COMPILATION REPORT ON THE

BILL-PELLY MINERAL CLAIM GROUP

PELLY LAKES AREA

Watson Lake Mining Division
Yukon Territory

June 13 - August 29, 1967

N.T.S. 105-J-1

Longitude 130°10' West

Latitude 62°04' North

By:

Wayne J. Roberts

ATLAS EXPLORATIONS LIMITED

March 1970

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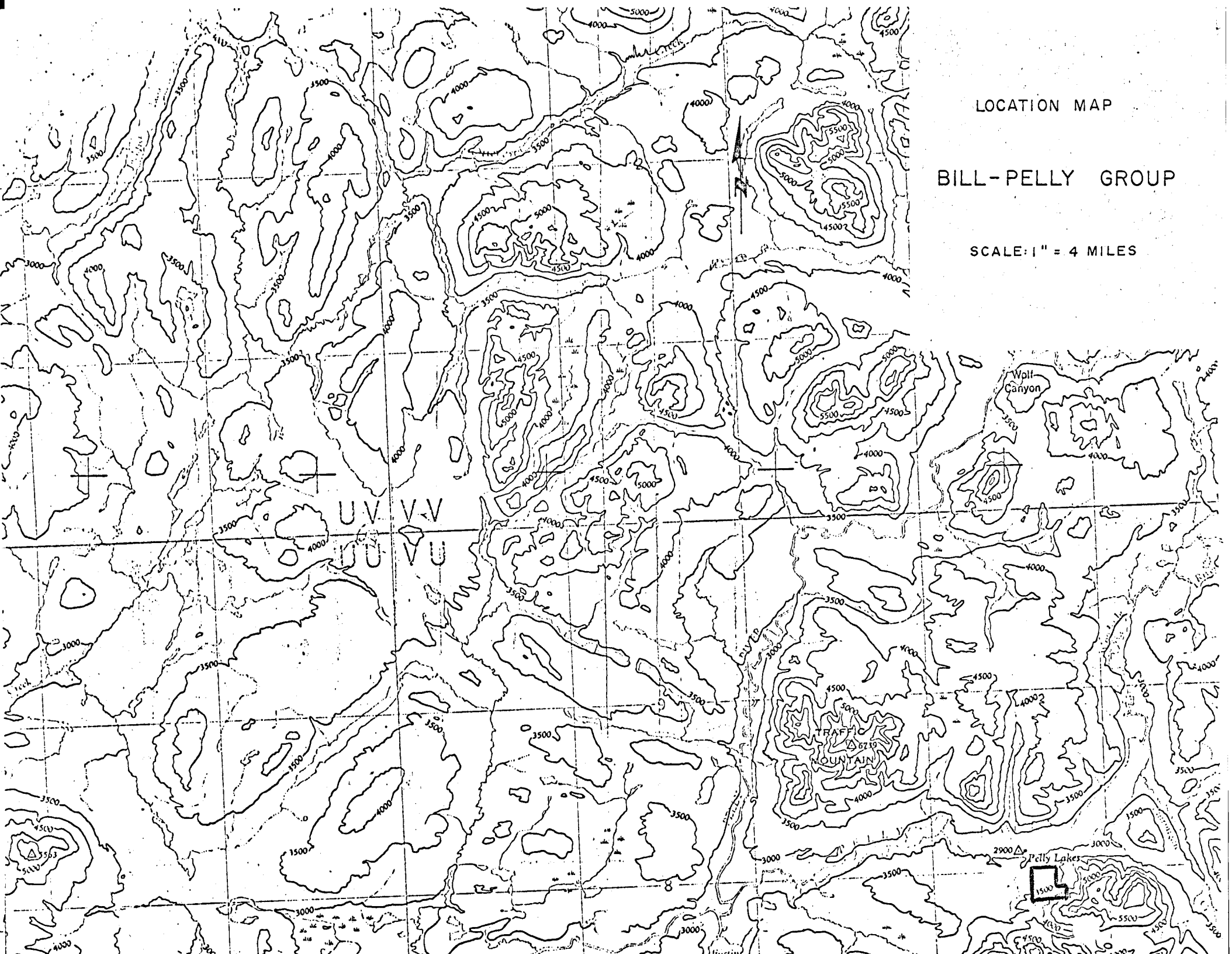
ILLUSTRATIONS


LOCATION MAP
BILL-PELLY GROUP
SCALE: 1" = 4 MILES
Wolf Canyon
TRAFFIC MOUNTAIN
6739
Pelly Lakes
2900
5563

