Molybdenum at Roca's Max Property Awakening a Sleeping Giant by Kristina Walcott

Molybdenite-bearing quartz stringers in granite porphyry from Max Property -(black circle is 1cm in diameter). Photo courtesy Roca Mines Inc

fter years of sleeping, molybdenum appears to be the latest metal to awake from its slumber, but with none of the allure of gold, or sparkle of diamonds. What is driving the recent price increase for this silvery-white, hard, transition metal that is often confused with graphite and lead sulphide ore? Molybdenum - the very origin of the word bespeaks this misidentification as the word comes from the Greek word "molybdos, meaning lead-like.

Most recently the price of molybdenum, commonly known as moly, rocketed up to the \$16/lb range, well up from it's low of \$2.50 and nearly a three-fold increase since early January when it traded at approximately \$6/lb. A contributing factor to this escalating demand is the insatiable hunger of the Chinese industrial engine, which coupled with limited supply, makes for an increasingly robust moly price.

Many of moly's current uses have their roots in the applications developed during WWI, as moly proved an effective replacement for tungsten in hard impact-resistant steels found in many military implements. The search for civilian applications for moly dominated much of the inter-war period resulting in the heat treatment of steels and its ability to resist corrosion at ordinary temperatures. Molybdenum has a melting point of 4,730° F., which is 2,000 degrees higher than the melting point of steel. The advent of the WWII again saw elevated demand; and by 1945, the use of moly in super alloys, nickel-based alloys, lubricants and other applications had become relatively commonplace. Steel cast alloys now account for about 75% of molybdenum consumption and there continues to be new demand for the unique strength enhancing qualities of molybdenum.

The moly industry itself is also very unique, as it owes much of its continued success to the amount of research and development it invested into finding new applications. The Climax Molybdenum Co., a subsidiary of Phelps Dodge, played an enormous role in forging new applications for the use of moly. In addition to establishing a research team with the sole mandate of developing new uses for moly it also established a research laboratory in Detroit that resulted in the introduction of low alloy steels for the automotive industry.

Molybdenum deposits are found in the United States, Canada, Europe, Australia, Chile, Russia, and China. Most of the moly deposits in Canada are found in British Columbia. The United States is the largest producer and accounts for nearly half of the world's molybdenum reserves. In 2003, some 34,000 metric tonnes of molybdenum was produced in the United States from mines located in Colorado, Idaho, New Mexico, Arizona, Utah and Montana.

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The first and still the world's largest molybdenum deposit is the comparatively low grade Climax deposit in Colorado that began production in 1918. In 1995, the mine was put on care and maintenance and production finally resumed in late December 2003. Target production for 2004 is 3,200 tons.

World reserves are currently estimated at 12.8 MT, with the United States accounting for approximately 5.5 MT. World demand for molybdenum continues to increase at a steady 2-4% per year with the U.S., Japan and Western Europe being the largest consumers. It is widely expected that consumption will continue to increase as new applications evolve.

Costs associated with mining moly remain relatively low and molybdenum mines are some of the most productive in the world. Moly is usually produced as a byproduct of copper mining with much of the world's supply coming from copper-molybdenum mines. About 70% of the world supply is produced as byproduct. The deceased output of copper mines has played a largely coincident role in the increased price of molybdenum.

All of these conditions add up to good news for Roca Mines Inc. [ROK-TSXV] and its newest acquisition – the road accessible Max property 60 km southeast of Revelstoke, British Columbia. Roca acquired the Max Property in late January 2004 and, with the price forecast to remain high and a drill program slated to begin in early May, timing could not have been better.

Roca's high-grade Max Property is well positioned to take advantage of this continued demand. Molybdenite on the Max property was first noted in 1917; however, much of the historical exploration focused on lead, zinc and tungsten. In fact, Newmont Mining Ltd. personnel examined the property in 1953 for its tungsten potential and five years later for its silver potential. In 1969, a subsidiary of Scurry Rainbow Oil optioned the property from a Trout Lake prospector and undertook trenching and diamond drilling for moly. Newmont undertook additional property investigations in 1969 and again in 1974. Finally, in 1975, Newmont optioned the property as part of a joint venture with Esso Minerals Canada, 22 years after looking at the property originally for tungsten.



