tracks&treads

FALL 2012

Sonic DRILL

A novel technology brings on fresh opportunities

Cat-Brand New

Three 775Ds get a major overhaul

Precious Metals

Rebuild kits give engines life X3

Community Riders

Finning bikes hit the road for the United Way

What is this man holding? p.29

PLUS: Finesse your paving technique

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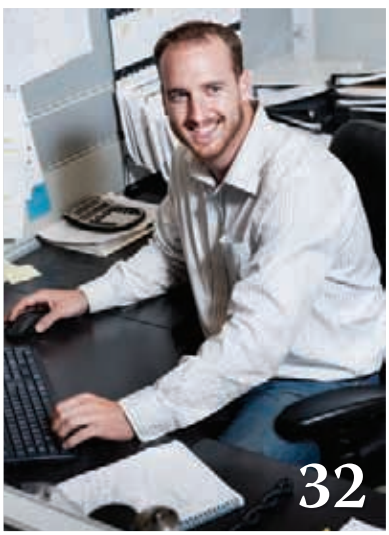
Now available for select 3406 engines for the following machine models: Scrapers (621G, 623G, 627F, 627G), Articulated Trucks (735, 740), Wheel loaders (824G, 826G, 980F, 980G) & Dozers (D8N, D8R).



Features

On the Cover

Kevin Reimer, operations manager, Sonic Drill Corporation.
Photo: **Stuart McCall**

Columns & Departments

Live Well, Work Smart

BY **JEFF WUITE**, FINNING EDITOR

The fighting spirit means more than staring down an opponent. It means a commitment to better health today

Lugging tools and heavy equipment across the washbay every day can be tough on a person. But it's after the workday is done that Finning washbay attendant Zack Zacharias really takes a beating.

After a 12-hour shift at Mildred Lake, the 25-year-old heads to his gym in Fort McMurray. Then it's four hours of weight training, cardio, and sparring, all in preparation for his next bout. Zack is a mixed martial artist, and his healthy approach to living is making him a better employee.

A healthy employee is a happy employee, as Zack can attest. And a happy employee is a productive one.

Zack became interested in mixed martial arts (MMA) when he and a friend would watch the Ultimate Fighting Championship matches on TV when they were kids. He had always been an avid soccer player, but there was something about the dedication and competitive spirit of the fighters that he found fascinating. Besides, the schedule of a soccer team doesn't always fit with the schedule of a Mildred Lake shift worker. In 2010, he met his future brother-in-law, Dean Taylor, who was already heavily involved in the world of MMA. Zack joined him in his training and took to the new sport with incredible aptitude.

He realized if he wanted to become competitive in this new sport, he needed proper coaching. He found Bowman's MMA gym for the time he was in Fort McMurray and Island Warriors for when he was back home in Campbell River, B.C. He also started training under Baz Cunningham. Baz is a professional MMA fighter with a style described as a combination of Muay Thai (Thai kickboxing), wrestling and Brazilian jiu jitsu. Zack took to the coaching extremely well, and was soon looking for his first competitive bout.

In February, 2011 he got his chance. The match took place in Campbell River against another rookie fighter. It lasted two minutes and 40 seconds, at which point Zack's opponent submitted. Since then Zack has fought twice. His record now stands at 2-1.

The healthy lifestyle and strict discipline of his sport have helped Zack at work. He eats healthier and exercises every day. His training diet consists of carbs in the morning, then only protein shakes, fruits and vegetables for the rest of the day.

"I love how much energy I have at work when I eat so cleanly," he says. "Even if I work out before my shift, I find it gives me energy and just keeps me a little happier. It's always good to be happy at work." It's some of those positive mental aspects of his sport that he finds helpful, not just at work, but everywhere else. "I was never a very confident person growing up, but since I started training and taking better care of myself, I find I'm a lot more confident."

It's that kind of healthy attitude companies are trying to integrate into their culture. Health-and-wellness programs are becoming more common with top-tier employers. A healthy employee is a happy employee, as Zack can attest. And a happy employee is a productive one.

Zack says he approaches his training at the gym and his matches in the ring with such intensity for just one reason: passion. "I'm not sure why I'd keep doing it, other than passion. It's the greatest, most intense few minutes anyone will spend. Even though I know it's not for everyone, if you have the interest, all I can say is just get out and do it."

tracks&treads

FALL 2012 Volume 53, No. 3

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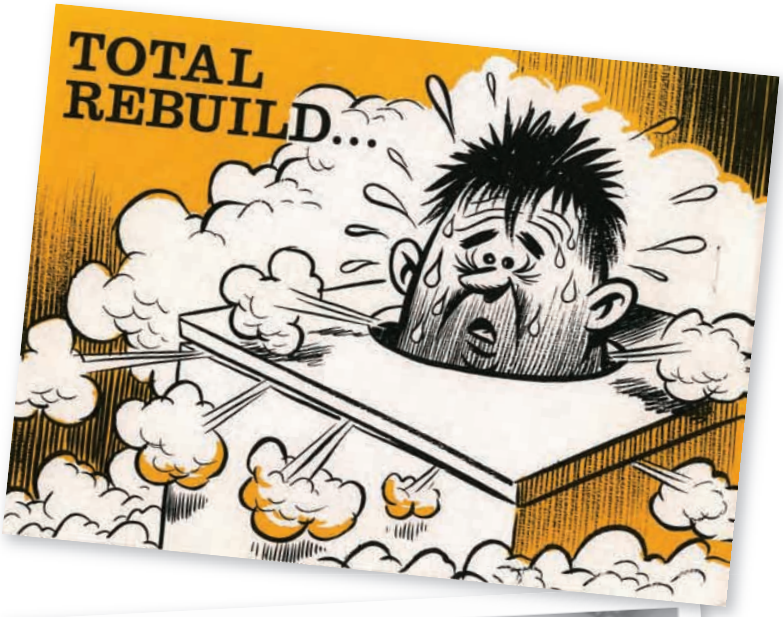
Tracks & Treads is published to provide its readers with relevant business, technology, product and service information in a lively and engaging manner.

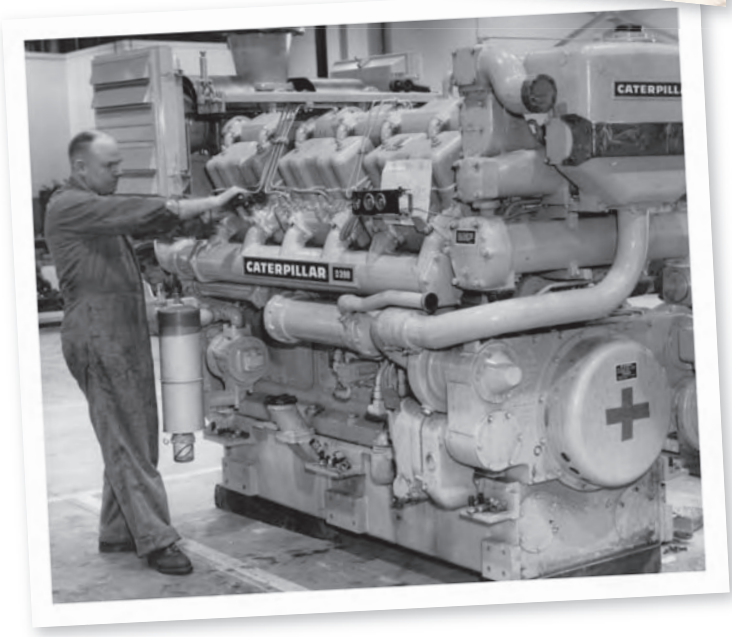
Tracks & Treads is published for Finning Canada by
Venture Publishing Inc.
10259-105 Street
Edmonton, Alberta T5J 1E3
Phone: 780-990-0839
Fax: 780-425-4921

Venture PUBLISHING INC.

PM #40020055

JUST SAY REBUILD IT: In this issue learn about how you can extend the life of your transmission and even give your yellow iron second and third lives. ***– Editors***





Tell us what you think

Tracks & Treads would love to hear from you. Tell us what you think of the magazine's stories, columns and look, so that we can improve it and make it a more interesting read.

Send your comments to editor-in-chief Jeff Wuite by email at jwuite@finning.ca or the old-fashioned way to: Jeff Wuite, *Tracks & Treads*, Finning Canada, 16830 – 107 Avenue, Edmonton, Alberta T5P 4C3

www.finning.ca

BY MIFI PURVIS

Cool, But No Toy

LIKE THE REAL THING: Students can try heavy-duty moves at reduced risk and cost.

"The goal of these simulators is to provide life-like training," says Brian Badge, chair of trades at Northwest Community College (NWCC) in Terrace, B.C. NWCC recently purchased 11 simulators from Finning – three excavators, two bulldozer tractors, two heavy haul trucks, two loaders, one grader and one scraper– to start heavy-equipment operator students on the road to mastery. "The students love the simulators," Badge says. "And we believe they really add value." Finning presented NWCC with some great options and, after another simulator NWCC bought two years ago proved valuable, purchasing more made sense for the college.

"The simulators have practical competencies built in," Badge says. "The competencies progress from easy to complex and the students must finish each competency before moving to the next level and, ultimately, to taking the controls of a real machine found later in the program."

NWCC has classroom simulators and an impressive mobile unit that can be used anywhere. The use of simulators has the added value of being a greener option that reduces wear on the training iron, increasing skill and proficiency before students get behind the controls of real iron.

"Students get a feel for the equipment," Badge says, "and it certainly speeds up the training process."

Tram Time

"Guys who have been around the construction industry for 30 years tell me they've never seen anything like this," says Trevor Dueck, a Finning general line sales rep in Kamloops. No surprise – he's talking about the tram across The Kwoiek Creek, a tributary to the Fraser River near Lytton, B.C., two hours south of Kamloops.

A company from Quebec City, CRT, came to Kamloops and bought a dozen Cat machines from Finning to complete its two-year Kwoiek Creek Hydroelectric Project, a 50-megawatt, run-of-river hydropower project located on the creek. CRT is constructing the facility for the project, which involves partners Kanaka Bar Indian Band and Innergex.

Finning also inked a service agreement for the machines. One small problem for Finning was getting the machines to site and later, getting service trucks in. The problem with the site? The Kanaka River runs through it.

