

GEOLOGICAL REPORT

LAD MINERAL CLAIM GROUP

(LAD 65-102)

Mayo Mining District
Yukon Territory

Longitude : 132°14' W.
Latitude : 62°57' N.

N.T.S. 105-K-16

Field work done during period
Sept. 10 - Sept. 28, 1968

By:

THOMAS J. ADAMSON

ATLAS EXPLORATIONS LIMITED

January 6th, 1969

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

J. P. Cray
RESIDENT GEOLOGIST

Approved as to cost in the amount
of: \$ 4,613⁰⁰/₁₀₀

J. B. Jowen
RESIDENT MINING ENGINEER

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

[Signature]
COMMISSIONER OF YUKON

LIST OF CLAIMS

<u>Claim Number</u>	<u>Grant Number</u>	<u>Date Recorded</u>
Lad 65-102	Y31259-Y31296	Sept. 10, 1968



NOTES: ONLY 800' SPACED GRID LINES SHOWN (INTERMEDIATE FILL-IN LINES NOT SHOWN)
 LAD # 1 GRID AREA LINE 16W TO 96E, 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: T.A. & P.V.
 DATE: DEC. 4/1968

SCALE IN FEET

0 1320 2640

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LIST OF CLAIMS

KEY MAP

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ATLAS EXPLORATIONS LIMITED

(N. P. L.)

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

GEOLOGICAL REPORT

LAD MINERAL CLAIM GROUP (LAD 65-102)

INTRODUCTION

The original Lad Group claims (3-12, 19-38, 45-62) were staked in September and October, 1967, to cover the area of three Ag, Pb, Zn, Cu showings, a number of sulphide float occurrences, and high lead results from reconnaissance soil and gossan sampling. Geological, geophysical and geochemical 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 for which this report is being submitted, 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 during the 1968 field season 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, 1968, 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.

Lad Claims 65-102 are located on both sides of the valley of Clearwater Creek. Elevation in the area of these claims ranges 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.

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

REGIONAL GEOLOGIC SETTING

The Lad Group lies northeast of a major northwest-southeast trending lineament along the South Macmillan River. This lineament resembles the Tintina Fault to the southwest. The area is underlain by northwesterly trending open to moderately tightly folded rocks.

A northwest-southeast trending intrusive belt consisting of two large granodiorite to quartz dioritic plutons (Mt. Armstrong and Mt. Selous) and numerous smaller marginal plutons is located just northeast and parallel to the South Macmillan lineament. The contact of the Mt. Selous pluton is about 2 miles west of the Lad Group.

Two major stratigraphic levels occur in the area: Proterozoic and Ordovician-Devonian. The Proterozoic rocks, mainly quartzite, phyllites and limestones occur in a Proterozoic arch trending along the Mt. Armstrong - Mt. Selous axis. The Ordovician-Devonian section is composed mainly of low grade, usually graphitic, metasediments. The most abundant rock types are graphitic cherts, shales and slates, and chert pebble conglomerate.

TABLE OF GEOLOGIC FORMATIONS

Cretaceous	1l	Granitic Intrusives
Ordovician-Devonian	3g	Red and green slates.
	3f	Grey bedded chert.
	3d	Chert, black slate pebble conglomerate, poorly cemented, rusty weathering.
	3a	Graphitic shales, cherts, greywackes.
Proterozoic	1c	Phyllite, grey to buff, very fissile, not rusty.
	1b	Limestone, grey, massive bedding, fine to medium grained, occurs in units of few feet to a few hundred feet in thickness
	1a	Quartzite, micaceous quartzite, quartz-sericite schist.

GEOLOGY OF GRID AREA AND MINERAL SHOWINGS

The geology of the north grid area was mapped on a scale of 1":400 ft. The mineral showings were mapped on larger scales.

Mapping was done in reference to a grid that was cut over the area of interest. Original 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 established on all lines.

Outcrop is very limited in this area except in the banks and bed of Clearwater Creek.

Proterozoic quartzite is by far the most abundant rock unit; with lesser amounts of Proterozoic limestone and phyllite. There are minor infolded Ordovician-Devonian sections composed of black shales and cherts, greenish phyllite, grey bedded chert and red and green slates. These Ordovician-Devonian units are seen mainly in the extreme northeast portion of the north grid area.

The strike of the above sediments ranges from about 120° to 150° with dips generally steep and to the northeast, but in some cases to the southwest.

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 LOE, 81N, is the best exposed of these showings. The main part of this showing, on the west side of Clearwater Creek, consists of two parallel, closely spaced, sulphide vein systems with skarn type mineralization. These veins are within a narrow limestone unit (35 ft.) bordered on both sides by quartzite. 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 and 2% Cu. Grab samples assay up to 37 oz/T. Ag, 18% Pb, 17% Zn and 4.5% Cu.

This structure is open to the west (overburden covered) and is covered by talus towards Clearwater Creek.

The structure does not, however, seem to cross Clearwater Creek. There is no sign of the limestone unit east of the creek, although in this area there are a number of quartz veins and shears in the quartzite carrying minor galena and chalcopyrite.

