

REPORT

on

A PRELIMINARY GEOCHEMICAL & GEOPHYSICAL SURVEY

of

The ALDER HILL - STE CLAIM GROUP

Whitehorse Mining District

Yukon Territory

(Yukon Claim Sheet #115-A-3)

Longitude 137°18'W

Latitude 60°03'N

By

Ace R. Parker & Associates

Mineral Industry Consultants & Contractors

Whitehorse, Yukon.

Work Performed
between

Oct 1st 1967

and

Dec 30th 1967

4800



This report has been examined by the Geological Evaluation Unit. Approved as to technical worth by:

D.C. Liddell
RESIDENT GEOLOGIST

Approved as to cost in the amount of: \$4800.00

A. E. Nelson
RESIDENT MINING ENGINEER

Accepted as representation work under Section 53(4) Yukon Quartz Mining Act.

James Paul
COMMISSIONER OF YUKON

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Maps In Pocket:	
1. Government Aeromagnetic Map	
2. The Ground Magnetic Survey - Alder Hill Group	
3. Preliminary Electromagnetic Survey - Alder Hill Group	
4. Composite Reconnaissance Geochemical & Geophysical Surveys of the STE Group (see key map)	
Dwg. No. 1 - 32+00N	
Dwg. No. 2 - 92+00N	
Dwg. No. 3 - 116+00N	
Dwg. No. 4 - 144+00N	
Dwg. No. 5 - 176+00N	
Dwg. No. 6 - Baseline	

INTRODUCTION

The surveys covered by this report provide ground confirmation and preliminary definition of several significant anomalies located by a recent Government Aeromagnetic Survey on Jackpot Copper Mines' ALDER HILL STE CLAIM GROUP on the Haines - White River Copperbelt in southwestern Yukon.

SUMMARY

The surveys discussed within this report provide a reconnaissance geophysical and geochemical assessment of a portion of the ALDER HILL - STE CLAIM GROUP and confirm the existence of several significant aeromagnetic anomalies first located during 1966 by a Government-sponsored aeromagnetic survey in an area generally covered by overburden. The survey was conducted in two sections with emphasis placed on 8 claims in the ALDER HILL group since these claims are under option to Jackpot Copper Mines Ltd. (NPL) and early assessment is essential to the company.

Two of these anomalies situated in the central portion of the property are of major importance due to their coincident anomalous geological, geochemical and geophysical expression and several of the minor anomalies coincide with known and projectable mineralized zones.

Consequently, additional geochemical and geophysical surveys, in conjunction with bulldozer trenching and diamond drilling, are justified at this time to assess the economic potential of the property. It is important to note that geochemical and geophysical exploration has not been conducted on the northern portion of the property where several copper showings are known to exist.

LOCATION & ACCESS

The survey area ($60^{\circ}03'N$, $137^{\circ}18'W$) is situated along the Tatshenshini River and straddles Pirate Creek near the north-northwest foot of Mount Seaton in the Squaw Range of Southwestern Yukon.

The area is centered 8 airmiles southwest of Milepost 106 on the Haines Road and a tote road 6 miles long crosses the Tatshenshini River at Dalton Post and thus provides a 112 mile road connection with tide-water at Haines, Alaska.

DISCUSSION OF THE SURVEYS

1. Purpose:

The surveys discussed herein were conducted to provide an initial assessment of the two groups of mineral claims held by Jackpot Copper Mines Ltd.

A large part of the survey was of a reconnaissance nature, designed to indicate zones warranting further investigation. Most of the work was conducted on the ALDER HILL Group of mineral claims since these claims are held by option and a decision must be made regarding the future of the property.

2. Geomorphic Conditions:

Much of the survey covers a bench-like area approximately 2,400 feet in elevation which is cut by the canyon of Pirate Creek. This area is covered by a relatively thin veneer of glacial overburden which hosts an assemblage of alder and willow brush mingled with cottonwood and spruce trees.

3. Control of the Surveys:

Thirty miles of grid lines provided control for the survey. The said grid lines have a common baseline 20,400 feet long which strikes in on 13° Azimuth across the property. (See Location Map - Pocket)

DISCUSSION OF THE SURVEYS (continued)

3. Control of the Surveys: (continued)

These lines were cut by hand methods and by bulldozer at 200 foot intervals along the baseline on the ALDER HILL Group and at half-mile intervals on the remainder of the survey area. Pickets were placed at 100 foot intervals on the lines to provide survey stations.

A. THE MAGNETIC SURVEY (Maps in Pocket)

The magnetic survey has been compiled using a Sharpe MF-1 Magnetometer and interpreted as shown on the attached maps.

Several anomalous zones are indicated and two large zones situated on the STE claims and cut by grid lines No. 144+00N and 176+00N are of particular interest.

These anomalies are definite, strong and have coincident anomalous geochemical expression (copper) in an area where copper-bearing float is reported.

A magnetically depressed area on the ALDER HILL Group probably indicates the presence of an underlying granitic pluton.

DISCUSSION OF THE SURVEYS (continued)

B. THE ELECTROMAGNETIC SURVEY (Maps in Pocket)

The electromagnetic survey utilized two Sharpe SE-300 electromagnetic units operating at 400 and 1600 cycles per second.

Both "in line" and "broad side" techniques were used as shown on the attached maps.

The "broad side" technique using a 400 foot instrument spacing succeeded in outlining the zones of known mineralization as well as indicating other related and probably mineralized structures on the ALDER HILL Group.

The "in line" technique did not prove very effective in outlining zones of known mineralization due to the disseminated nature of this mineralization.

The base line between stations 32+00N and 176+00N, and all cross lines between these points were surveyed using "in line" techniques due to the limiting number of lines present. Areas that were magnetically anomalous did not produce any significant EM anomalies but this is not considered critical since mineralization in the area is of a disseminated nature and has not

DISCUSSION OF THE SURVEYS (continued)

B. THE ELECTROMAGNETIC SURVEY (continued)

proven susceptible to the "in line" technique in areas of known mineralization.

C. THE GEOCHEMICAL SURVEY (Maps in Pocket)

All lines between 32+00N and 176+00N inclusive, and the baseline between these points were covered by the survey. Samples of A° soil were taken from holes approximately 10" deep, dug with a mattock. These samples were subsequently bagged, tagged, and sent to the Whitehorse Assay Office for copper analysis, employing hot nitric acid extraction and atomic absorption techniques.

