GEOPHYSICAL SURVEYS

(Magnetic and Electromagnetic)

TIM MINERAL CLAIM GROUP

SHELDON LAKE AREA
WATSON LAKE MINING DIVISION
YUKON TERRITORY

Longitude: 61°59' West
Latitude : 129°56' North

N.T.S. - 105-H-13

By

JOHN S. BROCK

ATLAS EXPLORATIONS LIMITED

January 16, 1968

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

RESIDENT GEOLOGIST

Approved as to cost in the amount of: $ 2600.00

RESIDENT MINING ENGINEER

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

COMMISSIONER OF YUKON

LIST OF CLAIMS

Claim Numbers	Grant Numbers	Date Recorded
Tim 1-42	Y17848 - Y17889	July 6, 1967
Tim 44-49	Y19051 - Y19056	August 22, 1967

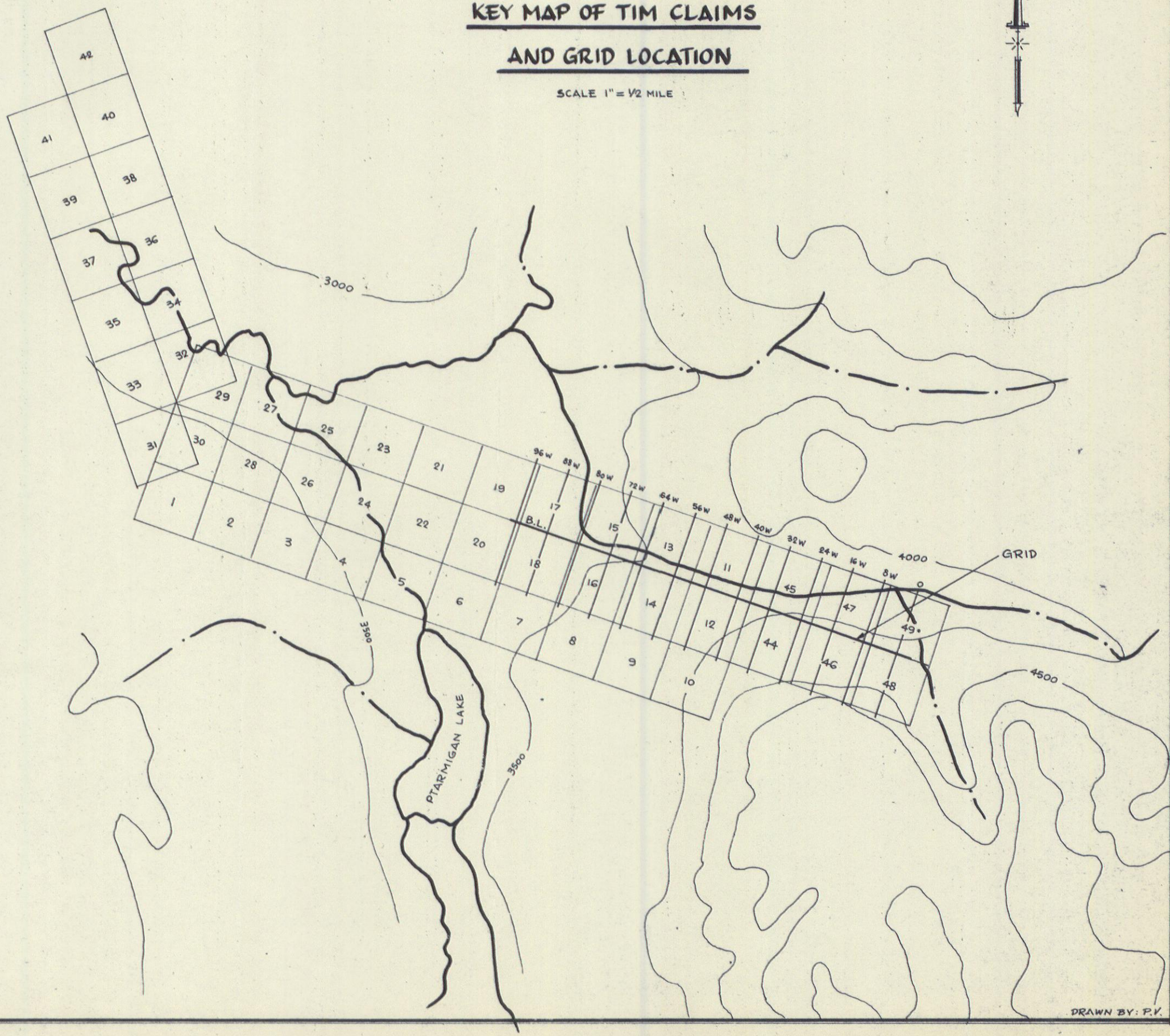
ATLAS EXPLORATIONS LTD.

