

4518

Geological and Geochemical Survey

QYR, IRA, MEG and KEY Claims

Redfern Lake Area, B.C.

Liard Mining Division

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO.	4518
	N.P.

H. Salat
Calgary, Alberta
August 10, 1973

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INTRODUCTION

1. General

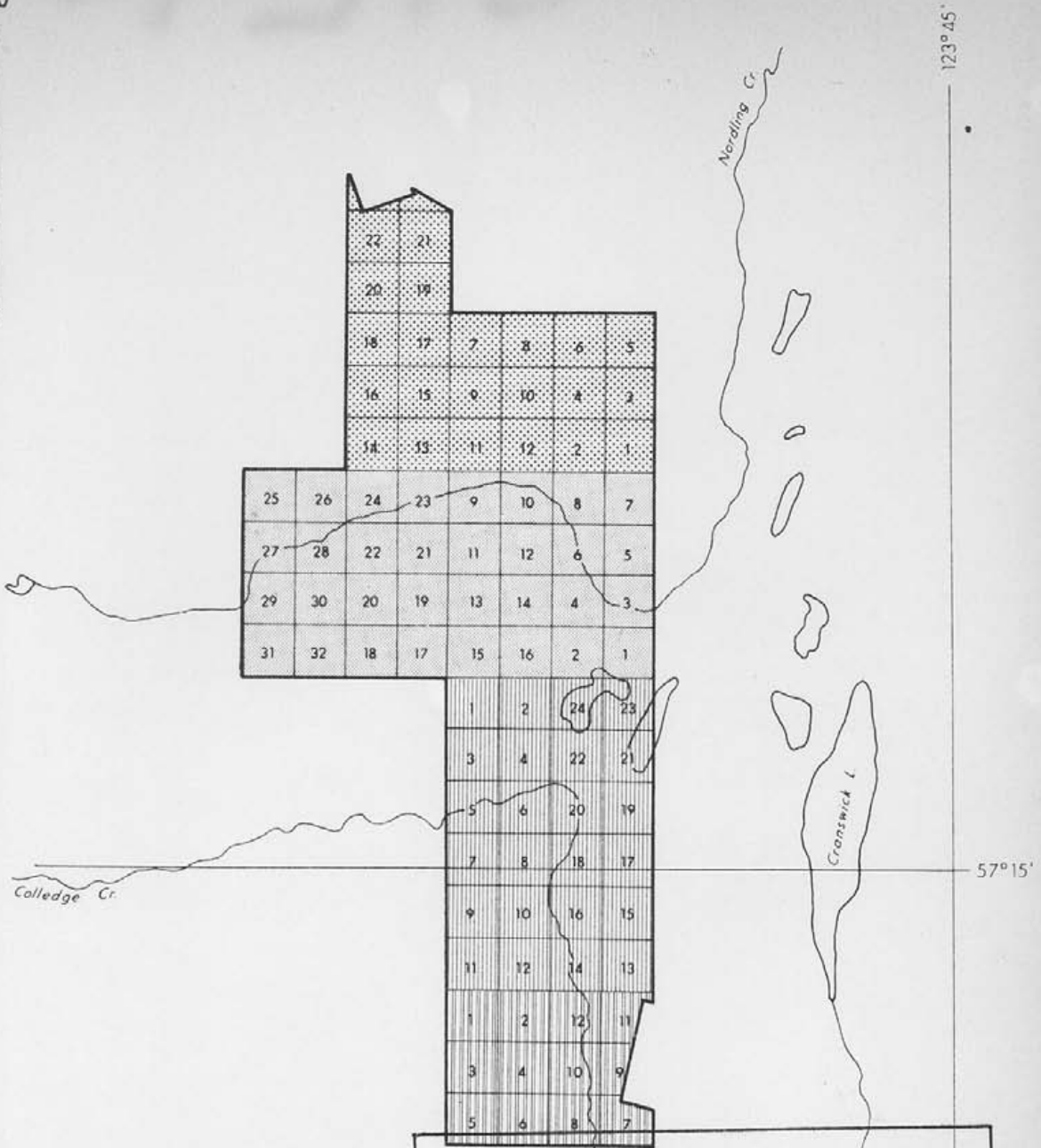
Aquitaine Company of Canada Ltd. and Vestor Explorations Ltd. (owner of the QYR, IRA, MEG, and KEY claims) of Edmonton, reached an agreement stating that the former could gain an interest in the said claims provided that sufficient exploratory work was performed. Therefore, after most of the snow had disappeared, a geological and geochemical program was carried out during the last two weeks of June and the beginning of July.

The QYR, IRA, MEG, and KEY claims are a continuous block of 92 claims situated approximately five miles southeast of Redfern Lake, B.C. They straddle Nordling Creek and Colledge Creek, and the centre of the claim group is approximately located at $57^{\circ} 16' N$ and $123^{\circ} 48' W$ (topographic maps 94 G/4W and 94 G/5W).

2. Geography

The topography consists of a rolling, alpine plateau bordering the bare ridges of the Rocky Mountain Front Ranges. It slopes downward regularly from 6000' to 5300' to the east and then abruptly drops off 500' into flat valleys, which occupy the south and southeast portions of the property, and are heavily forested.

While the plateau is the remnant of the scouring action by glaciers, the flat, broad valleys are covered by a continuous sheet of glacial drift. The lower valleys and slopes support some fine stands of lodgepole pine, white spruce and fir trees. In the



To accompany report:
 GEOLOGICAL AND GEOCHEMICAL SURVEY
 QYR, IRA, MEG & KEY CLAIMS
 Redfern Lake area BC. Lizard Mining Division
 August 10, 1973 - H. SALAT

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT

NO. 4518 MAP #1





-  QYR claims
-  IRA claims
-  MEG claims
-  KEY claims

FIG. 1



AQUITAINE
 COMPANY of CANADA Ltd.

LOCATION MAP
 QYR, IRA, MEG & KEY CLAIMS

DATE	July 1973	SCALE	1" = 900'
Prep. by		FILE	

flat zone, muskeg develops around ponds and lakes. On the plateau, stunted, wind-deformed, timber pines, Rhododendron, Kalmia, and Ledum shrubs are mainly encountered at lower elevations. At higher altitudes or between clusters of shrubs, moss, lichen, and grass thrive.

The area is not snow-free until mid-June. It remains free of snow until the end of September, although snow falls can be expected in early July or September. However, banks of packed snow remain along the steep slopes late in the summer.