Values were reported in "parts per million" and ranged from 10 ppm to 145 ppm. Threshold values in geochemical surveys for copper vary in different areas, and experimentation has shown that in this area, values greater than 35 ppm are probably anomalous. Several anomalous zones were detected during the survey and their values are plotted on the attached maps.

One zone of particular interest has a peak value of 145 ppm Cu where it crosses line 176+00N at station 14+00W. The same

DISCUSSION OF THE SURVEYS (continued)

C. THE GEOCHEMICAL SURVEY (continued)

zone is cut by the baseline at station 168+00N. This zone also appears at station 22+00E on cross-line 144+00N.

Another anomalous zone of importance appears at station 96+00E on cross-line 144+00N.

CONCLUSIONS & RECOMMENDATIONS

The geochemical and geophysical surveys discussed in this report succeeded in confirming the presence of several significant aeromagnetic anomalies on the property of Jackpot Copper Mines Ltd. Also, there appears to be a definite relationship between known mineralized zones of possible economic importance and anomalous magnetic zones.

Correlation of anomalous magnetic and electromagnetic results on the ALDER HILL - STE CLAIM GROUP in the southern portion of the property reveals several complex, new, untested and undelineated zones of possible economic importance.

CONCLUSIONS & RECOMMENDATIONS (continued)

These zones appear to represent fracture-controlled zones of disseminated mineralization possibly chalcocrite and/or pyrrhotite developed primarily along the contacts between Mush Lake andesite volcanic rocks and Coast Range intrusive rocks. In some areas, mineralization appears to be disseminated in both rock types.

Two extremely important anomalies were detected on the STE Group in the central portion of the property. These anomalies are definite, strong, undelineated and untested, and exhibit coincident anomalous geochemical results in an overburden covered area where float samples of copper mineralization are reported. One zone intersected by the baseline and cross-lines 144+00N and 176+00N probably exceeds 7,000 feet in length and 400 feet in width and from geologic projections, appears to lie along the contact between Mush Lake volcanic rocks and Coast Range intrusives. Bornite copper mineralization occurs in the canyon of the Tatshenshini River along the contact of Coast Range intrusives and Mush Lake volcanics and several hundred feet northwest of the indicated terminous of the airborne magnetic anomaly coinciding with this zone.

Geological, geochemical and geophysical correlation reveals

THE ALDER HILL - STE CLAIM GROUP

Ace R. Parker

CONCLUSIONS & RECOMMENDATIONS (continued)

a very significant anomaly in an overburden covered area at station 96+00E on line 144+00N. Float samples of porphyry-type mineralization have been reported from this area.

Anomalous zones in all parts of the property warrant further and detailed exploration employing geochemical, geological and geophysical techniques. All zones should be investigated by bulldozer trenching and diamond drilling starting on the Alder Hill Group of claims where sufficient data has been compiled to guide such work.

Respectively submitted,

ACE R. PARKER & ASSOCIATES



Ace R. Parker, P. Eng.

December 30, 1967.

C E R T I F I C A T E

I, Ace R. Parker, of the City of Whitehorse, Yukon Territory,
do Certify that:

- 1 - I am a Consulting Engineer practicing under the name and style of ACE R. PARKER & ASSOCIATES, with office at 3rd and Elliott Street, Whitehorse, Y.T.
- 2 - I am a Bachelor of Science in Mining Engineering from the College of Earth Sciences and Mineral Industry, University of Alaska, College, Alaska - 1962. I hold a diploma in Mineralogy from the Mineral Science Institute, Chicago, Illinois - 1959.
- 3 - I am a member in good standing of the Association of Professional Engineers of Yukon, the Association of Professional Engineers of British Columbia, and the Association of Professional Engineers of Alberta. I have been a member of the American Institute of Mining, Metallurgical, and Petroleum Engineers since 1954.
- 4 - I have formally practiced my profession for the past five years after working in the Mineral Industry since 1953.
- 5 - I have no direct or indirect interest in the "ALDER HILL - STE CLAIM GROUP" described in the accompanying report or in any securities relating to the said property.
- 6 - This Certificate is part of the attached Preliminary Geochemical & Geophysical Survey Report on the "ALDER HILL - STE CLAIM GROUP" dated December 30, 1967. The attached property map shows the location of the "ALDER HILL - STE CLAIM GROUP" of mineral claims and the respective grid lines pertaining to the surveys.
- 7 - This report is based on a comprehensive personal study of documents, maps, and reports relating to the surveys described herein, including reports of the Geological Survey of Canada and in conjunction with several personal examinations of the property by myself during 1967. The work outlined by this report was conducted under my direct supervision.

Whitehorse, Yukon
December 30, 1967.



Ace R. Parker, P. Eng.



ALDER HILL - STE CLAIM GROUP

Ace R. Parker

APPENDIX #1

COSTS

The direct costs of the surveys outlined by this report total \$20,572.23 and have been compiled by Collins & Collins, Chartered Accountants and are shown on the ATTACHED BALANCE SHEET prepared by the said company for Jackpot Copper Mines Ltd.

THE ALDER HILL - CLAIM GROUP

Ace R. Parker

PERSONNEL EMPLOYED ON THE PROJECT

<u>Name</u>	<u>Occupation</u>	<u>Address</u>
Ace R. Parker	Consulting Engineer	Whitehorse, Yukon
Michael Fox	Senior Geophysicist	Vancouver, B.C.
D. Duncan	Geophysical Assistant	Flin Flon, Man.
Gene Gordon	Geochemical/Geophysical Technician	Whitehorse, Yukon.

Seven (7) Transient Linecutters

AUDITORS' REPORT

To the Shareholders of
Jackpot Copper Mines Ltd. (N.P.L.)

We have examined the balance sheet of Jackpot Copper Mines Ltd. (N.P.L.) as at January 31, 1968 and the statements of deferred exploration, development and other expenditures and source and application of funds for the period from September 27, 1967 to January 31, 1968. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these financial statements present fairly the financial position of the company as at January 31, 1968, and the results of its operations and the source and application of its funds for the period then ended, in accordance with generally accepted accounting principles.

Collins & Collins
Chartered Accountants

Vancouver, B. C.,
March 11, 1968.

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

- as at January 31, 1968.

