

MAP No.

115-A-3

ASSESSMENT REPORT

N. M. E. A. P.

CONFIDENTIAL

OPEN FILE

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TYPE OF

WORK:

Geol, DDH

REPORT FILED UNDER	Jackpot Copper Mines Ltd.	DOCUMENT NO. 061160
DATE PERFORMED	1969 and 1970, 1972	DATE FILED: July 25, 1973.
LOCATION - LAT.	60° 03'N	AREA: Tatshenshini River area, Yuko
LONG.	137° 08'W	Yukon.
CLAIM NO.	RT, TATS, TED, LEO, GG, JOB, ALDER HILL; STE (see report for numbers)	
VALUE \$		
WORK DONE BY	R.G. Hilker	
WORK DONE FOR	Jackpot Copper Ms L	
REMARKS	Mineralization contained in and adjacent to a siliceous sheared or faulted andesite-granite contact assayed 3.9 - 12.2% Cu and 0.2-0.8 oz/t Ag over 3-6 feet widths and a length of 220 feet. Three of 5 DDH (1785ft.) intersected copper values of 0.36-2.5% Cu over 2.5-7.0 feet.	

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"LAND OF THE MIDNIGHT SUN"

Indexed *06/1/60*

SUMMARY REPORT
ON THE
TATSHENSHINI RIVER PROPERTY
DEZADEASH AREA
YUKON TERRITORY
N.T.S. 115-A-3

FOR

JACKPOT COPPER MINES LTD. (N.P.L.)
901 - 900 WEST HASTINGS ST.
VANCOUVER, BRITISH COLUMBIA

BY

R.G. HILKER, P. ENG.
WHITEHORSE, YUKON TERRITORY

FEBRUARY 25th, 1972

*Received
R.G.H. Hilker
C
July 25/73.*

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INTRODUCTION

Two claim groups, totalling 16 claims, were staked in 1967 by J. Yardley and J. Konde to cover copper mineralization in the Tatshenshini River area. The claims were subsequently sold to J. Amato who, in turn, sold them to C. Shandalla. Mr. Shandalla staked an additional 186 claims to bring the total to 202. Jackpot Copper Mines Ltd. (N.P.L.) was incorporated on 27 September, 1967.

During 1968, a preliminary evaluation program was carried out on the recommendation and under the supervision of A.R. Parker and Associates Ltd. The program consisted of geological, magnetic, electromagnetic, and geochemical surveys accompanied by bulldozer trenching. A geological report on the property was also made during 1968 by Gordon P.E. White and Associates Ltd.

On 5 December, 1969, the property was examined by the writer who concluded that further work, consisting of detailed geological, magnetic, and electromagnetic surveys, followed by drilling if warranted, was required to properly evaluate the Jackpot property. An \$89,300 evaluation program was recommended in the report dated 9 April, 1970.

Forty-eight of the 202 claims were optioned to Ramid International Ltd. (N.P.L.) on 24 July 1970. Ramid carried out diamond drilling and geological mapping under the supervision of C.J. Coveney, P. Eng. and an electromagnetic survey by S. Presunka during September - November, 1970. The option agreement was terminated December 31st, 1970.

Work to date has indicated that copper values are contained in and adjacent to a siliceous sheared or faulted contact between granite and andesite. The mineralized zone has been traced for 220 feet on

surface with assays ranging from 3.9 - 12.2% Cu and from 0.2 - 0.8 oz/ton Ag. Mineralized widths range from 3-6 feet. Three of five preliminary diamond drill holes intersected significant mineralization ranging from 0.36 - 2.5% Cu over intervals ranging from 2.5 - 7.0 feet.

LOCATION AND ACCESS

The Jackpot Copper Mines Ltd. (N.P.L.) property is located 8 miles southwest of mile post 106 of the Haines Road in the southwestern part of the Yukon Territory. The mineralized showings are located near the confluence of the Tatshenshini River and Pirate Creek at latitude 60° 03' and longitude 137° 08'. The claims are situated on N.T.S. sheet 115-A-3 and the south end of the Jackpot Copper Mines Ltd. (N.P.L.) claim group is about 3½ miles north of the Yukon - British Columbia boundary.

