

GEOLOGICAL AND GEOPHYSICAL REPORT

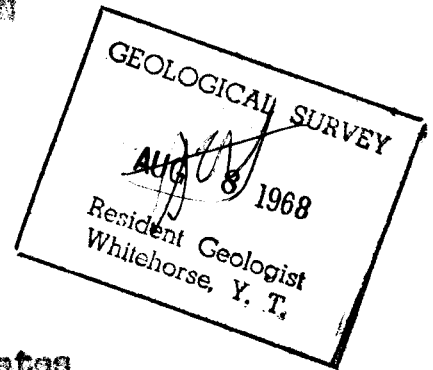
on the

WOLF CLAIM GROUP

Yukon Claim Sheet #105-0-10

Longitude 134° 57' W

Latitude 62° 31' N



by

Acc R. Parker & Associates
Mineral Industry Consultants & Contractors

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

Approved as to cost in the amount
of \$ *14,710.02*
D. S. ...
FEDERAL ...

Accepted as re-occupation work
under Section 33(4) Yukon Quartz
Mining Act.
[Signature]
COMMISSIONER OF YUKON

Work Performed

between

July 25, 1967

and

June 1, 1968

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GENERAL INTRODUCTION

This report outlines geological and geophysical work conducted to date on the Wolf Claim Group situated on the "Whitehorse Copper Belt" in the Yukon Territory and in the Whitehorse Mining District.

All work has been conducted by the management and staff of Ace R. Parker & Associates -- Mineral Industry Consultants and Contractors of Whitehorse, Yukon, at the request of Wolf Creek Mines Ltd. of Vancouver, B. C. who own the property.

The said work is herein summarized in sectionalized report form and presented as Assessment Work in compliance with Section 53 (4) of the Yukon Quartz Mining Act.

A. REPORT ON THE GEOLOGY OF THE WOLF CLAIM GROUPINTRODUCTION

The "Whitehorse Copper Belt" lies several miles west of Whitehorse, Y.T., and is known to extend for about 18 miles in a northwesterly and southeasterly direction. The Claim Groups were staked on the southernmost projection of this copper belt. Work, consisting of linecutting, geological mapping, and geophysical surveys, was done between July 1967 and June 1968 to explore whether mineral deposits, such as those already discovered on the copper belt, existed on the property. This report is a description of the work done to date.

A.

SUMMARY

The rocks of the map area consist of sediments of the Laberge Group, which are intruded by different-colored dikes. No deposits of economic importance were found, but the favorable location along the Whitehorse Copper Belt and the occurrence of rocks similar to those found near copper deposits in the belt, make the property a good prospect.

A.

PROPERTY, LOCATION, & ACCESS

The Wolf Claim Group is all in the Whitehorse Mining District, as shown on Claim Sheet 105-3-10. The group consists of the following claims:

1. Wolf Group - 40 claims numbered Y 18710 to Y 18749

The centropoint of the Wolf Claim Group is 14 miles $\text{S } 20^{\circ} \text{ E}$ from Whitehorse, Y.T., and 3 miles northwest of Cowley Lakes. The claims are west of the White Pass Railway.

The property is accessible to ordinary vehicles. At about Mile 906 on the Alaska Highway, a road is followed to within a mile of the C.Y.O. Camp, and, from this point, a bush road along an oil pipeline and along the west side of the railway line provides access to the property.

6.

LINE CUTTING

Approximately 28 miles of picket lines were cut and marked on the property, including a base line with a 330° azimuth across the western portion of the property. Cross lines, 4000 feet long, were made at 500 foot intervals along this baseline. All lines are shown on the attached geophysical maps.

A.

REGIONAL GEOLOGY

The Geological Survey of Canada has mapped the area within which the property is located, and have published the results as Memoir 312, Whitehorse Map Area, Yukon Territory, 105 D, by J. O. Wheeler with geological map 1093A, Whitehorse, Y.T.

