



Mixing Strength With Satisfaction

COLEMAN-MCCREEDY EAST MINE, LEVACK, ON

AF-D ARMOUR GUARD

PROJECT:	4945 Level Ore Pass Bin Lining Coleman-McCreedy East Mine Levack, ON
OWNER:	Vale/Inco Sudbury, ON
CONTRACTOR:	SCR Mines Technology Val Caron, ON
PRODUCT:	AF-D Armour Guard
QUANTITY:	46 m ³ (60 yds ³)
COMPLETION:	September 2007

Vale/Inco's Coleman-McCreedy East Mine is located 55km Northwest of Sudbury, along the northern border of the geological formation known as the Sudbury Basin. Coleman-McCreedy East is the newest mine of the Sudbury group, but has proved to be one of the most lucrative.

With the expansion of the lower 153 Ore Body, the decision was made to drive a new raise connecting 4945 level and 5080 level for the purpose of an ore pass bin. A contract to complete the work was awarded to SCR Mines Technology in May 2007 with the bulk of the work scheduled for the summer shutdown in July, so as not to conflict with major production.

After meeting with KING representatives about the technical aspects and advantages of the AF-D Armour Guard product, project leaders and engineers arrived at the decision to line the 23 metre (75 ft) long ore pass with KING AF-D Armour Guard. The decision involved the evaluation of the material performance at other North American minesites, as well as overall cost comparisons with steel plate liners.

Vale/Inco engineers specified a layer of screen and bolts covered with 3-4 inches of KING MS-D3 Mining Shotcrete, followed by a layer of KING AF-D Armour Guard Shotcrete. All spraying of the material for the ore pass bin project was done with an Aliva 252.1 shotcrete machine.

The KING AF-D Armour Guard shotcrete contains specially formulated high performance cement, silica fume, steel fibres, and other components that provide superior impact and abrasion resistance. With 800-900 tonnes of rock and ore expected to pass through the ore pass every day, Vale/Inco engineers recognized the importance of these properties when specifying an ore pass liner. Future findings will be confirmed by camera surveys scheduled in the spring-summer of 2008.

