

ENGINEER'S REPORT

on the

ALDER HILL - SEE CLAIM GROUP

Whitehorse Mining District, Yukon.

(60°03' N, 137°18' W)

by

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Consulting Engineer

Dated

January 10, 1968.

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INTRODUCTION

This report describes the ALDER HILL - STE CLAIM GROUP situated along Pirate Creek and the Tatshenshini River near Dalton Post in south-western Yukon.

These claims cover several largely-unexplored occurrences of copper mineralization associated with anomalous structure of the Mush Lake Group in an area where very little scientific exploration has been done to date.

SUMMARY

The ALDER HILL - STE CLAIM GROUP consists of two hundred six (206) contiguous and granted mineral claims which cover sparsely-vegetated and glaciated topography along the Tatshenshini River of south-western Yukon and approximately 5 airmiles southwest of Dalton Post.

These claims cover anomalous structure and include several poorly exposed, unexplored and undeveloped occurrences of copper mineralization in volcanic rocks of the Mush Lake Group. Known mineralization occurs in shearzones developed in andesitic volcanic rock and near the contacts of these rocks with coast range intrusive rocks.

Assays of character samples of shearzone mineralization vary from traces to approximately 3% copper in association with very minor amounts of gold and silver. The granitic rocks of the area are also mineralized, suggesting the possibility of porphyry-type copper deposits being present.

A government-sponsored aeromagnetic survey of the area reveals several significant anomalies, some of which coincide with known mineralization.

SUMMARY (continued)

A recently completed reconnaissance composite geophysical and geochemical survey of a portion of the property revealed several undelineated anomalies which appear to extend the zones of known mineralization and indicate new and unexplored areas of significance. An anomaly of particular importance is indicated on a plateau area in the center of the property. This anomaly indicates a zone 7,000 feet in length and 400 feet in width and exhibits coincident geochemical and geophysical results in an overburden-covered area where float samples mineralized with copper have been reported.

The property presents a promising exploration bet when considering the favorable geologic and geophysical evidence applicable to the property and a comprehensive and systematic surface exploration program is recommended at this time to assess the potential of the property. The initial stage of this exploration program should primarily include geologic mapping, geochemical prospecting and sampling, ground geophysical and geochemical surveys, bulldozer trenching and diamond drilling.

This program should be initiated during the early months of 1968 and is estimated to cost \$250,000.00.

PROPERTY - OWNERSHIP - OPTIONS

This property consists of two hundred six (206) contiguous and granted mineral claims which are shown on the attached property map and cover approximately 10,500 acres of Crown Land. The following tabulated statistics refer to those claims:

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date</u>	<u>Registered Owner</u>
ALDER HILL 1 to 4 incl.	Y 5653 to Y 5656 incl.	11 May 1968	John Amato Whitehorse, Y.T.
ALDER HILL 5 & 7	Y 5722 & Y 5723	12 May 1968	John Amato Whitehorse, Y.T.
ALDER HILL 6 & 8	Y 5724 & Y 5725	12 May 1968	John Amato Whitehorse, Y.T.
TATS 1 to 8 incl.	Y 5796 to Y 5803 incl.	17 May 1968	John Amato Whitehorse, Y.T.
CG 1 to 8 incl.	Y 8349 to Y 8356 incl.	6 June 1968	John Amato, Whitehorse, Y.T.
RT 1 to 6 incl.	Y 18074 to Y 18079 incl.	8 May 1968	Yukon Mortgage & Finance - Whitehorse
TED 1 to 8 incl.	Y 18080 to Y 18087 incl.	8 May 1968	Yukon Mortgage & Finance - Whitehorse
JOE 1 to 6 incl.	Y 18088 to Y 18093 incl.	8 May 1968	Yukon Mortgage & Finance - Whitehorse
STE 1 to 8 incl.	Y 21185 to Y 21192 incl.	30 October 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 9 to 16 incl.	Y 21193 to Y 21200 incl.	30 October 1968	Charles J. Shandalla Whitehorse, Y.T.

