

Geochemical and Geophysical Report  
on a  
Soil Survey and Test I.P. Survey  
over the  
Indian Claim Group

Skeena M.D.

NTS 104B/1E

Latitude 56°05'N  
Longitude 130°02'W

by Paul J. McGuigan,  
Lloyd M. Wilson

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,492**

Operator: Esso Resources Canada Limited

Owners: Azure Resources Limited,  
Esso Resources Canada Limited

November 25, 1983

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A. RECOMMENDATIONS

All out-crops near lead and gold B-horizon soil anomalies should be individually prospected for vein mineralization and sericite, silica, potassium feldspar and clay alteration.

The multi-element anomalous zone on the Indian-Woodier grid near 3+50E, on Lines 0, 2N, 4N and 6N should be mapped in detail and hand-trenched where rock is closely sub-cropping.

Fill-in geochemical sampling should be extended north of Line 6N on the Indian-Woodier grid. As well, fill-in sampling should be done on the Indian One grid, between L3N and L6N, and Stations 2+00W to 2+00E.

Induced polarization surveys should be used as a first priority geophysical tool on this property, where the topography permits.

The Zone C chargeability anomaly at Line 4N, 2+00E (or 0+60E metric) should be diamond drilled. Position the drill at L4N, 3+00E and drill two holes toward azimuth 260° at angles -40° and -55°.

Respectfully submitted,

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## B. INTRODUCTION

### B.1 Location and Access

The Indian claim group is located approximately 15 miles by road, northwest of Stewart, B.C. The group includes the claims over the abandoned Indian Mine. It lies in the drainages of the Salmon River and Cascade Creek. See Figure 1. Access to the area is by all-weather gravel road from Stewart, via Hyder, Alaska. Most work in 1983 was done by foot from the Granduc and Cascade Creek roads.

### B.2 History

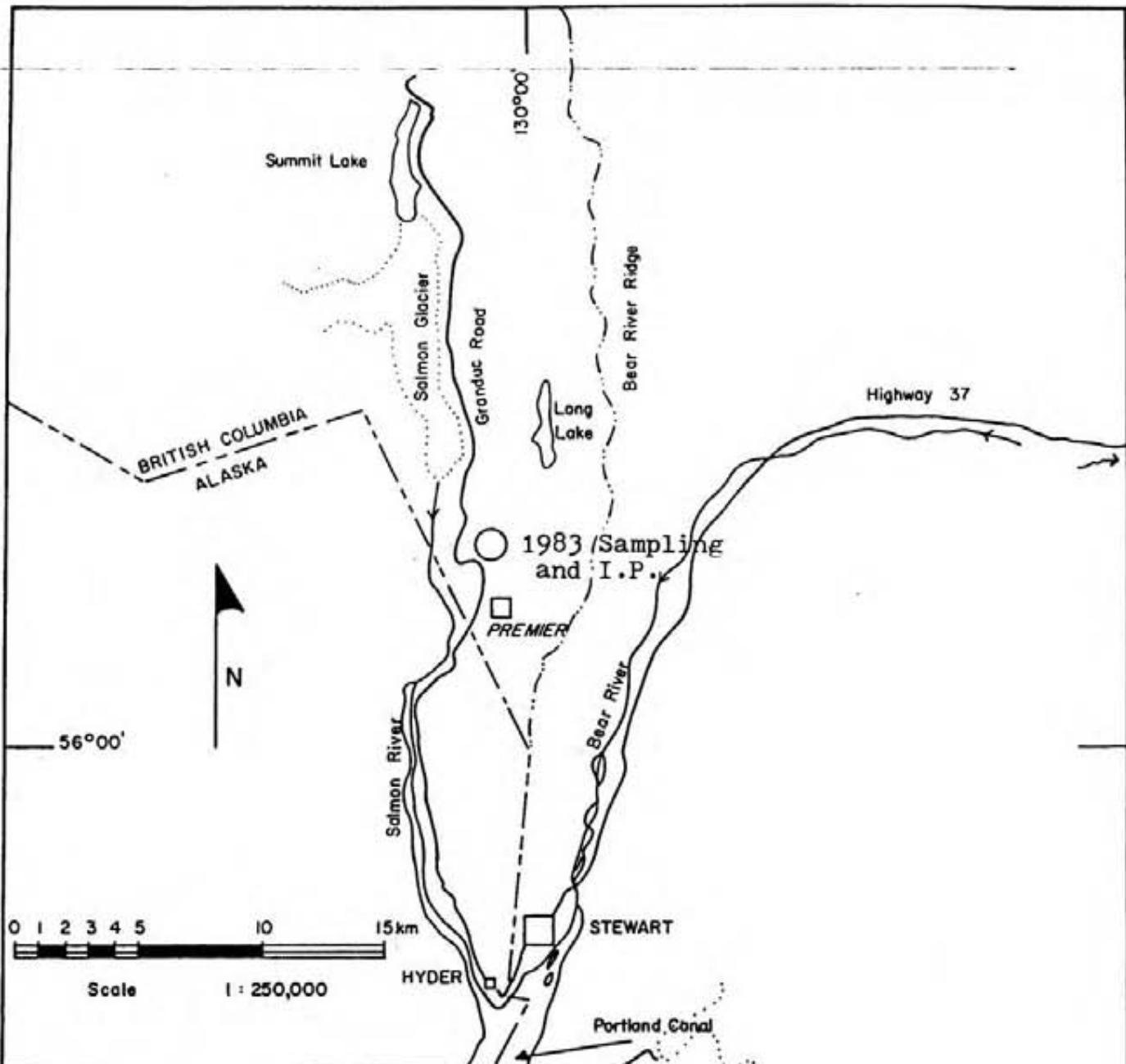
The Indian Mine produced minor amounts of ore between 1925 and 1953, with the product shipped to the Premier mill. Production totalled 14,100 tons, grading 4.4% lead, 5.5% zinc, 3.44oz/ton silver and 0.089oz/ton gold. See Grove (1971).

Recent activity in the claim area included exploration programs by Windy Point Minerals Ltd. (subsidiary of Houston International Minerals Co.) in 1980 and 1981. A grid was established, called the "Indian-Woodier" grid, which extends north and west of the Indian Mine. Soil geochemistry, a magnetometer survey, geological mapping and some diamond drilling were done. See Foye (1982) and various assessment reports for the Woodier group for details.

Esso Resources Canada Limited established a grid in 1982 which tied onto the east side of the "Indian One" grid and extends east to Cascade Creek. Geological mapping, trenching and geochemical soil sampling were done. See McGuigan (1982), three reports.

### B.3 Local Geology

The rocks of the Indian claim group are lower Jurassic Hazelton Group volcanic and sedimentary rocks. The rocks are described by Grove (1971) and Aldrich (1983). Rocks near the Indian Mine and Indian One grid are fine grained dacite tuff and partly pumaceous andesite lapilli tuff. The dacite tuffs are partly intercalated with tuffaceous black siltstone and argillite. The Bush-Cobalt area is underlain by andesite lapilli tuff, which is sericite altered and pyritic in places.



<b>ESSO MINERALS CANADA</b> A DIVISION OF ESSO RESOURCES CANADA LIMITED	
Indian Claim Group 1983 Location of Soil Sampling and I.P. Survey	
SCALE: 1 : 250,000	NTS: 103 P / 13
DATE: Nov. 1983	MINING DIST: Skeena
DRAWN BY: P. McGuigan	FIGURE NO.: 1

3.

Texas Creek granodiorite porphyry intrudes the rocks of the Indian claim group, especially in the area west of the baseline of the Indian-Woodier grid. The Texas Creek granodiorite might be as old as 209 million years (ref. Geological Atlas NTS 104B).

A late feature in the area is the north-south trending Indian fault. The fault contains pyritic, sericitic, quartz-calcite infilled fault breccia and gouge. Also contained in the fault are pods of heavily disseminated to massive sphalerite and galena with minor chalcopyrite and tetrahedrite. Unaltered andesite dykes follow the Indian fault and faults of other orientation.

Relatively little outcrop is present on the Indian group, considering the steepness of the terrain. The area is covered with thin surficial deposits of till from recent valley glaciation and lesser amounts of talus and alluvium. The till is mostly less than 2 meters thick. In gullies and on talus fans the surficial deposits are estimated to be less than 15 meters thick.

#### B.4 1983 Exploration Program

The 1983 Exploration Program of Esso included a test induced polarization survey over the Indian Mine and geochemical soil sampling over three grids. The induced polarization work was conducted to test the response of known sulphide mineralization in the Indian Mine. A total of 600 meters of time domain I.P. survey were run.

Geochemical soil surveys were run in three areas. Detailed sampling over the Indian Mine area (Indian-Woodier grid) was done to repeat and fill in 1980-81 sampling by Windy Point Ltd. 140 samples were collected. Of those, 69 samples were also run for cold extractable metal contents and for total extraction with analysis done by induction coupled plasma technique (ICP). The 1983 sampling was on the Portland No. 2 (L1979) and Portland No. 1 (L1980) crown granted claims.



The second area worked is the previously sampled Indian One grid (1982). The pulps from 539 samples were analysed for gold, mercury and arsenic. The area covered by this work was the Payroll No. 3 (L5524), O'Brien Fr. (L4441), Maggie Jiggs (L4442), Brookland (L511), Fortyfive (L512), Fritz (L1982), Portland No. 2 (L1979), Portland No. 1 (L1980) and Morn (L4064) crown-granted claims.

The third area is the Bush-Cobalt adit area. Two kilometers of flagged line were added to the existing Indian Two grid. 50 soil samples were collected. This work was done in the area of the Winner (L4116), Cobalt (L4053), and Cobalt No. 2 (L4054) crown-granted claims.

C. GEOCHEMICAL SOIL SURVEY

C.1 Sampling and Analysis

In the Indian Mine area (Indian-Woodier grid) samples were collected at 25 foot intervals on the existing grid lines. On the Bush-Cobalt, lines were flagged, then samples collected at 25 meter intervals. No additional samples were collected on the Indian One grid.

Soil samples were taken from the B-horizon of the soil profile. Most samples were collected from a depth of 15 to 20cm. Each sample was placed in a kraft paper bag. The locations of soil samples are given on Maps 3, 4, 20 and 24.

The samples were shipped to Min-En Laboratory, North Vancouver, for geochemical analysis. All samples were given standard geochemical analysis for copper, lead, zinc, silver, gold, arsenic, mercury and manganese. Methods for analysis are given in Appendix Two. For purposes of comparison only, 69 samples were given additional treatment. Firstly, a cold extraction was done, with standard atomic absorption analysis for copper, lead, zinc and silver. Secondly, a standard total extraction was done, with induction coupled plasma (ICP) analysis. Results are tabulated in Appendix Three.

Results are plotted on Maps 4-19 for the Indian Mine area, Maps 21-23 for Indian One grid, Maps 25-32 for the Bush-Cobalt area.

## C.2 Geochemical Interpretation

### C.2.a Partitioning of Sample Populations

The results of the atomic absorption analyses of samples collected in 1983 (up to Aug. 15) are plotted on log-probability paper. Analytical results are grouped into classes using class ranges of equal logarithmic value. Similar to the method given in Sinclair (1976), the classes are cumulated from the highest valued class downwards. The log-probability curves for each element are given in Figures 3 to 10.

Partitioning of the curves is not done strictly by the method of Sinclair (1976). This is done partly to maintain comparable threshold values between areas of similar geology on other Salmon River Valley prospects. The table of threshold values used is given in Figure 2. Note that the choice of  $t_1$ , and  $t_4$  especially has no statistical basis. They are arbitrarily chosen to add feature to the maps.

### C.2.b Soil Anomalies - Indian Mine Area

Topography in the Indian Mine area slopes steeply to the west, in areas west of the Indian-Woodier baseline. The baseline is the approximate sub-crop trace of the vein of the Indian Mine. The vein contains galena and sphalerite with minor chalcopyrite and tetrahedrite. The strongly anomalous zone of lead and zinc with scattered strongly anomalous arsenic, mercury, silver and gold is dispersed 50 to 100 meters down slope from the sub-crop trace. The strongest anomalies occur down slope of the only out-crop of mineralization which occurs at the baseline at Line 0.

To the east, and upslope of sub-crop trace of the Indian Mine vein is a second band of strong multi-element soil anomalies. It occurs on the Indian-Woodier grid between 3+50E and 4+50E, from Lines 0 to 6N. It is similar to the first anomaly, except arsenic is higher. Out-crop is sparse, and no significant vein material crops out. In addition, the anomaly is parallel to a chargeability anomaly found in the induced potential survey. (See Section C).

Figure Two

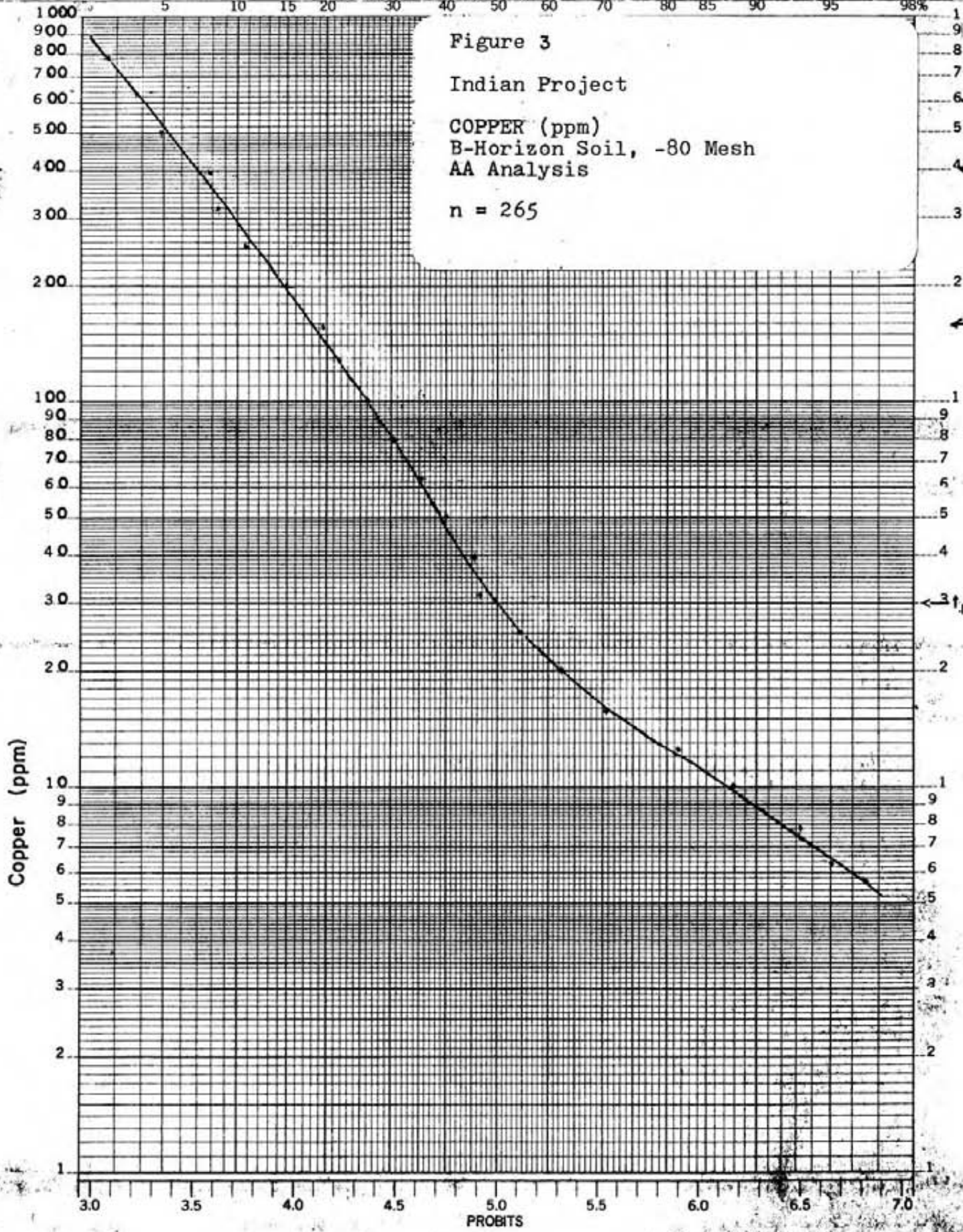
Threshold Values and Grouping

<u>Element</u>	<u>t<sub>1</sub></u>	<u>t<sub>2</sub></u>	<u>t<sub>3</sub></u>	<u>t<sub>4</sub></u>
Cu	30	160	300	600
Pb	60	150	400	1000
Zn	100	350	1000	4000
Ag	2.8	6.0	10.0	25.0
Au	-	30	150	1000
As	60	150	300	1000
Hg	180	350	700	—
Mn	-	-	-	—

<u>Group</u>	<u>Threshold</u>	<u>Symbol</u>
Arbitrary Upper Anomalous		⬢
Probably Anomalous	t <sub>4</sub>	■
Possibly Anomalous	t <sub>3</sub>	●
Upper Background	t <sub>2</sub>	⊙
Background	t <sub>1</sub>	.

