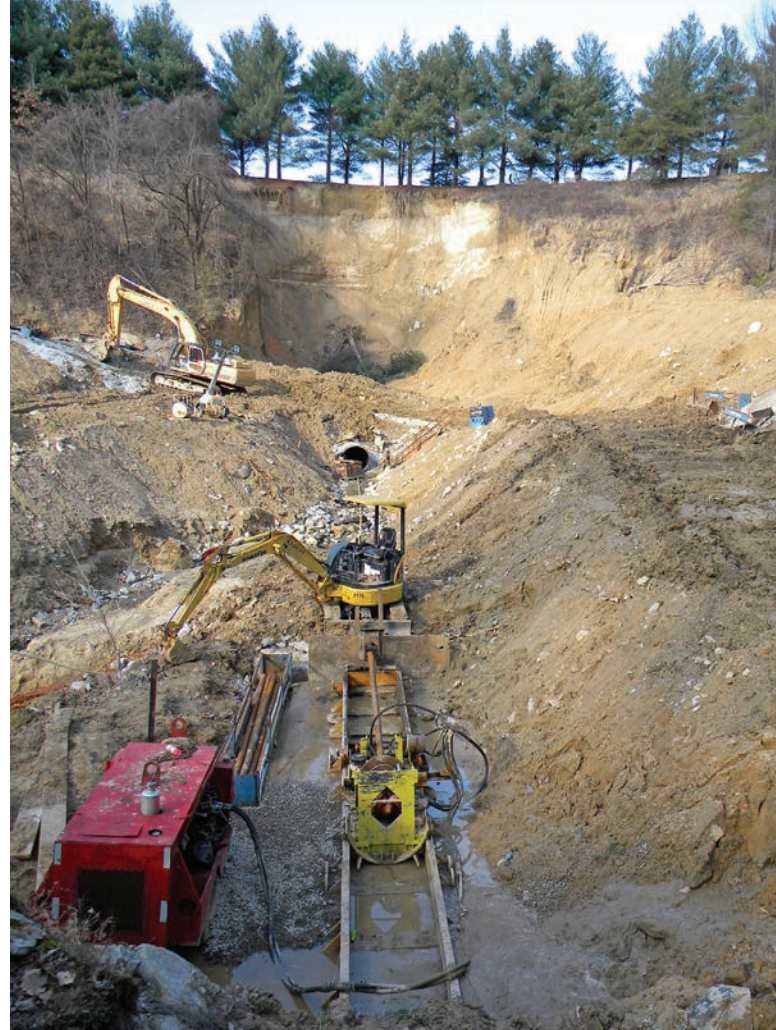
Controlling water was the team's first challenge. When it rained, runoff in the pipe backed up and filled the swale, which took two to three days to drain. The quarry tried to postpone dewatering until weekends to avoid inundating Grove's workers, but the effort wasn't always successful.

"Sand shifted down constantly and undermined the occasional pine tree," says Glenn Grove, superintendent. "Furthermore, everything in the pit drained to this area, making working conditions like living in a fish bowl."

Significant rainfalls twice a week, difficult wooded and overgrown terrain, and steep drop-offs challenged the crew, but the asphalt plant continued to operate throughout the 2 1/2-month rehabilitation.

STAGING STRUCTURES

Before workers arrived, in-house mechanical engineer Robert McDowell,



PHOTOS COURTESY OF GLENN GROVE

PROJECT: Rehabilitate a stormwater pipe to dewater a quarry and prevent the collapse of an asphalt plant

CUSTOMER: Stone quarry, Stafford, Virginia

CONTRACTOR: Aaron Enterprises, York, Pennsylvania

EQUIPMENT: 48-900 auger boring machine
American Augers, Inc., 800/324-4930
www.americanaugers.com

Platform sled
Michael Byrne Mfg., 800/613-7206
www.byrnegroup.com

RESULT: Pipe rehabilitated, quarry dewatering on schedule, asphalt plant secure

DOWN & DIRTY

To reach the downstream work site, crews widened the steep road to accommodate the Case 9050B tracked excavator and other full-size equipment. After opencutting 50 feet back from the compressed pipe, they excavated a 14- by 40-foot-long jacking pit that was overcut several feet and filled in with large stone to allow a constant flow of water.