PROPERTY - OWNERSHIP - OPTIONS (continued)

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date</u>	<u>Registered Owner</u>
STE 17 to 24 incl.	Y 21201 to Y 21208 incl.	30 October 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 25 to 32 incl.	Y 21209 to Y 21216 incl.	30 October 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 33 to 40 incl.	Y 21217 to Y 21224	30 October 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 57 to 64 incl.	Y 21225 to Y 21232 incl.	30 October 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 41 to 48 incl.	Y 21357 to Y 21364 incl.	30 Nov. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 49 to 56 incl.	Y 21365 to Y 21372 incl.	30 Nov. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 65 to 72 incl.	Y 21373 to Y 21380 incl.	30 Nov. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 73 to 80 incl.	Y 21707 to Y 21714 incl.	27 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 89 to 91 incl.	Y 21715 to Y 21717 incl.	27 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 81 to 88 incl.	Y 21766 to Y 21773 incl.	28 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 92 to 94 incl.	Y 21774 to Y 21776 incl.	28 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 113 to 120 incl.	Y 21777 to Y 21784 incl.	28 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 153 to 160 incl.	Y 21785 to Y 21792 incl.	28 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 97 to 104 incl.	Y 21793 to Y 21800 incl.	29 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.

PROPERTY - OWNERSHIP - OPTIONS (continued)

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date</u>	<u>Registered Owner</u>
STE 105 to 112 incl.	Y 21801 to Y 21808 incl.	29 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 129 to 136 incl.	Y 21809 to Y 21816 incl.	29 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 137 to 144 incl.	Y 21817 to Y 21824 incl.	29 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 145 to 152 incl.	Y 21825 to Y 21832 incl.	29 Dec. 1968	Charles J. Shandalla Whitehorse, Y.T.
STE 121 to 128 incl.	Y 21895 to Y 21902 incl.	4 Jan. 1968	Charles J. Shandalla Whitehorse, Y.T.

Mr. Charles J. Shandalla of Whitehorse, Yukon, agent for Yukon Mortgage & Finance Co. Ltd., Whitehorse, Yukon, holds an option to purchase twenty-four (24) of these claims from John Amato but the details of the said option are not included in this report. The remainder of the property is held by right of location.

No mining and milling plant exists on the property which may be considered as a raw prospect at this time.

Also, no liens are registered against the property.

LOCATION & ACCESS

The ALDER HILL - STE CLAIM GROUP (60°03'N, 137°18'W) is situated in the south-western part of the Yukon Territory along the Tatshenshini River and at its confluence with Pirate Creek , approximately 8 airmiles southwest of Mile-post 106 on the Haines Road.

A tote road 6 miles long crosses the Tatshenshini River at Dalton Post and provides access to the property. Currently travellers using the tote road must ford the Tatshenshini River to reach the property.

HISTORY & DEVELOPMENT

Indian prospectors associated with Jack Dalton first found copper mineralization in the area during the early 1900's but due to prevailing economic conditions and the remote location of the property, the area, in general, received only limited attention in regards to mineral exploration, except in the search for placer gold.

Several years ago, placer miners excavated several shallow bulldozer cuts on the property but the work was poorly engineered and consequently did not succeed in delimiting the mineralized zone.

HISTORY AND DEVELOPMENT (continued)

Later, Mr. George Black (Yukon MP - 1921 - 1930) and Pardon Kane investigated a high grade copper showing situated in the northern portion of the present STE claim group. Little is known of this showing, as records have become lost and the author has not examined this recently acquired section of the property.

During the summer months of 1966, John Amato and Associates moved a small "X-ray-type" diamond drill on to the property but due to management problems no effective drilling was accomplished.

Later in 1966 the Federal Government of Canada published an airborne magnetic map of the area which revealed several significant anomalies which coincide with known mineralization. These anomalies were recently staked by agents of Jackpot Copper Mines Ltd.

During the same year Rogue Point Mines optioned the Sheep Group copper property located on Squaw Creek two air miles southeast of the ALDER HILL - STE CLAIM GROUP and on similar structure. The said company is actively engaged in exploration of the Sheep Group at this time and favorable results are reported including pipe-like and porphyry-type ore structures

HISTORY AND DEVELOPMENT (continued)

contained in Mush Lake volcanic rock and controlled by shearzones.

