

5191

GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL REPORT  
ON THE A.A. 1-20 CLAIMS

92P/9W

NEHALLISTON CREEK AREA 92-P-9W  
KAMLOOPS MINING DIVISION  
LAT. 51°33'-34.5'N; LONG. 120°20'-23'W

BY

C.A. AIRD, P. ENG.

FOR

IMPERIAL OIL LIMITED  
ON WORK DONE BETWEEN  
AUGUST 1, 1974 and SEPTEMBER 30, 1974

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5191 MAP.....

OCTOBER 11, 1974

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Geological, Geophysical and Geochemical Report  
on the AA 1-20 Claims

Introduction:

In 1973, I.O.L. prospectors investigated a number of old workings on narrow quartz-galena-tetrahedrite veins on the FL group of claims, near the south east boundary. Adjacent to the FL group they found a number of small quartz veins, a disseminated copper showing and some mineralized float.

The quartz veins are believed to lie on strike with the mineralized veins on the FL group. They outcrop to the northwest on the AA claims 21-28 and are not considered to be of economic significance. Consequently, no work was done on the AA 21-28 claims.

The disseminated copper showing outcrops on the AA 9 and 10 claims, and in 1974 a geochemical soil survey, a magnetometer survey and geologic mapping were done in an attempt to evaluate the potential of the AA 1-20 claims.

Summary:

The AA 1-20 claims are situated 16 miles northwest of Little Fort, B.C. in an area of rolling wooded terrain at 4,300 to 5,100 feet above sea level. Numerous lakes occur in the hollows and outcrop is scarce except on hill tops.

The property is accessible via Highway 24 to a logging road 12 miles west of Little Fort, then 10.5 miles north and 2 miles east along the Rock Island Lake road to the south boundary of the claims.

Regional geology consists of block faulted, Permian, Cache Creek Group limestone and argillite, overlain by and in fault contact with Upper Triassic Nicola Group rocks. These are augite andesite flows and breccias, tuff, argillite, greywacke and limestone.

To the northeast and also in fault contact lie Lower to Middle Jurassic porphyritic augite breccias, conglomerate, volcanic arenites tuff and argillite. The Nicola rocks are intruded by leucogranitic to leucosyenitic rocks.

On the AA claims, augite andesite-dacite porphyry and hornblende andesite-dacite breccias and tuffs enclose a steep to vertically dipping sequence of volcanic siltstones, greywacke, conglomerate and argillite. These rocks strike northwesterly toward the Friendly Lake area, where similar rocks occur on the north east side of a major fault (?) zone. A magnetic survey shows definite northwest and northeast linear trends similar to ground lineament patterns and possible fault zones.

Pyrrhotite and pyrite in sedimentary rocks combined with anomalous geochemical values in Cu, Mo, Zn and Ag suggest some mineralization occurs at 380N, 702-706E.

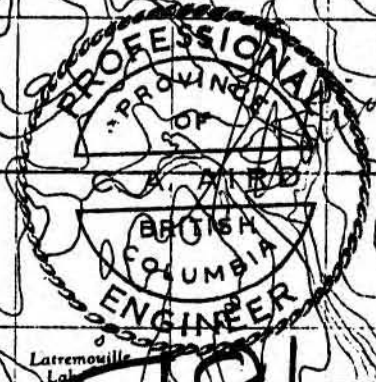
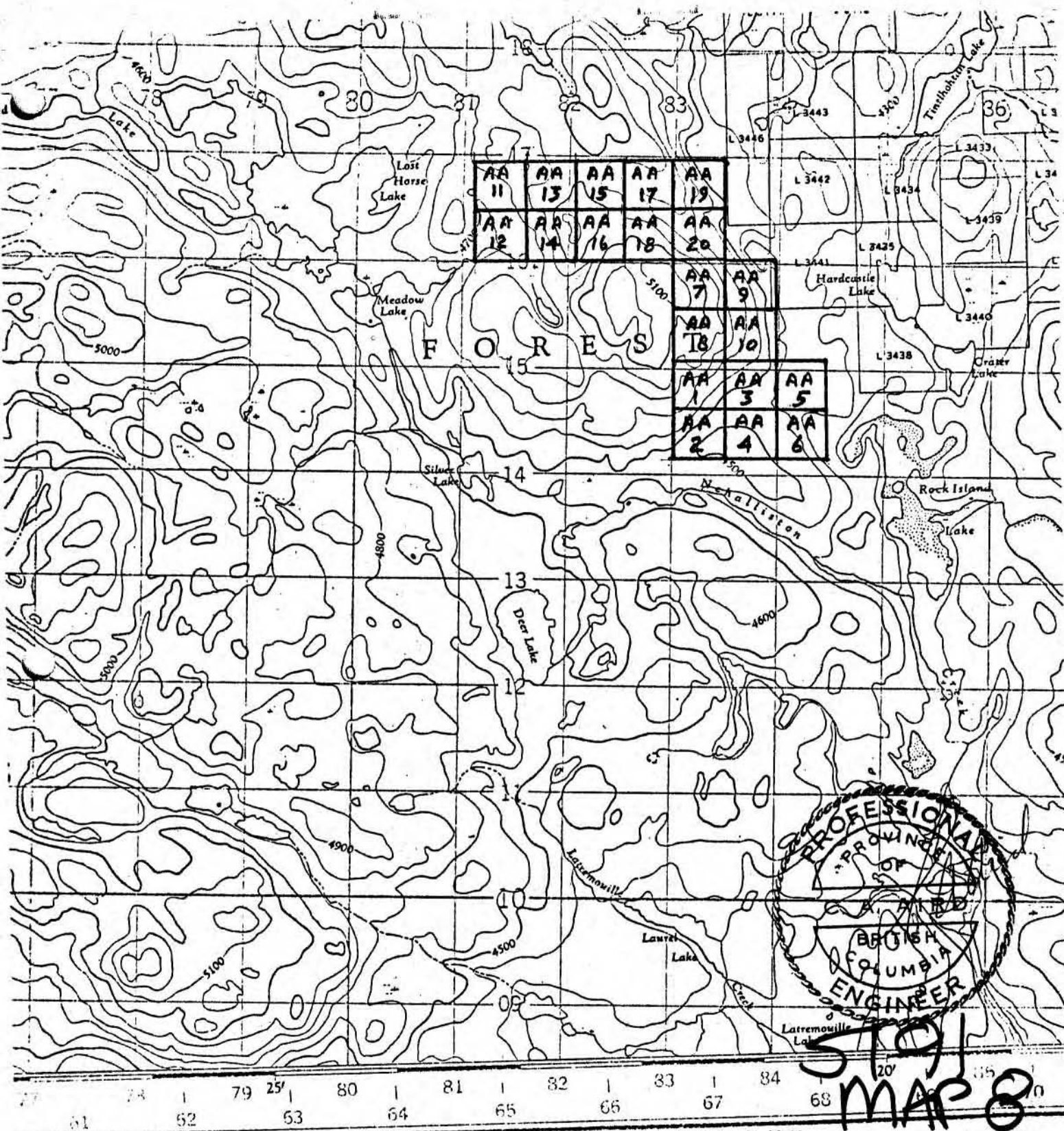
Disseminated chalcopyrite and pyrite is found associated with quartz, carbonate and epidote in fractured andesite-diorite tuff at 356N, 753E. A copper soils anomaly 1,000 feet wide and 1,500 feet long in a north-south direction suggests that the mineralization extends beyond the mapped outcrops.

The lack of Mo, Pb, and Ag geochemical correlation may indicate that the copper and zinc are of the volcanogenic rather than the epigenetic type of mineralization.

#### Conclusions and Recommendations:

The most significant area of interest on the AA 1-20 claims is the disseminated copper showing at 356N, 753E. A copper soils anomaly 1,000 feet wide and 1,500 feet long in a north south direction suggests that the mineralization extends beyond the mapped outcrops. More detailed work is necessary to define the zone properly. Line 372N and Line 380N should be extended eastward to cover the northerly trend of the geochemical anomaly. Detailed prospecting and mapping of the area between 348N and 380N; 745E and 760E is recommended.





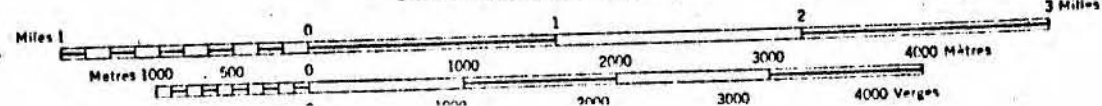
**STOLEN MAP**

To accompany a report by C.A. Aird P.Eng. dated October 11, 1974

**CLEARWATER**  
 KAMLOOPS DISTRICT  
 BRITISH COLUMBIA

**INDEX MAP**  
 THE AA CLAIM GROUP  
 NEHALLISTON CREEK AREA  
 KAMLOOPS M.D.

Recorded Oct. 15, 1973



Location and Access:

The AA claims are located 16 miles northwest of Little Fort, B.C. between Lat.  $51^{\circ}33'N$  and Lat.  $51^{\circ}34.5'N$  and between Long.  $120^{\circ}20'W$  and Long.  $120^{\circ}23'W$ . Elevations range from 4,300 to 5,100 feet above sea level. Topography is rolling and well-treed with numerous lakes in the hollows. Outcrop is scarce except on hill tops.

