



# MINING & CONSTRUCTION

MECHANIZED ROCK EXCAVATION WITH ATLAS COPCO - NO. 3/ 2012



## MINExpo 2012

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Atlas Copco

## EDITORIAL



As Atlas Copco comes away from a record-breaking MINExpo 2012, we want to thank all of our customers who made the show a success and let them know we are already looking to more developments and innovation in the future.

I was particularly proud to play a part introducing the show-stopping Pit Viper 311 blasthole drill rig. It was the centerpiece to our display, catching the eye of everyone at the Convention Center. Not only does the PV-311 have a totally redesigned cab for operator productivity and comfort, but the Rig Control System is included as the standard operating system. We've also worked hard to make maintenance easier.

I could go on about blasthole rigs, but our booth visitors were equally excited about underground products—the world's largest hauler, the Minetruck MT85, and new equipment such as the Chargetec ANFO charger and a new Boomer face drilling rig. We demonstrated the new Augmented Reality technology to help service and rebuild major components. Atlas Copco Secoroc tools, ground reinforcement products and air compressors and boosters showed 55,000 enthusiastic attendees we have whatever they need to be productive.

We had unique technology on display, but it is still our training and our service that make me most proud of Atlas Copco. Atlas Copco is focused on finding ways to help our mining customers thrive and be productive. Read on to find out more of what we offer to the very important mining industry.

**Jon Torpy**  
Business Line Manager,  
Rotary Blasthole Drills

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**Atlas Copco**





**ATLAS COPCO SHOWS IT'S AN ACE IN THE HOLE AT**



# MINE<sub>EXPO</sub> 2012

## INTERNATIONAL

**A**tlas Copco was a key participant in MINExpo International 2012—a record-breaking show that drew nearly 55,000 attendees and 19,000 exhibitors to the Las Vegas Convention Center Sept. 24 to Sept. 26. Atlas Copco's commitment to ingenuity and productivity is seen throughout the United States and around the globe. MINExpo, which occurs every four years, is a way to reach out to customers and fellow businesses in the mining community.

Central to Atlas Copco's booth was the release of the latest addition to the Pit Viper family of blasthole drill rigs. The Pit Viper 311 is the first of the new Pit Viper 310 series, offering a range of hole sizes 9 to 12.5 inches that fills in the gap between the hole diameters of the Pit Viper 351 and Pit Viper 270.

Atlas Copco also showed for the first time at MINExpo the world's largest articulated underground mining truck, the Minetruck MT85. It hauls 85 tonnes (93 short tons) while fitting the same drift dimensions of 50 to 60 ton trucks.

Other new products were launched just in time for the show, and other longstanding successes were on display for the mining industry—rock drilling tools, air compressors, boosters, light towers, exploration drills, core drilling products, grouting machines, surface crawlers, underground ventilation, face drilling rigs, an ANFO charging truck, long-hole drill rigs, pedestal boom systems and more.

### Industry earns attention

Nevada Lt. Gov. Brian Krolicki made a visit to Atlas Copco during his visit to MINExpo

on the show's opening day.

Atlas Copco Drilling Solutions President Peter Salditt and Krolicki toured the booth and talked about the importance of mining to the state. From precious metals mining of gold and silver to base metals such as copper, lead, zinc, mercury, tungsten and iron, Nevada's mines continue to be a large employer and to draw demand for Atlas Copco products.

Salditt pointed out that Atlas Copco employs nearly 150 people in the state with its sales and service force. Atlas Copco employs about 4,000 others across the U.S.

Krolicki spoke of Nevada's trade expansion for agriculture and high-tech products in China. Salditt agreed that Asia is a good market for Atlas Copco as well as other areas of growing importance such as Latin America and most of Africa. **»**



1. *The Pit Viper 311 was released at MINExpo for blasthole drilling in the 9 to 12 ¼ inch range. It is the first of the 310-series Pit Viper drill rigs. The design focused on a comfortable and productive cab and lifespan savings for the owner.*
2. *Customers got first-hand experience inside a Boomer M2C face drilling rig.*

#### » A vision—from stateside to global

The presidents of Atlas Copco's Mining and Rock Excavation sector got together during MINExpo to talk about opportunity, technology and growth.

Today Atlas Copco is diversified to support mining more than ever before. Customers are looking for equipment that will go deeper, drill faster and produce ore more efficiently—all at reduced costs per drilled foot or excavated ton—and the service and support to go along with it.

President of Atlas Copco Underground Rock Excavation David Shellhammer, said, "We are introducing new products like the largest underground mine truck, the MT85, because mines want to move more material with less effort, and we are also working on mechanical excavation projects that will reduce the number of machines needed for the same work."

One factor driving this focus on equipment is the industry's need for manpower. "I see the lack of skilled labor as the biggest challenge facing our industry," said Shellhammer.

He also cites miner and equipment safety as future challenges. "Mines are going deeper, which results in the need for better roof stability and also brings attention to the hotter conditions. We need to take this into consideration when engineering prod-

ucts. We are working closely with our mining customers to accomplish this," Shellhammer said.

Andreas Malmberg, president of the recently formed Atlas Copco Mining and Rock Excavation Service business division, concurred with Shellhammer's assessment that the customer-manufacturer relationship is the key to success.

"Customers are looking to us to grow. Most customers would agree Atlas Copco's dedication to service defines us, but now with a business focused on service we are expanding our product offering to meet their expectations," said Malmberg. "We know there are 30,000 Atlas Copco rigs in operation around the world. We can provide customers with everything from parts support to training programs and even remote monitoring services. The point is, we are in a position globally to provide what they need."

One of Malmberg's key strategies in the future is training, which fits directly with the focus for Atlas Copco's President of Geotechnical Drilling and Exploration business Victor Tapia. "Training is an investment in a company's future. Ninety percent of our customers are small businesses and supporting new equipment training is critical for our customers' success."

Innovation is also a big part of the growth and future of Tapia's business. "Cur-

rently we have a very small market share and lots of opportunity. Our group is about consumables and capital equipment, and though our core business is exploration, we have growing presence in ground engineering."

Tapia said technology is what customers are here to learn about. His group is working on safer and more efficient products as well as a core barrel, for example, that can go deeper and reduce time in the hole.

President of Atlas Copco's Rock Drilling Tools (Secoroc) division Johan Halling is onboard with Tapia's thoughts. "Someone who doesn't know consumable products may think all tools are alike, but we are making constant improvements that focus on penetration rates and life cycle costs. We have to prove our products, but the little things make a difference."

Atlas Copco Drilling Solutions President Peter Salditt had the largest piece of innovation in Atlas Copco's MINExpo booth. The new Pit Viper 311 stood like a beacon in the exhibit shouting, "Technology!" Centered on the new cab design, controls and monitoring equipment put more power into the operator's hands, while the sleek and smart design gives the new rig a next-generation feel.

"We are making great strides in technological advancement. Rigs are more ef-





3. Erik Wastlund, of SPC Technology, a developing partner for EDGE, showed visitors the newest way to increase bit life and maximize down-the-hole drilling efficiency with the EDGE drill monitoring system. Other tools newly introduced to the MINExpo crowd included the Secoroc PARD system, an innovation in drilling that combines the best of down-the-hole and rotary drilling technologies. Another new product from Secoroc is the PrimO pilot bit.
4. Atlas Copco compressors and boosters were on display at MINExpo, including the Interim Tier 4 Hurricane Booster B4-41, Hurricane Booster M-41, XAS 1800 JD compressor. Atlas Copco also released the QAC 1250 generator and the QLTS solar powered light tower.

efficient and safer while providing greater productivity. This MINExpo has been a great success for Atlas Copco to show we are a leader in equipment, and also ideas,” Salditt emphasized.

