

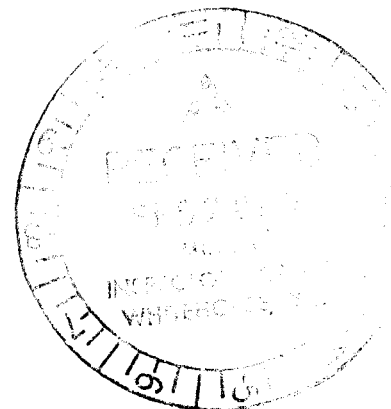
A REPORT ON ELECTROMAGNETIC
AND MAGNETIC SURVEYS
of the

BEE CLAIM GROUP
YCS #105-D-5
(60°28'N Latitude)
(136°40'W Longitude)

MAY 20, 1968

by

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



Work Performed
Between
April 15th, 1968
and
April 30th, 1968

019599A

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

D. C. Findlay
MEMBER GEOLOGIST

Approved as to cost in the amount
of \$ 29,580.00

R. G. Parker
MEMBER MINING ENGINEER

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

[Signature]
COMMISSIONER OF YUKON

BEE GROUP

ACE R. PARKER

INTRODUCTION

The report presents the geophysical results of a preliminary ground Magnetic and Electromagnetic Survey of the BEE GROUP of Mineral Claims which are owned by Canzac Mines Limited, Vancouver, B.C. These Claims cover anomalous zones outlined by a Government-sponsored Aeromagnetic Survey of the area.

The Surveys were designed to provide preliminary ground exploration of the BEE GROUP and were conducted under winter conditions by the management and staff of ACE R. PARKER & ASSOCIATES LIMITED, Mineral Industry Consultants & Contractors, Whitehorse, Yukon.

SUMMARY

The Surveys outlined several magnetic and electromagnetic conductors near the eastern end of the Claim Block as shown on the attached maps. These anomalous zones roughly coincide with the core-area of a large anomalous zone outlined by a previous Government-sponsored aeromagnetic survey and probably signify the presence of a mineralized contact zone between Coast Intrusive rocks and sedimentary rocks of the Lewes River Group which are presently concealed by a shallow lake and glacial drift. Many of the magnetic anomalies are probably caused by magnetite mineralization associated with localized and structurally controlled mafic intrusives.

Deep diamond drilling (1,000 feet +) will be required before it can be determined whether the coincident EM and Mag anomalies are indicative of economic mineralization - possibly metasomatic copper mineralization

BEE GROUP

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contained in Lewes River sedimentary rocks.

Nevertheless the present geophysical results should be checked with a Turam geophysical survey before any deep diamond drilling is attempted. The Turam method is essentially a deep penetrating fixed source horizontal loop (EM) method which is generally not distorted by overburden, topography, water courses, etc. and detects deposits of 3% or greater "sulphides".

PROPERTY & OWNERSHIP

The property consists of sixteen (16) contiguous claims and fractions which are shown on YCS #105-D-5 and registered in the office of the Mining Recorder at Whitehorse, Yukon as follows:

| <u>CLAIM</u> | <u>GRANT</u> | <u>EXPIRY</u> | <u>REGISTERED</u> |
|-----------------|----------------------------|---------------|-------------------|
| <u>NAME</u> | <u>NUMBERS</u> | <u>DATE</u> | <u>OWNERS</u> |
| BEE #1-8 incl. | Y 23390 - Y 23397 incl. | Feb. 6, 1968 | Canzac Mines |
| BEE #9-14 incl. | Y 23398 - Y 23402 incl. | Feb. 6, 1968 | Canzac Mines |
| BEE #1 Fr. | Y 23662 | Feb. 12, 1968 | Canzac Mines |
| BEE #2 Fr. | Y 23663 | Feb. 12, 1968 | Canzac Mines |

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LOCATION & ACCESS

The BEE GROUP (60°28'N, 136°40'W) is located approximately 26 air-miles southwest of Whitehorse, Yukon and straddles a shallow lake locally called Mud or Rat Lake which is centered in a glacially-carved and esker-mantled "high-land" valley approximately 3,800 feet above sea-level.

Helicopters or float planes based in Whitehorse, Yukon provide the most convenient access to the property. Road construction in the area is completely feasible.

PREVIOUS WORK

Previous work on the property consists of regional geologic mapping by the Geological Survey of Canada - Memoir #312, Whitehorse Map Area - with Geologic Map #103-9-A, 1" = 4mi., by J.O. Wheeler. This map shows that the Claims cover a buried contact between Triassic metavolcanics and sediments of the Lewes River Group and Coast Range Intrusive Rocks.

Government Airborne Geophysical Paper #3359 shows several strong aeromagnetic anomalies in the immediate area.

DISCUSSION OF THE SURVEYS

Purpose & Control of the Work

The main purpose of the Surveys discussed herein was to provide preliminary exploration of the BEE GROUP.

Grid lines picketed with four-foot laths at 100 foot intervals and shown on the attached maps provided control for the work. These lines totaled 7.9 line miles in length and had a common baseline with a bearing of 325°.

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The surveys were done under winter conditions and many of the pickets had to be placed by inserting them in holes that were chopped in lake-ice with the aid of an axe.

GEOPHYSICAL INSTRUMENTATION

A Sharpe MF-1 Magnetometer was employed to conduct the Magnetic Survey.

This is a hand-held light-weight instrument which measures the vertical component of the magnetic field by means of a fluxgate. The instrument has a range of 300,000 gammas on both positive and negative scales and has a sensitivity of 10 gammas per scale division.

A Ronka EM-16 Geophysical Survey was conducted along the same grid lines as those used for the Magnetic Survey. The results are plotted on the attached maps and suggest several conductive zones, some of which coincide with anomalous zones outlined by the Magnetic Survey.

The EM-16 consists of a very sensitive radio receiver covering the frequency band of the new VLF transmitting stations with a patented means of measuring the vertical field in-phase and quadrature components at right angles to the direction of transmission. In this case the transmitter used is located at Jim Creek (NPG), near Seattle, Washington.

OPERATING PROCEDURE

Operating procedure for the Magnetic Survey consisted of taking base station readings along the baseline at cross-line intersection points thus allowing the survey readings

EEE GROUP

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to be "looped" with established base stations and reread every hour as a means of controlling the "drift" and diurnal variations for the entire survey on a day-to-day basis.

