



Mixing Strength With Satisfaction

## XSTRATA NICKEL, THAYER LINDSLEY MINE, SUDBURY, ON

### AF-D ARMOUR GUARD

<b>PROJECT:</b>	1490 Ore Pass Rehabilitation Xstrata Nickel, Thayer Lindsley Mine Sudbury, ON
<b>SPECIFIER / CONTRACTOR:</b>	Xstrata Nickel Sudbury, ON
<b>PRODUCT:</b>	AF-D Armour Guard
<b>QUANTITY:</b>	150 m <sup>3</sup> (5300 ft <sup>3</sup> )
<b>COMPLETION:</b>	Winter 2001

Xstrata Nickel's Thayer Lindsley Mine is located in Valley East (approximately three kilometres east of INCO's Frood-Stobie Complex, just north of downtown Sudbury). Approximately 1200 metric tonnes of ore and 215 tonnes of waste are mined/removed each day. Current mining methods are mechanized cut and fill and blasthole stoping.

Early in 2001, Thayer Lindsley Mine began experiencing production delays as a result of ore pass wall sloughing and impact-related damage in and around the 1490 level grizzly. In several instances, ore pass conditions resulted in two to three days of man-shift delays. Mine personnel were concerned that the sloughing problems could escalate into a major delay that would result in significant economic loss to the mine. After evaluating the cost estimates to excavate an alternative ore pass, Xstrata Nickel engineers elected to rehabilitate the existing ore pass and prevent continued erosion of the pass. They specified AF-D Armour Guard as the ore pass liner. Xstrata Nickel engineers arrived at this decision after evaluating the performance of AF-D Armour Guard in similar applications at other mines throughout North America.

Through its specialty, high performance cement matrix, AF-D Armour Guard offers resistance to abrasion caused by rolling muck and the addition of steel fibres adds resistance to impact. The rehabilitation of the 1490 ore pass was completed in December 2001. In January 2002, the mine re-commissioned the ore pass.

In July 2002, a camera was lowered into the ore pass to verify the condition of the walls and the extent of liner material loss. At the time the camera survey was conducted, no cable bolt strands were exposed beyond the 100-150 mm (4-6 inches) layer of impact/abrasion-resistant shotcrete.

Since the rehab work was completed, sloughing of the ore pass has been eliminated in the vicinity of the grizzly and this has enabled the mine to return to normal production levels.