Behind the jacking pit, workers laid and backfilled 50 feet of 48-inch casing for drainage, and toed in jacking plates backfilled with large stone to support the thrusting forces. "We also sunk two I-beams and set steel resistance plates against them," says Grove. "One plate rested atop the drain casing while the other two reached the bottom of the trench."

The team excavated a pulling pit 150 feet further downstream, then poured a concrete pad reinforced with steel plates to withstand pressures greater than 400,000 pounds from the 48-900 auger boring machine (American Augers)

OPPOSITE PAGE: Looking upstream at the jacking pit with the red hydraulic power unit, platform sled (Michael Byrne), mini-excavator extracting 5-inch drill steels, and the opening of the 66-inch casing behind it. Underneath it all are 48-inch steel casings to drain water.

and platform sled (Michael Byrne Mfg.). They parked a Komatsu mini-excavator on the slab to handle 15-foot-long DD50 directional drill steels.

Meanwhile, another team built a runway from the base of a 35-foot cliff to the upstream pipe, bulldozing trees along 350 feet of rough, steep terrain through the swale. "We needed 800 feet for the fused 63-inch HDPE pipe, and that's just what we had before reaching the mouth of the pipe," says Grove. They also built a headwall there.

MANUAL LABOR

The crew cleared enough rocks and boulders from the open-cut section to set the tunneling shield over the end of the pipe. To advance the shield, workers welded 20-foot sticks of 66-inch, 750-wall (3/4-inch-thick) steel casing to it, then butted a push block against the casing. The boring machine jacked the assembly forward with 200,000 pounds of thrust.

"We welded eight gussets from the first casing to the shield and built a temporary masonry bulkhead between them to fill the annular space," says Grove. Advancing the shield also relieved some pressure on the pipe.

Protected under the shield, workers used pneumatic cutoff saws to slice through the compressed metal, tunneling spades to chip through soil and relieve the edges of the shield as it advanced, and rivet busters to break off pieces of rock in its way. A buggy system removed the material.



The runway for the HDPE pipe begins at the base of the cliff in the background. The fusing machine (McElroy) is 400 feet from the edge. Aaron Enterprises designed the pulling assembly. Eight-inch casings protect the pipe as it crosses a large stone bed and enters the swale.

To handle boulders, the team bored 1.5-inch holes in them with a pneumatic hammer drill, inserted a hydraulic rock splitter, and broke off a slab. "We'd tap the piece, insert an anchor bolt, and extract it with the winch on the boring machine," says Grove. "Splitting boulders went on relentlessly."

After hand-mining 75 feet in 4 1/2 weeks, workers reached the designated good section. "We relied heavily on dayshift foreman Richard Emanuel's construction background and customer relation skills," says Grove. "They were key to the project's success."

FUSING STATION

Quarry personnel helped build a gravel work area for a subcontractor's field technician to fuse the HDPE pipe using a 21,000-pound McElroy 1600 fusing machine with 3,000 psi and a 25 hp motor. "It's the largest butt-fusion machine made, and there are only a few of them," says Grove. *(continued)*


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His team set the 50-foot sticks of HDPE pipe with the Case excavator. Workers wearing welding gloves used putty knives to cut off the 1-inch-thick exterior fusion beads, enabling the pipe to slip through the 64.5-inch-I.D. casings. Fusing a joint took 60 minutes.

Fabrication engineer Jeffrey Smith designed a metal pulling eye and mechanism that attached to the lead pipe. Fabricators Jed Lucabaugh and Danny “Bud” Witmern turned his sketch into eight equidistant metal straps radiating back from the eye. “We cut eight equidistance slits in one end of the lead pipe, bent down the divisions to form a nose, and slipped on the assembly,” says Grove. Four bolts held each strap to the pipe.

After welding a heavy-duty steel line to the eye and fusing the first stick to the lead pipe, the excavator set it on a support with rollers just before the



The 1600 fusing machine is the largest made by McElroy.

edge of the cliff. An excavator at the bottom of the cliff used the line to control the pipe’s descent, then pulled it downstream.

“We stabilized one steep slope with a large stone bed where we cut trees,” says Grove. “To avoid damaging the pipe, we lay 8-inch casings for rollers. We also positioned casings at 50-foot increments through the swale.”

At one point, workers believed the steep slope and weight of the pipe would be more than the excavator could handle. “The pipe was at its teetering point and a man could have pulled it,” says Grove. “We had restraint precautions in place, but thankfully we didn’t need them.”