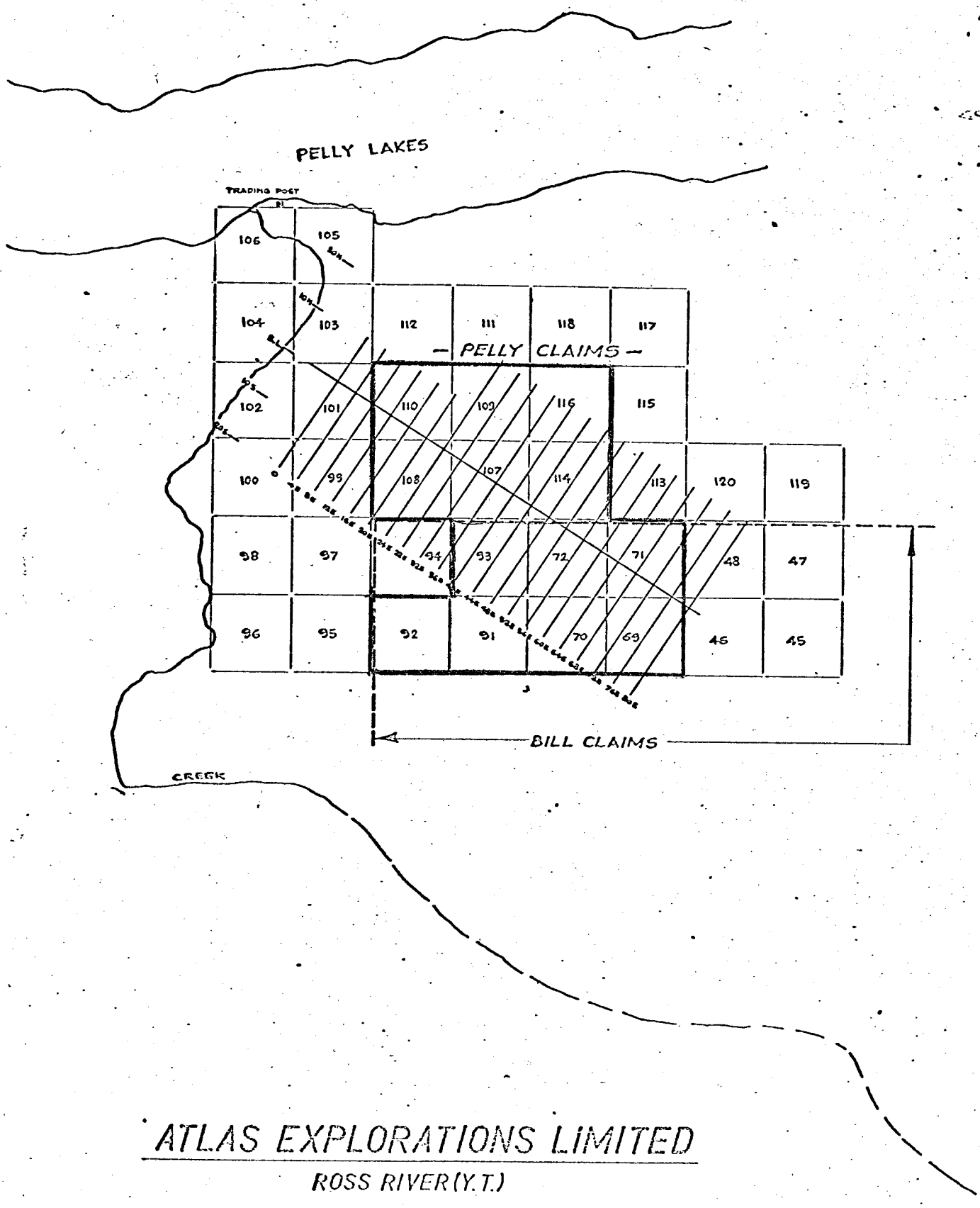
LIST OF CLAIMS

Claim Number	Grant Number	Date Recorded
Bill 69-72	Y16701-Y16704	October 17, 1966
Bill 91-93	Y16723-Y16725	October 17, 1966
Pelly 107-110	Y19002-Y19005	August 11, 1967
Pelly 114	Y19009	August 11, 1967
Pelly 116	Y19011	August 11, 1967

TRAFFIC MOUNTAIN REGION

KEY MAP OF BILL CLAIMS + GRID

SCALE 1" = 1/2 MILE



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ROSS RIVER (Y.T.)

DRAWN BY: P.V.

105-J-1

TELEPHONE 685-4331

ATLAS EXPLORATIONS LIMITED

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

COMPILATION REPORT ON THE BILL-PELLY MINERAL CLAIM GROUP PELLY LAKES AREA

By

Wayne J. Roberts

INTRODUCTION

The Bill Group was staked in October, 1966, to cover an area of high copper, lead and zinc geochemical results discovered as a result of reconnaissance soil sampling in a region of favourable geology. A cut grid was established and detailed geological, geochemical and geophysical surveys were used to assess the property.

LOCATION AND ACCESS

The Bill-Pelly Group is located at and to the southeast of an abandoned trading post on the south side of Pelly Lakes, about 75 air-line miles east of Ross River.