For the Electromagnetic Survey, readings were taken at the respective grid stations while facing west and along each grid line thus allowing readings of the primary magnetic field in-phases and quadature at right angles to the direction of transmission.

TREATMENT & PRESENTATION OF DATA

The Magnetic results were plotted on a scale of 1" = 200' and contoured with a 500 gamma interval as shown on the attached map. Prominent land forms such as the outline of Mud Lake as well as Claim corners are also shown on the map.

Electromagnetic results were plotted on the same scale as that used for the Magnetic Survey and actual in-phase and quadature values were plotted on a scale of 1" = 20% as shown on the attached map which also shows the subsequent EM conductors.

GEOPHYSICAL RESULTS

The Magnetic anomalies shown on the attached maps are of uniform character and are caused by near-vertical structures which come very close to surface, especially those anomalies centered at stations 3E and 1E on grid lines 4N and 0 respectively. Susceptibility differences indicate that most of these structures are of volcanic origin.

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It must be pointed out that the larger Magnetic anomalies have pronounced "shoulders" along their northeast side. These shoulder areas are probably caused by concentrations of magnetite contained in sedimentary rocks along the buried contact of these rocks with volcanic and intrusive rocks. It is these contact zones that may or may not contain economic mineralization.

The Electromagnetic Survey shows several low-amplitude cross-overs which signify conductive material near the northeastern flank of the Mag anomalies. These conductors as well as other but weaker conductors are shown on the attached maps. Generally, the Electromagnetic results on this property appear to be distorted by local high magnetism thus rendering interpretation of results of most "light EM Surveys" most difficult. Nevertheless the coincidence of the EM results with localized Mag results is considered significant.

CONCLUSIONS & RECOMMENDATIONS

The Geophysical Surveys outlined by this report verify the results of a Government-sponsored aeromagnetic survey of the area and provide additional geophysical detail which may be used to guide testing of the property by diamond drilling. Additional Geophysical Surveys, particularly deep penetrating Turam EM Surveys, should be conducted before any "deep" drilling is attempted.

Susceptibility differences indicate that many of the magnetic anomalies are caused by volcanic rocks which probably come very near surface and contain approximately 10% magnetite. Nevertheless certain magnetic features

BEE GROUP

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herein referred to as "magnetic shoulders" situated on the stronger magnetic anomalies especially along their eastern flank possibly indicate deeper concentration of magnetite mineralization possibly localized along a buried contact between volcanic and intrusive rocks and sedimentary rocks of the Lewis River Group.

These "shoulder anomalies" such as situated at Station 13E on Line O have a weak but coincident and significant EM expression and may or may not be caused by concentration of economic mineralization.

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COSTS

The direct costs applicable to the Surveys covered by this report and paid by Canzac Mines are listed as follows:

| | |
|--|-----------------|
| 1. Grid lines and Stations - including labour, surveying, picketing, and materials (7.9 line-miles @ \$50.00 per line-mile) | \$ 395.00 |
| 2. Ground Magnetometer Surveys (7.9 line-miles @ \$70.00 per line-mile) | 553.00 |
| 3. Ground Electromagnetic Survey (7.9 line-miles @ \$140.00 per line-mile) | <u>1.110.00</u> |
| Total | \$2,058.00 |

Additional costs including transportation, and subsistence are unknown to this author as they were borne by Canzac Mines Limited.

BND GROUP

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AFFIDAVIT OF COSTS

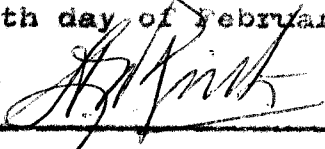
I, Ace R. Parker, of the City of Whitehorse, Yukon Territory, do certify that:

1. I am a Consulting Engineer practicing under the name and style of ACE R. PARKER & ASSOCIATES LIMITED and have personal knowledge of the matters described herein.
2. To the best of my knowledge and belief, the costs represented in this report are a true statement of direct expenditures for the surveys discussed herein.



Ace R. Parker, P. Eng.

Sworn before me at Whitehorse
in the Yukon Territory this
21st
19th day of February, 1969.



A Commissioner for taking Oaths
in and for the Yukon Territory.

BEE GROUP

ACE R. PARKER

PERSONELL EMPLOYED ON THE PROJECT


| <u>NAME</u> | <u>OCCUPATION</u> | <u>FIXED ADDRESS</u> |
|-------------|---------------------|----------------------|
| K. KANIA | GEOPHYSICAL TECH. | WINLOW, B.C. |
| R. SAVIDGE | GEOPHYSICAL TECH. | DURANGO, COLORADO |
| M. FOX | GEOPHYSICAL TECH. | VANCOUVER, B.C. |
| M. CURRIE | SENIOR GEOPHYSIST | PORT LORING, ONT. |
| A.R. PARKER | CONSULTING ENGINEER | WHITEHORSE, Y.T. |
| J. ATCHISON | STENOGRAPHER | WHITEHORSE, Y.T. |

