REPORT ON THE MINERAL EXPLORATION OF THE COIN LAKE GROUP DOME - HEYSON TOWNSHIPS OF RED LAKE, ONTARIO

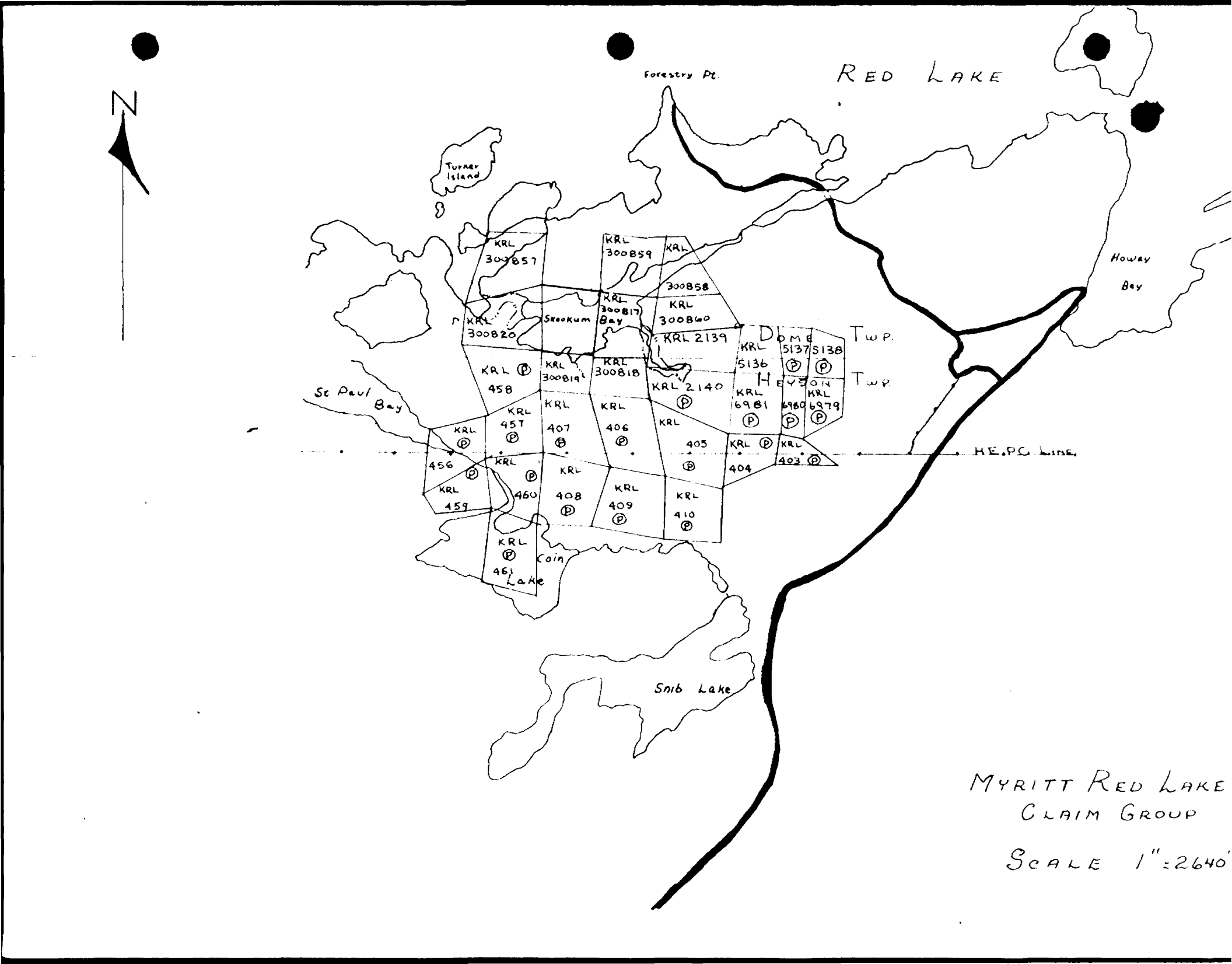
for

COCHENOUR WILLANS GOLD MINES LTD.

by

L.C. CHASTKO, B.Sc.

JANUARY, 1972



MYRITT RED LAKE
CLAIM GROUP

SCALE 1" = 2640'

INTRODUCTION:

This report has been compiled and written for the purpose of accompanying the submission of exploration work accomplished from September 1st to December 31st, 1971, and which is re-imburseable up to one-third of the direct cost of explorations as provided by the Ontario Department of Mines & Northern Affairs, Exploration Assistance Program.

Disseminated chalcopyrite and gold occurrances occur frequently in the Dome granitic stock, especially in the southern portions of the stock located in the southern part of Dome and northern part of Heyson townships. The mineralization is generally associated with fractures and shearing, particularly the intersection of N.N.W. and E.N.E. zones. Although showings are numerous, they are generally low in grade and erratic in nature. Producing gold mines in the stock area were both limited in size and number.

Low grade erratic gold and disseminated copper were reported on the Coin Lake My-Ritt property. Although the gold values themselves were not encouraging, the report of disseminated chalcopyrite mineralization in a number of holes over fair widths did spark interest. Unfortunately, no copper assays or estimates of chalcopyrite mineralization were made at the time.

An exploration program was designed to outline target areas on the property. The following points were considered:

(1) The deposit would have to be a sizeable one due to the low grade expected.
(2) The mineralization was known to occur in shears and fractures.
(3) The small amount of mineralization was not expected to respond to conventional electro-magnetic methods but the shear zones may respond weakly to sensitive methods.

The following steps were proposed and attempted:

(1) A lineament study was employed to study the frequency of intersections of the two sets.
(2) A V.L.F.-E.M. survey was conducted to trace possible weakly conductive shears.
(3) A cold extraction soil sampling geochemical survey was conducted.
(4) A self potential survey was abandoned. Poor results were attributed to the sharp contrast in resistivities between low and high areas.
(5) An Induced Polarization Survey was conducted after all methods listed above failed to indicate definitive targets.
(6) Three diamond drill holes were drilled. Two holes were drilled testing a V.L.F. anomaly. A third hole was drilled testing the strongest I.P. response on the property.

The copper-gold mineralization encountered in the drilling was far too low in grade and what values were obtained were far too narrow and erratic to warrant further exploration.

DESCRIPTION, LOCATION & ACCESS TO PROPERTY:

The Coin Lake Claim Group is comprised of thirty (30) contiguous mining claims, all located in Dome and Heyson townships of Red Lake, Ontario. Twenty-two (22) of the mining claims, Nos. KRL 403, 404, 405, 406, 407, 408, 409, 410, 456, 457, 458, 459, 460, 461, 2139, 2140, 5136, 5137, 5138, 6979, 6980 and 6981 are patented. The remaining eight (8) claims, Nos. 300817, 300818, 300819, 300820, 300857, 300858, 300859, 300860 are unpatented.

Access to the property is by waters of Red Lake or by an overland wood road off the Madsen-Red Lake road.

PROPERTY OWNERSHIP:

Fourteen claims, Nos. KRL 403 - 410, inclusive and 456 - 461, inclusive, are recorded in the name of My-Ritt Gold Mines Ltd.

Two claims, Nos. KRL 2139 and 2140 are recorded in the name of Cochenour Willans Gold Mines Ltd., Licence No. A.33564.

Six claims, Nos. KRL 5136, 5137, 5138, 6979, 6980, 6981 are under option from G.F. Thrall.

Eight claims, Nos. KRL 300817 - 300820 and 300857 - 300860 are recorded in the name of Coin Lake Gold Mines Ltd., Licence No. A.38310.

PRESENTATION OF RESULTS:

V.L.F. Electro-Magnetic Results

Reduced data using the in phase component readings are plotted and contoured on a grid plan at a scale of 1" = 200 feet. This plan is enclosed in a map pouch following this report.

Geochemical Results

The cold extraction geochemical results for total heavy minerals, zinc and copper are plotted in parts per million. Sampling was carried out at fifty foot intervals. Samples that analyzed one part per million or nil T.H.M. are not recorded and were not analyzed for Cu or Zn. The geochemical plan is provided at a scale of 1" = 200 feet and is enclosed in a map pouch following this report.

Induced Polarization Results

The I.P. results are provided in a separate report as supplied by McPhar Geophysics Limited.

Diamond Drilling Results FILED IN DRILL SECTION

A copy of the diamond drill logs and assays are provided in this report within the section pertaining to diamond drilling.

AVAILABLE DATA ON CLAIM GROUP:

Maps and reports covering the geology of the claim group area have been published by the Ontario Department of Mines.
- Geological Report 56, Geology of the Northern Part of Heyson Township by S.A. Ferguson, 1968; accompanying map 2125 at a scale of 1" = 1000 feet.
- Geological Report 45, Geology of Dome Township by A.S. Ferguson, 1966; accompanying map 2074, Dome Township at a scale of 1" = 1000 feet.
- Preliminary Map No. 208, Heyson Township, Geology and Geophysics by S.A. Ferguson and Assistants, 1960, 1961
- Preliminary Map, Dome Township 1951 - O.D.M.
- Forty Ninth Annual Report of the O.D.M. Vol XLIX, Part II, 1940; Geology and Mineral Deposits of the Red Lake Area by H.C. Horwood; accompanying plans Map No. 496 "Red Lake Area" at a scale of 1" = 2640 feet.

PREVIOUS WORK:

For more detailed information on companies, refer to Forty Ninth Annual Report of the O.D.M. by H.C. Horwood.

Coin Lake Gold Mines Limited

Original group of claims included KRL.403 - 410, inclusive, 456 - 461, inclusive.

Work consisted of a magnetometer survey, prospecting, trenching and diamond drilling carried out in 1936-38.

Claim KRL 457 was intensely prospected and trenched. To the writer's knowledge at least 22 drill holes were drilled. Low to medium but erratic gold values were obtained. Chalcopyrite was reported in many of the holes but no estimates or assays were recorded.

Skookum Gold Mines Limited

Original claim group consisted of 8 claims of which 4 form a part of the present day Coin Lake claim group. In 1936 and 1937, striping, trenching and diamond drilling was

carried out. A three compartment shaft was sunk to a depth of 190 feet on claim KRL 300817.

O.D.M. files possibly contain more information of work performed on these claim groups. The former Hasaga property claims KRL 2139 and 2140 and the G.F. Thrall property claims KRL 5136, 5137, 5138, 6981, 6982 and 6983 now make up a part of the new Coin Lake claim group and no doubt have work recorded with the O.D.M.

GENERAL GEOLOGY:

According to Ferguson and Horwood, the claim block is located essentially on the southern part of the Dome granitic stock. The bottom southernmost claims KRL 456, 460, 408, 409 and 410 are located on the contact between the granodiorite to the north and felsic meta volcanics to the south. The contact area on claims KRL 456 and 460 is intruded by serpentinite. Basic dikes intrude the granodiorite and felsic meta volcanics along at least two major sets of shear directions.

Exploration has been confined mainly to the stock area and therefore only the granodiorite will be mentioned briefly. Fuller descriptions of rock types and previous exploration activities are presented in both O.D.M. reports mentioned previously.