Most of the west half of the map area is occupied by Cretaceous Coast Intrusions of granite and related rocks. The east half is mainly covered by sedimentary rocks of Mesozoic to Precambrian age, which form belts striking in a northwesterly direction. The Whitehorse Copper Belt has a similar strike and is located near the granitic-sedimentary contact. Many mineable deposits of copper minerals have been discovered in Lewis River limestone along a distance of 18 miles in the copper belt. The deposits are classified as contact metamorphic, the host rock normally being a diorite-limestone skarn.

A.

LOCAL GEOLOGY

The Wolf Claim Group was mapped on a scale of 200 feet to the inch. Picket lines were used as controls, for mapping where those lines existed; elsewhere mapping was done by pace-and-compass traverses spaced 200 feet apart. This work was done by E. Tagseth, Cowan, Sask., between July 27, and August 26, 1967.

Table of Formations

I. CRETACEOUS

- Granodiorite, diorite and gabbro.

II. JURASSIC

- Laberge Group
- Banded quartzite and argillitic quartzite
- Quartzite, massive
- Graywacke
- Conglomerate

Topographically, the properties have a relief of only about 300 feet and lie between elevations of 2500 and 3000 feet. The ground rises gradually to the west, but individual hills are less than 100 feet in height. Most of the ground is dry, although small ponds and swamps are found throughout the area.

6.

LOCAL GEOLOGY (continued)

Tree types, sizes and densities were mapped in order to obtain, if possible, some information on underlying rocks. This data seemed to show that tree types were more related to topography and the moisture content of the ground than to rock types. However, it is considered that limestones may underlie areas of thick stands of tall spruce trees. Also, since fires have swept through a large part of the area, the subsequent growth of trees makes it more difficult to make deductions about underlying rock types.

Glacial deposits cover about 80% of the map area, and outcrops are rare in these parts of the properties. The deposits consist of lacustrine silts, clays and sands, and boulder clays and gravels. The clays form steep hills and banks and the coarser deposits esker-like hills.

The consolidated rocks which outcrop in the map area consist of sedimentary rocks of the Laberge Group of Jurassic age. The sequence, from oldest to youngest rocks seen in the area is thought to be conglomerates, greywackes, massive quartzites, and banded quartzites and argillites. The sediments dip at 20° or less and have varying strikes.

A.

LOCAL GEOLOGY (continued)

The conglomerates are most frequently exposed in the central part of the Wolf Claim Group. The conglomerate contains fragments of granitic and volcanic rocks which vary in size from sand-grain size to boulders a foot or more in diameter.

The greywacke is typically a greyish-green rock of medium grain, with a large proportion of quartz veins. With increasing amounts of quartz the greywacke grades into an impure quartzite. Pure quartzites are rare. The greywacke and quartzites are massive, showing little evidence of bedding. These rocks make up the greater proportion of sedimentary rock exposures.

Banded quartzites and argillites are commonly found in outcrops in the northwest corner of the claim group. These rocks are usually much broken-up in such outcrops, frequently forming low, elongated mounds with a shallow covering of overburden. The quartzite is fine-grained or cherty and bands an inch or two in thickness are separated by thinner bands of black argillite or slate. The proportion of silty or clayey sediments may increase so that the rock is more like a slate than a quartzite.

A. LOCAL GEOLOGY (continued)

On the map these rocks have been grouped as banded argillitic quartzites. Good sections of these rocks are found in deep ravines on the most north-westerly claims.

Intrusive rocks cut the sedimentary rocks of the map area. Such rocks become more abundant, forming larger masses, on the west side of the property, probably indicating greater proximity to the main body in this direction. The intrusions are in the form of dykes, generally striking northwest, and of irregular masses. The compositions of these rocks is very non-uniform, even in the same outcrop. The composition varies from that of granodiorite to that of gabbro, but probably represents differentiation of a single magma. Epidote is usually present in these rocks in sufficient amounts to give them a greenish color on fresh surfaces. Fine-grained diorite is the most abundant intrusive rock, followed by diorite porphyry and coarse-grained gabbro, all of which may be present in a single dike.

Both the intrusive rocks and the adjacent sedimentary rocks show strong effects of contact metamorphism, and assimilation.

A. LOCAL GEOLOGY (continued)

When quartzites have been intruded the resulting rock looks like a quartzitic diorite or diorite porphyry. Some of the diorite has been altered to a diorite skarn which contains large percentages of epidote.