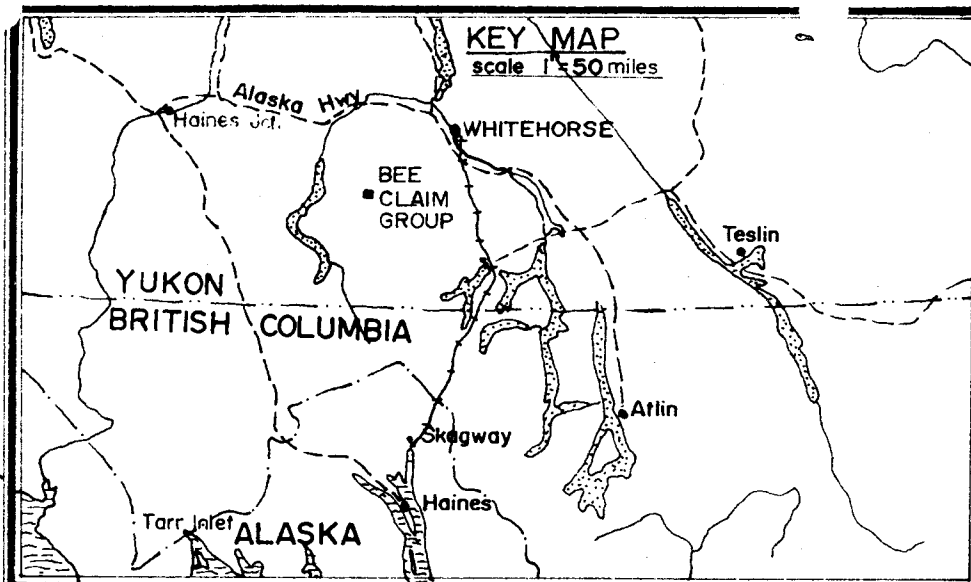
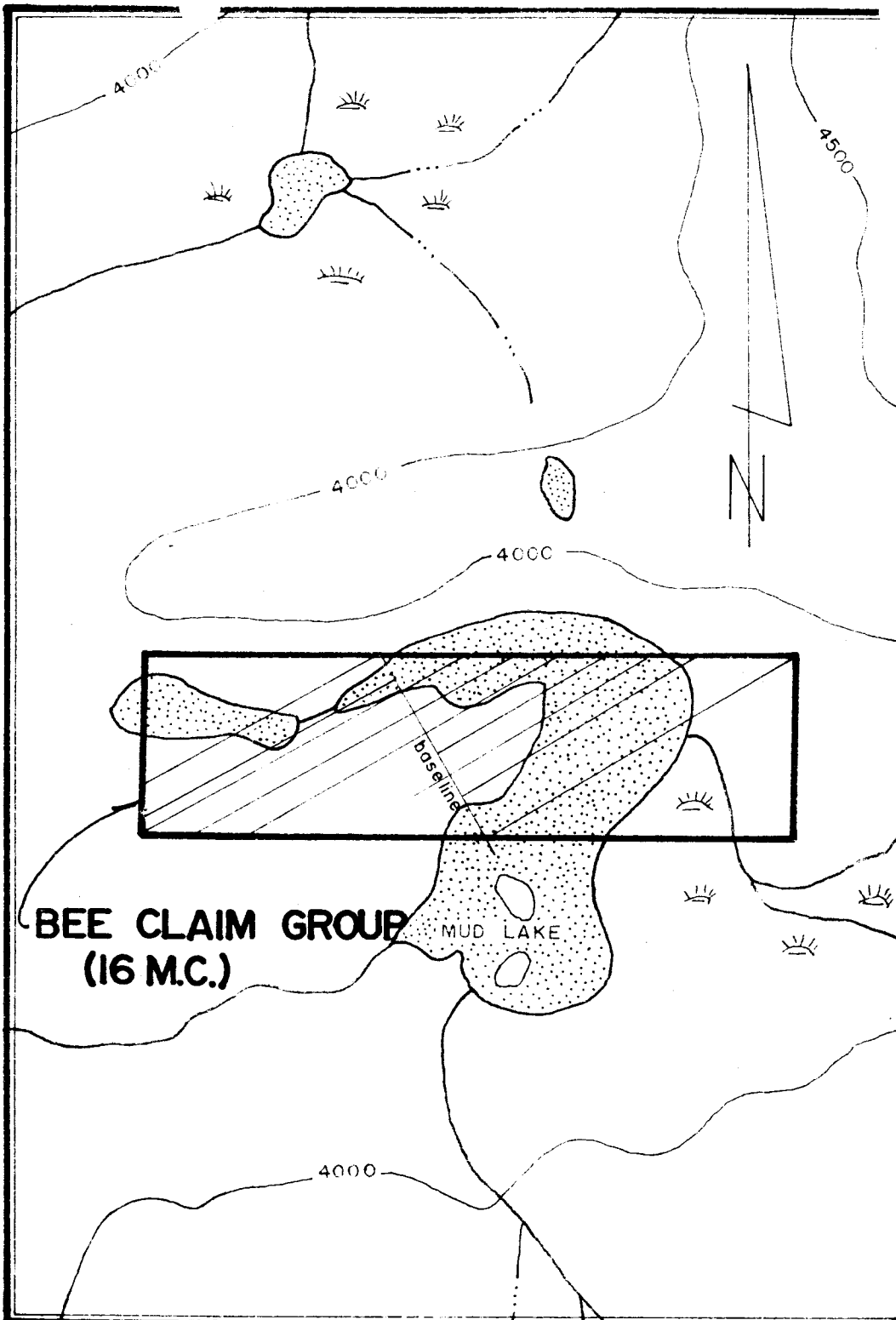
CERTIFICATE

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

1. I am a Consulting Engineer practising under the name and style of ACE R. PARKER & ASSOCIATES LIMITED with office at 3rd and Elliot Street, Whitehorse, Yukon.
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 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 six years after working in the Mineral Industry since 1953.
5. I have no direct or indirect interest in the BEE CLAIM GROUP described in the accompanying report or in any securities relating to the said property.
6. This Certificate is part of the attached Geophysical Report on the BEE CLAIM GROUP dated 20th of May, 1968. The attached map shows the location of the BEE CLAIM GROUP on which the included work was performed.
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. The work outlined by this report was conducted under my supervision.

Whitehorse, Yukon
20th of May, 1968


Ace R. Parker, P. Eng.



location of claims and grid approximate

CANZAC MINES Ltd.

PROPERTY LOCATION MAP

of the

BEE CLAIM GROUP

WHITEHORSE MINING DISTRICT

ACE R. PARKER & ASSOCIATES Ltd.