The relatively unaltered granodiorite is generally a light grey color. Mineral composition is feldspar 60 - 70%; quartz 15 - 20%; Chorite, biotite, amphibole 10 - 15%; accessories 2 - 3%. The rock is generally medium grained and equigranular. Approaching shear zones the rock is generally a salmon pinkish color. Alteration includes, sericitization, epidatization, silicification, saussuritization. Greatest alteration is associated with the stronger E.N.E. trending shears. In these zones crystal boundaries are highly obliterated and the rock is highly recrystallized. Mafic minerals often are present as clots rather than distinctive crystals. A basic dike was intersected in diamond drill holes C1 and C2 in a distinctive shear zone. C3 intersected a rather wide shear zone and a mylonite fault zone. Many of the shear zones form distinctive lineaments. The two dominant E.N.E. and N.N.W. directions were readily discernible on air photos. The greatest frequency of intersection of lineaments centered on claims KRL 2139, 2140, 300817 and 300818. It was therefore postulated that this may be a suitable area to concentrate explorations.
The two dominant shear directions are:
(1) Strike E.N.E. and dipping S.S.E. at approximately 60°
(2) Strike N.N.W. and dipping E.N.E. at approximately 85°

Economic Mineralization

Economic mineralization is very sparse. It includes mainly gold, chalcopyrite and occasional molybdenite. The mineralization is confined mainly to the shear zones. Chalcopyrite and molybdenite occur in disseminated forms or in tiny veinlets in fractures. Low erratic gold values are scattered in the shear zones. The only interesting gold value obtained was a .98 oz/ton over a width of 1.5 feet. This was obtained from a quartz-carbonate-pyrite fracture zone. Choice grab samples from an old pit on claim KRL 457 returned assay values of up to .48 oz/ton gold and .15% Cu. Although the chalcopyrite mineralization was scattered over fair widths, assay returns were generally trace amounts.

DISCUSSION OF RESULTS:

Lineament Study

A printed copy of an air photo used for the lineament study is enclosed. The dark lines represent some of the stronger lineaments observed. Note the two dominant N.N.W. and E.N.E. direction and the strong linear coming from the upper right corner of the photo (Hasaga Shaft area) paralleling Skookum Bay. The greatest frequency of intersection occurs on the north central portion of the grid.

V.L.F. Electro-Magnetic Survey

See instrument details in legend on grid plan. Readings were taken on all lines at 50-foot intervals. The inphase component readings were reduced, plotted and contoured. The anomalous areas show up as positive readings. Difficulties were encountered close to a dead but grounded power line, therefore no readings are recorded.

A V.L.F. survey was carried out in an attempt to delineate some of the stronger shear zones on the claim group. It was found that several V.L.F. responses did correspond to lineaments and the general shear directions.

Geochemical Survey

For details see legend on geochemical survey grid plan. The geochemical revealed no distinctive geochemical halos which may be interpreted in two ways:

(1) The geochemical survey was successful in delineating that no economic mineralization is present in significant amounts.
(2) An unknown factor is complicating the picture and a mineralized zone is present but this geochemical survey failed to pick it up.

The induced polarization survey and diamond drilling results favour the first postulation.

Induced Polarization Survey

See separate report for I.P. survey results. One definite strong I.P. conductor was delineated by McPhar Geophysics Limited. This anomaly was tested by diamond drill hole C3. The sulfide mineralization detected by the survey proved to be pyrite in a quartz carbonate fracture over a width of 1½ feet. This stringer did give assay returns of 0.98 oz/ton gold. Low erratic values in gold were obtained over other sections of this hole.

Diamond Drilling

CONCLUSIONS:

A V.L.F.-E.M., I.P., Geochemical and Lineament Study survey were conducted on the claim group to outline possible diamond drill targets. Two holes were drilled testing a V.L.F.-E.M. anomaly. A third hole tested the best I.P. response on the property. Very sparse copper-gold mineralization was encountered in all three drill holes.

RECOMMENDATIONS:

No further exploration work appears warranted or is recommended on this claim group at the present time.

Respectfully submitted,

L.C. Chastko, B.Sc.
COCHENOUR WILLANS GOLD MINES LIMITED

FINANCIAL SUMMARY

Staff:	Geologist	$ 2,185.00
	Surveyor	1,320.00
Road Cutting		600.00
Camp Construction		284.63
Grid Cutting - 18.7 miles		1,589.50
Prospecting		1,220.00
Geophysics:	V.L.F.-E.M. Survey	780.00
	I.P. Survey	3,996.81
Geochemical Survey		1,081.20
Office & Draughting		1,237.80
Transportation		480.00
Diamond Drilling		13,602.65
	TOTAL:	$28,377.59

1/3. $9,459.19

FINANCIAL STATEMENT

DOME AND HEYSON TOWNSHIPS

COIN LAKE et al GROUP

COIN LAKE, MYRITT, THRALL & HASAGA OPTIONS

Period - September 1st, 1971 to March 31st, 1972

Staff: Geologist	$ 2,185.00
Surveyor	1,320.00
Road Cutting	600.00
Camp Construction	284.63
Grid Cutting: 18.7 miles	1,589.50
Prospecting	1,220.00
Geophysics:	
V.L.F.-E.M. Survey	780.00
I.P. Survey	3,996.81
Geochemical Survey	1,081.20
Office & Draughting	1,237.80
Transportation	480.00
Diamond Drilling	13,602.65
TOTAL:	$28,377.59

McPHAR GEOPHYSICS LIMITED

139 BOND AVENUE, DON MILLS, ONTARIO, CANADA

PHONE 449-5551
TORONTO AREA CODE 416

CABLE-McPHAR
TORONTO

November 17, 1971

Invoice No. G11702

Cochenour Willans Gold Mines Ltd.
Cochenour,
Ontario.

Attention: Mr. J.E.J. Fahlgren

REFERENCE: Red Lake, Ontario - Contract No. G6402 - IP

Period: October 9th - 29th, 1971

Crew - 2 men J. Marsh & A. Wilcox

12½ days	Operating		@ $250.00/day	$3,125.00
1½ days	Travel	)		
2 days	Bad Weather	) 6½ days	@ $100.00/day	650.00
1 day	Preparation	)		
2 days	Standby	)		
				$3,775.00

Expenses

Taxis	9.00	
Vehicle Expense	17.71	
Meals and Accommodation	155.66	
Telephone and Telegraph	3.40	
Supplies	2.31	
	188.08	
Plus 10%	18.81	
	206.89	206.89
		$3,981.89

Statement of Account enclosed.

McPHAR GEOPHYSICS LIMITED

L.M. Braid (Mrs.)
Comptroller.

LMB:sb

3981.89
14.92
$ 3996.81

McPHAR GEOPHYSICS LIMITED

PHONE 449-5551
TORONTO AREA CODE 416

139 BOND AVENUE, DON MILLS, ONTARIO, CANADA

CABLE-McPHAR
TORONTO

December 15, 1971

Invoice No. G 11780

Cochenour Willans Gold Mines Ltd.
Cochenour,
Ontario.

Attention: Mr. J.E.J. Fahlgren

REFERENCE:- IP Survey - Red Lake, Ontario.
Contract No. G 6402

Charges received November, 1971

Expenses

Telephone and Telegraph	13.56	
	13.56	
+ 10%	1.36	
		$ 14.92
		$ 14.92

McPHAR GEOPHYSICS LIMITED

L. M. Braid

LMB:mh

for L.M. Braid (Mrs.)
Comptroller

GRAVEL & FILL

INVOICE

ROCK EXCAVATING AND TRUCKING

DIAMOND DRILLING
JACK H. EDWARDS LTD.
P. O. BOX 369 KENORA, ONT.

INVOICE B ~~XXXX~~ 7488

PHONE 468-6995 - 468-9891

KENORA, Ont. October 8, 19 71

M Cochenour Exploration Ltd.

Cochenour, Ont.

			Debit	Credit	Balance
	DIAMOND DRILLING SKOOKUM BAY SEPT. 17 TO OCT. 2 - 1971				
	MOVING TO SKOOKUM BAY				
	196 MAN HOURS	@ 4.25	833.00		
	12 HRS. TRACTOR	@ 7.50	90.00		
	10 HRS 4 WHEEL DR. TRUCK	@ 6.50	65.00		
	14 HRS POWER SAWS	@ 1.50	21.00		
	4 HRS BOAT & MOTOR	@ 3.00	12.00		
	FROM TO FOOTAGE				
Ho C 71-1	0 496 496	@ 6.50	3224.00		
	2 AX CASING 2 FT.	@ 7.95	15.90		
	10 CORE BOXES	@ 2.95	29.50		
	MOVING TO HOLE C 71-2				
	48 MAN HOURS	@ 4.25	204.00		
	7 HOURS TRACTOR	@ 7.50	52.50		
			6.50		
HOLE C 71-2	0 501 501	@ ~~7.95~~	3256.50		
	2 AX CASING 2 FT.	@ 7.95	15.90		
	10 CORE BOXES	@ 2.95	29.50		
			7848.80	[illegible]	7848.80

RECEIVED
OCT 12 1971
Cochenour Willans Gold Mines, Limited

Inv. Rec'd	Oct 12/71
Gds. Rec'd.	
Transpn.	
Way Bill N.	
Weight	
Date	

Extension	O.K. for Payment	Approved
	L.C.C.	

DR ACCT.	AMOUNT
54P	
(Craig Baker Engr)	7844.55

7844.55

McPHAR GEOPHYSICS LIMITED

REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY SURVEY ON THE MY-RITT PROPERTY, COIN LAKE AREA, RED LAKE MINING DIVISION, ONTARIO FOR COCHENOUR WILLANS GOLD MINES LIMITED

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1. INTRODUCTION

At the request of the company, an Induced Polarisation and Resistivity survey has been completed on the My-Ritt Property, Coin Lake area, Red Lake Mining Division, Ontario, for Cochenour Willans Gold Mines Limited. The property is located in the southwest quadrant of the 1° quadrilateral whose southeast corner is at 51°N latitude and 93°W longitude.

The country rock is pink to grey biotite granodiorite, as shown on O.D.M. Map No. 2125, Heyson Township North and Map No. 2074, Dome Township. There are twelve mines in this area which have been producing gold since 1930. Much of the ore is associated with quartz veins in andesite or silicified rock with feldspar porphyry, adjacent to rhyolite tuff. Other deposits are related to intrusive rocks.

Several showings have been located by the client and the IP survey was carried out to locate any economic deposits of metallic mineralisation

which might be present.

The work was done in October, 1971, using a McPhar P660 high power variable frequency IP unit, operating at 0.3 and 5 Hz over the following claims:

403, 404, 405, 406, 407, 408, 409, 410, 456, 457, 458, 460, 2135, 2136, 5136, 5137, 5138, 6979, 6980, 6981, 12793, K1423, K1426, K1428.

These claims are assumed to be owned or held under option by Cochenour Willans Gold Mines Limited.

2. PRESENTATION OF RESULTS

The Induced Polarization and Resistivity results are shown on the following data plots in the manner described in the notes preceding this report.

Line	Electrode Intervals	Dwg. No.
3E	200 feet	IP 5864-1
9E	200 feet	IP 5864-2
15E	200 feet	IP 5864-3
21E	200 feet	IP 5864-4
27E	200 feet	IP 5864-5
33E	300 feet	IP 5864-6
	200 feet	IP 5864-7
36E	300 feet	IP 5864-8
39E	300 feet	IP 5864-9
	200 feet	IP 5864-10

Line	Electrode Intervals	Dwg. No.
45E	300 feet	IP 5864-11
	200 feet	IP 5864-12
51E	200 feet	IP 5864-13
57E	200 feet	IP 5864-14
63E	200 feet	IP 5864-15
69E	200 feet	IP 5864-16
75E	200 feet	IP 5864-17
81E	200 feet	IP 5864-18

Also enclosed with this report is Dwg. I.P.P. 4825, a plan map of the My-Ritt Grid at a scale of 1" = 400'. The definite, probable and possible Induced Polarization anomalies are indicated by bars, in the manner shown on the legend, on this plan map as well as on the data plots. These bars represent the surface projection of the anomalous zones as interpreted from the location of the transmitter and receiver electrodes when the anomalous values were measured.

