

# 4668

103B/6E

INTERIM REPORT

ON Cu, Itsa

MAGNETOMETER, ELECTROMAGNETER

AND

GEOCHEMISTRY SURVEYS

OF

BARREL RESOURCES LIMITED

MAY 1 - 31 1973

52° 15'N, 131° 40'W

SKEENA MINING DIVISION

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 4668 MAP.....

Vancouver, B.C.  
June 15, 1973

W.G. Timmins, P. Eng.,

W. G. TIMMINS P. ENG. - MINING AND GEOLOGICAL CONSULTANT

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M A P S

- |                            |               |
|----------------------------|---------------|
| #1 MAGNETOMETER SURVEY     | 1" = 200 feet |
| #2 ELECTROMAGNETIC SURVEY  | 1" = 200 feet |
| #3 Geochemical Soil Survey |               |
| #4 " " " "                 |               |
- W. G. TIMMINS P. ENG. - MINING AND GEOLOGICAL CONSULTANT

## SUMMARY

Barrel Resources Ltd has acquired a group of 40 claims situated on the southeast end of Moresby Island, in the Queen Charlotte Islands.

There are several small high-grade properties in the area which, in the past, have produced relatively good tonnages of high grade copper and iron ore.

The area is known to be in a good geological setting, with Karmutsen series volcanics and limestone in contact with the Kunga limestone (Jurassic), which is in contact with Cretaceous intrusives. The mineral deposits appear to be limestone replacements in the Karmutsen, containing good grade iron and copper. Gold and silver values are known to occur as well.

A three-man party recently carried out a work program on the property. Geochemical and geophysical surveys were carried out over portions of the claim group and a sampling program in the old adits was conducted.

The exploration program confirmed the presence of significant amounts of copper and iron mineralization with minor gold and silver values.

It is recommended that additional work be done on the property to assess its mine-making potential. A two-phase programme at a total estimated cost of \$69,110.00 is proposed to further explore and develop the property.

## INTRODUCTION

Barrel Resources Limited has obtained two groups comprising 40 claims on the extreme southern end of Moresby Island in the Queen Charlotte Islands.

In the past, there has been a considerable amount of work done on these claims, developing three known occurrences of iron and copper-gold-silver mineralization. Work stopped in 1923 and the deposits appear to have been virtually untouched for a period of 50 years.

A recent examination of the property, with geochemical, geophysical surveys and a small sampling program, has confirmed the presence of high grade copper mineralization and outlined possibilities of significant tonnages.

## LOCATION, CLIMATE, ACCESS

The property consists of two groups of claims, the Itsa 1-18 (Record Numbers 37101 - 37118) and the Cu 1-22 (Record Numbers 37079 - 37100), situated on the western shore of Collison Bay, on the southeast end of Moresby Island. The claims are situated about 450 miles northwest of Vancouver and about two miles south of the old Jedway Mine, owned and operated by Granby Mining Co. Ltd. from 1962 - 1968.

The Cu 1-22 claims surround the western edge of Collison Bay. The old workings (two adits at Tidewater level) are called the Wireless showing to the west and the Oceanic showing to the east.

The Itsa 1-18 claims are located contiguous to and south of the Cu group. An old tramway 3800 feet from Collison Bay Beach leads to three adits worked many years ago.

Most of the property is heavily forested with the high timber and dense underbrush typical of coastal areas. The terrain on the Cu group north of Collison Bay is quite steep and rugged, although nowhere are there extreme elevations.

The climate is pleasant, with moderate temperatures all year round, but rainfall is quite high with an average precipitation of over 120 inches per year.

Access to the property is most conveniently achieved by float plane to the Beach at Collison Bay. Pacific Western Airlines schedule daily flights from Vancouver to Sandspit, from where a plane can be chartered to fly the 75 miles southeast to the claim group. An alternate route is by boat from the mainland.

### HISTORY

About the year 1900, a group of fishermen in the area discovered high grade copper mineralization in float on the beach near Ikeda Cove. Prospecting revealed massive copper ore, which was subsequently mined out between the years 1906 and 1909. Further exploration resulted in additional copper being found and work continued until 1920. The Lily Mine near the Collison Bay property is reported to have produced 1.2 million pounds of ore grading 7% Cu with gold and silver values reported as well.

Two of the deposits found and worked at that time were known as the Oceanic and Wireless showings. They are mentioned in Bulletin Number 54, 1968, British Columbia Department of Mines and Petroleum Resources, Page 213; 'Oceanic and Wireless.'

