

PESO SILVER MINES LTD. (N.P.L.)
COMMENTS ON METALLURGY REPORT ON
OXIDIZED ORE - NO. 1 SHAFT

April 17, 1962

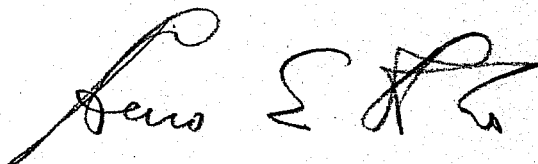
An excellent and thorough report by John W. Britton, Consulting Metallurgist, 755 Beatty Street, Vancouver 3, B.C., has been received on preliminary tests done on oxide ore from No. 1 shaft on No. 1 vein.

This report shows that from oxidized ore at a depth of 25 feet in the shaft, assaying 58 oz./ton silver, 0.08 oz./ton gold, 3.24 % lead, 2.8% antimony, 0.06% copper, and 9.40% arsenic, about 70% of the silver and 87% of the gold can be recovered readily by simple cyanidation. The remaining silver (about 15 oz./ton) appears to be tied up in cyanide - insoluble form probably in the hydrous lead-antimony oxide, Bindheimite.

This work has shown favourable recovery from oxidized ore in a process which will involve little or no transportation costs, since no bulky concentrates would be shipped from a cyanide circuit. It also appears possible that further refinement or variation may increase recovery, or that selective flotation of the oxide ore might recover a silver-lead-antimony concentrate from the oxidized ore.

Detailed flotation tests will also be carried out on bulk samples of fresh sulphide ore obtained from the underground cross-cuts on No. 1 vein. These forthcoming tests, combined with the above data, and refined to give the best indicated mill recovery from both oxidized and unoxidized ore, will form an important part of the basis for an evaluation of the profit potential of the property.

Respectfully submitted,



Dr. A.E. Aho,
Consulting Geological
Engineer.

PESO SILVER MINES LTD.

SPRING SUMMARY REPORT

May 20, 1962

The winter underground programme at Peso Silver Mines has been completed as scheduled and the summer programme of geophysics, geologic mapping, bulldozer stripping, and further underground work is being started. This report briefly summarizes the progress and results of underground work, the achievements to date, and the goals of the next phase of exploration.

PROGRESS OF UNDERGROUND EXPLORATION

On No.1 Vein - drifting and crosscutting on the No. 1 Vein was commenced March 17, 1962 and completed April 16, 1962. The drifting consisted of 64.6 feet Southwest and 202.2 feet Northeast for a total of 266.8 feet. Timbering was necessary for 157.5 feet of this distance. Ten crosscuts were completed with a total footage of 169.2 feet. The total footage for the period was 436.0 feet. Two shifts of two men each were employed. All tramping was by hand. Basic equipment consisted of one Atlas Copco 365 c.f.m. screw compressor, one Copco LH 35 mucking machine, two RH 656-4W Copco rock drills, two 27 cu. ft. side dump cars and one-12 inch fan. On the Rex Vein - a prospect shaft was sunk to an inclined depth of 42 feet at an incline of 43° to 72°, at chainage 11 + 62E.

RESULTS OF UNDERGROUND WORK

No. 1 Vein (See Attached Geologic Plan and Assay Plan)

The drifting and crosscutting has outlined a strong, wide vein zone heavily mineralized with sulfides, about half oxidized, averaging about 15 feet in width and of the order of 10 oz./ton silver along the total drift length of 275 feet. Although exact grade has not yet been calculated for this mineralization, it would appear that projecting the vein an average height of 120 feet to the surface and a depth of 150 feet below the drift, would give an overall possible tonnage of the order of 100,000 tons with about 10 ounces in silver and comparable gross values in other metals.

Included within this zone is a section 98 feet long, averaging 13 feet in width with an average grade of 23.3 oz./ton silver, .014 oz./ton gold, .25% copper, 4.22% lead, .14% zinc, 2.66% antimony, and .21% bismuth or about \$50.00 gross value per ton, excluding bismuth and zinc.

Included within the 23.3 ounce section is a higher grade hanging wall zone, 98 feet long averaging 6.8 feet in width with an average grade of 37.4 oz./ton silver, .027 oz./ton gold, .45% copper, 7.34% lead, .66% zinc, 4.53% antimony and .41% bismuth, or about \$87.00 gross value per ton, excluding bismuth and zinc.

If the two latter sections are assumed to project to a point near the surface and to a depth equal to half their length, assuming 10.5 cu. ft. per ton for partly oxidized ore, the 23.3-ounce shoot at 125.6 tons per vertical foot would contain 20,000 tons at a total gross metal content of about \$1 million, and the 37.4-ounce shoot at 63.5 tons per vertical foot would contain 10,000 tons at a total gross metal content of about \$900,000. The economics of bismuth,

with a quoted price of \$2.25 per lb., have not been investigated so its possible value has been excluded from this total.

Under presently known economic conditions the 37.4-ounce grade can be considered potentially economic in the Mayo district, but development of much larger tonnages would make lower grades economic and the possibilities of discovering such tonnages appear good.