Access is via Highway 24, west from Little Fort for 12 miles, then north along a logging road for about 8 miles and continuing along a dirt road for two and a half miles to the Rock Island Lake road. Turning right and travelling this road for roughly two miles brings one to the south boundary of the AA claims.

Property:

The AA 1-20 claims were located on behalf of Imperial Oil Limited and recorded on October 15, 1973.

History:

Early references to work in the general area are very vague as to location and undoubtedly some of the work was never recorded. The workings on the FL claims, referred to in the Introduction, are not mentioned in the literature, yet probably date back to the 1930's. In 1966, Anaconda American Brass Limited held 131 TC claims which covered the area to the north west of the AA 1-20 claims. They carried out geologic mapping, geochemical soils and stream sediment sampling, I.P. and magnetometer surveys, as well as bulldozer trenching and road building. These claims were later abandoned.

The United Copper Corporation Limited still hold a group of claims to the south and west of the AA 1-20 claims. In 1966 they did geochemical soil sampling, a magnetometer survey, geologic mapping and trenching on some old showings, including the old Lakeview gold-skarn property at Deer Lake and (?) an old lead, zinc, silver property near Silver Lake.

The disseminated copper showing on the AA claims is believed to be a new find.

### Procedure:

East-west lines were blazed and flagged with stations marked at 200 foot intervals. The lines are 800 feet apart and are controlled by tie lines at several intervals. The lines are an extension of the grid on the FL group to the west. Fourteen miles of line were run.

For the magnetometer survey, a McPhar model M700 fluxgate, vertical field magnetometer was used. Maximum sensitivity of this instrument is 20 gammas per scale division and maximum readability is 5 gammas. A base station was put in at each end of the property and sub-base stations along a tie line between the base stations. Each east-west traverse closed on a sub-base station and closure was made on one of the base stations at the start and finish of each day. Diurnal corrections were applied to adjust the readings to the fixed value of the base stations and a similar correction applied to the readings taken, according to the time of day.

Geochemical soil samples were taken every 200 feet from the B horizon at a depth of 6-9 inches. Samples were collected with a stainless steel trowel and placed in numbered kraft paper bags. They were then shipped to the I.O.L. laboratory in Calgary and analyzed for Cu, Mo, Pb, Zn, and Ag. A statement of the analytical procedure is given in the Appendix.

Results were statistically treated (2); the mean and threshold values established and plotted on colour-coded metal maps.

Geologic mapping was done on aerial photos at a scale of 1 inch to 1,000 feet by geologist P. Neilans and the author. Grid lines provided additional control.

### Regional Geology:

The region is bounded on the south by the Thuya batholith (circa 200 m.y.) and on the north east by the Raft batholith (circa 105-140 m.y.). Between lies a heavily block faulted area containing rocks from Permian to Middle Jurassic in age (1). Folding is regarded as unlikely and fracturing is believed to have occurred in Cretaceous time and again in pre late Miocene time.



The oldest rocks in the south west part of the area consist of Permian limestone and argillite of the Cache Creek Group. These are in fault contact with augite andesite flows and breccias, tuff, argillite, greywacke and limestone of the Nicola Group. To the north east and again in fault contact are Lower to Middle Jurassic porphyritic augite andesite breccias, conglomerate, volcanic arenites, tuff and argillite.

Several stocks of leucogranite to leucosyenite porphyry intrude the Nicola Group near Friendly Lake. Associated breccias, stockworks and fracture zones contain pyrite, chalcopyrite, galena and tetrahedrite (?) associated with quartz, pyroxene, orthoclase veining and chalcedony, carbonate, glaucophane, pyrite fracture fillings.

Elsewhere, numerous mineral occurrences are found, especially near the Thuya batholith, and to the east lies a molybdenum porphyry prospect known as the Anti Climax.

#### Property Geology:

The AA 1-20 claims are underlain in the south west and north east by augite andesite to dacite breccias and tuffs. These vary from striking, coarse (4-6 inch), sub-angular to rounded, augite porphyry clasts in a matrix of hornblende andesite or dacite to fine breccias and tuffs of both compositions. They are believed to strike north westerly and contain in the central part of the AA claims, a belt of northwest striking, steep to vertically dipping sediments; siltstone, greywacke, conglomerate and argillite. These rocks are similar to Preto's unit 6a (3) which outcrop north east of the Friendly Lake stock along a north westerly fault zone.

Mineralization occurs in two forms. One, at 380N, 702-706E, consists of pyrrhotite and pyrite disseminations along bedding planes and fractures in sediments, notably grey siltstone, adjacent to but not apparently related to, dykes of quartz feldspar porphyry and pale green felsite. The other, at 356N, 753E, is seen as disseminated chalcopyrite and minor pyrite in fractures and seams in andesite tuff associated with quartz, carbonate and epidote.

Geophysics:

Magnetic relief is mild, less than two thousand gammas but distinct patterns are evident. A lineament of regional significance trends south east from the north west corner of AA claim No. 11. This is believed to be a fault block boundary, perhaps between rocks of the Nicola Group and Jurassic rocks. A north easterly trend through AA claims No. 16, 17 and 18 parallels a strong lineament and probably represents another fault.

The disseminated copper zone on AA 9 & 10 forms part of a broad, low amplitude high which trends north to northwest and is cut off by the north east linear. Within the broad high are peaks of higher amplitude which unfortunately have no geochemical association.

Geochemistry:

Two hundred and seventy eight soil samples were collected and the results statistically sorted. Distribution of the values is close to log normal and the significant levels as determined by cumulative frequency log probability plots are as follows:

	<u>Geometric Mean</u>	<u>Anomalous Threshold</u>
Cu	44 p.p.m.	105 p.p.m.
Mo	2 p.p.m.	5 p.p.m.
Pb	17 p.p.m.	39 p.p.m.
Zn	137 p.p.m.	280 p.p.m.
Ag	0.7 p.p.m.	2.6 p.p.m.

A copper anomaly roughly 1,000 feet wide and 1,500 feet long in a north south direction overlies the disseminated copper showing. The high is 1,250 p.p.m. but the average is closer to 450 p.p.m.

Zinc is the only element that correlates at all with the copper anomaly and only in a few samples at the south end of the anomaly.

Elsewhere, molybdenum, lead, zinc and silver correlate with copper in a few scattered highs. At 380N 702-6E, copper, molybdenum, zinc and silver appear to indicate mineralization in sediments containing pyrrhotite and pyrite.

The broad low molybdenum anomaly in the north west part of the claim group may be associated with argillaceous sediments or a major fault zone.



C.A. Aird



CAA:lw



REFERENCES

1. Campbell, R.B. and Tipper, H.W. Geology of the Bonaparte Lake Map Area, B.C. G.S.C. Memoir 363, 1971. pp. 77-79, 82-86.
2. Lepeltier, C. A Simplified Statistical Treatment of Geochemical Data by Graphical Representation. Economic Geology, Vol. 64, 1969. pp. 538-550.
3. Preto, V.A.G. Geology, Exploration and Mining in B.C. B.C.D.M. 1970. pp. 307-312.
4. Waterland, T.M. M.M.A.R. for B.C. 1966. pp. 143-144.

APPENDIX

Procedure for Analysis of  
Soil and Silt Samples

C. J. Collyer  
November 1/72

1. Hang the bagged sample in the drying oven at 50°C over night or longer if necessary.
2. Sieve the sample to -80 mesh and retain this sieved portion in a plastic vial bearing the sample number.
3. Prepare a cross reference sheet to identify the samples during analysis.
4. Weigh  $0.50 \pm 0.01$  gm of the sieved sample and transfer to a Coors crucible, cover and place in its designated location on a stainless steel tray.
5. Place tray of samples in the muffle oven and ash at 500°C for 45 minutes (Approximately  $1\frac{1}{2}$  hours is required to reach 500°C.)
6. Remove samples from the muffle oven after it is cooled down and transfer to test tubes for digestion.
7. (A) All Elements Except Molybdenum
  - I. Add 5.0 ml of  $\text{HNO}_3$  and stir.
  - II. Transfer to heating blocks and digest for  $1\frac{1}{2}$  hours at 100°C.
  - III. Transfer to plastic racks; cool and dilute with 10 ml of deionized water.(B) Molybdenum Plus Other Elements Requested at Same Time
  - I. Add 1.5 ml  $\text{HNO}_3$  and stir.
  - II. Transfer to heating blocks and digest for  $\frac{1}{2}$  hours at 100°C.
  - III. Add 0.5 ml  $\text{HCl}$  and leave in heating blocks for an additional 2 hours.
  - IV. Transfer to plastic racks, cool and dilute with 7.8 ml of 1500 ppm  $\text{Na}_2\text{SO}_4$  in deionized water.
8. Leave samples sit over night, stir and analyze on the atomic absorption spectrophotometer for the elements requested after they are settled and the liquid clear.
9. Set scale expansion on the instrument at 1 ppm standard equal 34 on 7 A digestion and 1 ppm equal 20 on the 7B digestion.