ECONOMIC GEOLOGY

Only traces of sulphides or other economic minerals were found in the rocks of the map area. Quartzite on the baseline at 82° W contained blebs of molybdenite.

CONCLUSIONS AND RECOMMENDATIONS

The claims are located along the southern extension of the "Whitehorse Copper Belt." The dioritic skarns are similar to those found near the copper deposits in the belt. For these reasons the claims should be a favorable area for the discovery of new deposits.

Additional geophysical surveys should be conducted over the property and favorable zones should be tested by diamond drilling.

5. GEOPHYSICAL REPORT ON THE WOLF CLAIM GROUP**INTRODUCTION**

This section outlines the techniques and results of a ground magnetic and electromagnetic survey of the Wolf Claim Group.

SUMMARY

A ground magnetic and electromagnetic survey of the property was conducted during August, September, and October 1967, utilizing standard instruments.

Results of these surveys are shown in detail on the attached maps and suggest that the property covers a section of a contact zone between Coast Intrusive Rocks and Jurassic sedimentary rocks of the Laberge and Lewis River Group.

Correlations of the magnetic and electromagnetic results indicate that a zone of disseminated mineralization may be present in the western portion of the property.

This zone should be checked by additional electromagnetic surveys (EM-16 and/or I.P.) and subsequently tested by diamond drilling.

D.

DISCUSSION OF THE SURVEYS

The magnetic and electromagnetic surveys detailed within this report covered a rectangular area approximately 13,600 feet long and 4,000 feet wide, mantled by a layer of glacial overburden and vegetated with an assemblage of spruce and pine trees, and "scrub" brush.

Picket lines with 100 foot station intervals were placed along "hand-cut" grid lines. These lines have an aggregate length of 27.9 miles and a line interval of four hundred feet as shown on the attached geophysical maps.

The following instruments provided the data compiled during the survey:

Sharps - MF - 1 Magnetometer
Konka - EM-16 Electromagnetic Unit

The survey area has been previously covered by a government-sponsored aeromagnetic survey published as Geophysical Paper 1341, Sheet 105-D-10 (MacRae).

The present ground surveys constitute follow-up work on a small segment of the area shown on the above noted government map and covers the core of a rather large magnetic depression.

The directions and techniques of instrumentation of the present surveys are shown on the attached maps.

INTERPRETATION OF RESULTS

The results of the E.M. and magnetic geophysical surveys indicate that the property covers a sector of a contact zone between Coast Intrusive rocks and sedimentary rocks, of the Laberge and Lewis River Groups. Most of the area appears to have been highly fractured and faulted and subsequently intruded by numerous dykes of granitic rock. These dyke rocks may or may not be associated with copper-molybdenum mineralization.

CONCLUSIONS AND RECOMMENDATIONS

Both the magnetic and electromagnetic results suggest that a zone of possible disseminated mineralization crosses the western margin of the property adjacent and nearly parallel to the NW - SE trending baseline.

This area should be checked by employing additional "electromagnetic surveys" (EM-16 and/or I.P.) and tested by diamond drilling.

PERSONNEL EMPLOYED ON THE PROJECT

<u>NAME</u>	<u>OCCUPATION</u>	<u>FIXED ADDRESS</u>
E. Taggart	Professional Geologist	Govan, Saskatchewan
A. Parker	Consulting Engineer	Whitehorse, Yukon
B. Peterson	Geologic Assistant	Edmonton, Alberta
M. Fox	Senior Geophysicist	Vancouver, B.C.
P. Percival	Project Engineer	Whitehorse, Yukon
L. Fox	Geophysical Assistant	Whitehorse, Yukon
K. Mania	Geophysical Assistant	Whitehorse, Yukon
D. Bouchier	Geophysical Assistant	Whitehorse, Yukon
D. Duncan	Geophysical Assistant	Whitehorse, Yukon
R. Savidge	Field Supervisor	Whitehorse, Yukon
A. Alföldy	Line Cutter	Mission City, B.C.
T. Perron	Line Cutter	Toronto, Ontario
H. Roy	Line Cutter	Toronto, Ontario
Y. Lebrun	Line Cutter	Toronto, Ontario
G. Gordon	Line Cutter	Whitehorse, Yukon
H. Landry	Line Cutter	Whitehorse, Yukon