During 1967, Jackpot Copper Mines Ltd. initiated exploration of the ALDER HILL - STE CLAIM GROUP and conducted reconnaissance geochemical and geophysical surveys of a portion of the property with encouraging results.

The surveys revealed several significant anomalies some of which represent extensions of the known mineralized zones while others represent new and unexplored zones of possible mineralization.

Two strong anomalies were located in the central plateau area of the property. These anomalies coincide with anomalous zones first detected by the Government areomagnetic survey of the area and exhibit coincident geochemical and geophysical results in an area where float samples of copper mineralization have been reported. One anomaly is 7,000 feet long and 400 feet wide and is located in an overburden covered area believed to be underlain by Mush Lake volcanic rocks. Another anomaly is generally circular in shape and possibly indicates the presence of a porphyry-type mineral deposit as float samples of such mineralization have been found in the area.

PHYSIOGRAPHY & GENERAL GEOLOGY

The ALDER HILL - STE CLAIM GROUP essentially covers a sector of glaciated bench-like topography straddling the canyons of Pirate Creek and the Tatshenini River and situated at the northwestern foot of Mt. Beaton in the Squaw Range of southwestern Yukon.

Vegetation generally consists of a sparse growth of poplar and spruce trees and alder brush all which cling to a thin mantle of glacial soil and talus which covers the claims area and conceals bedrock on most of the property.

The claims cover a section of the contact zone between coast range granitic intrusive rock and Triassic volcanic rocks of the Mush Lake Group on the south end of the Silver Creek anticline. These rocks have been faulted and sheared as exemplified by the resulting drainage patterns of this area. The resulting structure contains both acid and basic dykes in some areas.

Several small "late stage" plutons of porphyritic biotite granite have been intruded within the claims area and at one location along the contact between dioritic derivations of the coast range intrusives and green andesites of the Mush Lake Group.

PHYSIOGRAPHY & GENERAL GEOLOGY (continued)

These "late stage" intrusives were followed presumably by the formation of mineral deposits primarily in favorable chemical and structural conditions in the Bush Lake andesites. The intrusives themselves are mineralized at several locations suggesting the possibility of the presence of porphyry-type mineral deposits.

ECONOMIC GEOLOGY & GEOPHYSICS

Copper mineralization occurs in place and as float at several locations on the property. Many of these occurrences exhibit considerable coincidence with geophysical anomalies outlined by government aeromagnetic surveys and by reconnaissance geochemical and ground geophysical surveys. The zones of known and probable mineralization are generally situated near the contacts of coast range intrusive rocks with Bush Lake volcanic rocks and are described as follows:

Area A - Property Map

The ALDER HILL GROUP contains a mineralized shearzone 15 feet wide, developed in andesitic volcanic rocks near the contact of these rocks with a local pluton of biotite granite, and exposed by erosion along the edge of a small ravine. This shearzone strikes 345°.

ECONOMIC GEOLOGY & GEOPHYSICS (continued)

Area A - Property Map (continued)

dips approximately 75° NE, and traverses tangentially along the contact of the local granitic pluton to become lost beneath overburden southeast of the intrusive.

Mineralization consists of disseminated grains and clots of chalcopyrite and pyrite in conjunction with very minor amounts of bornite and magnetite deposited hydrothermally in crumpled, sheared and silicified andesite. Small interrelated lenticular-shaped masses of basic dike rock (gabbro?) situated within the shearzone contain copper mineralization. Selected character samples of chalcopyrite-copper mineralization taken from the shearzone assay in excess of 3% copper with minor amounts of gold and silver. A chip sample taken across the 15 foot width of the zone assays slightly less than 1% copper, but it is expected that such sampling is not representative of the occurrence, since the surface exposure is highly leached and weathered, leaving a rusty-red colored "mask" of gossan over the outcrop. Although the vicinity of the shearing has been subject to block faulting and is largely concealed by overburden, ground geophysical surveys suggest that the occurrence is part of two parallel mineralized zones that traverse intermittently in a NW - SE direction across the claim group.