Since the Induced Polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly, no anomaly can be located with more accuracy than the electrode interval length; i.e. when using 200' electrode intervals the position of a narrow sulphide body can only be determined to lie between two stations 200' apart. In order to definitely locate, and fully evaluate, a narrow, shallow source it is necessary to use shorter electrode intervals. In order to locate sources at some depth, larger electrode intervals must be used, with a corresponding increase in the uncertainties of

location. Therefore, while the centre of the indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

3. DISCUSSION OF RESULTS

Several surface showings of mineralization have been located on this property and the IP survey was carried out to outline the source or sources of this mineralization. It is understood that the bedrock is very dense and this is confirmed by the high resistivities obtained. If it were not for the fact that there is known mineralization, most of the anomalies which have been noted would not be considered as being of any importance. It is probable that any mineralization which is present is, for the most part, weakly disseminated.

The exception to this is the source of the anomalous zone which has been designated Zone A. This zone lies approximately 400' to the west of the Skookum shaft (see Dwg. I.P.P. 4815) on Line 33E, Line 36E and Line 39E. The anomaly is definite on Line 36E; the anomalies on the lines to the north and south are lower in magnitude. The source of this zone is near 300' in depth and relatively narrow.

Anomalies on Line 45E, Line 51E, Line 57E and Line 63E have been tentatively correlated as Zone B. Anomalies on Line 51E, Line 57E, Line 63E, Line 69E, Line 75E and Line 81E form Zone C. The remaining anomalies have not been correlated at this time.

4. CONCLUSIONS AND RECOMMENDATIONS

The anomalies which were located by the IP survey are very weak.

except those of Zone A. In a preliminary report, a drill hole was recommended to test the anomaly on Line 36E. The drill hole was to be located so that the hole would pass beneath 10N at 450'. The drilling results are not known to the author.

As a guide to further exploration, the IP results should be correlated with surface geology. If any definite anomalous trend is evident as a result, it is possible that detail with shorter electrode intervals would better define and outline the source or sources.

McPHAR GEOPHYSICS LIMITED

Marion A. Goudie

Marion A. Goudie,
Geologist.

Robert A. Bell

Robert A. Bell,
Geophysicist.

Dated: November 23, 1971

ASSESSMENT DETAILS

PROPERTY: My-Kitt Property

MINING DIVISION: Red Lake

SPONSOR: Cochenour Willans Gold Mines Limited

PROVINCE: Ontario

LOCATION: Coin Lake Area

TYPE OF SURVEY: Induced Polarization

OPERATING MAN DAYS:	22	DATE STARTED:	Oct. 17, 1971
EQUIVALENT 8 HR. MAN DAYS:	33	DATE FINISHED:	Oct. 23, 1971
CONSULTING MAN DAYS:	3	NUMBER OF STATIONS:	308
DRAUGHTING MAN DAYS:	5	NUMBER OF READINGS:	2940
TOTAL MAN DAYS:	41	MILES OF LINE SURVEYED:	11.7

CONSULTANTS:

Marion A. Goudie, 739 Military Trail, West Hill, Ontario.
Robert A. Bell, 50 Romford Crescent, Don Mills, Ontario.

FIELD TECHNICIANS:

J. Marab, 118 Spencer Avenue, Toronto 3, Ontario.
A. Wilcox, R.R. #3, 12761 Sodom Road, Niagara Falls, Ontario.
Plus Extra Labour supplied by the client

DRAUGHTSMEN:

E. Merr, 19 Kenewen Court, Toronto 16, Ontario.
J. Treager, 20 Esterbrooke Avenue, Apt. 705, Willowdale, Ontario.
N. Lade, 299, Jasper Avenue, Oshawa, Ontario.

McPHAR GEOPHYSICS LIMITED

Marion A. Goudie

Marion A. Goudie,
Geologist.

Dated: November 25, 1971

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INTERIM STATEMENT OF COST

Cochenour Willans Gold Mines Limited - My-Ritt Property
Coin Lake Area, Red Lake Mining Division, Ontario.

Crew (2 men) J. Marsh & A. Wilcox

5½ days	Operating	@ $250.00/day	$1,375.00
1 day	Bad Weather	@ $100.00/day	100.00
½ day	Breakdown		N.C.
			1,475.00

Expenses - prorated 5½/12½

Taxis	3.96	
Vehicle Expense	7.79	
Meals and Accommodation	68.49	
Telephone and Telegraph	1.49	
Supplies	1.01	
	82.74	
Plus 10%	8.27	
	91.01	91.01
		$1,566.01

*

Note: This statement reflects at least 90% of the total cost; there may be a few minor charges not yet received by us and hence not included in the foregoing.

McPHAR GEOPHYSICS LIMITED

Marion A. Goudie

Marion A. Goudie,
Geologist.

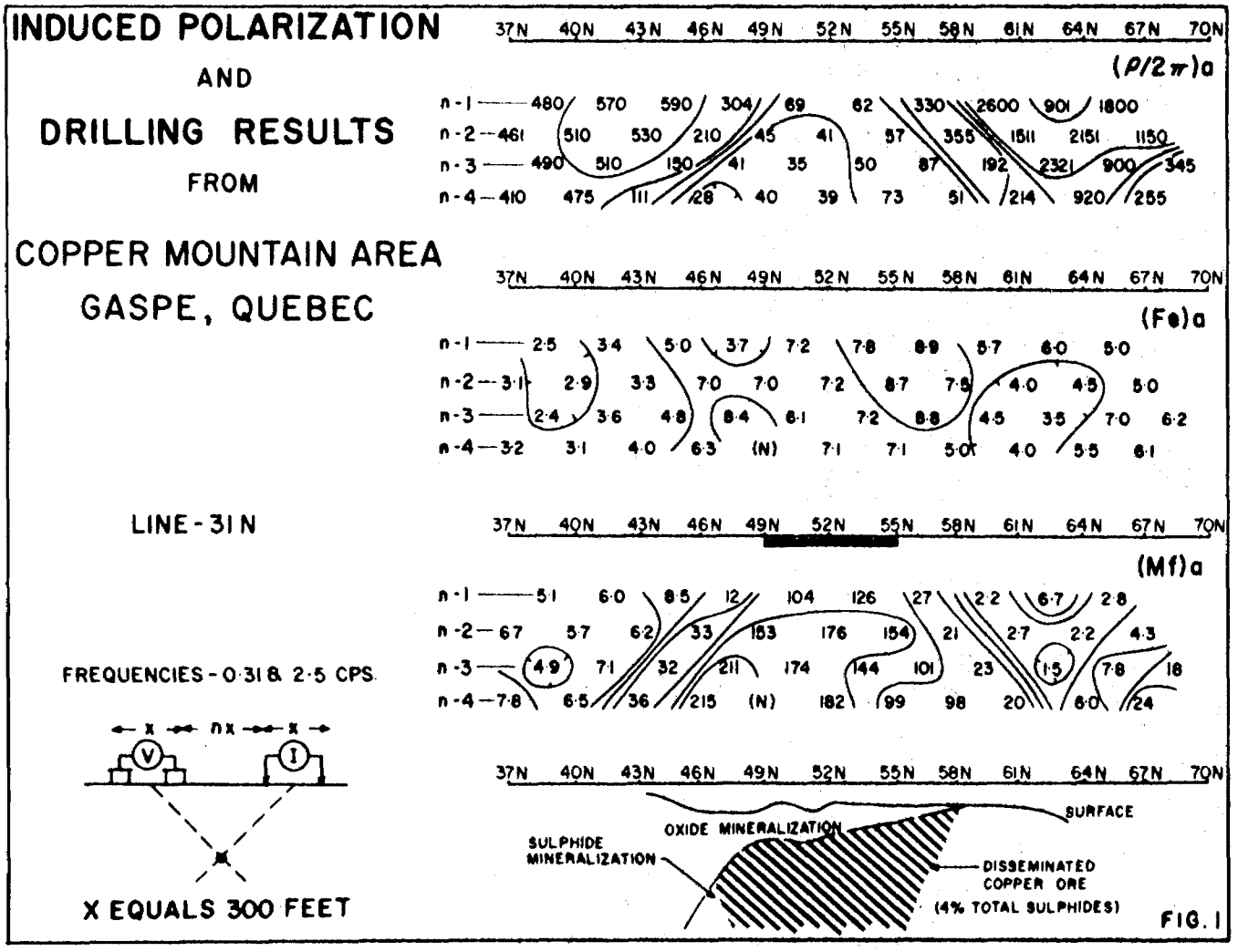
Dated: November 25, 1971

McPHAR GEOPHYSICS

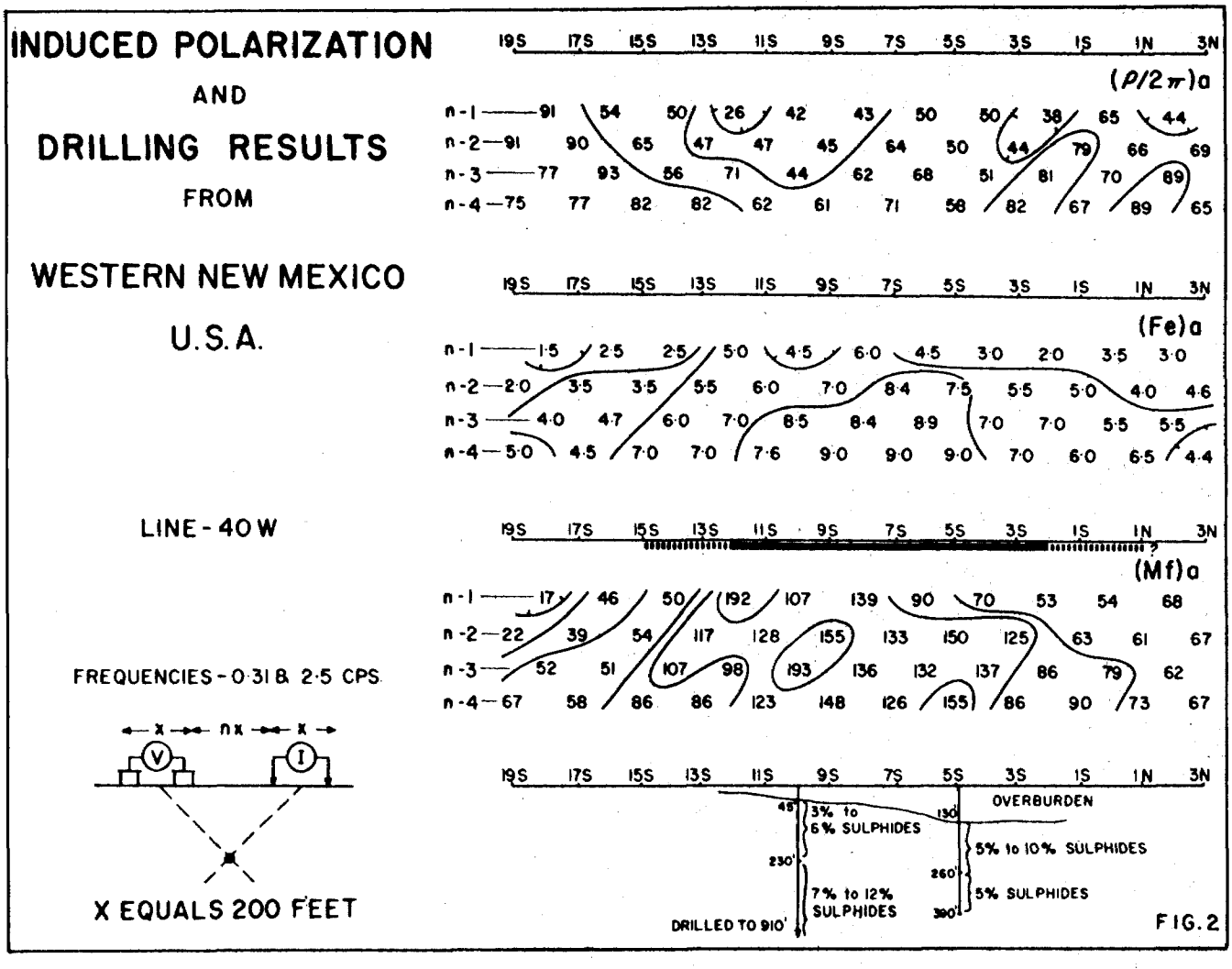
APPENDIX

EXPECTED IP ANOMALIES FROM "PORPHYRY COPPER" TYPE ZONES OF DISSEMINATED SULPHIDE MINERALIZATION

Our experience in other areas has shown that the induced polarization method can be successfully used to locate, and outline, zones of disseminated sulphide mineralization of the "porphyry copper" type. In most cases the interpretation of the IP results is simple and straightforward. The results shown in Figure 1 and Figure 2 are typical.