On both sides of Clearwater Creek, in this area, there occurs much fracturing and shearing in many different directions.

T. Skonseng, prospector, and an assistant, hand trenched and assay sampled the sulphide zones in the Showing F area. All assay samples, except for grab samples, were continuous chips taken across the structure. These samples were sent to either Coast Eldridge Ltd., or the Whitehorse Assay Office, and were assayed by standard methods.

Lad Showing G, is located on a small easterly tributary of Clearwater Creek, about 800 ft. up Clearwater Creek from Showing F. This showing consists of copper-lead-zinc-silver mineralization in and adjacent to shears in a skarny siliceous limestone unit. This showing also was further exposed, by hand trenching, and sampled by T. Skonseng and an assistant.

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 ft. Assays across this zone are quite low, averaging .5 oz./T. Ag, 5% Pb and .3% Zn.

GEOCHEMISTRY

Soil samples were taken at 100 ft. intervals on all lines (800 ft. and 400 ft. line spacing) in the north grid area. The results of the survey have 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 (F and G) have been found to coincide with the geochemical anomalies.

A small detailed soil sampling survey (100 ft. and 200 Ft. line spacing, 50 ft. sample spacing) was made to the southwest of Showing K. Anomalies extending 500 ft. plus to the southwest of the showing would seem to reflect the overburden covered continuation of the mineralized zone.

CONCLUSIONS AND RECOMMENDATIONS

Showing H is of only minor interest.

Although the assay results from Showing K are quite low, further prospecting and possible trenching should be done in the area of the geochemical anomaly extending from this showing.

Showings F and G must be further exposed with the use of a bulldozer.

Because of the excellent correlation between geochemical anomalies and sulphide mineralization seen in areas of some outcrop exposure, all of the anomalies in areas of overburden cover warrant further investigation.

Respectfully submitted,



T. J. Adamson

January 8th, 1969.



SUMMARY OF COSTSGEOLOGICAL REPORT - LAD 65-102 MINERAL CLAIMS
Period Sept. 10, 1968 - Jan. 8, 19691. Geological Mapping, Prospecting, Hand trenching and Sampling

1. (a)	Geologist - Project Chief	:	T. Coates	
	(b) Geologist - Party Chief	:	T. Adamson	
	(c) Prospector	:	T. Skonseng	
	(d) Prospector's helpers	:	E. Dick	
		:	M. Atkinson	
		:	M. Ladue	
2. (a)	Wages:			
	2 man days @\$30.00, daily wage of T. Coates		60.00	
	9 man days @\$23.00, daily wage of T. Adamson		207.00	
	19 man days @\$21.00, daily wage of T. Skonseng		399.00	
	20 man days @\$20.00, daily wage of natives		<u>400.00</u>	\$1,066.00
(b)	Helicopter Support:			
	9.9 hrs. @\$120.00 hr.			1,188.00
	Fuel - 17 gal/hr. = 168.3 gal. @\$1.65/gal.			278.00
(c)	Fixed-Wing Support			221.00
(d)	Subsistence Cost:			
	50 man days @\$8.00/man day			400.00
(e)	Supplies and Misc. Equipment			25.00
(f)	Assaying Costs			665.00
(g)	Interpretation & Report Presentation			
	Drafting: 4 man days @\$19.00, daily wage of P. Vlasveld			76.00
	Report Writing: 4 man days @\$23.00, daily wage of T. Adamson			92.00
(h)	Overhead - 15% of total			<u>602.00</u>
	.15 x \$4,011.00			
	TOTAL COST OF GEOLOGICAL SURVEY (Lad 65-102)			\$ <u>4,613.00</u>
	(Mapping, Prospecting, Hand Trenching, Sampling)			

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 ("Geological Report - Lad 65-102 Mineral Claim Group"- Appendix I) is both correct and true.