NOTES TO THE BALANCE SHEET

1. The company has acquired certain mining claims and options in the Whitehorse Mining District. The consideration for these claims and options is as follows:

650,000 shares of capital stock at a deemed price of 25¢ per share	\$162,500.00
Cash paid or payable	<u>31,000.00</u>
	<u>\$193,500.00</u>

The cost of exercising the options mentioned above is a further \$20,000.00 to be paid in four equal annual instalments commencing July 1, 1968.

2. Capital stock has been issued for the following consideration:

	<u>No. of Shares</u>	<u>Par Value</u>	<u>Discount</u>	<u>Net</u>
For cash	199,000	\$ 99,500.00	\$ 55,750.00	\$ 43,750.00
For options to purchase mining claims	<u>650,000</u>	<u>325,000.00</u>	<u>162,500.00</u>	<u>162,500.00</u>
	<u>849,000</u>	<u>\$424,500.00</u>	<u>\$218,250.00</u>	<u>\$206,250.00</u>
Deduct: Subscription receivable				<u>5,250.00</u>
				<u>\$201,000.00</u>

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

- for the period from September 27, 1967
to January 31, 1968.

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

Source of Funds:

Issue of capital stock for cash	\$38,500.00
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Application of Funds:

Exploration, development and other expenditures - per statement	\$27,524.33	
Acquisition of mining claims and options	11,000.00	
Purchase of fixed assets	2,500.00	
Incorporation costs	<u>1,200.00</u>	<u>42,224.33</u>

Working Capital Deficiency, January 31, 1968

\$ 3,724.33

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

- for the period from September 27, 1967
January 31, 1968.

to

STATEMENT OF DEFERRED EXPLORATION, DEVELOPMENT AND OTHER EXPENDITURESExploration and Development:

Camp supplies and expenses	\$ 233.20	
Engineering fees and expenses	11,442.25	
Recording, staking and maps	4,304.50	
Repairs and maintenance - equipment	177.45	
Transportation, travel and lodging	<u>8,719.33</u>	\$24,876.73

Administration:

Audit and legal	540.00	
Office expense	79.60	
Travel and lodging	<u>2,028.00</u>	<u>2,647.60</u>
		\$27,524.33

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

- as at January 31, 1968.

BALANCE SHEET

ASSETS	
Current:	
Cash	\$4,210.92
Due from Yukon Mortgage and Finance Ltd.	<u>3,000.00</u> \$ 7,210.92
Mining Properties, Claims and Options (Note 1)	193,600.00
Fixed - at cost:	
Machinery and Equipment	2,500.00
Deferred Exploration, Development and Other Expenditures - per statement	27,524.33
Incorporation Costs	1,200.00
	<u>231,935.25</u>

On behalf of the Board:

Director

Director

The accompanying notes are an integral

BALANCE SHEET


LIABILITIES	
Current:	
Accounts payable	\$ 5,935.25
Current portion of agreement for sale	<u>5,000.00</u> \$ 10,935.25
Agreement for Sale	25,000.00
Deduct: Current portion shown above	<u>5,000.00</u> 20,000.00
SHAREHOLDERS' EQUITY	
Share Capital:	
Authorized -	
5,000,000 Common shares, par value \$.50 each	<u>\$2,500,000.00</u>
Issued -	
840,000 Shares (Note 2)	424,500.00
Deduct: Discounts	<u>218,250.00</u>
	206,250.00
Deduct: Unpaid thereon	<u>5,250.00</u> 201,000.00
	<u>\$231,935.25</u>

part of this financial statement.


