PESO SILVER MINES LTD.

MINERAL PROPERTIES OF THE

E.H. BARKER ESTATE

HAGGART CREEK

MAYO MINING DISTRICT, YUKON

May 25, 1962

****

INTRODUCTION

Recent exploration of important silver-lead-antimony vein systems on the Peso Silver Mines property at Secret Creek west of Haggart Creek has shown that such mineralization may be very extensive in the district.

Mineral properties belonging to the E.H. Barker Estate and associates lie along the eastern continuation of the Peso Silver Mines vein systems. Similar mineralization has been exposed in at least two veins on the Barker ground, and promising possibilities or showings of gold, tin, and tungsten also occur on the Barker properties.

Since this is the most attractive ground in the area other than Peso and it contains most of the other known showings in the immediate vicinity, it was obvious that Peso Silver Mines should acquire an option to purchase these properties.

The purpose of this report is to briefly summarize the possibilities of the properties as a guide to a more detailed programme of exploration. Additional detailed data is available from various sources on individual showings.

GENERAL CONDITIONS (See Claim Map)

The claims of the Barker Estate lie about 35 miles due north of Mayo, centered at about latitude 64°02'N and longitude 135°50'W, straddling Haggart Creek in the Mayo Mining District of Yukon. The area is best reached by driving about 30 miles north up the Mayo-Elsa road, 14 miles west along the Proctor road, then about 14 miles up the Haggart Creek road. Most of the ground lies within easy reach of the road, but general road improvement is needed.

Haggart Creek and its tributaries usually contain abundant water for exploration or mining purposes. Timber can be purchased in the district. Power and other facilities would have to be established. Elsa and Mayo are about 25 and 50 miles away respectively by road and have most of the facilities necessary for servicing exploration in the district. Mayo is serviced three times a week by plane and has telephone and telegraph communications.

General operating conditions would be similar to those of United Keno Hill Mines, and the reader is referred to a detailed 1961 report on their operations in which overall operating costs total $47.50 per ton for their type and tonnage of ore and method of operation.

HISTORY

Placer gold was first discovered on Haggart Creek in 1895, the creek was staked in 1898, and was worked over periods of time up to the present day when three operators are mining it. Total placer production is about $1½ million.

Gold-bearing quartz-arsenopyrite veins were first discovered on the south side of Dublin Gulch about 1901 and were worked on from time to time during which several short adits were driven.

Tungsten, found abundantly in the placer sands suring World War I, was stockpiled and shipped during World War II. Some small lode tungsten showings were found.

Tin, also found abundantly in the placer at Dublin Gulch, was traced to a source on Tin Hill and explored in 1947 with a short adit and later with some bulldozer cuts. The lode prospecting, however, was not done on any major systematic basis until 1961 when Peso Silver Mines started work at Secret Creek.

Ed Barker, a remarkable oldtimer who died last July 5 while active in the area, deserves the utmost of credit for his foresight and fortitude in continuing to prospect the district year after year with a bulldozer, keeping the area alive.

PROPERTY

The mineral claim holdings of the Barker Estate consist of some 126 claims held by location by the Estate, by Barker's family, and by associates. Details of the claim names and ownership are on file at the Peso Silver Mines office.

Under the Yukon Quartz Mining Act assessment work requirements on the claims of a deceased miner may be exempted for a period of three years after death unless a deal is made on the ground.

Since the ground has now been optioned to Peso Silver Mines, it will be necessary to do the assessment work and it has been agreed that a minimum of 3 years' work shall be done, or a total of $300.00 per claim for 126 claims.

GEOLOGY AND MINERALIZATION

General

Rocks in the area consist of schist and quartzite of the Yukon Group (Bostock's Unit 5 - See GSC preliminary map 43-3). These rocks are folded along general east-west axes, and mostly strike WNW and dip northerly at moderate angles.

At Dublin Gulch these layered rocks are intruded along a N70°E axis by granodiorite stocks and lesser bodies of quartz-feldspar parphyry and quartz parphyry, which are apparently genetically related to the gold, tin, tungsten and silver-lead-antimony veins.

The district is cut by numerous major NNE shear or fault zones which control the localization of mineralization, especially the gold, silver, lead and antimony-bearing veins. Without detailed mapping little is yet known of the extent and number of these and other such mineralized structures, but most of the known ones appear to be concentrated on the claims of the Barker Estate, crossing Haggart Creek between Fifteen Pup and Dublin Gulch.

Shears extending along the south side of Dublin Gulch, across Haggart Creek at Barker's Cabin, and extending up to the head of Gill Gulch, appear to be the central control for gold mineralization in the district, and should be prospected for gold.

Gold

The known gold prospects occur as several veins (six reported) extending in a zone along the south side of Dublin Gulch and probably over into the northern part of the Peso Silver Mines property. At Dublin Gulch several short tunnels, shafts and surface cuts have locally exposed an aggregate of 500 feet of veins averaging about 0.5 oz./ton gold and 1 to 10 oz./ton silver over an average width of 28 inches. Better values and widths up to 4 feet or more are indicated in places so further bulldozing and other work may be expected to expose much better sections. Roughness of much of the rich placer gold in Dublin Gulch suggests a local source in the vicinity of, and including, these veins. Other gold bearing veins are also reported to the south of these veins.

