6151

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

ON THE GILLIAN MINERAL CLAIMS

OMINECA MINING DIVISION, B. C.

93L/1W

for

GILLIAN MINES LTD.

by

R. G. POTTER, P.Eng.

VANCOUVER, B. C.

July 8, 1976.

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List of Illustrations

1-00 INTRODUCTION

Acting on the recommendations of F. Holcapek, P.Eng., in his report dated February 9, 1976, Gillian Mines Ltd. carried out phase I of an exploration program to evaluate the potential of the Gillian property. The work was done during the period May 24 to June 18, 1976. Surveys completed on the property include soil sampling, geological mapping, electromagnetic (V.L.F.) and induced polarization. These surveys are controlled by a grid of east-west lines spaced at 100 meters with stations at 50 meter intervals.

The induced polarization survey was carried out by C. Agar and Associates under the direction of M. Berretta, Geophysicist.

The geochemical analyses were rune by Min-En Laboratories Ltd. of North Vancouver, B. C.

The writer supervised the exploration program and considers that these surveys fully qualify for acceptance as bona fide assessment work.

2-00 PROPERTY

The Gillian property consists of two mineral claims comprising 20 units. The configuration of the claims and position of the legal corner posts is shown in figure 1. The ground was staked on December 15 and 16, 1975 by J. Paul Stevenson.

While on the property the writer checked the boundary lines and corner posts and found the ground to be located in accordance with the modified grid system as required by the British Columbia Mining Act.

3-00 LOCATION AND ACCESS

The Gillian property is located about 18 miles southeast of

Houston, B. C. in the Omineca Mining Division (NTS 93L/1W). Geographical co-ordinates are lat. 54°10'N, long. 126°22'W. Access to the property is via the Buck Creek road for a distance of 20 miles. The Buck Creek road exits from Highway 16 about two miles west of Houston.

4-00 HISTORY

The Gillian claims cover part of the ground that was formerly included in the Gail and GMGW claims owned by Lewes River Mines Ltd. During the period October 15 to 29 1970, Archer Cathro and Associates conducted a geochemical and geological survey of these claims for Lewes River. This program was organized and supervised by A. R. Archer, P.Eng.

The Archer Cathro data indicated that copper content of B horizon soils in excess of 40 ppm could be considered anomalous. Silver concentrations in excess of 1 ppm were also considered to be anomalous.

Three low order copper anomalies were delineated by the survey. One of these is located on the Gillian property. It lies on the southerly flank of a topographic high on the north east quarter of the claim block. The outline of the anomaly is very irregular but approximate dimensions are 1000 meters east-west by 300 meters north-south. Copper concentrations here range from 40 to 94 ppm over a background of less than 20 ppm. This anomaly is supported by a weak silver anomaly which is smaller in size but essencially coincident. Silver values range from 1 to 3 ppm over a background of 0.5 ppm.

Geological mapping revealed a paucity of bedrock exposure on the Lewes ground. Several small outcrops of Tertiary volcanics were noted east of the present Gillian ground. Within the Gillian claim two small exposures located on the central hill were mapped as diorite.

5-00 GEOLOGY

5-10 Regional Geology

A compilation of the geology of the Owen Lake, Parrott Lakes, Goosly Lake area was completed by B. N. Church of the British Columbia Department of Mines in 1970. This mapping was published on a scale of 1:50,000. An early Mesozoic sequence was found to represent the oldest lithology in the area. This includes acid to intermediate lavas and pyroclastic rocks with some argillite sandstone and conglomerate. The early Mesozoic is exposed through windows in a broad covering of late Mesozoic and Tertiary extrusive rocks. Intrusive activity in the area appears to be concentrated along a narrow belt running through Owen Lake and Goosly Lake in a west-south westerly direction. Relatively small stocks scattered along this feature include granites, syenomonzonite-alkalic gabbros, biotite plagioclase porphyry and biotite quartz porphyry.

Mineral deposits of importance which are located along this 'intrusive belt' include the Owen Lake deposit of Bradina Resources and the Sam Goosly deposit of Equity Mining. The Gillian property is also located along this feature about ten kilometers west of Sam Goosly.

The Goosly deposit consists of an extensive zone comprising both massive and disseminated mineralization which appears to be concordant with the host sequence of Lower Mesozoic volcanic rocks. Sulphide minerals include pyrite, pyrrhotite and chalcopyrite with minor tetrahedrite and sphalerite. The mineralized zone lies immediately to the west of an intrusive stock which is mapped by Church as syenomonzonite-alkalic gabbro.

The geology of the Gillian claims bears a certain resemblance to that of the Goosly property viz., Lower Mesozoic volcanics flanking a gabbroic intrusion. It is this similarity which has generated the current

interest in the property. It should be noted however that with the exception of pyrite, no mineralization has been found to date on the Gillian ground.

5-20 Local Geology (figure 8)

Only two areas of the outcrop were disclosed by systematic traversing of the Gillian claims. The first is located between lines 49 south and 55 south and between stations 62 east and 70 east. Most of the outcrops here are of a fresh equigranular gabbro or diorite comprising 40 to 60% augite, 30 to 50% plagioclase and minor quartz, biotite and magnetite. Widely spaced and steeply dipping fractures have a predominant north-northwesterly trend.

The contact between this intrusive and Lower Mesozoic rocks is poorly exposed at grid point 51 south 63 east. Fine grained siliceous tuff is found to the north of this contact. The tuffs present a mottled to banded appearance in pale reds and greens. Small limonite patches and fracture fillings suggest the presence of a minor sulphide content at depth. Immediately adjacent to the intrusive contact a trace of pyrite was seen between fragments of brecciated tuff.

Outcrops to the north of the tuffaceous exposures are of fine grained, dark green volcanic sandstone and black argillite.

Bedding features were not descernible in these outcrops.

The second area of bedrock is located between lines 53 south and 54 south at stations 53 east and 30 east. Here a small topographic prominence has been exposed by logging operations. The rocks are dense aphanitic acidic tuffs. Colouring is pale pink to green. Black chert fills fractures and interfragmental spaces in small zones of brecciation.

Some limonite was seen in fractures but no sulphides were detected. One doubtful measurement of stratification was taken having a strike of 070 degrees and a dip of 80 degrees to the north.

6-00 GEOCHEMISTRY

6-10 Collection and Analysis

A total of 830 soil samples were taken at 50 meter intervals along the grid lines. These samples were taken from the 'B' soil horizon from pits dug with a grub-hoe. The soils were placed in standard kraft bags and dried prior to shipment to Min-En Laboratories Ltd. in North Vancouver, B. C.

Samples were oven dried, screened to -80 mesh and analyzed for copper, zinc, silver, mercury and arsenic as follows:

Cu, Zn, Ag - nitric and perchloric acid digestion
Atomic absorption analysis.

Hg - flameless - AA

Ag - calorimetric

6-20 Results

The frequency distribution and log-probability plots for the copper values are shown on figure 3. The indicated threshold and anomolous levels are 20 and 40 ppm respectively. This is in agreement with the Archer Cathro data.

Copper values are plotted in plan on figure 9. A number of small low level anomalies are concentrated in the east-central area of the claim block. These lie on the western and southern slopes of the topographic high; an area which is largely underlain by gabbroic

intrusive. They may be related to a relatively high trace copper content of the gabbro, comparatively thin overburden, or underlying zones of copper mineralization; or a combination of these factors.

No importance is attached to the scattered copper highs in the western and southern sections of the property.

Silver threshold and anomalous values are 1.0 and 2.0 ppm respectively (figure 4). The data is shown in plan on figure 10. Small low order anomalies are distributed similarly to those of copper and probably are the result of the same geological feature or features.

The results for zinc, mercury and arsenic disclose a few questionable spot anomalies which can for the most part be discounted.

7-00 GEOPHYSICS

The results of the geophysical surveys including induced polarization and electromagnetic VLF are covered in detail in the report by Mauro Berretta which is appended to this report (Appendix III).

The induced polarization survey has outlined two 'sub-anomalous' features. These underlie the northern upland area on lines 51 south to 53 south from 65 east to 68 east and on lines 57 south and 58 south at about 72 east. The northern anomaly is the most promising. It is coincident with a V.L.F. conductor and with weak geochemical anomalies in copper, silver and zinc. This induced polarization anomaly shifts to the east with increasing eletrode separation (increasing effective depth) thus indicating an easterly dip to the causative feature. The updip edge of this feature probably corresponds with the fractured limonitic tuffs found in outcrop along the contact of the gabbroic intrusive.

The electromagnetic survey (VLF) has delineated five conductors;

three of which underlie the upland area which is spotted with weak copper and silver anomolies. All the conductors have north to north-westerly strikes which is that of the regional tectonic fabric. Berretta assigns two possible interpretations to the electromagnetic results; conductive shear zones or concentrations of sulphide minerals.

8-00 CONCLUSIONS

The Gillian claims are underlain by Lower Mesozoic volcanics and sediments and by a gabbroic intrusion. Induced polarization and V.L.F. electromagnetic surveys have delineated anomalies which are supported, albeit weakly, by copper and silver soil anomalies. The most promising area of the property is located between lines 50 south and 52 south from stations 64 east to 68 east. Here there are coincident anomalies in all of the measured parameters.

The results of phase I of the program are considered to be sufficiently encouraging and further work is warranted.

9-00 RECOMMENDATIONS

The next phase of exploration should be essentially that recommended by F. Holcapek, P.Eng. with the exclusion of additional geochemical sampling. The program should include:

1. Trenching
2. Diamond drilling

10-00 COST ESTIMATE

1.	Trenching - with backhoe or cat allow $5,000.00	$ 5,000.00
2.	Drilling - 2000 feet at $25.00 per foot	50,000.00
3.	Engineering and supervision	3,000.00
4.	Assays	1,000.00
		59,000.00
	Contingencies - 10%	5,900.00
		$ 64,900.00

Additional drilling will be required if the initial program is successful. Allow for 4,000 feet at an overall cost of $25.00 per foot for a total of $100,000.00.

Respectfully submitted

Robert Potter, P.Eng.

APPENDIX I

Certification

I. Robert Potter of Fulford Harbour, British Columbia do hereby certify that:

1. I am a graduate of the University of British Columbia BASc. (1961) and McGill University, MSc. Applied (1972).

2. Since graduation I have been engaged in mining exploration in Canada and Europe.

3. I am a registered member, in good standing, of the Association of Professional Engineers of British Columbia #7650.

4. I have not received nor do I expect to receive any interest, directly or indirectly, in the properties or securities of Gillian Mines Ltd.

5. That the information contained in this report is based on personal knowledge of the geology of the Houston area, and on a study of the available assessment reports and government reports.

Robert Potter, Msc., P.Eng.

Vancouver, B. C.

July 8, B. C.

APPENDIX II

References

ARCHER, A. R. P.Eng. 1971 — Geochemical Survey and Geology of the Gail and GMGW Mineral Claims Assessment Report #2863

CHURCH, B.N. 1970 — Geology of the Owen Lake, Parrott Lakes and Goosly Lake Area, GEM pp 119-125

HOLCAPED, F. P.Eng. 1976 — Report of the Gillian Mineral Claims

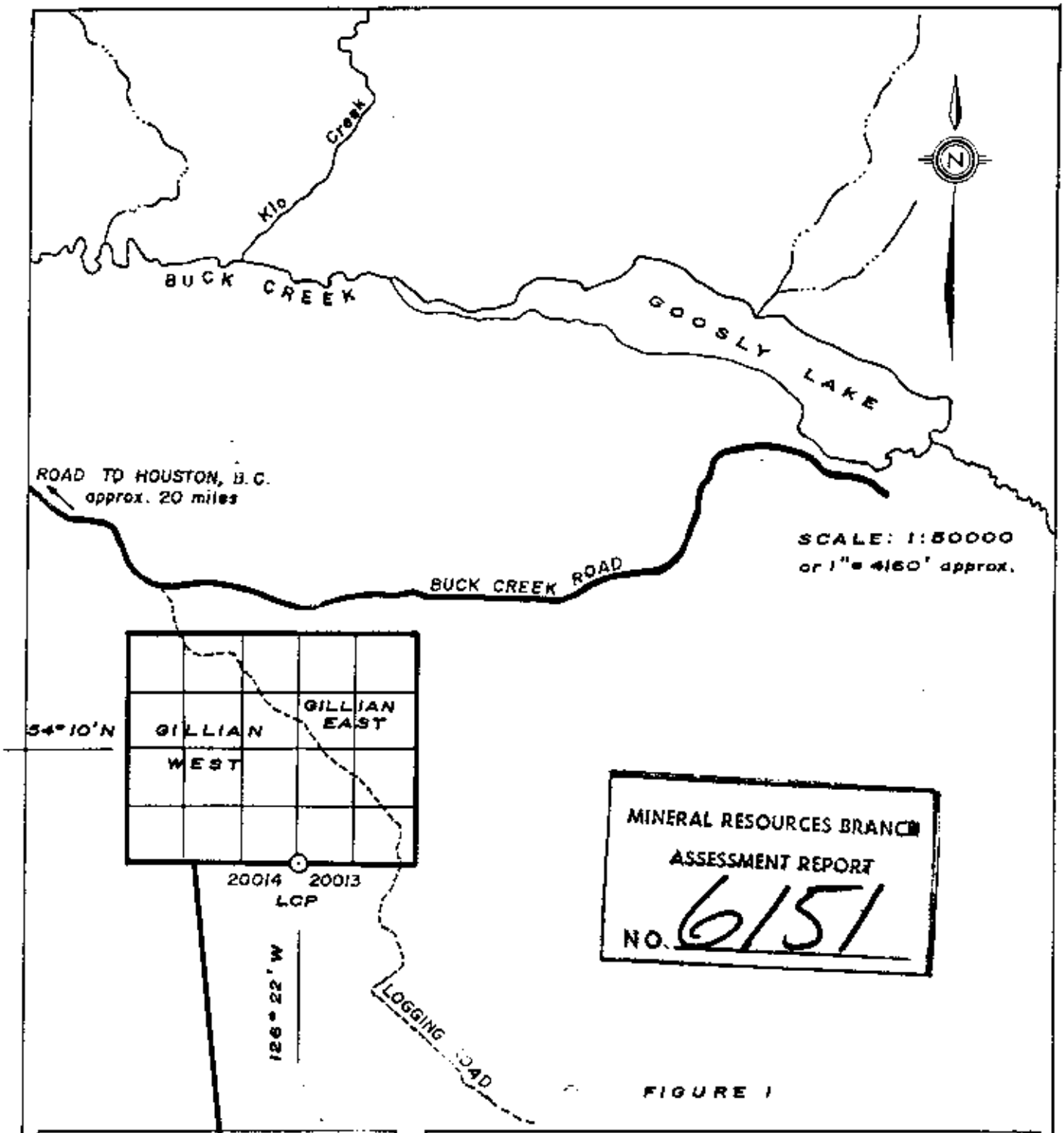

FIGURE 1

British Columbia

GILLIAN MINES LTD.