COST STATEMENT

AA CLAIM GROUP

PERIOD - AUGUST 1 TO SEPTEMBER 30, 1974

SUMMARY:

Salaries and Wages	\$2,325.00
Camp Costs	613.71
Technical Expenses	3.15
Services	24.70
Transportation	703.11
Analyses	1,046.25
Other	<u>500.00</u>
<b>TOTAL</b>	<b>\$5,215.92</b>

Declared before me at the  
of \_\_\_\_\_, in the  
Province of British Columbia, **VANCOUVER**, B. C.  
day of \_\_\_\_\_, A.D.

**OCT 15 1974**  
*[Signature]*  
**Sub-Mining Recorder**

*[Signature]*

A Commissioner for taking Affidavits within British Columbia or  
A Notary Public in and for the Province of British Columbia.

COST STATEMENT - DETAILS

Salaries and Wages

	<u>Cost/day</u>	<u>Amount</u>
C.A. Aird - Supervisor; P.Eng. September 1-30: 5 days	\$76.00	\$380.00
W.J. Hill - Senior Geologist August 1-15: 5 days	54.00	270.00
Brian Hughes - Geologist August 1-14: 14 days September 23-30: 8 days	32.00 32.00	448.00 256.00
Peter J. Neilans - Geologist September 16-30: 15 days	35.00	525.00
Eugene Peters - Assistant August 1-14: 14 days	26.00	364.00
T.S. Samoil - Technician September 28-30: 2 days	41.00	<u>82.00</u>
	TOTAL:	2,325.00

Camp Costs

Food	\$302.43
Lodging, Meals, Supplies	<u>311.28</u>
	TOTAL: 613.71

Technical Expenses

Engineering Supplies	3.15
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Services

Freight	10.00
Map Reproduction	<u>14.70</u>
	TOTAL: 24.70

Transportation

Vehicles (4-wheel drive truck)	\$403.11
Gas, Oil, Repairs	<u>300.00</u>
TOTAL:	703.11

Analyses

"In house" Services - 1395 Geochemical Element analyses @ \$.75	TOTAL: 1,046.25
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Other Costs

Compilation of Final Maps & Report	
Salaries: P. Neilans - 2 days @ \$35.00	70.00
C. Aird - 5 days @ \$76.00	380.00
Stenographic - 1 day @ \$50.00	<u>50.00</u>
TOTAL:	500.00

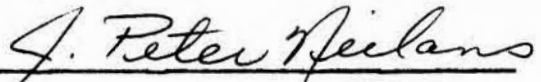


STATEMENT OF QUALIFICATIONS

I, J. Peter Neilans, of Vancouver, British Columbia, hereby certify the following qualifications:

(a) I obtained a B.A.Sc. degree in Geological Engineering (1973) from the University of British Columbia, Vancouver, B.C.

(b) I have been practising my profession as a geological engineer in Canada for the last year.

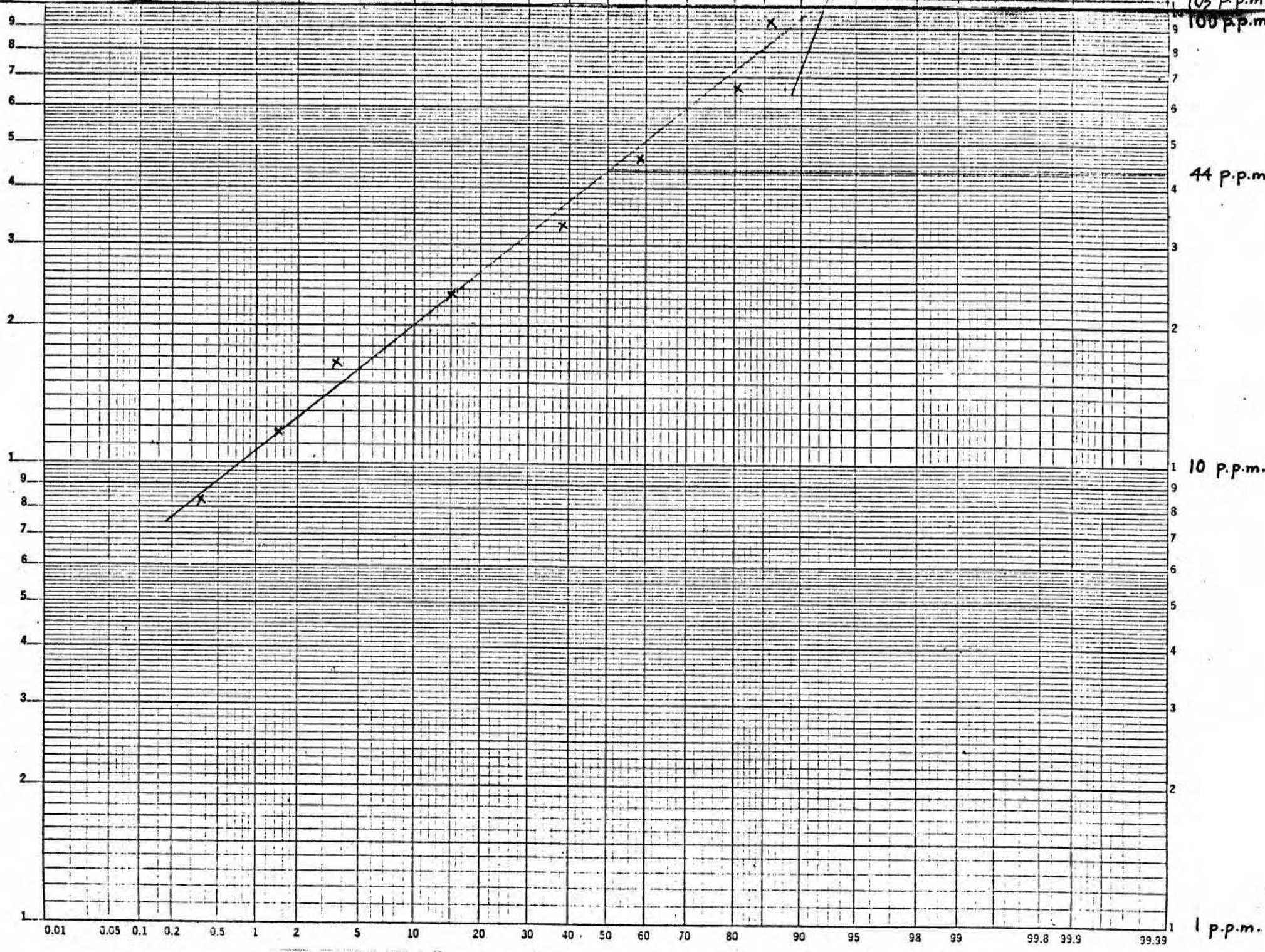
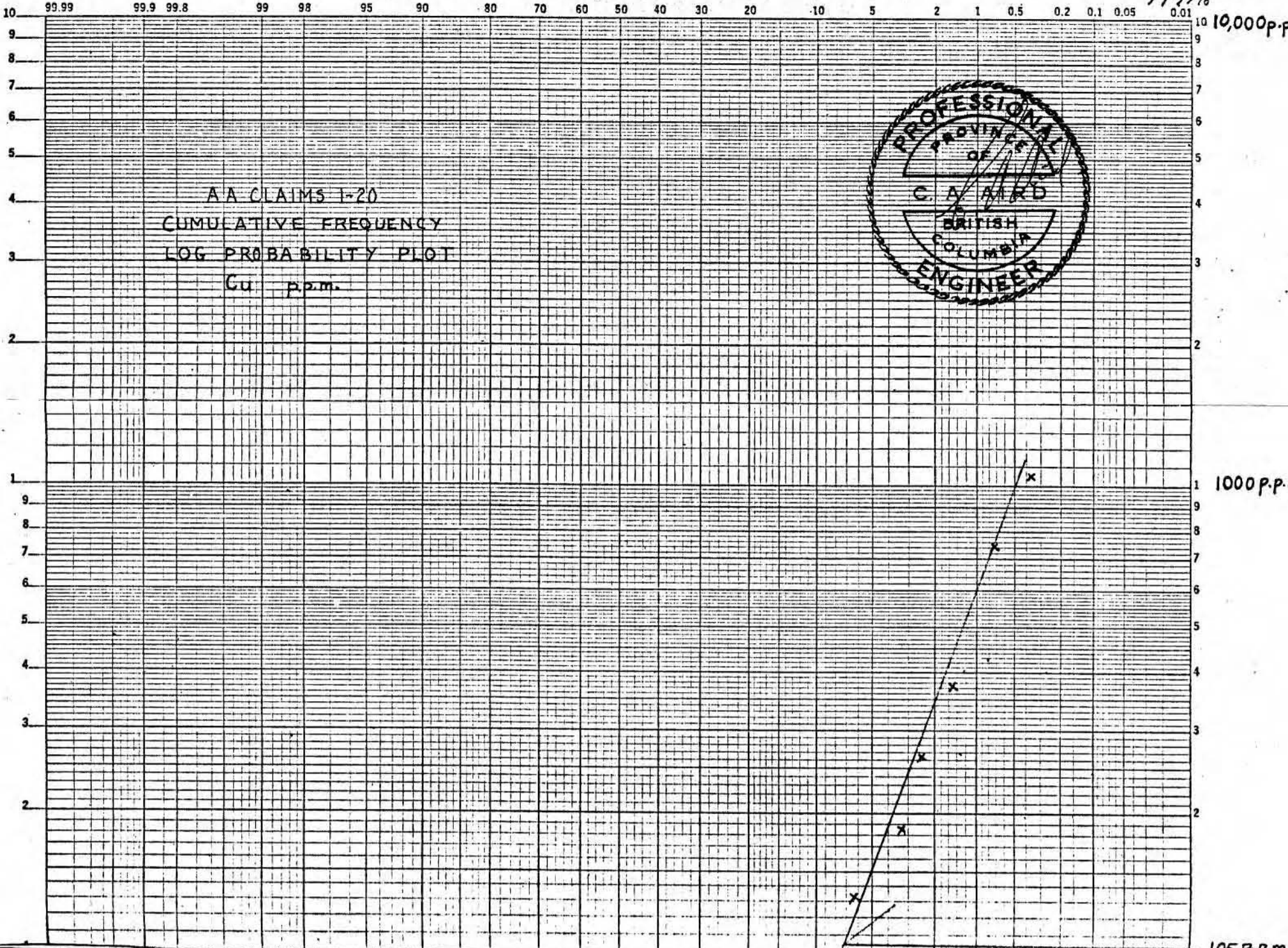


