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SUMMARY REPORT ON THE G. M. AND G. F. LOSE CLAIMS

H. KLOSS, SUMDUM, ALASKA

MR 115-18

The G. M. and G. F. comprise a group of six mineral locations lying at an elevation of 2,000 feet above sea-level 10 miles SE. of Sumdum. This property has been under continuous development since its discovery by the writer and Jack Davis, the present owners. During this period of time much work has been accomplished without any financial aid or help in any manner. Developing the ground under adverse conditions has been a slow process, but the work has been compensated for in the satisfactory results obtained.

Summarizing the work done on the G. M., it includes trail work, buildings and other work necessary, other than mining. The total underground work consists of 173 feet of drift on the vein and 127 feet of raise work in ore, as well as 400 feet of opencuts on the vein. The work has been accomplished by hand, the single jack method.

Last season we set a 2-ton Gibson mill on the property, and for the small tonnage put through results were satisfactory. The ore milled by straight amalgamation showed an average of \$10 per ton with an estimated loss of 50% extraction. A sample of concentrate taken 50 feet below our last plate gave results as follows: Gold, oz. - 208.46; and silver, oz. - 44 per ton.

In discussing the merit of our property it has much in its favor from an economical basis. Deep-water transportation is within 6,000 feet of the outcrops, and topographical features are such that a gravity tram-line could be erected without much cost. Timber is abundant on the ground and enough water for milling is close by. Our present means of reaching the workings is by trail, a distance over 2 miles from the beach, with a fair grade. For developing the ground in the preliminary stage of operation, the necessary equipment could be hauled in over the trail by cat. I believe a conservative figure in time would be less than 50 days work with a small crew of men to haul the machinery in working position, from the beach.

In compiling the geological data, taken from a careful study of the ground and from many years experience in the field and mines, it is my intention to stick as close to facts as possible, for practical reasons.

The G. M. is a fault fissure vein of slight displacement, lying in a belt of hard graphitic slate. In drifting on the vein no attempt was made to crosscut into the real foot-wall of the vein. One reason for this is the ground is hard to drill and consists mostly of closely spaced quartz stringers and sulphide replacement. On the hanging

wall side the orebody is more tabular and well defined, breaking clean from a few inches of fault gouge. Pinches and swells are characteristic of the deposit, along pre-mineral fracture planes, where the vein varies from less than a foot to over 5 feet in thickness. Fault gouge along these planes increases from a few inches to over 6 inches and as far as I can determine by eye, it is composed chiefly of ground up country rock. Some particles of quartz are present that may have come from the minute veining in the country rock. Continued movement or adjustments along the fissure, after the primary deposition of quartz, reopened the vein, with a later invasion of important mineralizing solutions. The ore has the banded or ribbon structure that is more or less a common occurrence in veins such as the G. M. type of fissure. In the banded portions of the vein, graphite is always present and the values in gold are much higher.

Minerals associated with the deposit are typical of most gold ores in SE. Alaska, such as iron pyrite, galena, chalcopyrite and zinc, as well as others.

In this particular vicinity of important veining (ore deposition), strong lines of shearing are conspicuous, which the G. M. fissure cuts at a narrow angle of 10° on the strike and from 30° to 40° on the dip. Two shears have been crossed in the total length of drift, and the effect on the vein has been a splitting into stringers at the intersection. This I believe was caused by the differential movement in crossing the line of previous stresses. Soon after crossing, the vein comes in as a well defined ore body. In crossing other shears, this feature should be more or less a general rule. Veins that fall under the G. M. type, where the thickness of ore, as well as the grade, is controlled by structural features discussed, are subject to sudden change. These changes that may take shape in various forms from narrow ore to lenses or ore shoots of any size or any grade, have in my experience needed exploration work to prove the difference between a possible mine or just another prospect.

Assays taken from all portions of the vein exposed show the values to be irregular--in most cases muck-pile samples taken from rounds shot out, are higher in values than channel samples. Many samples, in fact many hundreds, have been taken by mortar and pan method and they vary in gold content within a matter of inches, or in the same cuts.

As the G. F. vein is similar in many respects to the one discussed, I will be quite brief in my description of it.

This vein has been openout on the surface for a distance of 1,000 feet and is traceable on its strike in different places for more than a mile. The average thickness of quartz is 4 feet. In many places on the outcrop free gold is visible by panning and some fine specimens have been picked up, with coarse gold imbedded in the quartz.

Numerous assays, taken from the vein in many different places, show values from \$2 to \$80 per ton in gold.

The distance apart of the two veins, measured from the G. F. outcrop to the G. M. tunnel site, is 533 feet. The former vein strikes S. 30° E. and dips from 75° to a near vertical position SW. The latter vein strikes S. 20° E. and has an average dip of 45° SW. In between the two veins strong lines of shearing are spaced a short distance apart. Some of these shear zones are potential ore zones that will be cut in the future development of the property.