GILLIAN PROPERTY - GOOSLY LAKE AREA

MINING DIVISION: OMENICA

PROPERTY LOCATION MAP

MAP REFERENCE: 93L/1W

COORDINATES: 54° 10' N, 126° 22' W

MERIN MANAGEMENT LTD. JUNE 1970.

GRAPHIC CONTROLS CANADA LTD
MADE IN CANADA

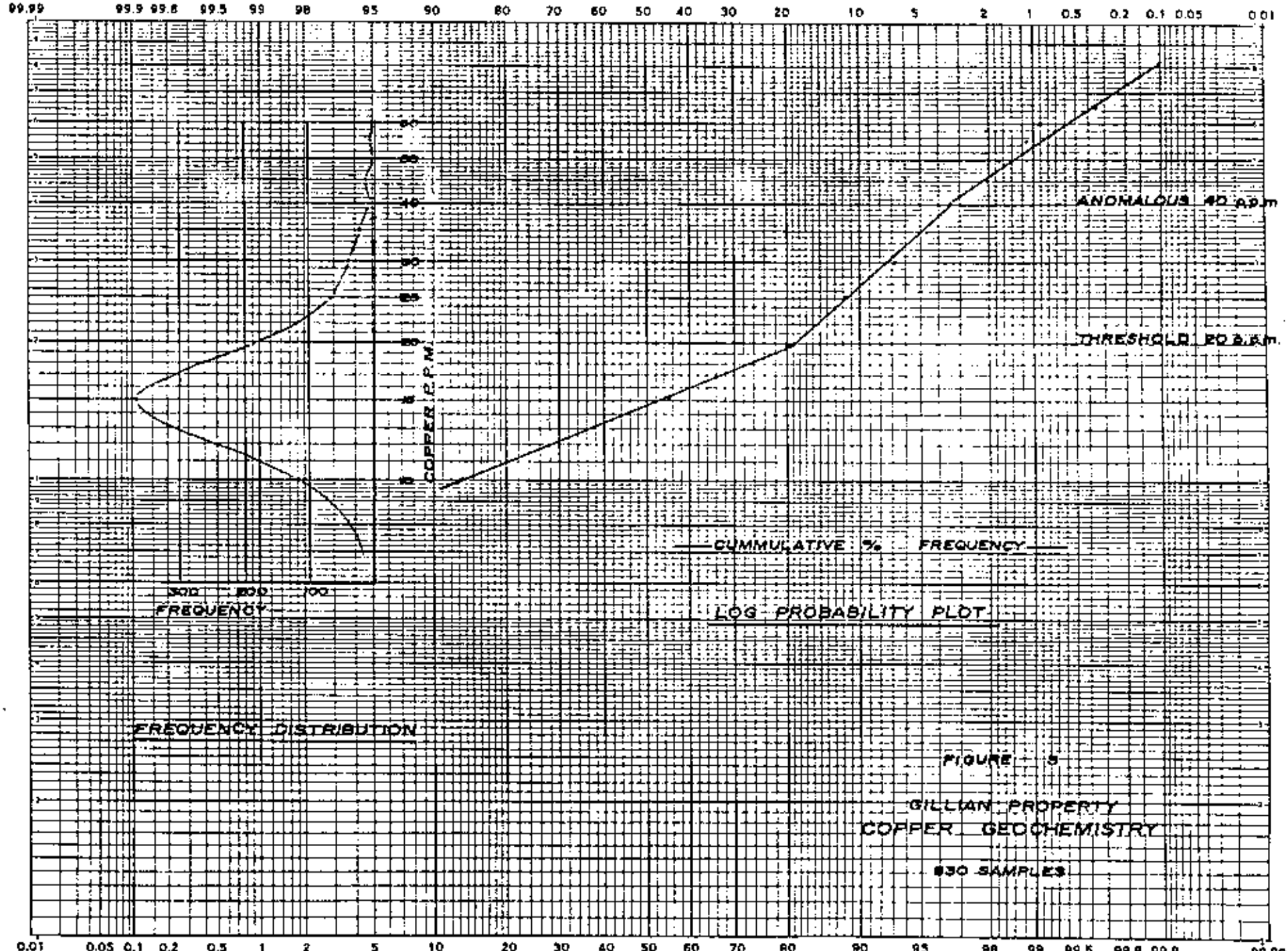

FIGURE 5

GILLIAN PROPERTY
COPPER GEOCHEMISTRY

830 SAMPLES

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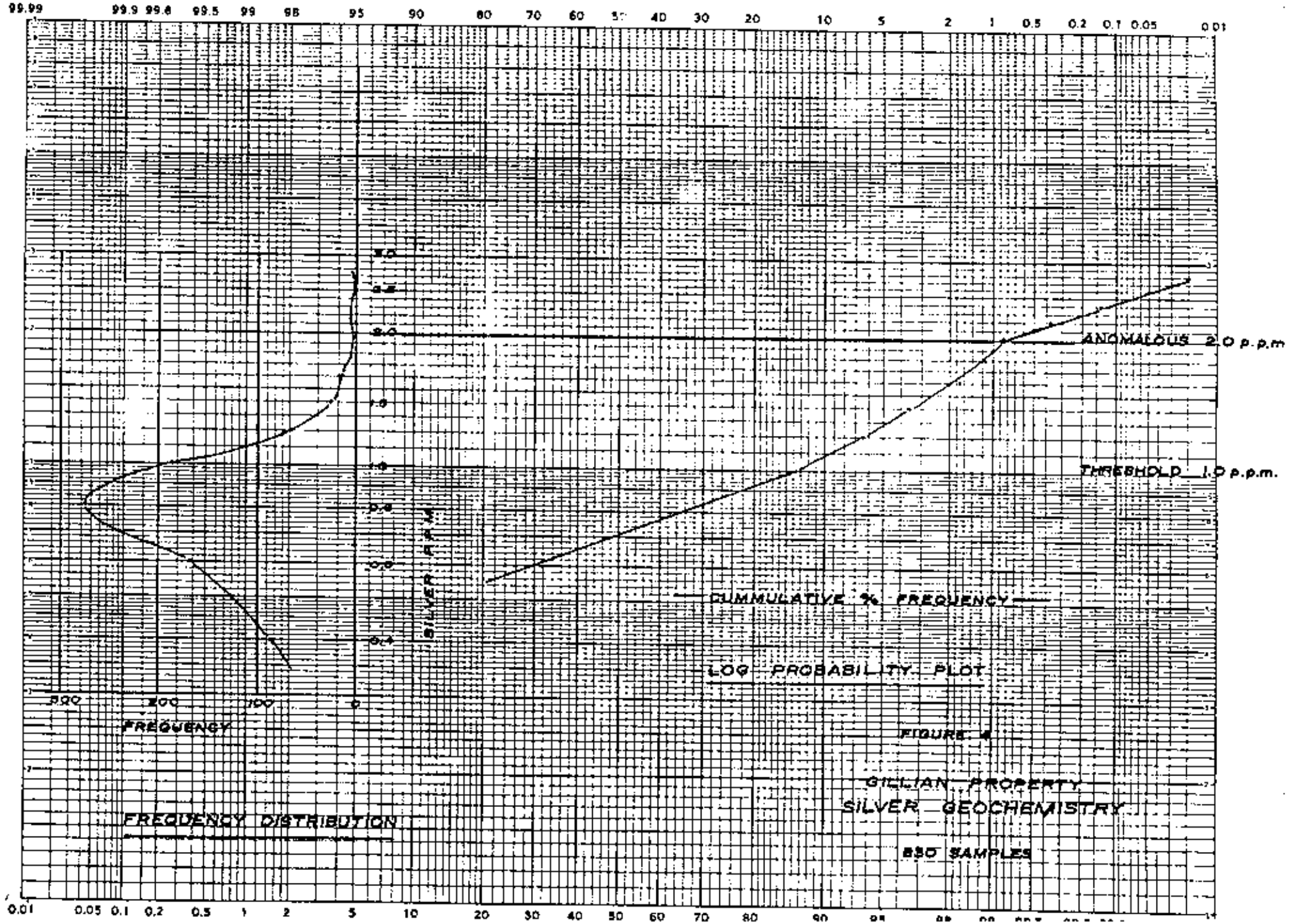
MADE IN CANADA



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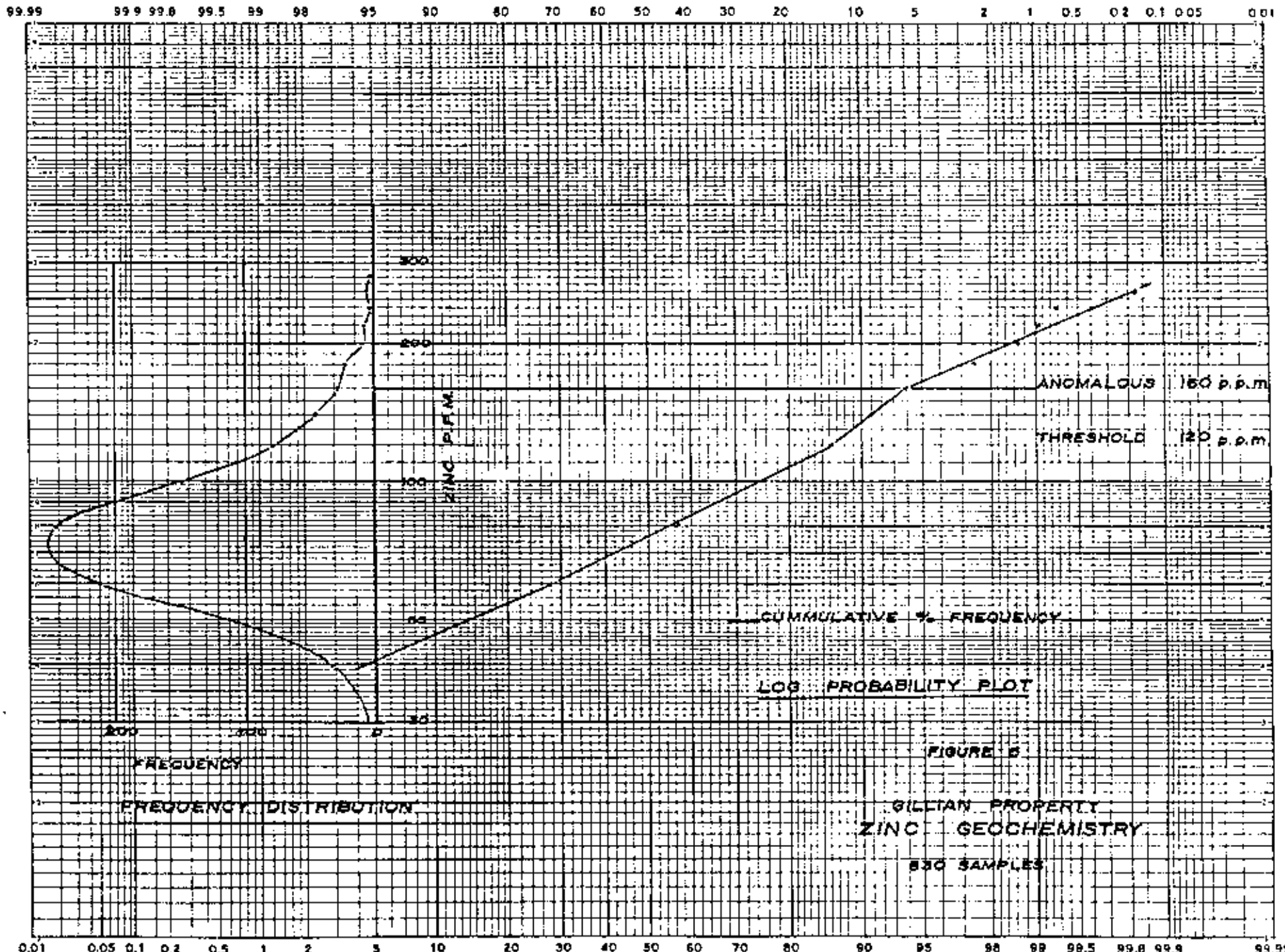