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J. Peter Neilans

0.01%

99.99%

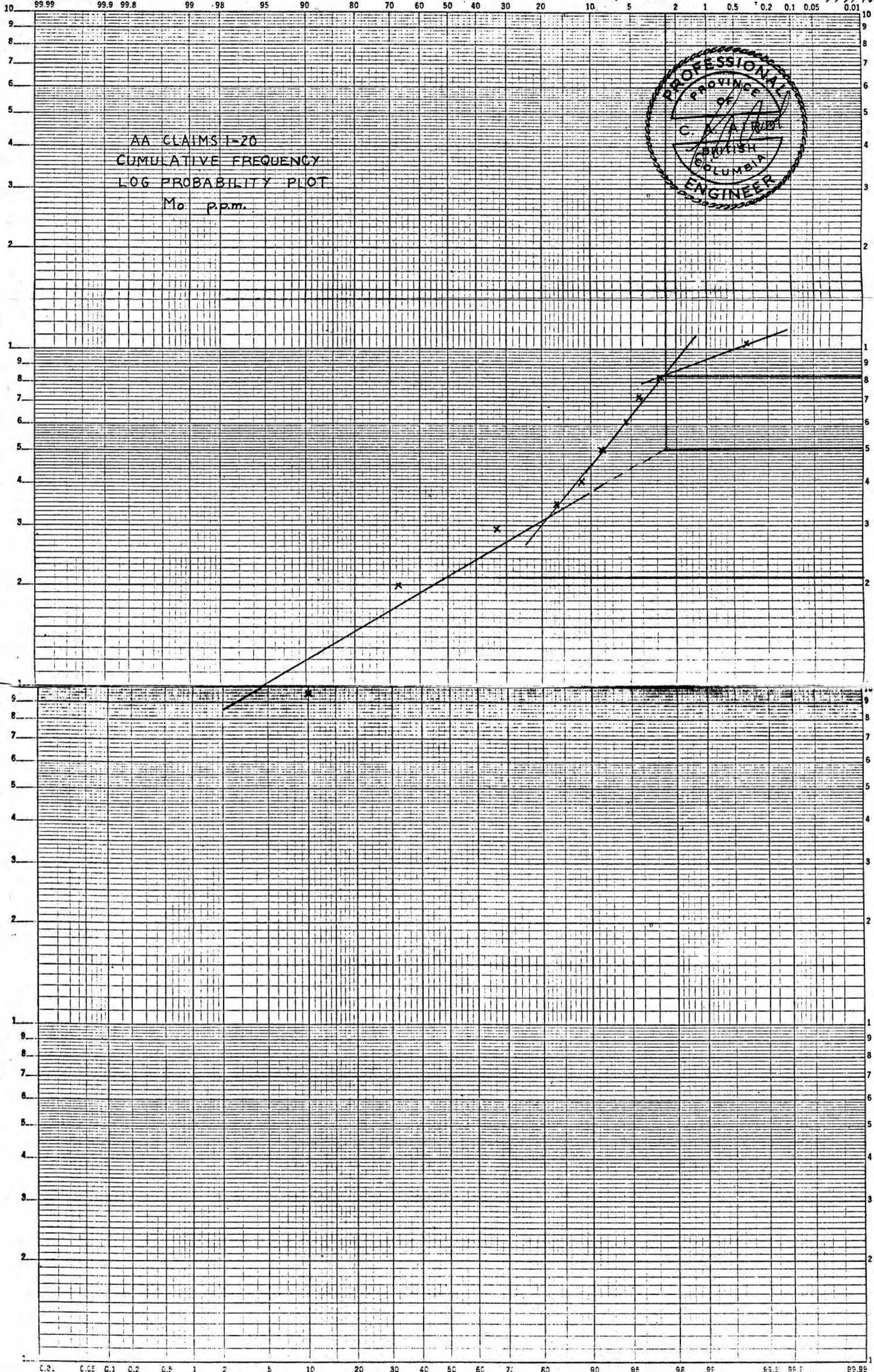


10,000 p.p.m.  
 1000 p.p.m.  
 105 p.p.m.  
 100 p.p.m.  
 44 p.p.m.  
 10 p.p.m.  
 1 p.p.m.

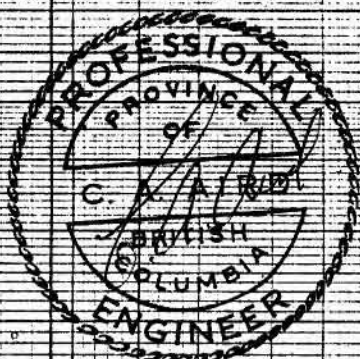


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99.99%



AA CLAIMS 1-20  
CUMULATIVE FREQUENCY  
LOG PROBABILITY PLOT  
Mo p.p.m.



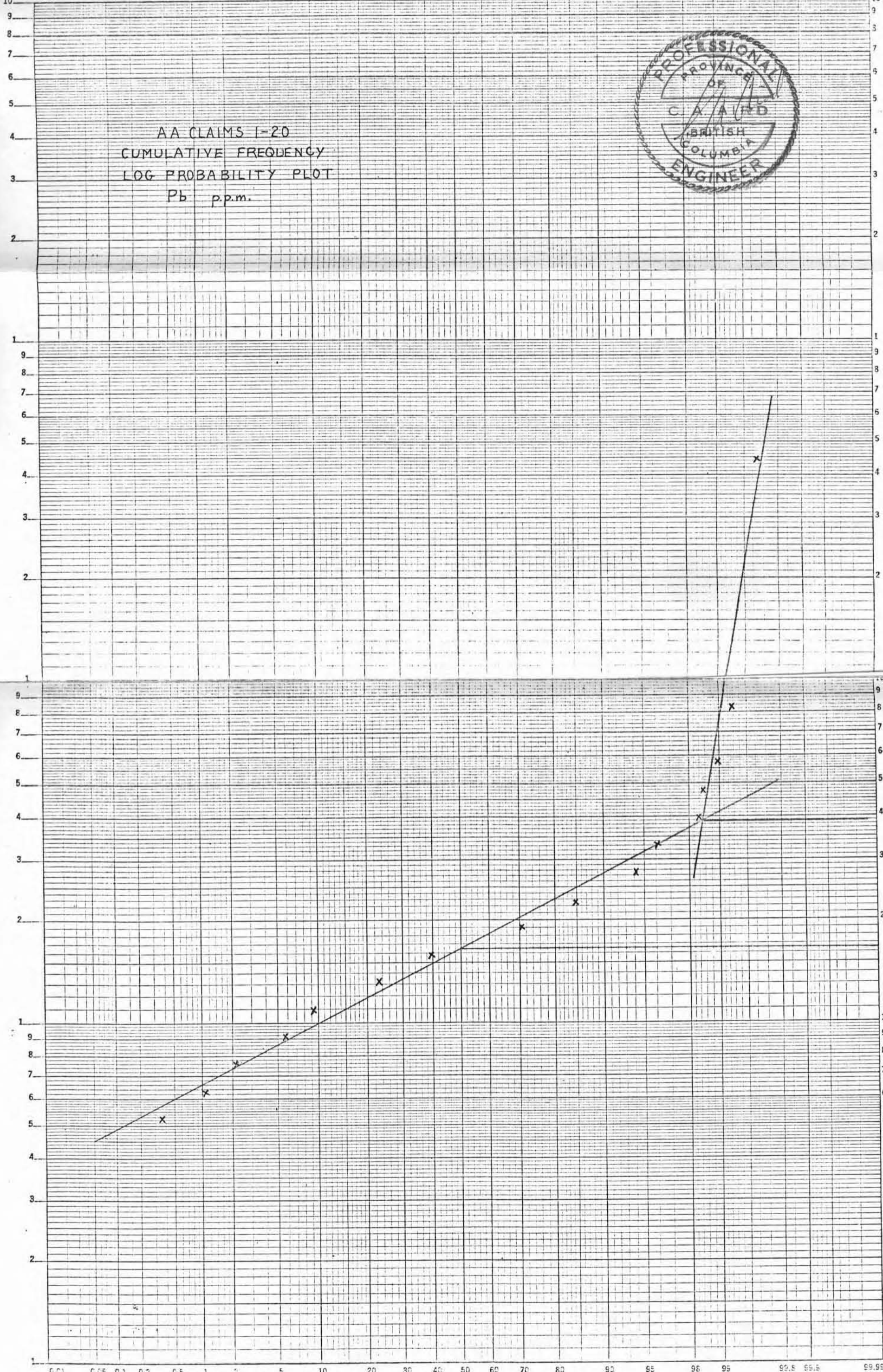
100 p.p.m.  
10 p.p.m.  
8 p.p.m.  
5 p.p.m.  
2 p.p.m.  
1 p.p.m.



