

ASSESSMENT REPORTS

MAP No. 105-K-16 TYPE OF WORK: Geochemical

REPORT FILED UNDER	Atlas Explorations Ltd.	
DATE PERFORMED	Sept. 1968	DATE FILED :
LOCATION - LAT.	62° 57' N	Ross River Area, V.T.
LONG.	132° 14' W.	
CLAIM Nos.	LAD 65-102	Y31259-296
WORK DONE BY	T. J. Adamson	
WORK DONE FOR	Atlas Explorations Ltd.	
REMARKS	The claims are underlain by quartzites phyllites and limestones of proterozoic age. The geochemical soil sampling survey has outlined a number of strong copper, lead and zinc target areas.	
	Further work is recommended .	\$2,464.00

GEOCHEMICAL REPORT

LAD MINERAL CLAIM GROUP  
(LAD NO. 65 - 102 M.C.)

Mayo Mining District  
Yukon Territory

Longitude : 132° 14' W.

Latitude : 62° 57' N.

N.T.S. 105 - K - 16

Field Work done in period  
Sept. 10 - Sept. 28, 1968

By

THOMAS J. ADAMSON

ATLAS EXPLORATIONS LIMITED

January 6, 1969

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

*W. R. Craig*  
RESIDENT GEOLOGIST

Approved as to cost in the amount  
of: \$ *2,464.85*

*J. G. Torrington*  
RESIDENT MINING ENGINEER

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

*Thomas J. Adamson*  
COMMISSIONER OF YUKON

LIST OF CLAIMS

<u>Claim Number</u>	<u>Grant Number</u>	<u>Date Recorded</u>
Lad No. 65-102	Y31259-Y31296	Sept. 10, 1968

TABLE OF CONTENTS

LIST OF CLAIMS

KEY MAP

INTRODUCTION .....	1
LOCATION AND ACCESS .....	2
GEOLOGY .....	2
TOPOGRAPHY AND GROUND CONDITIONS .....	4
GEOCHEMISTRY	
Survey Method .....	4
Geochemical Results .....	6
Showing K Grid .....	6
Lad North Grid Area .....	6
Interpretation of Geochemical Results..	9
CONCLUSIONS AND RECOMMENDATIONS .....	9

Appendix I	Summary of Costs
Appendix II	Affidavit Supporting Summary of Costs
Appendix III	List of Personnel
Appendix IV	Geology Map   Lad Grid - 1":400'
Appendix V	Values Map - Lad Grid - 1":400'
Appendix VI	Copper Contour-Lad Grid - 1":400'
Appendix VII	Lead Contours - Lad Grid- 1":400'
Appendix VIII	Zinc Contours - Lad Grid - 1":400'
Appendix IX	Geochemical Values - Contours Showing K Grid

# ATLAS EXPLORATIONS LIMITED

(N.P.L.)

330 MARINE BUILDING

355 BURRARD STREET

VANCOUVER 1, B.C.

## GEOCHEMICAL REPORT

### LAD MINERAL CLAIM GROUP

(LAD NO. 65 - 102)

#### INTRODUCTION

The original Lad Group claims (Lad 3-12, 19-38, 45-62) were staked in September and October, 1967, to cover the area of three Ag, Pb, Zn and Cu showings, a number of sulphide float occurrences, and high lead results from reconnaissance soil and gossan sampling. Geological, geochemical and geophysical work on these claims during the 1968 field season has outlined a number of attractive targets for further work.

During August and September, 1968, Lad Mineral Claims 65 - 102, the claims dealt with in this report, were staked to the north and west of the original claim block. These claims were staked to cover a number of sulphide mineral showings and some attractive soil sampling results.

The work done in the area covered by these claims in 1968 consisted of linecutting, geological mapping and prospecting, geophysical and geochemical surveys, hand trenching and sampling. Much of the work was done before the claims were staked. Only that portion of the work done after September 10, the recording date of the claims, is being claimed as representation work.

### LOCATION AND ACCESS

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

Access to the property can be made by float-equipped fixed-wing aircraft to "Van Lake", about 7 miles east of the claims. Helicopter support is required from this lake to the property.

### GEOLOGY

The claims were geologically mapped on a scale of 1":400'.

The area is underlain mainly by quartzites, phyllites and limestones of Proterozoic age.

A number of 'wedges' of Ordovician-Devonian rocks have been enfolded (?) into the Proterozoic sequence. These rocks are graphitic shales, slates, 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.

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

A number of sulphide mineral showings have been discovered in the area of the claims dealt with in this report.

Lad Showing F, located at about L0, 81N, is the largest of these showings. The main part of this showing consists of two parallel, closely spaced, vein systems with skarn type mineralization.

The sulphide zones, each varying in width from about 10 ft. to 1 ft., but averaging about 5 ft., have an average assay across each of them of about 6 oz/T. Ag, 6% Pb, 3% Zn, 2% Cu. Grab samples assay up to 37 oz/T. Ag, 18% Pb, 17% Zn and 4.5% Cu. These veins are in a narrow limestone unit bounded on both sides by quartzites. Also in the immediate vicinity are a number of quartz veins and shears in the quartzite carrying minor galena and chalcopyrite.

Lad Showing G, is located on a small easterly tributary of Clearwater Creek, about 800 ft. up Clearwater Creek from Showing F. This showing seems to be skarny type copper-lead-zinc mineralization in and adjacent to shears in a skarny siliceous limestone unit.

Lad Showing H, located at L16E, 42N, is a very minor occurrence. It consists of a 1 ft. thick skarny limestone unit, with disseminated chalcopyrite, galena and sphalerite. This unit is only seen for a strike length of about 6 ft., being terminated on both ends by faulting.

Lad Showing K, is located at L28E, 40N. This showing is a poorly exposed, mineralized, cross cutting shear (?), with disseminated galena, chalcopyrite, sphalerite, and pyrite across 4-5 feet. Assays across this zone average about .5 oz/T. Ag, 5% Pb, .3% Zn.

There is virtually no outcrop in the area away from the creek bed and banks.

## TOPOGRAPHY AND GROUND CONDITIONS

The claims dealt with in this report (Lad 65-102) are on both sides of the valley of Clearwater Creek. Elevation in the area of these claims range from 3500 - 4500 ft. Slopes vary from moderate to steep, but, away from the creek, are generally quite regular. Clearwater Creek has cut a sharply defined bed 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 soil 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

A grid was cut over most of the area covered by the claims in question. Original line spacing on the grid was 800 ft. Intermediate 400 ft. spaced lines were cut where more detail was required. Stations were established at 100 ft. intervals on all lines. Soil samples were taken at all 100 ft. stations where possible.

Much of the above work was done before the claims were staked. Although the maps show all work done in the area, only the cost of the work done after September 10, 1968, the recording date of the claims, is being submitted as representation work. All of the work covered in this report was done north of 40N on the grid, with the exception of the small

detailed grid around Showing K. The lines cut and sampled after September 10 are as follows:

<u>Lines</u>	<u>Footage Cut</u>	<u>Soil Samples Collected</u>
L24W, 40-105N	6500 ft.	57
L20W, 40-85N	4500 ft.	44
L16W, 40-105N	6500 ft.	65
L12W, 40-105N	6500 ft.	62
L8W, 85-105N	2000 ft.	19
L4W, 40-105N	6500 ft.	63
L4E, 50-85N	3500 ft.	33
L12E, 50-84N	3400 ft.	31
L20E, 40N-85N	4500 ft.	39
L28E, 40-51N	1100 ft.	11
L36E, 40-50N	1000 ft.	10
Showing "K" Grid	3000 ft.	65
	<hr/>	<hr/>
	49,000 ft.	499

All samples were analyzed for Cu, Pb and Zn trace element at Chemex Labs Ltd., North Vancouver, British Columbia.

