

# TERRANE

M E T A L S C O R P .

## **Reversal of Fortunes: The Time is Prime for Mt. Milligan** *By Julie Domville*

Today's much improved commodity market means many deposits that languished during the doldrums of the 1990s are being dusted off and the economics reworked. Some of these will become mines. Others will never meet the mark because there are too many mitigating factors working against them, be it environmental permitting issues, land claims, access or pure economics. Of these two groups, Mt. Milligan falls into the former. This massive copper-gold deposit in north central British Columbia has all its ducks in order and is marching towards production. And piping the tune is Terrane Metals Corp., an exploration and development company with an exceptional technical and management team.

### **The Early Days**

The tale of Mt. Milligan dates back to pre-World War II when prospector George Small found a gold-bearing float on the western side of Mount Milligan. His investigations to find the source of the float were interrupted by the war. He tried again in 1945 but was unsuccessful in his quest.

Twenty-seven years passed before another company, Pechiney Development Ltd. took a look at Mt. Milligan. They did some induced polarization work, geochemistry and drilled five holes, but they too were defeated in their quest to find the mother lode and allowed their claims to lapse. The property sat dormant until 1983 when Selection Trust Inc. (Selco) arrived and began a program of extensive geochemical work which identified significant copper-gold mineralization in what is now known as the Main deposit. Selco amalgamated with British Petroleum Resources Canada (BP Resources) in 1984. That same year Fort St. James prospector Richard Haslinger, staked claims on adjacent ground, which BP then optioned and launched a program that included extensive geological, geochemical, lithochemical, magnetic, induced polarization and trenching work. The program continued until 1986, when Lincoln Resources Inc. optioned the property. Lincoln later reorganized to become United Lincoln Resources Inc., and then amalgamated with Continental Gold Corp. in 1989. Additional work by United Lincoln and Continental Gold Corp led to the discovery of Southern Star deposit later that same year. This work also identified low-grade porphyry gold and copper-gold mineralization in Goldmark and North Slope zones.

## **Two Giants, One Property**

When a piece of ground is showing as much promise as was Mt. Milligan, the word gets out and in this case, the word reached the offices of two of Canada's oldest and most respected mining companies, Placer Dome Inc. and Noranda Inc.

In 1989, Noranda's exploration group met with Hunter Dickinson Inc, the mine development company conducting the work on Mt. Milligan, and initiated a data transfer. Noranda, a conservative company by nature, realized the up side potential in the deposit and, following a positive financial analysis, made an offer to Continental Gold.

Meanwhile, Placer Dome, also a very conservative company, had deep roots in B.C. and did not want to lose out on the opportunity to own the province's newest, most exciting deposit. Placer successfully topped Noranda's offer and purchased Mt. Milligan in 1990 for US\$ 230 million.

Placer promptly launched an aggressive exploration program. By 1991, the pre-feasibility study was completed and two years later the Mine Development Certificate was granted. Unfortunately, a number of overwhelming negative factors impacted the deposit and the decision was made to not put it into production.

The factors that influenced this decision were undeniably sound ones: gold and copper prices had dropped off dramatically which seriously affected the economics of the project. British Columbia was considered to be unreceptive to mineral exploration and mine development opportunities; an internal management change directed the company away from base metals to focus primarily on gold projects.

Between 1992 and 1998, Placer Dome continued to work on Mt. Milligan in an effort to improve the economics of the project. When the prices really flattened out between 1998-2003, the project was allowed to go dormant. Selling Mt. Milligan at a time when commodity prices were low was not considered nor did it fit with company policy to continue pouring money into a low-grade deposit.

In 2003, in an ironic twist of fate, the factors that previously were stacked against the economics of Mt. Milligan were reversed. Copper and gold prices began to recover and there was a favourable change toward mineral exploration and mining in terms of being a principal driver of the provincial economy. Mt. Milligan, being a very large, long-life resource in a safe jurisdiction, now had everything going for it.



Selling the property to a junior company while retaining a stake in it was briefly considered. In 2003 Placer decided it was more strategic to develop the project themselves and so took another more focused and innovative look at their mothballed deposit. In 2004, metallurgical testwork was re-started; a 3D geological model was re-defined; the pre-feasibility study was initiated; discussions with First Nations and local communities were reactivated, and discussions began with the government regarding re-permitting. In other words, it was all systems go until that fateful day in October 2005 when Barrick Gold made their hostile takeover bid for Placer Dome.

By January 2006, after the dust settled on the takeover, Placer had accepted Barrick's take over price of US\$10.4 billion. Placer's Canadian assets, including Mt. Milligan, were sold to Goldcorp Canada Ltd. for US\$1.48 billion. Goldcorp, being a gold producer, now had properties that did not fit its corporate strategy. The mining community was quick to leap to the conclusion that those properties would soon become available.

