SILVER DUKE MINES LTD.
The Max Claims
Watson Lake Mining Division
Yukon Territory

ALRAE ENGINEERING LTD.

September 3, 1970

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INTRODUCTION

On August 22, 1970, the writer traversed and examined mineralization exposed on the Max claims which has resulted from work during the past two months by Mr. R. Young and two men. This work has consisted chiefly of hand trenching in overburden and rock trenching to trace and expose mineralized zones.

During the examination ten different trenches were examined, samples were taken of mineralization exposed in these trenches and the general geology of the claim group noted.

LOCATION AND ACCESS

The Max claims are located at the headwaters of an easterly flowing tributary of the Hyland River, approximately 20 miles east of Frances Lake and some 100 miles north of Watson Lake, B.C. A bush road leads westerly from Mile Post 47 on the Canada Tungsten Mine access road which is 107 miles north of Watson Lake. This access road travels along the northern bank of an easterly flowing tributary of the Hyland River for a distance of 11.6 miles to the Silver Duke Mines camp. From this point a bulldozer trail, suitable for four wheel drive vehicle, during dry periods, continues for another 12 miles westerly and northwesterly along the river system to the Max claims. The last mile of this trail is not suitable for vehicles.

Co-ordinates of the claims are 128°44'W longitude and 61°17N latitude. Elevation varies from 4,500 feet to 7,000 feet.

PREVIOUS WORK

Mineralization was discovered in this area in 1964 and has been prospected sporadically since that time. Some shallow trenching, local geological mapping and magnetometer surveys were carried out during the summer of 1965 and again, during 1968. The 1968 work included an electromagnetic survey and a ground magnetometer survey,

by Seigel Associates Ltd. The magnetic surveys indicate relatively small but strong anomalies probably caused by magnetite occurrences. No anomalies were encountered by the electromagnetic survey work.

Two diamond drill holes were drilled during 1968 to depths of approximately 100 and 150 feet. These holes tested a weak magnetic anomaly on which mineralization had been encountered in trenching work. The holes are located near the camp site on claim Max 3.

CLAIMS

Claims and their record numbers are as follows:

CLAIM NAME	RECORD NUMBER
Max 1 - 40	Y17370 - Y17409
Max 41 - 68	Y22679 - Y22706

All 68 claims are within the Watson Lake Mining Division.

GEOLOGY

Geological Survey of Canada maps indicate the area of this property to be underlain by sedimentary and volcanic rocks of Precambrian to Devonian age which have been intruded by Cretaceous granitic rocks. The sediments are indicated to dip steeply northwest. Intrusive rocks occur on the northeastern portion of the claims. Although rock outcrops are generally abundant in this area, coarse boulders of glacial morain occur in the lower sectors of the valley and obscure bedrock.

Mineralization includes magnetite, sphalerite, galena and some minor chalcopyrite associated with skarn zones. Skarns and biotite schists are the chief host rock of mineralization and appear to be more strongly mineralized in the vicinity of intrusives.

There are three areas in which trenching work has been done on the claims and which were examined by the writer. Skarn mineralization occurs in the vicinity of the old drill camp and adjacent to the common claim posts of Max 1, 2, 3 and 4 claims. Trenches approximately 2,000 feet to the west of this point also expose skarn mineralization and have been called the Western Zone. Trenches approximately 3,000 feet to the southeast have been called the Eastern Zone and expose skarn mineralization with which chalcopyrite is associated.

The original discoveries and area in which two diamond drill holes were drilled is in the vicinity of the camp site. Exposures 500 feet to the east of the camp consist of four separate occurrences in a shallow bulldozer trench and three hand dug test pits. None of these appear to represent the same zone of mineralization, however, the widest mineralized zone, four feet in width, was sampled by the writer and found by assay to contain 2.62 oz of silver per ton; 0.60% lead and 6.84% zinc. Mineralization exposed within 50 feet of the final posts of Max 1 and 2 claims was also sampled in a trench which exposed a six foot wide zone of mineralized skarn. This sample was found to contain 3.48 oz of silver per ton; 2.32% lead; 1.91% zinc. Host rock to the skarn in this area is a medium grey impure quartzite.

