A GEOPHYSICAL REPORT ON
AN AIRBORNE MAGNETOMETER SURVEY
PARKER AREAS NO. L & 2
SKEENA MINING DIVISION
NEAR SHAMES STATION, BRITISH COLUMBIA
(54°, 128°, S.W.)

(ZAYZEE GROUP)

103 1/7W

For

Mr. R. H. Parker, Prince Rupert, B.C.

Mr. B. Webb, Doreen, B.C.

Survey by - Geo-X Surveys Ltd.

Report by- Jos. Sullivan, P.Eng.

Nov.20 - Dec.15, 1966







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#### **INTRODUCTION:**

The following context is a report on two airborne magnetometer surveys conducted by Geo-X Surveys Ltd., 627 Hornby Street, Vancouver 1, B.C., for Robert Parker, 801 Summit Avenue, Prince Rupert, B.C., over the Parker No. 1 & No. 2 areas near Shames Station on the northern line of the CN Railroad.

The drafting and compilation for the report was done by Mr. Don Fritz of the Geo-X staff.

Both areas are in the Skeena Mining Division in the Terrace district of British Columbia. They lie immediately north of the Skeena River on the south flank of Mount Remo. B.C. highway No. 16 crosses the southerly portions of both areas.

A location sketch follows this page.

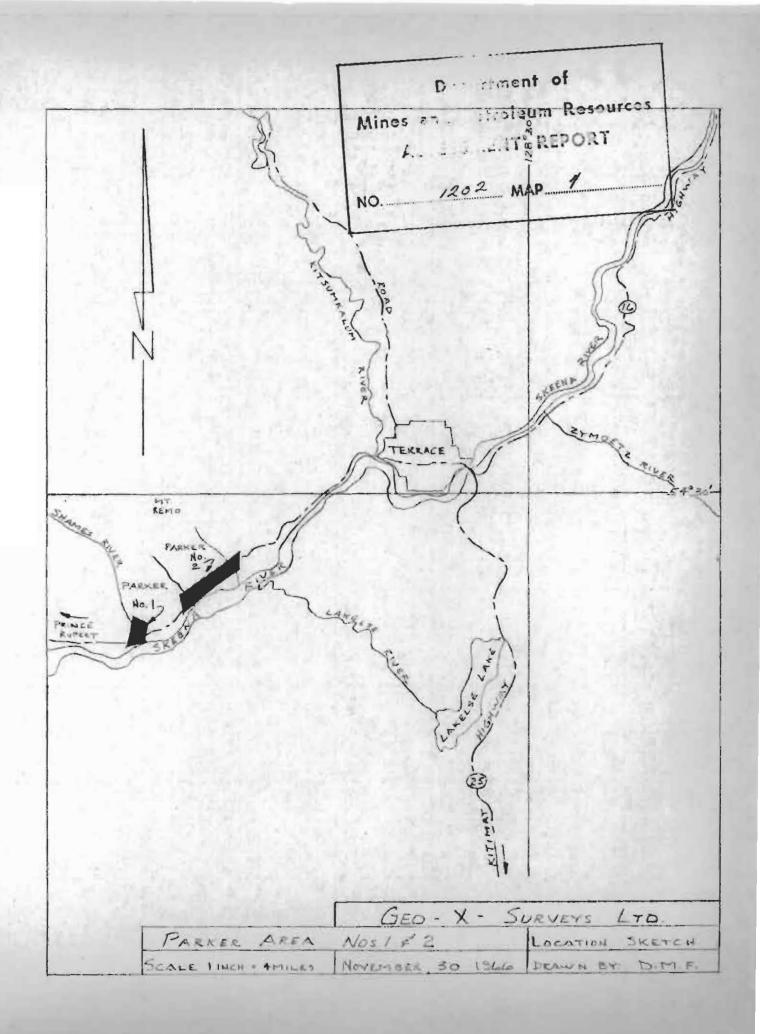
#### PROPERTY:

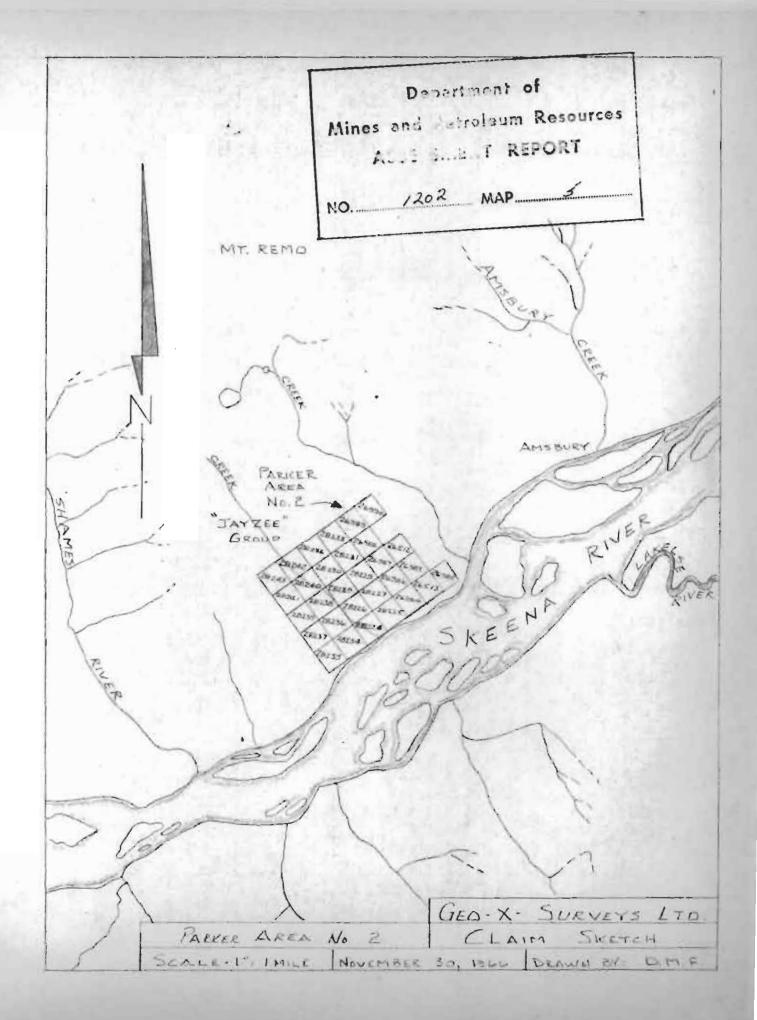
Parker area No. 1 - no recorded claims.

Parker area No. 2 - There are thirty contiguous claims in the group called the "Jayzee Group".

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Claim Record Nos. - 26383
- 26512 - 26513
- 26984 - 26990
- 28224 - 28243
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The recorded owners are Mr. R. H. Parker, 801 Summit Avenue,





Prince Rupert and Mr. Bruce Weeb, Doreen, B.C.

### GEOLOGICAL SUMMARY: (G.S.C. Map 1136A)

From the mapping of the Geological Survey of Canada, this area appears to be underlain by a Carboniferous sedimentary series composed of greenstone, shale, argillaceous limestone, and limestone. The general trend is northeast, with a moderate northerly dip.

Area No. 2 map be underlain in the northeast corner by a plug of granodiorite with a variety of basic border facies.

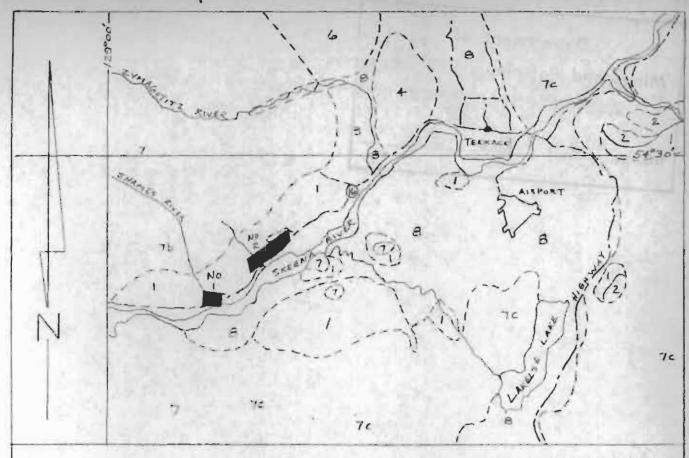
#### METHOD OF SURVEY:

A magnetometer, built to record the vertical component of the earth's magnetic field, was mounted on a Bell G-2 helicopter. The readings were fed into a chart recorder so that a continuous record of the gamma changes appear on the charts.

The Parker area No. 1 was traversed by six flight lines bearing approximately North 10° East with spacings approximately 750 feet apart.

The Parker area No. 2 was traversed by thirteen flight lines bearing approximately North 10° East with spacings approximately 750 feet apart.

An electric camera is included with the equipment on the helicopter so as to furnish a record of the aircraft's drift from the proposed flight lines, thus permitting a more accurate plot of the lines on the plan map.