ROSS RIVER (Y.T.)

KEY MAP OF TIM CLAIMS

AND GRID LOCATION

SCALE 1" = 1/2 MILE



DRAWN BY: P.V.

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INTRODUCTION

As a result of a geochemical reconnaissance program guided by geologic concepts formulated in the Pelly Lakes area, soil sampling northeast of Ptarmigan Lake revealed an area of anomalous zinc values. The geochemical results were in coincidence with an elongate aeromagnetic anomaly which was subsequently staked in June, 1967. Further geochemical reconnaissance confirmed the presence of high (in excess of 300 p.p.m.) zinc and scattered copper values. Six more claims were added to the Tim Group in August, 1967.

Follow-up work consisting of detailed geologic mapping, linecutting, geochemical and geophysical (EM and MAG) surveys was completed during August and September, 1967.

The Tim Mineral Claims are considered to be favourable for more exploration and development due to interesting geophysical-geochemical results obtained, coupled with a favourable geologic setting (limestone and skarn horizon) as well as reported zinc and tungsten occurrences.

LOCATION AND ACCESS

The Tim Group, approximately 80 air miles east of Ross River and 12 miles southeast of Pelly Lakes trading post (abandoned), are located in the northwest portion of claim sheet NTS 105-H-13.

Access to the property may be gained by float equipped aircraft to Ptarmigan Lake, one mile south of the claim group. The claims may then be approached on foot, although helicopter support has been used by the company. There is no trail cut from the lake to the property.

GEOLOGY

Strong overburden cover in the area of the claims prevented completion of a geologic map. However, a few isolated outcrops of black chert, quartzite and limestone indicated that a steeply-dipping sequence of limestone, limestone-chert, quartzite, and minor black slate (which is exposed to the southeast) underlies the grid area. This sequence is folded into a northwesterly-plunging syncline which appears to be on-strike with the geochemical anomaly.

One small showing in the grid area near L32, 7+005 consisted of a dark green skarn with minor chalcopyrite and pyrite.

All mapping was done by R. Dunsmore on air photo overlays, scale 1: 2730.

GEOPHYSICAL SURVEY

Linecutting

A base line, with east-west bearing, was established for 9600 feet along the central line of the eastern portion of the Tim Group; 3200 foot cross lines were cut using 800 foot line spacing; 100 foot stations were established on each cross line. The grid was controlled by picket and chain methods, linecutting was carried out by natives from Ross River.

Instruments Used

For the magnetometer surveys, a Jalander 46-65 magnetometer was used. The instrument is hand-held and measures the vertical magnetic component by use of an oil-dampened fluxgate which automatically levels itself in the direction of the vertical field. The range of this instrument is 10 to 250,000 gammas over five sensitivity ranges, the lowest being 10 gammas per scale

division, The magnetometer is of light weight and readings can be obtained quickly; a conversion factor is necessary before gamma values can be determined.

The elctromagnetic survey was carried out with a Crone JEM dual frequency unit. The Crone is of the inductive type and may be either used as a horizontal or vertical loop apparatus. Measurements are made of the resultant dip angle of the field and the width of null or out of phase component. It is designed to be operated with a maximum coil spread of 300 feet for a horizontal conductor and 100 feet for a vertical conductor. The effective lateral coverage is a direct function of the spread under ideal conditions. The equipment was chosen in order to give reliable information on the altitude and configuration of a conductor, the physical properties of the host rock, dimensions of the conductor, and results free from error due to topographic relief.

Survey Method

Magnetic Survey

Readings were taken on cross lines OW - 80W at 100 foot intervals. After being corrected for diurnal drift, the final gamma values were plotted on grid maps at scale 1"= 400 feet. These results were then contoured at intervals of 200 gammas.

Electromagnetic Survey

Crone JEM

The survey was run on cross lines LOW - 80W with horizontal loop configuration and 300 foot coil spacing. Both 1800 and 480 cps readings were taken at 100 foot stations.

Both high and low frequency readings were plotted on maps 1"= 400 feet and profiles drawn.