The Western Zone of mineralization, approximately 2,000 feet to the west of the camp site, again consists of silver-lead-zinc mineralization exposed in epidote rich skarn in a group of three trenches. Although blasting was not completed in this trench, it is apparent that the skarn mineralization occurs in a host rock of impure quartzite. A six foot sample at the south end of the deepest trench was found by assay to contain 14.29 oz of silver per ton; 7.94% lead; 7.82% zinc and 0.24% copper. A sample taken at the other end of this trench, approximately 25 foot distant, in a parallel narrow band of skarn (two feet wide), was found by assay to contain

3.59 oz of silver per ton; 2.48% lead and 0.97% zinc. A trench to the west of these exposures which had been dug to bedrock but not drilled and blasted exposed a rather fresh volcanic agglomerate containing angular fragments up to one and one-half inches in width. This rock appears to unconformably overlie the quartzites which dip 70° to the north at this point. Traces of pyrite were the only sulphide minerals noted in the agglomerate.

The Eastern Zone of mineralization approximately 3,000 feet southeast of the final posts of Max 1 and 2 claims consists of two adjacent trenches separated from a third trench approximately 400 feet to the west and near a small stream. The two short trenches exposed large boulders and frost heaved rubble of skarn in impure quartzites. A six foot sample from the southernmost of these two trenches assayed 0.58 oz of silver per ton; 0.06% lead; 0.72% zinc and 0.13% copper. The trench about 400 feet to the southwest exposes a limestone band and disseminated lead-zinc mineralization. This trench is approximately seventy feet long and appears to be almost along the strike of the limestone and quartzite which has an azimuth of 230° and dips 48° to the east. Small pegmatite dykes cut the sediment in this area. Some skarn mineralization has locally developed in these rocks but is very irregular and occurs chiefly at the hanging wall of the ten foot thick limestone band. This mineralization, occurring in a sheared siliceous zone three feet in true width, was found by assay to contain 17.48 oz of silver per ton; 7.23% lead; 3.80% zinc; and 1.84% copper. Other lead-zinc mineralization was noted near the foot wall of this limestone band, however, the rock was deeply weathered and had a poorly exposed surface, consequently, a reliable sample could not be taken.

All occurrences of mineralization examined, except the two in which the higher silver-lead-zinc content appears, contain magnetite as a major constituent of the skarn material. Magnetometer

surveys by Seigel & Associates, however, indicate the magnetite occurrences relatively limited extent. Although there is a reasonable amount of outcrop exposure on the property, systematic geological mapping has not been completed and it is evident that it would be most useful in trying to locate a structural trap for mineralization.

CONCLUSIONS AND RECOMMENDATIONS

Initial prospecting work has indicated and confirmed the presence of numerous isolated occurrences of silver-lead-zinc mineralization in skarn zones developed in slightly metamorphosed sediments on the Max claims. Magnetite is associated with many of these occurrences but not all. Electromagnetic geophysical methods have been tried on a portion of the ground with negative results, however, the sulphide occurrences are not sufficiently dense to be electrical conductors. Mineralization appears related to calcareous sediments and enrichments appear to occur associated with structural features.

To continue with the exploration and evaluation of this property, the following work is recommended:

(a) Geological mapping of the claim group on a detailed topographic map;

(b) Geochemical soil sampling in portions of the claims on which glacial debris is not extensive;

(c) Shallow diamond drilling or further test pitting of the Eastern and Western Zones of mineralization;

(d) Drilling or trenching of the structural features outlined by geological mapping to test for sulphide occurrences.

COST ESTIMATE

Approximate cost of the above recommended work would be as follows:

(a)	Geological mapping	$ 4,000.00
(b)	Soil survey work	8,000.00

(c)	Shallow diamond drilling	$ 20,000.00
(d)	Trenching	8,000.00
	TOTAL	$ 40,000.00

Should this work indicate an economically significant zone of mineralization, much further work would be required to completely evaluate the discovery.

Respectfully submitted:

Rae G. Jury

Rae G. Jury, P. Eng.

CERTIFICATE

I, Rae G. Jury, of the City of Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geological engineer.

2. I am a graduate of Queen's University in Kingston, (B.Sc. in Geological Sciences, 1957).

3. I am a registered Professional Engineer of the Provinces of British Columbia and Ontario and also a member of the Canadian Institute of Mining and Metallurgy.

4. I have practiced my profession since 1957 with Labrador Mining & Exploration Company, Quemont Mining Corporation, Canadian Johns-Manville Co. Ltd., and Alrae Engineering Ltd.

5. I have examined the location of some of the key claims of the Max group and found them to be located in accordance with the Yukon Quartz Mining Act.

6. I have personally examined mineralization exposed on the Max claims on August 22, 1970.

7. I have not received, nor do I expect to receive, any interest, either directly or indirectly, in the properties or securities of Silver Duke Mines Ltd.

DATED AT VANCOUVER, this 3rd day of September, A.D. 1970.

Rae G. Jury, P. Eng.