Each soil sample was dried in its kraft bag container, then screened to -80 mesh. To .2 grams of the -80 mesh material was added .5 ml. of concentrated hydrochloric acid and 1.5 ml. of concentrated nitric acid. The solution was let stand for one hour to decompose organics and then heated on a sand bath for two hours to complete the digestion. The solution was then diluted to 10 ml. with the addition of 8 ml. of water.

The samples were then run on an atomic absorption spectrophotometer unit, using prepared standard solutions for comparison.

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

#### Showing K Grid

Showing K is exposed in the creek bank at L28E, 40N. Soil samples were taken on the small grid laid out southwest of the showing. The line spacing is 100 ft. or 200 ft. and sample spacing on the lines is 50. The results were plotted on a values map and contoured, on separate maps, for copper, lead and zinc. These results showed an anomalous trending zone extending in a generally southwest direction from the showing.

The lead anomaly is most pronounced, with peaks of 35,000 ppm at the showing (40N, 28E), 610 ppm at 39N, 27E; 510 ppm at 37N, 28E and 415 ppm at 36N, 28E. At line 34 north, the 50 ppm contour is still open to the SW. A small single value anomaly (320 ppm) is located at 36N, 25+50E.

The anomalous copper results are coincident with the anomalous lead results, with the exception that only background copper results were obtained on L38N.

The zinc results showed only a single value high (1240 ppm) in the showing area, and a small anomalous zone (100 ft. by 200 ft.) with a peak of 600 ppm at 36N, 27E.

#### North Grid Area

##### Copper

The median, the best measure of background, is, in this area, about 20 ppm. The anomaly threshold, the value at

the 90% cumulative frequency, is approximately 55 ppm. This establishes the anomaly threshold at about 3 times background. The copper results were contoured above 50 ppm.

A small, but strong, copper anomaly is centred at L0, 80-81N (peak 2100 ppm). This zone extends for about 800 ft. to the north (50 ppm contour only). A strong (1040 ppm Cu) single value anomaly is located at L0, 76N. Other small strong copper anomalies are centred at L8E, 66N and L20E, 74N. There are numerous large irregular zones enclosed by the 50 ppm contour only scattered throughout the area.

#### Lead

Lead background is about 25 ppm and anomaly threshold is about 75 ppm. Results were contoured above 75 ppm.

The largest anomaly in this area is centred at L0, 80-81N (7500-6500 ppm). This zone, about 300 ft. wide, extends 400 ft. to the southwest to L0E, 76N (2650 ppm) and 600 ft. to the north, to a peak of 250 ppm at L4W, 83N.

A narrow northerly trending zone extends from L4E, 70N to L8E, 66N (1090 ppm). Another narrow north trending zone (100 ft. by 800 ft.) is centred at L20E, 74N (4150 ppm).

Two narrow, parallel, southeast trending, moderately valued zones are found in the western corner of the area in question. Both are about 150 ft. wide and 1200 ft. long. One extends from L16W, 56N to L4W, 54N, and the other from L20W, 50N to L8W, 48N.

Smaller lead anomalies are centred at:

L16W, 90N  
L16W, 97N  
L8W, 93N  
L24E, 82N  
L20W, 44N  
L8W, 58N  
L8W, 41N  
L0, 63N  
L4E, 61N  
L12E, 62N  
L16E, 54N

### Zinc

In this area, the background value for zinc (median) was determined to be 72 ppm. The anomaly threshold was established at 225 ppm. Results were contoured above 200 ppm.

A small very high valued zinc anomaly is centred at L0, 80-81N (at these two stations, zinc values are > 20,000 ppm). This anomaly extends for about 600 ft. to the north, but with much lower value than those on line zero.

A very high (21,000 ppm) single value result was obtained at L0, 76N.

Large irregular low magnitude anomalies are centred at L8E, 65N and L16E, 57N.

Smaller anomalies are found at L20E, 73N and L8W, 64N.

## Interpretation of Geochemical Results

### Showing K Grid

It would appear that the anomalies extending to the southwest from Showing K reflect the overburden covered continuation of the mineralized zone. Overburden cover in this area is quite thin.

### North Grid Area

Generally, in this area, copper, lead and zinc anomalies are superimposed upon one another.

The coincident copper-lead-zinc anomaly centred at L0, 80-81N, has its peak directly over Showing F. The northern and southwestern extensions of this anomaly are overburden covered, and warrant further work.

The anomalies centred at L8E, 66N cover the area of Showing G. Again, further work should be done in the overburden covered portions of the anomalous area.

There is no outcrop in the area of any of the other strong geochemical anomalies, but because of the excellent correlation between geochemical anomalies and sulphide mineralization in areas of some outcrop exposure, all of the anomalies in areas of overburden cover warrant further investigation.

## CONCLUSIONS AND RECOMMENDATIONS

The geochemical soil sampling survey has outlined a number of strong copper, lead and zinc target areas. Most of the area is overburden covered but, in two cases, sulphide mineral showings have been found to coincide with the geochemical anomalies.

More detailed prospecting is needed in most of the anomalous areas.

Bulldozer stripping will be carried out over the most favourable geochemical targets.

Respectfully submitted,



T. J. Adamson,  
Geologist

January 6, 1969.

