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New Hampshire directional drilling contractor keeps operations small, but isn't afraid to take on the big jobs.

By Cory Dellenbach

ON THE COVER:

Henniker Directional Drilling's David Bumford (right) and general contractor David Tierney guide a 12-inch water main into position on a job site where Henniker was installing a water main under Route 151 in New Hampshire. The company, located in Henniker, New Hampshire, has seven employees and provides services throughout the state. (Photography by Elizabeth Frantz)

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Looking for Opportunities

**NEVER BE AFRAID TO TRY SOMETHING NEW,
BUT MAKE SURE YOU THINK ABOUT IT BEFORE YOU DO**

BY CORY DELLENBACH, EDITOR

Sometimes you just know when the time is right to jump on a business opportunity and run with it. It can be risky, but can also turn out to be rewarding.

The owners of both companies featured in this issue of *Dig Different* each saw an opportunity and took it. The opportunities have paid off.

Andy Mayer grew up around pipe bursting and Swagelining in England. When he moved to the United States in the 1990s he noticed there wasn't a lot of pipe bursting taking place. He took the opportunity and started Murphy Pipeline Contractors in 1999. Business was sporadic at first and it required a lot of education to teach potential customers what pipe bursting was, but eventually the company began to grow.

"With my knowledge and background, it quickly turned into a no-brainer," Mayer says. "There was an opportunity for trenchless technologies in the U.S."

Today, the company based in Jacksonville, Florida, is 60 employees strong and does pipe bursting, Swagelining and sliplining jobs throughout the nation.

Jeff Martin and Rick Patenaude, owners of Henniker Directional Drilling in Henniker, New Hampshire, also saw an opportunity when starting their business in 2001. Patenaude had experience in drilling, owning a water well drilling company, and Martin was familiar with the directional drilling equipment. There weren't many companies in their region doing directional drilling yet.

The two have kept their business small — just seven employees today — but the amount of work they've done each year has grown substantially, according to Martin.

WHEN TO JUMP ON AN OPPORTUNITY?

If you are thinking of jumping on an opportunity like expanding services or starting a business, here are five simple questions to ask yourself.

How does this opportunity benefit you?

Usually the answer is straightforward and comes with a dollar sign in front of it. That's a must — being properly compensated for your work, product or service is a minimum requirement. But what else is good about it? Does it come at a slow time in your business? Do you need new business to stay afloat? Will it give you a foothold in a new market?

What are the downsides?

Every opportunity comes with some negatives, so what are the negatives here? Some that you'll have to look at include meeting deadlines, learning new techniques and having to hire employees. Take time to look at all the cons of the opportunity.

What's the best possible outcome from this opportunity?

On the other side, look at what the best outcomes could be. You could be the only business of its type in your area and pull in all the business. You could develop new customers or lock in one big customer. Dream big for a moment about where this opportunity could take you if everything goes really well. If that end result isn't something you want, then maybe this opportunity makes no sense for you after all.

Can you take on this opportunity and still fulfill existing obligations?

If the new opportunity will strain your resources so that you can't keep up with existing commitments, you're better off passing it by or finding another solution. With Henniker Directional Drilling, Martin left his job to start the company while Patenaude stayed with his water drilling company. It enabled Martin to run the new business without any outside obligations.

How does this opportunity fit into your long-term goals?

This is one of the most important questions to ask yourself. You have a plan, a vision and goals, but how does this opportunity fit into that? Will it move you in the direction you desire? Or is it a detour? If the latter, it may be better to pass it by.

Don't be afraid to look at all opportunities that you might come across. You never know what might happen.

STAY IN TOUCH

Let me know what opportunities you've explored with your company. Email me at editor@digdifferent.com or call me at 800/257-7222.

Enjoy this issue! ▼



DREAM BIG FOR A MOMENT ABOUT WHERE THIS OPPORTUNITY COULD TAKE YOU IF EVERYTHING GOES REALLY WELL. IF THAT END RESULT ISN'T SOMETHING YOU WANT, THEN **MAYBE THIS OPPORTUNITY MAKES NO SENSE FOR YOU AFTER ALL.**

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STRUGGLING WITH SOIL

Different Soil Types Require Different Methods

Sometimes soil can't only be difficult to dig in, it can also be tough to locate utilities in. Private utility locating companies use different methods and tools for searching for those utilities in different kinds of soils.
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WORKING ON A TOUGH JOB?

Are you directional drilling, trenching, hydroexcavating or air excavating on a tough job or just finished up one? We want to hear about those tough jobs your company has tackled. Email us at editor@digdifferent.com with some information about the job and we'll get in touch with you to highlight it in our magazine.



GETTING YOUR MONEY!

Making Sure You Get Paid

Sometimes getting what is owed to you is one of the toughest parts of the job, and it shouldn't be. Carol Frischer, a billing/collections manager, gives contractors tips on how to make sure you get paid while you are on a job or right after.
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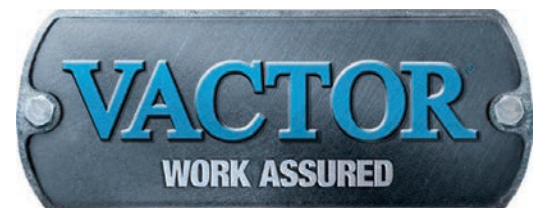
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Finding a Solution

SKANSKA USA USES THE BROKK 400 TO PROVIDE RELIEF TO WASHINGTON DC NEIGHBORHOODS IN CONSTRUCTION OF THE FIRST STREET TUNNEL

BY BRITTANY LUTHI

Torrential rain. Sewage-filled streets. Submerged vehicles. Flooding as much as three times in a matter of two weeks. These are some of the issues that affected two low-lying neighborhoods in Washington, D.C. And now, after nearly a century of flooding, the neighborhoods of Bloomingdale and LeDroit Park can see the light at the end of the tunnel — the First Street Tunnel.

The First Street Tunnel, a \$157 million project, began construction in late 2013. It's a portion of the District of Columbia Water and Sewer Authority's — also known as DC Water — Clean Rivers Project. The goal is to reduce combined sewer overflows, improve water quality in local rivers and support flood protection in the District of Columbia.

Once completed, the tunnel will stretch more than 2,700 feet — slightly longer than the Lincoln Memorial Reflecting Pool. Its 21-foot-diameter tunnel will store as much as 8 million gallons of stormwater — or about 12 Olympic-sized swimming pools. The city will store the water inside the tunnel and pump it into the sewer system once the storms subside to help prevent sewer backups, overland flooding and water pollution.

SORTING THROUGH OPTIONS

DC Water needed a contractor that could finish the project quickly and efficiently to save the communities of Bloomingdale and LeDroit Park from further flooding. In October 2013, Skanska USA, one of the largest construction and development contractors in the world, won the First Street Tunnel design-build contract as a joint venture with Jay Dee Contractors.

The tunnel project is in the center of one of Washington, D.C.'s long-standing neighborhoods, loaded with charming townhomes and narrow tree-lined streets — resulting in the need for strict working hours for the assigned contractor.

"The project required compact, versatile equipment to enable us to construct the shafts efficiently and safely," says Scott Hoffman, First Street Tunnel project manager for Skanska-Jay Dee.



Once completed, the First Street Tunnel will stretch more than 2,700 feet, and its 21-foot-diameter tunnel can store as much as 8 million gallons of stormwater — or as much as 12 Olympic-sized swimming pools.

DOWN & DIRTY

PROJECT: Construct shafts for the First Street Tunnel portion of the Clean Rivers Project in Washington, D.C.

CUSTOMER: District of Columbia Water and Sewer Authority

CONTRACTOR: Skanska-Jay Dee joint venture

EQUIPMENT: Remote-controlled demolition robot from Brokk

RESULTS: Completion of the shaft-digging phase of the project and the First Street Tunnel will be finished this year

In the midst of excavating the first neighborhood shaft — one of three shafts that would convey rainwater into the new tunnel — Skanska-Jay Dee began searching for alternative excavation options. Skanska-Jay Dee's first method, an excavator, was sufficient, but its bulky size made it difficult to maneuver inside the shaft. And its diesel exhaust was a concern in the tight quarters.

(continued)

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The Brokk 400 has a 23-foot reach and 360-degree turning radius. It achieved the desired radius — more than 13 feet within each shaft — in a fraction of the time of alternative methods.

GET READY TO BROKK

Armed and ready with Brokk by its side, Skanska-Jay Dee continued working on the First Street Tunnel. To start, Skanska-Jay Dee excavated the remaining two shafts. The shafts required additional support, which they achieved through a ground freezing method. Skanska-Jay Dee worked with Moretrench, a geotechnical contractor out of Rockaway, New Jersey, to deploy a frozen ground system with three chiller units. Moretrench accomplished this by circulating chilled liquid brine through pre-installed vertical piping around each shaft. This process effectively froze the soil down to about 160 feet and converted the soil's viscosity to a solid mass ready for excavation.

Using the Brokk machine provided maximum efficiency, greatly reducing the duration of time on the job. The Brokk only requires one operator,

allowing additional crew members to work on other fundamental tasks.

After the soil was frozen, an operator equipped Brokk's three-part arm with an Atlas Copco SB 552 breaker, and a crane slowly lowered the Brokk 400 machine into the shaft — working vertically — chipping away frozen clay-sand material. The crew swiftly removed 2,500 cubic yards of material out of the shafts, later hauling it to backfill quarries.

“THE PROJECT REQUIRED COMPACT, VERSATILE EQUIPMENT TO ENABLE US TO CONSTRUCT THE SHAFTS EFFICIENTLY AND SAFELY.”

Scott Hoffman

Brokk's team did more than bring the equipment; they supported Skanska-Jay Dee's crew with equipment training as well, such as finding the most precise methods and tools to complete the project efficiently.

Beyond the Brokk 400's flexibility and strength, its electric drive eliminated exposure to exhaust fumes in the remaining shafts. While the excavator was equipped with scrubbers to reduce exposure to fumes in the first shaft, the Brokk machine is powered by an electric motor, providing added safety to operators in the remaining shafts.

“The air is cold and heavy, which makes it difficult for the fumes to escape,” says August Scalici, Brokk field sales application expert. “The Brokk's electric drive saves their crew members from harmful exposure to toxic fumes.”

KEEP TUNNELING ON

In less than three months, Skanska-Jay Dee completed the shaft-digging phase of the project, from ground freezing to excavation.

“With the shaft excavation complete, we anticipate the First Street Tunnel construction to be finished in 2016,” Hoffman says. ▼



A crane slowly lowers the Brokk 400 machine into the shaft.

Skanska-Jay Dee was familiar with Brokk machines and scheduled a demonstration of an 11,000-pound remote-controlled Brokk 400, which can excavate a 26.5-foot-diameter shaft at twice the production rate as a conventional excavator.

The Brokk 400 is compact. At only 14 feet long and 5 feet wide, it is small enough to move freely inside the relatively cramped space of the shaft, while still delivering exceptional maneuverability and power. Beyond maneuverability, the equipment can handle a breaker that generates nearly 775 ft-lbs of breaking force. This was ideal for Skanska-Jay Dee, as it allowed them to break through extremely hard material, such as frozen ground. Its 23-foot reach and 360-degree turning radius provided unmatched flexibility and precision in each shaft. It achieved the desired radius — more than 13 feet in each shaft — in a fraction of the time of alternative methods.

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Planning for Success

CONSTRUCTION PROJECTS, EVEN TRENCHLESS METHODS, CAN COME WITH RISKS. LEARN HOW TO IDENTIFY THOSE RISKS AND WHAT TO DO NEXT.

BY MATT TIMBERLAKE

Trenchless technologies include a number of methods and materials that can install a new utility where one does not currently exist or that can rehabilitate an existing utility. Trenchless is proven and has been a standard for many pipeline installation and rehabilitation programs throughout the world for nearly 50 years; however the technology continues to grow, expand and be more openly accepted.

One of the critical components with any type of construction is the risk management plan; this is also true for trenchless. Risk management means something different to the owner, the consultant or design engineer, and the contractor. I am a contractor who has been involved with trenchless rehabilitation and installation for more than 20 years and will share some basic strategies that may help you.

The first step to any risk management plan is to have a project management team or estimator who can clearly identify the risks associated with a project. These risks can be technical risks associated with the approach, risk due to unknown conditions, contract risk, and financial risks. A savvy team can identify these and begin to develop strategies to deal with them individually.

TAKING THE RIGHT APPROACH

For a pipe bursting project, for example, a risk associated with the approach could be where a project is specified as pneumatic pipe bursting and the project team feels that static pipe bursting would be a better approach. Often an owner or consultant will specify the means and methods that can then transfer some of the risk associated with the subsequent failure of that approach to them or the owner.

UNKNOWN CONDITIONS

Risk due to unknown conditions on a CIPP project could be where current CCTV video of the segments to be lined is not supplied with the project documents prior to the bid. This adds additional risk to the contractor, as you now do not know the current conditions of the pipe and how much risk there is in attempting to line it.

CONTRACT RISK

Contract risk could be language associated with indemnification or damages being written in a way that the contractor is responsible for the actions of others, even their negligent actions. Someone well versed in contract law, either internally or through legal counsel, should review these contracts thoroughly before you consider bidding.

FINANCIAL RISK

Financial risks, like retainage and “pay when paid,” or even worse “pay if paid,” can add delays to receiving payment and often tie up critical operating cash flow or force you to use your operating line of credit. This reduces the net

profit on a project and should be carefully reviewed and considered prior to bidding a project.

