2427

GEOCHEMICAL REPORT

on

Orequest's Parrott Lake Project

the

W. L. and Jan Claims and Mislocation No. 1 Fraction

situated 14 road miles south

of Houston

Omineca Mining Division

British Columbia

N.T.S. 93 L/2 (east half)

Latitude 54°12'N; Longitude 126°18'W

and owned by

A. L. J. MacDonald

on behalf of

OREQUEST EXPLORATION SYNDICATE

Field Work between May 17 and June 19, 1969

Report by:

D. R. Cochrane, P.Eng.
May 23, 1970.

d. r. cochrane

TABLE OF CONTENTS

	Page
SUMMARY AND CONCLUSIONS	A
INTRODUCTION	1
LOCATION AND ACCESS	1
CLAIMS AND OWNERSHIP	1
GENERAL SETTING	2
SOIL DEVELOPMENT	3
FIELD PROCEDURES	
(A) Linecutting	3
(B) Soil Sampling	4
DATA PRESENTATION	4
DATA PROCESSING	5
DISCUSSION OF RESULTS	
A. Copper	5
B. Zinc	6
C. Lead	8
D. Molybdenum	9
E. Silver	9
DEPTH PROFILING	9

FIGURES

#1	1. Location Map	in report
#2	2. Claims Map	" "
#3	3. Sample Locations	map pocket
#4	4. Geochemical Results, Copper	" "
#5	5. Geochemical Results, Zinc	" "
#6	6. Geochemical Results, Molybdenum & Silver	" "
#7	7. Sample Locations, Detailed Area	" "

FIGURES (cont.)

#8	8.	Geochemical Results, Detailed Area, Copper	map pocket
#9	9.	Geochemical Results, Detailed Area, Zinc	" "
#10	10.	Geochemical Results, Detailed Area, Lead	" "
#11	11.	Geochemical Results, Detailed Area, Molybdenum & Silver	" "

APPENDIX

I CERTIFICATES

II PERSONNEL AND DATES WORKED

III COST BREAKDOWN

IV COST APPROPRIATION

V ANALYTICAL PROCEDURE

VI NOTES ON DATA BY D. R. COCHRANE

SUMMARY AND CONCLUSIONS

During May and June 1969, an Orequest field party layed out just under 40 line miles of control lines on the WL and Jan claims, located 14 miles south of Houston, B.C. Approximately 900 B horizon soil samples were collected at 200 foot intervals along lines spaced 500 feet apart. Most of the samples were analyzed for copper and zinc, and a number for molybdenum, lead, and silver by hot acid extraction in the laboratory of Vancouver Geochem.

Statistical analysis of the data was facilitated by use of an Olivetti-Underwood 101 Computer.

Copper background was assessed at 60 ppm and content ranged from 5 to 285 ppm. About 90 percent of the population lies below 60 ppm. There are several areas of anomalous copper content, the most widespread centered in and southeast of the "Detailed Area" near the grid center. Other anomalous patches are somewhat scattered and overall correlation is difficult.

The zinc content of the upper B horizon soil samples is very high. The arithmetic mean is 270 ppm and the background was set at 250 ppm. An extremely large area characterized by plus 350 ppm occupies the south central to southwest grid area and is over 2 miles in length. Maximum zinc content is 3500 ppm from a sample in the center of the detailed grid area.

Lead tests were run on samples from the detailed area, and the "average" is 23 ppm, and background set at 32 ppm. A rather irregular shaped lead in soils anomaly is 1200 feet long by roughly 4000 feet wide and lies on the south flank of the "Detailed Area" copper soil anomaly.

The molybdenum results averaged about 2 ppm and ranged from 1 to 22 ppm. A slight molybdenum enrichment area is situated between 6000 and 11000 south on line 7500 west.

Silver content ranged from 1 to 5 ppm. No definite "hot" zones were located, but only a moderate fraction of the samples were tested.

Depth profiling for Zinc and Copper proved inconclusive. Some pits showed an increase in both metals with depth, while others showed no definite change or a decrease.

These facts, in addition to the presence of a high water table, suggest that much of the zinc and a good proportion of the copper may have been transported some distance. The distribution of high zinc soils is very widespread laterally, and suggests the possiblity of mobilization from a zinc halo, possibly surrounding a bedrock enrichment in copper and molybdenum. Further work is strongly recommended, especially "upslope" from the Detailed Area grid. A different, more definitive and selective exploration tool would be more advantageous, such as induced polarization and magnetic surveys.

Respectfully submitted,

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. R. COCHRANE

D. R. Cochrane, B.Eng.
May 25, 19[illegible]
Delta, B.C.

d. r. cochrane, p. eng.

INTRODUCTION:

In mid May, 1969, the WL and Jan claims were located on a rusty soil zone immediately north of the Parrott Lakes, in North Central British Columbia. Exploration work commenced immediately by personnel of Orequest Exploration Syndicate and consisted of linecutting and soil sampling.

This report describes the field procedures used and discusses the results of the geochemical survey.

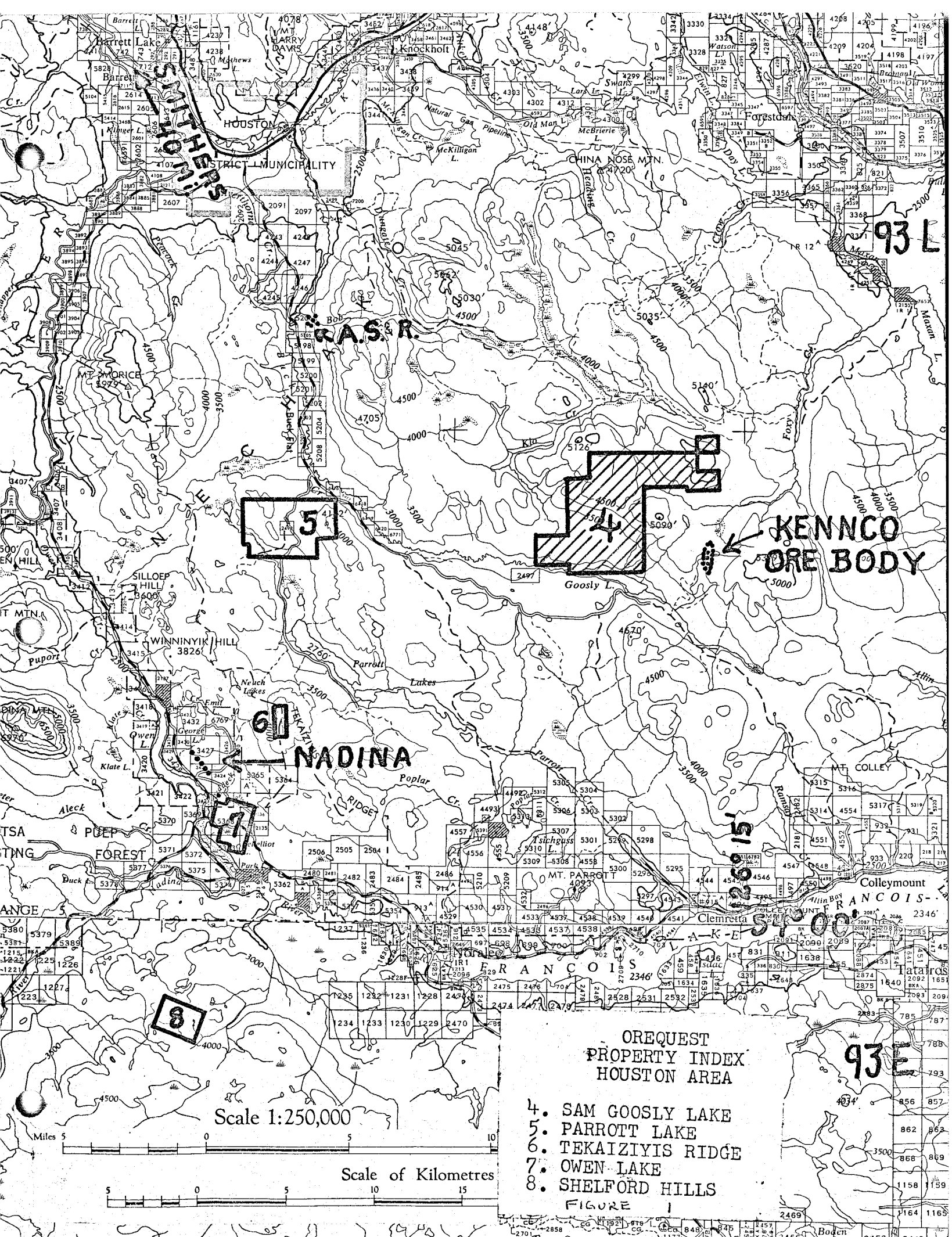
LOCATION AND ACCESS:

The claims are situated 14 miles south of the town of Houston in the Omineca District of British Columbia. Normal access is by truck south from Houston on the Goosly Lake Secondary Road for a distance of 12 miles, then south and slightly west onto the Parrott Lakes "cart track" for a distance of two miles. The "cart track" bisects the claim group. (see location map, Figure 1). The latitude is 54°12'North; Longitude 126°18' West and N.T.S. code for the area is 93 L/2.