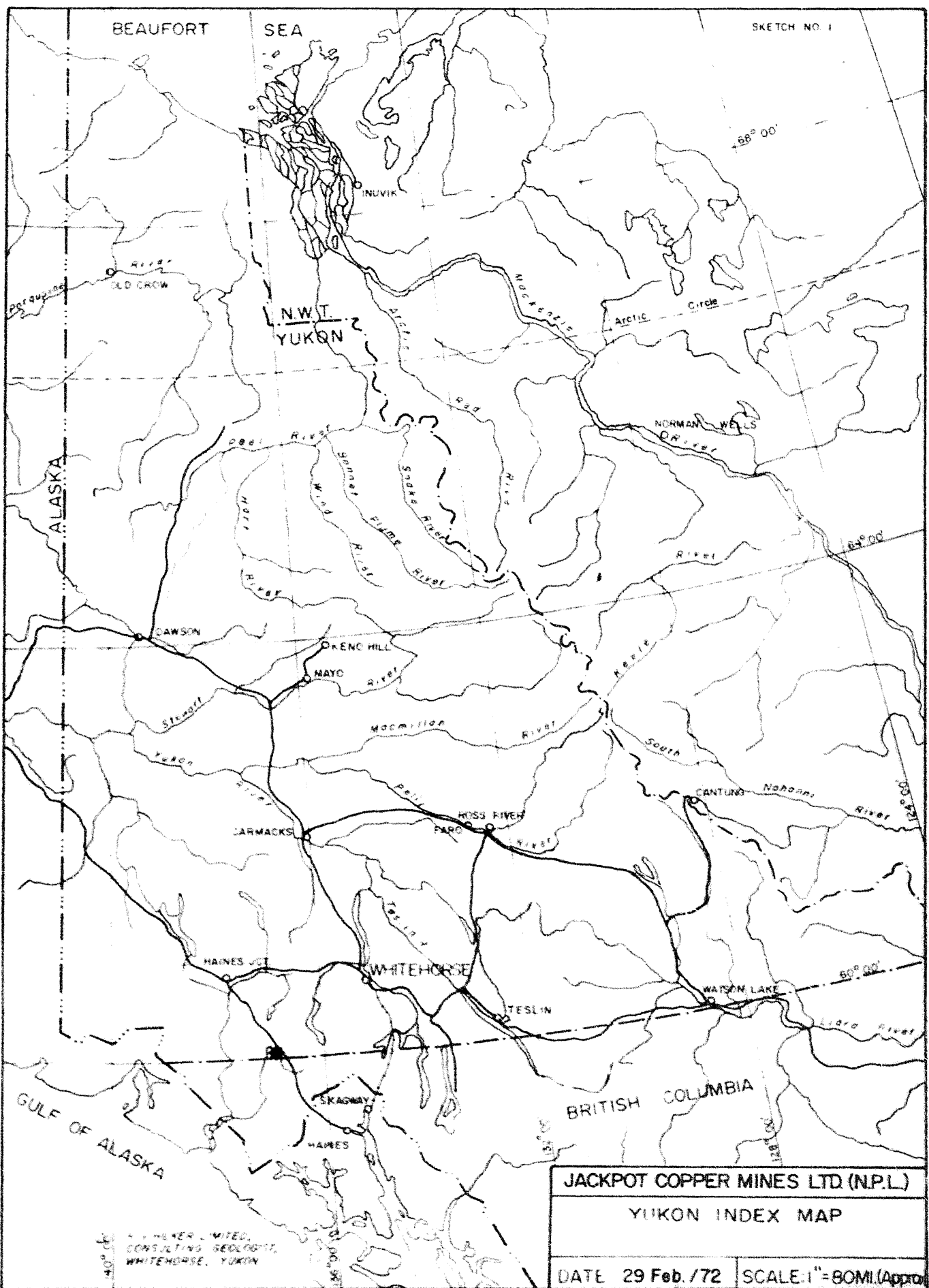
Access to the property is from mile 106 of the Haines Road by a truck road west to the old Dalton Post, across the Tatshenshini River and southwest to the property. The truck road extends about 12 miles from the Haines Road to the property. The Tatshenshini River is the main obstacle, as the river is very swift and deep during spring run-off and when flash flooding occurs during the rain storms in the surrounding mountains.

The nearest community to the property is Haines Junction, Y.T. at Mile 159 on the Haines Road. The Dezadeash Lodge is located at Mile 125 of the Haines Road where telephone, gasoline, minor repairs, food, and lodging are available from May through October.

Physiographically, the showing occurs in the Duke Depression, a narrow band bounded on the east by the Coast Range and on the west by the St. Elias Range.

BEAUFORT SEA

SKETCH NO. 1



N.W.T.
YUKON

ALASKA

Arctic Circle

NORMAN WELLS
DRIVER

DAWSON

DRENCH HILL

MAYO

ROSS RIVER
PARO

CARMACKS

CANTUNG

Nahanni River

HAINES MCT

WHITEHORSE

TESLIN

WATSON LAKE

Liard River

GULF OF ALASKA

SKAGWAY

HAINES

BRITISH COLUMBIA

JACKPOT COPPER MINES LTD (N.P.L.)