3. Access

The property is situated approximately 45 miles directly west of Mile 162 on the Alaska Highway. There is no access route into the area apart from pack-horse trails and a winter road which follows the Sikanni Chief River then branches north and south along the valleys which mark the transition between the foothills and the Rocky Mountains.

Air is the only means of approach. A few lakes in the area such as Colledge Lake or Cranswick Lake can be used by float planes. However, to facilitate moving, travel, and working conditions, the helicopter is an essential tool of the prospector or geologist.

GEOLOGY

No previous work has ever been done in this area and the general geological map of the Trutch area (94G) by D. F. Stott

(Map 12-1963) does not differentiate the Paleozoic strata. Hardly any prospecting has been carried out, and the interest in the region was triggered by the discovery of a lead-zinc mineralization near Robb Lake, some 25 miles south.

Geological and exploratory work were still to be carried out within the property limits. Fortunately, over most of the claims, the high elevation of the terrain and the correlative light vegetation cover provided enough outcrops to map the area accurately.

The geology over the entire claim area is very monotonous and consists of two conformable formations. Apart from a long strip in the northeast corner, the claims are underlain by the Besa River Shale Formation which is a thick series of shales and harder calcareous shales. They are generally rich in carbon and some horizons contain numerous pyritic nodules. These shales are upper Devonian to Mississippian in age.

To the northeast, underneath the shales, a series of limestone appears and forms the buttresses of the high plateau region. A cross-section leading up from the low grounds (re: fig. 2) shows along the canyon wall:

- dark to medium grey, microcrystalline, fetid limestone, with some tiny brown spots (algae?); some thin layers are more recrystallized.
- grey to medium grey, lithographic limestone; very rare traces of brachiopodes.
- medium grey, fetid limestone, containing some blebs of bitumen; many stylolitic joints, contorted parting.

On the plateau, south of the preceding canyon, there are two round-topped ridges. Over the first, we have the same section as described above, while to the west, the second shows the continuation of the cross-section:

- mainly medium grey, recrystallized, micro-crystalline limestone loaded with amphipora, coenites, brachiopodes and pelicy pods...

This limestone has a slaty parting.

Structurally, the Dunedin and the Besa River Formations show normal continuity, dipping to the west. This slice of Dunedin Formation is part of the huge pile of limestone which makes up Mount Bertha to the east. The shales, due to their competent nature, display many tight disharmonious contorted folds.

To the west, a small portion of the claim area has Dunedin outcrops, part of the thrust plates related to the Front Ranges of the Rocky Mountains.

The Dunedin limestone in the area has very poor porosity, and the slaty parting suggests argillaceous composition. Consequently, it is hard to imagine the limestone as a good reservoir for mineralizing solutions.

GEOCHEMISTRY

Geochemical prospecting was carried out in two stages: stream sediment sampling to determine the more favourable areas, and then soil sampling over selected ground. To help in the

appraisal of the samples, a small field laboratory was installed and an analyst, using Bloom and Holman tests, was able to give an idea of the approximate content of metallic elements.

1. Stream sediments (re: fig. 2 and 3)

All creeks with flowing water were sampled and a silt fraction was taken from the active bed whenever possible. If no active silt was available, a sample from the bank or collapsed material was taken and reported as such. The pH of the water was also noted.

The property is crossed by two main creeks, Nordling Creek and Colledge Creek, which flow straight east from the mountain cirques, then curve, one north and the other south. A small creek, which we called QYR, meanders on the plateau then suddenly bends south and flows into Nordling Creek.

As far as results from assays are concerned, it appears that all the Colledge Creek samples are uniform and give an idea of the local geochemical background with 40 to 60 ppm zinc and 10 to 25 ppm copper. However, the stream system of Nordling Creek and its tributary, QYR, shows an abnormally high background in zinc and copper. Although these two elements are high but uniform along the main creek, QYR reveals particularly abnormal teneur in zinc between 150 and 250 ppm. Also, while pH in water is generally neutral (7), the QYR waters have a lower pH of 6 to 6.5. One sample reaches up to 1250 ppm, but as it is very local, it is probably caused by some erratic mineralized boulder. Such a high value is not ignored, but its meaning is very limited.

APPENDIX I

Geochemical

Assays

2. Soils

It appeared from the stream sediment sampling that the northern portion of the claim group showed the most interesting potential and soil sampling was undertaken. A grid with 100 metre spacing was set out on the ground using compasses, prism squares, and an enlarged air photomap (scale 1:6,000). The distance on the ground was measured by means of "topofil".

a) Type

Over most of the high plateau, good, thick soil has developed with some variations due to very local topographical influence and micro-climate. Generally, it ranges from a rendzina soil (A₁C type with a superficial moder humus) on the upper slopes, characterized by limestone rubble, to acid brown forest soils where stands of spruce and fir trees on shaly bedrock were encountered. However, the most typical soil covering most of the area consists of a pseudo-alpine acid regosolic soil with a thick, mor horizon evolving into an ochric, podzolic soil where a lumpy, argillic horizon (B) develops.

As already mentioned, topography induces variation, especially in flat depressions where podzolic stagnogley can be expected.

Using a grubhoe, samples of these soils were taken at the bottom of the A₁ horizon where there is some neogenetic clay in a moder humus type, or at the top of the B argillic (lumpy) horizon. The samples were poured into a wet-proof Kraft bag (8" x 4") and carefully identified.

b) Mineral distribution

In these unsaturated soils, a strong leaching of ionic elements is taking place and are more or less retained downward by the argillic horizon. However, the presence of a deep, evolved A₁ horizon should not make too great discrepancy in the results with regard to samples taken in the B horizon.

The contour maps (re: fig. 4 and 5) showing the distribution of zinc and copper in soils indicates a poor relationship between the two elements. Unfortunately, the limit of detection of lead by Atomic Absorption was too high due to the unavailability of a more modern instrument than the Jarrell-Ash used for assays.

The backgrounds for zinc and copper are around 75 ppm and 25 ppm respectively. Contour lines for zinc in soils indicate two anomalous zones in prolongation with each other, however, interrupted by a low zinc trough. These zones are localized north of Nordling Creek and extend in a southwest-northeast direction across the claim group. A few other anomalies are scattered throughout the area, but their values or space are not significant with the exception of one anomaly near the southern limit of the soil sample grid. This anomaly reads as high as 1200 ppm zinc and 160 ppm lead. Its cause has not been checked out but the presence of some transported mineralized boulder on the ground surface could be expected.

