

GEOPHYSICAL REPORT
(MAGNETIC AND ELECTROMAGNETIC SURVEYS)
SCOT MINERAL CLAIM GROUP

Mayo Mining District
Yukon Territory

Longitude : 131^o 17' W.
Latitude : 63^o 20' N.

N.T.S. 105-0-6

Work done in period June 21-
July 15, 1968

By:

THOMAS J. ADAMSON
ATLAS EXPLORATIONS LIMITED

October 7, 1968

<p>This report has been examined by the Geological Evaluation Unit. Approved as to technical worth by:</p> <p><i>W. G. Lindley</i> RESIDENT GEOLOGIST</p> <p>Approved as to cost in the amount of: \$ 2,831.00</p> <p><i>R. E. Weston</i> RESIDENT MINING ENGINEER</p> <p>Accepted as representation work under Section 53(4) Yukon Quartz Mining Act.</p> <p><i>Thomas J. Adamson</i> COMMISSIONER OF YUKON</p>

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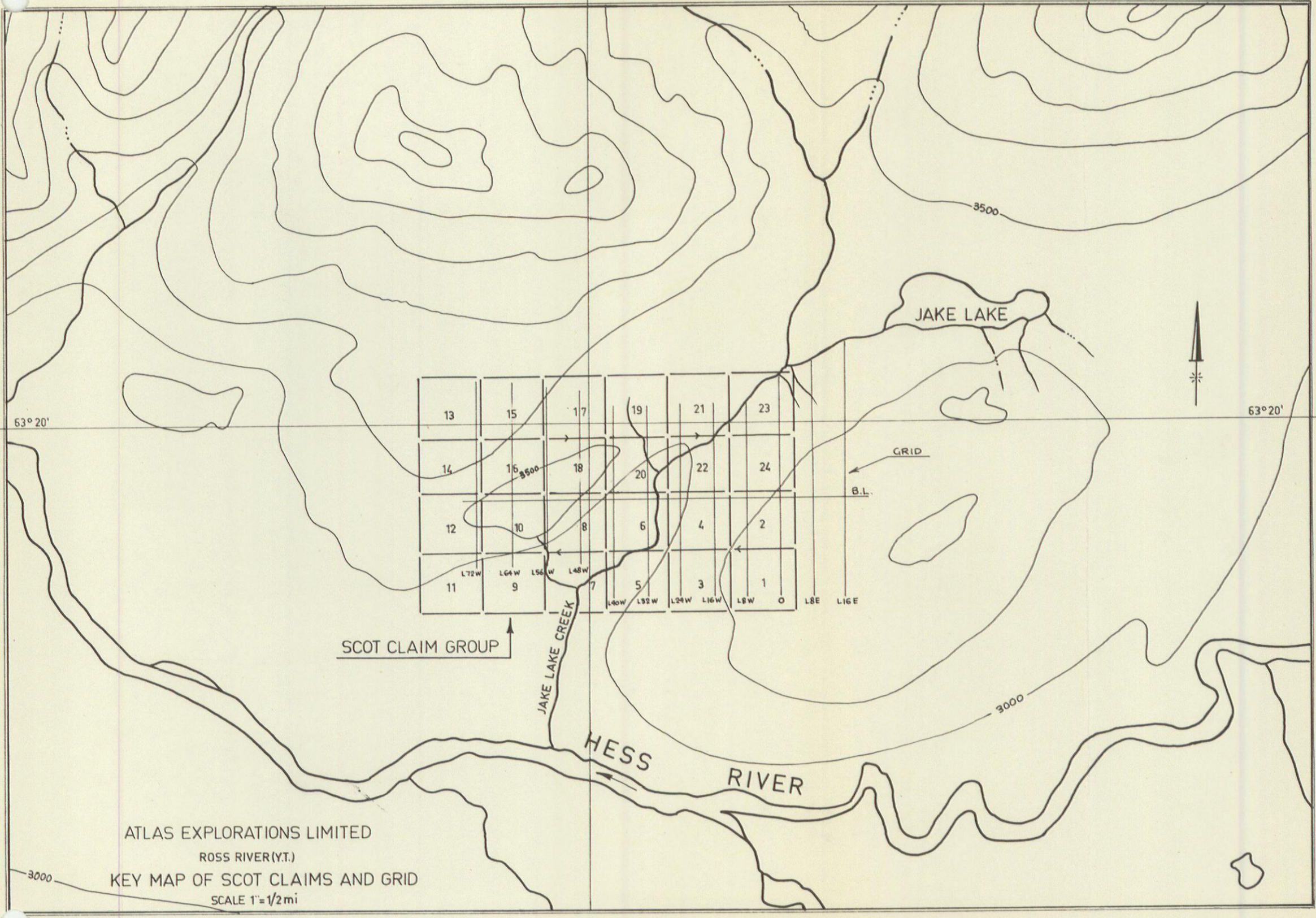
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LIST OF CLAIMS