The ingenious solution is a Swiss tram system built by the Doppelmayr Garaventa Group, the likes of which members of the public can only see if they take the Peak 2 Peak Gondola in Whistler. The suspended cab over the Kwoiek Creek can hold 20 tons, more than enough for a service vehicle, and the scenic cross-river ride is just part of the commute for Finning's techs who are servicing CRT's yellow iron on the other side.

HIGHER CARE: Finning has rivers to cross.

The Right Parts, Right Now

Caterpillar's Precious Metals engine rebuild kits recognize your business's reality. Finning's customers are looking for high-quality, low-cost and time-saving options to extend the life of their equipment. Finning and Caterpillar are stepping up to the plate with new service and parts offerings. Precious Metals kits feature improved parts quality, tech support and warranty, all in a customizable package. See more on page 18.

GET MORE FOR YOUR MONEY. Prepackaged kit options feature improved pricing – as much as 20 per cent lower than the cost of buying parts separately – and contain everything you need for a cost-effective engine repair solution.

COUNT ON QUALITY. Genuine Cat engine components are manufactured to precise specifications and engineered for a reliable rebuild, boosting productivity and minimizing downtime. They work together as a system to give your machine new life.

SAVE TIME AND EFFORT. Because there's no need to select individual parts for the repair, you always get exactly what you need, simplifying ordering and handling, and shortening turnaround time and reducing the chance for errors.

A Smooth Road

Paving guru Lafarge Construction, which offers tailored pavement solutions, has a cool new tech tool in the toolbox. Finning recently sold the company some new graders and pavers, and SITECH Western Canada Solutions Ltd. equipped them with technology designed to make operators' lives a little easier. But the new technology means taking a new approach to work. Lafarge made the investment in order to complete the southeast section of Stony Trail, Calgary's new ring road.

"Lafarge was contracted to do the base and paving, and they needed to maintain high accuracy standards and tolerances," says Kyle Canning, technology sales and service representative at SITECH, which deals in construction technology systems for heavy and highway contractors, working closely with Caterpillar and Finning and all heavy equipment manufacturers and authorized dealers. SITECH has expanded its business relationships to include fleet management solutions designed to improve productivity and lower costs.

"Lafarge has used SITECH's Trimble GPS technology for survey team and equipment users," Canning says. "And the GPS is adequate for most applications, but this one had particularly tight tolerances – above normal tolerances," he says. "To increase accuracy, Lafarge switched to UTS – universal total stations – for final passes."

A robotic UTS uses an optical device. "It can follow a target robotically, without the intervention of a user." Basically, UTS tracks a machine target and delivers the positioning information to earth moving, grading and paving machines as quickly and accurately as possible. The paver operator can grade to millimetre-accuracy, minimizing rework, which costs money.

"The technology reduces error and increases speed," says Canning. "The system needs good digital design to operate, and a good operator who understands what he's doing and what the system is capable of." Rather than dumbing down the job, it lets an operator do a better job – UTS provides a kind of 3D view of what's underneath the paver. It adjusts for irregularities, so that the first pass with the paver builds a smooth mat. Subsequent passes have little or no corrections to make and can focus on perfecting the final surface. It's a new approach for paving crews in Alberta, Canning says, and it takes time to understand that the paver produces a product without error by taking away the guesswork. "It changes the focus from rework to efficiency and productivity."

Sweet Compact Track Loader

Equipment operators in Western Canada have a great new option from Finning. Travis Drake, a rep in general construction sales in Fort McMurray, recently sold the territory's first 299D XHP compact track loader to Global Fabrication Inc.

The compact track-type loader may be the biggest machine in its class with a tremendous lifting capacity, but it has relatively low ground pressure, says Ben Sych, general manager at Global. "That's important to us," he says, "because we often work in environmentally sensitive areas, like reclaimed areas on the Syncrude sites in Fort McMurray." Global has also been involved in the design and build of the Bison Ranch, a reclaimed section of land that will be home to a herd of buffalo.

"We absolutely needed the 299D to build a walkway across some sensitive fen areas so researchers could get out to their plots to monitor them," Sych says. Fens are areas where the water table is as high as the ground and they are particularly sensitive to disturbance. "Any other machine we could have used to build the walkway would have chewed up the fen, defeating the purpose," Sych says. Global is embarking on a period of growth and Sych says Global has big plans for the machine, which has been in the field since the beginning of June.

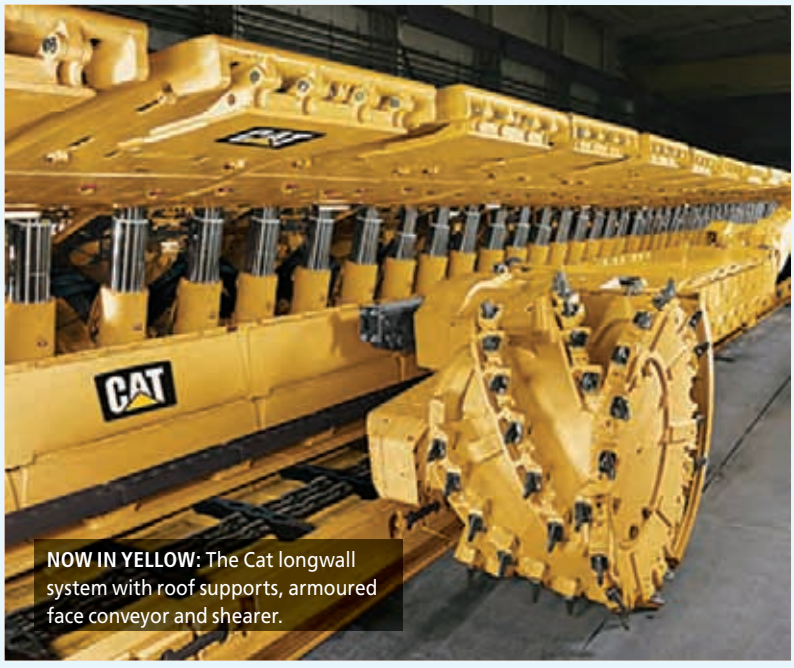
The 299D will come in handy for Global in a number of ways. "We have to operate in areas where we can't bring in a lot of machines, so we needed something pretty versatile," he says. The hydraulic flow and lift capacity mean that the machine is powerful enough to bring in other equipment and machines, even to install screw piles for the company's fencing projects.

"Finning is an excellent business partner," Sych says, "and it was as much our experiences with them and the after-sales support that convinced us. Travis was able to locate this machine in the States and bring it up in fairly short order."

FAB FEATURES

- The Cat 299D XHP compact track loader has a vertical lift design, delivering extended reach and lift height for quick and easy truck loading. The torsion axle suspension system provides superior traction, floatation and the ability to work in a wide range of underfoot conditions and applications.
- The 299D has a sealed and pressurized cab for a clean, quiet operating environment. The seat-mounted adjustable joystick and air ride seat mean the D-series is also built for comfort.
- The high performance power train provides maximum performance and production capability.
- Electronically controlled Cat C3.8 aftercooled engine provides high horsepower and torque, while meeting U.S. EPA Tier 4 Interim requirements.
- XHP hydraulic system provides high flow and high pressure that deliver industry-leading hydraulic horsepower to efficiently run the most power-hungry work tools.

Bucyrus Update



NOW IN YELLOW: The Cat longwall system with roof supports, armoured face conveyor and shearer.

In May, Finning International completed the acquisition from Caterpillar of the former Bucyrus distribution and support business in portions of South America and in the U.K.

"Today marks a new chapter in our history as we build on our strong foundation as the leading heavy equipment supplier and service partner to support our customers with all of their surface and underground mining equipment needs," said Mike Waites, president and CEO of Finning International Inc. in a press release. "Acquiring this business fits squarely with our strategy of delivering unrivalled service and solutions in the rapidly growing mining territories where we operate."

The transaction is valued at US$306 million for Finning in South America and the U.K. An estimated US$159 million will be paid upon completion of the transaction for Finning Canada.

Stay tuned to future issues of *Tracks & Treads* for more on the history of Bucyrus and the new yellow mining iron, serving mines from top to bottom.

PAVE THE WAY!

In May, Caterpillar launched a website dedicated to paving. If your business specializes in paving, you'll want to check it out for the latest news, specs and details about the machines you need to know. Get up-to-date information on vibratory soil compactors, pneumatic rollers, tandem vibratory rollers and pavers. The website, ***paving.cat.com***, also shows 3D virtual walk-arounds and videos for operators.

New Digs in Mildred Lake

The original structure was started in the early 1980s. Bits were added as needed: a file storage area here, a trailer there. Twenty-five years later it was apparent the Finning facility at Mildred Lake was due for an overhaul. "It was not up to Finning standards," says facility manager Jud Overton. "We had definitely outgrown the space."

Phase one of the $4.8-million project includes some demolition and the addition of brand new men's and women's locker rooms, along with a new kitchen and lunch area. This critical piece of renovation will provide overdue comforts for Mildred Lake employees. It will also increase safety and efficiency. Crews are revamping the mechanical services to the building and the new tool room will allow employees easy central access to everything they need for their workday. And one other neat innovation includes a coverall dispensary.

"We have about 4,000 pairs of coveralls in circulation at Mildred Lake," Overton says. "With the high degree of movement and turnover in the oil sands, we've been losing track of coveralls, and employees have had to wear coveralls with other people's names on them. Keeping track of the coveralls has become a fulltime job."

To solve the problem, Finning has created a coverall dispensary. Employees stop on their way in to get a clean pair of coveralls in their size – no names on any garments. In the locker room at the end of shift, they simply deposit the day's coveralls in a hopper to be laundered. The next day they start with a fresh pair from the dispensary. Ensuring that there is always a supply of appropriately sized coveralls contributes to keeping the employees safer. "And we think the move will decrease our coverall count by one-third," Overton says.

There is talk of a potential phase two to the project, but for now, staff at the Mildred Lake site are looking forward to moving into the renovated digs in December. "It is designed to improve asset security and will provide a single-delivery outlet for the shop operations, tooling, parts, and supplies on the site," Overton says. "And it demonstrates that Finning is here for the long term."

