

GEOCHEMICAL REPORT

LAD MINERAL CLAIM GROUP
(Lad 3-12, 19-34, 45-62)

Mayo Mining District
Yukon Territory

Longitude : 132° 15' W.
Latitude : 62° 56' N.

N.T.S. 105-K-16

Work done during period
July 23- Sept. 13, 1968

By

THOMAS J. ADAMSON

ATLAS EXPLORATIONS LIMITED

October 18, 1968

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

D. C. Fidler
RESIDENT GEOLOGIST

Approved as to cost in the amount
of: \$ 9474.00

R. G. Redden
MINING ENGINEER

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

[Signature]
COMMISSIONER OF YUKON

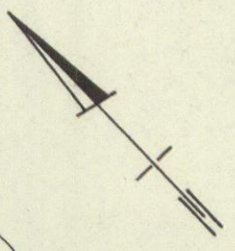
LIST OF CLAIMS

<u>Claim Numbers</u>	<u>Grant Numbers</u>	<u>Date Recorded</u>
Lad 3-8	Y14068-Y14073	Oct. 11, 1967
Lad 9-12	Y14074-Y14077	Oct. 11, 1967
Lad 19-24	Y14136-Y14141	Nov. 3, 1967
Lad 25-32	Y14078-Y14085	Oct. 11, 1967
Lad 33-34	Y14086-Y14087	Oct. 11, 1967
Lad 45-48	Y14218-Y14221	Nov. 6, 1967
Lad 49-54	Y14142-Y14147	Nov. 3, 1967
Lad 55-62	Y14148-Y14155	Nov. 3, 1967

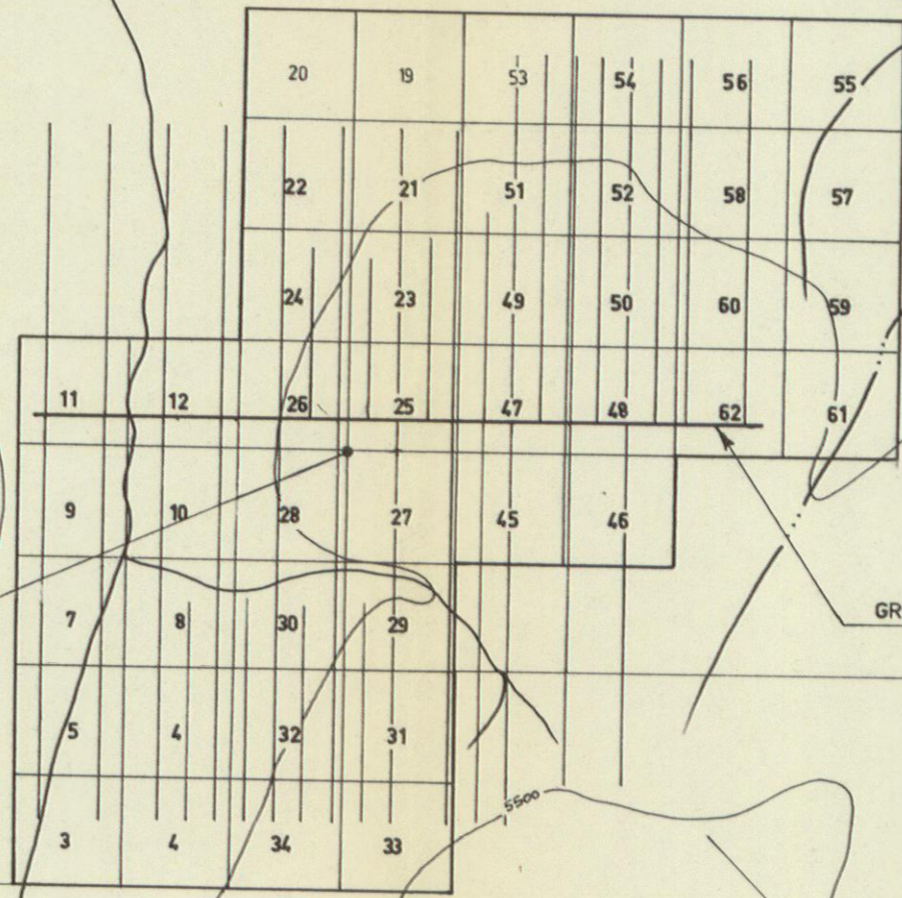
105-K-16

132° 14'

62° 56'



LAD MINERAL CLAIMS



GRID

MOUNT SELOUS 7136' ELEVATION 9 MILE

1967 STAKED CLAIMS

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

KEY MAP OF LAD MINERAL CLAIMS AND GRID

scale 1" = 1/2 mi

62° 56'

132° 14'

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ATLAS EXPLORATIONS LIMITED

(N.P.L.)

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

GEOCHEMICAL REPORT LAD MINERAL CLAIM GROUP (Lad 3-12, 19-34, 45-62)

INTRODUCTION

The Lad Group was staked in September and October, 1967, to cover the area of three Ag, Pb, Zn, Cu showings, a number of sulfide float occurrences, and high lead results from reconnaissance soil and gossan sampling.

To September 13, 1968, the work done on the group consisted of cutting a grid in the area of interest, over which geological mapping and prospecting, soil and silt sampling, magnetic and electromagnetic surveying were carried out.

An additional 164 claims were staked in the immediate vicinity during the 1968 field season.

LOCATION AND ACCESS

The Lad Group is located on the SE slope of Mt. Selous, in the north-central portion of claim sheet 105-K-16. Ross River, Y.T., the nearest settlement, is about 65 miles south of the claim group.

Access to the property can be made by float-equipped aircraft to "Van Lake", 8 miles east of the claims. Helicopter support is required from this lake to the property. Several helipads have been cut out on the property.

A camp was established on Clearwater Creek, in the northwestern portion of the claim group.

GEOLOGY

The Lad Group was geologically mapped on a scale of 1":400'.

The area is underlain mainly by quartzites, phyllites and limestones of Proterozoic age. Quartzite is by far the most abundant unit.

A number of 'wedges' of Ordovician-Devonian rocks have been infolded (?) into the Proterozoic sequence. These rocks are graphitic shales, slates and cherts, chert pebble conglomerate and grey bedded chert.

The general regional attitude of the sediments is about 135° , and dipping moderately to steeply to the NE or SW.

A small pluton of granitic orthoclase porphyry outcrops on the grid at about L80E, 28N. A narrow dyke (approx. 10 ft. wide) of quartz-orthoclase porphyry outcrops in Hugo Creek at 33E, 22S.

The contact of the Mt. Selous pluton is about 2 miles west of the Lad Group.

Within the grid area, five sulfide showings have been discovered. They are vein fracture zones and shear zone impregnations. Only one of the above showings, located at 51E, 24S, would seem to hold any economic potential. This mineralized shear zone (chalcopyrite, pyrite, galena and pyrrhotite) is exposed in the creek bed for about 30 ft, is from 2-5 ft. wide, and open on both ends. A representative grab sample assayed 49.68 oz. Ag, 15.3% Pb, 3.1% Zn, 4.40% Cu.

TOPOGRAPHY AND GROUND CONDITIONS

The Lad claims are on the north and western slope and top of a broad flat-topped mountain, and also on the southeast slope northwest of Clearwater Creek. Elevations in the group range from about 3500 ft. to 5500 ft. Slopes vary from moderate to steep, but are generally quite regular.

Clearwater Creek and its main tributary from the southeast (Hugo Creek, joining Clearwater Creek at 12E, 19S) have cut sharply defined valleys down to and into bedrock.

The "A" soil horizon is thin over most of the area except in small local swampy sections. A layer of volcanic ash is found just below the "A" horizon, or very near the top of the "B" horizon. All sampling was done from the top of the "B" horizon but below the ash layer.

Timber line is at about 5000 ft. elevation. Below timber line vegetation is moderately to very thick, consisting mainly of spruce, dwarf birch and mountain alder.

GEOCHEMISTRY

Survey Method

Soil samples were collected at 100 ft. stations on all grid lines. The same grid was used for the geophysical surveys. A total of about 2000 soil samples were collected.

Silt samples were taken from all major drainages and from minor drainages in areas of interest. An attempt was made to collect active silts from as close to the centre of the drainage as possible.

All samples were analyzed for Cu, Pb and zinc trace element content at a complete testing laboratory at Ross River, Y.T.

Each soil sample was dried in its kraft bag container, then screened to -80 mesh, weighed out to 0.5 grams, and digested in hot aqua regia. Samples were then diluted, clarified for 20 hours, then tested for copper, lead and zinc content by atomic absorption spectrophotometer analysis. The "AA" unit used was a Perkin Elmer Model 303. The accuracy of the instrument ideally is 1% of the amount of metal present.

Silt samples were treated in much the same way, the only difference being that sample digestion was in hot hydrochloric acid rather than in hot aqua regia.

The Geochemical results (expressed in PPM) of each sample were plotted on a single grid plan (1":400'). Separate geochemical contour maps were drawn for each of copper, lead and zinc.