0.01%

99.99%

99.99 99.9 99.8 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01



1000 p.p.m.

39 p.p.m.

17 p.p.m.

10 p.p.m.

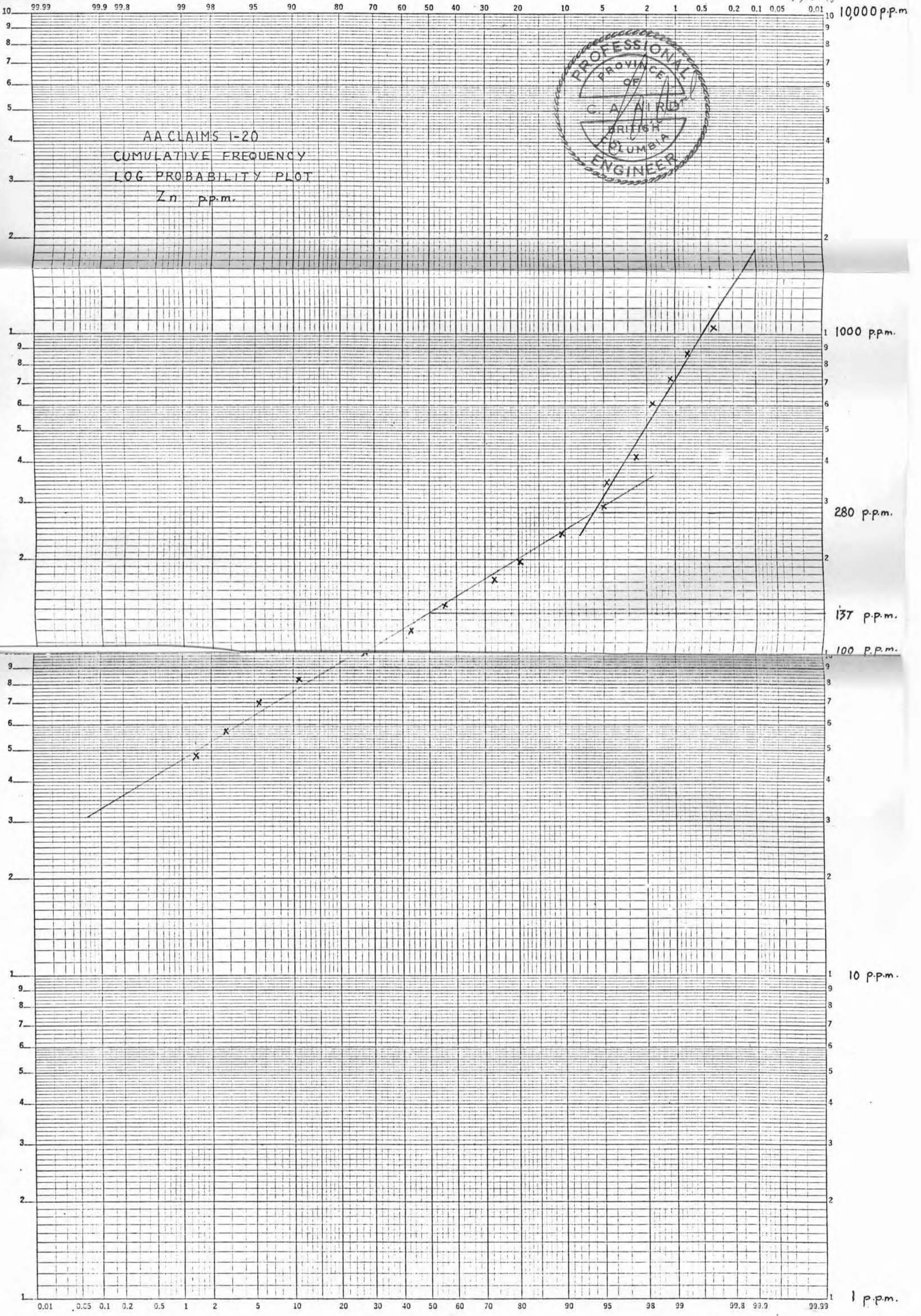
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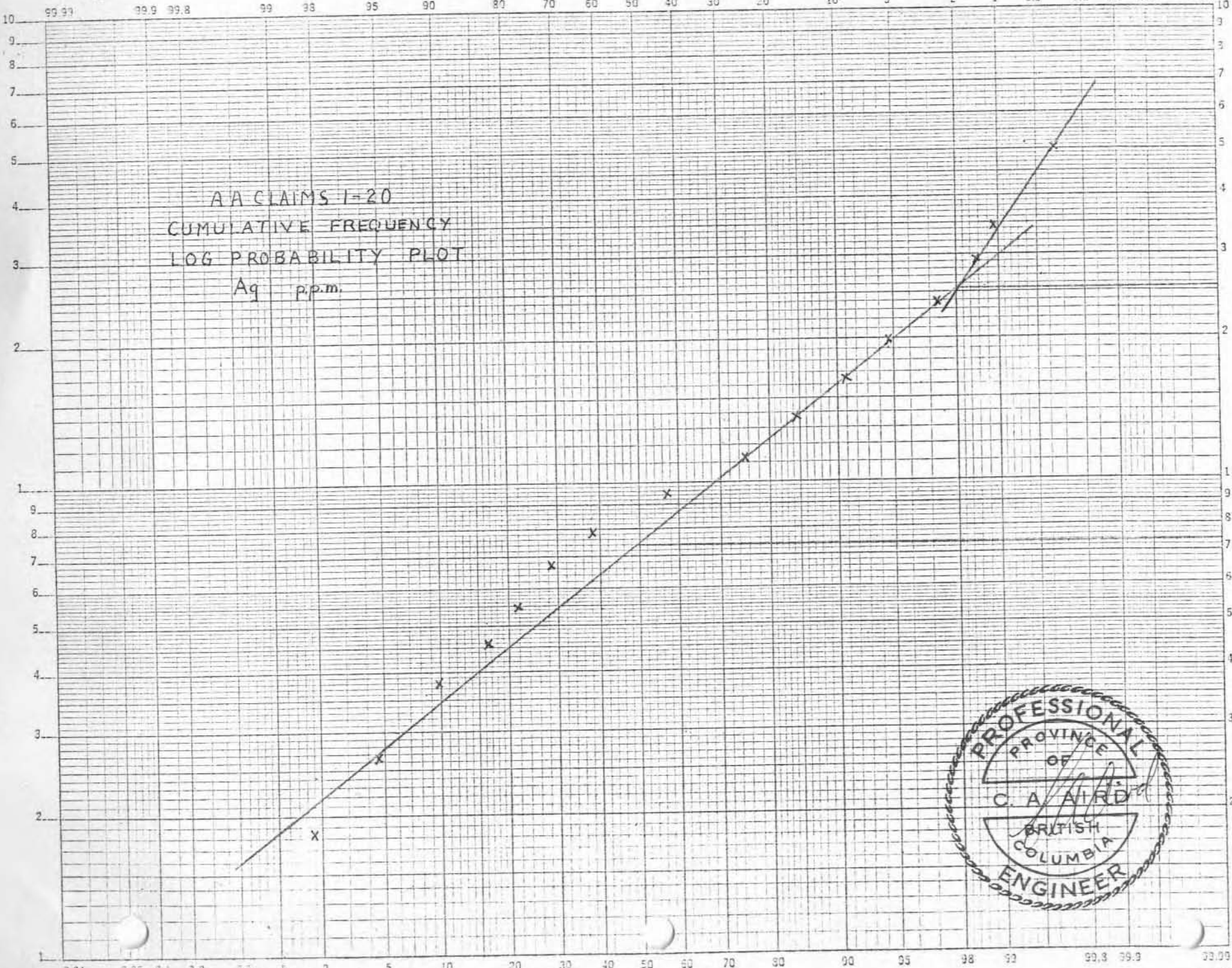
AA CLAIMS 1-20  
CUMULATIVE FREQUENCY  
LOG PROBABILITY PLOT  
Zn p.p.m.





