

2943

Report

of

82F/3W

Geophysical - Geochemical Surveys

for

Reeves-MacDonald Mines, Ltd., Remac, B. C.

by

Vanguard Exploration Co., Spokane, Washington

June 15, 1970 - August 31, 1970

Reeves-MacDonald Ltd. Claims: Able, Baker, Charlie, Dog  
Easy, Fox, George, How

Located adjacent to and north of Remac, B. C., Lat.  $49^{\circ}01'N$ .  
Long.  $117^{\circ}21' - 22'W$ .

Geophysical Report by: Dr. Don A. Hansen

Geochemical Report by: I. L. Turner

Countersigned by: Lindsay M. Kinney  
Registered Mining Engineer  
Assn. Professional Engineers  
Province of British Columbia

March 30, 1971

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 2943 ..... MAP.....

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GENERAL

The following report concerns two surveys, one geophysical and the other geochemical, performed by Vanguard Exploration Company of Spokane, Washington, for the Reeves-MacDonald Mining Co., Remac, B. C.

These surveys were conducted over the Reeves-MacDonald claims, Able, Baker, Charlie, Dog, Easy, Fox, George and How, which are located adjacent to and north of the town of Remac, B. C. and south of and adjacent to the Salmo River.

The survey period extended from June 15, 1970, to August 31, 1970. Laboratory analysis of soil samples, compilation of geophysical data and construction of topographic base maps continued for several months after this period.

A declaration of costs is submitted and though it is presented as a single unit, each item has been proportionately subdivided to indicate its applicability to either geophysical or geochemical exploration. Line cutting has been fully apportioned to geophysical costs.

A section on description of work done including interpretation of data collected is presented. The complete record of data observed and measurements taken is presented on the geochemical-topographic base map (scale 1"=200') and the geophysical (induced polarization) overlay.

PERSONNEL CONDUCTING SURVEYS

Name	Address	Occupation	Rate	Distribution	
				<u>GP</u>	<u>GC</u>
Blayney, Patrick	Remac, B. C.	Chain saw oper. GP-GC crew	\$21.93/day	25 days \$548.25	2 days \$43.86
Dorey, James	Salmo, B. C.	Chain saw oper. GP-GC crew	\$19.04/day	25 days \$476.00	2 days \$38.08
Nay, Douglas	Fruitvale, B. C.	GP-GC crew	\$19.93/day	8 days \$159.44	2 days \$39.86
Nay, C. R.	Gold River, B. C.	Geophysical Crew Chief	\$23.15/day	9 days \$208.35	
Irvine, R. J.	Spokane, Washington	Geophysicist	\$54.00/day	1 day \$ 54.00	

DECLARATION OF COSTS

Geophysics

1. Airborne, false color infrared - direct application to claim groups: 1 line mile @ \$17/line mile.....	\$ 17.00
2. Induced Polarization, 9,700 line feet Brushing - 31 man days.....	\$ 743.02
I. P. Survey.....	\$ 662.83
3. Board and room for field crew.....	\$ 89.67
4. Vehicle 4-WD - rental.....	\$ 275.00
	<hr/>
Subtotal	\$1,787.52

Geochemistry

1. Geochem. soil sampling, 100 ft. intervals Sampling - 9 man days.....	\$ 155.83
Sample preparation @ \$0.31/sample.....	\$ 43.71
141 sample assays @ \$2.50 each.....	\$ 115.70
2. Vehicle 4-WD - rental.....	\$ 62.00
	<hr/>
	\$ 377.24

Total costs declared: \$2,164.76

PROFESSIONAL QUALIFICATIONS - AUTHORS OF REPORT

Dr. Don A. Hansen, B.S.-PhD., Brigham Young University, Utah; U.C.L.A., Los Angeles, Calif. Executive Vice-President-Chief Geophysicist of Vanguard Exploration Company.

Professional Experience: Vanguard Exploration Company, 4 years; Utah Construction Co., 7 years; U. S. Steel, 2½ years; Bear Creek Exploration Co., 3 years.

Irving L. Turner, B.A.-M.S., Southern Illinois University, University of Tennessee. Senior Geologist, Vanguard Exploration Company.

Professional Experience: Vanguard Exploration Company, 2 years; St. Joe Minerals Corp, 9 years.

## GEOPHYSICAL REPORT

### Method and Equipment Used

Surveys to determine electrical resistivity and induced polarization were conducted along the lines indicated on the enclosed overlay.