By the Numbers

20 to 75

The weight range, in kilograms, of an average wolf

25,000

The approximate readership of *Tracks & Treads* magazine

0

The number of places in a mine site that you can't find Caterpillar iron

5 to 7

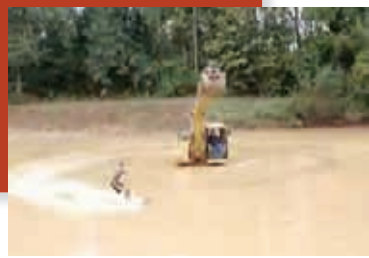
The average number of wolves in a pack

1

The number of dominant males in the pack

> 348,992

The number of times the clip "Caterpillar Water Skiing" has been viewed on YouTube. (Hint: it involves a mud-hole in South Carolina)



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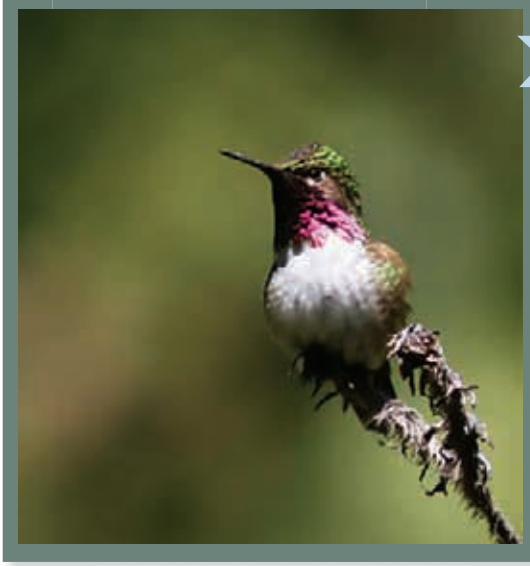
The smallest living bird is the bee hummingbird



6

Length, in centimetres, of the endangered bird

1.9

Weight, in grams, of the bee hummingbird

31

Wingspan, in centimetres, of the largest butterfly, the female Queen Alexandra's Birdwing

A bit smaller.

The male

SOURCES: *canadiangeographic.ca; iucnredlist.org; enchantedlearning.com*

BY **KEITH HADDOCK**

Scrape Iron

Today's scrapers are born of both incremental and game-changing improvements

The launch of Caterpillar's new H-series scrapers commemorates more than 60 years of scraper manufacture. Changes large and small have steadily improved safety, reliability and operator comfort, making Caterpillar the leader in scraper design for decades.

In 1951, Caterpillar got serious about motor scrapers. That year, the company unveiled the first two of a long line of motor scrapers that led the industry for more than 60 years. These were the DW20 4-wheel tractor with No. 20 scraper and the DW21 2-wheel tractor with No. 21 scraper, rated at 20 cubic yards heaped capacity, and equipped with the Caterpillar D337 diesel engine developing 225 horsepower. An independent, two-cylinder gasoline engine of 25 horsepower started these legendary machines. Caterpillar expanded and continually upgraded the product line to produce today's sophisticated models.

But before the DW20 and DW21 scrapers of the 1950s, Caterpillar had more tentatively ventured into the scraper market, introducing the 100-horsepower DW10 4-wheel tractor in 1941. Since Caterpillar had not yet fully entered the scraper business, Cat sourced suitable scrapers for this tractor from allied manufacturers. In 1947, Caterpillar finally produced its own scraper, the No.10 rated at nine cubic yards heaped capacity, designed to match the DW10 tractor. From 1946 to 1949 Caterpillar also introduced pull-type scrapers, with a model designed to match each of its crawler tractors, D4 to D8.

Operators, using a double-drum cable control unit with synchronized clutch and brake control, operated the DW20 and DW21 scrapers. Long ropes with multiple sheave blocks raised the apron, raised the bowl, and pulled the ejector forward to force out the load. Caterpillar designed and built the tractor transmissions and final drives. These incorporated a five-speed constant mesh transmission allowing a top speed of 20 miles per hour with fully-loaded scraper for the DW21, and 26.6 miles per hour for the DW20. Operator's cabs were optional.

Although primitive by today's standards, Caterpillar's DW series scrapers represented a breakthrough in modern technology in the early 1950s. For example, steering for the DW21 was effected by two double hydraulic cylinders providing a safe and secure steering angle in response to the operator's steering wheel movements. This design provided protection against the jackknifing that sometimes occurred with other scrapers.

Throughout the 1950s, Caterpillar expanded its scraper line and announced a number of upgrades to its models. In 1955, the DW20 and DW21 received a turbo-charger with a boost to 300 horsepower. Later, Cat increased the power to these units to 320 horsepower and finally to 345 horsepower and boosted the scraper capacity to 27 cubic yards, heaped. The production run for this model ended in 1960.

In 1959, Caterpillar introduced the first of its 600-series motor scrapers, the 619 with 18 cubic yards heaped capacity. The following year, the former DW models were replaced by the 600-series, which expanded to full line from 18 to 54 cubic yards heaped capacity by 1962. These are the ancestors of today's high-powered, productive 600-series scrapers, most recently represented by the standard 621H, elevating 623H and twin-powered 627H models. What a spectacular difference from those early machines.

The new scrapers retain the successful Caterpillar features found in recent models, such as a cushion hitch to dampen haul road bounce and eight-speed semi-automatic power shift transmission. All three scraper movements are still controlled by a single T-handle lever. A swivel seat, increased leg room, and a self-contained air compressor for the air-suspended seat top the list of operator comfort enhancements.

H-series scrapers are loaded with electronic software in most areas, reducing or eliminating operator guesswork. These include transmission/torque converter software to maintain speed during gear shifts for increased performance, electronic clutch pressure control to prevent torque spikes for smoother shifts, grade control system to achieve a desired pre-set grade, and other electronic monitoring systems.

More than six decades of continuous improvements have contributed to Caterpillar's unchallenged leading position in today's worldwide scraper market.

CABS WERE OPTIONAL: It may look primitive, but early Cat scrapers represented top-of-the-line power.

COMPUTERS ON BOARD: Today's H-series scrapers are loaded with custom software to improve accuracy and efficiency.

Get the Wrinkles Out

A smoother asphalt mat means a better ride for motorists and an even reputation for pavers

BY **LISA RICCIOTTI**

Sam McGhee has been in the asphalt paving business for 30 years. He currently works as an equipment manager with Dawson Paving in Kamloops, B.C. "We do everything – municipal airports, highway construction, city street reconstruction, parking lots, tennis courts and driveways," McGhee says. "If it involves asphalt, we do it."

With such wide-ranging experience, you'd expect McGhee to have some expert tips to share, but he says it would take a book to detail them all. There's no one-rule-fits-all when it comes to asphalt. Each project has specific criteria, from the asphalt's composition to its thickness, density and oil content. Success is measured by how closely the paving crew comes to those engineered requirements. "There are 101 things to consider," McGhee says.

He says that there is one thing that increases a contractor's chances of an excellent paving job: "It helps to have good weather. Rain makes it tough to keep working. Eventually you'll have to shut down." During a heavy rain, the asphalt cools too fast, negatively impacting the density of the mat. "Rain also makes the asphalt stick to the rollers," he says, "and you end up with one big mess."

McGhee also stresses the importance of having smooth operators to achieve smooth results. "Stops and starts leave bumps. You have to keep your speed steady." That's a lot easier to do now than when he first started. "A paving operator used to do it all manually. Now there's full automation on pavers for better ride control."

McGhee says the paving train should likewise move at a steady speed. "You have to time operations so all equipment moves at an even pace. Time your haul truck so the train can keep moving steadily ahead, and time the compactors to keep pace with the rest of the the train."

McGhee also says that what goes in dictates what comes out. "We use a pickup machine; that's a must for us. The windrow elevator we use ensures that a better mixed product goes to the paver."

Last tip? "It's important that the paving operator can follow a straight line." It's not as easy as it sounds, so good operators are in demand. "What's most important is the people on the road. Your crew needs to be qualified and competent, or you're in for a long, drawn-out season of error." The right crew and procedures make the operation and mat smooth.

But that's about all the paving advice you'll get out of McGhee – or any paver. "Our secrets are our secrets. It's a very competitive business and every contractor is trying to find an edge."

TOP TIPS TO A BETTER MAT

1) **Problems with overheating pavers?** Nick Rummel of Cat Preventive Maintenance offers this simple fix to try before you shut down: "Often all it takes is blowing out the radiator and oil cooler. That cleans them out and gets the engine and hydraulics back down to operating temperatures. Simple and easy, and you can do it right on the jobsite."
2) **Level the screed plates before you start paving.** "It's easy to do with the adjusting screws," Rummel says, "but also make sure the area around the screws is clean."
3) **Check before you work.** Before you fire it up, check around and under the machine for loose bolts, trash, oil leaks, coolant leaks, broken parts or worn parts. Inspect the attachments and the hydraulic components. Accumulated oil on a machine is a fire hazard. Remove this debris with steam cleaning or high-pressure washing, at least every 1,000 hours or when you spill a significant quantity of oil.
4) **Look for leaks.** Wipe all fittings, caps and plugs before you service the machine. If you suspect a leak, find the source and repair it. Check fluid levels more often if you suspect a leak.
5) **Find more tips for pre-work inspections.** To see if you are undertaking the right pre-work inspections that will ensure your Cat paver is working at top form, check here: **safety.cat.com/cda/layout?m=388415&x=7**

Recruitment Simplified

Whether you're hiring for a crew or office, finding new people can be challenging and time consuming. Help is here

BY **CAITLIN CRAWSHAW**

With baby boomers retiring and the economy growing, it can be difficult for companies to keep their workplaces well staffed.

"In the heavy equipment sales and services, and the construction sectors, we're seeing a lot of demand and competition for candidates," says Rick Harcourt, president of Edmonton recruiting firm Harcourt Recruiting Specialists.

Whether you're a new or established manager, dealing with recruitment on top of your other duties can be a challenge. However, a talent shortage means that you need to recruit efficiently and effectively, says Harcourt.

Start by identifying your company's "story" – that is, what makes your organization a great place to work and what you offer employees, in addition to a salary package. Many competing companies offer similar salaries, but they can attract candidates by explaining what makes them different. Your job advertisements should sell your workplace to prospective employees, rather than simply list a job description and duties.

After posting your job online, you may find yourself inundated with applications. There are a number of applicant tracking systems that can help you organize the responses you get and even rank them by keywords. However, there are limitations to using these programs to narrow down the pool of candidates.