CUMULATIVE PERCENTAGE

Figure 3  
Indian Project  
COPPER (ppm)  
B-Horizon Soil, -80 Mesh  
AA Analysis  
n = 265



46 8082

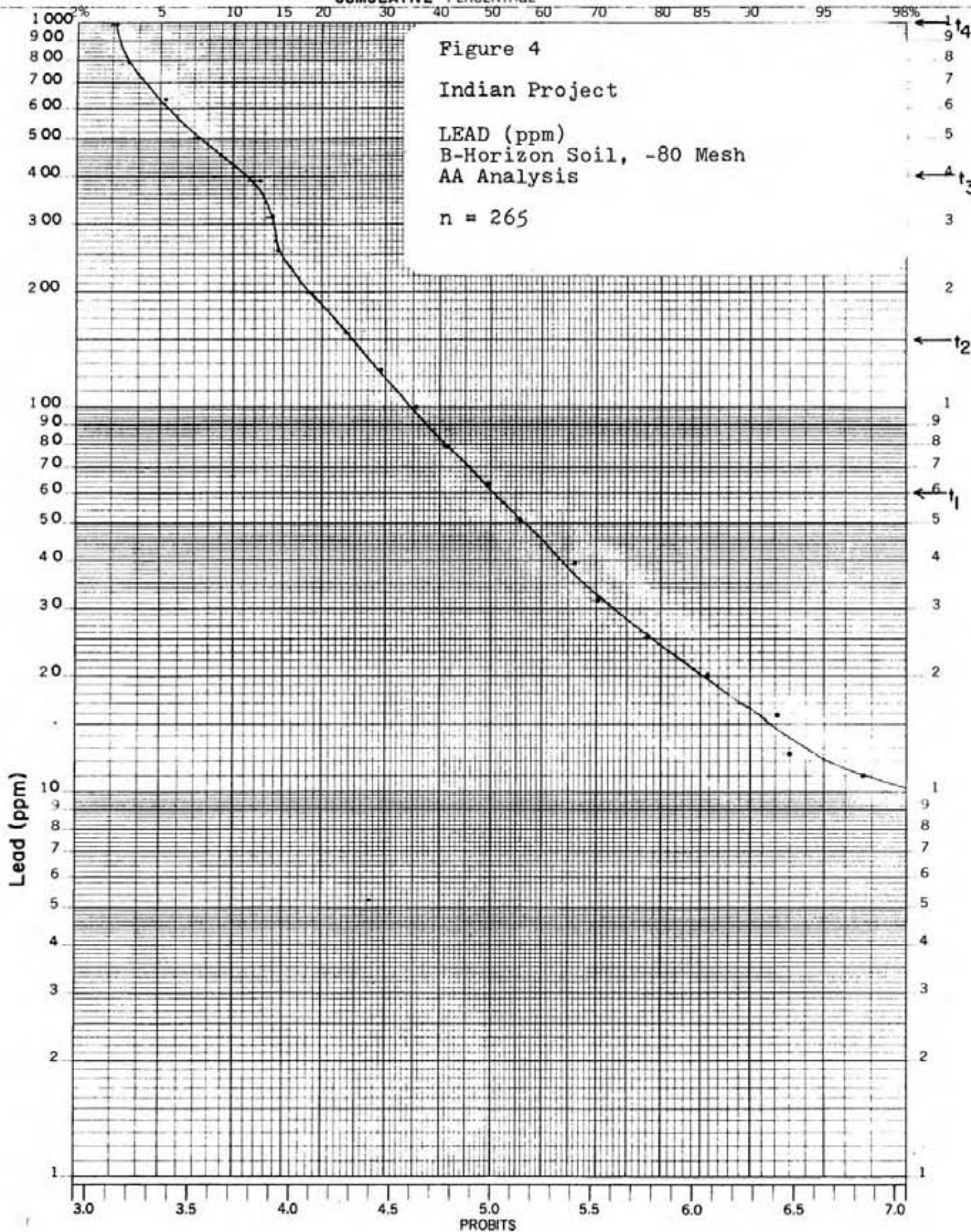
K-E PROBABILITY X J LOG CYCLES  
KEUFFEL & ESSER CO. MADE IN U.S.A.

Copper (ppm)

PROBITS



CUMULATIVE PERCENTAGE



46 8082

K&E PROBABILITY X 3 LOG CYCLES  
KEUFFEL & ESSER CO. MADE IN U.S.A.

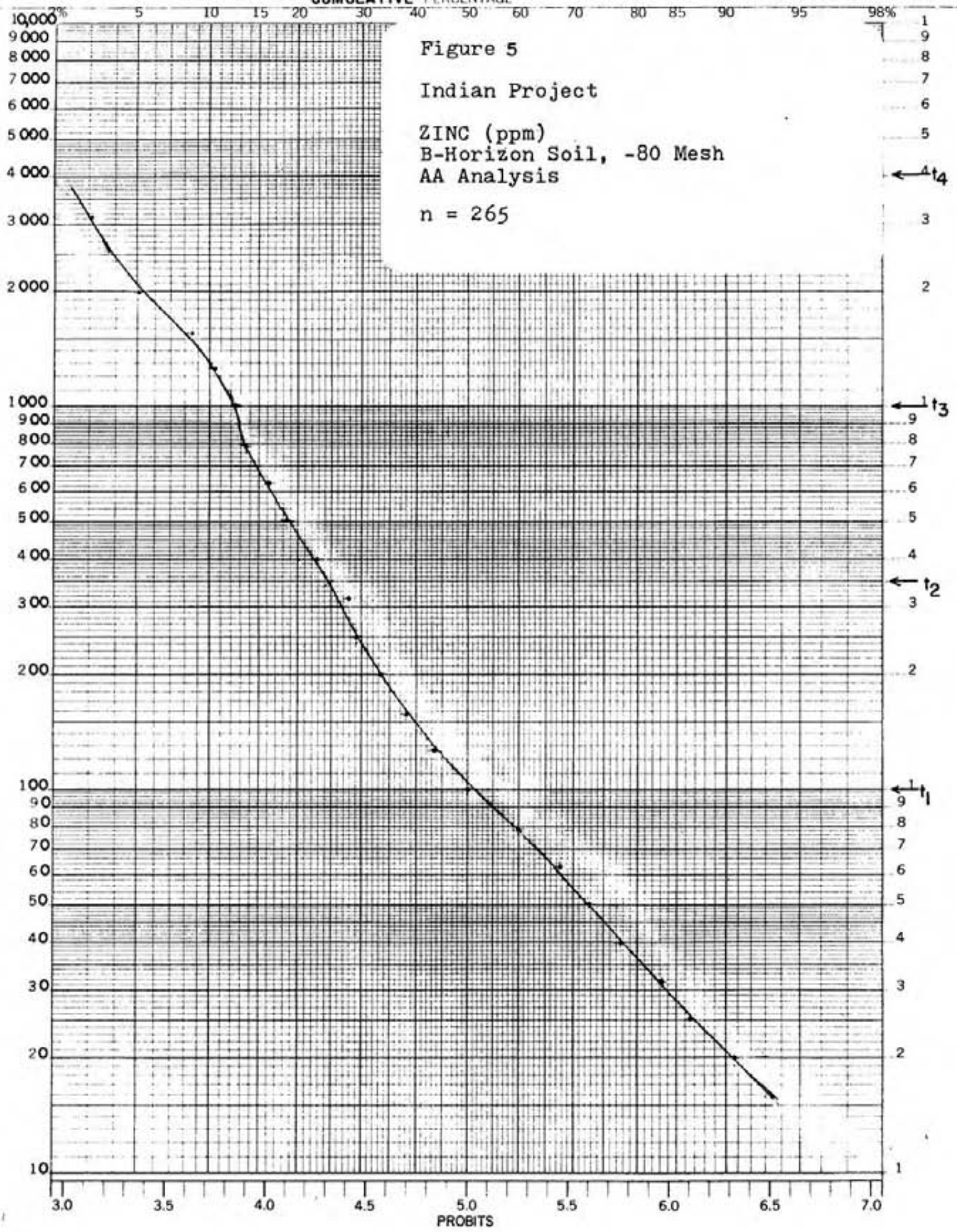
CUMULATIVE PERCENTAGE

46 8082

K&E PROBABILITY X 3 LOG CYCLES  
KEUFFEL & ESSER CO. MADE IN U.S.A.

Zinc (ppm)

Figure 5  
Indian Project  
ZINC (ppm)  
B-Horizon Soil, -80 Mesh  
AA Analysis  
n = 265



10000  
9000  
8000  
7000  
6000  
5000  
4000  
3000  
2000  
1000  
900  
800  
700  
600  
500  
400  
300  
200  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10

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4  
5  
6  
7  
8  
9  
t3  
t2  
t1

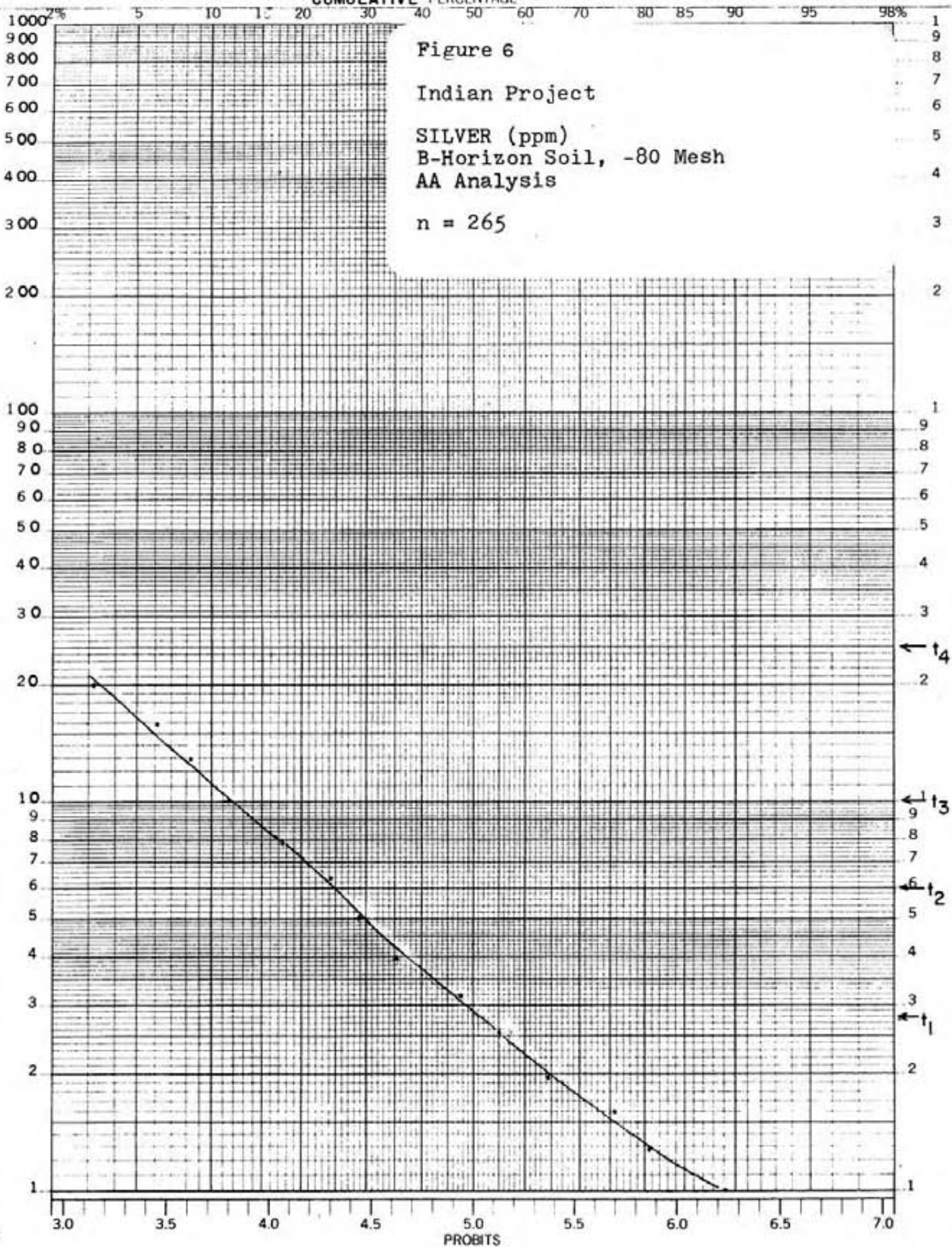
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K-Σ PROBABILITY X 3 LOG CYCLES  
KEUFFEL & ESSER CO. MADE IN U.S.A.

Silver (ppm)

CUMULATIVE PERCENTAGE

Figure 6  
Indian Project  
SILVER (ppm)  
B-Horizon Soil, -80 Mesh  
AA Analysis  
n = 265





K-02 PROBABILITY X J LOG CYCLES  
HEUFFEL & ESSER CO. MADE IN U.S.A.

46 8082

Gold (ppb)

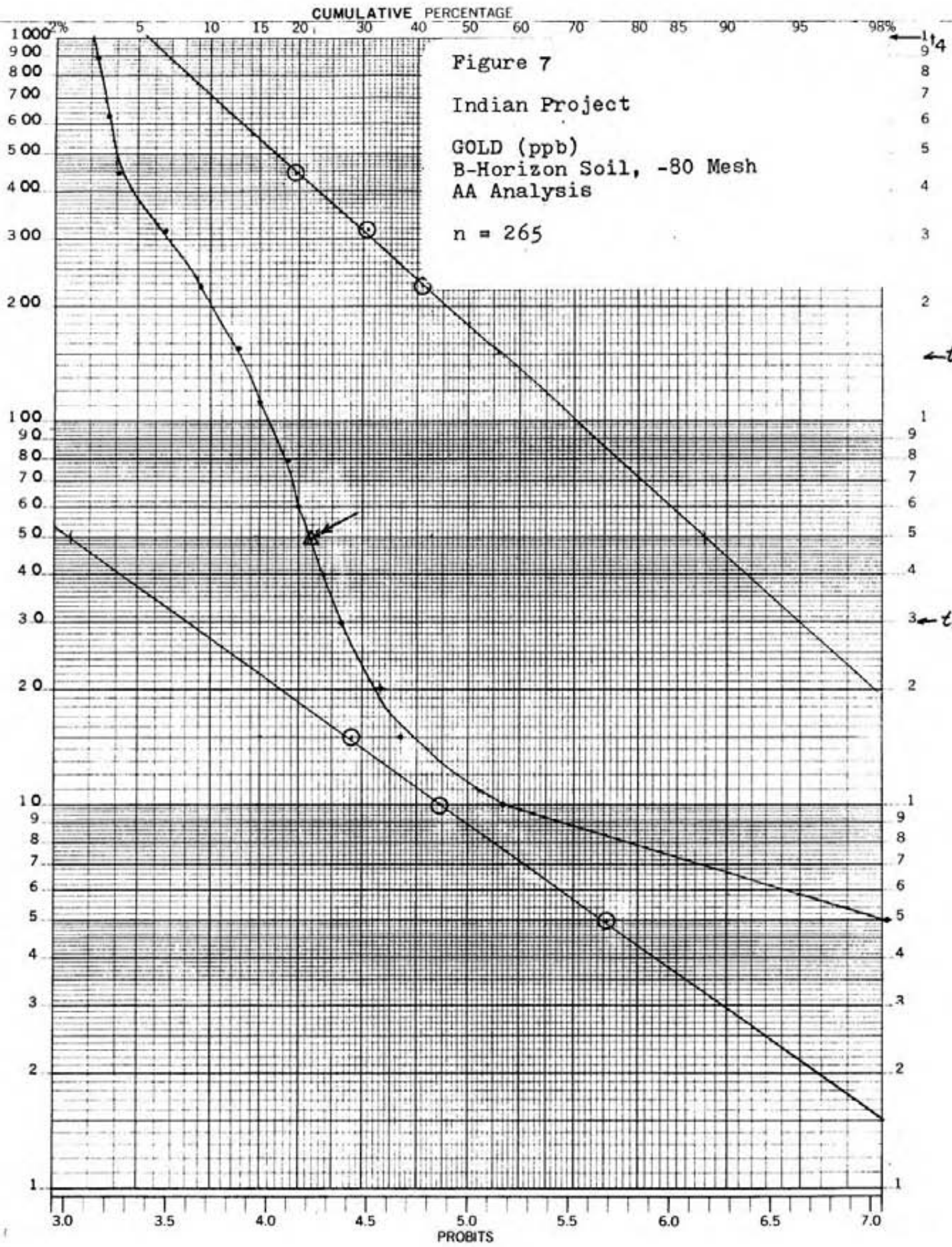


Figure 7  
Indian Project  
GOLD (ppb)  
B-Horizon Soil, -80 Mesh  
AA Analysis  
n = 265

1 1/4  
9  
8  
7  
6  
5  
4  
3  
2  
1  
t3  
9  
8  
7  
6  
5  
4  
3  
t2  
1  
9  
8  
7  
6  
5  
4  
3  
2  
1