RESULTS

Within the grid area, four zones of magnetic response were outlined with peak values between 1600 and 2400 gammas (absolute).

(1) Line 40W - 80W stations ON-12N.
Peak values at L48W, 5N
L64W, 7N.

(2) Line OW - 14W stations 3S - 13S
Peak values at LOW, 12S.

(3) Line 50W, 5S.

(4) Line 72W, 14S.

Background for the area has been established at 1000 gammas.

A broad and elongate anomalous electromagnetic expression was outlined between LOW and 80W. The profiles vary in width from 400 to 2100 feet and reached peak values of -30 and -27 degrees resultant dip angle. Profiles are of regular character and continuity.

CONCLUSIONS AND RECOMMENDATIONS

All magnetic anomalies and responses are contoured to appear sinuous in nature with a northwest-southeast strike. It appears that the magnetics are generally on strike with phyllitic units mapped by the G.S.C. Interbedded within the phyllite is skarn and limestone, the skarn probably gives rise to spot magnetic highs within the overall anomaly.

The electromagnetic survey outlined a broad overall response approximately of east-west strike and conformable to the regional geologic and topographic strike. It is felt that the conductor is not of economic significance and is probably due to black slates interbedded with the limestone-phyllite as well as groundwater conditions in the basin area of the valley.

Some coincidence is apparent between magnetic and geochemical results and, although no geologic information is available on the grid, the fact that a favourable limestone sequence strikes toward the geochemical and geophysical expressions makes an interesting situation.

Relatively heavy overburden cover prevents detailed examination of the property, however more geochemical surveys are recommended along strike of the existing anomalies, as well as prospecting for float occurrences.

Respectfully submitted,

JOHN S. BROCK,
ATLAS EXPLORATIONS LIMITED

January 16, 1968.

Approved

APPENDIX I

PERSONNEL

TIM MINERAL CLAIMS

R. Dunsmore	Geologist	Vancouver, B.C.
A. Lake	Prospector	Vancouver, B.C.
J. Ladue	Linecutter	Ross River, Y.T.
B. Etzel	Linecutter-Geochem	Ross River, Y.T.
J. Ollie	Linecutter-Geochem	Ross River, Y.T.
J. Atkinson	Linecutter	Ross River, Y.T.
T. Charlie	Linecutter	Ross River, Y.T.
J. Galeski	Mag. and E.M. Operator	1312 - 70th Ave.S.W. Calgary, Alberta.
M. Simpson	E.M. Helper-Geochem	Tofino, B.C.
M. Acklack	Geochem	Ross River, Y.T.
V. Pratico	Geochem	Vancouver, B.C.

SUMMARY OF COSTS
TIM MINERAL CLAIMS

TIM Geophysics

A. Linecutting

1. (a) Footage Cut: 51,200 feet
   (b) Linecutters: J. Ladue, B. Etzel, J. Ollie, J. Atkinson, T. Charlie.

2. (a) Wages:

35 man days x $20.00, daily wage of natives	$ 700.00
(b) Helicopter Support:	
1/2 hours at $112.00 per hour	145.60
(c) Fixed Wing:	
1 trip, one way, Ross River to Pelly Camp = 1(76 mi.x $.85/mi.) = 1 x $64.60	64.60
(d) Subsistence Cost:	
35 man days x $8.00, cost per man day	280.00
(e) Supplies & Misc. Equipment	100.00
(f) Travel from Ross River to Pelly Camp:	
5 men x $15.00 per man	75.00
(g) Supervision:	
35 man days x $1.20/man day	42.00
(h) Overhead:	
15% of Total = 15% x $1,407.20	211.08
TOTAL COST OF TIM LINECUTTING	$ 1,618.18

B. Magnetometer Survey

1. (a) Footage Read : 35,200 feet

   (b) Operators: J. Galeski and M. Simpson

2. (a) Wages:

4 man days x $16.50, daily wage of J. Galeski		$ 66.00
2 man days x $17.50, daily wage of M. Simpson		35.00
		101.00

(b) Helicopter Support:

1 hour at $112.00 per hour		112.00

(c) Subsistence Cost:

6 man days x $8.00 per man day		48.00

(d) Travel from Vancouver and Edmonton:

$15.00 per man x 2 men		30.00

(e) Supervision Cost:

6 man days x $1.20 per man day		7.20

(f) Instrument Cost:

6 days used x $5.00		30.00

(g) Interpretation & Report Presentation:

Drafting: 1 day x $30.20, daily wage of P. Vlasveld	30.20	
Interpretation: E. Smith and J. Brock - 1 day x $75.00	75.00	105.20

(h) Overhead:

15% of Total = 15% x $433.40		65.01
TOTAL COST OF TIM MAGNETOMETER SURVEY		$498.41

C. E.M. Survey

1. (a) Footage Read : 35,200 feet

   (b) Operators : J. Galeski and M. Simpson

   (c) Helpers : R. Dunsmore and J. Ollie

2. (a) Wages:

10 man days x $17.50, daily wage of M. Simpson	$ 175.00
4 man days x $23.00, daily wage of R. Dunsmore	92.00
2 man days x $20.00, daily wage of J. Ollie	40.00
2 man days x $16.50, daily wage of J. Galeski	33.00

   (b) Helicopter Support:

2 hours at $112.00 per hour	224.00

   (c) Fixed Wing Support:

1 trip, one way, Ross River to Pelly camp = 1(76 mi.x $.85/mi.) = 1 x $64.60	64.60

   (d) Subsistence Cost:

18 man days x $8.00 per day	144.00

   (e) Instrument Cost:

9 used days x $5.00 per day	45.00

   (f) Travel from Ross River, Vancouver and Edmonton:

$15.00 per man x 4 men	60.00

   (g) Supervision Cost:

17 man days x $1.20 per man day	21.60

(h) Interpretation & Report Presentation:

Drafting: 1 man day x $30.20, daily wage of P. Vlasveld	= $30.20		
Interpretation: C. Smith and J. Brock - 1 day x $75.00	= $75.00	$	105.20
TOTAL COST OF TIM E.M. SURVEY			$1,004.40

APPENDIX III

TELEPHONE 685-4331

ATLAS EXPLORATIONS LIMITED
(N.P.L.)
330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, John S. Brock, Operations Manager, Atlas Explorations Limited, of Ross River, Yukon Territory, do hereby state that, to the best of my knowledge and belief, the statement of costs as presented in this report "Geophysical Surveys - Tim Mineral Claim Group" (Appendix II) is both correct and true.