LEGEND

GSC MAP 1136A

- / Greenstone, shale, argillaceous limestone, limestone
- White crystalline limestone
- Limestone-boulder conglomerate, grevwacke, banded volcanic sandstone, chert
- 4 Andesite, breccia, tuff, greywacke, argillite
- Greywacke, conglomerate, argillite; minor tuff
- 7 Undifferentiated: granodiorite, diorite, quartz diorite, quartz monzonite, adamellite, granite, gabbro Border Facies: 7b, hornblende diorite, quartz diorite, migmatite Inner Facies; 7c, white granodiorite
- 8 Sand, gravel, clay, alluvium

	GEO - X - SUA	EVEYS LTD.
PARKER AREA	Nos. 1 & 2	GEOLOGY SKETCH
SCALE-LINCH - 4 MILES	NOVEMBER 30 1966	DRAWN BY: DMF

The opertor's field reports are included as Appendix I and Appendix II at the back of this report.

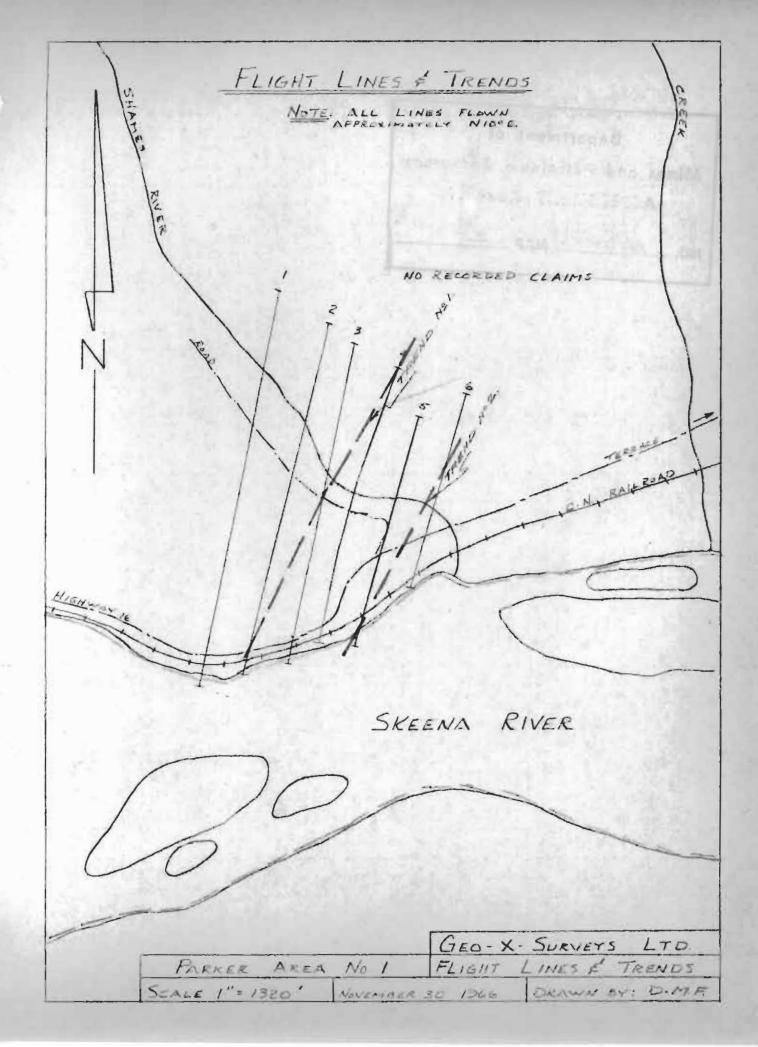
# INTERPRETATION AREA NO. 1

This analysis is based on a visual inspection of the recorder charts. Each chart is inspected premarily for gradient, (gradual increases or decreases in the gamma count) along the flight lines. Generally, such gradients are separated by a pronounced signature. The writer believes these signature are due to faulting, lithographic changes, or topography. Consequently, when correlating between the flight lines the transverse trends expressed will be due to the same faulting, lithography and topography.

Occassionaly a marked signature appears to have no relationship to the general trends. These may be magnetic peaks, magnetic depressions, or dipoles, and can be considered anomalous.

Trend No. 1 on lines 2, 3 and 4 is the most pronounced magnetic ridge along these flights. This could be a thin rock unit of relatively high magnetic susceptibility or a fault.

Trend No. 2 on lines 5 and 6 marks a decided change in the magnetude of the gamma counts. The area east of this trend line is in a much higher gamma range than the area to the west. Thus, the writer feels there is a complete change in lithography across trend No. 2.