CRANK UP THE POWER

Smith modified the platform sled to accommodate a beetle motor (Gill Rock Drill Co.) to thread the 5-inch directional drill steels as workers strung them from the pulling pit. The platform pushed the steels more than 1,000 feet upstream through the casing and pipe for attachment to the pulling eye. “It took every ton of thrust the platform had to pull in the 208,000-pound pipe 30 inches at a time,” says Grove.

The pull continued nonstop into the night. When the nose emerged from



The pulling assembly emerges from the 66-inch casing into the spotlight. Once the pull began, it continued nonstop.

“THE PIPE WAS AT ITS TEETERING POINT AND A MAN COULD HAVE PULLED IT. WE HAD RESTRAINT PRECAUTIONS IN PLACE, BUT THANKFULLY WE DIDN’T NEED THEM.”

Glenn Grove



A view from the top of the cliff downstream at the jacking pit and HDPE pipe in its final position.

the casing, workers mucked out and bedded the pipe’s final resting place where the mini-excavator had worked. Then they pulled the pipe into position and backfilled with stone per the quarry’s specifications.

After removing the temporary masonry bulkhead, the crew filled the space with a grout mix from Cardinal Concrete Co. To fill the 1.5-inch-wide annular space between the HDPE pipe and casing, workers tapped the pipe, threaded 2-inch couplers on the downstream end, attached the pump to a 2-inch hose, and pumped in the grout.

“The entire job took 100 cubic yards of product,” Grove says. “It was the last step in restoring the pipe’s structural integrity.” ▼



Unit helps pull new HDPE pipe through collapsed clay main

PROBLEM

A residential customer in Germantown, Tennessee, was experiencing slow drains. Upon investigating, plumbers found extensive root infiltration in the home's main sewer line. They also discovered that the house had an old clay pipe that was collapsing and needed total replacement. Due to the condition of the pipe, relining was not an option. There were also several large, mature trees in the front of the home, coupled with a large landscaped berm forming a natural water barrier. Traditional approaches to trenching and replacing the sewer pipe were not possible.

SOLUTION

The **Spartan UnderTaker** flawlessly pulled the new pipe through the old clay pipe — something that would have been nearly impossible without the proper equipment. In less than three hours, over 90 feet of failing clay sewer main was replaced with a new 4-inch HDPE pipe.

RESULT

The unit helped the homeowner avoid thousands of dollars in landscaping repairs. The home's occupants continued to use their sinks, showers and bathroom as the plumbing techs performed repairs on the line. While this was great for the homeowners, it is also a fit for commercial properties, such as supermarkets, where a complete closure would mean the loss of revenue. 800/435-3866; www.spartantool.com



Prechlorinated pipe bursting provides new water mains without disturbing residents

PROBLEM

Bloomfield Village in Oakland County, Michigan, was ready to replace water mains, but it wanted to do so with minimal interruption of water service to local residents. Space along street rights-of-way was also limited, so officials wanted to limit excavation.

SOLUTION

The village specified prechlorinated pipe bursting replacement in its plans and chose to upgrade the existing mains with 8- and 12-inch HDPE pipe. Pipe bursting specialist Bidigare Contractors was chosen for the job. For bursting operations Bidigare used its own hydraulic pipe bursting machine from the **HammerHead Trenchless Equipment HydroBurst** line. Although the machine was capable of up to 100 tons of pulling force, Bidigare said the average burst required only about 20 tons.

RESULT

Bidigare Contractors replaced between 200 and 500 feet of pipe a day using this method. Residents were never without water service aside from the day the work was done. Bidigare is on schedule for completion of the project in mid-2017. 800/331-6653; www.hammerheadtrenchless.com ▼

Simple Tips Keep Directional Drills, Pulling Accessories Running

NOT CHANGING OUT WORN EQUIPMENT TENDS TO BE A BIG REASON FOR MAJOR REPAIRS NEEDED ON THE MACHINES

BY MARYBETH MATZEK

Directional drills and pulling accessories play small, but vital roles when putting in underground lines. Keeping drills and accessories in good condition requires simple, but regular care, according to industry experts.

“With tooling, the biggest issue is wear,” says Jeff Davis, Ditch Witch product manager for HDD Tooling. “It’s like the wear on a tire. The more you use it, the more wear there is.”

Kayla Breja, utility product marketing specialist with Vermeer, agrees most operators fail to change out worn equipment and try to make it last as long as possible. “Many people will wait until an item has completely failed before changing it out due to the costs associated with that repair,” she says. “Sometimes, contractors feel they can get more time out of the suggested maintenance parts and wait to change them out, but then forget until the part breaks.”