ECONOMIC GEOLOGY & GEOPHYSICS (continued)

Area B - Property Map

Float samples of porphyry-type copper mineralization are reported from the east-central portion of the STE CLAIM GROUP in an overburden-covered area where the presence of a significant aeromagnetic anomaly has been confirmed by reconnaissance ground geophysical surveys. Field work produced anomalous geochemical results, coincident with anomalous geophysical results, in this area.

Area C - Property Map

Copper mineralization is reported along a 1,000 foot long section of the gorge-like walls of the Tatshenini River Canyon and near the contact of coast intrusive rocks with andesitic Mush Lake volcanic rocks. This mineralization is situated near the northwestern limit of an elongated Government aeromagnetic anomaly, the existence of which has been confirmed by ground reconnaissance geophysical surveys, and exhibits coincident anomalous geochemical values.

Airborne and ground geophysical surveys in this overburden-covered area, in conjunction with geochemical surveys indicate a very significant anomalous zone approximately 7,000 feet long and 400 feet wide.

ECONOMIC GEOLOGY & GEOPHYSICS (continued)

Area C - Property Map (continued)

Due to favorable geochemical, geological and geophysical evidence, especially the presence of mineralized float in the overburden covering this anomaly, and along the walls of the Tatshenini canyon near the end of the anomaly, it is postulated that the anomaly probably represents a concealed mineral deposit located near the contact of coast intrusive rocks with Mush Lake volcanic rocks, and localized by faults.

Area D - Property Map

A similar occurrence of copper mineralization is located in the northern section of the STE CLAIM GROUP on a bench-like area north of the Tatshenini River in an area where the government aeromagnetic survey has produced anomalous results. Unfortunately this author has not examined the showings in this area but it is reported that considerable hand trenching was done in this area during the 1950's under the sponsorship of the Yukon Member of Parliament, George Black. Values in excess of 4% copper are reported, but records have become lost and thus the said reports cannot be verified at this time, although they are considered reliable.

EXPLORATION AND MINING CONSIDERATIONS

Reconnaissance magnetic and electromagnetic geophysical surveys conducted in conjunction with geochemical surveys have provided a reliable method of outlining the extent of the known mineralized zones as well as indicating other favorable areas presently concealed by overburden. These areas could be subsequently exposed by bulldozer trenching and tested at depth by diamond drilling after additional geochemical, geological and geophysical surveys have been completed. Open pit mining methods with their subsequent low unit costs should be applicable in extracting some of the ore developed on the property. The magnitude of such an operation will depend on both the quantity and grade of ore developed.

CONCLUSIONS & RECOMMENDATIONS

The ALDER HILL - STE CLAIM GROUP presents a promising exploration possibility for copper in an area of the Yukon Territory where very little scientific exploration has been conducted to date.

Recently compiled geochemical, geological and geophysical evidence in conjunction with favorable economic conditions justifies detailed exploration of the property at this time.

Consequently a systematic exploration program consisting primarily of geological mapping, geochemical and geophysical surveys ,

CONCLUSIONS & RECOMMENDATIONS (continued)

trenching, and diamond drilling is recommended as the first stage of work on the property. This work if conducted during 1968 is estimated to cost \$250,000.00 and is detailed as follows:

OPERATIONS BUDGET

<u>Item</u>	<u>Cost</u>
1 - Geologic prospecting, mapping & sampling	\$15,000
2 - Linecutting & Ficketing 100 line miles @ \$100/mile	10,000
3 - Ground Magnetometer Survey 100 line miles @ \$100/mile	10,000
4 - Ground Electromagnetic Surveys 100 line miles @ \$150/mile	15,000
5 - Geochemical Survey 150 line miles @ \$100/mile	15,000
6 - Earthwork - Trenching Road Repair & Drill Site Preparation	20,000
7 - Diamond Drilling 8,000 feet of BQ wireline	96,000
8 - General Assaying	4,000
9 - Engineering & Supervision	7,000
10 - Camp & Supply	12,000
11 - Wages & Services	6,000
CARRIED FORWARD	210,000

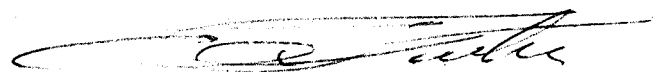
CONCLUSIONS & RECOMMENDATIONS (continued)

OPERATIONS BUDGET (continued)

<u>Item</u>	<u>Cost</u>
BROUGHT FORWARD	\$210,000
12 - Transportation & Communication	8,000
13 - General Administration	5,000
14 - File Assessment Work	2,000
	<hr/>
SUB TOTAL	\$225,000
Contingencies	25,000
TOTAL ESTIMATED COST	<u><u>\$250,000</u></u>

After the program is completed a decision can be made regarding the amount of further exploratory work required to assess the potential of the property.

