

GEOLOGICAL-GEOPHYSICAL-GEOCHEMICAL

ASSESSMENT REPORT

on the

TOPAZIOS CLAIM GROUP

Whitehorse Mining District

(YCS #105-D-11)

Latitude: 60°40' N

Longitude: 135°07' W

and

Latitude: 60°43' N

Longitude: 135°07' W

by

ACE R. PARKER & ASSOCIATES LIMITED

MINERAL INDUSTRY CONSULTANTS & CONTRACTORS

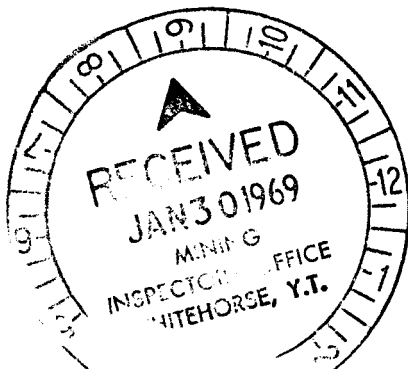
Whitehorse, Yukon

Work Performed

Between

June 1968 &

August 1968 incl.



This report has been examined by
the Geological Evaluation Unit
Approved as to technical worth by
D. J. Fridley
Mining Inspector

Approved as to cost in the amount of
\$5100.00
R. F. Hodder
Mining Inspector

Approved as to representation work
under Section 30(4) Yukon Quartz
Mining Act.
[Signature]
COMMISSIONER OF YUKON

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- Grid A - (in pocket)	
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THE TOPAZIOS GROUP

ACE R. PARKER

INTRODUCTION

This report covers geochemical, geological and geophysical surveys conducted to date on the "TOPAZIOS CLAIM GROUP" situated on the Whitehorse Copper Belt, Whitehorse Mining District, Yukon Territory.

The work discussed in this report was conducted by the management and staff of ACE R. PARKER & ASSOCIATES LIMITED, Mineral Industry Consultants & Contractors, Whitehorse, Yukon, at the request of TOPAZIOS MINING & EXPLORATION LIMITED.

Work completed to date is summarized in this report and is presented as annual assessment work in compliance with the Yukon Quartz Mining Act.

THE TOPAZIOS GROUP

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SUMMARY

This report outlines the methods, results, and cost of preliminary geochemical, geological, and geophysical exploration conducted during 1968 on the TOPAZIOS GROUP of mineral claims situated on the Whitehorse Copper Belt in the Yukon Territory.

Picket lines, government survey lines, and pace and compass traverses provided control for the work discussed herein.

The results of the various surveys are shown on the attached maps and suggest several areas worthy of additional exploration.

Additional geophysical surveys, primarily Turam EM surveys, and subsequent diamond drilling are recommended to assess the economic potential of the property.

THE TOPAZIOS GROUP

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PROPERTY AND OWNERSHIP

The property consists of 51 contiguous and granted mineral claims which cover two separate claim blocks which are shown on the attached maps. These claims are recorded in the office of the Mining Recorder, Whitehorse Mining District, Whitehorse, Yukon and are further described as follows:

<u>CLAIM NAME</u>	<u>GRANT NUMBERS</u>	<u>EXPIRY DATE</u>	<u>REGISTERED OWNERS</u>
Topazios #2	Y 18837	26/12/69	R. Larson
Topazios #3	Y 18838	26/12/69	R. Larson
Topazios #6-9 incl.	Y 20057-Y 20060 incl.	11/1/69	R. Larson
Topazios #34	Y 20141	13/1/69	J.L. Parker
Topazios #35	Y 20142	13/1/69	J.L. Parker
Topazios #42-44 incl.	Y 20149-Y 20151 incl.	13/1/69	M. Fox
Topazios #46	Y 20153	13/1/69	M. Fox
Topazios #48	Y 20155	13/1/69	M. Fox
Topazios #66-71 incl.	Y 20173-Y20178 incl.	13/1/69	B. Peterson
Topazios #73	Y 20180	13/1/69	B. Peterson
Topazios #76	Y 20183	13/1/69	J.T. Willekes
Topazios #82	Y 20189	13/1/69	R. Wolsynuk
Topazios #83	Y 20190	13/1/69	R. Wolsynuk
Topazios #85	Y 20192	13/1/69	R. Wolsynuk
Topazios #87-89 incl.	Y 20194-Y 20196 incl.	13/1/69	R. Wolsynuk
Topazios #90-94 incl.	Y 20197-Y 20201 incl.	13/1/69	G. Wolsynuk
Topazios #97	Y 20204	13/1/69	G. Wolsynuk
Law Fraction #1-5 incl.	Y 24549-Y 24553 incl.	3/5/69	R. Savidge
Law Fraction #7	Y 24555	3/5/69	R. Savidge
Law Fraction #8	Y 24556	3/5/69	R. Savidge
Law Fraction #9	Y 24557	3/5/69	K. Kania
Law Fraction #10	Y 24558	3/5/69	K. Kania
Chunk Fraction #1	Y 24664	13/5/69	A. Parker
Chunk Fraction #2	Y 24665	13/5/69	A. Parker
Chunk Fraction #3	Y 24666	13/5/69	A. Riba
Chunk Fraction #4	Y 24667	13/5/69	A. Riba
Chunk Fraction #5	Y 24668	13/5/69	A. Parker
Chunk Fraction #6	Y 24669	13/5/69	A. Parker
Debie Fraction #1	Y 24670	4/5/69	A. Parker
Debie Fraction #2	Y 24671	4/5/69	A. Parker
Shack #1	Y 24661	5/5/69	A. Parker

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No mining or milling plant exists on the Claim and to the best of my knowledge and belief no liens are registered against the property.

LOCATION AND ACCESS

The TOPAZIOS CLAIM GROUP, 60°40' N, 135°07' W and 60°43' N, 135°07' W, is situated along the Whitehorse Copper Belt, one air mile southwest of the town of Whitehorse, Yukon, west of and immediately adjacent to the Alaska Highway at Mile-Post 917. Currently, bush-roads and foot-trails leading from the Alaska Highway, near Whitehorse, Yukon, provide access to the property.

Whitehorse, Yukon is serviced by the Alaska Highway, scheduled Aircraft, and the White Pass and Yukon Route narrow gauge railway which has deep sea docking facilities at Skagway, Alaska, 111 miles by rail south of Whitehorse, Yukon.

DISCUSSION OF THE SURVEYS

Purpose and Control of the Work

The purpose of the surveys included herein was to provide preliminary exploration of the TOPAZIOS - "et al" CLAIM GROUP.

Government Survey lines, pace and compass traverses and hand-cut grid lines picketed at 100 foot intervals provided control for the work discussed herein. The cut-grid lines are shown in the attached maps and total 7.2 line miles in length.