Mineral Industry Consultants and Contractors

DATE

20. May 1968.

SEAL

SCALE

1" = 1/2 mile

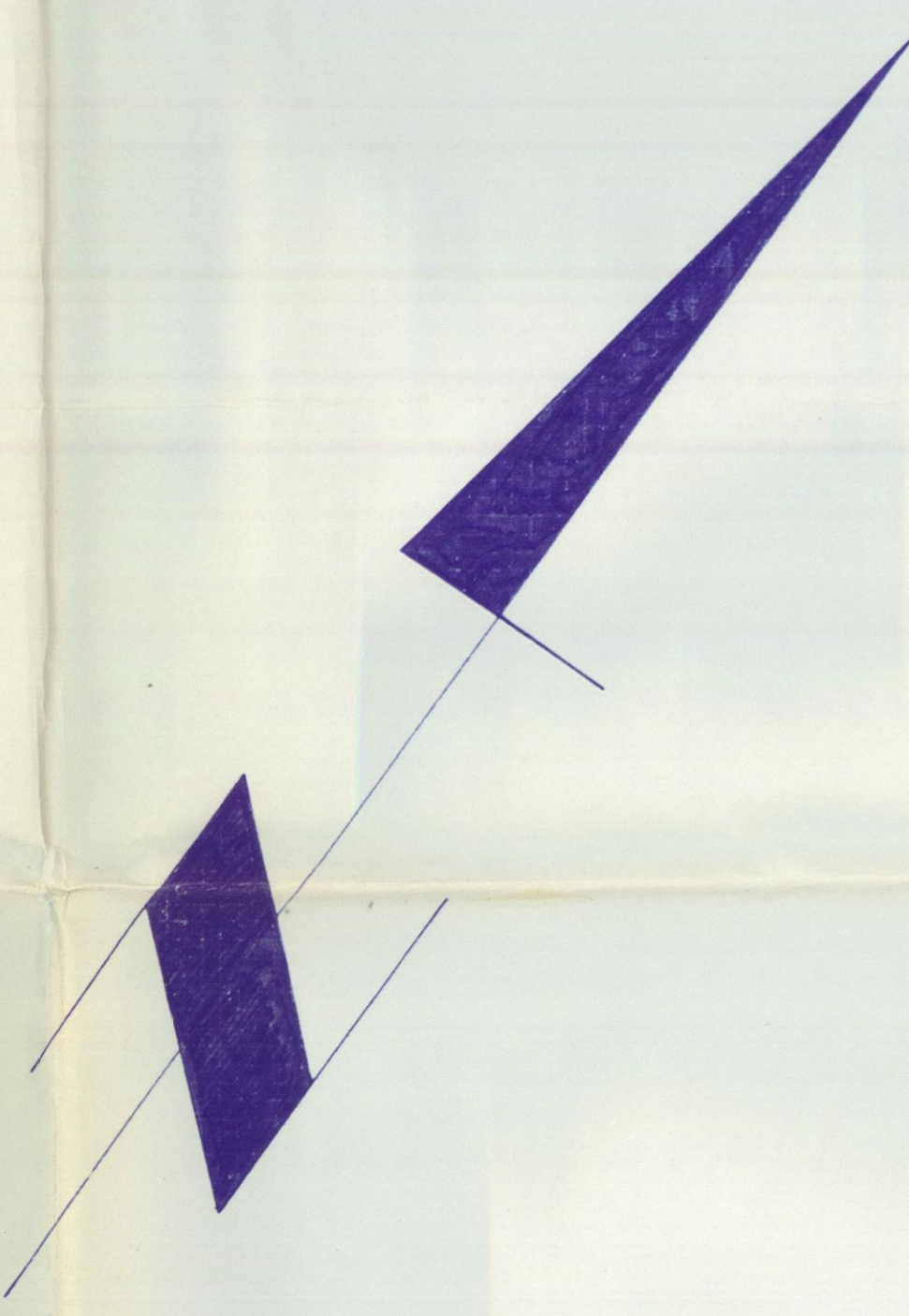
DRAWN

J. Muff

DWG. N^o