The source of the moderate magnitude IP anomaly shown in Figure 1 contains approximately 4% metallic mineralization. The zone is of limited lateral extent and enough copper is present to make the mineralization "ore grade". The presence of the surface oxidation can be seen in the fact that the apparent IP effects increase for n = 2.



The IP anomaly shown in Figure 2 has about the same magnitude as that described above. It should be noted that appreciably greater concentrations of metallic mineralization are present; further, there is little or no copper present. These results illustrate the fact that IP results can not be used to determine the exact amount of metallic mineralization present or to determine the economic importance of a mineralized zone. In some geologic situations zoning is present; the zones of mineralization of greatest economic value may contain less total metallic mineralization than other zones in the same general area.

In the proper geologic environment, the method will detect even very low concentrations of metallic mineralization. The IP results shown in Figure 3 located the ore zone at the Brenda Property near Peachland, B. C. The zone contains 1.0 to 1.5 per cent metallic mineralization; however, the mineralization is "ore grade" because only molybdenite and chalcopyrite are present.

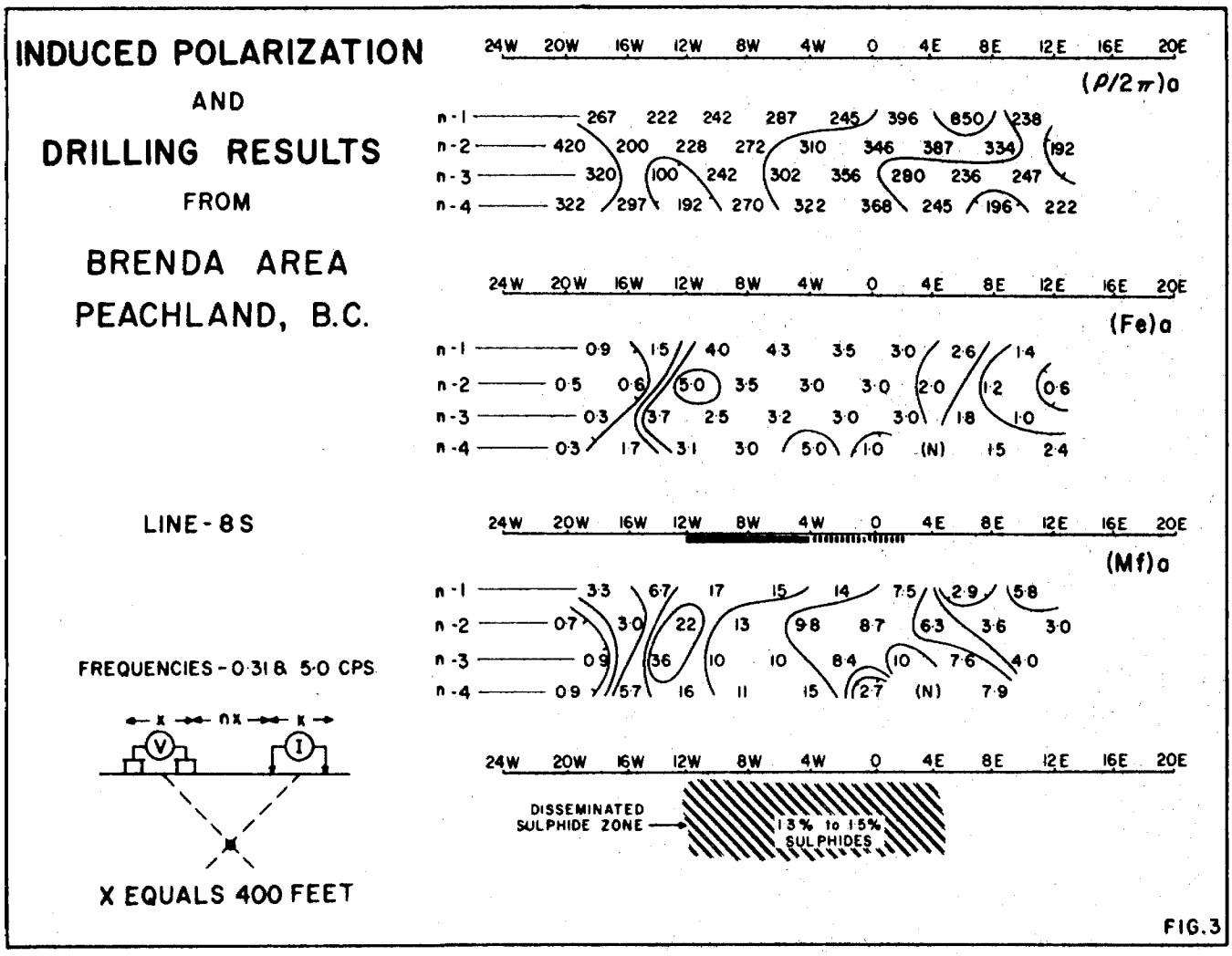
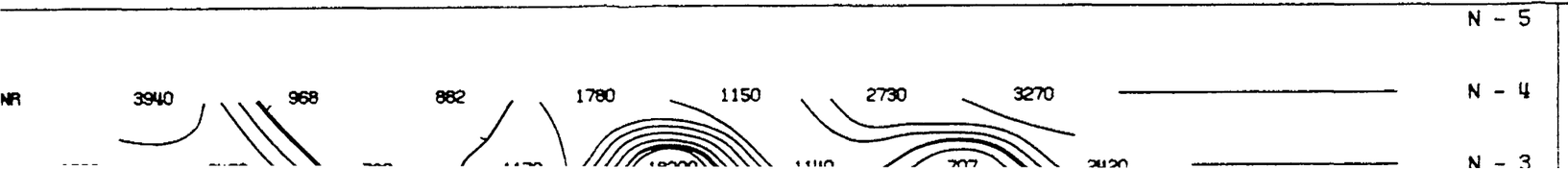
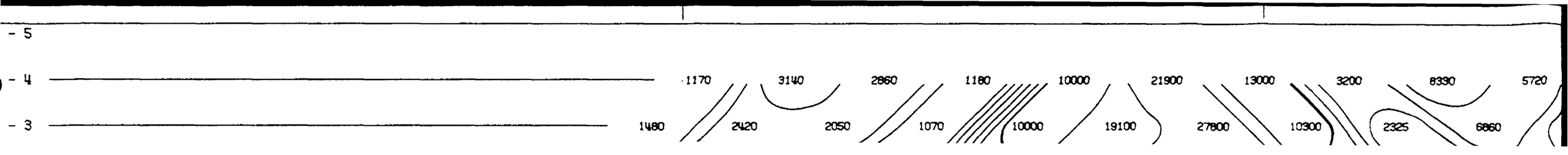


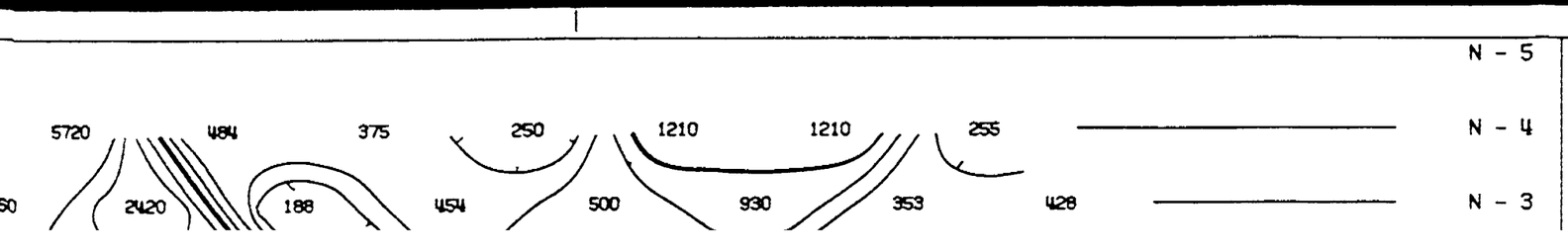
FIG.3



DWG. NO.- I.P.- 5864 - I

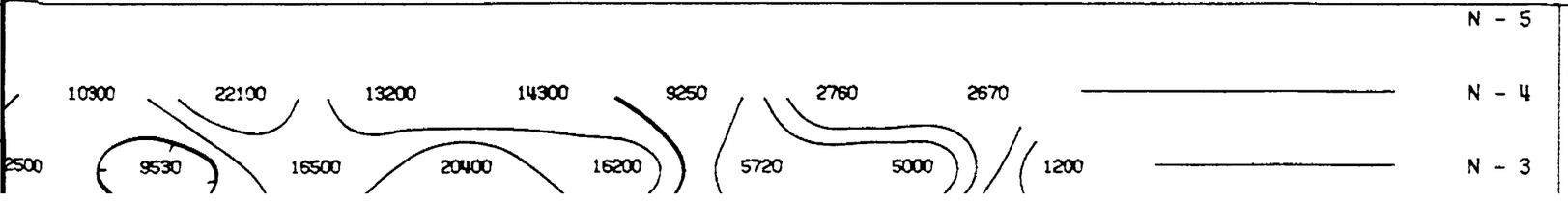
COCHENOUR WILLANS


- 5
- 4
- 3
1480
1170
2420
3140
2050
2860
1070
1180
10000
10000
19100
21900
27800
13000
10300
3200
2325
8330
6860
5720