WHAT TO DO NEXT?

Once risks are identified, strategies can begin to be developed that can either avoid, transfer or mitigate those individual risks.



Matt Timberlake

THE FIRST STEP TO ANY RISK MANAGEMENT PLAN IS TO HAVE A PROJECT MANAGEMENT TEAM OR ESTIMATOR WHO CAN CLEARLY IDENTIFY THE RISKS ASSOCIATED WITH A PROJECT.

Avoidance is taking action to eliminate the risk. Transferring the risk is through contract language allocating the risk to another party. Mitigation in construction is the most common risk strategy where you either reduce the likelihood or minimize the consequence of the risk.

Trenchless technologies like CIPP, pipe bursting, pipe ramming, HDD, piercing and others are proven methods that can help a utility save money, reduce impact and meet their long-term goals. However, like any form of construction, they do not come without risk.

By having a strong risk management program, you can help meet or exceed the goals of the project while reducing losses.

ABOUT THE AUTHOR

Matt Timberlake is the president of Ted Berry Co., located in Livermore, Maine. ▼

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10. In cab back up camera for rear view





FAMILY ATMOSPHERE

NEW HAMPSHIRE DIRECTIONAL DRILLING CONTRACTOR KEEPS OPERATIONS SMALL, BUT ISN'T AFRAID TO TAKE ON THE BIG JOBS

STORY: CORY DELLENBACH PHOTOS: ELIZABETH FRANTZ

A strong family-type atmosphere at Henniker Directional Drilling has allowed the company to maintain low employee turnover and become a successful contractor in the New Hampshire region.

"We've stayed small; we're only seven people in the company between the office and field employees," says Jeff Martin, president and co-owner with the company, based in Henniker, New Hampshire. "My wife and I both left our jobs to start this company and that was one of our main goals, to have a good place to work for our employees."

Martin and co-owner Rick Patenaude started the company in 2001. Patenaude had experience in drilling already, owning a water well drilling company. The company started with just four employees — Martin, his wife Danielle, Patenaude and Charlie Hunt.

"The amount of work we're doing each year has grown substantially," Martin says. "And the projects have become more profitable as the years have gone on."

A SLOW START

Martin was working for an equipment manufacturing company and Patenaude was one of his customers before the two started Henniker Directional Drilling. "Rick and I developed a friendship over the years, and eventually it was time to move on from where I was," Martin says. "Between the two of us, we decided this was something we wanted to try. He had a water well drilling company, so it just seemed like a good offshoot from typical well drilling to directional drilling."

When the two started out, the industry was in a down-



"IT'S A VERY HARD JOB AND THE GUYS WORK VERY, VERY HARD."

Jeff Martin

turn and not many underground utilities were being placed. "The first few years were pretty slow," Martin says. "Just the four of us could handle it."

Business picked up as more underground utilities started to come in and the company has grown to the point of being busy year-round. The company typically serves as a subcontractor to a general contractor.

"We're pretty much strictly drilling and do very little excavation," Martin says. "There are certain areas of projects that need to be drilled, whether it's across a river, an intersection or a road that they don't want to disturb. We'll go in and drill just that one section and install the pipe in those sections."

With the exception of gas line work, Henniker crews do their own pipe fusion. "Most of what we put in is high-density polyethylene pipe."

Henniker uses three main front-line drills — all Vermeer — that run from 16,000 to 100,000 pounds. For its fluid mixing and vacuum systems, the company uses Ditch Witch equipment. For locating the drill bits, the company uses transmitters from Digital Control.

"We have the equipment to run two full-time crews if we need to," Martin says. "We just haven't grown on the people side yet."

"Most of the time we're one crew, but we do split up into two from time to time. At times I'll go out with one of the guys or by myself to do a little job here or there if we have to. I've also got a couple of other local drillers that have helped us when we get too busy."

KEEPING IT FAMILY

Over the years, Henniker Directional Drilling has expanded to seven employees, but the owners don't want to see the company grow too big and lose the family atmosphere they strive for. "We try and treat the employees the best that we know how," Martin says. "It's certainly more than money."

Henniker Directional Drilling's Fred Currier helps move a pipe sleeve into position on a job site in Greenland, New Hampshire. Henniker was there to help install a water main underneath Route 151. The company based in Henniker, New Hampshire, primarily provides directional drilling work throughout its service area.



Charlie Hunt, drilling foreman, moves the Vermeer D36x50 Series II Navigator into position at the job site.

Henniker Directional Drilling Henniker, New Hampshire

OWNERS: Jeff Martin and Rick Patenaude

EMPLOYEES: 7

SERVICE AREA: New Hampshire, Massachusetts and parts of Maine and Vermont

SERVICES OFFERED: Directional drilling

WEBSITE: www.hddbore.com

While at a fundraiser in December 2015, Henniker owners bid on a fishing trip with Dave Marciano, the captain of the fishing boat *Hard Merchandise*, from the TV show *Wicked Tuna* on the National Geographic channel. The company won and gave the staff the trip as a Christmas gift.

Martin says he thanks his employees for the work they do. "It's a very hard job and the guys work very, very hard," he says. "I'm sure I'm not the easiest person to work for, but I think we're very fair and we try to do the best we can for them."

Besides Martin's wife, the staff includes Eric Butler, office assistant, and four workers in the field — Hunt (foreman and driller), Bill Martin (drill crew), David Bumford (drill crew) and Fred Currier (drill crew). Having a strong relationship with employees has had benefits, including very low turnover.

"Finding quality people is extremely difficult," Martin says. "I'm fortunate that the crew has been with us for a long time. It's a very unpredictable job as far as the end of your workday. You don't shut off at 5 o'clock and go home. It's just the nature of how the business works. You're there until you're done or you've met your goal for the day."

However, when the time does come to add a new crew member, Martin looks for someone who doesn't have a lot of experience in the industry.

"We tend to look for a simple, hard worker who's interested in what we're doing," Martin says. "We haven't had to hire a lot of people, but the ones we have hired have come with limited experience. There is a lot to learn, but it can be an interesting job and certainly different every day."

FINDING THE UNIQUE JOBS

One of those interesting jobs came in winter 2014 when the company was doing work at a Wal-Mart store near Henniker. The store had just expanded and was still on a private septic system that was getting outgrown. The store needed to connect to a small treatment plant behind the building, constructed for its own use.

The problem came because of where the store's leachfield was — in front of the building. Crews would have to drill across the store from the front to the back and then pull the pipe back to the front.

The job called for a 600-foot-long bore from entry to exit. "The main problem we had was the ability to locate our drill bit," Martin says. "We spent two days trying to get the drill started. We would get within 200 feet of the building and we would get interference and we couldn't locate our drill."



Drilling assistant Bill Martin disconnects the drill bit from the pipe being pulled through on a water main installation job.

“I’M FORTUNATE THAT THE CREW HAS BEEN WITH US FOR A LONG TIME. IT’S A VERY UNPREDICTABLE JOB AS FAR AS THE END OF YOUR WORKDAY. YOU DON’T SHUT OFF AT 5 O’CLOCK AND GO HOME.”

Jeff Martin

Martin called the Digital Control representative, who came to the job site and spent about two days with Henniker using a new, experimental transmitter. “He dropped everything and came out to help us get drilled across the store to the exit pit,” Martin says.

As crews monitored the drill bit, they needed to be above the drill path — inside the store in this case. “We had our guys in the store tracking the drill bit as it was going from the music department and out to the parking lot,” Martin says.

During drilling, Martin likes to have a line of sight to ensure that the drill is heading in the correct direction. In the store, there was no clear



One of the company’s Digital Control locators is lined up with the finishing location of a directional drill job. The company only uses Digital Control F2 and F5 systems when drilling.

Locating tools add value

Of all the directional drills, fluid mixing and vacuum equipment that Henniker Directional Drilling has in its arsenal, the pieces most valuable to the company are some of its smallest.

“The one single piece of equipment we couldn’t work without would probably be our locating equipment we use to track our drill bit,” says Jeff Martin, president and co-owner.

The company uses Digital Control locating equipment, including the F2 and F5 systems. The DigiTrak F2 allows for two transmitter frequency options, left/right and up/down target steering and off-track guidance that can be used when walkover locating isn’t possible.

The DigiTrak F5 is the most advanced in Digital Control’s F Series. It allows multiple transmitter options in five frequencies at depths up to 90 feet.

“Directly behind our drill bit, we put in a sonde that sends the information to a hand-held receiver that we use on the surface,” Martin says. “It sends us information on where our drill bit is pointing and what the inclination is.”

The Digital Control transmitters can track existing nonmetallic ducts and measure pullback tension and mud pressure. “We’ve used Digital Control since we started,” Martin says. “Their service is fantastic, and that is what has kept us with them.”

“THE AMOUNT OF WORK WE’RE DOING EACH YEAR HAS GROWN SUBSTANTIALLY. AND THE PROJECTS HAVE BECOME MORE PROFITABLE AS THE YEARS HAVE GONE ON.”

Jeff Martin

The staff of Henniker Directional Drilling took a fishing trip with Dave Marciano, right. Marciano is a captain on the National Geographic television show *Wicked Tuna*. The company won the fishing trip at a fundraiser and gave it to the employees as a Christmas gift.



line of sight, so the crew improvised. “We actually used some balloons off the displays and used those on the ceiling at our locate points for our line of sight,” Martin says. “It certainly was not the norm.”

The company was on the job site for two weeks and had to battle snowstorms, including one that dumped 3 feet of snow on the work site.

“Near the end of the job, we were at the point where we begin pullout, and we normally don’t do that on a Friday, but this time we did,” Martin says. “We had another snowstorm coming in and the guys decided they would rather do the pullback on Friday instead of coming back the next week, shoveling out the snow and doing the pullback.”

Martin called in for reinforcements, and an employee from Patenaude’s water well drilling company came to help that day.

“We got there early and started pulling the pipe out, and we got back to the shop about 3 a.m.,” Martin says. “That employee doesn’t volunteer to help us anymore. I think we scared him away, but it was great to have him.”

STATUS QUO FOR THE FUTURE

Martin is looking forward to seeing what the future holds for the small but prosperous company. While he would like to see the company grow some to help serve more of its regular customers, he also knows that growing too big can be a problem.

“We don’t want to be a whole lot bigger,” Martin says. “We’re not trying to be bigger than we need to be. We didn’t open the business to set the world on fire.” ▼



Find out how Henniker Directional Drilling shows high school students more about the industry.
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Charlie Hunt runs the company’s Vermeer D36x50 Series II Navigator.



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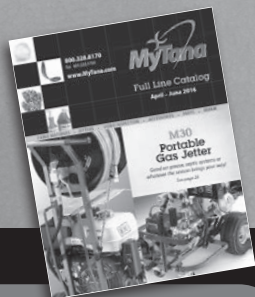
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Poor Financial Planning Can Tarnish Your Golden Years

SMALL-BUSINESS OWNERS AND THEIR EMPLOYEES CAN USE EASY ONLINE RETIREMENT CALCULATORS AND SOCIAL SECURITY TO PREPARE FOR LIFE AFTER WORK

BY ERIK GUNN

Sometime in the future, you're thinking, you'll pass the business along to the next generation and go fishing. Sounds wonderful! How will you get there?

Planning for retirement can seem overwhelming, but it doesn't have to be. Start early, take it in small bites and keep at it. You'll be pricing bass boats before you know it.

COLLECT THE DATA

Start with information gathering. Pull all your ("your" means belonging to you and your spouse) financial information together: life insurance policies, bank accounts, retirement savings plans, your most recent Social Security income statement, mortgage information, pensions, and the last couple of years of tax returns — personal and business.

Include any divorce decrees, marital settlement agreements or child support agreements you or your spouse are a party to, as well as basic information about your children (dates of birth, college plans, any insurance policies or savings accounts you have for them) and a short comment about circumstances particular to your spouse or children (special needs children, a spouse who is much older or younger than you are, children with a broad age span from oldest to youngest).

Last but not least, you need a copy of your will and power of attorney, the articles of incorporation or partnership agreement for your business, and your financial statements for the last couple of years.

PLANNING FOR RETIREMENT CAN SEEM OVERWHELMING, BUT IT DOESN'T HAVE TO BE.

CONTEMPLATE YOUR FUTURE

Next, talk to your spouse about your mutual expectations. Buy an RV and see the United States, or move next door to the grandkids? Work at something different? Volunteer?

Don't take the answers for granted. Better to find out now that you have different ideas about retirement than after you've sold the business to your foreman and applied for Social Security benefits.

Other questions: How much longer do you want to work? Do you have significant personal debt? Are you expecting to pay for your children's college education? How healthy are you?

Of course these answers can change over time, but thinking about them as early as possible will help you keep track of where you want to be, where you are and how to adjust as your vision for the future changes.

MAKE SOME PROJECTIONS

Then look at projecting possible outcomes. Here's where the web can help.



Choose a calculator, enter your specific financial information and some personal data, and you'll get a report.

As with any calculator, the old adage "garbage in, garbage out" applies. If the calculator only asks a few questions, you get basic information with limited applicability. Try several calculators and think carefully about the information provided.

The Social Security Administration's website (www.ssa.gov) gives the complete picture of the government retirement benefit, including helping figure out how much you're projected to receive at full retirement age. (If you were born between 1943 and 1954 it's age 66; for those born between 1955 and 1960, the age rises by a few months each year until it's 67 for those born in 1960 and after.)