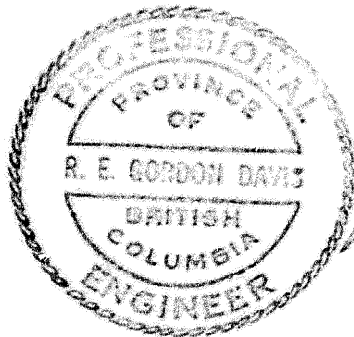
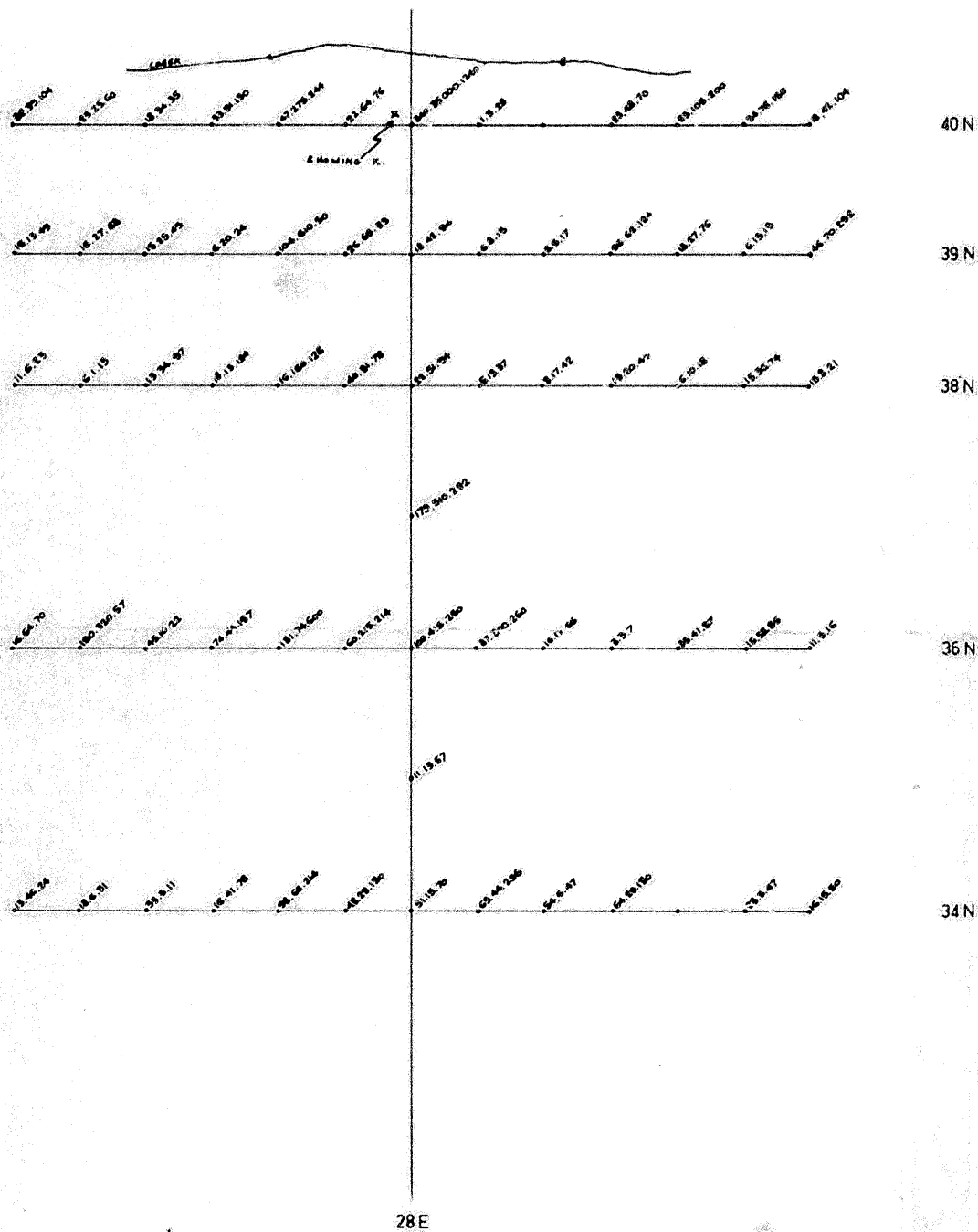


fig. 13



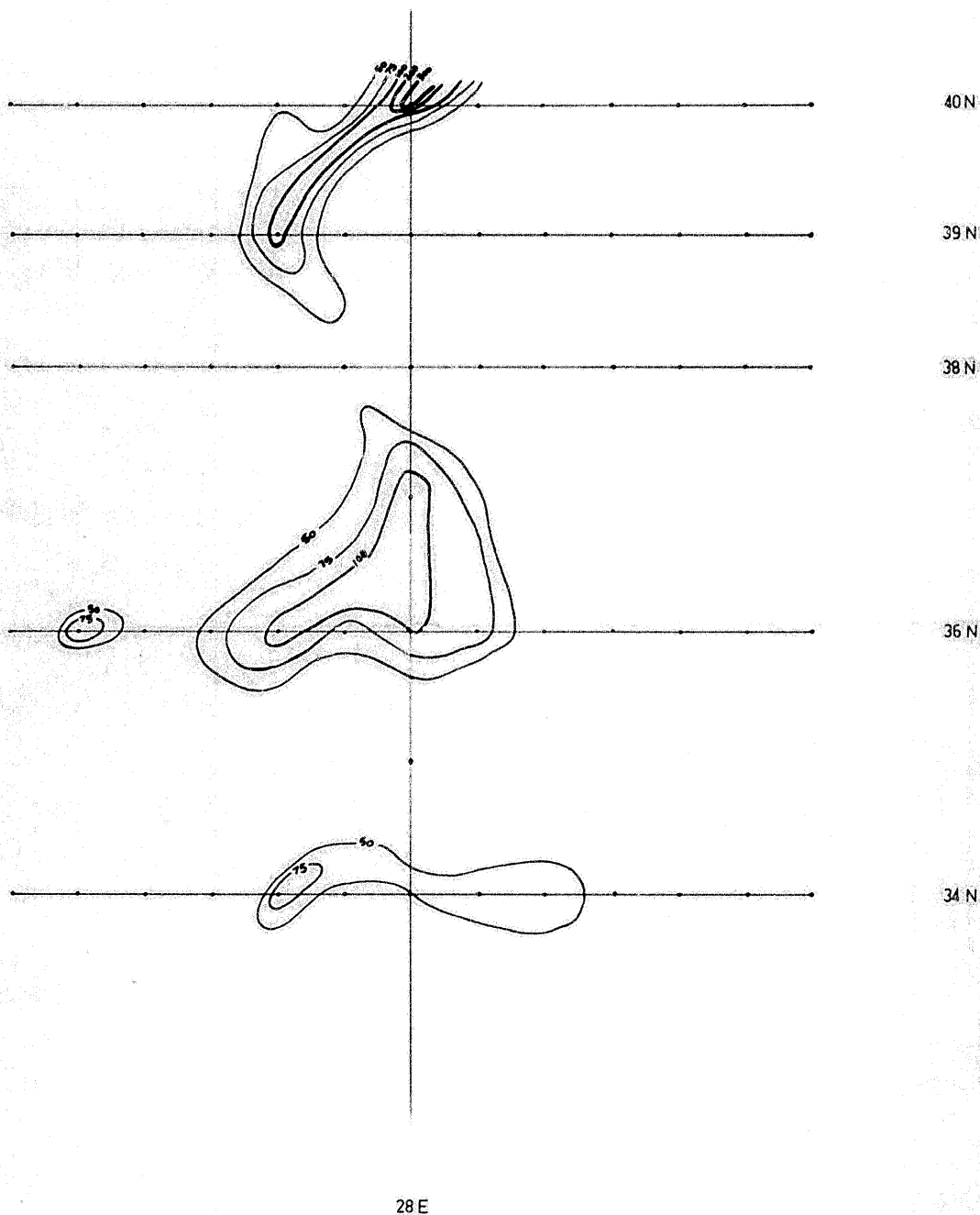
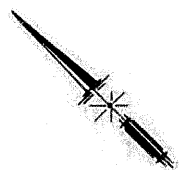
SOIL SAMPLE VALUES

SAMPLER: M. ACKLACK

ATLAS EXPLORATIONS LIMITED  
ROSS RIVER (Y.T.)  
LAD MINERAL CLAIM GROUP

SHOWING "K" GRID  
(WITHIN LAD #1 GRID)

SCALE 1" = 100'