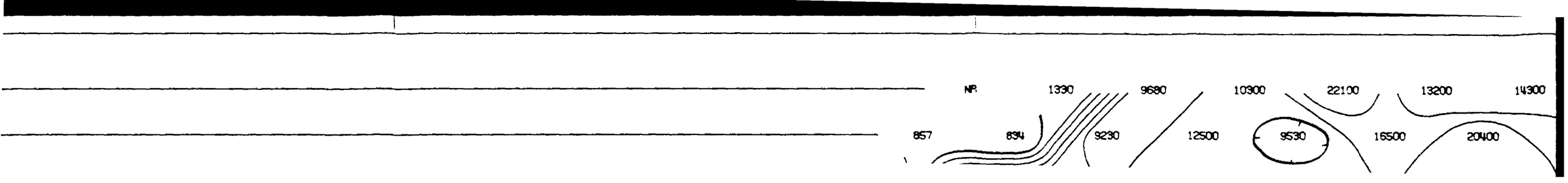
DWG. NO.- I.P.- 5864 -2

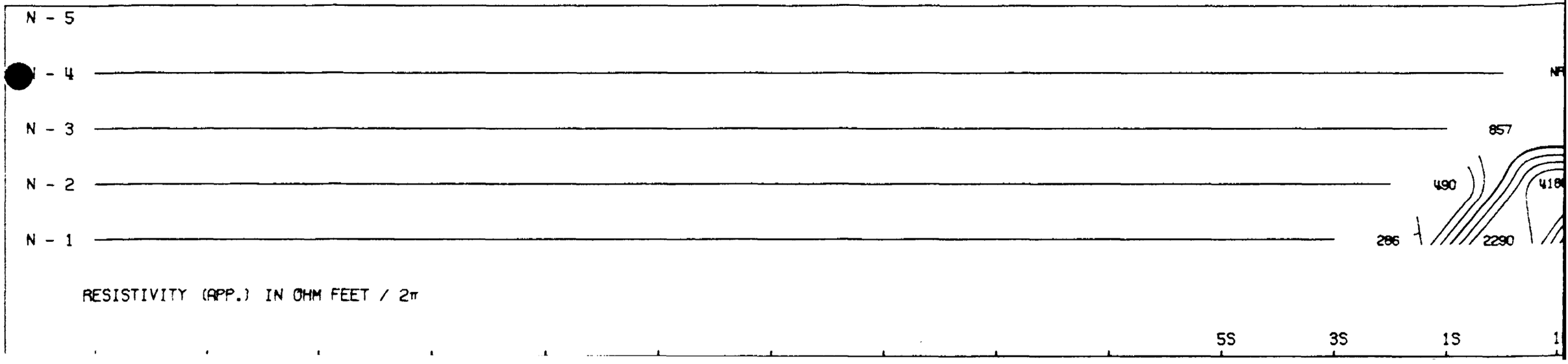
COCHENOUR WILLANS

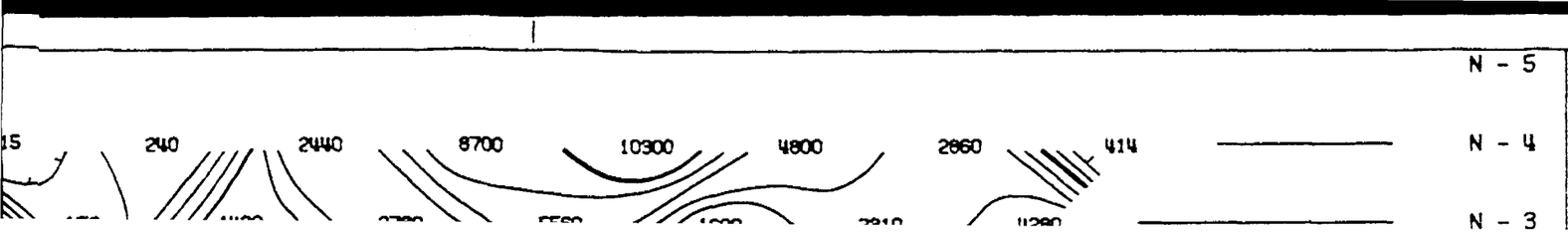


DWG. NO.- I.P.- 5864-3

COCHENOUR WILLANS

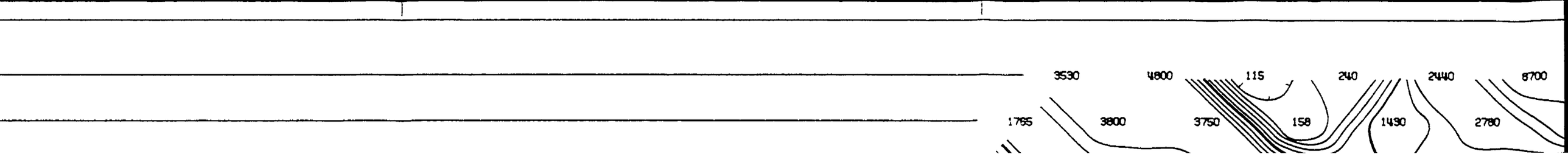

NR
1330
9680
10300
22100
13200
14300
857
834
9230
12500
9530
16500
20400


N - 5
N - 4
N - 3
N - 2
N - 1
857
490
286
2290
RESISTIVITY (APP.) IN OHM FEET / 2π
5S
3S
1S



DWG. NO.- I.P.- 5864 - 4

COCHENOUR WILLANS


3530
4800
115
240
2440
8700
1765
3800
3750
158
1490
2780

N - 5

N - 4

N - 3

N - 2 — 348

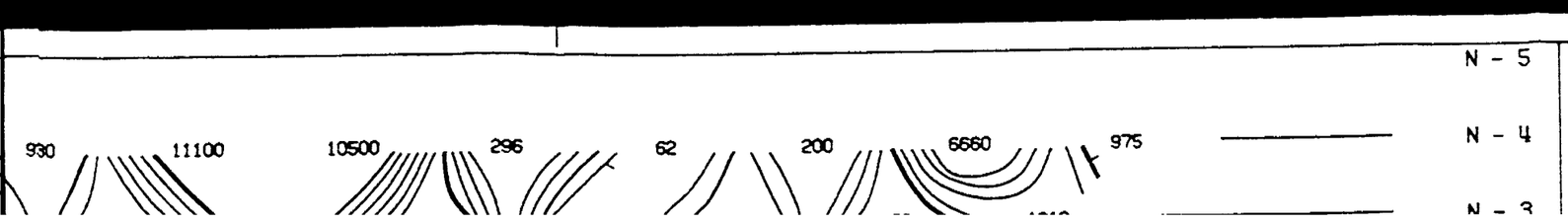
N - 1 — 207

RESISTIVITY (APP.) IN OHM FEET / 2π

10S 8S 6S

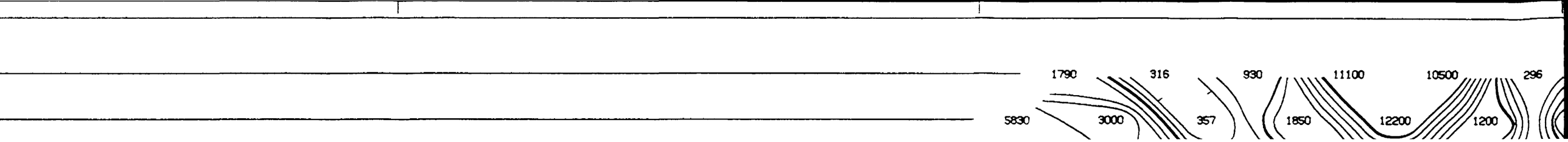
?

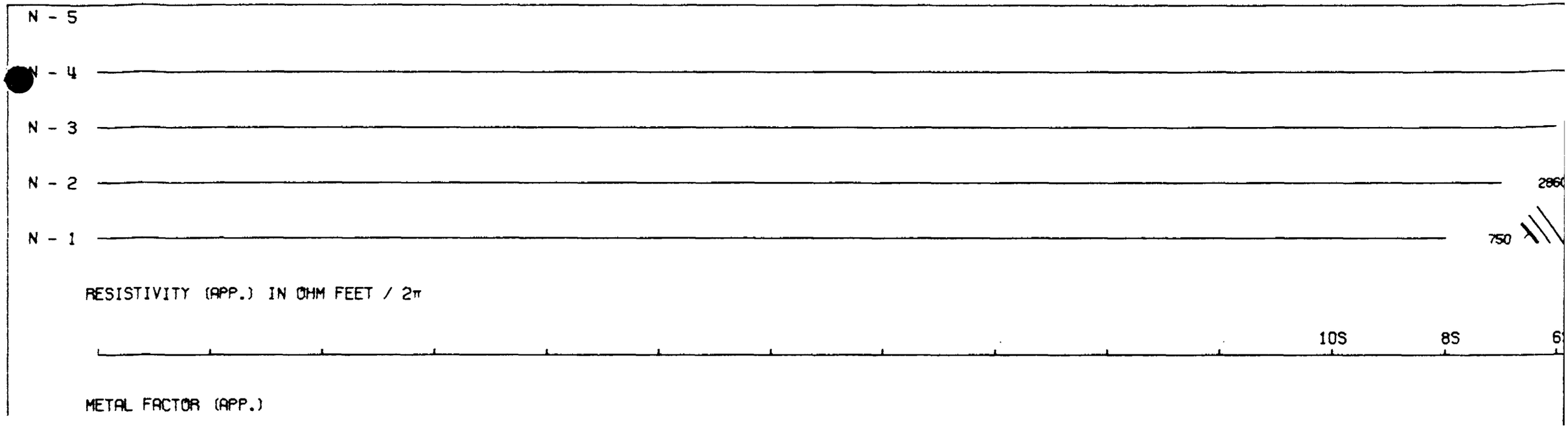
METAL FACTOR (APP.)



DWG. NO.- I.P.- 5864 - 5

COCHENOUR WILLANS

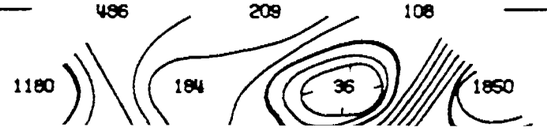

1790
316
930
11100
10500
296
5830
3000
357
1850
12200
1200


N - 5
N - 4
N - 3
N - 2
N - 1
2860
750
RESISTIVITY (APP.) IN OHM FEET / 2π
10S
8S
METAL FACTOR (APP.)