<u>CLAIM NUMBER</u>	<u>GRANT NUMBER</u>	<u>DATE RECORDED</u>
Scot 1-8	Y14044 - Y14051	Oct. 11, 1967
Scot 9-16	Y14052 - Y14059	Oct. 11, 1967
Scot 17-24	Y14060 - Y14067	Oct. 11, 1967

131° 18'



63° 20'

63° 20'

SCOT CLAIM GROUP

GRID

B.L.

JAKE LAKE CREEK

HESS RIVER

JAKE LAKE

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

KEY MAP OF SCOT CLAIMS AND GRID

SCALE 1" = 1/2 mi

3000

3000

3500

3500

131° 18'

ATLAS EXPLORATIONS LIMITED

(N. P. L.)

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B. C.

GEOPHYSICAL REPORT (MAGNETIC AND ELECTROMAGNETIC SURVEYS) SCOT MINERAL CLAIM GROUP

INTRODUCTION

In September, 1967, as a result of a reconnaissance geochemical program, the Scot 1-24 Mineral Claims were staked. They cover an area of high zinc values in soils.

Follow-up work was done on the Scot Group in the period June 21 to July 15, 1968. During this time, a grid was cut over the area of interest (total footage 67,200'). Work done on this grid consisted of geologic mapping and prospecting, geochemical sampling and geophysical surveying.

LOCATION AND ACCESS

The Scot 1-24 Mineral Claim Group is located north of the Hess River, approximately three miles on bearing 030° from the east end of Niddery Lake. The group is in the southwest portion of claim sheet 105-0-6. The property is about 100 air miles from the settlement of Ross River, Y. T.

Access to the property can be made by float-equipped aircraft to "Jake Lake", $1\frac{1}{2}$ miles northeast of the property. A trail is cut from this lake to the property.

The only suitable campsite at Jake Lake is on the northeast shore.

One helipad has been cut in the central part of the property.

GEOLOGY

The claim group is within a thick Ordovician-Devonian section composed mainly of black chert, black shales and slates, and minor limestone, quartzite and phyllite.

The sediments are quite uniformly steeply dipping and strike in an easterly to southeasterly direction.

Over the grid area, outcrop is very limited. All the units are thin and interbedded. Because of this it is impossible to interpolate units or contacts outside the immediate outcrop area.

Only one small sulfide showing has been found in the grid area. It consists of very minor tetrahedrite in a narrow quartz-calcite vein. The vein cuts black cherts, shales and limestone.

There is very little outcrop in the eastern grid area. Centred on the base line at 8+00W is an area of about 400 ft. by 500 ft. in which carbonate-rich ground waters have emerged to the surface, depositing a light porous chemical sediment of calcium carbonate (travertine). Travertine float was found over a wide area on the eastern portion of the grid.

GEOCHEMISTRY

Geochemical silt and soil sampling outlined a large (1600 ft. by 2400 ft.) well defined zinc geochemical anomaly in the eastern grid area. Zinc values range from 5000 ppm to 35,000 ppm in the above zone.

There is no outcrop within the anomalous zone.

Travertine float was found close to nearly all high zinc geochemical results. In a rock geochemical determination, the travertine ran 9,000 ppm zinc.

GEOPHYSICAL SURVEY

Line Cutting

The cut grid consists of an east-west, 8,800 ft. long central base line, with cross lines, at a line spacing of 800 ft., varying from 4,000 ft. to 6,000 ft. long. Stations at 100 ft. intervals were marked on all lines. The grid was controlled by picket and chain methods. A total of 67,200 ft. of line was cut. The line cutting was carried out mainly by natives from Ross River, Y.T.