CLAIMS AND OWNERSHIP:

The WL and Jan claims form a contiguous block of 106 full sized located claims and one fraction. They were located by Messrs. Tickner, Wiggins and McLeod as agent for Mr. Angus L. J. MacDonald of 808-837 West Hastings Street, Vancouver 1, B.C.

The location lines run true east-west (approximately) and claims are shown on the Mineral Claims map for the Houston Area.



OREQUEST
PROPERTY INDEX
HOUSTON AREA

4. SAM GOOSLY LAKE
5. PARROTT LAKE
6. TEKAIZIYIS RIDGE
7. OWEN LAKE
8. SHELFORD HILLS

FIGURE 1

The following lists pertinent claims data:

Claim Name	Record Number	Anniversary Date
WL No. 1 to 46 incl.	72038 to 72083 (incl.)	May 26
Miscalculation No. 1 Fraction	72102	" "
Jan No. 1 to 12 incl.	72103 to 72114 (incl.)	" "
WL No. 53 to 70 incl.	72084 to 72101 (incl.)	" "
WL No. 111 to 124 incl.	74509 to 74522 (incl.)	June 23
Jan No. 19 to 34 incl.	72115 to 72130 (incl.)	May 26

The location of the claims is shown in Figure 2.

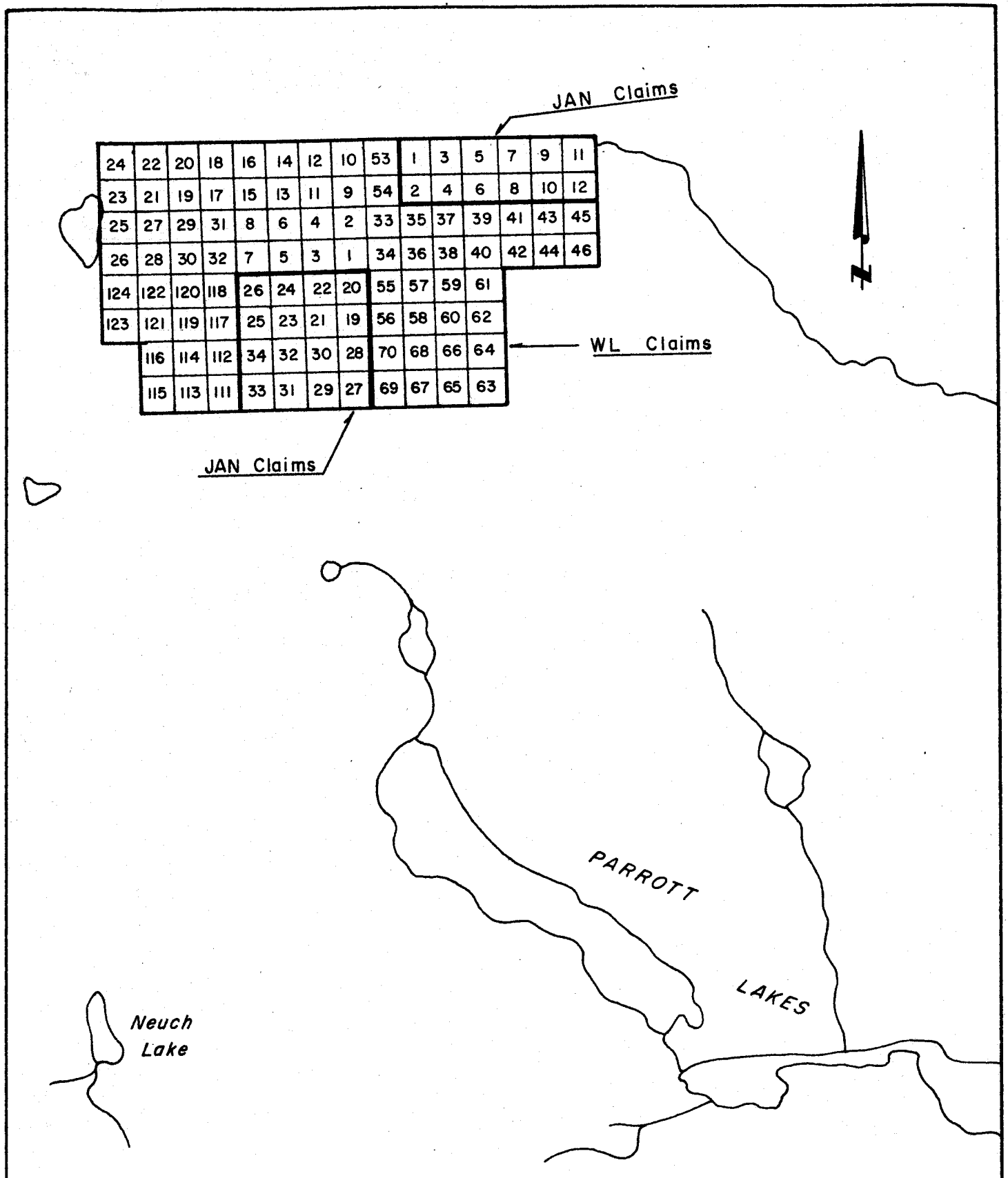
GENERAL SETTING:

The WL and Jan claims are situated in the Nechako Plateau physiographic subdivision of the Interior Plateau system of British Columbia. This area is characterized by moderate relief and is a fairly gently rolling upland with elevations rising to just over 5000 feet. The claims cover a gentle prominence rising to just over 3500 feet just north of the northern-most Parrott Lake (elevation 2760'). Claims on the west side of the group cover a fairly steep prominence trending north and rising to over 4000 feet above sea level.

B. C. Department of Mines Map 69-1, a compilation by Carter and Kirkham, shown the Parrott Lakes area as underlain by Lower and Middle (?) Jurassic volcanics with minor sedimentary sequences. This complex is intruded by stocks and plugs of Upper Cretaceous and Early Tertiary acidic rocks, and this entire complex overlain by relatively flat lying patches of Tertiary volcanics.

D. Brabec, in a private report to Orequest reported--

> "Most outcrops occur along ridges, often as cliffs, and consist of andesites and their tuffs, grey to reddish in color, often amygdaloidal and of variable grain size. Somewhat different are a few outcrops observed, namely:



OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE PROJECT

HOUSTON CLAIMS

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

SCALE : 1 " = 1 Mile

DATED : May 22/70

FIG. 2

(a) - Light grey andesitic tuff (?) with feldspars transformed into clay minerals or sericite and mafics usually completely limonitized. This rock may be hydrothermally altered. It is fractured and sheared 035°-045° with steep dip of fractures. The glacial striae observed only on one spot indicate the local direction of glacial transport as 230°. The outcrop is exposed in the road cut for some 1300 feet starting from the junction with the Goosly Lake Road which follows Buck Creek.

(b) - A dark green rock with no visible quartz and rare feldspar, possibly hornblendite or pyroxenite, exposed in the road cut some 1 mile S of the described tuff outcrop. It is a small dike-like outcrop jointed 20-30°.

(c) - Slightly silicified limestone (?) - a fine-grained rock exposed near claim post 2700'S 1400'E (soil survey grid on Maps 1, 2 and 3. This rock is exposed or covered with thin soil mainly along a small ridge and its very steep northern slope."

SOIL DEVELOPMENT:

Much of the claims area is covered with glacial till. A small section in the central claims area is currently under cultivation. (Land lease 2498). The overburden consists of debris and boulder of volcanic rock with cobbles and slabs of greywacke and impure limestone. The fines consist of clay and silt. Soil development is poor to fair and may be classed as bunisolic, brown, wooded, with a moderately well developed Bf horizon. In lower swampy areas, greysolic soils predominate with a thick Ah horizon. The water table is extremely high, and not uncommonly a soil sampling pit will fill with water soon after excavation.

