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NEWMONT
REPORT.

(GORDON GUTRATH)

SILVER DIAMOND GROUP - ATLIN, B. C.

The Silver Diamond group of 73 claims are located on the headwaters of Boulder Creek, about 16 miles by road, northeast of Atlin, B. C.

Summary and Conclusions

The 'rediscovery' of sulphides in an old trench and subsequent spectrographic analysis led to the discovery of tin values in the exposure. The association of pyrrhotite suggested magnetic work and the anomalous areas located were trenched and sampled. The apparent small size of the mineralized zones and the low or negligible tin values led to the suspension of work. The tin mineralization appears to be a very localized occurrence related to the quartz vein mineralization.

General Geology

The area is underlain by the Cash Creek Group rocks near a contact with a small alaskite batholith. Atlin intrusive rocks of ultramafic composition are abundant in the area.

Local Geology

The main rock exposed in the trenches is a talcose basic volcanic with minor peridotite and serpentine zones. Contact metamorphism has developed a hornfelsic texture and fine black biotite is increasingly apparent as the alaskite contact is approached. Remnant limestone blocks occur as coarsely recrystallized calcite. Diopside with poorly developed garnet occur in some shear or fault zones. Narrow quartz veins trend north-northwesterly through the area.

Mineralization

Weakly disseminated pyrite-pyrrhotite is present in the volcanic rocks and all specimens contain minor to moderate amounts of magnetite. The main mineralization occurs as small, irregular elongated zones, apparently closely associated with quartz veining and the limestone blocks. Massive to disseminated pyrrhotite-marcasite, streaks of chalcopyrite, erratic sphalerite, and patches of fluorite occur in a sericitized feldspathic groundmass with varying amounts of quartz.

TIN

associated
Sn + Pb

The diopside (skarn?) contains a little disseminated pyrite-pyrrothite-chalcopyrite.

The quartz veins contain all the minerals mentioned above plus a very erratic distribution of silver bearing tetrahedrite. Specks of scheelite are present in the quartz and the mineralized zones. No cassiterite was identified megascopically.

Trenching

Twelve trenches, totalling 3,100 feet in length, average width 16 feet, average depth 6 feet, were put down on claims 3 and 4, in the vicinity of the original showing. Trench 12 was not completed but oxidation in the walls of the trench suggested that the mineralization exposed in trench 10, at sample 58, extends at least to trench 12. Both the topography and the uncertainty of strike direction led to some misorientation of the trenches.

Magnetism

An area 1,000 feet by 1,000 feet was run with an Analaia Magnetometer. The magnetics are erratic due to the irregular distribution of magnetite and the spotty occurrence of peridotite. As a strong magnetic low was associated with the original sulphide showing, other lows were used as guides in locating the trenches. The reasons for these lows is not clear.

mag low

Sampling

Tin values are confined to the area of the initial showing in trenches 1 and 2 and mainly to the west side of this showing. Only traces of gold, tungsten, and nickel were found. Samples 84 to 95 were assayed for tin only, and all ran nil. A little chalcopyrite and sphalerite were present in some of these samples.

Other assaying was as follows:

<u>NO.</u>	<u>TRENCH</u>	<u>DEPTH</u>	<u>SH.</u>	<u>CU.</u>	<u>ZH.</u>	<u>AG.</u>	
62	1	5.0	0.42	2.1	0.22	1.1	5.3
63	1	3.2	0.10	2.3	0.22	1.7	3.3
64	1	3.0	0.05	2.5	0.15	2.7	0.2
65	1	5.0	Tr	0	0.22	1.1	N11
66	1	6.0	0.21	1.26	0.25	1.5	0.5
				<u>3.91</u>		<u>5.1</u>	
	Composite	24.2	0.14	-	-	-	1.48
67	1	2.0	0.01	0.02	0.07	0.1	22.4
70	1	5.0	0.01	0.05	-	-	-
72	1	3.0	0.01	0.05	0.10	2.0	0.2
73	1	3.0	0.01	0.03	0.22	0.7	2.1
		<u>15.0</u>		<u>4.6</u>		<u>2.8</u>	<u>11.8</u>
68	2	5.0	0.34	-	0.15	0.1	-
69	2	5.0	Tr	-	0.07	1.1	-
	Composite	10.0	0.26	-	-	-	0.00
71	3	2.0	0.02	-	0.01	-	-
74	4	2.0	0.02	-	0.01	-	-
79	4	2.0	Tr	-	0.32	-	-
75	5	Grab	Tr	-	0.07	-	0.52
76	5	1.6	Tr	-	N11	-	0.28
77	5	1.2	Tr	-	-	-	-
78	5	1.5	Tr	-	N11	-	0.08
80	6	2.0	Tr	-	-	-	-
81	6	1.2	Tr	-	-	-	-
82	6	1.4	Tr	-	-	-	-
83	6	1.1	Tr	-	-	-	-
	Composite	-	N11	-	0.07	-	10.18

22.8
39.2

General

The deposit is an interesting and unusual geological occurrence, but has no economic aspects. There are undoubtedly other similar occurrences in the area but there is no reason to assume that they would be larger and economic.

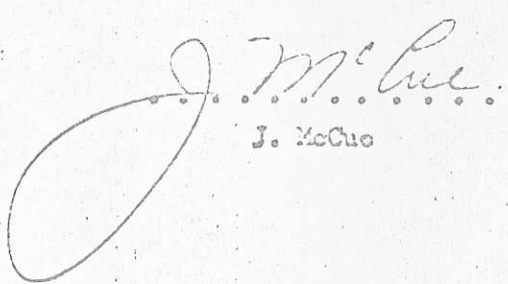
The occurrence of fluorite as an accessory mineral in the alaskite may indicate the presence of chrysoberyl.

Maps

Two maps accompany this report - a Surface Plan and a Magnetic map.

References

Geological Survey of Canada Memoir 307 - Atlin Map Area, by J. D. Aitken (1959).


J. McCue

October 16, 1963.