Equipment used: Induced Polarization Instrument, Model No. HEW-200 No. 1, mfg. by Hewitt Enterprises, Salt Lake City, Utah.

Electrode Spacing Interval: A = 200 feet

Coincidental Claim Lines Surveyed: NR 2.0, 3.0, 4.0, 5.0, 6.0, 6.5, 7.0

Transmitter electrodes: aluminum foil

Receiver electrodes: porous pots

### Results

Chargeability values on surveyed lines ranged from a minimum of 0 to a maximum of 50 Mv/v. Resistivity values ranged from near 0 to a maximum of 33,000 ohm-feet. Definitely anomalous chargeability highs and corresponding resistivity lows were noted to occur on lines: NR 2.0, 3.0, 4.0 and 5.0. Results are inconclusive for lines NR 6.0, 6.5, 7.0 because of shortness of completed traverses. This was due to the extremely rugged terrain at these locations and the terminating influence of the Salmo River gorge on the north.



Interpretation

An anomalous conductor is interpreted to be oriented in an ENE'ly direction across survey lines NR 2.0, 3.0, 4.0 and 5.0. This conductor is determined to be a minimum of 200 feet wide and 3,700 feet long. Whether the material causing this anomaly is caused by disseminated metallic sulfides or the disseminated graphite so peculiar to the Reeves dolomite remains to be determined.

Dual interpretation with the corresponding geochemical traverses are recommended.

30 March, 1971

Signed: Don A. Hansen

Dr. Don A. Hansen  
Chief Geophysicist  
Vanguard Exploration Company  
Spokane, Washington

Countersigned: Lindsay M. Kinney

Lindsay M. Kinney  
Professional Mining Engineer  
Assn. of Prof. Engineers  
Province of British Columbia

## GEOCHEMICAL REPORT

### Procedure - Equipment Used

141 soil samples were collected at 100 foot intervals along the brushed geophysical survey/claim lines. The A<sub>2</sub> soil horizon was sampled using stainless steel trowels and the sample retained in coded paper bags. Sample preparation took place in the Spokane laboratory of Vanguard Exploration Company, and consisted of drying, sieving to minus-80 mesh, splitting, retention of rejects, and submission for analysis. Replicate samples were submitted for check analysis.

All samples were analyzed by the Vancouver laboratory of Barringer Research, Ltd. Analyses for Pb, Zn, Cu and Ag were made in all instances. Sample values for each station are recorded on the attached Geochemical-Topographic base map. Silver values less than 0.1 ppm have not been plotted.

Metal results are for total extractable values.

### Results

Most significant values were obtained for Pb and Zn.

Background for Pb is 75 ppm., threshold: 130 ppm; anomalous: greater than 130 ppm, with several high values ranging from 425 to 600 ppm.

Background for Zn is 210 ppm., threshold is 380 ppm. Anomalous is greater than 380 ppm, with several high values ranging from 800 to 1,200 ppm.

Copper values average a background of 25 with several anomalous values in the mid-40 ppm range. One value of 132 ppm is considered to be too high to be meaningful.

Maximum silver values are only 0.3 ppm and the great bulk of samples are reported to be less than 0.1 ppm.

Interpretation

Coincidence of anomalous values of Pb and Zn are considered to be the most significant features of this survey. Copper reflects these anomalous conditions at some stations but seems to provide an inverse value elsewhere.

Particularly significant areas are as follows:

Line NR 4.0	Station 600 N
NR 5.0	" 500 N
NR 6.0	" 100 S
NR 6.5	" 100 S
NR 7.0	" 600N, 300N, 100S, 300S

Comparison of these geochemically anomalous areas with the geophysically anomalous I.P. chargeability highs is striking. Note especially that if the geologic structure is correctly interpreted, as a WSW'ly-plunging, southerly dipping syncline, the resulting IP anomalies on the western lines and the resulting geochemical anomalies on the eastern lines (with a zone of overlap in the middle) are what would be ex-

pected with the varying depth relationships.