John S. Brock

April 17, 1968
Date

A Commissioner of Oaths
in and for the Yukon
Territory

Approved

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

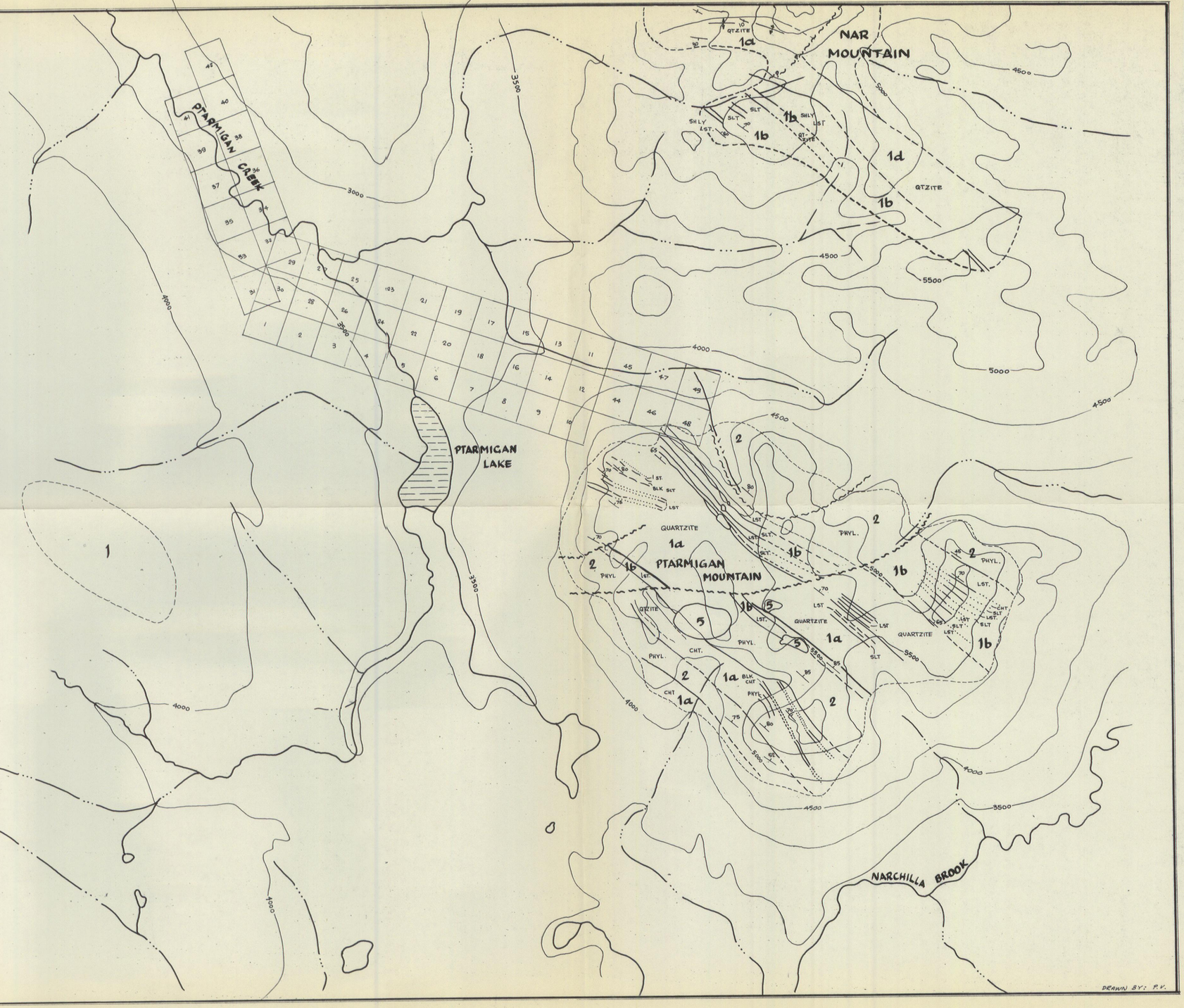
TIM MINERAL CLAIMS

REGIONAL GEOLOGY

SCALE 1" = ½ MI.

LEGEND:

CRETACEOUS (?)	5b	GRANODIORITE
	5a	BIOTITE QUARZ MONZONITE PORPHYRY
	5	GRANITIC INTRUSIVES
M-U CAMBRIAN	2c	SERICITIC PHYLLITE
	2b	GRAY PHYLLITE
	2a	SPOTTED PHYLLITE
PROTEROZOIC (?)	1d	QUARTZITE
	1c	QUARTZ SANDSTONE
	1b	PHYLLITE, LIMESTONE, MINOR WHITE CHERT
	1a	QUARTZITE, WHITE CHERT, MINOR PHYLLITE AND LIMESTONE



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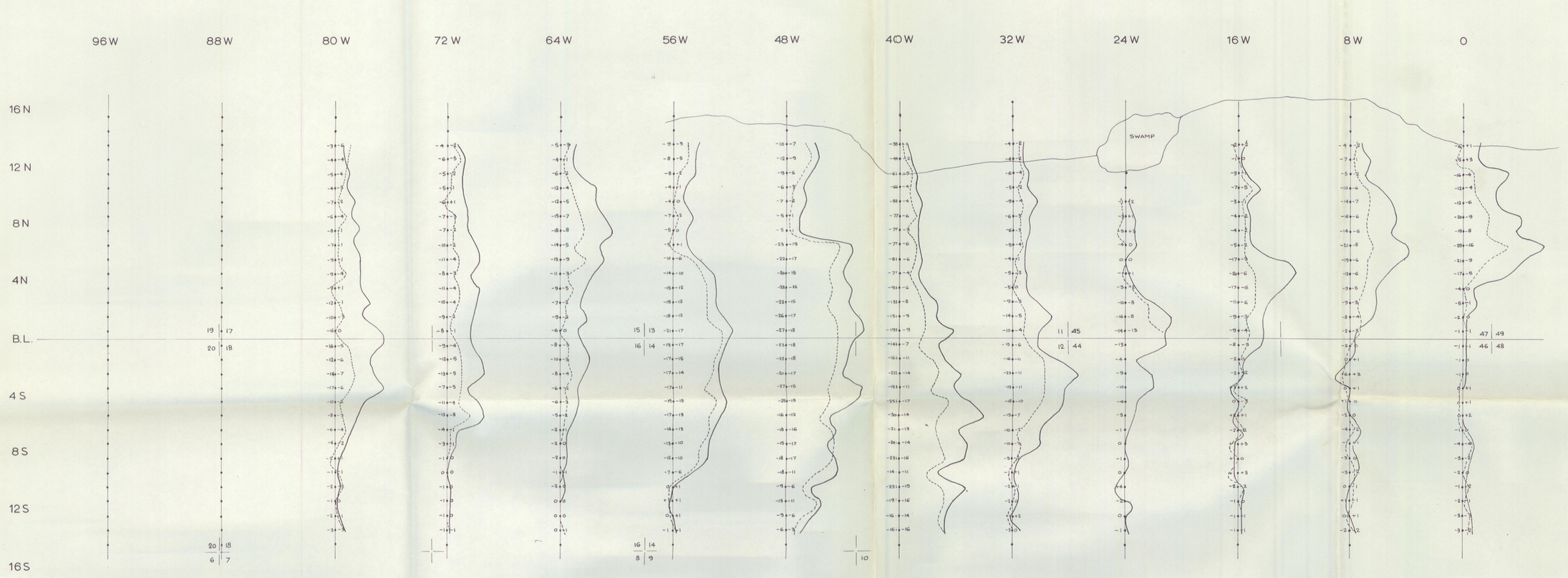


ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

TIM MINERAL CLAIMS

GROUND ELECTROMAGNETIC SURVEY

VALUES AND PROFILES

INSTRUMENT: J.GALESKI (HIGH & LOW FREQ. RESULTS)

1800 cps → ← 480 cps

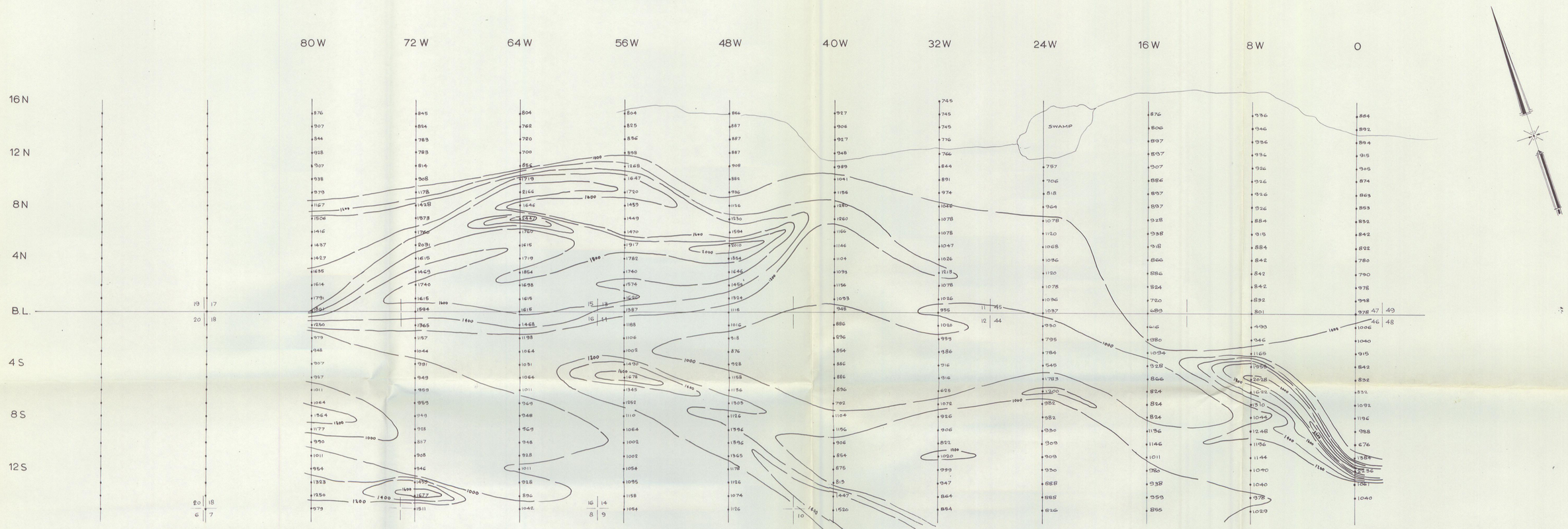
DRAWN BY: P.J.F. VLASVELD

DATE: AUGUST 1967

400 0 400 800

scale in feet

PROFILE SCALE : 1" : 20° DIP ANGLE



ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

TIM MINERAL CLAIMS

GROUND MAGNETOMETER SURVEY

VALUES & CONTOURS

INSTRUMENT: JALANDER
OPERATOR: V. PRATICO

DRAWN BY: P.J.F.VLASVELD
DATE: AUGUST 1967

400 0 400 800
scale in feet