

THE

LESLIE LEDGER

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The 724J loads push beams, or mining conveyor sections, onto the highwall mining machine, shown below.

Deere's 724J: Going strong at

Welcome to the world of highwall coal mining, where success or failure is measured in high dollars per hour. Your \$6-million mining machine can pull coal — black gold — out of a mountain at 2,700 tons per day. So when you're choosing a wheel loader to support

the big miner, that loader had better be the most reliable, hard-working one out there.

That explains why Contour Highwall Mining Inc., bought a John Deere 724J Loader to work behind its highwall coal miner here in the Appalachian Mountains southeast of Charleston, West Virginia. Contour uses the 724J to add or remove the 20-foot-long, 10,000-pound, "push-beams" that join end-to-end and extend under a mountain into the coal seam. Twin augers line up continuously inside the push-beams to bring coal from the cutter head to daylight, unaided by manual labor.

Contour's 724J Loader sets the bar high for reliability and uptime. In fact, by February the machine had chalked up 17,400 hours with only a couple of minor problems since the company bought it in 2003.

"That loader might be a \$200,000 piece of equipment, but if it's not running, our \$6-million miner is shut down, too," says Dave Bundy, an owner of Contour, which is based in Summersville, West Virginia. "I'm depending on that loader to keep our operation moving."

The highwall miner pushes 20-foot-long, 10,000-pound

12% more tons per hour

A recent side-by-side production study showed the 724J stockpiled 12-percent more tons per hour than a leading competitor. It also loaded more than 5-percent more tons per hour in a truck-loading application. Pretty impressive numbers if moving more tons per hour is important to your operation's profitability.

Run the numbers and you'll run with Deere.



"It's unheard of to have a loader last this long without touching the engine's top end," says Bundy. "It's like having a car that lasts 300,000 miles." Last year, he says operating the loader cost Contour just four cents per ton of coal produced, not counting fuel. Repairs totaled one injector pump and one fan motor.

push-beam auger sections after the miner extracts them from the mountain. Typically each push under the mountain extends for 800 to 1,000 feet before the mining machine pulls them back out again.

To get 17,400 hours from the loader has required a diligent preventive maintenance program.

Engine oil is changed at 250-hour intervals, and the machine is greased once

per shift. "We check the air pressures every few days, and inspect the pins and bushings," says Bundy. "We have some coal dust, so we have to blow out the cab's air filters every couple of days."

In response to an ever-increasing demand for coal, Bundy added a second highwall mining machine in May. He also purchased a new 724J Loader to support it. "The John Deere loader has earned our respect," says Bundy.

Explaining highwall mining

Highwall mining means drilling and blasting a 70- to 100-foot-or-more-deep bench of overburden to expose a horizontal coal seam around the side of a mountain. Earthmoving equipment then removes the overburden and carves the bench that gives mining equipment access to the coal seam. For obvious reasons, the vertical rock face is called the highwall.

The process starts when the John Deere 724J Loader delivers a push-beam section to a table on the highwall miner. Next, lift arms on the miner grab the push-beam and set it into the miner's belly,

behind the last beam. A worker locks it into place, and huge twin hydraulic rams push the continuous line of beams steadily into the coal seam as the cutter head mines deeper into the mountain.

When we visited the mine, miner operator Tim Conner was pushing the cutter ahead in 14-inch increments. It took the miner about 10 minutes to push ahead 20 feet, when another section of push-beam would be added. At the heading, deep under the mountain, the cutter module mined a cross-sectional face 9.5-feet wide by 51-inches high. Mined coal fell into the twin augers contained in the push-beams and was carried back to the miner, which lifts the coal to a stockpile. ■

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— Dave Bundy, co-owner, Contour

17,400 hours

"The loader's operating cost is right where it should be," says Bundy. "And now that it has that many hours on it, the cost is probably lower than normal, because we've had virtually no breakdowns on it, and next-to-no oil consumption between changes."

Both Bundy and loader operator Greg Arthur like the way the 724J handles when carrying the big push-beam sections. "We've had a Cat 950G Loader, and this John Deere is a little heavier than the Cat and handles the beams better," says Bundy.

"The loader is very stable when carrying the push-beam sections," adds Arthur.

Long-life tires

The 724J is still running on three of its original four tires, and have a lot of wear left. L-5 tires have treads that are 2.5-times deeper than standard L-3 tires and use a harder, more tear-resistant rubber compound.

"Those tires have worn like iron," says Bundy. He notes that while the mining application is mostly a load-and-carry operation, the loader also works in a traction role — to clean rocks from the

