PHIL MINERAL CLAIM GROUP

AIRBORNE GEOPHYSICAL SURVEY REPORT
(Magnetic, Electromagnetic)

Watson Lake Mining District

Yukon Territory

Longitude : 130°31' W. (approx.)
Latitude : 61°55' N. (approx.)

N.T.S. 105-G-15

Field work done in period
Sept. 12 - Sept. 13, 1968

By

JOHN S. BROCK

ATLAS EXPLORATIONS LIMITED

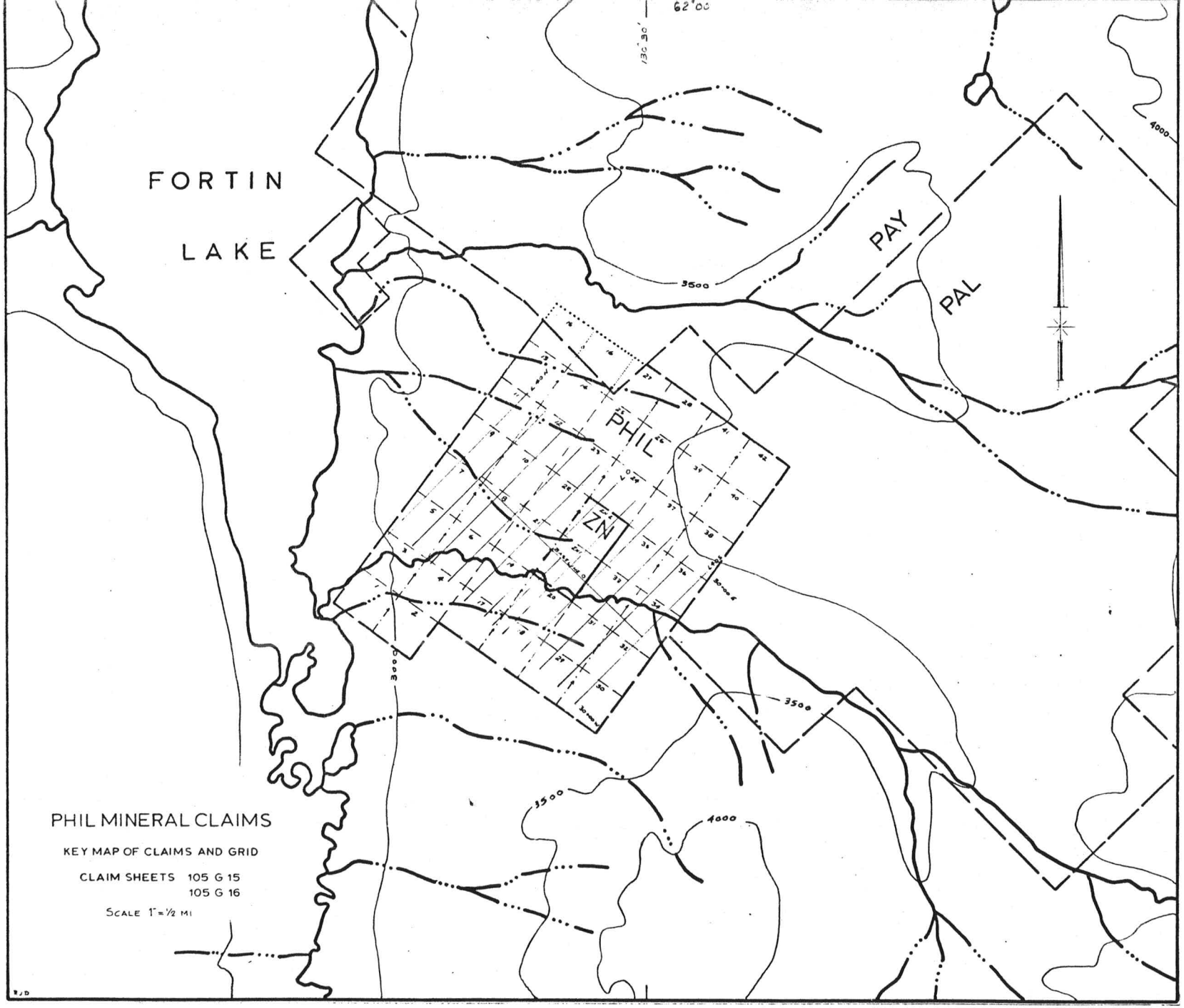
February 21, 1969

TABLE OF CONTENTS

APPENDICES

LIST OF CLAIMS

Claim Number	Grant Number	Date Recorded
Zn 1-2	Y19017-Y19018	Aug. 16, 1967
Phil 1-8	Y19072-Y19079	September 5, 1967
9-16	Y19080-Y19087	September 5, 1967
17-24	Y19088-Y19095	September 5, 1967
25-32	Y19096-Y19103	September 5, 1967
33-40	Y19104-Y19111	September 5, 1967
41-42	Y19112-Y19113	September 5, 1967