"A person may not know how to optimize their resumé for key words, but might be a great candidate," says Harcourt. While useful for keeping track of applicants you've contacted, these software packages have limitations as screening tools, he argues.

Of course, your job search shouldn't be limited to online job ads. Depending on the role you're filling, you should be using other strategies, too. For management positions, some online searching of company websites or LinkedIn profiles can point you to prospective candidates, says Harcourt.

An internal referral system – in which current employees recommend colleagues for positions at the company – can also be an efficient way of finding good-quality candidates. Chances are good that in the course of their careers, your staff have come across colleagues who might be a fit with your company now.

This is a strategy Harcourt uses at his own firm, in fact. When an employee referral results in a successful hire, the referrer receives a $500 bonus after the new employee has been with the company for six months.

"Letting your people tap into their networks and even giving a reward or incentive for doing so can be a pretty powerful tool," says Harcourt. "The idea is always have your people bird-dogging for talent." By doing so, you create a workplace culture where everyone is helping to grow the team, which takes the pressure off of traditional recruiting methods.

Factors such as constraints on your time, the size of your company's human resources department and the nature of the jobs you're trying to fill, may dictate that you find a hired gun to do your recruiting. If this is the case, check out jobsite aggregators such as Indeed.ca to identify which recruiters specialize in your industry, says Harcourt. He also suggests asking colleagues which recruitment firms have worked for them.

But Harcourt offers a caution. "There are hundreds of companies who set themselves up to be recruiters," he says, "but relatively few with solid track records or who specialize in certain areas."

TOP 5 TAKEAWAYS

1) **Standardize your assessment process.** It's easier to compare apples to apples, so make sure the job description and requirements are clear enough that prospective employees are offering the same basic information.
2) **Hire for the job.** Understand and clearly state the roles and responsibilities of the job for which you are hiring.
3) **Let your networks work for you.** Your employees have a wealth of knowledge and know loads of great potential team members. Let them bring some names to the table.
4) **Get some help**. You can't do everything, so turn over the heavy lifting to professional recruiters.
5) **Tell your company's story.** Potential hires will be as attracted to your company as they are to a given position. Show yourselves off and let them get to know you.

STEP BY STEP: Finning techs peel away the years of wear and tear, making machines like new again.

Second Life

Great maintenance makes for a beautiful rebuild story. And Cat iron is built to be rebuilt

BY **MARTIN DOVER**

The vehicles in Caterpillar's 775 series of industrial trucks aren't the largest in the company's fleet, but you might not know that to look at them. The vehicles' dimensions are impressive: more than 30 feet long and 14.5 feet high, with a payload of 60 tons. Yet it easily stands in the shadow of Caterpillar's massive 793F, a behemoth favoured by the mining industry that stands more than 18-feet tall and carries a payload well in excess of 220 tons.

But size isn't everything and, pound for pound, the 775 series is the off-highway truck of choice in businesses such as smaller mining operations and quarries. Just ask Dan Anderson, equipment manager for the Greater Vancouver Area at Lafarge Inc., a world-leading supplier of construction materials including cement, ready-mix concrete, asphalt and aggregates.

For Anderson, Lafarge's fleet of nine Caterpillar 775D trucks has been the backbone of the company's Earl Creek, Pitt River, and Texada Island limestone, aggregate, and sand-and-gravel operations near the greater Vancouver area. "These trucks have been really good performers," he says. And that's why earlier this year, as trucks in the fleet began nearing the upper limit of their operating lives, Lafarge started exploring the option of having them undergo Caterpillar Certified Rebuilds at Finning Canada's campus in Surrey, B.C.

Caterpillar equipment enjoys a healthy reputation for quality and durability. But even the best machinery must eventually be replaced. In a large number of cases, that involves new purchases. In other instances, however, a certified rebuild is a compelling option. Under the right conditions, the benefits can be substantial. Cost savings certainly come into play. But there's more to it. Caterpillar sets strict standards for certified rebuilds, which guarantees that equipment undergoing the process emerges in like-new condition. Certified rebuilt machines also get new serial numbers, which means the rebuild costs can be claimed as capital expenses for tax purposes. Moreover, rebuilds come with a hefty one-year, bumper-to-bumper warranty on the vehicle and optional extended warranties. In this case, Lafarge elected to go with a three-year 10,000-hour power train and hydraulic coverage.

For these reasons, Lafarge is now working with Finning Canada on a program to rebuild some – and potentially all – of the 775D fleet from its quarry operations. One truck has already been through the process, and two more are scheduled for rebuilds in the near future. After that, the company hopes do the same for the remaining six vehicles.

STAND TALL: An overhaul makes Surrey's trucks purr.

It's a large project for both Lafarge and Finning, and neither company took lightly the decision to proceed with the initial trial rebuild of three trucks. Their story offers insight into the process for other Caterpillar equipment owners looking at the certified-rebuild option.

For Wayne Wyllie, major product support sales rep at Finning, the process began more than a year ago, when he and Lafarge started considering that certified rebuilds might be an option for their fleet of 775Ds, some of which were approaching the 30,000-hour milestone for replacement. "These machines were getting tired and needed attention," he says. Lafarge agreed that this may be a good option and asked Wyllie to proceed with a quote to overhaul one unit.

Here's how the process works: The initial challenge in determining whether a certified rebuild is a solid option for a client is cost. During the process, a piece of equipment is broken down into component parts – there are thousands of them – which techs inspect, repair and, if necessary, replace. Depending on the condition of the machine, and how well a given company has maintained it, costs can add up. But if the overall investment comes in at the threshold of 60 per cent of the cost of a new purchase, then a rebuild is a viable – and valuable – option.

For that reason, a detailed site inspection of the machine, which can last eight to 10 hours, is critical. It will scope out the work that's required and determine whether it can be accomplished under the 60-per-cent threshold.

For Lafarge, which follows exacting maintenance standards for its equipment, it was likely that the level of repairs and replacements could be accomplished within the threshold. Wyllie generated a quote for a rebuild on the first truck. Lafarge accepted the quote and Finning techs started work.

When Lafarge's truck arrived at Finning's Surrey operations – a campus covering close to 15 acres of land – it was assigned to a large service bay. There, a team of three certified heavy-duty technicians started the rebuild task, a job that would ultimately take more than three months to complete.

The first step in a rebuild is to strip the piece of equipment down to its bare frame. At that point, techs thoroughly inspect the frame. If frame components are stressed or cracked, they are replaced to Caterpillar standards. After that, the team sandblasts and repaints, and the rebuilding of the vehicle begins.

"We replace all the hoses. We replace all the wiring harnesses. All the components are replaced, either with refurbished components from Caterpillar or we overhaul them to Caterpillar specifications," Wyllie says. Even the cab gets an overhaul, with fresh seats, lining and, where necessary, dashboard components, even the glass bevels on gauges, if they're looking tired. When the process is complete, "the truck looks and feels like a brand new truck," Wyllie says.

As work progressed on its 775D, Lafarge was able to monitor the process. Along the way, it also asked for a few add-on features, mainly to help improve safety. When the work was done, the truck was completely reborn. And Anderson was glad to have it back in the fleet.

Another factor in determining whether a certified rebuild is the right choice is the impact of losing a vehicle to downtime while it is overhauled. In Lafarge's case, the company was able to work around having a truck down for several weeks, although it took careful planning, factoring in business seasonality and inventory cushions, to make sure the impact on operations was minimal.

In the long run, Anderson was pleased with the results. He has scheduled two more trucks for certified rebuilds and, if the process continues to deliver expected results, Lafarge's six other 775Ds will go through the process. "Caterpillar's focus on a quality product makes it a good choice for us to do this and see if it is economically viable," he says. "Cat puts quality very high up there in their guidelines, and they are putting their name on it, the same as Finning. With their attention to detail the Finning technicians ensure the best fit and finish to the end product. Finning provides an excellent piece of equipment and service for Cat."

Driveways to Highways

BY **ROBIN BRUNET**

The latest Cat paver looks like James Bond should be aboard, and it brings some pretty cool tech to its first owner in Finning territory

Surrey, B.C.-based Keywest Asphalt Ltd. is the quintessential family success story. Its founder Ricky Dhatt began by paving clients' driveways in 1996 with only a few pieces of rolling stock, and he grew the business into a 100-employee team that tackles major paving projects throughout Metro Vancouver and beyond.

To complete these projects, Dhatt has an inventory of 200 different types of equipment, including a large variety of Cat asphalt rollers, backhoes, base compactors, dozers and excavators. However, to take his business to the next level by securing major highway jobs, he needed to acquire another machine. He settled on the Caterpillar AP1055E, and its purchase in April makes Dhatt the first owner of this type of paver in all of B.C., Alberta, the Northwest Territories and Yukon.

Dhatt, who talked with *Tracks & Treads* just after his new AP1055E had completed its first few assignments, is well aware of this distinction. But he is more concerned about the paver's performance, and on that score he says, "I made the right choice. I had considered quite a few pavers from different manufacturers, but I took a chance on the AP1055E partly on the reliability of the Cat brand and partly due to the attentiveness of Finning general line sales representative Chris Wilfort, who truly cares for his customers."

The paver lets Dhatt do bigger jobs. "And the AP1055E's quality was evident right from the first assignment, a 2.46-kilometre stretch of road in Mission," he says. "It created an extremely smooth surface that major clients demand." The smoothness is partly due to the AP1055E's Mobil Trac undercarriage, which provides excellent flotation and limits disturbance on soft base materials, ensuring uniform thickness to the asphalt mat. Large oscillating bogies and hydraulic accumulators progressively overcome surface irregularities with minimal tow-point movement. This limits the negative effects that might otherwise happen with the presence of mix piles and manholes. It adds up to a smoother mat.

Dhatt also singles out the paver's ease of operation, which is facilitated by dual swing-out stations, tilting consoles and the low profile design of the cooling system. These features provide good forward visibility that enables the operator to communicate effectively with the truck driver while monitoring mix in the hopper. The stations are extended beyond the machine frame, meaning the operators can also see the rearward auger chamber.

"Ricky previously owned a used Cat AP1055D and was pleased with its performance. We sold him the new AP1055E based on reliability and post-sale support," Wilfort says. "It's a very agile and productive machine and has a very strong resale value."