G-24 LOGARITHMIC PROBABILITY

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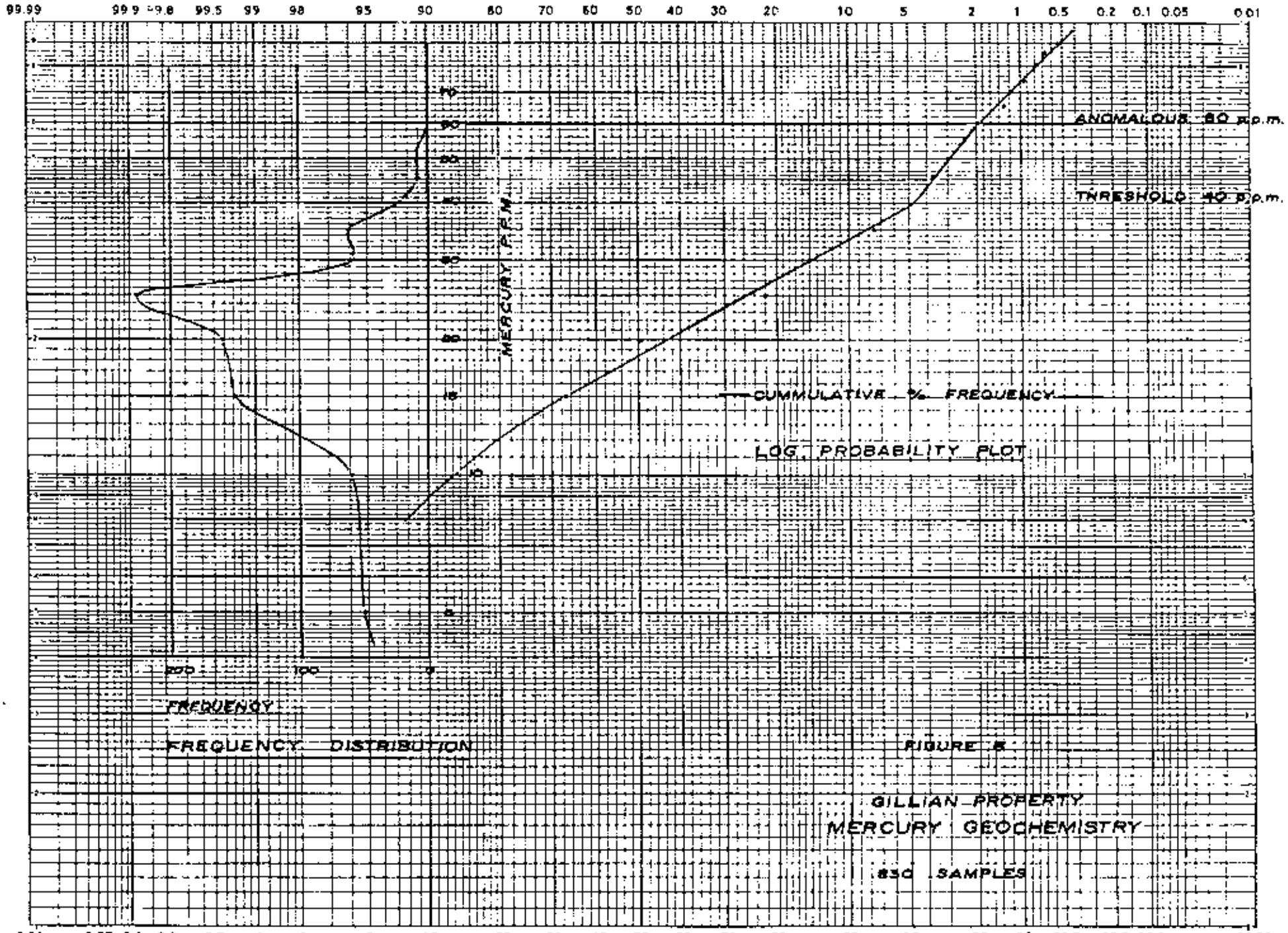

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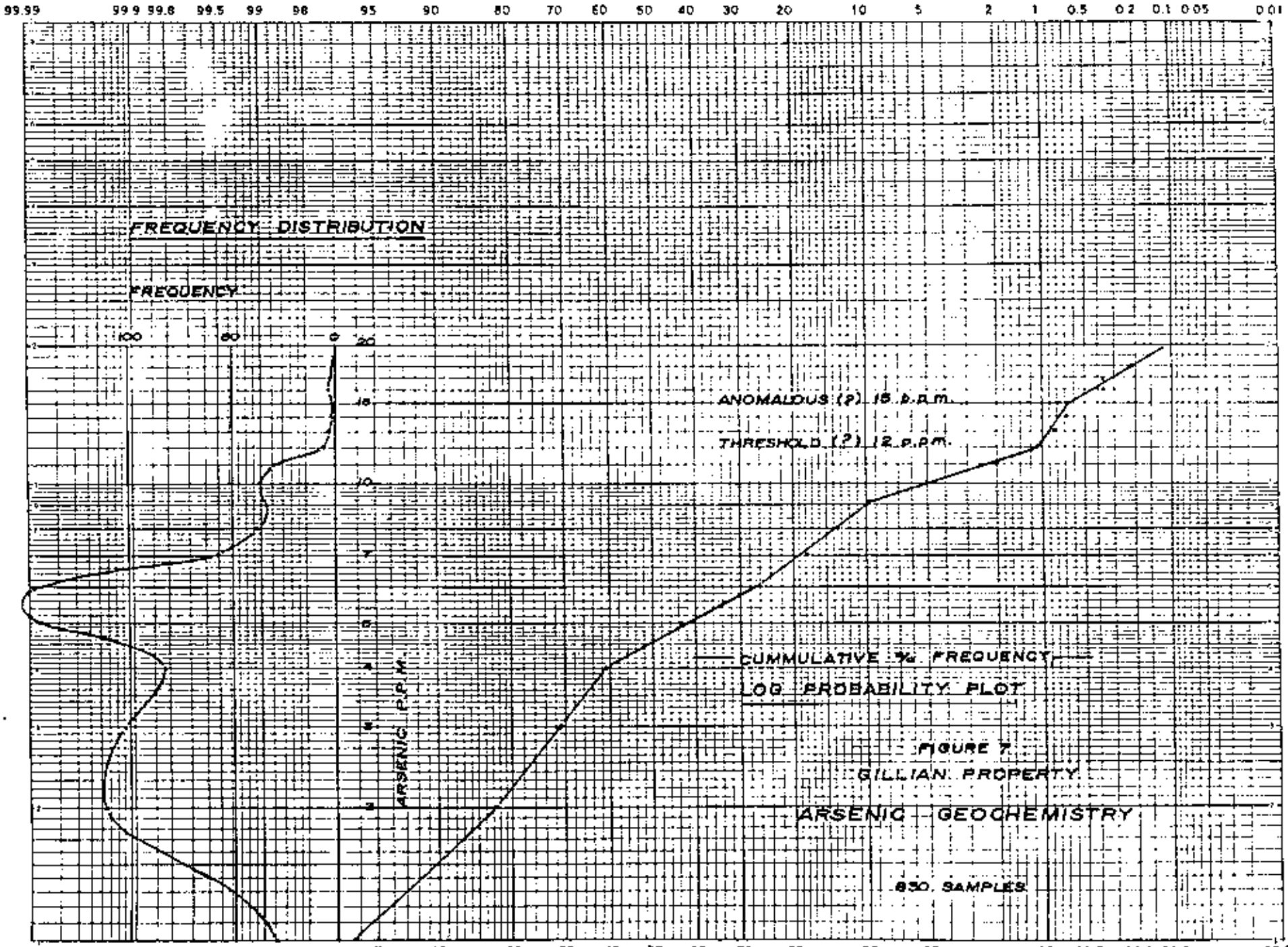

APPENCIX III

GEOPHYSICAL REPORT

INDUCED POLARIZATION

and

VLF ELECTROMAGNETIC SURVEYS

ON THE GILLIAN MINERAL CLAIMS

OMINECA MINING DIVISION, B. C.

93L/1W

for

GILLIAN MINES LTD.

by

MAURO G. BERRETTA, GEOPHYSICIST

MAPLE RIDGE, B. C.

June, 1976

Mauro G. Berretta, B.Sc., M.Sc.
CONSULTING GEOPHYSICIST

PHONE (604) 463-3787
21141 - 117TH AVE.
MAPLE RIDGE, B.C. CANADA

SUMMARY

An induced polarization survey over the Gillian property has outlined a small zone of sulfide mineralization such pyrite, chalcopyrite, pyrrhotite, etc., in unknown relative proportions, of up to 2% by volume if disseminated, and substantially higher if massive. The survey has also negated the possibility of any sulfide deposits of substsantial size. VLF data has defined several conductors. Whether these are due to ionic conductivity in faults and shears, or to small concentrations of massive mineralization is not known. Geochemical results are of extreme importance, as would be a low frequency shootback em survey, the latter being recommended.

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LIST OF FIGURES

1. INTRODUCTION

During the period from May 28 to June 18, 1976, an induced polarization survey was carried out on the Gillian Mineral Claims on behalf of Gillian Mines Ltd. The field crew consisted of M. Berretta (geophysicist), D. MacQuarrie (geologist), A. Driver (operator), A. Watson, H. Moskaluk, W. Breuer (field assistants). The survey was under the direction of M. Berretta. Instrumentation consisted of a Sabre Mk1 450 watt portable frequency domain system.

A VLF em survey was also carried out by Gillian Mines. The results have been analyzed and interpreted and are included in this report.

The property is located about 18 miles southeast of Houston in the Omineca Mining Division, B.C., and is accessible from Houston via the Buck Creek Road (Figure 1). The topography is relatively flat with swampy areas and lakes in the southern part. Outcrop is very sparse.

2. GEOLOGY

The property is underlain by Mesozoic volcanics and sediments and by Miocene andesites and dacites. These have been intruded by a syenomonzonite stock situated in the central part of the claim block. Regional geochemical data outlines a weak copper and silver anomaly on the property. Moreover, scattered float has revealed the presence of some sulfides. The geologic

environment then appears similar to that of the Goosly deposit (about 4 miles to the east), which contains both disseminated and massive mineralization.

3. INDUCED POLARIZATION RESULTS AND INTERPRETATION

In view of the extensive overburden cover found on the property, a resistivity sounding was performed at the beginning of the survey, in order to determine roughly the overburden depth. The data, taken on the southwestern part of the property where the deepest cover was suspected, revealed a depth of about 50 metres. Moreover, the overburden resistivity was found to be low, in the range of 25 to 35 ohm-meters, a value typical of wet, clay-rich soils. Consequently, an electrode separation of 100m was selected using a dipole-dipole array with a value of n=2. This gives an effective depth of penetration of about 75 to 100m. The frequency span employed was 0.3-10 Hz.

RESISTIVITY

The resistivity data, shown in Figure 2, outlines the presence of two, possibly three rock types. The largest part of the property displays lower resistivities (25-100 ohm-m). Although in part due to conductive overburden, these are thought to represent volcanic rock which is itself conductive due to any or all of several factors such as fracturing, porosity and clay content. In the northwest corner of the survey area is a

circular feature of medium resistivity (100-300 ohm-m). This can be attributed either to a different rock unit or to a decrease in overburden depth, i.e. a 'hump' in bedrock surface. In the northeast section of the survey area, a pronounced zone of high resistivity (100-900 ohm-m) coincides with outcrops of gabbroic rock. This feature appears to outline well the extent of the intrusive stock. Its southeast appendage may be indicative of a dyke. Additional resistivity data on selected lines and using smaller electrode separations (Figures3,4,5) is in general agreement with this picture. The higher resolution of the smaller dipoles accounts for the increase in anomaly amplitudes and sharpness.

PERCENT FREQUENCY EFFECT

The pfe data is shown in Figure 6. Background values of 0-3% cover almost the entire survey area. Only two 'sub-anomalous' features appear. The first is on lines 51S to53S from 65E to 68E, and the second on lines 57S and 58S at about 72E. Selected lines were traversed over these zones in an attempt to define their size and behaviour with depth. The results are shown in Figures 7,8 and 9. The lesser anomaly (on lines 57S and 58S) disappears. The other, displays an increase in response with decreasing electrode separation, indicating that its cause is of small extent. Its largest amplitude is 10%, and it corresponds to the smallest separation used (a=25m, n=1), as can be seen in Figure 9. Normally, such response is characteristic

of sulfide mineralization of up to 2% by volume if disseminated and substantially higher if massive. Correlation with resistivity data (Figures 4,5) indicates that this anomaly occurs within the intrusive stock, close to its western contact.

4. VLF RESULTS AND INTERPRETATION

An EM-16 survey was carried out on the property , and the results are shown in Figure 10. As with most VLF surveys, one finds an abundance of conductors and topographic effects. Consequently the data was Fraser filtered and contoured as shown in Figure 11. Conductor crossovers in the original tilt angle data, now appear as maxima. In addition to several scattered, single line anomalies, that are probably due to noise, there are five major conductive zones on the property, all striking roughly northwest. Three of these occur in the northeast corner of the survey area and appear to be in the region of contact between the gabbro stock and the volcanics. Specifically, they are located at about 63E on lines 50S to 53S; from 67E to 70E on lines 53S to 58S; and from 70E to 74E on lines 52S to 57S. Their tilt angle profile shape (Figure 10) indicates that their cause is near surface and gently dipping to the east. The only i.p. anomaly observed occurs in close proximity to the conductor on lines 50S to 53S at 63E. The other two major conductors are in the western part of the property, at about 57E on lines 52S to 54S, and at about 51E on lines 55S to 57S. Here, no i.p. response was observed.

There are two possible interpretations of the em data. The first is that some or all of the conductive zones are due to ionic conductivity associated with wet clays in overburden and/or contact related faults and shears. The second is that some may be due to concentrations of massive sulfides of an extent too small to be responsive to the parameters employed in the i.p. survey. The geochemical soil data should prove highly instrumental in ascertaining which interpretation is more plausible.

5. RECOMMENDATIONS

It is recommended that the present data be revaluated in light of geochemical results. In addition, a low frequency shootback em survey over all VLF conductors is also suggested. Subsequent to this work, drilling and/or trenching is also recommended.