GEOCHEMICAL RESULTS AND INTERPRETATION - SOILS

Lead

In the grid area the background for lead is about 30 ppm. Anything over 100 ppm is definitely anomalous.

Anomalous lead results are scattered over the entire grid area.

A large anomaly stretches from line 84 to 68E, 23N, with a peak value of 35,500 ppm lead. Another large zone on strike with the first is located between lines 36 to 64E. This zone has a maximum value of 700 ppm lead.

A narrow sinuous lead anomaly stretches from L8 to 32E, 35N with a peak value of 1950 ppm lead.

An anomaly trending northerly and with a maximum lead value of 500 ppm extends from L0, 21S to L8W, 8S.

Between L24E to 48E, 24S is found a large southeast trending strong anomaly.

A 3000 ft. long east-west trending zone has peaks at L46E, 34S (2875 ppm), L56E, 28S (1270 ppm) and L64E, 23S (300 ppm).

Centred at L60E, 52S is a large irregular anomalous lead zone.

Smaller, lower valued lead anomalies are located at:

L20E, 12S to L28E, 6S
L56E, 26N
L60E, 8S
L52E, 22S
L32E, 34S
L16E, 19S
L8W, 2N

Copper

Copper, in the grid area, has a background value of 30 ppm and a threshold value of about 50 ppm.

A large oval shaped copper anomaly is located in the western grid area between L16W and L16E, 0-21S.

A strong anomalous copper zone exists between L16E and 20E, 35N.

A small but high valued anomaly is centred at L80E, 23N.

An elongate southeast trending moderately valued zone extends from L0 to L24E, 22N.

A strong copper zone is found between L44E and L50E, 19S.

Other smaller, lower valued copper zones are centred at:

L8E, 12N	L58E, 24S
L8E, 31N	L44E, 30S
L32E, 28N	L32E, 10S
L88E, 3N	L24E, 30S
L96E, 30N	L24E, 39S
L64E, 22S	L8E, 42S
L60E, 34S	L8E, 29S

Zinc

A background value of 100 ppm and a threshold value of about 200 ppm were determined for zinc in the grid area.

At L80E, 23N is centred a 1200 ft. long high valued zinc anomaly.

In the western grid area, an anomaly with a peak value of 600 ppm zinc, extends from L0 to L7E, 3S.

In the same area, a large anomaly, also with a maximum value of 600 ppm runs from L6W, 16S to L5E, 8S.

A southeast trending zinc zone is found between L32E and L52E, 6S.

In the area L36 to 48E, 30-37S, is found a strong zinc anomaly with a peak value of 1200 ppm.

Other smaller zinc anomalies are located at:

L28E, 14S
L16E, 19S
L16E, 10N
L16E, 20N
L16E, 29N
L20E, 35N

Interpretation

Lead anomalies are found to coincide with zinc anomalies at the following locations:

L4W, 18S
L20, 24E, 36N
L16E, 10N
L80E, 23N
L46E, 34S
L64E, 23S
L42E, 22S
L16E, 19S
L3E, 3S
L16E, 10N
L20E, 35N

Lead anomalies are found to coincide with high copper results at the following locations:

L4W, 18S
L20E, 34N
L80E, 23N
L96E, 50N
L46E, 39S
L56E, 27S
L60E, 32S
L64E, 23S
L50E, 20S
L3E, 3S
L16E, 10N
L20E, 35N

High copper and zinc values coincide at:

L0, 12S
L16E, 20N.

No significance has been attributed to the coincidence, or lack of it, between copper, lead and zinc in the grid area.

In Hugo Creek, the known showings are located in geochemically anomalous zones. The large copper-lead-zinc anomaly centred at L80E, 23N coincides with a gossan in which some galena containing 30 oz./ton silver has been found.

Magnetic anomalies coincident with lead geochemical anomalies are located at:

L80E, 29S
L80E, 30-40N
L86E, 20N
L32E, 5N
L24E to L48E, 22S
L24E, 35N

The magnetics are thought to be related to intrusive activity and associated shear zones. Although we have little geological information because of overburden cover over much of the area, it is thought that the geochemical anomalies are reflecting vein-type sulphide mineralization in the above shear zones.

GEOCHEMICAL RESULTS AND INTERPRETATION - SILTS

Silt samples were taken from all major and many minor drainages in the grid area.

Generally, the results obtained from silt sampling reflected those obtained from soil sampling.

In no areas were anomalous silt results obtained from drainages that did not have within the drainage basin a corresponding soil anomaly.

However, not every creek draining an area of high soil values gave anomalous silt results. This is seen in places in the northeast grid area. The reasons for this irregular correspondence between anomalous soil results and silt results is not yet understood because of a lack of geological information, due to overburden cover, in the areas in question.

CONCLUSIONS AND RECOMMENDATIONS

The geochemical survey revealed a large number of interesting copper, lead and zinc anomalies.

It is thought that these anomalies are reflecting vein-type sulphide mineralization in shear zones. We are dealing with a well mineralized district. The structure and lithology of the area suggest attractive possibilities of defining substantial sections of economic grade.

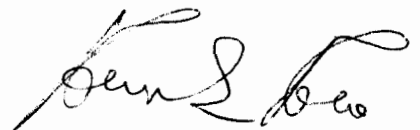
A program of bulldozer trenching of geochemical anomalies
and follow-up diamond drilling is planned for next season.

Respectfully submitted,



T. J. Adamson,
Geologist

October 18, 1968



SUMMARY OF COSTS
GEOCHEMICAL SURVEYS - LAD MINERAL CLAIM GROUP
(Lad 3-12, 19-34, 45-62)

1.	(a)	Footage sampled on grid	:	201,600 ft.	
	(b)	Soil samples taken	:	1948	
	(c)	Silt samples taken	:	80	
	(d)	Geochemical samplers	:	R. Etzel	
				T. Brock	
				M. Simpson	
				J. Dick	
				M. Acklack	
				G. Johnny	
				T. Charlie	
				J. Olie	
				O. Charlie	
	(e)	Cook	:	C. Marcoux	
2.	(a)	Wages:			
		3 man days @\$20.00, daily			
		wage of R. Etzel		\$ 60.00	
		6 man days @\$17.00, daily			
		wage of T. Brock		\$102.00	
		4 man days @\$18.00, daily			
		wage of M. Simpson		\$ 72.00	
		13 man days @\$20.00, daily			
		wage of J. Dick		\$260.00	
		7 man days @\$20.00, daily			
		wage of M. Acklack		\$140.00	
		6 man days @\$20.00, daily			
		wage of G. Johnny		\$120.00	
		3 man days @\$20.00, daily			
		wage of T. Charlie		\$ 60.00	
		1 man day @\$20.00, daily			
		wage of J. Olie		\$ 20.00	
		1 man day @\$20.00, daily			
		wage of O. Charlie		\$ 20.00	
		9 man days @\$20.00, daily			
		wage of C. Marcoux		<u>\$180.00</u>	\$1,034.00

(b)	Helicopter Support:		
	8.0 hrs. @\$127.00/hr.	1,016.00	
	Aviation gasoline -		
	17 gal. @\$2.00/gal.	<u>272.00</u>	\$ 1,288.00
(c)	Fixed-Wing Support		\$ 127.00
(d)	Subsistence Cost:		
	53 man days @\$8.00/man day		\$ 424.00
(e)	Analysis Cost:		
	2028 geochemical samples		
	@\$2.50/sample processing cost		\$ 5,070.00
(f)	Supplies & Misc. Equipment		\$ 50.00
(g)	Travel from Vancouver:		
	3 man @\$20.00/man		\$ 60.00
(h)	Supervision cost:		
	53 man days @\$1.20/man day		\$ 64.00
(i)	Interpretation & Report Presentation:		
	Drafting:		
	2 man days @\$19.00, daily		
	wage of P. Vlasveld,	38.00	
	Interpretation & Report writing		
	2 man days @\$23.00, daily		
	wage of T. Adamson	46.00	
	Subsistence Cost:		
	4 man days @\$8.00/day	32.00	
	Supervision Cost:		
	4 man days @\$1.20/day	<u>5.00</u>	\$ 121.00
(j)	Overhead - 15% of total		
	15% of \$8,238.00		<u>\$ 1,236.00</u>
	TOTAL COST OF LAD GROUP GEOCHEMICAL SURVEY		<u>\$ 9,474.00</u>
	(3-12, 19-34, 45-62)		

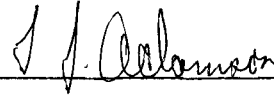
ATLAS EXPLORATIONS LIMITED

(N. P. L.)

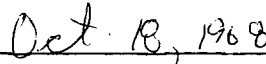
330 MARINE BUILDING
355 BARRARD STREET
VANCOUVER 1, B.C.