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REGIONAL GEOLOGY

The Geological Survey of Canada has mapped the area within which the property is situated and has published the results as Memoir #312, Whitehorse Map Area, Yukon Territory, 1961, by J.O. Wheeler, with Geological Map 1093A, Yukon Territory.

THE GEOLOGICAL SURVEY

Local Geology & Geomorphic Conditions

The property covers a block of glaciated topography along the western margin of the Whitehorse Trough and west of the Yukon River near the eastern toe of McIntyre Mountain.

The Claims lie below tree line and between elevations of 2,400 and 2,800 feet. The property has been subjected to considerable faulting and fracturing as indicated by geomorphic conditions and the resulting drainage pattern. One major NW-SE trending fault passes along the western margin of the property and subsequent erosion processes have developed a long valley-like depression in this area.

The Claims were mapped on a scale of 400 feet to the inch as shown on the attached maps. This work was conducted during June 1968.

Topographically, the area consists of a series of low hills concealed in most areas by a thick blanket of glacial overburden, including tills and boulder clays, and minor lacustrine silts which are remnants resulting from a large lake that once filled the Whitehorse Trough.

THE TOPAZIOS GROUP

ACE R. PARKER

Overburden in most areas host a thick "second growth" of small spruce and pine trees and buck brush which are extremely difficult to traverse in most areas.

The detailed geology is shown in the attached maps and outcrops suggest a lacolithic pendant area of dioritic-granitic rock at surface which caps a thick assemblage of Lewes River and Laberge Series sedimentary rocks. They are exposed west of the property and lay "on top" of the eastern flank of this Whitehorse Stock.

These granitic rocks exposed at surface are primarily diorites and minor biotite granite and contain porphyritic acid dikes. The entire pendent area has been subjected to considerable faulting as indicated by outcrop and the resulting drainage patterns.

In some areas the acid dikes contain disseminated copper mineralisation in the form of chalcopyrite and secondary malacite and are presumably related to the granitic activity that is probably responsible for the formation of contact metasomatic copper deposits contained in the underlying sedimentary rocks such as those being developed by New Imperial Mines.

The following Table of Formations outlines the rock types covered by the Claims and included in the immediate area.

TABLE OF FORMATIONS

- 1 - Quaternary
 - A - Alluvium, glacial deposits
 - B - Basalt - minor pyroclastic rocks
- 2 - Cretaceous
 - A - Coast intrusions - granodiorite, quartz diorite and allied rocks and pegmatic syenite
- 3 - Jurassic
 - A - Laberge Group - greywacke, arkose quartzite argillite and hornfels.
- 4 - Triassic
 - A - Lewis River Group - greywacke, siltstone, argillite, limestone; and metamorphosed equivalent. (projections)

THE GEOCHEMICAL SURVEY

358 samples of A° horizon soil were collected at 100 foot intervals along grid lines shown on the attached maps. These samples consisted of a 200 gram mass of vegetation-free soil dug from the bottom of 10-inch-deep holes with the aid of a mattock. All samples were placed in standard paper sample bags and sent to the Whitehorse Assay Office where they were analysed for copper by employing hot acid extraction and atomic absorption techniques.

The attached map shows the sample locations and the resulting copper values.

Generally speaking, geochemistry for copper did not prove to be very effective in the areas covered by the present grid due to deep overburden.

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GEOPHYSICAL SURVEYS

Magnetometer Surveys

A Jalander Electronic Magnetometer Survey was conducted over the same grid lines as those used for the other surveys as well as along Government survey lines, local roads etc. The results of the surveys are shown on the attached maps but it is impossible to determine the significance of the results until after additional surveys and correlations have been completed.

The Jalander Magnetometer consists of a lightweight-handheld instrument which is manufactured in Finland and measures the vertical component of the magnetic field by means of an oil dampened fluxgate. The range of the instrument is 250,000 gammas over five sensitivity ranges with the lowest being 10 gammas per scale division and all requiring conversion factors before gamma values can be determined.

Electromagnetic Surveys

A Ronka EM-16 geophysical survey was conducted along hand cut grid lines on two portions of the property. The results are plotted on the attached maps and suggest several conductive zones worthy of additional exploration. Some of these zones generally 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.

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CONCLUSIONS AND RECOMMENDATIONS

According to recent field work, including geological mapping, the TOPAZIOS GROUP of Mineral Claims situated in the Whitehorse Copper Belt consists of a series of old sedimentary rocks, primarily limestones and graywackes of the Lewes River and Labarge Series all capped by an irregular mass of granodiorite. This "laccolithic-like" pendent area, where not concealed by overburden, has been subjected to faulting and intruded by porphyritic acid dikes. Many of the dikes contain copper mineralization in the form of disseminated chalcopyrite and suggest the possibility of sill-like contact-metasomatic copper deposits.

*See Christ's side
p. 2 - January 7, 11*

A very small portion of the property was surveyed with geophysical and geochemical techniques. The geophysical surveys, both Mag. and EM suggest the presence of several conductive zones worthy of additional exploration, not to mention the large area of the property that has not been explored to date.

The geochemical survey did not prove very successful in the limited areas covered by the recent survey due to the depth of overburden but undoubtedly areas exist on the property which could be effectively explored with such techniques, including both copper and mercury analysis.

All results are shown in the attached maps and future exploration should include copper and mercury geochemical surveys, Magnetic and Turam EM geophysical surveys, all followed by bulldozer trenching and diamond drilling if justified.

THE TOPAZIOS GROUP

ACE R. PARKER

COSTS

The initial direct costs applicable to assessment work on the property and paid by TOPAZIOS Mining and Exploration Limited are shown on the attached contracts and total

\$ 3400.00

Additional costs not included in the contract include:

- Additional Geological Mapping \$ 1350.00

- Geochemical Surveys: 358 spls. @1.50/spl.
\$ 537.00

Total \$ 5287.00

THE TOPAZIOS GROUP

ACE R. PARKER

AFFIDAVIT OF COSTS

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 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 Assessment work performed on the "TOPAZIOS GROUP" as outlined by this report.



Ace R. Parker, P. Eng.

Sworn before me at
Whitehorse in the
Yukon Territory this

27 day of January, 1969



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

THE TOPAZIOS GROUP

ACE R. PARKER

PERSONELL EMPLOYED ON THE PROJECT

<u>NAME</u>	<u>OCCUPATION</u>	<u>FIXED ADDRESS</u>
G. Davies	Geophysical Tech.	Vancouver, B.C.
R. Savidge	Exploration Tech.	Durango, Colorado
K. Kania	Exploration Tech.	Winlaw, B.C.
L. Fox	Exploration Tech.	Vancouver, B.C.
M. Fox	Geophysical Tech.	Vancouver, B.C.
C. Gover	Geological Tech.	Montreal, Que.
M. Currie	Senior Geophysist	Port Loring, Ont.
J. Atehison	Stenographer	Whitehorse, Y.T.
Ace R. Parker	Consulting Eng.	Whitehorse, Y.T.
P. Percival	Field Geologist	Whitehorse, Y.T.
G. Gordon	Exploration Tech.	Whitehorse, Y.T.
R. Landry	Line Cutter	Whitehorse, Y.T.
H. Roy	Line Cutter	Whitehorse, Y.T.