At that point, Breja says the repair may end up costing more than the original maintenance. “Maintenance is something that you can look at as a difference-maker,” she says.

A great piece of advice to follow is to start each day with a walk around the equipment to see if anything is amiss, Davis says. Beyond that, here’s additional advice on maintaining pulling accessories and directional drills:

1 CLEAN PARTS DAILY
Use water to clean the swivel and vise dies daily to keep them in good working condition, Davis says. “There’s no life expectancy for swivels. They work until they lock up or they break,” he says.

As for the vise dies, use a wire brush after the daily washing to maintain a good tooth profile. That will prevent slipping during rod makeups and breakdowns. “Pulling accessories are wear items and need to be maintained after every bore,” Breja says.

2 DON’T SKIP THE GREASE
Davis says swivels and other pieces of equipment last longer when they are greased regularly. For example, if gearbox rollers are not greased properly, they can break off and fall into the rack and pinion, causing damage.

“There’s no specific grease you have to use on equipment. Just keep greasing it until it comes around the joint pieces,” Davis says. “The grease will keep it operating optimally. I preach day-in and day-out about using the proper levels of fluids on equipment.”

3 LOOK FOR WEAR
Monitor equipment daily for abrasive wear. Tooling sub savers, for example, touch the drill rod twice — once when you’re drilling out and when you’re putting the rod back in. If that gets worn, it can damage the box end, which can then damage the new rod’s pin nose.
“Pay special attention to bolts and threads when watching for damage,” Davis says. “You don’t want to use a worn-out bolt since you may end up losing your product in the hole.”

4 DRILL MAINTENANCE
Breja says directional drills have a maintenance schedule set for every 250 running engine hours.
“If you maintain your drill on a regular basis, not only can it help extend the life of your machine, but you have the opportunity to catch



PHOTOGRAPHY BY BRAD STAUFFER

Mid MN Septic Services owner Bob Billiet maintains the beacon assembly on his Ditch Witch JT2020 Mach 1 horizontal directional drill.

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"MAINTENANCE IS SOMETHING THAT YOU CAN LOOK AT AS A DIFFERENCE-MAKER."

Kayla Breja

items before they fail," she says. "More times than not, if maintenance is avoided a machine can fail on a job site, causing frustration, loss of efficiency and extra funds."

5

LOOK BENEATH THE WHEELS

This may sound a bit odd, but Davis says looking at ground conditions are a must in keeping swivels and drill bits in good condition. "If you don't watch it, you can get significant wear," he says.

Davis says contractors need to consider pulling capacity and limits before starting any job. "Make sure that you have enough. If you have a 20,000-pound machine, you need to make sure to have a swivel with the same capacity," he says. ▼

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BY CRAIG MANDLI

Horizontal Directional Drilling

Ditch Witch JT10

The Ditch Witch JT10 horizontal directional drill provides operators with drilling power in a compact, reliable platform. Powered by an air-cooled, Tier 4 66 hp Deutz diesel



engine, it provides operators with an easy-to-service engine for lasting performance. For advanced power and better mudflow, the drill allows operators to efficiently complete larger-diameter reams on smaller job sites with a combination of 10,000 pounds of pullback force, and a standard 16 or optional 20 gpm mud pump. With onboard drill-pipe capacity of 324 feet and quick cycle times, it provides operators with the power to install more pipe in the ground and faster. Its ergonomic operator station has a traversing seat for easy-to-reach pipe handling and an advanced display for complete machine diagnostics, and a smoother and more intuitive drilling experience.

800/654-6481; www.ditchwitch.com

Hunting Trenchless HX-1TRN Quick Connect

The HX-1TRN Quick Connect from Hunting Trenchless requires just a single



360-degree rotation to connect or disconnect transition subs, starter rods, pulling adapters, backreamers and other downhole tools for rigs in the 40,000-pound class and below. Its Quad-Lead design provides a thread pattern with a lead every 90 degrees, so the technician has four places to start threading, as opposed to one with current technology. It takes just one rotation to connect tools, providing the customer with time savings and a safer work environment. It is designed to be compatible with threads on every brand of downhole tool.