Instruments Used

For the magnetometer survey, a Sharpe MF-1 magnetometer was used. This is a hand held fluxgate magnetometer which measures the vertical magnetic component. The range of this instrument is 0 to 100,000 gammas over five sensitivity ranges, the lowest being 10 gammas per scale dimension. The instrument reads directly in gammas. No conversion factor is necessary

The electromagnetic survey was carried out with a Crone JEM dual frequency unit. The Crone JEM 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 ft. for a horizontal conductor and 100 ft. 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 attitude 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

The base line provides control for the magnetic survey and base stations were established along it between 8E and 32W in order that the operator may check into these during the survey and thus keep all readings on a relative basis.

Readings were taken on cross lines 8E to 32W at 100 ft. intervals. After being corrected for diurnal drift, the final gamma values were plotted on a grid map at scale 1":400'.

Electromagnetic Survey (Crone JEM)

The EM survey was run on cross lines 0W to 72W. A horizontal loop configuration and 200 ft. coil spacing were used.

Both 1800 and 480 cps readings were taken at 100 ft. stations.

Both high and low frequency readings were plotted on grid maps (1":400') and profiles were drawn.

A conductivity analysis from the ratio of maximum resultant dip angles (480 cps/1800 cps) was attempted to determine relative conductivity trends.

Results

The magnetic survey was run over the eastern grid area, which included the zinc geochemical anomaly. All gamma values obtained were uniform and of a "flat" nature. No anomalous or above background trends were recorded.

Using the Crone JEM unit, resultant dips ranged from low to high negative angles. The profiles are of irregular character and continuity. The conductivity analysis from the ratio of maximum resultant dip angles (480 cps/1800 cps) did not determine any relative conductivity trends that could be correlated with other geochemical and geophysical results.

It was impossible to correlate electromagnetic results with any of magnetics, geology or geochemistry.

CONCLUSIONS AND RECOMMENDATIONS


No interesting trends or zones of magnetic response were outlined by the magnetic survey.

It is felt that the irregular and chaotic results obtained by the electromagnetic survey are due to high and varying percentages of graphite in the Ordovician-Devonian sediments.

The magnetic and electromagnetic surveys were not successful in defining any economically significant targets.

However, the strong zinc geochemical anomaly coincident with a geologically indicated good replacement host rock justifies more geological and geochemical surveys in this area.

Respectfully submitted,


Thomas J. Adamson,
Geologist

October 7, 1968



SUMMARY OF COSTS
GEOPHYSICAL SURVEYS - SCOT MINERAL CLAIMS

A. LINECUTTING

1.	(a)	Footage cut	67,200 ft.		
	(b)	Linecutters	:	F. Charlie	
			:	T. Charlie	
			:	T. Brock	
			:	M. Simpson	
	(c)	Cook	:	C. Marcoux	
2.	(a)	Wages:			
		27 man days @\$20.00 daily wage of natives		540.00	
		2 man days @\$18.00, daily wage of M. Simpson		36.00	
		2 man days @\$17.00, daily wage of T. Brock		34.00	
		6 man days @\$20.00, daily wage of C. Marcoux		<u>120.00</u>	\$ 730.00
	(b)	Helicopter Support:			
		2.1 hrs. @\$127.00/hr. (including oil)		267.00	
		Aviation gasoline 17 gal/hr. @\$2.00/gal.		<u>71.00</u>	\$ 338.00
	(c)	Fixed-Wing Support			\$ 190.00
	(d)	Subsistence Cost:			
		37 man days @\$8.00 /man day			\$ 296.00
	(e)	Supplies and Misc. Equipment			\$ 25.00
	(f)	Travel from Vancouver (travel from Ross River included in fixed-wing support)			
		3 men @\$10.00/man			\$ 30.00
	(g)	Supervision:			
		37 man days @\$1.20/man day			\$ 44.00
	(h)	Overhead - 15% of total			\$ 248.00
		15% of \$1,653.00			
		TOTAL COST OF SCOT GROUP LINECUTTING			<u>\$1,901.00</u>