THE TOPAZIOS GROUP

ACE R. PARKER

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 practising under the name and style of ACE R. PARKER & ASSOCIATES LIMITED with office at 3rd and Elliot 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 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 TOPAZIOS 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 Assessment Report on the TOPAZIOS CLAIM GROUP dated 5 January, 1968. The attached property map shows the location of the TOPAZIOS 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

6 January, 1968

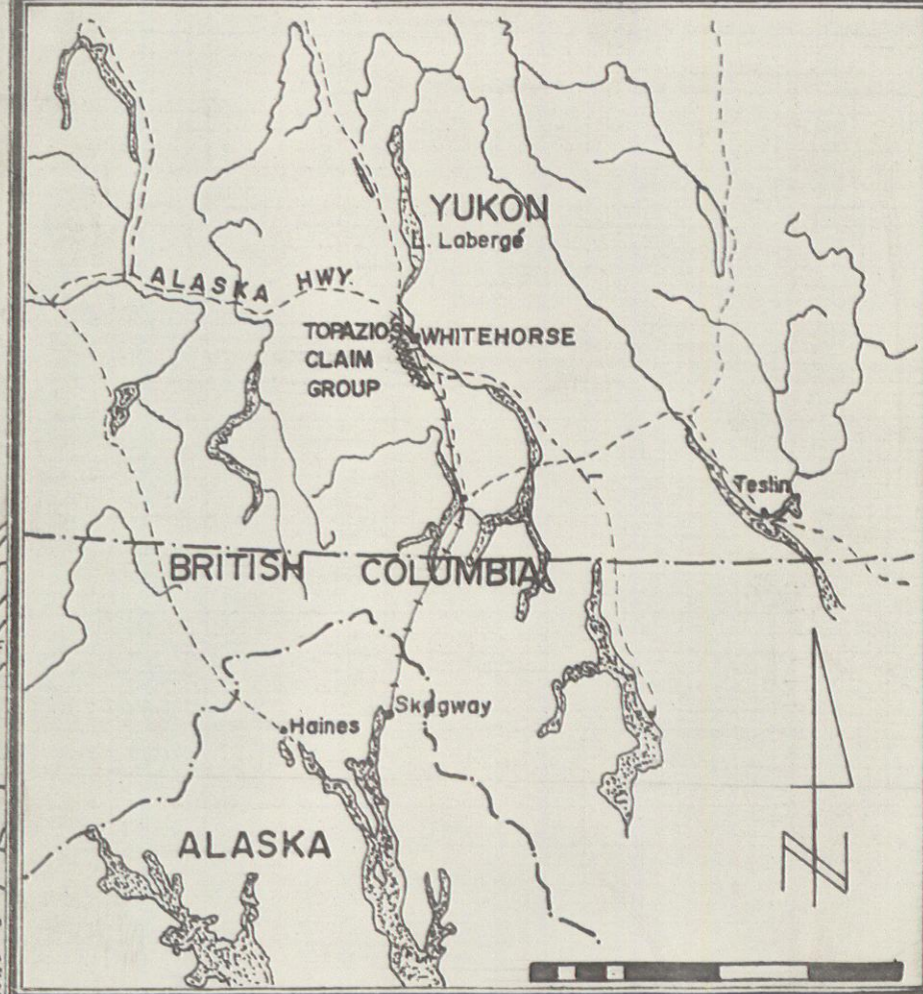
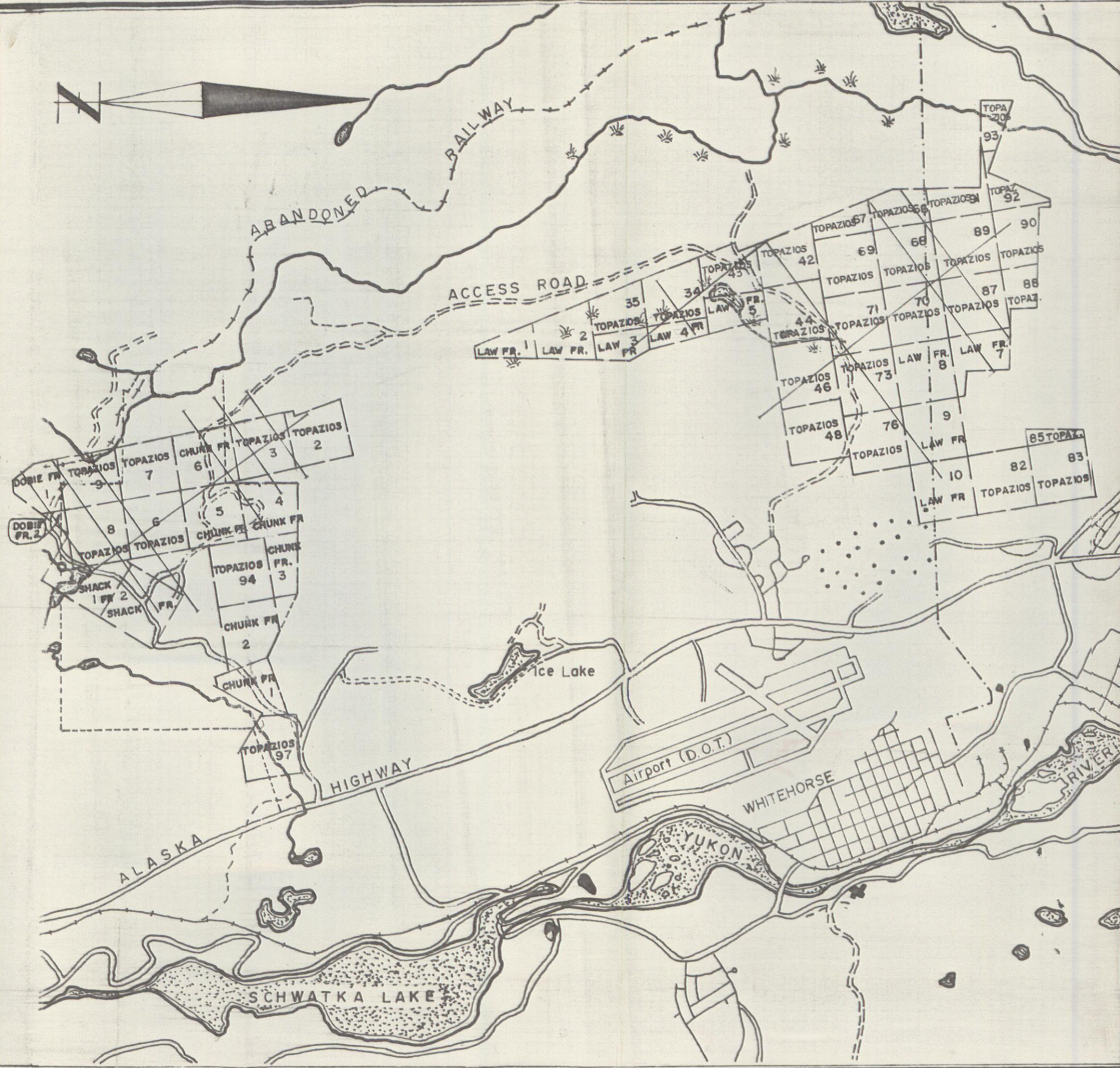