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

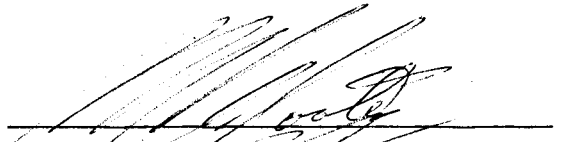
I, Thomas J. Adamson, Geologist, Atlas Explorations Limited, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the statement of costs presented in this report "Geochemical Report - Lad Mineral Claim Group" (Appendix I) is both correct and true.



Thomas J. Adamson



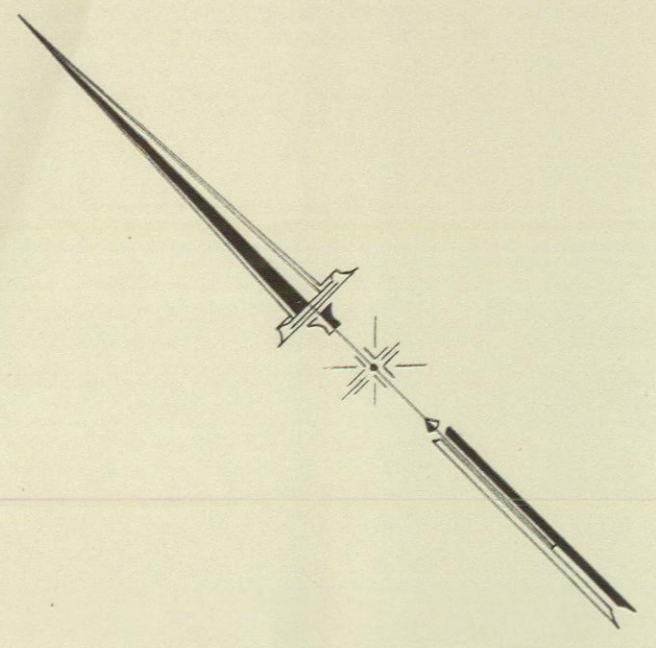
Date


Commissioner for Oaths in and
for the Yukon Territory

LIST OF PERSONNEL
LAD GROUP GEOCHEMICAL SURVEYS

T. Adamson	Geologist - Party Chief	Vancouver, B.C.
T. Brock	Student Assistant Geochem Sampler	Vancouver, B.C.
M. Simpson	Student Assistant Geochem Sampler	Vancouver, B.C.
R. Etzel	Geochem Sampler	Ross River, Y.T.
J. Dick	Geochem Sampler	Ross River, Y.T.
F. Charlie	Geochem Sampler	Ross River, Y.T.
T. Charlie	Geochem Sampler	Ross River, Y.T.
M. Acklack	Geochem Sampler	Ross River, Y.T.
J. Olie	Geochem Sampler	Ross River, Y.T.
G. Johnny	Geochem Sampler	Ross River, Y.T.

16W 8W 0 8E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 96E



50 N
40 N
30 N
20 N
10 N
BASE LINE 0
10 S
20 S
30 S
40 S
50 S

LEGEND

- | | | |
|-------------|----|---|
| CRETACEOUS | 3f | GREY BEDDED CHERT |
| ORDOVICIAN | 3d | CHERT-BLACK SLATE PEBBLE CONGLOMERATE |
| DEVONIAN | 3a | GRAPHITIC SHALES, CHERT, GREYWACHE |
| PROTEROZOIC | 1c | PHYLITE, GREY TO BUFF |
| | 1b | LIMESTONE |
| | 1a | QUARTZITE, MICACEOUS QUARTZITE, QUARTZ-SERICITE SCHIST. |