The Group may be reached by float aircraft, landing on Pelly Lakes, or by tote trail. The Atlas Tote Trail leaves the Watson Lake-Ross River Road northwest of Finlayson Lake and reaches the claim group at about mile 43. The road may be used by bombardier in the summer or by 4-wheel drive truck in the winter.

TOPOGRAPHY AND GROUND CONDITIONS

The Bill-Pelly Group lies generally in an area of rugged mountain topography within which outcrop is abundant. Much of the grid area, however, is at the base of the mountain on a gradually sloping north-facing slope. The slope is covered by alluvium and glacial moraine. Elevations average 3,500 feet and vegetation is typical sub-alpine.

TABLE OF GEOLOGIC FORMATIONS

Cretaceous (?)	7	Granodiorite
Devonian (?)	6	Grey limestone
		6a - black limestone breccia and quartz-mica schist
	5	Grey chert
		5a - grey limestone
	4	Black chert - black phyllite
		4a - black phyllite
	3	Grey dolomite
		3a - white quartzite
		3b - black phyllite
	2	Black chert
		2a - grey dolomite
		2b - grey quartzite and black phyllite
Proterozoic (?)	1	Grey phyllite
		1a - grey quartzite

REGIONAL GEOLOGY

The Bill-Pelly Group is underlain by a steeply dipping, N70°W striking sequence of interbedded black cherts, black slates, dolomites and quartzites (of probable Devonian age). The sequence lies with conformity on a thick unit of grey phyllite of probable Proterozoic age. The Devonian (?) sequence occurs along the eastern limb of a tight, gentle westerly-plunging anticline cored by the Proterozoic (?) phyllites. The east margin of the claim group is underlain by granodiorite which intrudes the metasediments.

There are two strong directions of regional fracturing present. A N70°W striking set of either reverse or normal faults has caused dip-slip displacements between large blocks. A northeasterly trending set parallels the Pelly Lakes lineament and has caused apparent strike slip movements.

DETAILED GEOLOGY

The southern portion of the claim group was geologically mapped on a scale of 1" = 1000'. The area consists of five conformable major units of phyllite (oldest), black chert, dolomite, black chert - black phyllite and grey chert (youngest). Minor interbeds of quartzite, limestone, limestone breccia and quartz-mica schist occur throughout the sequence. The sediments strike approximately N70°W and dip steeply to the

northeast, except in areas of local faulting.

The units are cut by a body of medium grained granodiorite that underlies a steep ridge along the eastern portion of the claim group. Metasomatism is not pervasive and consists mainly of pyritization of the sediments within an aureole of a few hundred feet.

The rocks are cut by at least two northeasterly-trending faults of probable strike-skip displacement. Beds near the faults are disrupted and detail structure is very complex.

ECONOMIC GEOLOGY

Small vein shoarings occur scattered along the two faults to the north as shown on the accompanying geology map. Only two showings of significance were located. One is a lead-zinc breccia filling in black limestone breccia in which a grab sample assayed 3.65 percent combined Pb-Zn. Another showing consisted of a replacement Pb-Zn ore in dolomite, averaging 3.05 percent combined PbZn. It may be observed on the accompanying geology and geochemical maps that the former showing occurs downslope from an elongate zinc geochemical anomaly. Furthermore, this large geochemical anomaly occurs on-strike with an underlying dolomite unit, similar to the "host dolomite" unit for zinc mineralization on the nearby Pay Group, presently being assessed by Atlas.

GEOCHEMICAL SURVEYS

Results and Conclusions

Statistical determinations of background and threshold values were not undertaken, however, approximate threshold values were used to determine anomalous zones.

Four isolated anomalies were located within which values range from 600 to over 2300 ppm zinc. The largest anomaly, located between lines 28E and 68E, is elongate and narrow averaging approximately 500 feet in width. It is believed that the main as well as the smaller zinc geochemical anomalies indicate the presence of zinc mineralization.

Lead geochemical results are nowhere markedly anomalous although slightly higher values can in places be related to zinc highs. It is believed that the depth of overburden over most of the grid is too great for detection of the lead dispersion.

Higher copper values also occur within areas of anomalous zinc values.

GEOPHYSICAL SURVEYS

Results and Conclusions

A northwesterly-trending electromagnetic anomaly located between line 64E and 48E, stations 4S to 12S, is thought

to be caused by an underlying black chert and black phyllite unit. Termination of the conductor at its northwest end is probably due to faulting as shown on the geologic map.

There is also a high intensity positive response on line 68E, 4S in the vicinity of known sulphide mineralization. It is possible that this may indicate a narrow vertical conductor and massive sulphides.

A broad irregular conductive zone, as represented by negative tip angles recorded between lines 80E and 44E, is thought to be caused by carbonaceous units although there is no geologic evidence.