COSTSCONTRACTED FIELD WORK

Geology et al:

Photogeologic studies, mapping,
and sampling

24 AC @ \$90.00 per claim 2,160

Grid Lines and Stations:

Linecutting and Ficketing

25.6 miles @ \$95.00/ mile 2,430

Geophysics:

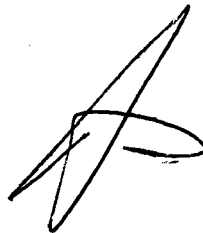
Magnetic Survey

25.6 miles @ \$75.00/mile 1,940

Electromagnetic Survey

25.6 miles @ \$150.00/mile 3,880

Camp and Supply 1,700

Engineering, Supervision, Transportation 2,600TOTAL COSTS \$14,710

AFFIDAVIT OF COST

I, Ace R. Parker, P. Eng., of the City of Whitehorse
in the Yukon Territory do make oath and say that:

IN THE BEST OF MY KNOWLEDGE AND BELIEF,
THE COSTS REPRESENTED IN THIS REPORT ARE
A TRUE STATEMENT OF EXPENDITURES INCURRED
ON THE WOLF CLAIM GROUP.



Ace R. Parker, P. Eng.

Sworn before me at Whitehorse
in the Yukon Territory this
8th day of JULY 1968.



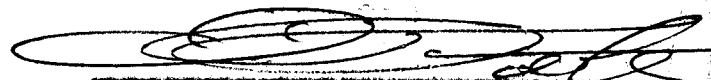
A Commissioner for Taking Affidavits
in and for the Yukon Territory.

