

IMPRESSIONS OF MT. NANSEN

GOLD-SILVER DISTRICT

YUKON

Submitted to Peso Silver Mines Limited
420 - 475 Howe Street
Vancouver 1, B.C.

August 11, 1964

A. E. Aho

Dear Sirs:

I visited the Mt. Nansen properties on August 9 in the company of Avery Stone and Clifford Deans guided by Gordon Dickson, property manager, and spent August 10 with Dickson on the property.

Dickson is doing an excellent job of extending the known vein exposures and of discovering new veins. The Webber vein has now been exposed for an additional 1000 feet to the southeast, new veins of the Huestis zone are being exposed, extensions of the Brown-McDade system are being traced, a new vein has been found on the hanging wall side of the Brown-McDade, and general exploratory trenches are being deepened. This is all being done very efficiently with a 7-man operation using two bulldozers supported by an old Army "Four by Four", a jeep, and a bombardier. An Atlas Capco overburden drill rig is now being taken in to dry drill the vein zones. This should work well for sampling the veins to shallow depths. The reader should refer to reports by other writers for details.

Webber Vein

The newly exposed section to the southeast appears to be as strong and as well mineralized as the former section exposed and sampled by Newmont and Associates. A northwest branch converging with this new section has also been exposed.

Values, widths, and extent of well mineralized sections similar to those sampled by Newmont occur as strongly in the newly exposed extensions, the vein zone in general is as continuous as before, it is open on both ends, and there is no reason to suspect that the ore shoots (which have about twice the dollar value of Discovery Mines' Laforma ore shoots) do not continue or recur to depth. The diamond drilling done by Newmont did not disprove depth extent, because rich vein zones cannot be evaluated by diamond drilling a few holes especially with poor core recovery. The presence of fresh sulfides with good values also indicates absence of any significant near-surface enrichment in these vein zones.

The entire length of mineralized vein zone occurrences found to date from the Webber vein to the Huestis zone and beyond totals 8400 feet and is still open on both ends.

Mapping and sampling of the new parts of the Webber vein zone is being started by Fred Carter as soon as stripping is completed.

I have recommended that Carter concentrate entirely on mapping of all float and vein or alteration zones and on sampling. The sampling procedure recommended is to cut panel samples about one foot wide at 5-foot spacing in any well mineralized or wide sections, sampling vein and altered wall rock separately across either the entire width if greater than 5 feet or across 4 or 5 feet if zone width is less. This should provide reliable results that can be weighted across mining widths.

Proper evaluation of the new findings should be possible within about 2 weeks when this sampling is completed. However, there is every indication that the continuity and frequency of well mineralized sections is similar if not better than before, and the zone is completely open on both ends. Inspection of the lowest exposures next to Webber Creek shows continued vein strength, so that an adit with a maximum of about 200 feet of backs could be started and continued along the Webber vein zone. A portal site was selected and it is firmly recommended that drifting for a distance of about 2000 feet be started on the Webber zone in November as soon as freeze-up conditions permit bringing in camp and equipment. Meanwhile plans can be formulated and minor preparatory work can be done such as bulldozing a portal and road access, and selecting a campsite. Final decision on extent and implementation of the program should be made as soon as forthcoming assay data is available from surface sampling and from drilling with the overburden drill.

Cabin Creek Vein

A 110-foot long shoot of ore grade on the southwest end of the exposed Cabin vein is being extended farther but trenching is hindered by deep, wet overburden. This vein zone is open to the southeast and in spite of the section of low values exposed to date, the zone also continues northwest through existing trenches and is therefore also open to the northwest. There is also some possibility that all of the vein, or any subsidiary vein that might exist, may not have been exposed by trenching to date.

Further trenching is therefore recommended on the Cabin Creek zone.

The zone should also be drilled during the present program.

Unless a northwest extension on the Webber Creek slope proves promising, any eventual underground work on the present shoot would have to be done by shaft sinking.

Huestis Zone

The Huestis vein zone consists of several veins, some striking NW and some NE. Some sections show good values across widths of several feet and the zone is open to the northwest and southeast.

More trenching and sampling should be done and the best zones should be stripped, sampled, and drilled.

This work may justify underground exploration which can be done by drifting from the Dome Creek side to develop a maximum of 150 feet of backs.

It is not yet apparent whether the Huestis zone is a continuation of the Webber zone faulted to the east, or whether it lies en echelon. Although the intervening ground is being trenched, deeper wet overburden has hindered the work to date.

Brown-McDade

The surface of the Brown-McDade zone is being trenched at intervals and to the southeast for better sampling and evaluation.