337/367-9296; www.hunting-intl.com/trenchless

Melfred Borzall Ogre

The Ogre reamer from Melfred Borzall is built for jobs that have a lot of cobbles, shale, river rock, glacial till and hardpan. It is designed with a slow taper and deep-spiraled fluting to give it maximum mixing and pumping, and to efficiently carry away the cuttings. Angled fluid jets shoot water opposite the reamer rotation to keep carbides clear of debris. The stacked reamer is fabricated so each cutter takes off only a 1/4 inch at a time for smooth, efficient cutting. It's built with carbide blocks to prevent shaft wearing directly in front of the reamer body, has hardfacing on all other wear areas, and curved, hardfaced backup blades for added wear resistance during pushbacks. It is available with built-in swivels and in cutting sizes from 6 to 48 inches, with custom sizes available.

800/558-7500; www.melfredborzall.com



Toro DD2024

The Toro DD2024 horizontal directional drill combines a compact design with 20,000 pounds of pullback force and 2,400 ft-lbs of rotary torque. Powered by a 74 hp Cummins B3.3 turbocharged diesel engine, it delivers performance in all operating conditions. Its quad rack-and-pinion carrier design spreads the load evenly for smooth and stable movement. The onboard mud

pump flows up to 30 gpm, and the floating carriage has two speeds, including a 120-feet-per-minute fast mode. It has a footprint of 52 inches wide, 207 inches long, and a height of 74 inches, with forward-mounted track drive motors with planetary gear reduction to provide traction in all types of ground conditions. The rear dual stabilizers can be independently adjusted to safely secure the unit during operation. For operator safety, it uses a remote exit side lockout and a Zap Alert system to notify the operator in the event of an electric line strike.

800/344-8676; www.toro.com



Mud Recyclers

Mud Technology MCT 800

The MCT 800 from Mud Technology offers mixing, cleaning and recycling of solids. It is a fully self-contained, closed-loop system with a 5,000-gallon, three-section tank, with more than 800 gpm of cleaning capacity. The cleaning system includes high G-force linear shakers, two three-panel scalping shakers, a three-panel desander shaker, a three-panel desilter shaker, over 110 square feet of cleaning area, two 10-inch hydrocyclones with a 74-micron cut, and 12.5-inch hydrocyclones with a 20-micron cut. It is powered by a 480-volt, 150-kilowatt, three-phase diesel generator with safety shutdowns on the engine and generator. Independent on/off switches control each function. A remote on/off switch allows the driller to control supercharge. High-visibility night work lights are included.

903/675-3240; www.mud-tech.com



Mud/Slurry Pumps

Dragon Products mobile water-transfer pump

Mobile water-transfer pumps from Dragon Products have Redi-Prime vacuum-assisted priming, with a run-dry mechanical seal, powered by a John Deere 6090 Tier 3 325 hp engine with 160-gallon-capacity integral fuel tanks. They have a maximum flow of 4,900 gpm with a 368-foot total dynamic head. The units have DOT lights and tandem torsion-ride axles, stabilizer jacks and electric brakes.

866/914-8198; www.dragonproductsllc.com



Pipe Bursting

Pow-r Mole Sales Model PD-33M

The Model PD-33M pipe bursting machine from Pow-r Mole Sales is designed to replace existing underground pipes 2 to 6 inches in diameter. Its nonslip cylinder-activated jaws prevent cable damage while providing 60,000 pounds of pulling force. It offers a cost-effective alternative to open-cut excavation, which reduces customer disruption and increases company profits. The process replaces the existing pipe with a fused HDPE pipe, which eliminates all joints, and allows the operator to pull through bends such as 45-degree fittings. This system is modular, and can be easily disassembled and reassembled for manhole and basement applications. With a compact design and very small footprint of only 20 by 20 inches, this unit can be used in tight locations.

800/344-6653; www.powrmole.com



RODDIE lateral pipe bursting machine

The lightweight lateral pipe bursting machine from RODDIE slides apart into two components of 50 and 60 pounds that can be lowered and reassembled by hand in the excavated pulling pit. In most cases this machine is powered and operated by a mini-excavator or bobcat tractor. It is capable of 30 to 50 tons of pulling force and can be used on 4-, 6- and 8-inch sewer laterals, but can also replace 1- to 4-inch water services.