These two properties are similar and adjacent or possibly even the same and are located on the shore at the west entrance to Collison Bay. Discovery of these deposits was made about 1906 by the Daykin brothers. The mineralization occurs as a copper-rich bedded replacement of a thin interlaval limestone in the Karmutsen Formation. The bed strikes N 25° E and is up to 4 feet thick. A 50 foot adit was driven in 1911 on the Wireless at sea level.

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In 1916, 17 tons were shipped from the Wireless, containing 795 pounds of copper, 14 ounces of gold and 12 ounces of silver. Sorted chalcopyrite ore totalling 15 tons and containing 1,178 pounds of copper and 7 ounces of silver was shipped from the Oceanic in 1913.

The Collison Bay deposit was the subject of extensive work in the early 1900's. It is mentioned briefly in the Report of the Minister of Mines for 1919. A two level underground development is described:

"The vein is characteristic of the surrounding showings, being magnetite with pyrrhotite, pyrite and scattered chalcopyrite. The whole dump would probably assay 1 and 1.5 per cent copper."

#### GEOLOGY

There is very little geological information available for this area, and no geologic mapping has as yet been done on the claims. However, Map No. 5 from Bulletin No. 54, British Columbia Department of Mines and Petroleum Resources, Geology of the Queen Charlotte Islands, by A.S. Brown describes some detail of the geology of this area.



The economically important Karmutsen Formation of Triassic Age appears to underly the northwestern portion of the Barrel property in contact with granitic type rocks of Cretaceous Age on the west. The Karmutsen Formation is a favourable host-rock in this area to base metal occurrences. It consists of a series of massive basalt flows, pillow lavas and related breccias and tuffs.

In the central area of the Barrel claims, the basalt flows of the Karmutsen Formation are in contact with the limestone of the Kunga Formation of Jurassic Age, which, in turn, is in contact with granitic-type rocks of Cretaceous Age near the eastern boundary of the claim group.

The Barrel claims are in an area known to be favourable for copper-iron occurrences. Granby Mining Co. Ltd and Falconbridge Nickel Mines Limited have carried out exploration work on some of these deposits. Chalcopyrite-magnetite is the typical type of mineralization contained in these occurrences.

Several miles farther north, the Mastadon-Highland Bell Mines Ltd deposit has been developed to 8.2 million tons of high grade iron with significant copper values. Excelsior Mines

Limited has some 1.5 million tons of similar material further to the north.

#### CURRENT PROGRAM - DISCUSSION AND RESULTS

During the month of May of this year an exploration program was initiated in order to substantiate reports of mineralization noted in B.C. Government Literature. A three man party was flown into Collison Bay and carried out preliminary exploration work.

Following reconnaissance and location of the showings, and because of rugged terrain, heavy vegetation, and severe climatic conditions, and upon examination of the showings with the finding of substantial base metal mineralization, it was decided to concentrate the work program on the showing areas.

Two grids were laid out, one over the Oceanic and Wireless showings, and the other over the Collison Bay showings.

A Ronka EM-16 and a Scintrex fluxgate MF-2 magnetometer were used in geophysical surveys over the grids. Unfortunately, due to the rugged terrain and steep slopes and related interpretational problems, the Em-16 could be used only on the

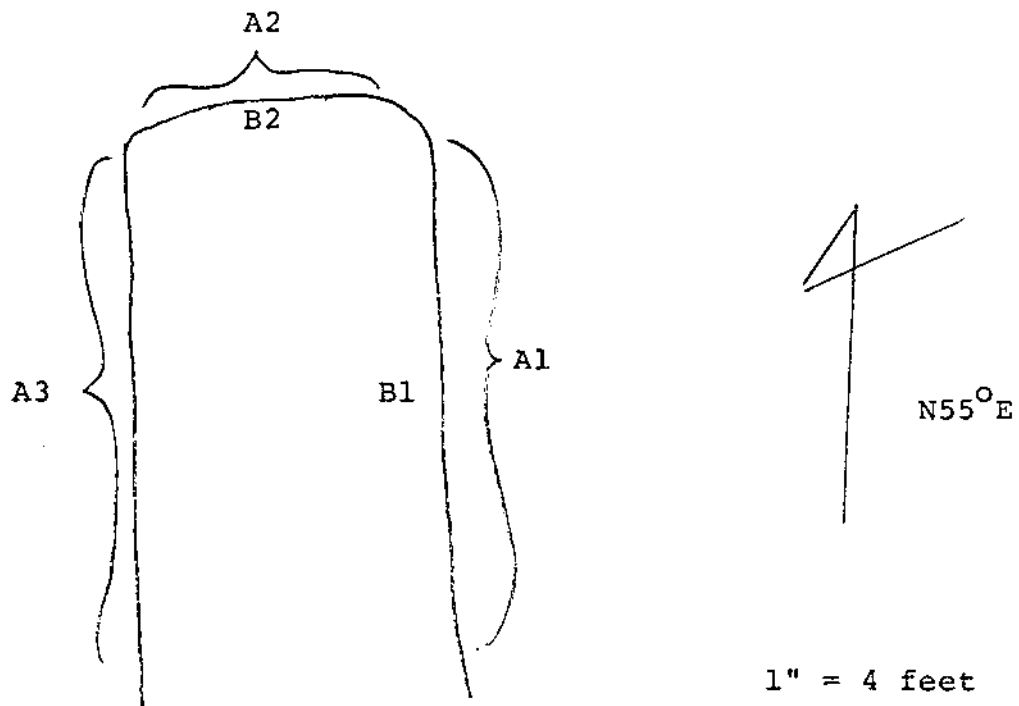
southern grid. (Due possibly to the proximity of salt water, great difficulty was encountered in finding a null during the EM program on the northern grid). No definite anomalies were defined by the EM survey.