99.99%

0.01%



10 p.p.m.

2.6 p.p.m.

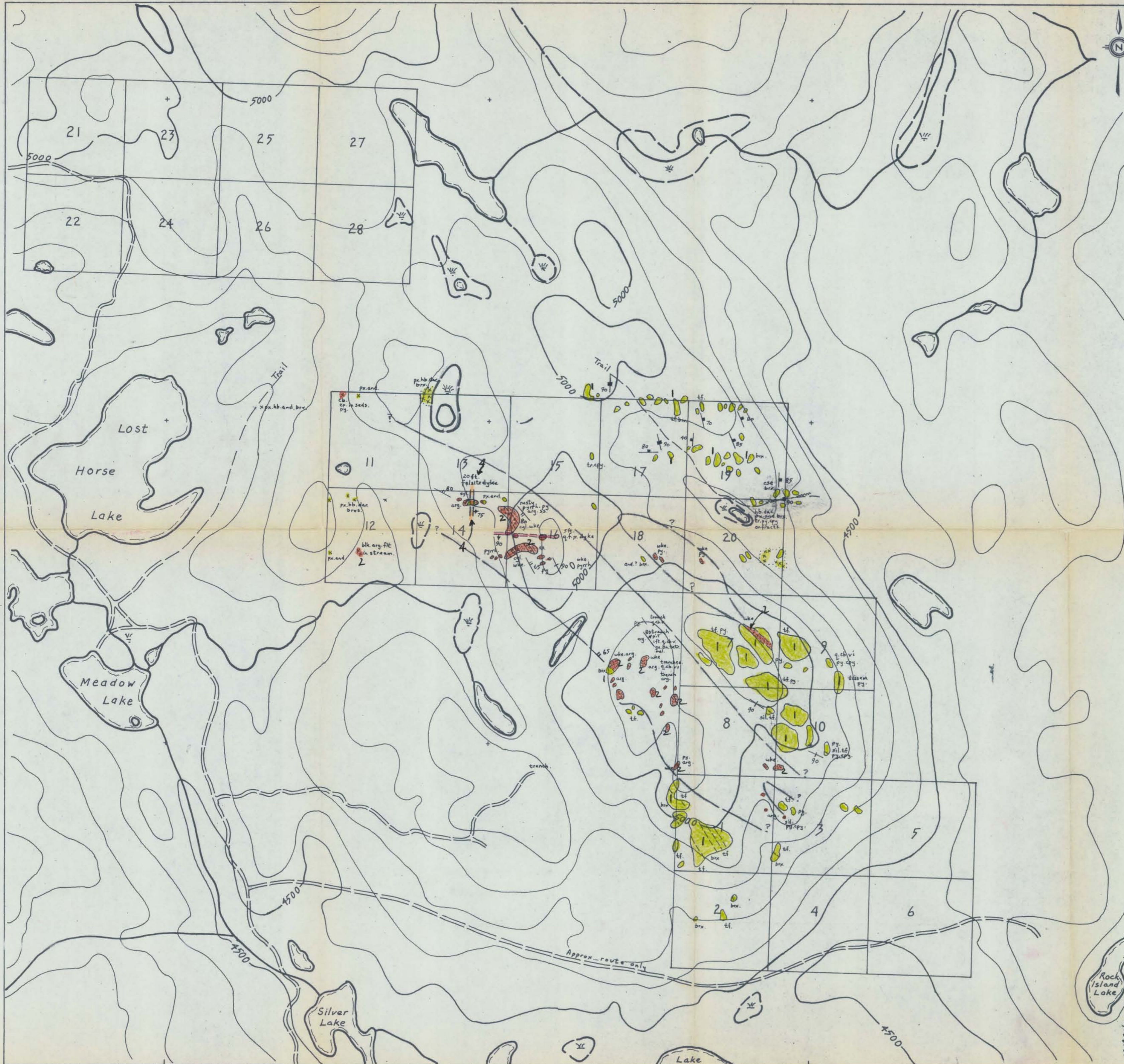
1 p.p.m.

0.7 p.p.m.

0.1 p.p.m.







**LEGEND**

- 4 Felsite dyke
- 3 Quartz feldspar porphyry
- Volcanic siltstone, argillite, greywacke, conglomerate
- 1 Pyroxene-hornblende andesite/dacite breccias, tuffs, tuff breccias

- Bedding; tops unknown
- Joints
- Strike and dip of contacts and Veins (orange)

**SYMBOLS**

- Drift-covered area
- Rock outcrop, area of outcrop, float
- Geological boundary (defined, approximate interpreted)
- Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)
- Bedding, tops unknown (inclined, vertical, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Lineation, axes of minor folds (horizontal, inclined, vertical)
- Drag-fold (arrow indicates plunge)
- Fault (defined, approximate, interpreted)
- Fault (inclined, vertical)
- Fault (solid circle indicated downthrow side, arrows indicate relative movement)
- Thrust fault (approximate, interpreted)
- Shearing and dip
- Joint (horizontal, inclined, vertical, dip unknown)
- Syncline (defined, approximate)
- Anticline (defined, approximate)
- Anticline and syncline (overturned)
- Intensity (weak, moderate, strong)

5191 m1

- Trench
- Adit or tunnel
- Rock dump or tailings
- Quarry or mine
- Shaft, raise, winze
- Diamond-drill hole



Department of  
**Mines and Petroleum Resources**  
**ASSESSMENT REPORT**  
NO. **5191** MAP # **1**

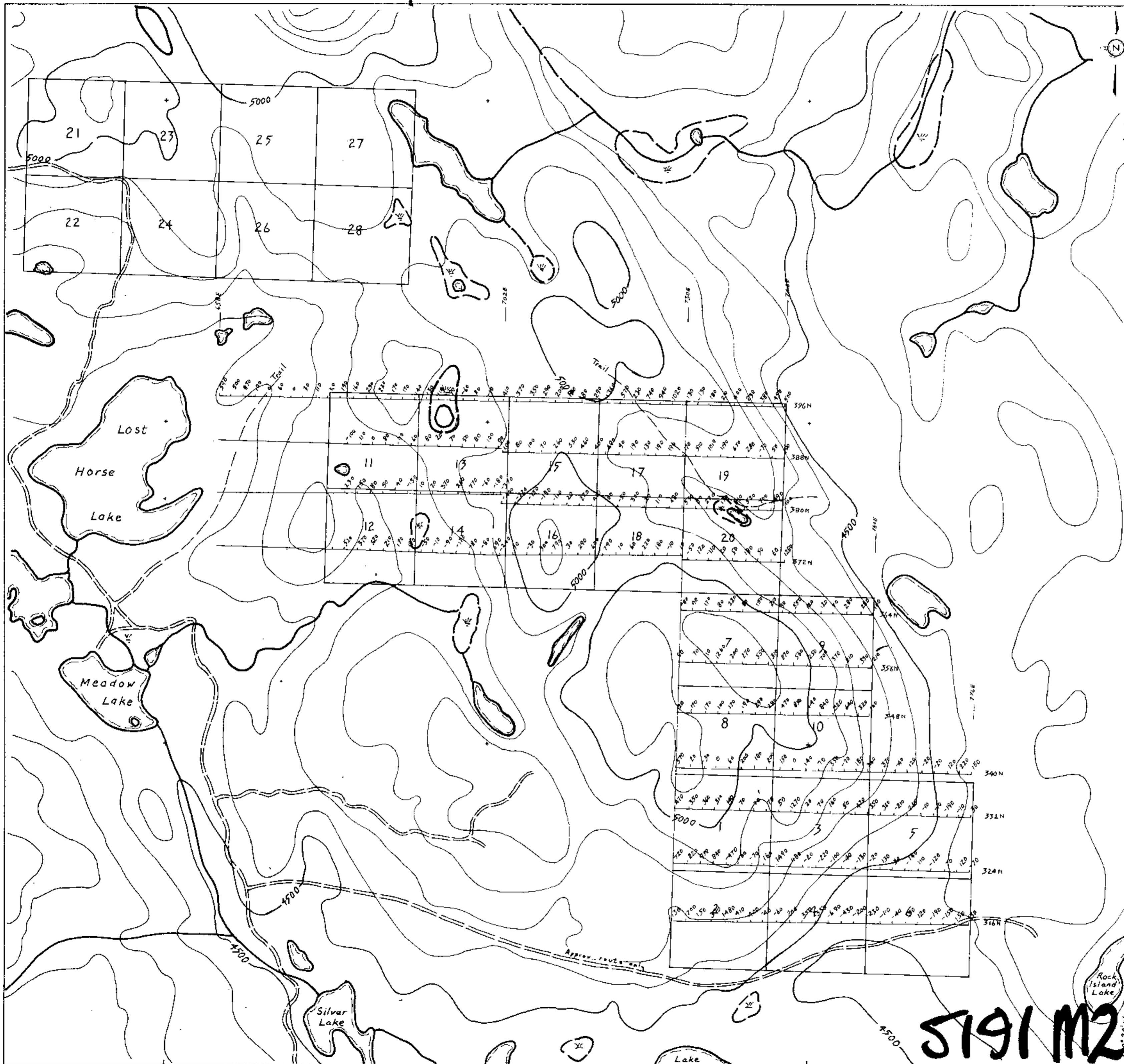
Scale 1 inch = 1,000 Ft.  
IMPERIAL OIL LIMITED - MINERALS