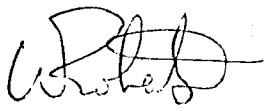
A magnetic anomaly delineated between lines 80E and 60E from stations 4S to 16S containing four isolated magnetic "highs", appears to be partially coincident with one of the electromagnetic anomalies but does not seem to be related to any geochemical evidence. Local concentrations of magnetic sulphide mineralization within the area probably explain the magnetic "highs".

CONCLUSIONS AND RECOMMENDATIONS

The geochemical anomalies on the Bill-Pelly Claim Group are believed to be very significant and, with the presence of

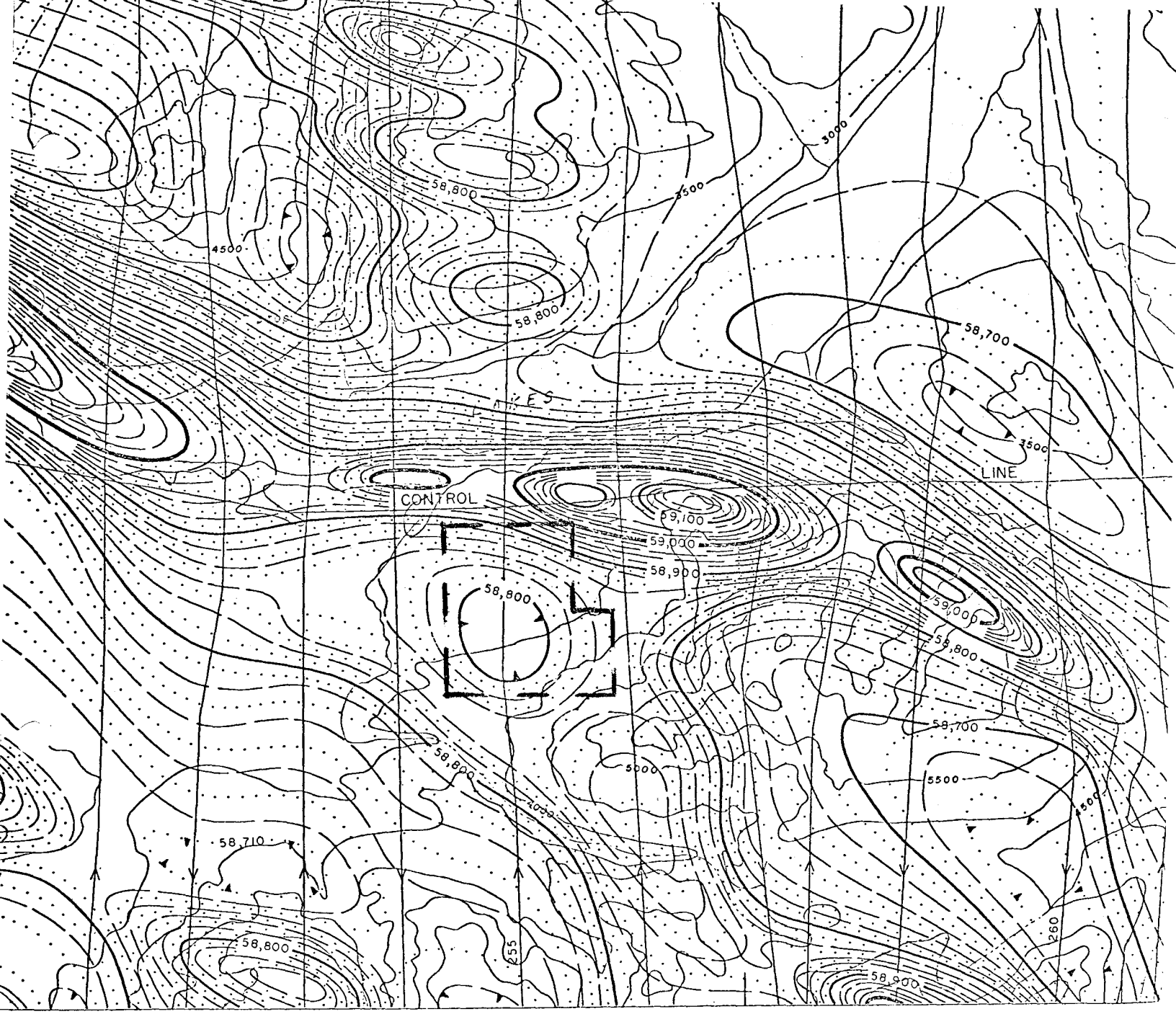
favourable geology, suggest the presence of a potentially economic concentration of sulphides. It is recommended that trenching and diamond drilling be used in the area of the magnetic anomalous zones to fully assess the potential of the property.

Respectfully submitted,



Wayne J. Roberts,
Geologist.