The sleek and low-slung AP1055E paver builds on the proven platform of the AP1055D in order to create a new standard for productivity and reliability in the asphalt paving industry. Caterpillar markets the machine as having excellent mobility, superb visibility, a powerful C7.1 or C6.6 engine with ACERT technology, and a comfortable operating environment: in short, cleaner power, fuel efficiency (critical to high-production paving applications) and high performance in a mobile and versatile platform.

> The Mobil Trac undercarriage limits disturbance on soft base materials, ensuring uniformity to the asphalt mat.

With the AP1055E (and the recent purchase of an asphalt plant and a cold-milling machine required by most municipalities for preparation of existing roads prior to paving), Keywest is well armed to obtain the type of large-scale municipal contracts that Dhatt could only dream about when he launched his firm 16 years ago. "I first began securing municipal contracts in 2008, and there's no end of highway work – new roads, resurfacing – in this province," he says. "Our infrastructure is aging and badly in need of repair."

The integration of Dhatt's rolling stock and asphalt plant will enable him to bring competitive quotes when bidding on contracts and give him the freedom to schedule the work to maximize cost-effectiveness.

REBUILD IT: Cat's rebuild kits can extend the life of a machine for less money.

Rebuilding Momentum

Customers are taking on more of the maintenance and repair of machines themselves. It means that Cat rebuild kits are gaining popularity

BY **DAVID DICENZO**

There is one word that Brian Pepe has a particular problem with: "downtime." Pepe, the equipment manager at Calgary's Standard General Inc., oversees a full range of about 150 Caterpillar machines for the renowned contracting company, whose name is synonymous with land development and road construction in Alberta. When any one of those pieces isn't up and running, the impact is significant. And costly.

"Ultimately, downtime is a killer for us," says Pepe. "A machine sitting idle, that can't produce, is thousands of dollars an hour."

So when one of his Cat 980G wheel loaders got to the point where it required an engine rebuild, Pepe and his team were faced with a choice. That aversion to downtime was the impetus for the company's decision to try out one of Finning Canada's new Precious Metals engine rebuild kits. Pepe purchased a platinum rebuild kit, an efficient option containing every part required to get the 980G's engine purring again.

"It's like a one-stop shop," said Pepe, who also ordered an additional kit for one of Standard's 963D crawler loaders. "When you order the platinum kit, you get everything. There is no 'Will I need this, as well?'"he says.

"Before these kits, you're looking at about 120 hours of labour to rebuild an engine. The waiting time, when the components were sent out to be tested, was the real killer," Pepe says. He adds that all the components his team needed for the rebuild were included in the kit. "You can feel very confident that the parts in front of you are proper and will fit. It's all there, so you're not waiting."

That was the idea when Caterpillar originally introduced the rebuild kits for on-highway truck engines several years ago. The scope and availability of the kits is expanding, which is potentially advantageous to many customers in the Finning territory.

"The biggest positive that I see for our customers is the time they save," says Ehtisham Anwer, Finning Canada's products development manager. "These kits make it easy for us to order the parts they require for an overhaul. Otherwise, it's a lengthy process."

Caterpillar and Finning introduced the kits, which come in four levels, earlier this year. There is the basic bronze kit, silver and gold versions and, in Standard's case, the platinum option, which is the most complete rebuild option available. Each of the kits features pre-packaged, sorted parts (some additional related parts may need to be ordered) and are designed to meet the varying needs of Finning customers depending on the extent and complexity of the rebuild for their specific equipment.

"We realize, depending on the customer's workload and the jobs they have coming in, that they have priorities to juggle," says Eric Bruce, Caterpillar's parts manager for Western Canada. "They might not always need the most in-depth rebuild. We can provide the kit that will meet their needs best."

Bruce was hearing from customers who wanted more options, who wanted Caterpillar to be easier to do business with. "We're a premium quality product," he says, "and we want to make sure all of our bases are covered."

Customers everywhere are keeping a closer eye on the bottom line, so for many it makes sense to rebuild

an engine at a reduced rate rather than purchase a new one outright. To be able to do that rebuild in the most efficient way possible only adds to the savings.

"You reduce turnaround time for the overhaul, which results in more uptime and productivity," says Anwer, who adds that the gold and platinum kits also have a remanufactured parts option, which will not only result in further savings to customers, but also benefits the environment.

Caterpillar's Equipment Protection Plan option adds to the peace of mind. That was a big selling point for Pepe when he was weighing options for his Caterpillar iron at Standard.

"Warranty is a big issue with us," he says. "We have an in-house shop that does most of our repairs but when it comes to major parts like an engine, we use the dealer to work with our guys to extend warranties. One of the reasons we chose the platinum kits was the full one-year warranty option."

"It shows the support Cat has for its products," adds Bruce. "We're backing up the quality and durability with good service."

Customers are finding that the process for ordering the kits is simple. The information is readily available and easy to access. Bruce says that from a quoting perspective, what used to take up to a couple of days can be whittled down to hours or even minutes.

"That could be the difference between a customer choosing us and the competition," he says.

The kits are currently available for select 3406 engines for the following machine models: 621G, 623G, 627F, 627G, 735, 740, 824G, 826G, 980G, 980F, D8N and D8R. But the expectation is that this rebuild solution will grow to include many more engine and machine models.

"We're focusing on medium-sized motor graders, scrapers, track-type tractors, excavators and wheel loaders right now," says Bruce. "We plan on having most of these kits available by the end of 2013. We're working diligently to expand that product line."

There are currently about 1,500 Caterpillar machines in the Finning territory that would be well-suited for a Precious Metals rebuild. For Pepe, he's satisfied with the two kits he used for rebuilds at Standard.

"The whole idea is uptime," he says. "And that kit is one of the best you can get to make that happen."

PLATINUM CAUSE: Rebuild kits can extend a machine's life.

ON THE PODIUM

Heavy equipment needs vary from customer to customer. That was a key factor in how Caterpillar developed its four types of Precious Metals engine rebuild kits.

"There is a great deal of flexibility to the rebuild kits," says Finning's Ehtisham Anwer.

The lowest-cost option rebuild kit is the bronze, which is the basic building block for the other levels. It includes value-add components, like connecting rod bearings, and additional parts a customer might not initially think to replace, such as exhaust manifold sleeves. (If you leave those unchecked, it could lead to failures and the dreaded downtime.) Bronze also includes all required gaskets and seals to reassemble the engine. The silver kit builds on the bronze with the addition of pistons, liners, wrist pins, rings and retainers. The gold kit is comprised of the bronze base with Cat Reman cylinder pack assemblies. The packs are preassembled with rods, pistons, rings and liners, which can save from four to six hours on a rebuild.

The platinum kit begins with the bronze kit but also comes with Reman cylinder packs, Reman injectors, Reman complete cylinder head, Reman water pump and Reman oil pump. Caterpillar's most complete option will maximize the life of an engine, giving it a second and often third life. The gold and platinum kits offer most value to customers.

"One thing I really liked about our platinum kit was the inclusion of the cylinder head and the injectors," says Standard General Inc.'s Brian Pepe. "In the past, those parts have taken up to two or three weeks to get, maybe longer."

That's time companies like Standard cannot afford to lose.

Shift Long and Prosper

BY **CAILYNN KLINGBEIL**

Efforts to extend the life of your transmission start in the cab and continue to the lab

ILLUSTRATION BY RAYMOND REID

A transmission failure is expensive and inconvenient. It's also preventable, says Wilf Block, drive train and hydraulic product manager at Finning.

"Proper maintenance will help control costs as it is the key piece of the puzzle," Block says. Transmission life expectancy can vary according to work type, material encountered, operator skill and maintenance practices. Block says the maintenance practices you adopt today will ensure your machine's transmission runs properly and prevent a massive failure and unplanned downtime.

Preventive maintenance saves money

"Overall maintenance has to start from the top," Block says. That means daily inspections by operators who examine the entire machine. "You should have a checklist that includes key areas that the operator is watching for any indication of problems."

With daily inspections, you can usually identify a leak that wasn't there the day before or new noises when the machine starts up.

In addition to daily inspections, preventive maintenance can also keep a transmission operating smoothly. "You should be following the preventive maintenance schedule for your oil changes, filter change-outs and greasing intervals," Block says.

When it comes to oil changes, using the correct oil for the machine is also a big part of proper maintenance. Block notes that the Caterpillar oils have gone through rigorous testing to ensure they are right for the application. The machine's handbook will specify which oils and filters should be used for a particular machine.

Preventive maintenance can help operators identify failures in the system in the early hours, which saves money and down time, Block says. "If a part is starting to fail and you can catch it right away, it will be cheaper to repair than if you end up burning up the transmission."

Pay attention to the warning signs

Each machine has its own set of indicators to help you understand what the unit is telling you. "For example, if you start having hesitation and slipping, that's a warning. That particular warning could be worn plates, or linkage out of adjustment, or low fluid levels," Block says.

Other warning signs include unusual noise, a possible problem with the gears and bearings, and vibrations, which could mean a bent shaft, gear failure or bearing failure. Overheating is another indicator, one that may point to the wrong oil being used for the application, a plugged radiator or worn pumps. Replacing a worn bearing or seal is relatively inexpensive, especially when compared to fixing a failed transmission.

"Another thing to look out for is leaks. Leaks can indicate a worn or cracked seal, but if that unit runs low or out of oil the costs to repair it will start increasing," he says.

Whatever the indicator is, Block says it's crucial to catch it early on. Once an operator or tech notices it, the next step is for the customer and dealer to meet and discuss how to proceed, which will vary by case.

OFFER OF SERVICE

S.O.S. Services is a fluid-sampling program that helps determine wear and the presence contaminants in engines, transmissions, final drives, compressors, small gear sets and reducers. It's available to Cat equipment owners to help spot trouble early on. The service establishes routine oil, coolant and fuel sampling, which also builds data over time, allowing equipment owners to compare sample history and more easily identify trouble.

"Oil samples are the number one thing in our industry in order to help the customer try and get those indicators that there could be something going wrong with the transmission," Block says.

"We also have benchmarks, which are a standard to what customers can realistically expect the transmission to last, put into hours." Block says benchmarks help operators plan service for machines. By working with your local Finning rep, you can establish your machine's benchmark and plan maintenance accordingly.