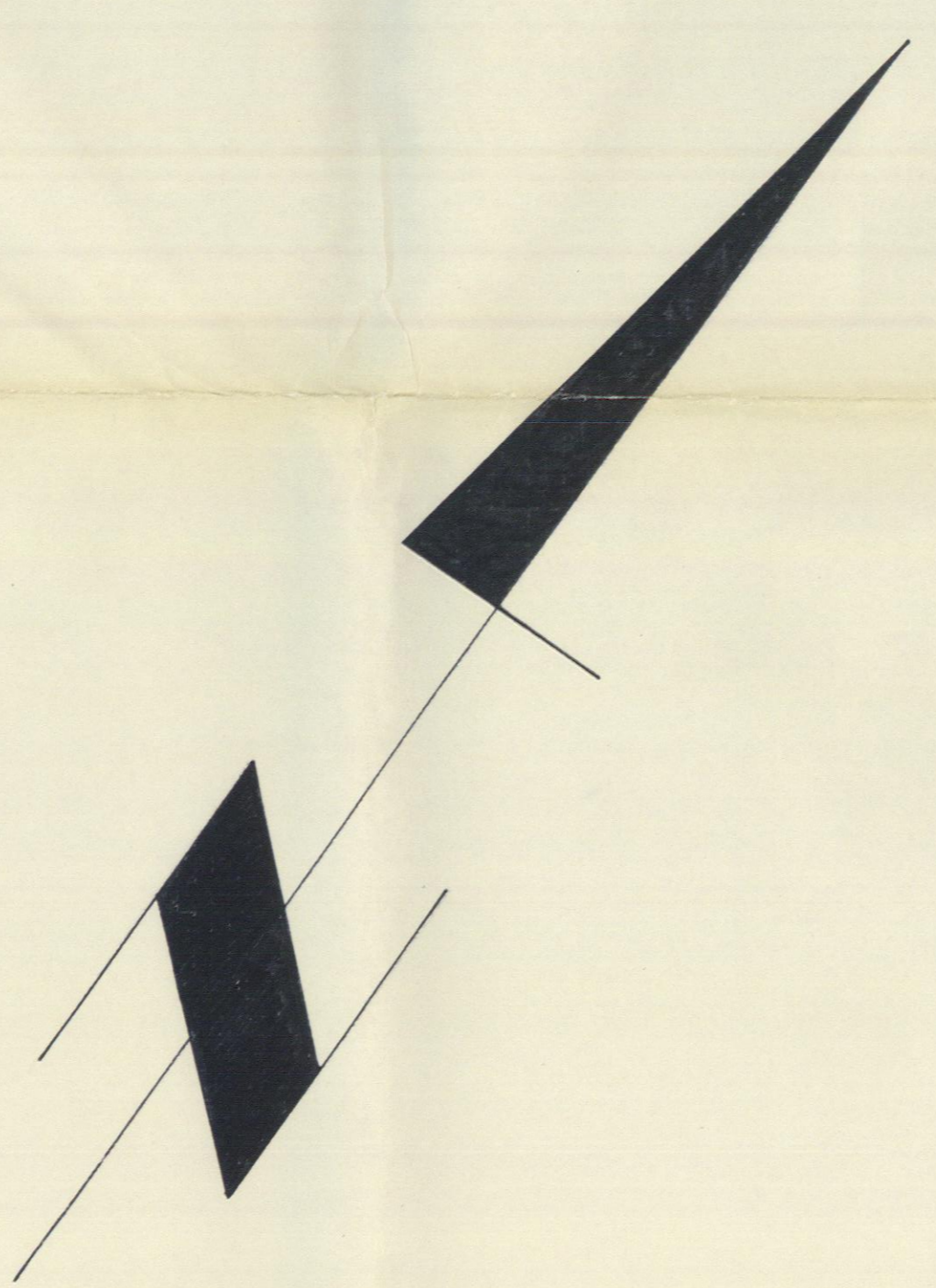


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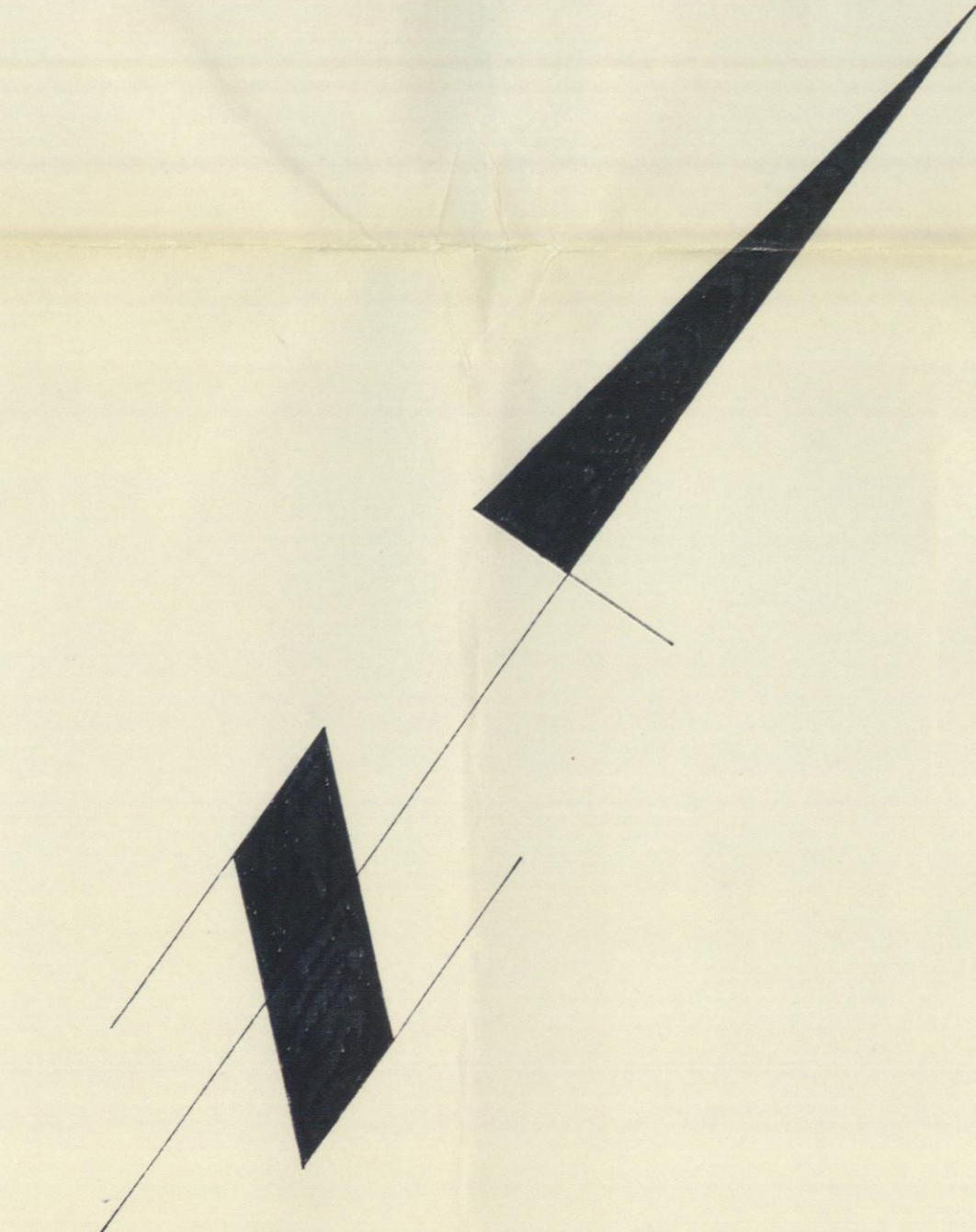
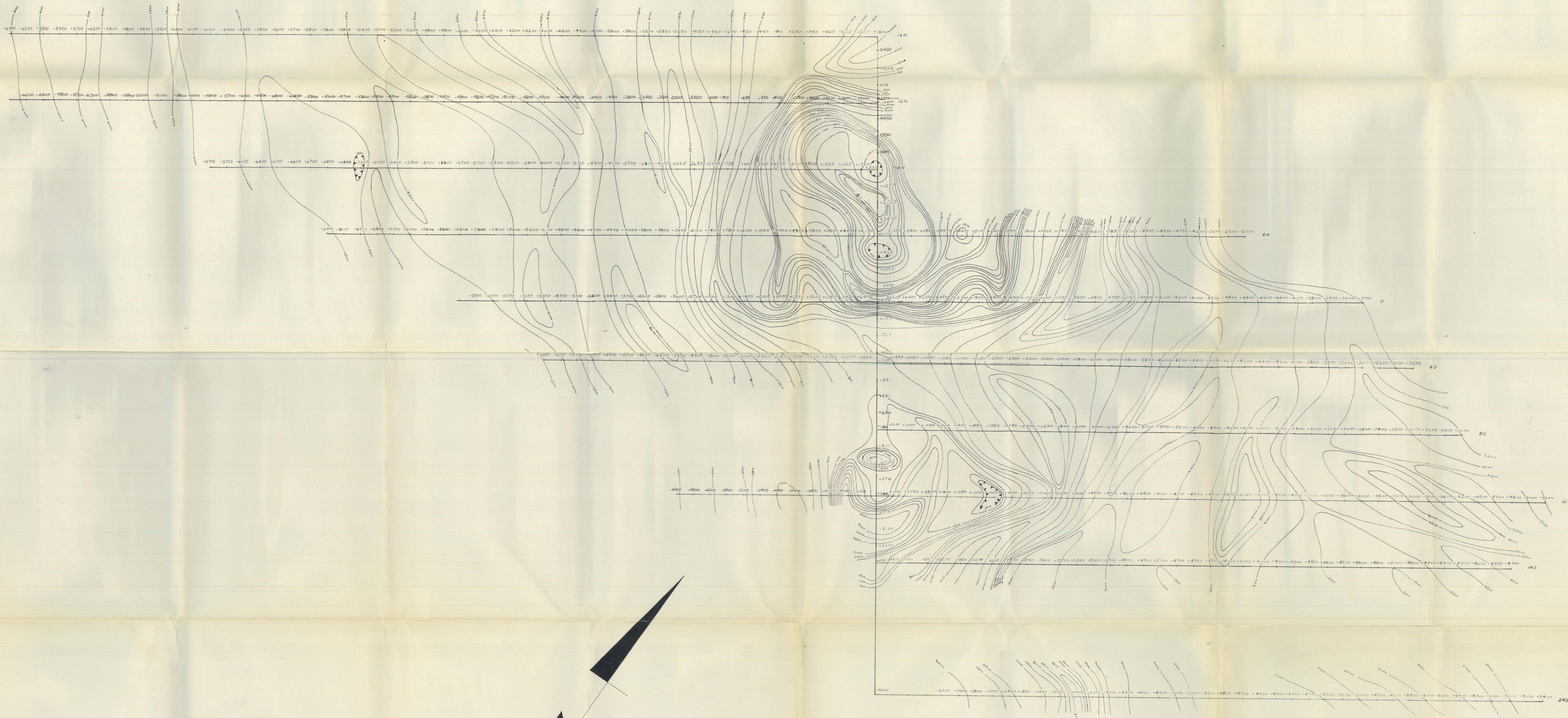


