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MEMORANDUM FOR DR. JENNESS

PESO SILVER MINE,
MAYO DISTRICT,
YUKON TERRITORY.

Summary

Peso Silver Mines began exploring its property in late summer of this year. Before this, some small scale exploration work had already been undertaken by prospectors, but it required the use of bulldozers to remove enough overburden to really trace the veins.

The mineralization exposed by bulldozer trenches consists of non-descript earthy yellowish brown and greenish material, the product of the weathering of primary sulphides. This weathered superficial alteration is predominantly made up of iron-sulphates and iron-arsenates. It was preserved because the glaciers of the last ice age did not reach up to the elevation of the showings; otherwise, the soft weathered material would have been scoured away.

In an oxidized zone of this kind, it is usual to find an enrichment in silver content if the primary sulphides contained silver. However, with few exceptions, the silver content found in the veins at surface so far has not been sufficient to consider it as a direct shipping ore.

To date, five different veins of oxidized mineralization have been found. Sufficient work has been done in the case of one of the veins to prove that it has a length of 700 ft. More surface work remains to be done in 1962 to trace out the other veins.

This winter, the company plans to drive an adit from the north to cut the No. 1 vein. This work is to determine what actually constitutes the primary sulphide mineralization and to decide if the silver values will be high enough to make ore. In assessing the work to date, it is a favourable sign that the oxidized vein material is fairly extensive and seems to compare in dimensions to the ore found at the various mines of United Keno Hill.

It is my impression that Peso Silver Mines is a company which has the means to undertake the primary exploration work required. However, should this prove reasonably successful, Peso Silver Mines will probably have to turn to a larger company for technical and financial assistance in further developing its deposit.

PESO SILVER MINE, MAYO DISTRICT, YUKON TERRITORY

Introduction

The writer visited this prospect on September 24, 1961. The Consulting Geologist, Dr. Aro Aho, was present at the property and acted as guide.

Location

About 30 miles north of Mayo and 17 miles northwest of Elsa and the United Keno Hill Mine. The present showings are at an elevation of some 3,600 ft. along a ridge.

Access

The property may be reached by truck and jeep roads from the Mayo-Elsa Highway. The turn-off is at Proctor's Lumber Camp, 1½ miles out of Elsa, and from here, it is 25 miles to the Peso Camp.

Ownership

The claims were staked by a local prospector, Cecil D. Poli, and optioned by Tanar Gold Mines. The price and terms of the option are not known. A new company, Peso Silver Mines, Limited, was formed to explore and develop the property.

Company

The Northern Miners handbook and the Financial Post Survey of Mines had very little to say about the two companies involved. Peso Silver Mines was incorporated in 1961 under B.C. charter. The Head Office is at 633 Hornby Street, Vancouver. The Secretary and Managing Director is S.E. Cropper.

Capitalization is 5 million shares at $1.00 par value. Up to May, 1961, 900,000 shares had been issued, all of them pooled. The Northern Miner of October 5, 1961, mentions that 100,000 shares were recently sold at 50 cents to pay for the financing of the exploration programme.

Tanar Gold Mines is the operating company which holds the 900,000 pooled shares of Peso. This company is a private company incorporated in 1959 in B.C. The Head Office address is 202, 633 Hornby Street, Vancouver.

Capitalization consists of 3 million shares authorized at 50 cents par value. As of May, 1961, 200,000 shares had been issued, in part as pooled shares.

Tanar Gold Mines owns a gold prospect in the Tolfino District, B.C., as well as a coal deposit in the Caribou District. The latter is said to represent coking quality coal estimated at 150 million tons.

Nothing could be learned about the officials of the Company. None are listed in the last edition of the Canadian Who's Who. The Consulting Geologist, Dr. A.E. Aho, has a good reputation. Incidentally, it is he who interested Tanar Gold Mines in the Peso property.

History

The Peso Silver Mine ground was first staked in 1912 for gold. Some values of gold are found in rusty quartz, and a shaft was originally sunk on a quartz vein. The claims were given up as the mineralization was found to be too low in value.

In 1948, Cecil Poli restaked the claims, this time for antimony. In 1950, Poli succeeded in exposing the silver bearing veins that aroused the interest of Dr. Aho. In the spring, 1961, Tanar Gold Mines optioned the claims, and a tent camp was set up the end of June. Exploration work was started in mid-August.

Facilities and Equipment

Since exploration on the property was started only a short time ago, there are only a few facilities available. When the writer visited the property at the end of September, there was only the tent camp. However, some old buildings were just being hauled by bulldozer from Haggart Creek to house the men in the cold weather.

The property is above the tree line and timber is available some two miles away at lower altitudes. Water has to be hauled from a point about one mile away and some 500 ft. below camp elevation.

Since we may be approached on the question of assistance under the Tote Trail Program, an appendix to this report describes the existing road facilities in some detail.

At the time of the writer's visit, there were two D-6 bulldozers being used. There was also a compressor for use with several hand-held drills.

Development

Most of the work done on the property consists of trenches opened up by bulldozer. Since a layer of over-burden of 2 ft. to 8 ft. covers the ground, only trenching can help to expose the underlying rock and mineralization. Some of the trenches are quite long, measurable in hundreds of feet and they attain depths up to 10 ft. The total length of trenching should be near 4,000 ft. In addition to the trenching, an inclined one-compartment shaft was put down for a length of 40 ft. This shaft has an inclination of 45°, and its vertical depth would be 30 ft. By the end of September, some $25,000 had been expended by the company on the Peso property.