T. J. Adamson



Date

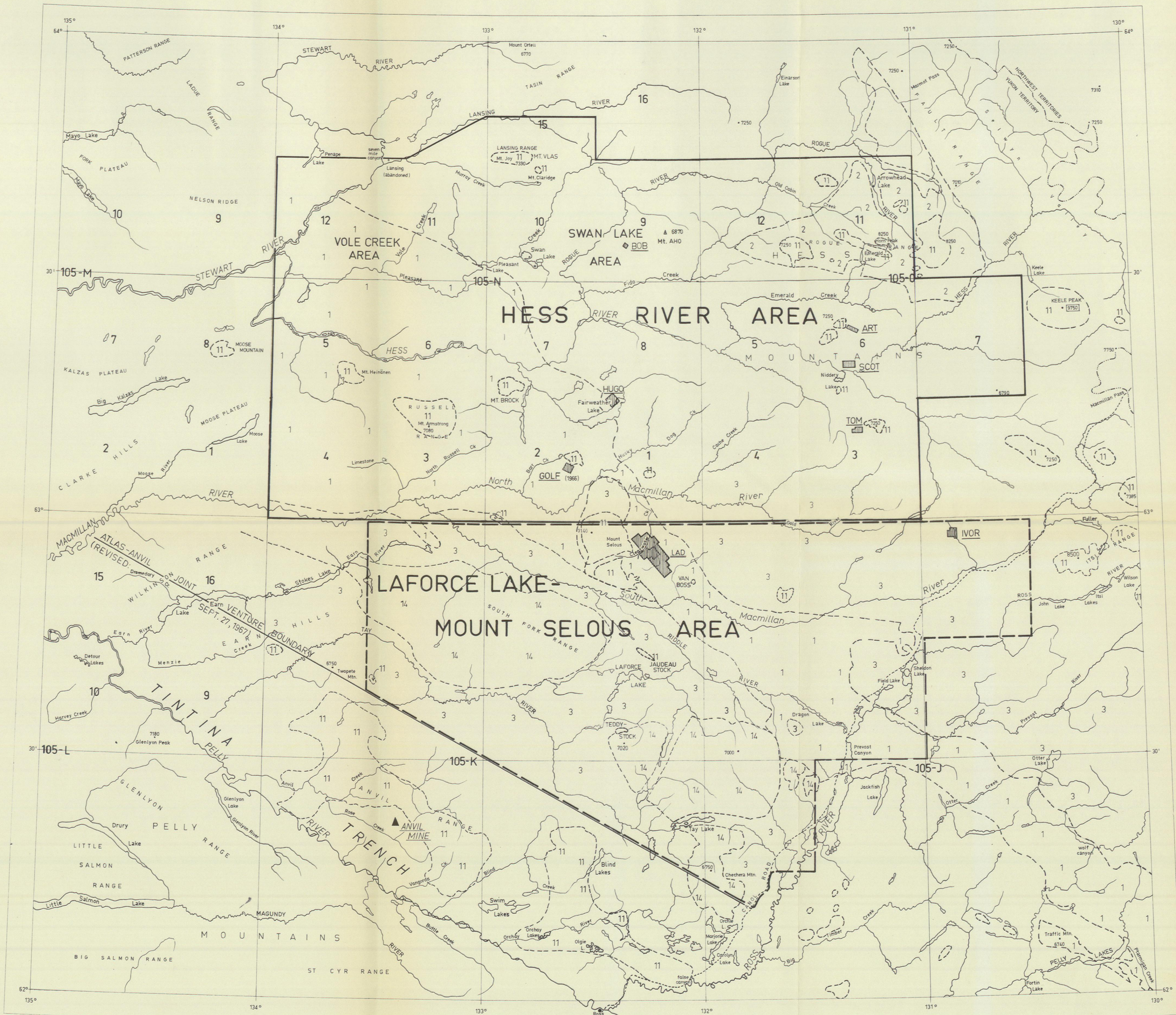


Commissioner of Oaths in
and for the Yukon Territory

LIST OF PERSONNEL
LAD GROUP (65-102) GEOLOGICAL SURVEY

T. Coates	Geologist	Vancouver, B.C.
T. Adamson	Geologist	Vancouver, B.C.
T. Skonseng	Prospector	Ross River, Y.T.
E. Dick	Prospector's Asst.	Ross River, Y. T.
W. Atkinson	Prospector's Asst.	Ross River, Y.T.
M. Ladue	Prospector's Asst.	Ross River, Y.T.
P. Vlasveld	Draftsman	Vancouver, B.C.