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| GEOPHYSICAL COMMENTS INSTRUMENT = RONKA E. M. 16 In phase (bottom) ——— Quadrature (top) - - - - Polarity Corrected for in Survey Results Plotted 1" = 20% Conductor Axis Defined ——— Inferred - - - - Possible Mineralized Zones | | CANZAC MINES LTD. PRELIMINARY E.M. GEOPHYSICAL SURVEY of the BEE GROUP WHITEHORSE MINING DISTRICT ACE R. PARKER & ASSOCIATES LTD. MINERAL INDUSTRY CONSULTANTS & CONTRACTORS DATE MAY 20, '68 DRAWN BY [Signature] SCALE 1" = 200' DWG. NO. 3 | |
|--|--|---|--|


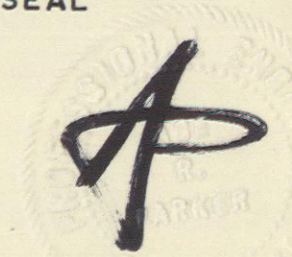
W52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40E



| | | | |
|---|--|--|--------------------------------|
| GEOPHYSICAL COMMENTS INSTRUMENT = RONKA E.M.16 In phase (bottom) ——— Quadrature (top) - - - - Polarity Corrected for in Survey | | CANZAC MINES LTD. PRELIMINARY E.M. GEOPHYSICAL SURVEY of the BEE GROUP WHITEHORSE MINING DISTRICT ACE R. PARKER & ASSOCIATES LTD. MINERAL INDUSTRY CONSULTANTS & CONTRACTORS SEAL | |
| NPG pmf Results Plotted 1" = 20' Conductor Axis Defined ——— Inferred - - - - Possible Mineralized Zones | | DATE MAY 20, 68 | DRAWN BY <i>[Signature]</i> |
| | | SCALE 1" = 200' | DWG. NO. |



BASELINE

| | | | |
|---|--|--|--|
| <p>GEOPHYSICAL COMMENTS</p> <ul style="list-style-type: none"> — Instrument Sharpe MF-1 — Contour interval 500 gammas  Mag depression | | <p>CANZAC MINES LTD PRELIMINARY MAG. GEOPHYSICAL SURVEY of the BEE GROUP WHITEHORSE MINING DISTRICT</p> | |
| <p>ACER PARKER & ASSOCIATES LTD. MINERAL INDUSTRY CONSULTANTS & CONTRACTORS</p> | | <p>DATE MAY 23, 1968 DRAWN BY <i>JH</i> SCALE 1" = 200' D.W.G. NO.</p> | |
| | | <p>SEAL </p> | |

PRELIMINARY REPORT

ON

THE BEE MINERAL CLAIM GROUP

WHITEHORSE MINING DIVISION

YUKON TERRITORY

FOR

CANZAC MINES LTD. (N.P.L.)

816, 510 West Hastings St.,

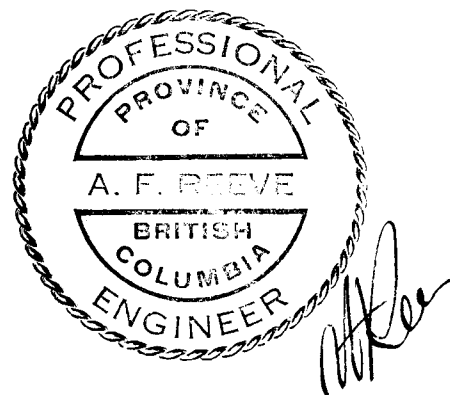
Vancouver, B. C.

by

CORDILLERAN ENGINEERING LTD.

Vancouver, B. C.

February, 1968.



C O N T E N T S

| | <u>P a g e</u> |
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| - Writer's Certificate | |
| - Fig. 1 Location of Bee Claim Group | 1" = 1/2 mi. |
| - Fig. 2 Location of Air Magnetic Anomaly | 1" = 1 mile |
| - Fig. 3 Ground Magnetic Traverses | 1" = 1000' |

INTRODUCTION

This report has been prepared at the request of Mr. R. Sostad, president of Canzac Mines Ltd. It describes a group of claims which occupy geological and geophysical features that suggest the possible occurrence of copper mineralization. It is based on a study of published geological and geophysical maps and field information supplied by Mr. R.A. Cranger who visited the property on February 9, 1968.

