



Atlantic Industries Limited

PROJECT PROFILE



May 22, 2008

AIL designs strong, economical, green solution for heavy haul road

**Lighter, less expensive and more environmentally
friendly than other bridge structures**

VALUE ENGINEERING CASE STUDY

Built in response to an engineering challenge faced by Peter Kiewit Sons Co. Ltd., the Kemess Arch uses AIL's exclusive Super•Cor with Encased Concrete technology to provide a bridge solution that is lighter, less expensive and more environmentally friendly than other bridge structures.

Spanning 20 m without disturbing the waterway

In April of 1997, Royal Oak Mines required a bridge to sustain the loads of 390-ton mine trucks crossing the Kemess Creek at a new open-pit mine deep in the British Columbia mountains. The Ministry of Environment insisted that the construction of the bridge leave the stream bed undisturbed, calling for a clear span of over 20 metres.

Project at a glance:

Project Name: Kemess Creek Haul Road Crossing

Location: Kemess Creek, BC

Owner: Royal Oak Mines

Consultant: Peter Kiewit Sons Co. Ltd.

Sector: Mining & Energy

Application: Stream Crossing

Product: Super•Cor Structural Plate Bridges and Tunnels

Product: MSE Retaining Wall System (Wire Walls)



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30% savings over precast concrete arch

Instead of a precast concrete arch, Peter Kiewit opted for a Super•Cor Steel Arch with encased concrete reinforcement and welded wire-mesh MSE Retaining Walls, both from AIL. The resulting Super•Cor bridge was designed and built faster than a concrete bridge. It met both engineering and environmental requirements with ease, and saved 30% over a conventional concrete arch solution.

Installed in a fraction of the time

The arch was installed in two weeks, with three weeks required for the completion of the wire walls and backfilling. Sections were bolted together and lifted into position and 15 encased concrete ribs were poured in a single day. The structure was completed on schedule and in full compliance with strict environmental regulations.



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