Business Area President of Atlas Copco Mining and Rock Excavation Technique Bob Fassel summed up the comments from the group saying, “Atlas Copco is looking at long-term solutions. We need to offer more efficiency and mechanical availability to our customers.”

He reflected that it’s an “unsure time” for most mining companies. “Big companies will cut spending, and small and medium companies will look to efficiencies. The consensus to deal with the future is to be more prudent.”

In addition to keeping cost down, Fassel thinks times like this will drive automation and mechanization for products. “As a



niche supplier we will continue to develop products that allow mines to be more efficient.”

Fassel expects the demand for mined products to remain strong and believes the current slowing of the market will correct itself in time, just as it’s always done in the mining industry. “We will continue to offer cost effective solutions and sell products that benefit downstream returns.”

*Victor Tapia, Bob Fassel, Andreas Malmberg, Peter Salditt  
Back row: David Shellhammer,  
Johan Halling*



# Making the *cut*

## Combi Cutter slashes bridge demo time

**W**hen Denver's Interstate I-25 and 84th Avenue bridge needed replacing, Performance Equipment Service stepped in to help its client contractor get the job done on time. Performance Equipment is first and foremost a rental house, but it provides extra workforce when its clients are in a pinch. The strict timeline for the project required the bridge to come down in just two night shifts, with the area open to traffic by 5 a.m. each morning. The Colorado Department of Transportation would impose stiff fines if these times weren't met.

Performance Equipment Service is a store that started as a family venture 13 years ago in Erie, Colo.

Donnie Fetters, owner and president, said client contractors on jobs requiring an excavator with an extended boom sometimes ask Fetters or one of his operators to jump in.

Performance Equipment brought in an Atlas Copco CC 3300™ Combi Cutter. Meeting the strict time requirements was not an issue.

"I could have done it with just the pulverizers, maybe. But that was a hard deadline to meet. The Combi Cutter got us off the freeway faster. Maybe it only cut a little more than an hour off each night, but an hour makes me look better."

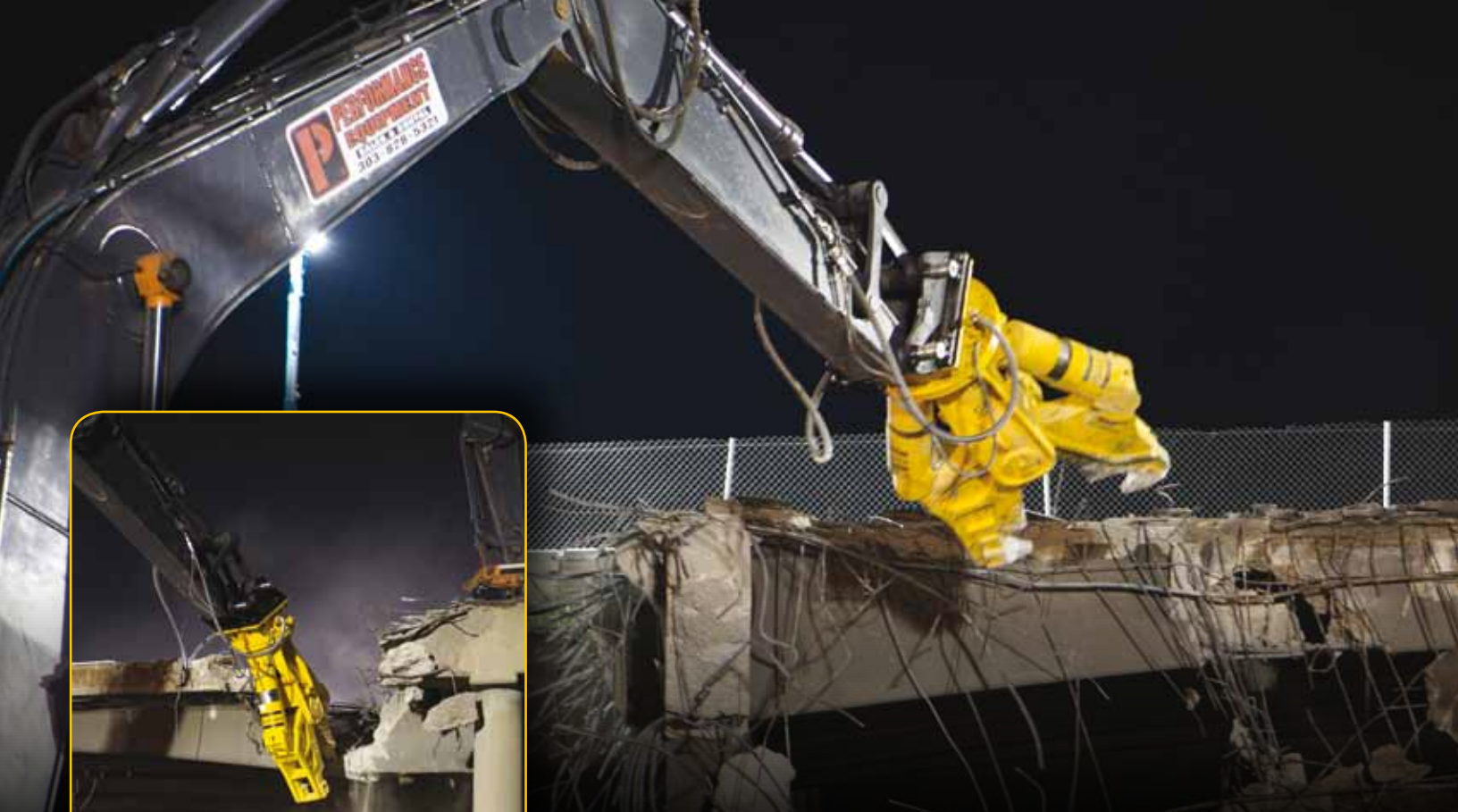
Fetters had two five-hour windows in which to complete the work. He arrived for

the first shift just before midnight and finished by 4:15 a.m. The next night he arrived shortly after 11 p.m. and was done by 3:30 a.m.

This completed the final demolition phases of the 44-foot-wide 1960s-era bridge. Two Atlas Copco HB3000 heavy-duty breakers turned the 44-foot concrete span into "the better part of 60 semitrailer dump loads" of rubble, Fetters said. He recycled the material to provide a base for his company's 7 ½ acre equipment yard area.

"I'd guess it would have been a six-hour-a-night job for the pulverizers. What's nice about the Combi Cutter is I could slice the bridge up, take it down whole chunks at a time."





*(above and left) The powerful Combi Cutter breaks through the bridge with time to spare. The CC 3300 has a cutting force of 1,124,358 pounds in the upper blades and a crushing force of 240,304 pounds with universal jaw shown in the jaw tip.*

*(below) Though no longer in production, the rugged and reliable HB3000 will be found in quarries and demolition projects for many years to come. Companies will find the HB3100 to be an impressive successor. The HB3100 might best be described as a redesigned HB3000 with improved performance along with all the design features of the larger breakers in its HB family. It has the VibroSilenced system to reduce noise, AutoControl to match blow frequency and impact energy to material hardness, the ContiLube II integrated automatic lubrication system, StartSelect to match the startup and shutdown process to a given application, and the PowerAdapt self-preservation system to protect against hydraulic input errors.*

Fetters liked the capability of the Combi Cutter, with its independent jaws and metal shearing knives. “My first impression was, the knives were sure wearing well. In fact, there’s no sign of wear yet, except for the paint that came off the jaws. No nicks—and this was big No. 9 rebar.”