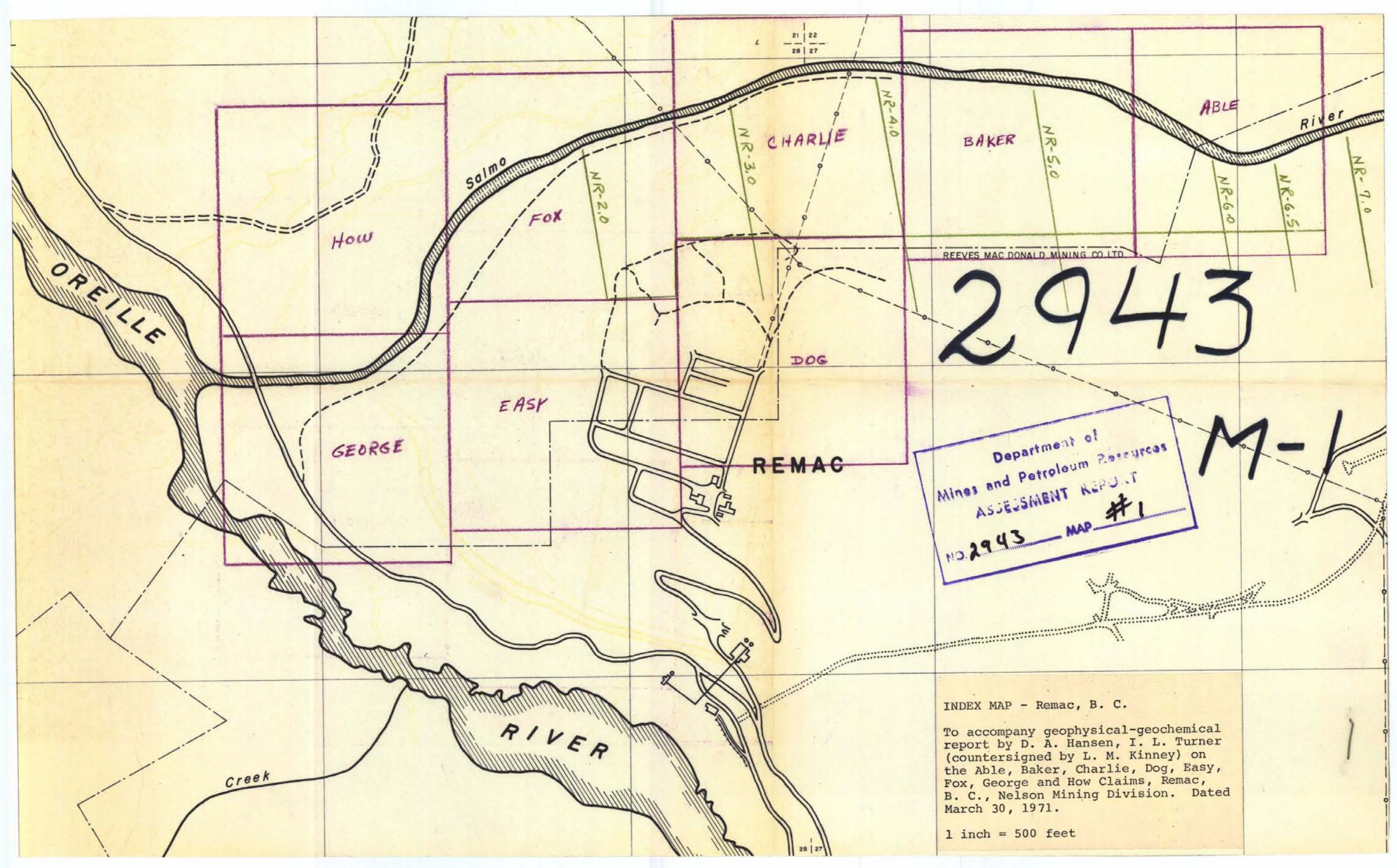
30 March, 1971

Signed: I. L. Turner

I. L. Turner  
Senior Geologist  
Vanguard Exploration Company  
Spokane, Washington

Countersigned: Lindsay M. Kinney

Lindsay M. Kinney  
Professional Mining Engineer  
Assn. of Prof. Engineers  
Province of British Columbia



REEVES MAC DONALD MINING CO LTD

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Mines and Petroleum Resources  
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INDEX MAP - Remac, B. C.