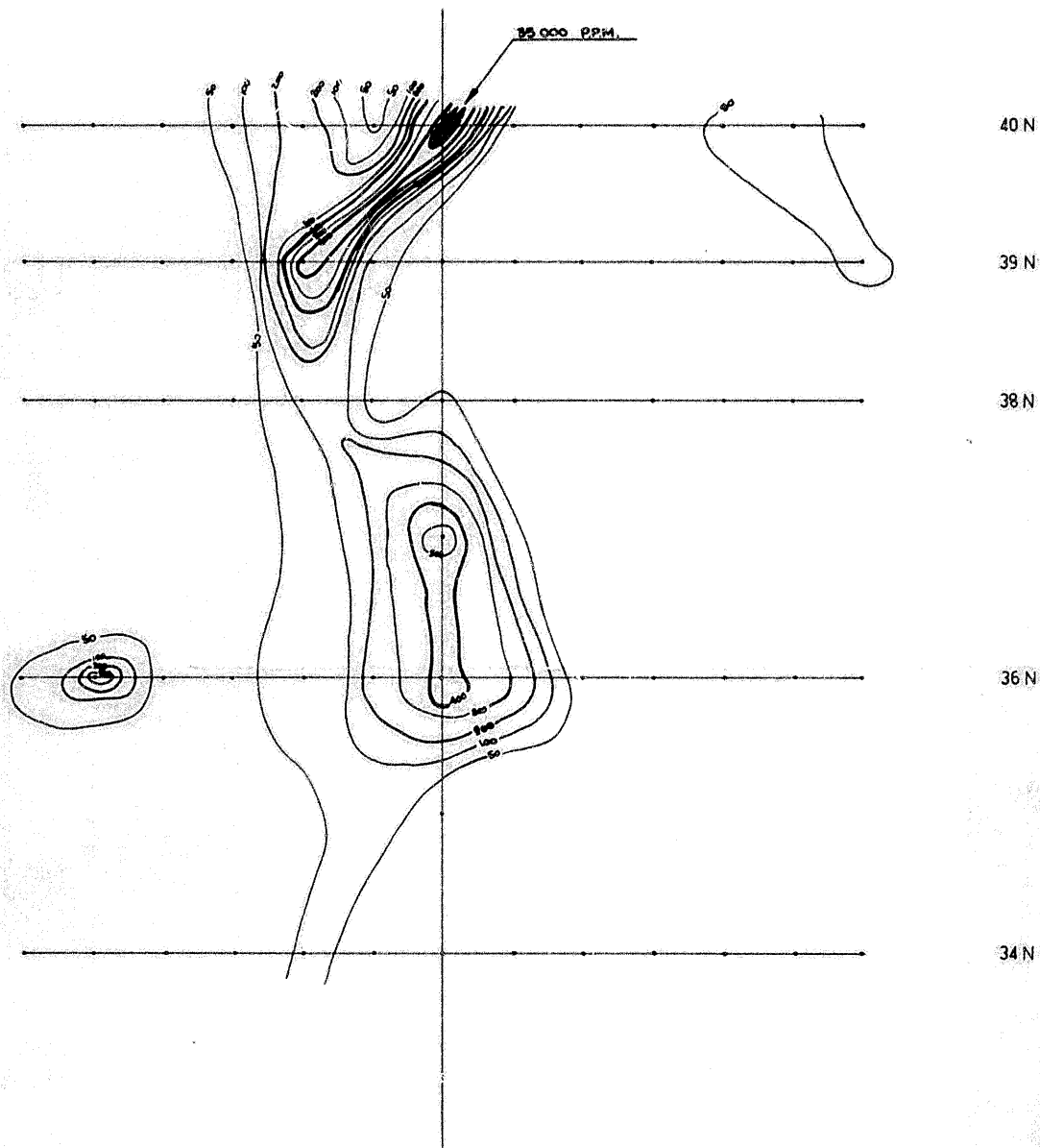
COPPER CONTOURS

ATLAS EXPLORATIONS LIMITED  
ROSS RIVER (Y.I.)  
LAD MINERAL CLAIM GROUP

SHOWING "K" GRID  
(WITHIN LAD #1 GRID)

SCALE 1" = 100'

fig. 15



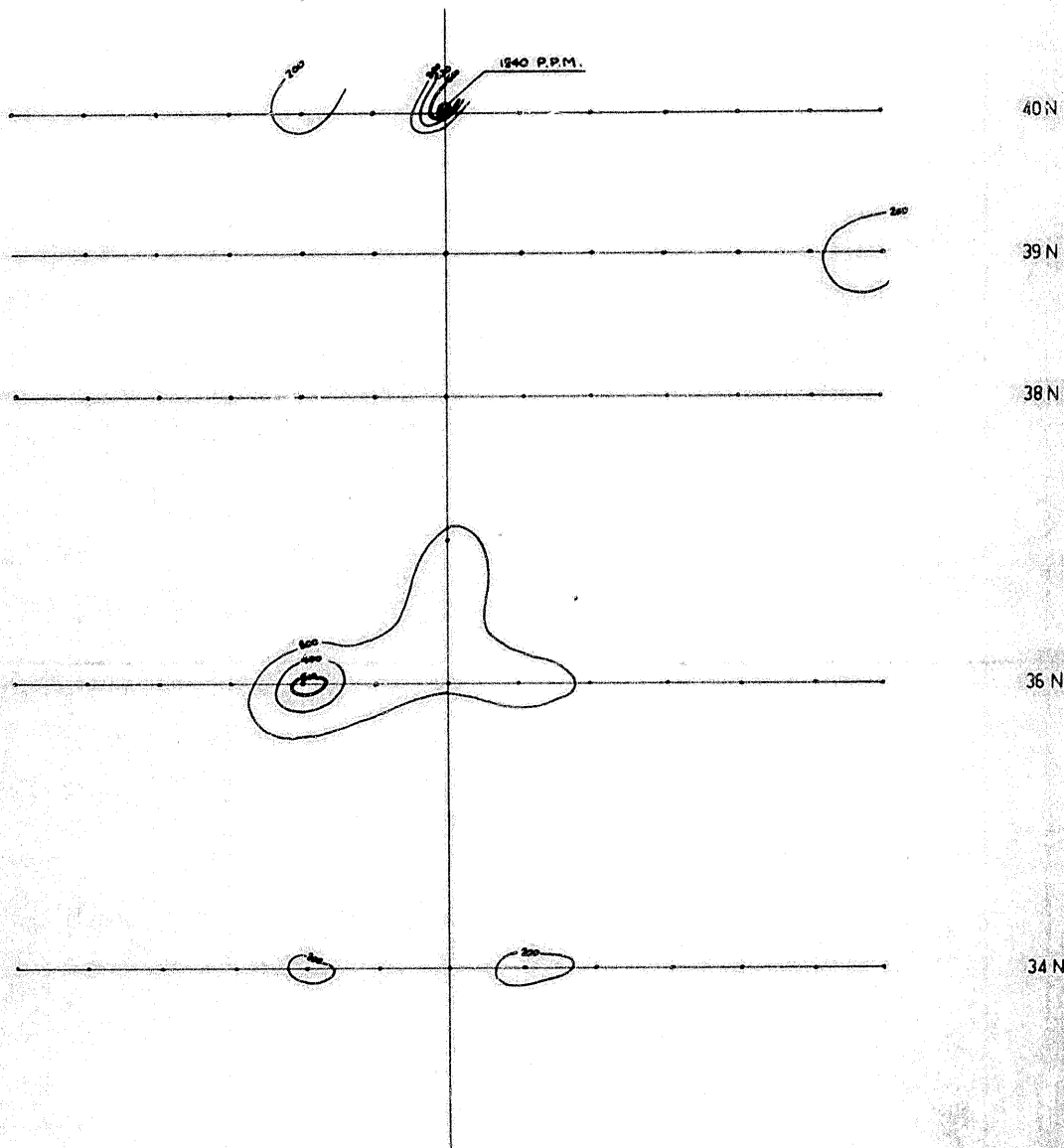
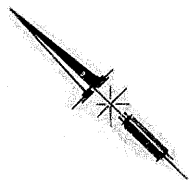
LEAD CONTOURS