YUKON INDEX MAP

DATE 29 Feb. /72

SCALE 1" = 80MI. (Approx)

... LIMITED,
CONSULTING GEOLOGIST,
WHITEHORSE, YUKON

CLAIMS

The following claims, located on N.T.S. sheet 115-A-3 in the Whitehorse Mining Division of the Yukon Territory, are held by Jackpot Copper Mines Ltd. (N.P.L.). Certificates of Work (Form D) have been issued on all claims and the Anniversary Dates shown are correct as of January 1, 1973.

<u>Claims</u>	<u>Grant Number</u>	<u>Anniversary Date</u>
RT 1 - 6	Y18074 - Y18079	May 1, 1976
TATS 1 - 8	Y5796 - Y5803	May 1, 1976
TED 1 - 6	Y18080 - Y18087	May 1, 1976
LEO 1 - 4	Y18094 - Y18097	May 1, 1976
ALDER HILL 1 - 4	Y5653 - Y5655	May 1, 1976
ALDER HILL 5	Y5722	May 1, 1976
ALDER HILL 6	Y5724	May 1, 1976
ALDER HILL 7	Y5723	May 1, 1976
ALDER HILL 8	Y5725	May 1, 1976
G.G. 1 - 8	Y8349 - Y8356	May 1, 1976
JOE 1 - 6	Y18088 - Y18093	May 1, 1976
STE 1 - 8	Y21185 - Y21192	January 1, 1974
STE 9 - 14	Y21193 - Y21198	January 1, 1974
STE 15 - 22	Y21199 - Y21206	January 1, 1974
STE 23 - 24	Y21207 - Y21208	January 1, 1974
STE 25 - 30	Y21209 - Y21214	January 1, 1974
STE 31 - 40	Y21215 - Y21224	January 1, 1974
STE 41 - 48	Y21357 - Y21364	January 1, 1974
STE 49 - 56	Y21365 - Y21372	January 1, 1974

<u>Claims</u>	<u>Grant Number</u>	<u>Anniversary Date</u>
STE 57 - 58	Y21225 - Y21226	January 1, 1974
STE 59 - 60	Y21227 - Y21228	January 1, 1974
STE 61 - 64	Y21229 - Y21232	January 1, 1974
STE 65 - 72	Y21373 - Y21380	January 1, 1974
STE 73 - 80	Y21707 - Y21714	January 1, 1974
STE 81 - 88	Y21756 - Y21773	January 1, 1974
STE 89 - 91	Y21715 - Y21717	January 1, 1974
STE 92 - 94	Y21774 - Y21776	January 1, 1974
95 & 96	DO NOT EXIST	
STE 97 - 102	Y21793 - Y21798	January 1, 1974
STE 103 - 104	Y21799 - Y21800	January 1, 1975
STE 105 - 112	Y21801 - Y21808	January 1, 1975
STE 113 - 116	Y21777 - Y21780	January 1, 1975
STE 117 - 120	Y21781 - Y21784	January 1, 1974
STE 121 - 122	Y21895 - Y21896	January 1, 1974
STE 123 - 126	Y21897 - Y21902	January 1, 1975
STE 129 - 138	Y21809 - Y21816	January 1, 1975
STE 139 - 148	Y21819 - Y21826	January 1, 1974
STE 149 - 152	Y21829 - Y21832	January 1, 1975
STE 153 - 160	Y21785 - Y21792	January 1, 1975

PREVIOUS WORK

The principals of Jackpot Copper Mines Ltd. (N.P.L.) have supplied the writer with the following reports and data on the Tatshenshini River property:

1. "Engineers Summary Report #1 on Results of Exploration of the Alder Hill - Ste Claim Group (Jackpot Copper Mines Ltd.), Whitehorse Mining District, Yukon (Yukon Claim Sheet 115-A-3) by Ace R. Parker & Associates Limited, Mineral Industry Consultants & Contractors, Whitehorse, Yukon - Dated at Whitehorse this 1st day of October, 1968"

The report summarizes the field work consisting of geological, geochemical, and geophysical surveys, and contains a limited amount of trenching data. Work was carried out on three zones, covered by linegrids with lines at 200 or 400 foot intervals, and is documented as follows:

Zone A (Alder Hill 0 Tats Claims) (200 foot line spacing)

"Preliminary E.M. - Geophysical Survey" - Scale 1" = 200 feet

"Ground Magnetic - Geophysical Survey" - Scale 1" = 200 feet

The Zone A linegrid covers portions of the Alder Hill 1-6 and Tats 1-8 claims.

Zone B & C (Alder Hill - Ste claims) (400 foot line spacing)

"Reconnaissance Mag. - Geophysical Survey" - Scale 1" =
400 feet

"Reconnaissance Geological Survey" - Scale 1" = 400 feet

"Reconnaissance Geochemical Survey (Copper Plot)" - Scale
1" = 400 feet

Zone B linegrid covers a portion of 12 Ste claims.

Zone C linegrid covers portions of the Ste 3-8, 21-24, and 59-60 claims.