Ace R. Parker, P. Eng.

TOPAZIOS MINING & EXPLORATION Co. Ltd.

PROPERTY LOCATION MAP

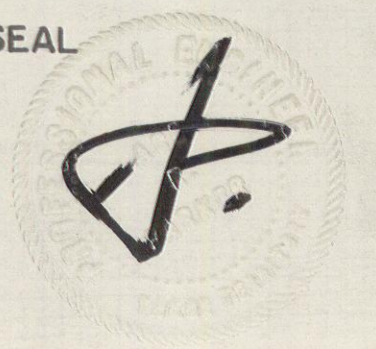
of the
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WHITEHORSE MINING DISTRICT

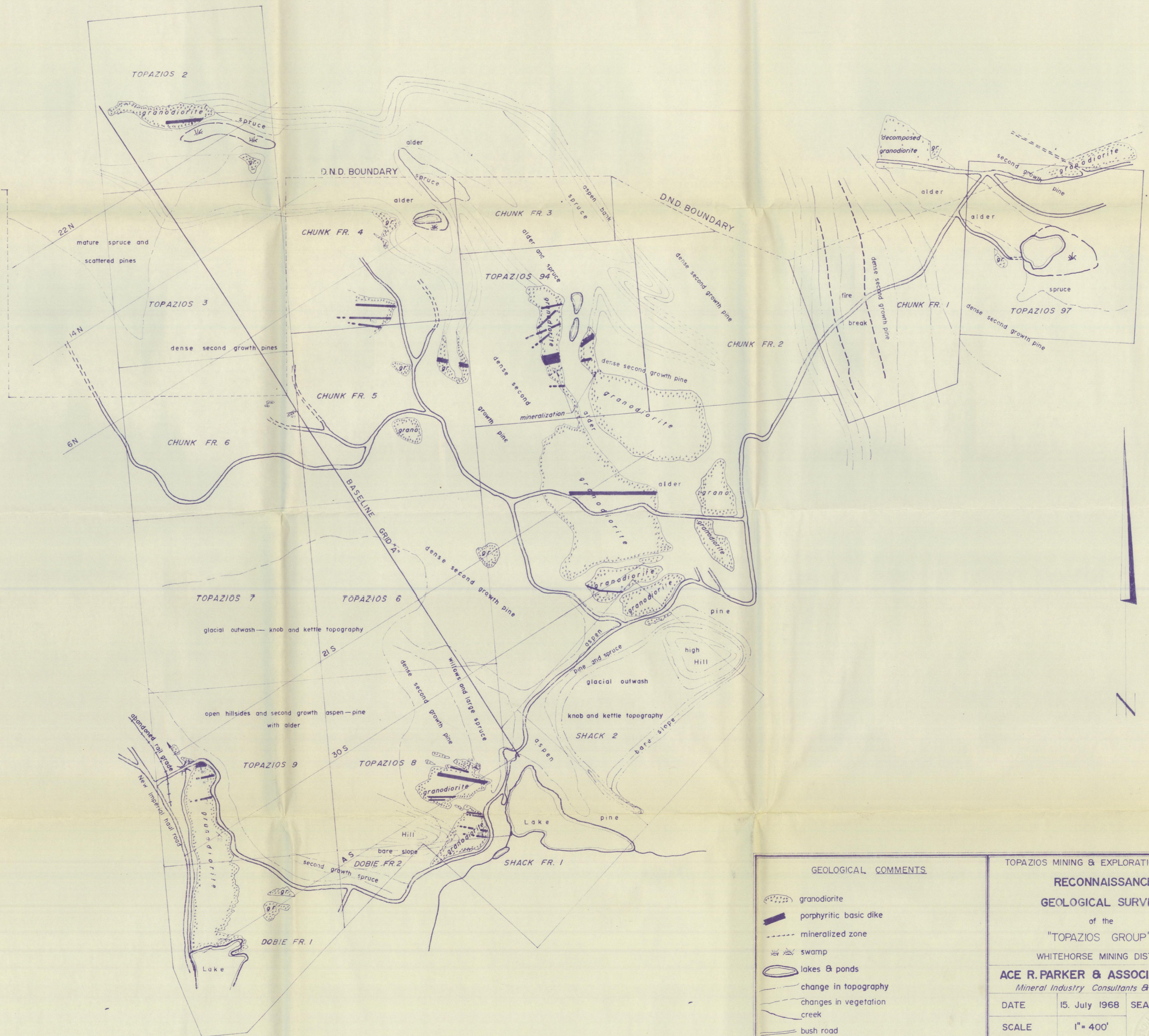


ACE R. PARKER & ASSOCIATES Ltd.
Mineral Industry Consultants & Contractors

Claim locations approximate
Key map based on Yukon Resources Conference map,

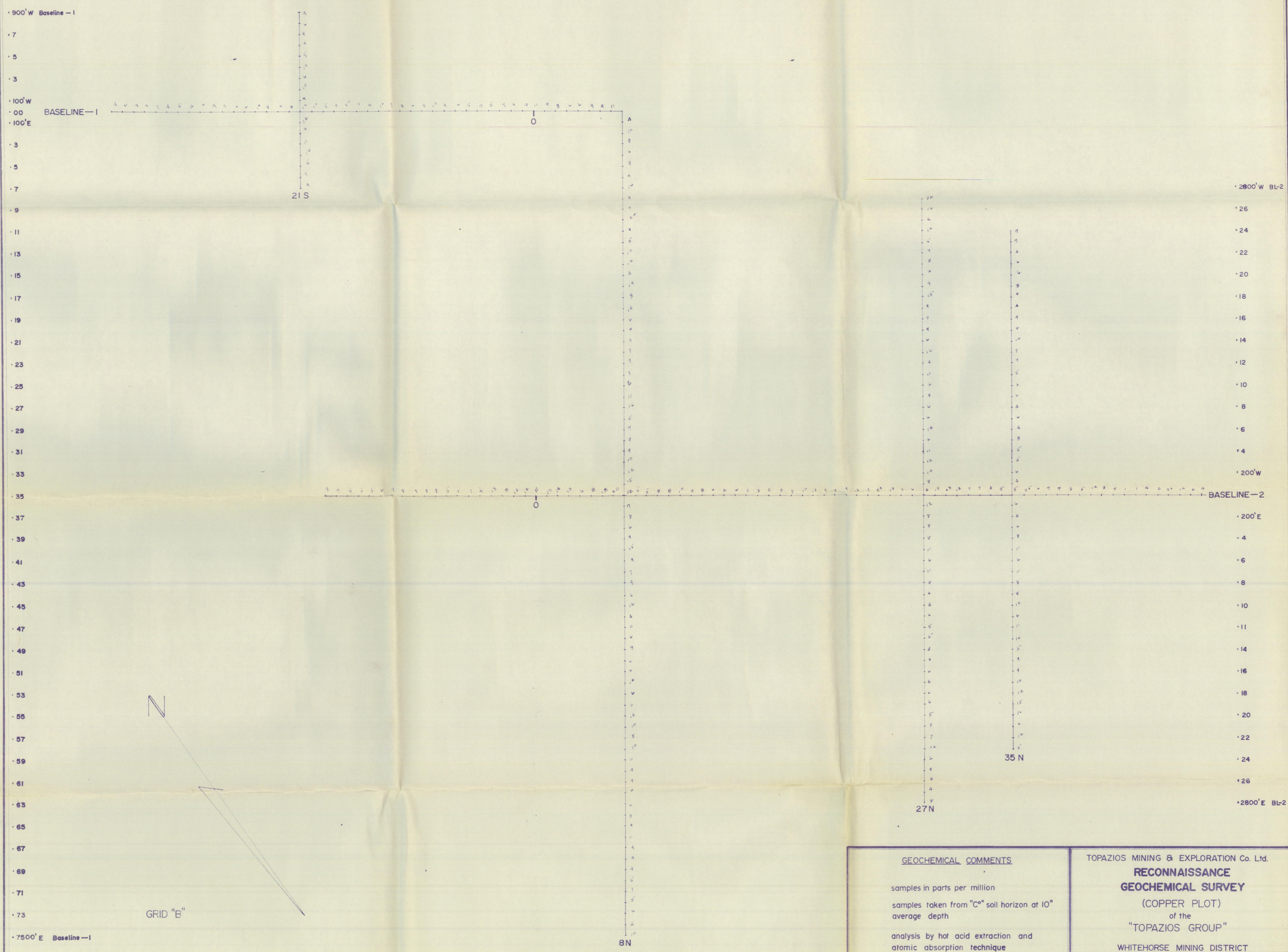
DATE	5. Jan. 1969.	SEAL
DRAWN BY	<i>Ja.</i>	
SCALE	1" = 1/2 mile	
DWG. N ^o		





GEOLOGICAL COMMENTS	
	granodiorite
	porphyritic basic dike
	mineralized zone
	swamp
	lakes & ponds
	change in topography
	changes in vegetation
	creek
	bush road
	strike and dip in degrees

TOPAZIOS MINING & EXPLORATION Co. Ltd.		
RECONNAISSANCE		
GEOLOGICAL SURVEY		
of the		
"TOPAZIOS GROUP"		
WHITEHORSE MINING DISTRICT		
ACE R. PARKER & ASSOCIATES Ltd.		
<i>Mineral Industry Consultants & Contractors</i>		
DATE	15. July 1968	SEAL
SCALE	1" = 400'	
DRAWN	<i>J.P.</i>	
DWG. N ^o		



GEOCHEMICAL COMMENTS

samples in parts per million

samples taken from "C" soil horizon at 10" average depth

analysis by hot acid extraction and atomic absorption technique

TOPAZIOS MINING & EXPLORATION Co. Ltd.

**RECONNAISSANCE
GEOCHEMICAL SURVEY**

(COPPER PLOT)

of the

"TOPAZIOS GROUP"