The writer did not make a field examination.

Three sketches showing the location of the claims, geology and magnetic anomalies are appended.

PROPERTY (see figure 1)

| Claim Name | Grant No. | Record Date | Registered Owner |
|------------------------|-----------------------------|---------------|------------------|
| Bee #1 to #8 incl. | Y 23390 to Y 23397 incl. | Feb. 6, 1968 | Ralph Sostad |
| Bee #9 to #14 incl. | Y 23398 to Y 23402 incl. | " " " | George Wing |
| Bee #1 Fraction | Y 23662 | Feb. 12, 1968 | " " |
| Bee #2 | " Y 23663 | " " " | " " |

The property was visited by the claims inspector on February 6, 1968.

The writer received the above information from photocopies of claim records supplied by the owners.

They report that all claims are being transferred to Cansac Mines Ltd.

LOCATION

About 30 miles SW of Whitehorse near Mud Lake.

60° 28' N. latitude

136° 40' W. longitude

3800' above sealevel.

Access is by helicopter from Whitehorse

GEOLOGY

The geology of the Whitehorse region is described on G.S.C. Map #1039A (1" = 4 miles). The Bee claim group occupies a broad valley bottom which is partially filled with flat-lying Cenozoic volcanic rocks of unknown thickness. Beneath these volcanics is a contact between Triassic metavolcanics and sediments of the Lewes River group, and "Coast Range" intrusive rocks of Cretaceous age. Contact metamorphic copper deposits are known to occur at numerous locations in the Whitehorse Region, associated with Coast Range and Lewes River rocks. The most important deposits of this type occur on the New Imperial Mines property immediately SW of Whitehorse. Magnetite is a common constituent of these occurrences.

No exposed copper mineralization is reported on the Bee claims.

MAGNETIC ANOMALIES

(See figures 2 and 3 appended, also G.S.C. Magnetic Map #105 10/5 Rose Lake, 1" = 1 mi.)

A positive air magnetic anomaly with a peak of 2700 gammas above the regional background is located at the west end of Mud Lake. It is cut on two flight lines 1 mile apart, has a smooth orbicular shape and trends parallel to the suggested direction of the underlying geological structure.

Negative features immediately NE and SW of the positive peak imply that the source is steeply inclined and not deeply buried.

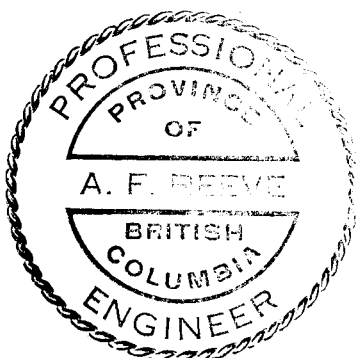
Ground magnetic traverses run by Granger, (see figure 3) confirm the location of the anomaly on the Bee group near the west end of Mud Lake.

Maximum local relief of about 10,000 gammas was obtained on the ground.


SUMMARY AND CONCLUSIONS

The Bee mineral claim group is located on a buried contact between Lewes River metavolcanics and sediments and Coast Range intrusive rocks about 30 miles SW of Whitehorse, Y.T.

A well defined magnetic anomaly, indicated by airborne surveys and confirmed on the ground, occurs on the property. These features suggest the possibility of a contact metamorphic copper deposit beneath the Bee claim group similar to known occurrences in the Whitehorse copper belt.



Respectfully submitted,
CORDILLERAN ENGINEERING LIMITED


A.F. Reeve, P.Eng.,
Geological Engineer

February 21, 1968.

APPENDIX

CORDILLERAN ENGINEERING LIMITED

400-837 WEST HASTINGS STREET

VANCOUVER 1, B.C.

TELEPHONE: 685-0167

MINERAL EXPLORATION
MANAGEMENT AND
ENGINEERING CONSULTANTS

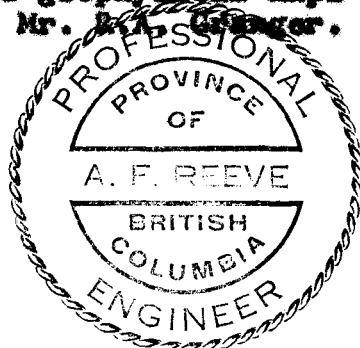
— ASSOCIATES —
BONDAR-CLEGG & COMPANY LTD.
GEOCHEMISTS

CERTIFICATE

I, Albert F. Reeve, of Vancouver, B.C.,

hereby certify:

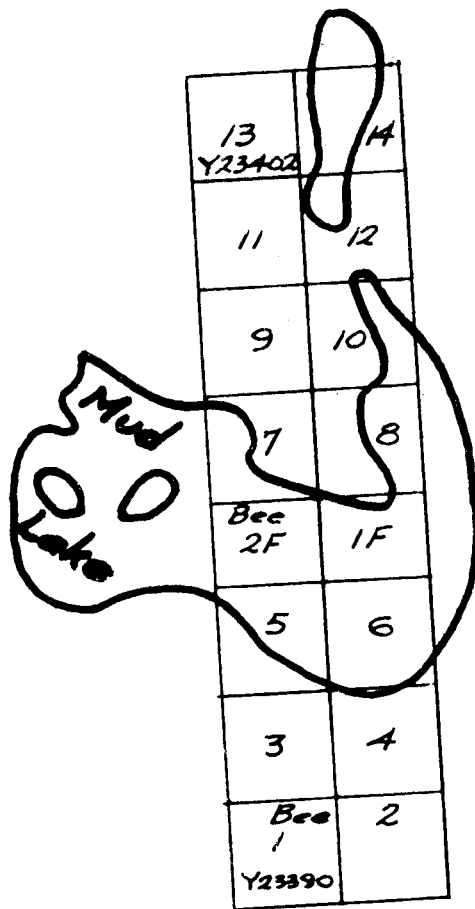
1. I am a geological engineer employed by Cordilleran Engineering Limited of 400, 837 W. Hastings Street.
2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario, and received a Bachelor of Science degree in Geological Engineering from Michigan College of Mining & Technology, Houghton, Michigan, in 1961.
3. I am a certified member of the Association of Professional Engineers in the provinces of Ontario and British Columbia.
4. I do not have any direct or indirect interest in Canzac Mines Ltd. or the Bee mineral claim group, nor do I expect to receive any.
5. This report is based on a study of published geological and geophysical maps and field information supplied by Mr. H.A. Gager.