— HESS PROJECT —

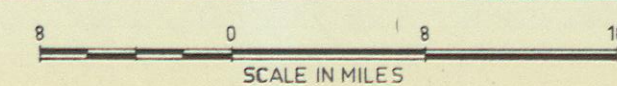


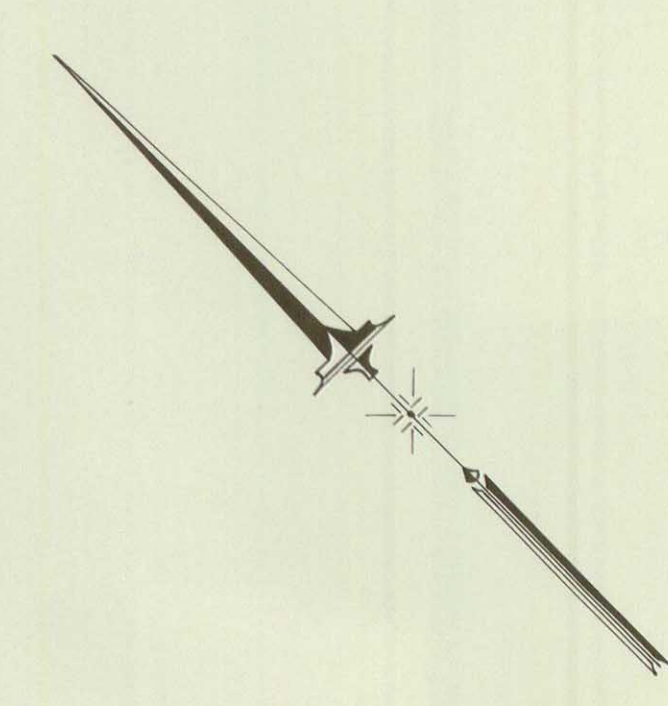
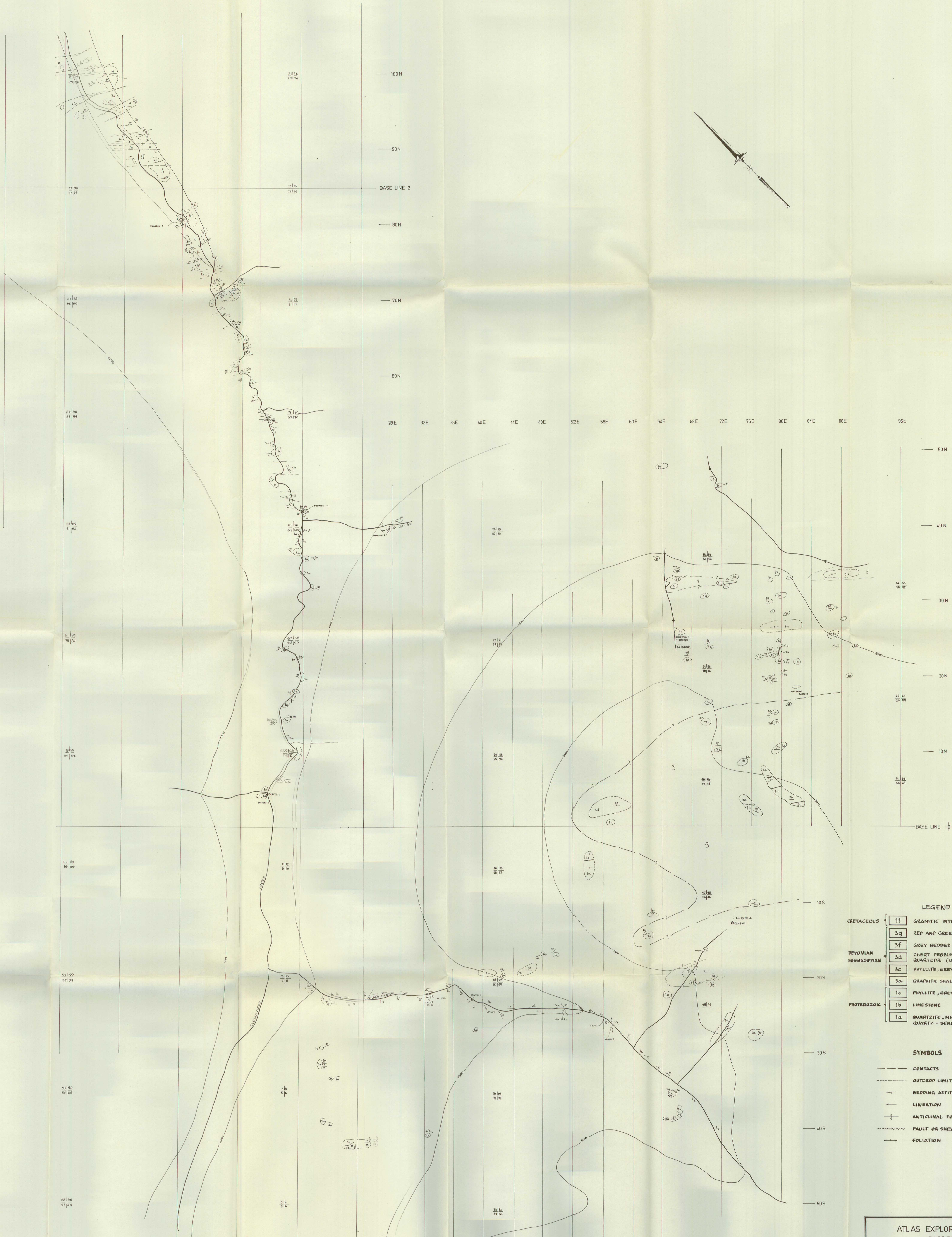
LEGEND

- | | | | |
|----|---|-----|---|
| 14 | Volcanic rocks; Porphyry (Tertiary) | 2 | Varicolored Slates, Chert, Siltstone (Ordovician-Silurian) |
| 11 | Intrusive rocks; Granodiorite, Quartz-monzonite. (Cretaceous) | 1 | Yukon Group; Quartzite, Phyllite, Conglomerate, Limestone, Slate. (Proterozoic) |
| 3 | Graphitic Argillites, Chert, Greywacke (Devonian-Mississippian) | ■ | Claim group |
| | | --- | Geologic boundary (Approximate) |

ATLAS EXPLORATIONS LIMITED
ROSS RIVER (Y.T.)