Although the northeast drift passed through a short barren section where the vein zone is intersected by a 45°-dipping hanging wall fault, an increasing amount of heavy sulfides, and widening at the face suggests that the drift is entering another section in which better widths and grade may be expected. An isolated sample at 196 feet near the face assayed 28.8 oz./ton silver across 3.4 feet.

The hanging wall fault probably exerts control on the localization and shape of the ore shoots in which case they may pitch moderately northeast along the vein parallel to the 37°-pitching intersection of the fault and the vein. In this case the richer surface section of 120 feet of 19-ounce grade would still lie some 100 to 200 feet ahead of the face, and would require about 200 feet additional drifting to prove up. Complete surface stripping and mapping of the vein west of this section on surface should test this idea of ore control, and determine if drifting should be continued with this objective.

The ratios of silver to lead and lead to antimony in the oxidized and unoxidized parts of the vein strongly suggest that the silver content has not been significantly leached or enriched at the level of the drift. The values at this level are comparable to those on No. 1 shaft which is almost 200 feet higher in the oxidized zone. An electromagnetic survey along the general zone of Nos. 1, 2, 3 and 4 veins, followed by bulldozer stripping, should greatly expand the possibilities in this vicinity.

Rex Vein

The prospect shaft on the Rex Vein encountered two lenses of galena-jamesonite mineralization. The top lens from surface to 14 feet and up to 3.2 feet wide assayed up to 91.6 oz./ton silver across 0.7 feet while the bottom lens from 25 feet to 38.5 feet and up to 2.8 feet wide assayed up to 39.0 oz./ton silver across 1.8 feet. A grab sample from this lower lens assayed 103 oz./ton silver. These two sections of vein are apparently repeated by faulting so further work should reveal more such mineralization.

The vein will be stripped to expose all sections of ore grade on surface, then explored deeper by prospect pits, and probably by drilling because of its less oxidized character. An electromagnetic survey and stripping of other probable zones in the vicinity of the Rex Vein may be expected to uncover other such veins with good values and width. The Rex vicinity is still considered one of the best on the property.

ACHIEVEMENTS TO DATE

Peso Silver Mines has made remarkable progress in its first year of existence, and every phase of the work has enhanced the property and contributed greatly to its eventual evaluation as a mine-making potential.

The first staking of 100 claims in March, 1961 assured adequate protection in the beginning. The first prospect shaft started in June proved an anticipated increase in silver values below the leached surface.

Subsequent bulldozing in August and September greatly expanded the picture by showing at least five strong veins with several sections of promising silver values.

An access road was built, a camp and equipment set up and a winter underground program was carried through in spite of some adverse conditions and severe weather. A preliminary cyanidation test from No. 1 shaft has shown a favourable recovery of 70% of the silver from the oxidized ore.

The underground work has accomplished many objectives, solved several questions, and definitely enhanced the property. Grade, width, character, continuity to depth and favourable steep dip have been proven. Silver of economic grade was proven to be carried in tetrahidrite, with lesser amounts in jamesonite and with no unfavourable admission of arsenopyrite so that a good flotation concentrate may be expected from fresh sulphides. Secondary enrichment does not appear to be significant and good silver values higher than those in surface trenches persist at depth. The decision to drift instead of drill has been vindicated since drilling would have proved very unreliable due to vein conditions. Copper and bismuth were found to be present in interesting amounts particularly in the unoxidized higher grades. Much larger width and greater sulfide content were encountered than is suggested by surface work, probably because the abundant pyrite has leached, oxidized and collapsed the vein to a narrower than true width on surface. Metallurgical samples have been obtained for flotation tests, but the higher grades are oxidized due to their originally more porous open-space character, so further work may be necessary to provide metallurgical samples of representative grade.

The underground work has established the presence of some ore of economic grade and larger tonnage possibilities of low grade sulfides that may prove economic if present in large quantities.

Detailed underground geologic data has given valuable indications of probable ore control that, combined with surface indications, suggest that further underground work would continue to develop such ore at recurrent intervals.

Since it is apparent that (a) more similar or even better mineralization can be found by underground work, that (b) such sections occur in several places on No. 1 and No. 2 Veins on the surface, and that (c) additional extensions of known veins and discovery of new veins can be expected to greatly augment the picture, the objectives of the next phase of exploration are as follows:

- (1) Do flotation tests to determine mill recovery, grade of concentrate and economics as far as possible.
- (2) Decide if drifting should be continued to probe for higher grade and better metallurgical samples.
- (3) Determine rough overall tonnage potential at the property and area as far as possible with a view to a large-tonnage mining operation. The summer programme is designed for this purpose.

It is anticipated that the above work will greatly enhance the tonnage possibilities in view of the known strength of structures and amount of sulfides encountered underground. By fall 1962, this tonnage potential with geologic, metallurgical, and other data, should provide a basis for evaluation of the approximate scale and grade of mine operation that may be justified.

Respectfully submitted,

Dr. A.E. Aho,
Consulting Geological Engineer.