March 1970



1407G "105 G/16"

10'

05'

MAP 4400 G

PELLY LAKES

YUKON TERRITORY

Scale: One Inch to One Mile = $\frac{1}{63,360}$

Miles

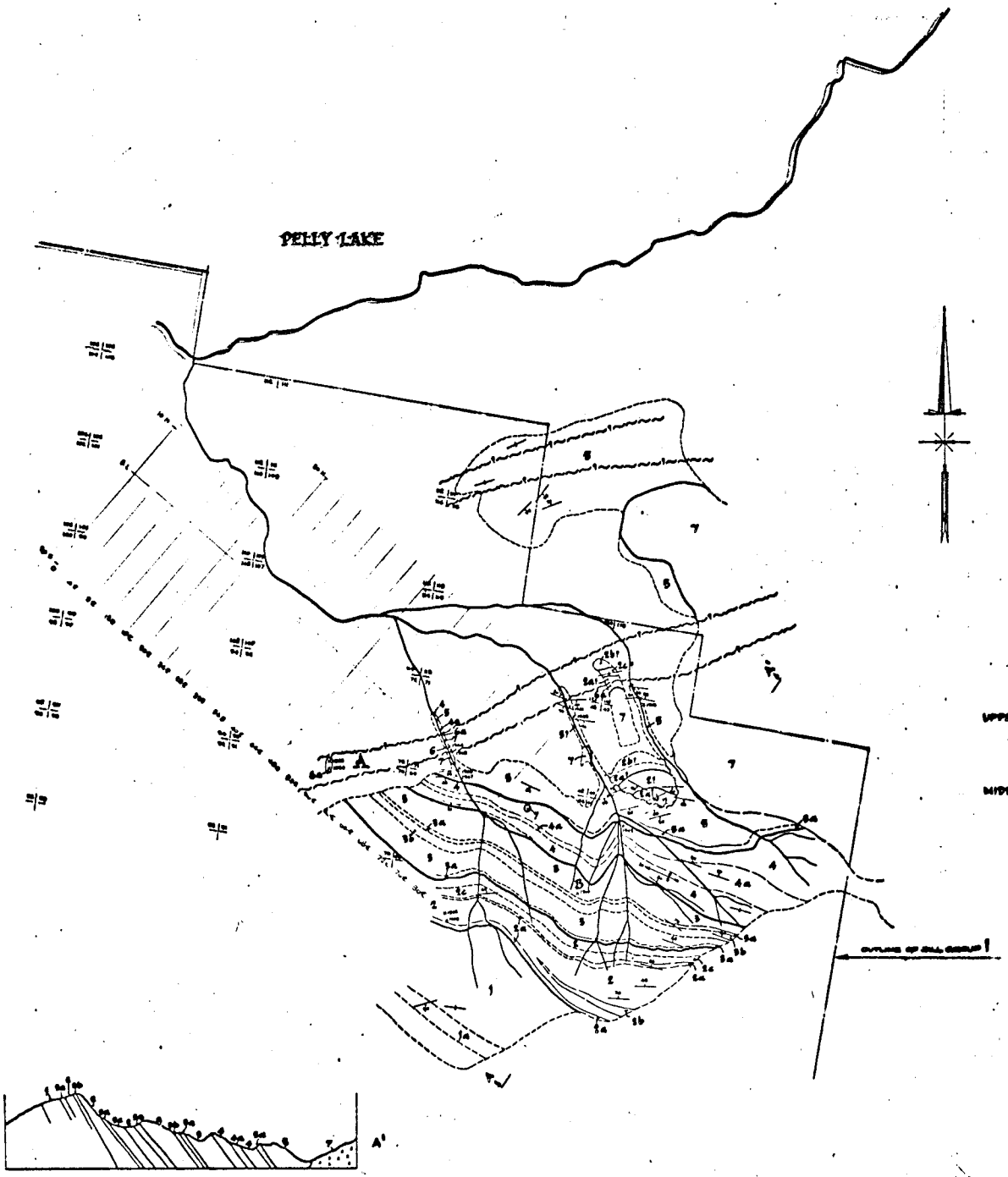
1 ½ 0 1 2 3

COPIES OF THIS MAP MAY BE OBTAINED FROM THE DIRECTOR, GEOLOGICAL SURVEY OF CANADA, OTTAWA

Magnetic survey, March 1968 to June 1968 by Aero Ph...