The magnetometer survey was carried out over both grids and anomalous values were recorded near the old workings and over much of the grid. (See map accompanying this report for EM and magnetometer data.)

The entire grid was sampled geochemically, but, at the time of writing this report, results have not yet been returned. An extensive sampling program was carried out in the old adits located on the property. A small Copco Cobra drill was used and some blasting was done in order to obtain fresh samples. They were then assayed for gold, silver and copper. Some iron assays were also taken. (See following sketches and assay tables for sampling data.)

## COLLISON BAY

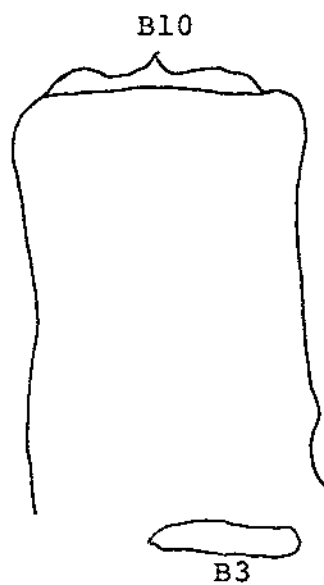
## WEST ADIT



## LEGEND

	Au	Ag	Cu
A1 - chip sample from east wall (10')	.01	.30	.60
A2 - chip sample from back at face (6')	.02	.43	1.40
A3 - chip sample from west wall (10')	.008	.762	0.50
B1 - grab sample from blast (east side)	.005	.295	.06
B2 - grab sample from blast (back face)	.03	.42	1.11

