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FINAL REPORT

WHITESAIL LAKE PROJECT

1988

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for

KERR ADDISON MINES LIMITED

Vancouver, B.C.

August, 1988

N.T.S. 93 E

Donald B. Cross, P. Geol.

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SUMMARY

Regional prospecting in the Whitesail Lake map area has identified two areas which require follow-up sampling to better define anomalous gold values in bedrock.

The Smoke Mountain prospect carries up to 0.37 ounces per ton gold in altered and structurally disrupted pyritic Kasalka Group volcanics intruded by Late Cretaceous granodiorite. Additional work is warranted in this area.

In addition, anomalous gold and arsenic values encountered in brecciated and silicified volcanics require additional detailed sampling in the immediate vicinity of Sibola Peak.

Porphyry copper prospects in the Whitesail Lake area do not carry significant values in precious metal mineralization.

LOCATION AND ACCESS

The northern limit of the Whitesail Lake map sheet (N.T.S. 93E) lies 100 km south of the town of Houston, B.C. Access to the northern portion of the area can be gained by motor vehicle on all-weather roads leading south from Houston. The remainder of the area is accessible only by charter aircraft.

Approximately 40 percent of the map area lies within the boundaries of Tweedsmuir Provincial Park.



The map area encompasses both the eastern limit of the Coast Mountains and the adjoining western margin of the Nechako Plateau.

Coast Mountain terrain is rugged with peaks rising above 1800 metres. The Nechako Plateau is underlain by volcanic and sedimentary rocks and is characterized by subdued topography with average elevations of 1400 metres.

Above 1200 metres alpine conditions prevail whereas below this level mature stands of spruce, jackpine and balsam grow.

Deeply incised northeast-trending valleys are occupied by lakes, some of which have been flooded to provide for the hydroelectric development at Kemano on the western limit of the the map area.

Pleistocene glacial ice sheets advanced in a northeasterly direction through the then existing drainage system.

HISTORY

In the early 1900's numerous small base metals and gold showings were discovered in the area by prospectors.

The largest exploration effort, to date, focussed on the Berg porphyry copper-molybdenum prospect. Kennco Explorations, (Western) Limited, in work carried out between 1961 and 1976, outlined a deposit said to contain geological reserves of 400 million tonnes containing 0.4 percent copper and 0.05 percent molybdenite.

The Kennco work attracted numerous mining companies to the area to extend the search for additional copper-molybdenum deposits. Little or no systematic sampling or analysis for gold was carried out during this time.

Recent exploration has focussed on the search for polymetallic mineral deposits with significant precious metal content.

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REGIONAL GEOLOGY

The Whitesail Lake map area lies on the south limb of the Skeena Arch, a northeast-trending structural high formed during Jurassic time.

Volcanic and sedimentary rocks of the Jurassic Hazelton Group comprise a basal marine and non-marine arc assemblage deposited in a widespread area over the Skeena Arch. Early and Middle Jurassic age arc-related volcanism is of significant economic importance.

This was followed in Upper Jurassic to Upper Cretaceous time by deposition of mixed volcanic and sedimentary rocks of the Gambier and Skeena Groups. This package of shallow marine volcanics and sediments contributes little to the economic endowment of the area.

Cretaceous and Tertiary age Kasalka, Ootsa Lake, Endako and Chilcotin Group volcanics of felsic to mafic composition cover extensive areas with gently dipping flows and pyroclastic rocks.

Upper Cretaceous to Eocene age Nanika and Goosly Lake intrusions are associated with the development of basin and range geomorphology that occurs throughout the Stikine Terrane.

Associated with the Skeena Arch is a distinct northeasttrending zone of intrusions which are well mineralized and incorporate both the Berg and Granisle deposits.

The Berg deposit is a stock type calc-alkalic porphyry associated with Middle Eocene porphyritic rocks. An annular alteration zone surrounding a quartz monzonite stock carries both hypogene and supergene copper-molybdenum mineralization.

Bergette prospect is a "failed" porphyry in that coppermolybdenum mineralization occurs in scattered, small, dispersed zones within a large area of jarosite capping. No estimates of geological reserves of mineralization have ever been published for this prospect.

Whiting Creek consists of quartz-molybdenum-chalcopyrite veinlets which occur in altered and intensely fractured quartz porphyry, granodiorite and porphyritic quartz monzonite. Published reserves on the Ridge Zone of 123.5 million tonnes of 0.043 percent MOS₂ and 0.062 percent Cu are currently owned by Saskatchewan Mining and Development Corporation.