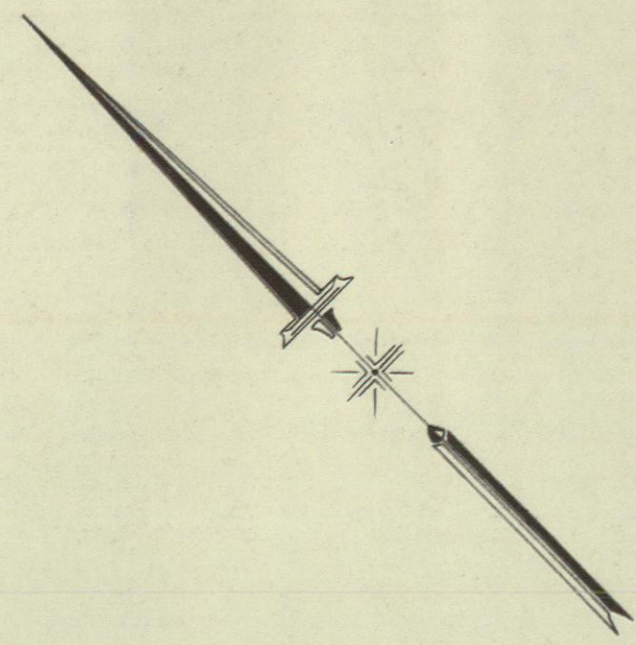
SYMBOLS

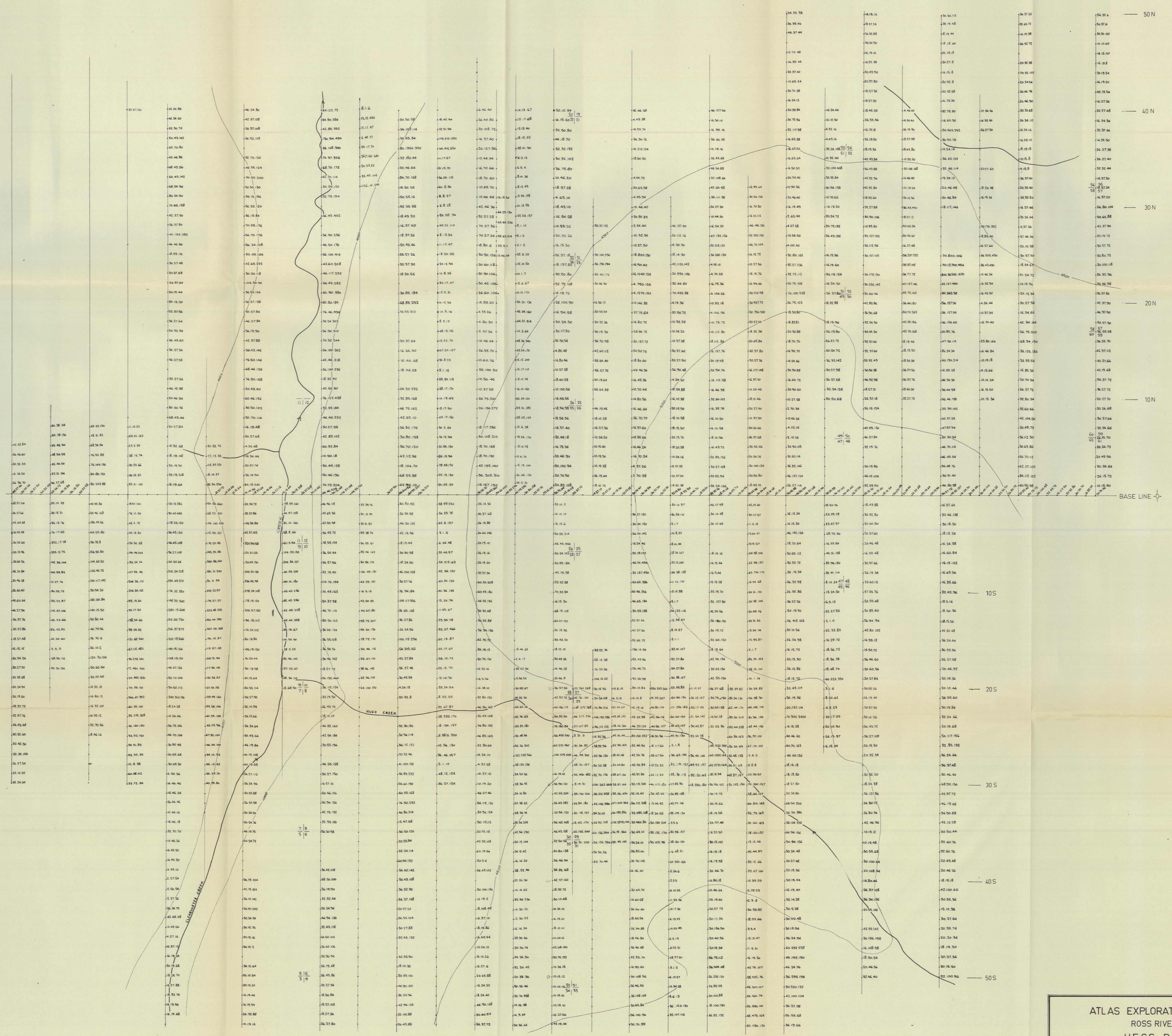
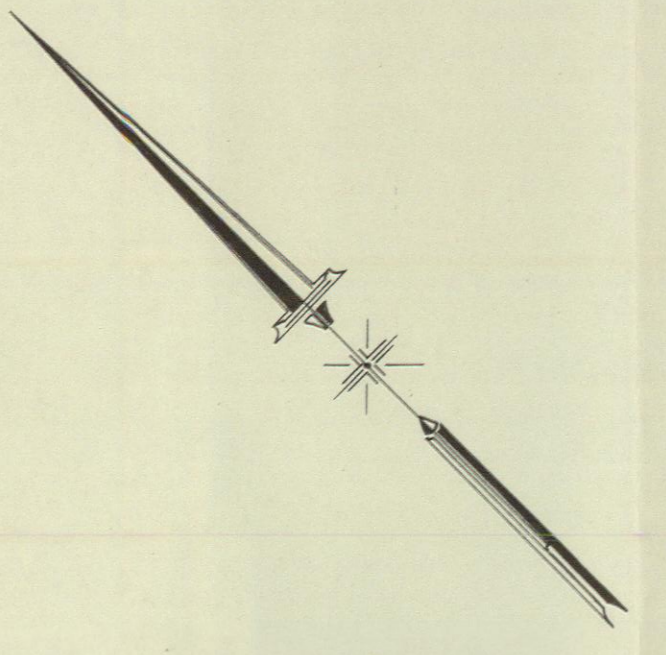
- CONTACTS
- - - - - OUTCROP LIMIT
- / — BEDDING ATTITUDE
- / — LINEATION
- / — ANTICLINAL FOLD
- ~~~~~ FAULT OR SHEAR

ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
LAD MINERAL CLAIM GROUP
GRID GEOLOGY
(OUTCROP MAP)

GEOLGY BY: T. ADAMSON
DRAWN BY: P.J.F. VLASVELD
DATE: OCTOBER 19/88

16W 8W 0 8E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84 88E 92E 96E



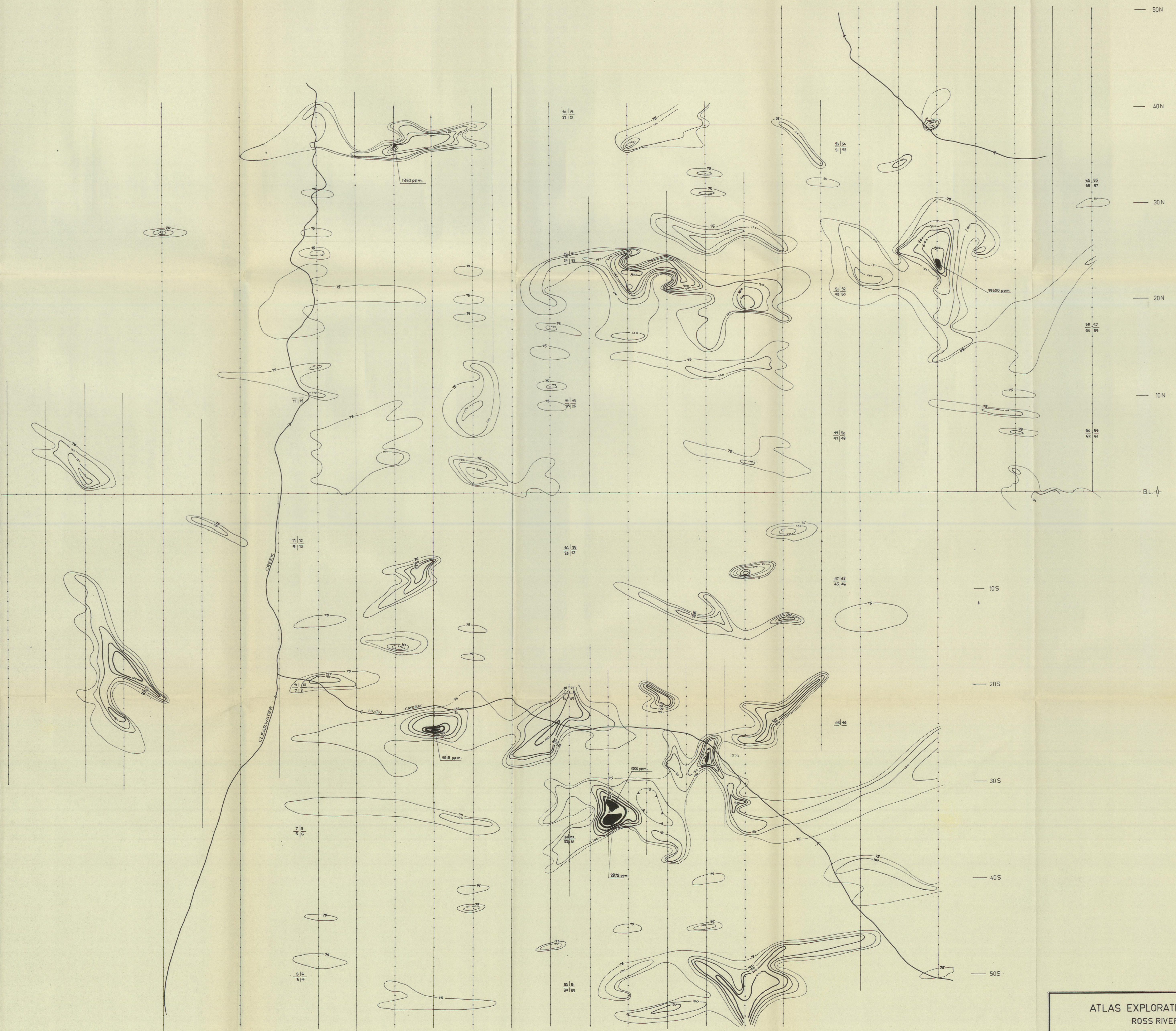
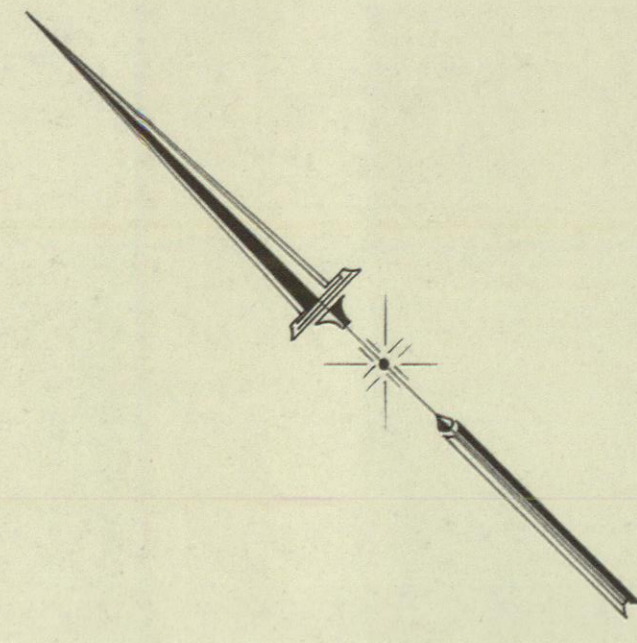


ATLAS EXPLORATIONS LIMITED
 ROSS RIVER (Y.T.)
 HESS REGION
 LAD MINERAL CLAIM GROUP
 GEOCHEMICAL RESULTS BY ATOMIC ABSORPTION COPPER, LEAD,
 AND ZINC, SPECTROPHOTOMETER ANALYSIS.

PARTY CHIEF: T. ADAMSON
 DRAWN BY: P.J. WILKINSON
 DATE: SEPTEMBER/88

0 200 400 600 800 1000 feet

16W 8W 0 8E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 92E 96E

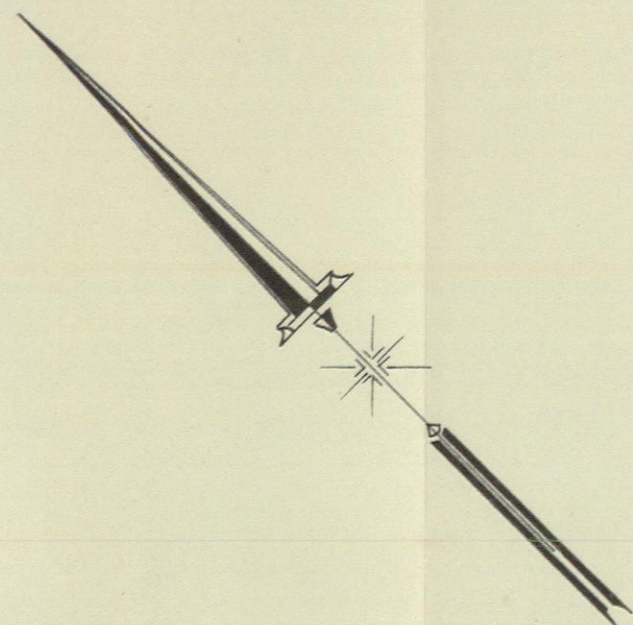


ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
LAD MINERAL CLAIM GROUP
GEOCHEMICAL SOIL SAMPLE SURVEY
LEAD CONTOURS

PARTY CHIEF: T. ADAMSON DRAWN BY: P. J. F. KLASVELD
DATE: OCTOBER 17/78

0 200 400 600 feet

16W 8W 0 8E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 92E 95E



ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
LAD MINERAL CLAIM GROUP
GEOCHEMICAL SOIL SAMPLE SURVEY
ZINC CONTOURS

PARTY CHIEF: T. ADAMSON
DRAWN BY: J. J. VILASVOLD
DATE: OCTOBER 17/98

0 200 400 600 800 feet

GEOPHYSICAL REPORT

LAD MINERAL CLAIM GROUP
(Lad 3-12, 19-34, 45-62)

Mayo Mining District
Yukon Territory

Longitude : 132° 15' W.
Latitude : 62° 56' N.

N.T.S. 105-K-16

Work done during period
July 23 - Sept. 13, 1968

By

THOMAS J. ADAMSON

ATLAS EXPLORATIONS LIMITED

October 15, 1968

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

[Signature]
RESIDENT GEOLOGIST

Approved as to cost in the amount
of: \$ 8500.00

[Signature]
RESIDENT MINING ENGINEER

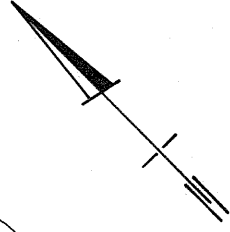
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under Section 53(4) Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON

105-K-16

132° 14'

62° 56'



LAD MINERAL CLAIMS

		20	19	53	54	56	55
		22	21	51	52	58	57
		24	23	49	50	60	59
11	12	26	25	47	48	62	61
9	10	28	27	45	46		
7	8	30	29				
5	4	32	31				
3	4	34	33				

GRID

MOUNT SELOUS
7138' ELEVATION 9 MILE

1967 STAKED CLAIMS

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

KEY MAP OF LAD MINERAL CLAIMS AND GRID

scale 1" = 1/2 mi

62° 56'

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Results	4
Interpretation	5
Electromagnetic Survey	
Results.....	6
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Appendix VI - Ground EM Survey - Values and Profiles (1":400')	
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ATLAS EXPLORATIONS LIMITED

(N.P.L.)

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

GEOPHYSICAL REPORT LAD MINERAL CLAIM GROUP (Lad 3-12, 19-34, 45-62)

INTRODUCTION

The Lad Group was staked in September and October, 1967, to cover the area of three Ag, Pb, Zn, Cu showings, a number of sulfide float occurrences, and high lead results from reconnaissance soil and gossan sampling.

To September 13, 1968, the work done on the group consisted of cutting a grid in the area of interest, over which geological mapping and prospecting, soil and silt sampling, magnetic and electromagnetic surveying were carried out.

An additional 164 claims were staked in the immediate vicinity during the 1968 field season.

LOCATION AND ACCESS