FIELD PROCEDURES:

A. Linecutting

Ground control for the geochemical survey was facilitated by running north-south blazed and flagged lines at right angles to the claim location lines. The lines were run with compass control and were chained

and marked at 100 foot intervals. 0 + 00W and 0 + 00N was chosen at the center of the northernmost location line. Cross lines are 500 feet apart in the center claims area, and at a wider spacing at the claims group margins.

B. Soil Sampling

Soil samples were collected along the cross lines by excavating a small pit with a shovel to a depth of between 10 and 20 inches. Approximately ½ cup of soil was scooped from the pit and placed into a pre-numbered kraft paper soil sample bag and folded shut. Samplers identified the sample bag number with grid coordinates on standard note forms and described the sample with respect to depth, soil horizon, slope, texture and colour. Initial sampling was conducted at 100 foot intervals within an area of about 3000 feet by 1500 feet in the central claims area, and is referred to as the "Detailed Area". The second soil sampling phase consisted of the collection of samples at 200 foot intervals along north-south lines spaced 500 feet apart.

The soil samples were oven dried by D. Brabec, and most of them were sifted to -80 mesh in a small field laboratory situated in Houston. The samples were then repacked, crated and shipped to Vancouver where they were analyzed by Vancouver Geochem. The analytical method is appended. Samples were tested for content of copper and zinc, and a number for molybdenum, silver and lead.

DATA PRESENTATION:

The soil sample results were compiled by Mr. R. Key on maps drafted at a scale of 1 in.:500 feet. (see maps in map pocket) The detailed

area is plotted at a 1 in.:100 foot scale. Preliminary data processing by the author (see appendix VI) established the mean and standard deviations of the metal distributions and the results were contoured on this statistical basis. Claim boundaries and posts were located with respect to the grid lines and are shown on the accompanying plans.

DATA PROCESSING:

Statistical analysis of the tabulated geochemical data was facilitated by use of a programmed Olivetti-Underwood 101 computer. Random samples of the data were "keyed in" and the sample mean (average) and standard deviation of the copper and zinc data were calculated. In addition, frequency histograms of the populations were prepared and are displayed in appendix VI along with a cumulative frequency curve for zinc. The lead, silver and molybdenum data were analyzed by manual methods.

DISCUSSION OF RESULTS:

A. Copper

The arithmetic mean of a sample of 51 results from the total copper population is 38 ppm and the standard deviation is 38. Individual values ranged from a low of 5 to a high of 285 ppm in the first batch of 93 samples. The distribution of copper values is multi-modal and approximately log normal. A prominent mode lies in the range 10 to 19, and the interval 10 to 29 ppm contains 63.3 percent of the total population. Based on these statistics the following categories may be devised:

Class	Designation
0 to 59 ppm	background
60 to 89 ppm	possibly anomalous
790	probably anomalous

Figure 4 displays the areal distribution of these categories. The map is also contoured at 40 ppm (close to the arithmetic mean), thus, in addition, providing categories of "above" and "below" average.

The distribution of "possibly anomalous" copper content in upper B horixon soils is quite patchy and lacks positive overall correlation and definition. Several anomalous centers are worthy of note and these occur at

(a) 500 E; 5000 S

(b) 3000 W; 5500 S

(c) 1000 W: 8500 S

Several "one sample" highs are also shown in Figure 4. The largest area of "above average" copper content occurs in and about area (a), defined above.

Figure 8 displays the copper results of the detailed area, and supplies more information about area (a). A narrow band of +90 ppm is assumed to strike NW across the detailed area, and is approximately 500 feet long and just less than 100 feet wide. Cross line correlation is tentative only. This "probably anomalous" zone is enclosed in an irregular shaped "above average" envelope.

B. Zinc

The arithmetic mean of a sample of 52 zinc results is 270 and the standard deviation 201 ppm. The distribution of zinc is multi-modal,

and apparently, at least three zinc families exist. Two families are quite prominent. The dominant mode lies in the 100 to 149 class and contains 20 percent of the total analyzed population of 289 zinc results.

Based on the above statistics the following categories may be devised:

Class	Designation
0 to 249 ppm	background
250 to 349 ppm	possibly anomalous
greater than 350	probably anomalous

Figure 5 (map pocket) shows the areal distribution of these categories. The results are also contoured at 250 ppm (the approximate arithmetic mean) thus dividing background into below and above average categories.

The large areas of "probably" anomalous zinc in the upper B soil horizon is most impressive. The entire south central claims area is anomalous, with a few patches of "possibly" anomalous within this zone. The high zinc content extends westerly, and is still open to the west of line 75 + 00W. Zinc content reaches a maximum amplitude of 1750 ppm in and around 90 + 00S, 20 + 00E.

Figure 9, Detailed Area, Zinc Content, provides a more accurate picture of the anomalous (a) zone. A wide band of plus 350 ppm trends northwesterly across the Detailed Grid, and two patches of plus 1000 response are included. Maximum content is 3500 ppm zinc from a sample collected at the geographical center of the detailed grid. There is good

correlation between the copper and zinc soil anomalies in this area, although the zinc content is obviously "more" anomalous and the "anomalous" area more widespread. The zinc anomaly is still open to the south and east.

C. Lead

The soil samples were tested for lead in the detailed area only.

The average lead content of the upper B soil horizon on the north half of the detailed area is 23 ppm, and the standard deviation is 8 ppm. The range is between 5 and 160 ppm. Hawkes and Webb (Geochemistry in Mineral Exploration) report an overall average of 10 ppm Pb in soils, and range 2 to 200 ppm.

Based on these statistical data the following categories may be devised:

Range	Class
0 to 22	below average
23 to 31	above average
32 to 39	possibly anomalous
greater than 39	probably anomalous

Figure 10 shows the areal distribution of these categories. The largest area of plus 30 ppm lies in the south, and is an irregularly shaped patch over 1200 feet long and approximately 400 feet wide. It lies on the southwest flank of the copper high, but correlates well with the west half of the zinc anomaly.

D. Molybdenum

The results of those samples analyzed for molybdenum are shown in Figure 6 (map pocket). Molybdenum content range from limit of detection (1 ppm) to a high of 22 ppm. The average (background) content is slightly less than 2 ppm. The area of highest response is the south half of line 7500 west. Between 6000 and 11000 south the average of 26 analysis is 3.5 ppm and this area also contains the high 22 ppm sample. A second area of minor enrichment (three, 3 ppm samples) is situated on the Jan 23 claim. Neither of these areas of slight molybdenum enrichment correlate well with copper or zinc enrichment.

E. Silver

The results of the limited amount of testing for silver is shown in Figure 6 along with molybdenum results. Silver content ranged from the limit of detection (1 ppm) to a high of 5 ppm. No definite zones of enrichment were defined, however analysis was limited. The 5 ppm Ag content is located at 4800 S on line 0, and a 4 ppm was reported at 6400 S on line 2500 E.

Depth Profiling

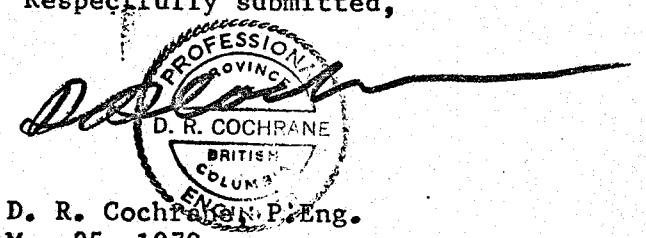
D. Brabec investigated the vertical distribution of copper and zinc, and reported the following:

> "A highly anomalous area (100 ppm Cu+) near road in the middle of the area is about 300 feet long, and ends abruptly in all directions except east. Vertical distribution in most pits indicates decrease of values with depth. Two road cuts in the south part of anomaly show an increase of copper with depth.

Road cuts samples further north seem to show the following type of background vertical distribution:

Depth	Cu, ppm	Zn, ppm
2 - 12 in.	18	96
12 in. - 2 ft.	28	105
2 - 3 ft.	28	100
3 - 4	31	95
4 - 5	31	105
5 - 6	31	99
6 - 7	38	105"

Respectfully submitted,



D. R. Cochrane, P.Eng.
May 25, 1970,
Delta, B.C.

d. r. cochrane, p. eng.