No correction has been made for regional variation

The planimetry for this map was obtained from topographical map sheets published by the Department of Energy, Mines and Resources



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ROSS RIVER (YT)

BILL GROUP GEOLOGY

(PHOTO OVERLAY OF # A-17189-197)
1000' : 1"

GEOLOGY : C.L. SMITH & E. DUNSMORE
DATE : JULY 1967
SCALE 1"=1000'

SYMBOLS :

- OUTCROP OUTLINE
- UNIT CONTACTS
- MEMBER CONTACT
- APPROXIMATE MEMBER CONTACT
- INFERRED MEMBER CONTACT
- FAULTS
- BEDDING

LEGEND :

CRETACEOUS (?)	7	GRANODIORITE
UPPER DEVONIAN	6	GRAY LIMESTONE ; 6a BLACK LIMESTONE BRECCIA AND QUARTZ-MICA SCHIST.
	5	GRAY CHERT ; 5a GRAY LIMESTONE
	4	BLACK CHERT- BLACK PHYLLITE ; 4a BLACK PHYLLITE
	3	GRAY DOLOMITE ; 3a WHITE QUARTZITE ; 3b BLACK PHYLLITE
	2	BLACK CHERT ; 2a GRAY DOLOMITE ; 2b GRAY QUARTZITE ; BLACK PHYLLITE
MIDDLE UPPER CAMBRIAN	1	GRAY PHYLLITE ; 1a GRAY QUARTZITE

MAIN SHOWINGS

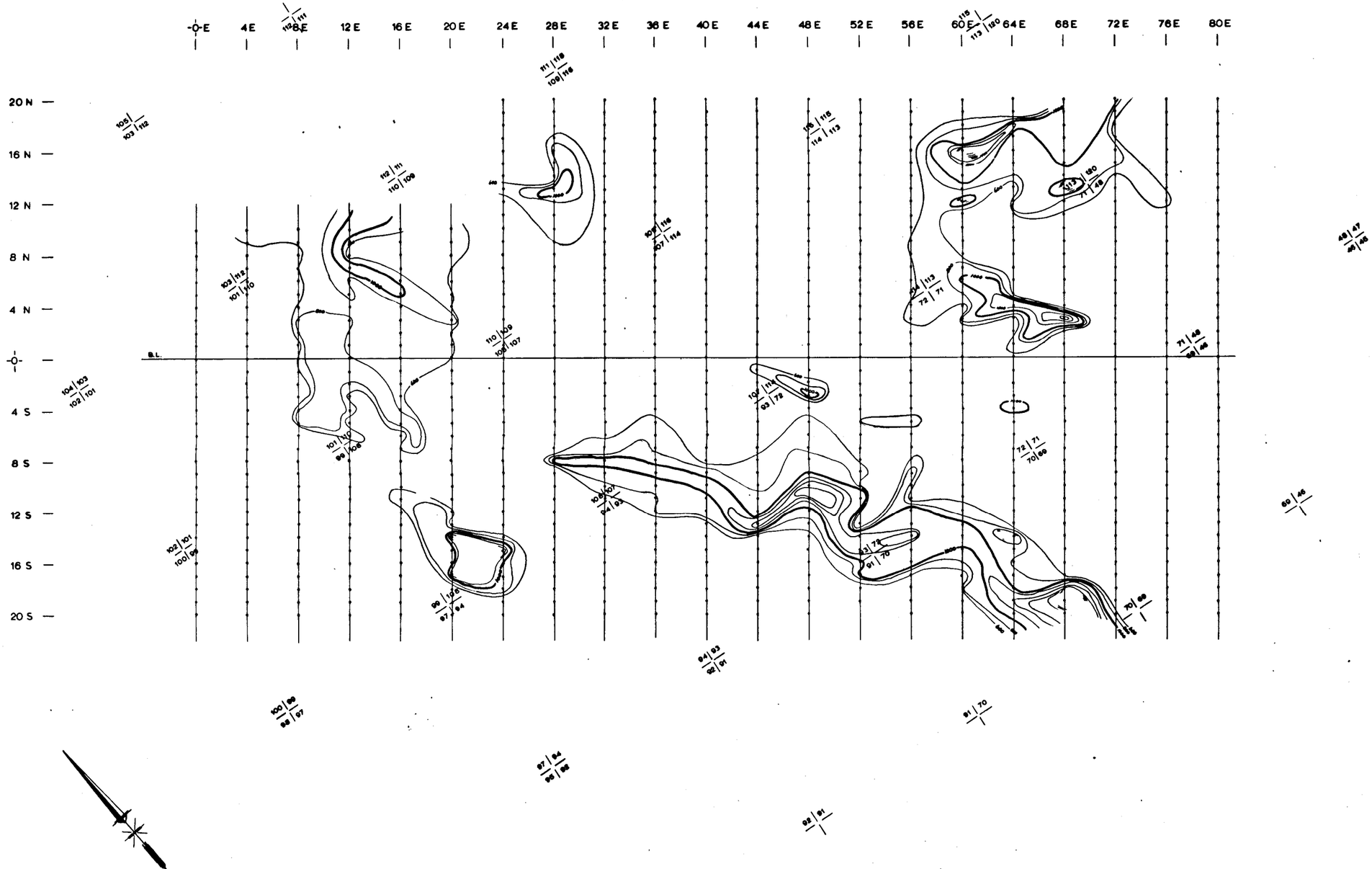
A — SMALL Pb-Zn MATRIX FILLING IN LIMESTONE BRECCIA