MAP SHOWING LOCATION AND GENERAL GEOLOGY OF HESS RIVER AND LAFORCE LAKE-MOUNT SELOUS AREAS





LEGEND

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

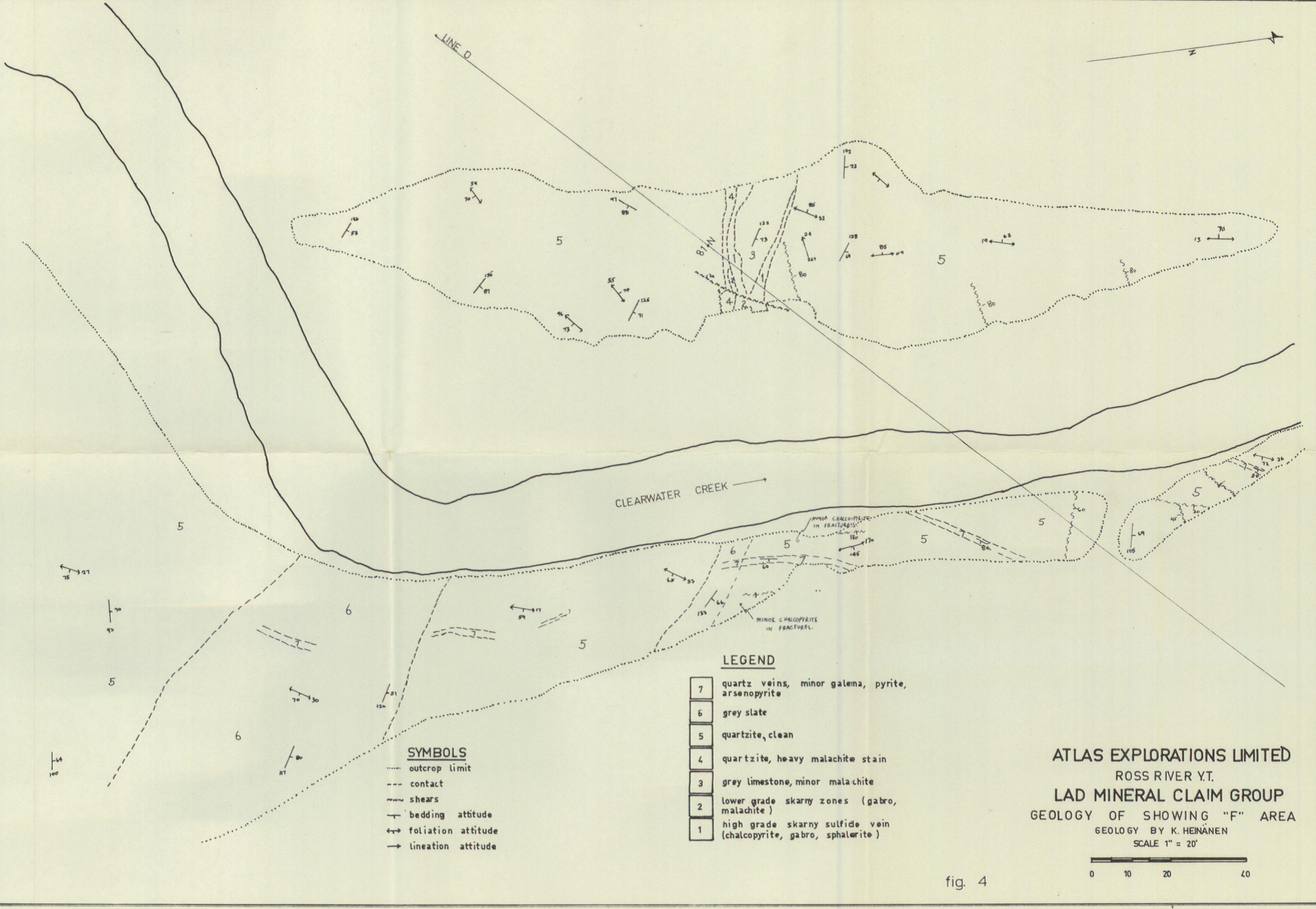
SYMBOLS

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

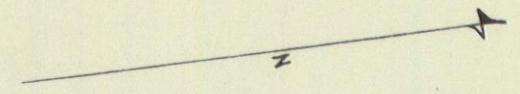
ATLAS EXPLORATIONS LIMITED
 ROSS RIVER (V.T.)
 HESS REGION
 LAD MINERAL CLAIM GROUP
 GRID GEOLOGY
 (OUTCROP MAP)

GEOLGY BY: T. ADAMSON
 DRAWN BY: P.J.F. VASFIELD
 DATE: OCTOBER 9/88

fig. 3



LINE D



CLEARWATER CREEK

LEGEND

- 7 quartz veins, minor galema, pyrite, arsenopyrite
- 6 grey slate
- 5 quartzite, clean
- 4 quartzite, heavy malachite stain
- 3 grey limestone, minor malachite
- 2 lower grade skarny zones (gastro, malachite)
- 1 high grade skarny sulfide vein (chalcopryite, gastro, sphalerite)