N - 5

N - 4

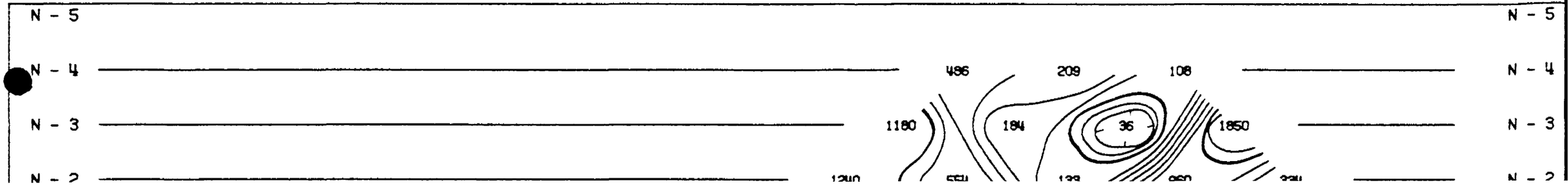
N - 3

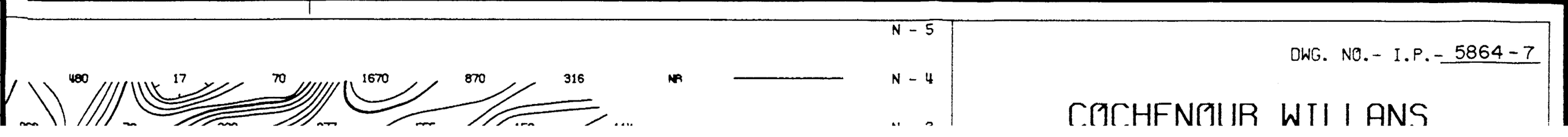


DWG. NO.- I.P.- 5864 - 6

COCHENOUR WILLANS

GOLD MINES LIMITED

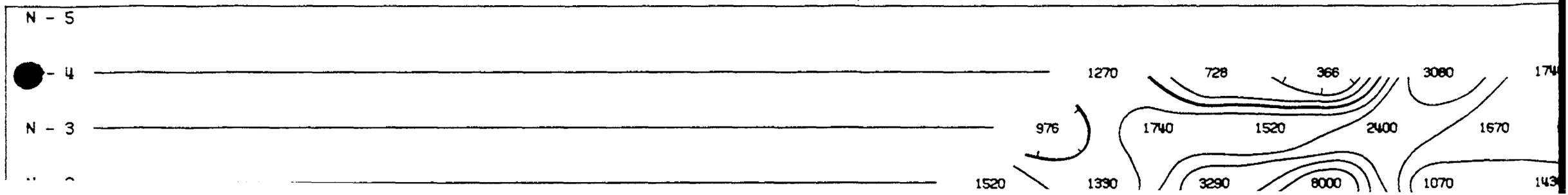

N - 5
N - 4
N - 3
N - 2
1180
486
209
108
184
36
1850

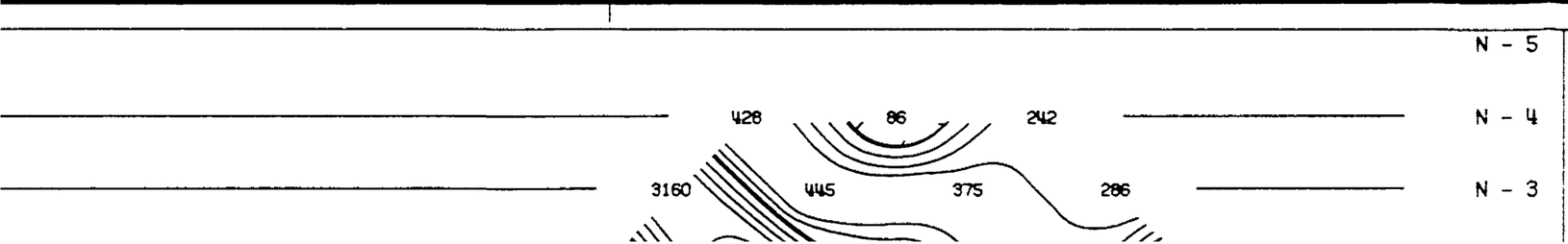


DWG. NO.- I.P.- 5864-7

COCHENOUR WILLIAMS

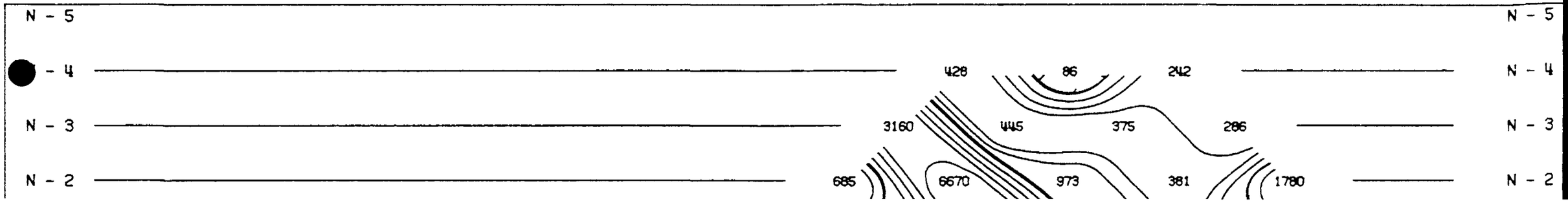
1270 728 366 3080 1740 6000 4450 1460 480 17 70

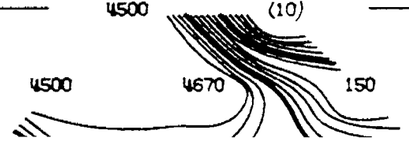

N - 5
N - 4
N - 3
1270
728
366
3080
976
1740
1520
2400
1670
1520
1390
3290
8000
1070



DWG. NO.- I.P.- 5864 - 8

COCHENOUR WILLANS
GOLD MINES LIMITED


N - 5
N - 4
N - 3
N - 2
428
86
242
3160
445
375
286
685
6670
973
381
1780



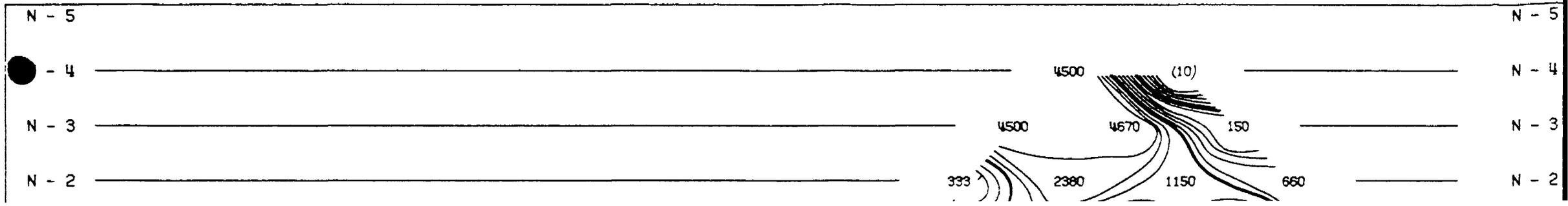
N - 5

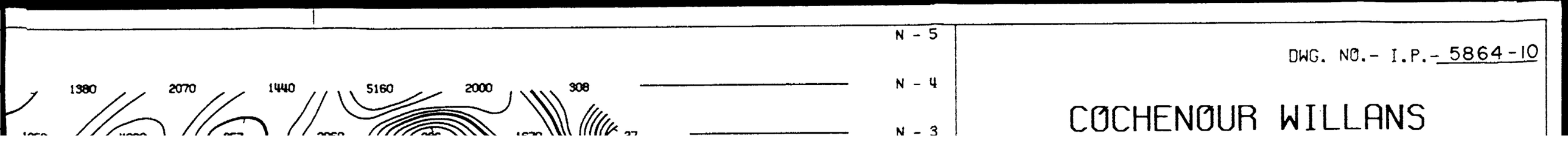
N - 4

N - 3

DWG. NO.- I.P.- 5864-9

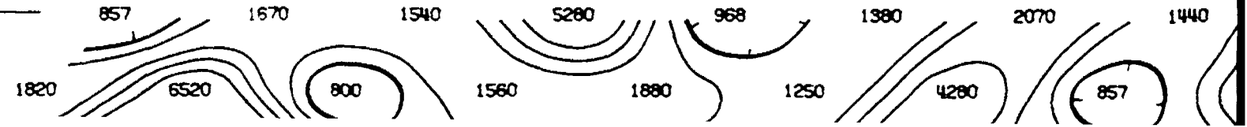
COCHENOUR WILLANS
GOLD MINES LIMITED

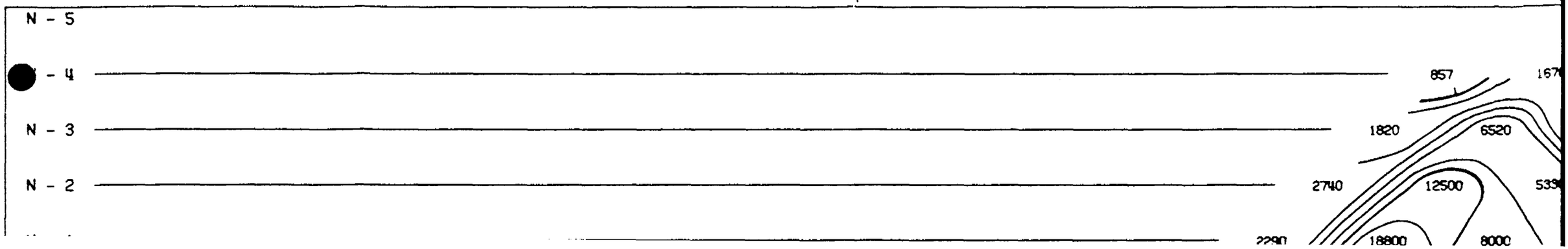

N - 5
N - 4
N - 3
N - 2
4500
(10)
4500
4670
150
333
2380
1150
660



DWG. NO.- I.P.- 5864-10

COCHENOUR WILLANS


857
1670
1540
5280
968
1380
2070
1440
1820
6520
800
1560
1880
1250
4280
857


N - 5
N - 4
N - 3
N - 2
857
1820
6520
2740
12500
18800
8000

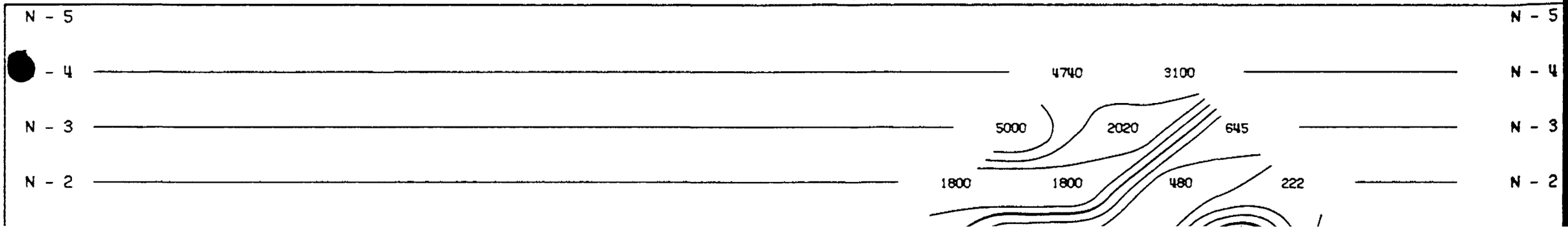
N - 5

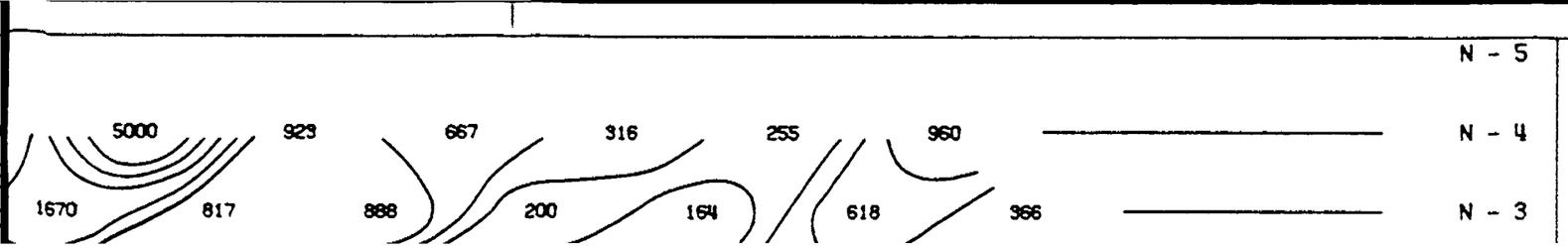
N - 4

N - 3

DWG. NO.- I.P.- 5864-II

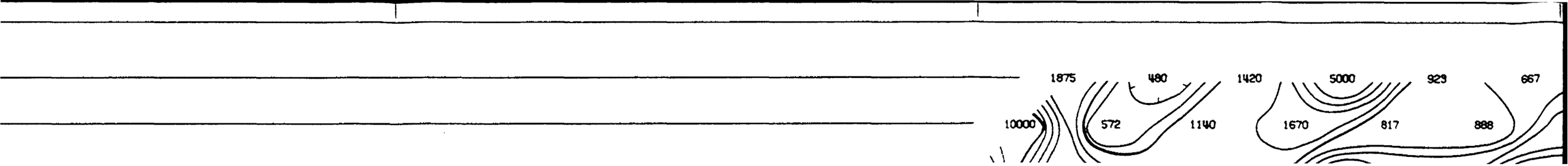
COCHENOUR WILLANS
GOLD MINES LIMITED


N - 5
N - 4
N - 3
N - 2
4740
3100
5000
2020
645
1800
1800
480
222
N - 5
N - 4
N - 3
N - 2



DWG. NO.- I.P.- 5864 - 12

COCHENOUR WILLANS


1875
480
1420
5000
923
667
10000
572
1140
1670
817
888

N - 5

N - 4

N - 3

N - 2

N - 1

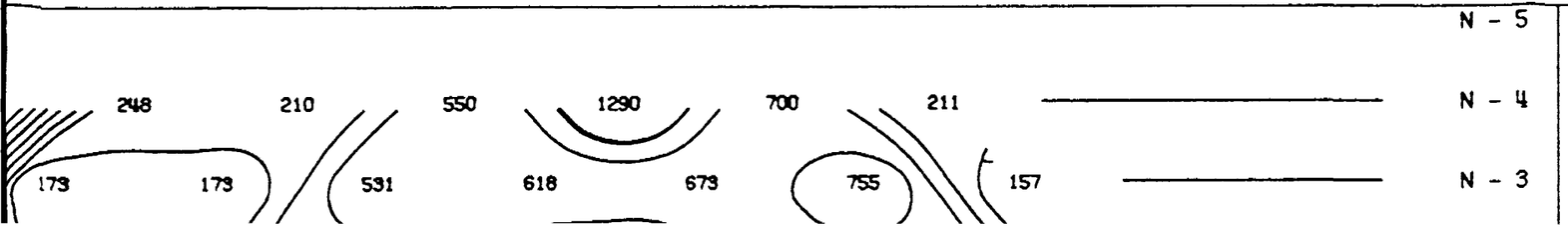
276

8880

RESISTIVITY (APP.) IN OHM FEET / 2π

15S 13S 11

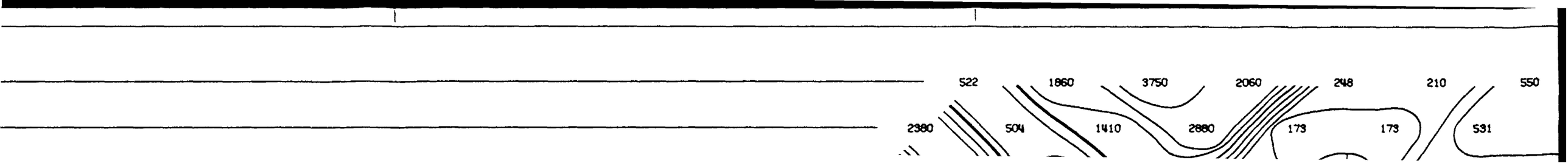
METAL FACTOR (APP.)