Create an account and you can get a personalized statement based on your record of Social Security earnings that will tell you exactly what you're projected to receive, or just take a quick look for a rough projection based on your last couple of years of earnings.

Social Security sends you a paper statement every five years, but you'll get current data if you create an account, and you can check it any time.

HELP IS ON THE WAY

You can find lots of information to help as you sort out your plans for retirement. Some are fairly simple, others more sophisticated. Each has advantages and drawbacks.

For basic projections:

No-load mutual fund company Vanguard, (www.vanguard.com) on its personal investors page, offers a variety of planning calculators, including a basic "When can I retire?" simulator and worksheets for retirement income and expenses. Discount broker Schwab (www.schwab.com) offers a simple cal-

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culator. AARP's (www.aarp.org) calculator winds up with a handy graph with green for your money and red for any expected shortfall. It also allows for changes in expected savings withdrawals and amounts of preretirement savings.

More details, but still free:

Discount broker Fidelity (www.fidelity.com) allows for detailed expenses, various scenarios including retirement work, Social Security estimates/override, tax calculations, and you can also save your data. Analyze Now (www.analyzenow.com) offers a pre- and post-retirement planner, which has good explanations, lets you save data and allows you to consider real estate purchases and various financial events.

A deeper dive at a cost:

J & L Financial Planner (www.jlplanner.com) is Windows-based and offers a 21-day free trial; cost ranges from \$109 to \$169 with more interesting and complicated features in the more expensive versions. Flexible Retirement Planner (www.flexibleretirementplanner.com) works on Java, the web, Windows, Mac and Linux. A personal edition is available for as small of a donation as \$20.

OnTrajectory (www.ontrajectory.com) is web-based and allows you to track progress and view your history; pay \$3 per month or \$30 per year.

OTHER HELPFUL RESOURCES

Laurence Kotlikoff's book, *Get What's Yours*, is a guide to maximizing your Social Security benefits — especially useful if you have complicated personal circumstances such as a disabled family member.

Jane Bryant Quinn's recent book, *How to Make Your Money Last*, is full of practical, straightforward explanations of the financial world, both pre- and post-retirement, and of financial products from the basic to the arcane. She also includes extensive information about Social Security — claiming it and maximizing it.

Also consider booking a session with a fee-only financial planner. These are people who do not sell financial products of any kind and thus have no

built-in bias for a specific company's products.

Expect to pay around \$350 an hour for their time, which might sound steep, but consider: They have no hidden agenda. You give them information regarding your resources and objectives, they give you recommendations.

The National Association of Personal Financial Advisors (www.napfa.org) has an advisor search function and explains the qualifications necessary for a planner to make that list.

ABOUT THE AUTHOR

Erik Gunn is a magazine writer and editor in Racine, Wisconsin. ▼

10 Tips on Caring for Your Mud Recycler

DRILLING FLUIDS CAN BE REUSED EFFECTIVELY WITH A PROPERLY MAINTAINED MACHINE

BY KYLE ROGERS

A mud-recycling system can be a big benefit to the bottom line. A lot of time and expense can be saved by reusing drilling fluids. Less outside water has to be hauled in and waste doesn't have to be disposed of as frequently. But the machine can only provide those benefits when it's operating effectively.

Here Seth Matthesen, a senior product manager for the Ditch Witch organization, provides some tips about how to properly care for a mud recycler.

1 MATCH THE SCREEN TO YOUR JOB SITE CONDITIONS

When it comes to wear components on a mud recycler, the screens are at the top of the list.

"The screens do most of the work, so that's where you're going to see the majority of any type of wear," says Matthesen. "They're manufactured with durability in mind because you can't continue to change out screens all day, obviously. It's really about matching the screen to the conditions."

In an abrasive environment, operators may want to consider using a higher-quality screen in order to avoid changing out screens as often. In a less-abrasive environment, a lesser-quality screen might be sufficient. The micron rating for screens is also a factor. Take the Ditch Witch MR90's two-screen system. A first-pass screen takes care of larger particles (225 microns and above on the standard screen set) while a finer second-pass screen removes smaller particles (88 microns) to achieve the proper fluid quality.

"The goal is to ensure that both screens are working in tandem so one screen is not doing all the work," Matthesen says. "If material simply passes through the first-pass screen, you will create premature wear on the hydrocyclones and overwork the second-pass screen."

But if the first-pass screen is too fine, material will run off the back of the unit, not giving the rest of the system the chance to work. Soil conditions will dictate what screen size will make the mud recycler most productive.

"It's all about job management," Matthesen says.

2 BE SURE YOU HAVE A FLOWABLE MATERIAL COMING OUT OF THE PIT

One way to reduce the amount of wear on the screens and the machine's other components is to pump enough volume downhole to keep the mud thin, or flowable, as Matthesen says.

"You have to have that flowable material so it can be cleaned. Otherwise it's like trying to clean rock," he says. "In training I always use the chocolate shake analogy. You can make it really thick, but if you add just a little bit of milk, you can make it flowable."



PHOTO COURTESY OF DITCH WITCH

Prior to starting a directional drilling job, contractors should check over their mud recyclers, like the Ditch Witch MR90, to make sure it is operating as it should.

The way the pit is set up can help, as well. Digging a deeper area on one side of the pit provides a place where the larger rock cuttings can settle so that a more liquefied material is maintained in the rest of the pit.

"That way you're not taking those huge rock cuttings off the bottom," Matthesen says.

3 REGULARLY MONITOR THE SYSTEM PRESSURE

On a mud recycler, an out-of-the-ordinary pressure gauge reading is one of the first indications of a problem.

"That really is the key to the utilization of the system," Matthesen says. "It could be from the pump getting old. There may be a gasket that is wearing. It may be a hydrocyclone. Hydrocyclones wear from the inside out, so it's not something you can visually see without taking it apart or checking that pressure."

The Ditch Witch MR90 mud recycler operates at just under 30 psi. Depending on the size of the system, most mud recyclers will run in the 20 to 30 psi range, says Matthesen.

4 WATCH FOR PLUGGED NOZZLES ON HYDROCYCLONES

An optimal pressure will tell you that the hydrocyclones are operating properly. If that's not the case, then there's a problem that

needs further inspection. Oftentimes, a plugged nozzle is the culprit, Matthesen says.

“The material should spray out the bottom of a hydrocyclone. If it’s just flowing out like on a bathtub faucet, then there’s something wrong,” he says. “Typically the nozzle gets plugged up. Then you’re reducing your system capability. If you’re running five hydrocyclones, you’ve just cut it off by 20 percent.”

5 THE BEFORE-JOB ROUTINE

The hydrocyclones are among the items that should be inspected most often, and before the start of any job.

“Check the hydrocyclones, the screens and the system pressure every day,” Matthesen says. “Those three things will let you know if the system is operating at full capacity. It’s also important because that’s the stuff that is hidden. A tank is a tank. If it’s leaking, you’re going to see it.”

Make sure the screens are tight and set up correctly, and that there aren’t any holes. If there are, replacement is the best fix, but repair is also an option.

“One small hole can cause a lot of damage to other components because solids are still getting through that one small area,” Matthesen says. “When mud weight or sand content starts to increase in the system, the first area to check is the screens and potential holes. Quick-dry silicone is commonly used to cover a worn area of the screen to get longer screen life or continue production until a replacement screen can be installed.”

From there, make sure the hydrocyclones are clean, that the pressure is set correctly and the system is actually achieving that pressure. If the pressure is too low, the clean material won’t come through with the solids dropping off. If it’s too high, machine components could prematurely wear.

6 PRACTICE AN EVERYDAY CLEANING ROUTINE

Cleaning a mud recycler is pretty straightforward: Run fresh, clean water through the entire system. “That should do it,” says Matthesen. “Also take the hydrocyclones apart from the bottom just to get all the heavy material out. Make sure it’s clean and nothing is stuck in that area.”

7 TRACK MUD WEIGHT AND SAND CONTENT WHILE ON THE JOB

Matthesen recommends doing tests to check the mud weight and the sand content of the material every half-hour to an hour.

“You need to dispose of the material if it gets too high,” he says. “The heavier the weight, the higher the sand content, the more quickly things wear out not only for the recycling system but also for the drill.”

Matthesen says for the MR90, the Ditch Witch factory recommends users dispose of the material once it exceeds 9.5 pounds per gallon for mud weight and 1 percent for sand content. The rate at which you reach those levels can also be indicative of a problem.

“If one day it took you 24 hours to get to the threshold and then three days later it only takes you 12 hours, there’s probably something going on with the system you need to recognize,” he says.

“ALSO TAKE THE HYDROCYCLONES APART FROM THE BOTTOM JUST TO GET ALL THE HEAVY MATERIAL OUT. MAKE SURE IT’S CLEAN AND NOTHING IS STUCK IN THAT AREA.”

Seth Matthesen

FACTOR IN THE WEATHER

8

In cold-weather conditions, Matthesen says it’s important to properly drain the system after off-loading, and to use antifreeze as an additional measure to prevent any problems.

“You have to off-load and drain the pumps and the hoses, which is why there is a low-point drain,” he says. “I still recommend putting some antifreeze in the pump itself just so there is some liquid in it. It’s hard to get every bit of fluid out of a pump a lot of times. Otherwise the low-point drain will get everything else out.”

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9 DON'T MIX UP HOSES

Matthesen recommends operators do something to keep their pit pump hose that connects to the recycling system clearly distinguishable from the transfer hose that transports clean fluid. If a mix-up occurs, the system’s pump could be damaged.

“It sounds pretty simple, but I’ve seen it happen. That dirty hose gets used on the clean side and causes damage to the pump,” he says. “I would recommend using two different types of hoses, two different colors of hoses, one collapsible and one solid. Something so you don’t mix up the hoses out in the field.”

10 DON'T NEGLECT PIT PUMP MAINTENANCE

A mud recycler can’t do its job if material isn’t able to make it to the machine in the first place. That’s where the pit pump comes into play.

“The pit pump is just as important,” Matthesen says. “If you don’t have the ability to pull it from the pit over to the recycling system, you’re not able to work. So be sure to go through all the daily maintenance features on the pit pump.” ▼

Read more tips on maintaining mud recyclers at digdifferent.com/featured



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Murphy Pipeline Contractors
Jacksonville, Florida

FOUNDED: 1999

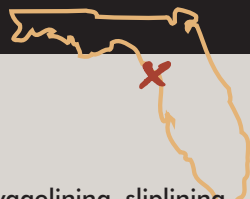
OWNER: Andy Mayer

EMPLOYEES: 60

SPECIALTIES: Static pipe bursting, Swagelining, sliplining

SERVICE AREA: Throughout North America

WEBSITE: www.murphypipelines.com





PIPE BURSTING

Profile

LEADING THE WAY

WITH AN EMPHASIS ON EDUCATION, FLORIDA'S MURPHY PIPELINE HELPS NEW TRENCHLESS TECHNOLOGIES GAIN A FOOTHOLD

STORY: KYLE ROGERS PHOTOS: ROB HERRERA

Andy Mayer got his first taste of pipe bursting and Swagelining at the age of 16 while working as an engineering apprentice for British Gas. So when he arrived in the United States two decades later to do the same work, he was surprised by what he found.

"A country as big as America was still putting 30-ton excavators with 4-foot buckets in subdivisions to install 6-inch pipe. It didn't make any sense to me," he says. "With my knowledge and background, it quickly turned into a no-brainer. There was an opportunity for trenchless technologies in the U.S., hence Murphy Pipeline was formed."

It was 1999 and work was sporadic at first. Gradually, awareness about the technologies grew in the U.S., and Murphy Pipeline Contractors has grown right alongside it. The company's proactive educational efforts have been key, not only for its own growth but also the trenchless industry as a whole.

"It all comes down to education and working with clients to explain the processes and the benefits," Mayer says. "It's taken about 15 years, but what I've seen in the U.S. — particularly with pipe bursting — is that trenchless technologies have become very accepted. It's now gathering a lot of momentum."