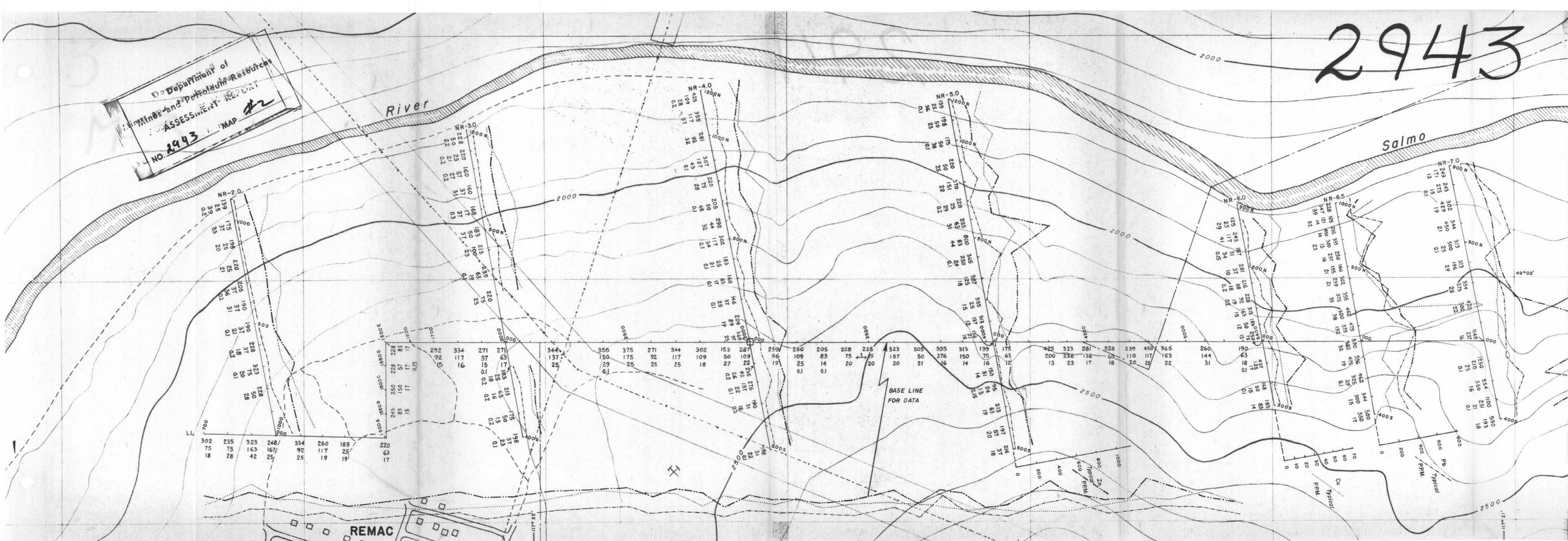
To accompany geophysical-geochemical report by D. A. Hansen, I. L. Turner (countersigned by L. M. Kinney) on the Able, Baker, Charlie, Dog, Easy, Fox, George and How Claims, Remac, B. C., Nelson Mining Division. Dated March 30, 1971.

1 inch = 500 feet

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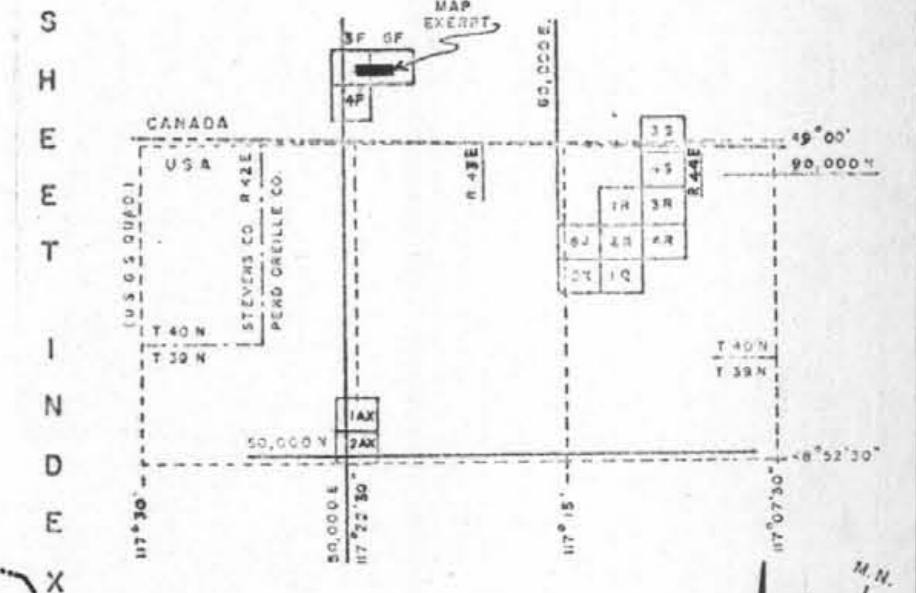
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GEOCHEMICAL ANALYSIS  
ORDER OF DATA