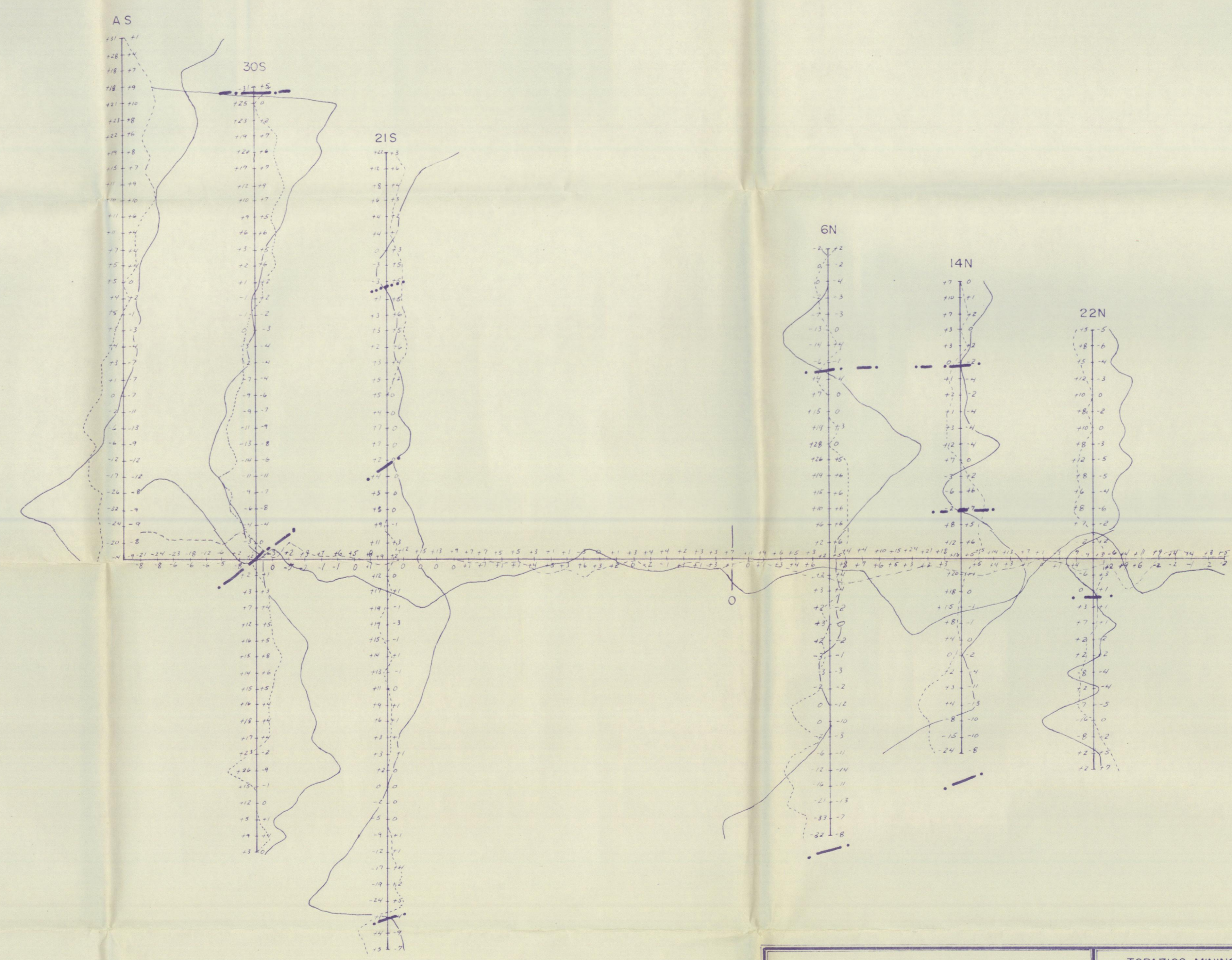
WHITEHORSE MINING DISTRICT

ACE R. PARKER & ASSOCIATES Ltd.

Mineral Industry Consultants & Contractors

DATE	15. July 1968.	SEAL
SCALE	1" = 400'	
DRAWN	<i>Jill</i>	
DWG. No		

+ 3200'W
 + 30
 + 28
 + 26
 + 24
 + 22
 + 20
 + 18
 + 16
 + 14
 + 12
 + 10
 + 8
 + 6
 + 4
 + 299'W
 + 00
 + 200'E
 + 4
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 + 8
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 + 12
 + 14
 + 16
 + 18
 + 20
 + 22
 + 2400E



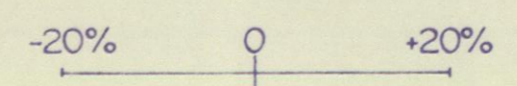
GRID "A"

GEOPHYSICAL COMMENTS

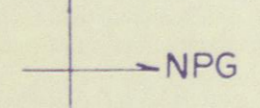
Instrument: RONKA E.M 16

in-phase (right)
 quadrature (left)

--- inferred conductor axis



survey orientation



Baseline azimuth 325°

TOPAZIOS MINING & EXPLORATION Co. Ltd.
RECONNAISSANCE E.M.
GEOPHYSICAL SURVEY
 of the
 "TOPAZIOS GROUP"
 WHITEHORSE MINING DISTRICT

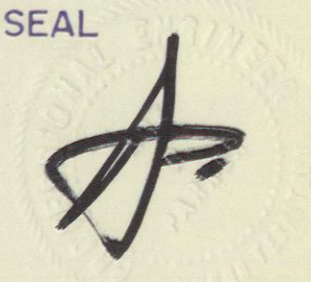
ACE R. PARKER & ASSOCIATES Ltd.
 Mineral Industry Consultants & Contractors

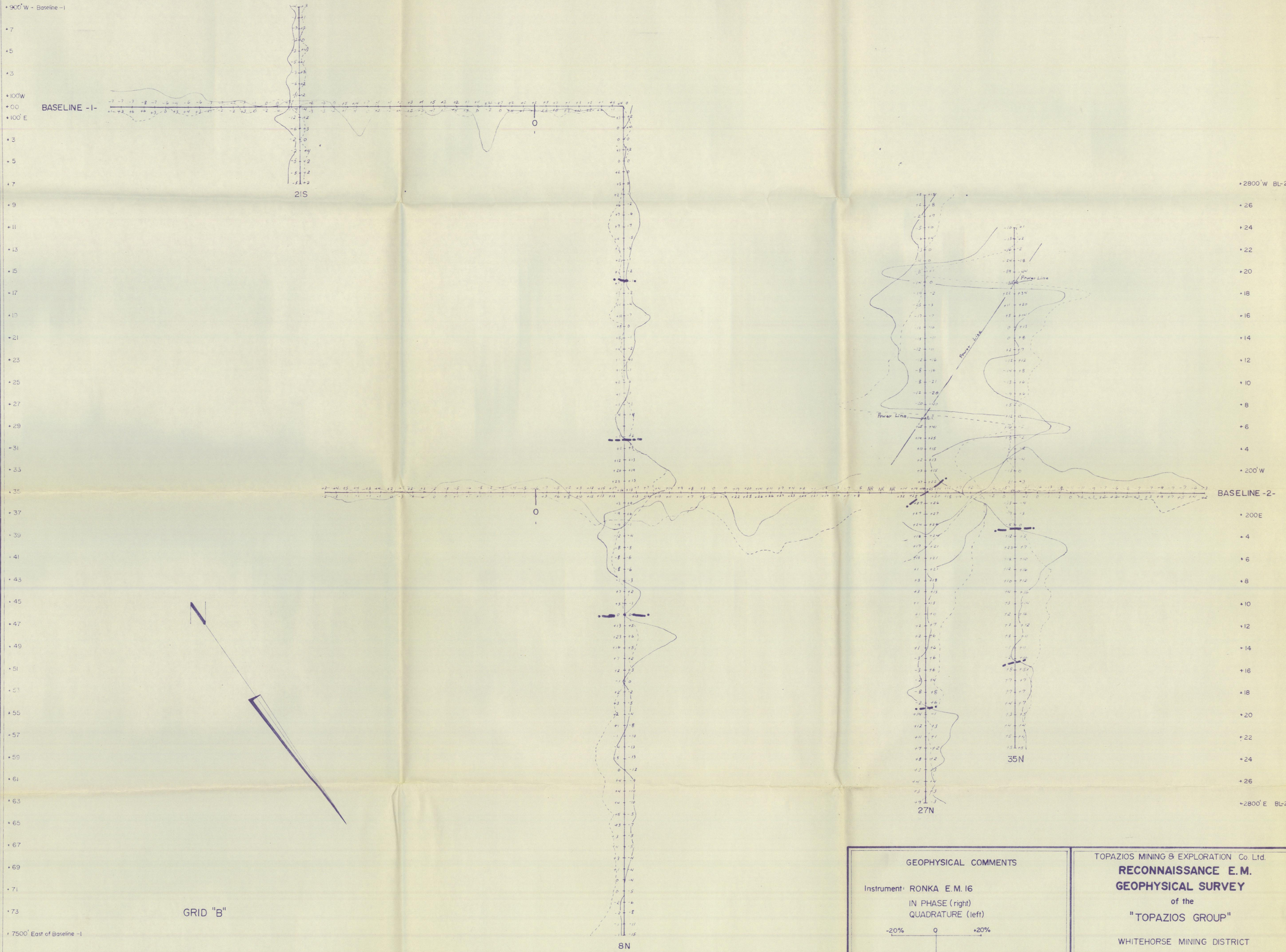
DATE: 15. JULY 1968. SEAL

SCALE: 1" = 400'