CUMULATIVE PERCENTAGE

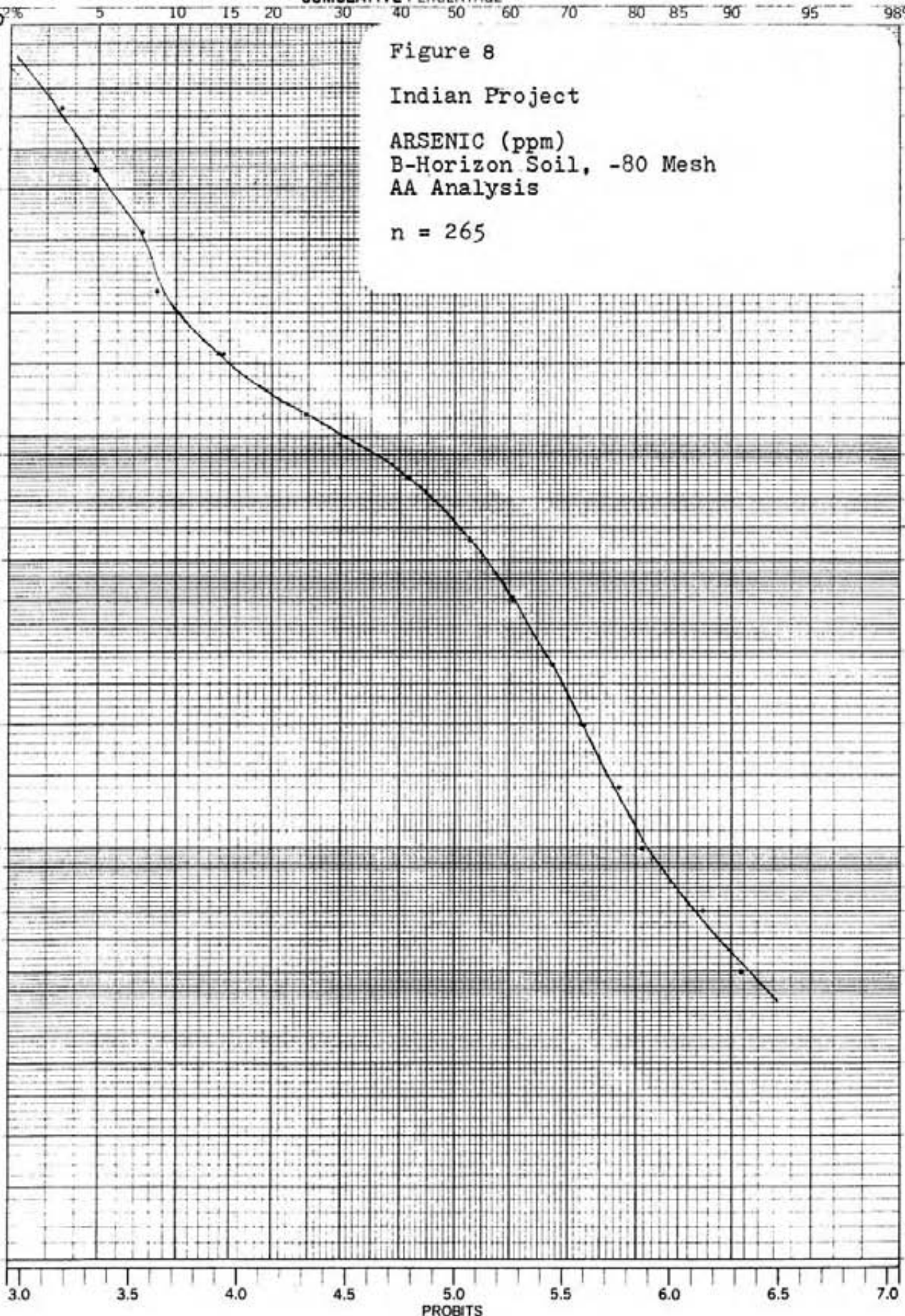


Figure 8  
Indian Project  
ARSENIC (ppm)  
B-Horizon Soil, -80 Mesh  
AA Analysis  
n = 265

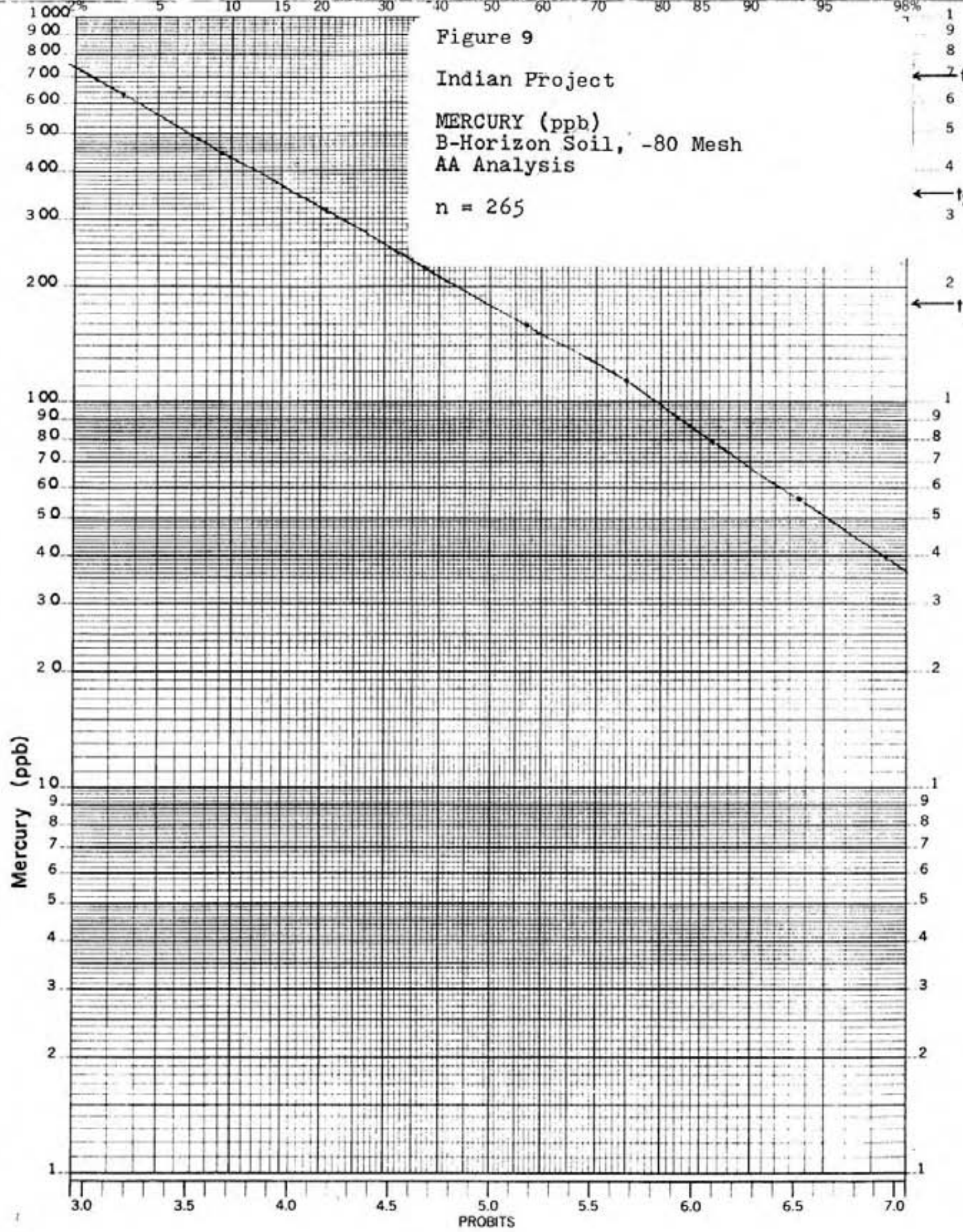
46 8082

KOE PROBABILITY X 3 LOG CYCLES  
KEUFFEL & ESSER CO. MADE IN U.S.A.

Arsenic (ppm)

PROBITS

CUMULATIVE PERCENTAGE



46 8082

K-E PROBABILITY X 3 LOG CYCLES KEUFFEL & ESSER CO. MADE IN U.S.A.



CUMULATIVE PERCENTAGE

10<sup>5</sup> 100,000 5 10 15 20 30 40 50 60 70 80 85 90 95 98% 1

Figure 10

Indian Project

MANGANESE (ppm)  
B-Horizon Soil, -80 Mesh  
AA Analysis

n = 265

46 8082

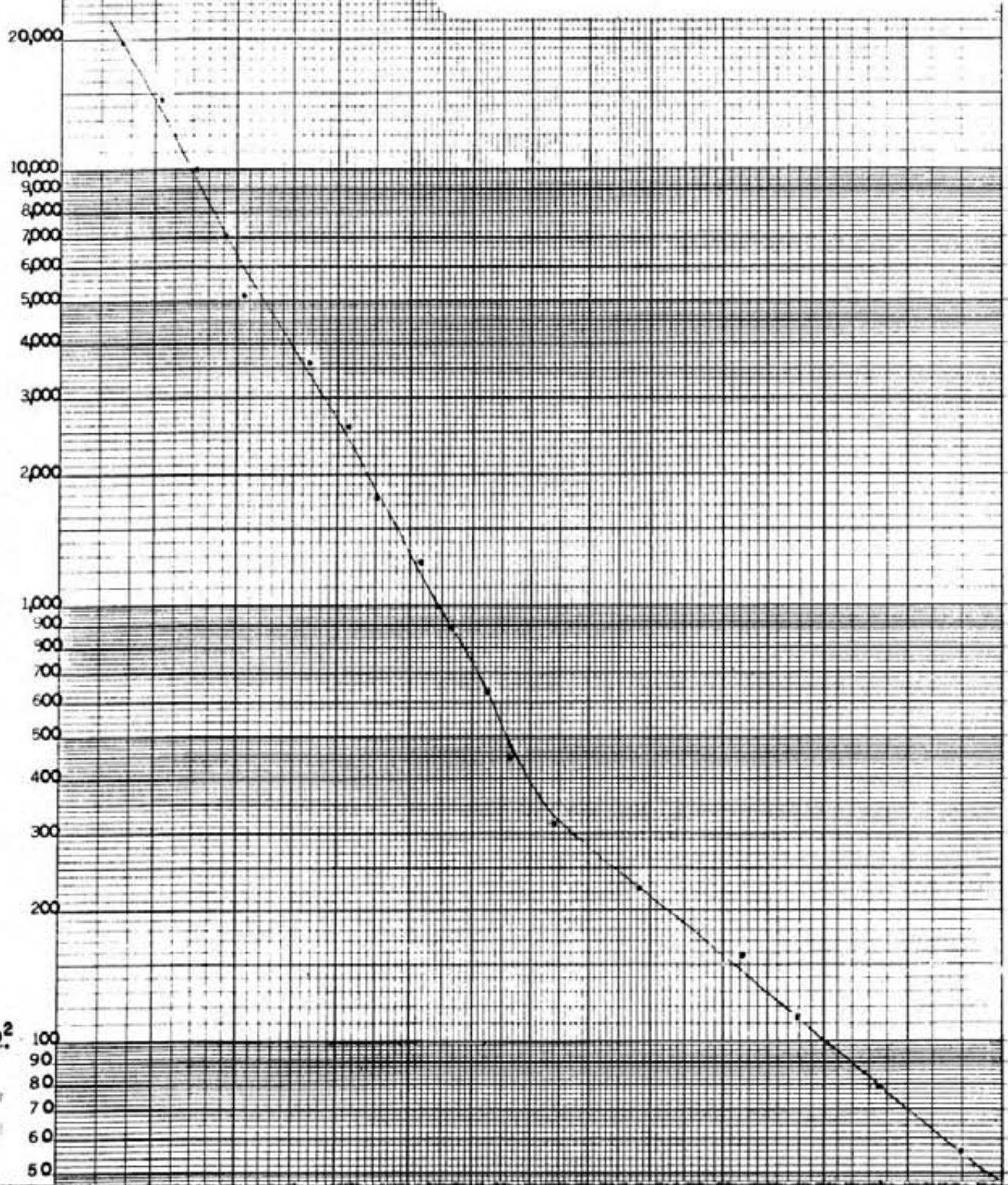
K&E PROBABILITY X 3 LOG CYCLES  
HEUFFEL & ESSER CO. MADE IN U.S.A.

PROBABILITY X 3  
HEUFFEL & ESSER CO.

Manganese (ppm)

100,000  
90,000  
80,000  
70,000  
60,000  
50,000  
40,000  
30,000  
20,000  
  
10<sup>4</sup>  
10,000  
9,000  
8,000  
7,000  
6,000  
5,000  
4,000  
3,000  
2,000  
  
10<sup>3</sup>  
1,000  
900  
800  
700  
600  
500  
400  
300  
200  
  
10<sup>2</sup>  
100  
90  
80  
70  
60  
50

1  
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5



Handwritten marks and scribbles on the left margin.

### C.2.c Soil Anomalies - Indian One Grid

A similar pattern of anomalies is shown in the 1983 gold and arsenic results as in the 1982 lead, zinc, silver, and copper results. Mercury is less closely associated with the other elements analysed.

Results from the re-analysis of pulps on the Indian One grid were followed up after the anniversary date of the Indian group. The sampling density of 25 meter line interval was increased to 12 1/2 meter line interval in the Indian One baseline, L3N to L6N area. Details of that follow-up will be included in next year's report. The gold anomaly (64,000ppb) at L4N, 0+25E was followed up based on a silver anomaly (135ppm) of 1982. At the sample site, a boulder of comb quartz and calcite vein material was found with heavily disseminated galena. No significant sulphide mineralization is present in nearby outcrop.

### C.2.d Soil Anomalies - Bush-Cobalt (Indian Two Grid)

The results from the Bush-Cobalt sampling are plotted in the south-west corner of the Indian Two grid maps. (Maps 24 to 32). No significant anomalies were detected in the 1983 survey.

D. INDUCED POLARIZATION SURVEY

D.1 Equipment and Procedures

A Scintrex time domain IP system was used, consisting of an IPC8/250 watt IP and DC resistivity transmitter and an IPR 10A digital time domain IP receiver.

In time domain IP, current is introduced into the ground by means of grounded electrodes (Fig. 3), which results in the polarisation of electrical charges at the boundaries of discrete metallic minerals, such as sulphides and also clay minerals, that may occur in pore spaces in the rock volume being energized. When the external current flow is interrupted the polarized electrical charges return to their former states in a finite period of time. This phenomenon can be observed by measuring the voltage of the ground. Over a period of time, the polarization voltage decays to its background value. Its amplitude and period of decay is an indication of the amount of polarizable material as well as a crude indicator of the type of polarizable material detected. The current waveform induced in the ground and the resulting voltages set up are shown in Fig. 4.

The transmitter used was a battery powered unit rated at 250 watts. Current was induced into the ground by means of two current electrodes (C<sub>1</sub> C<sub>2</sub>) of a dipole-dipole array (Fig. 3); the resulting voltages set up in the ground were measured across potential electrodes P<sub>1</sub> and P<sub>2</sub>. The minimal separation between electrodes "x" was 20m; measurements at each current electrode set up were made for up to five multiples (n=1, 2, 3, 4 and 5) of the separation "x". By increasing the separation between current and potential electrode pairs, a greater volume of rock was sampled, thus measurements reflect a greater depth of exploration for each successive increase in separation.

The transmitter cycle time was set at 2 secs "current on" and 2 secs "current off" after which the current polarity was reversed and the cycle repeated. During the "current off" portion of the cycle, 3 slices of the decay curve were sampled with the  $M_3$  value being plotted.

The quantities measured were chargeability, defined as:

$$M = \frac{V_s}{V_p} \times 1000 \frac{mV}{V}$$

where M - chargeability

$V_s$  - secondary or polarization voltage measured during the "current off" part of the cycle.

$V_p$  - primary ground voltage measured during the "current on" part of the cycle:

and apparent resistivity is defined as:

$$\rho_a = G \frac{V_p}{I_t} \text{ ohm-m}$$

where  $\rho_a$  is apparent resistivity

$V_p$  - is the primary voltage measured during the "current on" part of the cycle

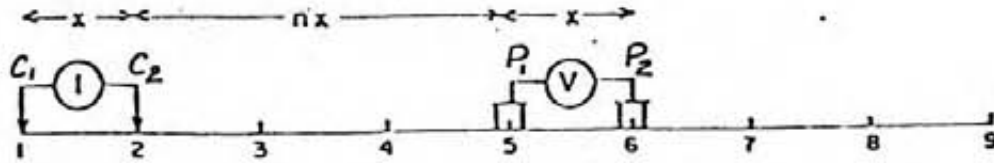
$I_t$  - is the transmitter current

$G$  - geometric factor dependant on type of electrode array and its size.