ATLAS EXPLORATIONS LIMITED  
ROSS RIVER (Y.T.)  
LAD MINERAL CLAIM GROUP

SHOWING "K" GRID  
(WITHIN LAD #1 GRID)

SCALE 1" = 100'

fig. 16



28 E

ZINC CONTOURS

ATLAS EXPLORATIONS LIMITED

LAD MINERAL CLAIM GROUP

SHOWING "K" GRID  
(WITHIN LAD #1 GRID)

SCALE 1" = 100'

SUMMARY OF COSTSGeochemical Survey - Lad 65-102 Mineral Claims  
Period Sept. 10 - Jan. 6, 1969LINECUTTING AND GEOCHEMICAL SAMPLING


1.	(a)	Linecutters and Samplers: M. Acklack	
		: G. Johnny	
	(b)	Footage Cut	: 49,000 ft.
	(c)	Samples Collected	: 499
2.	(a)	Wages:	
		12 man days @\$20.00, daily	\$ 240.00
		wage of natives	
	(b)	Helicopter Support:	
		4.5 hrs. @\$120.00/hr.	540.00
		Fuel: 17 gal./hr. = 76.5 gal.	
		@ \$1.65/gal.	126.00
	(c)	Fixed-Wing Support	221.00
	(d)	Subsistence Cost:	
		12 man days @\$8.00/day	96.00
	(e)	Supervision & Administration	
		1 man day @\$25.00, daily wage	23.00
		of T. Adamson, geologist	
	(f)	Analysis Cost:	
		500 samples @\$1.50/sample	750.00
	(g)	Supplies & Misc. Equipment	25.00
		Soil sample bags	
	(h)	Interpretation & Report Presentation	
		Drafting: 4 man days @\$19.00	76.00
		daily wage of P. Vlasveld	
		Report Writing: 2 man days @\$23.00,	46.00
		daily wage of T. Adamson	
	(i)	Overhead: 15% of total	321.00
		15% of \$2,143	
			<hr/>
		TOTAL COST LAD 65-102 GEOCHEMICAL	\$2,464.00
		SURVEY	<u>          </u>

**ATLAS EXPLORATIONS LIMITED**  
(N. P. L.)


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

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, Thomas J. Adamson, Geologist, 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 I - "Geochemical Report - Lad 65-102 Mineral Claim Group) is both correct and true.

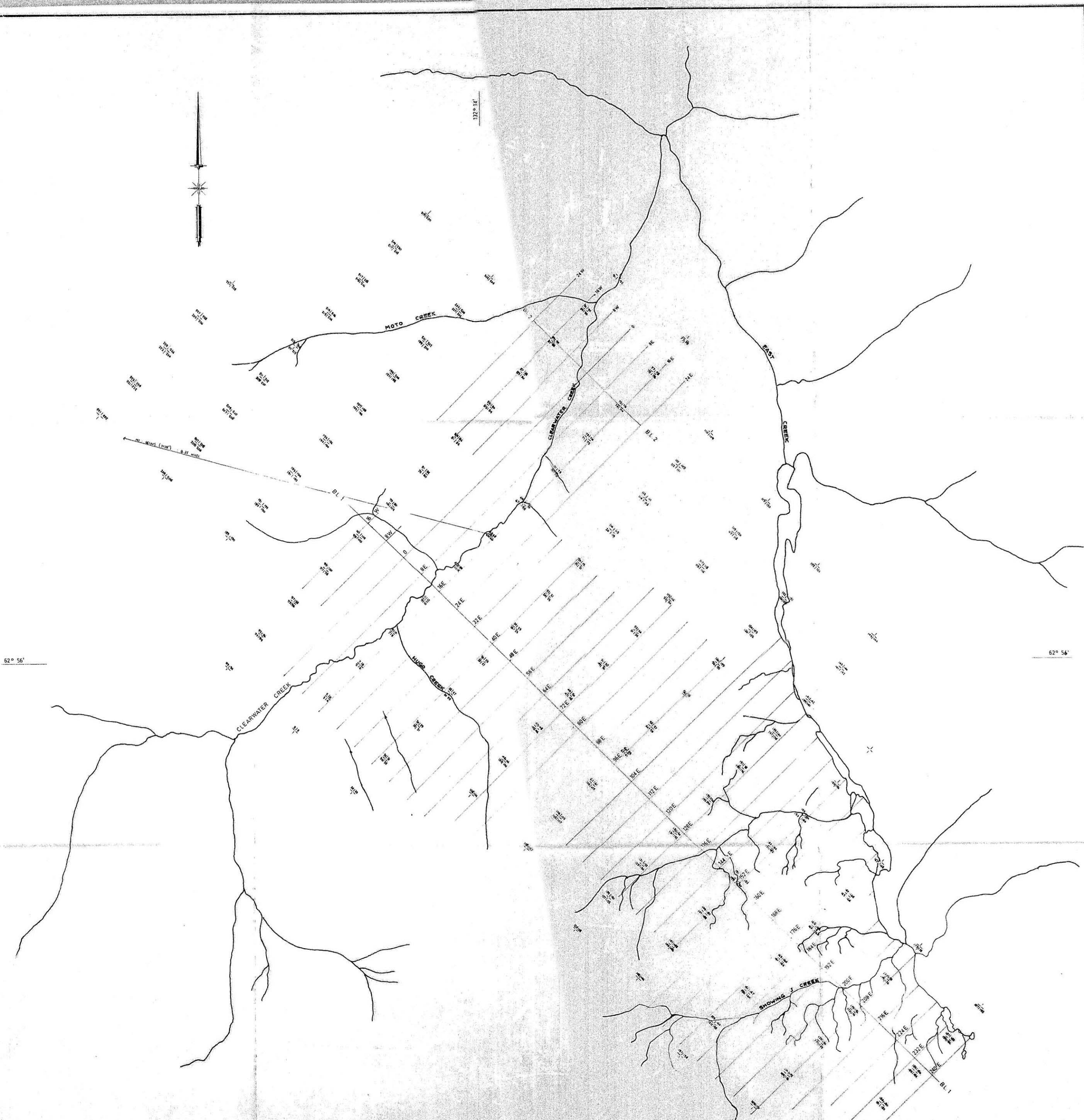
  
\_\_\_\_\_  
T. J. Adamson

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Commissioner of Oaths in and  
for the Yukon Territory

LIST OF PERSONNEL

T. J. Adamson	Geologist-Party Chief	Vancouver, B.C.
M. Acklack	Linecutter-Geochem Sampler	Ross River, Y.T.
G. Johnny	Linecutter-Geochem Sampler	Ross River, Y.T.
P. Vlasveld	Draftsman	Vancouver, B.C.