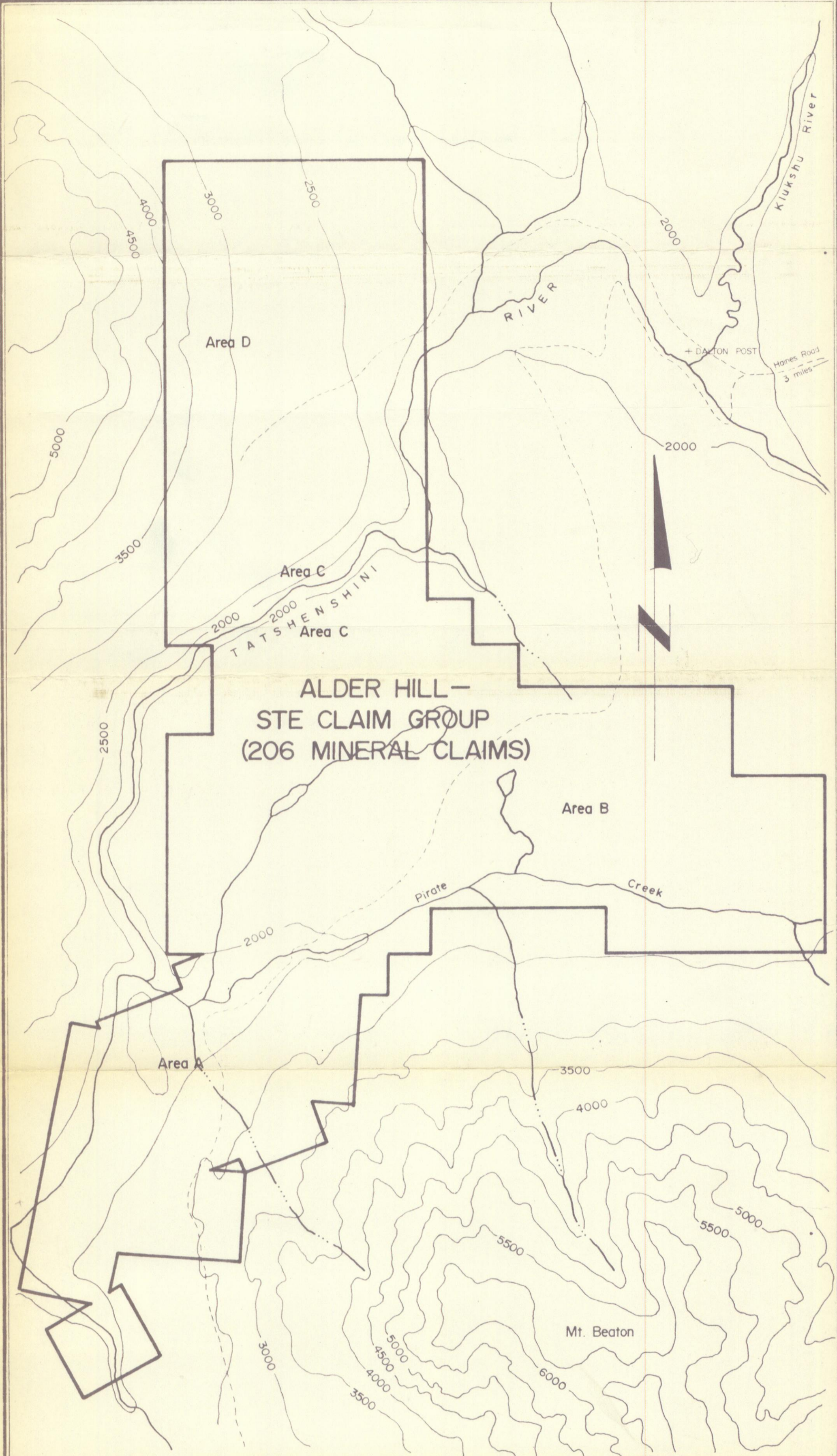
Respectfully submitted,