B — SMALL Pb-Zn REPLACEMENT ZONE IN DOLOMITE

ASSAYS :

	RESULTS				
	Au	Ag	Cu	Pb	Zn
P V 1901		.25	.01	.04	.01
V 1902		.05	.01	.02	.10
V 1903		Nil	.01	.02	.10
V 1904	Tr.	.11	.005	.02	.05
V 1905	Tr.	.10	.004	Nil	.004
V 1906		Nil	.005	.007	.01
V 1907	Tr.	Nil	.005	.015	.02

	RESULTS				
	Au	Ag	Cu	Pb	Zn
V 1908		.16	.07	.015	.005
V 1909	Tr.	.57	.005	.005	.005
V 1910		.06	.004	1.40	5.20
V 1911		.15	.004	.15	.007
V 1912		Nil	.004	.005	.015
V 1913		.15	.016	1.15	1.50
V 1914	Tr.	.15	.015	1.50	5.20



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ROSS RIVER (Y.T.)

SHELDON REGION

BILL MINERAL CLAIMS

GEOCHEMICAL SOIL SAMPLING SURVEY

ZINC CONTOURS

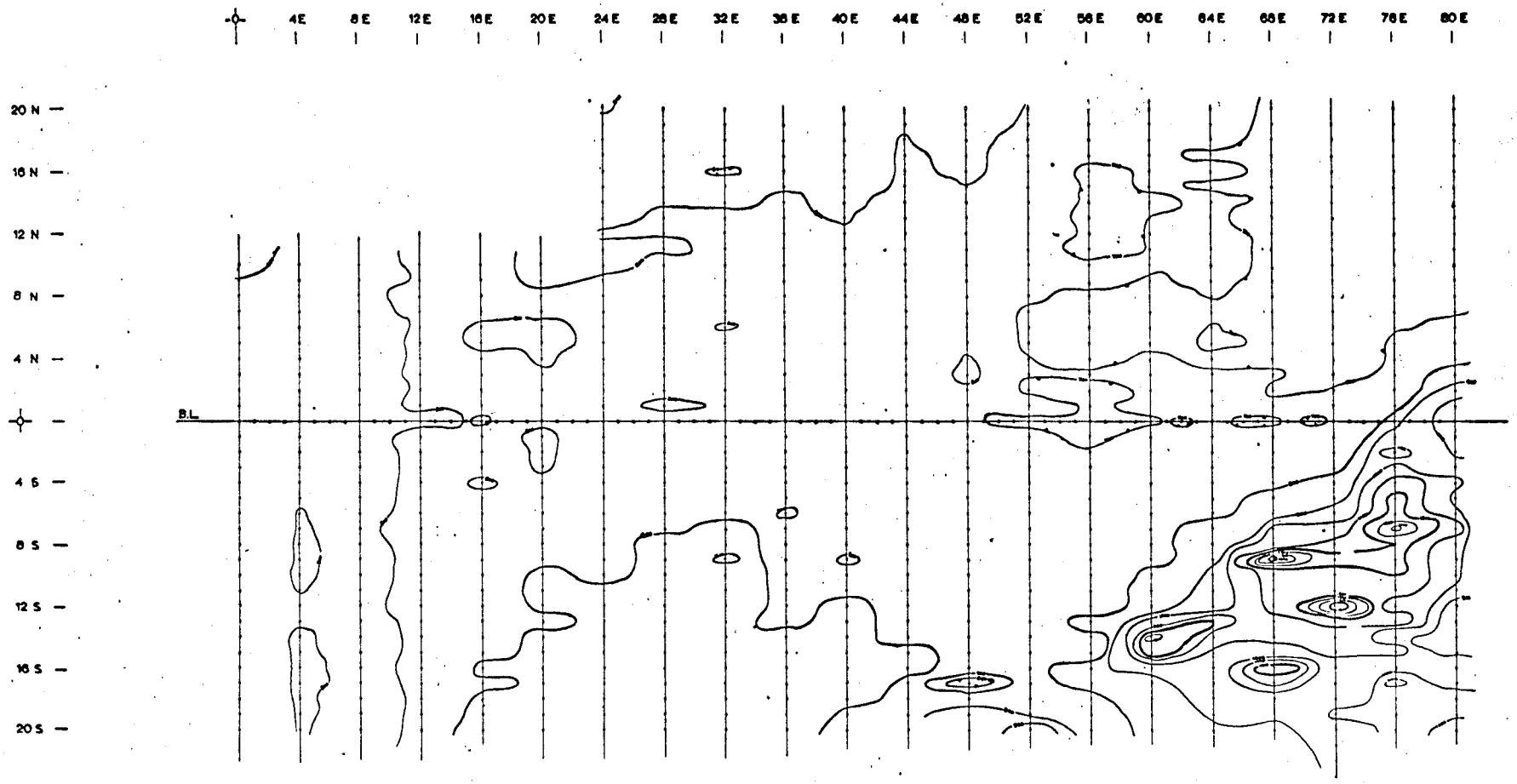
SOIL SAMPLER : M. SIMPSON

DRAWN BY : R.J. DARNEY

DATE : OCTOBER 1967

400 0 400 800

scale in feet



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ROSS RIVER (Y.T.)