The Lad Group is located on the SE slope of Mt. Selous, in the north-central portion of claim sheet 105-K-16. Ross River, Y.T., the nearest settlement, is about 65 miles south of the claim group.

Access to the property can be made by float-equipped aircraft to "Van Lake" 8 miles east of the claims. Helicopter support is required from this lake to the property. Several helipads have been cut out on the property.

A camp was established on Clearwater Creek, in the northwestern portion of the claim group.

GEOLOGY

The Lad Group was geologically mapped on a scale of 1":400'.

The area is underlain mainly by quartzites, phyllites and limestones of Proterozoic age. Quartzite is by far the most abundant unit.

A number of wedges of Ordovician-Devonian rocks have been infolded (?) into the Proterozoic sequence. These rocks are graphitic shales, slates and cherts, chert pebble conglomerate and grey bedded chert.

The general regional attitude of the sediments is about 135° , and dipping moderately to steeply to the NE or SW.

A small pluton of granitic orthoclase porphyry outcrops on the grid at about L80E, 28N. A narrow dyke (approx. 10' wide) of quartz-orthoclase porphyry outcrops in Hugo Creek at 33E, 22S.

The contact of the Mt. Selous pluton is about 2 miles west of the Lad Group.

Within the grid area, five sulfide showings have been discovered. They are vein fracture zones and shear zone impregnations. Only 1 of the above showings, located at 51E, 24S, would seem to hold any economic potential. This mineralized shear zone (chalcopyrite, pyrite, galena and pyrrhotite) is exposed in the creek bed for about 30 ft, is from 2-5 ft. wide, and open on both ends. A representative grab sample assayed 49.68 oz. Ag, 15.3% Pb, 3.1% Zn, 4.40% Cu.

GEOCHEMISTRY

Soil samples were taken at 100 ft. intervals on the cut grid. The geochemical results from these soils have outlined and detailed several very interesting zones of anomalous lead and

copper-zinc values. The geochemistry was successful in detecting the known showings, making the geochemical anomalies in the overburden covered areas attractive targets for further work.

GEOPHYSICAL SURVEY

Linecutting

A crew of up to six men spent 107 man days cutting the Lad Group grid. The central base line of this grid runs 135° and is 11,200 ft. long. Original cross-line spacing on the grid was 800 ft. but this was reduced to 400 ft. or 200 ft. in areas where more detailed work was necessary. Stations at 100 ft. intervals were marked on all lines. The grid was controlled by picket and chain methods. A total of 208,000 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 METHODS

Magnetometer Survey

Results

Approximately 150,000 ft. of magnetometer survey was conducted over the Lad Group on grid lines of 800 ft. spacing with 400 ft. 'fill-in' lines over areas of anomalous interest.

Background is in the order of 1700 gammas with maximum peak values of 2800 gammas being obtained in specific and localized areas on the grid.

Isomagnetic contouring of gamma values reveals a general northwest-southeast magnetic trend over the survey area. Within this trend, numerous discordant and localized magnetic highs are apparent with relief from 500 to 1000 gammas above background.

Two major expressions have been outlined between lines 72E and 96E at stations 25N to 50N (eastern anomaly) and lines 16E to 40E between stations 20S to 45S (western anomaly). These anomalies are characterized by an 1800 gamma closure around numerous isolated spot highs contributing to a discontinuous array of magnetic anomalies within the overall expression.