A handwritten signature in black ink, appearing to read "A. F. Reeve".

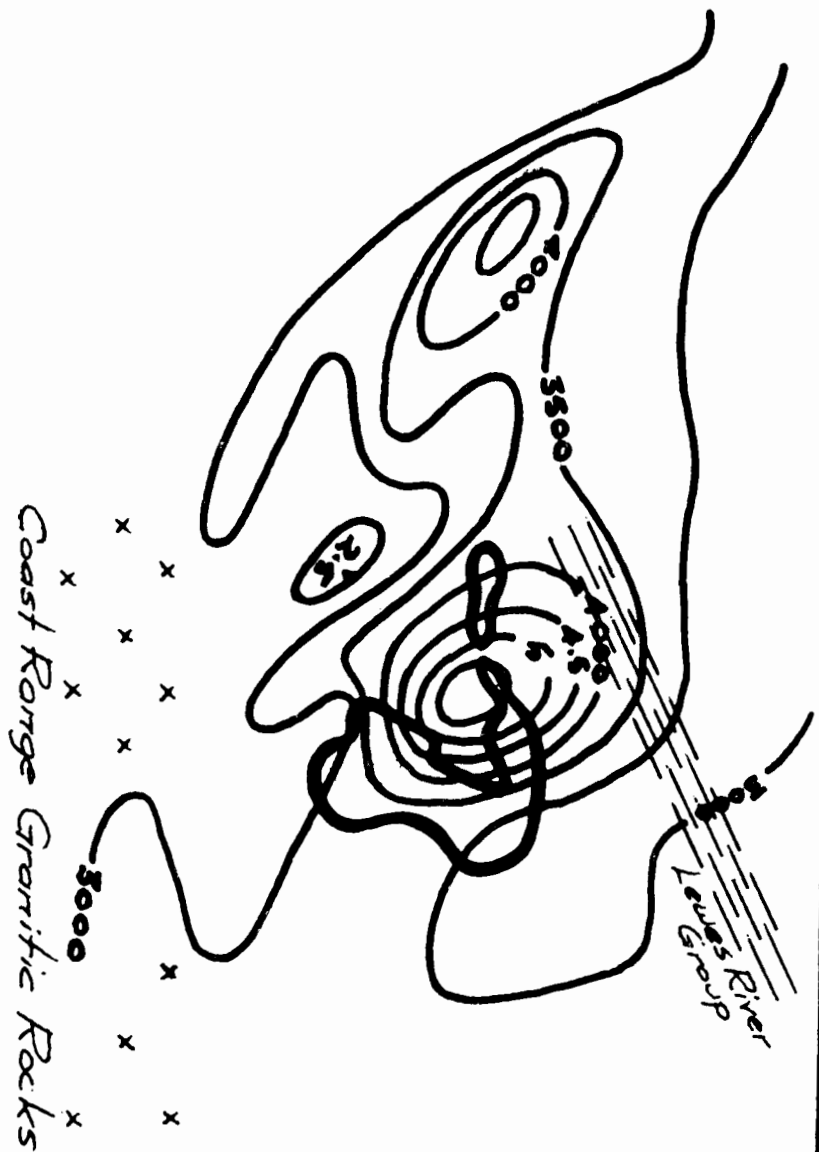
Albert F. Reeve, P.Eng.

February 21, 1968



Bee Claim Group
105D-5 Yukon
Scale: 1" = 1/2 mi.

Fig. 1

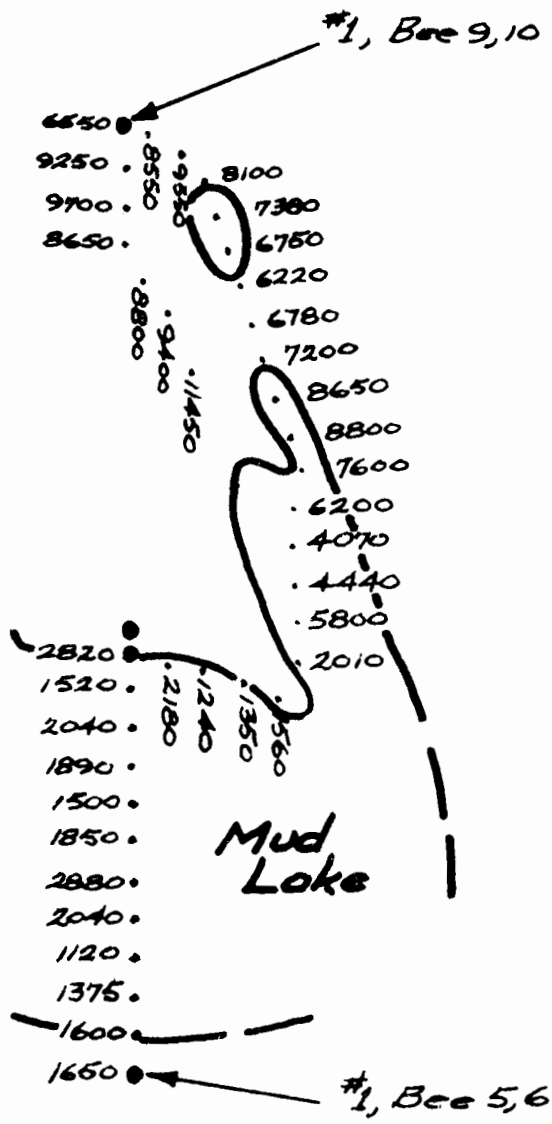


G.S.C. Aeromagnetic Map 105 D/5
 Contours ~ 500⁰ Scale ~ 1" = 1 Mi.
 traced by: RAG.

60°30'N

135°30'W

Fig. 2



Magnetic Traverse ~ Bee Gp.
 Inst: MF-1 Scale: 1" = 1000'
 Feb. 9, 1968 RAG.