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HOG WILD

Finning and friends make this year's Finning Ride for the United Way a roaring success

BY **TRICIA RADISON** / PHOTO BY **AMANDA KERR PHOTOGRAPHY**

Cresting a hill in the sunny countryside west of Edmonton, motorcycle rider Hank vanDrunen looked down to a sight that gets him every year – more than 150 bikes and riders sweeping into the valley below. For vanDrunen, maintenance manager for Ensign Energy in Edmonton, the image of camaraderie exemplifies the Finning Ride for the United Way, an event that has grown to be the most successful single event Finning has ever held for the United Way, raising $21,688 in its fourth year.

"It's really neat to see all those bikes," says vanDrunen. "You get to hang out with people and see different motorcycles. There are a lot of reasons to participate, not least of which is you're riding for the United Way."

This year's event took place on May 26, 2012. Finning employees, customers and their families gathered at Dacapa Crane & Rigging in Spruce Grove, about 15 minutes west of Edmonton, to journey 229 kilometres together in support of the United Way. They came from all over – Drayton Valley, Calgary, Kamloops, and places in between. Ekati mechanic Phil McPhail made the trip from his home base in Yellowknife, a distance of about 1,500 kilometres. Caterpillar Inc. also took part, with field-follow engineer Evan Dagit from Griffin, Georgia and Cat service technical representative Travis McClung joining the fun.

"It was pretty great to watch it unfold," says Candy Norman, A Finning customer service advisor and event co-ordinator. "As the day started, there were more and more people showing up."

The riders registered and enjoyed coffee and donuts donated by Tim Hortons, purchased their 50/50 tickets and then set out. The route took them south to circle Pigeon Lake, before they returned to Dacapa for a catered lunch.

"It's a lot of fun," says vanDrunen, adding that the weather this year made the event even better. "It's always fun but some rides are colder than others. We've ridden in rain; we've ridden in snow. As long as it's not unsafe, we'll put up with a bit of that. It shows that you are committed and truly, that's the personality of the people in the ride. We're committed to it and we're going to do it."

Norman dreamed up the charity ride in 2009 as part of Finning's commitment to supporting the United Way. Across Canada, Finning employees and the executive team hold numerous special events – including book sales, jewelry sales and auctions – to raise money that supports a wide variety of local community needs and initiatives.

"From all levels, Finning is quite engaged with the United Way. They are one of our very, very strong partners and we're excited to have them involved," says Jessica Smith-Perry, campaign manager, United Way of the Alberta Capital Region.

Last year, Finning employees in the Edmonton and Alberta Capital Region, along with The Cat Rental Store, raised $260,000.

About 50 organizations and initiatives in the greater Edmonton area receive support from the United Way, and that translates into help for thousands of people. Every penny makes a difference. For instance, the $22,000 raised in this motorcycle ride could provide for nearly 100 at-risk youth to receive counselling, 21 days of youth programming or 42 upgrading courses from Continuing Education for youth and young adults. The United Way also funds The Kids In the Hall Bistro Program, which runs a restaurant on the ground floor of Edmonton's City Hall. More than that, it's a social enterprise that helps at-risk youth between 16 and 24 gain knowledge, skills and work experience to set them up for success in future educational or employment settings.

> The money supports programs and services for people working to lift themselves out of poverty.

Finning also raises awareness about the United Way and its work. For example, last year's company campaign kick-off event was a street hockey tournament, so the United Way brought in a speaker from the Canadian Paraplegic Association who is a national competitor in sledge hockey.

"That was pretty amazing," says Smith-Perry. "People got to meet and listen to someone who was impacted by an unfortunate situation but, through the help and support of organizations and people, is now living a wonderful life."

Understanding where the dollars raised are going and who they are helping is important to many people who give their time, energy and money to charities. Finning frequently holds breakfast and lunch events at its headquarters and various office locations, usually inviting people to come and learn about the United Way.

Smith-Perry sees the motorcycle ride as a great way to engage employees and customers in the initiatives of the United Way and the organizations it supports.

"It is an instrumental way to spread knowledge and awareness of some of the issues that are happening in our city and some of the things that organizations are working on to improve people's lives," she says.

The money raised stays in the community, supporting programs, services and initiatives related to kids and youth, families, and those working to lift themselves out of poverty. The fact that it funds community initiatives is important, says vanDrunen. "They made us aware this year that the money is used locally. That was a concern we had."

In the first year, with Finning supporting the idea of the ride, Norman approached her father, Dacapa Crane and Rigging president (and former owner) Darrel Norman about taking part. Dacapa Crane is a Finning customer and both Darrel and his wife, Pat, ride, making the company an ideal partner for the event.

"We think it's a good cause and it seems like all the people who come have a good time," says Darrel. The company donates its yard and facilities, advertising, and the use of a trailer. It also brings in a catered lunch for the riders.

The growth of the event, which raised $10,000 in the first year and a total of $45,000 in all years combined, is the result of a number of factors. Candy Norman explains that part of the reason for this year's success was word-of-mouth advertising generated by past participants, Finning sales staff, and the Finning extended family. This year Finning also promoted the event in videos on its external website and intranet, and the exceptional weather was a big draw.

It takes a lot of help to organize the ride and many people donated time and goods. Finning Canada gave each rider a T-shirt commemorating the event while Finning Edmonton & Calgary Power Systems provided door prizes, as did Homes by Avi, O.E.M. Remanufacturing Company, Chris Hanson Marketing and Stallion Boots. Phoenix Equipment contributed a pressure washer that was raffled off to raise more money, and a local Tim Hortons donated coffee and baked goods. Nobody went home disappointed.

BY **MICHAEL HINGSTON**

Feel the Glove

Task-appropriate hand protection is a low-tech way to reduce jobsite injury

"There's an app for that." It has become a familiar phrase. At Finning, staff could as easily say, "there's a glove for that." The company recently launched an awareness campaign aimed at increasing hand protection for employees in the workplace.

Steve Ollinger, general manager for health and safety with Finning, says records consistently show that about 30 per cent of all injuries sustained by Finning employees are related to hands or fingers. "In most cases," he says, "you can minimize or eliminate the types of injuries that we're seeing by wearing gloves."

The new campaign involves a series of what Ollinger calls "safety glove boards," which the company has distributed to Finning locations across Western Canada. On each board is a chart depicting pictures of eight different types of gloves along with descriptions of the tasks each glove can be used for, and a sample glove attached at the end. Superior Glove, a Finning supplier and partner in the campaign, provided the sample gloves.

The goal of the campaign is to help employees realize that no matter what kind of work they're doing, and even though gloves may not be mandatory on their jobsite, there is a glove that helps keep them safe without reducing the quality of their work.

> No matter what kind of work they're doing, there's a glove that helps keep all employees safe.

"Gloves have changed dramatically over the years. Now there's basically a glove for every task," Ollinger says, listing everything from moving pallets to more high-finesse tasks like making fine adjustments to equipment. Superior and other glove manufacturers make products that can handle both of these tasks, and pretty much anything else in between. "It's not old school anymore. The technology has advanced incredibly in terms of the protection that's available." He says that to not use a product that could mitigate or prevent injury is "absolutely off the mark."

Part of Finning's strategy has been to seek out employee feedback, too. Ollinger points out the engagement of employees focusing on injury prevention is vital to the success of the campaign. Employees from across the company were involved in developing the boards. The boards take into account which gloves the people on the floor have identified as those best suited for tasks at hand. This means that the information on the boards is as reliable and accurate as possible.

It's still too early to gather any significant statistics that attest to the effectiveness of the campaign. But Ollinger says that – anecdotally – his colleagues are seeing early signs of an increased awareness in hand safety, a downward trend in the frequency of the injuries and, in some cases, a drop in injury severity, too.

"There are people wearing gloves who have never worn gloves before," he adds. "They're saying, 'If I had known they were this comfortable, and could do these specific tasks, I would have been wearing them quite a while ago.'"

And given how frequently Finning workers use their hands on the job, every person the campaign can convince to put on a pair of gloves represents a success.

"It's not a surprise that we have a high number of hand and finger injuries," Ollinger says. But it still pays to take care. "You're not always 100 per cent. Sometimes you may not see something, a sharp edge or protruding object, something that you didn't anticipate was going to hurt you. We want everybody to go home safely."

Best PRACTICES Exhibited

Minerals, materials and petroleum, oh mine! Edmonton reaches a wide audience during an annual mining conference

BY **MICHELLE LINDSTROM**

In the wee hours of the morning, well before Edmonton businessmen and women took over the downtown core with their coffees, stilettos and SUVs, a massive yellow machine – tires as tall as a man – navigated the streets to the very heart of the city. The yellow machine was a Caterpillar 777G mining haul truck and its final destination, on the morning of May 2, was Churchill Square. Later in the day, passersby gawked, took pictures and pondered the massive machine.

Dan Clark, Finning Canada's director of mining, marketing and sales, says Finning supplied the interesting piece of mining equipment and made it accessible to the public as a show of support for the mining industry. Other pieces were on display, too, in support of the 29th annual Canadian Institute of Mining, Metallurgy and Petroleum (CIM) conference in Edmonton. "Under normal circumstances, we would never have been able to bring that size of equipment downtown," Clark says. "But because of this event, we had the full support of the City of Edmonton." Logistics meant the 777G required a 2 a.m. delivery time when the streets were relatively clear.

Edmonton's CIM conference, which ran from May 6 to 9, saw record crowds at the Shaw Conference Centre. More than 13,500 visitors – CIM members, general public, students, academia, government and industry – participated in some portion of the conference. The event facilitates learning, mentorship and professional development for people involved in minerals, materials and petroleum industries in Canada and throughout the world. CIM has 11,000 members, most residing in Canada but about 1,000 living abroad. All are dedicated to discovering, producing, utilizing and marketing minerals, metals and petroleum. Edmonton's conference attracted visitors from 43 countries and its grand opening welcomed delegates from West Africa, Chile and other international locations.

"If you're in the mining industry and you want to learn about the latest and greatest, you should participate in CIM's annual conference," Clark says. The general public should also get involved, he says, to gain a better understanding of mining, reclamation plans and how natural resources are impacted and managed by the industry.

And mining has been one of Canada's largest industries since before the turn of the 20th century. Its main professional organization, CIM, was founded in 1898. Today, mining accounts for 3.5 per cent of Canada's Gross Domestic Product – a relatively stable percentage for the past 25 years.