#### RECOMMENDATIONS FOR AREA NO. 1:

Both the trends outlined in this survey are worthy of a visual prospecting effort, for faulting and lithographic changes are frequently the reason for the localization of metallic mineral deposits.

### INTERPRETATION AREA NO. 2:

Trend No. 1 off the south ends of lines 3, and 4, is under the Skeena River. This is a magnetic ridge with a range better than +500 gammas which may terminate on line 5 immediately south of trend No. 2.

Trend No. 2 on lines 4 and 5 is a magnetic depression with a range better than ~500 gammas.

Trend No. 3 on lines 9 and 10 is a magnetic high zone that may be due to the influence of the topographic ridge that follows the east side of the adjacent creek bed.

Trend No. 4 on line 12 is an isolated dipole with its negative and positive limits well beyond the sensitivity set on the amplifier. Since a similar signature was not noted on the adjacent runs this trend is not given a direction.

#### RECOMMENDATIONS FOR AREA NO. 2:

The writer considers trend No. 4 and the intersection of trends No's. 1 and 2, to be the two points of chief interest. Both these points should be prospected thoroughly, and perhaps mapped geologically. If the cause for the anomalous conditions cannot be determined visually, it will be necessary to conduct a controlled magnetometer survey on the ground.

Respectfully,

Jos. Sullivan, P.Eng.

## APPENDIX I

# Operators Report Airborne Magnetometer Survey Shames River Area Skeena Mining Division Parker Area No. 1

Line No.	No. Pictures	Chart Length	Mileage
1	13	5.2"	1.05
2	12	5.2	•95
3	12	4.7	.85
4	10	4.2	•75
5	9	3.6	.62
6	. 9.	3.6	_ • 53
Totals	<u>65</u>		4.75 Miles

Date Flown - November 20, 1966

Direction Flown - Approximately North 15° East

Line Separation - Approximately 750!

Sensitivity - 1000 gamma full scale

Air Speed - 60 M.P.H.

Altitude - 500 feet

Pilot - Ed. Phillips - O.K. Helicopters

Operator - R. Robillard, Geo-X Surveys Ltd.

## APPENDIX II

# Operators Report Airborne Magnetometer Survey Parker Area No. 2 Skeena Mining Division Jayzee Group

Line No.	No. Pictures	Chart Length	<u>Mileage</u>
1	9	3 • 4"	.68
2	ý	3.2	.62
3	8	3.0	.60
4	9	3.5	.63
5	.8	2.8	.63
6	11	4 • 4	.75
7 .	13	5.5	.80
8	13	5 • 4	•87
9	13	5.7	•87
10	12	5.2	•95
11	11	4.9	.92
12	11	4.5	•95
13	_12	4.8	<u>•90</u>
Total	139		10.18 Miles

Date Flown - November 20, 1966

Direction Flown - Approximately South to North

Line Separation - Approximately 750 feet

Sensitivity - 1000 gammas full scale

Air Speed - 60 Miles per Hour

Altitude - 500 feet

Pilot - Ed Phillips, O.K. Helicopters

Operator - R. Robillard - Geo-X Surveys Ltd.

#### APPENDIX III

## Personnel Employed on Survey:

Name	Occupation	Address	Dates Worked
J. Sullivan	P. Eng.	2766 W. 30th Avenue Vancouver, B.C.	Dec. 13-14, 1966
R. Robillard	Operator	Geo-X Surveys Ltd.	Nov. 20, 1966
P. Marshall	Helper	Geo-X Surveys Ltd.	Nov. 20, 1966
E. Phillips	Pilot	0. K. Helicopters	Nov. 20, 1966
D. Fritz	Drafting	Geo.X Surveys Ltd.	Nov.23, Dec.15/66
A. Price	Typing	Geo-X Surveys Ltd.	Dec. 15, 1966

# Instrumentation:

Magnetometer sensing head - Saturable core type -- manufactured by Sabre Electronics Ltd., Burnaby B.C.

D.C. Operational amplifier and related circuitry

Recorder - Bausch and Lomb model VOM 6

Camera - Robot model 24

A saturable core is mounted in an oil dampened gimbal and attached to a boom on the front of a helicopter. Impulses from the core, proportional to the vertical component of the earth's magnetic field, are amplified and recorded continuously and automatically on the chart recorder. An electrically run camera automatically timed to the chart recorder, is used to photograph each flight line, providing an accurate ground location of each line flown.

# APPENDIX IV

# PHOTOS:

Composites of aerial photos taken during surveys of Parker Areas No. 1 & 2 showing location and drift of flight lines.

