



a clear direction for the future



case study

## Snap Lake Diamond Mine

Northwest Territories, Canada

### Overview

There are few places that match the beauty of Canada's Northwest Territories. The region also happens to be home to some of the most abundant diamond mines in the world. Protecting the rich wilderness while at the same time capitalizing on the world's sole source of guaranteed conflict-free diamonds is a delicate balance. For the Snap Lake Mine, De Beers' first mine outside Africa, meeting sound and emissions standards is a top priority. For that reason, the De Beers mine has earned ISO 14001 certification, and is subject to both external and self-imposed regulations.

When design and engineering of the mine was completed, construction started in 2005 with the winter road. Over the next two years, a process plant, water and sewer treatment plants, and a utilities building to power the site as well as an airstrip were constructed. Engines and generators at all of the facilities had to achieve high standards of attenuation, so the exhaust systems had to be fitted with exceptionally effective sound and emissions solutions.

### Challenge

While creating the ideal solution was not a problem for GT Exhaust, the greatest challenge was the tight time frame in which the project needed to be completed and delivered on-site. The road to the mine is made up primarily of ice, so it is only passable for six to eight weeks a year, during the coldest days of winter. As a result, GT Exhaust had to engineer and manufacture all of the products very quickly. There was essentially only one chance to deliver the entire solution efficiently and effectively, as any errors or mishaps would mean waiting an entire year before having another opportunity to ship the products.

### Solution

GT Exhaust provided carbon steel components, spool pieces, elbows, bellows, wyes, nut and bolt gasket kits and thermal wrap for the project. Everything was shipped to Alberta in time, so that it could be loaded onto trucks and taken up the winter road to the Snap Lake Mine. In a small claim to fame, the products were even featured on an episode of the History Channel's Ice Road Truckers.

De Beers' Snap Lake Mine produces 1.4 million carats of diamonds annually, while continuing to meet the critical regulations that have allowed the mine to thrive and preserve the precious environment simultaneously.

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