APPENDIX I

Personnel Certificates

COCHRANE, Donald Robert: Geological Engineer, B.A. Sc. University of Toronto, 1962, M.Sc. (Eng.) Queen's University 1964. P.Eng; Ontario, Saskatchewan, and British Columbia. Engaged in various phases of mineral exploration since graduation.

MacDONALD, Angus L. J.: B.A. U.B.C., 1953. Engaged in mineral exploration since 1955 while in employ of Kerr Addison Gold Mines, United Keno Hill Mines, Peso Silver Mines, Jersey Yukon Mines, Meridian Exploration Syndicate 1964-1967, Orequest Exploration Syndicate 1968 - present.

JOHNSON, Garth: Gd. X education, 925 E 59th Street, Vancouver, age 16; summer 1969; Orequest Exploration, linecutting and soil sampling under supervision.

DODD, George: 3rd year student, U.B.C., age 21; Previous experience in mineral exploration with Utica Mines Ltd., Summer 1969, Orequest Syndicate, soil sampling, linecutting, camp construction under supervision.

McLEOD, Robert Gordon: High School diploma; age 20, 2 years previous experience with MacDonald Consultants in mineral exploration. Summer 69, soil sampling with Orequest under professional supervision.

FORSHAW, Robin Thomas: Age 22, High School Diploma; Grade 13 (Oliver) Previous experience in mineral exploration with: The Granby Mining Company Ltd. April 1967 to June 1969 supervising and cutting lines, magnetometer operator, claim staking, and surveying (level, transit). Huntec Ltd; Induced polarization operator and helper. San Jacinto Mines; line cutter, IP helper. James Foreshaw Ltd; July-Sept. 66, line cutter, claim staking. 1968 - employed by Orequest starting July 1, 1969, Soil sampling and linecutting under supervision and supervising line cutting and soil sampling.

TICKNER, John Jeremy: Age 30, 2 years university, major in geology, U.B.C. Previous experience includes - one season (1967) with Noranda Exploration; one year (1966) with Asbestos Corp. (Exploration Division) and one season (1965) with Silver Standard Mining Co. Employed since 1968 with Orequest Exploration acting in a capacity as party chief.

BRABEC, Dragan: B.Sc. equivalent, University of Belgrade 1959;
M.Sc. equivalent, University of Belgrade 1965;
D.I.C. Imperial College of Science & Technology, London, 1964.

APPENDIX II

Personnel and Dates Worked

The following table lists Orequest personnel employed on the Parrott Lake project, and the dates and nature of their work. All field work was supervised by Mr. A. MacDonald.

Name	Work Done	Dates	Man Days
A. MacDonald	Supervision, line-cutting and soil sampling	May 17 to 22 May 25 to June 5 June 7 to June 19 Sept. 20 to 24	36
J. Wiggins	Linecutting and Soil Sampling	May 17 to 22 May 25 to June 5 June 7 to June 19	31
G. Dodd	Linecutting and Soil Sampling	May 17 to 22 May 25 to June 5 June 7 to 19	31
D. Brabec	Soil Sampling and Supervision	May 25 to June 5 June 7 to 19	25
G. McLeod	Line Cutting, Soil Sampling	May 17 to 22 May 25 to June 5 June 7 to 19	31
J. Tickner	Linecutting and Soil Sampling	May 17 to 22 May 25 to June 5 June 17 to 19 Sept. 20 to 24	36
R. Forshaw	Linecutting	Sept. 20 to 24	5

APPENDIX III
Cost Breakdown

1.	Linecutting	
	(a) Brabec; 2 days @ $50.00	100.00
	(b) MacDonald; 6 days @ $50.00	300.00
	(c) Wiggins, McLeod, Forshaw, Tickner, Dodds 87 man days @ $35.00/day	3,045.00
2.	Soil Sampling	
	(a) Brabec; 12 man days @ $50.00	600.00
	(b) MacDonald; 9 man days @ $50.00	450.00
	(c) Wiggins, McLeod, Forshaw, Tickner, Dodds 47 man days @ $35.00	1,645.00
3.	Supervision	
	(a) Brabec; 11 days @ $50.00	550.00
	(b) MacDonald; 21 days @ $50.00	1,050.00
4.	Geochemical Analysis, (Vancouver Geochem.) 882 samples @ $2.70	2,381.40
5.	Board Loss 195 field man days @ $7.50/man day	1,462.50
6.	On Property Transportation	
	(a) Rental of Chev. 4 x 4	500.00
	(b) Rental of Dodge 4 x 4	500.00
7.	Preliminary Data Reduction	
	(a) Numerical Analysis by D. R. Cochrane (see Appendix VI)	33.75
	(b) Drafting, R. Key, November, 1969	132.00
	Drafting, R. Key, May, 1970	66.00
8.	Report Preparation, D. R. Cochrane	
	December 4	83.32
	May 20, 21 - 2 days @ $136.00/day	272.00
9.	Cobra Drill Rental (for deep sampling)	189.00
	TOTAL	$13,359.97

Angus MacDonald

APPENDIX IV

COST APPROPRIATION

One year's work on JAN #1 to 12 inclusive;
JAN 25 to 34 inclusive;
WL 7, 8, 10 and 12;
WL 13 to 32 inclusive;
WL 37 to 46 inclusive;
WL 53 and 54;
WL 59 to 70 inclusive;
WL 111 to 124 inclusive.

Total: 84 claims @ $100 per year . . . . . $ 8,400.00

Two year's work to apply to:

WL #1 to 6 inclusive;
WL 9 and 11;
WL 33 to 36 inclusive;
WL 55 to 58 inclusive;
JAN 19 to 24 inclusive;
Miscalculation #1 Fraction

Total: 23 claims @ $200 per year 4,600.00

TOTAL: $ 13,000.00

Appendix V

Vancouver Geochemical Laboratories Ltd.

1521 PEMBERTON AVENUE NORTH VANCOUVER, B.C., CANADA TELEPHONE: 604-988-2171

J. R. WOODCOCK
CONWAY CHUN

November 21, 1969

TO: Mr. Angus MacDonald
Orequest Syndicate
#808, 837 West Hastings St.
Vancouver 1, B. C.

FROM: Mr. Laurie Nicol, Supervisor Chemist
Vancouver Geochemical Laboratories Ltd.
1521 Pemberton Avenue
North Vancouver, B. C.

SUBJECT:
Analytical procedures used to process acid soluble molybdenum, copper, zinc, silver and lead in geochemical samples received from Orequest Syndicate during 1969.

1. Sample Preparation

(a) Geochemical soil, silt and rock samples were received in the laboratory in wet-strength 3½ x 6½ Kraft paper bags.

(b) The wet samples were dried in a ventilated oven.

(c) The dried soil and silt samples were sifted, using an 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.

(d) The dried rock samples were crushed and pulverized to minus 80-mesh. The pulverized sample was then put in new bag for later analysis.

2. Methods of Digestion

(a) 1.00 gram or 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.

(b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).

(c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

. 2

3. Methods of Analyses

(a) Molybdenum analyses:

Molybdenum analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 with a molybdenum hollow cathode lamp. The digested samples were aspirated directly into a nitrous oxide, acetylene flame. The results were read out on a Photovolt Varicord Model 43 chart recorder. The molybdenum values, in parts per million, were calculated by comparing a set of molybdenum standards.

(b) Copper, zinc, silver and lead analyses:

The above element analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamp. The digested samples were aspirated directly into an air acetylene flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption unit.

4. The analyses were supervised or determined by Mr. Conway Chun, or Mr. Laurie Nicol and their laboratory staff.

L. J. Nicol

VANCOUVER GEOCHEMICAL LABORATORIES LTD.

LJN:mb

APPENDIX VI

Notes on Numerical Analysis by

D. R. Cochrane

August 20, 1969

Following 6 pages

4952 8A Ave.,
Delta, B.C.,
August 20, 1969.

Mr. A. MacDonald,
Exploration Manager,
Orequest Syndicate,
808-837 W. Hastings,
Vancouver, B.C.

Dear Angus:

Enclosed are some notes on the elementary numerical analysis of your geochemical data that I have recently completed. The procedure employed was a standard frequency distribution one, and the arithmetic mean and standard deviations were calculated on a Programma 101.

The zinc data is most interesting, and shows a very distinct and real pattern when contoured on the basis of the statistical analysis, almost a "halo like" shape to the "probably anomalous" values. The distribution of copper in the soils, however, is not as definitive. There is certainly some "real" abnormality near the south ends of 500W, 0 and 500E.