A proposed crosscut of 417 feet would intersect the G. F. vein with vertical backs of 325 feet and a continuation of the crosscut approximately 937 feet would cut the G. M. with vertical backs of 440 feet.

In conclusion it might be well to mention a few facts pertaining to the district as a whole.

The large low grade gold deposits on the Windham Bay side in the past years have been partially developed in a hap-hazard manner. My experience on the property of the Alaska Windham Gold Mines Company, as well as a cursory examination of adjoining property, leaves no doubt in my mind that in the near future these properties will be developed. Mistakes have been made that were the cause of unjust criticism, and that reflected on the different properties in the district. It is my belief that intelligent reasons were the least considered. Properties that were partially developed in the past and at that time considered as prospects of merit are worthy of re-examination under the modern mining methods of today.

I feel that the district merits more than the usual cursory investigation that does more harm than good in most mining districts.

Respectfully submitted,

(Sgd) HERMANN KLOSS

12/5/40.

SUMMARY DESCRIPTION OF THE 40% LODE CLAIMS, SUMDUM, ALASKA

H. KLOSS

The 40% comprises a group of six claims situated near tide-water on Endicott Arm, a deep-water fjord. The property is accessible at all time of the year by ocean-going ships. Its location near the coast affords the natural advantages of most producing mines in the Juneau district. Water for power is within a few hundred feet of these outcrops and the claims have an abundant growth of spruce and hemlock timber suitable for general use. Topographical features are favorable for exploration and the winters are mild with very little snow-fall in the lower region near sea level.

For the preliminary development of this property, that surface indications warrant, a diamond drill could be used to good advantage, or the ground could be prospected by crosscuts driven in at different intervals on the ore zone. The strike and dip of the deposit eliminates any danger of the water from the fjord, on its SE. trend, where considerable backs on the ore zone could be gained within a short distance.

The 40% is a fine type of selective replacement deposit. Two well defined lines of fissuring spaced about 80 feet apart are noteworthy structural features. One of these fissures, that I have termed the main ore zone, has been opencut for a distance of one claim length--the other is exposed for a short distance near the beach. The opencuts range in width from 16 to 30 feet across the ore, depending on the amount of overburden to contend with. In all cuts exposed, solid bands of sulphides are continuous and show no important change from the beach to the last opencut to the SE.

Minerals in order of importance are as follows: Zinc, lead, silver, and gold. The iron content ranges from 10 to 20 per cent, carrying a small percentage of copper.

The host or country rock is a calcareous slate, and the rock for a considerable distance away from the fissures has been highly altered, showing widespread sulphide mineralization, zinc being the predominating mineral of importance.

Representative samples taken from the mineralization in the outcrops show values of about \$8 per ton in the order named above. The ores make a good recovery of 95%, and in conclusion I would say that the prospect merits the attention of capital.

Respectfully submitted,

(Sgd) HERMANN KLOSS

SUMMARY REPORT ON THE GOLD MARIE AND GOLD FOURTH LOBE CLAIMS

By

H. KLOSS,
Sumdum, Alaska,
9/30/41

The Gold Marie and Gold Fourth comprise a group of six mining claims lying at an elevation of 2,000 feet above sea level, 10 miles southeast of Sumdum near Endicott Arm.

With the exception of a short period of time, this property has been under continuous development by the writer and Jack Davis, the present owners and discoverers. During the past few years much work has been performed without any help in any manner from outside sources. Developing the mine under these conditions has been a slow tedious task--the work accomplished being performed by hand, the single-jack method.

Summarizing the work done at the mine underground, this includes 173 feet of drift on the vein and 137 feet of raise work in ore, the results of which are very encouraging.

Briefly discussing the merits of the property, it has much in its favor of becoming a mine of importance. Deep-water transportation is located within 6,000 feet of the outcrops and timber is available on the ground. From our beach camp at the landing we have a good pack trail that could be constructed into a cat road within a few weeks with a small crew of men. I mention the cat road as I believe it to be more economical than erecting a tram line for preliminary development underground.

A development program that I have in mind, and one that should block out a sufficient tonnage of milling ore and prove many other factors, would not exceed a cost of \$30,000. The plan calls for a crosscut tunnel to intersect the Gold Fourth and Gold Marie veins. The former vein would be cut at a distance of 417 feet, with vertical back of 325 feet, and a continuation of the tunnel for a total distance of 937 feet would cut the latter vein with vertical back of 440 feet, with approximately 600 feet of stoping ground at the point of intersection.