As for copper, besides erratic and localized high values, only two anomalous areas stand out. One is found just south of Nordling Creek and the other to the north of the creek.

The first could originate from a break in slope of the topography, and has a definite relationship with the stream sediment values (NOR/SS 40-47); the second is partly located above the drop-off on the edge of the plateau. Moreover, this last anomaly is correlative with the zinc anomalous area previously mentioned.

As a result, one zone stands out clearly that is worthy of further investigation. It is situated on the western corner of the claims where the IRA group joins the QYR group (re: fig. 1) and yet remains open to the west.

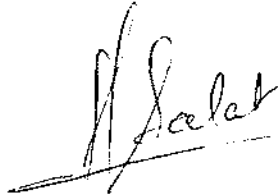
The small zinc anomalies on the southern border of the soil sample grid is not to be disregarded and will be investigated should any further work be planned for that property.

CONCLUSION

Geological and straight prospecting did not result in the discovery of any mineral occurrence on the property. In the light of the geology itself, this shows that most of the property is underlain by shales which at first glance do not constitute a very favourable environment. The limestone formation to the east (Dunedin Formation) does not hold any further encouraging characteristics as the formation is very tight, somewhat argillaceous, with fossils which indicate a back-reef facies.

However, geochemical results are more promising and although they do not mean much by themselves, they provide a good guide for additional work over the claim group. Therefore, it can be

recommended that a tighter-spaced grid for soil sampling be implemented over the anomalous area. This would be followed by trenching over the best zones as well as the restricted zinc anomaly in the south. At the same time, a new, close, geological examination on a very small scale could be undertaken.

A handwritten signature in cursive script, appearing to read "H. Salat", is written over a horizontal line.

REFERENCE

Pelletier, B.R. and - 1963 - Trutch Map Area (94G);
Stott, D.F. GSC Paper 63-10

DATE: August 2, 1973.

ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
NOR/SS/31	10	< 25	25
/32	< 10	< 25	20
/33	50	< 25	110
/34	12	< 25	40
/35	12	< 25	45
/37	20	25	90
/38	15	< 25	45
/39	12	< 25	30
/40	40	< 25	90
/40a	40	< 25	105
/41	55	< 25	110
/43	60	< 25	110
/44	50	< 25	90
/45	50	25	100
/46	55	25	115
/47	50	25	100
/48	40	< 25	100
/49	30	35	75
/50	50	35	110
/51	40	25	95
/52	40	25	100

continued...

DATE: August 2, 1973

ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
NOR/SS/53	35	50	100
/54	40	50	95
/55	30	35	80
/56	30	35	95
/56a	25	35	85
/57	30	35	105
/58	45	35	95
/59	40	35	90
/60	40	50	90
/61	45	35	100
/62	25	< 25	85
/63	30	< 25	95
/64	40	50	100
/65	40	50	110
/66	50	< 25	110
/67	35	50	90
/68	40	50	90
/69	35	50	90
/70	30	50	90
/71	30	50	80
/72	25	50	95

continued...

DATE: August 2, 1973

ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
NOR/SS/73	35	25	100
/74	30	<25	90
/80	40	<25	90
/81	25	<25	85

I hereby certify that the above results are those assays made by me upon the herein described samples.


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DATE: July 30, 1973 .

ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
COL/SS/31	14	25	40
/32	20	25	45
/33	15	25	60
/34	15	<25	65
/35	12	<25	50
/36	16	25	40
/36a	25	25	130
/37	18	25	70
/38	18	25	55
/39	22	25	60
/40	15	<25	60
/41	15	<25	65
/42	15	<25	50
/43	15	<25	50
/44	15	<25	70
/45	10	<25	45
/46	15	<25	70
/47	15	<25	55
/48	10	<25	45
/49	<10	<25	45
/50	10	<25	55

continued...

DATE: July 30, 1973

ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
COL/SS/51	15	< 25	60
/52	12	< 25	55
/53	< 10	< 25	55
/54	12	40	50
/55	15	25	40
/56	15	25	60
/57	15	25	45
/58	10	< 25	55
/59	10	< 25	65
/60	12	< 25	45
/61	12	< 25	50
/62	12	< 25	50
/63	12	< 25	40
/64	15	< 25	45
/65	12	< 25	40
/66	12	< 25	55
/67	12	< 25	60
/68	15	25	60
/69	12	25	45
/70	12	< 25	60
/71	12	< 25	45

continued...

DATE: July 30, 1973

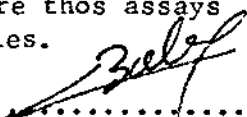
ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
COL/SS/72	12	< 25	60
/73	12	< 25	65
/74	30	< 25	70
/75	15	< 25	60
/76	10	25	60
/77	10	25	60
/78	10	25	55
/79	10	25	50
/80	12	<25	30
/81	12	<25	40
/82	15	<25	45
/83	12	<25	40
/85	15	<25	50
/86	10	<25	45
/87	12	<25	45
/88	15	<25	60
/89	15	<25	40
/90	10	<25	35
/91	12	<25	45
/93	12	<25	50
/94	10	<25	45

I hereby certify that the above results are those assays
made by me upon the herein described samples.

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DATE: August 7, 1973

ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
QYR/SS/01	70	< 25	200
/03	80	25	300
/04	85	25	260
/05	85	<25	280
/06	60	25	140
/07	80	<25	240
/08	70	<25	240
/09	60	<25	145
/10	45	<25	125
/11	45	<25	140
/12	50	<25	115
/13	40	<25	150
/14	35	<25	150
/15	50	<25	160
/16	40	25	140
/17	50	<25	175
/18	50	<25	155
/19	50	<25	165
/20	50	<25	175
/21	40	<25	160
/22	45	<25	150

continued...

DATE: August 7, 1973


ANALYST: M. Balous

SAMPLES: Geochem Stream Sediments

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
QYR/SS/23	45	< 25	160
/24	50	< 25	175
/25	45	< 25	145
/27	45	< 25	175
/29	25	< 25	150
/30	25	< 25	1230
/31	25	< 25	160
/32	20	< 25	170
/33	20	< 25	250
/34	20	< 25	170
/35	20	< 25	150
/36	35	< 25	180
/37	20	< 25	185

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: July 19, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN07/00 W	35	< 25	70
VN07/01 W	45	< 25	75
VN07/03 W	30	< 25	80
VN07/04 W	35	< 25	50
VN07/05 W	30	< 25	60
VN07/06 W	40	< 25	80
VN07/07 W	50	25	145
VN07/08 W	60	25	110
VN07/09 W	65	< 25	135
VN07/10 W	80	< 25	120
VN07/11 W	80	< 25	110
VN07/14 W	85	< 25	150
VN07/15 W	60	< 25	210
VN07/16 W	30	< 25	100
VN07/17 W	40	< 25	80
VN07/18 W	50	< 25	110

I hereby certify that the above results are those assays
made by me upon the herein described samples.