SYMBOLS

- outcrop limit
- contact
- ~~~~~ shears
- bedding attitude
- ↔ foliation attitude
- lineation attitude

ATLAS EXPLORATIONS LIMITED
 ROSS RIVER Y.T.
 LAD MINERAL CLAIM GROUP
 GEOLOGY OF SHOWING "F" AREA
 GEOLOGY BY K. HEINÄNEN
 SCALE 1" = 20'

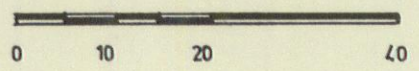
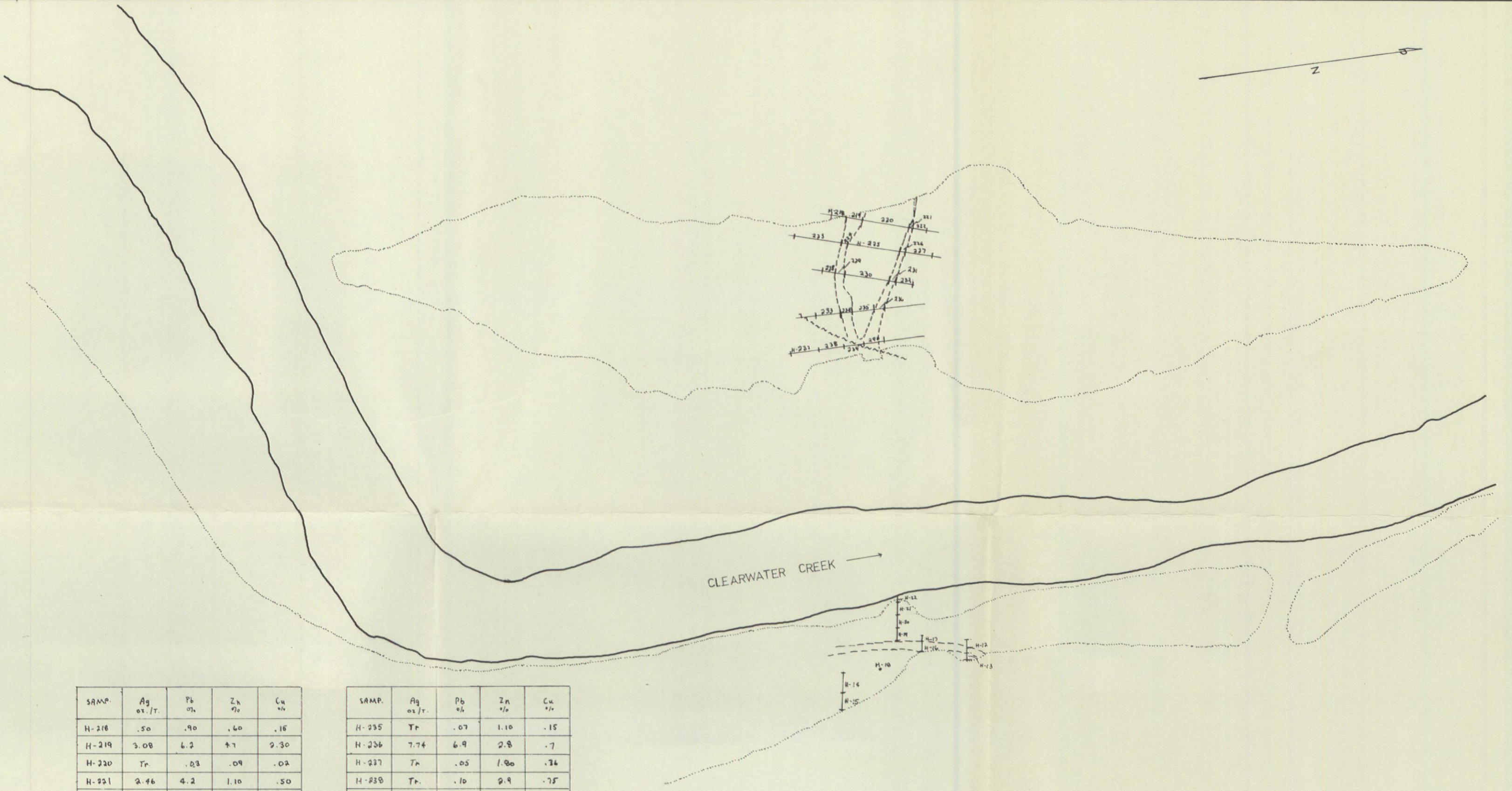
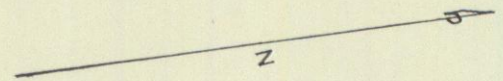


fig. 4



SAMP.	Ag oz./T.	Pb %	Zn %	Cu %
H-218	.50	.90	.60	.16
H-219	3.08	6.2	4.7	2.30
H-220	Tr.	.03	.09	.02
H-221	2.46	4.2	1.10	.50
H-222	.02	.15	.30	.08
H-223	.10	.04	.37	.05
H-224	6.49	5.8	.93	.50
H-225	Tr.	.05	.36	.08
H-226	5.06	5.8	2.1	1.45