AFFIDAVIT OF COSTS

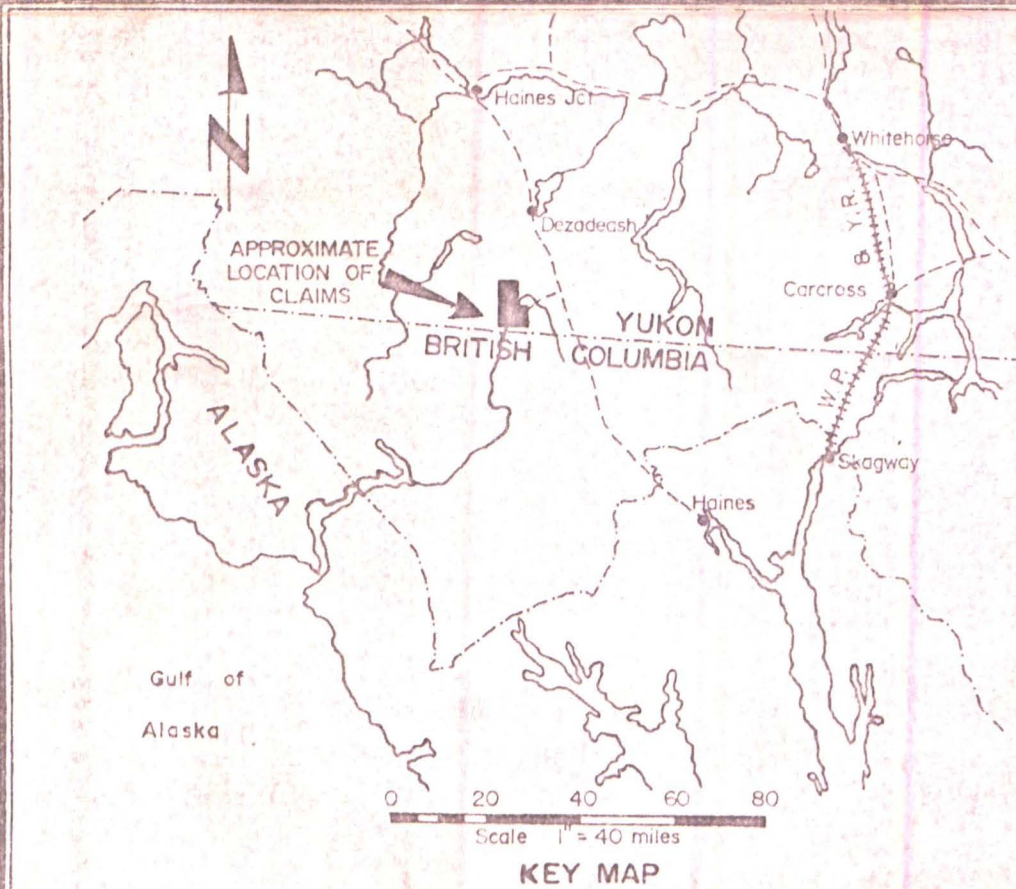
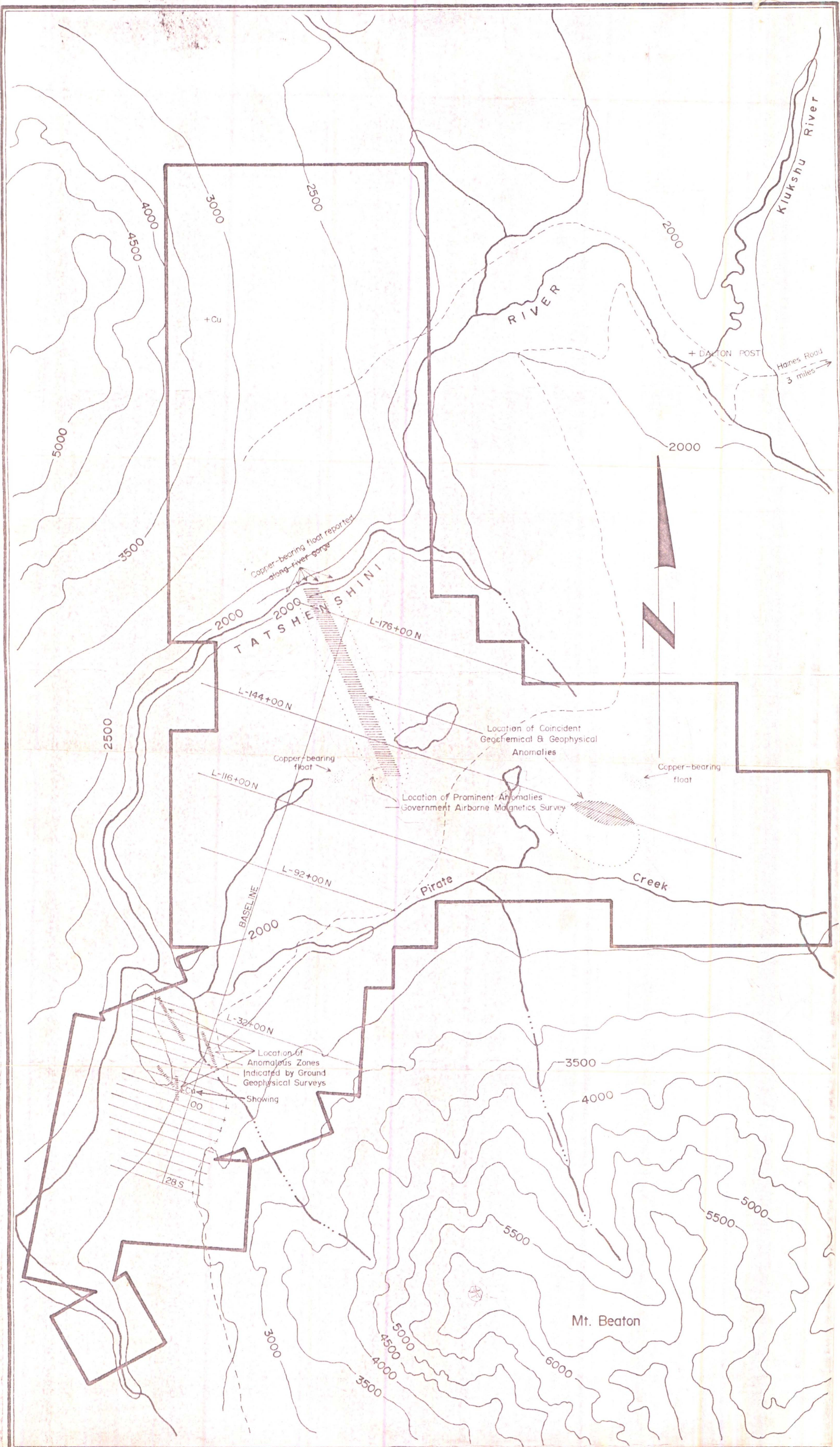
I, Charles J. Shandalla, Director of Jackpot Copper Mines Ltd. do make oath and say that:

To the best of my knowledge and belief, the costs presented in this report and tabulated by Collins & Collins, Chartered Accountants, namely \$20,572.23, are a true statement of direct expenditures for conducting "A Preliminary Geochemical & Geophysical Survey" of the Alder Hill, et al, Claim Group as outlined by this report.