VALUES Zn = 1025 P.P.M.  
" Pb = 175 "  
" Cu = 36 "  
" Ag = 0.2 "

A<sub>2</sub> SOIL HORIZON



SCALE: 1" = 200'  
(1:2400)  
TOPOGRAPHIC CONTOUR INTERVAL = 40 FEET

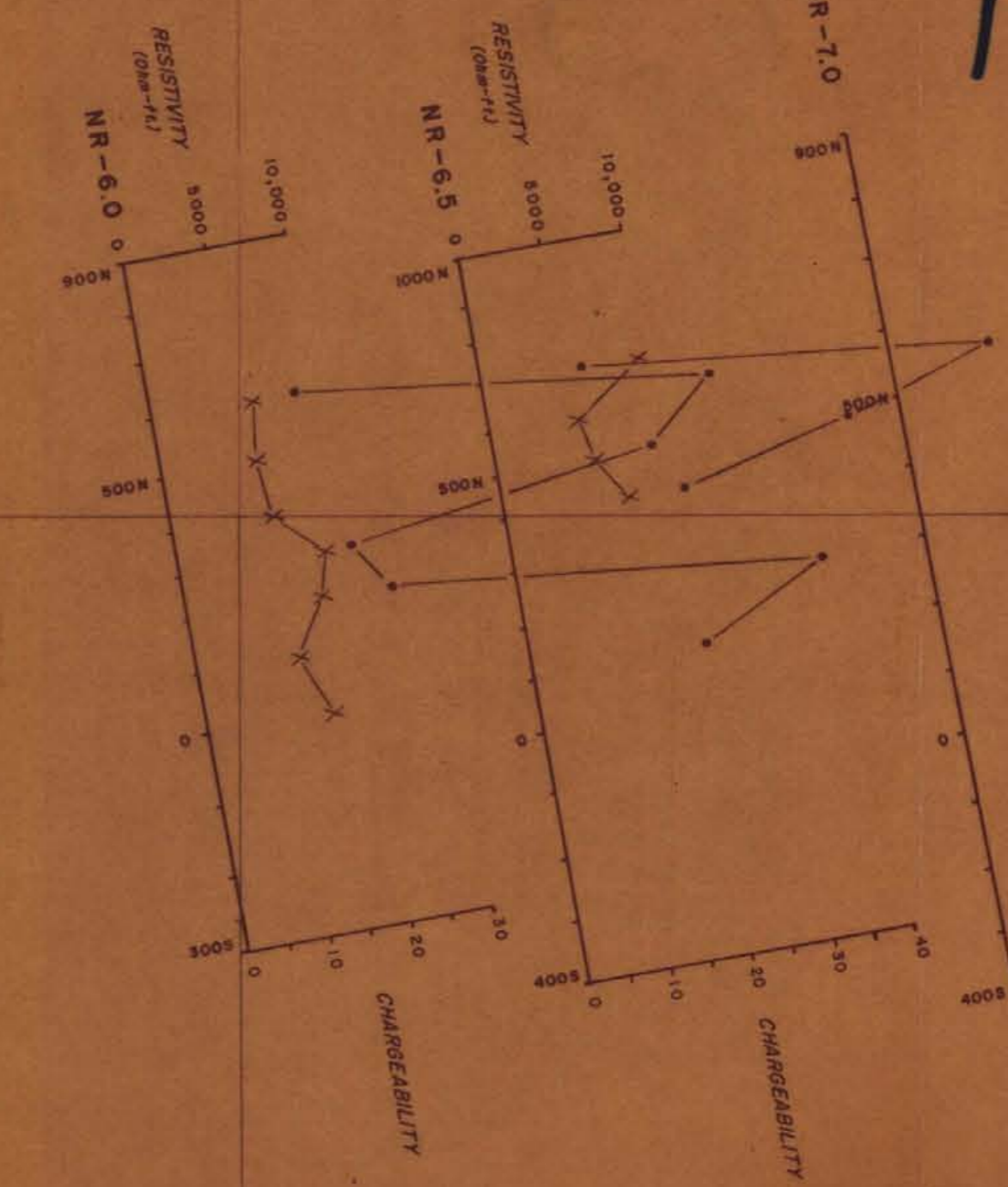
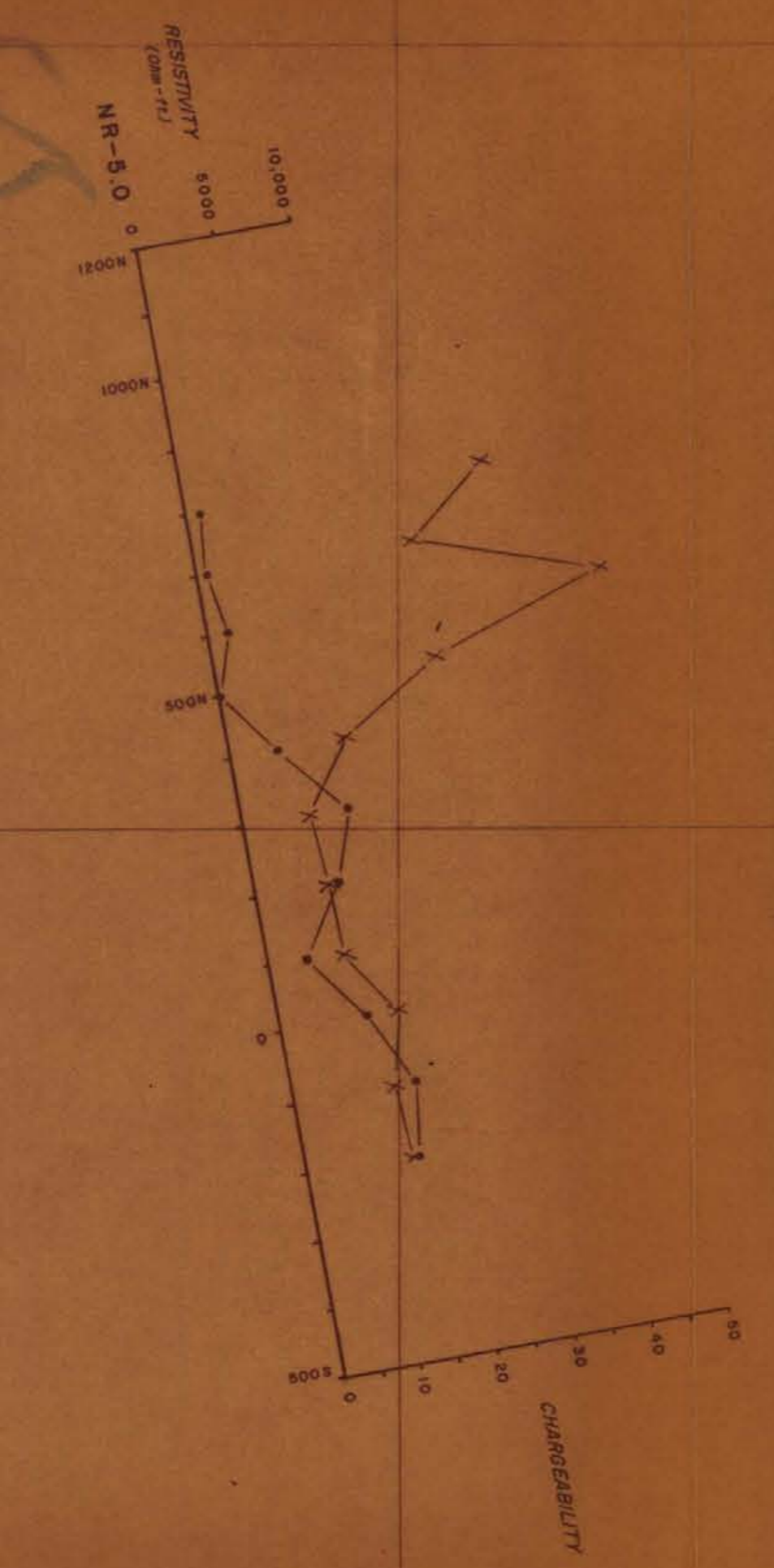