62°00
130°30'
FORTIN
LAKE
PAY
PAL
PHIL
ZN
3500
4000
3000
PHIL MINERAL CLAIMS
KEY MAP OF CLAIMS AND GRID
CLAIM SHEETS 105 G 15
105 G 16
SCALE 1"=½ MI

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330 MARINE BUILDING
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INTRODUCTION

An Airborne Magnetometer - Electromagnetometer (Mag-EM) Survey was carried out over the Phil Mineral Claims and immediate surrounding area during the period September 12th to September 13th. It was hoped that airborne geophysical data would aid in geologic mapping and interpretation of geochemical anomalies on the Phil Group.

LOCATION AND ACCESS

The Phil 1 to 42 mineral claims are located near the southeast end of Fortin Lake (N.T.S. 105-G) and are adjacent to the south boundary of the Pay Group.

Access to the property was gained by aircraft equipped with floats based at Ross River, some 64 miles west of Fortin Lake. Landing facilities were made available at a base camp on the Pay Claims about 3 miles north of the Phil Claims on the east shore of Fortin Lake. Access to the Phil Camp was provided by bombardier from the Pay Camp.

SURVEY METHOD

Instrumentation

A Gulf Fluxgate Magnetometer Mark III and a Mark III electromagnetic unit, consisting of a vertical coaxial transmitter and receiver coils mounted on a thirty-foot boom, were used

for the entire survey. The instruments and operator were provided under a contract agreement with Lockwood Survey Corporation. The survey was conducted with a Bell 206 helicopter as fixed-wing aircraft were judged to be unsuitable for some of the regions of more rugged terrain.

For the electromagnetic apparatus, amplitudes of in-phase and out-of-phase response of the resultant field are measured in parts per million of the primary field, the frequency of the primary current is 4000 cycles per second.

The magnetometer has a sensitivity of 1200 gammas and measures total magnetic field.

Survey Procedure

The geophysical instruments were towed to a mean terrain clearance of 100 ft. over flight lines of 1000 ft. spacing. Effective ground control was maintained by the use of aerial photographs with pre-located flight lines for navigational purposes. The helicopter was equipped with APN-1 radio altimeter and stop motion 35 mm. camera for further ground control and recording of fiducial points. All flight lines were oriented approximately orthogonal to geologic strike.

Plotting of Results

Flight records were processed by the staff of Atlas Explorations, as no plotting of results was done by the contractor during the actual survey. All airborne information was plotted on plastic overlaps showing flight lines, fiducial points, drainage and major topographic expressions to a scale of one inch to one-quarter mile. Magnetic data was contoured for all results corrected and derived from flight records. Isomagnetic contour interval of 100 gammas was used.

Electromagnetic data was presented on a separate sheet by contoured in-phase response. Contours represent amplitude of in-phase response of the resultant expressed in parts per million of the primary field. Relative conductivity is also expressed by a ratio of amplitude in-phase component over quadrature component.

AEROMAGNETIC AND ELECTROMAGNETIC RESULTS

High Level Magnetic Results

Study of the 1 inch to 4 mile aeromagnetic survey presentations[I] in conjunction with 1 inch to 4 mile G.S.C. geologic maps of the same areas shows the area around the Pay Mineral Claims to be within a broad northwest trending magnetic anomaly. Local higher intensity anomalies are contained within this belt.

Some disparity exists between the Sheldon and Finlayson Lake aeromagnetic 4 mile sheets as the two areas were flown at different times with no apparent attempt at 'tying-in' results. As the boundary between the Sheldon and Finlayson sheets runs east-west through the Pay Mineral Claims, the anomalies are discontinuous.

Correlation of Geologic Survey (G.S.C.) geology and aeromagnetics shows no relationship between Mesozoic intrusives and magnetic anomalies. Intrusives, as mapped, are confined to areas of magnetic lows. The anomalous areas appear to be coincident mainly with Cambrian phyllite in part limy and dolomitic and locally changed to hornfels. Some slates, cherts and shales have also been mapped in this area but are not related to magnetic highs. On the Sheldon Sheet, and over the northern sections of the northwesterly trending aeromagnetics, units mapped are cherts, shale, minor conglomerate and limestone.

[I] Refer to G.S.C. Geophysics Paper 7838 G (Sheldon Lake 105-J) and G.S.C. Geophysics Paper 7006 G (Finlayson Lake 105-G)

Low Level Magnetic Results

The airborne survey flown over the Pay Mineral Claims and surrounding region was flown at an instrument terrain clearance of 100 ft. Results have been presented on scale 1 inch to ¼ mile.

The overall northwest trending magnetic anomaly shown from high-level survey results is generally distinguishable on the low-level results. Two distinct areas of anomaly exist, a northwest-southeast trending belt of magnetic anomalies at the north end of the survey area and localized magnetic highs between the Phil and Pay Grids.