At the 2012 conference, two issues received a lot of attention: the looming shortage of workers and the lack of employee diversity.

Studies show the industry will need to hire roughly 30,000 new workers this year alone to fill new positions and satisfy general replacement needs, and 70,000 more by 2020.

To help build awareness of potential mining careers, the CIM builds bridges with students, says CIM's vice-president Dr. Tim Joseph, PhD, PEng, a professor of mining engineering at the University of Alberta. This year, students in his program visited more than 45 Edmonton schools to deliver a Mining for Society (also known as M4S) presentation that includes a mining-for-gold activity where students deploy a toothpick to mine for gold (actually chocolate chips) through all the substrate (cookie dough).

"As they proceed, they realize that mining is not just about getting to the gold or diamonds, it's also about managing the waste materials and doing it responsibly," Joseph says, adding that the light goes on for students when they see the large mound of cookie dough compared with the relatively small haul of chocolate chips.

> CIM's annual conference will show off mining's "latest and greatest", Dan Clark says. The event helps managers improve their best practices and sustainability for the future.

M4S offered a similar experience to CIM conference attendees. More than 4,400 young people, mostly between the ages of 10 and 16, passed through Mining for Society's seven pavilions to learn about the industry.

An interesting feature at the M4S pavilion were three heavy equipment model simulators, donated by Finning. "The M4S is a valuable piece of the whole CIM," Finning's Clark says. "It's an opportunity to bring in a number of school children and provide them with a better understanding of what mining's all about."

He says the M4S pavilion provides a good platform for students to pose questions to experts about how the earth is mined, what equipment is involved and then address any concerns they have about the environment as it relates to mining.

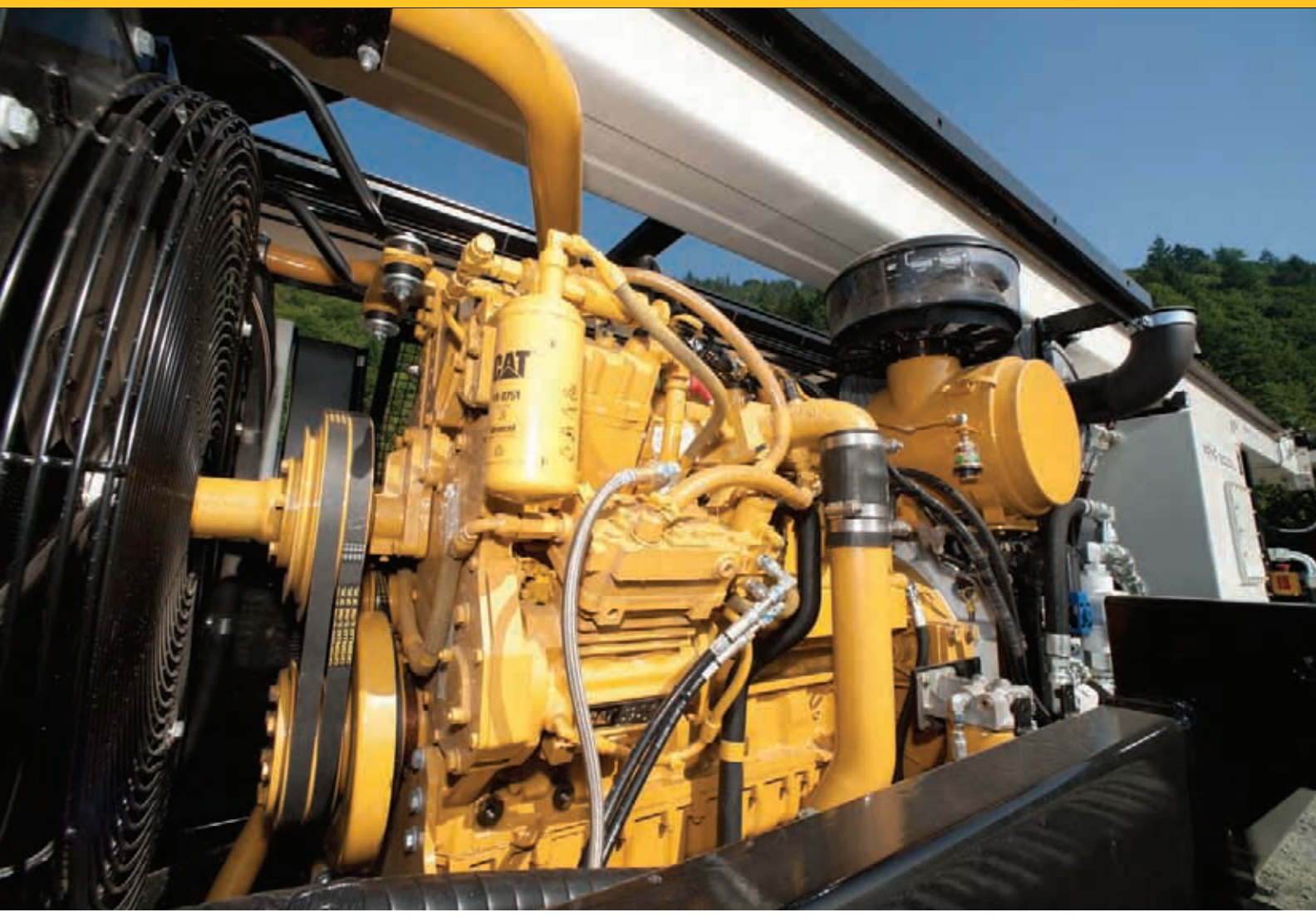
Of course, those curious school kids comprise both boys and girls, and better representation of women in mining continues to be a goal for industry. In a tight labour market, human resources departments need to be able to tap both halves of the population so, as part of a panel discussion in the Women in Mining annual forum at CIM, HR leaders shared strategies on how to attract, retain and advance women in mining.

The yearly CIM conference also provides managers and company leaders with an industry overview and a tradeshow with 2,600 exhibitors. "The CIM national conference has less of a technical engineering or science focus and offers more of an overview," CIM's Joseph says. "The information is at a higher level and allows managers to understand there are resources and places they can go to get information and people they can talk to, to improve their practices and ensure there is sustainability for the future."

On the second day of the conference the CIM Awards Gala, sponsored by Caterpillar and its Canadian dealers, honoured recent industry achievements and individual contributions to the industry. A silent auction raised $16,000 for the Canadian Mining and Metallurgy Foundation and CIM's M4S programs.

The Edmonton conference capped off more than a century's worth of industry events. Throughout its history, CIM has strived to provide world-class professional mining development and knowledge-sharing for Canadians and others around the world. Next year's conference in Toronto will continue CIM's work, exhibiting the newest technologies and connecting industry and academics to strive for best practices for sourcing minerals, metals and petroleum.

There is no guarantee, though, that locals in Toronto will get the opportunity to witness a Caterpillar 777G wandering down Yonge Street in the wee hours of a quiet morning in May 2013.



Licence TO DRILL

BY **ROBIN BRUNET** | PHOTOGRAPHY BY **STUART McCALL**

Sonic technology is reimagining conventional drilling, and a Chilliwack company is at the forefront

Sonic Drill Corporation's production facility is nestled at the base of a mountain in the quiet outskirts of Chilliwack, B.C. It's a peaceful setting for a company that has shaken up industries with its high-speed sonic drilling technology.

Sonic Drill uses special drill heads to quickly penetrate most geological formations via a combination of rotary motion, oscillation and vibration (with minimal ground disturbance). It is now a drilling technique of choice for the mining and exploration sectors as well as geotechnical and even construction. Of late, Sonic's drills have been used to diamond drill in Africa, search for gold in Peru, unlock gas deposits in the Arctic, rehabilitate nuclear waste sites in the U.S., and stop a massive dam leak in Canada.

SOUND OF SUCCESS: Sonic Drill's operations manager Kevin Reimer holds the drill head that makes the magic happen.

Sonic's principal owners, Ray Roussy and Tom Savage created the technology in the 1970s and hold more than 40 patents on it. Finning helped them make it more versatile. "We supply the engines for the drills, but equally important to Sonic's evolution is that we also supply the undercarriages and Cat tracks that make the drills mobile," says Finning customer account manager Paul Hoffer.

The relationship between Finning and Sonic came about because one of the Sonic owners was a long-standing Finning client. Sonic operations manager Kevin Reimer recalls, "He was well acquainted with Cat quality and Finning service, so when we transitioned from manufacturing drill heads to building complete rigs that were either truck- or crawler-mounted, there was no question who we would turn to for help."

Initially, Sonic rigs were designed to be powered by the Caterpillar C-7 250 BHP Tier 3 diesel engine; Sonic's SDC550-18 is mounted on a Caterpillar crawler model 312C, while the larger SDC550-28 operates on a Caterpillar 315CL.

But since *Tracks & Treads* last checked in with Sonic six years ago, the company and its relationship with Finning have grown considerably. "We've consolidated our reputation as a global provider of drills with a diverse array of rigs," says Reimer. "In addition to the C-7 that we use for our 450 series, we now use two versions of the C6.6: the 225 and the 173, which are for our SDC390 and SDC350 series drill rigs."

Sonic has also developed what Reimer refers to as "our baby drill." For this, the company outfits the compact 200 series with a 404D-22T, which is a powerful but quiet 2.2-litre turbocharged unit that delivers impressive performance with low operating costs. "These engines, combined with our 312 and 315 track sets, have enabled us to give customers a much more diverse product line to select from, as well as a price range as low as $200,000 all the way up to $700,000." All told, Finning supplies as many as 15 power plants annually.

THE TECHNOLOGY CAN BE USED IN CRITICAL ECO-SYSTEMS AND UNSTABLE TERRAIN WHERE TRADITIONAL DRILLING COULD CAUSE HARM.

Reimer uses the SDC390 series as an example of how Sonic responds to customer needs. "The prevailing need in the OEM industry of late is for machines that are versatile, compact but at the same time very powerful," he says. "At only 28,000 pounds, our 390 is the world's most powerful sonic rig. It has a fantastic drilling depth and yet can fit into an ocean container. The C6.6 engine gives it 225 horsepower, which is only a loss of 25 horses compared to our bigger machines."

