

# POWERSOURCE

A publication of John Deere Power Systems

Fall 2016

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GREENER THAN  
EVER**

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PUT A CHOMP ON  
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# CLEAN SWEEP

**ELGIN SWEEPS THE  
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The Elgin Pelican now cleans city streets using a John Deere Final Tier 4/Stage IV engine.

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To learn more about John Deere engines and drivetrain components, visit [www.JohnDeere.com/jdpower](http://www.JohnDeere.com/jdpower).







The new Zinex TR-LS5 features a high-torque PowerTech Plus 6.8L engine and Funk Series 28000 double pump drive.

The Zinex A5 is a deep-hole surface drill used for hard-rock exploration of minerals, such as diamond, gold, silver, zinc, and copper.



# STRIKE GOLD!

## Modern-day '49ers go exploring for minerals with Zinex Mining diamond drills

Since the great Gold Rush and Klondike mining eras of mid-1800s, gemstones and precious metals have lured prospectors to journey to some of the harshest, most remote places of North America and other parts of the world in hopes of striking it rich.

This spirit still holds true today. In Alaska alone, mining opportunities are as vast as the Last Frontier. According to the Alaska Miners Association, in 2014, an estimated \$67 million was spent on exploring for gold, silver, copper, zinc, lead, and coal.

The staff members at Zinex Mining understand the passion. They leveraged their past experiences and expertise in mining and began designing and fabricating diamond-bit core drills so that others could continue their quest. Along the way, the company struck gold. "The first drill took nine months to build, and then we built four drills in four months," recalls Matt Conley, fabricator for

The John Deere powertrain supplies ample power to all of the drill's hydraulic functions, including the drill head, rubber tracks, and leveling cylinders.



Zinex. "Before long, business exploded for us. We were working night and day the first year to get product out there."

Today, the track-mounted diamond drills are sold through Zinex Mining's headquarters in Whistler, British Columbia, Canada. "If a client buys a Zinex drill, they have the confidence in knowing it will perform well because it was designed by a driller," says Conley.

Zinex diamond drills are used for the hard-rock exploration of minerals, such as diamond, gold, silver, zinc, and copper. "The drills can be used to sample for any minerals in bedrock or hard compact ground. There are many minerals in hard rock that people will mine," explains Conley. The drills take core samples several thousand feet deep. These samples are then examined by geologists for mineral percentages and stratigraphic contact points, giving exploration companies the information necessary to begin or abandon mining operations in a particular area.




Zinex Mining manufactures three models of diamond drills — all powered by John Deere diesel engines. The models include the A5, a deep-hole surface drill. With over 400 A5 drills working in over 30 countries around the globe, it has become the company's biggest seller. The popularity of the A5 stems from its modular build that makes it possible to be broken down into several smaller modules, called "picks," that can be hauled into remote regions via helicopter. A compact, power-dense PowerTech™ 4.5L engine drives the drill. Zinex also manufactures an underground version of the same machine, called the U5, which can drill at angles of up to 180 degrees, offering a wide variety of drilling angles and reach.

Zinex Corporation also recently began production of the TR-LS5 for diamond and geotechnical drilling. The new drill is powered by a complete John Deere powertrain, including a PowerTech Plus 6.8L Tier 3/Stage III A engine and a Funk Series 28000 double pump drive. The John Deere powertrain supplies ample power to all of the drill's hydraulic functions, including the drill head and a set of wide, high-clearance MST-2200VD Morooka rubber tracks for traversing muddy and marshy conditions.

Zinex is also in the developing stage of a deep-hole drill that will encompass a variety of safety features, including an operator enclosure with heat and lights and a mechanical rod-handling system that removes any physical risk of loading and stacking rods by hand. The drill will feature a complete John Deere powertrain, including a PowerTech Plus 6.8L engine, Funk Series 28000 double pump drive, and a Funk HMD 4-speed transmission.

Zinex sources the John Deere engines and Funk products from Frontier Power Products in Delta, British Columbia. The John Deere engine and Funk distributor develops a complete, drop-in-ready power unit. Conley says Frontier Power packages a consistent product equipped with the same componentry time after time, which is important to Zinex to maintain that same consistency in the drills. "Once we develop a drill, every single one is the same and parts are interchangeable. You can take an engine off our drill and bolt a new engine right on."

And if a repair is needed, the engines are easy and simple to fix, he says, although the durability of the John Deere engines makes that a rare occasion. "We've used John Deere since 2007 and we've had no complaints at all."

 **Distributor: Frontier Power Products, Delta, British Columbia, Edmonton and Calgary, Alberta;**  
[www.frontierpower.com](http://www.frontierpower.com)



A PowerTech 6.8L engine powers a pump at a placer goldmine.

## A STAR IS BORN

If reality television is a form of measurement, interest in gold mining is alive and well. "Gold Rush" pulls in over 6 million viewers each week, making it the Discovery Channel's top-rated show in America.

Now in its sixth season, "Gold Rush" follows the day-to-day lives of six miners in their search for gold in the wilds of Alaska and Yukon, Canada. Soon to join the cast is a SD-600 screen deck, another product of Matt Conley's, which he manufactures at his own company, Macon Industries, located on Vancouver Island, British Columbia.

One of the show's main characters recently took delivery of the machine this past spring and will use it to mine for gold placer deposits in the Dawson City area in the Yukon Territory of Canada.

Macon Industries builds four different placer gold-mining plants designed to

accommodate the different styles of mining. In addition to the SD-600, the company builds two land-based trommels, the T-400 and T-600. The trommels process gold-bearing material by separating out the larger rocks and boulders, allowing the smaller material containing gold to run through a sluice. These large machines wash material at a rate of up to 229 cubic meters (300 cubic yards) per hour.

Macon Industries also builds a Super Sluice-800 designed specifically for handling boulders and coarse rock without having to previously screen it. The system washes material at a rate of 137 cubic meters (179 cubic yards) per hour.

All four placer gold mining plants are powered by generator sets driven by PowerTech 4.5L engines. Because the plants make use of high volumes of water, Conley also packages and sells water pumps powered by PowerTech 6.8L diesel engines.

This 57-gram (2 ounce) nugget was recovered at a placer mine in Atlin, British Columbia.



A Macon T-600 processes gold-bearing material by separating out the larger rocks and boulders, allowing the smaller material containing gold to run through a sluice.