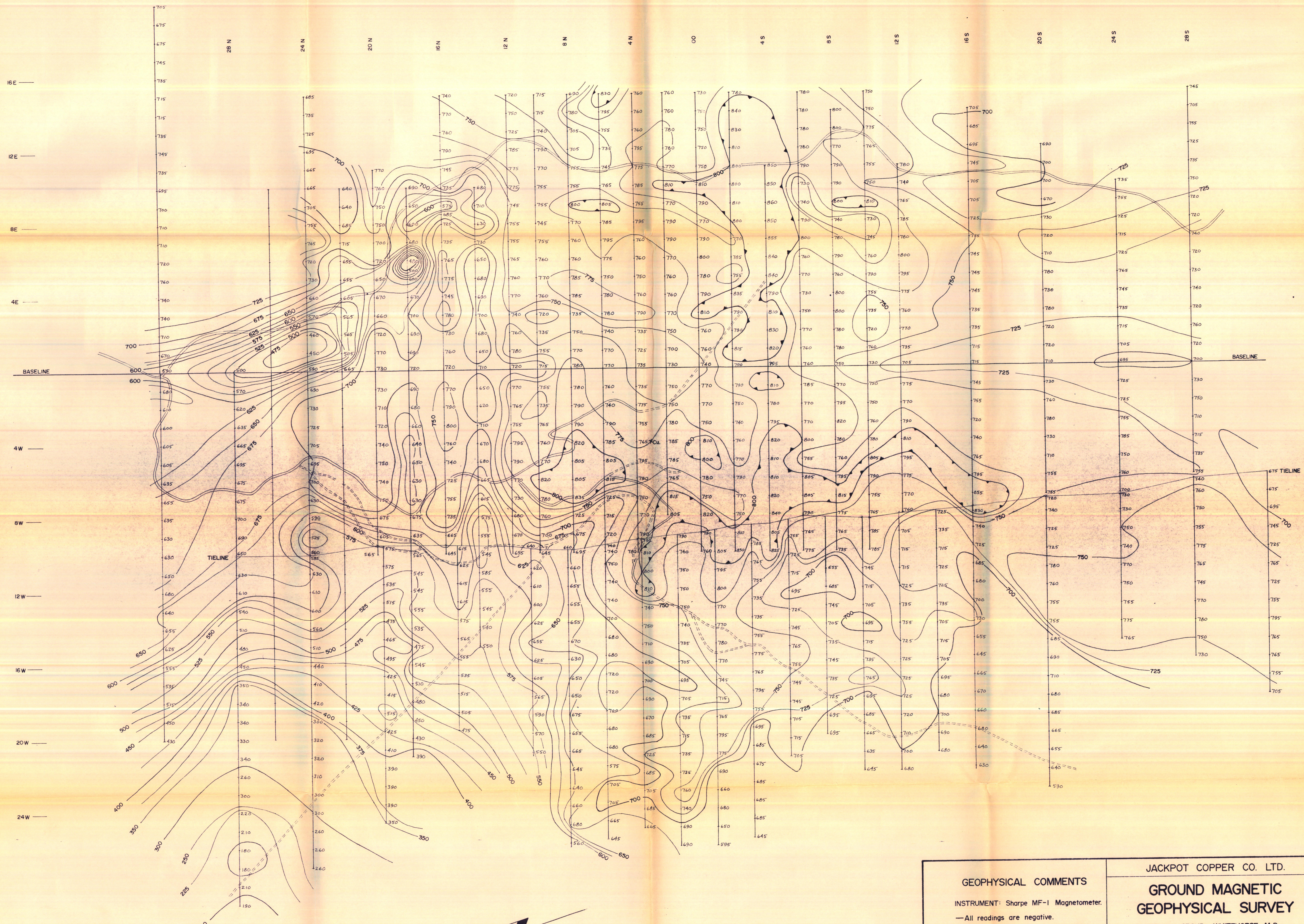

Charles J. Shandalla
Director - Jackpot Copper Mines Ltd.

Sworn before me at Whitehorse
in the Yukon Territory this 21
day of May 1968.


A Commissioner for Taking Affidavits
in and for the Yukon Territory.




<p>JACKPOT COPPER MINES LTD.</p> <p>ALDER HILL — STE CLAIM GROUP</p> <p>WHITEHORSE MINING DISTRICT</p> <p>SKETCH SHOWING ANOMALOUS ZONES</p> <p>ACE R. PARKER & ASSOCIATES</p> <p>MINERAL INDUSTRY CONSULTANTS & CONTRACTORS</p> <p>WHITEHORSE — YUKON</p>		
SCALE:	1" = 1/2 mile	
DATE:	January 10, 1968	
DRAWN BY:	<i>Fox</i>	
DWG. NO.		

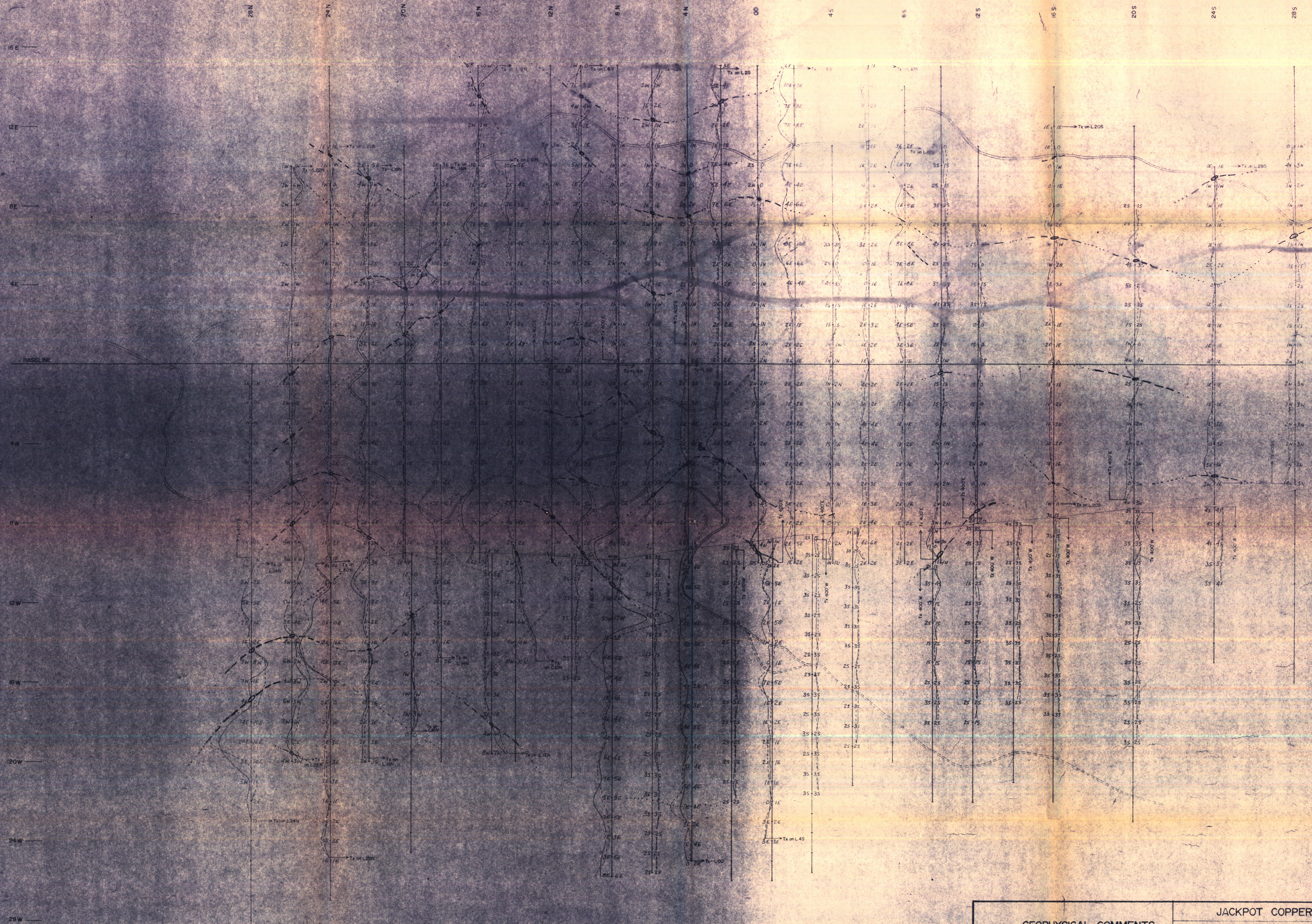


GEOPHYSICAL COMMENTS
 INSTRUMENT: Sharpe MF-1 Magnetometer.
 — All readings are negative.
 — Contour Interval: 25 gammas
 ⚡ Magnetic Depression

JACKPOT COPPER CO. LTD.
**GROUND MAGNETIC
 GEOPHYSICAL SURVEY**
 ALDER HILL GROUP—WHITEHORSE M.D.