Respectfully submitted,

Mauro G. Berretta
Geophysicist

Maple Ridge, B.C.
June, 1976

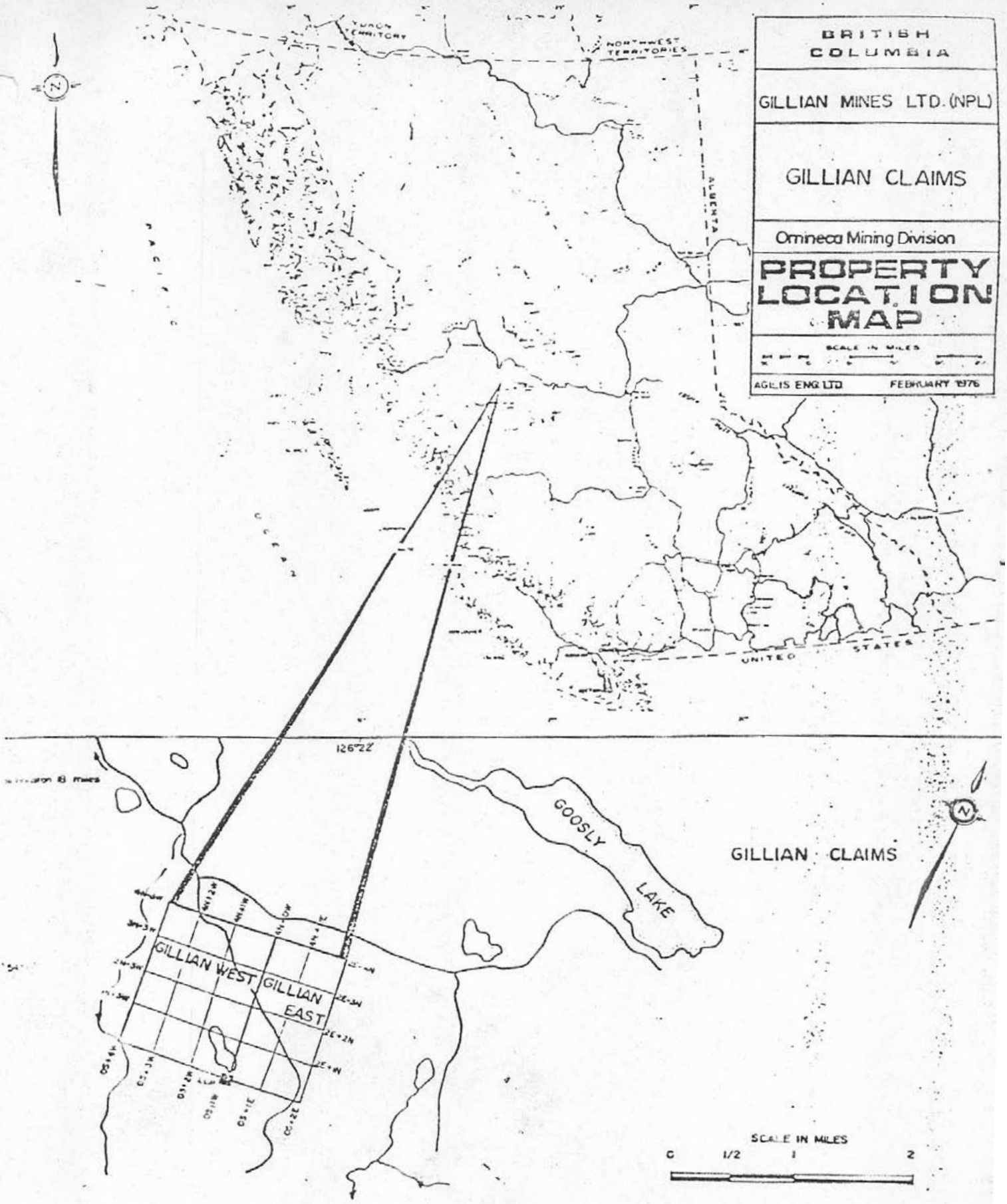

BRITISH COLUMBIA
GILLIAN MINES LTD. (NPL)
GILLIAN CLAIMS
Omineca Mining Division
PROPERTY LOCATION MAP
SCALE IN MILES
AGLIS ENG LTD
FEBRUARY 1976
YUKON TERRITORY
NORTHWEST TERRITORIES
ALBERTA
UNITED STATES
126°22'
GOOSLY LAKE
GILLIAN CLAIMS
GILLIAN WEST
GILLIAN EAST
SCALE IN MILES
0
1/2
1
2

FIG. 2

GEOLOGY OF THE OWEN LAKE, PARROTT LAKES, GOOSLY LAKE AREA

OMINECA MINING DIVISION B.C.

GEOLOGY BY N CHURCH 1970
GEM 1970

BEDDED ROCKS

PLIOCENE
- POPLAR BUTTES VOLCANICS, COLUMNAR OLIVINE BASALT.

MIOCENE
- BUCK CREEK VOLCANICS, INTERCALATED BASALTIC ANDESITE (locally feldspathic) AND / APHANITIC ANDESITE AND DACITE.

EOCENE
- GOOSLY LAKE VOLCANICS, MAINLY BIOTITE - PYROXENE - PLAGIOCLASE TRACHYANDESITE LAVAS / AND THICK SILLS OR LAVA FLOWS AND SMALL STOCKS OF SIMILAR ROCK.

PALEOCENE OR UPPER CRETACEOUS
- TIP TOP HILL VOLCANICS, MAINLY BIOTITE-HORNBLENDE ANDESITE AND ANDESITIC DACITE LAVAS AND PYROCLASTIC ROCKS.

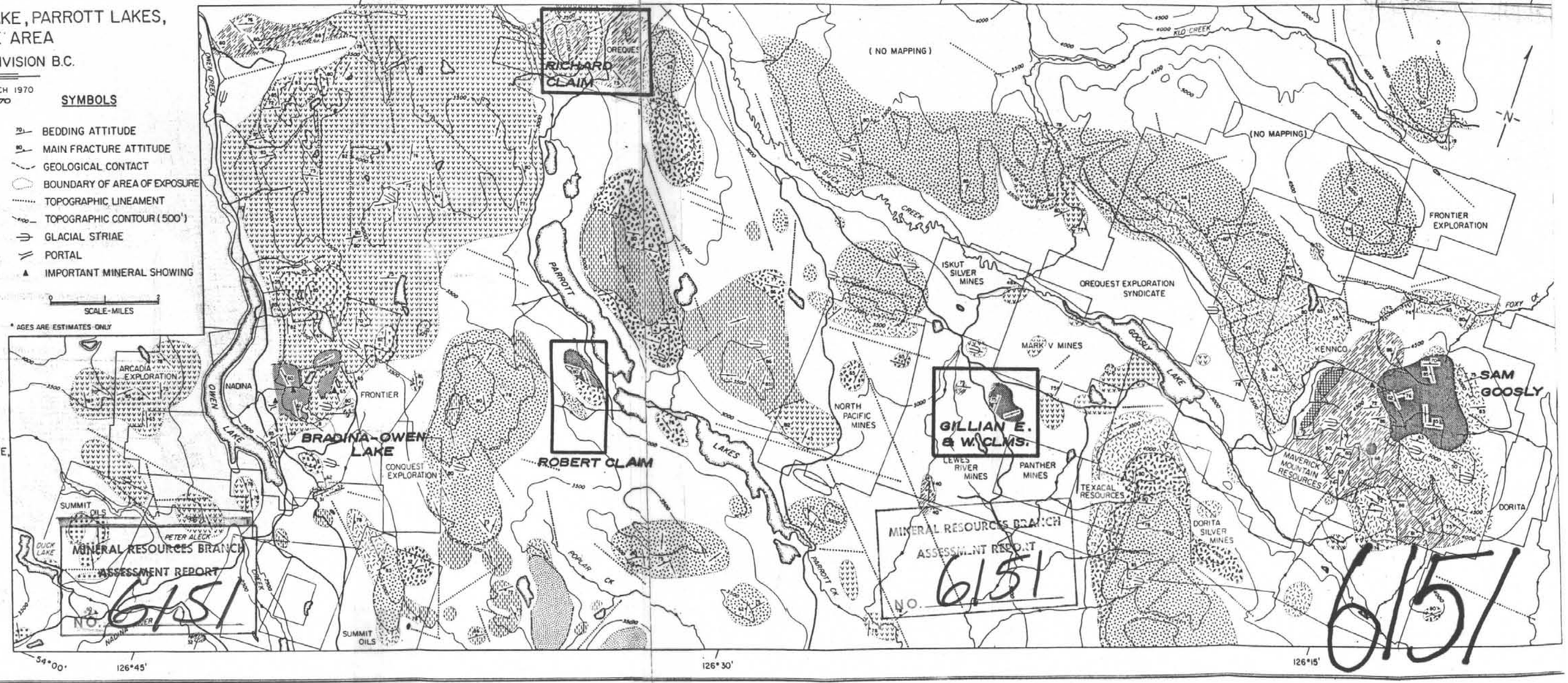
EARLY MESOZOIC
- ACID AND INTERMEDIATE LAVAS AND PYROCLASTIC ROCKS, SOME ARGILLITE, SANDSTONE, AND CONGLOMERATE.

IGNEOUS INTRUSIONS
- SYENOMONZONITE - ALKALIC GABBRO STOCKS.
- GOOSLY BIOTITE GRANITIC STOCK
- DUCK LAKE BIOTITE - PLAGIOCLASE PORPHYRY STOCK.
- MINE HILL MICRODIORITE SILLS AND DYKES.
- OKUSYELDA HILL BIOTITE - QUARTZ PORPHYRY.

SYMBOLS
- BEDDING ATTITUDE
- MAIN FRACTURE ATTITUDE
- GEOLOGICAL CONTACT
- BOUNDARY OF AREA OF EXPOSURE
- TOPOGRAPHIC LINEAMENT
- TOPOGRAPHIC CONTOUR (500')
- GLACIAL STRIAE
- PORTAL
- IMPORTANT MINERAL SHOWING

SCALE - MILES

* AGES ARE ESTIMATES ONLY



6151 NO.

6151

MERIN MANAGEMENT LTD.

906-675 West Hastings Street

Vancouver, B. C. V6B 1N2

April 30, 1976

Invoice #76-002

INVOICE TO: Gillian Mines Ltd.
202-900 West Pender Street
Vancouver, B. C.

RE: GILLIAN EAST AND GILLIAN WEST CLAIMS

Personnel:
C. Stanley - calculate and draft base map, purchase camp equipment, services re pooling agreement — 588.00

Disbursements:

A.B.C. Recreational - camp equipment	173.95	
Altair Drafting - prints	14.98	
B. C. Telephone - long distance calls	109.12	
	298.05	
15% contingency on disbursements	44.70	
		342.75
TOTAL INVOICE		$ 930.75

E. & O. E.

R1

MERIT MANAGEMENT LTD.

906-675 West Hastings Street

Vancouver, B. C. V6B 1N2

May 31, 1976

Invoice #76-[illegible]

INVOICE TO: Gillian Mines Ltd.
202 - 900 West Pender Street
Vancouver, B. C.

RE: GILLIAN EAST AND GILLIAN WEST CLAIMS

Personnel:

Robert Potter - geologist - field supervision May 15&31, 1976	1,330.00	
Peter Rouin - field asst. May 1-31, 1976	1,330.00	
C. Stanley - preparation of field program and field program cost schedules; arrange contracts; complete location maps; purchasing and expediting field equipment, etc.	826.93	
		[illegible]

Disbursements:

B. C. Industries - field equipment	127.87	
B. C. Telephone - long distance calls	25.59	
Super Valu Stores - deposit re groceries	600.00	
R. Potter expenses - travel, camp supplies	210.14	
C. Stanley expenses - postage, stationery, prints, equipment repairs	10.44	
J. C. Stevenson expenses - truck repairs, first aid supplies, gas, groceries	752.55	
	1,702.49	
15% contingency on disbursements	264.37	
		2,030.86

Equipment:

1 - 1976 Ford truck, 4 x 4 - 1 month @ $600.00/mo	600.00	
Mileage - 2,500 miles @ 10¢ per mile	250.00	
1 - EM 16 Magnetometer - 1 month @ $300.00/mo	300.00	
1 - Magnetometer - 1 month @ $ 70.00/mo	70.00	
2 - Suunto Clinometers - 1 month @ $ 10.00/mo ea	20.00	
		1,240.00

TOTAL INVOICE $ 6,753.79

June 24, 1976
E. & O.E.

MERIN MANAGEMENT LTD.

906-675 West Hastings Street

Vancouver, B. C.

V6B 1N2

June 22, 1976
Invoice #72-010

INVOICE TO: Gillian Mines Ltd.
202 - 900 W. Pender Street
Vancouver, B. C.

TO: Cash advanced to Far Out Enterprises Ltd. re line cutting contract	3,464.10 ✓
15% contingency	519.62 ✓
TOTAL INVOICE	$ 3,983.72 ✓

RT

INVOICE TB: Gillian Mines Ltd.
202-900 West Pender Street
Vancouver, B. C.

July 31, 1976

Invoice #76-015

GILLIAN EAST AND GILLIAN WEST CLAIMS

Personnel:		
R. Potter - geological, geochemical and geophysical report July 3-11	$ 853.52	
C. Stanley - drafting maps for and assembly of report July 1-15	1,050.00	
F. Karchewski - report typing July 7-8	50.00	
		$ 1,953.52
Disbursements:		
Altair Drafting - prints9	10.78	
B. C. Industries - drafting supplies	52.42	
B. C. Telephone - long distance calls	194.63	
Deakin Equipment - rain gear	63.99	
Metro Motors - truck repair, tire	90.87	
Super VAlu - groceries	364.50	
VanCal - drafting equipment, blackline prints	373.54	
Western Reproducers - base map	73.34	
Expenses - R. Potter, travel	238.28	
C. Stanley, field supplies, office expense, promotion	144.87	
Stellac Syndicate - truck rental, gas	99.44	
J. P. Stevenson - camp supplies refund	(94.89)	
	1,611.77	
15% contingency on disbursements	241.77	
		1,853.54
		$ 3,807.06

SUNDRY EXPENSES

Disbursements:		
The Lettershop - business cards	$ 46.74	
15% contingency on disbursements	7.01	
		$ 53.75
TOTAL INVOICE		$3,860.81

afk August 24, 1976
E. & B.E.

INVOICE TO: Billian Mines Ltd.
c/o Morgan & Company
1210 - 675 West Hastings Street
Vancouver, B. C.

August 31, 1976

Invoice #76-016

GILLIAN EAST AND WEST CLAIMS - FIELD PROGRAM

Personnel:		
C. H. Stanley, drafting, assemble additional reports, Congdon report, etc.		$ 294.00
Disbursements:		
B. C. Telephone, long distance calls	$ 15.61	
C. P. Airlines, freight on soil samples	60.72	
Carnarvon Enterprises, photocopies of reports	74.70	
Vancal Reproductions, prints, drafting supplies	61.39	
Western Airlines, air freight	17.75	
Western Reproducers, prints	172.53	
	402.70	
15% contingency on disbursements	60.40	
		463.10
		757.10

SUNDRY AREAS - PROPERTY EXAMINATION, Yukon Terr.