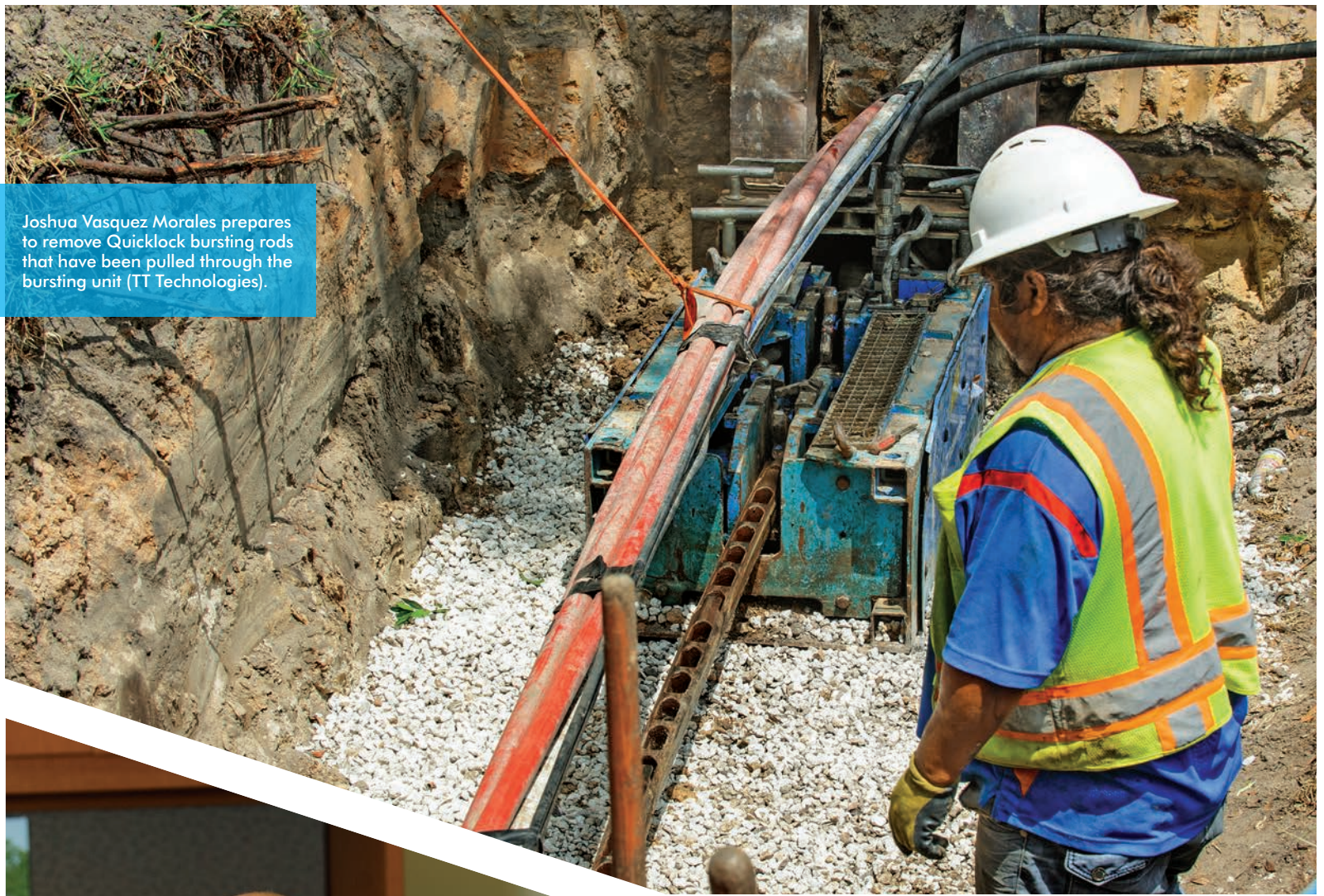
"A COUNTRY AS BIG AS AMERICA WAS STILL PUTTING 30-TON EXCAVATORS WITH 4-FOOT BUCKETS IN SUBDIVISIONS TO INSTALL 6-INCH PIPE. IT DIDN'T MAKE ANY SENSE TO ME."

Andy Mayer

COMING TO AMERICA

With the U.S. trenchless market still in its infancy when Murphy Pipeline started, it has been a steady upward trajectory for the company since. Mayer says it is far different from his experience in England, where the technologies have been well established for decades.

The Murphy Pipeline team includes, front row, from left, Rooster Williams (site superintendent), Daniel Lopez, James Roberts, Johnny Turner, Joshua Vasquez Morales, Roberto Vasquez and Austin Williams; middle row, Mike Lopez, Frankie Hernandez and Ricardo Nolasco; top, Miles Opacic.



Joshua Vasquez Morales prepares to remove Quicklock bursting rods that have been pulled through the bursting unit (TT Technologies).



“In England it was what I was brought up in. It was never an emerging market,” he says. “The technology was proven and acknowledged. It was normal practice.”

After completing his apprenticeship, Mayer remained with British Gas for about 10 years, then started his own company, AJM Consults & Engineers. A little more than a decade after that, Mayer found himself being recruited by HammerHead Trenchless Equipment to bring his expertise to the U.S.

“Initially, it wasn’t to start up a business and move here,” Mayer says. “It was to help a Florida contractor break into the market. But I thought pre-chlorinated pipe bursting was being done, and it turns out it wasn’t. People had no idea what it was. There was a huge market potential in the U.S. and I just happened to be in the right place at the right time. I was going to be pretty individualistic in the U.S., whereas going back to England I would’ve been one of many.”

So Mayer made the move, setting up shop in Jacksonville, Florida. While certain trenchless methods were being employed in the U.S., such as directional drilling and pneumatic pipe bursting for the replacement of gravity sewer lines, the growth potential Mayer saw was in the specialties he first learned working for British Gas, particularly static pre-chlorinated pipe bursting to replace pressurized lines delivering potable water.

Targeting an untapped market meant starting out small. It was just Mayer and a few crew members, and pre-chlorinated pipe bursting being a new technology,

Andy Mayer, president of Murphy Pipeline Contractors, sits in his office in Jacksonville, Florida. The company, which Mayer founded, operates throughout the U.S.

Mayer first worked with the Florida Department of Environmental Protection and the American Water Works Association to get the method approved. The method utilizes HDPE

pipe that is disinfected and pressure tested above ground beforehand, allowing it to be put into service immediately after the burst and eliminating the need for temporary water services. Early projects were successful and from there it grew, beginning in Florida and then expanding throughout North America.

Now there are about 60 employees companywide among three office locations — Milwaukee, Wisconsin; the Houston area; and the headquarters in Jacksonville. Murphy Pipeline mostly serves municipal customers, and while the primary focus is the U.S., work has taken the company into Canada. Pipe bursting makes up most of the workload — about 80 percent. The company's other specialties, Swagelining and sliplining, make up the remainder. Murphy Pipeline uses bursting equipment from TT Technologies and Hammer-Head Trenchless Equipment, and pipe fusion tools from McElroy. Most of the HDPE pipe and fittings come from ISCO Industries and Ferguson.

EDUCATION IS THE KEY

Education has been an integral part of Murphy Pipeline's growth since the start. Todd Grafenauer, the company's educational director, leads those efforts from the company's Milwaukee office.

"That's primarily what my involvement has been since day one," says Grafenauer, who was introduced to Mayer during one of the company's first major projects. "It's the first step we need to do before we can actually work, because human nature is what it is. People do things they're comfortable with. Why are there communities that only do open cut? Because that's the way they've always done it."

A variety of different educational methods are used. Grafenauer may travel to a potential customer's location to do a technical presentation about the trenchless methods. He'll cover the history of the technology, show videos of work occurring at job sites, highlight actual case studies, explain the technology's value from a construction and design standpoint, and spend time afterward answering questions. Murphy Pipeline will also hold "open days" at actual job sites and send out invitations so people can see the technology being utilized firsthand.

"We just did this recently for a 10,000-foot pipe bursting job in the Dallas-Fort Worth area," says Grafenauer. "We invited cities and engineers from around Texas to come and see the technology in action. From that we got a good response and had well over 100 people just standing over the pit, watching crews pull the pipe into place. There's tremendous value in that because not only do they see the method work, but they can also look at the areas where work has already been completed and see the kind of environment we left behind."

Grafenauer says an "open day" at a job site is the company's most effective educational method, and while he can't put a hard figure on it, there's a direct correlation between the amount of work Murphy Pipeline gets in a certain area and the number of "open days" that have been held there. While seeing the effectiveness of the technology firsthand may be a significant selling point, Grafenauer says Murphy Pipeline's educational approach is a multi-step process. *(continued)*

Frankie Hernandez and James Roberts disconnect the cutter and bursting head from HDPE pipe for pit removal.



"OUR MAIN GOAL IS TO EDUCATE COMMUNITIES ON THESE TECHNOLOGIES AND THE VALUE INVOLVED. IF WE DO A GOOD JOB, IT'S A PRETTY EASY DECISION FOR THEM TO MOVE FORWARD."

Todd Grafenauer



Daniel Lopez controls the TT Technologies Grundoburst bursting unit remotely with a Hetronic control, as Joshua Vasquez Morales collects the Quicklock bursting rods while on a job site in Altamonte Springs, Florida.

“The ‘open day’ is an important step, but there’s a lot of work we do beyond that I believe is critical,” he says. “Maybe it’s the initial phone call with a potential client. We also get a ton of emails — just basic questions — and it’s important to get back to those people and spend the time to make sure they have the answers they were looking for.”

Putting together the team

When Andy Mayer started Murphy Pipeline Contractors in 1999 in Jacksonville, Florida, he had some challenges he didn’t have to worry about with the first company he founded more than a decade earlier in his home country of England. His specialties — static pre-chlorinated pipe bursting and Swagelining — were commonly used methods in England, but they were new to the U.S. market, so customer education became an integral part of building the business. Attempting to establish new technologies brought another challenge — putting a knowledgeable team together. For early jobs, more experienced workers from overseas were sometimes brought in to assist.

Throughout the last 17 years, Mayer has gradually been able to put together that knowledgeable team.

“I know personally what I’m looking for, but a lot of it is trial and error,” he says. “It’s not easy. We’ve been through a lot of people to get the people we want.”

As Mayer’s expertise began to trickle down to others during Murphy Pipeline’s early years, a process developed to ensure that knowledge kept spreading when more new employees came on board.

“What we’ve been doing is overloading our crews,” Mayer says. “For example, instead of a 10-man crew, we’ll bring more people in and put together a 14-man crew for a job. We’ll pick out guys who we feel can be managers and they all work together. That way, when we need to split the crew later, we have guys who are already educated. The methodology of Murphy Pipeline gets embedded in one crew to the next. It flows all the way through the company.”

Murphy Pipeline is currently in the midst of one of those cycles.

“We’re looking at increasing the crew preferably by the end of the year, so we’re already bringing more people on in anticipation of that growth,” Mayer says. “It’s all about teamwork, and Murphy Pipeline has a great team. I have some knowledge, but I also have great people behind me. Without them, Murphy Pipeline would be nothing.”

For contractors who rely heavily on customer education to ultimately sell their services, Grafenauer says it’s important to understand the full scope of what customers need to learn. During Murphy Pipeline’s early years, that meant focusing on the HDPE pipe material just as much as the actual bursting process.

“When I started doing this, before I could even talk to someone about our technologies, I had to cover the kind of pipe we install,” Grafenauer says. “For some communities, the conversation ended right there if they didn’t accept HDPE and were still stuck on installing ductile iron. What’s good to see is there are now some industry groups who are doing a phenomenal job with research and education about plastic pipe, such as the Plastics Pipe Institute. I don’t have to spend nearly as much time educating about HDPE anymore.”

He also says contractors should be prepared to do a certain amount of work up front with no guarantee that it will turn into a profitable job.

“A part of our education process when we’re looking at specific projects is feasibility,” he says. “We spend a lot of time with communities on the front end going through a feasibility analysis — which projects are good candidates, what risks might be present and how can we mitigate those risks. Also involved in that is cost analysis and design guidance. But there’s no guarantee that you’re getting any work out of it. More often than not, it turns into a job. But if it doesn’t, we don’t have any issue with that. That’s what education is. It’s not about getting every job. We believe in the value of the technology and the proof is in the pudding — once you do work for somebody, how often do you go back and work for them? Almost every client we’ve ever worked with has had us back to do more work.”

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THE VALUE OF TRENCHLESS

The value of the technology is perhaps best shown in jobs Murphy Pipeline has done in some unique areas. For example, one of the biggest early jobs had the company bursting 25,000 feet of pipe in the Florida Everglades. The pre-chlorinated pipe bursting method was still so new to the United States that Mayer had to bring in workers from England, where the technology was better established, to fill out the crew. They had more than the typical job site challenges to deal with.

“We were just really happy to have a job of that size,” Mayer says. “We had our pre-job meeting and I had all my people there. There were park rangers who went through a list of animals in the Everglades that could kill us. They

started with pythons and rattlesnakes, and we were sitting there and our eyes were wide. From there they moved onto crocodiles, caiman and alligators, saying that this was the only place in the world they all existed together, and our eyes grew wider.”

Despite the unusual work environment (one alligator earned the nickname Five O’Clock Freddy for his daily trek across the job site), the project was a success and the largest pre-chlorinated pipe bursting job in the U.S. at the time of its completion in 2003.

“Everglades National Park has some of the most endangered species of any park in the U.S., and when you look at how to replace water main in a park system like that, you need something that is fast and efficient and will sig-



The bursting head is destroying the old pipe to make way for the new HDPE pipe.



The HDPE pipe being installed is attached to the burst head and pulled into the pipe it will be replacing.

“THERE WAS A HUGE MARKET POTENTIAL IN THE U.S. AND I JUST HAPPENED TO BE IN THE RIGHT PLACE AT THE RIGHT TIME.”

Andy Mayer

nificantly reduce the amount of digging you do with open trench,” says Grafenauer. “I think it was a no-brainer for the parks system to use this kind of technology. That was a good project that served as a leaping stone for the company.”

More recently, Murphy Pipeline was involved in another pipe bursting project in a particularly sensitive area. In early 2015, the company wrapped up the latest phase of water main replacement in Arlington National Cemetery. Beginning in 2012, Murphy Pipeline has burst 44,500 feet of pipe in the 624-acre site where more than 400,000 of the nation’s fallen soldiers are buried.

“Talk about an area needing a process that cannot impact the ground or disrupt operations,” says Grafenauer. “Every day there were 25 to 30 funerals.”

Crews stopped work and shut down equipment out of respect whenever a funeral procession passed, but without much advanced warning, it helped that the pipe bursting method produced minimal disruption to begin with.