**GEOLOGICAL MAP**

Project No. **AA GROUP** Mining Division **KAMLOOPS**  
Latitude **51° 35' N** Longitude **120° 20' W**  
NTS **92-P-9W**

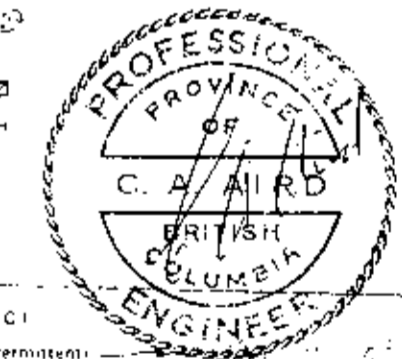
To Accompany A Report By: **C.A. AIRD P.Eng.**  
Dated: **Oct. 11, 1974**  
Map No. \_\_\_\_\_





VERTICAL COMPONENT  
RELATIVE VALUES IN GAMMAS

- SYMBOLS**
- Drift covered area: [Symbol]
  - Rock outcrop: [Symbol]
  - Geological boundary: [Symbol]
  - Bedding: [Symbol]
  - Dip unknown: [Symbol]
  - Settling: [Symbol]
  - Schistosity: [Symbol]
  - Vertical dip unknown: [Symbol]
  - Folds: [Symbol]
  - Drag fold: [Symbol]
  - Fault: [Symbol]
  - Shearing and dip: [Symbol]
  - Joint: [Symbol]
  - Syncline: [Symbol]
  - Anticline: [Symbol]
  - Intensity: [Symbol]



- Trench: [Symbol]
- Aft or tunnel: [Symbol]
- Rock dump or tailings: [Symbol]
- Quarry or mine: [Symbol]
- Shalt case wire: [Symbol]
- Diamond-drill hole: [Symbol]
- Contours: [Symbol]
- Stream or creek: [Symbol]
- Marsh: [Symbol]
- Lake: [Symbol]
- Road: [Symbol]
- Jeep Road: [Symbol]
- Trail: [Symbol]
- Trestle: [Symbol]

Mines and Petroleum Assessment  
ASSESSMENT REPORT  
NO. 5191 MAP #2

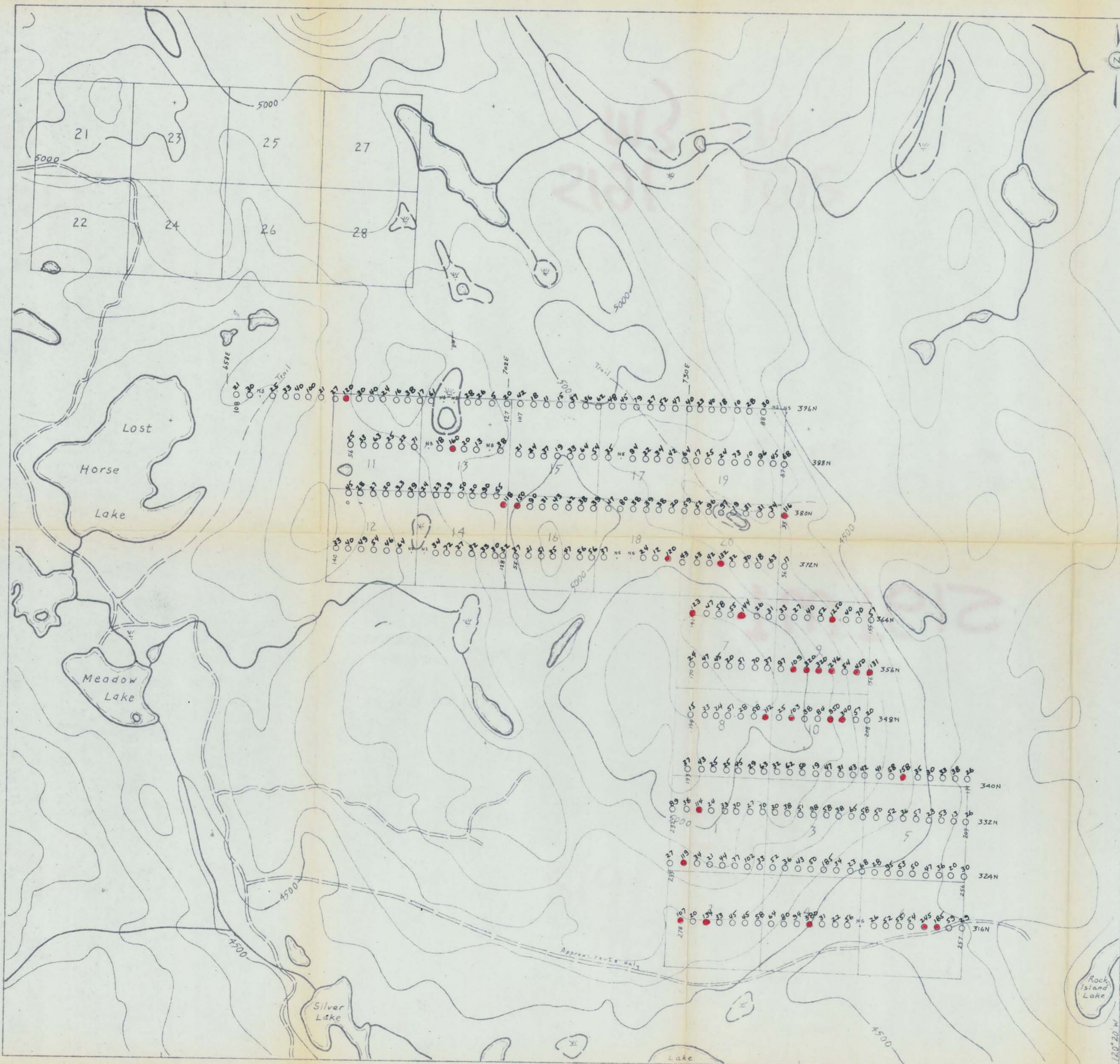
Scale 1 inch = 1,000 Ft.

IMPERIAL OIL LIMITED MINERALS  
MAGNETOMETER SURVEY

Project No. AA GROUP Mining District KAMLOOPS  
Latitude 51° 35' N Longitude 120° 20' W  
NTS 92-P-9W  
To A company A Reg. or St. C. A. AIRD, P. Eng.  
Date Oct. 11, 1974  
Map No.