Disbursements:		
B. C. Ferries - travel	184.50	
15% contingency on disbursements	27.68	
		212.18
TOTAL INVOICE		$ 969.28

November 3, 1976
E. & B. E.

Disb. 402.70 + 184.50 = 587.20

Cont. 60.40 + 27.68 = 88.08

R1

INVOICE 76-023

October 31, 1976.

INVOICE TO: Gillian Mines Ltd.
c/o Morgan and Company
1210-675 West Hastings Street
Vancouver, B. C. V6B 1N2

GILLIAN EAST AND WEST CLAIMS-DRILLING PROGRAM
AND E-M SURVEY

Personnel:		
Colin Harivel, October 2-15, supervision sampling and drill program	$ 1,372.00	
Peter Douglas, October 1-25, field assistant	931.50	
C. Stanley, October 7-13, E-M operator, field surveying October 28-29, drafting, report preparation	700.00	
		$ 3,003.50
Disbursements:		
John Barakso, consulting advance	1,000.00	
H.N. Horning, advance, percussion drilling	2,000.00	
C. Harivel, expenses(mileage, rope, feight)	87.50	
Min-En Labs., geochemical analysis	2,159.65	
Super-Valu, groceries	69.49	
Super-Valu, groceries	46.63	
VanCal, prints	42.54	
VanCal, drafting supplies	10.58	
B. C. Telephone, long distance calls	208.23	
Multiple Business, photocopies	2.25	
VanCal, prints	17.26	
VanCal, prints	44.82	5,688.95
15% contingency on disbursements		853.34
Rentals:		
1-1976 Ford truck 4x4 1 mo. @ $600.00/mo.	600.00	
mileage, 5,000 miles @ 25¢	1,250.00	
1-EM 16 VLF	300.00	
		2,150.00
		$ 11,695.79

TO HOUSTON, 25 mi. 15.63 km.

3200

3200

3300

3300

3100

3200

3000

2900

3000

56 E

75 E

50+50

argillite, fine grained black angular rubble

volcanic sandstone, fine-grained light to dark green bedding indistinct

angular fragments of acidic tuff mottled and banded red to green ocherous limonite patches

angular rubble of acidic tuff, banded, patches & diss. of ocherous limonite

acidic tuff brecciated with minor pyrite between fragments

fr or bd ? with fine black chert stringers

acidic tuffs, fine grained pink to green black chert foliae and cross-cutting minor brecciation with black chert matrix limonite on scattered fractures

minor chlorite, sericite alteration

GABBRO
~65% mafics (hornblende)
25% feldspar
5% quartz
coarse-grained

Gabbro, fresh

Gabbro

Dyke, light grey (dacite) amygdaloidal, some limonite

Gabbro

Gabbro

LAKE

LCP 20014 20014

GILLIAN WEST

GILLIAN EAST

50
51 S
52 S
53 S
54 S
55 S
56 S
57 S
58 S
59 S
60 S
61 S
62 S
63 S
64 S
65 S
66 S
67 S
68 S
69 S

LEGEND

-3500- TOPOGRAPHIC CONTOURS IN FEET
CONTOUR INTERVAL: 100 FEET or 30.48 meters

MARSH BOUNDARY — CREEK

GRAVEL ROAD

HI-SPEED LOGGING ROAD

GEOLOGY

ACIDIC TUFFS Fine grained, siliceous

VOLCANIC SANDSTONE

ARGILLITE

ALKALINE GABBRO

DACITE (Dyke rock)

bd Bedding

fr Fracturing

GEOLOGY - R. POTTER, P. ENG.

FIGURE 8
TO ACCOMPANY A REPORT BY R. POTTER, P.ENG. JULY 8, 1976

gillian mines ltd.

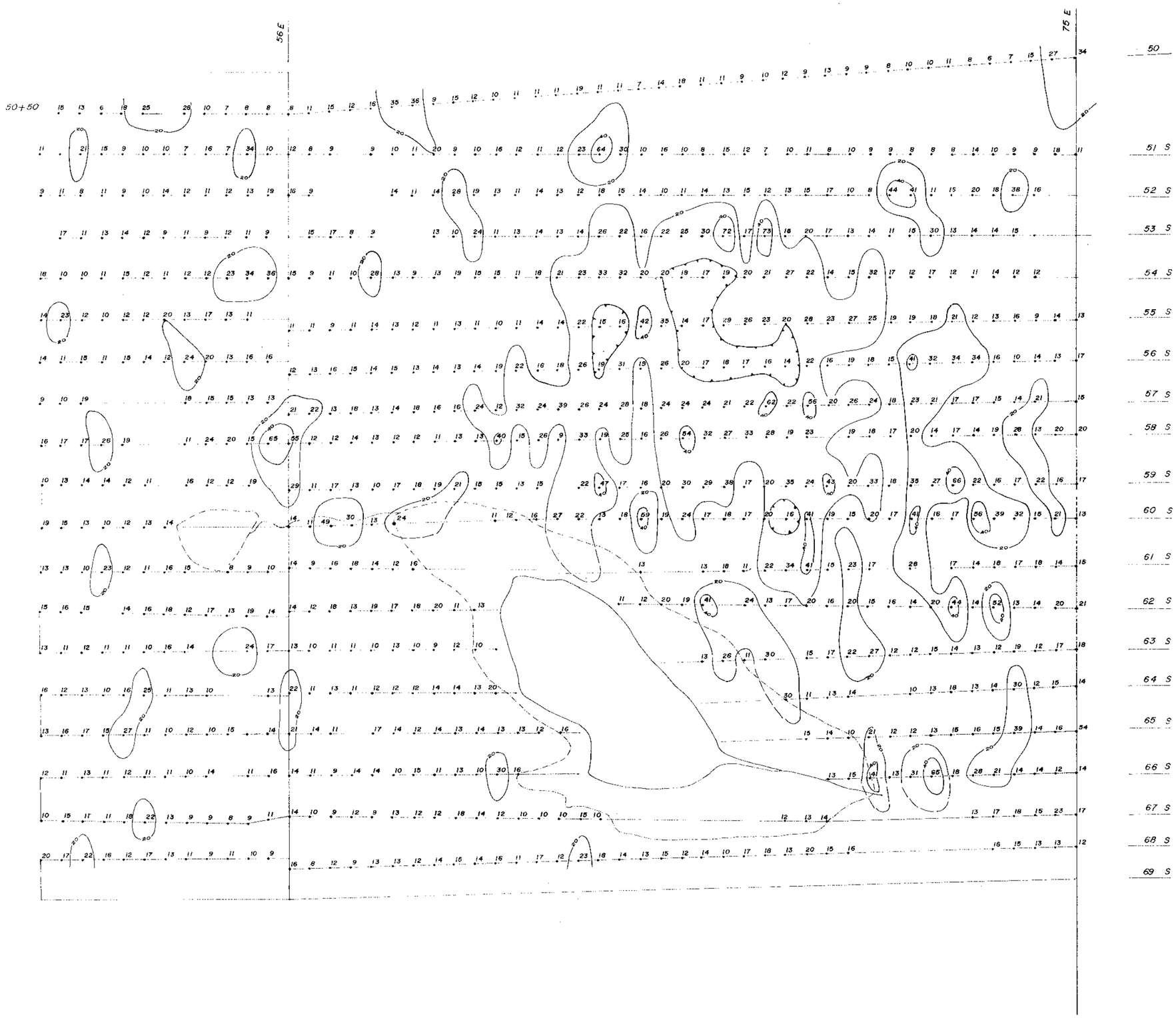
GILLIAN EAST AND WEST MINERAL CLAIMS
GOOSLY LAKE AREA
OMENICA M.D., B.C.

GEOLOGY

SCALE IN METERS
100 50 0 100 200 300
1:5000

MAP REFERENCE NTS 94L/1
PROPERTY COORDINATES 54°10'N 126°22'W

JUNE, 1976 MERIN MANAGEMENT LTD.



N

LEGEND

52 GEOCHEMICAL SOIL SAMPLING STATION ON CUT LINE GRID WITH VALUE IN P.P.M.

(20) OUTLINE OF AREA ABOVE THRESHOLD (20 p.p.m.)

(40) OUTLINE OF ANOMALOUS AREA (> 40 p.p.m.)

MARSH BOUNDARY

CREEK

FIGURE 9

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6151
MAP NO. 2

TO ACCOMPANY REPORT BY R. POTTER, P.ENG., DATED JULY 8, 1976.

Gillian Mines Ltd.

GILLIAN EAST AND WEST MINERAL CLAIMS
GOOSLY LAKE AREA
OMENICA M.D., B.C.

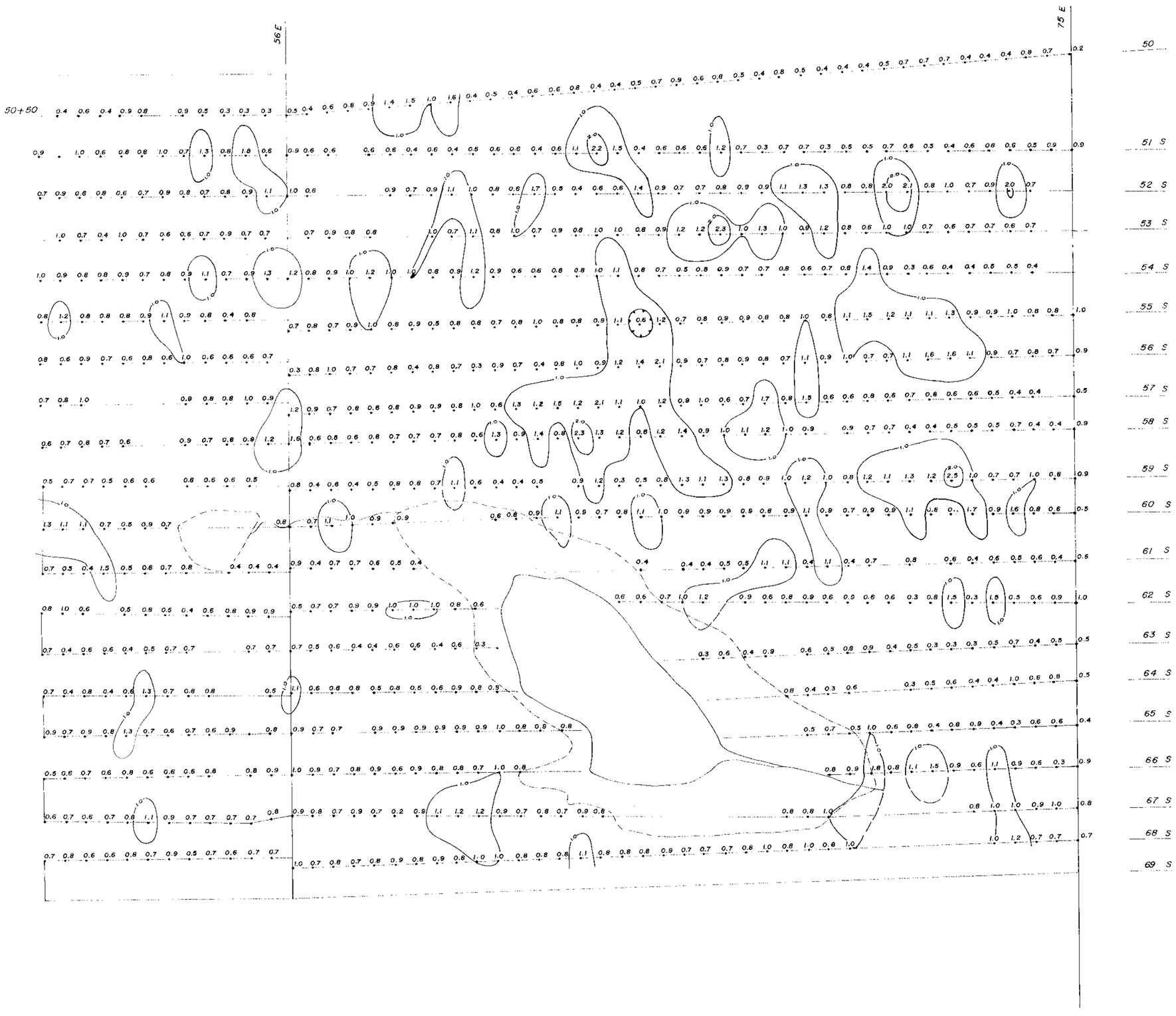
COPPER GEOCHEMISTRY

VALUES IN P.P.M.
VALUE AND CONTOUR MAP
SCALE IN METERS
100 50 0 100 200 300
1:50
MAP REFERENCE NTS 94L/1 e
PROPERTY COORDINATES 54° 10'N 126° 22'W

JUNE, 1976

6151

MERIN MANAGEMENT LTD.



LEGEND

0.6 GEOCHEMICAL SOIL SAMPLING STATION ON CUT LINE GRID WITH VALUE IN P.P.M.

1.0 OUTLINE OF AREA ABOVE THRESHOLD (1.0 p.p.m.)

2.0 OUTLINE OF ANOMALOUS AREA (>2.0 p.p.m.)

MARSH BOUNDARY

CREEK

FIGURE 10

TO ACCOMPANY REPORT BY R. POTTER, P.ENG., DATED JULY 8, 1976.

gillian mines ltd.

GILLIAN EAST AND WEST MINERAL CLAIMS

GOOSLY LAKE AREA

OMENICA M.D., B.C.

SILVER GEOCHEMISTRY

VALUES IN P.P.M.