Other magnetic highs are of a more northwest-southeast enechelon trending nature and are sinuous and discordant in character. Peaks of these anomalies are located at:

L64E, 38S
L64E, 7S
L40E, 12S
L32E, 38N

A strong localized negative magnetic response is located at L24E, 35N.

Magnetic anomalies coincident with lead geochemical anomalies are located at:

L80E, 29S
L80E, 30-40N
L86E, 20N
L32E, 5N
L 24E to L48E, 22S, and
L24E, 35N

Interpretation

The area described as the 'eastern anomaly' is probably associated with a granitic orthoclase porphyry that outcrops in several locations in this vicinity. The irregular magnetics can be attributed to varying susceptibilities within the intrusive mass. The 'western anomaly' which is similar in character to the 'eastern anomaly' could also be due to similar underlying intrusives, although no outcrop was noted in this area.

Quartzite with minor disseminated pyrrhotite was found close to the peak of the magnetic high centred at L64E, 34S. There is little or no outcrop near the other magnetic peaks.

From limited outcrop and float locations as well as sulphide occurrences noted over the survey grid, there is little direct evidence that can be attributed to causing the numerous magnetic anomalies. In many instances, lead geochemistry is coincident with magnetic expressions and it is thought that the irregular magnetics could be associated with intrusive action and related faulting and shearing that contains sulphide mineralization.

Half width calculations show most causative structures to be close to surface (within 50 ft.). Test pits sunk on the negative magnetic anomaly (L24E, 35N) uncovered gossan-like float containing minor galena.

The sulphide occurrences in Hugo Creek are within a magnetic low.

Electromagnetic Survey

Results

A total of 13,200 ft. of line was surveyed with the Crone JEM horizontal loop to detect any conductive zones coincident with magnetic and lead geochemical anomalies. Experimental profiles were run over selected portions of magnetic and geochemical anomalies on lines 20E, 24E, 32E, 40E, 48E, 56E, 64E and 80E.

All profiles (see map folder) are of a 'flat' nature and do not show relief exceeding -4 and +2 degrees resultant dip. The only response of significance is obtained on line 40E, 25+00S and line 48E, 23+00S, where positive resultant dips of +2 degrees were obtained on both 1800 and 480 cps frequencies. These values are obtained on single stations only.

Interpretation

The easterly trending conductor traced over lines 40E and 48E is of vertical or near vertical attitude and limited in width (probably less than 10 ft.). The electromagnetic response is not strong and conductivity cannot be attributed to a definite source, a vein structure of disseminated sulphides or a vertical shear zone would be a plausible explanation of the causative structure.

CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey revealed a number of irregular and localized magnetic anomalies, the majority of which are associated with lead geochemical anomalies. The magnetics are thought to be related to intrusive activity and associated shear zones that could be favourable to vein-type sulphide mineralization.

Electromagnetic results are not conclusive in outlining conductors associated with geochemical and magnetic anomalies

Although no mineral deposits of economic size have been found to date, we are dealing with a structurally and lithologically favourable, well mineralized district.

