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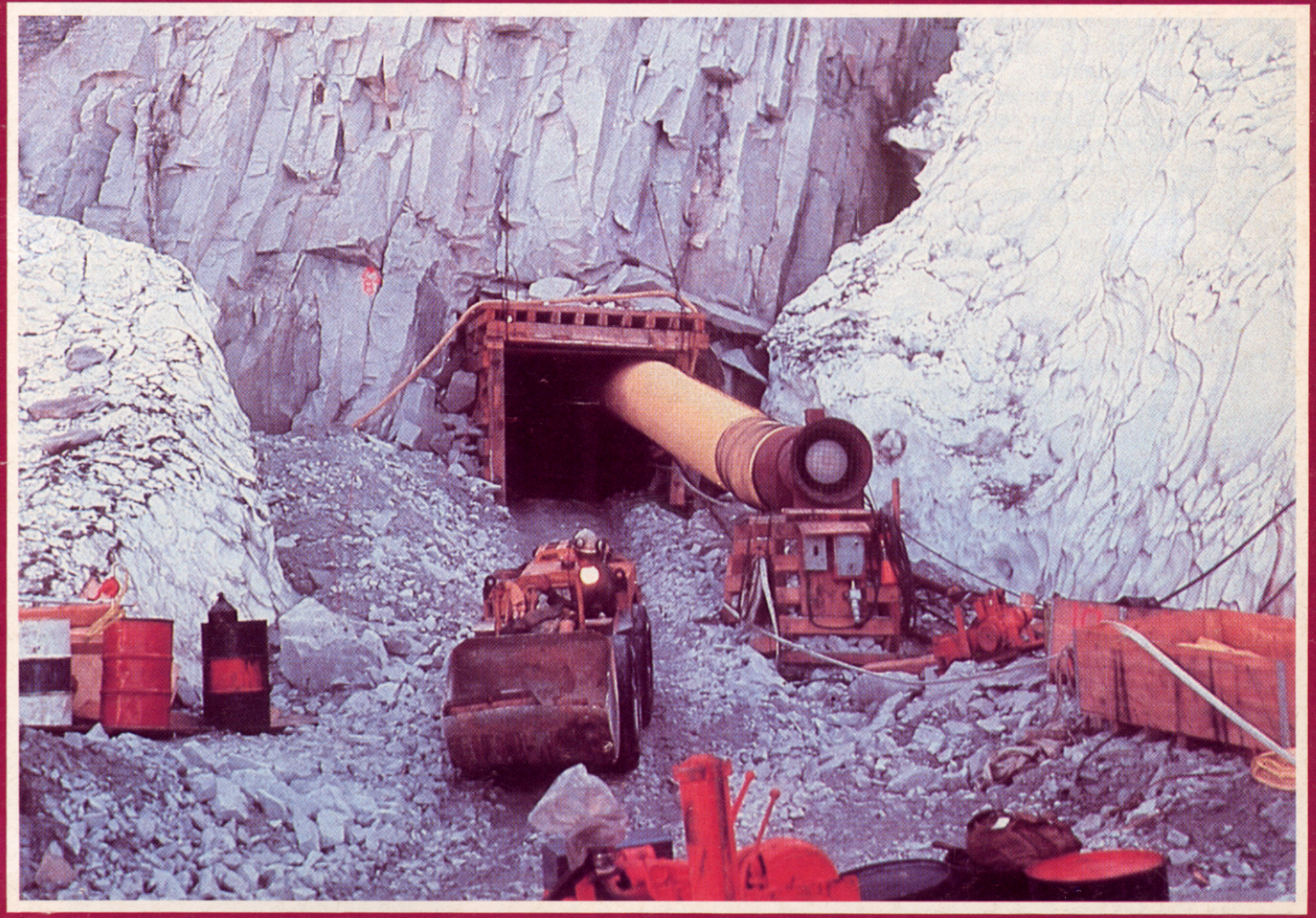


Omni Resources Inc. Mt Ogden moly project

Glaciers, mountains probed to find Mt Ogden moly

By M.J. BELEY, President, Bema Industries Ltd

The Mt Ogden property is located in northwestern British Columbia, 25 km south of the old Tulsequah mining community and 65 km east of Juneau, Alaska. In the Tulsequah area, the northwest trend of the Boundary Ranges of the Coast Mountains is interrupted by the broad valleys of the Whiting and Taku Rivers. The peaks are rugged, and sculptured by glacier ice into jagged spires and narrow, sawtoothed ridges. The deeply incised valleys in the central part of the range give it a local relief of 1500 to 2000 metres.