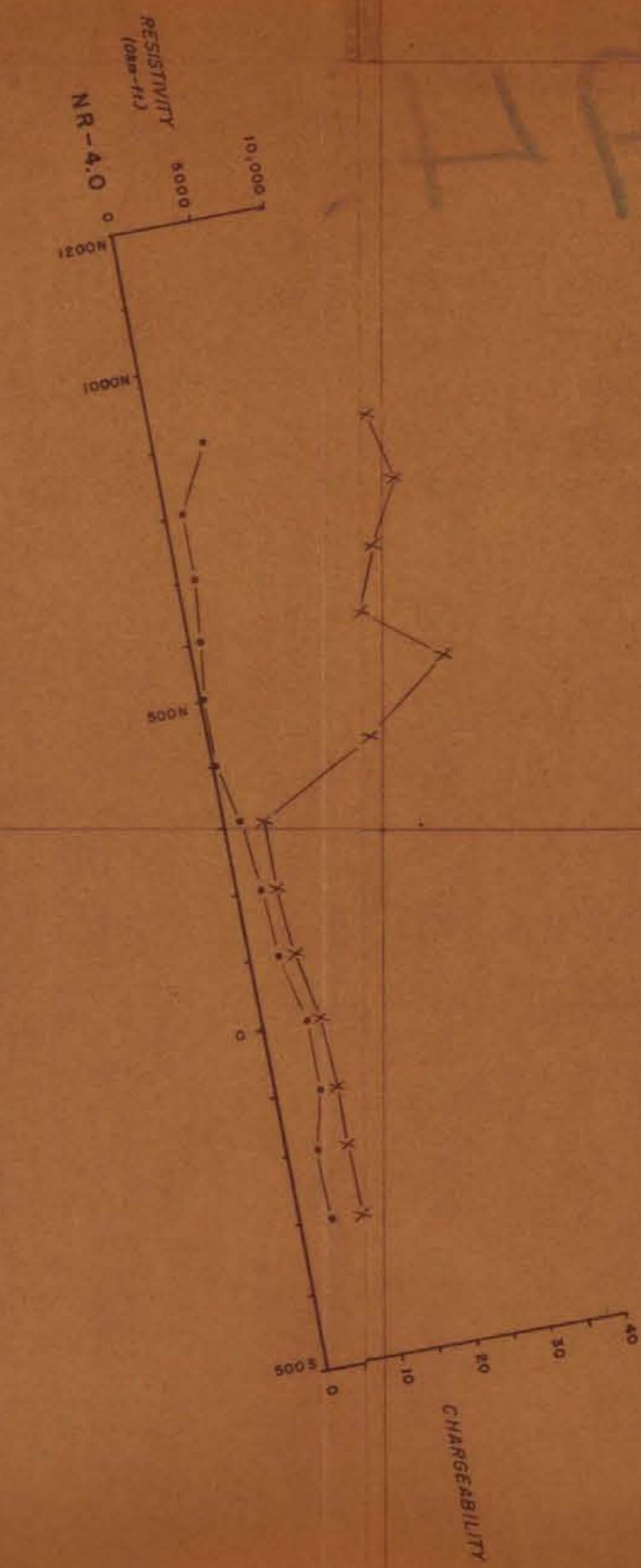
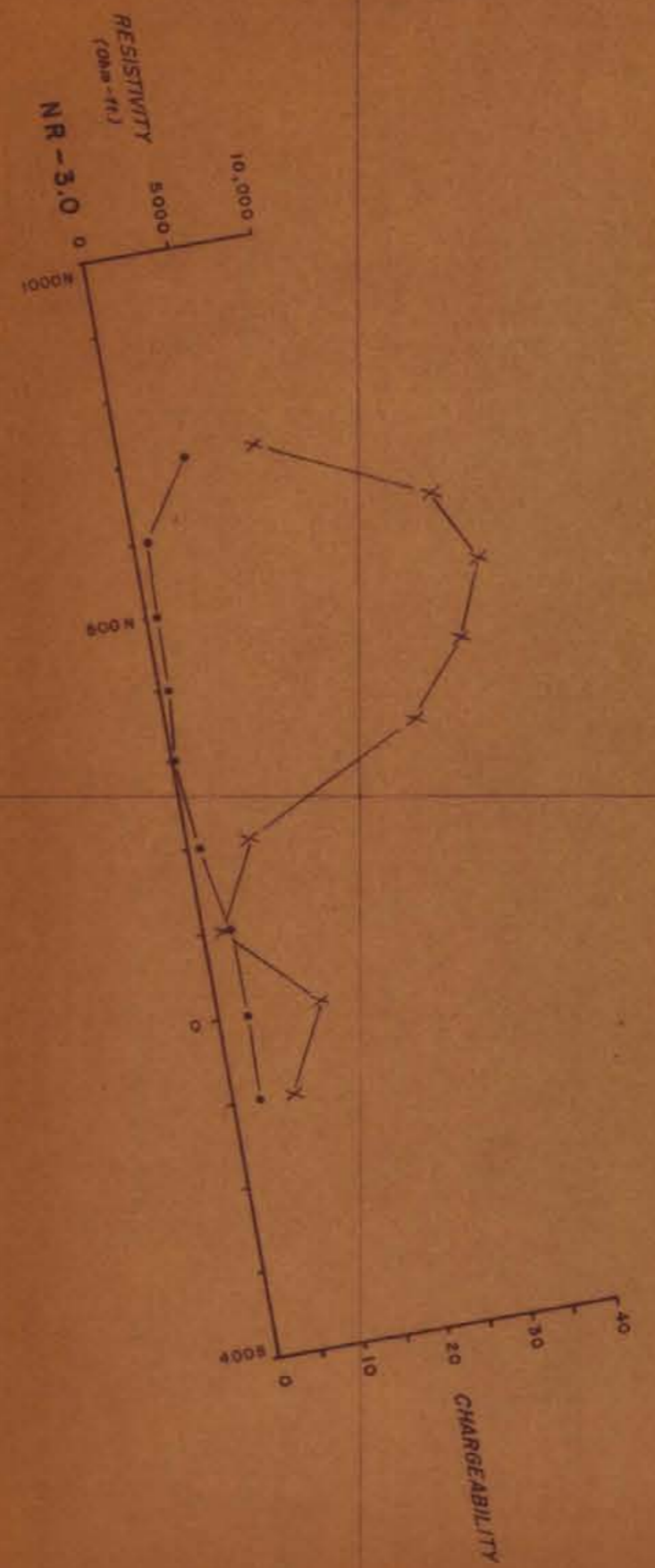
VANGUARD EXPLORATION COMPANY  
SPOKANE, WASHINGTON