Further systematic trenching along the general gold-bearing zone can be expected to discover other larger or richer gold-bearing sections since only a small part of the Dublin Gulch shears has been explored. The strength, width, and amount of mineralization discovered in the Peso veins strongly suggest that, where similar vein zones are gold bearing, good widths and values may be expected.

The presence of interesting amounts of bismuth in the Peso veins and the occurrence of considerable native bismuth and bismuth tellurides with gold attached to them in the placer at Barker's cabin and up Dublin Gulch, suggests that bismuth may be an important constituent of the gold-bearing zone.

Silver-Lead-Antimony

The strong shears, up to 100 feet or more in width (see accompanying plan) are impregnated with pyrite and arsenopyrite, some carry low silver-lead-antimony values, but none have been explored much. Since they lie on the strike of the Peso veins there are several possibilities for discovery of this type of mineralization.

Virtually the only places where any work has been done on these shears or veins, is on the bank of Haggart Creek above Barker's cabin where interesting but low values and rather sparse mineralization were found in two zones. There is no reason to believe that more heavily mineralized sections do not occur on the claims held by the Barker Estate.

A probable extension of the well-mineralized Peso No. 1, 2 and 3 vein zone may cross Haggart Creek about 3/4 mile up from Fifteen Pup. At this locality there is much gouge and altered or mineralized rock in the creek bed, for at least 300 feet and one of several fault zones within this zone carries an impregnation of pyrite, arsenopyrite and chalcopyrite for several tens of feet on one wall.

Tin

About 20% of the non-magnetic heavy sand concentrate in Haggart Creek and Dublin Gulch consists of tin in the form of cassiterite pebbles up to several pounds in weight. The source of some of this tin was found in tin-tourmaline veins on Tin Hill but it is probable that a richer source still remains to be found.

Tourmaline vein matter, characteristic of the known tin showing, also occurs in and next to the granodiorite on the west side of Haggart Creek, indicating possible sources of tin in this direction as well.

Tungsten

Tungsten in the form of scheelite and ferberite forms an even larger part of the sand concentrate than tin, and although the source of this is reported to be in abundant small stringers near the head of Dublin Gulch, there is still a possibility of finding an important tungsten prospect.

CONCLUSIONS

The Haggart-Creek - Dublin Gulch area has long been considered to be among the most promising in the Yukon due to its indications of prolific mineralization and strong structure. The Peso silver discoveries are now vindicating this opinion which was originally based largely on ground now held by the Barker Estate.

Aside from silver, lead, and antimony, minerals such as gold, tin and tungsten are of considerable current interest and will become even more important in the near future. An increase in price of gold could occur after a couple of years. A tin shortage has already been forcing the price up (now $1.20 U.S. per lb.) and tungsten could also become more strategic due to high temperature uses.

Diversification into prospects of these metals, as well as enlarging the silver possibilities, will give exploration in the district greater stature and a much sounder position, by increasing probabilities, particularly since gold and tin may also occur on the Peso property.

The mineral properties of the Barker Estate and associates form the largest block at favourable ground immediately adjoining Peso Silver Mines and they contain most of the other known mineral showings in the area, including:

(a) several strong mineralized shear zones with possibilities of Peso type silver-lead-antimony ore or of gold-bearing sections

(b) several partly developed gold prospects

(c) the only lode tin prospect in the Yukon, and

(d) other possibilities such as tungsten.

From the way Peso Silver Mines has developed width, strength, and continuity of vein zones, it appears that these properties also have excellent possibilities for discovering not only similar deposits but also gold-bearing sections of comparable size, without consideration of additional possibilities of tin, tungsten, or other metals.

RECOMMENDATIONS

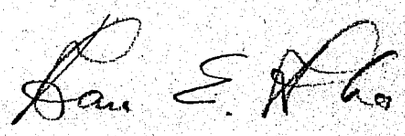
1. It is firmly recommended that a minimum of $40,000 be spent in preliminary mapping, bulldozer stripping and possibly prospect shaft sinking on certain zones on the Barker Estate properties with

first consideration being given to gold and silver bearing zones.

2. This work should follow the experience of surface exploration at Peso Silver Mines with the addition that all bulldozer cuts near the Dublin Gulch shear zones or any gold-bearing zones should be systematically sampled and panned for gold at 100-foot or closer intervals in a fashion similar to that employed by Klondike Lode Gold Mines. Tin should also be tested for and traced at the same time by using zinc test strips and hydrochloric acid.

It is anticipated that this type of systematic work in such a well mineralized area will result in important discoveries.

Respectfully submitted,



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

Supporting Data:

1. 36 pages miscellaneous reports on Barker Estate Claims.
2. Plan of claims and mineralization, Haggart Creek.
3. Mineral claim holdings in Mayo district.
4. Geological Survey of Canada Preliminary Map 43-3.
5. Dublin Gulch, Yukon - 1:50,000 topographic map.