“You nibble at it with the jaws. Take the end 10 inches, and then get in there with your knives for the exposed rebar.”

Atlas Copco wasn’t the only manufacturer that Fetters looked at. “It outperformed any other tool I’ve ever used. None of those others have the teeth the Combi Cutter has. One on top and two on the bottom.”

He found the action to be a unique design advantage. “The self-leveling really

impressed me. The jaws don’t put pressure on your tractor. One side stays put and the other comes around, balanced. No one else could tell me they had that. First one I’ve seen like that. And it makes it stronger. The other cutter I have doesn’t have nearly the strength of this one.”

He believed there was something to be said about a difference in weight. “This unit is about 2,500 pounds lighter than that other one. That’s easier on my tractor, too. Easier to work with.”

Fetters liked the CC 3300 enough to buy it outright for his business after the bridge demolition. Its next project was to be a steel building. He said buildings typically have girders up to 14 inches, but after what he »





saw on the bridge, he didn't anticipate it would present any problem for the Combi Cutter. The CC 3300™ has an optional jaw package for metal.

The slightest reminiscence of a boy who'd just gotten the coolest new toy on the block was in Fetters' voice as he answered the question about whether he would rent out the Combi Cutter or just keep it for his own use while Performance was helping contractors out: "Well, yeah. I'll rent it out. We're a rental house above anything else. We never compete with our contractors—but I'll have to have a lot of trust in the operator."

To ensure that trust, rental of the Combi Cutter will come with a thorough checkout and some quality hands-on coaching before Fetters will completely put the Combi Cutter into other hands. As with all of Performance Equipment's rentals, he said he wanted to keep the unit in the absolute best possible condition, guaranteeing that his rental customers would have an experience similar to the one that impressed him so much on his very first Combi Cutter project. ☉

## THE ATLAS COPCO COMBI CUTTER LINE

- Varying jaw configurations available
- Short opening and closing times
- 360-degree hydraulic rotation
- Tandem cylinders
- Replaceable blades and teeth
- Exchangeable jaws
- CAPS Coupling and Positioning System

The Combi Cutter lineup forms one part of Atlas Copco's "silent demotion" group of attachments, which include pulverizers, multi-grapples and scrap cutters. Like its counterparts, the Combi Cutter are precise, cost-effective tools when demolition and material recycling call for a low-noise, low-vibration technique.

From the smallest model, the CC 250 designed for carriers in the 2- to 4.5 ton class, to the massive CC 6000 (for carriers in the 64- to 94-ton class), there is a Combi Cutter suitable for almost any demolition job.

Models CC 650 and larger feature two hydraulic cylinders incorporating high-speed valves for minimum cycle times. Their speed and power comes from the action of two moving jaws that are both powered by their own hydraulic cylinder. It not only ensures consistent breaking power over the entire

breaking cycle but directs that power to the material without transferring force or vibration back to the carrier.

The units have easy-to-replace teeth and a modular design that mean jaws can be quickly swapped out in the field, even with different jaws. Universal, "U" versions, of a model bear jaws designed for cutting masonry and reinforced concrete. Steel shear, or "S" versions, are made to cut through steel structural components and reinforcements.

For the CC 3300 a "B" jaw is also available that increases the recycling rate on demolition jobs. It is designed to cut material on three sides simultaneously. As the jaws penetrate concrete material, they also cut through the rebar, all in one motion, producing a box-shaped product. This decreases fines and dust on the worksite. This option requires a little bit bigger carrier. CC 3000 U and CC 3300 S fit carriers in the 30- to 50-ton range. The CC 3300 B needs at least a 35-ton carrier.

Atlas Copco Combi Cutters—the silent demolition tool that combines high crushing force, short cycle times, ease of maintenance, optional jaws and, as always, Atlas Copco's full customer support.



### EXCELLENT HANDLING

Thanks to 360° hydraulic rotary drive as standard.

### MORE SPEED, LESS CONSUMPTION

Speed valves shorten the working cycle time thus less fuel consumption during operation.

### ROBUST

The combination of a single and double jaw both fitted in a very robust cutter body offer maximum stability under extreme strain.

### BIGGER BITES, HIGHER EFFICIENCY

Wide jaw openings increase the volume per bite, save time and make the combi cutter suitable for more applications.

### HIGHER FORCE SAVES TIME

High power at the jaw tips, even when the jaw is almost closed, helps to demolish structures with fewer bites.

### KEEPING IT SMOOTH

An optional automatic lubrication device helps to increase productivity by providing continuous lubrication and to avoid downtimes for manual lubrication.

### POWER ENABLES CONTROL

Two powerful hydraulic cylinders deliver virtually constant closing force.

### EASY MAINTENANCE

The CC design concept allows easy change of jaws according to application.



# Good impressions

Atlas Copco's Dynapac paving line gets high marks from contractor



**S**ite Masters specializes in laying asphalt for large commercial parking lots. Established as a true family business by Lee and Linda Mosley and their son Jeff in 2002 in Pheba, Miss., today the paving contractor's service territory covers everything east of a line from about Fargo, N.D., down to West Texas.

During the construction and paving season's peak, Site Masters employs 50 to 70 personnel who complete up to 14

projects a year, with anywhere from four to eight projects going on simultaneously. The company has about 70 pieces of equipment in its fleet to meet its customers' needs. Site Masters had tended to favor one manufacturer in particular. Yet with the construction market coming back strong, the company purchased a couple Dynapac rigs after trying them out in late 2011: the Dynapac F1000T tracked paver and a Dynapac CC424HF tandem asphalt roller.

Trying a new brand came about as the result of some creativity by Atlas Copco and Dynapac sales representative Stacy Lynn that introduced Site Masters to Dynapac. Atlas Copco purchased Dynapac in 2007, »



» which became fully integrated in 2010. Site Masters needed to rent rollers for a project in Nashville. Lynn sent two rollers out to the company. Then Lynn thought Site Masters might be interested in the Dynapac F1000T paver.

The Dynapac F1000T Site Masters purchased is a rubber-track paver-finisher designed specifically for the North American market. It lays up to a 12-inch paving thickness of bituminous mixed material, roll-down or lean-mixed concrete. It will also manage track-laying ballast and unbound mineral aggregates for foundations for paving. One of the most unique benefits of the F1000T is the outboard auger drive and slat conveyor system that is designed to eliminate center line segregation.

The CC424HF is a 25,000-pound articulated drum roller whose design not only increases maneuverability but features enhanced operator view of the drum surfaces and edges, as well as the sprinkler nozzles.

After a month of using the equipment, Site Masters Project Manager Jeff Mosley said he was pleased with the Dynapac models and made the decision to buy the paver and one roller.

#### Review from the road

Mosley said, “My operators really liked the rollers. They perform a little better. There’s a lot better visibility and greater ease of operation.”

The rigs had come with operator training from the store. Mosley said everything was familiar right away to those operators who already had a lot of experience. The main difference was that the control panel was entirely electronic, with capabilities for selection and monitoring of vibration and compaction modes. Mosley said, “They learned it fairly quickly. Some had no experience at all. We put them on it and gave them a crash course.”

Once Site Masters purchased the equipment, a factory representative came to further train the company’s personnel on additional capabilities of the units and operator techniques to fine-tune productivity.

John Givins, Site Masters crew chief for a job about 50 miles northwest of San Antonio, Texas, was on the F1000T running the screed. He preferred the rubber tracks to wheeled pavers for this job, which was on gravel. “It’s got power and traction. When we push up against the dump truck with wheels, they will sometimes dig holes. Not with tracks.” Today, though, they were load-



ing the paver’s 207-cubic-foot capacity hopper by front-end loader and placing about 100 to 150 feet a load.