TABLE OF FORMATIONS

QUATERNARY

Glacial till and alluvium

TERTIARY

CHILCOTIN GROUP Olivine basalt, plateau basalt

ENDAKO GROUP Basalt, breccia and tuff

CRETACEOUS AND TERTIARY

OOTSA LAKE GROUP Rhyolite, dacitic to basaltic volcanics UPPER CRETACEOUS

KASALKA GROUP Rhyolite to andesite flows

SKEENA GROUP Sandstone, siltstone, shale

GAMBIER GROUP Andesite to rhyolite flows

JURASSIC

ASHMAN FORMATION Shale, siltstone, sandstone

HAZELTON GROUP

SMITHERS FORMATION Volcanic sandstone, greywacke, tuff WHITESAIL FORMATION Rhyolite flows, breccia and tuff TELKWA FORMATION Basaltic to rhyolitic tuff, breccia, flows

TRIASSIC

UPPER TRIASSIC Tuff

PERMIAN AND TRIASSIC

LOWER PERMIAN Limestone, dolomitic limestone PERMIAN AND/OR OLDER

Quartz biotite schist and phyllite

PALEOZOIC AND/OR YOUNGER

Rhyolite and siliceous sediments

PALEOZOIC

GAMSBY GROUP Felsic and mafic tuff, schist

CENTRAL GNEISS COMPLEX Gneiss, migmatite

GRANITOID ROCKS

TERTIARY

EOCENE

GOOSLY LAKE, INTRUSIONS	gabbro and diabase, granite, quartz monzonite
PALEOCENE and EOCENE NANIKA INTRUSIONS	Feldspar porphyry, granodiorite
CRETACEOUS and/or TERTIARY	Diorite, gabbro, granodiorite
CRETACEOUS	Granodiorite
MESOZOIC and/or CENOZOIC	Granodiorite, quartz monzonite, quartz diorite
JURASSIC	
TOPLEY INTRUSIONS	Quartz monzonite
PALEOZOIC	Diorite, quartz diorite

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1988 PROSPECTING PROGRAM

The Whitesail Lake Project was initiated to test the precious metal potential of the known porphyry copper-molybdenum prospects within the map area. In addition, any remaining areas of interest were to be investigated and evaluated for precious metal content.

Accordingly, three areas were selected for detailed investigation by a two-man prospecting crew:

- 1. Sibola Range including Smoke Mountain
- 2. Lindquist Peak area
- 3. Troitsa Peak property of Alpine Exploration Corporation

Field work was carried out on these areas between June 2 and July 19, 1988 by Don Cross and George Benmore. Prospecting, silt and soil sampling traverses were carried out with the aid of a helicopter or a four-wheel drive vehicle.

RESULTS

SMOKE MOUNTAIN

Reconnaissance sampling of the Smoke Mountain area yielded four samples of intensely altered, fractured, pyritic Kasalka Group volcanics as follows:

Sample	No.	Au ppb	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Mn ppm
100660		0100							
103660		2190	48.0	2040	658	2110	>10,000	94.0	7220
103661		560	4.6	85	2150	50	339	2.0	994
103707	>1	.0,000	50.0	1030	594	638	2300	12.0	2750
103708		200	1.0	45	159	30	111	0.5	346

Sample 103707 returned a fire assay value of 0.370 oz/ton gold.

The gold occurrence lies within a fault zone in a 3 km wide band of Kasalka Group volcanics that separates two bodies of Late Cretaceous porphyritic granodiorite. The altered volcanics are continuously exposed in a stream cut for a distance of 0.5 km.

Sample 103707 was taken from a flat-lying massive sulfide vein 0.5 m wide in hydrothermally altered andesite.



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DRAWN BY - P.H.	DATA - D.C.
NTS - 93 E	REVISED-

Silt samples taken from a stream which drains the occurrence show a muted response to the presence of gold mineralization. High levels of manganese within the region may contribute towards forming complex ions with liberated gold. This problem was noted elsewhere in the region.

In 1974, Noranda Exploration drilled six holes in a similar geological environment where induced polarization anomalies were outlined. The area of drilling lies approximately one half mile west of this occurrence. Low values of copper-molybdenum mineralization were returned in altered volcanics and intrusive rocks. The ground is now open for staking.

A 0.1 metre interval of core selected from Noranda's DDH 74-4 at 284 feet consists of massive pyrite within a quartz vein in andesite. Kerr Addison sample 5124 returned the following:

Sample	No.	Au ppb	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Mn pp
5124		1735	7.8	80	390	122	256	2.0	3090

Additional sampling of altered outcrop in the area of the showing will be carried out in September, 1988.