The data was plotted in a pseudo section format (Fig. 3) at a scale of 1:1000 and the Interpreted anomalies are plotted on Map 1 at a scale of

FIGURE 11

METHOD USED IN PLOTTING DIPOLE-DIPOLE  
INDUCED POLARIZATION AND RESISTIVITY RESULTS



Stations on line

$x$  = Electrode spread length  
 $n$  = Electrode separation

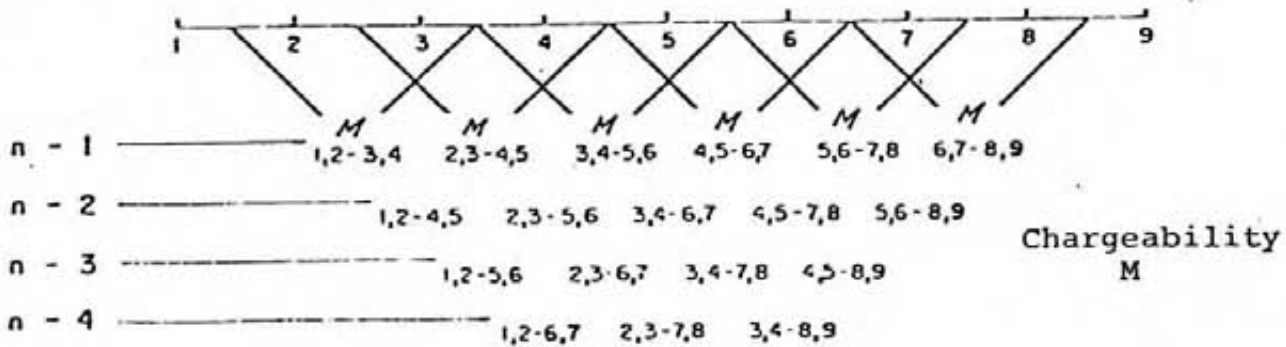
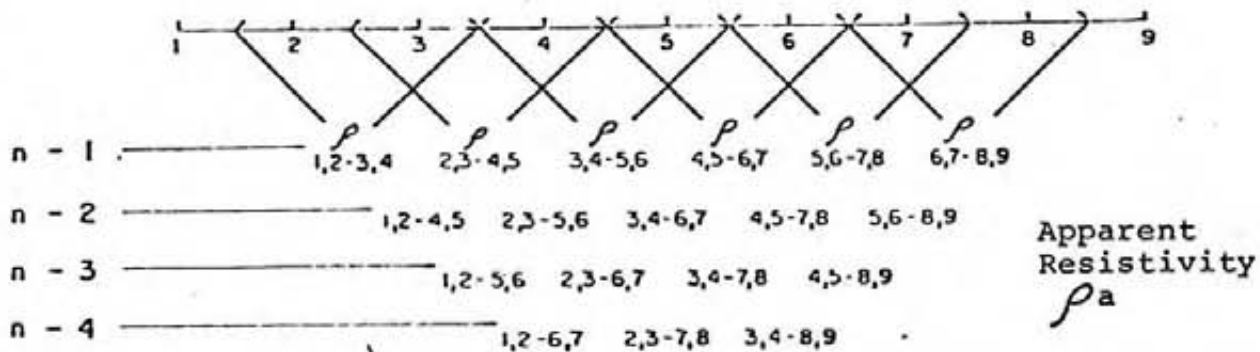
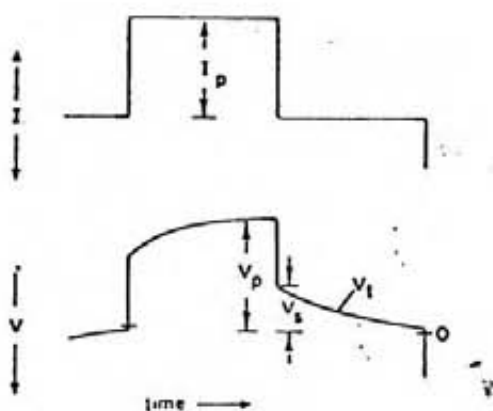


Figure 12



The IP pulse or time-method waveforms, ideally due to a long-period pulse, showing the induced primary current  $I_p$  being detected as a maximum primary voltage  $V_p$ . When current is turned off, voltage drops to a secondary level  $V_s$  and the transient voltage  $V_t$  decays with time. A theoretical measure of chargeability,  $M$ , is  $M = V_s/V_p$ .  
after Summer, 1976.



## D.2 I.P. Survey Results, Anomalies Interpreted

Three Lines (Lines 0, 2N, 4N, were surveyed using the dipole-dipole I.P. method.

### Zone A

This zone, observed on all three survey lines, is located immediately east of the base line. Zone A is characterized by a medium to high I.P./chargeability effect of 20 - 35 mV/V and a medium to high apparent resistivity of 1500 - 2500 ohm-metres. The strongest chargeability response is observed on Line 0. This zone appears to outcrop.

### Zone B

Zone B is observed on the N3, N4 and N5 readings for all three survey lines, suggesting a greater depth to the top of the source than that for Zones A and C. The response on Line 4N suggests this zone possibly plunges or weakens along strike to the north. Zone B is characterized by a high resistivity of 2000-4000 ohm-m. and a high I.P. affect of 25-40 mV/V. The strongest response is observed on Line 2N.

### Zone C

Zone C occurs along the east edge of the survey lines. The depth to the top of the source appears to be shallow, possibly outcropping. Zone C has good depth extent, as suggested on Line 4N. Zone C is characterized by a medium to high apparent resistivity of 1500-4000 ohm-m. and a high chargeability effect of 30 - 50 mV/V.

## E. CONCLUSIONS

### E.1 Geochemical Soil Surveys

- The vein mineralization of the Indian Mine has a closely associated multi-element B-horizon soil anomaly. The anomaly is dispersed 50-100 meters downslope from the trace of the vein sub-crop.
- A second multi-element B-horizon soil anomaly is present on the Indian-Woodier grid. It occurs in a north-south zone which crosses each of the grid lines between 3+50 and 4+50E. The zone is uphill from the Indian Mine vein. It is sub-parallel to a chargeability anomaly in the I.P. survey.
- Follow-up of the Indian One area gold, arsenic, and mercury was not started prior to the anniversary date of the Indian claim group.
- Values for gold and arsenic are locally very high in the B-horizon soils of the Indian Mine area and Indian One grid. Gold as high as 64,000ppb and arsenic as high as 4300ppm were detected.
- No significant anomalies were found in the Bush-Cobalt area (Indian Two grid).

### E.2 Test Induced Polarization Survey

- Three anomalous, sub-parallel zones, labelled A, B, C on the pseudo sections occur over the area of the Indian Mine.
- Zones A and B occur over the quartz-calcite-sulphide vein mineralization in the Indian Mine.
- Zone C is sub-parallel to A and B; it occurs near the multi-element soil anomaly at 3+50E on the grid.

## F. REFERENCES

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Appendix One

Cost Statement

1. Indian Mine Area Sampling

Wages, Paul Hardisty	2d x 86.44/d	172.88
Wages, M. McGuigan	2d x 87.36/d	174.72
Wages, Sheldon Ryder	2d x 104.00/d	208.00
Wages, Ian Webster	4d x 87.36/d	349.44
Wages, Paul McGuigan	7d x 300.00/d	2100.00
Wages, André Laberge	1d x 87.36/d	87.36
Commissary, 18m-d x 40/m-d		720.00
Analyses, 140 samples x 17.85/spl		2499.00
Analyses, 69 samples (ICP) x 6.85/spl		472.65
Analyses, 69 samples (cold extract.) x 3,80/spl		262.20
Drafting supplies, consummables, shipping		300.00
Part 1 Total		<u>\$7346.25</u> 7346.25

2. Indian One - Analysis of Sample Pulps

Wages, T. Samoil	1d x 200.00/d	200.00
Wages, Ian Webster	2d x 87.36/d	172.72
Wages, M. McGuigan	1d x 87.36/d	87.36
Wages, Paul McGuigan	2d x 300.00/d	600.00
Analyses, 543 samples x 12.25		6651.75
Drafting supplies, consummables		200.00
Commissary, 5m-d x 40/m-d		200.00
Part 2 Total		<u>\$8113.83</u> 8113.83

3. Bush-Cobalt - Indian Two Area Sampling and Linecutting

Wages, Paul Hardisty	2d x 86.44/d	172.88
Wages, David Thompson	2d x 86.44/d	172.88
Commissary, 4m-d x 40/m-d		160.00
Analyses, 50 samples x 17.85/spl		892.50
Part 3 Total		<u>\$1398.26</u> 1398.26

Cost Statement cont....

4. Indian Mine Area - Induced Potential

Wages, Lloyd Wilson	4d x 300.00/d	1200.00	
Wages, Sheldon Ryder	2d x 104.00/d	208.00	
Wages, André Jetté	2d x 87.36/d	174.72	
Wages, Paul Hardisty	2d x 86.44/d	172.88	
Wages, Jay Spare	2d x 87.36/d	174.72	
Wages, M. McGuigan	1d X 87.36/d	87.36	
Rental, I.P. equipment		700.00	
Commissary, 13m-d x 40/m-d		520.00	
	Part 4 Total	<u>\$3237.68</u>	<u>3237.68</u>
	Total	\$20,096.02	

## Appendix Two

### ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK PROCEDURES FOR Mo, Cu, Cd, Pb, Mn, Ni, Ag, Zn, As, F

Samples are processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95° C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer.

1.0 gram of the samples are digested for 6 hours with HNO<sub>3</sub> and HClO<sub>4</sub> mixture.

After cooling samples are diluted to standard volume. The solutions are analyzed by Atomic Absorption Spectrophotometers.

Copper, Lead, Zinc, Silver, Cadmium, Cobalt, Nickel and Manganese are analysed using the CH<sub>2</sub>H<sub>2</sub>-Air flame combination but the Molybdenum determination is carried out by C<sub>2</sub>H<sub>2</sub>-H<sub>2</sub>O gas mixture directly or indirectly (depending on the sensitivity and detection limit required) on these sample solutions.

For Arsenic analysis a suitable aliquote is taken from the above 1 gram sample solution and the test is carried out by Gutzeit method using Ag CS<sub>2</sub>N (C<sub>2</sub>H<sub>5</sub>)<sub>2</sub> as a reagent. The detection limit obtained is 1. ppm.

Flourine analysis is carried out on a 200 milligram sample. After fusion and suitable dilutions the fluoride ion concentration in rocks or soil samples are measured quantitatively by using fluorine specific ion electrode. Detection limit of this test is 10 ppm F.

(REPORT VALUES IN PPM)	AG	AS	B	CO	CU	MM	MO	PB	SB	ZN
6500	1.8	135	18	11	36	356	18	73	19	97
6501	1.1	21	7	6	19	101	7	21	4	42
6502	.9	0	9	3	8	85	3	31	0	26
6503	2.5	330	25	27	56	2250	33	223	23	103
6504	5.7	742	21	19	65	862	24	102	30	75
6505	1.9	270	15	11	22	234	17	67	17	63
6506	6.3	9	3	1	6	186	1	6	3	20
6507	3.9	116	18	13	18	181	19	85	13	79
6508	3.3	0	2	1	4	78	0	6	1	20
6509	2.5	0	7	4	6	93	3	82	0	47
6510	16.3	0	37	61	34	41500	86	242	11	3130
6511	27.0	0	34	46	75	56100	179	204	0	11600
6512	2.6	0	11	5	34	4240	34	28	1	2310
6513	5.8	0	12	9	23	16100	102	52	6	4100
6514	40.8	0	33	78	79	70500	388	168	0	13000
6515	11.9	0	40	96	71	29000	129	1030	24	1670
6516	.3	0	11	6	7	1480	10	43	1	113
6517	.4	21	11	8	15	532	11	53	3	59
6518	1.1	0	8	1	11	175	3	121	0	103
6519	2.7	29	14	8	81	339	12	1040	2	823
6520	51.3	503	18	22	2270	306	58	112000	397	3380
6521	7.5	89	13	9	341	234	16	6030	26	1170
6522	3.3	118	16	10	81	200	24	1410	19	534
6523	.9	22	14	6	29	209	15	338	6	100
6524	.9	89	14	9	39	159	21	194	9	201
6525	2.9	3	6	2	10	66	3	205	1	72
6526	2.6	16	6	4	12	84	6	40	0	33
6527	1.6	57	12	13	51	475	20	56	3	87
6528	1.3	76	15	11	38	170	28	82	11	40
6529	1.9	138	21	16	36	210	33	76	19	84
6530	.5	85	16	10	69	192	48	51	13	133
6531	.3	51	10	9	18	210	17	21	5	77
6532	.9	30	11	5	17	212	14	39	4	118
6533	.6	50	10	7	10	65	15	26	3	36
6534	3.0	79	11	7	18	241	29	48	9	150
6535	3.2	112	11	9	17	112	9	40	3	83
6536	5.2	201	25	18	34	224	24	81	21	122
6537	1.0	4	5	4	6	79	3	3	0	22
6538	1.3	246	23	18	29	184	22	87	28	94
6539	7.9	448	27	31	37	2710	29	258	23	178
6540	11.8	507	33	47	88	3960	32	771	31	376
6541	1.9	46	8	6	10	438	8	103	3	40
6542	2.3	16	19	25	15	1530	18	120	1	223
6543	21.3	0	44	18	242	42000	107	582	0	7320
6544	14.8	0	8	3	120	1470	8	183	0	1400
6545	27.2	0	29	103	89	26400	22	472	0	220
6546	.9	26	14	11	18	1000	12	40	5	59
6547	2.0	0	5	1	4	235	0	21	0	15
6548	1.5	76	16	12	32	226	17	47	4	78
6549	12.2	63	10	9	33	161	14	49	6	96
6550	2.6	15	8	3	9	648	6	47	5	34
6551	3.0	17	6	3	7	106	5	29	2	38
6552	1.9	23	11	4	8	168	6	35	4	32
6553	8.4	0	37	116	67	11000	31	1690	1	364
6554	4.4	59	30	26	25	3060	41	509	12	443
6555	12.1	0	32	43	99	14300	30	478	2	1560
6556	3.3	32	3	4	25	312	5	49	3	59
6557	2.1	5	7	3	15	181	4	52	1	52
6558	.7	45	16	9	24	192	14	42	3	59
6559	1.5	107	18	16	21	1250	24	71	15	51

PROJECT No: INDIAN 2184  
ATTENTION: PAUL MCGUIGAN

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2  
(604)980-5814 OR (604)988-4524

INDUSTRY: FINE 1 OF 1  
FILE No: 3-675S/P3  
DATE: AUGUST 11, 1983

(REPORT VALUES IN PPM)	AG	AS	B	CO	CU	MN	MO	PP	SR	ZN
6560	0	78	16	12	11	250	18	31	15	37
6561	.6	59	16	12	17	195	17	48	10	56
6562	1.1	40	13	9	16	460	15	35	8	34
6563	12.9	0	30	73	51	41500	59	378	13	169
6564	1.1	104	11	18	10	1750	46	56	19	150
6565	2.5	71	12	10	14	749	32	39	14	125
6566	.7	8	8	7	7	236	9	15	7	61
6567	2.0	36	9	11	15	1050	16	83	10	102
6568	60.1	95	16	25	246	4000	64	1780	41	1700



Appendix Four

LINE BY LINE ANALYSIS

DIPOLE-DIPOLE I.P. SURVEY

LINE 0: The apparent resistivities are generally medium to high along the entire length of the survey line, with the exception of the slightly lower resistivities for one dipole set up in the vicinity of 10W. To the east of 10W, the I.P./chargeability effects are anomalously high, with three subparallel zones of even higher chargeability east of the base line; these zones are labelled A, B and C.

LINE 2N: Same as for Line 0. The electrical contact is located at approximately 20W.

LINE 4N: Same as for Line 0 and 2N. The electrical contact is located at approximately 50W.

Appendix Two (cont.)

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK  
PROCEDURE FOR GOLD GEOCHEMICAL ANALYSIS

Geochemical samples for Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 5.0 or 10.0 grams are pretreated with  $\text{HNO}_3$  and  $\text{HClO}_4$  mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

At this stage of the procedure copper, silver and zinc can be analysed from suitable aliquote by Atomic Absorption Spectrophotometric procedure.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.