“We burst in front of the Tomb of the Unknown Soldier. We burst in front of Kennedy’s grave. Some of the areas we were able to work were incredible,” says Grafenauer. “The value this technology has in an area like Arlington National Cemetery is why we do what we do.”

THE FUTURE

Mayer says his goal when he first came to the U.S. was to build a sustainable business, and Murphy Pipeline is gradually getting there as the value of its trenchless specialties get more exposure. The company is currently adding employees and training them in order to have another crew available for jobs by the end of the year. Mayer says he thinks the trenchless market has grown

in recent years partly because of the added exposure everything gets in today’s social media age.

“With social media allowing people to complain to the masses literally with the click of a button, any work going on in the roads has become more

visible. And with more of an emphasis on being ‘green,’ that has made everyone a lot more conscious about just digging up a street,” Mayer says. “I think that has pushed the trenchless market to grow a little more than it would have otherwise.”

Still, in-house educational initiatives remain the most important key for Murphy Pipeline’s future growth.

“There are all these companies that will bring salespeople in. We truly don’t have salespeople,” Grafenauer says. “Our main goal is to educate communities on these technologies and the value involved. If we do a good job, it’s a pretty easy decision for them to move forward.” ▼

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“We ask questions. We have a protocol form. If [the customer] can answer all questions and we have **clarity** as to what the project is and what they expect of us, that is helpful. We like to walk it with the client — to understand all hazards.

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Richard Young, President
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The Right Piercing Tool

MANUFACTURER GIVES TIPS ON SELECTING THE RIGHT TOOL AND TAKING CARE OF THE EQUIPMENT

BY MARYBETH MATZEK

For contractors and utility companies, finding the right piercing tool can make the difference between a project that runs smoothly or one filled with delays. The trick to finding that right tool is figuring out soil conditions and how easy the tool is to use.

Piercing tools are normally used for installing utilities under existing structures and landscapes. The pneumatic-powered tools create a compact hole that lets contractors install underground water, gas, cable, irrigation, fiber or electrical lines without causing a lot of disruption.

“The key with piercing tools is getting the right kind for your soil,” says Chris Alexander, southeast regional sales manager for HammerHead Trenchless Equipment. “If you have the wrong one, it will take longer to get the job done.”

HammerHead, based in Lake Mills, Wisconsin, offers piercing tools with two head styles: a stationary head used for softer soils and a reciprocating head that can handle harder soils.

THE HARDER SOILS

The reciprocating head design allows the piercing tool to handle tougher soils, such as clay or cobble soils.

HammerHead’s Active Head Mole piercing tool model has a specially designed retaining system and replaceable rings on the bit shaft and head so it lasts longer and maintains its performance level, Alexander says. The tools are available in four lengths ranging from 2 inches to 3.5 inches.

“THE KEY WITH PIERCING TOOLS IS GETTING THE RIGHT KIND FOR YOUR SOIL.”

Chris Alexander

For contractors who work in both hard and soft soils, Alexander says the Catamount model, where the tool ranges in size from 2.5 inches to 5.125 inches, may be a choice. “The head is driven by air that resets the head, eliminating the need for mechanical springs, which can cause failure in some other trenchless tool designs,” he says. “It has an easy start. The design allows the user to start it faster and easier.”

The Catamount includes a patented quarter-turn reverse feature called the Power Port Reverse that locks the tool in either forward or reverse gear, preventing any accidental direction change during the bore. “That lock is important since you don’t want it to suddenly go into reverse. You lose time and the more you can bore, the more money you can make,” Alexander says.

The Catamount includes a patented quarter-turn reverse feature called the Power Port Reverse that locks the tool in either forward or reverse gear, preventing any accidental direction change during the bore. “That lock is important since you don’t want it to suddenly go into reverse. You lose time and the more you can bore, the more money you can make,” Alexander says.

THE SOFTER SOILS

When it comes to softer soils, a piercing tool with a stationary head is the preferred choice. HammerHead offers the tools in a variety of sizes ranging from 2 to 8 inches and the heads are interchangeable. All models run at 110 pounds per square inch.

The company’s rear anvil design features valve and head options that don’t require specialty tools to change. “The customer can service it in the back of their truck and not have to take it into a shop to change the heads,” he says.



PHOTOS COURTESY OF HAMMERHEAD TRENCHLESS EQUIPMENT

A contractor uses a piercing tool from HammerHead Trenchless Equipment on a job site. There are several piercing tools that can be selected from, depending on soil type and the job the contractor is doing.

“We also have fewer working parts than our competing tools so there are fewer failure points.”

KEEPING UP WITH MAINTENANCE

Regular maintenance is important when it comes to piercing tools. “I liken it to maintaining your vehicle,” Alexander says. “You need to get its oil changed after so many miles so it works at its best, and with the piercing tools, it’s the same thing and there’s a prescribed course of service.”

For example, if a contractor is laying 400 to 500 feet of fiber optic cable every day, the tool should be checked every few months, Alexander says. When contractors purchase a HammerHead Trenchless piercing tool, they receive training on how to take care of it so it lasts as long as possible.

“When it comes to replacing heads, a lot really depends on use, but overall, contractors should get long-term functionality out of the tool,” he says. “I also show them how to know when it’s time to replace the rings and how to do it.”

HammerHead Trenchless continues to look at ways to improve its piercing tools, including different head assemblies. “We’re constantly testing and evolving the product to meet users’ needs,” Alexander says. “We want to give customers a lot of different options so they can get the most from it.” ▼



Stationary heads are used for soft soils and reciprocating heads for harder soils.



Pipe bursting used in steel water main replacement

PROBLEM

Incline Village General Improvement District of Lake Tahoe, Nevada, designed a water main replacement and fire flow enhancement project that included replacement of a 2,500-linear-foot steel water main distribution system. The project included replacing the existing 6- and 8-inch steel water mains with new 8-inch fusible C900 PVC pipe. Steel pipe was widely used in many parts of the western United States and was often cut and welded together as needed to circumvent boulders and tree stumps. This makes replacing the steel pipe extremely difficult.

SOLUTION

Q&D Construction was contracted to perform the replacement through static pipe bursting with a **Grundoburst 800G static pipe bursting unit from TT Technologies**. These static bursting systems are able to burst/split and replace ductile iron and steel pipes, and can pull in a variety of replacement pipes including fusible PVC. During bursting operations, Q&D Construction installed a 4-inch HDPE temporary bypass water supply for affected residents. Soil in the area was hard, with sand, as well as large rocks ranging in size from 24 to 36 inches in diameter. Bursting runs averaged 400 to 500 feet in length and took approximately two hours to complete.

RESULT

Pull readings on the static pipe bursting unit on typical runs ranged from 125 to 200 bar. Numerous water services, fire hydrants and gate valves were removed and reconnected. **800/533-2078; www.tttechnologies.com.**



Fused piping system solves sinkhole dilemma

PROBLEM

Underground leakage from a faulty 6-inch clay pipeline — estimated to be 100 years old — was causing sinkholes to form on one of the original brick-lined alleyways in downtown Tulsa, Oklahoma. The city was forced to close the alley, which blocked public access, and the only access nearby workers had to their company's parking lot. The need to rehabilitate the street was urgent.

SOLUTION

The city's sewer operations and maintenance crew replaced the 6-inch clay pipe with 8-inch high-density polyethylene pipe, which is joined through heat fusion technology to create a seamless, leak-free system. They used their in-house **pipe fusion machine — a McElroy TracStar 500** — to fuse the pipe together. For the install, they rented pneumatic pipe bursting equipment from TT Technologies to break up the old pipe and make way for 337 feet of fused pipe, which was pulled in place with a HammerHead constant tension cable winch. This trenchless method allowed them to pull the pipe from manhole to manhole in a short amount of time without having to tear up a major street, which would have further disrupted traffic.

RESULT

Updating infrastructure with a modern HDPE pipeline has been a cost-saving measure that benefits the environment and creates much safer driving conditions. **918/836-8611; www.mcelroy.com/fusion.**



Steering head helps navigate challenging ground conditions

PROBLEM

In November 2015, Kandey Company of West Seneca, New York, accepted the Rush Creek Interceptor Project. Spanning over 8,600 linear feet, crews will install a combination of 1,700 feet of gravity and force main sewer line that will be placed within a 48-inch steel casing by 2017. The massive pipeline is being installed in an abandoned industrial area, which has made for unpredictable and challenging ground conditions. Crews have uncovered abandoned foundations and unreported utility lines throughout the project.

SOLUTION

To navigate the crowded underground, Kandey Company enlisted the help of the **McLaughlin On Target auger boring steering system**. The steering head allows contractors to control horizontal on-grade changes and also allows for lateral direction changes. The cutting path of the steering head is controlled by hydraulically actuated flaps that open and close to keep the head on the intended path. Its control station has a hydraulic power pack to control the movement of the steering head, and a built-in water level helps monitor grade throughout the bore.

RESULT

By using an auger boring machine with the On Target system, Kandey Company was able to complete a 335-foot bore to install a steel casing in one pass. Even with grade changes that varied as much as 2 percent and the debris in the ground, the crew was able to adjust the steering to produce an accurate bore. 800/435-9340; www.mclaughlinunderground.com. ▼

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 Ditch Witch Contact: Haley Brorsen 1959 W Fir Ave. Perry, OK 73077 p: (405) 326-8280 www.ditchwitch.com haley.brorsen@ditchwitch.com See ad page 56	JT5	Kubota® D1105	24.8	13	3,690*	10 to 16
	JT9	Deutz® TD2.9	66	18	7,050*	10 to 14
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	JT30	Cummins® QSB4.5	160	48	22,284*	10 to 16
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McLaughlin Group Inc. Contact: Jeff Wage 2006 Perimeter Road Greenville, SC 29605 p: (864) 277-5870 tf: (800) 435-9340 www.mclaughlinunderground.com mmole@mightymole.com See ad page 15	McL-10H Pit Launch Drill	Hydraulic	n/a	n/a	1,100	
Pow-R Mole Sales LLC Contact: Brian Kelly 1400 Commerce Parkway Lancaster, NY 14086 tf: (800) 344-6653 www.powrmole.com brian@powrmole.com	PD-6	Honda GX630	20	6.5	750	pit launch

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MANUFACTURER	MODEL NAME	Engine Make & Model	Fuel Tank Size (gallons)	Model Weight (lbs.)	Thrust
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	McL-45/60 Auger Boring Machine	Mechanical	15	7,560 Carriage	950,000

Pull Back (lbs.)	Thrust (lbs.)	Max. Spindle Torque (ft/lb)	Max. Spindle Speed (rpm)	Drill Pipe Diameter (inches)	Max. Drilling Depth (feet)	Min. Bore Diameter (inches)	Rod Carrying Capacity (feet)	Other
5,000	4,100	550	195	1.10	Varies – based on project and locating system used	2.5	148	
9,000	9,000	1,100	186	1.60		3	330	
20,000	17,000	2,200	210	2.06		4	400	
27,000	27,000	4,000	220	2.38		4.5	550	
30,000	24,800	4,000	225	2.38		4.5	500	
30,000	24,800	4,000	225	2.23 (All Terrain Pipe)		4.75	330	
60,000	60,000	9,000	240	3.06		5	420	
60,000	60,000	9,000	240	3.63 (All Terrain Pipe)		6.25	260	
100,000	70,000	12,000	210	3.62		6	360	
100,000	70,000	12,000	210	3.63 (All Terrain Pipe)		6.25	340	
13,250	17,670	1,030	125	28.8	180			
79,000	84,000	4,500	2	2	15	1/2"-8"		Directional thrust boring system is a dry bore pit launch machine

Drill Pipe Diameter (inches)	Minimum bore diameter (inches)	Max. Spindle Torque (ft/lb)	Max. Spindle Speed (rpm)	Other
48	16			
60	16	200,000	2,500	Optional ON TARGET steering system which provides contractors additional control and accuracy on difficult bores

A Commitment to Safety

WINDCREEK SERVICES' SAFETY PROGRAM IS INTEGRATED INTO EVERYTHING EMPLOYEES DO

BY MARYBETH MATZEK

Randon Williamson holds the title of environmental health safety director at Windcreek Services, but every one of the company's 80 employees makes safety an integral part of their job.

"Our goal is that everyone goes home safely every single night," he says. "Our company's culture is deeply committed to safety and it's vital to everyone's work."

And it shows. In 2015, the Gillette, Wyoming-based company had zero recordable injuries or lost time accidents. That's an accomplishment for any business, but even more so for a company providing excavation, pipeline, fluid management and other services in the oil and gas and other industries.

Williamson says the company's safety culture starts from the top. "Company leaders take safety seriously and make sure we as a company are where we need to be," he says.

The company's Near Miss Program, which focuses on catching potential safety issues before they happen, is a cornerstone for its safety initiative. An example of a near miss would be an employee who forgot to put on safety glasses, says Jason Scallen, Windcreek's sales manager.

"We're very proactive and trying to catch something before it happens," he says, adding that the employee who left behind his safety glasses would be chided by his co-workers into bringing a 12-pack of soda for the team. "It's all done in a fun manner."

Employees who spot a near miss are asked to fill out a form explaining what happened. As part of the report, employees rank the near miss from a 1, which means the potential for injury was very minor, up to a 4, which means the injury potential was very high.

To help employees identify and report near misses, the company held a contest for teams who spotted the most near misses. Employees won a break from work and had the opportunity to shoot skeet, play horseshoes or other fun activities.