One selling point of the high-tech paver was that it wasn’t difficult for Givins or his driver to learn the rig, since it was not completely unfamiliar to them. Givins said, “It’s just like an older style paver. Screed is pretty much the same. The paver is tracked but has a steering wheel. And it has electronics.”

Givins gave the Dynapac the edge on maintenance compared to other makes. “Time for maintenance is a little bit better. Takes about 30 minutes at the end of a shift. About 15 to 20 of that is greasing it and the rest is to clean off excess asphalt, as you would any machine. Accessibility to grease points is pretty fair, actually.”

Mosley said he’d had no problems at all with the equipment. The rigs are serviced to the recommended maintenance schedule. The CC424 roller manuals have been updated to reflect the model’s increased service intervals. Longer time between servicing has further increased productive uptime. In the first four months the rigs had already



completed projects in five states, from Indiana down to Florida and Texas.

One Virginia job required the company to move nearly a half million cubic yards of dirt and rock from a mountainside to use as fill, up to 150 feet deep in places. The entire six-month project, which was completed expertly and on time, included grading and installing utilities, storm drain, curb and gutter, and stone and paving.

The contract for a truck stop and travel center project in Indiana required paving a 40,000 square yard parking lot. Pavement was to consist of a 4- to 6-inch asphalt binder course with 2 inches of asphalt surface. The paver handled 20,000 tons of hot mix






F1000T

“My operators really liked the rollers. They perform a little better. There’s a lot better visibility and greater ease of operation.”

**Jeff Mosley**  
CEO, Site Masters

asphalt for this project. Mosley said his crew averaged 2,200 tons per day, not only completing the project on time but well exceeding the high installation quality requirements that his customer had set. “We are amazed at the performance that we are able to get out of these machines on a day-to-day basis,” Mosley said.

In short, you could say that so far, throughout the U.S. east of the Rockies and in the expert hands of Site Masters’ crews, Dynapac’s paving line has made ... a very good impression. 

### CC424HF / CC524HF / CC624HF TANDEM ASPHALT ROLLERS

The three-model Dynapac family of CC424HF, CC524HF and CC624HF articulated tandem rollers is designed for use on both thin and thick asphalt lifts, taking time- and field-proven technology and introducing a number of performance-improving innovations. One is soft starting and stopping, which prevents unevenness or cracking in the asphalt layers. A sudden forward/reverse lever movement will immediately drop the unit out of soft mode for an emergency stop, a noteworthy safety feature.

Standard equipment on the rollers includes an emulsion sprinkler system and quick-release scrapers and cocoa mats for easy cleaning.

Nearly 30 options are readily available to customize the rollers to specific contractor or operator needs. One of the most valuable might be the Dynapac Compaction Analyzer for Asphalt. The DCA-A registers the number of static or vibratory passes, measures the surface temperature and calculates core temperature, and provides a real-time graphic display for the operator. The DCA-A can also be used to document the compaction work for later analysis to improve upon rolling patterns or to provide hard evidence of quality compaction



CC424HF

CC524HF

meeting or exceeding the client’s specifications. It can play back the rolling pattern or allow a full array of statistical information to be printed as hard copy or exported as a PDF.

All machines can be equipped with an optional 13.75 inches of drum offset (crab steering) for rolling close to curbs and other objects.

Low fuel consumption, ease of maintenance, extended intervals in the maintenance schedule, quiet operation and numerous safety features make Dynapac asphalt rollers a top contender in the compaction equipment market worldwide.

### DYNAPAC UNVEILS FIFTH GENERATION OF CA SINGLE DRUM VIBRATORY ROLLERS

Dynapac USA has introduced four new models of their CA-series single drum vibratory rollers. The CA5000, CA5500, CA6000 and CA6500 have been equipped with a number of enhancements over previous models, including optimized drum amplitude, Automatic Bouncing Control and an overall design that makes it easier to service the equipment.

Superior compaction is delivered by the new models utilizing industry leading drum amplitude of .083 inch (2.1 mm.) This increased force allows rock fill to be compacted in layers almost 9 feet thick with rock sizes up to 3 feet in diameter.

Automatic Bouncing Control measures

feedback from the drum and eliminates drum bouncing, or over compacting.

A full package of design features enhances the serviceability of all models.

Another key new feature is the “ECO mode” fuel conservation system that minimizes fuel consumption as well as carbon dioxide emissions by ensuring that the roller does not consume more power than needed at any given time.

The new CA rollers are available in standard models with a choice of specifications and available options allowing customers to “build” their own machines, or choose from a number of pre-defined packages.



CA6000



# Central American

# REBIRTH

Rodio-Swissboring finds success drilling in Latin America, serving Panama to Mexico as a diamond and geotechnical contractor

**R**odio-Swissboring is at the heart of growth in Central America. The region is experiencing a surge in geotechnical and exploration work needed for everything from infrastructure projects in Guatemala to metals mining in Panama. The company has had up to 50 projects underway from small monitoring wells to some multi-million dollar exploration projects and there is no sign of slowing.

The company has been working with Atlas Copco diamond drills for more than 15 years. Within that time Rodio-Swissboring General Manager Federico Rosenberg said he has come to know the Atlas Copco Christensen series surface core drilling rigs inside and out. “These drills are what we do. Our mechanics and drillers know them.

Atlas Copco’s rigs are the reason we are successful.”

Rodio-Swissboring has two divisions. The large diameter division takes care of civil construction infrastructure projects such as caissons, driven piles and soil improvement jobs. The small diameter division handles tiebacks, micropiles, monitoring wells, geotechnical and mineral exploration plus drilling and grouting projects. If that’s not enough, they also work in Mexico for geotechnical and mineral exploration.

Rosenberg breaks down how the Atlas Copco Christensen rigs (CS series) work so well—they are reliable, mobile and multi-purpose. “They hardly ever break down, and when they need maintenance, they are

simple-to-fix problems. Getting parts can be an issue because of our remote locations, but Atlas Copco ships directly from Salt Lake City, Utah, USA, within a couple days.”

He said mobility of the rigs is an added advantage: “We mount them on tracks. This makes them mobile and easy to get from one place to another. The CS1000 is our most common drill and we have kept its overall width so it fits into a 40-foot container. That is very important, shipping into some countries in the region.”

Rosenberg needs rigs for multi-purpose drilling with both reverse circulation (RC) and core drilling capabilities. “We can go to 500 feet with reverse circulation drilling a 5-inch hole, then switch to core drilling. RC





Rodio mounts the drillers station above the drill area giving the operator clear view of the work area and winch lines.

drilling saves our customers about 40 percent over diamond drilling,” he said. This is an advantage when the customer doesn’t need detailed information of the overburden.

CS1000 comes standard with a P-size choke, which Rosenberg likes. Also, he appreciates the 6-cylinder engine. Rodio-Swissboring orders the CS1000 with a long stroke mast, allowing rotary drilling RC and longer runs. “This P6L configuration has been the bread and butter rig for the company,” Rosenberg said.

### Good as gold

Nicaragua is just one hot spot for Rodio-Swissboring. Rosenberg said they once drilled over 250,000 meters of HQ core for a gold project in El Salvador. “We had as many as four CS1000s working there at one time. That was a great job for my company and we had 40 great employees working there.”

Today the company has about 640 employees in Central America, about 80 of whom are working in Nicaragua. The highest concentration of workers is in the RAAN (northern region) area with four drills operating there.