APPENDIX FIVE

Statement Of Qualifications

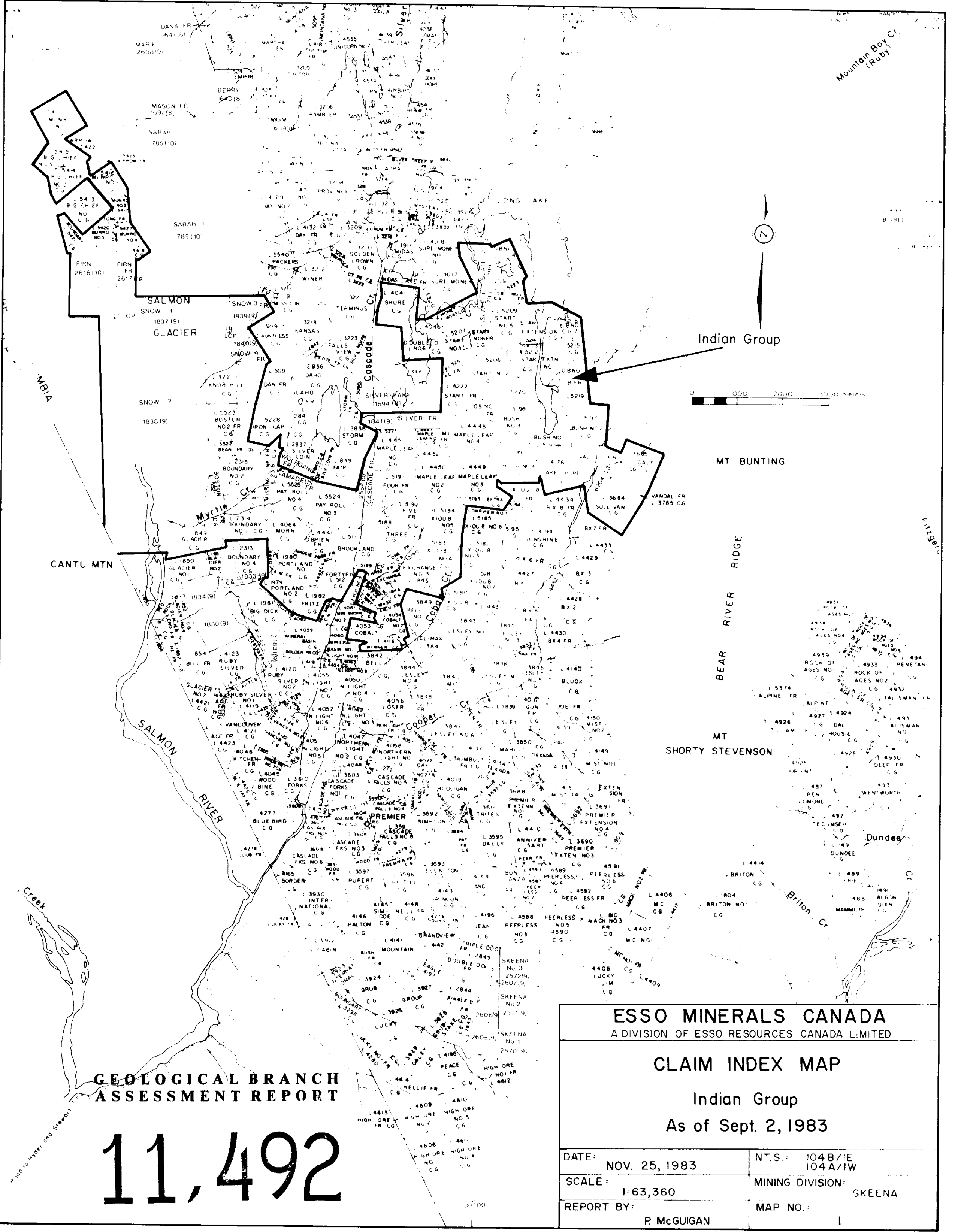
I, Paul J. McGuigan, of Stewart B.C., do hereby certify that:

- 1) I graduated with a Bachelor of Science (Honours) Degree in Geology from the University of British Columbia in 1974.
- 2) I have been employed since that time as an exploration geologist in minerals. Since 1976, I have been employed by Esso Resources Canada Limited, mostly in British Columbia.

## APPENDIX FIVE

### QUALIFICATIONS OF AUTHOR

Lloyd M. Wilson received his B.A. (Honors) degree in Mathematics from Memorial University of Newfoundland in 1971. From May, 1971 to October, 1973, Mr. Wilson worked full-time in oil and gas exploration for Amoco Canada Petroleum Co. Ltd. in Calgary, Alberta, specializing in gravity, magnetics and seismic methods. Since then he has had nine years of experience as a mineral exploration geophysicist - three with Geotrex Limited (1973 - 1976) in Ottawa and six with Esso Minerals Canada in Toronto. For the past three years he has been in charge of project planning, geophysical field activities, project reports and the training and supervision of student personnel for Esso Minerals Canada. He is a member of the Society of Exploration Geophysicists, the Prospectors and Developers Association, CIMM (Toronto Branch) and KEGS.



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

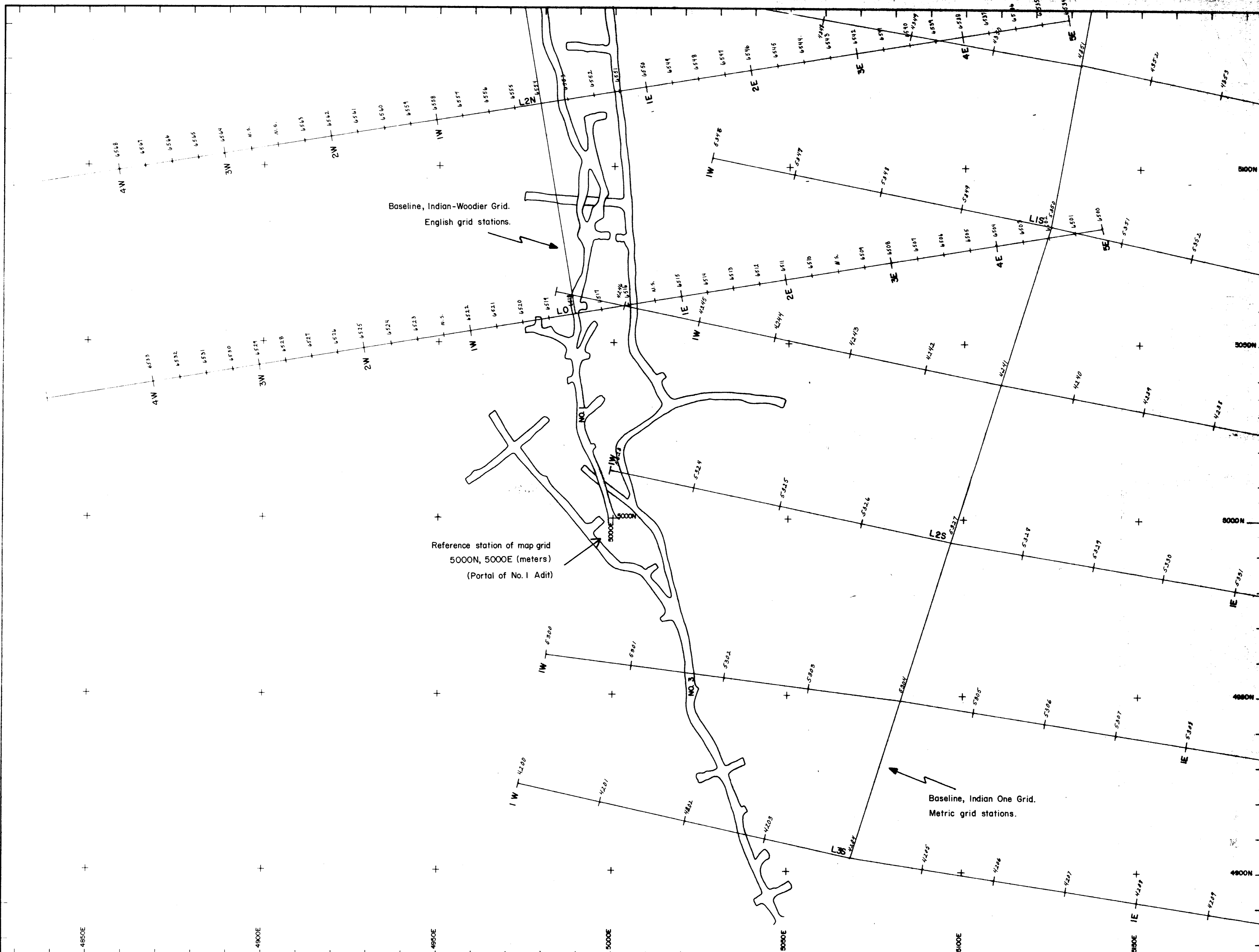
**11,492**

**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**CLAIM INDEX MAP**

Indian Group  
As of Sept. 2, 1983

DATE:	NOV. 25, 1983	N.T.S.:	104 B/IE 104 A/IW
SCALE:	1:63,360	MINING DIVISION:	SKEENA
REPORT BY:	P. McGUIGAN	MAP NO.:	1



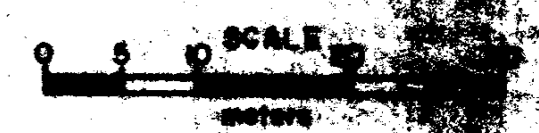
Baseline, Indian-Woodier Grid.  
English grid stations.

Reference station of map grid  
5000N, 5000E (meters)  
(Portal of No. 1 Adit)

Baseline, Indian One Grid.  
Metric grid stations.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,492



ESSO MINERALS CANADA  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN PROJECT  
Indian Mine Area  
GEOCHEMISTRY  
SAMPLE LOCATION

SCALE: 1:500	REV: 104 B/IE
DATE: Nov. 25, 1983	DRAWN BY: [Signature]
BY: P. McGuigan	MAP NO. 2







133/76 Total Extractable / Cold Extractable (ppm)		SYMBOL
COPPER (ppm)		
t4	600	●
t3	300	■
t2	160	●
t1	30	○

GEOLOGICAL BRANCH  
 ASSESSMENT REPORT  

# 11,492

**ESSO MINERALS CANADA**  
 A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**  
 Indian Mine Area  
**GEOCHEMISTRY**  
 COPPER (ppm)  
 'B' Horizon Soil  
 -80 Fraction

SCALE: 1: 500	N.T.S.: IO4 B/IE
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 4

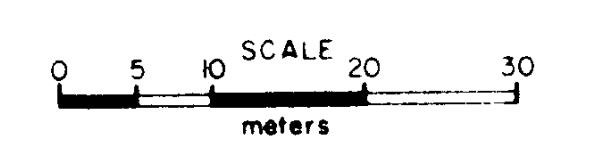




COPPER (ppm)	SYMBOL
t4 600	●
t3 300	■
t2 160	●
t1 30	○

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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ESSO MINERALS CANADA  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN PROJECT  
Indian Mine Area  
GEOCHEMISTRY  
COPPER (ppm)  
'B' Horizon Soil  
-80 Fraction

SCALE: 1:500	N.T.S.: 104B/1E
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 5

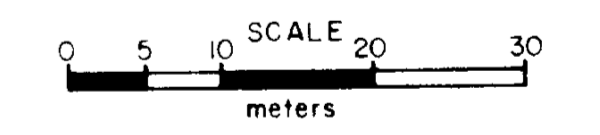


133/76 Total Extractable / Cold Extractable (ppm) (ppm)

LEAD (ppm)	SYMBOL	
t4	1000	●
t3	400	■
t2	150	●
t1	60	○

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**  
**Indian Mine Area**  
**GEOCHEMISTRY**  
**LEAD (ppm)**  
**'B' Horizon Soil**  
**-80 Fraction**

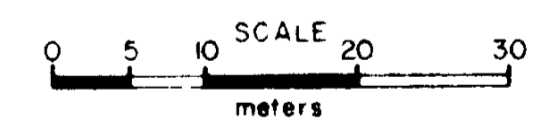
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DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 6



LEAD (ppm)	SYMBOL
t4 1000	◆
t3 400	■
t2 150	●
t1 60	○

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**  
  
Indian Mine Area  
**GEOCHEMISTRY**  
  
LEAD (ppm)  
  
'B' Horizon Soil  
  
-80 Fraction

SCALE: 1:500	N.T.S.: 104B/1E
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 7



133/76	Total Extractable / Cold Extractable (ppm)
ZINC (ppm)	SYMBOL
t4	4000 ●
t3	1000 ■
t2	350 ●
t1	100 ○

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

# 11,492

0 5 10 SCALE 20 30  
meters

**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**

Indian Mine Area  
GEOCHEMISTRY  
ZINC (ppm)  
'B' Horizon Soil  
-80 Fraction

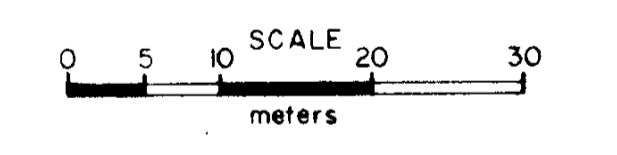
SCALE: 1:500	N.T.S.: 104 B/IE
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 8



ZINC (ppm)	SYMBOL	
t4	4000	●
t3	1000	■
t2	350	●
t1	100	○

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 11,492



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**  
**Indian Mine Area**  
**GEOCHEMISTRY**  
**ZINC (ppm)**  
**'B' Horizon Soil**  
**-80 Fraction**

SCALE: 1:500	N.T.S.: 104B/1E
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 9



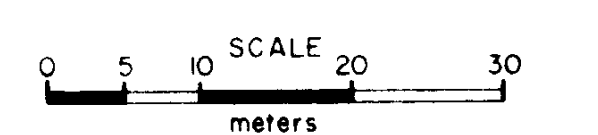




SILVER (ppm)	SYMBOL
t4 250	●
t3 10.0	■
t2 6.0	○
t1 2.8	•

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 11,492



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**  
  
Indian Mine Area  
**GEOCHEMISTRY**  
**SILVER (ppm)**  
**'B' Horizon Soil**  
**-80 Fraction**

SCALE: 1:500	N.T.S.: 104B/1E
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: //

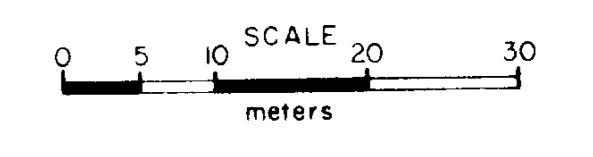




GOLD (ppb)	SYMBOL
14 1000	◆
t3 150	■
t2 30	●

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**



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**INDIAN PROJECT**  
  
Indian Mine Area  
**GEOCHEMISTRY**  
  
GOLD (ppb)  
  
'B' Horizon Soil  
  
- 80 Fraction

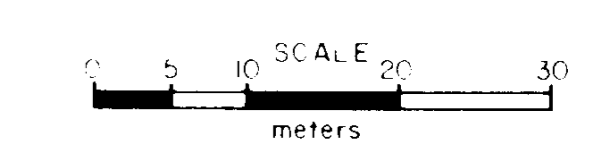
SCALE: 1:500	N.T.S.: IO4B/IE
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 13



ARSENIC (ppm)	SYMBOL	
t4	1000	●
t3	300	■
t2	150	●
t1	60	○

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**  
  
Indian Mine Area  
**GEOCHEMISTRY**  
**ARSENIC (ppm)**  
**'B' Horizon Soil**  
**-80 Fraction**

SCALE: 1:500	N.T.S.: 104 B/IE
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: P. McGuigan	MAP NO.: 14





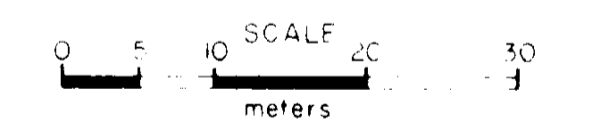




MERCURY (ppb)	SYMBOL
t4	■
t3 700	●
t2 350	○
t1 180	•

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 11,492



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

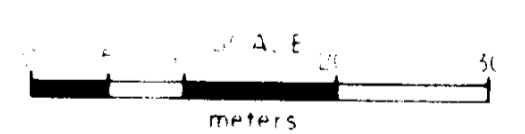
**INDIAN PROJECT**  
  
Indian Mine Area  
**GEOCHEMISTRY**  
**MERCURY (ppb)**  
**'B' Horizon Soil**  
**-80 Fraction**

SCALE	1:500	N.T.S.	104B/1E
DATE	Nov. 25, 1983	MINING DIVISION	Skeena
BY	P. McGuigan	MAP NO.	12



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

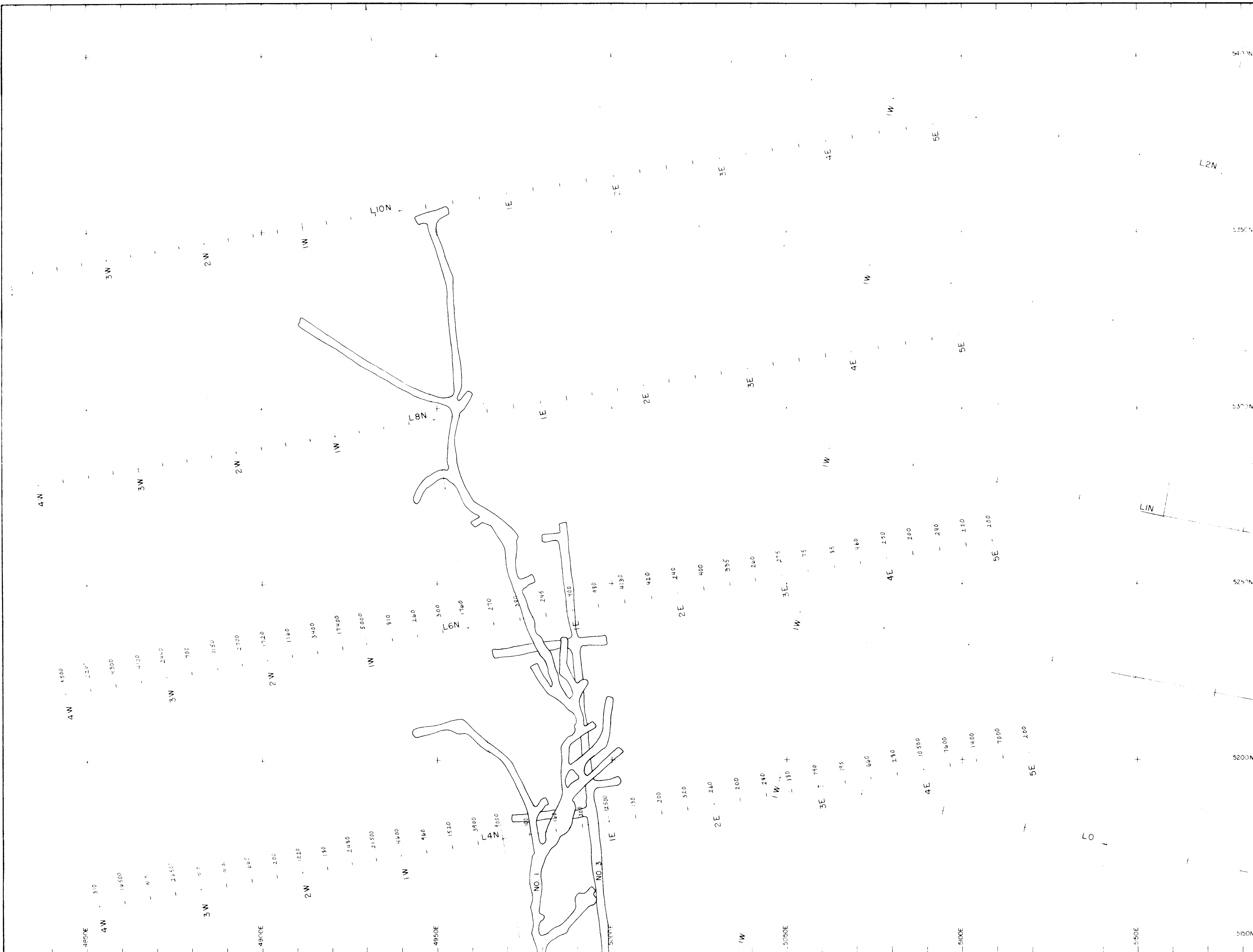
**11,492**



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

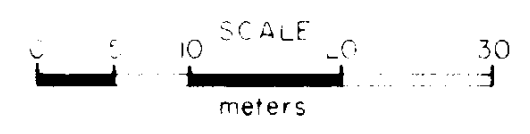
**INDIAN PROJECT**  
  
Indian Mine Area  
**GEOCHEMISTRY**  
Manganese (ppm)  
**'B' Horizon Soil**  
**-80 Fraction**

