

## Case History – BNE Iron Guard Installation - GoldCorp

Goldcorp is one of the Canada's largest gold producers, with 10 mines they employ more than 14,000 people worldwide. Their Porcupine Mine in Timmins, ON has over 100 years of continuous mine and mill operations and has produced more than 66 million ounces of gold since production began.

The floor in their Vehicle Maintenance Shop was heavily pitted because of the enormous amount of heavy wear and abuse it sees. In this area they maintain mining equipment and their fleet of trucks that can weigh more than 225,000 lbs. Their mechanics were having difficulty rolling their toolboxes over the uneven surface safely and using their roller carts to get under the vehicles and equipment. Several times the concrete was removed and replaced and a metallic shake hardener was tried without success. These options were very expensive and required extensive downtime for the concrete & toppings to cure enough for heavy use.



GoldCorp General Foreman, Ray McIver was impressed by ICO Contractor BNE's credentials and prior work history in similarly tough environments. Because of the conditions Chris Henderson of BNE recommended Iron Guard, a three part, steel reinforced epoxy system intended for unusually severe wear applications, applied at a 1/2" thickness. With its non-rusting, proprietary steel fill, it has tremendous abrasion and impact resistance. Iron Guard also had the fastest turnaround time of all the alternatives. Applied in a single pass it cures hard for truck traffic in 28 hours at 70F, greatly reducing GoldCorp's downtimes. In addition it is a seamless system that can withstand the penetration of oils, salts, and liquids.

The 12,000 sq/ft area was divided into two 6,000 sq/ft sections so GoldCorp could continue their maintenance operations during installation. BNE ground the rough areas to remove loose, old concrete and toppings. Then they shotblast the area to remove oil and containments and provide a good profile for the epoxy to bond. All drains and entrances to the shop were keyed approximately a 1/2". After the floor was prepped the area was primed with deep penetrating ICO Primer LV at 200 sq/ft per gallon and silica sand was broadcast into the primer to provide a good bite while power troweling. The Primer LV was allowed to cure overnight and the Iron Guard was power troweled in 6-7 hours for a single lift at a 1/2" nominal thickness. Each section took three days to prep, prime, power trowel, and install safety lines. They client was able to return the floor to service 24 hours after installation.

Despite being somewhat skeptical as they had used other repair products in the past, GoldCorp is very impressed with their new floor. It has been performing exceptionally well and has not shown the early signs of wear as the other products had.