NOTES: ONLY 800' SPACED GRID LINES SHOWN (INTERMEDIATE FILL-IN LINES NOT SHOWN)  
 LAD # 1 GRID AREA LINE 16W TO 24E, 55S TO 50N  
 LAD EAST GRID AREA LINE 104E TO 240E  
 LAD NORTH GRID AREA LINE 24W TO 24E, 40N TO 105N

105-K-16

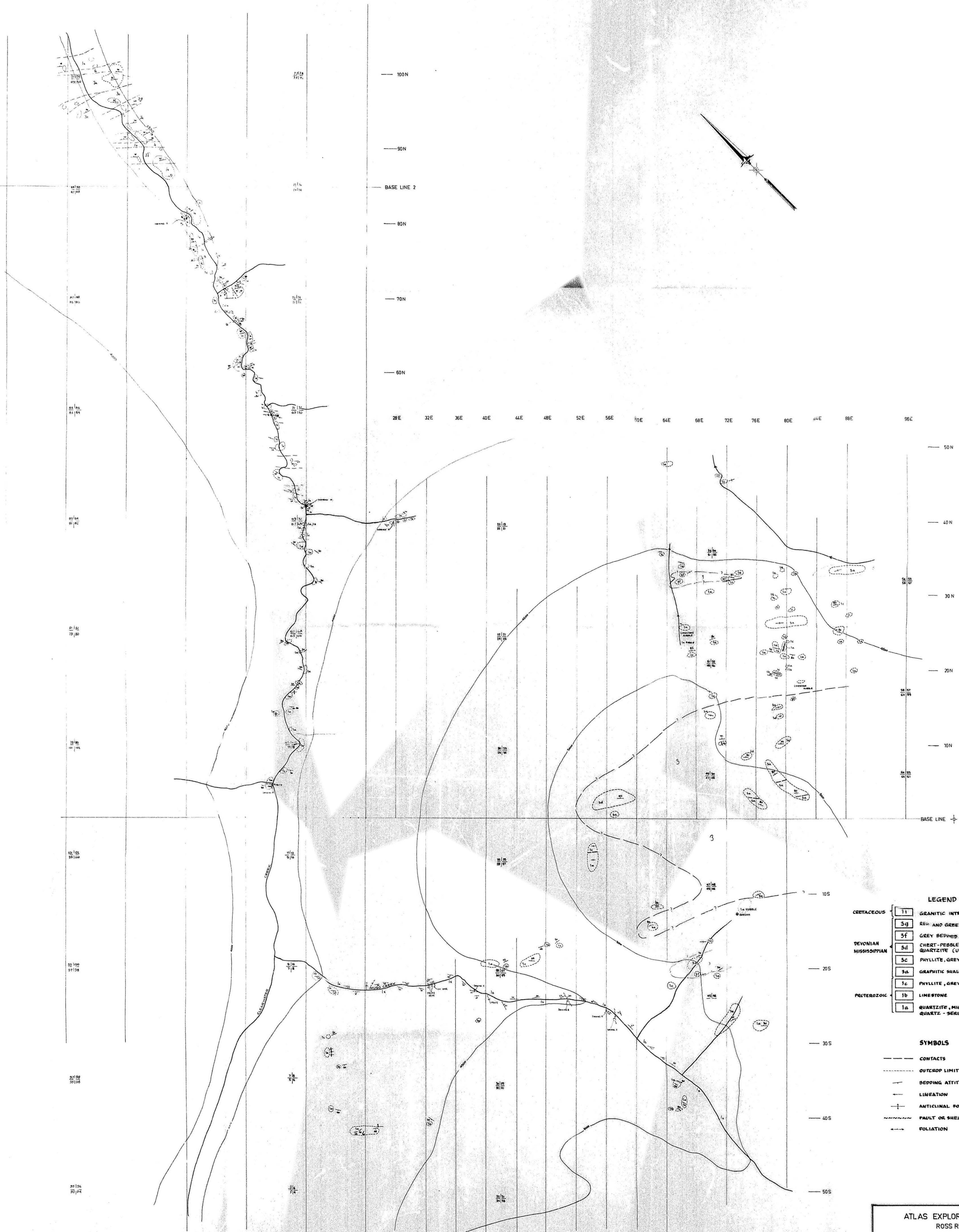
ATLAS EXPLORATIONS LIMITED  
 ROSS RIVER (Y.T.)  
 HESS REGION  
 LAD MINERAL CLAIM GROUP  
 KEY MAP OF CLAIMS AND GRID

PARTY CHIEF: T. ADAMSON  
 DRAWN BY: J. A. P.V.  
 DATE: DEC 4/1968

SCALE IN FEET  
 0 1000 2000

fig. 1

24W 16W 8W 0 8E 16E 24E



**LEGEND**

CRETACEOUS	11	GRANITIC INTRUSIVES
	5g	RED AND GREEN SLATES
DEVONIAN	5f	GREY BEDDED CHERT (UPPER DEVONIAN)
MISSISSIPPIAN	5d	CHERT-PEBBLE CONGLOMERATE, MINOR QUARTZITE (UPPER DEVONIAN)
	5c	PHYLLITE, GREY TO GREEN, INDURATED SLATES.
	3a	GRAPHITIC SHALES, CHERT, GREYWAXNE
	1c	PHYLLITE, GREY TO BUFF
PRETEROZOIC	1b	LIMESTONE
	1a	QUARTZITE, MICACEOUS QUARTZITE, QUARTZ - SERICITE SCHIST.

**SYMBOLS**

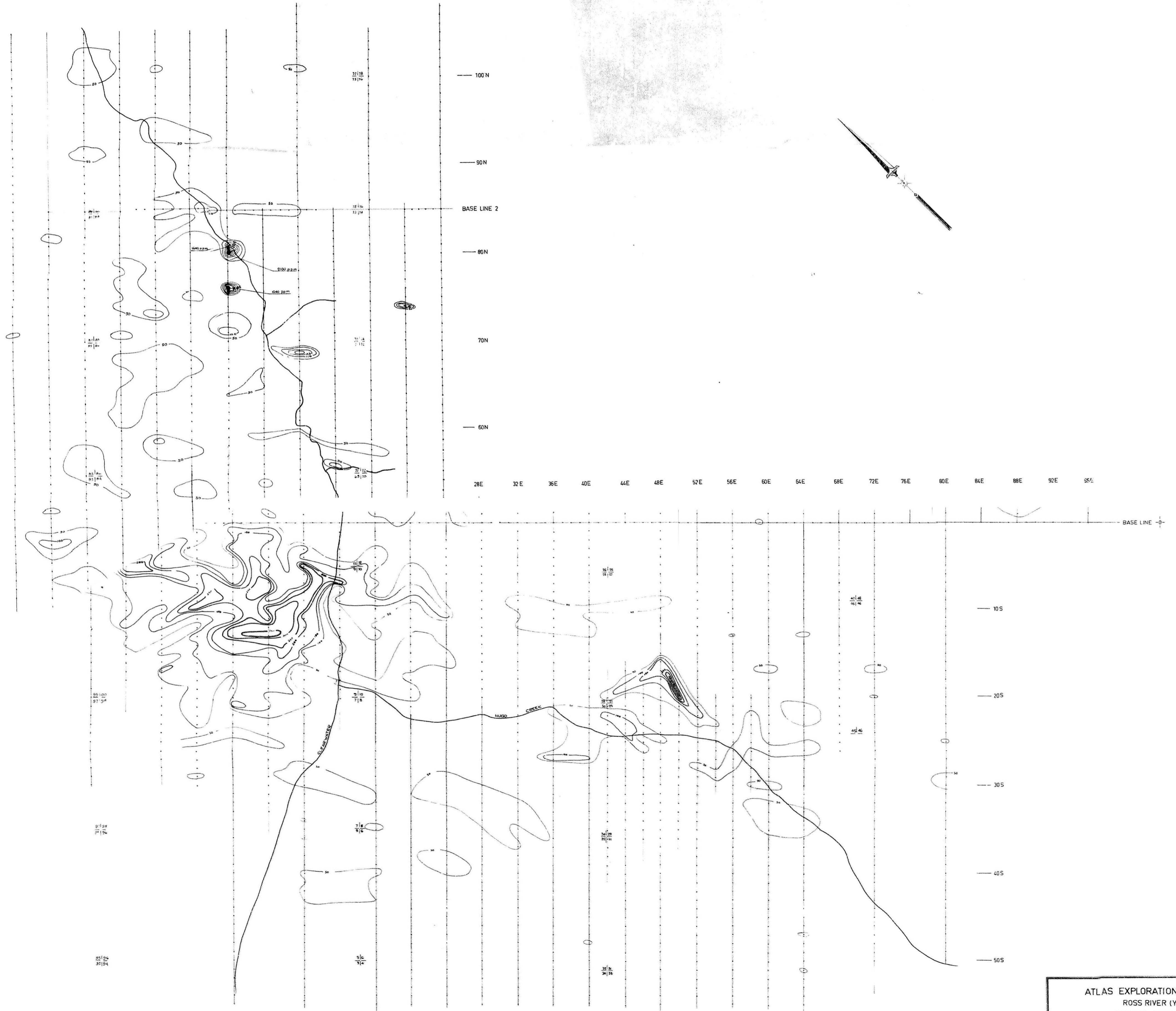
- CONTACTS
- OUTCROP LIMIT
- BEDDING ATTITUDE
- LINEATION
- ANTICLINAL FOLD
- FAULT OR SHEAR
- FOLIATION