Geology and Mineralization

The veins cut quartz-sericite schists of the Yukon Group. These schists represent a younger member of the same group of rocks in which the mineralization at United Keno Hill Mines occurs. The mineralization consists of a non-descript earthy yellowish-brown and greenish material which represents the alteration of primary sulphides. The reason this kind of weathered material has been preserved at all, is that the last period of glaciation did not extend to this elevation.

The mineralization is predominantly jarosite, a hydrous iron-sulphate containing lead and silver, as well as scorodite, a hydrous iron arsenate. The only primary sulphide I saw in samples was arsenopyrite.

If one were to follow the present vein material downward, one should eventually pass into primary sulphide mineralization, assuming the veins continue downward. It is difficult to predict at what depths the altered mineralization will change to a predominantly primary one; as a guess, I would say somewhere between 100 - 200 ft. vertical depth. From the composition of the oxidized vein material at surface, it may be assumed that the primary sulphide would be galena, arsenopyrite, and some silver mineral like freibergeite.

The job of exposing and tracing the veins at the surface has not yet been completed; surface stripping will have to be resumed in 1962. So far, five veins have been discovered. However, none has as yet been delimited in length. Work to date was concentrated on the most westerly vein or No. 1 vein. This vein has been traced for a length of some 700 ft. It runs about due east and dips 45° N. The width of the vein varies from 1 ft. to 16 ft., and its average is somewhere between 4 ft. and 5 ft. One section of the vein has been stripped continuously for 120 ft. Here,

channel samples returned assay values from a fraction of an ounce to 57 oz. Ag., while the average of all channel samples is 17.3 oz. Ag.

The 40-ft. inclined shaft, was sunk on the vein, that is, down a dip of 45°. In the shaft, the vein is 7 ft. to 11 ft. wide. Channel samples assayed between 20 and 174 oz. Ag. According to Dr. Aho, there was an increase in value with depth. From 4 ft. to 20 ft., the average was 50 oz. Ag., and from 20 ft. to 40 ft., the average was 80 oz. Ag. On the other hand, Mr. M. Manifold, Chief Mine Geologist of United Keno Hill, does not agree with this. Although he found similar results in sampling as Dr. Aho, he did not discern any increase in value with depth.

Future Plans

Trenching by bulldozer was to continue until freeze-up; this should have occurred by now. At the time of my visit, cold weather and snow had just set in. A winter camp has since been established to continue exploration. The plan is to drive an adit from the north to cut the No. 1 vein and any other possible mineralization. This adit would probably be 200 ft. lower than the surface exposure of the vein. As a rough guess, I would say that some 500 ft. of tunneling are required. Drill stations on the level are to permit diamond drilling for exploration from underground. Dr. Aho estimates that about $75,000 will have to be expended for this proposed phase of underground exploration.

Conclusions

The work to date indicates the presence of several veins within an area of about ¼ mile by 1 mile. The No. 1 vein, as uncovered at surface, shows persistence in length and sufficient average width to promise ore shoots of mineable size if the mineralization is of ore grade.

The grade of the mineralization is so far completely unknown. All we have at surface is an oxidized material which contains very irregular values in silver. This secondary mineralization could not form a basis of a mining operation. With it, one could not hope for a better than 50 per cent recovery of silver values in a conventional mill where the final product is a sulphide concentrate. On the other hand, the secondary mineralization can hardly be expected to be of sufficient volume to consider extraction by a chemical leaching plant. The value of the ore will have to be determined by the amount of silver associated with the primary sulphides. For this

reason, it is indispensable that underground working or diamond drilling encounter the primary sulphide veins.

H.W. Pfeffer,
Economic Division.

c.c.—K.J. Christie

PESO SILVER MINE APPENDIX

We will probably be asked to render assistance under the Tote Trail Program. For this reason, the present road facilities are being described.

To reach the Peso Silver property, one has to turn off from the Mayo-Elsa Highway at Proctor's Lumber Camp, 4½ miles from Elsa. For the next 14 miles, the road runs along the McQuestin Valley going to the west. This road was built by Proctor for his sawmill. It is in fairly good condition, but would need some gravel fill in places as well as some culverts. During dry weather, the road can presently be used by an ordinary car.

After 14 miles, there is a bridge across the McQuestin River which takes us to the north side where Haggart Creek flows into the river. From here on, the Haggart Creek Road is used for the next 6½ miles. The road along Haggart Creek was built by the territorial government in the 1930's for the placer miners. The part to be used for access to the Peso Silver Mine would need extensive repairs and in places, it would have to be started over again. At the time we drove along it, it had been raining, and the road was only useable for trucks or four-wheel drive vehicles.

From Haggart Creek, one turns off to go up Swede Creek and then up Secret Creek for a distance of 2 miles. From here on, the road leaves the Creek bed and in a series of switchbacks, it leads up a steep slope to the Peso Camp. This last stretch is some 2½ miles long, and takes us from an elevation of 2,500 ft. to an elevation of 3,600 ft. The 4½-mile stretch from Haggart Creek to the mine was built by Peso Silver Mines. For the 2 miles along Swede Creek and Secret Creek, it is in very poor condition. At times, the road follows the creek bed, and only a power wagon or bulldozer can get through this section. The two miles from Secret Creek to the Camp is in somewhat better condition.

To fix up the roads so they could be used as a tote road taking a reasonable amount of truck traffic during the exploration and development phase of the mine would require, as a rough estimation, about $20,000.