888/406-3821; www.pipeburstingamerica.com



Source One Environmental SilverBack XL

The SilverBack XL flexible coupling from Source One Environmental is specifically designed for pipe bursting and ramming applications. Connecting clay to clay and clay to plastic pipe, the coupling sizes range from 4 to 12 inches, with custom options available. Its extra-long length, flexible PVC material and heavy-duty shear ring allows the coupling to fix pipe alignment problems while resisting heavy earth loads and shear forces. It will protect the pipe from thermal expansion and contraction, and unstable ground. Contractors can easily connect the two pipes together during the bursting process and feel confident that the connection only needs to be completed once.

877/412-4740; www.s1eonline.com



Pipe Fusion

McElroy Acrobat 250

The Acrobat 250 fusion machine from McElroy Manufacturing has a lighter-weight hydraulic power unit that is easier to move around the job site and consumes less power than previous models. A heater and guide rod latching system eliminate the need to manually hold the heater in place during overhead fusions, reducing operator fatigue. An ergonomic handlebar design makes it easy to use from all angles, even overhead. Designed for fusing 2- to 10-inch polypropylene pipe, it enables operators to fuse pipe in the confines of the walls, ceilings and floors.

918/836-8611; www.mcelroy.com/fusion



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Straightline Professional Drilling Solutions Crusher

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SAFETY AND TRAINING NEED TO BECOME A PRIORITY IN THE INDUSTRY

BY JOHN F. HENDERSHOT

It has only been six short years since I made the transition from banking into the construction world. My thoughts prior to beginning the transition were that business is business, and throughout the marketplace we either have a product or a service to offer, and we do it in a fashion that is efficient, customer focused and within compliance. What I did not expect when I made my career switch was how much workplace safety would begin to weigh heavily on me.

Never had I wrestled with how to ensure safe practices and environments for my team members before, and it was quite foreign to me. It wasn't foreign in a way that I could not comprehend what the actual practices were, but how numb industry professionals were to conducting safe work practices.

Some of the things I witnessed, and still witness, make my stomach do backflips, because they are blatantly irresponsible. Before we invested in a safety manager, which was probably the best decision that we have ever made, I would often say, "accidents are going to happen when you are doing everything right, but we will have a better probability of it not happening if we are well prepared and trained."

The longer I have been a part of the underground construction industry, the more confident and outspoken I have become in being an advocate for safety training, and uniform core competencies industrywide. To be honest, I am not a huge regulation person, but I think something must be done to align contractors in a fashion that everyone operates safely, and within the same parameters.

WAGING WAR

For too long we have waged a war within the marketplace that has put highly skilled, well-trained and well-compensated employee-focused companies with companies that offer little to no training other than a demonstration from the manufacturer or salesperson who sold the equipment. Not to mention little to no safety or procedural training.

The war still battles on, because the main source of measurement for companies, other than within the pipeline industry, is where the price point falls. Safety may be given lip service, but rarely, if ever, are any credentials of qualification, certifications or competencies.

BASIC TRAINING

How is it that within an industry that can be immensely dangerous to both our crews as well as the community at large is this not taken more seriously? I find it odd that a pipeline contractor working in the same right-of-way as a contractor boring in fiber optics has a whole dossier pack full of training, certifications and procedures, while the fiber contractor has probably never even had a basic first aid class, let alone any sort of procedural or certification training.

Does this strike anyone else as odd? It's not like the pipeline contractor is taking on any more risk than the fiber contractor. They both work in the same

areas, with the same dangers. So why is it that both contractors are not required to have uniform competencies that extend to all contractors working in like environments?

It is my opinion, as contractors, industry professionals, locators, utility, pipeline, and telecommunications



John F. Hendershot

TO BE HONEST, I AM NOT A HUGE REGULATION PERSON, BUT I THINK **SOMETHING MUST BE DONE TO ALIGN CONTRACTORS IN A FASHION THAT EVERYONE OPERATES SAFELY, AND WITHIN THE SAME PARAMETERS.**

companies, we come together and jointly work toward a remedy. This doesn't need to be a law, but guidelines would be highly encouraged and be made public so customers can see what contractors are doing.

I believe the conduit for this to happen can be initiated through organizations like the Great Lakes Trenchless Association. If you are interested in speaking with me or joining me on this mission, please email me at jfhendershot@digitinc.net.