2. Trenching in the Jackpot Copper Mines Ltd. (N.P.L.) property with a crawler type tractor and blade.
3. "Geological Report on the Alder Hill and Ste Claims, Whitehorse Mining Division, Yukon Territory for Jackpot Copper Mines Ltd. (N.P.L.) - October 24th, 1968".
4. "Geological Examination and Evaluation Report on the Tatshenshini River Property, Dezadeash Area, Yukon Territory for Jackpot Copper Mines Ltd. (N.P.L.), Vancouver, B.C. by R.G. Hilker, P. Eng., Whitehorse, Yukon Territory, April 9th, 1970".
5. "A Report on Jackpot Copper Property, Yukon Territory for Ramco International Ltd. (N.P.L.), 901-900 West Hastings St., Vancouver, B.C. by C.J. Covenay, P. Eng., Vancouver, B.C., September 29, 1970"
6. "Report on Reconnaissance Survey and Drill Supervision by F. Lee, Geologist, on the Jackpot Copper Mines (N.P.L.) Ltd. Copper property between Squaw and Pirate Creeks, Whitehorse Mining Division, Yukon Territory for Ramco International (N.P.L.) Ltd., Latitude: 60° - 03'N, Longitude 137° - 08'W, from 25th September to 12th November, 1970, 12th November, 1970.