SCALE	1:500	N.T.S.	104 B/IE
DATE	Nov. 25, 1983	MINING DIVISION	Skeena
BY	P. McGuigan	MAP NO.	/B



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**

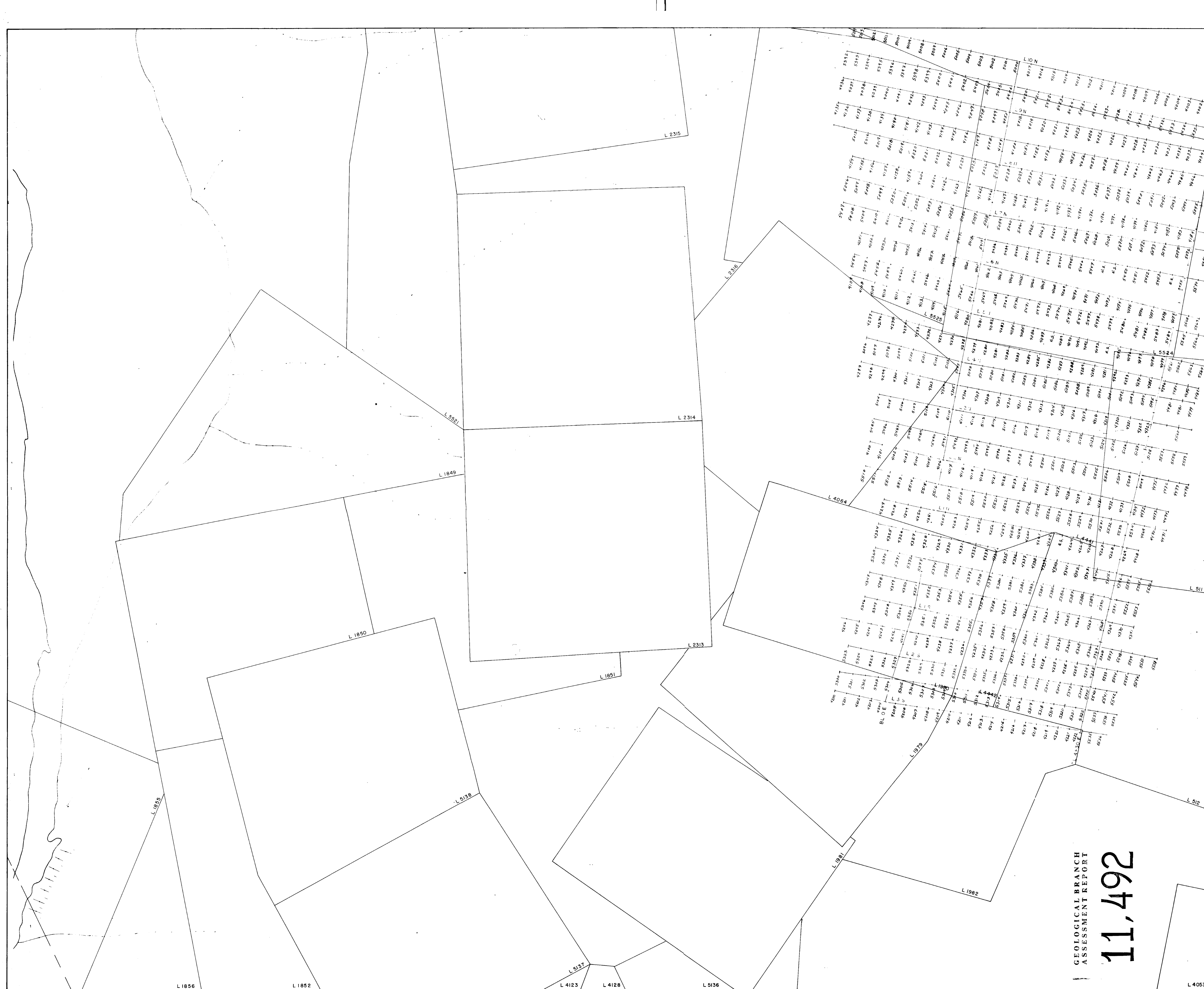


**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

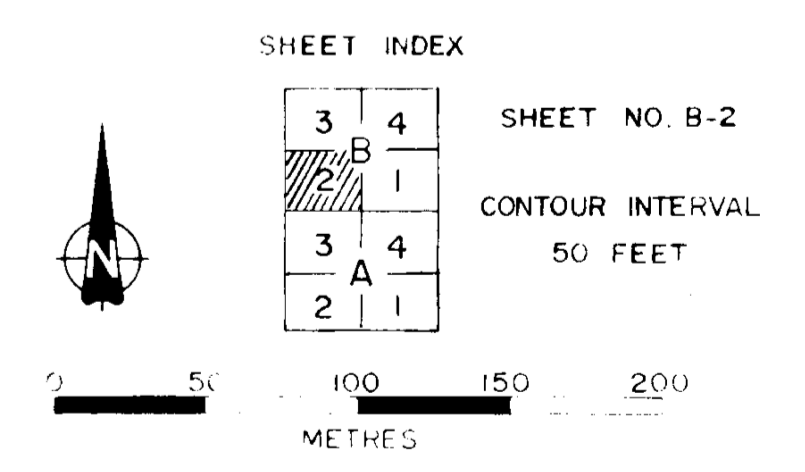
**INDIAN PROJECT**  
  
Indian Mine Area  
**GEOCHEMISTRY**  
Manganese (ppm)  
'B' Horizon Soil  
-80 Fraction

SCALE	1:500	N.T.S.	104B/1E
DATE	Nov. 25, 1983	MINING DIVISION	Skeena
BY	P. McGuigan	MAP NO.	19





GEOLOGICAL BRANCH  
ASSESSMENT REPORT  
**11,492**



ESSO MINERALS CANADA  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN I GRID  
GEOCHEMISTRY  
SAMPLE LOCATION

SCALE	1:2500	N.T.S.	104 B/E
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. Mc GUIGAN	MAP NO.	20



GOLD (ppb)      SYMBOL

t4      1000      ●

t3      150      ■

t2      30      ●

SHEET INDEX

3	4	SHEET NO. B-2
3	1	CONTOUR INTERVAL
3	4	50 FEET
2	1	

0 50 100 150 200 METRES

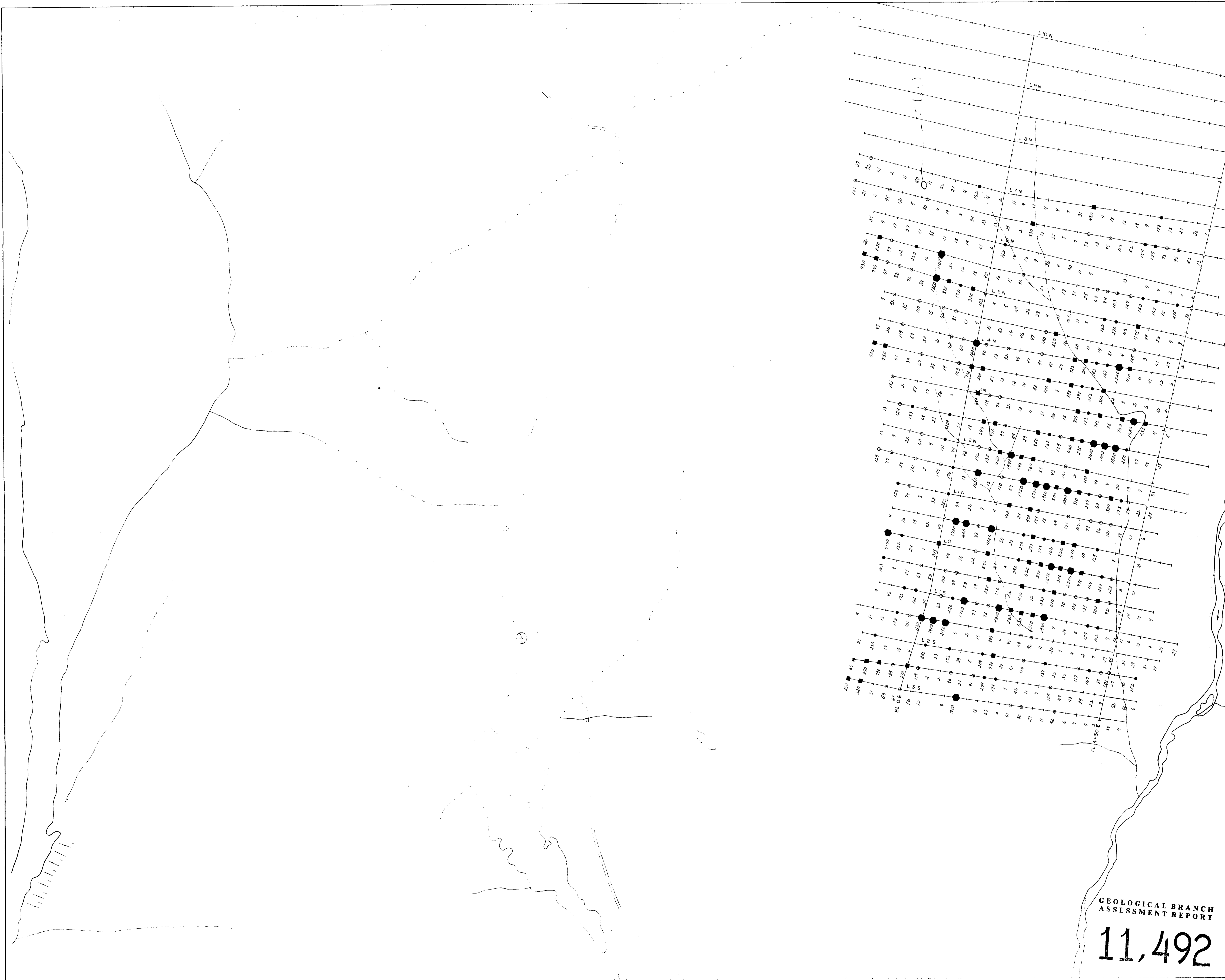
**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN I GRID  
GEOCHEMISTRY  
GOLD (ppb)  
'B' Horizon Soil  
-80 Fraction

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**

SCALE	1:2500	N.T.S.	104 B/1E
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. McGuigan	MAP NO.	21



ARSENIC (ppm)	SYMBOL
t4 1000	●
t3 300	■
t2 150	○
t1 60	●

SHEET INDEX

3	4
B	1
3	4
A	1
2	1

SHEET NO. B-2  
CONTOUR INTERVAL  
50 FEET

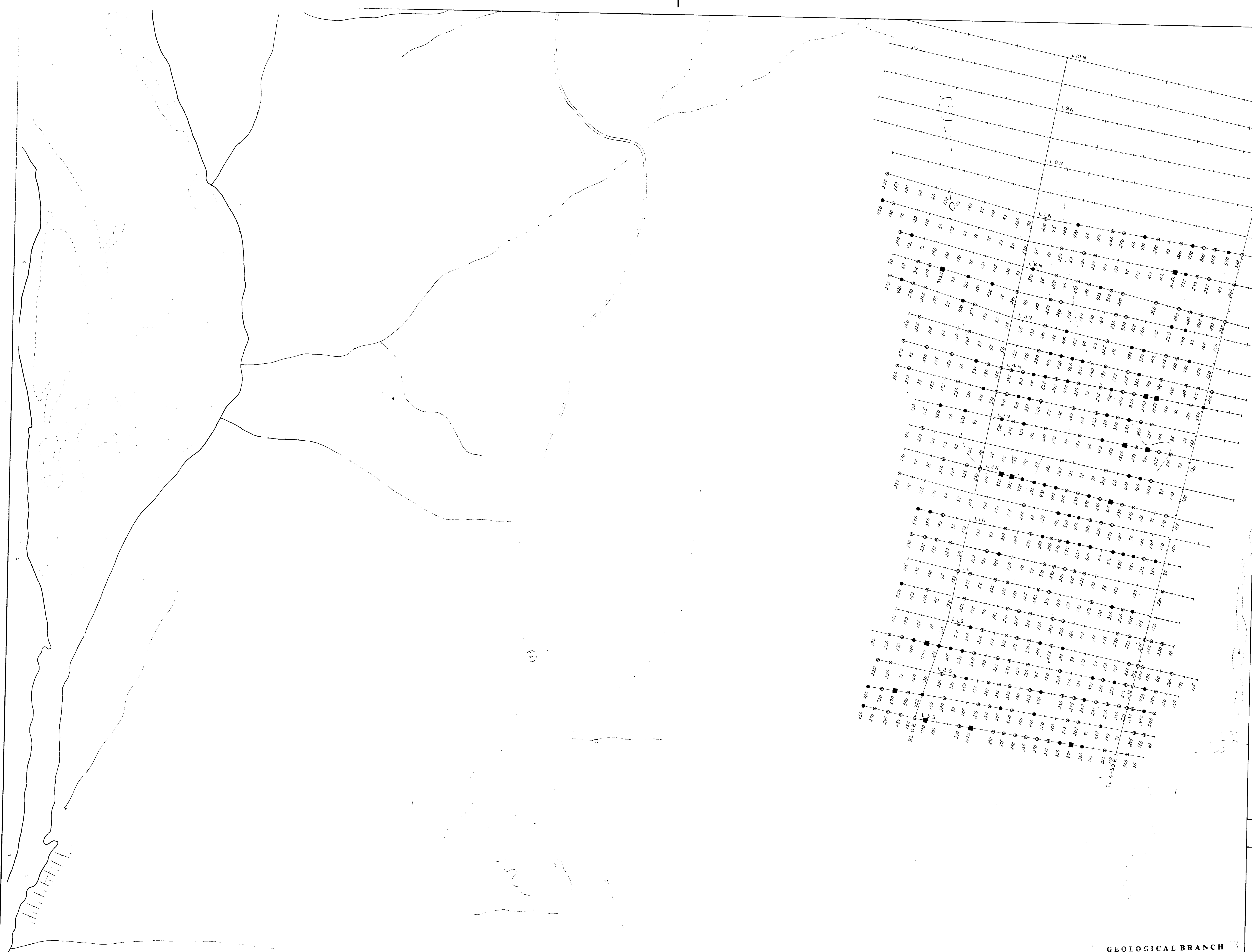
**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN I GRID  
GEOCHEMISTRY  
ARSENIC (ppm)  
'B' Horizon Soil  
-80 Fraction

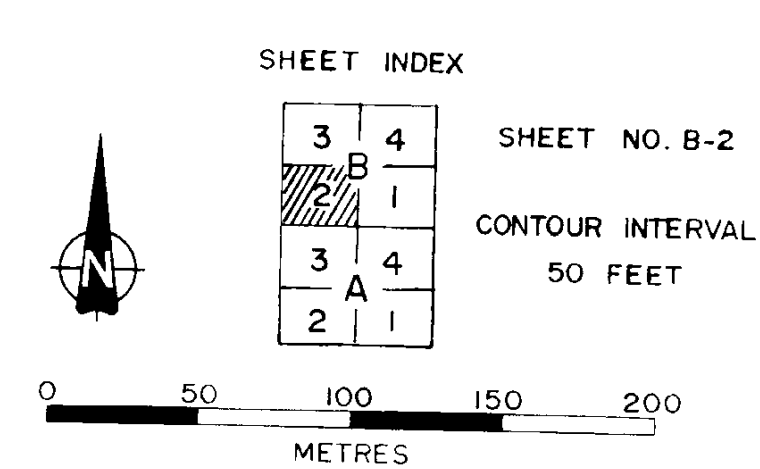
GEOLOGICAL BRANCH  
ASSESSMENT REPORT  
**11,492**

SCALE 1:2500	N.T.S. 104 B/1E
DATE NOV. 25, 1983	MINING DIVISION SKEENA
DRAWN BY P. McGUIGAN	MAP NO. 22





MERCURY	ppb	SYMBOL
t4		■
t3	700	●
t2	350	○
t1	180	○



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN I GRID  
GEOCHEMISTRY  
MERCURY (ppb)  
'B' Horizon Soil  
-80 Fraction