## MIDDLE ADIT



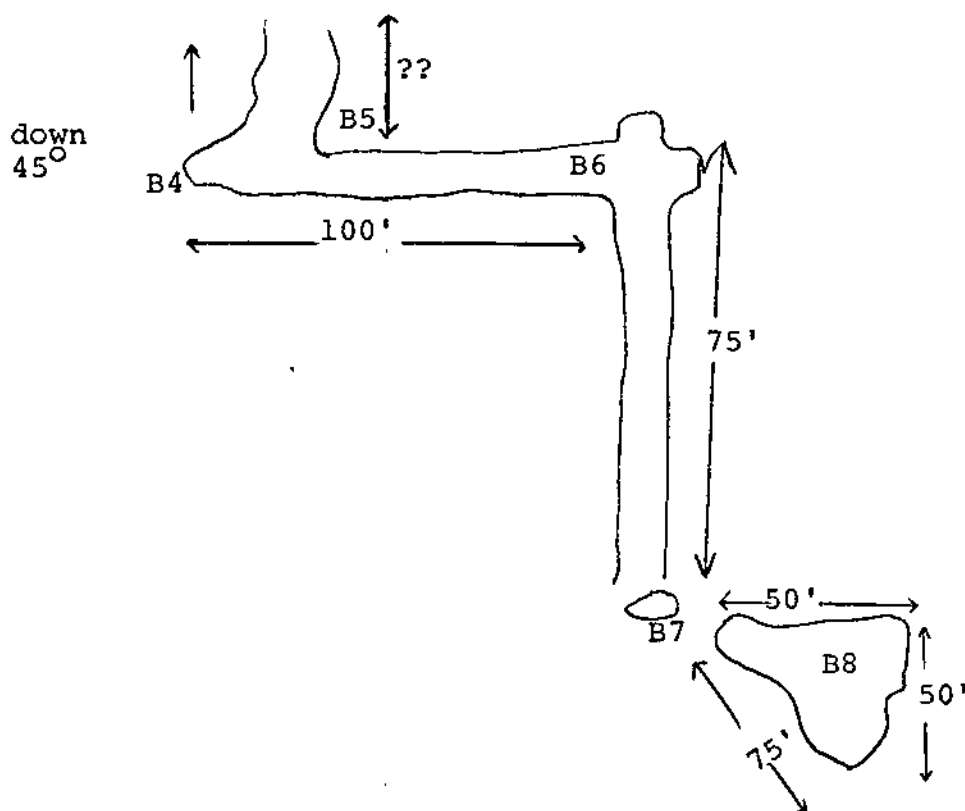
N60°E

1" = 4 feet

## LEGEND

	Au	Ag	Cu	Ni	Fe
B3 Grab sample from stockpile	.18	.62	1.62	.01	23.4
B10 Grab sample from blast hole	.08	.44	1.09	.01	26.6

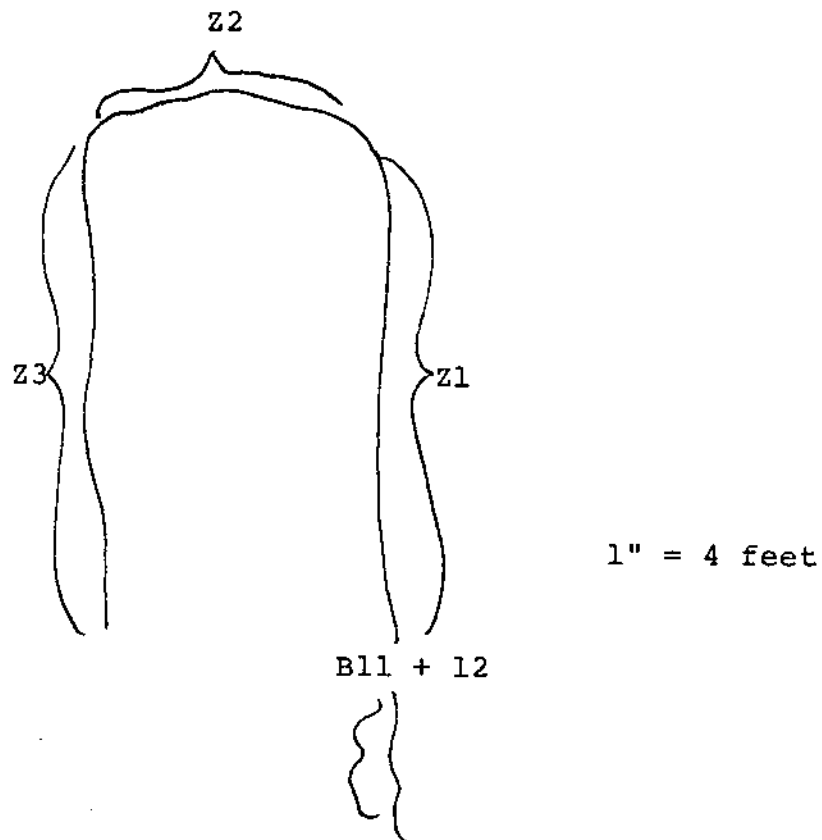
## EAST ADIT



## LEGEND

	Au	Ag	Cu	Ni	Fe
B4 - Grab sample	.06	.74	3.20		
B5 - Grab sample	.025	.175	.026		
B6 - Grab sample from N.W. end of tunnel - first bend	.068	.36	.062		
B7 - Grab sample from last load?	.09	.81	3.10	.01	
B8 - Grab sample from main stockpile	.06	.58	3.10	.02	