C E R T I F I C A T E

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

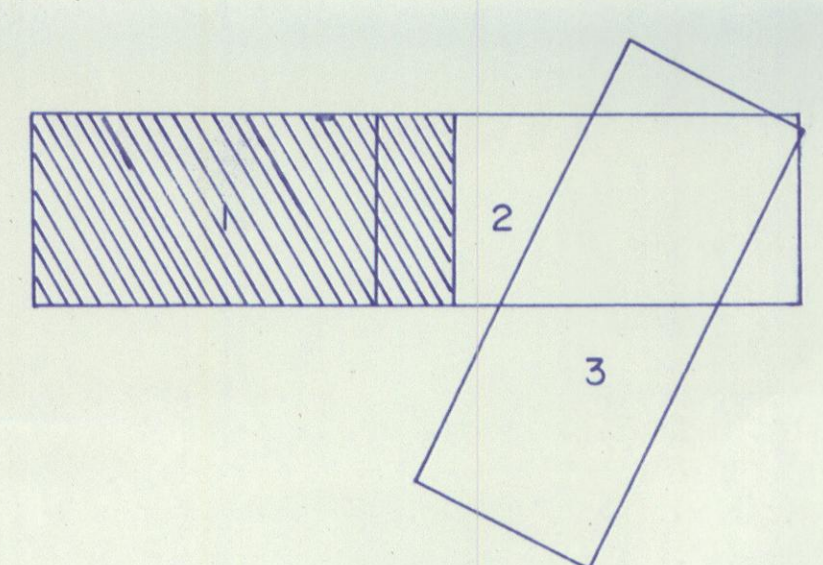
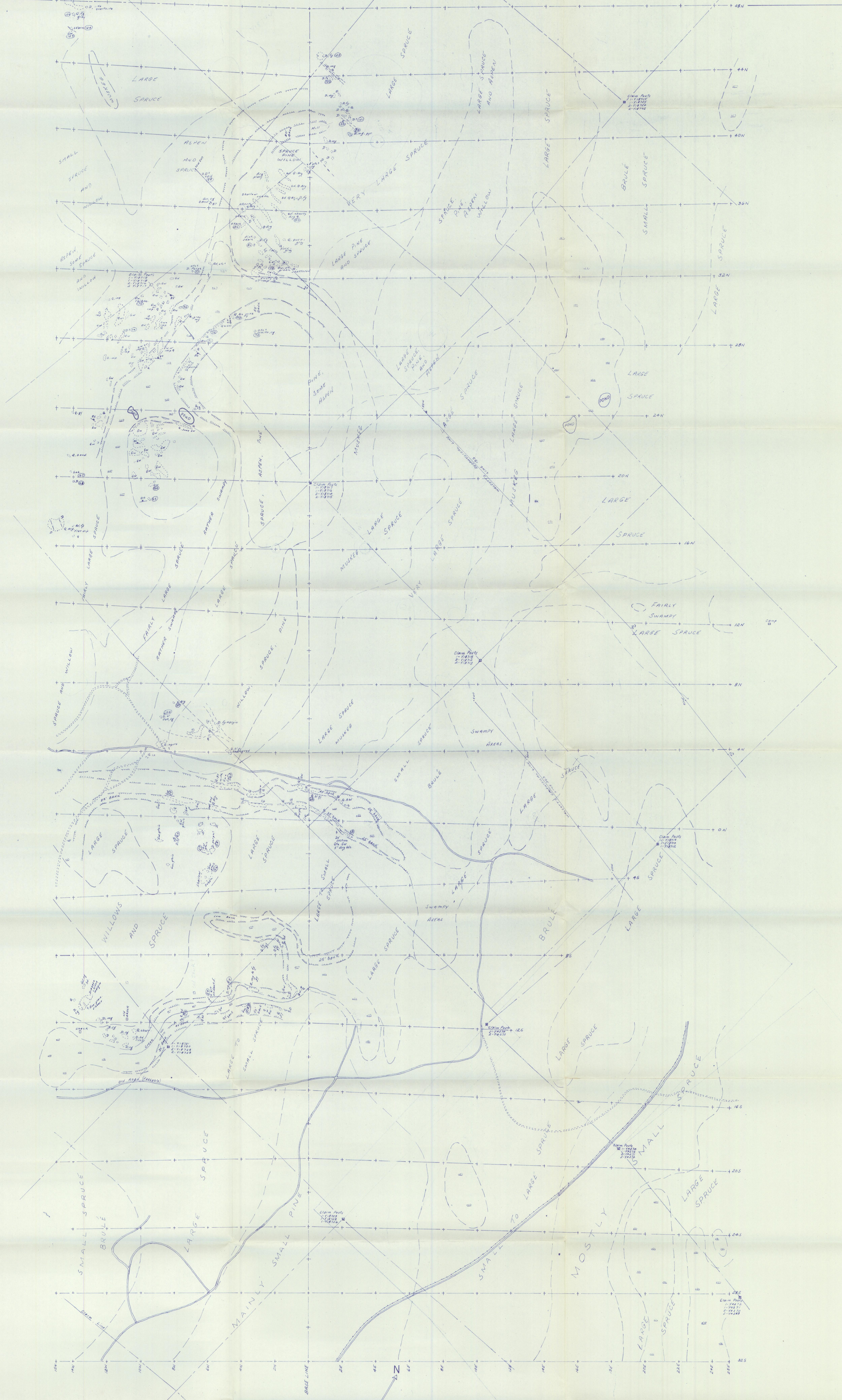
1. I am a Consulting Engineer practicing under the name and style of ACE R. PARKER & ASSOCIATES, with office at 3rd & Elliott Street, Whitehorse, Y.T.
2. I am a Bachelor of Science in Mining Engineering from the College of Earth Science and Mineral Industry, University of Alaska, College, Alaska--1962. 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 practice 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 "WOLF GROUP" described in the accompanying report or in any securities relating to the said property.
6. This Certificate is part of the attached Geological and Geophysical Report on the "WOLF GROUP" of mineral claims 1 June 1968. The attached property map shows the location of the "WOLF GROUP" of mineral claims which have been located in compliance with the Yukon Quartz Mining Act.
7. This report is based on a comprehensive personal study of documents, maps, and reports relating to the property described herein, including reports of the Geological Survey of Canada and in conjunction with several personal examinations of the property by myself during 1967 and 1968. All work outlined in this report was conducted under my direct supervision.