VALUE AND CONTOUR MAP

SCALE IN METERS

100 50 0 100 200 300

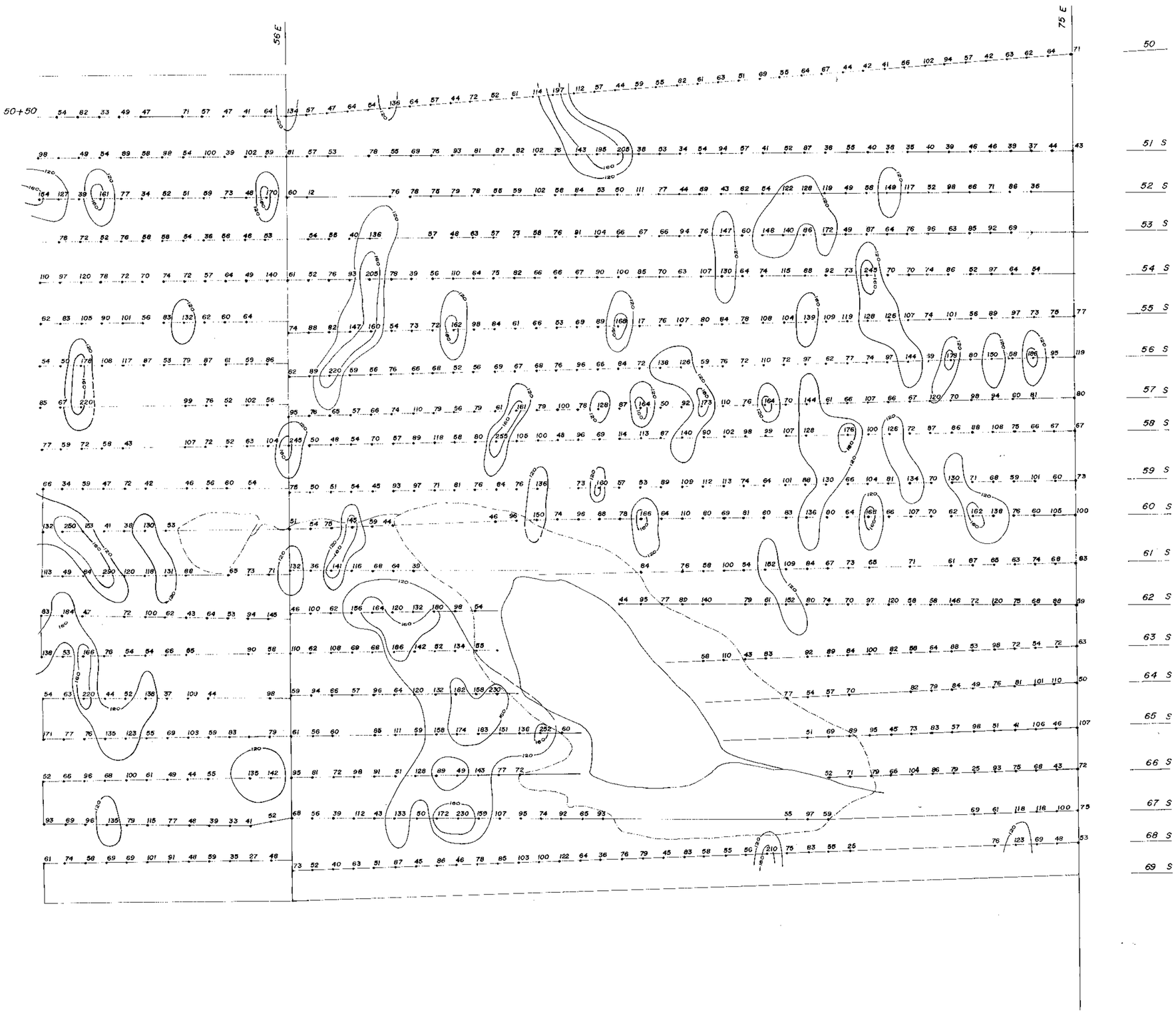
1:50

MAP REFERENCE NTS 94L/1

PROPERTY COORDINATES 54° 10'N 126° 22'W

JUNE, 1976

MERIN MANAGEMENT LTD.



N

LEGEND

105 GEOCHEMICAL SOIL SAMPLING STATION ON CUT LINE GRID WITH VALUE IN P.P.M.

120 OUTLINE OF AREA ABOVE THRESHOLD (120 p.p.m.)

160 OUTLINE OF ANOMALOUS AREA (>160 p.p.m.)

MARSH BOUNDARY

CREEK

FIGURE 11

TO ACCOMPANY REPORT BY R. POTTER, P.ENG., DATED JULY 9, 1976

gillian mines ltd.

GILLIAN EAST AND WEST MINERAL CLAIMS

GOOSLY LAKE AREA

OMENICA M.D., B.C.

ZINC GEOCHEMISTRY

VALUES IN P.P.M.

VALUE AND CONTOUR MAP

SCALE IN METERS

100 50 0 100 200 300

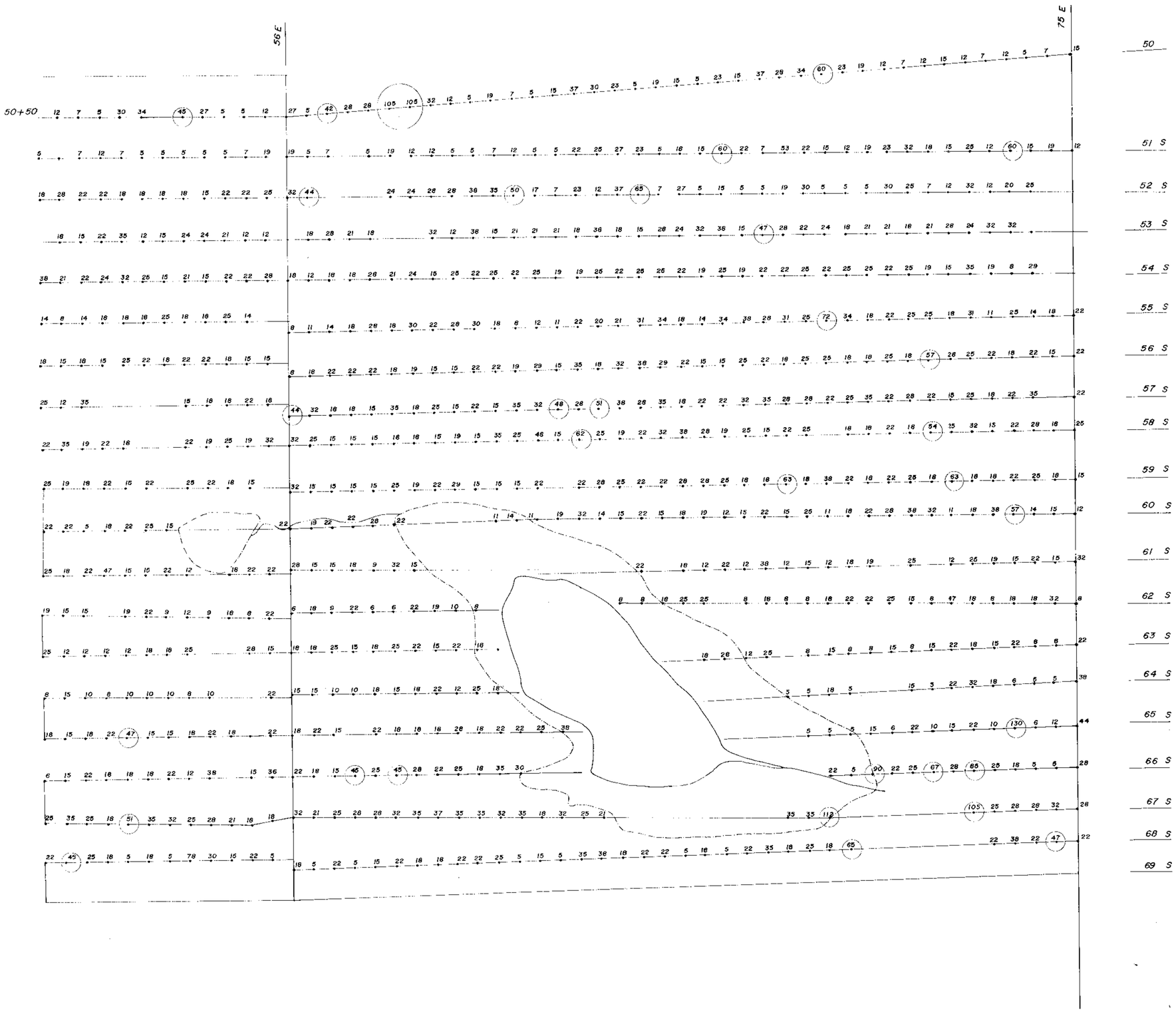
1:50

MAP REFERENCE NTS 94L/1

PROPERTY COORDINATES 54° 10'N 126° 22'W

JUNE, 1976

MERIN MANAGEMENT LTD.



LEGEND

- 47 — GEOCHEMICAL SOIL SAMPLING STATION ON CUT LINE GRID WITH VALUE IN P.P.M.
- VALUES ABOVE THRESHOLD (40 p.p.m.)
- ANOMALOUS VALUES (>60 p.p.m.)
- MARSH BOUNDARY
- CREEK

FIGURE 12

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6151
MAP NO. 5

TO ACCOMPANY REPORT BY R. POTTER, P.ENG., DATED JULY 8, 1976.

Gillian Mines Ltd.

GILLIAN EAST AND WEST MINERAL CLAIMS
GOOSLY LAKE AREA
OMENICA M.D., B.C.

MERCURY GEOCHEMISTRY

VALUES IN P.P.M.
VALUE AND CONTOUR MAP

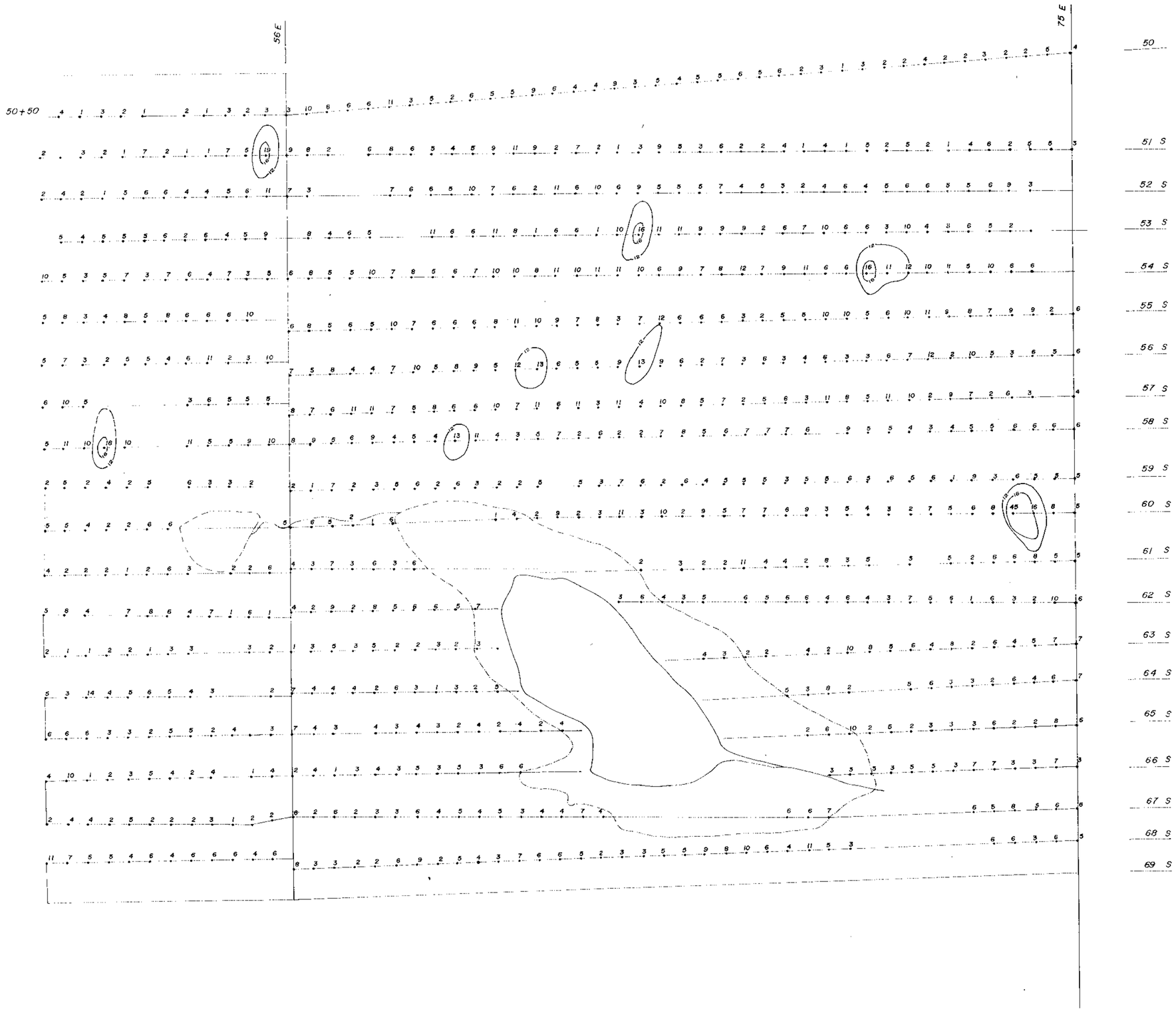
SCALE IN METERS
100 50 0 100 200 300
1:50

MAP REFERENCE NTS 94L/1
PROPERTY COORDINATES 54° 10'N 126° 22'W

JUNE, 1976

6151

MERIN MANAGEMENT LTD.



LEGEND

- GEOCHEMICAL SOIL SAMPLING STATION ON CUT LINE GRID WITH VALUE IN P.P.M.
- (12) OUTLINE OF AREA ABOVE THRESHOLD (12 p.p.m.)
- (16) OUTLINE OF ANOMALOUS AREA (>16 p.p.m.)
- MARSH BOUNDARY
- CREEK

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6151
MAP NO. 6

FIGURE 13

TO ACCOMPANY REPORT BY R. POTTER, P.ENG., DATED JULY 8, 1976.

gillian mines ltd.

GILLIAN EAST AND WEST MINERAL CLAIMS

GOOSLY LAKE AREA

OMENICA M.D., B.C.

ARSENIC GEOCHEMISTRY

VALUES IN P.P.M.

VALUE AND CONTOUR MAP

SCALE IN METERS
100 50 0 100 200 300
1:50

MAP REFERENCE NTS 94L/1

PROPERTY COORDINATES 54° 10'N 126° 22'W

JUNE, 1976

MERIN MANAGEMENT LTD.