A program of bulldozer trenching of geochemical anomalies and follow-up diamond drilling is planned for next season.

Respectfully submitted,



T. J. Adamson,
Geologist

October 15, 1968



SUMMARY OF COSTS
(July 23-Sept. 13)
GEOPHYSICAL SURVEYS - LAD MINERAL CLAIM GROUP
(Lad 3-12, 19-34, 45-62)

A. LINECUTTING

1.	(a)	Footage Cut	:	208,000 ft.	
	(b)	Linecutters	:	M. Simpson T. Brock F. Charlie T. Charlie M. Acklack G. Johnny J. Olie J. Dick	
	(c)	Cook	:	C. Marcoux	
2.	(a)	Wages:			
		7 man days @\$18.00, daily			
		wage of M. Simpson		\$126.00	
		6 man days @\$17.00, daily			
		wage of T. Brock		\$102.00	
		24 man days @\$20.00 daily			
		wage of F. Charlie		\$480.00	
		20 man days @\$20.00, daily			
		wage of T. Charlie		\$400.00	
		24 man days @\$20.00, daily			
		wage of M. Acklack		\$480.00	
		20 man days @\$20.00, daily			
		wage of G. Johnny		\$400.00	
		4 man days @\$20.00, daily			
		wage of J. Olie		\$ 80.00	
		2 man days @\$20.00, daily			
		wage of J. Dick		\$ 40.00	
		21 man days @\$20.00 daily			
		wage of C. Marcoux		<u>\$420.00</u>	\$2,528.00
	(b)	Helicopter Support:			
		19.5 hrs. @\$127.00/hr.		\$2,477.00	
		Aviation Gasoline -			
		17 gal/hr. @\$2.00/gal		<u>\$ 663.00</u>	\$3,140.00

(c)	Fixed-Wing Support	\$ 308.00
(d)	Subsistence Cost: 128 man days @\$8.00/man day	\$1,024.00
(e)	Supplies and Misc. Equipment	\$ 25.00
(f)	Travel from Vancouver 3 man @ \$7.00/man	\$ 21.00
(g)	Supervision: 128 man days @ \$1.20/man day	\$ 154.00
(h)	Overhead - 15% of total 15% of \$7,200.00	<u>\$1,080.00</u>
	TOTAL COST LAD GROUP LINECUTTING (Lad 3-12,19-34,45-62)	\$8,280.00

B. MAGNETOMETER SURVEY

1.	(a)	Footage read	: 148,400 ft.	
	(b)	Operators	: M. Simpson, T. Brock	
	(c)	Cook	: C. Marcoux	
2.	(a)	Wages:		
		11 man days @\$18.00, daily wage of M. Simpson	198.00	
		2 man days @\$17.00, daily wage of T. Brock	34.00	
		3 man days @\$20.00, daily wage of C. Marcoux	<u>60.00</u>	\$ 292.00
	(b)	Helicopter Support:		
		2.6 hrs. @\$127.00/hr.	330.00	
		Aviation Gasoline - 17 gal/hr. @\$2.00/gal.	<u>88.00</u>	\$ 418.00
	(c)	Fixed-Wing Support		\$ 40.00
	(d)	Subsistence Cost 16 man days @\$8.00/man day		\$ 128.00
	(e)	Travel from Vancouver: 3 man @ \$7.00/man		\$ 21.00
	(f)	Supervision Cost: 16 man days @ \$1.20/man day		\$ 19.00
	(g)	Instrument Cost: 13 days used @ \$5.00/day		\$ 65.00

(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	23.00	
	Subsistence Cost: 2 man days @\$8.00/man day	16.00	
	Supervision: 2 man days @\$1.20/man day	<u>2.00</u>	\$ 60.00
(i)	Overhead - 15% of total 15% of \$1,043.00		<u>\$ 156.00</u>
	TOTAL COST LAD GROUP MAGNETOMETER SURVEY (3-12, 19-34, 45-62)		<u><u>\$1,199.00</u></u>

C. E.M. SURVEY

1.	(a)	Footage read	: 13,400 ft.	
	(b)	Operator	: M. Simpson	
	(c)	Helper	: T. Brock	
	(d)	Cook	: C. Marcoux	
2.	(a)	Wages: 2 man days @\$18.00, daily wage of M. Simpson	36.00	
		2 man days @\$17.00, daily wage of T. Brock	34.00	
		1 man day @\$20.00, daily wage of C. Marcoux	<u>20.00</u>	\$ 90.00
	(b)	Helicopter Support: .8 hrs. @\$127.00/hr. Av. Gas, 17 gal/hr. @ \$2.00/gal.	102.00 <u>28.00</u>	\$ 130.00
	(c)	Fixed-Wing Support		\$ 14.00
	(d)	Subsistence Cost: 5 man days @\$8.00/man day		\$ 40.00

(e)	Travel From Vancouver: 3 man @ \$7.00/man		\$	21.00
(f)	Supervision Cost: 5 man days @\$1.20/man day		\$	6.00
(g)	Instrument Cost: 2 days used @ \$5.00/day		\$	10.00
(h)	Interpretation & Report Presentation: Drafting: 1 man day @\$19.00, daily wage of P. Vlasveld, draftsman	19.00		
	Subsistence: 1 man day @\$8.00/day	8.00		