I hope I may be of service again.

Regards,

Don Cochrane, P.Eng.

Notes on Numerical Analysis of Zinc (ppm), Parrot Lake Projects

Total Population of 289
Minimum 13
Maximum 1700
Arithmetic Mean: 270 (of a 52 population sample)
Standard Deviation 201
Mode at 100-149 class with 20% of the total population

Distribution apparently approaches log normality.

Both the cumulative frequency distribution and histogram show significant departure from log-normality in two places, one at 250 and the second at 350 ppm.

There appears to be three families and two at least, are quite prominent. These families may reflect soil type variation and/or concentration of Zn in bedrock, mode of adsorption on soils, etc.

The zinc distribution may be categorized as follows:

Class (ppm)	Name
0 to 249	background
250 to 349	possibly anomalous
>350	probably anomalous

A sketch map is enclosed and was contoured on the basis of the above categories.

Notes on Numerical Analysis of Copper (ppm), Parrot Lake Project

Total Population of 293
Minimum 5
Maximum 285
Arithmetic Mean 38 (of a 51 sample)
Standard Deviation 38 (of a 51 sample)
Mode at 10 to 19 parts and contains 33.1% of population.

Distribution is multimodal and is apparently log normal or hybrid. The mode is situated at 10 to 19 and is very prominent. The two classes of values between 10 and 29 contain a total of 63.3% of the total population. Significant deviation from log normality is apparent in the 70 to 79 and 100 to 109 intervals. The copper results may be divided into three families summarized as follows:

Class	Name
0 to 59	Background
60 to 89	Possibly anomalous
>90	Probably anomalous

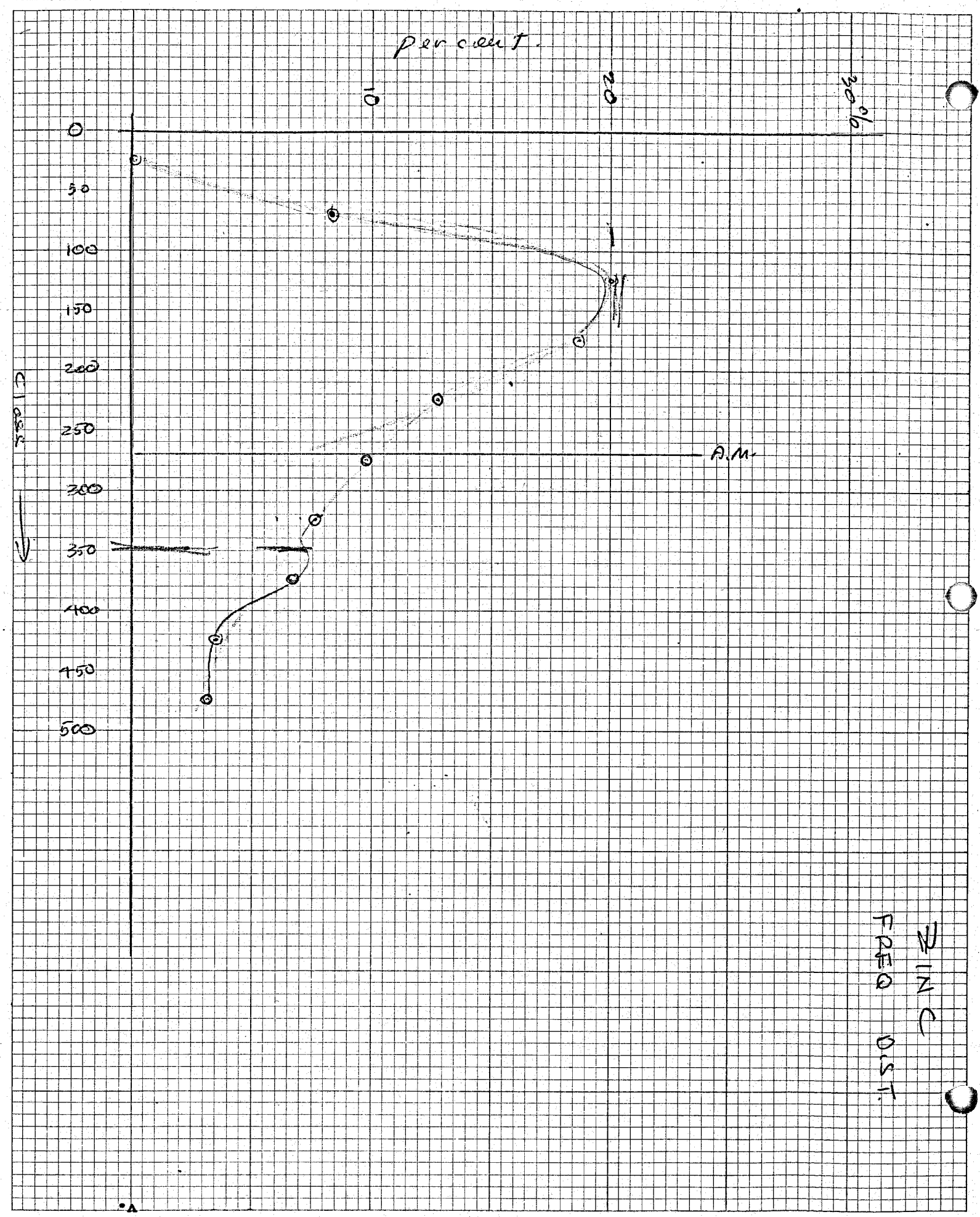
Note that the threshold of 90 parts is just over the arithmetic mean plus one standard deviation.

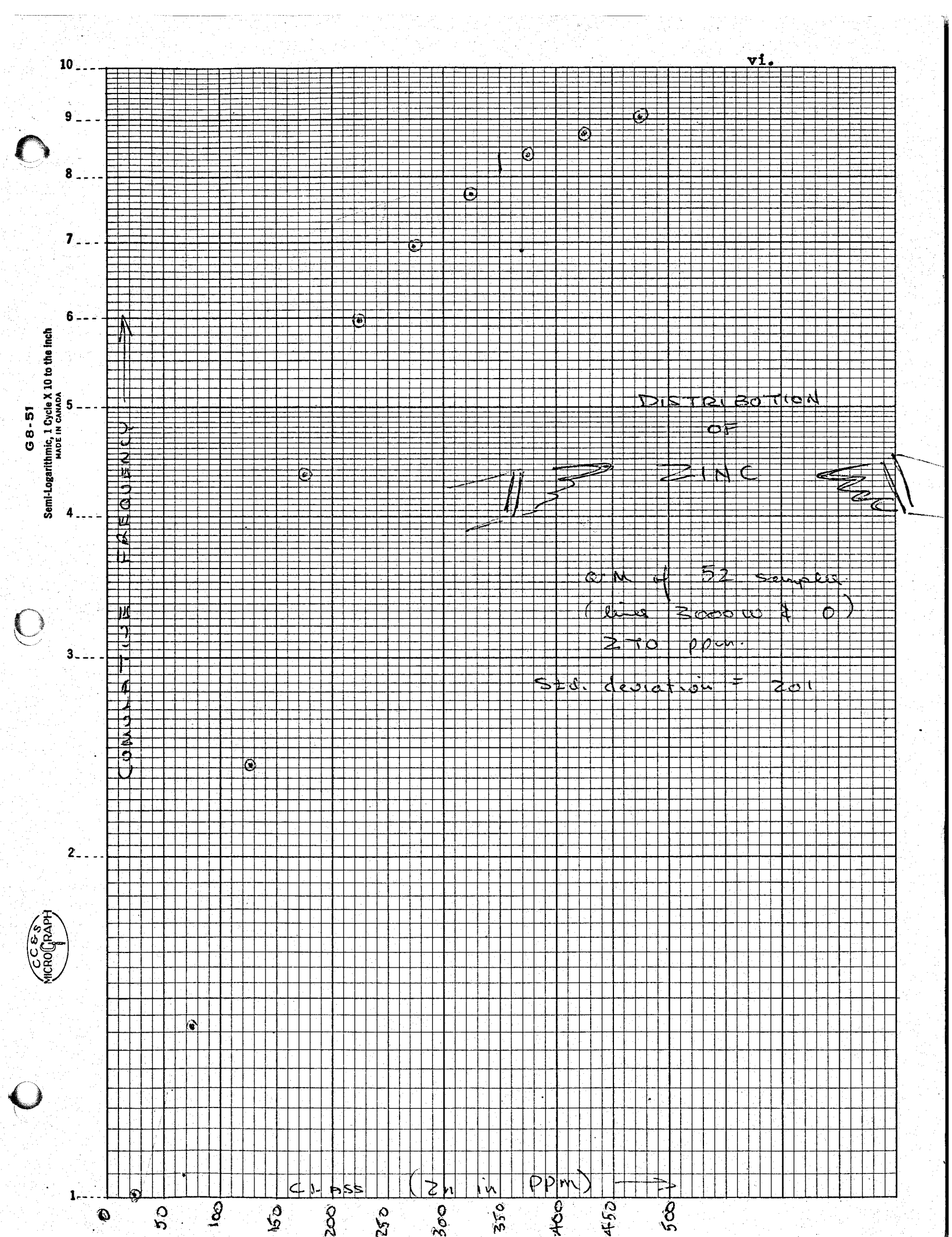
A distribution table follows:

Distribution Table - Copper

Class	Percent of Total (293) Population	
0 - 9	<1	
10 - 19	33.1	
20 - 29	30.2	
30 - 39	11.6	
40 - 49	7.9	
50 - 59	4.8	
60 - 69	2.0	←
70 - 79	3.8	
80 - 89	1.0	
90 - 99	0.7	←
100 - 109	3.1	
110 - 119	<1	
220; 230 & 285		

FORM NO. L1-247 WILSON STATIONERS





G 8-51
Semi-Logarithmic, 1 Cycle X 10 to the inch
MADE IN CANADA

N

WL 1 CLAIM

WL 2 CLAIM

WL 34 CLAIM

WL 33 CLAIM

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2427 MAP #10

LEGEND

- CLAIM POST
- STATION LOCATION
- GEOCHEMICAL READING

TO ACCOMPANY GEOCHEMICAL REPORT ON THE WL 1 TO 4 INCL. CLAIMS, OREQUEST'S PARROT LAKE PROJECT BY D.R. COCHRANE P.ENG. DATED MAY 22, 1970

D.R. COCHRANE
BRITISH COLUMBIA
PROFESSIONAL ENGINEER

2427

OREQUEST EXPLORATION SYNDICATE

PARROT LAKE GEOCHEMISTRY

HOUSTON CLAIMS

DETAILED AREA

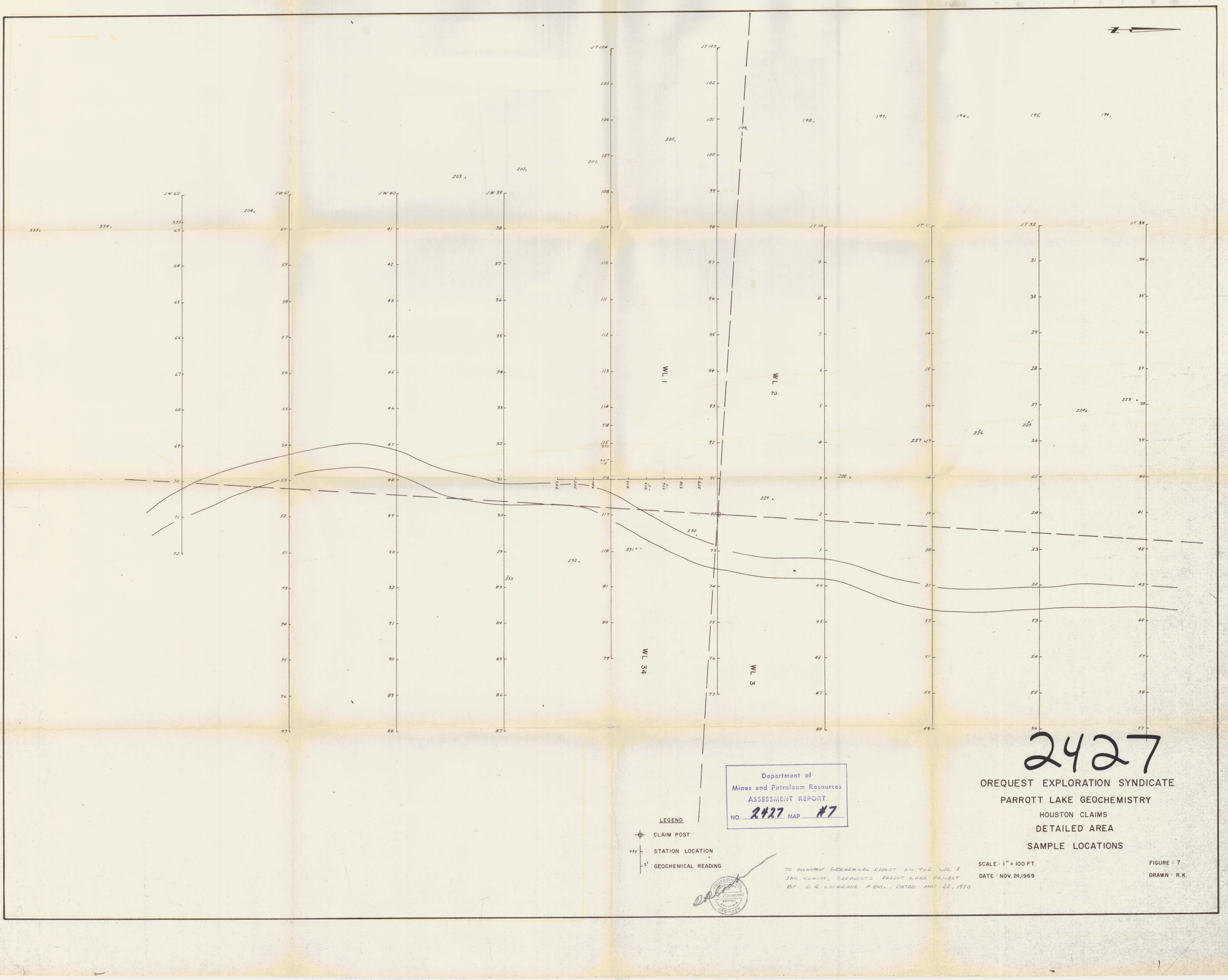
Lead (ppm)

SCALE : 1" = 100 FT.

DATE : NOV. 24, 1969

FIGURE : 10.

DRAWN : R.K.



2427

OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE GEOCHEMISTRY

HOUSTON CLAIMS

DETAILED AREA

SAMPLE LOCATIONS

LEGEND

- CLAIM POST
- STATION LOCATION
- GEOCHEMICAL READING

SCALE : 1" = 100 FT.