B. MAGNETOMETER SURVEY

1.	(a)	Footage read	:	33,600 ft.		
	(b)	Operator	:	M. Simpson		
	(c)	Cook	:	C. Marcoux		
2.	(a)	Wages:				
		9 man days @\$18.00, daily wage of M. Simpson			72.00	
		1 man day @\$20.00, daily wage of C. Marcoux			<u>20.00</u>	\$ 92.00
	(b)	Helicopter Support				
		.3 hrs. @\$127.00/hr.			38.00	
		Aviation gas - 17 gal/hr. @\$2.00/gal.			<u>8.00</u>	\$ 46.00
	(c)	Fixed-Wing Support				\$ 30.00
	(d)	Subsistence Cost:				
		5 man days @\$8.00/man day				\$ 40.00
	(e)	Travel from Vancouver:				
		\$10.00 per man x 2 men				\$ 20.00
	(f)	Supervision Cost:				
		5 man days @\$1.20/man day				\$ 6.00
	(g)	Instrument Cost:				
		3 days used @\$5.00 per day				\$ 15.00
	(h)	Interpretation & Report Presentation:				
		Drafting:				
		1 man day @\$19.00, daily wage of P. Vlasveld, draftsman			19.00	
		Interpretation & Report writing				
		1 man day @\$23.00, daily wage of T. Adamson, geologist			23.00	
		Subsistence:				
		2 man days @\$8.00/day			16.00	
		Supervision:				
		2 man days @\$1.20/day			<u>2.40</u>	\$ 60.40
	(i)	Overhead - 15% of total				\$ 46.60
		15% of \$309.40				
						<hr/>
		TOTAL COST OF SCOT GROUP MAGNETOMETER SURVEY				<u>\$ 356.00</u>

C. E.M. SURVEY

1.	(a)	Footage read	:	45,800 ft.		
	(b)	Operator	:	M. Simpson		
	(c)	Helper	:	T. Brock		
	(d)	Cook	:	C. Marcoux		
2.	(a)	Wages:				
		4 man days @\$18.00, daily wage of M. Simpson			72.00	
		4 man days @\$17.00, daily wage of T. Brock			68.00	
		1 man day @\$20.00, daily wage of C. Marcoux			<u>20.00</u>	\$ 160.00
	(b)	Helicopter Support:				
		.6 hrs. @\$127.00/hr. (including oil)			76.00	
		Aviation gas - 17 gal/hr. @\$2.00/gal.			<u>20.00</u>	\$ 96.00
	(c)	Fixed-Wing Support				\$ 50.00
	(d)	Subsistence Cost:				
		9 man days @\$8.00/man day				\$ 72.00
	(e)	Travel from Vancouver:				
		\$10.00 per man x 3 men				\$ 30.00
	(f)	Supervision Cost:				
		9 man days @\$1.20/man day				\$ 10.80
	(g)	Instrument Cost:				
		4 days used @\$5.00 per day				\$ 20.00
	(h)	Interpretation & Report Presentation Drafting:				
		1 man day @\$19.00, daily wage of P. Vlasveld, draftsman			19.00	
		Interpretation & Report writing:				
		1 man day @\$23.00, daily wage of T. Admason, Geologist			23.00	
		Subsistence:				
		2 man days @\$8.00/day			16.00	
		Supervision:				
		2 man days @\$1.20/day			<u>2.40</u>	\$ 60.40

(i) Overhead - 15% of total
15% of \$499.20 \$ 74.80

TOTAL COST OF SCOT GROUP E.M. SURVEY \$ 574.00

ATLAS EXPLORATIONS LIMITED
(N.P.L.)

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, Thomas J. Adamson, Geologist, Atlas Explorations Limited, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the statement of costs as presented in this report "Geophysical Report - Scot Mineral Claim Group" Appendix I is both correct and true.

J. J. Adamson

Thomas J. Adamson

Oct 9 1968

Date

[Signature]

A Commissioner for Oaths
in and for the Yukon Territory

PERSONNEL
SCOT MINERAL CLAIMS - GEOPHYSICAL SURVEYS

T. Adamson	Geologist-Party Chief	Vancouver, B.C.
M. Simpson	Student Assistant	Vancouver, B.C.
T. Brock	Student Assistant	Vancouver, B.C.
C. Marcoux	Cook	Quebec, P.Q.
F. Charlie	Linecutter	Ross River, Y.T.
T. Charlie	Linecutter	Ross River, Y.T.