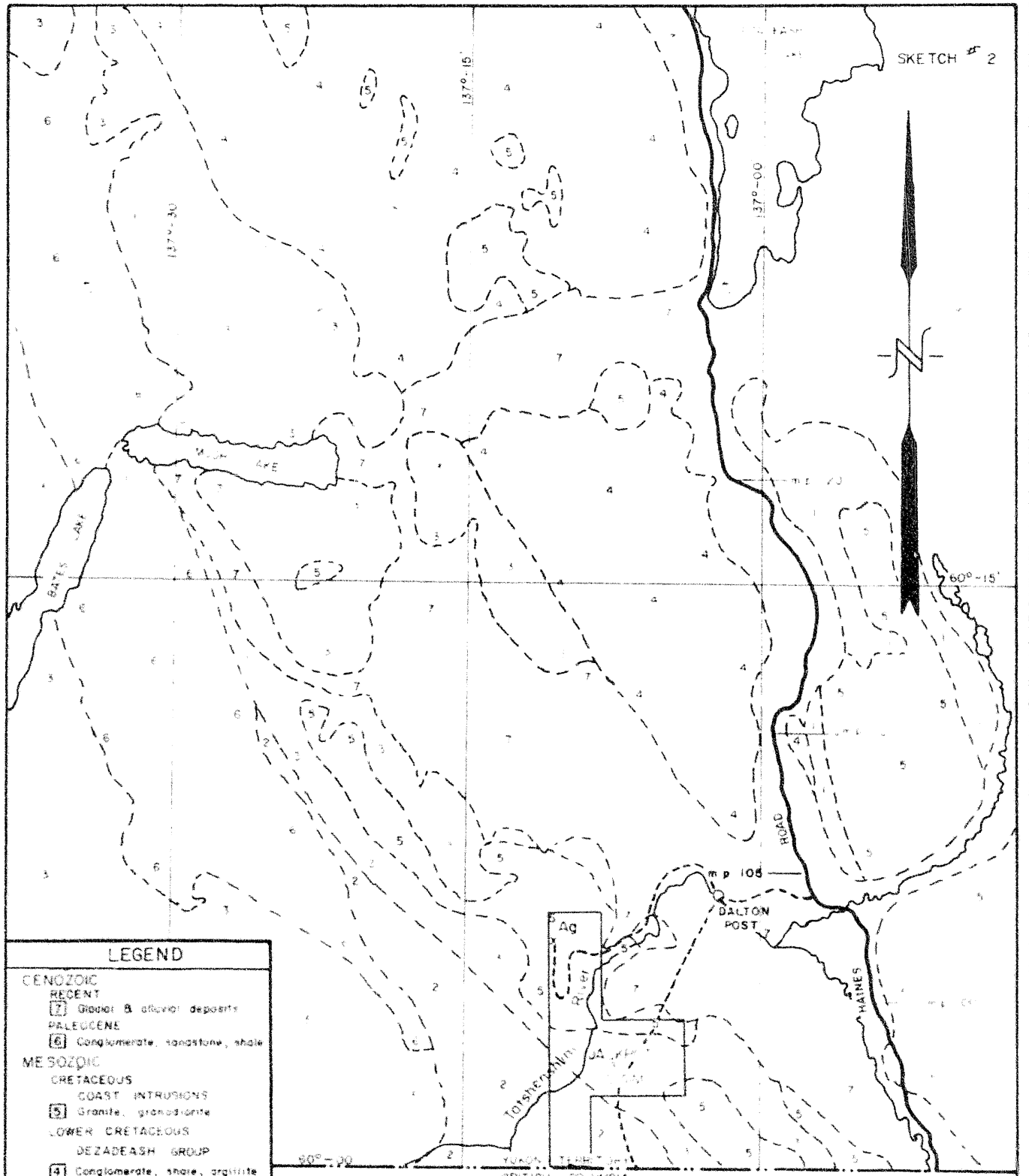
REGIONAL GEOLOGY

The claims held by Jackpot Copper Mines Ltd. (N.P.L.) are located on a NW-SE trending assemblage of volcanics and sediments, known as the Mush Lake Group, which extends for some 70 miles through the Dezadeash Map area (G.S.C. Map 1019). The assemblage varies in width from 1/2 to 8 miles and generally dips to the northeast at 40 - 80°. The Mush Lake Group is considered to be of Triassic/Jurassic age and consists of bands of andesitic and basaltic lavas alternating with bands of tuff, greywacke, quartzite, argillite, slate, and limestone.

The Mush Lake Group is bounded on the northeast by the Lower Cretaceous Dezadeash Group consisting of conglomerate, shale, sandstone, tuff, argillite, chert, and greywacke. Minor intrusive bodies of peridotite, serpentina, and granodiorite also occur within the Group. The Dezadeash Group varies in width from 13 miles, in the vicinity of Dezadeash Lake, to approximately 1 mile, in the area immediately east of the claim groups.

To the southwest, the Dezadeash Group is bordered by the Permian Kaskawulsh Group, in the area immediately west of the claim groups, and by Paleocene sediments farther north in the vicinity of Mush Lake. The Kaskagulsh Group consists primarily of limestones and marbles, while the Paleocene sediments consist of conglomerate, sandstone, and shale.

The east portion of the Dezadeash Map area consists primarily of the Cretaceous Coast Intrusions in the form of porphyritic-granite and biotite granodiorite. Outlying small stocks and dikes of granite and



LEGEND	
CENOZOIC	
RECENT	
[7]	Gravel & alluvial deposits
PALEOCENE	
[6]	Conglomerate, sandstone, shale
MESOZOIC	
CRETACEOUS	
COAST INTRUSIONS	
[5]	Granite, granodiorite
LOWER CRETACEOUS	
DEZADEASH GROUP	
[4]	Conglomerate, shale, argillite
TRIASSIC/JURASSIC	
MUSH LAKE GROUP	
[3]	Andesite, tuff, argillite
PALEOZOIC / PRECAMBRIAN	
CARBONIFEROUS / PERMIAN	
KASKAWULSH GROUP	
[2]	Limestone, marble, argillite
INDETERMINATE	
YUKON GROUP	
[1]	Schist, gneiss, quartzite

After Kinde (1963) - Memoir
1963

R.G. HILKER LTD
CONSULTING GEOLOGIST
WHITEHORSE, Y.T.

JACKPOT COPPER MINES LTD. (N.P.L.)	
TATSHENSHINI RIVER AREA	
GENERAL GEOLOGY	
DATE - APR - 8 - 70	SCALE - 1" = 4 MI.

granodiorite, associated with the main batholith to the east, intrude the Mush Lake Group in the vicinity of the claim groups.

Copper mineralization occurs in several areas within the Mush Lake Group. Seams of chalcopyrite associated with a major fault have been found some five miles south of Mush Lake.

TABLE OF FORMATIONS

CENOZOIC

Recent

- [7] - Glacial and alluvial deposits

Paleocene

- [6] - Conglomerate, sandstone, shale

MESOZOIC

Cretaceous

Coast Intrusions

- [5] - Granodiorite, granite, granite porphyry, quartz porphyry

Lower Cretaceous

Dezadeash Group

- [4] - Conglomerate, shale, sandstone, tuff, argillite, chert, greywacke, coal

Triassic/Jurassic

Mush Lake Group

- [3] - Andesite, basalt, rhyolite, volcanic breccia, tuff, argillite, slate, limestone

PALEOZOIC/PRECAMBRIAN

Carboniferous/Permian

Kaskawulsh Group

- [2] - Limestone, marble, slate, quartzite, argillite, chert, andesite, schist

Uncertain Age

Yukon Group

- [1] - Quartz-mica schists, gneiss, slate, quartzite, crystalline limestone, greenstone, various schists.

After Kindle (1953) Memoir 268

REFERENCE TO PUBLISHED GEOLOGY

The following publications contain geological information pertaining to the Tatshenshini River area where the Jackpot Copper Mines Ltd. (N.P.L.) claims are located:

1. "Dezadeash Map Area, Yukon Territory"; G.S.C. Memior 268; E.D. Kindle; 1953.
2. "Dezadeash, Yukon Territory"; G.S.C. Map 1019A; Scale 1" = 4 miles; Map accompanies Memior 268.