6151

N

LEGEND

GEOPHYSICAL ANOMALIES

I.P. PERCENTAGE FREQUENCY EFFECT

E.M. CONDUCTORS

GEOCHEMICAL ANOMALIES

COPPER

SILVER

ZINC

GEOLOGY

CONTACTS

OBSERVED

INTERPRETED

GRID LINES

LEGAL CORNER POST

FIGURE 14

TO ACCOMPANY A REPORT BY R. POTTER, P.ENG. JULY 8, 1976

Gillian Mines Ltd.

GILLIAN EAST AND WEST MINERAL CLAIMS

GOOSLY LAKE AREA

OMENICA M.D., B.C.

COMPOSITE MAP
Geophysics, Geochemistry, Geology

SCALE IN METERS

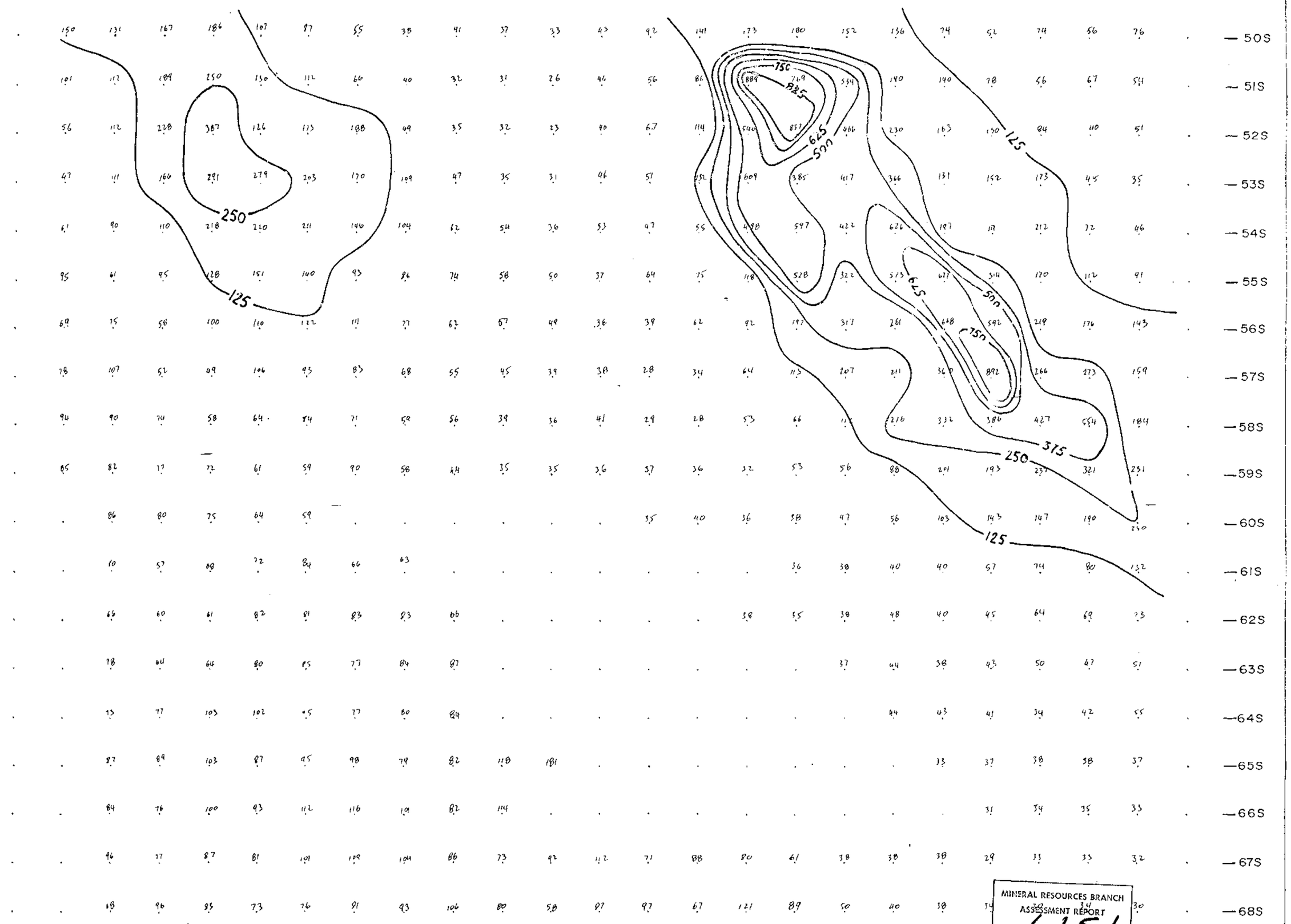
100 50 0 100 200 300

1 : 5000

MAP REFERENCE NTS 94L/1

PROPERTY COORDINATES 54° 10'N 126° 22'W

JUNE, 1976. MERIN MANAGEMENT LTD.



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6151
MAP NO. 8 Berretta fig. 2

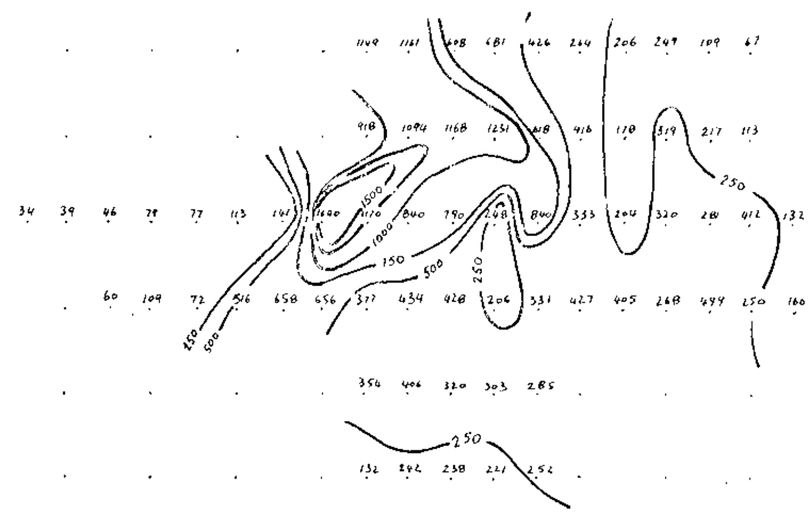
RESISTIVITY

GILLIAN PROPERTY	GILLIAN MINES LTD.
DIPOLE DIPOLE a = 100 m n = 2 0.3-10 HZ	SCALE 1 cm = 50 m CONTOUR INTERVAL 125 ohm-m
	M.G. BERRETTA JUNE 1976

6151

50E 51E 52E 53E 54E 55E 56E 57E 58E 59E 60E 61E 62E 63E 64E 65E 66E 67E 68E 69E 70E 71E 72E 73E 74E

50S
51S
52S
53S
54S
55S
56S
57S
58S
59S
60S
61S
62S
63S
64S
65S
66S
67S
68S



Berretta fig. 3

RESISTIVITY

GILLIAN PROPERTY	GILLIAN MINES LTD.
DIPOLE DIPOLE a = 50 m n = 2 0.3 - 10HZ	SCALE 1cm = 50m CONTOUR INTERVAL 250 ohm-m M.G. BERRETTA JUNE 1976

6151

50E 51E 52E 53E 54E 55E 56E 57E 58E 59E 60E 61E 62E 63E 64E 65E 66E 67E 68E 69E 70E 71E 72E 73E 74E

50S
51S
52S
53S
54S
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57S
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64S
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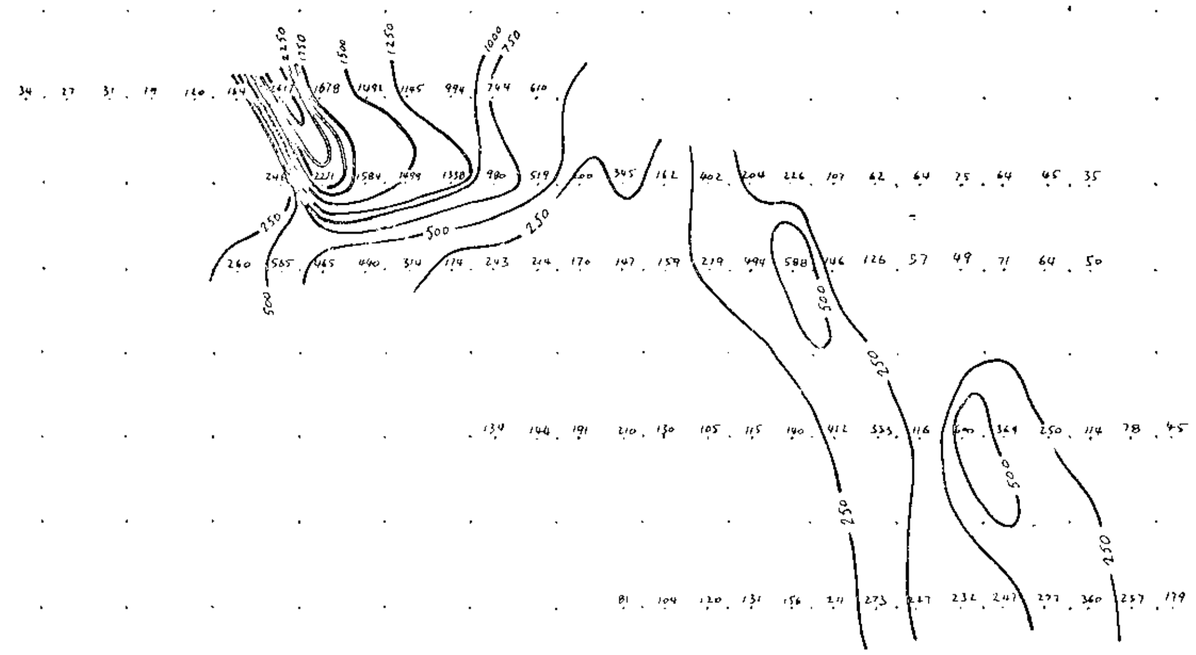
66S
67S
68S



M Berretta fig. 4

RESISTIVITY

GILLIAN PROPERTY

GILLIAN MINES LTD.

DIPOLE DIPOLE
a = 50m
n = 1
0.3 - 10 HZ

SCALE 1cm = 50m

CONTOUR INTERVAL 250 ohm-m

M.G. BERRETTA JUNE 1976

6151

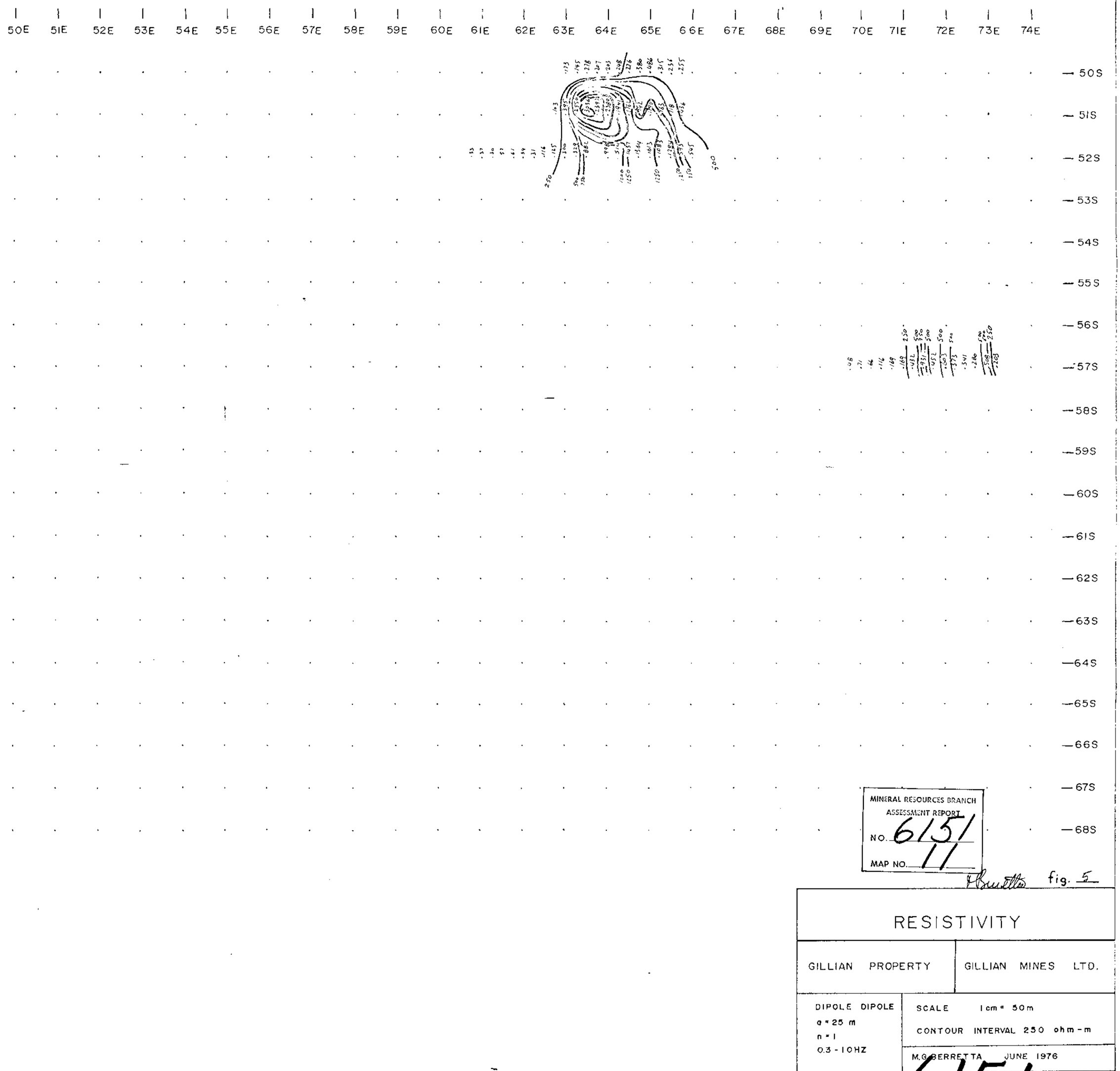


fig. 5

RESISTIVITY

GILLIAN PROPERTY	GILLIAN MINES LTD.
DIPOLE DIPOLE a = 25 m n = 1 0.3 - 10HZ	SCALE 1cm = 50m CONTOUR INTERVAL 250 ohm-m M.G.BERRETTA JUNE 1976