DRAWN BY: *MLL*

DWG. N°





+900' W - Baseline -1
 +7
 +5
 +3
 +100W
 +00
 +100' E
 +3
 +5
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 +9
 +11
 +13
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 +49
 +51
 +53
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 +57
 +59
 +61
 +63
 +65
 +67
 +69
 +71
 +73
 +7500' East of Baseline -1

+2800' W BL-2
 +26
 +24
 +22
 +20
 +18
 +16
 +14
 +12
 +10
 +8
 +6
 +4
 +200' W
 +200E
 +4
 +6
 +8
 +10
 +12
 +14
 +16
 +18
 +20
 +22
 +24
 +26
 +2800' E BL-2

GRID "B"

GEOPHYSICAL COMMENTS

Instrument: RONKA E.M. 16
 IN PHASE (right)
 QUADRATURE (left)

-20% 0 +20%

--- inferred conductor axis
 survey orientation:

NPG
 pmf

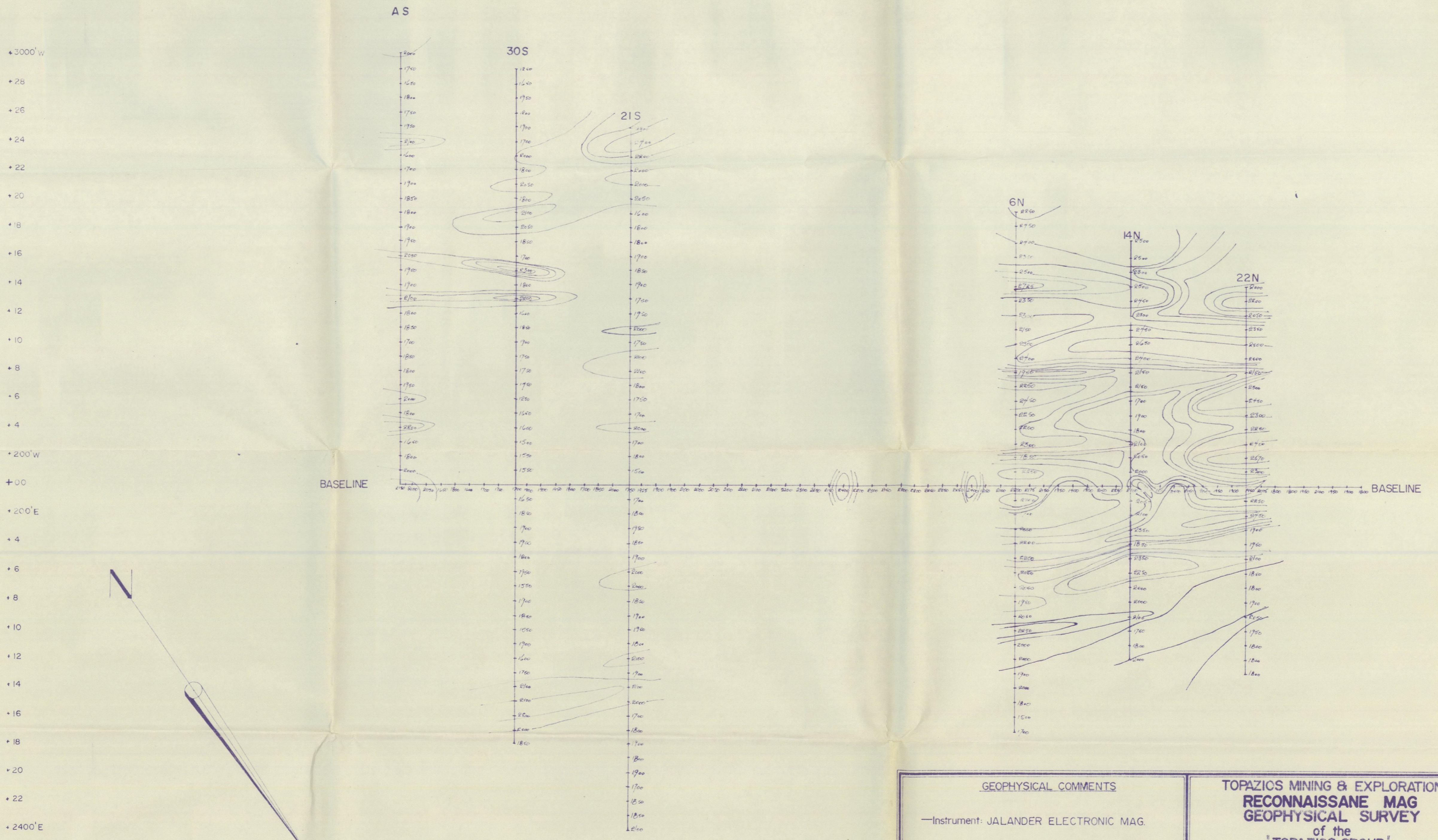
Baseline azimuth 325°

TOPAZIOS MINING & EXPLORATION Co. Ltd.
RECONNAISSANCE E.M.
GEOPHYSICAL SURVEY
 of the
"TOPAZIOS GROUP"
 WHITEHORSE MINING DISTRICT

ACE R. PARKER & ASSOCIATES Ltd.
 Mineral Industry Consultants & Contractors

DATE: 15 JULY 1968. SEAL
 SCALE: 1" = 400'
 DRAWN BY: J.M.
 DWG NO:

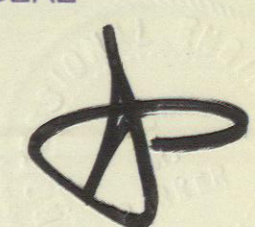
J.M.