ECONOMIC GEOLOGY

A property examination made by the writer on December 5, 1969 revealed two showings of copper mineralization on the Alder Hill 1 and 2 claims. The showings are located approximately 200 feet apart on a 340 degree bearing with the intervening area being snow-covered at the time of examination. Both showings are contained in the Triassic/Jurassic Mush Lake Group, which consists of a light-to-medium green andesite in the immediate area. The andesite is fine grained with a spheroidal texture and is highly fractured and jointed with local silicification. Mineralization in both showings consists of disseminated to massive chalcopyrite carried in the fractured silicified andesite. The south-easterly showing was exposed in a bulldozer trench where the general strike of the andesite is 182 degrees with a 72 degree dip to the west. A chip sample across 10 feet (not representative of true width) of the trench showing assayed 8.75% Cu, 0.60 oz/ton Ag, and Tr Au. A grab sample from the same area assayed 4.76% Cu, 0.30 oz/ton Ag, and Tr Au. Approximately 200 feet NW of the trench showing, the mineralization is exposed in a cliff face where the andesite strikes 135 degrees and dips 80 degrees to the southwest. A chip sample across 3 feet of the exposed mineralization assayed 12.23% Cu, 0.84 oz/ton Ag, and Tr Au. At the time of the examination, it was not possible to ascertain the true widths of either showing.

During September, October, and November of 1970, Ramid International Ltd. (N.P.L.) carried out diamond drilling with associated geological and electromagnetic surveys. The following, is a summary of the data presented in the report by F. Lee and it should be clearly understood

that the writer of this report can accept no responsibility for the performance and/or accuracy of the documented work or the geological/geophysical interpretation, as the program was not carried out under his supervision.

The Jackpot Copper Mines Ltd. (N.P.L.) property is situated on the southern margin of a large hornblende diorite intrusive body (G.S.C granite/granodiorite Coast Intrusions) of probable Lower Cretaceous age where it intrudes the Triassic/Jurassic Mush Lake Group, consisting primarily of andesite. A small stock of leucocratic granite is situated to the south of the diorite intrusion and, while the granite may be related to the diorite, the granite is definitely thought to be earlier than the diorite. Both the granite and the andesite have been highly chloritized, slightly pyritized, and variably silicified by the invasion of quartz veins. A concentration of large quartz veins and small stringers, located in and around a fault or shear zone on the andesite/granite contact, carries appreciable amounts of pyrite and chalcopyrite. The mineralized contact area on the Alder Hill 1,2,3,4, claims was the focal point for the evaluation drilling, mapping, and geophysics.

The following is a description of the geological units and structural features of the property:

1. Andesite (Triassic/Jurassic Mush Lake Group)

The Mush Lake Group andesites underly most of the claims area and are divisible into two general types. In the vicinity of the Alder Hill and Tats claims, the andesite is fine-to-medium grained, occasionally porphyritic, and dark olivine green/grey in color due to pronounced chloritization. Minor amounts of disseminated pyrite

are common throughout along with calcite veinlets. In the southern part of the property, the andesite is much coarser than the above and also less noticeably green, due to a lesser degree of chloritization. Pyrite and calcite are not common in this area. Hornblende diorite dikes are common throughout the northern andesite area along with dikes of more basic composition.

2. Leucocratic Granite (Lower Cretaceous Coast Intrusions)

The granite is white to grey-white, medium grained, with a ferro-magnesian content averaging about 2%. The fresh rock almost invariably has a glassy and often greenish appearance, indicating a mild degree of metamorphism, while the ferro-magnesian minerals have been almost totally converted to chlorite. Finely disseminated pyrite is common throughout the granite intersected by the drill holes and concentrations approach 2% in thin bands near shears. Examination of the drill core suggests that the granite intruded the andesite and the presence of diorite-related dikes in the granite and the freshness of the diorite suggests that the granite predates the diorite.

3. Diorite (Lower Cretaceous Coast Intrusions)

Hornblende diorite underlies the northern portion of the claim group and is a part of the Coast Range Intrusions complex of the western cordillera. In the vicinity of the claim group, the diorite is fresh, medium-to-coarse grained, and carries no sulfides and only minor calcite veinlets. The diorite does not appear to be invaded by quartz veins.

4. Overburden/Till

The property is nearly entirely covered by overburden to variable depths, probably not exceeding 40 feet. Bedrock is exposed in the beds of deeply incised streams and at major changes in slope. Diorite boulders predominate in the northern part of the property, but an increasing frequency of leucocratic granite and granodiorite in the area to the north and northeast of the drill sites suggests that the leucocratic granite may be more extensive than surface exposures suggests.