ABOUT THE AUTHOR

John F. Hendershot is the CEO of DIG-IT INC., a utility and telecommunications contracting company based in Hastings, Michigan. He is also the president of the Great Lakes Trenchless Association. For more information on DIG-IT INC. go to www.digitinc.net, and for more information on the Great Lakes Trenchless Association go to www.greatlakestrenchless.com. ▼

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DON'T LET PRICE OBJECTIONS BRING YOUR SALES PROPOSAL TO A GRINDING HALT

BY JUDY KNEISZEL

Contractors, like parents, can be undone if they constantly cave in to whining. If parents give in every time a child begs for candy, mom and dad will pay for it in dental bills. A contractor who gives in every time a potential customer complains about price eventually pays for it with diminished profit margins. Saying yes is easier in the moment, but in the long run it leads to decay.

You can employ several tactics to avoid caving in when a potential customer protests that your price is too high and still win the contract. Some require you to look at your long game and overall pricing strategy. Others are simple strategies you can try in the middle of your pitch to try and get the potential customer to shift his or her thinking about price.

1. Know exactly what the customer is objecting to. Sometimes people abruptly cut off a sales pitch early by announcing that the price is simply too high. But if someone has been interested enough to listen to an entire proposal and an objection to the price is only thrown out at the end, you need to determine what the customer means when he or she says your price is too high.

It could mean that the price you are quoting is literally higher than they can afford right now. Financing or an alternate payment structure could be proposed as a solution.

If the customer believes that the same service is available for less from a different provider, try to determine if they are comparing apples to apples. Point out the advantages of your proposal.

Calling out your proposed price as too high could also mean that the service you are offering is not worth the price to *them*. The customer may say your price is too high but what they mean is that it's not too high for what it is, but for what they *need*. Start over and this time listen to the customer, then present an accurate price for what is truly needed, rather than what you'd like to sell them.

2. Get out the calculator. Don't spend a lot of time discussing the total price. Rather than focus on the price of a six-month contract, break it down by the month, week and day to show the cost is reasonable. Explain how the daily cost may be less than the price of a fast-food meal or a good cup of coffee, and ask if it isn't worth that small amount to have the job done correctly. Take the price they had in mind or said they could afford and stress the small difference between your price and theirs.

3. Show your hand. It's hard to determine the true price of anything these days. Most retailers offer merchandise at 25 percent off so frequently customers start to wonder if anyone ever pays regular price for anything anymore.



So it's no wonder a customer's gut reaction is to feel ripped off when you give them a number. Explain how you arrived at the price. Have a pricing structure in black and white that you can show the customer and make it a company policy that the price is the price. Show the customer how difficult it was to get the number as low as you did. Explain how long your rates have been in effect even though costs have gone up. Seeing how slim your margins are might make them feel camaraderie with you. If the price is the price for every cus-

INVESTOR WARREN BUFFETT FAMOUSLY SAID, "PRICE IS WHAT YOU PAY, VALUE IS WHAT YOU GET." THE KEY TO WINNING OVER A COST-CONSCIOUS CUSTOMER IS GETTING HIM OR HER TO APPRECIATE THE VALUE OF THE SERVICE YOU OFFER, WHILE ACCEPTING THE PRICE AS FAIR.

tomers, they'll know what their competitors are paying and may be less likely to balk. Most people just want to feel like they are being treated fairly.

4. Don't take it personally. It's easy to become defensive when a customer rejects the price you've quoted. But don't feel like they are questioning your integrity or your intelligence. They are just doing what today's "buyer beware" culture has conditioned them to do. They are looking to protect their business interests just like you are. So try to put yourself in their place and reiterate the benefits of what you are proposing. Price objection is your invitation to further educate a customer about the quality of your products and services.

5. Act like you've already closed the deal. Even if the customer hasn't signed on the dotted line, talk to them like they have. Say, "When we arrive at your location" or "We'll be working this long at your site." The customer is less likely to say the price is too high if it seems like you've already struck a deal.

In the end, value is the crucial selling point when dealing with a customer who rebukes your price.

Investor Warren Buffett famously said, "Price is what you pay, value is what you get." The key to winning over a cost-conscious customer is getting him or her to appreciate the *value* of the service you offer, while accepting the price as fair. ▼

Build a Barrier to Accidents

IMPROVING SAFETY AND PERFORMANCE IS EASY WITH A FEW SIMPLE TOOLS EVERYONE IN YOUR COMPANY CAN EMPLOY

BY DOUG DAY

Accidents most often involve what can be called a “confluence of circumstances.” It’s also known as the domino theory, developed by W.H. Heinrich, a pioneer in the area of industrial safety. His 1930s work has been updated by others, leading to such things as the “multiple causation theory,” MORT (Management Oversight and Risk Tree), and the Canadian Centre for Occupational Health and Safety accident causation model.