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

fig. 3

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

24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E

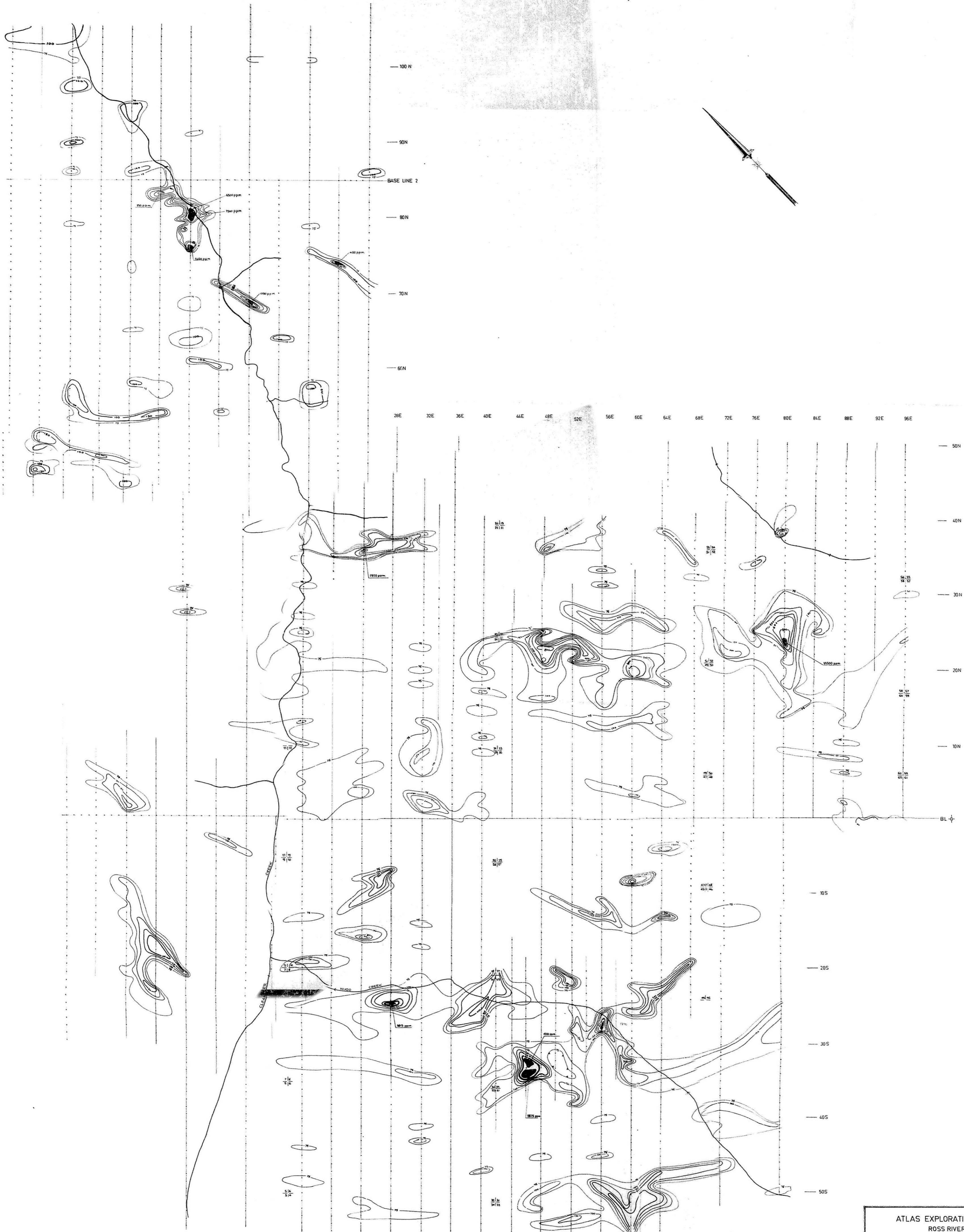


ATLAS EXPLORATIONS LIMITED  
ROSS RIVER (Y.T.)  
HESS REGION  
LAD MINERAL CLAIM GROUP  
GEOCHEMICAL SOIL SAMPLE SURVEY  
COPPER CONTOURS