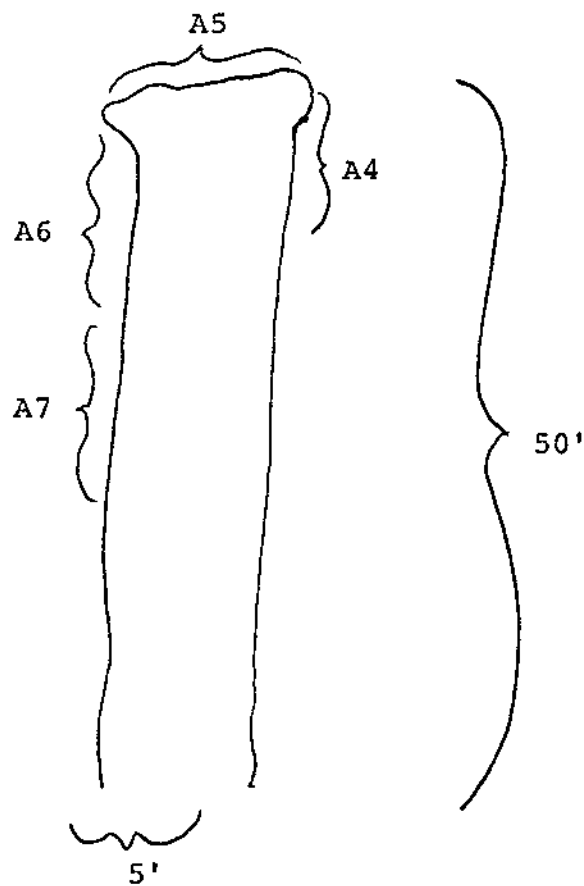
## WIRELESS



## LEGEND

		Au	Ag	Cu
Z1	Chip sample from east wall (10')	.028	1.22	2.00
Z2	Chip sample from north wall (5')	.01	.28	0.09
Z3	Chip sample from west wall (10')	.03	1.02	2.00
B11 )	Grab samples from blast hole	.04	2.60	10.70
B12)	from adit	.08	1.04	4.90

## OCEANIC



## LEGEND

	Au	Ag	Cu
A4 - 10' section east wall	.015	.165	0.26
A5 - 10' section face	.02	1.46	1.88
A6 - 10' section west wall	.015	.815	1.42
A7 - 10' section west wall	.005	.295	.20



CONCLUSIONS

Barrel Resources Limited has acquired a copper-iron property consisting of 40 mineral claims, located on the extreme south east end of Moresby Island, Queen Charlotte Islands.

An exploration program recently carried out on the property has substantiated reports of high grade copper mineralization. The copper-iron structure occurring on the southern sector of the property possesses potential for longer strike length as evidenced by dump material sampled in the West Adit, the actual vein itself sampled in the East Adit, and as indicated by magnetics.

With respect to the deposits in the Wireless and Oceanic showings, on the north side of Collison Bay, sample assays have proven up reports of a high grade occurrence of copper mineralization. If the copper occurs, as replacements in limestone, then potential exists for additional deposits of possible large size.

The Barrel claims are located in a geologically favourable area for occurrences of other mineralized zones within the claim boundaries. The immediate area is known to contain significant copper-gold-silver mineralization and other companies have found substantial amounts of copper and copper-iron material in the general region.

The property is located at tidewater and close to large dock facilities.

In view of the favourable results from the exploration program, further expenditures are warranted in order to further assess the potential of the known occurrences of copper, as well as to explore thoroughly the remainder of the property to determine the location of other possible mineralized areas.

#### RECOMMENDATIONS

The following two-phase programme is recommended.

#### PHASE I

1. Establish a control grid on 400 foot line spacings oriented in an east-west direction over the entire property.
2. Conduct a geochemical soil sampling program with stations each 100 feet, for copper determinations.
3. Conduct a magnetometer survey establishing stations each 100 feet.

4. Trench and sample known mineralized occurrences and geologically map the entire property.

PHASE II

Dependent upon results of Phase I, diamond drilling of showings and anomalous areas should be carried out.

ESTIMATED COST OF PROGRAMME

PHASE I

1.	Control grid 48 miles at \$200/mile	\$ 9,600.00
2.	Geochemical soil sampling - collection and determination 2,534 samples at \$5/sample	12,670.00
3.	Magnetometer survey at 400 x 100 feet stations, 48 miles at \$80/mile	3,840.00
4.	Trenching, sampling, assaying and mapping	8,000.00
5.	Transportation	3,000.00
6.	Supervision, reports, maps etc.	2,000.00
	TOTAL ESTIMATED COST PHASE I	<u>\$39,110.00</u>

PHASE II

1.	Diamond drilling, 2000 feet at \$15/foot	Estimated	<u>\$30,000.00</u>
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Respectfully submitted,



W. G. Timmins, P.Eng.,

June 15, 1973

## CERTIFICATE

I, WILLIAM G. TIMMINS, of the Province of British Columbia, certify as follows:

1. That I am a geologist having been practising my profession continuously for eleven years and maintain an office at 307-475 Howe Street, Vancouver, British Columbia.
2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario and have attended Michigan Technological University, Houghton, Michigan.
3. I am a member of the Association of Professional Engineers of British Columbia.
4. I have no interest, direct or indirect in the property or securities of Barrel Resources Ltd., nor do I expect to receive any such interest.
5. This report is based upon a study of pertinent government reports and maps, and upon a visit to the property March 3, 1973 and supervision of program conducted during May, 1973.