"OUR GOAL IS THAT EVERYONE GOES HOME SAFELY EVERY SINGLE NIGHT. OUR COMPANY'S CULTURE IS DEEPLY COMMITTED TO SAFETY AND IT'S VITAL TO EVERYONE'S WORK."

Randon Williamson

All employees can spot the near miss and report it, Scallen says. "One of the guys called out our company president (Don Williamson) for not wearing his hard hat in the field," he says. "He was then asked to bring a 12-pack of pop for the crew. That shows you safety is everyone's job."

In addition to empowering employees to spot near misses, Williamson also created a safety team. A safety team member — recognizable by their red hard hats — is on every job site. Team members receive additional training and their red hats are a visible reminder of the additional attention paid to safety.

"I can't be at all the sites, and the team has had a big safety impact just by their very presence in the field," Williamson says. "You always have to be aware when it comes to safety, since you never know what you're going to run into in the field."

Windcreek employees also conduct a daily job safety control analysis. At the start of the day, employees outline and investigate potential hazards and double-check equipment. Williamson says this process ensures safety is the first thing employees think about each day.

While 2015 was a safety success for Windcreek, Williamson says the company remains as committed as ever to safety. If the company finishes 2016 without any reportable injuries, all employees will receive three extra vacation days.

Safety plays a role in the hiring process, too. When interviewing potential employees, managers try to get a feel for the applicant's commitment to safety and following procedures. Once an employee is hired, they go through an onboarding program where they receive safety training and learn about Windcreek's safety processes, Scallen says. New hires wear a green hat and complete a six-month mentorship to learn more about safety processes. After six months, the employee earns a white hard hat and assumes full responsibility for his assigned duties.

Williamson says Windcreek's safety record makes it stand out from the crowd since oil and gas businesses want safety information about their service providers. To get employees focused on safety, the company not only follows OSHA's monthly requirement, but goes "above and beyond," he says.



"If we're doing confined space training, we not only review the information, but then do a hands-on activity," Williamson says. "Or when we discussed defensive driving techniques, employees put on special goggles that impaired their vision and

had to drive around some cones. They could really see how impaired vision can affect your driving."

Windcreek used a state grant to build a mobile training center. The fully heated and air conditioned trailer can be taken to different locations for employee training sessions. The trailer includes a computer, large screen and chairs, and allows the company to offer real-time training to employees.

The company's safety-first attitude extends beyond the workplace, Williamson says, adding that he saw an off-duty Windcreek truck using chock blocks in the Wal-Mart parking lot.

"Our employee was off the clock, but yet he was still embracing the safety culture we've created," he says. "The worker didn't even think twice about it (putting down the blocks) since safety is just part of who our workers are." ▼



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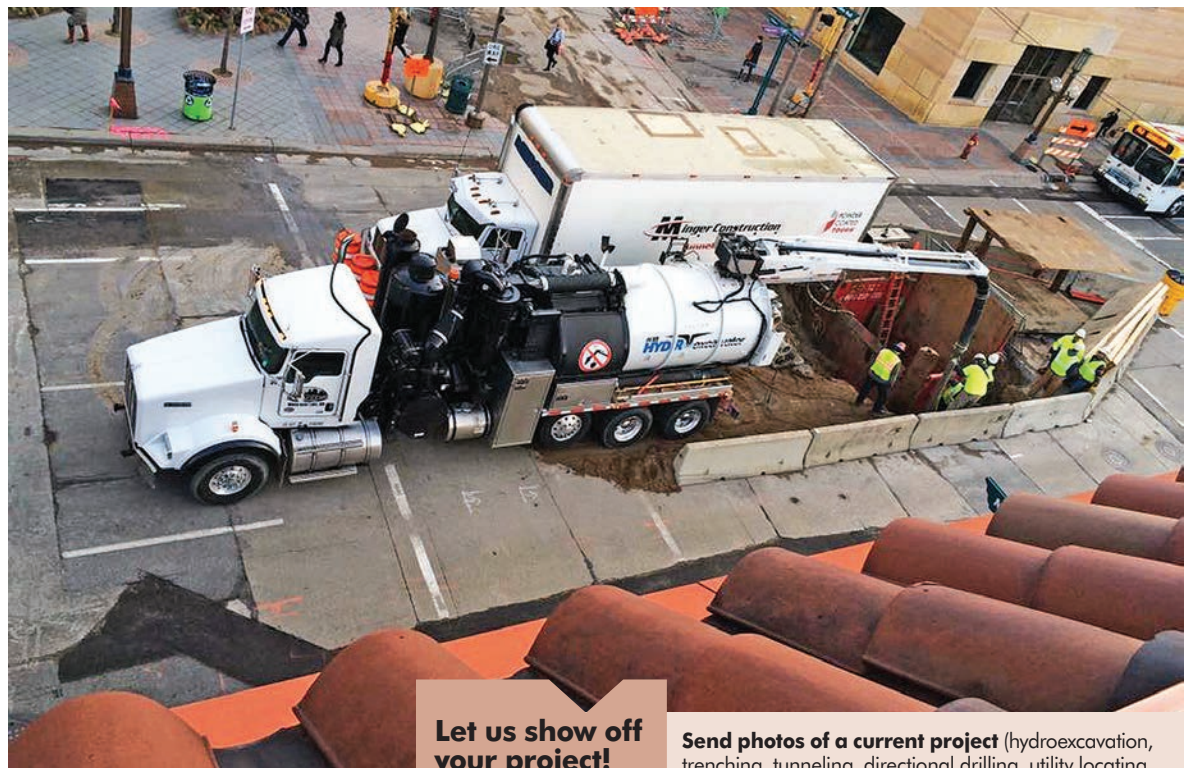
PROJECT SNAPSHOT

Dauids Hydro Vac

(WHITE BEAR LAKE, MINNESOTA)

REPLACING EQUIPMENT FOR LOCAL POWER COMPANY

Dauids Hydro Vac, based in White Bear Lake, Minnesota, took on this job site in downtown Minneapolis in March. Dauids Hydro Vac was working for the local power company that was replacing an existing duct bank. The area of work was congested and the entire job was dug by the hydroexcavator. The area where the work was being completed was also heavily populated with underground utilities, including electric, fiber and a water main. The lead operator on the site was Shawn Bengtson. ▼



Let us show off your project!

Send photos of a current project (hydroexcavation, trenching, tunneling, directional drilling, utility locating, pipe bursting or similar nontraditional excavation) showing your equipment and crew on site.

Include name, company name, mailing address, phone number and details (what you are doing, equipment used, time expected on the project and anything difficult or unique about it). Email to editor@digdifferent.com or mail to Editor, Dig Different, P.O. Box 220, Three Lakes, WI 54562. We look forward to hearing from you.

BY CRAIG MANDLI

Auger Boring

Akkerman Guided Boring Machine

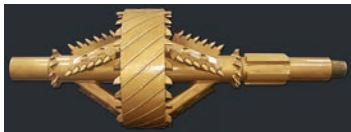
Guided Boring Machine (GBM) systems from Akkerman use a jacking frame, a digital guidance system and one of four angled steering heads to match various displaceable geological conditions. The guidance system enables contractors to accomplish longer drive lengths. A range of upsizing tooling makes it possible to install up to 72-inch steel casing. The Rock Drill Adapter for Tri-Hawk drill bits can be used in rock density up to 18,000 psi. The inaugural pilot tube rock bore took place in September 2015 in Australia and to date, subsequent runs up to 225 feet have been achieved in North America.



800/533-0386; www.akkerman.com

Century Products Osprey Series fly cutters

Osprey Series fly cutters from Century Products incorporate a square tube design to ensure longevity with superior strength, with the ability to pull or push ream due to strategically placed cutter bars with replaceable rotating carbide teeth both forward and aft. Protected recessed fluid nozzles are placed in a concentric pattern for a full sweep across the borehole face. They are available in the SD standard duty and XD extreme duty with optional customization features. The SD incorporates a vertical spoke/fluid chamber design, while the XD incorporates a roof truss design for structural integrity with a forward and aft angular tube design. Both provide a full-coverage cutting pattern with larger flow through areas to optimize cutting removal for increased penetration rates.



262/820-3600; www.centuryproducts.net

Pow-R Mole Sales PD-6

The PD-6 steerable and locatable hydraulic-thrust boring machine from Pow-R Mole Sales plugs into any 3,000 psi hydraulic source. This pit-launched directional thrust boring machine can be used for pipe



installations of up to 200 feet in length. The 6-foot-long by 3-foot-wide unit allows for setup in confined areas where use of a directional drill is not possible. It is a dry-bore system requiring no water tanks or mud pumps, allowing for easy setup and avoiding messy cleanup. It can be used to help install water or sewer lines using any type of pipe. It is available with over 84,000 pounds of thrust and can install pipes up to 8 inches, or be used to pipe burst existing utilities and replace with new HDPE pipe. An optional digital guidance system allows for the accurate installation of on-grade sewer lines.

800/344-6653; www.powrmole.com

Railhead Underground Products EXTReam reamers

EXTReam reamers from Railhead Underground Products are available in five sizes from 6- to 16-inch diameters with connections for virtually every drill. Field-replaceable teeth allow the user to stay on the job, saving downtime. They come with a complete set of jets and plugs, so the reamer may be configured to the varying ground conditions encountered throughout a project.

The newly designed 6-, 8- and 10-inch units are built with an API pin and box with a removable pulling eye at the back of the reamer. This allows the user to quickly hook up many configurations, including pulling reamers in tandem or using the reamer as a stabilizer for subsequent reamer passes.

817/594-6663; www.railhead.com



StraightLine HDD Crusher Reamer

The Crusher from StraightLine HDD is the ideal solution for tough rock bores where hole diameters are too small for a hole opener. It has a one-piece, solid body and shaft design, and is ground condition configurable. For hard rock conditions — up to 25,000 psi — a short-bodied radius carbide button design is preferred. A chisel-top carbide button design is ideal for softer rock formations. Carbide buttons are placed on independent cutting paths to ensure maximum hole engagement. Replaceable fluid ports deliver fluids exactly where needed to ensure smooth cutting action. Its tapered solid-body design transitions into full diameter in the back of the tool, which stabilizes the tool and promotes cutting control. At home in harsh conditions, such as hardpan, cobble and solid rock, it is available in diameters from 4 to 10 inches.

800/654-3484; www.straightlinehdd.com



The Robbins Company Remote Controlled Small Boring Unit

The Remote Controlled Small Boring Unit

(SBU-RC) from The Robbins Company has the ability to excavate small-diameter hard-rock tunnels at long distances on line and grade. It is available in a 36-inch-diameter model, but can be customized for a smaller 30-inch-diameter model. Equipped with a smart guidance system and pin-point steering controlled from a station at the surface, it is ideal for difficult crossings like gravity sewers. Muck removal is accomplished through a cost-effective vacuum system.

440/248-3303; www.therobbinscompany.com



Directional Drills

Melfred Borzall FastBack

The FastBack system from Melfred Borzall allows for direct pullbacks without removing the drill head or installing a backreamer. It is ideal for fiber installation where space is a concern. It includes the FastReam housing — used in place of a reamer to enlarge the hole during pullback — and an Eagle Claw, Iron Fist or blades fitted for the Eagle Eye, the Iron Eye, the Quick Link or the Quick Swivel. Once the pilot bore is complete, simply attach the FastBack tool and pull



the product in one direct pullback. It is made to complete multiple short bores per day and increase production, minimize excavation and restoration costs, and save time on bores.

800/833-1252; 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

Drilling Equipment



Foremost dual rotary drill

Dual rotary drills from Foremost have two rotary drives, including a lower rotary drive used to advance steel casing through sand, gravel, glacial till and boulders. The lower drive feeds and rotates the casing independently of the top drive. The casing is held securely in the lower drive by a set of power-operated jaws. Once the desired casing depth is reached, the drill continues drilling open-hole like a conventional top drive drill. There is no need to trip out or change tools when transitioning to open-hole drilling. The independent rotary top drive simultaneously handles a drill string, which can be equipped with a down-the-hole hammer, tri-cone or drag bit. Cuttings are typically evacuated with air, but drills can also be configured with pumps for mud or flooded reverse circulation drilling.

403/295-5800; www.foremost.ca

Jet-Lube ECO-SAFE

ECO-SAFE nonmetallic thread compound from Jet-Lube contains carbon-based fibers and additives and other natural extreme-pressure and anti-wear agents. These components are blended into its high-temperature calcium-complex base grease. The base grease offers the additional advantage of superior adhesion to wet steel surfaces, resistance to water wash-off, and most drilling fluids. It is effective for invert or high-pH drilling fluids, carries the ANSI/NSF 61 certification and is approved for all downhole applications and contact with potable water. It is ideal for stainless steel pump connections.

800/538-5823; www.jetlube.com



Montabert CPA 225E

The Montabert CPA 225E drilling attachment enables operators to transition from digging to drilling in a matter of minutes. Designed for use on 15- to 25-ton excavators, it is easily transported between job sites, delivering drilling power in the blast hole, slide stabilization, tunneling and other long-reach applications. The 3,197-pound unit drills holes measuring 1 1/2 to 3 inches in diameter and

up to 14 feet deep. An optional rod adder enables it to reach a drill depth of 26 feet. The single-pass drilling attachment includes an aluminum feed that provides 47 degrees of drill rotation. Radio controls allow it to be operated from outside the excavator cab, while the Intelsense system automatically analyzes drilling conditions and adjusts feed pressure and speed, anti-jamming controls and percussion pressure.