.....

DATE: July 19, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN08/00 W	18	<25	95
VN08/01 W	15	<25	90
VN08/02 W	30	<25	120
VN08/03 W	25	<25	90
VN08/04 W	20	<25	75
VN08/05 W	18	<25	60
VN08/06 W	55	<25	130
VN08/07 W	25	<25	140
VN08/08 W	50	<25	135
VN08/09 W	25	<25	90
VN08/10 W	55	<25	150
VN08/15 W	45	<25	130
VN08/16 W	50	<25	110
VN08/18 W	65	<25	90

I hereby certify that the above results are those assays
made by me upon the herein described samples.


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DATE: July 20, 1973

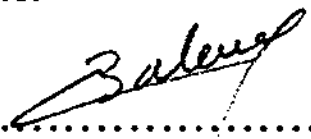
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN09/00 W	20	< 25	120
VN09/01 W	20	< 25	140
VN09/02 W	20	25	90
VN09/03 W	20	25	55
VN09/04 W	25	< 25	45
VN09/05 W	100	< 25	340
VN09/06 W	40	< 25	120
VN09/07 W	35	25	80
VN09/08 W	50	25	95
VN09/09 W	45	< 25	125
VN09/10 W	60	< 25	135
VN09/11 W	75	< 25	160

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 20, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN10/00 W	30	< 25	105
VN10/01 W	25	< 25	80
VN10/02 W	40	< 25	65
VN10/03 W	20	< 25	80
VN10/04 W	30	< 25	65
VN10/05 W	50	< 25	95
VN10/06 W	30	25	60
VN10/07 W	40	< 25	95
VN10/08 W	45	< 25	80
VN10/09 W	50	< 25	125
VN10/10 W	50	< 25	140
VN10/11 W	50	< 25	120

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 21, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN11/00 W	18	< 25	95
VN11/01 W	18	< 25	110
VN11/02 W	18	< 25	60
VN11/03 W	20	< 25	85
VN11/04 W	15	< 25	80
VN11/05 W	40	< 25	90
VN11/06 W	20	< 25	50
VN11/07 W	30	< 25	65
VN11/08 W	35	< 25	80
VN11/09 W	30	< 25	120
VN11/10 W	45	< 25	115

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 21, 1973

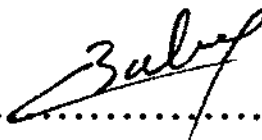
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN12/00 W	28	< 25	125
VN12/01 W	15	< 25	105
VN12/02 W	20	< 25	130
VN12/03 W	20	< 25	45
VN12/04 W	25	< 25	65
VN12/05 W	20	< 25	60
VN12/06 W	12	< 25	50
VN12/07 W	60	< 25	120
VN12/08 W	40	< 25	90
VN12/09 W	22	< 25	95
VN12/10 W	45	< 25	110

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 23, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN13/00 W	25	< 25	100
VN13/01 W	15	< 25	150
VN13/02 W	10	< 25	85
VN13/03 W	10	< 25	60
VN13/04 W	15	< 25	120
VN13/05 W	20	< 25	60
VN13/06 W	18	< 25	85
VN13/07 W	20	< 25	60
VN13/08 W	50	< 25	95
VN13/09 W	60	< 25	140

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: August 3, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN14/02 W	20	25	130
VN14/03 W	20	< 25	145
VN14/04 W	18	25	85
VN14/05 W	10	25	65
VN14/06 W	22	25	70
VN14/07 W	25	25	60
VN14/08 W	20	25	105
VN14/09 W	30	<25	120

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: August 3, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN15/02 W	22	< 25	190
VN15/03 W	25	25	140
VN15/04 W	15	< 25	120
VN15/05 W	20	25	105
VN15/06 W	22	< 25	115
VN15/07 W	25	25	90
VN15/08 W	62	< 25	100
VN15/09 W	30	25	110
VN16/04 W	20	25	90
VN16/05 W	20	< 25	85
VN16/06 W	20	< 25	75
VN16/07 W	40	< 25	100
VN16/08 W	60	< 25	55

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: July 23, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN17/01 W	18	< 25	90
VN17/02 W	25	< 25	65
VN17/03 W	40	< 25	165
VN17/04 W	20	< 25	145
VN17/05 W	30	< 25	95
VN17/06 W	25	< 25	80
VN17/08 W	18	< 25	50
VN17/09 W	20	< 25	65
VN17/10 W	25	< 25	65
VN17/11 W	20	< 25	80
VN17/12 W	25	< 25	70

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 24, 1973 .


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN18/01 W	60	< 25	215
VN18/02 W	30	< 25	245
VN18/03 W	15	< 25	95
VN18/04 W	30	< 25	120
VN18/05 W	30	< 25	85
VN18/06 W	22	< 25	100
VN18/08 W	30	< 25	70
VN18/09 W	30	< 25	65
VN18/10 W	30	< 25	90
VN18/11 W	35	< 25	100
VN18/12 W	30	< 25	85

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: August 6, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN19/03 W	25	25	175
VN19/04 W	35	40	155
VN19/05 W	30	25	175
VN19/06 W	25	25	85
VN19/07 W	32	25	145
VN19/08 W	75	25	90
VN19/09 W	50	25	130
VN19/10 W	35	25	150
VN19/11 W	40	25	160
VN19/12 W	38	25	170

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: August 7, 1973

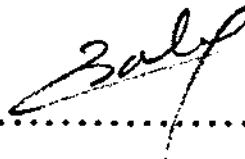
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN20/02 W	25	< 25	80
VN20/03 W	45	25	180
VN20/04 W	38	25	140
VN20/05 W	22	25	85
VN20/06 W	30	< 25	110
VN20/07 W	25	< 25	140
VN20/08 W	45	< 25	150
VN20/09 W	52	25	150
VN20/10 W	28	< 25	130
VN20/11 W	30	25	85
VN20/12 W	45	25	155

I hereby certify that the above results are those assays
made by me upon the herein described samples.


.....