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

SCALE:	1" = 200'	Seal 
DATE:	December 30, 1967	
DRAWN BY:	<i>Benny Peterson</i>	
GEOPHYSICS:	M. FOX	
DWG. NO.		



GEOPHYSICAL COMMENTS

INSTRUMENTS: Sharpe S.E. 300 E.M. Units

Tilt Angles (as plotted)

20°N In Line S 20°

20°E Broadside W 20°

(Scale: 1" = 20')

--- 400 cps

--- 1600 cps

- - - - - Inferred Conductor Trend

Location of Transmitter relative to Receiver position is indicated on map.

JACKPOT COPPER CO. LTD.

PRELIMINARY E.M. GEOPHYSICAL SURVEY

ALDER HILL GROUP — WHITEHORSE MINING DISTRICT

ACE R. PARKER & ASSOCIATES

MINERAL INDUSTRY CONSULTANTS & CONTRACTORS

SCALE: 1" = 200'

DATE: December 30, 1967

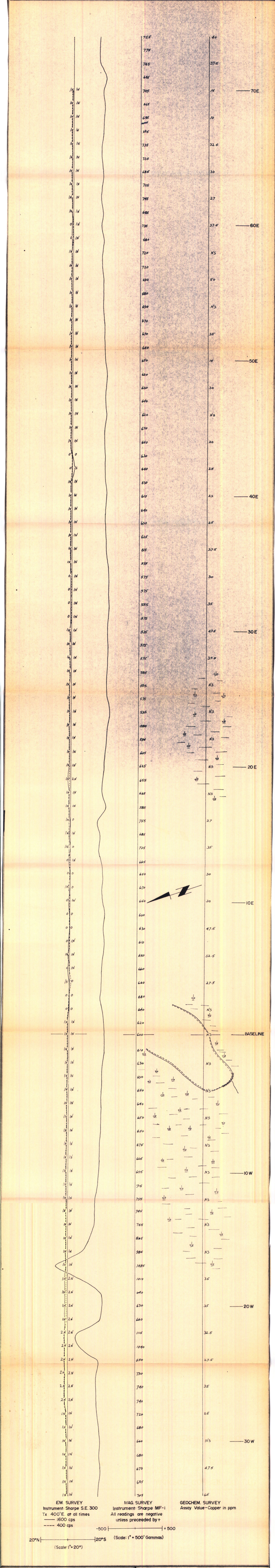
DRAWN BY: J.F.

GEOPHYSICS: M. FOX

DWG. NO.

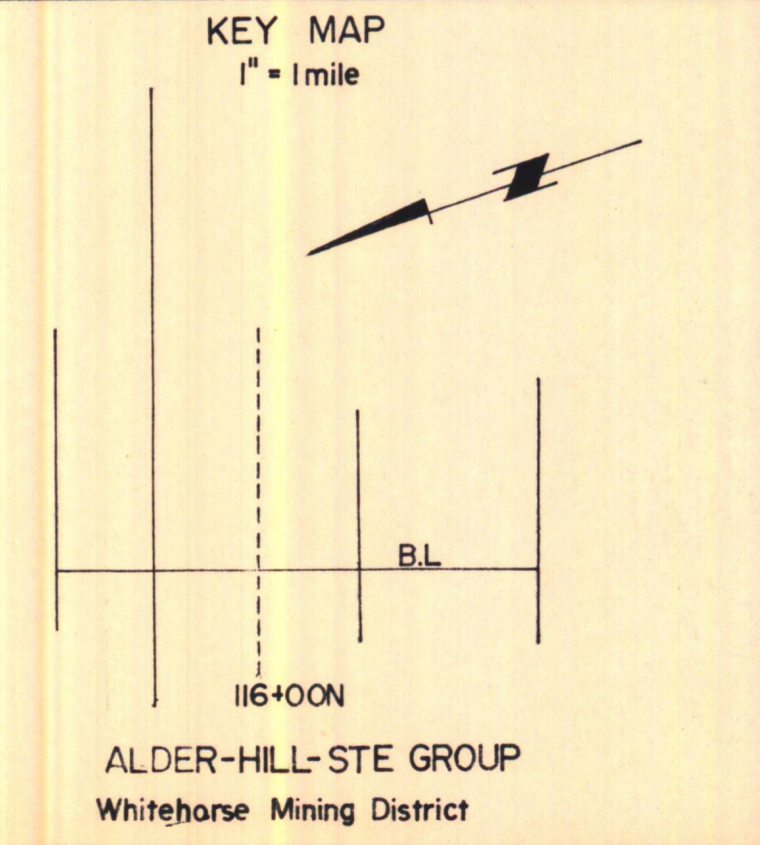
Seal





EM SURVEY Instrument: Sharpe S.E. 300 Tx 400°E at all times 400 cps
 MAG SURVEY Instrument: Sharpe MF-1 All readings are negative unless preceded by +
 GEOCHEM SURVEY Assay Value - Copper in ppm

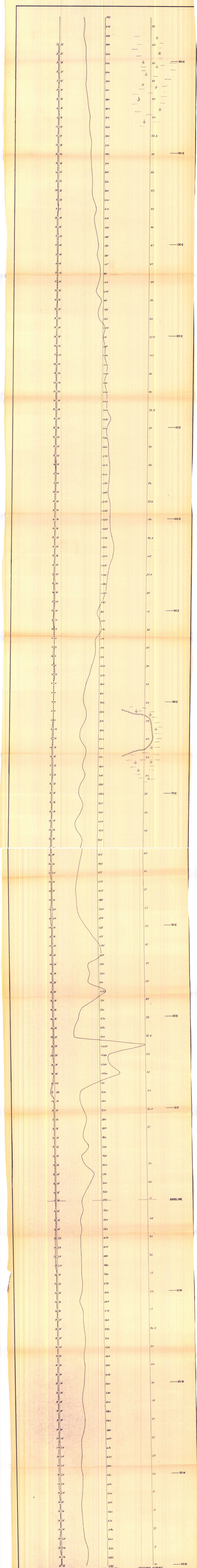
(Scale: 1" = 200')