H-227	.38	.36	.21	.06
H-228	Tr.	.02	1.20	.12
H-229	3.30	5.4	2.8	1.15
H-230	Tr.	.02	.05	Tr.
H-231	1.40	1.30	2.9	.48
H-232	.24	.20	.70	.18
H-233	Tr.	.09	1.15	.25
H-234	7.52	7.7	5.5	4.40

SAMP.	Ag oz./T.	Pb %	Zn %	Cu %
H-235	Tr.	.07	1.10	.15
H-236	7.74	6.9	2.8	.7
H-237	Tr.	.05	1.80	.74
H-238	Tr.	.10	2.9	.75
H-239	6.32	4.0	4.9	1.82
H-240	11.62	8.0	8.9	3.73
H-12	8.6	13.08	0.20	0.02
H-13	7.3	5.75	2.49	0.20
H-14	1.6	0.51	0.53	0.60
H-15	1.8	0.29	0.68	0.34
H-16	2.1	1.88	0.53	0.12
H-17	9.0	4.55	3.22	0.37
H-18	19.4			
H-19	1.6	1.56	0.38	0.13
H-20	0.85	0.78	0.60	0.18
H-21	0.28	0.27	0.23	0.07
H-22	0.13	0.14	0.30	0.05

Au 0.02

LAD MINERAL CLAIM GROUP