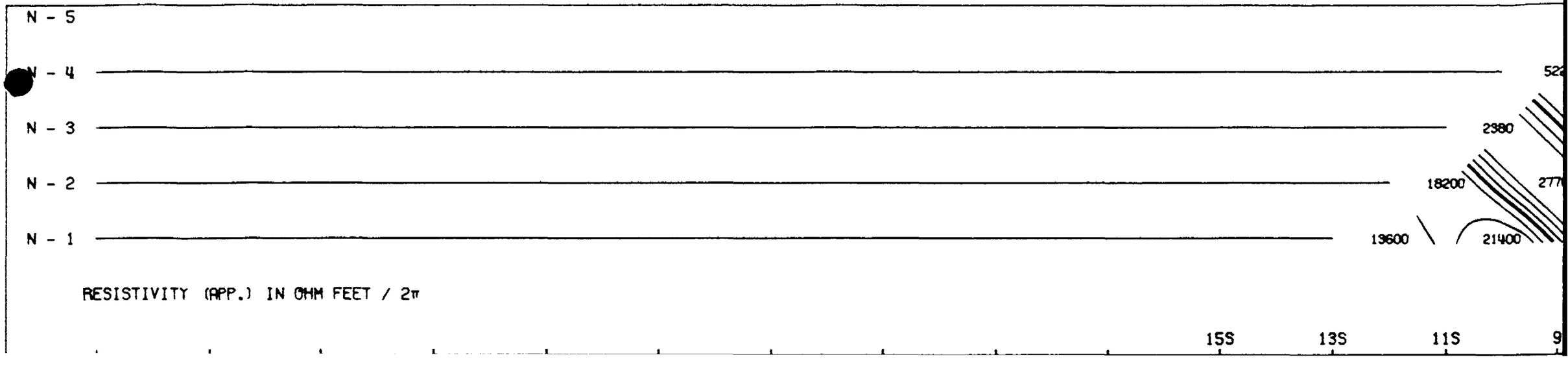


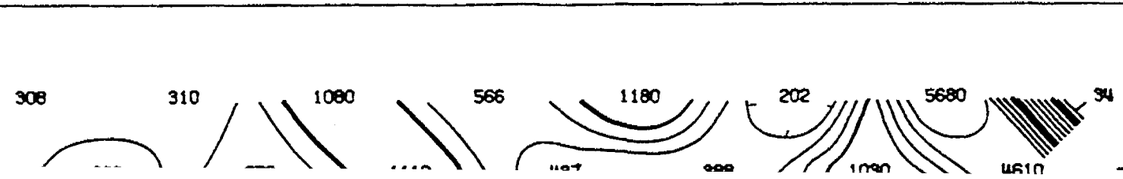
DWG. NO.- I.P.- 5864 - 13

COCHENOUR WILLANS

COLD MINES LIMITED


522
1860
3750
2060
248
210
550
2380
504
1410
2880
173
173
531


N - 5
N - 4
N - 3
N - 2
N - 1
522
2380
18200
277
19600
21400
RESISTIVITY (APP.) IN OHM FEET / 2π
15S
13S
11S
9



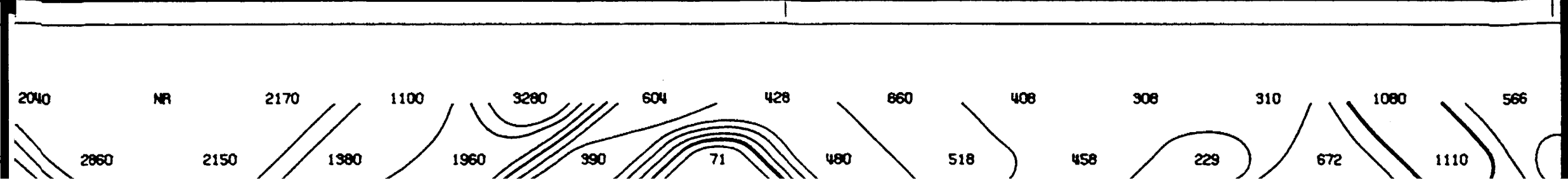
N - 5

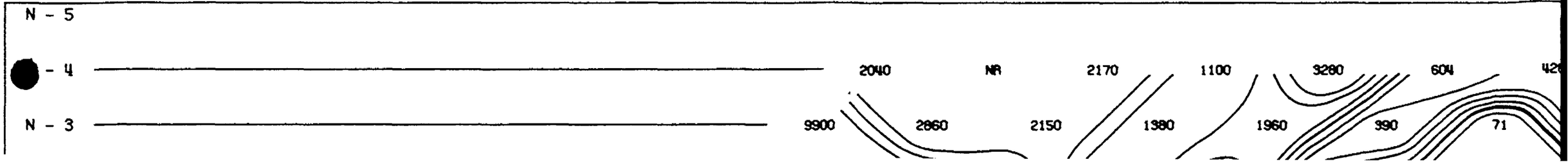
N - 4

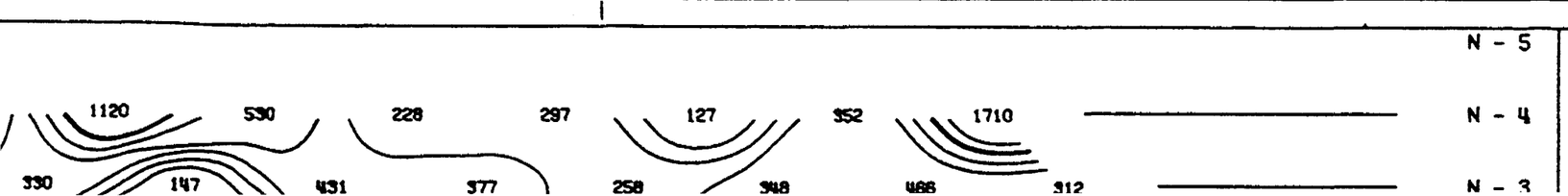
N - 3

DWG. NO.- I.P.- 5864-14

COCHENOUR WILLANS

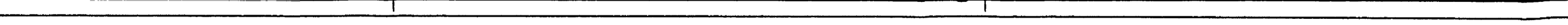

2040
NR
2170
1100
3280
604
428
660
408
308
310
1080
566
2860
2150
1380
1960
390
71
480
518
458
229
672
1110

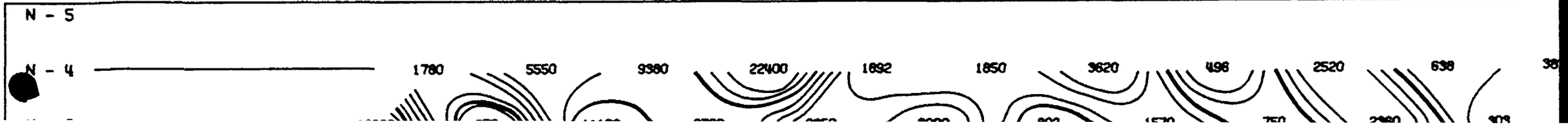

N - 5
N - 4
N - 3
2040
NR
2170
1100
3280
604
9900
2860
2150
1380
1960
390
71

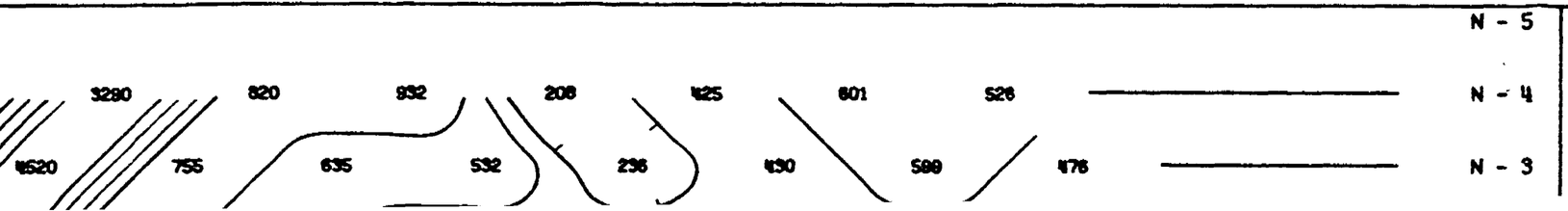


DWG. NO.- I.P.- 5864-15

COCHENOUR WILLANS

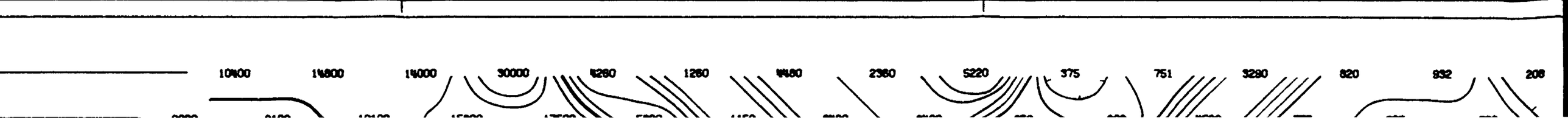

1780
5550
9380
22400
1892
1850
3620
496
2520
638
387
1670
214
1120
530
228
297

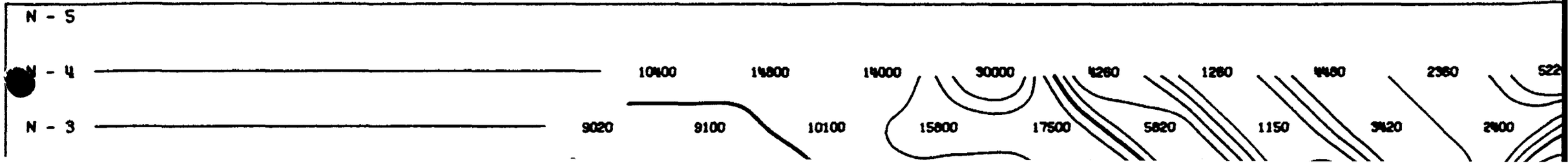

N - 5
N - 4
1780
5550
9380
22400
1892
1850
3620
496
2520
638

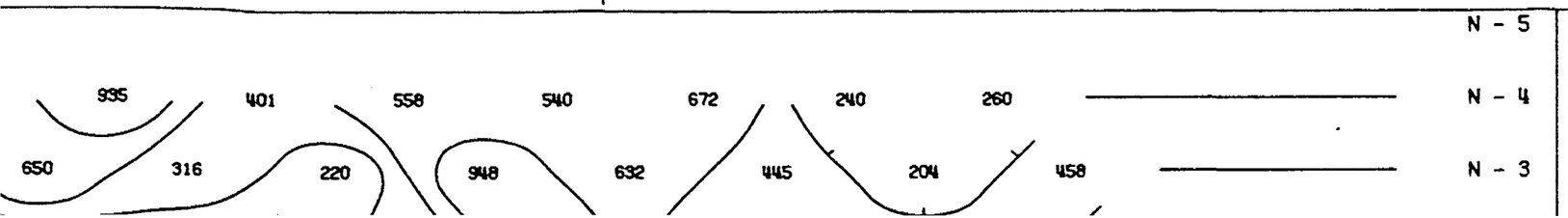


DWG. NO.- I.P.- 5864-16

COCHENOUR WILLANS

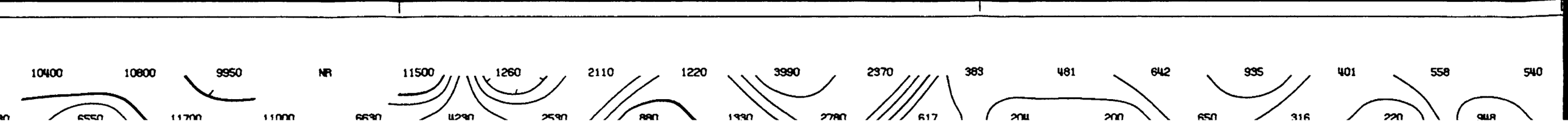

10400
14800
14000
30000
8260
1260
9460
2360
5220
375
751
3280
820
832
208

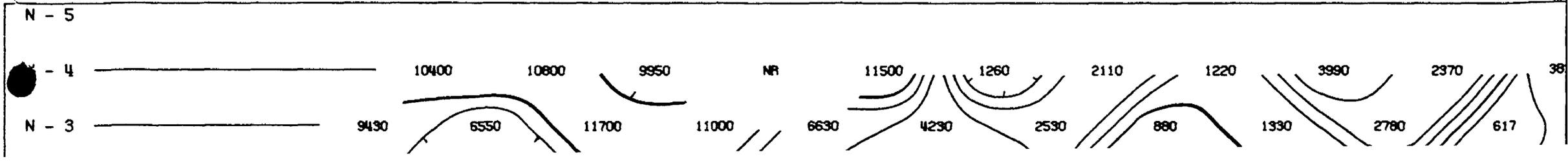

N - 5
N - 4
N - 3
10400
14800
14000
30000
4260
1260
4480
2360
522
9020
9100
10100
15800
17500
5820
1150
3420
2400

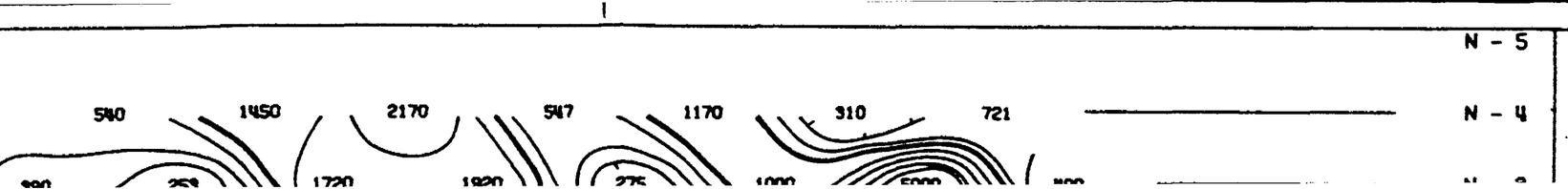


DWG. NO.- I.P.- 5864-17

COCHENOUR WILLANS
GOLD MINES LIMITED

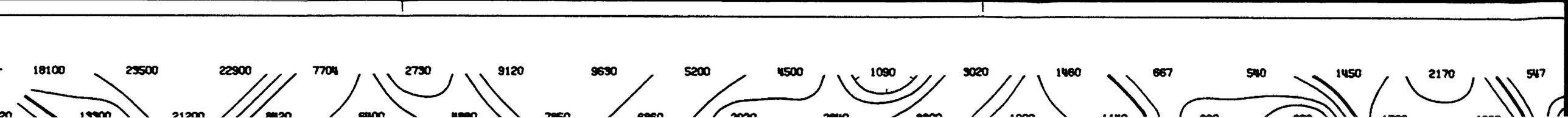

10400
10800
9950
NR
11500
1260
2110
1220
3990
2370
383
481
642
935
401
558
540

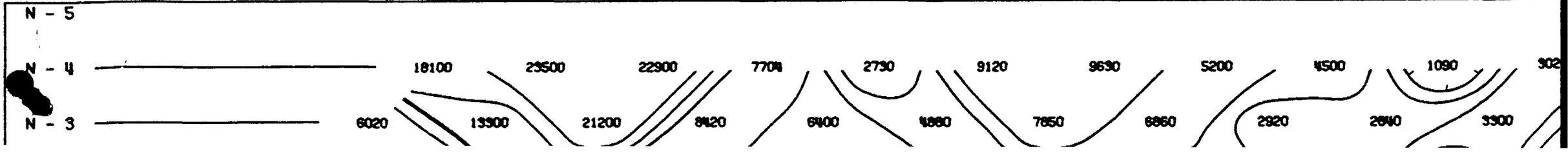

N - 5
N - 4
N - 3
9430
10400
10800
6550
9950
11700
NR
11000
11500
6630
1260
4230
2530
2110
880
1220
3990
1330
2780
2370
617



DWG. NO.- I.P.- 5864-18

CACHEMAIR WILLIAMS


18100
29500
22900
7704
2730
9120
9630
5200
4500
1090
3020
1460
667
540
1450
2170
547


N - 5
N - 4
N - 3
18100
23500
22900
7704
2730
9120
9630
5200
4500
1090
6020
13900
21200
8420
6400
4880
7850
6860
2820
2840
3900

DWG. IPP - 4825

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

Number at the end of anumaly indicates spread used.

COCHENOUR WILLANS GOLD MINES LIMITED

MY-RITT PROPERTY, COIN LAKE AREA

RED LAKE M.D., ONTARIO

SCALE

ONE INCH EQUALS FOUR HUNDRED FEET

52N45W2002 63.2969 HEYSON TWP

200

RED LAKE

SKOOKUM BAY

COIN LAKE

TIE LINE

TOWNSHIP LINE

CAMP

C-1

C-2

C-3

7798

7799

12790