JACKPOT COPPER CO. LTD.
 COMPOSITE RECONNAISSANCE
 GEOCHEMICAL & GROUND
 GEOPHYSICAL SURVEYS
 OF LINE 116+00N
ALDER-HILL-STE GROUP
 WHITEHORSE MINING DISTRICT

ACE R. PARKER & ASSOCIATES
 Mineral Industry Consultants & Contractors

SCALE: 1" = 200'
 DATE: Dec. 30, 1967
 DRAWN BY: [Signature]
 DWG. NO.:
 GEOPHYSICS: M. FOX

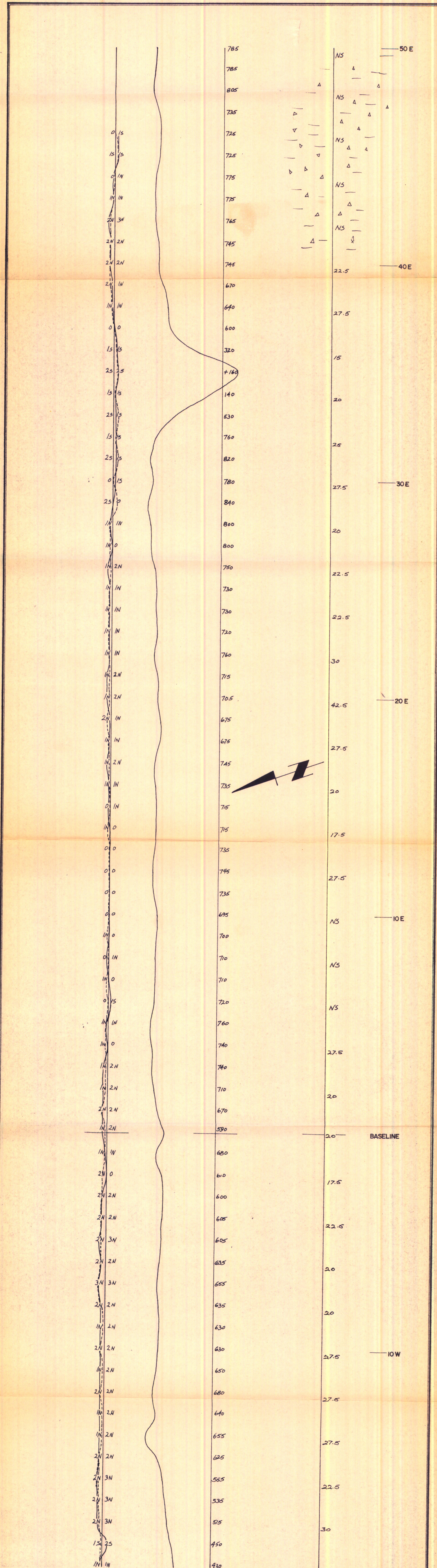


E.M. SURVEY Instrument: Sharp S.C. 300
 T₁ 400 G. at all times
 400 cps
 Scale: 1" = 200'

MAG. SURVEY Instrument: Sharp MF-1
 All readings are magnetic
 unless preceded by a
 400 cps
 Scale: 1" = 500 Gauss

GEOCHEM. SURVEY
 Assay Value - Copper in ppm

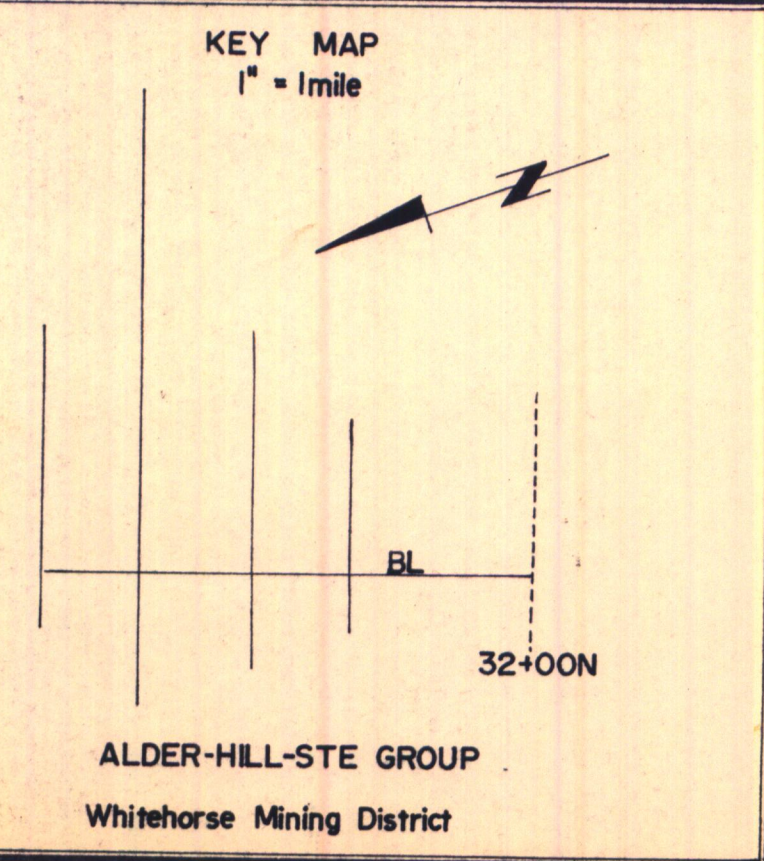
KEY MAP 1" = 1 mile 	JACKPOT COPPER CO. LTD. COMPOSITE RECONNAISSANCE GEOCHEMICAL & GROUND GEOPHYSICAL SURVEYS OF LINE 44-00N ALDER HILL-STE GROUP WHITEHORSE MINING DISTRICT	
	ACE R. PARKER & ASSOCIATES Mineral Industry Consultants & Contractors	SEAL
	SCALE 1" = 200' DATE December 30, 1967	
	DRAWN BY DWG. NO. GEOPHYSICS	M. FOX



E.M. SURVEY
 Instrument: Sharpe S.E. 300
 Tx 400' E. at all times.
 --- 1600 cps
 --- 400 cps
 (Scale: 1" = 20')

MAG. SURVEY
 Instrument: Sharpe MF-1
 All readings are negative
 unless preceded by +
 --- 500
 --- 500
 (Scale: 1" = 500 Gammas)