In anticipation of this outcome, in early 2006, a group of mining entrepreneurs, who just happened to be former Placer Dome geologists whose positions were terminated in the takeover, formed Terrane Metals Corp. Terrane, loaded as it was with experienced geologists and with the benefit of sage financial advisors, was able to pick up four quality properties – Mt. Milligan (gold and copper), Berg (copper and molybdenum), Maze Lake (gold) and Howard's Pass (zinc and lead) -for C\$120 million.

### **The Terrane Technical Team**

The fact that Mt. Milligan is now in the hands of top notch geologists who have an intimate knowledge of this deposit inside and out is another ironic twist in the tale of Mt. Milligan. It was just one of those golden moments - a group of very talented people happened to all be available at the same time that a group of very good properties became available. This almost symphonic alignment of factors is one of the most compelling aspects of tale of Mt. Milligan.

One of the initial instigators of Terrane Metals is President and CEO, **Rob Pease**, P.Geo, FGAC, formerly Placer Dome's General Manager, Canada, Exploration and Global Major Projects. He worked for Placer for 24 years and was responsible for managing all aspects of Placer's Canadian exploration, overseeing the geological aspects of advanced stage, major exploration and development projects worldwide. Mt. Milligan was one of Rob's projects. Directors **Doug Leishman**, P. Geo, FGAC, A.R.S.M. and **Jeff Franzen**, P.Eng, worked closely with Rob to form the new company. Doug is a geological consultant who formerly was Director of Geology and Exploration for Endeavour Financial Ltd. and who also has a history with Mt. Milligan. Jeff played a key role in assessing the deposit while with Continental Minerals, and brings to Terrane the benefit of his 30 years experience in mineral exploration, mine development and operations.

The rest of the Terrane's technical team is made up of seasoned, professionals who, for the most part, have all been involved at one time or another, with Mt. Milligan and who all share a sense of unfinished business. Vice President, Project Development, **Peter Marshall**, P.Eng, spent 19 years with Placer Dome and jumped at the chance to join forces with former colleagues who were of like mind in regards to the value of Mt. Milligan. Likewise is the case of Vice President Exploration, **Darren O'Brien**, P.Geo, and formerly Placer Dome's Senior Geologist. Terrane's Mt. Milligan Chief Geologist **Darin Labrenz**, BSc Geology also has a history with Placer Dome having spent 13 years with the company. **Dan Niosi** was the Senior Mining Analyst, Noranda Business Development Group when that company was in discussion with Continental Gold regarding the purchase of Mt. Milligan. He came out of retirement (for the second time) to join the team as Senior Advisor, Mining. The most recent addition to the Terrane Team is a resident of the region, **Glen W. Wonders**, RPF – MBA, VP of Corporate Relations and Sustainability, who brings many years of local knowledge, First Nations and Community Relations experience to Terrane's expertise.

**Keith Ferguson**, MASC, Environmental Engineering and **President, Ferguson Sustainability Engineering**, is coordinating environmental and geotechnical aspects of Mt. Milligan's Feasibility Study and Environmental Impact Assessment. Keith is very familiar with this aspect of the project as he was formerly the Vice President, Safety and Sustainability for Placer Dome, and coordinated environmental work for a pre-feasibility study of Mt. Milligan in the mid-1990s.

Terrane receives financial advice and capital market expertise from **Endeavour Financial** and **Featherstone Capital**, respectively. **Doug Forster**, one of the principals of Featherstone, was formerly the Vice President of Project Development and Director of Continental Gold when that company acquired Mt. Milligan.

Goldcorp retained a 70% interest in Terrane but is not involved with the management of the company. This means that Terrane has the deep pockets and savvy experience of Goldcorp behind it, an invaluable asset when the time arrives to raise the capital required to construct the mine.

The timing of the rebirth of Mt. Milligan could not be better as metal prices are in a very strong cycle that differs remarkably from previous cycles. Copper and gold are simultaneously at 20 year highs instead of the usual pattern of one being high while the other is low. In 1988, when Continental Gold was preparing the pre-feasibility study, copper's average price for the past twenty years was \$US1/lb and gold, at the time, was \$US400/oz. By the time Mt. Milligan was at the production stage decision, copper had dropped to \$US.60/lb and gold was down to \$US270/oz. Now copper is \$US2.50/lb (and has been as high as \$4.00/lb) and gold is well over \$US600/oz. The robust prices are driven and supported by the enormous appetites of China, India and other emerging countries as they each undergo industrialization.

## **The Deposit**

One of the benefits of acquiring a property that has been held and worked by a major for a number of years is the vast wealth of information that is gathered. When Terrane acquired Mt. Milligan they were the beneficiaries of a massive \$50 million data base. Of course in this situation, the new owners, being the ones who compiled the data, knew what their first steps would be soon as the ink dried on the agreement with Goldcorp.