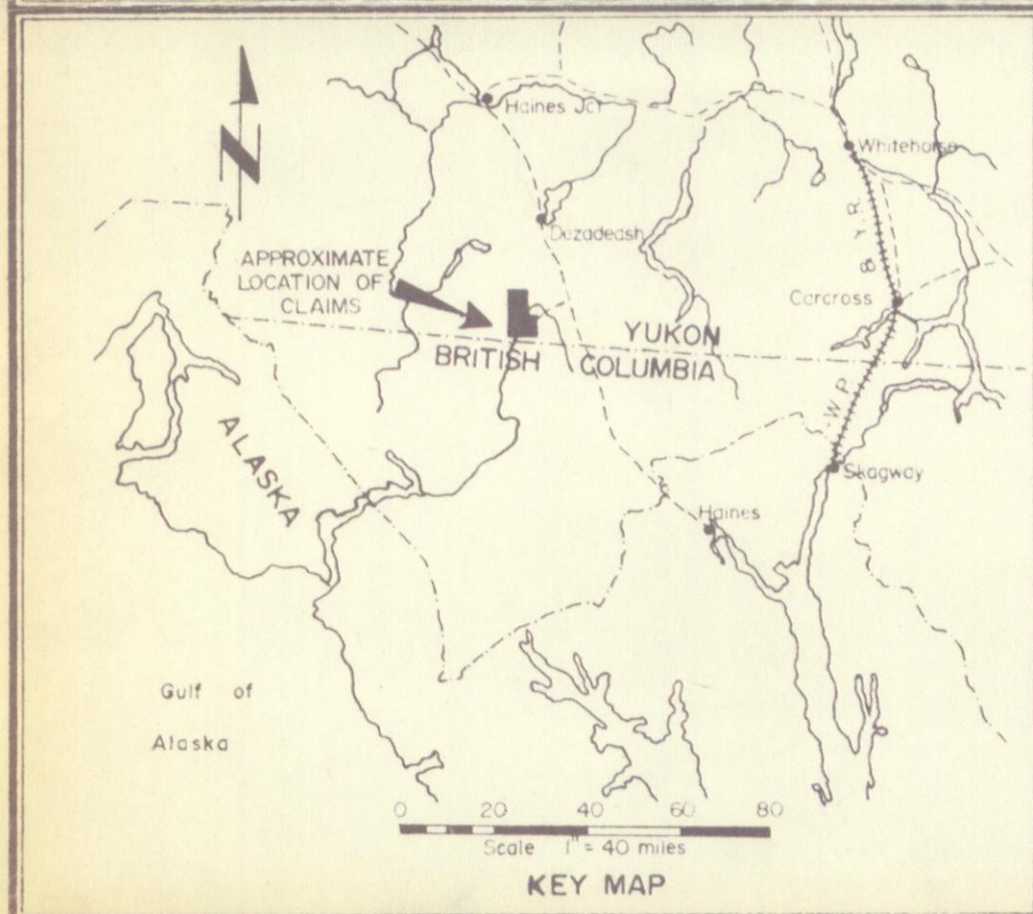
Ace R. Parker, P. Eng.

