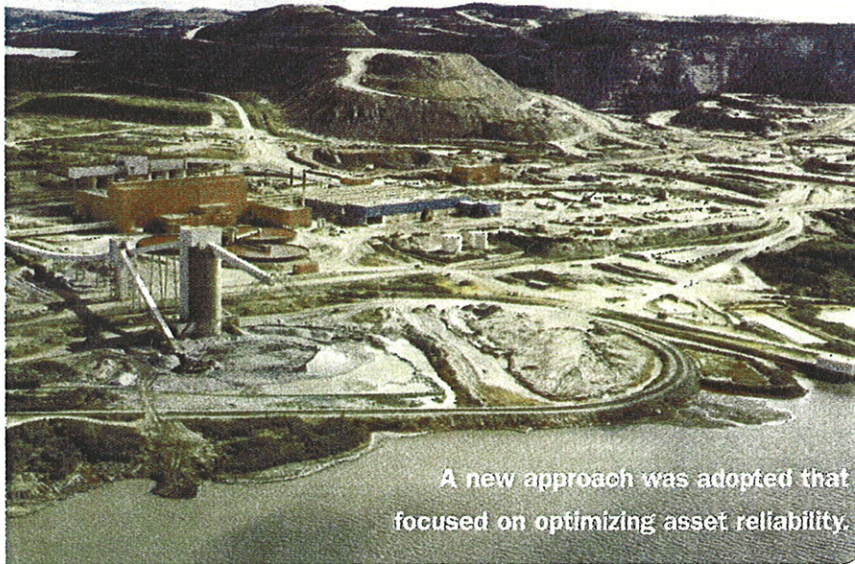


# Québec Cartier Mining reduces maintenance shop costs

**QUÉBEC CARTIER MINING COMPANY** (QCM) is one of the leading producers of iron ore products in North America. The company operates an open pit mine and a crusher/concentrator facility capable of producing 18 million metric tons of iron ore concentrates annually at Mont-Wright in northern



A new approach was adopted that focused on optimizing asset reliability.

PHOTO: QCM

Québec. The company also operates a pellet plant with an annual production capacity of some nine million metric tons of iron ore pellets at Port-Cartier, Québec, on the north shore of the Gulf of St. Lawrence.

To meet its operating challenges, QCM has reduced costs over several years, becoming a lean organization. By the late 1990's, however, it was apparent that additional measures were required. Already pared down, the only option was to find a way to accomplish more with the same manpower and the same or less equipment.

To help QCM do more with less and drive increased profit without added costs was to partner with Ivara Corp. to improve the reliability of mining assets. Ivara's reliability strategy has enabled QCM to implement proactive, condition-based maintenance and optimize asset reliability and business results.

With a reliability strategy, QCM focused on improving the maintenance business process, ensuring that the things people do each day include the right work on the right equipment. For example, QCM developed effective work identification methods. QCM also installed Ivara EXP reliability software to support maintenance best practices.

As part of the initiative, QCM established a technology transfer group (TTG), whose responsibility was to provide transitional direction to QCM business units. The TTG members learned about the latest reliability practices from Ivara practitioners. With input from Ivara, the TTG established QCM's reliability business process and applied best practices, moving QCM toward its goal of achieving "world-class" maintenance performance.

QCM quickly realized reliability improvements in its maintenance shop. With the old way of thinking, equipment (i.e. trucks, tractors, loaders and other mobile assets) was taken out of service for repairs when it broke down or at a specified number of running hours. This necessitated either the availability of replacement equipment (hence a larger fleet) or a production halt.

Repairs had been performed according to the availability of parts and personnel, further extending downtime. A new approach was adopted that focused on optimizing asset reliability. This required closer attention be paid to the health of the equipment, not just its hours of service. The TTG placed particular emphasis on establishing key performance indicators (KPIs) that allowed improvements to be measured and tracked, and which would also identify areas for further improvement.

In 2004, the maintenance shop contributed towards an excess of \$7 million to the QCM bottom line. This involved a combination of increased product throughput, deferred and reduced capital expenditures and lower material carrying costs as a result of reductions in spare parts inventory. Manpower efficiency was up by 5.1 percent and spare parts inventory values were projected to be down by nearly \$10 million by the end of 2004.

Asset reliability also continues to make a significant contribution to QCM employees' well being. With the transition to proactive maintenance, major safety incidences are down by 74.7 percent since 2001. This has resulted in an additional \$1.1 million in savings.

"Implementing Ivara EXP has moved QCM from a reactive, repair-based environment to a proactive reliability-driven maintenance culture," says QCM spokesperson Denis Moreau. "By partnering with Ivara, focusing on asset reliability and implementing a business process for maintenance, QCM has not only seen a financial impact on the bottom line, but our employees' safety and quality of life have greatly improved." **PEM**

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