	Supervision: 1 man day @\$1.20/man day	<u>1.20</u>	\$	28.00
(i)	Overhead: 15% of total 15% of \$339.00		\$	<u>51.00</u>
	TOTAL COST OF LAD GROUP E.M. SURVEY (3-12, 19-34, 45-62)		\$	<u><u>390.00</u></u>

TOTAL COST OF LAD GROUP GEOPHYSICAL SURVEYS:

Linecutting	\$8,280.00	
Magnetometer Survey	\$1,199.00	
Electromagnetic Survey	<u>\$ 390.00</u>	\$9,869.00

ATLAS EXPLORATIONS LIMITED

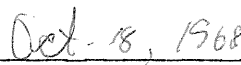
(N. P. L.)

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.AFFIDAVIT SUPPORTING SUMMARY OF COSTS

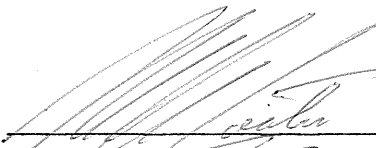
I, Thomas J. Adamson, Geologist, Atlas Explorations Limited, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the statement of costs presented in this report "Geophysical Report - Lad Mineral Claim Group" (Appendix I) is both correct and true.



T. J. Adamson



Date

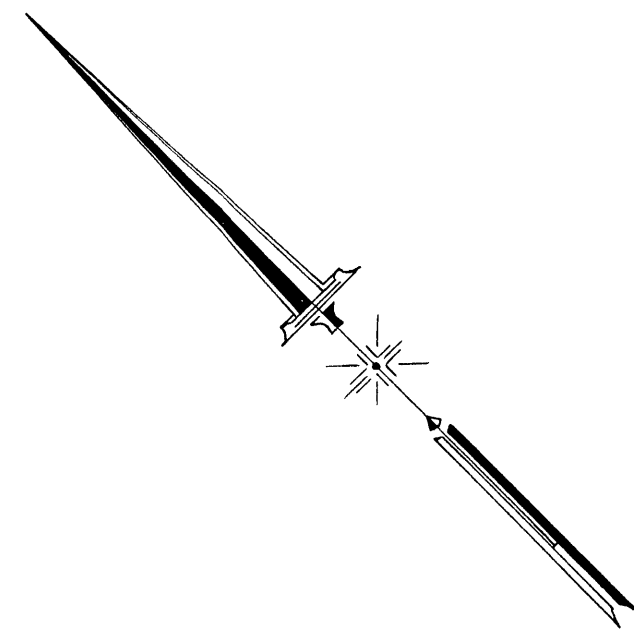


Commissioner of Oaths in and
for the Yukon Territory.

LIST OF PERSONNEL
LAD GROUP GEOPHYSICAL SURVEY

T. Adamson	Geologist, Party Chief	Vancouver, B.C.
M. Simpson	Student Assistant	Vancouver, B.C.
T. Brock	Student Assistant	Vancouver, B.C.
F. Charlie	Linecutter	Ross River, Y.T.
T. Charlie	Linecutter	Ross River, Y.T.
M. Acklack	Linecutter	Ross River, Y.T.
G. Johnny	Linecutter	Ross River, Y.T.
J. Olie	Linecutter	Ross River, Y.T.
J. Dick	Linecutter	Ross River, Y.T.
C. Marcoux	Cook	Quebec, P.Q.

16W 8W 0 8E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 96E



50 N
40 N
30 N
20 N
10 N
BASE LINE 0

LEGEND

- | | | |
|-------------|----|---|
| CRETACEOUS | 11 | GRANITIC INTRUSIVES |
| | 3f | GREY BEDDED CHERT |
| OROVICIAN | 3d | CHERT-BLACK SLATE PEBBLE CONGLOMERATE |
| DEVONIAN | 3a | GRAPHITIC SHALES, CHERT, GREYWACHE |
| | 1c | PHYLLITE, GREY TO BUFF |
| PROTEROZOIC | 1b | LIMESTONE |
| | 1a | QUARTZITE, MICACEOUS QUARTZITE, QUARTZ - SERICITE SCHIST. |

SYMBOLS

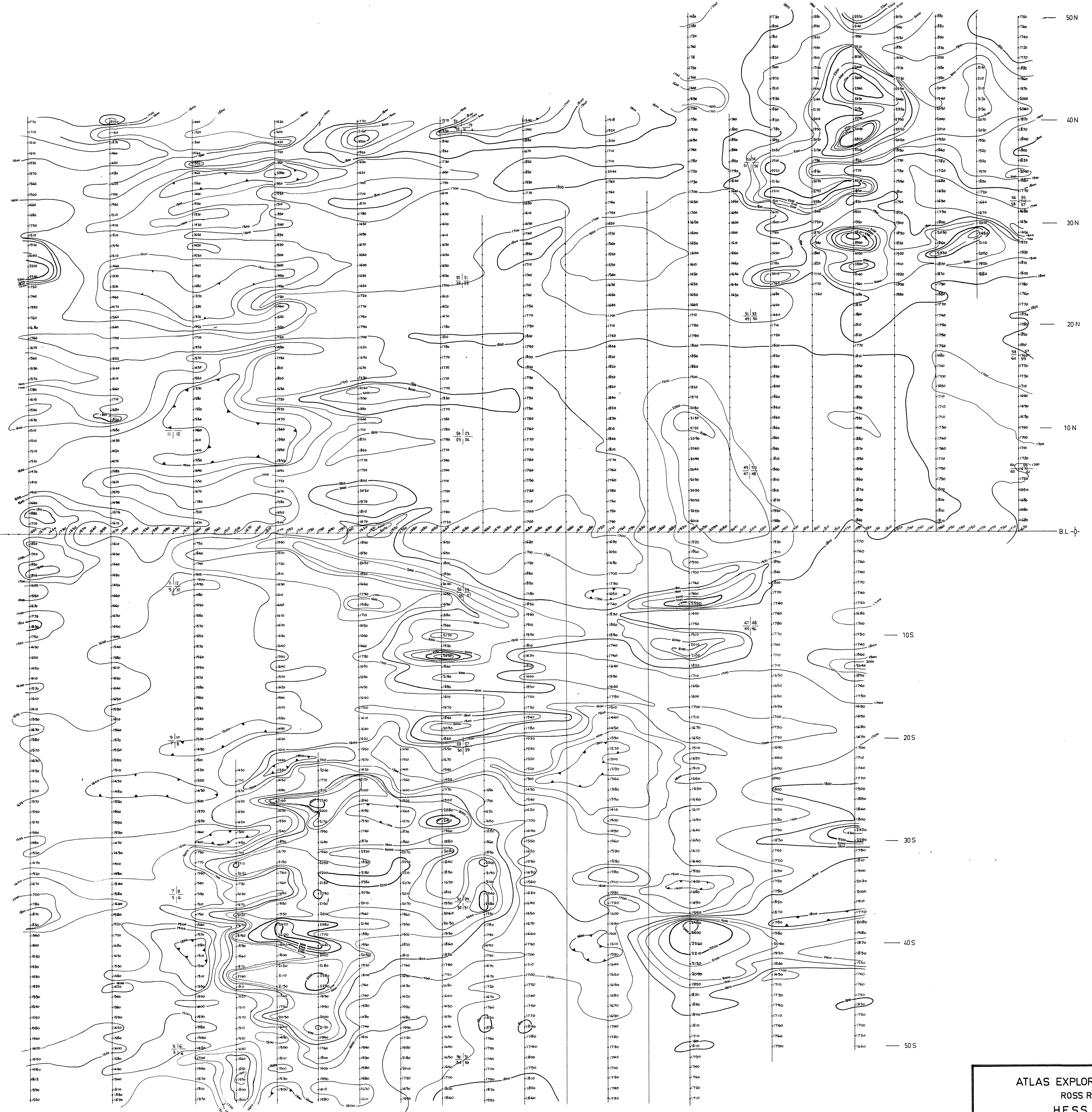
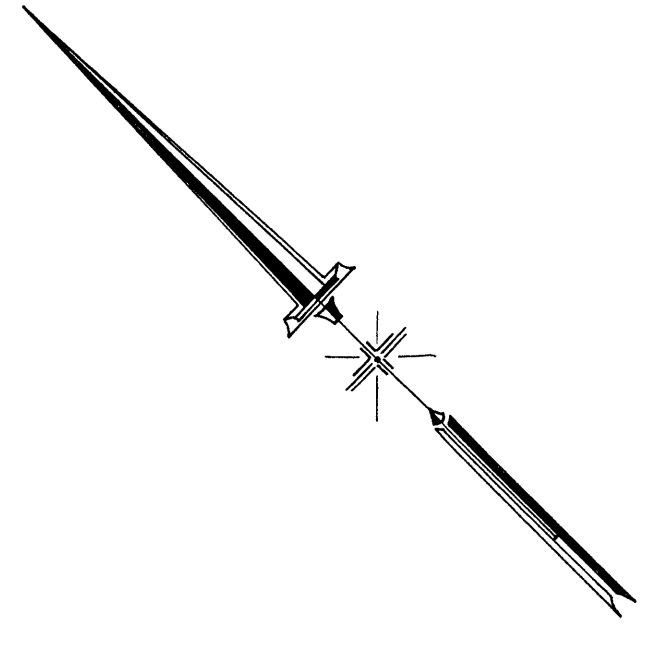
- CONTACTS
- - - - - OUTCROP LIMIT
- ┌ BEDDING ATTITUDE
- └ LINEATION
- ⌒ ANTICLINAL FOLD
- ~ FAULT OR SHEAR

ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
LAD MINERAL CLAIM GROUP
GRID GEOLOGY
(OUTCROP MAP)

GEOLGY BY: T. ADAMSON
DRAWN BY: P.J.F. VLASVELD
DATE: OCTOBER 1978

0 200 400 600 800 1000 feet

16W 8W 0 8E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 92E 96E



ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
LAD MINERAL CLAIM GROUP
GROUND MAGNETOMETER SURVEY
VALUES AND CONTOUR MAP

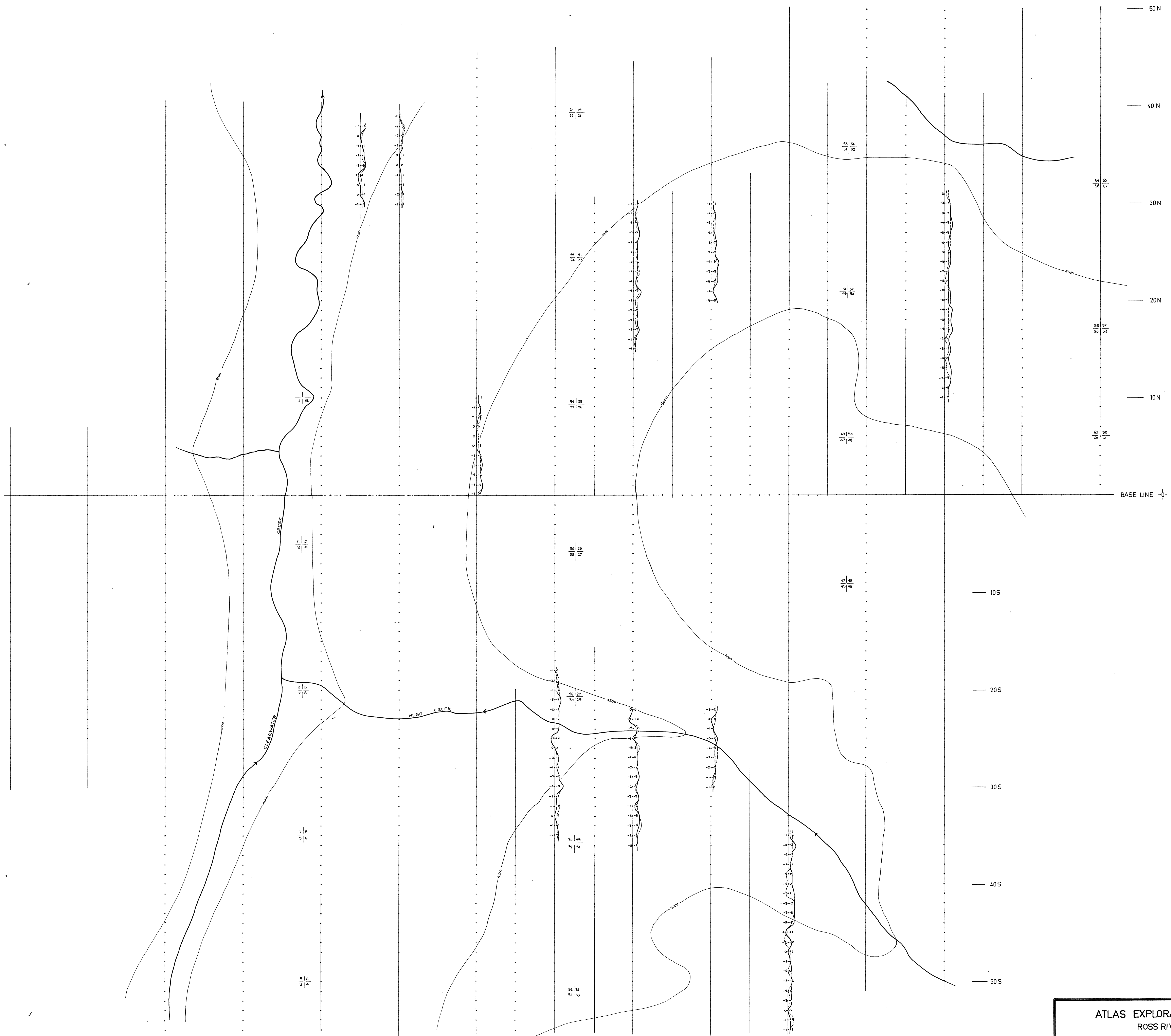
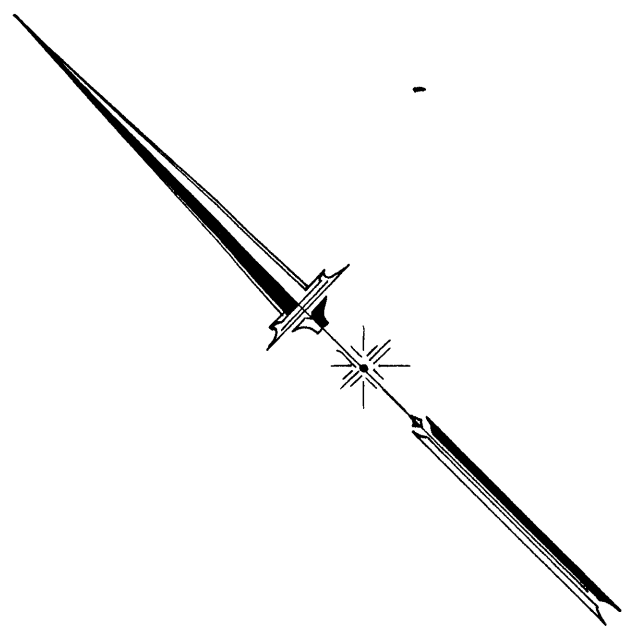
PARTY CHIEF: T. ADAMSON
OPERATOR: M. SIMPSON
AND T. BROOK

INSTRUMENT: SHARPE MF-1

DRAWN BY: P.J. FVLASWELD
DATE: SEPTEMBER 26/58

0 100 200 300 MET

16W 8W 0 8E 16E 24E 28E 32E 36E 40E 42E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 96E

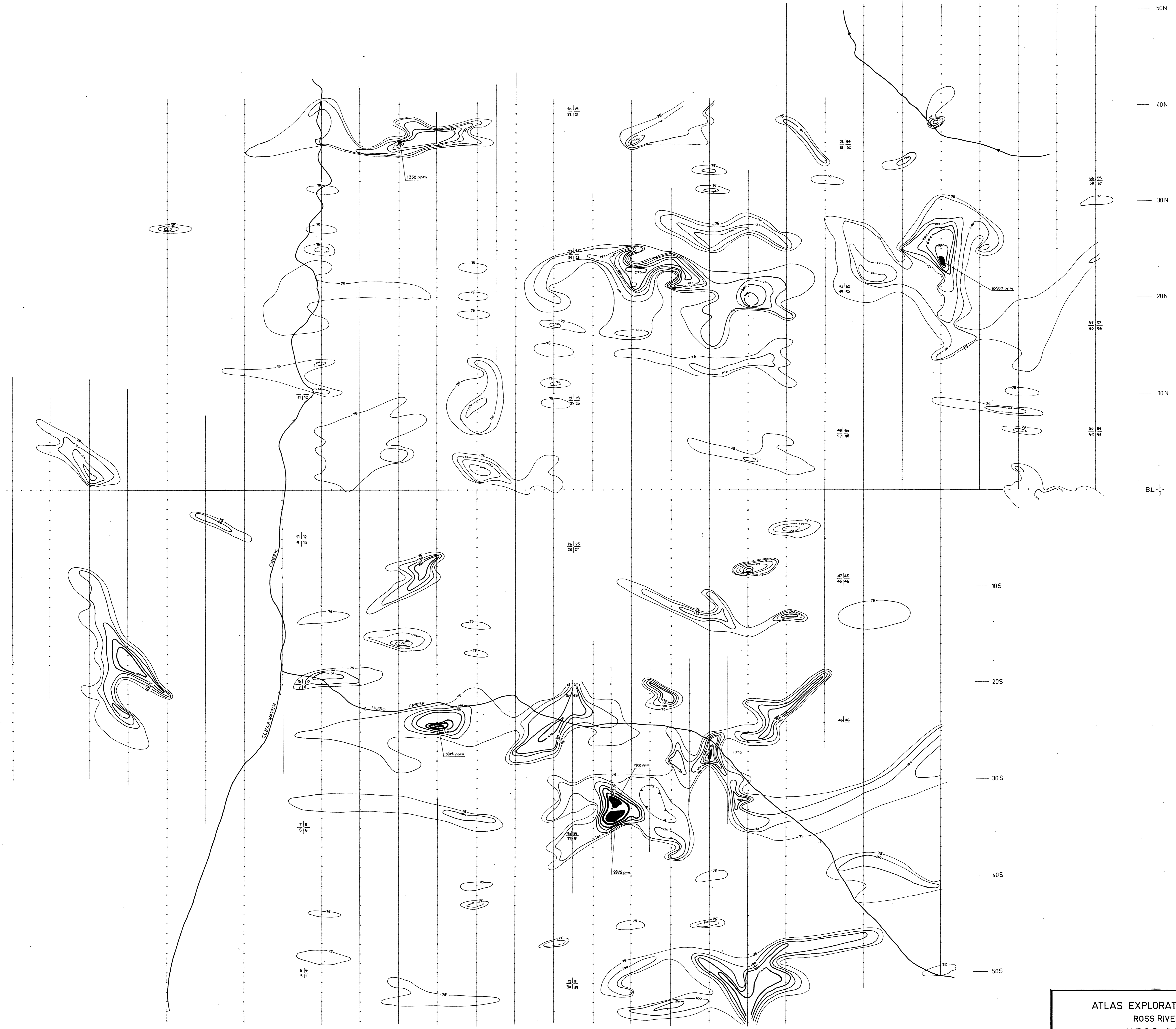
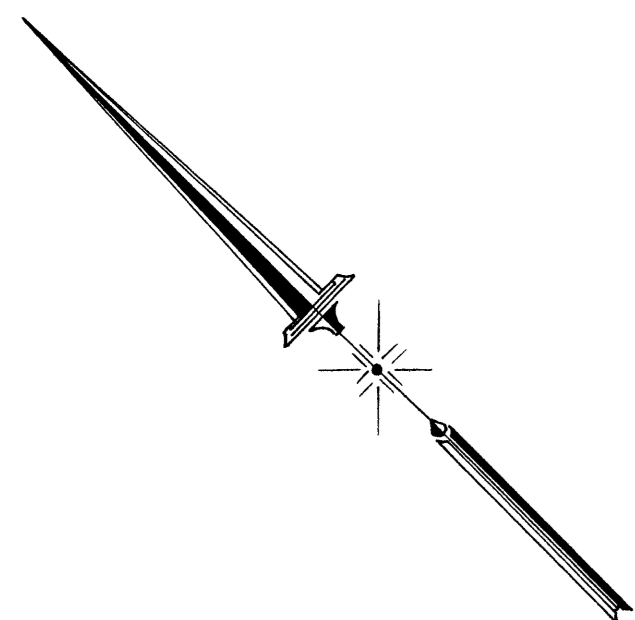


ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
LAD MINERAL CLAIM GROUP
GROUND ELECTROMAGNETIC SURVEY
VALUES AND PROFILE MAP

PARTY CHIEF: T. ADAMSON
OPERATORS: M. SIMPSON and
T. BRUCK
INSTRUMENT: CRONE JEM
DIP ANGLE SCALE: 1/2" = 2'
DRAWN BY: P.J.F. VLASVELD
DATE: OCTOBER 16/1968

1000 cps 480 cps 400 cps
1" = 400 feet

16W 8W 0 8E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 92E 96E



50N
40N
30N
20N
10N
BL

10S
20S
30S
40S
50S

ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)
HESS REGION
LAD MINERAL CLAIM GROUP
GEOCHEMICAL SOIL SAMPLE SURVEY
LEAD CONTOURS

PARTY CHIEF: T. ADAMSON
DRAWN BY: P. J. KLASZKO
DATE: OCTOBER 17, 1988