Whitehorse, Yukon
June 1, 1968


Ace R. Parker, P. Eng.

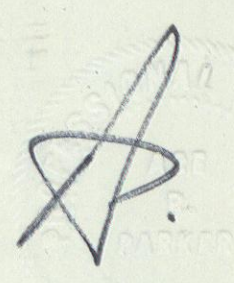
MATCH LINE

MATCH LINE



MAP SEQUENCE

SCALE: 1"=200'



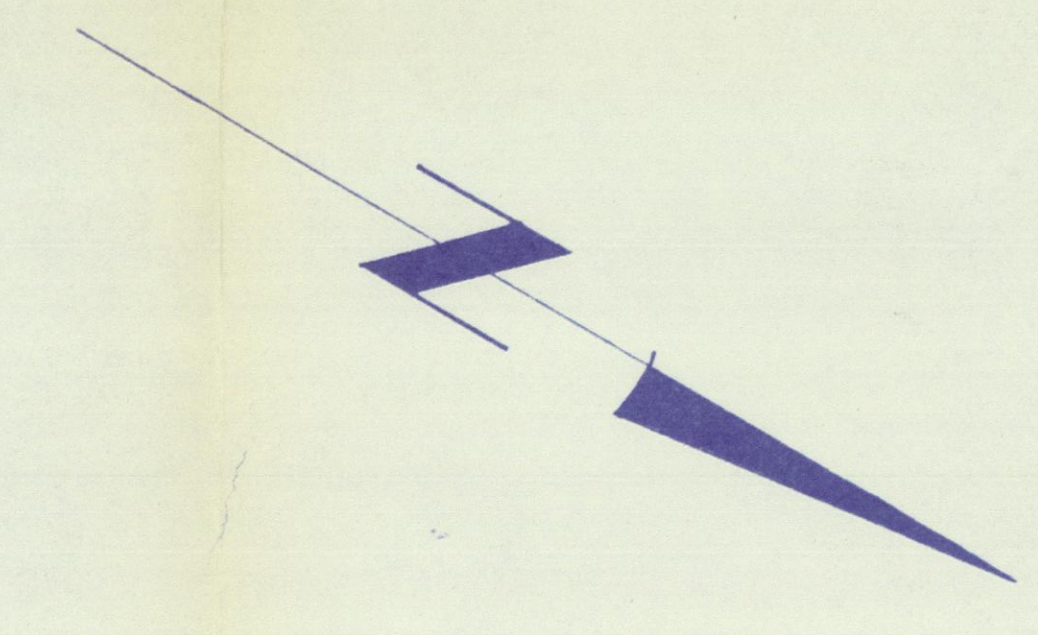
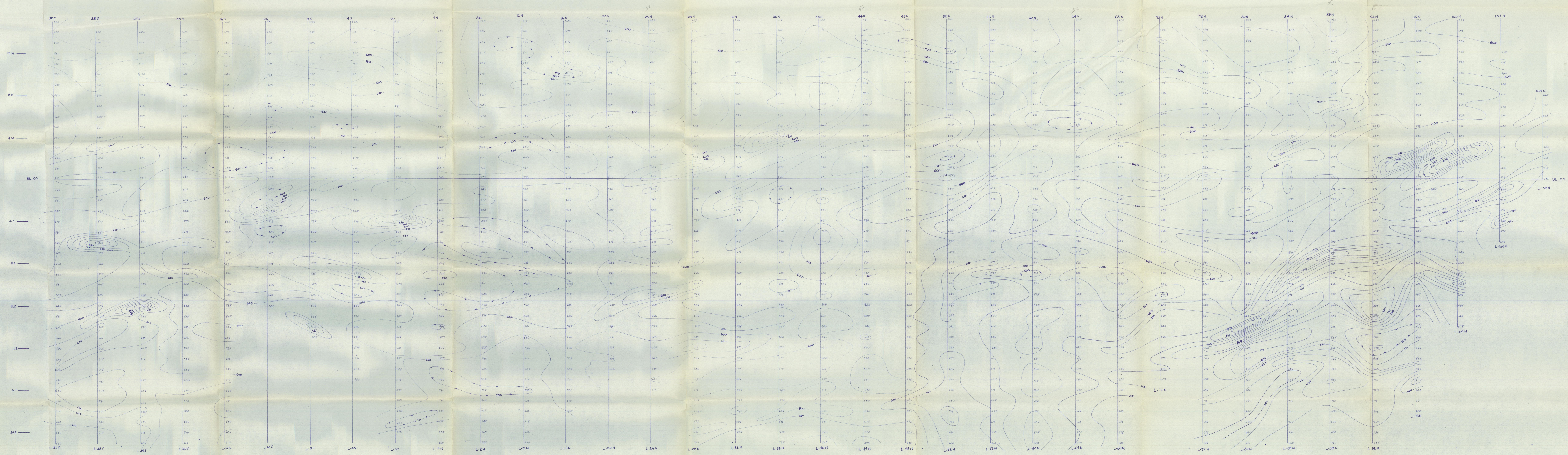
LEGEND