The main workshop is in the city of Leon with two drills working close by, at the Limón/Santa Pancha and la India Mines. The Limón mining area has been producing gold for 100 years with varying degrees of development based on the economic and political climate. Today’s owner of the Limón Mine is B2Gold Corporation, a Canadian metals exploration company. It purchased the mine with an underground operation that today has expanded into an open pit mine. The work done by Rodio-Swissboring will

define the future opportunity and direction of the operations.

B2Gold reports, “Drilling is currently being conducted in the Santa Pancha “Deep” area to confirm and upgrade the December 2009 inferred resource of 167,000 ounces of gold (1.2 million tons at 4.7 grams per ton gold at 2.3 grams per ton gold cut off).”

Rodio-Swissboring is drilling HQ holes every 328 feet to approximately 985 feet deep. They are currently finding quartzite veins, as expected, with a few pleasant surprises. The thickest vein in the 970 foot hole was reached at about 720 feet and was 82 feet thick. Drill crew foremen Juan Mendoza said at times this vein was 165 feet thick. The first vein was located at 460 feet and was 26 feet thick. The geological report told them to complete the hole at 970 feet. But as they approached the required depth, the last few feet of the core sample showed another quartzite vein.

After a few phone calls and consultations with geologists, the crew was directed to continue deeper to find the bottom of this mystery vein. “This could be another few feet or 35 feet thick, that’s the exciting thing about exploration drilling,” said Rosenberg.

When advancing through the gold-infused quartz, the drill really slows down. Drilling the volcanic andesite that makes up the overall formation, the entire 10-foot length of the core barrel can drill fast. But when they get into the quartz, the crew slows down, pulling samples 1 foot or less at a time. “This is where we need to be careful. This is what they really pay us for,” said Rosenberg.

Rosenberg emphasized how important it is for the mine to have accurate samples. His crew puts each piece of rock into the box

as it comes from the sample tube. Also, because the quartz can be broken up, the driller watches his pressure to make sure water continues to flow through the rotary head. An increase in pressure could mean a piece of the sample is jammed in the tube, not allowing circulation. This could also show they could get stuck in the hole or wear the bits excessively.

That said, here they are drilling what Rosenberg called lost circulation drilling. Although they are pumping water down the hole, mud must also be applied around the barrel at the top for additional lubrication.



The quartz vein is a varying degree of consolidated rock and shows pockets of metals deposits.

No cuttings flow from the hole. “The formation is broken up in this region, therefore the cuttings are moving into the formation. Notice nothing is flowing from around the drill pipe,” he said.

Applying the fluid, which consists of calcium carbonate, polymer and bentonite, maintains lubrication for the bit and stabilizes the hole. Because the formation is broken up, the mud and cuttings that stay in the hole cake the sides of the hole. »





*(above) Rodio's service team keeps the drills in the region in top condition. With each new drill the crew mounts the CS-series rig on a crawler base. This configuration works best for the terrain and fast relocation in Central America.*

*(right) The Rodio Swissboring crew shows off the cores in the box. The last row in the box shows the vein of quartz.*



» Once through the overburden, drilling here is fast. They are advancing in third speed. Although it doesn't always go so smoothly, they find this region has much opportunity for core drilling.

The contract they are about to begin with Limón Mine is a geotechnical project for a future shaft. Rodio will drill and grout holes for the 10-foot shaft to 120 feet deep. This will put them past the broken overburden, giving the mine a better formation in which to sink the shaft.

The project will include a first phase of holes in total with six around the perimeter and another in the center. The holes will be pressure grouted with one of their Atlas Copco Unigrout grout plants and a pneumatic pump.

"This mine has lots of opportunities for us. The top 160 feet is really bad ground. Because we are also a company that has lots

of ground engineering experience, we offer a good partnership with the mine," said Rosenberg.

#### **Another hot spot**

Not far from the Limón Mine, Rodio had core drilling contracts with two geothermal companies in recent years. One is Cerro Colorado Power and the other is Geonica. The latter gave the company its deepest hole ever at 3,670 feet.

These deep NQ-diameter holes were drilled with the company's newest drill rig, the Atlas Copco Christensen CS14 drill. This drill was purchased specifically for geothermal work. It has a capacity of 4,265 feet.

Geothermal drilling requires a little different technology than metals sample drilling. Geologists test temperature and pressure while drilling. The crew must also run

safety equipment similar to oil and gas drilling, such as a blowout preventer. Rosenberg said at times they hit areas that are 392 degrees F, but overall the temperature changes through the length of the borehole. For a well to be usable for geothermal steam generation, it must maintain among other important parameters a 300 degree F temperature. To fall below that means the hole might not have long-term power generation viability.

Rosenberger said they have drilled many wells that have not met the standards for a good geothermal well, but many others do. He said much of the area near Managua is a volcanic-active region ripe for both long-term geothermal electricity generation and metals mining.

For these reasons Federico Rosenberg has much praise for Nicaragua, "I think Nicaragua has a bright future and could be a leader in Central America in the future." ☉



# Drilling to the core with Atlas Copco's TH60DH



**W**estern Kentucky is known for its ample supply of coal. Although it might seem unusual to see an Atlas Copco TH60 water well rig at work in a coal mine, Armstrong Coal Company has found it valuable in starting up its two new mines.

Classified as a water well drill, Atlas Copco's TH60DH (deep hole) can do much more. In fact, Atlas Copco's entire range of water well products can be used in various applications, including geothermal, dewatering,

degassing, uranium, leaching, coring, reverse circulation, potash drilling and exploration.

Armstrong Coal controls more than 300 million tons of proven and probable coal reserves in western Kentucky where they operate five mines, surface and underground. The company became interested in the exploration and core drilling capabilities of the TH60DH drill rig when it started the expansion in 2011. Armstrong uses both rotation motors with a speed of 145 rpm to

get their core samples and has found that is fast enough to get the quality they're looking for.

Armstrong Director of Engineering Keith Brown said, "We're doing exploration drilling to look for strata, normal mining strata, and we target some areas where we're looking for strip faults—anomalies where there wouldn't be good drilling."

Core drilling and the exploration process are imperative to understanding different types of rock conditions, faults and

The TH60DH is a mid-weight, truck-powered, hydraulic tophead drive drill rig. It is designed for water well and other applications requiring air or mud rotary and down-hole hammer drilling methods. The drill is designed for drilling 5 to 12 inch (127 to 305 mm) holes but can drill up to 20 inches (508 mm) and handle up to 19 inch (483 mm) diameter casing.

#### Features and benefits

- Single engine design provides lighter weight and quieter operation
- Electronic air regulation system continuously monitors compressor volume and pressure output for optimum efficiency
- 70,000 lbf pullback (311 kN) with 37 ft 6 in (11.4 m) tower support deeper applications

	TH60	TH60DH
<b>Pullback</b>	40,000 lbf (178 kN)	70,000 lbf (311 kN)
<b>Feed System</b>	Single cylinder, cable feed	Twin Cylinder, cable feed
<b>Derrick</b>	Capacity: 45,000 lb (20,412 kg)	Capacity: 75,000 lb (34,019 kg)
<b>Rotary Head</b>	Standard: 5,500 ft-lb (7,458 Nm) at 145 rpm single-speed rotary head Optional: 5,500 ft-lb (7,458 Nm) at 145 rpm two-speed rotary head (second speed) 4,000 ft-lb (5,424 Nm) at 195 rpm  Optional: 6,200 ft-lb (8,406 Nm) at 134 rpm single-speed rotary head Optional: 6,200 ft-lb (8,406 Nm) at 134 rpm two-speed rotary head (second speed) 4,650 ft-lb (6,305 Nm) at 180 rpm  Optional: 8,000 ft-lb (10,847 Nm) at 105 rpm single-rotary head Optional: 8,000 ft-lb (10,847 Nm) at 105 rpm two-speed rotary head (second speed) 5,500 ft-lb (7,457 Nm) at 145 rpm	

» abnormalities that will affect the design of the mine.