Whitehorse, Yukon Territory

January 10, 1968



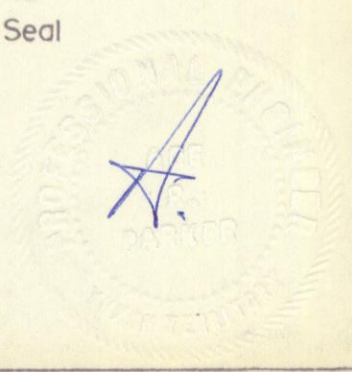
**ALDER HILL -
STE CLAIM GROUP
(206 MINERAL CLAIMS)**



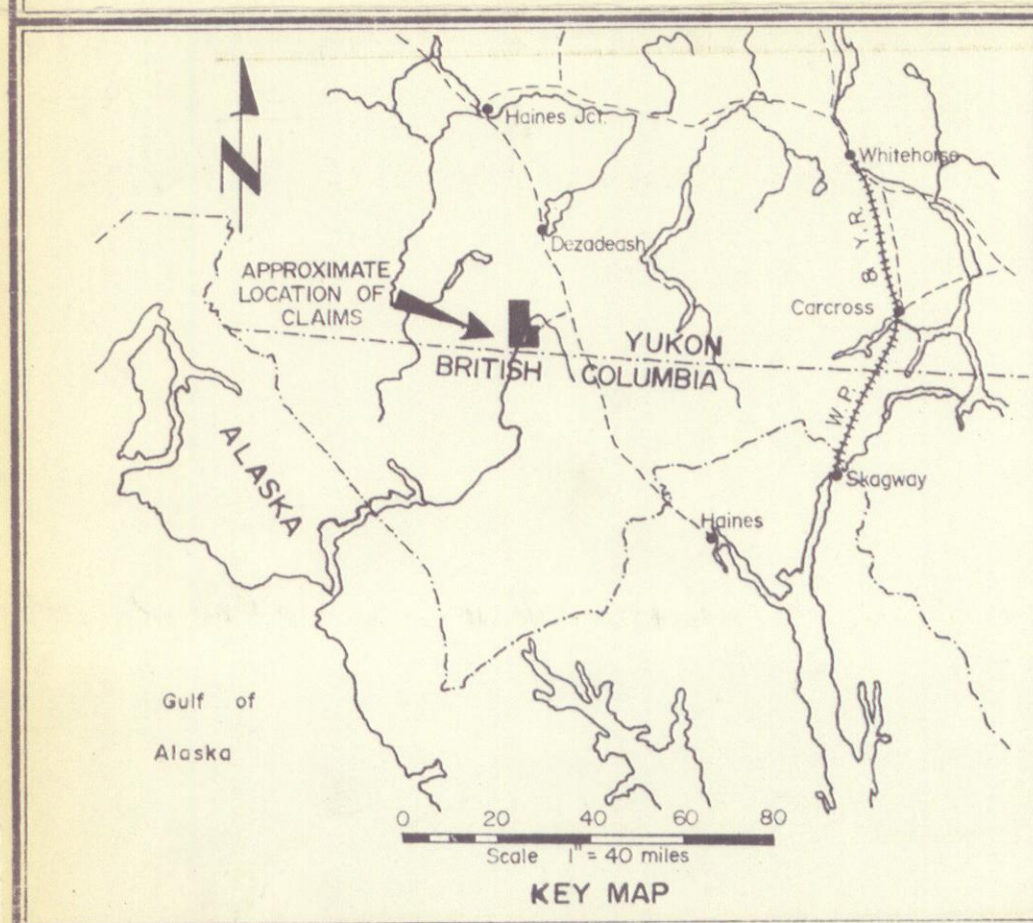
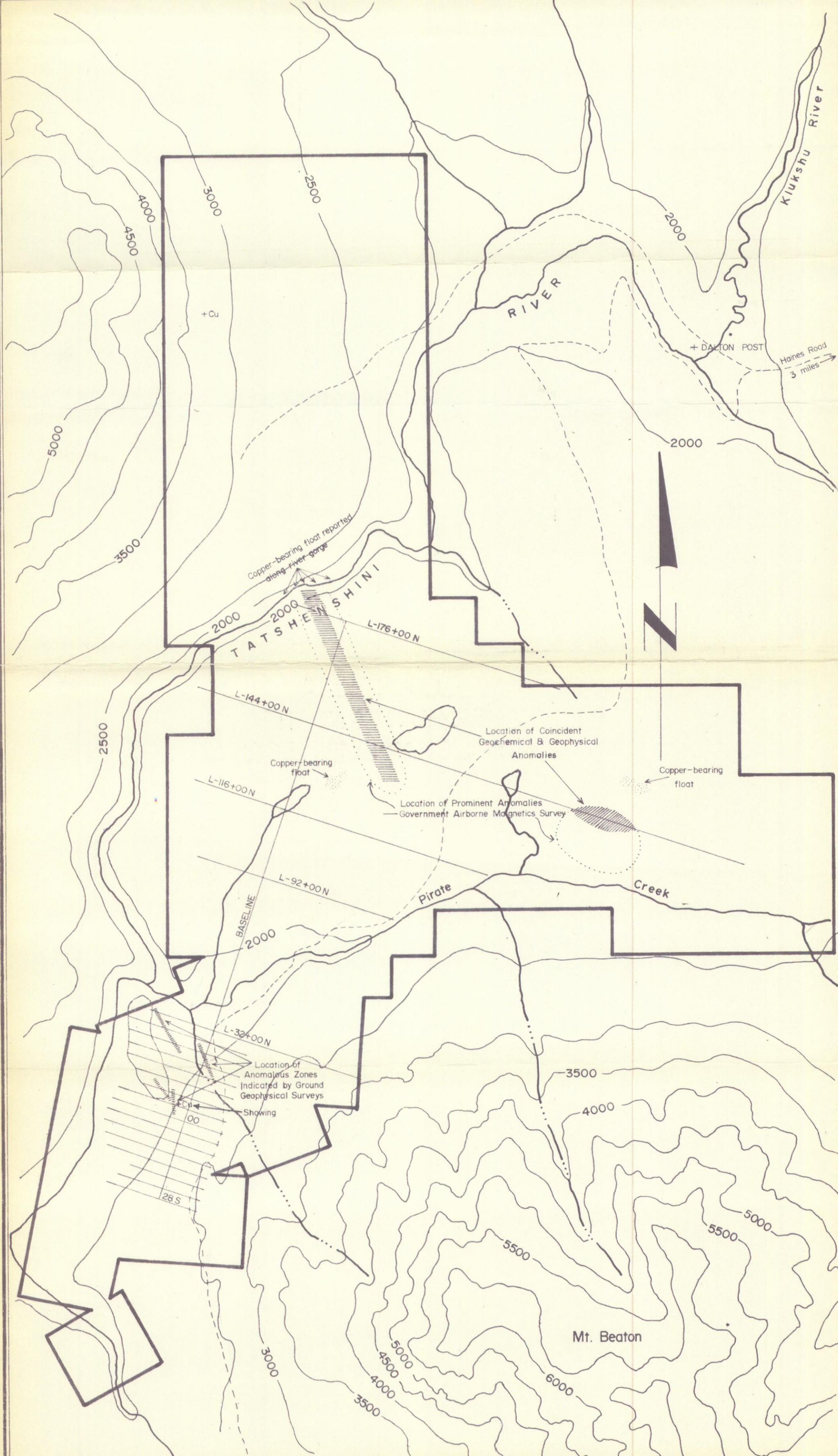
**PROPERTY LOCATION MAP
ALDER HILL - STE
CLAIM GROUP
WHITEHORSE MINING DISTRICT**

ACE R. PARKER & ASSOCIATES
MINERAL INDUSTRY CONSULTANTS & CONTRACTORS
WHITEHORSE — YUKON

SCALE:	1" = 1/2 mile	Seal
DATE:	January 10, 1968	
DRAWN BY:	<i>Fox</i>	
DWG. NO.		



KEY MAP

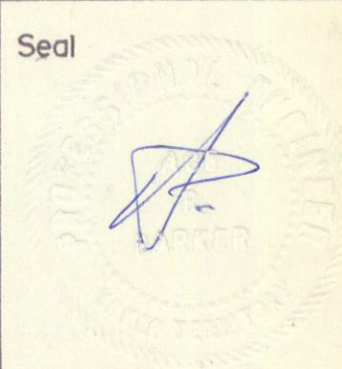


JACKPOT COPPER MINES LTD.

ALDER HILL — STE CLAIM GROUP

WHITEHORSE MINING DISTRICT
SKETCH SHOWING ANOMALOUS ZONES

ACE R. PARKER & ASSOCIATES
MINERAL INDUSTRY CONSULTANTS & CONTRACTORS
WHITEHORSE — YUKON

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