Bolivar Receives Exceptional Drill Results

Bolivar Gold Corp. [BGC-TSX] has reported diamond drilling results from the first 34 drill holes of the 2004 exploration program at its 70%-owned Choco 10 gold property located in east-central Venezuela. The company is currently negotiating to acquire the remaining 30% interest in the project. Jose Francisco Arata, Executive VP, Exploration noted that, "In addition to four multi-ounce intercepts, these results increase substantially the boundaries of the area of successful deep holes."

One of the better intercepts include drill hole CRO4-101 which intersected 125.6 metres grading 2.3 grams gold/tonne gold that included a one-metre interval with an uncut gold grade of 112 grams/tonne. Other highlights include hole CR04-127, which intersected 42.5 metres grading grade 2.3 grams gold/tonne plus 59.1 metres of 2.1 grams/tonne including a 1.5-metre interval with an uncut grade of 77.3 grams/tonne. Also, hole CRO4-121 intersected 44 metres averaging 4.0 grams gold/tonne plus another 60.5 metres with a gold grade of 4.1 grams/tonne. Within this second intercept, two one-metre intervals each returned uncut grades of over 50 grams gold/tonne.

Previous deep drilling at Rosika had defined a mineralized zone some 175 metres wide over a strike length of approximately 650 metres. Hole CR04-127 was successful in extending the zone 325 metres to the east, while hole CR04-122 extended the mineralized zone 175 metres to the west and 150 metres to the south. A further 20 holes (CR04-131 through CR04-150) have been commenced or completed, with results pending.

In late March Bolivar Gold reported that Corporacion Venezolana de Guayana approved the Choco 10 feasibility study, including the related social programs and royalties. Bolivar Gold can now apply for an Exploitation (Mining) Permit. In addition, the Venezuelan Ministry of Environment and Natural Resources has approved the Environmental Impact Statement.

Stanley Bartlett, P.Geo., of the independent consulting firm of Micon International Ltd. has prepared a Technical Report on the Choco 4 and 10 properties dated October 31, 2003. The resource estimate, updated by Ben Whiting, P.Geo., and J. Thomas Neelands, P.Geo., as at December 31, 2003, contains an estimated 13.2 million tonnes averaging 2.5 grams/tonne representing 1.1 million contained ounces of gold in the indicated category plus 7.2 million tonnes averaging 2.3 grams gold/tonne representing 533,000 ounces in the inferred category based on a gold cut-off grade of 0.5 grams/tonne.

At the Choco 4 & the 10 properties exploration has confirmed near-surface mineable reserves of 880,000 ounces with encouraging exploration results immediately below the planned open pit. Development of the Choco 10 property has begun, with production scheduled for the fourth quarter of this year. Average annual gold production of 125,000 ounces is expected at an estimated total cash cost of US \$146 per ounce.

> (right) Drilling at the Choco 10 Concession, Venezuela. Photo courtesy Bolivar Gold Corp.





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The Esso/Newmont Joint Venture undertook extensive work on the property, then known as the Trout Lake deposit, including 44,000 metres of drilling, of which 22,000 metres were underground. In addition, underground development of two km of adit access to the deposit included crosscuts within the mineralization. Based on this work, a resource of 48.7 million tonnes grading 0.193% MoS₂ at a 0.1% cutoff (Boyle, 1989); including 11.7 million tonnes grading 0.362% MoS₂ at a 0.2% cutoff was estimated (pre NI-43-101 standards) within which were several zones of high grade mineralization. The potential of the high-grade mineralization was never fully investigated by past workers, as efforts were solely directed at larger tonnage. Roca's current exploration will focus on the potential of the high-grade zones to host a profitable molybdenite operation. Drill permits have been received and Roca's first drilling program is expected to commence in early May. Initial exploration will be aimed at confirming the potential of the known higher grade (in excess of 1% MoS₂) zones that are up to 20 metres (65 ft) wide by 200 metres (650 ft) long and hosted within the main deposit area. The deposit remains open to depth and expansion of the resource estimate will be the subject of a follow-up drill program. Scoping studies will also be initiated shortly to assess the potential of a range of operating scenarios; including larger development supported by a sustained price for molybdenum.

epilogue

The Good Old Days

any people lament the fact that the 'good old days" are long gone and things just aren't the way they used to be. Count me as one of them! Where it's most noticeable to me is in the marketplace, which is probably understandable because there really isn't one in Vancouver anymore. Twenty years ago if someone had told me the Vancouver Stock Exchange would have packed it up and moved first to Calgary and then to Toronto I would have asked them what they were smoking.