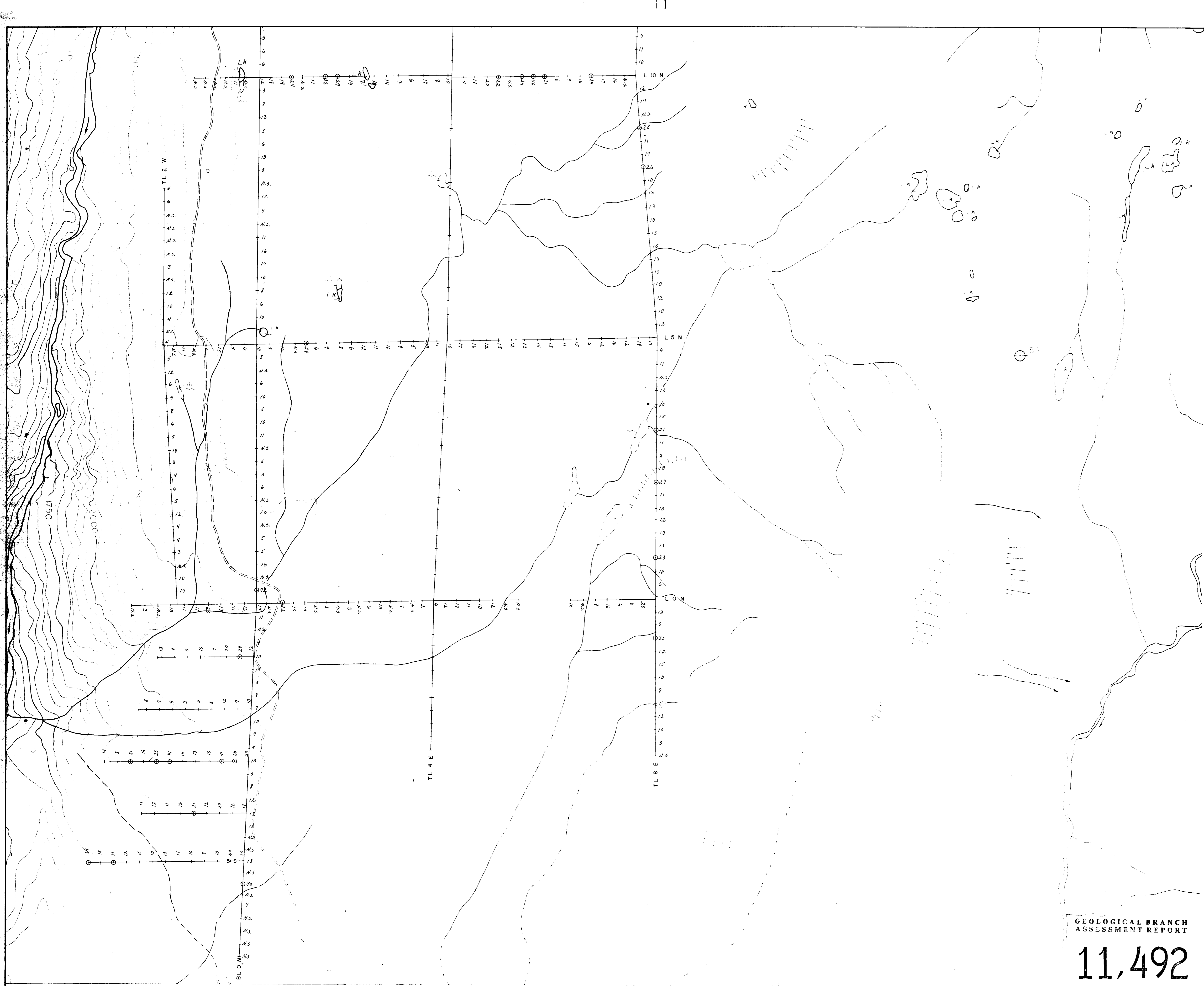
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**

SCALE	1:2500	N.T.S.	104 B/IE
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. MCGUIGAN	MAP NO.	23







COPPER (ppm)	SYMBOL
0-21	•
21-160	○
160-300	◻
300+	◼

SHEET INDEX

3	4
2	1
3	4
2	1

SHEET NO. B-1

CONTOUR INTERVAL  
50 FEET

0 50 100 150 200  
METRES

**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN II GRID  
GEOCHEMISTRY  
COPPER (ppm)  
'B' Horizon Soil  
-80 Fraction**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,492**

SCALE	1:2500	N.T.S.	104 B/IE
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. MCGUIGAN	MAP NO.	25



LEAD (ppm)      SYMBOL

0-25                    .

25-150                ◻

150-1000            ◉

1000+                ◐

SHEET INDEX

3	4
B	A
2	1
3	4
A	1
2	1

SHEET NO. B-1

CONTOUR INTERVAL  
50 FEET

0 50 100 150 200  
METRES

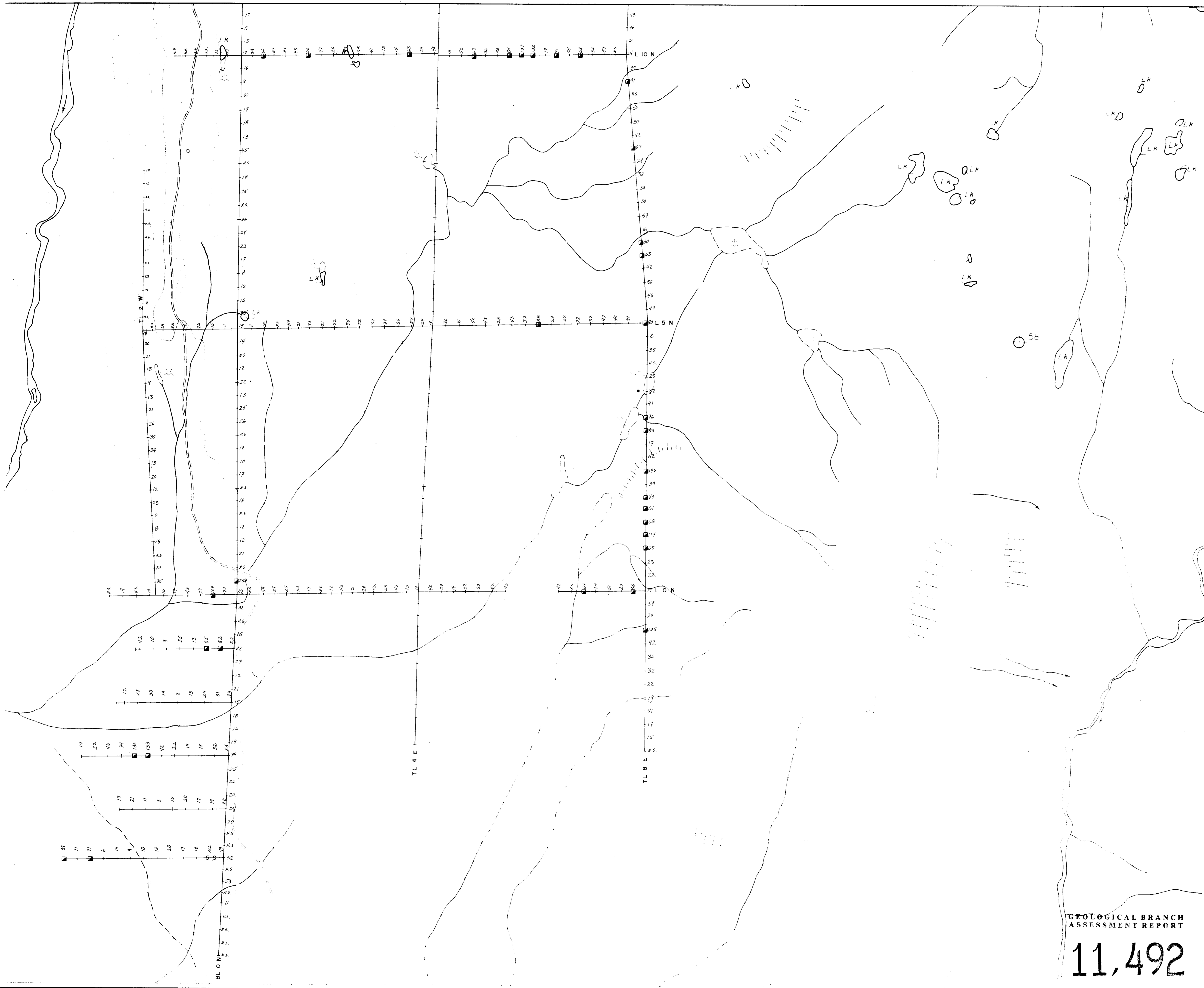
**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN II  
GEOCHEMISTRY  
LEAD(ppm)  
'B' Horizon Soil  
-80 Fraction**

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

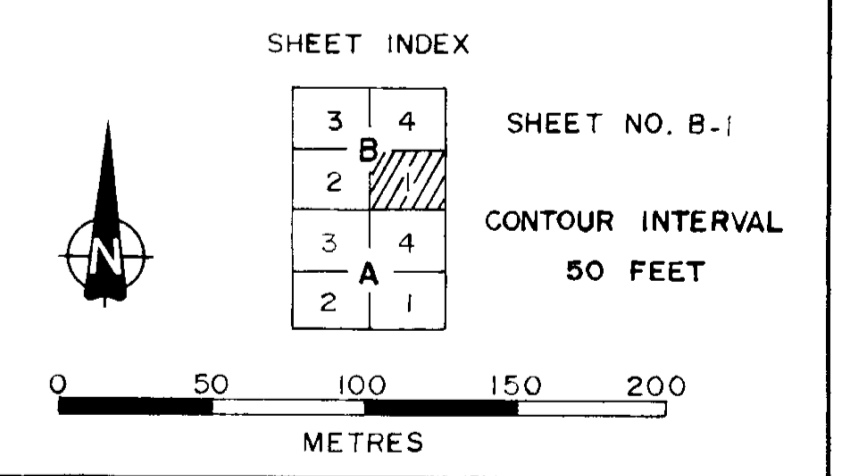
**11,492**

SCALE	1:2500	N.T.S.	104 B/IE
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. MCGUIGAN	MAP NO	26



ZINC (ppm)      SYMBOL

0-60	•
60-350	◼
350 +	■



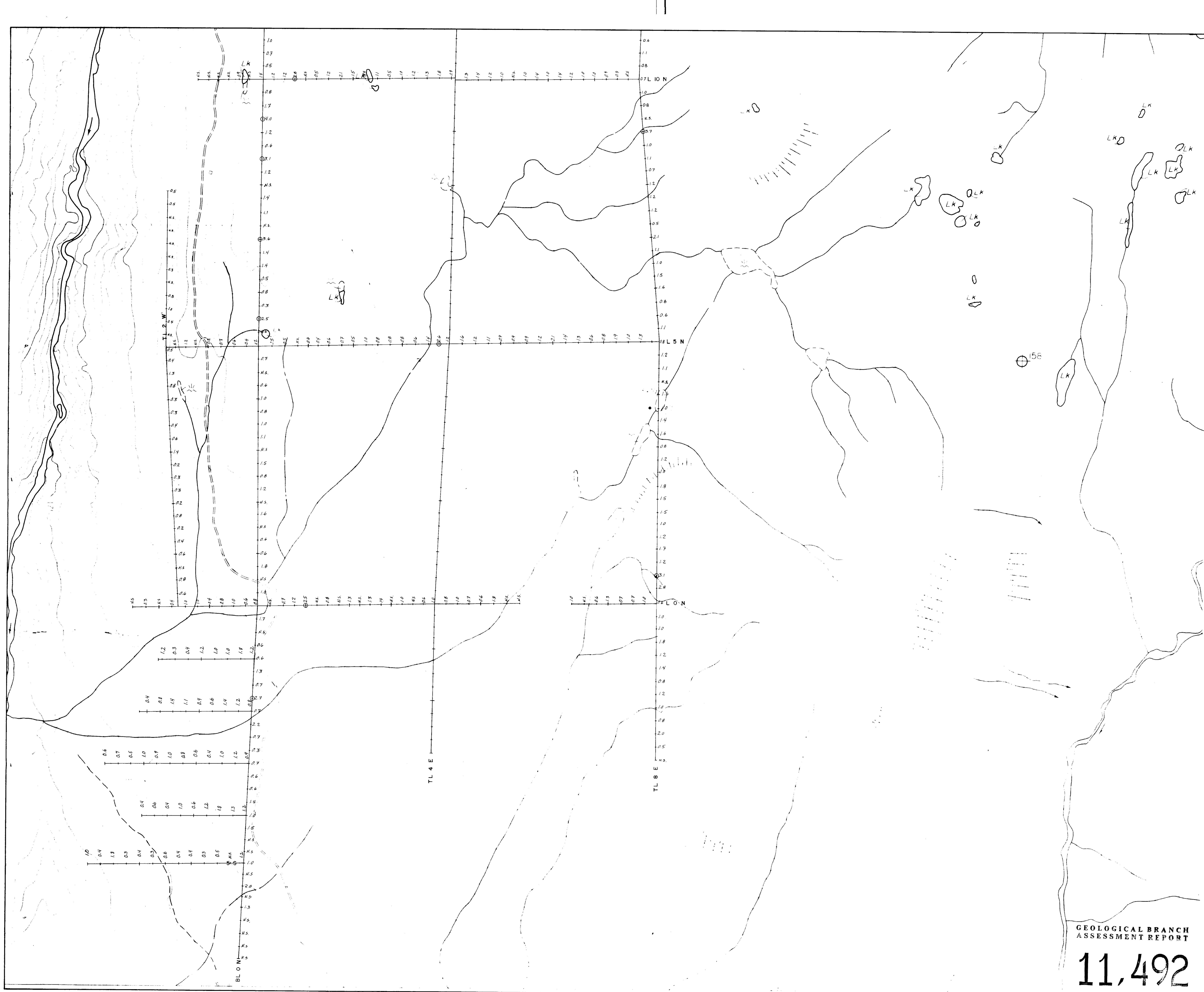
**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN II GRID  
GEOCHEMISTRY  
ZINC (ppm)  
'B' Horizon Soil  
-80 Fraction**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,492**

SCALE	1:2500	N T S	104 B/IE
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. McGUIGAN	MAP NO	27



SILVER (ppm)	SYMBOL
0-25	•
2.5-8	○
8-15	◐
15 +	◑

SHEET INDEX		SHEET NO. B-1
3	4	
2	B	
3	A	
2	1	

CONTOUR INTERVAL  
50 FEET

0 50 100 150 200  
METRES

**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN II  
GEOCHEMISTRY  
SILVER (ppm)  
'B' Horizon Soil  
-80 Fraction**

GEOLOGICAL BRANCH  
ASSESSMENT REPORT


**11,492**


SCALE	1:2500	N.T.S.	104 B/IE
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. MCGUIGAN	MAP NO.	28






GOLD (ppb)      SYMBOL

14      1000      

13      150      

12      30      

SHEET INDEX

3	4
2	1
3	4
2	1

SHEET NO. B-1

CONTOUR INTERVAL  
50 FEET

0 50 100 150 200  
METRES

ESSO MINERALS CANADA  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN II  
GEOCHEMISTRY  
SAMPLE LOCATION  
GOLD (ppb)  
'B' Horizon Soil  
-80 Fraction

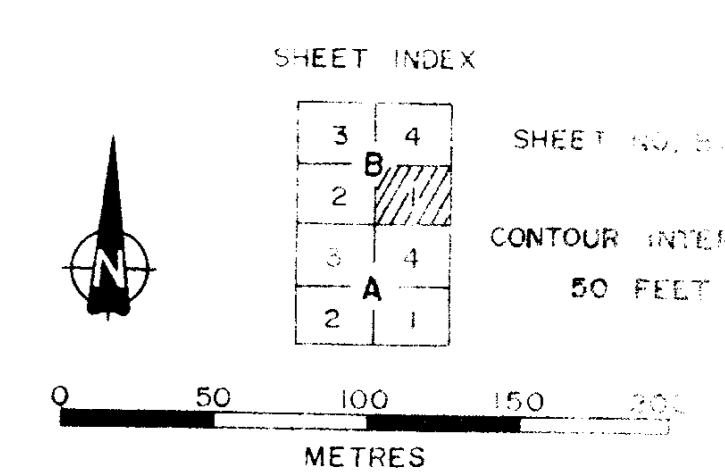
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**

SCALE	1:2500	N.T.S.	104 B/IE
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. MCGUIGAN	MAP NO.	29



ARSENIC (ppm)	SYMBOL
1000	●
300	■
150	●
60	○



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN II**  
GEOCHEMISTRY  
SAMPLE LOCATION  
ARSENIC (ppm)  
'B' Horizon Soil  
-80 Fraction