12788

30057

6007

7800

30059

2980

30020

6006

30017

4578

30019

6121

2981

457

456

407

406

460

408

409

13020

461

1445

RED LAKE

SKOOKUM BAY

COIN LAKE

ST PAUL BAY

7738

7733

12730

12795

TIE LINE

300857

7814

6117

300859

2980

300820

6006

CAMP

TOWNSHIP LINE

300817

C-2

C-1

TIE LINE

458

300815

6121

C-3

H.E.P.C. LINE

457

107

46

45

9E

12E

15E

18E

21E

24E

33E

36E

39E

42E

45E

48E

51E

SNIP LAKE

220

1302

461

1441

1445

1442

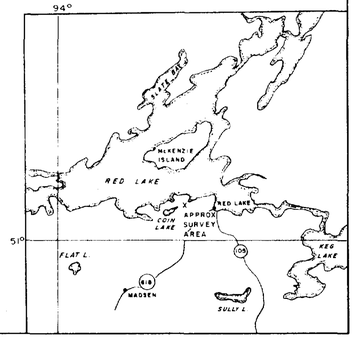
McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP

LOCATION MAP

SCALE 1" = 4 MILES



COCHENOUR WILLANS GOLD MINES LIMITED

MY-RITT PROPERTY, COIN LAKE AREA

RED LAKE M.D., ONTARIO

SCALE

ONE INCH EQUALS FOUR HUNDRED FEET

DRAWN: B. L. M.

DATE: NOV. 1971

APPROVED: [illegible]

DATE: 24 Nov 71

(24x36) 8-3/4-4/4 63-2869

DWG. IPP-4825

DOME TWP.

HEYSON TWP.

SNIP LAKE

1274

5588

1741

2134

822

30058

2136

2135

30060

5136

5137

5138

1347

1348

6979

2140

6981

6980

1381

404

403

406

405

1423

45E

48E

51E

54E

57E

60E

63E

66E

69E

72E

75E

78E

81E

409

410

1442

1429

1428

1427

1426

1425

63-2969 (3x4½) 3½ sq/m.

COCHENOUR WILLANS GOLD MINES LTD.

COIN LAKE PROPERTY

SKOOKUM BAY OF RED LAKE

DOME-HEYSON TWPS., RED LAKE ONTARIO.

SCALE 1" = 200'

GEOCHEMICAL SURVEY PLAN

COLD EXTRACTION: DITHIZONE METHOD

SAMPLED HORIZONS: A & B

VALUES PLOTTED IN: (P.P.M.) PARTS PER MILLION

5 | 10/20

5 - TOTAL HEAVY MINERALS (T.H.M.) IN P.P.M.

10 - ZINC VALUES IN P.P.M.

20 - COPPER VALUES IN P.P.M.

NOTE:

ALL LINES SAMPLED AT 50' INTERVALS.

VALUES OF 1 P.P.M. OR NIL NOT PLOTTED

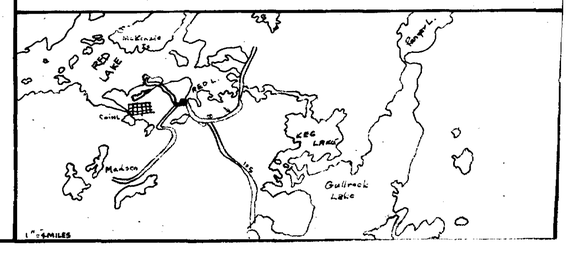
SAMPLES COLLECTED: EINOR SWANSON, MCKENZIE ISLAND

SAMPLES ANALIZED: DOUG HOWE, COCHENOUR

DATE SEPTEMBER 10 - 21, 1971

CONSULTANT GEOLOGIST: L.C. CHASTKO B. Sc.

DRAWN BY: R. BOUCHARD



DOME TWP.

HEYSON TWP.

63-2969 (3x4½) 13½ sq ft

COCHENOUR WILLANS GOLD MINES LTD.
COIN LAKE PROPERTY
SKOOKUM BAY OF RED LAKE
DOME-HEYSON TWPS, RED LAKE, ONTARIO
SCALE 1" = 200'

V.L.F. SURVEY PLAN
INSTRUMENT: GEONICS E.M. 16
METHOD: FIXED TRANSMITTER
ACCURACY: ± 1%
PARAMETERS MEASURED: IN PHASE & OUT OF PHASE COMPONENTS. IN PHASE DATA REDUCED FOR CONTOURING.
FREQUENCY & STATIONS:
N.P.G., SEATTLE WASHINGTON - 18.4 KHz
LINES 3 E TO 24 E INCLUSIVE.
N.A.A. CUTLER, MAINE, 17.8 KHz
LINES 27 E TO 81 E INCLUSIVE.

SURVEY BY: D. COGHILL
DATE OF SURVEY: SEPTEMBER 8 - 15, 1971
CONSULTANT GEOLOGIST: L.C. CHASTKO B.Sc.
DRAWN BY: R. BOUCHARD