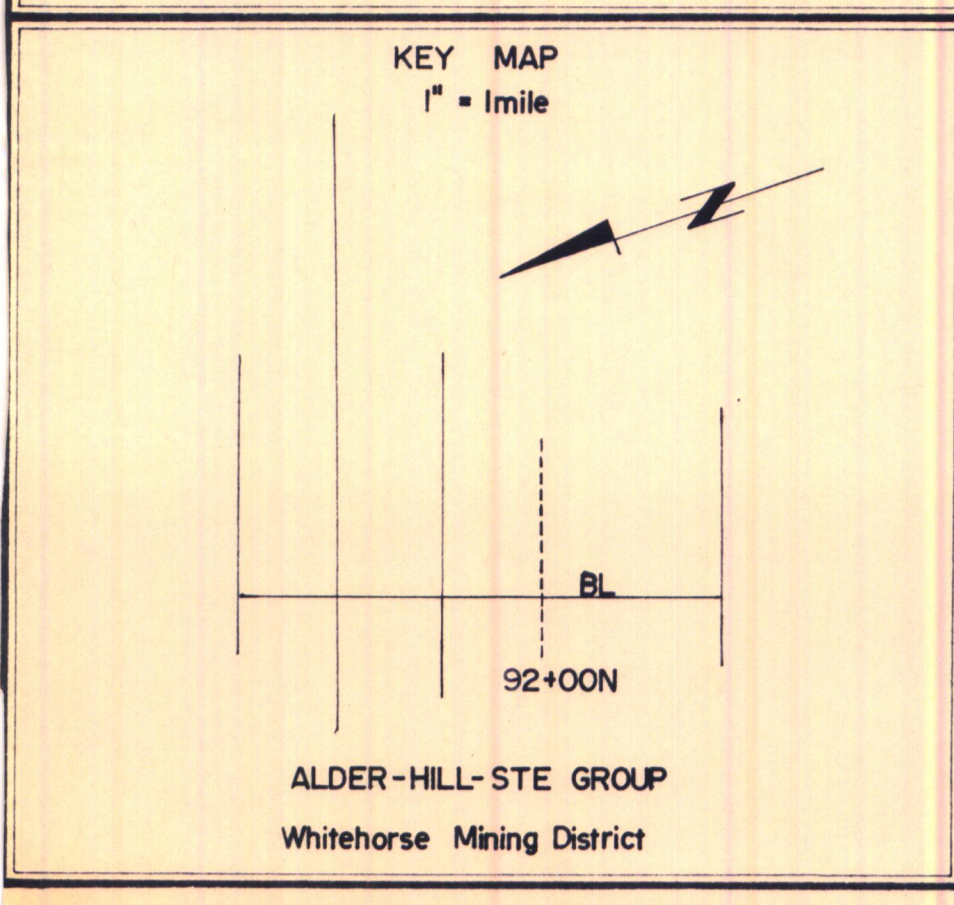
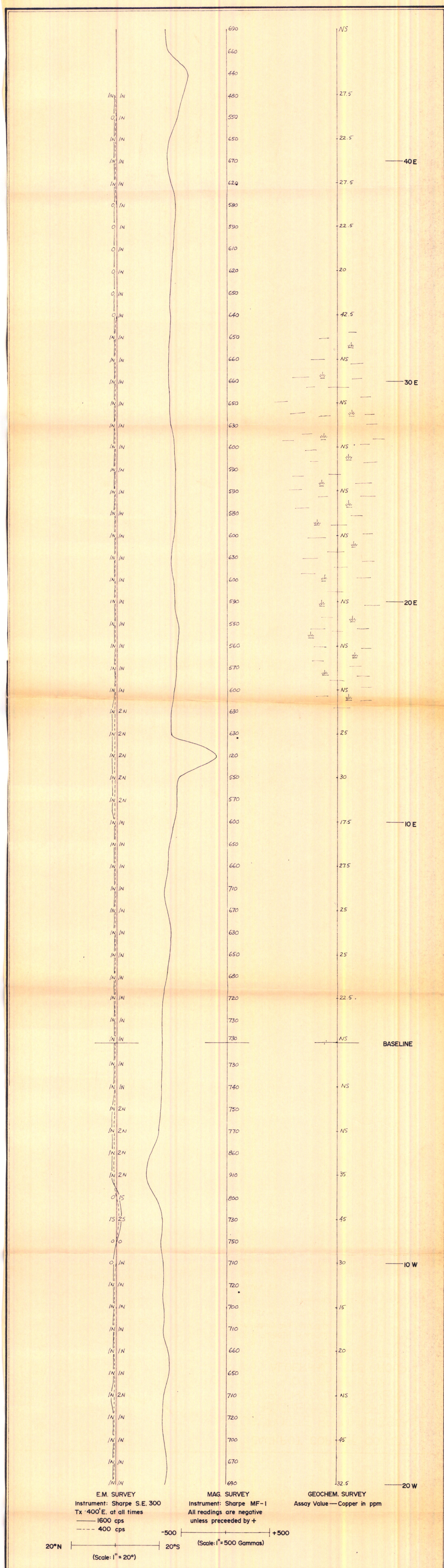
GEOCHEM. SURVEY
 Assay Value - Copper in ppm
 --- 20
 --- 20



JACKPOT COPPER CO. LTD.
 COMPOSITE RECONNAISSANCE
 GEOCHEMICAL & GROUND
 GEOPHYSICAL SURVEYS
 OF LINE 32+00N
 ALDER-HILL-STE GROUP
 WHITEHORSE MINING DISTRICT

ACE R. PARKER & ASSOCIATES
 Mineral Industry Consultants & Contractors

SCALE: 1" = 200'
 DATE: December 30, 1967
 DRAWN BY: [Signature]
 DWG. NO.:
 GEOPHYSICS: M. FOX



JACKPOT COPPER CO. LTD.
COMPOSITE RECONNAISSANCE
GEOCHEMICAL & GROUND
GEOPHYSICAL SURVEYS
OF LINE 92+00N
ALDER-HILL-STE GROUP
WHITEHORSE MINING DISTRICT

ACE R. PARKER & ASSOCIATES
Mineral Industry Consultants & Contractors

SCALE: 1" = 200'
DATE: December 30, 1967
DRAWN BY: *Benny Peterson*
DWG. NO.:
GEOPHYSICS: M. FOX