DATE: August 7, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN21/00 W	25	25	135
VN21/01 W	35	< 25	100
VN21/02 W	30	< 25	120
VN21/03 W	28	< 25	170
VN21/04 W	45	< 25	110
VN21/05 W	22	25	65
VN21/06 W	32	< 25	160
VN21/07 W	25	25	100
VN21/08 W	45	< 25	160
VN21/09 W	22	< 25	105
VN21/10 W	30	< 25	105
VN21/11 W	32	< 25	155
VN21/12 W	45	< 25	140

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 24, 1973

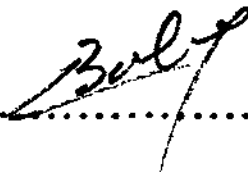
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN22/00 W	30	< 25	105
VN22/01 W	30	< 25	100
VN22/02 W	30	< 25	95
VN22/03 W	50	< 25	100
VN22/04 W	45	< 25	85
VN22/05 W	55	< 25	110
VN22/06 W	80	< 25	210
VN22/07 W	85	< 25	205
VN22/08 W	70	< 25	170
VN22/09 W	130	< 25	280
VN22/10 W	35	< 25	100
VN22/11 W	40	< 25	100
VN22/12 W	45	< 25	135

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: July 24, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN24/01 W	30	< 25	140
VN24/02 W	35	< 25	95
VN24/03 W	15	< 25	105
VN24/04 W	15	< 25	110
VN24/05 W	60	< 25	400
VN24/06 W	25	< 25	180
VN24/07 W	15	< 25	70
VN24/08 W	20	< 25	85
VN24/09 W	45	< 25	180
VN24/10 W	50	< 25	155
VN24/11 W	70	< 25	45
VN24/12 W	40	< 25	220

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: July 25, 1973

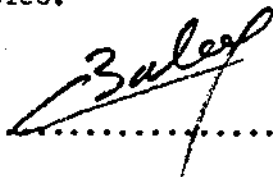
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN25/00 W	10	< 25	105
VN25/01 W	12	< 25	125
VN25/02 W	20	< 25	70
VN25/03 W	30	< 25	80
VN25/04 W	18	< 25	85
VN25/06 W	25	< 25	140
VN25/07 W	15	< 25	65
VN25/08 W	30	< 25	80
VN25/09 W	20	< 25	85
VN25/10 W	30	< 25	100
VN25/11 W	35	< 25	210
VN25/12 W	30	< 25	110
VN25/13 W	18	< 25	100
VN25/14 W	35	< 25	145

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: July 24, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN23/00 W	25	< 25	55
VN23/01 W	35	< 25	130
VN23/02 W	30	< 25	140
VN23/03 W	45	< 25	125
VN23/04 W	30	< 25	120
VN23/05 W	55	< 25	180
VN23/06 W	40	< 25	100
VN23/07 W	28	< 25	100
VN23/08 W	30	< 25	100
VN23/09 W	45	< 25	195

I hereby certify that the above results are those assays
made by me upon the herein described samples.

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Balous

DATE: July 25, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN26/00 W	22	<25	80
VN26/01 W	12	<25	70
VN26/02 W	10	<25	115
VN26/03 W	16	<25	70
VN26/04 W	20	<25	140
VN26/05 W	20	<25	95
VN26/06 W	25	<25	90
VN26/07 W	55	<25	85
VN26/08 W	18	<25	65
VN26/09 W	32	<25	80
VN26/11 W	55	<25	120
VN26/12 W	50	<25	120
VN26/13 W	55	<25	150
VN26/14 W	40	25	100

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 26, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN27/00 W	22	< 25	65
VN27/01 W	15	< 25	70
VN27/02 W	20	< 25	60
VN27/03 W	25	< 25	130
VN27/04 W	22	< 25	60
VN27/05 W	25	< 25	105
VN27/06 W	25	< 25	100
VN27/07 W	60	< 25	115
VN27/08 W	60	< 25	95
VN27/09 W	90	< 25	80
VN27/10 W	50	< 25	115
VN27/11 W	60	< 25	115

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 26, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN28/00 W	10	25	80
VN28/01 W	12	< 25	65
VN28/02 W	22	< 25	85
VN28/03 W	22	< 25	100
VN28/04 W	25	< 25	145
VN28/05 W	35	< 25	75
VN28/06 W	65	< 25	115
VN28/07 W	80	< 25	140
VN28/08 W	55	< 25	90
VN28/09 W	65	< 25	100
VN28/10 W	70	< 25	140
VN28/11 W	80	< 25	120
VN28/12 W	22	< 25	110
VN28/13 W	18	< 25	90
VN28/14 W	20	25	220
VN28/15 W	15	25	80
VN28/16 W	10	25	40

I hereby certify that the above results are those assays
made by me upon the herein described samples.


.....

DATE: August 6, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN29/00 W	12	< 25	75
VN29/01 W	72	25	75
VN29/02 W	18	< 25	80
VN29/03 W	15	< 25	60
VN29/04 W	42	25	75
VN29/05 W	45	< 25	75
VN29/06 W	35	< 25	75
VN29/07 W	15	25	55
VN29/08 W	45	25	70
VN29/09 W	35	25	60
VN29/10 W	50	25	95
VN29/11 W	75	25	110
VN29/12 W	20	25	130
VN29/13 W	12	50	95
VN29/14 W	16	40	60
VN29/15 W	12	40	55
VN29/16 W	20	25	65

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: August 7, 1973

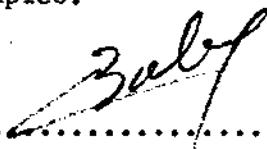
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN30/00 W	18	< 25	85
VN30/01 W	18	< 25	65
VN30/02 W	22	< 25	65
VN30/03 W	30	< 25	170
VN30/04 W	20	25	80
VN30/05 W	35	< 25	80
VN30/06 W	35	25	60
VN30/07 W	25	25	60
VN30/08 W	40	< 25	130
VN30/09 W	40	25	60
VN30/10 W	85	< 25	125
VN30/11 W	55	25	100
VN30/12 W	22	25	130
VN30/13 W	30	25	60
VN30/14 W	15	< 25	65
VN30/15 W	15	< 25	60
VN30/16 W	18	25	65

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: August 6, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN31/00 W	20	25	90
VN31/01 W	20	< 25	50
VN31/02 W	95	40	65
VN31/03 W	32	40	60
VN31/04 W	25	25	100
VN31/05 W	35	< 25	75
VN31/06 W	35	< 25	75
VN31/07 W	25	25	75
VN31/08 W	38	25	75
VN31/09 W	35	25	82
VN31/10 W	25	< 25	75
VN31/11 W	70	< 25	125
VN31/12 W	25	< 25	105
VN31/13 W	10	< 25	45
VN31/14 W	20	< 25	130
VN31/15 W	20	< 25	175
VN31/16 W	12	40	140