The extremely rugged and hostile environment was one of the main obstacles in executing this preliminary survey. We located our camp on Border Lake approximately 6 km from the showings. Virtually all the cirque walls were near vertical and traverses on them were carried out under the direction of two professional climbers.

Because of the problems of access, the sampling and mapping was very slow. Thus all time available had to be expended within the intrusive and in areas of mineralization.

Continuous chip samples were collected where access was possible. The results of these samples indicated that there was a number of zones within a 300 to 400 m area that assayed about 0.30 per cent MoS_2. Further work was then required to follow up this preliminary work.

Beley

The 1979 program

In mid-May, we began my moving about 55 t of fuel and equipment to the Tulsequah airstrip from Atlin, BC. The camp was moved by helicopter to the property.

Once the camp was established our next problem was to prepare for the Longyear 38 diamond drill. The only economical way of moving this drill from Atlin to the property was by float aircraft, however Border Lake was still partially covered by ice. A considerable amount of explosives was required to clear the lake. Even the helicopter was pressed into service to expedite the removal of this ice.

Once the drill was on the property, work continued in the preparation of a drill site on Z zone. This site was a near vertical cliff of broken fractured rock rising from uncompacted snow on the glacier. The drill had to be suspended from heavy cables rockbolted to the cliff. Our climbers could not scale this broken face so another approach was required to solve the problem. Mother Nature supplied the answer by providing us with a dead tree. After propping it up against the cliff by helicopter about 0.5 kg of spikes was required to facilitate travel up the pole and enable us to drill in the rock bolts.

With the drill platform complete we turned our efforts towards preparation of the portal site at N zone. A large serac was discovered about the proposed portal site at N zone by the safety crews. Before any work could commence at the portal, this serac — 55,000 t of ice — had to be removed.

The first step was to open the crevasse by bombing it from the

The portal sits on a glacier at the foot of a 300 m vertical face from which 55,000 t of ice were removed

helicopters. Special nets were [illegible]le up to longline 1500 kg of powde[illegible]to the crevasse. The climbers then hand-packed the explosives and a six-man crew covered the powder with snow. We were completely successful in the removal of the serac and thus established a safe work area at the portal site.

The next problem was to prepare a platform for the mining equipment and supplies which were en route by barge from Vancouver through Juneau to the Taku River. This platform was to be situated on the glacier at the foot of a 300 m vertical rock face from which we had just removed the serac.

Sawdust was used to make a hard packed surface for a front end loader and an open cut was cleared to the portal site. This required drilling by auger and blasting. In two days a large platform was levelled and the mining equipment moved in from the barge. With all the support facilities in place, the technical program could now begin.