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**11,492**

SCALE	1:2500	N.T.S.	104 R/IE
DATE	NOV. 25, 1983	MINING DIVISION	SKEENA
DRAWN BY	P. McGUIGAN	MAP NO.	30







# LINE 4+00N

I.P. SURVEY

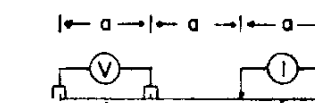
SYSTEM: SCINTREX TX: IPC-8 (250Watt)  
PULSE DURATION: 2 SEC ON - 2 SEC OFF

RX: IPR-10A

MEASURING CHANNELS: MI, M3, M5

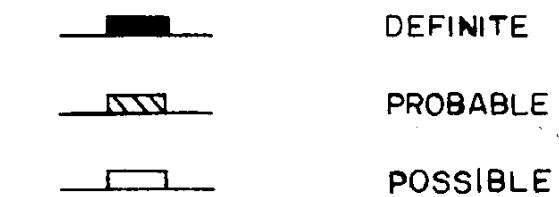
OPERATORS: A. Jetté, J. Spare, L. Wilson

$\rho_a$  APPARENT RESISTIVITY  
(ohm-m)  
C.I. = 1, 1.5, 2, 3, 5, 7.5  
low: < 1000  
med: 1000-2500  
high: > 2500



PLOTTING POINT  
a = 20 metres

ANOMALIES:



$M_2$  CHARGEABILITY (mV/V)  
C.I. = 5, 10, 15...  
low: < 10  
med: 10-30  
high: > 30

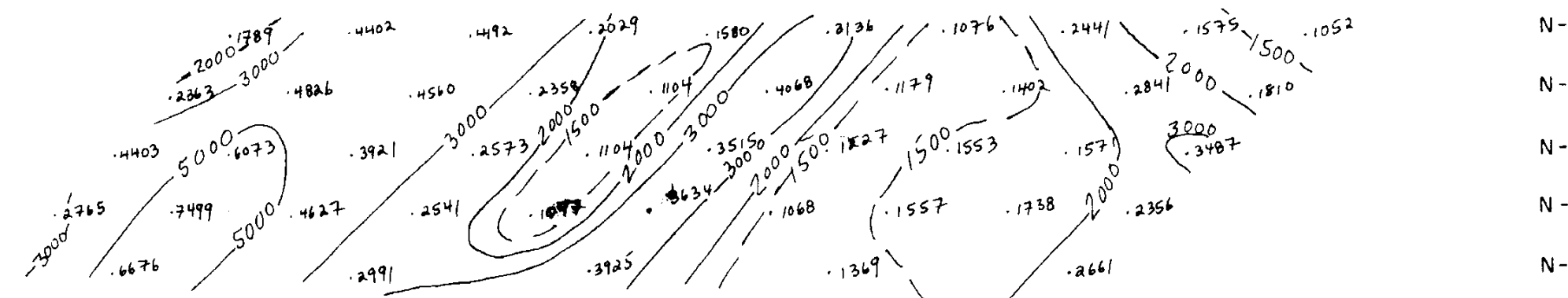
## GEOLOGICAL BRANCH ASSESSMENT REPORT

# 11,492

ESSO MINERALS CANADA DIV'N OF ESSO RESOURCES CANADA LIMITED		
PROSPECT: INDIAN-WOODIER GRID		
DIPOLE-DIPOLE I.P. SURVEY		
ACCOUNT NO	FILE NO	TORONTO
DRAWN BY: L. Wilson	DATE June 1983	NTS 104B/1E
DWG. NO	MAP NO 34	
SCALE		
1:1000	0 50m	
To Accompany A Report By: L. Wilson		
Dated: NOV 1983		

med.  $\rho$ , med. M high  $\rho$ , med-high M  
med.  $\rho$ , high M high  $\rho$ , med-high M  
med.  $\rho$ , high M high  $\rho$ , med-high M

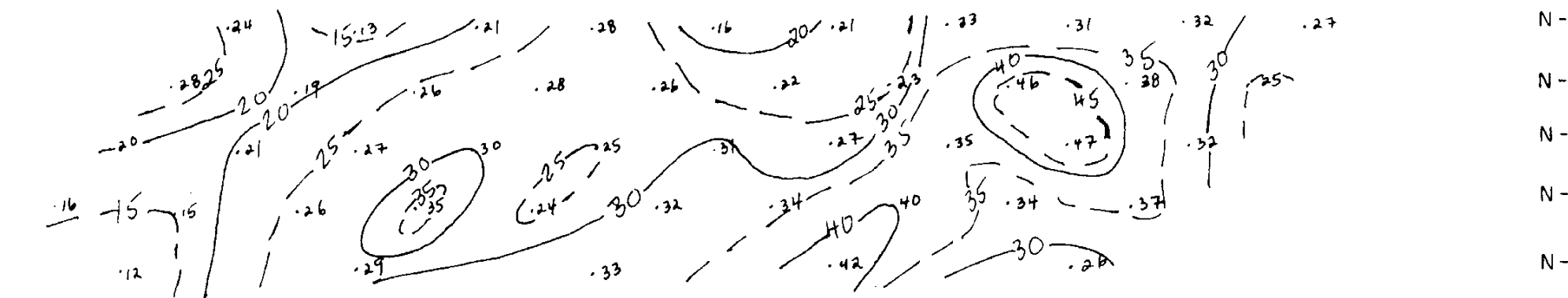
100W 80W 60W 40W 20W 0 20E 40E 60E 80E 100E 120E 140E 160E 180E 200E



N-1  
N-2  
N-3  
N-4  
N-5

100W 80W 60W 40W 20W 0 20E 40E 60E 80E 100E 120E 140E 160E 180E 200E

Zone A Zone B Zone C  
(deep)



N-1  
N-2  
N-3  
N-4  
N-5

# LINE 2+00N

I.P. SURVEY

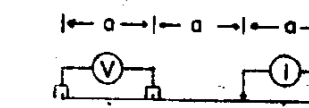
SYSTEM: SCINTREX TX: IPC-8 (250Watt)  
PULSE DURATION: 2 SEC ON - 2 SEC OFF

RX: IPR-10A

MEASURING CHANNELS: M1, M3, M5

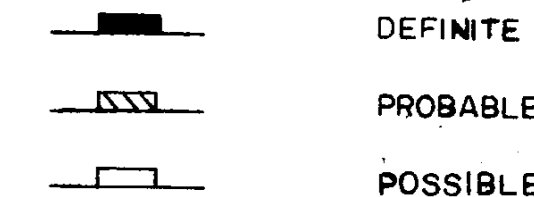
OPERATORS: A. Jetté, J. Spare, L. Wilson

$\rho_a$  APPARENT RESISTIVITY  
(ohm-m)  
C.I. = 1, 1.5, 2, 3, 5, 7.5  
low: < 1000  
med: 1000 - 2500  
high: > 2500



PLOTTING POINT  
a = 20 metres

ANOMALIES:

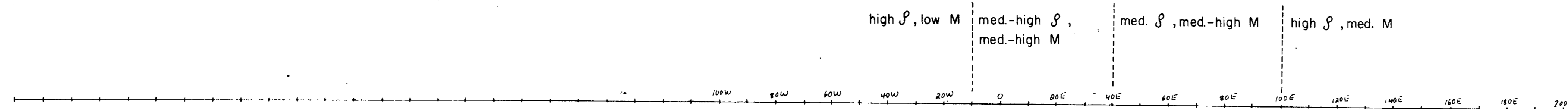


$M_3$  CHARGEABILITY (mV/V)  
C.I. = 5, 10, 15...  
low: < 10  
med: 10 - 30  
high: > 30

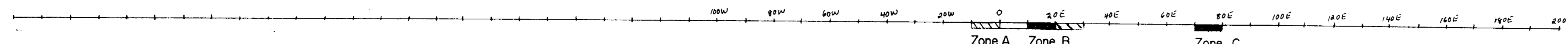
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 11,492

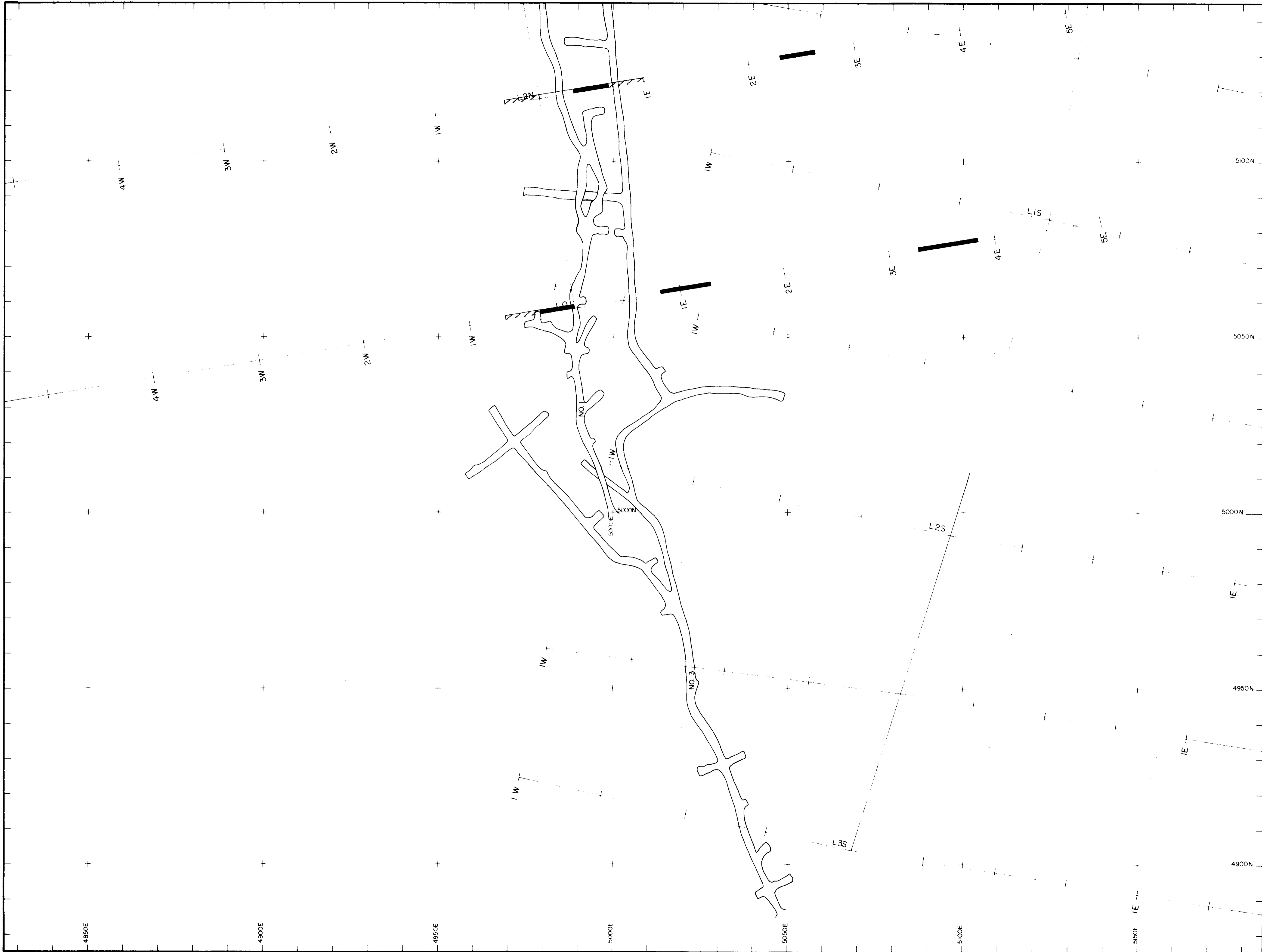
ESSO MINERALS CANADA DIV'N OF ESSO RESOURCES CANADA LIMITED		
PROSPECT: INDIAN-WOODIER GRID		
DIPOLE-DIPOLE I.P. SURVEY		
ACCOUNT NO	FILE NO	TORONTO
DRAWN BY: L. Wilson	DATE June 1983	NTS 1048/1E
DWG. NO	MAP NO 35	
SCALE		
1:1000 0 50m		
To Accompany A Report By: L. Wilson		
Date: NOV 1983		



N-1  
N-2  
N-3  
N-4  
N-5



N-1  
N-2  
N-3  
N-4  
N-5



**ANOMALIES:**

- DEFINITE
- PROBABLE
- POSSIBLE

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

# 11,492

SCALE 1:500  
0 5 10 20 30  
meters

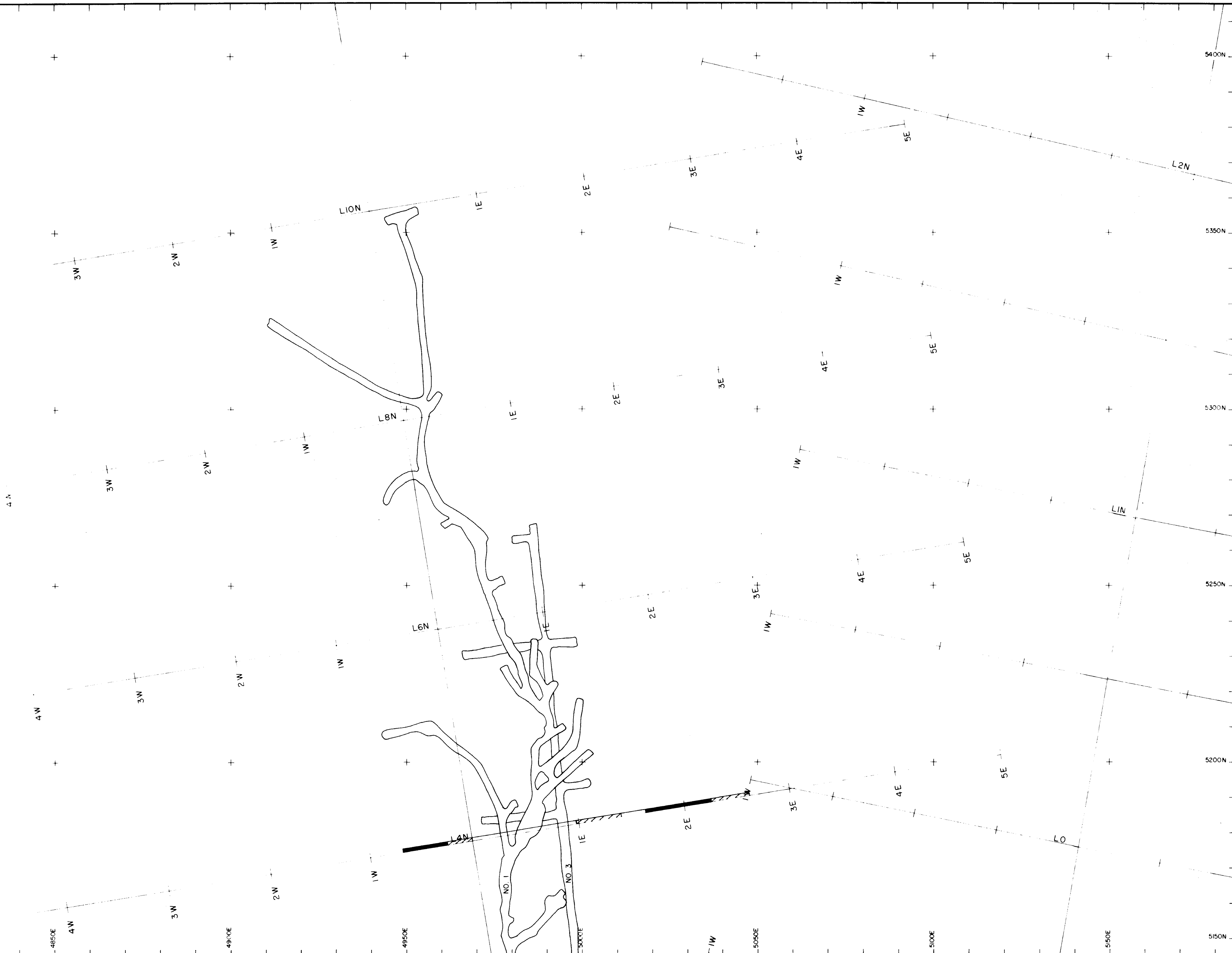
**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**



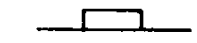
**Indian Mine Area**

**I.P. Survey  
Location Map & Interpretation**

SCALE: 1:500	N.T.S.: 104 B/IE
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: L. Wilson	MAP NO.: 36

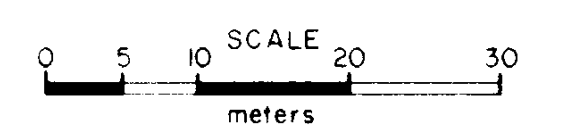


ANOMALIES:

-  DEFINITE
-  PROBABLE
-  POSSIBLE

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

# 11,492



**ESSO MINERALS CANADA**  
A DIVISION OF ESSO RESOURCES CANADA LIMITED

**INDIAN PROJECT**  
  
Indian Mine Area  
  
I.P. Survey  
Location Map & Interpretation

SCALE: 1:500	N.T.S.: 104B/1E
DATE: Nov. 25, 1983	MINING DIVISION: Skeena
BY: L. Wilson	MAP NO.: 37