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: July 25, 1973

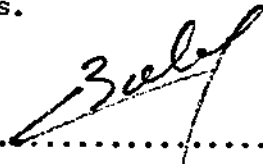
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN32/00 W	18	< 25	110
VN32/01 W	18	< 25	140
VN32/02 W	18	< 25	160
VN32/03 W	45	< 25	75
VN32/04 W	12	< 25	75
VN32/05 W	22	< 25	80
VN32/06 W	30	< 25	90
VN32/07 W	30	< 25	100
VN32/08 W	35	25	75
VN32/09 W	80	25	100
VN32/10 W	35	25	100
VN32/11 W	25	< 25	80
VN32/12 W	27	< 25	100
VN32/13 W	20	< 25	80
VN32/14 W	18	< 25	105
VN32/15 W	18	25	70

I hereby certify that the above results are those assays
made by me upon the herein described samples.

..... 

DATE: August 4, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN33/00 W	10	< 25	75
VN33/01 W	15	< 25	85
VN33/02 W	20	< 25	65
VN33/03 W	15	< 25	100
VN33/04 W	20	< 25	90
VN33/05 W	10	< 25	75
VN33/06 W	38	< 25	65
VN33/07 W	15	< 25	80
VN33/08 W	10	< 25	65
VN33/09 W	15	< 25	105
VN33/10 W	10	< 25	70
VN33/11 W	10	< 25	75
VN33/12 W	15	< 25	80
VN33/13 W	15	< 25	90
VN33/14 W	15	40	75
VN33/15 W	15	< 25	85
VN33/16 W	15	40	55

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: August 4, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN34/00 W	30	< 25	80
VN34/01 W	50	< 25	70
VN34/02 W	32	< 25	80
VN34/03 W	15	< 25	85
VN34/04 W	10	25	55
VN34/05 W	20	< 25	80
VN34/06 W	42	35	60
VN34/07 W	35	< 25	110
VN34/08 W	25	< 25	65
VN34/09 W	30	< 25	70
VN34/10 W	25	< 25	75
VN34/11 W	20	< 25	85
VN34/12 W	10	< 25	85
VN34/13 W	15	25	290
VN34/14 W	12	25	50
VN34/15 W	18	< 25	50
VN34/16 W	10	< 25	40

I hereby certify that the above results are those assays
made by me upon the herein described samples.

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.....

DATE: August 3, 1973.

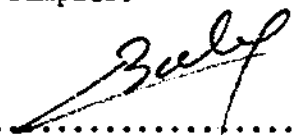
ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN35/00 W	32	< 25	90
VN35/01 W	28	< 25	100
VN35/02 W	28	25	145
VN35/03 W	15	< 25	100
VN35/04 W	10	25	80
VN35/05 W	15	25	170
VN35/06 W	80	< 25	75
VN35/07 W	35	< 25	85
VN35/08 W	23	35	70
VN35/09 W	15	25	110
VN35/10 W	15	< 25	105
VN35/11 W	< 10	< 25	85
VN35/12 W	< 10	25	60
VN35/13 W	42	160	1200
VN35/14 W	10	35	65
VN35/15 W	10	50	95
VN35/16 W	12	< 25	55
VN35/17 W	10	< 25	40

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: August 3, 1973


ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN36/00 W	15	< 25	60
VN36/01 W	15	< 25	60
VN36/02 W	20	< 25	65
VN36/03 W	18	< 25	80
VN36/04 W	38	< 25	80
VN36/05 W	30	25	40
VN36/06 W	18	25	65
VN36/07 W	28	< 25	60
VN36/08 W	15	25	65
VN36/09 W	10	25	75
VN36/10 W	10	< 25	65
VN36/11 W	30	< 25	200
VN36/12 W	38	25	55
VN36/13 W	<10	25	70
VN36/14 W	18	< 25	55
VN36/15 W	12	50	55
VN36/16 W	10	< 25	30
VN36/17 W	12	25	40

I hereby certify that the above results are those assays
made by me upon the herein described samples.

.....


DATE: August 4, 1973

ANALYST: M. Balous

SAMPLES: Geochem Soils

ASSAYS

<u>Sample Number</u>	<u>Cu (ppm)</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>
VN37/01 W	30	< 25	85
VN37/02 W	40	< 25	80
VN37/03 W	55	< 25	45
VN37/04 W	42	< 25	80
VN37/05 W	30	< 25	70
VN37/06 W	30	< 25	60
VN37/07 W	15	< 25	85
VN37/08 W	25	< 25	65
VN37/09 W	12	< 25	50
VN37/10 W	10	< 25	85
VN37/11 W	10	25	40
VN37/12 W	20	25	250
VN37/13 W	10	< 25	75
VN37/14 W	15	< 25	55
VN37/15 W	18	25	30
VN37/16 W	12	< 25	30
VN37/17 W	10	25	45

I hereby certify that the above results are those assays
made by me upon the herein described samples.


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APPENDIX II

ANALYST CERTIFICATE

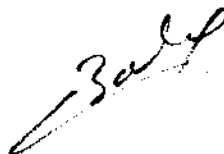
I, M. BALOUS, do hereby certify that:

- I am a chemist residing at 64.230 Poey do Lescar, France.
- I am the holder of a certificate of Industrial Training and have obtained a diploma from the National Conservatory of Engineering (Conservatoire National des Arts et Metiers), France.
- I have been employed with Société Nationale des Pétroles d'Aquitaine in Pau, France, since 1963. I work as a chemist in special charge of assays done by Atomic Absorption Spectrophotometry.
- I am temporarily working for Aquitaine Company of Canada Ltd., a subsidiary, and am doing their chemical analysis.
- The method I am using in assaying soils and stream sediments consists of:
 - 1) drying the samples at 110°C , grinding, sieving, and taking the fraction passing through the 50 mesh sieve.
 - 2) one gram of the sample is digested by 20 cc of 70% boiling nitric acid for a period of one hour, dried slowly, redigested by 10 cc of 70% hot nitric acid for 15 minutes, and then allowed to cool.
 - 3) The solution is poured into a 50 cc graduated flask with distilled water added to bring the solution up to the 50 cc mark. After agitating and decanting, the solution is ready for analysis.
 - 4) Measurements are made through the use of an atomic absorption spectrophotometer, JARRELL-ASH, with a single beam, and equipped with a digitalized read-out. The analysed solution is compared to standards containing the same elements to be analysed at various concentrations.