866/472-4373; www.montabert.com



Reed Manufacturing Reed's Feed Tap Machine

The Reed's Feed Tap Machine from Reed Manufacturing drills through PVC, PE, cast iron and ductile iron pipe while under pressure using a corporation stop inserted into a service saddle. The compact design, with a separate, independent feed control for advancing the heavy-duty shell cutter into the pipe, allows the user to easily complete the tap using an electric or cordless drill, right-angle drill for cast and ductile iron, or a 7/16-inch wrench with manual power for plastics. The independent feed control advances the shell cutter for tapping PVC pipe as recommended by Uni-Bell PVC Pipe Association. The kit contains both a coupon-retaining drill bit and two sets of coupon-retaining magnets ideal for ductile iron taps. It comes with all adapters, shell cutters, shell cutter adapters and a ratchet wrench with socket to cover 3/4- to 2-inch services in PVC and PE, and a sturdy carrying case.

800/666-3691; www.reedmfgco.com



Utilicor Technologies MC-450 Minicor coring attachment

The MC-450 Minicor coring attachment from Utilicor Technologies fits skid-steers as well as mini track loaders, allowing for quick and efficient pavement core cuts for daylighting or potholing purposes. It cuts pavement cores from 8 to 18 inches in diameter up to 24 inches in depth. Due to its narrow width, coring in tight spaces or up close to buildings or other structures is also possible. Simple controls ensure ease of operation, and the quick-connect to the auxiliary hydraulic system makes for simple plug-and-play installation to be ready to core in a matter of minutes. Integrated water tanks allow for multiple cores to be cut in a single fill. When the coring process is completed, the core



is reinstated back into the roadway using Utilibond Core Bonding Compound, and after just 30 minutes the roadway or sidewalk repair is permanent.

888/572-6666; www.utilicor.ca

Mud Pumps

BBA Pumps BA180E D315

The BA180E D315 compact 8-inch dry self-priming pump from BBA Pumps provides a maximum capacity of 3,150 gpm and a maximum head of 135 feet at 59 psi. It is driven by a Caterpillar diesel engine that meets stringent global emission standards. It is built according to strict U.S./EU

emissions legislation and is suitable for use worldwide, and comes in a sound-

attenuated enclosure, ensuring a low noise level and protection against dust, wind, rain and snow. It has a high-end LOFA control panel with support in 10 languages. Its light weight makes it easy to move around on site, or it can be mounted on a trailer.

843/849-3676; www.bbapumps.com



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.dragonproductsltd.com



Gorman-Rupp engine-driven pump

Engine-driven pumps from Gorman-Rupp can be used to supply large quantities of water for hydraulic fracturing operations and centrifugal pumps used on blending and hydration rigs. Solids-handling, self-priming trash pumps can be used for drilling rig cellar pumpout, transferring drilling mud slurries, frac tank and reserve pit water transfer, tank loading and closed-loop recirculation.

419/755-1011; www.grpumps.com



(continued)

Mud Recyclers



Ditch Witch MR90

The MR90 mud-recycling system from Ditch Witch is a single, self-contained unit that can mix and recycle mud, handle spoils, and can be transported full of fluid. It can meet the demands of any small- to medium-size drill with up to 90 gpm cleaning capability. It is specifically designed for drill units with pullback ratings from 20,000 to 60,000 pounds, supporting the most widely used drill rigs in service today. It has a 340-gallon first-pass mud tank, and 110-gallon clean tank with 3-inch vacuum connections. An optional 300-gallon freshwater tank with transfer pump provides additional drilling fluid capacity and high-pressure water for cleanup.

800/654-6481; www.ditchwitch.com

Mud Technology MCT 800

The MCT 800 from Mud Technology offers mixing and 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 kW, 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

Pipe

Advanced Drainage Systems SaniTite HP

SaniTite HP from Advanced Drainage Systems provides a solution for sewer casings or rehabilitates deteriorated CMP and RCP culverts. The light-weight pipe and triple-wall design reduces friction

and allows for longer uninterrupted pushing distance with light construction equipment. Liner systems are highly resistant to abrasion and are not susceptible to chemical attack or corrosion. It has ideal watertight joint performance meeting the requirements of ASTM D3212. Sizes available include 12- to 60-inch diameter with lengths of 20 feet. Custom pipe lengths are available.

800/821-6710; www.ads-pipe.com



IPEX TerraBrute CR

Engineered for horizontal directional drilling and other trenchless applications, TerraBrute CR from IPEX is a nonmetallic, AWWA C900 PVC pressure pipe system. Noncorroding and installation-friendly, it enables the standardization of PVC throughout a potable water and sewer infrastructure. Its nonmetallic ring-and-pin gasketed joint design provides additional pull strength — up to 120,000 pounds for 12-inch pipe. Rounded bell shoulders slide by roots, rocks and other debris that can protrude into the borehole. It requires no relaxation time before installation of fittings or services. It is made from stock certified to CSA B137.3, and is Factory Mutual-, ULC- and ULI-approved.

800/463-9572; www.ipexna.com



Pipe Bursting Equipment

HammerHead Trenchless Equipment HydroBurst 100XT

The compact HydroBurst 100XT static pipe bursting system from HammerHead Trenchless Equipment has a tethered remote control, and pays out rod quickly due to its automated rod-spinning assembly and the design of its hydraulic cylinders. It weighs 3,200 pounds and is 39 inches high by 30 inches wide. It can replace pipes up to 16 inches in diameter, yet is compact enough to use with pipes as small as 4 inches. The pulling machine's water-cooled PP4500 hydraulic power-pack with 72.7 hp Kubota engine pumps hydraulic fluid at up to 43.5 gpm and 4,500 psi. In 50-ton mode the unit directs all hydraulic fluid to just two of the cylinders, which then can move twice as fast as in 100-ton mode.

800/331-6653; www.hammerheadtrenchless.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.

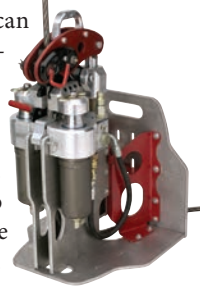
877/412-4740; www.s1eonline.com



Spartan Tool UnderTaker

The UnderTaker pipe bursting system from Spartan Tool can help replace existing sewer laterals with new, seamless, high-flow HDPE pipe from 2 to 6 inches in diameter. The system sets up quickly without any tools and handles up to three 45-degree bends in the existing pipe. No component weighs over 70 pounds, so it's easy to quickly position for any job, with minimal disruption to the customer's yard or business, allowing the customer full use of their facilities quickly.

800/435-3866; www.spartantool.com



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Dig Different welcomes news about a tough excavation, pipe bursting, trenching, boring or tunneling job you just completed for the Down & Dirty column.

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WHAT'S TRENDING IN ALTERNATIVE EXCAVATION?

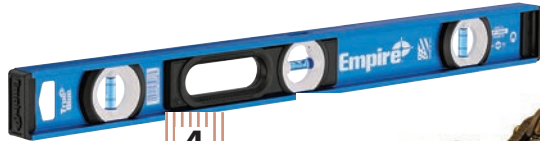
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THE LATEST: Products



1. Envirosight cable-free HD inspection camera

The Quickview airHD cable-free inspection camera from Envirosight is designed for pipes 6 to 48 inches in diameter. It captures high-definition video and transmits it wirelessly to a tablet for live viewing. The camera head connects to a pole that extends to a maximum length of 12 or 16 feet for manhole inspections. Available pole extensions allow for inspection of deeper manholes and catch basins. The Quickview mobile app is available for iOS and Android tablets and offers touch-screen control of zoom, illumination and tilt, as well as image capture and video recording, playback, annotation and sharing. **866/936-8476; www.envirosight.com.**

2. COXREELS biodiesel reels

Biodiesel reels (SHF-N-525-BBN, TSHF-N-XXX-BBN and TSHL-N-635-BBN) from COXREELS are designed for biodiesel concentrations above B5. Model TSHF-N-620-BBN is designed for biodiesel concentrations above B20 when used with Viton seals and the Flexwing VersaFuel Hose. **800/269-7335; www.coxreels.com.**

3. KOHLER Power Systems diesel-powered mobile generators

Diesel-powered mobile generators (90REOZT4 and 120REOZT4) from KOHLER Power Systems are designed to withstand the elements, run long hours in prime and standby applications and meet all EPA emission requirements. Generators run on a John Deere Final 4.5L engine. Features include a heavy-duty air cleaner with restriction indicator, fuel tanks designed for 24-hour runtime, external emergency stop and stainless steel door latches and hinges. **800/544-2444; www.kohlerpower.com.**

4. Empire Level e55 Series True Blue I-Beam levels

The e55 Series True Blue I-Beam levels from Empire Level feature a top-read window for clear overhead viewing and built-in molded grip zones for enhanced portability. Magnetic models include a continuous magnetic edge that provides maximum holding power when measuring. High-contrast vial surrounds provide visibility in all light conditions. **800/558-0722; www.empirelevel.com.**

5. Pure Technologies robotic crawler

The PureRobotics inspection system from Pure Technologies is designed to carry sensors and tools up to 3.1 miles at 85 feet per minute through dewatered pipe or while submerged. The system, designed for both water and wastewater applications, features HD digital, pan/tilt/zoom and closed-circuit television that delivers live video for detecting leaks and other anomalies in underground pipes. The crawler can be equipped with an inertial measurement unit for XYZ mapping, 3-D LIDAR scanning tools, or pull condition assessment tools such as 2-D laser technology. The track feet are modular and can be changed out for different styles depending on the type of pipe. The chassis can be expanded for large pipelines. **855/280-7873; www.puretechltd.com.**

6. Jetstream of Houston rotary nozzle

The Orbi-Jet X22 rotary nozzle from Jetstream of Houston is designed for surface cleaning applications. The self-rotating nozzle is rated for up to 22,000 psi. Features include a lightweight Twis-Lok shroud that ensures safe water displacement and protects the nozzle from damage during operation. A magnetic braking system controls rotational speed. Nozzles are safety colored for pressure recognition. The premium kit includes an optional 15,000 psi adapter, 50-hour maintenance kit and secondary rebuild kit. **800/231-8192; www.waterblast.com.**

7. Milwaukee Electric Tool Corp. liquid paint markers

INKZALL liquid paint markers from Milwaukee Electric Tool Corp. are designed for darker job site surfaces, such as black pipe and structural steel. The pens feature wear-resistant acrylic tips for writing on dusty, wet

or oily surfaces up to 300 degrees F. Marks are both water- and UV-resistant with a 10-second drying time. A textured barrel makes the pens easier to use while wearing gloves. Colors include white, yellow, black, red, green, blue and orange. Fine-point markers are available. **800/729-3878; www.milwaukeeetool.com.**

8. Reelcraft spring-retractable cord reels

Series L 70000 spring-retractable cord reels from Reelcraft Industries are designed to accommodate up to 100 feet of 12-gauge cord. Steel construction and baked-on powder coat combine for a heavy-duty, corrosion-resistant finish. The containerized drive spring offers safer and easier handling during maintenance. Two sealed ball bearings produce a smoother spool rotation and easier operation. All cord reels are UL-listed. **800/444-3134; www.reelcraft.com.**

9. Princeton TEC headlamp

The Vizz-IND headlamp from Princeton TEC has a 205-lumen Max-bright LED lamp to provide a long throw spot beam. Four white Ultra-bright LED lamps provide a flood beam for up-close work and a wider viewing angle. The four white LEDs have a dimming feature. The headlamp is waterproof up to 3 feet and up to 30 minutes. Three AAA alkaline batteries, a nylon head strap and a rubber hard hat strap are included. **800/257-9080; www.princetonotec.com.**

10. John Deere small-frame skid-steer

The 312GR skid-steer loader from John Deere is designed for work in tight spaces or indoor operations. It features a 51 hp, Final Tier 4 engine with a 1,550-pound operating capacity. The radial-lift option offers a one-person boom lockout system that can be activated from within the cab. The lift system is designed for lower maintenance and optimal digging performance and is ideal when more reach is needed at midrange lift heights. All G-Series models are compatible with more than 100 available Worksite Pro attachments. **800/503-3373; www.johndeere.com.**

11. General Equipment Company temporary lighting

Tower Light temporary lighting products from General Equipment Company provide an inflatable, temporary lighting solution for large and confined areas. A cylindrical load-bearing nylon tower is inflated with constant air pressure delivered by an integral blower system. Designed for indoor or outdoor use, lights can be installed and ready for operation in about one minute with no special tools or additional components. Operational heights of 7.5, 10 and 14 feet provide 360-degree illumination. **800/533-0524; www.generalequip.com.**

(continued)

This Issue's Feature:

GSSI's 3-D ground-penetrating radar system provides X-ray-like imagery

BY ED WODALSKI

The updated **UtilityScan ground-penetrating radar system** from **Geophysical Survey Systems Inc. (GSSI)** includes 3-D data collection and playback mode for the UtilityScan DF model that provides X-ray-like imagery of the ground in addition to the standard two-dimensional mode.