The magnetic anomalies between the Phil and Pay Grids are on flight lines 13, 14 and 15. The main anomaly reaches peak values of 1300 gammas or 400 gammas above background, the anomaly is north-south trending for about 1500 ft. in length. In relation to this anomaly is a corresponding magnetic low, reaching values below 700 gammas total survey intensity. 3000 feet to the southeast is located a local

NOTES

2 distinct areas of anomaly

(1) Localized magnetic highs between Phil Grid and Pay Grid on flight lines 13, 14, 15. Main anomaly reaches peak of 1300 gammas or 400 gammas above background. North-south trending, 1500 ft. lengths. Corresponding mag low, below 700 gammas to the north, below 700 gammas.

3000 feet to southeast - local mag high 1200 gammas or 300 above background.

(2) Northwest-southeast trending belts of magnetic anomalies at north end of survey area. Within this belt two distinct trends:

(1) fault contact area, sharp gradient striking approximately 105°, series of elongate mag highs of peak values of 400 to 600 gammas above background.

(2) other trends at 135° broad flat anomaly containing local spot highs.

Phil Mag - suggested plug or west dipping - another plug to north, possibly associated plug to southeast.

Aeromagnetics

Refer to G.S.C. Geophysics Paper 7838 G (Sheldon Lake 105-J) and Geophysics Paper 7006 G (Finlayson Lake 105-G)

Study of the 1 inch to 4 mile aeromagnetic survey presentations in conjunction with the 1 inch to 4 mile G.S.C. geologic maps shows the area around the Pay Mineral Claims to be within a broad northwest trending magnetic anomaly, with local highs intensity anomalies contained within the belt. Some disparity exists between the Sheldon and Finlayson Lake aeromagnetic survey sheets as the two areas were flown at different times and apparently no attempt made to 'tie-in' results. As the boundary between both sheets runs across the Pay Claims, some of the anomalies are discontinuous.

NOTES (Continued)

Correlations with G.S.C. geology show no relationship between Mesozoic intrusives and magnetic anomalies. Intrusives, as mapped, are confined to areas of magnetic lows. The anomalous areas appear to be coincident mainly with Cambrian phyllite in part limy and dolomitic and locally changed to hornfels. Some slates, cherts and shales have also been mapped in the area, but are not related to magnetic highs. Over the northern section of the airmagnetics, units mapped are cherts, shale, minor conglomerate and limestone.

The aeromagnetic survey flown at 100 feet terrain clearance and presented on scale 1 inch to ¼ mile generally shows the regional northwest trending magnetic configuration outlined on the 4 mile maps.

Mag anomaly near grid lake - serecite, phyllite.

Quartzite between two anomalies - 105 trend - possible sereciae, phyllite - graphite.

LIST OF PERSONNEL

J. S. Brock	Geophysicist	Vancouver, B.C.
D. W. Goodbrand	Draftsman	Vancouver, B.C.
G. Preiss	Geophysical Operator	Lockwood Survey Corp 1409 W. Pender St. Vancouver 5, B.C.
R. Conant	Helicopter Pilot	Trans North Turbo Air, Box 1977, Whitehorse, Y.T.
E. MacKay	Helicopter Engineer	Trans North Turbo Air Box 1977, Whitehorse, Y.T.

PAY AND PHIL GROUPS AIRBORNE GEOPHYSICAL SURVEY

(Magnetic, Electromagnetic)

SUMMARY OF EXPENDITURES

05 - AIRBORNE SURVEYS		Year to date Jan.31,1969	
001 WAGES/SALARY/BONUSES	100.00	1,477.18	1,214.14 CR
009 FREIGHT		125.00	125.00 CR
016 CONTRACT CHARGES		2,581.69	2,581.69 CR
021 HELICOPTER SUPPORT		1,628.26	1,628.26 CR
026 MAPS AND REFERENCES	3.03	6.10	6.10 CR
150 CAMP SUPPORT		576.94	576.94 CR
PROJECT TOTAL	103.03	6,397.17	6,136.13CR
Plus Overhead (15% of Project Total)		959.57	
TOTAL		7,356.74	

Total Survey = 220 line miles
Phil Group Portion Lines 1-18 @ 4.5 mi/line = 81 line miles
Plus 7 miles tie lines = 88 miles Total

40% of Total as applied to Phil Group = $ 2,942.69
February wages direct to Phil $ 205.48

TOTAL $ 3,148.17

Appendix II

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AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, John S. Brock, Geophysicist, Atlas Explorations Limited, Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the statement of costs presented with this report (Appendix II - "Airborne Geophysical Survey Report, Phil Mineral Claim Group")is both correct and true.

_____
John S. Brock

_____
Date

_____
Commissioner of Oaths in
and for the Yukon Territory