To date trenches on the southeast end, although not deep enough, suggest some change in the character of the zone, perhaps influenced by proximity to intersections with the new hanging wall zone. Even if this extension proves barren, the strength of zone suggests that further continuation with recurrence of values may exist under the slightly deeper overburden toward Dome Creek. If such an extension can be proved up by trenching or drilling an adit from this direction could develop more backs than the present workings and could be started along the vein zone.

Further trenching and drilling is recommended to test this southeast extension.

In accord with Campbell's conclusions, re-evaluation of the present underground workings should be carried out since it appears that sections of ore may have been missed.

Since underground values compare reasonably well with surface and some drill hole values, no significant near-surface enrichment is indicated even though the zone is almost completely oxidized. If anything, silver values may have been leached to some extent down to, and below the present workings.

To the northeast very little trenching has been done but several small veins with good gold and silver values have been exposed, and one strong zone with low values, probably the main Brown-McDade zone, has been exposed within Mt. Nansen Group volcanics. The presence of a

nearby zone 2 feet wide with reported values of 1.5 oz/ton gold from an old shaft sunk by McDade, suggests that sections of good grade should occur along this main structure. There is thus a good probability of continued strong continuation with values northeast along the general Brown-McDade strike.

Further trenching should be carried out in this direction.

New Vein, Hanging Wall Side of Brown-McDade

Exploratory trenching on the west side of the Brown-McDade vein exposed a new vein zone that appears to be about 10 feet wide and appears to converge toward the southeast extension of the Brown-McDade zone. This zone has not yet been completely exposed due to frost but a grab sample taken by Dickson assayed .26 oz/ton gold and 13 oz/ton silver. The vein contains some fresh sulfides.

Further trenching is being laid out to expose the projection of this zone toward the Brown-McDade in anticipation that it may be explored underground from the present Brown-McDade workings.

Other Indications

A number of other vein or alteration zones and float occurrences with or without gold and silver values have been found between the above-mentioned zones and along projections both northwest and southeast. Further surface exploration may therefore be expected to reveal other zones or extensions of equal or greater importance. The occurrence of placer gold up to the headwaters of Nansen Creek suggests good possibilities to the northwest, and the southeast projection of the Mt. Nansen district is also still open.

Reconnaissance soil and silt sampling should be carried out this season on the general northwest and southeast projections of the Mt. Nansen gold-silver district preparatory to continued bulldozer exploration next season.

General Conclusions

1. The Mt. Nansen area is a substantial epithermal gold-silver district with numerous vein zones, and partial exploration of only one part of the district to date has shown at least four main vein zones which appear to have mine-making possibilities.
2. Values, widths and continuity are relatively good and within economic range.

3. Near-surface enrichment would be negligible as evidenced by good values in fresh sulfides; in fact the Brown-McDade zone may be slightly leached of silver values.
4. Mineralogical depth potential in the district as a whole should be good, perhaps in the order of 3000 feet which is comparable to the deeper epithermal deposits in the western states.
5. The ore-bearing vein zones may be expected to continue either as continuous or en echelon zones for distances of several thousands of feet or even miles, as is the case in many other epithermal deposits.
6. Structural depth potentials of ore shoots in any particular zone are unknown, since there are no data yet on ore controls. However, the frequency of sections of probable economic grade is most encouraging and similar sections may be expected underground as well as on surface.
7. The fine-grained character and arsenic content of the mineralization will require metallurgical study.
8. The Mt. Nansen vein zones are especially attractive mine-making bets, best of which is presently the Webber vein. Further exploration may be expected to reveal additional discoveries of comparable or greater merit.

General Recommendations

1. The present program of trenching, stripping, drilling and sampling should be continued until freeze-up with the following additions.
 - a. A geologist, preferably one who could continue on in an underground program, should be sent in to map and interpret general geology and control of mineralization as much as possible.
 - b. Key points and all the main showings should be surveyed in accurately before freeze-up to give detailed survey control.
 - c. Preparatory work should be done for a drifting program on the Webber vein.
 - d. Geochemical reconnaissance should be done outside the area presently being explored; by two crews to the northwest and one to the southeast.

The above work can be done without substantial expansion of facilities and supplies which are geared to the present program and cannot be greatly increased without unwarranted expense.

2. Results of stripping, sampling, and drilling on the Webber vein should be evaluated as soon as possible and an underground program of 2000 feet of drifting should be started as soon as camp and supplies can be taken in and set up after freeze-up.
3. Mill tests should be conducted on samples of fresh mineralization during this first underground phase.
4. Financing should be estimated and arranged for the expanded present program, the underground work on the Webber vein, and for at least two seasons of additional surface exploration as well as any further or additional underground exploration and development that may be decided upon.

Respectfully submitted,

Dr. A. E. Aho.

Note: Written report mailed in from the field and typed up copies of report not proof-read by the writer.