The bottom line is that there are normally several causes when things go wrong. The more barriers you put up, the less likely something bad is going to happen.

These human performance tools are designed to prevent accidents and errors that can impact safety or quality. These tools are stated in different ways by different industries, but here is one example.

Training and qualifications

Are workers properly trained on equipment such as jetters and backhoes? They also need to be qualified for confined-space entry, fall protection, etc. You also need to train them on processes and procedures so everyone is doing work in the same way.

Prejob briefing

A good briefing (tailgate or tailboard) may last a few minutes or much longer depending on the complexity of a job. It should identify hazards, an OSHA requirement, but can also be used to ensure that the job gets done correctly the first time.

Procedure compliance

We all get hurried or distracted now and then. Checklists, even for mundane tasks, can help workers avoid missing steps that could lead to accidents or mistakes. They are especially needed in complicated duties, situations in which errors are likely and when completing rarely performed tasks.

Coaching

Leaders need to model these behaviors, reinforce them and correct those who are not using them appropriately. Coaching can also be done between peers to help improve overall team performance.

Operating experience

Using examples of bad (or good) experiences serves as a learning tool. They don’t necessarily have to come from your own company. You can use examples from other firms or even other industries to help illustrate proper behaviors. Having people tell their own stories can send a powerful message.

Self-checking (STAR: Stop – Think – Act – Review)

We are our best first line of defense. Instilling STAR as a discipline can help workers identify traps that could compromise safety or quality and help people stay focused on the job.

Peer-checking

Employees need to feel comfortable checking on each other, as well. If someone isn’t wearing their hard hat or safety glasses, everyone should feel empowered to correct them.

Stop when unsure

If it doesn’t feel right, stop. It is just as important to support workers who do this as it is to train them on it.

Questioning attitude

“Why” can be a powerful question, and it’s one we’ve been asking since we learned to talk.

Situational awareness

Maybe you’ve had trouble cleaning a system in the past. Being aware of risks and potential problems goes a long way in preventing them from affecting the work.

Clear communication

Three-way communications, phonetic alphabet, repeat backs; these are methods of making sure we understand each other and know what is about to happen. No sense working on a system on Beacher Street when you were supposed to be at Beeker Street.

Post-job critique

How did it go? Did you encounter unexpected problems or conditions, or learn anything you can share with others? Maybe the job gave someone an idea for improving a process. Taking a few minutes to review the job can save hours later on.

With a little training and practice, human performance and error reduction tools can help everyone work safer and smarter, reducing the chance of injury and preventing rework that can cost you money. ▼

WE ALL GET HURRIED OR DISTRACTED NOW AND THEN. **CHECKLISTS, EVEN FOR MUNDANE TASKS, CAN HELP WORKERS AVOID MISSING STEPS THAT COULD LEAD TO ACCIDENTS OR MISTAKES.**

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CALENDAR

April 6-7

National Heavy Equipment Show, International Centre, Mississauga, Ontario. Visit www.nhes.ca

April 9-13

NASTT's No-Dig Show, Gaylord National Hotel & Convention Center, Washington, D.C. Visit www.nastt.org

May 16-18

National Utility Contractors Association (NUCA) Washington Summit, Embassy Suites, Washington, D.C. Visit www.nuca.com/summit

June 4-7

Electric Utility Fleet Managers Conference (EUFMC), Williamsburg Lodge and Conference Center, Williamsburg, Virginia. Visit www.eufmc.com

June 4-7

Rapid Excavation and Tunneling Conference (RETC), Hyatt Grand Manchester, San Diego. Visit www.retc.org

June 9-15

World Tunnel Congress (WTC), Grieghallen, Bergen, Norway. Visit www.wtc2017.com

June 19-22

ASSE Professional Development Conference & Exposition, Colorado Convention Center, Denver. Visit safety.asse.org

Sept. 30 - Oct. 4

90th Technical Exhibition and Conference (WEFTEC), McCormick Place North & South, Chicago. Visit www.weftec.org

Oct. 3-5

International Construction & Utility Equipment Exposition (ICUEE), Kentucky Exposition Center, Louisville, Kentucky. Visit www.icuee.com

Oct. 25-27

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

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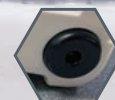
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