5. Quartz Veins

Quartz veins, generally less than ¼ inch in thickness, occur sparingly in the andesite and leucocratic granite. The veins show only a poorly preferred orientation and only those veins with thicknesses of ½ inch or greater carry sulfide mineralization. The quartz is thought to have originated from granite stock.

6. Faulting

While some of the physiographical features of the area are possibly fault-controlled, the only fault observed on the property is that containing the quartz and copper mineralization on Alder Hill 1, 2, 3, and 4 claims. Shearing and jointing in the outcrop area make it difficult to obtain an attitude on the fault, but it is probable that the fault strikes between 330 and 340 degrees and dips in the vicinity of 70 degrees to the northeast. The fault appears to follow the leucocratic granite/andesite contact.

7. Mineralization

Copper mineralization, as chalcopyrite, is carried by medium to large sized quartz veins and/or by a narrow network of quartz stringers contained in the fault zone separating the andesite and granite. Pyrite and chalcopyrite are present and it is possible

that arsenopyrite may also occur. The sulfides occur as partially segregated aggregates in the white quartz veins with a variable pyrite to chalcopyrite ratio. Drilling suggests the possibility of several mineralized zones. Assays from mineralized areas are tabulated as follows:

	<u>Location</u>	<u>Sample Width</u>	<u>% Cu</u>	<u>oz/ton Ag</u>	<u>oz/ton Au</u>
a.	Trench	grab sample	4.76	0.30	Tr
b.	Trench-chip sample	10 feet	8.75	0.60	Tr
c.	Cliff-chip sample	3 feet	12.23	0.84	Tr
d.	Point #2	3.0 feet	6.99	0.20	Tr
e.	Point #3	2.0 feet	5.03	0.20	Tr
f.	Point #4	4.5 feet	3.89	0.20	Tr
g.	ddh 1 (140.5-147.5 ft)	7.0 feet	2.55	0.29	Tr
h.	ddh 2 (346.0-348.5 ft)	2.5 feet	2.42	0.20	Tr
i.	ddh 3 (124.0-129.0 ft)	5.0 feet	0.36	-	-

Remarks

- a. Hilker, 1969; surface
- b. Hilker, 1969; surface; not indicative of true width
- c. Hilker, 1969; surface; not indicative of true width
- d. Coveney, 1970; surface at vein exposure; width not fully exposed
- e. Coveney, 1970; surface; 25 feet north of 'd'; width not fully exposed
- f. Coveney, 1970; surface; 125 feet north of 'e'; width not fully exposed
- g. Coveney, 1970; ddh inclined at -45°; not true width
- h. Coveney, 1970; ddh inclined at -45°; not true width
- i. Coveney, 1970; ddh inclined at -45°; not true width

GEOPHYSICAL SURVEY

During September, 1970, an electromagnetic survey was carried out over the area containing the mineralized outcrop on the Alder Hill 1,2,3, and 4 claims by S. Prasunka. A Ronka EM-16 unit was employed and approximately 4.23 linemiles were covered on a 200 foot line interval with 100 foot stations.

The survey indicated a conductor coincident, in part, with the mineralized outcrop and extending both north and south from it on an approximate bearing of 330-150 degrees. Lee reports that drill hole locations were influenced by the survey.

As the only data available on the survey consists of two plan maps (scale: 1"= 100 feet) with the readings shown only in plan, the writer cannot properly evaluate the survey and, accordingly, cannot accept responsibility for the interpretation.

DIAMOND DRILLING

A total of 1785 feet of 8Q wireline diamond drilling in five holes was carried out on the property by Arctic Diamond Drilling Ltd. between late August - late October, 1970. All holes were inclined at -45 degrees and were drilled on either 265 or 245 degree bearings.

Difficulties were encountered with the drilling program due to the advent of winter conditions and the lack of cold weather drilling equipment. Core recoveries are not fully documented in the F. Less report, but a summation of the data contained indicates recoveries of 71.6%, 57.4%, and 43.2% for holes 3, 4, and 5, respectively.

Mineralization was intersected in holes 1, 2, and 3 and a 10 foot section assaying "just under 0.20% Cu" is reported, but not documented, from the end portion of hole 5. Only holes 1 and 3 have definitely intersected the faulted contact target area. Hole 5, drilled to check an EM conductor, may have passed through the contact, but logs are not available for examination. Mineralization in hole 2 and in the upper portion of hole 3 is contained in narrow bands or xenoliths of andesite included in the leucocratic granite. Hole 2 appears to have been terminated about 50 - 100 feet short of the contact zone as projected from surface through hole 1 (apparent dip 75 degrees east). Hole 4 would appear to have bottomed about 50 feet short of the projected contact. It is realized, and it is quite possible, that the contact zone may not have a uniform dip throughout the area of interest and that the above projected intersections may, accordingly, not be valid. Plotting of holes in section also requires topographical control, for relative elevations of which is

← 265° 02

508' 4

OVERBURDEN

granite

andesite

granite

andesite

granite

granite

andesite

granite

andesite

granite

andesite

granite

andesite

granite

end 572

H G HILKER LIMITED CONSULTING GEOLOGICAL ENGINEER P.O. Box 4008, Whitehorse, Yukon Territory	
JACKPOT COPPER MINES LTD. (N.P.L.)	
DDH SECTION 4	
Date: 29 Feb /72	Scale: 1" = 50'

Section data from drill logs and surface plan included with F Lee (1970) report

not available.

