John Slaven of MineSense on Turning Every Shovel into a Data Engine

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At PDAC 2026 in Toronto, InvestorNews host Tracy Hughes sat down with John Slaven, CEO of MineSense Technologies Ltd., to discuss a technology that is quietly reshaping how value is extracted from existing mines—one shovel at a time.

In an industry long defined by averages, estimates, and delayed feedback loops, MineSense is introducing something far more immediate: real-time ore intelligence at the point of extraction.

“Our sensors are mounted directly onto large mining shovels,” Slaven explained. “As material is loaded onto haul trucks, we measure the copper grade instantly. That allows operators to decide—right then—whether that material goes to the mill as ore or to the waste pile.”

The implications are profound. In a sector where discovering and permitting new deposits is increasingly difficult, MineSense is focused on maximizing what already exists. By identifying ore and waste in real time, mining companies can significantly increase recovery rates without expanding their footprint.

“Finding new deposits is hard,” Slaven said. “But if you can extract more value from the ore you’re already mining, the benefit is immediate—and substantial.”

That value proposition is resonating. MineSense is now deployed at approximately 16 mine sites globally, working with many of the world’s largest mining companies. The company has achieved

roughly 30% revenue growth in recent years, a reflection of growing industry adoption.

But the technology is not limited to major operators. “We can scale down to a single shovel,” Slaven noted. “Even smaller operations can benefit—whether it’s a shovel or a front-end loader managing material.”

The business model is equally pragmatic: MineSense sells the hardware—its ruggedized sensors—and generates recurring revenue through data services and ongoing support. In an environment where equipment faces constant impact from heavy rock, durability is critical, and continuous maintenance ensures reliability.

Looking ahead, copper remains the company’s primary focus, particularly in open-pit operations. But expansion is already underway. “Nickel is a natural next step, and we’re also looking at bulk materials like iron ore,” Slaven said. “We’re investing heavily in R&D to ensure we can achieve the level of precision required across different commodities.”

Perhaps the most compelling insight emerging from MineSense’s technology is not just operational—but geological.

“What’s fascinating is the variability within an ore body,” Slaven said. “Traditionally, we rely on drill holes spaced tens of meters apart and build models from that. But now we’re seeing granular, real-time data that reveals just how much variability actually exists.”

That shift—from estimation to measurement—has the potential to influence not only day-to-day operations, but also long-term mine planning, resource modeling, and downstream processing.

For Hughes, the takeaway was clear: “Bringing new meaning to

data mining,” she remarked. In an era where critical mineral supply is under pressure and efficiency is paramount, MineSense’s approach represents a quiet but powerful evolution—transforming every shovel into a decision-making tool, and every load into an opportunity to unlock more value.

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