Gd	Granodiorite	[Symbol]	Outcrops
D	Diorite	[Symbol]	Contacts
Gab	Gabbro	[Symbol]	Swamp
Q	Quartzite with argillite b and s	[Symbol]	Hills
Q	Quartzite	[Symbol]	Claim lines
Go	Greywacke	[Symbol]	Pipeline
[Symbol]	Conglomerate	[Symbol]	Roads (useable)
[Symbol]	Strike and dip of formations	[Symbol]	Roads (unuseable)
[Symbol]	Strike and dip of prominent jointing	[Symbol]	Bulldozed lines

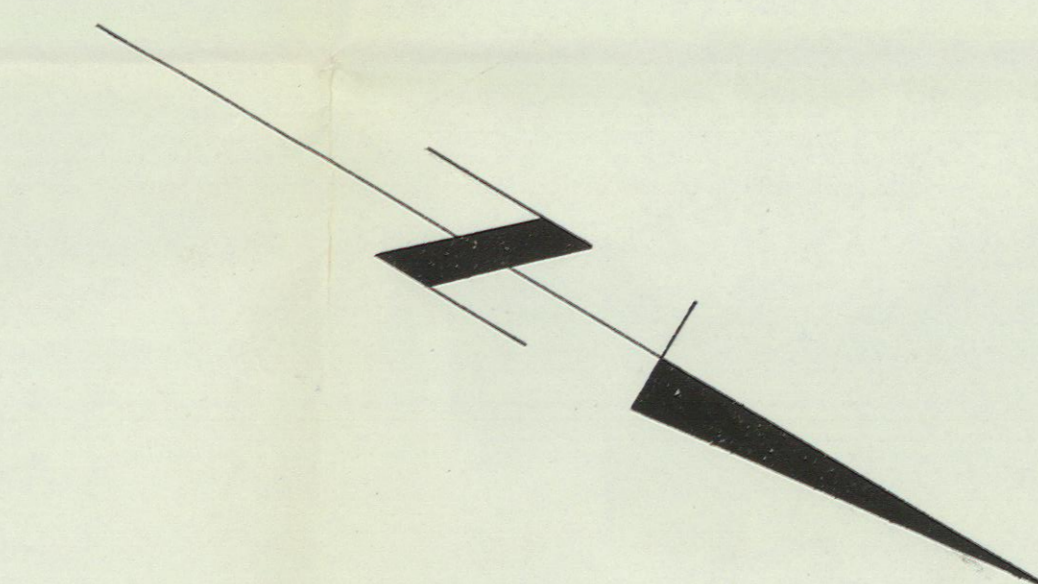
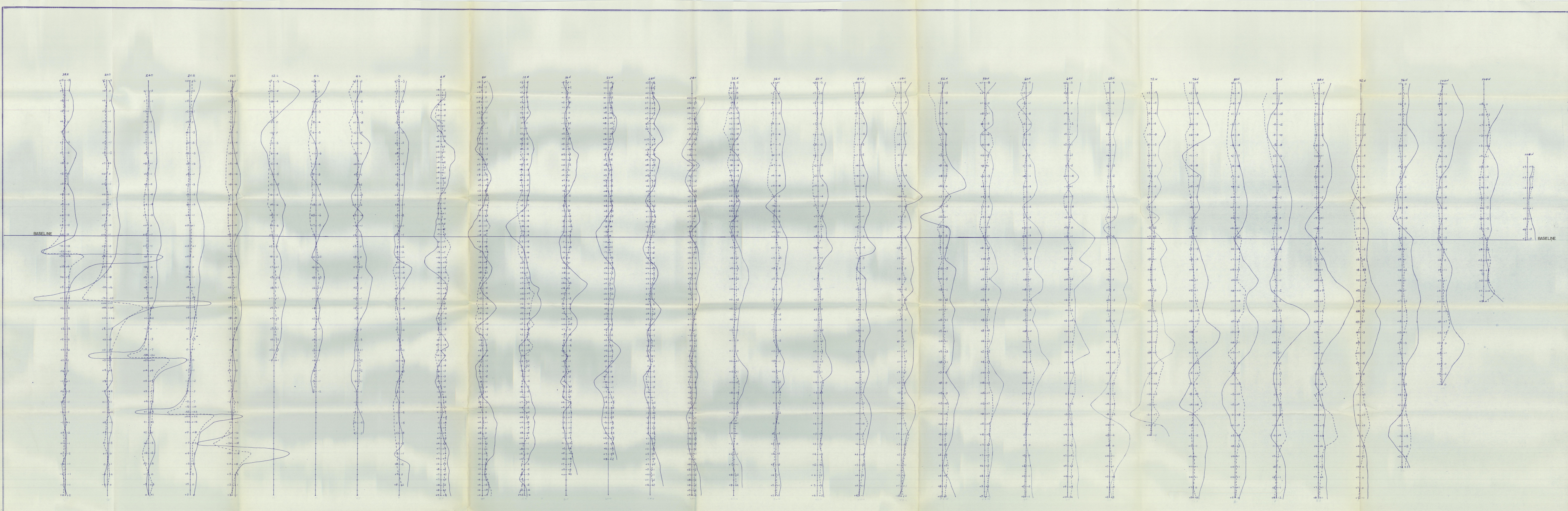
GEOLOGICAL MAP
of the
WOLF GROUP
 WHITEHORSE MINING DISTRICT
 YUKON TERRITORY