PARTY CHIEF T. ADAMSON  
DRAWN BY P. F. VILASVELD  
DATE OCTOBER 1958

fig. 10

24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E

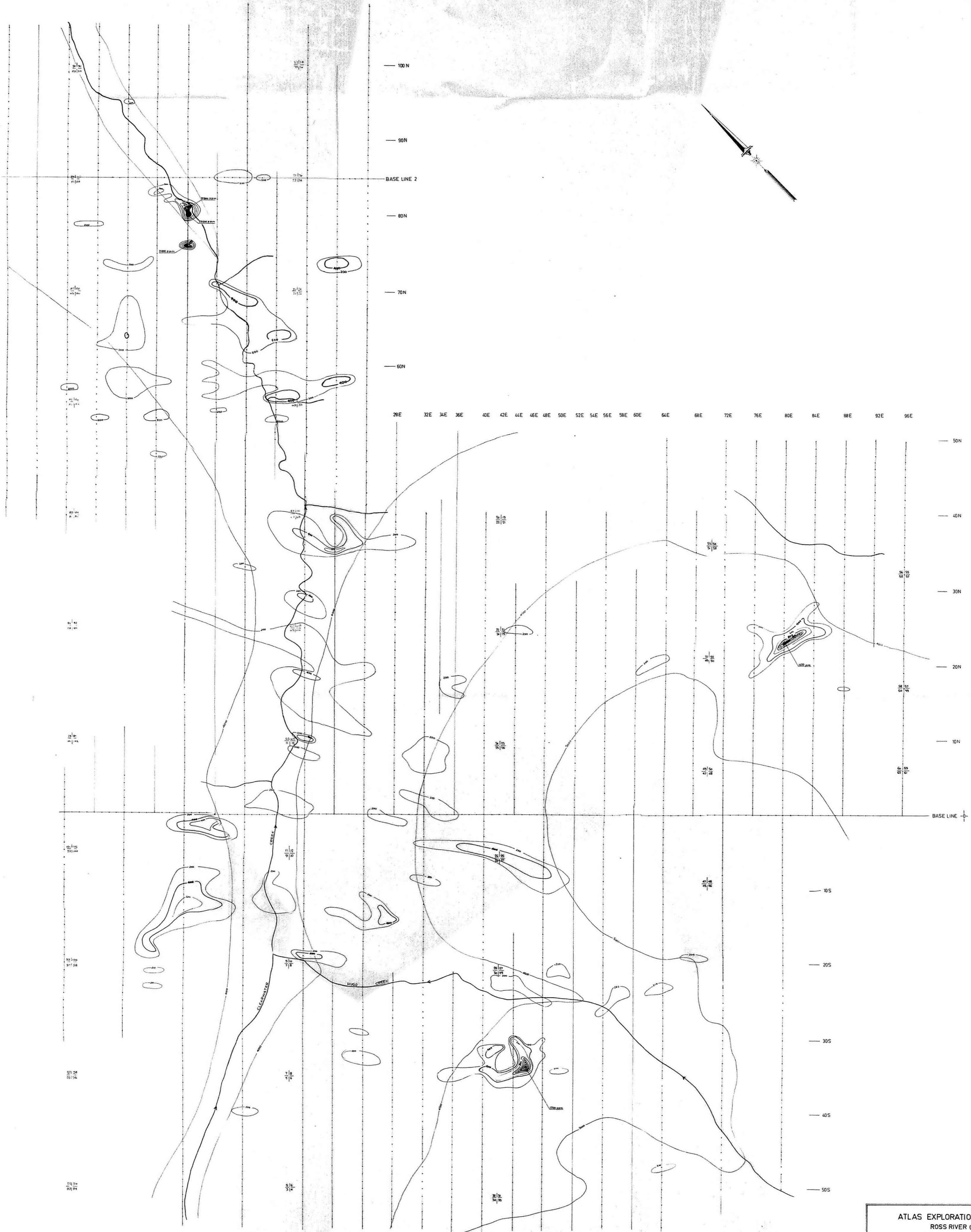


ATLAS EXPLORATIONS LIMITED  
 ROSS RIVER (Y.T.)  
 HESS REGION  
 LAD MINERAL CLAIM GROUP  
 GEOCHEMICAL SOIL SAMPLE SURVEY  
 LEAD CONTOURS

Fig 11

SCALE 1:50,000  
 DRAWN BY P.F. HALL  
 DATE 10/19/78

24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E



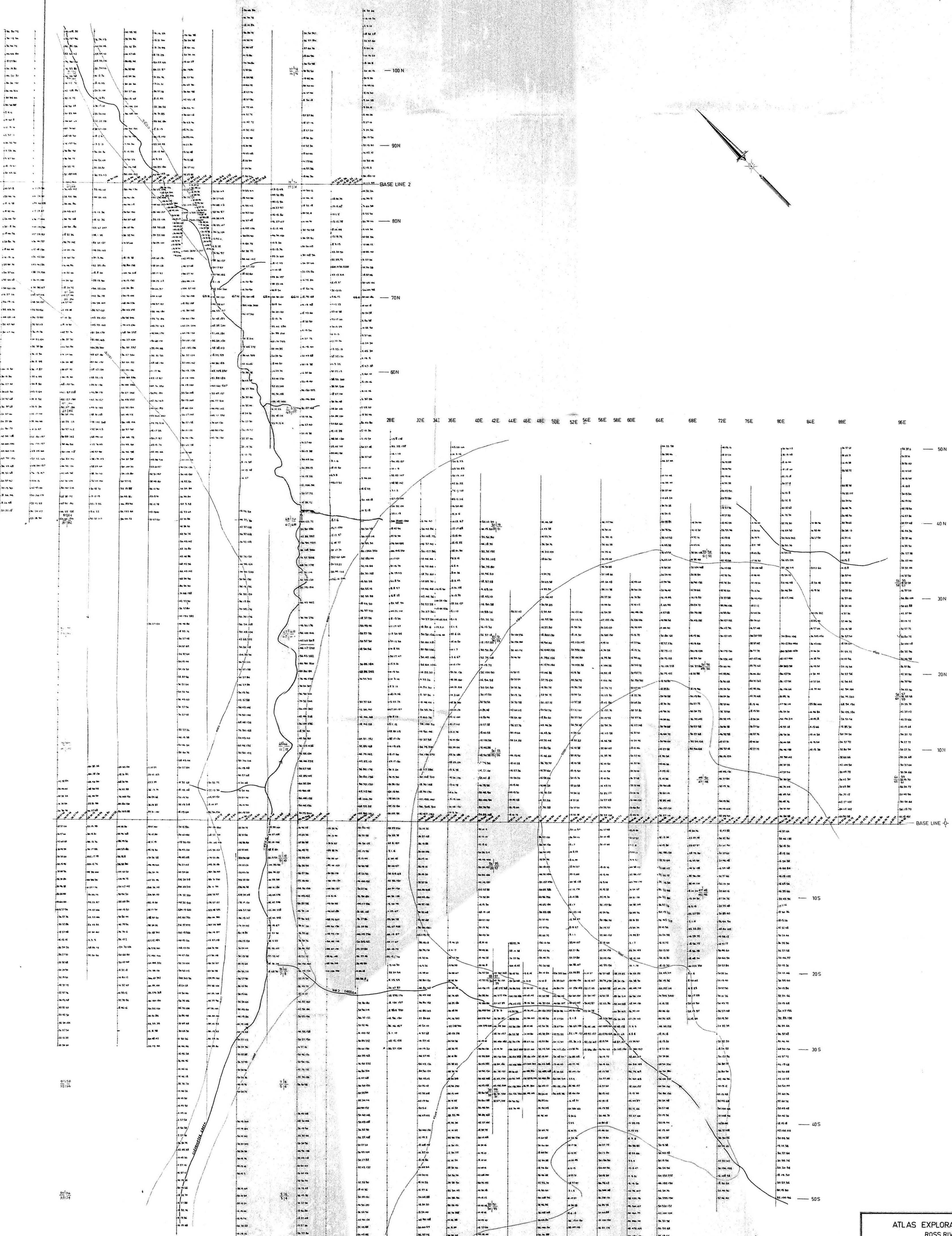
ATLAS EXPLORATIONS LIMITED  
 ROSS RIVER (V.T.)  
 HESS REGION  
 LAD MINERAL CLAIM GROUP  
 GEOCHEMICAL SOIL SAMPLE SURVEY  
 ZINC CONTOURS

PARTY CHIEF: T. ADAMSON  
 DRAWN BY: P. J. VILASVELD  
 DATE: OCTOBER 1964

fig. 12



24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E



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: I. JAMSON  
 DRAWN BY: P. J. FUSCO  
 DATE: SEPTEMBER '64

fig. 9