In the case of chip samples, the dosage is the same, only the preparation and digestion change.

- 1) Chip samples are sawed, crushed, and ground into a jaw-crusher.
- 2) One gram of the sample, which is placed in a teflon capsule, is digested in 10 cc of concentrated perchloric acid and 40 cc of 40% hydrofluoric acid, and then put on a hot plate at 80°C for a period of 12 hours, enough to dry the sample out.
- 3) According to the element to be analysed, the sample is then redissolved either in nitric or hydrochloric acid.

To carry out the work, I am using the facilities of CORE LABORATORIES CANADA LTD., 6101 - 6th Street S.E., Calgary, Alberta, using space and equipment rented by Aquitaine Company of Canada Ltd.



M. Balous

APPENDIX III

COST BREAKDOWN

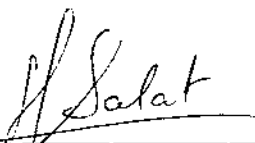
Air transportation	\$ 6,243.00
Labour -	
Field	2,900.00
Office and report	900.00
Expenditures -	
Chemical analysis	1,011.05
Food and lodging	636.59
Field supplies	239.74
Reproduction	232.80
Sub-total	<hr/> \$ 12,163.81
Administration and supervision at 10%	1,216.38
Audit fee	125.00
	<hr/>
	\$ 13,505.19

APPENDIX IV

CERTIFICATE

As provided under the "Mineral Act" Chapter 244, revised statutes of British Columbia, 1960, I, Hugues Salat, do hereby certify that:

1. I am a geologist residing at 4707 Charles Avenue, S.W., Calgary, Alberta.
2. I was a graduate of the National Superior School of Geology (Nancy, France) and of the Earth Sciences Faculty (the University of Nancy, France) in 1965.
3. I have attended and worked as a research assistant at the University of Southern California (Hancock Foundation) from 1965 to 1967.
4. I worked as an exploration oil geologist for Société Nationale des Pétroles d'Aquitaine (France) from 1968 to 1969 and have been with Aquitaine Company of Canada Ltd. since then.
5. I personally directed and supervised the geological and geochemical programs concerning the QYR, IRA, MEG, and KEY claims.
6. I am in the process of being registered with the Association of Professional Engineers of the Province of British Columbia.



H. Salat



LEGEND

- 65 040 Sample identification - Zinc in ppm.
- - - - - Claim group boundary
- Geological contour
- v Dip of beds
- Thrust fault
- Geological cross-section
- BSR Beso River shale formation (Upper Devonian - Mississippian)
- DN Dunedin formation (Middle Devonian)

Department of
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ASSESSMENT REPORT
NO. 4518 MAP #2

4518-ME

FIG. 2

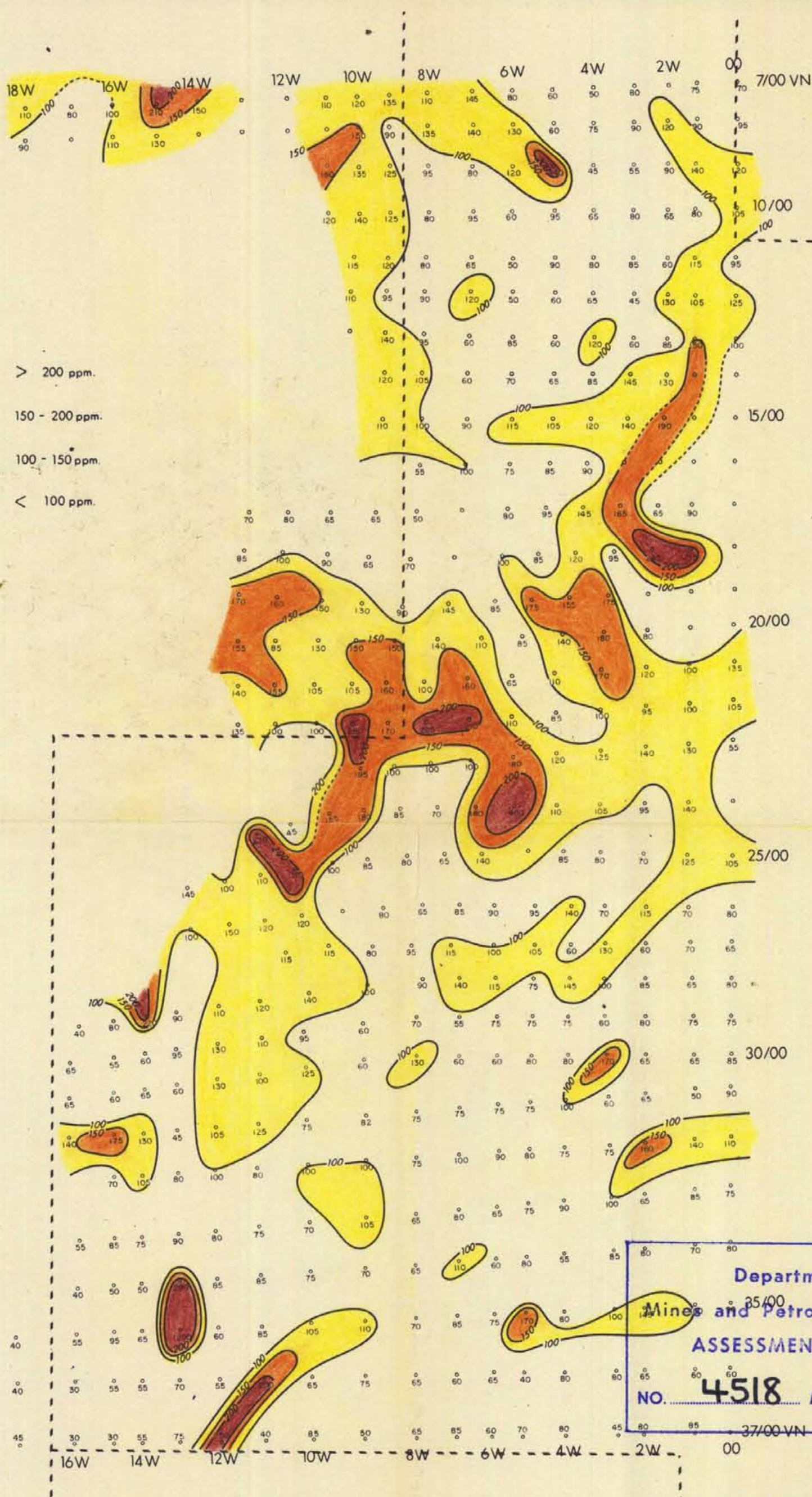
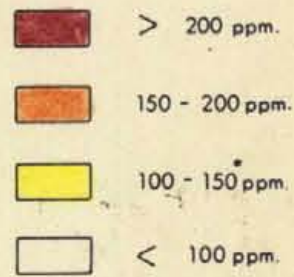
AQUITAINE COMPANY OF CANADA LTD.