72 W

64 W

56 W

48 W

40 W

32 W

24 W

16 W

8 W

0

8 E

16 E

40 N

30 N

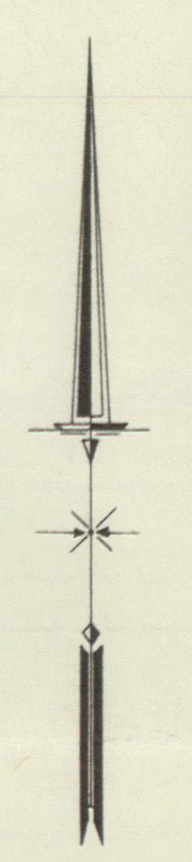
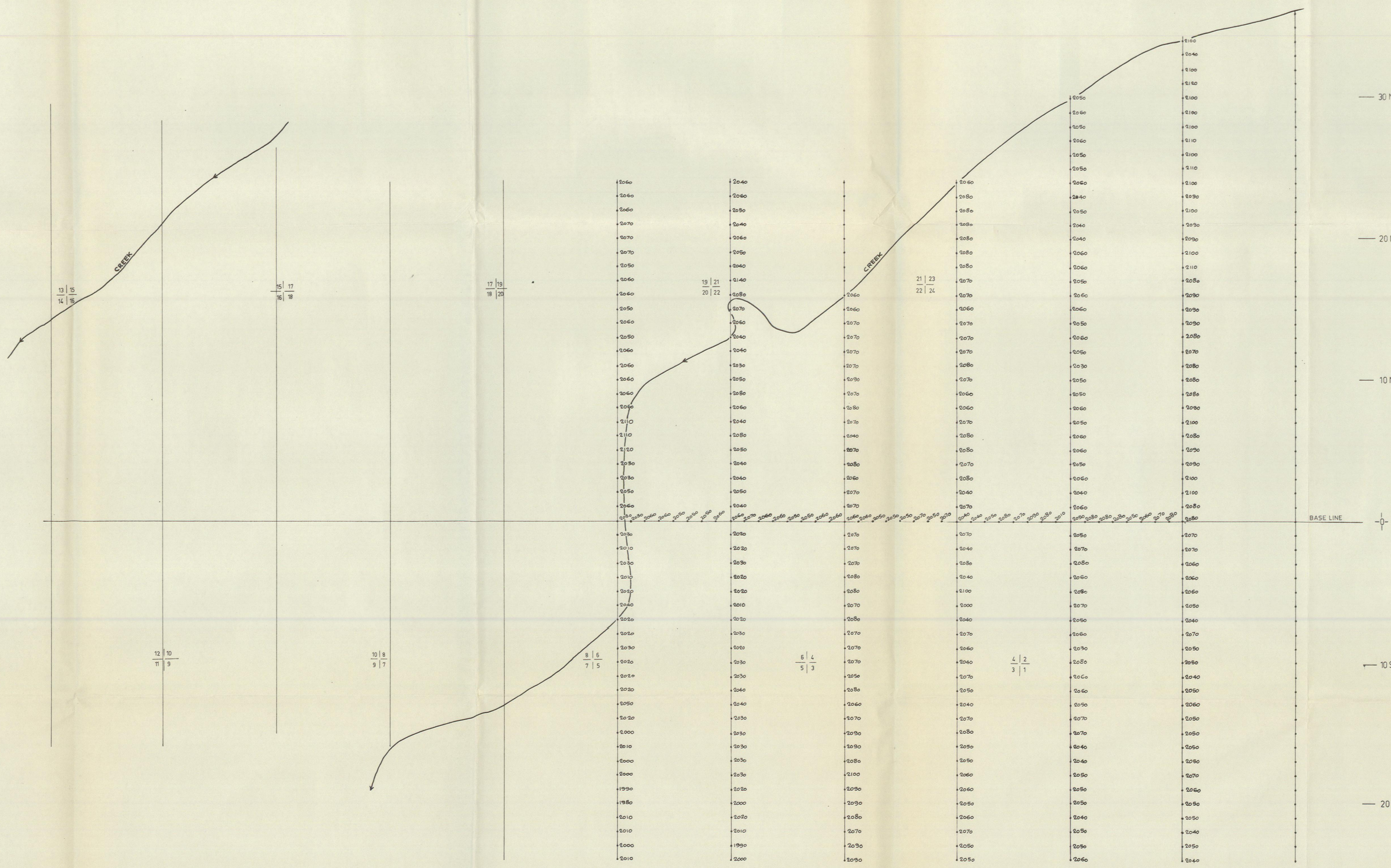
20 N