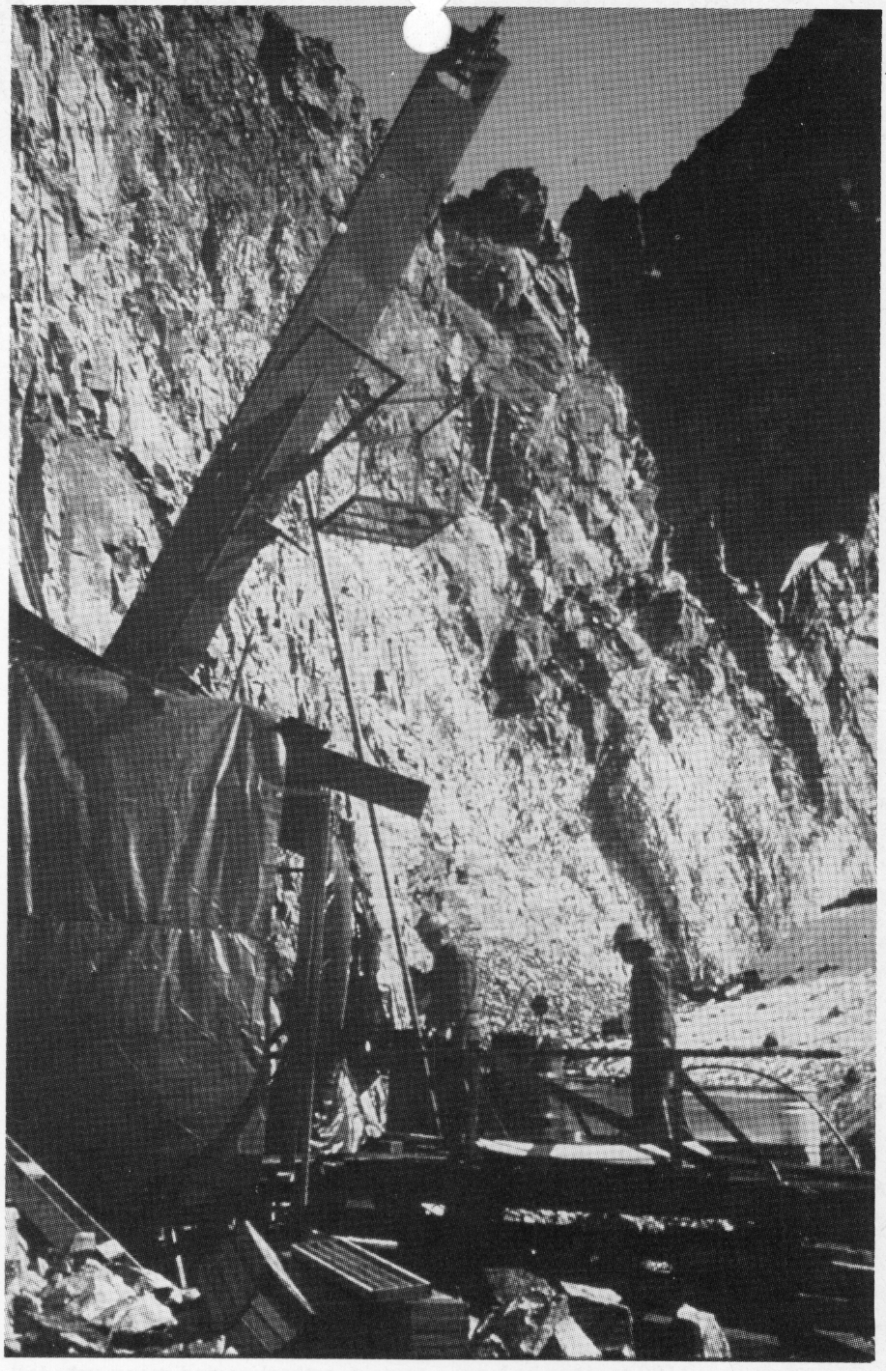
Geology of Mt Ogden area

The property is located within the Coast crystalline belt of Mesozoic to Tertiary age. In the region of the property, these crystalline rocks can be divided into the Coast Plutonic rocks and minor intrusions.

The Coast Plutonic rocks are characterized by fresh, non-foliated younger rocks with a simple, widely spaced joint system that is often expressed in topographic features. Most of the rocks in this group are light colored, coarse to medium grained quartz monzonites with hornblends (sometimes biotite) as the main mafic constituent. Clear or smoky quartz occurs as interstitial grains and euhedral crystals in miarolitic cavities. The rocks are generally unaltered, and a K-Ar age determination from the Niagara Mt area dates this part of the intrustion at 69 million years.

Minor intrusions in the general area are numerous and occur as stocks, sills and dykes of felsite, ranging in size from six or so metres to stocks several kilometres in diameter. These bodies are found cutting all phases of the Coast Plutonic rocks.

While most of these rocks range from aphanitic to fine grained, the majority are porphyritic with 1-3 mm feldspar and quartz phenocrysts. Mafic minerals are present in very small quantities or are often completely absent. The felsites are believed to be hypabyssal, shallow intrustions related to both the Sloko Volcanics and the younger phases of the Plutonic rocks, and are considered to be of late Cretaceous and early Tertiary age.



Rugged terrain doesn't stop the Omni resources drillers working on the Z zone

The search pays off with molybdenum mineralization clearly visible in these samples from the N zone

Sedimentary rocks, including volcanics, in this area are Permian to Triassic in age. Paleozoic sediments, believed to be equivalent to the Yukon Group of regionally metamorphosed sediments, occur west of Mt Ogden. As the metamorphic grade decreases eastward, these rocks grade into fine grained, dark, clastic sedimentary and intercalated volcanic rocks that are, on a regional scale, intensely folded, but are, in the claim area, uniformly dipping to the northeast.