Executive Vice President of Operations for Armstrong Coal Kenneth (Kenny) E. Allen described what they're looking for in underground mines: "We look for the strata to determine the integrity and competency of the roof, and the quality of the coal seam.

"We analyze the coal for ash, sulfur, moisture and BTU content as well as perform a trace element analysis. It is important to know the constituents of the coal for marketing purposes," Allen said. "We evaluate the floor material to help us size the pillars that support the mine—the softer the floor, the bigger the pillars. It's all part of underground mining."

#### Mining in the Bluegrass state

Sandstone, shale, and limestone are the most common rock formations in western Kentucky.

Approximately one month after the TH60DH arrived on site, Armstrong Coal drilled a continuous core for the new mine shaft with the TH60DH in Union County, Kentucky. Once completed, drillers will use the TH60DH to drill seven to eight water monitoring wells. This process involves drilling both shallow and deep wells and monitoring both surface water and deep water for at least six months prior to filing an application for a permit to mine.

Armstrong Coal also initiated exploratory drilling to target depths that could be used for the roof, floor, and seams at different localities around the location of their future mine. So far, drillers have been drilling

to depths ranging between 270 feet to 1,500 feet, depending on the coal seam or slopes being analyzed.

As of August 2012, the TH60DH drilled more than 20,000 feet in Union County and logged more than 1,800 hours of drill time. According to Project Manager/Coordinator Steve Kane, the TH60DH is running at 95 to 96 percent availability and has had no major issues since it arrived.

#### Gaining flexibility

Armstrong Coal was pleased with the versatility of the TH60DH. "The biggest benefit of having this rig is flexibility of doing things that we used to have to contract, which cost us a lot of money," said Kane. "That drill has saved this company a bunch of money just from that standpoint. I'm very comfortable we can do anything we're asked to do with it—monitor wells, holes for safe rooms, core drilling for underground, travel way and belt slopes. We can do it all."

Using Atlas Copco PDC or tricone bits, the size of the holes varies from 9 to 12 1/4 inches, with consistent use of 3 1/2-inch drill pipe. Armstrong Coal also used bits ranging from 5 7/8 to 6 1/8 inches for grouting once the casing was set. They drill through the casing, concrete, and then use a 4 5/8-inch bit to finish drilling the hole. They case with PVC mostly, but use steel when deeper than 1,000 feet.

Allen said the decision-making process to purchase an Atlas Copco TH60DH for use in a coal mine was simple: "We might be a little biased because we've had good

results with our blasthole drills. We get good service. Atlas Copco has worked with us on issues that have come along on the drills."

In fact, Armstrong Coal owns three Pit Viper 275 rotary blasthole drill rigs, three DML blasthole rigs and two ROC F9 top hammer drills. The company also uses Atlas Copco bits for a number of projects. "Everything we've got in our drilling stable, so to speak, is an Atlas Copco drill. Since we evaluated the deep hole drills, Atlas Copco seemed to have everything in the TH60 that we were looking for," said Allen. "So it made sense to stay with the same group of people and the same company."

The capabilities of the TH60DH had Armstrong Coal interested in more than brand loyalty. Allen said, "Many claimed they had the capabilities of doing what we wanted them to do and the TH60 seemed to stand out to us. We're really pretty deep, taking core at 1,500 feet, and it's pretty important to be able to get those cores where we need them."

Armstrong Coal doesn't need auxiliary air, even at those depths.

Kane and Atlas Copco salesman Paul Haynes worked closely together during the sales process. When Haynes visited Armstrong Coal in early 2011 to present the deep







*(above) Armstrong Coal Project Manager Steve Kane and Atlas Copco Salesman Paul Haynes check out work on the drill site.*

*(far left) Ricky Hawes (left) and Pat Reeter (left) Driller Pat Reeter uses a sifter to sample the material of the hole in order to determine the rock type in each location. Those most commonly encountered at greater depths were shale, limestone and coal.*

hole product range, Kane was adamant about having at least 50,000 lbf of pullback capacity. “We wanted something that had a lot of pullback power and with the TH-60DH, of course we’ve got 70,000 pounds of pullback in case we get in trouble, and a lot of these other drills we looked at don’t have this capability,” said Kane. “We just felt that with the versatility, we could make the TH60 do what we needed to do with everything we were involved in.”

Haynes and fellow Atlas Copco Product Manager Frank Chickey were the two that led the training of the TH60DH. Kane said, “We got it in July, but these drillers had to go through a training process. Paul [Haynes] and Frank Chickey had a class for the drillers, and then we took the drill back in the parking lot and spent two, maybe three days of hands-on training.” Ac-

ording to Kane, the drill was unlike anything his two drillers had ever used but, they quickly caught on.

#### **Future plans**

As of September 2012, the Armstrong West project has no definitive timeline. Drilling of exploratory holes continues to determine the best locale and structure for the new underground mine. Once all exploratory holes are completed for this project, the TH60DH will begin drilling safe-room holes, which are required for underground mines in case of disaster.

“We have to provide so many days of water, so many days of food, oxygen tanks, but also you have to have a surface hole coming all the way down and into that room so you can use it to drop communications, more food, more water,” said Kane. “As

soon as the undergrounds get progressed enough to need those, then we’ll be putting those in, too.” Kane said it’s likely the TH60DH will be drilling a 10 3/4-inch hole and setting 8-inch casing.

Kane is confident the TH60DH can handle the job no matter what project comes up for Armstrong Coal. He said, “You can do so many things with it. You’re not handicapped. I’ve talked to different people around the country and we’ve been talking about equipment, primarily core drills and blasthole drills. And when I would tell them that we had a TH60DH water well drill, they said, ‘Well what are you going to do with it?’ And I said, ‘You don’t understand. This is what we have set this thing up to do—what we need it to do. We don’t call it a water well drill. It’s our multipurpose machine.’” ☉



# ROCK steady

Used rigs level gas pads, lower bottom line

Atlas Copco's used rig market offers blast-hole drilling companies a wide selection of tried and true models at a fraction of the cost of new. Yet they have the same customer support and flexible financing packages. Even through the recession thrifty drill and blast companies could maintain their fleets, even expand, remaining competitive in the rocky climate of recent years and continuing to provide quality service to their clients.

Take Brainard Explosives and its 10-rig blasthole drill fleet as a prime example.

John Brainard, who has 34 years of blasting experience, co-founded the company with his wife in 1984. The company's drilling operations started up in 2001 with the purchase of an Ingersoll Rand ECM 360. Since then the company has acquired rigs every year and is still growing.

One of Brainard Explosives' specialties is the region's characteristic flagstone that is so frequently seen in decorative landscaping and stone fences in that area of the Northeast. But today Brainard Explosive's clients also include gas companies in the Marcellus Shale region of Pennsylvania and New York. Brainard not only provides pre-construction leveling of the pads but also works area quarries, drilling and blasting to pro-



vide a steady supply of crushed rock to use as fill at the sites.

In addition to the Atlas Copco ECM 360, the Brainard fleet includes two ECM 660 drill rigs and an ECM 360, ECM 570, ECM 670, ECM 680 and ECM 720. Some of the rigs are old enough to show the beige livery of their Atlas Copco predecessors. All of them are in steady production work.