10 N

10 S

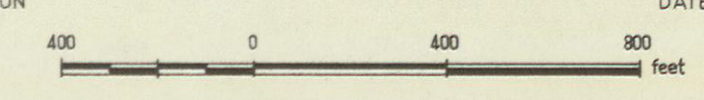
20 S

30 S



ATLAS EXPLORATIONS LIMITED
 ROSS RIVER (Y.T.)
 HESS REGION
 SCOT MINERAL CLAIM GROUP
 GROUND MAGNETOMETER SURVEY
 -VALUES-

PARTY CHIEF: T. ADAMSON INSTRUMENT: SHARFE MF-1 DRAWN BY: P.J.F. VLASVELD
 OPERATOR: M. SIMPSON DATE: SEPTEMBER 12/88



72W 64W 56W 48W 40W 32W 24W 16W 8W 0 8E 16E

40N

30N

20N

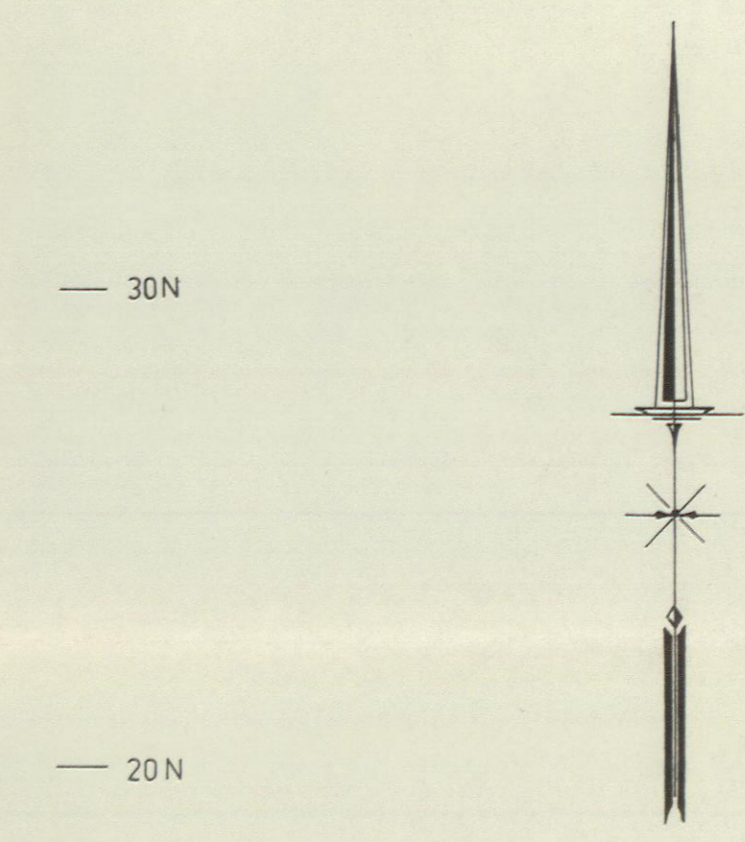
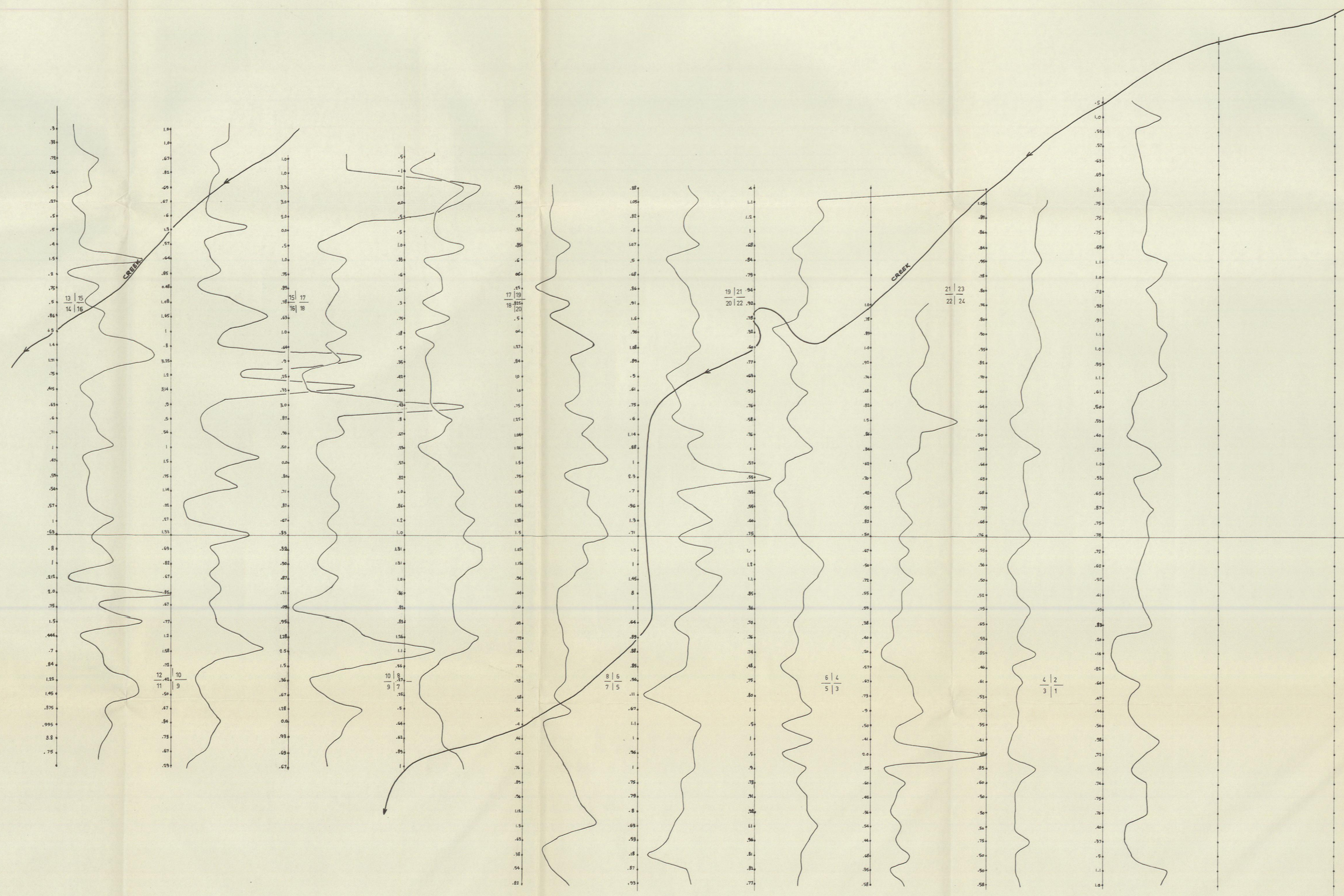
10N