ACE R. PARKER & ASSOCIATES
 Mineral Industry Consultants & Contractors
 Whitehorse Yukon

DATE	20 Sept 1967	Geology by:
SCALE	As Shown	E.A. TAGSETH P.Eng.
DWG No.	I	Professional Geologist



GEOLOGICAL COMMENTS		WOLF CREEK MINES LTD.	
INSTRUMENT: Sharpe MF-1 Magnetometer		GROUND MAGNETIC	
CONTOUR INTERVAL: 50 Gammas		GEOLOGICAL SURVEY	
Magnetic Depression		of the	
		WOLF CLAIM GROUP	
		WHITEHORSE MINING DISTRICT	
		ACE R. PARKER & ASSOCIATES	
		MINERAL INDUSTRY CONSULTANTS & CONTRACTORS	
		WHITEHORSE	
SCALE	1" = 200'	SEAL	
DATE	JUNE 1, 1968		
DRAWN BY	M. FOX		
GEOPHYSICS	M. FOX		
DWG. NO.			



GEOLOGICAL COMMENTS		WOLF CREEK MINES LTD.	
INSTRUMENT: RONKA E.M. 16		PRELIMINARY E.M.	
In phase (left)		GEOLOGICAL SURVEY	
Quadrature (right)		of the	
Polarity Corrected for in Survey		WOLF CLAIM GROUP	
		WHITEHORSE MINING DISTRICT	
		ACE R. PARKER & ASSOCIATES	
		MINERAL INDUSTRY CONSULTANTS & CONTRACTORS	
DATE: MAY 7, '68		DATE: MAY 7, '68	SEAL
DRAWN BY: <i>[Signature]</i>		SCALE: 1" = 200ft	
DWG. NO. 1			

Results plotted 1" = 20%

Conductor Axis

Defined

Inferred

POSSIBLE MINERALIZED ZONES