Brainard was able to acquire some of the rigs when he needed them through Atlas Copco's flexible financing, a customized payment package for the company based on its fluctuating cash flow.

Brainard decided to purchase his ECM 720 after leasing it for two years.

He doesn't trade rigs in. He adds to what

he has, and the way work has been coming in, he believes he'll keep an eye out as rigs become available. It reminded him of another point he liked about the Atlas Copco used rigs. Many of the parts are the same. When he retires a rig from useful service, he'll keep it for parts. For instance, the ECM 670 and ECM 680 use the same hammers. It will be an easy swap out.

Brainard said back when he operated air rigs, he did all the servicing and repair him-

self. With these hydraulic blasthole surface crawlers, he still does some servicing but allows Atlas Copco specialists to tend to the computers and hydraulics. When he does have something that needs attention, he calls up "Jimmy B." at the Clarks Summit store. James Baranowski gets him on track quick, often accommodating him with same-day technical support. Brainard said that he liked it, too, that when servicing or repair was going to take a while, Baranowski arranged for him to use a loaner rig, keeping him up and running.

On this day driller Cory Baranowski is in one of the company's ECM 660 surface crawlers drilling 18- to 20-foot blastholes just below Danna Branning, who was op-



## New or used, Atlas Copco stands by its equipment

Atlas Copco's rock drills are supported whether they are fresh off the production line or well used in the field. The newest versions of these surface crawlers are:

	PowerROC Series
<b>SmartROC Series</b>	PowerROC T25 PowerROC T30 E PowerROC T30 PowerROC T35 PowerROC T35 E PowerROC T45 PowerROC T45 PowerROC D55
<b>FlexiROC Series</b>	AirROC T25 W AirROC T25 AirROC T35 AirROC D35 AirROC D40 AirROC D40 W AirROC D45 AirROC D45 SH AirROC D50 AirROC D55 AirROC D65 AirROC C50 AirROC C65

### Naming Structure

Product series name	Drilling type	Optimal
AirROC	T:Tophammer	Nominated
PowerROC	D:DTH	hole size
FlexiROC	C:COPROD	15-70 for 1,5"-7,0"
SmartROC		Ex: 30 for 3.0"

Product series name	Model
<b>FlexiROC</b>	<b>T30 R</b>
Product name	

Complementary codes  
W: Wheel based carrier for AirROC  
SH: Semi-hydraulic pneumatic rig  
R: Radio Remote Control  
E: Exterior Direct Control

erating an ECM 720 at a slightly higher elevation, drilling 30-foot holes. Both rigs were using T51 steel with 3.5-inch diameter bits. They were preparing the next blast of a conventional drill pad construction project.

In the first three and a half hours Baranowski had drilled 15 of the 3.5-inch holes already with the ECM 660. That included time, he said, to remark the pattern, which had been erased in places by the rig's treads as he trammed from hole to hole.

Baranowski said the sandstone was hard and seemed to have a lot of dirt between the layers, though he was doing well in the conditions. He said he preferred his ECM 660 to the ECM 590 rigs, which he had used prior to joining Brainard. Some of his preference, he said, was due to the roomy cab of the ECM 660 that allowed him to sit rather than stand outside, but he also liked the automatic rod changing. He made the switchover fairly easily. He gave an exam-

ple of a challenge he took up once in softer rock. Another ECM 660 driller had bored 38 holes in a 10-hour shift. Although new with the rig, Baranowski completed 88 in his own 10-hour shift.

Comfortable as he was with the ECM 660, Baranowski said he would still trade Branning for a chance to operate the ECM 720. ECM 720 was showing its older brother up, even while drilling deeper holes. It was averaging eight to nine holes an hour in the hard gray sandstone.

Brainard said as his drilling operations have grown he has moved from buying 10-year-old rigs to buying rigs that are just a couple years old. Such careful investment means now he is looking into an Atlas Copco PowerROC T50 being demonstrated in Atlanta. Who knows? It may become the first new rig of his blasthole surface crawler fleet. Will he swap out one of his older rigs if it does? Brainard said, not a chance: "I'll keep them till they die." ☺



Co-owner John Brainard, driller John Stankiewicz, and office manager Manuel Uribe.



# HOLE new direction

Young company secures niche in seismic, micro-seismic drilling with Atlas Copco hammers and bits

To say that Mike Comstock has an interesting background is an understatement. The short version is that after returning to the construction business in his home state of New York after doing well in Alaska as a transport boat owner-operator and an Alaskan ice road driver, he and his wife established a small company cutting trails, grading access roads and pads, and improving sites for large drill rigs. Natural gas in the Marcellus Shale of northeast Pennsylvania and upstate New York was beginning to create a boom in the regional economy.

It was while cutting trails for what Comstock called “tracked buggies” that he became inspired to enter the drilling business. “I kept seeing these things going by while

we worked. There was just something that seemed wrong about them to me. I said ‘I can do better than that.’” With that, Comstock committed himself to the seismic drilling industry.

In seismic drilling, blasts in drilled holes serve as sonic sources that will produce a picture of underground geology through their reflected vibrations. The process is somewhat analogous to the way fishermen use sonar units to “see” fish below them. Each of the holes receives a small charge just large enough to “bump” the ground. Vibration from these charges reflects back from variance in underlying structures to an array of geophones systematically placed over the holes on the surface.

F.T. Seismic’s involvement is concluded



*F.T. Seismic Support head mechanic Joe Baldwin is shown with one of the company’s drills.*



after the charges are set. Other contractors will place the geophones. The information they receive is sent to computer software that interprets and records it for a highly detailed 3-D graphic representation from which gas companies can plan how best to harvest the resource.

Today seismic drilling is the company's specialty. F.T. Seismic Support has become a major supplier of field construction services throughout the northeastern U.S., as well as an international manufacturer. Headquartered in Campbell, N.Y., the company has a fabrication and repair shop in Avoca, N.Y., and a satellite office in Houston, Texas. F.T. Seismic Support has provided its services across the country, drilling in Arkansas, California, Oklahoma, and various locations in the Rocky Mountains.

Comstock credited the company's incredible success to the quality people around him. Starting with just six employees, the company now has a 150-person workforce. "I've got my son, Chris, an aeronautical engineer who right now is completely running the microseismic operations. Joe Baldwin is an incredible mechanic. I've got Corey Campbell, my fabricator and shop manager. There's a lot of versatility in the company personnel."

### Tooling from Atlas Copco

When his fleet needed hammers and bits, Comstock contacted Atlas Copco in Clarks Summit, who set up F.T. Seismic with Secoroc products. F.T. Seismic primarily uses Atlas Copco Secoroc TD 35 and DHD 3.5 hammers to drive 3 7/8 inch Atlas Copco hammer bits 20 feet down on an average job. "When you're getting paid by feet drilled, you want the power to be in and out of the holes." To gain perspective of his concern, consider that a recent job required F.T. Seismic to drill an 18,000-hole pattern in an 80 square mile area of northeast Pennsylvania in the Marcellus Shale geography.

That is typical in this line of work. Thousands of shallow holes are drilled over a large geographic area, executed precisely to an engineer's specifications in order to place the sonic sources for readings.

It was just five years ago that Comstock contacted Atlas Copco for drilling tools. That's how he met Joe Mela of Atlas Copco at the Clarks Summit, Penn., store. "The thing that impressed me about Joe," Comstock said, "is that he took the time to sit down and talk to me about what we wanted to do."



Mela is not just an equipment salesman. He worked for 20 years as a heavy equipment mechanic and has extensive experience setting up drill rigs. Part of his connection to Comstock was his genuine interest in Comstock's endeavor, and the rest was the impression Comstock made on him. "Mike's steps are always longer than his stride," Mela said, the old expression used to describe those who are continually stretching their capabilities.