Maybe it's the stifling regulatory climate, but you just don't seem to find any real characters in the marketplace anymore. I'm not just talking about promoters but the real rock-in-the-box mining people who discovered and in some cases developed their own finds in the past.

When 1 was transferred out west in 1979 to run the Vancouver office of The Northern Miner' the gold market was booming and in fact the editor at the time, Mort Brown, expressed concern that 1'd find another job before 1 arrived. Well, his concern was unfounded and when 1 arrived here 1 realized 1'd discovered my own version of the Mother Lode and worked hard to get to know everyone.

In those days, most of the lunch invitations 1 received were at Hy's Encore and they tended to be long drawn out affairs that would last from noon to 4 PM or later. Invariably, lunch was followed by cocktails with the final bill for four to five people often coming to \$800 or more. Of course, everyone had a story and 1 always attempted to accommodate my hosts by giving them a little bit of press.

Earlier on in my career as a journalist - and this probably applies

to mainstream media as well – 1 recognized the mutual dependency that exists between a journalist and his sources and attempted to balance the two as best 1 could. 1 tried to keep an open mind but there were always a few promoters around who tested my mettle.

One of them - whom I won't name but whose initials are MS - contacted me for some press on a situation he was involved in and I went over to his office for the interview. Knowing his reputation, I asked him if the MS on his monogrammed designer jeans meant "Multiple Sclerosis." Well, that was the shortest interview I ever did and I had to leave it to David Baines at the Vancouver Sun to expose MS's transgressions for all to see.

On the other hand, these types were vastly outnumbered by the so-called "real people" in the industry like Don McLeod who developed the Northair Mine near Squamish and discovered a few other significant gold deposits in northern BC as well.

Don and I drove up to Northair one day for a visit and after touring the underground and surface facilities, he threw a few gold bricks into the back of his station wagon and drove them into Vancouver. I asked him about "security" and he insisted that no one would ever think someone would be crazy enough to drive a few hundred thousand dollars worth of gold into Vancouver without security. He was right.

One promoter 1 did get to know quite well was Murray "The Pez" Pezim. 1 liked Murray who was very much a promoter in the traditional sense. One thing he did understand was the mathematics of the marketplace, which - let's face it - is very much a casino and always had been. 1 always knew when Murray was out of town because the market volume on the VSE would actually drop about 20%.

He applied his mathematical ability to the exploration scene as well and after drilling 75 blank holes at Hemlo came up with one of the largest single gold discoveries in Canadian history.

In the mid-1980's, I visited Hemlo with Murray and John May, vice president exploration for Teck Corp. When Murray had money he was never averse to spending it, so of course we flew to Hemlo in a chartered Lear Jet.

Checking into our hotel, Murray always the showman - asked the pretty receptionist if she knew who he was. She didn't recognize him but after introducing himself as Murray Pezim her face lit up in acknowledgement. Slipping his hand into his pocket, he told the young lady that he had a "diamond pin" for her which to her disappointment was a "dime" welded to a "safety pin" (dime and pin!). The joke having run its course, he tipped her a \$100 bill and was off. Murray never forgot the guys/gals in the field and he brought a few boxes of Sony Walkman's which he distributed on site.

On the way back to Vancouver, we listened to some tapes he had of his favorite comics, (Milton Berle, Henny Youngman) many of whom were personal friends until they lost money in one of his deals. We arrived in Vancouver on a perfectly clear day at about 5 AM and he insisted 1 call my wife to let her know we were flying over. She answered the phone and after telling her where to look in the early morning sky she muttered something incomprehensible and hung up. ●