Under this proposed method of development the Gold Fourth would be under production, milling the ore with a small pilot mill, while the other work continued to cut the Gold Marie vein.

A careful study of geologic features in the vicinity of the veins, which the tunnel would crosscut, appears favorable for other orebodies being encountered under the proposed development plan.

In this particular section of the district strong lines of shearing are a conspicuous topographical feature that deserve more discussion than I care to take up in this brief report. Both veins are confined to these persistent structural planes.

The Gold Marie vein is confined to the hanging wall of one of the strong shear zones and shows faulting of slight displacement--a few inches of fault gouge is present on the hanging-wall, and the quartz breaks free. Pinches and swells are characteristic features on both the strike and dip. The quartz on the hanging wall varies from less than a foot to over 5 feet in thickness and follows more or less the general rule of veins of this particular type of deposition.

At the time of writing no attempt has been made to crosscut through the full width of mineralization, or the width of the mineralized zone of stringers and sulfide impregnation, that make up the foot-wall portion of the deposit. Briefly, the sequence of vein deposition suggests three or four different stages of mineralization. What appears to be an important structural feature, as I see it, was the later adjustment along the previous shearing accompanied by slight faulting and important veining.

The Gold Fourth vein is similar in many respects to the Gold Marie, therefore, my description will be quite brief. This vein has been exposed on the surface for 1,000 feet and is traceable on the surface in different places on the strike for more than a mile. The average thickness of quartz exceeds 4 feet and in many places in the outcrop free gold is visible by panning the ore. Some very fine specimens of ore have been picked up with free gold imbedded in the white quartz.

Important factors of practical value as I see them are: The relation of the veins to the strong shears, as cited above. Both veins show characteristic features of the compound or reopened type of vein. In most places the veins show the banded or ribbon structure, and graphite is always present. In the banded portions of the veins the values increase. This needs no further discussion to the experienced mining man as a favorable type of veining.

In discussing veins of this type, where sudden changes are likely to take place both in the thickness of the veins, as well as in the values, there are no rules to go by that were ever reliable, to my knowledge. The one exception, and the only one I personally know of, applying to prospects of merit, is a good sound development program under efficient management.

Hundreds of samples have been taken from all parts of the veins, most of which were mortar and pan samples, but a great number of them were sent to different places for assays, and the values are favorable.

In conclusion, I have omitted as far as possible in this brief report any theoretical discussion and have attempted only to set forth the facts as I see them from my own personal study of our property.

Respectfully submitted,

(Sgd) HERMAN KLOSS

SYNOPSIS OF REPORT ON THE 40% LODE CLAIMS

The 40% includes a group of six mining claims, located 8 miles southeast of Sundum, near the south shore line of Endicott Arm. Endicott Arm is a deep-water fiord that is accessible at all times of the year to ocean-going ships of any tonnage.

The property's location near the coast affords the natural advantages of most SE. Alaska mines for economical operations throughout the year. Water for power is available within 300 feet of the outcrops and the ground has an abundant supply of spruce and hemlock timber that is suitable for general purposes.

Topographical features are favorable for prospecting the ground, either by drill or drifts and crosscuts. The ore body could be explored for less cost than most prospects could be reached by road work. Good backs could be gained by driving a working tunnel a few feet above high tide level in ore. The ground is firm and would require no timbering--large stopes could be opened without any danger of caving and the strike and dip eliminates any danger from water of the fiord.

The 40% is a fine type of selective replacement deposit and contains the following minerals in order of importance: Zinc, lead, silver, gold and copper--the iron content ranges from 10 to 15 per cent. Near the beach alteration is extensive, where the full width of mineralization can be observed, showing disseminated sulfides over a wide area characteristic of the main ore channels.

Two well defined lines of fissuring are noteworthy structural features of the main ore zones, spaced about 80 feet apart. On one of these zones the deposit has been exposed in different places on the strike for a distance of one claim length. Open-cuts range from 16 to 30 feet across the orebody and in all cuts, solid bands of sulfides are exposed as named in order above. The country rock appears to be a calcareous slate, and in places much lime-carbonate is present.

Representative samples taken from the mineralization in the outcrops and thoroughly tested by some of our large mining companies were reported as favorable and show the ores to make a good recovery by flotation.

Judging the prospect from my many years experience in the field and mines, and considering the favorable factors briefly mentioned above, I feel that the 40% merits more attention than Davis and I have been able to afford since its discovery.

It is a fact well known that our large mining companies are hard to interest in undeveloped prospects, even to the extent of a cursory examination.

In conclusion, the small expenditure that would be necessary in opening up this property, that seems necessary in most of our mines, is well worthy of the potential possibilities of the 40%.

Respectfully submitted,

(Sgd) HERMAN KLOSS