Clarks Summit store manager Tim Tinsley said that was one difference in how Atlas Copco distinguishes itself from other manufacturers. The company's first preference, of course, is to provide customers with Atlas Copco rigs, whose designs are based on thoroughly researched, globally field-tested technology. But Atlas Copco is also willing to help all customers, even fledgling companies, giving exactly the support deemed appropriate for that particular customer's situation and needs.

Mela introduced Comstock to his colleague who specialized in rock drilling tools, Joe Stewart, also of the Atlas Copco store in Clarks Summit. Stewart keeps F.T. Seismic in supply of pneumatic hammers and bits, as well as poly crystalline diamond composite bits, referred to as PDC, for rotary work.


F.T. Seismic is also doing microseismic drilling projects. Gas companies have been under pressure by concerned groups over the possibility that hydraulic fracturing might be an environmental hazard. To provide indisputable evidence of hydrau-

*Seismic drilling requires the crews to go wherever engineers layout the holes. Atlas Copco hammers and bits help F.T. Seismic get in and out of the tangles and onto the next hole in the least time possible.*

lic fracturing's low environmental impact, permanent ground-condition monitoring systems are set around fields prior to fracking. The strategically located monitors are permanently grouted in holes typically drilled to 120 feet deep. The data they collect establishes conditions before fracturing, records any changes to conditions during fracturing and provides permanent monitoring. As microseismic monitoring systems prove their worth, demand for skilled drillers will only increase.

This past winter's mild weather put some of his projects as much as three months ahead of schedule.

Comstock saw no sign that business would let up any time soon. "I get calls every day asking for more rigs, more rigs, more rigs," he said. "But getting rigs isn't the problem. It's that I can't find enough qualified operators to train. I don't care what kind of drilling equipment you have. The wrong person can wreck a rig. We'll look at 500 candidates to get 20. And it takes us a year to train a driller."

The sign in front of F.T. Seismic Support's Avoca shop says "Help Wanted"—but only apply if you want to be counted among the best in the business. They won't hire less. 

# Atlas Copco celebrates opening of Phoenix store

Atlas Copco opened the doors to its 14th U.S. store, marked by a grand opening and ribbon-cutting event Feb. 23 in Phoenix. Atlas Copco chose this location to support the region's large customer base in drilling, blasting and paving. The store now offers these industries a quality sales team and the easily accessible support presence their customers require.

Salesman Greg Ayers said so far customers have been impressed with the 9,050-square-foot facility, which

is situated on a spacious 2.5-acre lot and features three pull-through bays. "They are happy to have another supplier for equipment and services locally. We are excited to establish new working relationships and build and develop existing relationships."

Manager Ed Greer heads up the Atlas Copco team at the store, including Rental and Service Coordinator Jerry Delrae, Project Manager Tim Fagan, and Customer Service and Parts Manager David Arroyo.



# Atlas Copco announces personnel changes



**SHANE RODEN** is the product manager for GIA and raise boring products within Atlas Copco Construction Mining Technique USA.



**KEVIN HOUSE** is a sales representative for the Atlas Copco Rocky Mountain Store in Denver.



**ROSS GJERDE** is the product manager for top hammer equipment for Atlas Copco Construction Equipment.

**BRIAN BIELLER** is the new vice president of business development for Atlas Copco Construction Equipment.



**RANDY SHAMY** is a sales representative at the Atlas Copco Rocky Mountain store.



**RAY SHELOR** is product line manager for down-the-hole equipment at Atlas Copco Construction Equipment.



**STEPHEN NELSON** has been appointed to the position of business development manager for Atlas Copco Construction Equipment.



**ZUHRA DUGUMOVIC** is branch and rental administrator at Atlas Copco's Sacramento store.



**JOEY PARKER** is service operations manager for Atlas Copco Construction Equipment.

**VIJAYAKUMAR PALANISAMY** is product marketing manager for Road Construction Equipment.



**JUSTINE MANNING** works in inventory control and customer support for Atlas Copco Construction Equipment.



**JASON STARNES** is team leader of sales coordination for Atlas Copco Portable Energy.



**DELANEY ERICKSON** business development sales manager for Rock Drilling Tools, oil and gas markets in the mid-south region.



**VERSIE WALLACE** is training manager for Atlas Copco Mining and Rock Excavation Technique Service Division.



**JERRY HACKETT** is a sales representative for the Atlas Copco store in Vista, Calif.



## Atlas Copco announces addition of new attachments



Atlas Copco has announced the addition of two models of bulk pulverizers, the BP 2050 and BP 3050, to their range of silent demolition tools. Key design features include a specially angled shape and wide jaw for improved access to material and a speed valve for a more rapid open and close cycle.

“The speed valve actually helps lower the overall cost of ownership,” said Keith Becker, product development specialist for Atlas Copco hydraulic attachments. “If you reduce your opening and closing time, or cycle time, you’re reducing machine hours, operator hours and fuel consumption while increasing production.”

“Another feature that cuts down your time on the job and saves money is the high, constant power that these units generate at the jaw tips, even when they’re almost closed,” added Becker. “That extra power means you can use fewer bites to demolish a structure, for example. Every bite adds up.”

Atlas Copco has also added to its Construction Equipment line six new hydraulic compactors designed for use on carriers in the 2,205- to 88,185-pound class. A key design feature is that the housing attachment is offset at 15 degrees, improving the force distribution on the vibrator plate while further reducing the stress and wear on the compactor.

These compactors are virtually maintenance free due to Atlas Copco’s PermaLube system, which keeps the bearing flooded with lubricating oil. The integrated control valve regulates hydraulic flow and pressure to prevent motor overload, particularly if compactors are used on different carriers.



## Atlas Copco—Baltimore hosts rock crusher event



An audience of industry professionals witnessed Atlas Copco—Baltimore putting its Powercrusher PC3 impact crusher and an Atlas Copco 3715 screen through their paces. The demonstration was held at Melvin L. Joseph Construction in Georgetown, Del. A Powercrusher PC4 jaw crusher was also on site for attendees to examine.

Ed Hullett, store manager for

Atlas Copco—Baltimore and Eric Amberson, Atlas Copco’s product line manager for the Powercrusher range of crushers and screens, demonstrated the ease of use and high performance capabilities of the PC3. The unit’s 250 to 300 ton per hour maximum production capacity and well-designed service and maintenance access were a hit with the audience of local industry professionals.

### WHERE TO FIND US

Please contact your nearest Atlas Copco Customer Center. Visit the store website to see regional news and product information focused to its location.

State	City	Phone	Website
GA	Atlanta	888-762-3745	<a href="http://www.atlascopco.us/atlanta">www.atlascopco.us/atlanta</a>
MD	Baltimore	877-797-0987	<a href="http://www.atlascopco.us/baltimore">www.atlascopco.us/baltimore</a>
PA	Clarks Summit	800-950-1049	<a href="http://www.atlascopco.us/clarkssummit">www.atlascopco.us/clarkssummit</a>
CO	Denver	866-466-9777	<a href="http://www.atlascopco.us/denver">www.atlascopco.us/denver</a>
NV	Elko	775-777-2204	<a href="http://www.atlascopco.us/elko">www.atlascopco.us/elko</a>
TN	Knoxville	888-339-0344	<a href="http://www.atlascopco.us/knoxville">www.atlascopco.us/knoxville</a>
MA	Ludlow	413-589-7439	<a href="http://www.atlascopco.us/ludlow">www.atlascopco.us/ludlow</a>
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