**QYR, IRA, MEG & KEY CLAIMS
GEOCHEMICAL SURVEY**

ZINC in STREAM SEDIMENTS and SOIL SAMPLES GRID

To accompany report
GEOLOGICAL AND GEOCHEMICAL SURVEY
QYR, IRA, MEG & KEY CLAIMS
Radnor Lake area, IBC,
Laird Mining Division
August 10, 1973 H. SALAT

INTERPRETED BY: H. SALAT	CONTOUR INTERVAL:
DATE: JULY 1973	SCALE: 1:10000 app.
REVISED:	FILE NO.:



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **4518** MAP #4



To accompany report:
 GEOLOGICAL AND GEOCHEMICAL SURVEY
 QYR, IRA, MEG & KEY CLAIMS
 Redfern Lake area, BC. Lizard Mining Division
 August 10, 1973 - H. SALAT



AQUITAINE
 COMPANY OF CANADA Ltd.

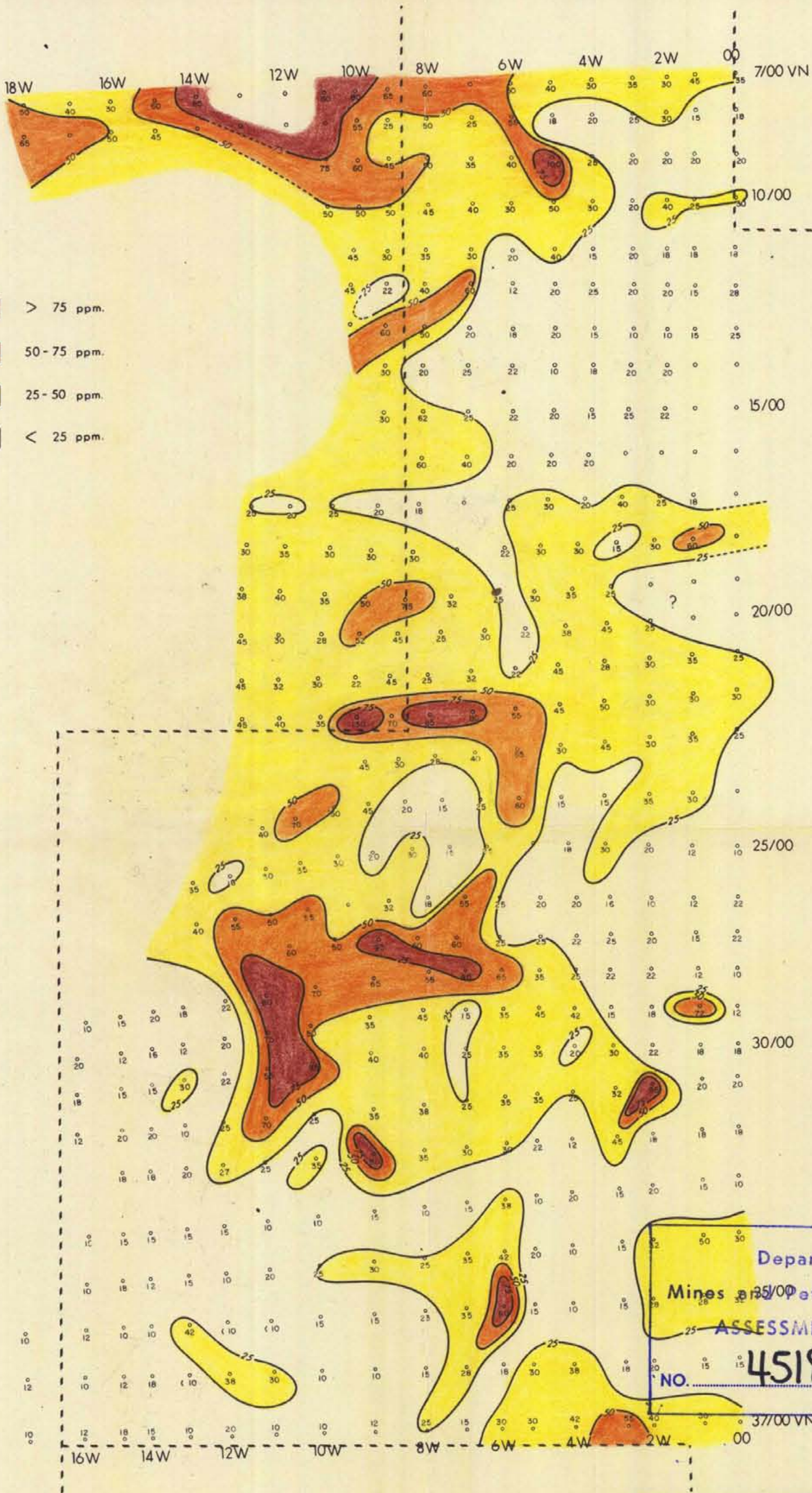
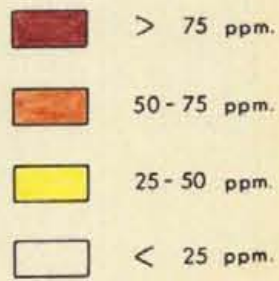
GEOCHEMICAL SURVEY
 VN SOIL SAMPLES
 ZINC

DATE	July 1973	SCALE	1 : 10 000 approx.
Prep. by	H. SALAT	FILE	

FIG. 4

4518-144

4518-110



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 4518 MAP #5



To accompany report:
 GEOLOGICAL AND GEOCHEMICAL SURVEY
 QYR, IRA, MEG & KEY CLAIMS
 Redfern Lake area, BC,
 Lizard Mining Division
 August 10, 1973 - H. Salat

AQUITAINE
COMPANY OF CANADA Ltd.

GEOCHEMICAL SURVEY
VN SOIL SAMPLES
COPPER

DATE	July 1973	SCALE	1 : 10 000 approx.
Prep. by	H. SALAT	FILE	

FIG. 5

4518-110