SIBOLA PEAK

Elsewhere in the Sibola Range rock samples taken in the Sibola Peak area 2 km north of the Whiting Creek prospect returned anomalous values as follows:

Sample No	. Au ppb	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm	Cd ppm	Mn pp
5138	665	8.0	>10,000	158	3580	2050	16.0	1055
5140	180	7.8	70	858	54	413	1.5	1505
103622	140	23.8	30	159	528	510	3.0	2270

All three bedrock samples consisted of brecciated and silicified volcanics containing up to 5 percent pyrite and/or arsenopyrite. The breccia zone, visible in the cirque immediately below Sibola Peak, strikes northwesterly with a near-vertical dip and is about 5 feet wide.

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COMB CREEK

Four kilometres southeast of Sibola Peak on the west bank of Comb Creek a 1.5 metre wide massive sulfide vein was sampled. Its strike orientation was N 30°W with a near-vertical dip. Pyrite constitutes about 70% of the vein with sphalerite comprising most of the remainder. The zone could be traced for 25 metres along strike but disappeared into overburden on each extremity. Three samples in the immediate area returned the following results:

Sample	No.	o. Au	Ag	As	Cu	Pb	Zn	Cđ	Mn
		ppb	ppm	ppm	ppm	ppm	ppm	ppm	pp
103623		30	5.0	5	1050	36	470	4.0	1555
103624		360	3.0	80	265	41	5470	61.0	1745
103625		1030	16.6	<5	2200	<2	>10,000	>99.9	1195

A small electromagnetic survey over this occurrence should aid in determining its potential for additional strike length and/or additional zones of interest.

TARA PROSPECT

Silt samples 1001-1019 taken from a creek draining to the NE from Bergette prospect returned intermittent anomalous values in gold and persistent anomalous values in copper. Anomalous values are considered to be those greater than the 95th percentile when all samples are statistically analysed. Anomalous silt results exist above these values for N.T.S. 93 E:

Element	95th	percentile
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Au	19	ppb
Ag	0.2	ppm
As	23	ppm
Cu	66	ppm
Pb	25	ppm
Zn	190	ppm
Ni	26	ppm
Co	16	ppm
Mn	1900	ppm
Мо	5	ppm
Нд	70	ppb
Cđ	0.5	ppm

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The source of anomalous silts appears to be sheared, porphyritic andesite of the Kasalka Group. Limited bedrock sampling and additional sampling of core drilled on the Tara prospect failed to return significant values in gold.

Sample No.		Au	Ag	Cu	Pb	Zn	As
		ppp	ppm	ppm	ppm	ppm	ppm
Rock	5104	160	0.6	350	16	54	7
Rock	5105	10	0.7	214	17	62	29
Rock	5106	30	0.3	590	18	66	9
Rock	5107	15	0.3	90	26	91	14
Core	5115	65	0.5	830	4	56	6
Core	5116	165	0.3	960	7	41	3

The remainder of the samples taken in the Sibola Range provide little encouragement for gold enrichment of the known porphyry prospects.(see Figure 4)

LINDQUIST PEAK AREA

Limited rock and silt sampling in the vicinity of the Deerhorn Mine failed to indicate additional areas of interest for exploration.

Silt sample 1083 in McCuish Pass did return a value of 155 ppb gold in an area underlain by Mesozoic chloritized quartz diorite and granodiorite.

Rock sample 5101 was taken from a small sulfide occurrence at Ear Lake. Silt samples in the immediate area failed to detect additional mineralization.

Sample No.	Au	Ag	Cu
	ppb	ppm	ppm
5101	7400	63.0	1930

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TROITSA PEAK

Two days of sampling were undertaken on the Troitsa Peak property of Alpine Exploration Corporation accompanied by Dr. T. A. Richards. Detailed property information is available in reports written by Alpine personnel.

Sampling of silicified, epithermal fracture systems associated with the Troitsa hypabyssal intrusive complex was carried out.

A few anomalous values in gold were reported, however, the probablility of encountering widespread gold mineralization in these fracture systems appears to be low.

No further work is recommended.

CONCLUSIONS AND RECOMMENDATIONS

SMOKE MOUNTAIN

Further work is required to assess the significance of gold mineralization discovered in 1988. Detailed mapping and sampling in the immediate vicinity of the discovery is required. In addition, induced polarization surveying should aid in outlining sulfide bodies which host the gold mineralization.

SIBOLA PEAK

Additional prospecting in this area should focus on identifying additional exposures of brecciated and silicified andesite along northwest-trending structures.

Respectfully submitted,



Vancouver, B.C. August 25, 1988

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