Drilling data is tabulated as follows:

<u>Hole No</u>	<u>Inclination</u>	<u>Bearing</u>	<u>Depth</u>	<u>Relative Location</u>
1	-45°	265°	232'	
2	-45°	265°	403'	265' at 080° from hole 1
3	-45°	265°	248'	305' at 168° from hole 1
4	-45°	265°	572'	635' due North from hole 1
5	-45°	245°	330'	1065' at 142° from hole 1

The relative locations were taken from the plan map (1" = 500 feet) accompanying the F. Lee report and may not be accurate due to scale distortion caused by multiple copy-ing from the original.

CONCLUSIONS

Copper mineralization, as chalcopyrite, is contained in a quartz-rich fault zone at the contact of Cretaceous leucocratic granite with Triassic/Jurassic andesite in the immediate vicinity of the claim posts of the Alder Hill 1,2,3, and 4 claims.

Four random weighted surface samples yield 6.82% Cu over an average sample width (not true width) of 3.1 feet. It should be noted that the samples yielding the weighted assays above are possibly from unrelated mineralized zones and do not reflect continuous mineralization. Weighted samples from diamond drill holes 1 and 2 yield 2.52% Cu over an average sample width (not true width) of 4.8 feet. Hole 3 intersected values of 0.36% Cu over 5.0 feet which yields a

combined average for holes 1,2, and 3 of 1.77% Cu over an averaged width of 4.8 feet. Silver values between 0.2 - 0.8 oz/ton are associated with copper mineralization.

The EM-16 survey has indicated a conductor, in part coincident with surface mineralization, over a length of approximately 3000 feet and open at both ends. Insufficient drilling and correlation has been done to fully evaluate the significance of the anomaly.

Diamond drilling, to the extent of 1785 feet in five angle holes, has indicated significant mineralization to 220 feet vertically below surface. Insufficient drilling has been done to date to fully evaluate the vertical and lateral extent of mineralization, as only two of the five holes drilled passed entirely through the faulted contact. The generally poor core recovery combined with missing (therefore unlogged) core in three holes and unlogged core from one hole requires additional drilling with core recovery as the prime objective.

As no topographical control is documented, such a survey will be required in order that geological data may be confidently projected from and to drill holes.

RECOMMENDATIONS

The following program is warranted to fully evaluate the economic potential of the copper mineralization on the Alder Hill 1,2,3, and 4 (Y5653 - Y5656) claims of the Tatshenshini River property of Jackpot Copper Mines Ltd. (N.P.L.)

STAGE I

Compilation and drafting of present data-----	\$ 500.00
Grid Control -----	2,000.00
Supplementary geological and topographical mapping-----	1,500.00
Geophysics - electromagnetic survey-----	2,000.00
Camp costs - food-----	500.00
Camp equipment-----	500.00
Transportation of field parties and supervision-----	1,000.00
Radio-----	200.00
Map and report preparation-----	1,000.00
Geological Consulting-----	<u>800.00</u>
	\$10,000.00

STAGE II

Diamond drilling - 2500 feet @ \$15.00 -----	\$37,500.00
Drill mobilization and demobilization-----	2,000.00
Bulldozer - drill sites, access roads, trenching, etc-----	5,000.00
Assaying-----	1,000.00
Camp costs - food-----	4,000.00
Camp labor-----	1,000.00
Camp equipment-----	2,000.00
Transportation of field crews and supervision-----	2,000.00
Radio-----	<u>200.00</u>
Sub-Total Stage II	\$54,700.00

Geologist - for drill program -----	\$ 4,000.00
Map and Report Preparation -----	1,000.00
Geological Consulting-----	<u>1,000.00</u>
	\$60,700.00

TOTAL STAGES I & II \$70,700.00



R. G. HILKER LTD.
CONSULTING GEOLOGIST
WHITEHORSE Y.T.

DALTON POST AREA CLAIM LOCATION SKETCH SHEET 115A-3	
RUM, LILL, STE - CLAIMS	
DR. BY - W.S.M	APP'D BY - R.G.H
SCALE - 1" = 1/2 MILE	DATE - NOV. - 12 - 69

60° 00'

137° 00'