

# Good fortune for New Talisman as mine revival edges closer

Photo: Keith Griffin

The gold and silver Talisman Project lies near the town of Paeroa, about 90 minutes' drive southeast of Auckland. The original mine was first worked from 1875 to the early 1920s, then intermittently to about 1992, and in that time produced about 1Moz of gold at a grade of 28g/t.

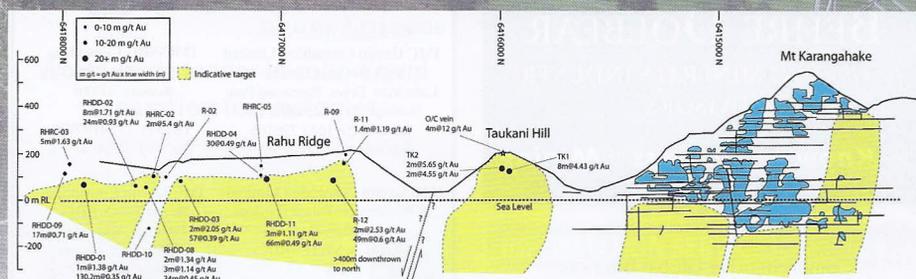
The company, New Talisman Gold Mines Ltd, with new chairman Robert Pearce and new executive director Paul Griffin, is reviving the old mine into a modern underground gold-silver project and focused on restarting mining in 2014. A recently completed scoping study with a 50,000oz/y scenario showed a cash cost of about US\$630/oz and total attributable cost of about US\$1,000/oz of gold are indicated.

The Talisman Project has a granted mining licence and project development work required for approval and consents from the New Zealand authorities is now under way. A high regard for environmental, community and scenic values underpins the company's work.

The Talisman Resource is estimated at 204,000oz of gold (JORC inferred, indicated and measured) with a conceptual geological potential an order of magnitude greater. The Rahu exploration discovery at depth to the north is the anticipated future of the Talisman mine.

## The scale of the underground operation

The new mine will be an underground operation, to be worked on a small scale with ore mining rates of around 150,000t/y. Tunnel sizes will be 3m x 3m with small loaders and trucks to suit. The development tunnels will



be located wherever possible on the many vertical gold-bearing reefs in the mine, minimising the non-payable development. Cemented backfill will be integral to the mining method, and will also be used to

restore haulage access where the ore is mined. Developments in engine technology of the small underground equipment now allows renewable and biodegradable 100% biofuel to be used, bringing benefits of lower fire hazard, lower exhaust toxicity, and zero carbon emissions.

Underground monorail haulage, compatible with the small truck haulage, is an option being considered. The electric-powered train has productivity matched to the mine output, and it can provide economic vertical haulage capacity using a rack-and-pinion drive.

Talisman will use modern processing methods. The ore will be concentrated to a gold- and silver-rich sand (a third of the tonnage) to be transported elsewhere for sale or further toll-based processing. The remaining

two-thirds of non-valuable residue will be delivered using concrete pumps back underground as cemented backfill. This approach avoids cyanide-based processing and, apart from perceived environment benefits, it saves the capital and operating costs of fine grinding and attendant tailings storage.

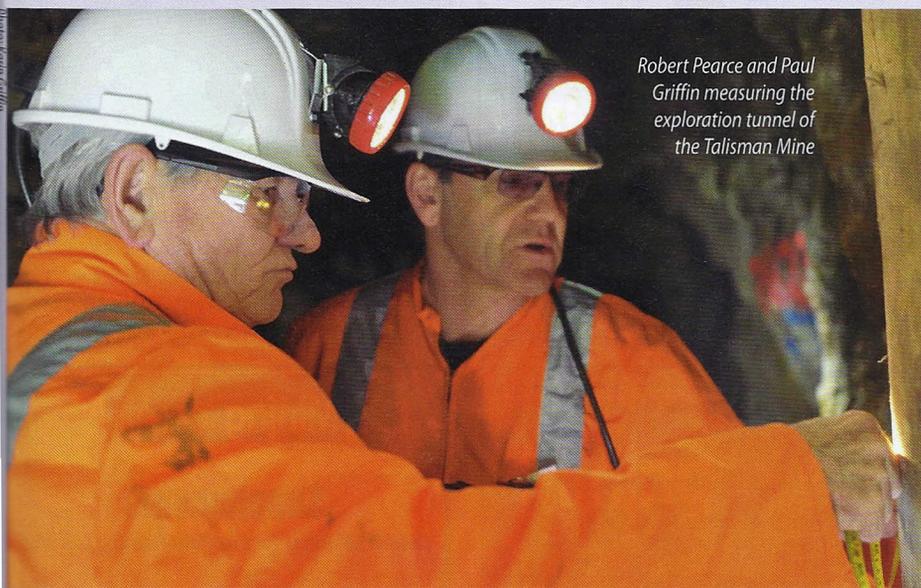
The processing plant will be a secure facility because of the high grade being processed, with throughput of 20t hourly, and based on modules housed in a single-storey shed. The company is evaluating techniques such as ore sorting with colour or X-ray sensors, gravity separation and flotation. These processing options are possible because of the low tonnage and high grade being planned.

The Talisman Project is blessed with very good infrastructure. State Highway 2, just a few kilometres from the mine, leads to the major container terminal at Port Tauranga, only 80km away. Power lines pass nearby, and 100% renewable electricity from hydroelectric and geothermal sources can power the mine.

Within 15km are two substantial and attractive towns – the mining town of Waihi (home to the 8Moz Martha mine), and the farming service town of Paeroa. The international mining skills shortage will have small influence because highly skilled and well educated people are available and living locally or working in mines overseas and looking to come back to New Zealand.

**“The Talisman Project is blessed with very good infrastructure”**

Robert Pearce and Paul Griffin measuring the exploration tunnel of the Talisman Mine



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**NEW TALISMAN GOLD**