5191 M2





Geom. Mean 44 ppm  
 Threshold Value ● 105 ppm

- SYMBOLS**
- Geophysical area
  - Rock outcrop area of outcrop floor
  - Geological boundary (defined approximate interpreted)
  - Bedding top known (horizontal inclined vertical overturned)
  - Bedding top unknown (horizontal inclined vertical overturned)
  - Structural geophysics (downflow fracture horizontal vertical (to unknown))
  - Location axes of linear folds (horizontal inclined vertical)
  - Drag fold (arrow indicates plunge)
  - Fault (defined approximate interpreted)
  - Fault (inclined vertical)
  - Fault (with circle indicated downthrow side and relative movement)
  - Thrust fault (approximate interpreted)
  - Shoaling and dip
  - Strike-slip fault (inclined vertical (to unknown))
  - Anticline (defined approximate)
  - Anticline and syncline (overturned)
  - Terrace (weak moderate strong)

- Trail
- Adit or tunnel
- Rock dump or barge
- Quarry or mine
- Shaft (open mine)
- Diamond drill hole



Minister of  
 Mines and Petroleum Resources  
**ASSESSMENT REPORT**  
 NO. 5191 MAP #3

Scale 1 inch = 1,000 Ft

**GEOCHEMICAL MAP**

Cu p.p.m.  
 Project No. AA GROUP Mining Division KAMLOOPS  
 Latitude 51° 35' N Longitude 120° 20' W  
 NTS 92-P-9W  
 C. A. AIRD P. Eng.  
 Date Oct. 11, 1974

**5191  
 M3**



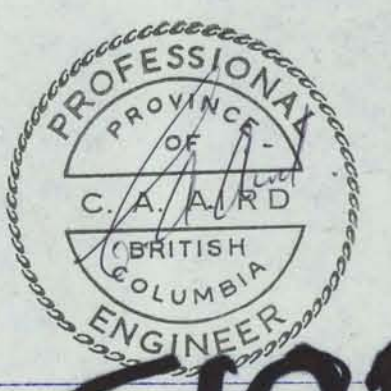


Geom. Mean 2 ppm  
 Threshold Value 5 ppm

**SYMBOLS**

- Drift covered area [Symbol]
- Rock outcrop, area of outcrop, float X (XXX) X
- Geological boundary (defined approximate interpreted) [Symbol]
- Bedding tops known (horizontal, inclined, vertical, overturned, dip unknown) [Symbol]
- Bedding tops unknown (inclined, vertical, dip unknown) [Symbol]
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown) [Symbol]
- Lineation, axes of minor folds (horizontal, inclined, vertical) [Symbol]
- Drag fold (arrow indicates plunge) [Symbol]
- Fault (defined, approximate, interpreted) [Symbol]
- Fault (inclined, vertical) [Symbol]
- Fault (solid circle indicated downthrow side, arrows indicate relative movement) [Symbol]
- Thrust fault (approximate, interpreted) [Symbol]
- Shearing and dip [Symbol]
- Joint (horizontal, inclined, vertical, dip unknown) [Symbol]
- Syncline (defined, approximate) [Symbol]
- Anticline (defined, approximate) [Symbol]
- Anticline and syncline (overturned) [Symbol]
- Intensity (weak, moderate, strong) [Symbol]

- Trench [Symbol]
- Adit or tunnel [Symbol]
- Rock dump or tailings [Symbol]
- Quarry or mine [Symbol]
- Shaft, raise, winze [Symbol]
- Diamond drill hole [Symbol]



**5191**  
**MA**  
 ASSESSMENT REPORT  
 NO. 5191  
 Scale 1 inch = 1,000 Feet.

IMPERIAL OIL LIMITED - MINERALS

**GEOCHEMICAL MAP**  
 Mo p.p.m.  
 Project No. "AA" GROUP Mining Division KAMLOOPS  
 Latitude 51° 35' N Longitude 120° 20' W  
 NTS 92-P-9W

To Accompany A Report By C.A. AIRD P.Eng.  
 Dated Oct. 11, 1974  
 Map No.





Geom. Mean 17 ppm  
 Threshold Value 39 ppm

- SYMBOLS**
- Drift covered area
  - Rock outcrop area of outcrop, flat
  - Geological boundary (defined, approximate, interpreted)
  - Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)
  - Bedding, tops unknown (inclined, vertical, dip unknown)
  - Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
  - Lineation, axes of minor folds (horizontal, inclined, vertical)
  - Drag-fold (arrow indicates plunge)
  - Fault (defined, approximate, interpreted)
  - Fault (inclined, vertical)
  - Fault (solid circle indicates downthrow side, arrow indicates relative movement)
  - Thrust fault (approximate, interpreted)
  - Shearing and dip
  - Joint (horizontal, inclined, vertical, dip unknown)
  - Syncline (defined, approximate)
  - Anticline (defined, approximate)
  - Anticline and syncline (overturned)
  - Intensity (weak, moderate, strong)

Trench  
 Adit or tunnel  
 Rock dump or tailings  
 Quarry or mine  
 Shaft, raise, winze  
 Diamond drill hole

Contours 2500 C.1  
 Stream or creek (Perennial, intermittent)  
 Marsh  
 Lake  
 Road  
 Jeep Road  
 Trail  
 Trees

Scale 1 inch = 1,000 Ft.



Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 5191 MAP  
 MS

IMPERIAL OIL LIMITED - MINERALS

**GEOCHEMICAL MAP**  
 Pb p.p.m.  
 Project No. AA GROUP Mining Division KAMLOOPS  
 Latitude 51°35' N Longitude 120°20' W  
 NTS 92-P-9W  
 To Accompany A Report By C.A. AIRD P. Eng.  
 Dated Oct. 11, 1974  
 Map No.

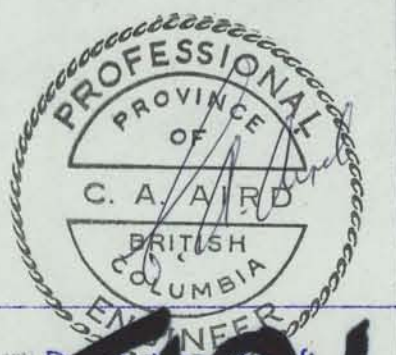




Geom. Mean 137 ppm  
 Threshold Value ● 280 ppm

**SYMBOLS**

- Drift covered area [Symbol]
- Rock outcrop, area of outcrop, float [Symbol]
- Geological boundary (defined, approximate, interpreted) [Symbol]
- Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown) [Symbol]
- Bedding, tops unknown (inclined, vertical, dip unknown) [Symbol]
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown) [Symbol]
- Lamination, axes of minor folds (horizontal, inclined, vertical) [Symbol]
- Drag fold (arrow indicates plunge) [Symbol]
- Fault (defined, approximate, interpreted) [Symbol]
- Fault (inclined, vertical) [Symbol]
- Fault (solid circle indicated downthrow side, arrows indicate relative movement) [Symbol]
- Thrust fault (approximate, interpreted) [Symbol]
- Shearing and dip [Symbol]
- Joint (horizontal, inclined, vertical, dip unknown) [Symbol]
- Syncline (defined, approximate) [Symbol]
- Anticline (approximate) [Symbol]
- Anticline and syncline (overturned) [Symbol]
- Intensity (weak, moderate, strong) [Symbol]
- Trench [Symbol]
- Adit or tunnel [Symbol]
- Rock dump or tailings [Symbol]
- Quarry or mine [Symbol]
- Shaft, raise, winze [Symbol]
- Diamond drill hole [Symbol]
- Contours 2500 C1
- Stream or creek (Perennial, intermittent) [Symbol]
- Marsh [Symbol]
- Lake [Symbol]
- Road [Symbol]
- Jeep Road [Symbol]
- Trail [Symbol]
- Trees [Symbol]



**5191**  
**ASSESSMENT REPORT**  
**NO. 5191M #6**

Scale 1 inch = 1,000 Ft.

IMPERIAL OIL LIMITED - MINERALS

**GEOCHEMICAL MAP**

Zn p.p.m.  
 Project No. AA GROUP Mining Division: KAMLOOPS  
 Latitude 51° 35' N Longitude 120° 20' W  
 NTS 92-P-9W  
 To Accompany A Report By C. A. AIRD P. Eng.  
 Dated Oct. 11, 1974  
 Map No.





Geom. Mean 0.7 ppm  
 Threshold Value • 2.6 ppm

- SYMBOLS**
- Drift covered area
  - Rock outcrop area of bedrock fault
  - Geological boundary: defined, approximate, interpreted
  - Bedding: top known (horizontal, inclined, overturned, dip unknown)
  - Bedding: top unknown (vertical, dip unknown)
  - Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
  - Lineation: axes of minor folds (horizontal, inclined, vertical)
  - Draping arrow indicates plunge
  - Fault: defined, approximate, interpreted
  - Fault: inclined, vertical
  - Fault: tilted, strike indicated, downthrow side, arrow indicates relative movement
  - Thrust fault (approximate, interpreted)
  - Shearing and slip
  - Roof: horizontal, inclined, vertical, dip unknown
  - Syncline: defined, approximate
  - Anticline: defined, approximate
  - Anticline and syncline (overturned)
  - Intensity (weak, moderate, strong)

Trench  
 Adit or tunnel  
 Rock dump or talings  
 Quarry or mine  
 Shaft, raise, winze  
 Diamond drill hole

Contours 2500 - C1  
 Stream or creek (Perennial, intermittent)  
 Marsh  
 Lake  
 Road  
 Jeep Road  
 Trail  
 Trees

Scale 1 inch = 1,000 Feet



**5191**  
**ASSEM. REPORT**  
**NO. 519m #7**

IMPERIAL OIL LIMITED MINERALS

**GEOCHEMICAL MAP**  
 Ag p.p.m.  
 Project No. AA GROUP Mining Division KAMLOOPS  
 Latitude 51° 35' N Longitude 120° 20' W  
 NTS 92-P-9W

To Accompany & Report By: C.A. AIRD P. Eng.  
 Date: Oct. 11, 1974  
 Map No.