GEOCHEMICAL ANALYSIS  
FOR LINES NORTH OF REMAC  
SALMO-METALINE MINING DISTRICT, BRITISH COLUMBIA

APS

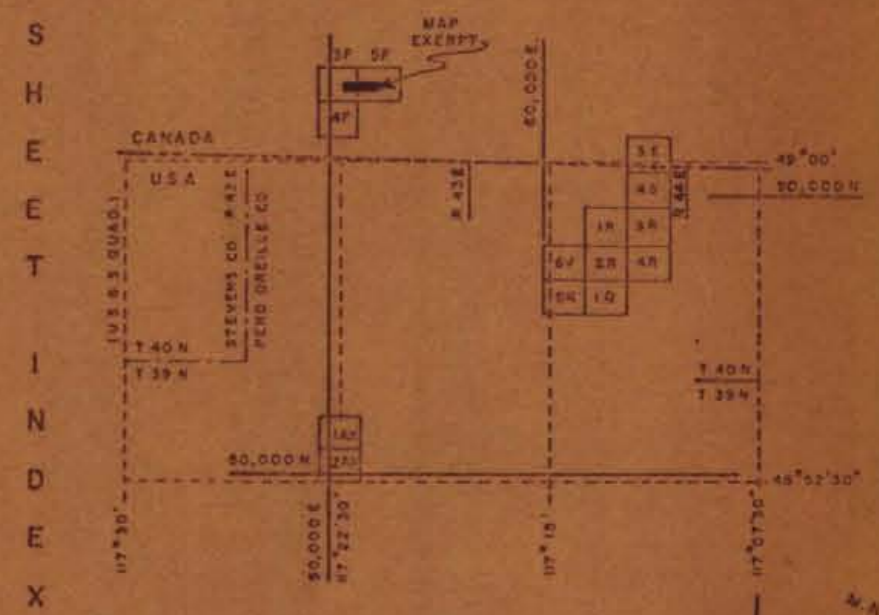
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LEGEND  
Chargeability X—X  
App. Resistivity ●—●



SCALE: 1" = 200'  
(1:2400)

VANGUARD EXPLORATION COMPANY  
SPOKANE, WASHINGTON

I. P. SURVEY  
Wenner Array 200ft. "a" Spacing  
NORTH OF REMAC  
SALMO-METALINE MINING DISTRICT, BRITISH COLUMBIA