0

10S

20S

30S



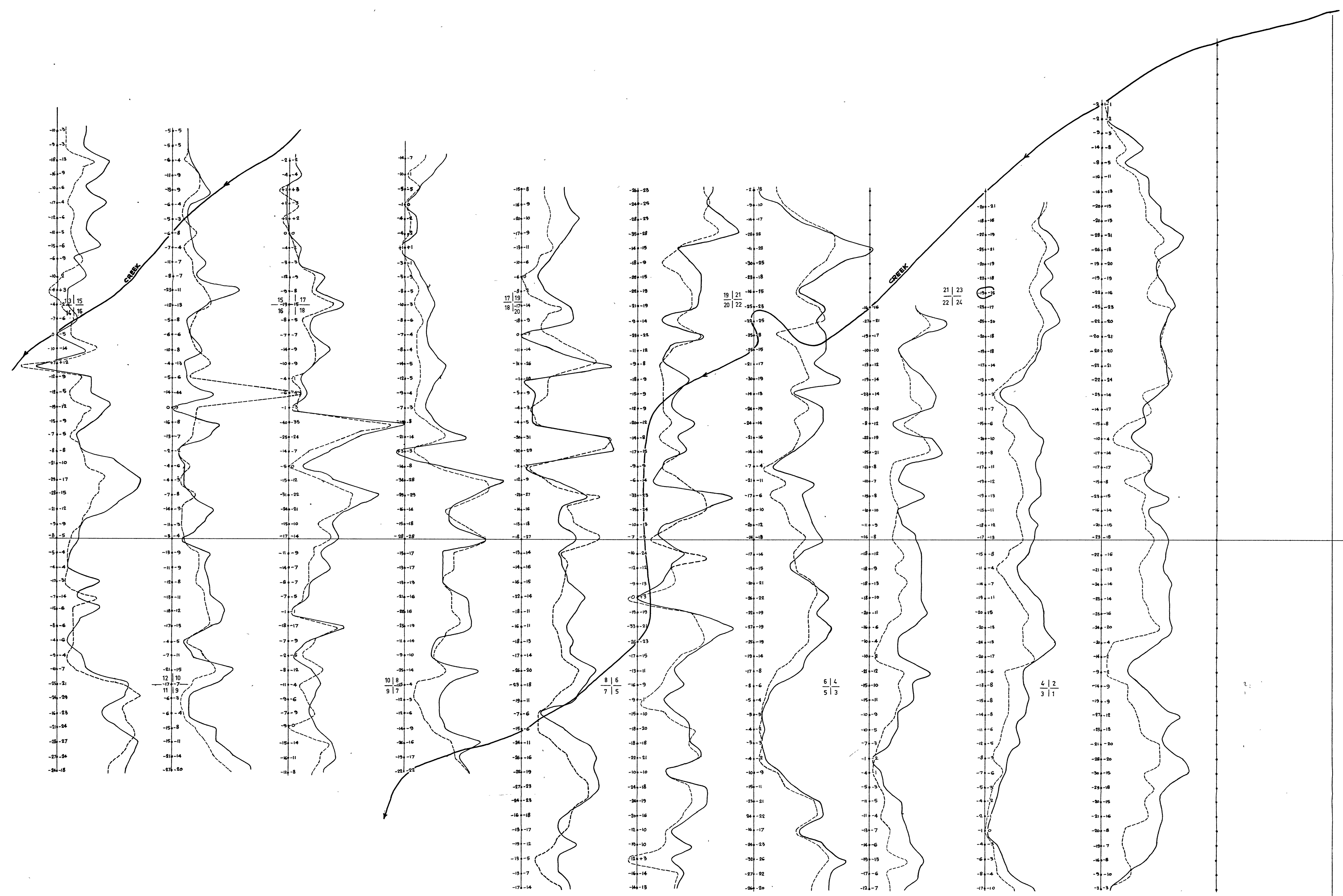
ATLAS EXPLORATIONS LIMITED
 ROSS RIVER (Y.T.)
 HESS REGION
 SCOT MINERAL CLAIM GROUP
 GROUND ELECTROMAGNETIC SURVEY (PROFILES)
 CONDUCTIVITY ANALYSIS FROM THE RATIO OF MAXIMUM RESULTANT DIP ANGLES

PARTY CHIEF: T. ADAMSON INSTRUMENT: CRONE JEM DRAWN BY: P.J. FVLASVELD
 OPERATORS: M. SIMPSON & RATIO SCALE: 1"=1 DATE: SEPTEMBER 14/68
 T. BROCK

480/1800 cps. 400 0 400 800 Feet

72 W 64 W 56 W 48 W 40 W 32 W 24 W 16 W 8 W 0 8 E 16 E

— 40 N
— 30 N
— 20 N
— 10 N
— 0
— 10 S
— 20 S
— 30 S



019041

ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
SCOT MINERAL CLAIM GROUP
GROUND ELECTROMAGNETIC SURVEY
VALUES AND PROFILE MAP

PARTY CHIEF: T. ADAMSON INSTRUMENT: CRONE JEM DRAWN BY: P.J.F. VLASVELD
OPERATORS: M. SIMPSON & T. BROCK DIP ANGLE SCALE: 1/10°-2° DATE: SEPTEMBER 13/68
1800 cps 480 cps 400 0 400 800
feet