Overlying the clastic sediments are the Eugeo-synclinal volcanic rocks of the Upper Triassic Stuhini Group, characterized by andesite and basalt flows, pillow lava, volcanic breccia and conglomerates, lapili tuff and their sedimentary equivalents. Just east and north of Border Lake there is evidence of feeder channels and pipes cutting through the underlying clastic sediments.

In the vicinity of Mt Ogden intrusive, all sediments have been strongly-hornfelsed and, where calcic are garnetized. Similar alteration is evident along felsic and andesite dykes elsewhere.

Most interesting outcrop

The area of main interest on the property consists of a series of intrusive outcrops in two opposing cirque headwalls where alaskite is in contact with hornfelsed clastic sediments. The nature of the contact is extremely variable. In some locations it is conformable with the sedimentary bedding, while elsewhere the bedding is crosscut. It is obvious that the exposed portion of the intrusive rock represents the very apex of the body, which plunges gently to the north, while to the southeast its exposure is obliterated by snow and ice.

The stock, which is 1500 m wide, measures at least 1600 m along its long axis and may be at least 700 m longer if the newly discovered Y zone is indeed part of the main stock, as is presently believed. While most of the molybdenite mineralization occurs within the intrusive rock, some interesting mineralization has been found in the intruded sediments.

The stock is characterized by its general fine grain size, in which quartz and feldspar crystals occur as phenocrysts. Between the various exposures lining the cirques below Mt Ogden there appears to exist some variation in grain size and extent of porphyritic texture.

The moly mineralization on the property may be split into five modes, some or all of which may be present at any one locality:

- Finely disseminated molybdenite, which is sparse.
- Miarolitic cavities may contain books or rosettes of molybdenite.
- Tight, dry fractures in various orientations may carry thin molybdenum paint.
- Quartz veins up to 4 cm wide may carry strong molybdenum mineralization.
- In addition there exists subhorizontal veins to 10 cm wide in which massive molybdenite occurs with quartz.

Alteration of the host rock is not prominent in hand specimens, but in some thin sections there is strong K-spar sericite alteration, while chloritization occurs along some fractures.

Results of 1979 program

The main thrust of the 1979 program has been in N and Z zones with the latest effort being directed towards the newly discovered Y zone. These are the mineralized areas most easily accessible.

Underground at N zone, 154 m of drift was completed with two drill stations 144 m apart. A total of 589 m of BQ drilling was carried on underground in six holes.

The rock in the adit was notable for its uniformly fresh appearance. Fracture density varied but would be about four per metre with the near vertical joints being the most frequent. Only minor brecciation was observed. The mineralization occurs as fillings and coatings along the joints which were generally less than 1 cm in width. A prominent flat lying joint system occurs at 2 m intervals and carried the higher grade mineralization.

Quartz is the main fracture filling but also present are chlorite, fluorite, calcite, orthoclase, rhodocrosite and minor scheelite. Miarolitic cavities contain orthoclase and many euhedral quartz crystals.

Two drill holes passed through the sharp alaskite-hornfels contact indicating an apparent dip of 30 degrees to the south. On the surface, only two holes were drilled, at Z zone one hole was drilled to 380 m in the alaskite. Visually, there was an increase in molybdenum with depth.

The newly discovered Y zone was being tested late in the season after tracing highly altered and well mineralized float up the Wright Glacier. Inclement weather forced a shut down of the drill prior to drilling through the hornfels into the porphyry.

The outcrop at the Y zone differs in texture but is compositionally similar to N and Z zones. It exhibits increased alteration. Quartz phenocrysts are prominent and up to three per cent pyrite has been added. Increased fracturing and quartz veining is also noted. Significant amounts of tungsten are also present with the molybdenite mineralization. It is believed that the Y zone represents a phase belonging to a deeper seated portion of the stock with an unknown mode of emplacement.

Findings

It is too early in the investigation of this deposit to give any reliable estimate of grade and tonnage. Sampling of material from the adit obtained some spectacularly high values (well over one per cent molybdenite) but the material has been erratic. Surface sampling has not been a reliable source of information either. Diamond drilling is not extensive enough at present.

This project has been a real challenge and is one of the best examples I know of the contribution to the mining industry by the prospector and the small mining company.

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