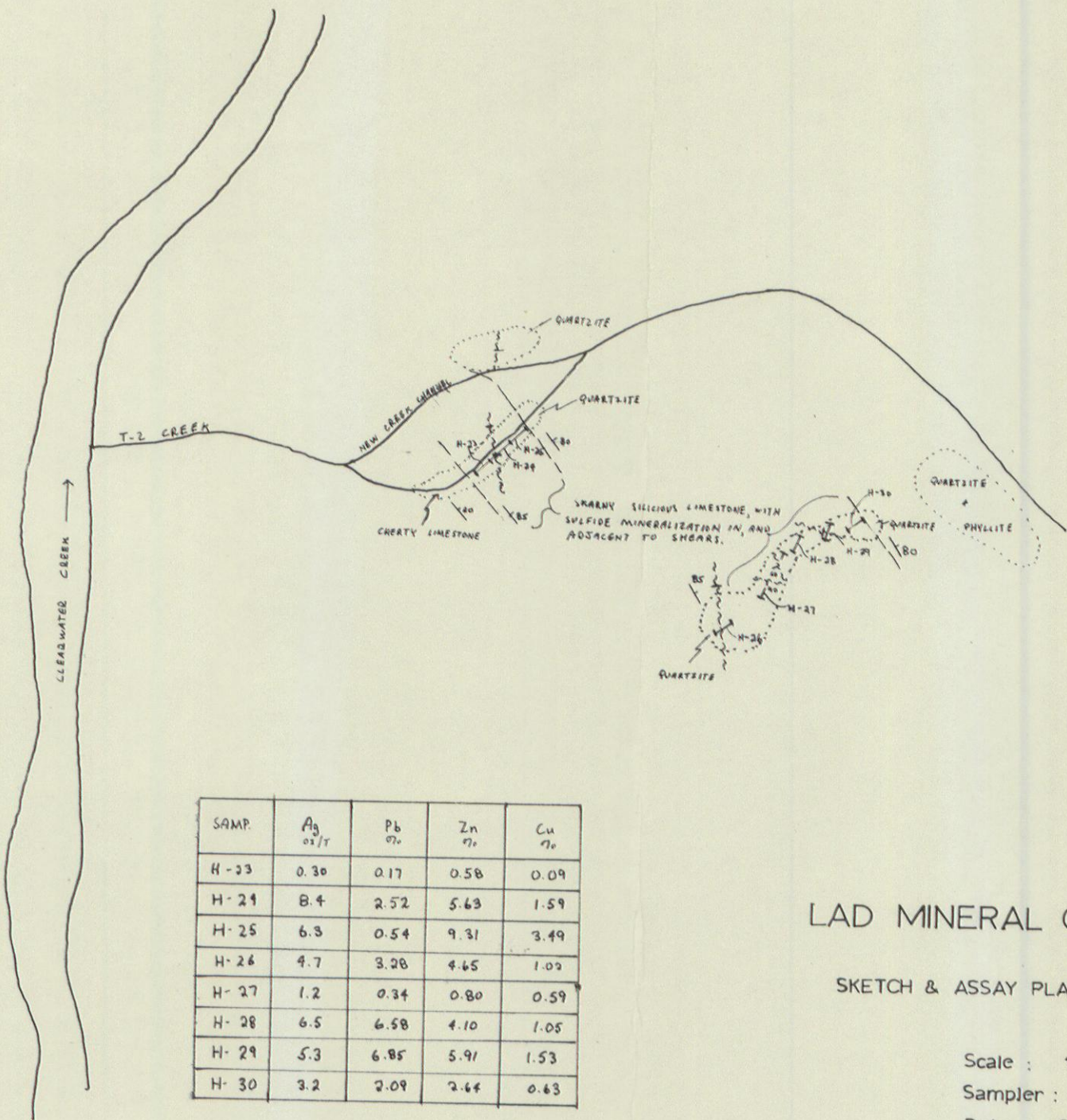
ASSAY PLAN — SHOWING 'F'

Scale : 1" = 20'

Sampler: K Heinänen

Date : Sept., 1968.

fig. 6



SAMP.	Ag oz/T	Pb oz.	Zn oz.	Cu oz.
H-23	0.30	0.17	0.58	0.09
H-24	8.4	2.52	5.63	1.59
H-25	6.3	0.54	9.31	3.49
H-26	4.7	3.28	4.65	1.02
H-27	1.2	0.34	0.80	0.59
H-28	6.5	6.58	4.10	1.05
H-29	5.3	6.85	5.91	1.53
H-30	3.2	2.09	2.64	0.63

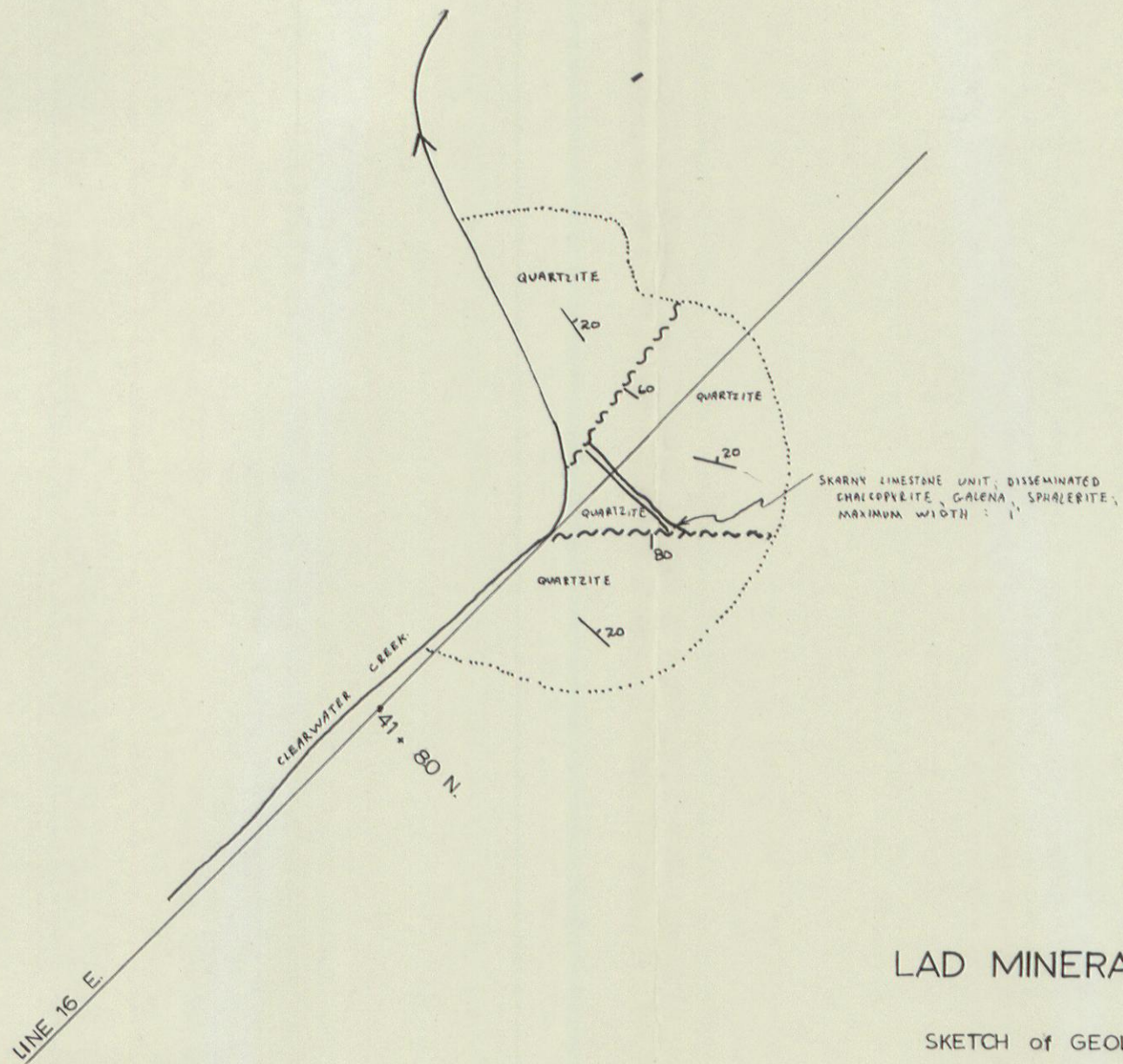
LAD MINERAL CLAIM GROUP

SKETCH & ASSAY PLAN — SHOWING "G"

Scale : 1" = 50'

Sampler : T. Skonseng

Date : Sept., 1968



LAD MINERAL CLAIM GROUP

SKETCH of GEOLOGY — SHOWING "H"

Scale : 1" = 10'

Date : Sept, 1968