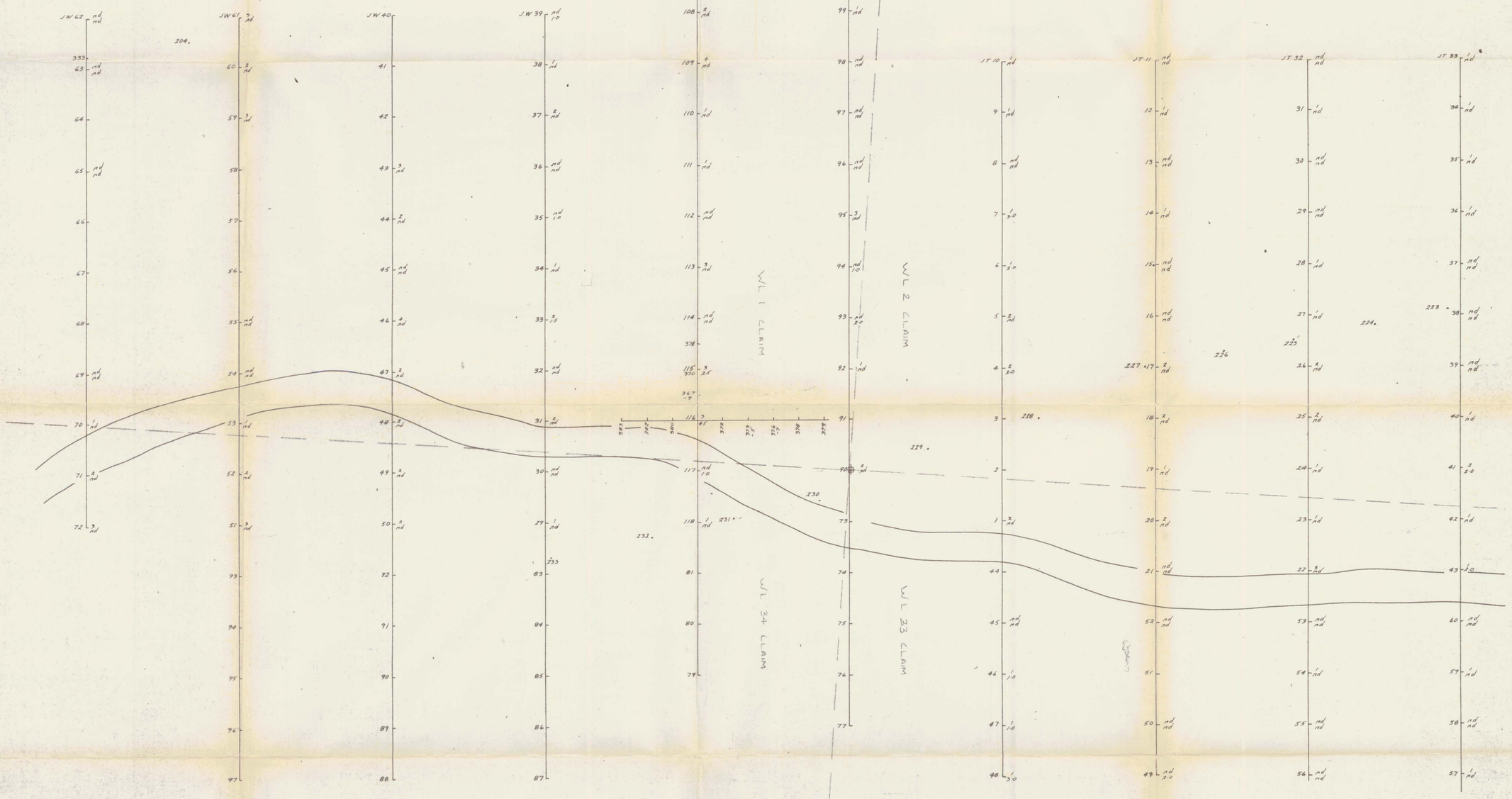
DATE : NOV. 24, 1969

FIGURE : 7

DRAWN : R.K.

TO ACCOMPANY GEOCHEMICAL REPORT ON THE WL 1 JAN CLAIMS, OREQUEST'S PARROT LAKE PROJECT BY D.R. COCHRANE P.ENG., DATED MAY 22, 1970

D. R. COCHRANE
BRITISH COLUMBIA
ENGINEER



LEGEND

- CLAIM POST
- STATION LOCATION
- GEOCHEMICAL READING

To accompany Geochemical report on the WL 1 Jan claims, Orequest's Parrott Lake project
By D.R. Cochrane P.Eng. Dated May 22, 1970

D.R. COCHRANE
BRITISH COLUMBIA
PROFESSIONAL ENGINEER

OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE GEOCHEMISTRY

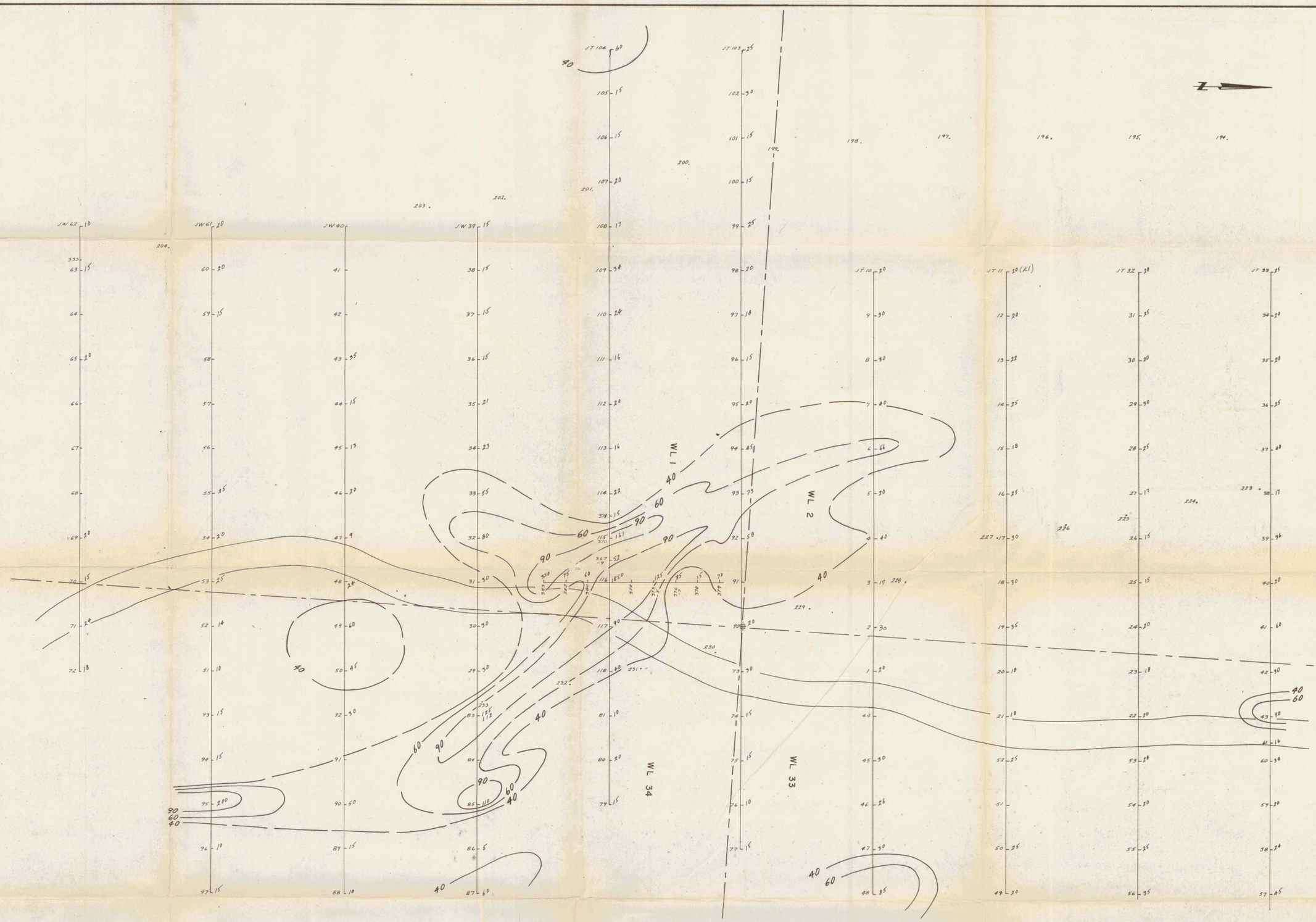
HOUSTON CLAIMS

DETAILED AREA

Molybdenum - Silver (ppm)

SCALE : 1" = 100 FT.
DATE : NOV. 24, 1969
FIGURE : II
DRAWN : R.K.

2427



LEGEND

- CLAIM POST
- 995 STATION LOCATION
- 21 GEOCHEMICAL READING

- 40 – 59 ppm
- 60 – 89 ppm
- > 90 ppm

TO ACCOMPANY THE GEOCHEMICAL REPORT ON THE WL & JAN CLAIMS,
OREQUEST'S PARROTT LAKE PROJECT
BY D.R. COCHRANE, P. ENG., DATED MAY 22, 1970.

