

# Boosting nickel recovery for Vale's Clarabelle Mill in Sudbury

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Construction is under way on Vale's Challenging Ore Recovery (CORE) project. The CORE project is a brownfield integration within the Clarabelle Mill in Sudbury, Ontario, Canada, which also includes a greenfield development of a new flotation building. The brownfield work is being executed without interrupting plant operations and includes demolition of existing equipment, which is being replaced by a new 2,000-hp IsaMill – an energy-efficient, high-intensity, large-scale grinding mill for mineral ores. A new 69-kV substation and banks of flotation cells are also included in the assignment.

The greenfield work includes a new flotation building, which houses the 100 m<sup>3</sup> flotation cells, flotation columns, blowers, compressors and slurry pumps. The new flotation circuit will improve nickel recovery from the existing ore while improving operations and enabling control of concentrate grades to the smelter.

The CORE project is fast-tracked and the construction strategy was built around tying in to the existing plant during the 2011 and 2012 planned maintenance shutdowns.

Hatch completed the conceptual and feasibility studies for the project and is now providing full EPCM services. Construction began in October 2010 and will be complete by April 2013. When the new facility is tied into Clarabelle in 2013, Vale will achieve a 4% increase in extraction of metals such as nickel, copper and palladium from its flotation systems. The ore will be shipped to Vale's Copper Cliff site for smelting.

The project has progressed quickly with no interruptions to the Clarabelle Mill operations. In fact, the entire schedule has been planned so that Clarabelle Mill can continue operating at full production around the clock during all construction and commissioning activities. This objective demands exceptional co-ordination efficiencies, especially considering that, at its peak, the on-site team will include 20 Hatch staff and 200 contract trades.

The CORE project is part of a \$3.4 billion program of upgrading and environmental projects in the Sudbury area. The investment will help to modernise operations and contribute to Vale's competitiveness and sustainability for many years.