This report herein may be used in the prospectus of the Company and amendments thereto.

DATED at Vancouver, British Columbia, this 15th day of June, 1973.



W.G. Timmins, P.Eng.,

ADDENDUM TO THE  
INTERIM REPORT  
ON THE  
QUEEN CHARLOTTE ISLANDS PROPERTY  
OF  
BARREL RESOURCES LIMITED  
DATED JUNE 15, 1973  
BY  
W.G. TIMMINS, P.ENG.

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A preliminary geochemical soil sampling survey was carried out over portions of the north and south grids, as well as a number of samples taken along the trail between Collison Bay and the south grid.

Samples were collected from the soil B horizon and sent to Kamloops Research Laboratory for analysis for copper and silver.

Geochemical Analysis Procedure:

The soil samples were tested for copper by Kamloops Research & Assay Laboratories Ltd. The method of analysis was as follows:

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1. Dried in an electric oven,
2. Screened to -80 mesh,
3. A 0.5 gramme sample weighed out and digested in 5 mls. hot HCl and HClO3 and then evaporated to dryness.
4. Residues from 3 dissolved in 40 mls. of water,
5. Results were tested by atomic absorption spectrometry against known standards.

#### RESULTS OF GEOCHEMICAL SURVEY

A total of 71 samples were collected from the south grid. Assuming a background of 15 ppm for copper, the area in the vicinity of the old adits is extremely anomalous with values up to 1300 ppm coincident with anomalous magnetics caused by pyrrhotite.

Several other isolated low anomalous values are indicated at random locations.

Readings up to 54 ppm copper are recorded on Line 6 + 00 NW coincident with an anomalous magnetic zone. Only occasional anomalous silver values are noted, background being approximately 0.4, however in this same area a reading of 11.4 ppm was obtained.

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An occasional high copper value is recorded from samples taken along the trail from the south grid to Collison Bay.

Using a background of 50 ppm copper and 0.6 ppm silver for the north grid 9 samples from the 26 samples collected are anomalous in copper, and, 4 in silver. Highest readings obtained are in the vicinity of the old workings, however, anomalous values to the northeast also occur.

All geochemical results are plotted on the accompanying map and confirm that recommendations previously made in my report of June 15, 1973 should be carried out forthwith.

Respectfully submitted,  
W. G. TIMMINS & ASSOCIATES LTD.,

  
W. G. Timmins, P.Eng.,

August 27, 1973

**W.G. TIMMINS & ASSOCIATES LTD**

CONSULTING GEOLOGISTS



DOMINION OF CANADA:  
PROVINCE OF BRITISH COLUMBIA:  
To Wit:

In the Matter of

I, WAYNE WATERS

of 3756 West Broadway, Vancouver 8, B.C.

in the Province of British Columbia, do solemnly declare that

\$16,000 was spent on Barrel Resources Ltd., Queen Charlotte Islands (Collision Bay) mining claims during the months of May 1 - 31 1973. The following is a breakdown of the money expenditures:

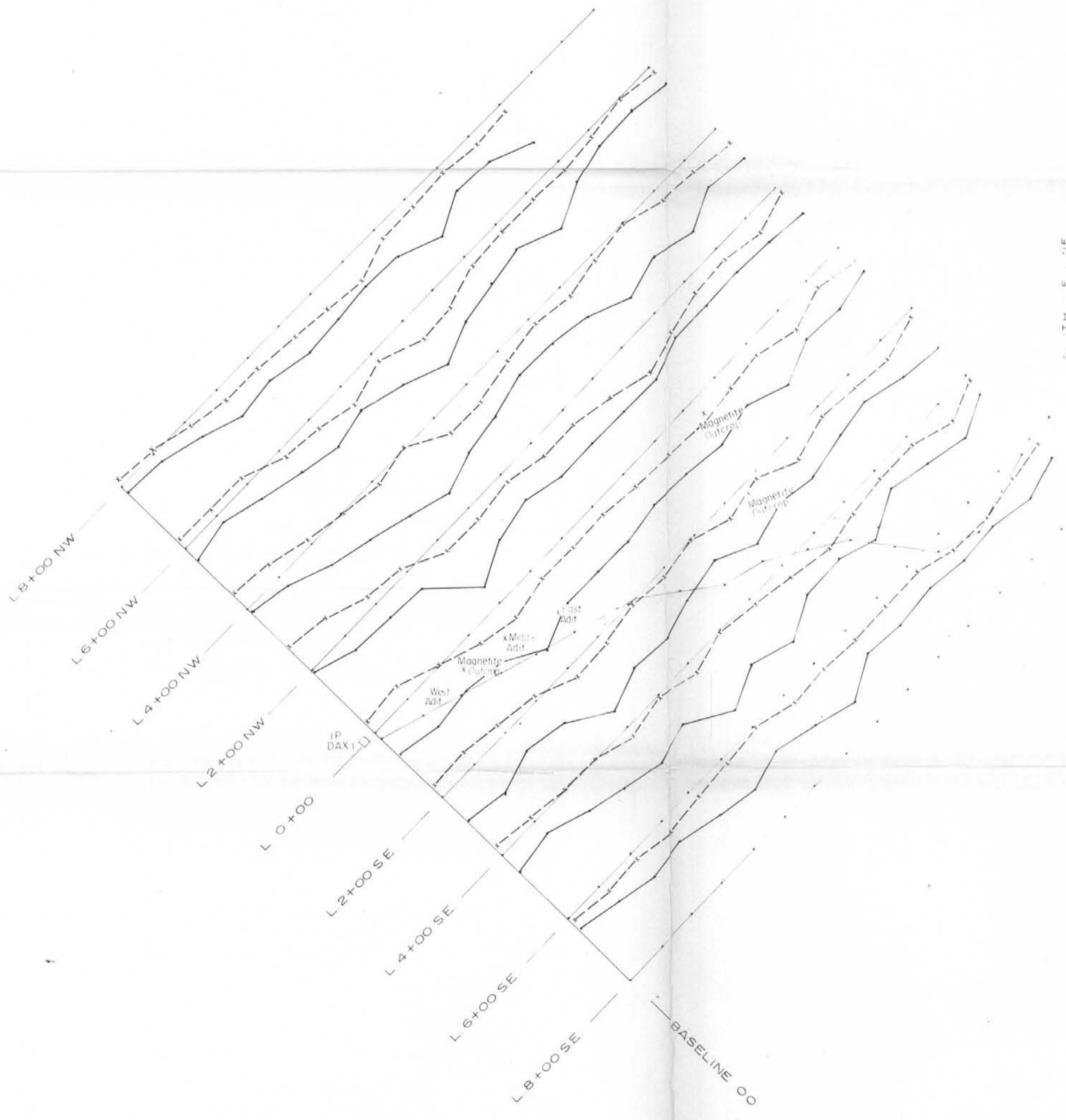
Transportation	\$ 1,000.00
Wages @ \$50/day/man for 30 days (ie. 3 men)	4,500.00
Rental of Magnetometer and Electromagnetometer @ \$150/day	4,500.00
Geochemical collection and analysis	2,900.00
Rental of cobra @ \$20/day/or 30 days	600.00
Groceries	550.00
Dynamite and accessories	350.00
Engineering and Supervision	1,600.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the *City*  
of *Vancouver*, in the  
Province of British Columbia, this *22nd*  
day of *October* 1973, A.D.

*[Signature]*  
A Commissioner for taking Affidavits for British Columbia or  
A Notary Public in and for the Province of British Columbia.

*[Signature]*  
SUB-MINING RECORDER



**LEGEND**  
 RONKA EM-16 SURVEY  
 ——— DIP ANGLE  
 - - - QUADRATURE  
 VERTICAL SCALE - 1" = 10 Degrees  
 HORIZONTAL SCALE - 1" = 200 Feet

**4668**

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. **4668** MAP #1

*W.H.T.*

BARREL RESOURCES LTD.  
 ELECTROMAGNETIC SURVEY  
 COLLISON BAY  
 QUEEN CHARLOTTE ISLANDS, B.C.