Terrane's first move was to initiate a multi-rig diamond drilling program to collect bulk samples for metallurgical test work. The Phase I drilling program, a 32 hole, 8,200 m large diameter core drilling program, was designed to provide representative bench and pilot plant test work samples over a range of gold and copper grades to optimize flow sheet and process design criteria. Several of the holes in Phase I intersected significant thicknesses of laterally continuous gold-copper mineralization that are outside the historic resource limits. Phase II involved another 8200 m of core drilling in 22 holes designed to upgrade Inferred resources into Measured and Indicated categories. To date, a total of 204,020 m of diamond drilling from 955 holes has defined a large gold-copper resource.

The drilling programs were in support of a Feasibility Study which will be completed in the fourth quarter of 2007. A key component of the Study will be the completion of a revised and independent National Instrument 43-101- compliant resource estimate which will consider a number of open pit development scenarios.

The Mt. Milligan Feasibility Study is being conducted by Wardrop Engineering Inc., an internationally recognized consulting engineering group. Terrane has also appointed a group of technical and engineering specialists in ore reserve estimation and mine design, environmental and socioeconomic studies, mineral processing and metallurgy, geotechnical, infrastructure and capital and operating cost estimation.

With using the very conservative prices of \$US450/oz gold and \$US1.25/lb copper in late 2005, Placer Dome reported that the Mt. Milligan deposit hosts a measured and indicated resource totaling 206 million tonnes grading 0.6 gram per tonne gold and 0.247% copper containing 3.78 million ounces of gold and 1.12 billion pounds of copper. Those were very conservative figures given that gold is currently well over the \$US600/oz and copper is over \$US 2.00/lb.

Terrane recently entered into an option agreement to acquire a 100% interest in the Wildcat gold-copper property. This property is directly adjacent and contiguous to Mt. Milligan claims and is approximately 12 km southwest of the main Mt. Milligan deposit.

As far as the permitting process goes Placer conducted extensive work on preparing an Environmental Study in the early 1990's, and the project was granted a development certificate in 1993. That certificate expired in 2003, now Terrane is building on those previous studies, and updating to the standard and conditions of today. Once the studies have been completed, Terrane will submit a new Environmental Impact Assessment.

The company expects to have all the permits and certificates in place for development by late 2008. Once the Feasibility Study is complete, Endeavour will assist Terrane in arranging financing for the US\$650 m capital cost for construction; once the financing is secured, contracts will be awarded for construction of the mine site. Terrane expects the mine to be producing by early 2011.

### **The Mine and Mill**

The deposit is well suited to large-scale open pit development with a projected throughput rate of 60,000 tonnes per day. The expected life of the mine is 15 years and the capital cost is expected to be US \$650 m. Fortunately, the highest grade ore is near surface which means a “starter pit” will be mined first thereby allowing Terrane to pay back the capital cost of construction as quickly as possible.

There have been some adjustments to the mine site layout as designed by Placer. In order to minimize the footprint of the plant site and lower operating costs, the tailings pond has been relocated closer to the plant site and open pit.

### **Infrastructure and Community Support**

In terms of infrastructure and location, Mt. Milligan could not be in a better situation: it is in the McKenzie land use plan – an area zoned for mine development; it sits midway between the communities of McKenzie and Fort St. James with a local skilled workforce; road access and rail lines are nearby; low-cost power; and strong support by the communities of Fort St. James, Mackenzie and Prince George and from the provincial and local governments.

This area of B.C. has recently been hit very hard by the pine beetle epidemic, the repercussions of which will have a long term negative impact on the forest industry. The prospect of a long life mine within spitting distance is a huge boon to the communities, both from the perspective of employment at the mine site and from goods and services contracts. The construction phase is expected to take two years and employ 900 people while the mine itself is expected to employ between 300-400 people for another 15 years after that. This mine is seen as a lifeline to these communities.

Today, issues involving First Nations are more complex than they were in the past but there now exists in B.C. a keener desire on the part of mining companies to ensure that there are opportunities for all interested First Nations to participate in exploration and mining activities. There are two First Nations groups near Mt. Milligan and Rob Pease, as Placer’s project manager, developed a good relationship with both bands back in the 90s. Reconnecting with the bands is a top priority for Terrane; the company is committed to building relationships in which all involved parties benefit from the development of this mine.



The future of Mt. Milligan, after a protracted history of on-again off-again exploration and thwarted development plans, now lies in the hands of people who have a deep knowledge of the deposit and have long believed in the value of the project. Rather than being one of many projects in the pipeline of a large, international company, Mt. Milligan is now the top priority of a group of professionals committed to and capable of guiding this deposit through to production. The current global demand for base metals has positively changed the economic drivers for Mt. Milligan, and Terrane Metals Corp feels this mine can be developed in a manner that will assure its financial strength. In doing so, Terrane Metals will significantly add to regional community sustainability and economic diversification under a carefully managed environmental, social and regulatory regime.

For Further information contact:  
Gillian Roy, Public Relations  
groy@terranemetals.com  
Telephone: (604) 681-9930  
Toll Free: 1 866-681-9930  
<http://www.terranemetals.com>