SHELDON REGION

BILL MINERAL CLAIMS

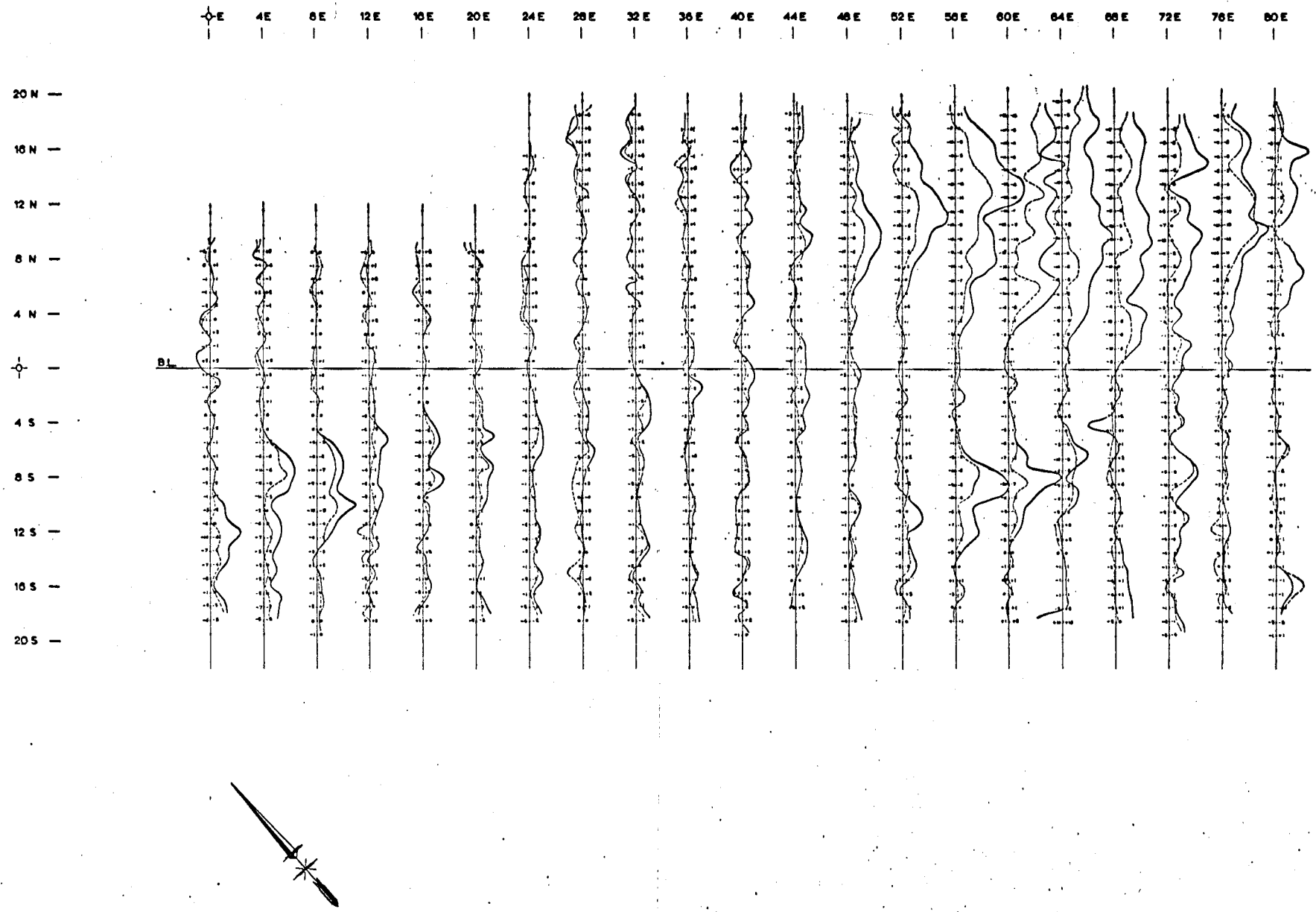
GROUND MAGNETOMETER SURVEY

CONTOURS

INSTRUMENT : JALANDER
OPERATOR : J. GALESKI

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

400 0 400 800
Scale in feet



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ROSS RIVER (Y.T.)

SHELDON REGION

BILL MINERAL CLAIMS

GROUND ELECTROMAGNETIC SURVEY

E.M. VALUES & PROFILES

INSTRUMENT: CRONE (JEM)
OPERATOR: J. GALESKI

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

400 0 400 800
scale in feet