50E	51E	52E	53E	54E	55E	56E	57E	58E	59E	60E	61E	62E	63E	64E	65E	66E	67E	68E	69E	70E	71E	72E	73E	74E	
.	.2	.1	.1	.2	.1	.0	.1	.0	.1	.0	.0	.0	.0	.0	.1	.0	.0	.0	.1	.2	.1	.1	.1	.	— 50S
.	.2	.2	.1	.2	.2	.2	.2	.1	.2	.1	.1	.2	.1	.1	.2	.4	.4	.4	.1	.2	.2	.1	.1	.	— 51S
.	.0	.0	.1	.2	.1	.0	.2	.0	.2	.0	.1	.1	.1	.2	.4	.4	.5	.4	.0	.2	.2	.2	.1	.	— 52S
.	.1	.0	.1	.2	.2	.2	.2	.1	.2	.1	.2	.1	.1	.1	.3	.3	.3	.3	.1	.2	.2	.1	.0	.	— 53S
.	.1	.0	.2	.1	.1	.1	.2	.1	.1	.1	.1	.1	.0	.1	.4	.1	.2	.2	.0	.1	.2	.1	.1	.	— 54S
.	.2	.1	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0	.1	.2	.2	.2	.2	.1	.2	.3	.1	.1	.2	.	— 55S
.	.0	.1	.1	.0	.1	.1	.0	.2	.1	.0	.1	.0	.1	.0	.1	.2	.1	.2	.0	.2	.2	.3	.3	.	— 56S
.	.1	.2	.0	.	.0	.	.0	.0	.	.1	.0	.1	.	.0	.0	.1	.1	.2	.1	.2	.2	.4	.2	.	— 57S
.	.2	.2	.1	.0	.0	.2	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.2	.2	.2	.3	.3	.3	.	— 58S
.	.1	.1	.0	.0	.0	.1	.1	.0	.0	.1	.2	.1	.2	.1	.2	.0	.2	.2	.2	.3	.3	.2	.2	.	— 59S
.	.	.0	.	.	.	.	.	.	.	.	.	.	.	.	.1	.0	.2	.0	.1	.1	.1	.1	.0	.0	— 60S
.	.	.1	.1	.3	.2	.1	.0	.0	.	.	.	.	.	.	.	.	.1	.0	.0	.0	.0	.0	.0	.	— 61S
.	.	.0	.2	.2	.2	.1	.1	.0	.0	.	.	.	.	.	.	.1	.1	.0	.0	.0	.0	.0	.0	.	— 62S
.	.	.0	.0	.0	.0	.0	.0	.0	.0	.	.	.	.	.	.	.	.0	.1	.0	.0	.0	.0	.0	.	— 63S
.	.	.1	.	.0	.0	.0	.0	.1	.0	.	.	.	.	.	.	.	.	.1	.1	.0	.1	.1	.0	.	— 64S
.	.	.1	.1	.1	.0	.0	.1	.0	.0	.0	.1	.	.	.	.	.	.	.	.0	.0	.0	.1	.1	.	— 65S
.	.	.1	.1	.0	.0	.0	.0	.0	.0	.0	.	.	.	.	.	.	.	.	.	.0	.0	.0	.0	.	— 66S
.	.	.1	.2	.1	.1	.1	.1	.1	.2	.1	.2	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.	— 67S
.	.	.1	.1	.1	.1	.1	.1	.1	.1	.0	.1	.0	.1	.0	.0	.0	.0	.1	.1	.0	.1	.1	.1	.	— 68S

M Berretta fig. 6

PFE

GILLIAN PROPERTY | GILLIAN MINES LTD.

DIPOLE DIPOLE
a = 100 m
n = 2
0.3 - 10 HZ

SCALE 1 cm = 50 m
CONTOUR INTERVAL 3 %

M.G. BERRETTA JUNE 1976

6151

50E 51E 52E 53E 54E 55E 56E 57E 58E 59E 60E 61E 62E 63E 64E 65E 66E 67E 68E 69E 70E 71E 72E 73E 74E

50S
51S
52S
53S
54S
55S
56S
57S
58S
59S
60S
61S
62S
63S
64S
65S
66S
67S
68S

M Berretta fig. 17

PFE

GILLIAN PROPERTY | GILLIAN MINES LTD.

DIPOLE DIPOLE
a = 50 m
n = 2
0.3 - 10 HZ

SCALE 1 cm = 50 m
CONTOUR INTERVAL 3 %

M.G BERRETTA JUNE 1976

6151

50E 51E 52E 53E 54E 55E 56E 57E 58E 59E 60E 61E 62E 63E 64E 65E 66E 67E 68E 69E 70E 71E 72E 73E 74E

50S
51S
52S
53S
54S
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57S
58S
59S
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61S
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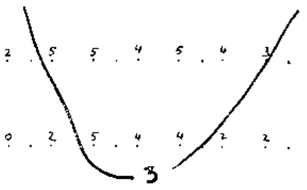
63S
64S
65S
66S
67S
68S



Berretta fig. 8

PFE

GILLIAN PROPERTY	GILLIAN MINES LTD.
DIPOLE DIPOLE a = 50 m n = 1 0.3-10 HZ	SCALE 1 cm = 50 m CONTOUR INTERVAL 3 % M.G. BERRETTA JUNE 1976

6151

50E 51E 52E 53E 54E 55E 56E 57E 58E 59E 60E 61E 62E 63E 64E 65E 66E 67E 68E 69E 70E 71E 72E 73E 74E

50S
51S
52S
53S
54S
55S
56S
57S
58S
59S
60S
61S
62S
63S
64S
65S
66S
67S
68S

M Berretta fig. 9

PFE

GILLIAN PROPERTY	GILLIAN MINES LTD.
DIPOLE DIPOLE a = 25 m n = 1 0.3-10HZ	SCALE 1cm = 50m CONTOUR INTERVAL 3 % M.G. BERRETTA JUNE 1976

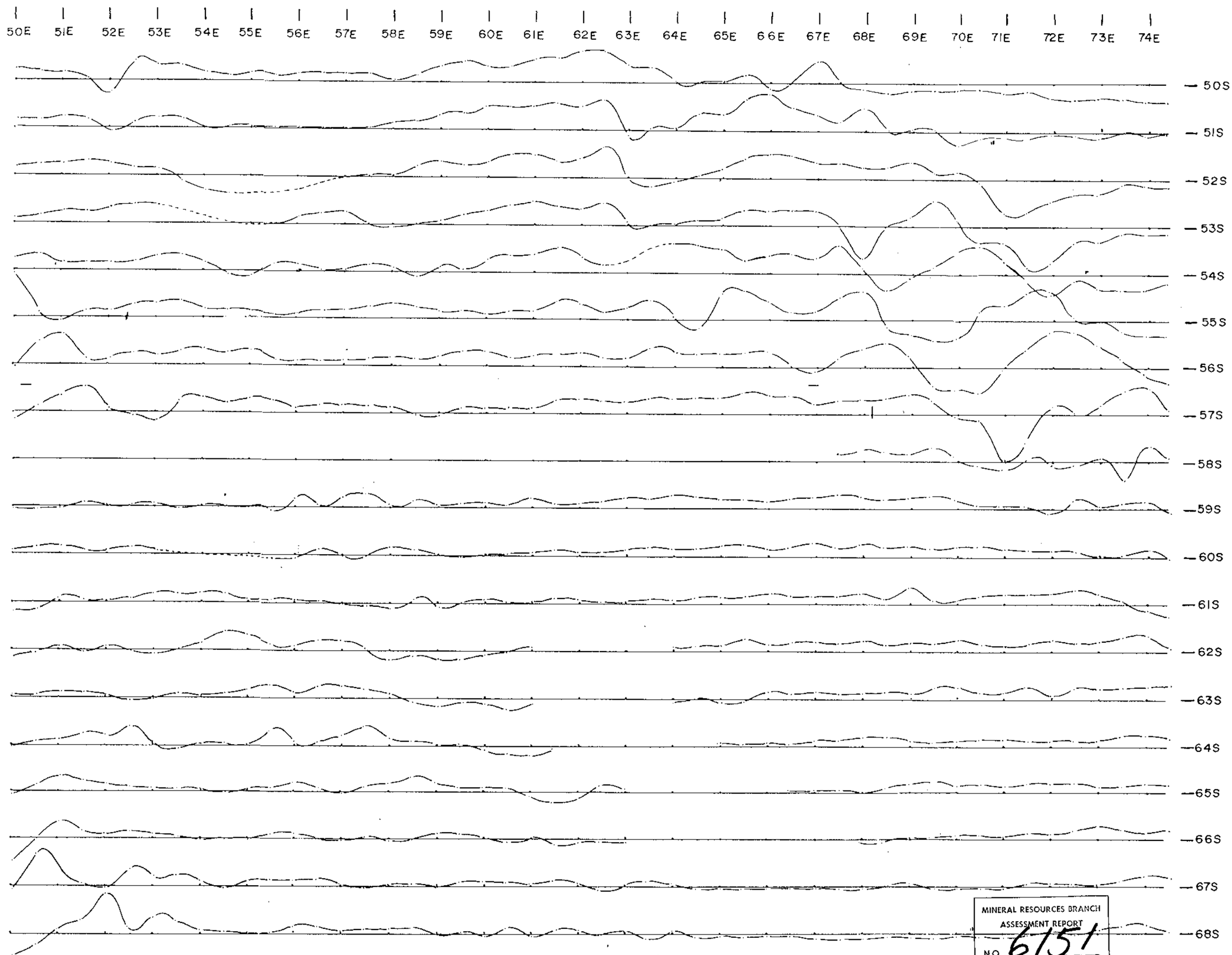
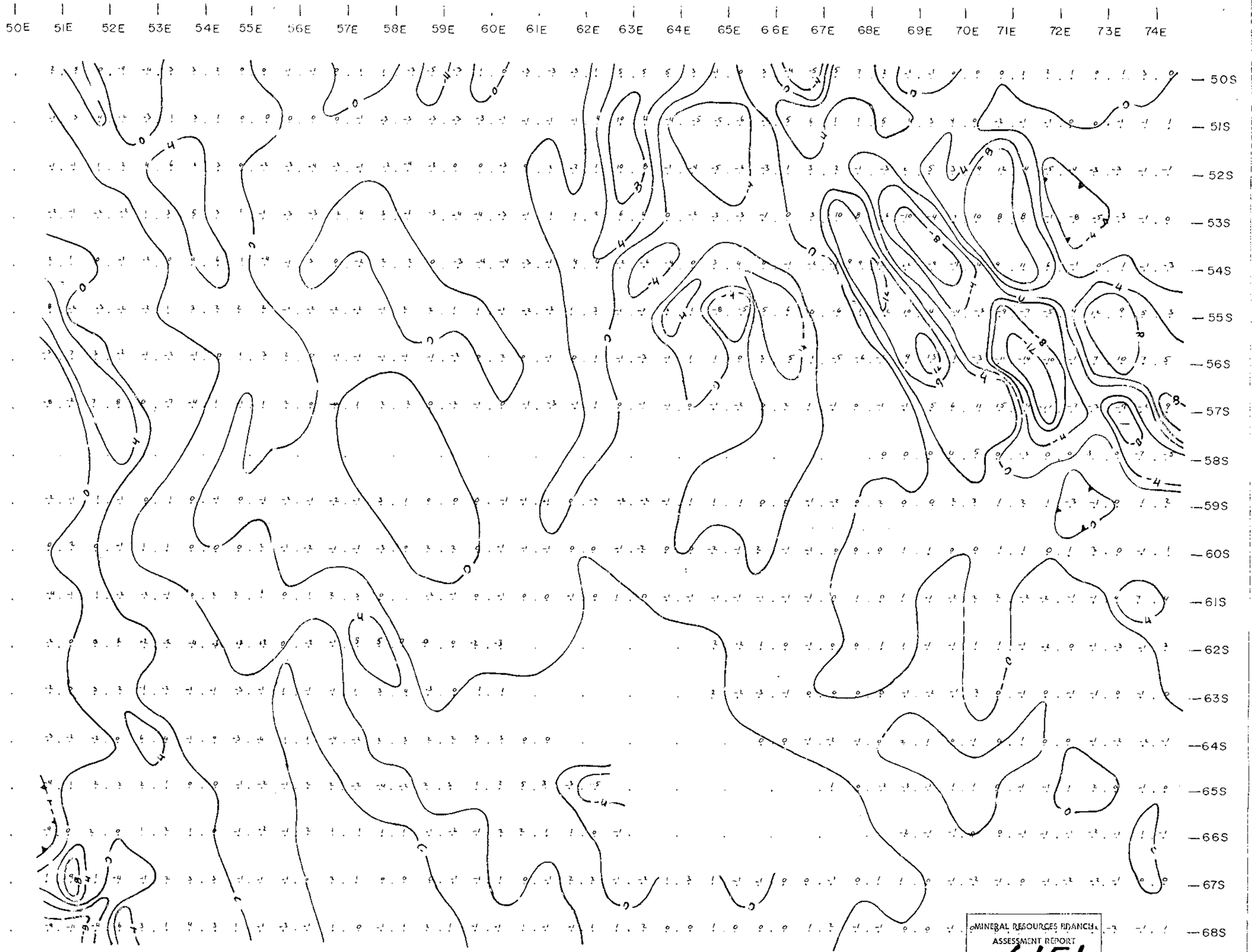


fig. 12

VLF TILT ANGLE

GILLIAN PROPERTY	GILLIAN MINES LTD.
EM-16 TRANSMITTER SEATTLE FACING EAST	SCALE 1cm = 50m VERTICAL SCALE 1cm = 16 % M.G. BERRETTA JUNE 1976



Berretta fig. 11

FRASER FILTERED TILT ANGLE

GILLIAN PROPERTY	GILLIAN MINES LTD.
VLF EM-16 TRANSMITTER SEATTLE FACING EAST	SCALE 1cm = 50m CONTOUR INTERVAL 4° M.G. BERRETTA JUNE 1976