Paul Hoffer is the fourth Finning rep to handle the Sonic account, and his easy rapport with Reimer compels him to make the whole process of determining the appropriate power package for new rigs sound simple: "During the design stage, we basically find out what the rig needs to do, then we consult with Sonic's engineering team, select the right engine, and make sure it's delivered on time and configured properly." It's a shorthand explanation of a complex process. The time-cycle for

building either a crawler-mounted or truck-mounted drill rig is about 20 weeks, with the crawler being the component that requires the longest lead time.

Finning provides assistance above and beyond equipment supply. "The first thing clients ask us is, 'What are the emissions standards of your engines?'" says Reimer. "Air quality regulations vary depending on which part of the world we're doing business, and Paul is terrific in helping us obtain Tier 4 Flex and other permits that enable our rigs to operate in diverse locations."

The Sonic/Finning collaboration has also resulted in tough drills that are extremely long-lasting. "One of our SDC550s with a C-7 and 310 steel tracks has logged 9,300 vibrating hours on the drill head and 12,000 hours on the engine," says Reimer. "It has operated 24/7 for the past four years in Lima, Peru, in one of the world's biggest open-pit gold mines."

Reimer is pleasantly surprised by how Sonic drills are being used around the world. "Different industries keep finding new applications for them," he says.

Indeed, Sonic recently shipped two drills to New York City to conduct subsurface environmental assessment. In New South Wales, Australia, the drills are an integral part of a sampling program to determine where the foundations of a proposed new bridge will be placed. Earlier this year, an SCD-450 rig mounted on tracks was even used to drill inside a heritage building in Surrey, B.C. Over the decades, the building had accommodated a coal-fired power station and a steel mill. Its owners wanted to take soil samples from beneath the concrete floor to determine the level of site contamination. Sonic also turned up a little surprise.

"During this process, the rig encountered an old railway track and drilled right through it," Reimer says, adding that at one point the drill pipe began glowing red due to a rare and specific frequency of vibration as it chewed through the thick steel of the buried track. "Ray Roussy always thought it was possible that such conditions would make the pipe glow, but it took 30 years to prove his theory," says Reimer.

The construction sector has embraced sonic drilling for several reasons. "Our smaller rigs allow for great maneuverability in confined sites but, more importantly, sonic has the least amount of deviation in the bore hole of all drilling systems," says Reimer. "This is crucial when drilling in urban areas: a deviation of 10 per cent, which is common with other types of drills, would jeopardize the integrity of utilities and other underground components."

Reimer is bullish about the future of Sonic Drill Corporation, perhaps not surprisingly. And he is optimistic that the company's relationship with Finning will steadily evolve. "We'll continue to develop new models," he says. "For example, we're about to design a rig in the $400,000 range for smaller contractors. The point is, whatever individual clients and markets demand, we can accommodate – with terrific support from Finning."

TRACKS TO GO: Sonic's rigs are equipped with Caterpillar power and tough, long-lasting sonic drill heads.

TOP APPLICATIONS

The non-intrusive abilities of sonic drilling technology make it ideal for sensitive projects such as dam remediation, nuclear site investigations and hazardous waste site reclamation – to the point that many government-tendered contracts specifically require sonic drilling.

Unlike other kinds of drilling, this technology creates vibrations from the drill bit that do not transmit very far. It means that sonic drilling can be used in sensitive areas: critical eco-systems, unstable terrain or other vulnerable situations where traditional drilling could cause harm or instability.

While Sonic Drill Corporation's Kevin Reimer notes that industry clients keep finding new applications for the technology, there are some mainstays for sonic drilling. The top three uses for a sonic drill rig are:

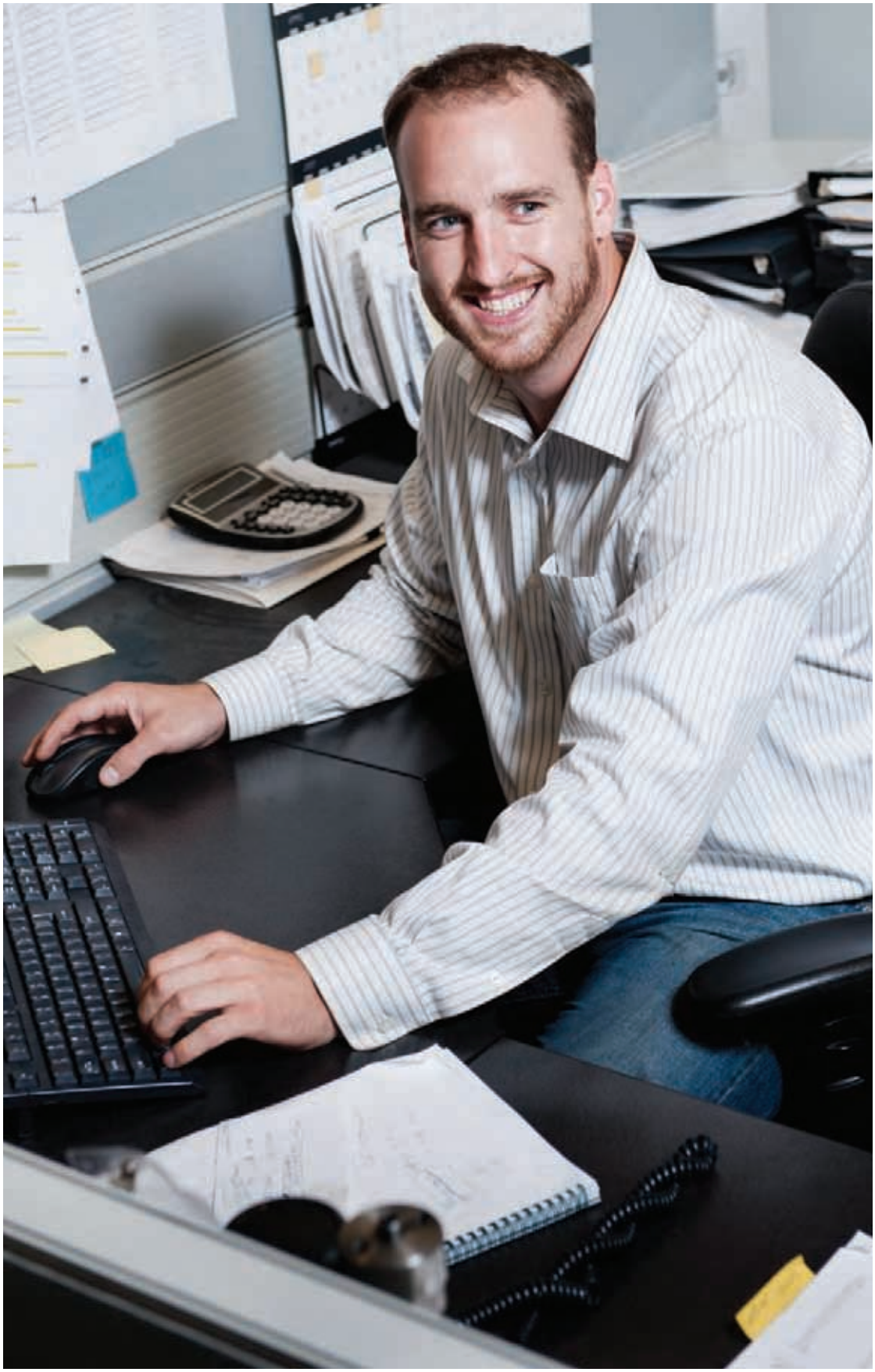
GEOTHERMAL INSTALLATIONS: The sonic rig can drill, case, loop and grout in one operation, producing lower per-foot drill costs and allowing geothermal installations into areas that were previously inaccessible.

ENVIRONMENTAL INVESTIGATIONS: Continuous core samples can be extruded into a plastic sleeve for easy analysis of contaminants while the sonic drill speed allows any project to proceed quickly and profitably.

MINERAL EXPLORATION: The sonic rig can provide continuous core samples to 300 feet through tough, overburden conditions, without disturbing mineral finds.

Portrait: *Bryan Verhoeven*

PHOTOGRAPHY BY **JASON EVERITT**



"No two days are the same," says Bryan Verhoeven. "That's what I like about my job."

Verhoeven supervises customer service advisors (CSAs) and clerks who deal directly with Finning customers, ensuring that the group adheres to processes and procedures, with an eye to best practices.

"I'll help out with anything and everything that comes up, like customer requests or issues," he says. "I keep things organized and make sure work flows the way it should."

Verhoeven has been in his current position for the last year and a half of his nearly six years at Finning, most of that time spent in the Edmonton office. He spends most of his holidays with his family in Ontario. For his down time in Alberta, you can find him riding or tinkering with one of his four bicycles, which range from a sturdy mountain bike to a street bike for riding around town.

"They're worth more than my car," he says with a laugh.


BILL'S BUSINESS
BB
PIPE DREAMS!
GRAHH!!!
Bill? What's wrong?!
I'm just... just so frustrated!
This pipeline finally got a contractor and I know for a FACT that they'll need a subcontractor on the job!
LOCAL
ZDARCO GETS CONTRACT FOR PIPELINE
But I'd need a PL 83 AND a PL 87 to lay pipe, which I DON'T have...
Call Paul.
...and a new D8 of course ..
Call Paul.
...I should probably just call Paul and see if he can help me.
Shortly...
...the financing sounds perfect, Paul! AND a service package so I have less downtime? I could kiss you!
Sigh. He may as well.
Three weeks later...
Hey, Bill! I'm here with the service guys! Everything going OK?
CAT
Paul! Good to see you!
Looks like the pipe laying rentals are working out!
Yeah! And the contractor was pretty happy with how quickly I was able to start!
I can't believe I didn't call you sooner since you're the first person on my speed dial!
Besides ... your wife?
Oh, uh, yeah! Of course!

Count on Us

Winter? Bring it

You may be enjoying a golden autumn, but it doesn't hurt to remember that winter is never far away. Especially in the Yukon. The season always makes itself felt there, but some winters, like the one in 1988-89, are truly notable. In one 24-hour period, 20 avalanches covered parts of the South Klondike Highway between Carcross and Skagway, Alaska. Several sections were covered, and one 1,000-foot stretch was blanketed in snow, rock and broken trees. On the job were several graders and a plow truck. The Yukon Territorial Government also employed two of these Cat 966D loaders, equipped with Idaho Norland snow blowers.

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