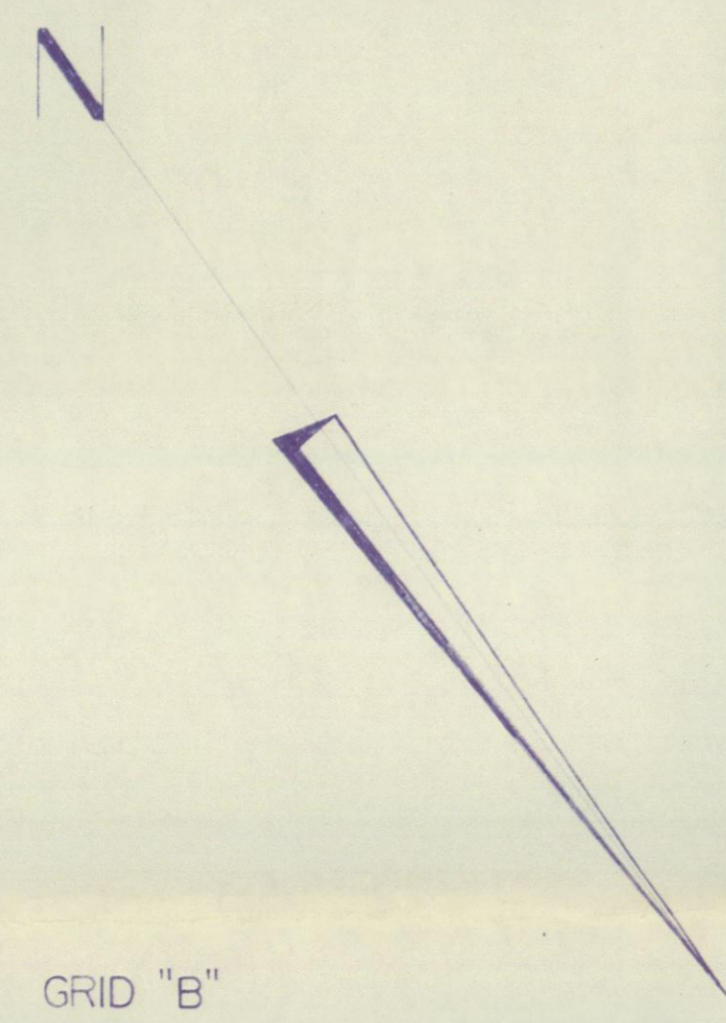
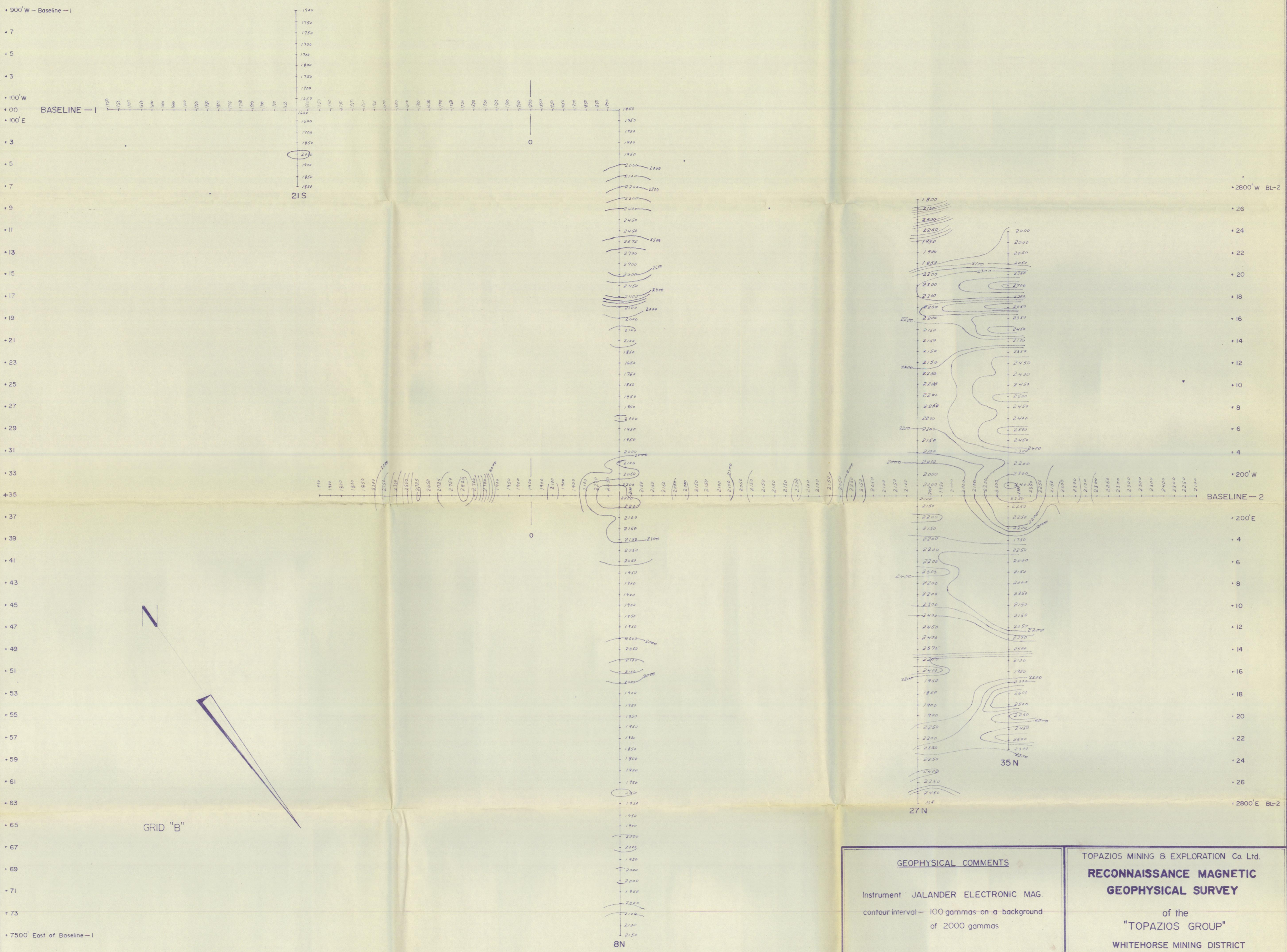


GEOPHYSICAL COMMENTS

—Instrument: JALANDER ELECTRONIC MAG.
 —Contour interval: 100 gammas with a back ground of 2000 gammas.

**TOPAZIOS MINING & EXPLORATION
 RECONNAISSANCE MAG
 GEOPHYSICAL SURVEY**
 of the
"TOPAZIOS GROUP"
 Whitehorse Mining District
ACE R. PARKER & ASSOCIATES
 Mineral Industry Consultants & Contractors

DATE	15 JULY 1968.	SEAL 
SCALE	1" = 400'	
DRAWN BY	<i>J.P.</i>	
DWG. N ^o		



GEOPHYSICAL COMMENTS

Instrument JALANDER ELECTRONIC MAG.
 contour interval - 100 gammas on a background
 of 2000 gammas

TOPAZIOS MINING & EXPLORATION Co. Ltd.
**RECONNAISSANCE MAGNETIC
 GEOPHYSICAL SURVEY**

of the
 "TOPAZIOS GROUP"
 WHITEHORSE MINING DISTRICT
ACE R. PARKER & ASSOCIATES Ltd.
 Mineral Industry Consultants & Contractors

DATE:	15 JULY 1968	SEAL
SCALE:	1" = 400'	
DRAWN BY:	<i>J.M.</i>	
DWG. No:		