"The DF system is a new breed of GPR antenna that offers two antennas (800 and 300 MHz) in one," says Brian Jones, applications specialist for Geophysical Survey Systems. "Previous generations of antennas and systems were only capable of collecting a single-frequency antenna, or possibly multiple antennas, but they had to be separated, used a significant amount of cabling and were very cumbersome for utility locating, environmental surveys, road inspections and more. With both antennas in a single housing, users can now collect two surveys in half the time."

The radar can be used to locate metallic and nonmetallic objects and features a touch-screen monitor that enables users to simultaneously view shallow and deep targets. Applications include locating underground storage tanks, old foundations or debris, as well as locating depth to bedrock for engineering planning and environmental drilling, golf course turf assessment, archaeology and forensics.

"The use of 3-D data collection provides enhanced viewing options not seen in single scans or profiles," he says. "Users can stretch, shrink or zoom in on files for customized presentation. The 3-D playback allows the entire data set to be sliced and diced along various X, Y and Z planes for easy interpretation of complex areas."

Advanced filters, such as Signal Noise Floor, indicate how deep the equipment is imaging at any given site since GPR technology is affected by chang-

ing soil types.

The SIR-4000 controller included in the UtilityScan 4000 package enables both analog (traditional design) and digital (newer design) antennas to be used. "This feature is great for users with older equipment that want the latest features and updates," Jones says.

New software features allow the user to input colored markers while using a GPS unit to aid in subsurface target classification.

"Both the UtilityScan 4000 and the DF allow for real-time adjustments of key system-processing functions and display settings, such as data display gains, data improvement filters, color and contrast adjustments and more," Jones says.

Other software features include GPS positioning integration that allows data in the field to be exported directly to engineering and surveying software packages.

"The 3-D module in GSSI's RADAN 7 office processing software also enables users to create shapes (pipes, drums, lines) in the GPR data, which can be exported for integration with CAD drawings," Jones says.

GSSI also offers a two-day technology training class that includes the fundamentals of radar theory, system setup and hands-on learning.



800/524-3011; www.geophysical.com

THE LATEST: Products



12. Vacall – Gradall Industries water recycling system

The AllClean water recycling system from Vacall – Gradall Industries is designed to conserve water and enable AllJetVac operators to work all day without refilling the water tanks. It uses a series of filters, screens and centrifugal motions to remove matter of different sizes from water collected in the debris tank before returning it to the water tanks. A 240-gallon clean water washdown feature is included. **800/382-8302; www.vacall.com.**

13. DPL Telematics GPS tracking system with anti-tamper protection

The Trackall OBDII vehicle tracking system from DPL Telematics delivers real-time vehicle and driver behavior data. The unit plugs into the existing OBDII port of most vehicles and installs in seconds. Anti-tamper features include a backup battery that delivers immediate disconnection notifications with location, as well as GPS jamming detection. Managers can monitor vehicles through an internet-based software package and mobile app. **800/897-8093; www.dpltel.com.**

14. Komatsu America Corp. wheel loader

The WA600-8 wheel loader from Komatsu America Corp. is designed to maximize production efficiency in loading off-highway trucks or load-and-carry applications. The 529 hp, Tier 4 Final certified engine improves powertrain and hydraulic efficiency and consumes up to 13 percent less fuel than its Tier 3 predecessor. It features a standard bucket capacity of 9.2 cubic yards. **847/437-5800; www.komatsuamerica.com.**

15. Paladin Attachments binder

TwinDrive binders from Paladin Attachments quickly tighten and loosen loads of prime mover equipment and attachments by using a cordless drill and socket. Binders are made for confined spaces where a full rotation is not possible with a manual binder. Heat-treated and forged components and a reinforced bolt carriage with grease fittings provide durability and smooth operation. **800/456-7100; www.paladinattachments.com.** ▼

“There are different ways

to excavate soil.

Most people think you’re just

spraying water on the ground,

but it’s a science —

there’s a right way to do it.

“We’re here to stay. We’ve got a good

reputation,

and that makes me want to work

even harder. The guys and I all have

something to prove.”

Mike Morehouse, Owner
Davids Hydro Vac
White Bear Lake, Minn.



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Happenings

CALENDAR

July 8

Underground Construction Technology Association (UCTA) South Texas Chapter Luncheon, AARC, Austin, Texas, www.uctaonline.org.

Sept. 24-28

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

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.

Dig Different welcomes your contributions to our Happenings column. To recognize members of your team, please send notices of new hires, promotions, service milestones, certifications or achievements. We also invite your national, state or local associations to post notices, news items and learning opportunities. Send contributions to editor@digdifferent.com. ▼

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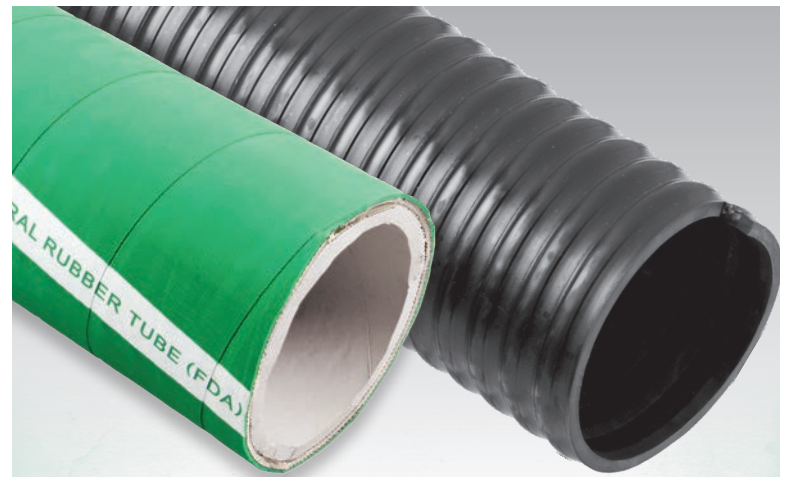


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Heavy Hydro Power

SINGLE-CHASSIS BRUTE FROM SCHELLVAC TAKES ON BIG JOBS WITH A COMPACT PACKAGE

BY CRAIG MANDLI

In the booming hydroexcavation industry, packing high power into a compact package is preferred. The people at SchellVac Equipment took that to heart when designing the SCH VT 2600 tri-drive hydroexcavator, which was introduced at the 2016 Water & Wastewater Equipment, Treatment & Transport Show. And many attendees of the show took notice.

“This is about as big of a system and as much power as you can get on a single-chassis truck,” says SchellVac President Alexander Scheller. “It’s a big, powerful unit, but because it’s on the single chassis, it’s actually proportionally small for the power it provides.”

The system is built on a 2016 Peterbilt 567 tri-drive, triple-axle system that is rated to a 66,000-pound payload, with power from a Cummins ISX15 engine delivered through an efficient 18-speed transmission.

“Companies are looking to hydroexcavation trucks as a main source of income, so they need a unit that is easy to operate and allows them to get the job done well and fast,” he says. “The bigger trucks are becoming a better fit for the crowd at this show, and this one is our big boy.”

The SCH VT 2600 boasts a large, hoisted 15.5-cubic-yard debris body with full-opening rear doors and hydraulic locks. A high-power Robuschi RBDV 145 blower provides 6,400 cfm of vacuum force at 28 inches Hg, powered by a NAMCO direct-drive transfer case. Debris is filtered through a heavy-duty cyclone and cartridge system. Its 8-inch telescopic boom provides 27 feet of reach and 320-degree rotation, with 20-degree downtilt and 55-degree uptilt, allowing the operator to reach more of the job without needing to reposition the unit.

“IT’S A BIG, POWERFUL UNIT, BUT BECAUSE IT’S ON THE SINGLE CHASSIS, IT’S ACTUALLY PROPORTIONALLY SMALL FOR THE POWER IT PROVIDES.”

Alexander Scheller

“A lot of the contractors we are talking with are impressed by the big blower with higher cfm output than they are used to,” Scheller says. “We also took great care to make sure that the vacuum system is easy to maintain.”

The high-pressure washing and blasting system has a 1,200-gallon aluminum water tank to allow the operator to stay on site for longer work periods instead of breaking for water fills. Blasting power is provided by a CAT Pumps 3560 pressure pump that offers 3,400 psi at 20 gpm. A 980,000 Btu boiler heats water for additional blasting effectiveness. The unit conveniently features a hose reel on each side of the unit, while a glycol system enables damage-free use in cold winter months. In addition, the complete water system is installed



Alexander Scheller, president of SchellVac Equipment, discusses his SCH VT 2600 tri-drive hydroexcavator with a group of 2016 WWETT Show attendees. The unit has a large, hoisted 15.5-cubic-yard debris body with full-opening rear doors with hydraulic locks, and is built on a heavy-duty tri-drive, triple-axle system.

in a fully insulated and heated aluminum van body for cold climates.

“We know that not everyone is going to need the heated system, and that we’re basically building these units for the northern portion of the United States, and all of Canada,” says Scheller. “It is important that companies in those colder northern climates have a unit that can run year-round.”

While SchellVac has been in the vacuum truck industry for 10 years, the larger hydroexcavation units are a relatively new endeavor for the company. Scheller says the big goal he had for his company coming into the WWETT Show was to introduce the new units to attendees, while reminding longtime customers that their smaller vacuum and septic pump trucks are still a focus of the company.

“We wanted to let people know that we are expanding and branching out, and our hydroexcavators are made with the same quality that we’ve put into all our vacuum trucks over the years,” he says. “We’re looking forward to coming back next year with even more options for those at this show.” 877/336-0081; www.schellvacequipment.com. ▼



Water & Wastewater Equipment, Treatment & Transport Show
www.wwettshow.com
 Education Day: Feb. 22, 2017
 Exhibits: Feb. 23-25, 2017
 Indiana Convention Center, Indianapolis

PHOTO BY CRAIG MANDLI

THE LATEST: News



Komatsu CARE program reaches milestone

Komatsu and Columbus Equipment Company completed Komatsu CARE's 60,000th service interval since the complimentary maintenance for Tier 4 machines was launched in 2011. The Komatsu CARE program covers eligible Komatsu Tier 4 construction-sized machines for the first three years or 2,000 hours.

Federal Signal acquires Westech Vac Systems

Federal Signal Environmental Solutions Group, parent company of Vactor Manufacturing, acquired Westech Vac Systems, provider of vacuum truck-mounted solutions. As a Federal Signal subsidiary, Westech will continue to operate in Nisku, Alberta, as Westech Vac Systems.

Raven Lining Systems earns USDA certification

Raven Lining Systems earned the USDA Certified Biobased Product Label for its AquataFlex 505 and 506 products. The label verifies that the products' amount of renewable biobased ingredients meets or exceeds levels set by the USDA. Both products deliver strong adhesion properties to properly prepared concrete, steel, aluminum, wood, composites and other substrates.

Ditch Witch honors top individuals, dealership

Ditch Witch, a Charles Machine Works Company, presented the Harold Chessnut Award to Archie Sours of Ditch Witch of Virginia. Kenny Mangrum of Ditch Witch of South Louisiana received the Service Excellence Award. Ditch Witch of South Louisiana was recognized as the top dealership for service and support in 2015.

Thompson Pipe Group – Flowtite names regional sales manager

Thompson Pipe Group – Flowtite named Dee Bryant regional sales manager. Bryant will be based in Houston and focus on growing Flowtite FRP across the South Central market.



GapVax founders receive local honor

GapVax founder Gary Poborsky and his wife, Rose, were inducted into the Greater Johnstown Cambria County Business Hall of Fame in Johnstown, Pennsylvania. The GJCC Business Hall of Fame honors individuals who made a lasting impression on the region through business contributions or efforts to improve the area. Poborsky founded GAP Pollution and Environmental Control in 1977.

JCB North America celebrates production milestone

JCB North America celebrated the production of its 100,000th compact excavator. The company's first compact excavator rolled off the production line in 1989.

Benlee acquires Huge Haul

Benlee acquired the assets of Huge Haul in a cash transaction. Huge Haul manufactures Load Lugger roll-off systems for trucks and trailers.

McElroy Manufacturing redesigns website

McElroy Manufacturing recently launched a redesigned website, www.mcelroy.com. The site features a new menu structure where machines are grouped into two categories based on the type of industries served and a search feature.



Envirosight releases Sewer Zoom Camera Buyer's Guide

Envirosight released a new *Sewer Zoom Camera Buyer's Guide*. The complimentary guide can be downloaded off the company's website, www.envirosight.com.

Mustang-Gehl Company adds Texas State Rentals to dealer network

Texas State Rentals joined the Gehl dealer network for Gehl telescopic handlers. Texas State Rentals provides sales and service to southeastern Texas with locations in Tomball, New Braunfels and Hallettsville.

Stellar Industries promotes two to inside sales positions

Stellar Industries promoted Eric Janssen and Ryan Ytzen to inside sales positions. Janssen served the last four years as a sales representative for the American Eagle Accessories Group, a division of Stellar Industries. Ytzen was previously a technical service representative in the customer service department.



From left, Dan Miller, president and CEO of Manitou Americas, Pete Smeretsky and Francois Piffard, executive vice president of sales and marketing for Manitou Group.

Manitou presents 2015 Top Dealer award

Manitou presented Pete Smeretsky of Transport Equipment Sales (South Kearny, New Jersey) with the 2015 Manitou Top Dealer award. The award is based on overall sales performance for North American Manitou dealers.

Ring-O-Matic partners with Utility One Source

Utility One Source, which provides sales, rental and aftermarket service of heavy equipment, will make Ring-O-Matic's vacuum jetters available to customers nationwide from its 23 locations. ▼

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