PROFESSIONAL ENGINEER
D. R. COCHRANE
BRITISH COLUMBIA

OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE GEOCHEMISTRY

HOUSTON CLAIMS

DETAILED AREA

Copper (ppm)

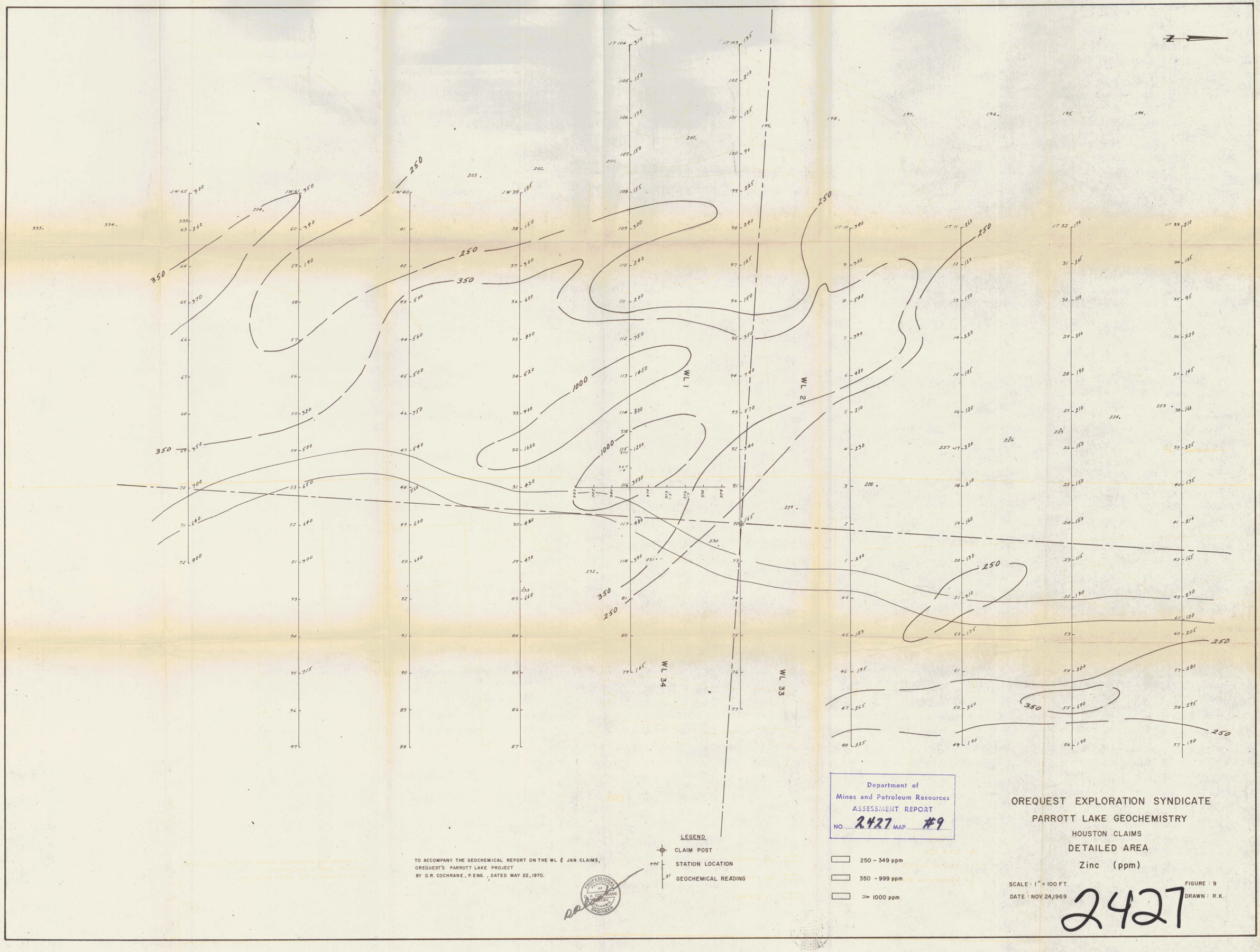
SCALE : 1" = 100 FT.

DATE : NOV. 24, 1969

FIGURE : 8

DRAWN : R.K.

2427



TO ACCOMPANY THE GEOCHEMICAL REPORT ON THE WL & JAN CLAIMS,
OREQUEST'S PARROTT LAKE PROJECT
BY D.R. COCHRANE, P.ENG., DATED MAY 22, 1970.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. R. COCHRANE

LEGEND

- CLAIM POST
- 995 STATION LOCATION
- 21 GEOCHEMICAL READING

250 - 349 ppm

350 - 999 ppm

> 1000 ppm

OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE GEOCHEMISTRY

HOUSTON CLAIMS

DETAILED AREA

Zinc (ppm)

SCALE : 1" = 100 FT.

DATE : NOV. 24, 1969

FIGURE : 9

DRAWN : R.K.

2427

2427
OREQUEST EXPLORATION SYNDICATE
PARROTT LAKE GEOCHEMISTRY
HOUSTON CLAIMS
Copper (ppm)
SCALE: 1" = 500 FT.
DATE: NOV. 24, 1969
FIGURE: 4
DRAWN: R.K.
LEGEND
CLAIM POST
STATION LOCATION
GEOCHEMICAL READING
SWAMP -
40-59 ppm
60-89 ppm
> 90ppm
TO ACCOMPANY THE GEOCHEMICAL REPORT ON WL & JAN CLAIMS,
OREQUEST'S PARROTT LAKE PROJECT.
BY D.R. COCHRANE, P. ENG. DATED MAY 22, 1970.
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2427 MAP #4
SEE DETAILED MAPS
NOTE SCALE CHANGE

2427

OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE GEOCHEMISTRY

HOUSTON CLAIMS

Zinc (ppm)

SCALE: 1" = 500 FT.

DATE: NOV. 24, 1969

FIGURE: 5

DRAWN: R.K.

LEGEND

- CLAIM POST
- STATION LOCATION
- GEOCHEMICAL READING
- SWAMP -
- 250 - 349 ppm
- 350 - 999 ppm
- > 1000

TO ACCOMPANY THE GEOCHEMICAL REPORT ON THE WL & JAN CLAIMS, OREQUEST'S PARROTT LAKE PROJECT. BY D.R. COCHRANE, P. ENG. DATED MAY 22, 1970

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA D.R. COCHRANE

TO ACCOMPANY THE GEOCHEMICAL REPORT ON WL & JAN CLAIMS,
OREQUEST'S PARROTT LAKE PROJECT.
BY D.R. COCHRANE, P. ENG. DATED MAY 22, 1970.

OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE GEOCHEMISTRY

HOUSTON CLAIMS

Molybdenum – Silver (ppm)

SCALE: 1" = 500 FT. FIGURE: 6

DATE: NOV. 24, 1969 DRAWN: R.K.

7000 W | 6000W | 5000W | 4000W | 3000W | 2000W | 1000W | 0 | 1000E | 2000E | 3000E | 4000E | 5000E | 6000E | 7000E | 8000E | 9000E | 13,000E | 14,000E

NOTE — SCALE CHANGE

2000 N | 1000N | 0 | 1000S | 2000S | 3000S | 4000S | 5000S | 6000S | 7000S | 8000S | 9000S | 10,000 S | 11,000S | 12,000S

WL 20 | WL 18 | WL 16 | WL 14 | WL 12 | WL 10 | JAN 1 | JAN 3 | JAN 5 | JAN 7 | JAN 9 | JAN 11

WL 19 | WL 17 | WL 15 | WL 13 | WL 11 | WL 9 | JAN 2 | JAN 4 | JAN 6 | JAN 8 | JAN 10 | JAN 12

WL 31 | WL 8 | WL 6 | WL 4 | WL 2 | WL 33 | WL 35 | WL 37 | WL 39 | WL 41 | WL 43 | WL 45

WL 32 | WL 7 | WL 5 | WL 3 | WL 1 | WL 34 | WL 36 | WL 38 | WL 40 | WL 42 | WL 44 | WL 46

WL 118 | JAN 26 | JAN 24 | JAN 22 | JAN 20 | WL 55 | WL 57 | WL 59 | WL 61

WL 117 | JAN 25 | JAN 23 | JAN 21 | JAN 19 | WL 56 | WL 58 | WL 60 | WL 62

WL 112 | JAN 34 | JAN 32 | JAN 30 | JAN 28 | WL 70 | WL 68 | WL 66 | WL 64

JAN 33 | JAN 31 | JAN 29 | JAN 27 | WL 69 | WL 67 | WL 65 | WL 63

WL 111

SEE DETAILED MAPS

SCALE

SCALE

SCALE

SCALE

2427

OREQUEST EXPLORATION SYNDICATE

PARROTT LAKE GEOCHEMISTRY

HOUSTON CLAIMS

SAMPLE LOCATIONS

SCALE: 1"= 500 FT. | FIGURE: 3

DATE: NOV. 24, 1969 | DRAWN: R.K.

LEGEND

- LOCATION LINES AND POST
- STATION LOCATION
- GEOCHEMICAL READING
- SWAMP -
- APPROXIMATE CLAIMS BOUNDARY

JAN 63 - CLAIM NAME

TO ACCOMPANY THE GEOCHEMICAL REPORT ON WL & JAN CLAIMS, OREQUEST'S PARROTT LAKE PROJECT. BY D.R. COCHRANE, P. ENG. DATED MAY 22, 1970.