SCALE  
 FEET 400 200 0 200 400 FEET  
 W.G. TIMMINS P. ENG. JUNE, 1973





**4668**  
**M2**  
Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. **4668** MAP # **2**

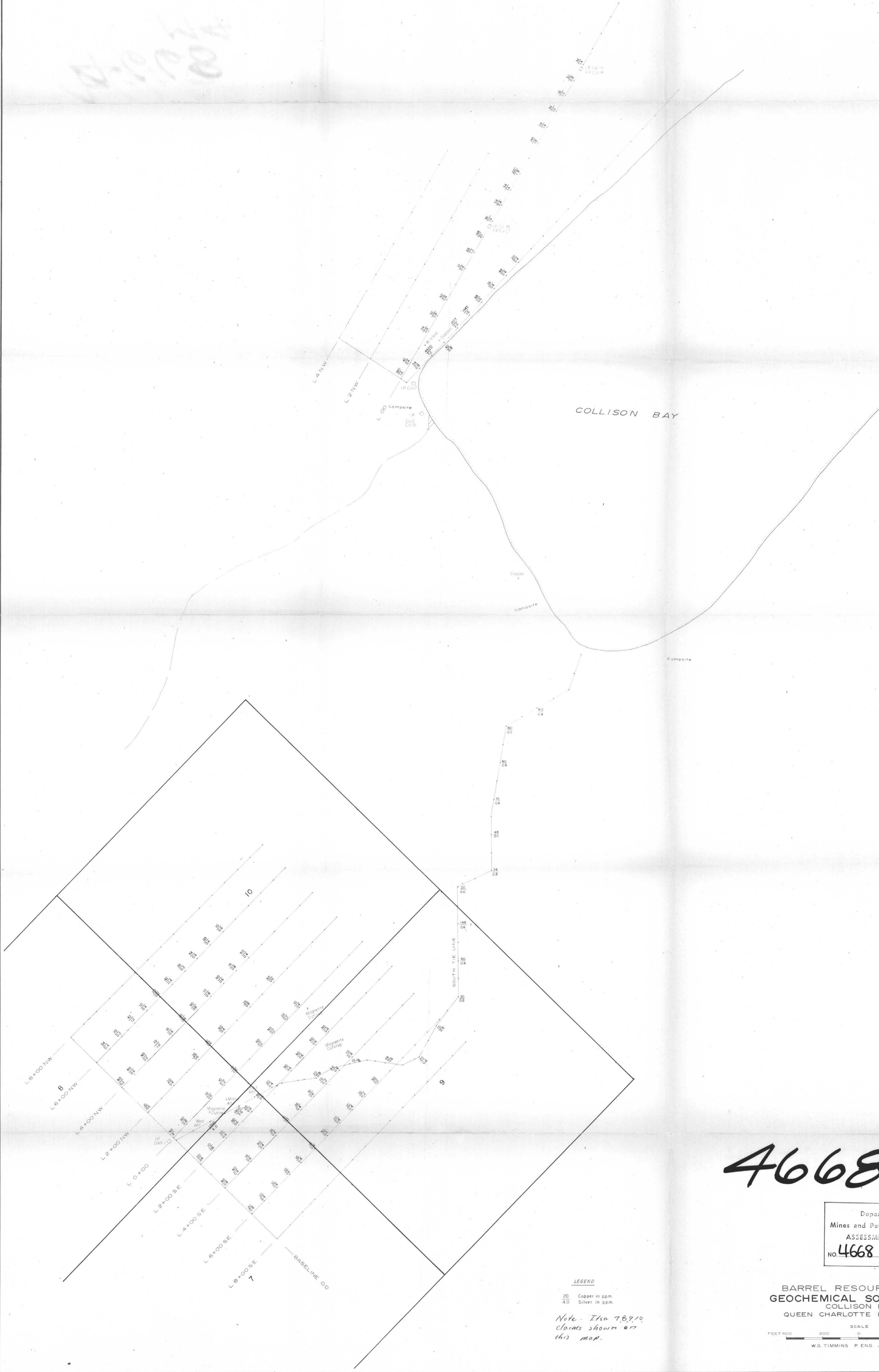
BARREL RESOURCES LTD  
MAGNETOMETER SURVEY  
COLLISION BAY  
QUEEN CHARLOTTE ISLANDS, B.C.

NOTE CONTOUR INTERVAL 100 GAMMAS

SCALE  
FEET 400 200 0 200 400 FEET  
WG TIMMINS P. ENG. JUNE, 1973



4668 M3



COLLISON BAY

L8+00 NW  
L6+00 NW  
L4+00 NW  
L2+00 NW  
L0+00  
L2+00 SE  
L4+00 SE  
L6+00 SE  
L8+00 SE  
BASELINE 00

SOUTH TIE LINE

LEGEND  
20 Copper in ppm.  
40 Silver in ppm.

Note - Irsa 789/0  
claims shown on  
this map.

4668 M3

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4668 M.P. #3

BARREL RESOURCES LTD.  
GEOCHEMICAL SOIL SURVEY  
COLLISON BAY  
QUEEN CHARLOTTE ISLANDS, B.C.

SCALE  
0 200 400 FEET  
WG. TIMMINS P. ENG. JUNE, 1971



