

SOIL GEOCHEMISTRY  
PARROTT LAKES PROSPECT

IRK 6 Claim (6 Units)

OMINECA M.D.

93L/2E

Lat. 54°12'

Long. 126°38'

ASARCO EXPLORATION CO. OF CANADA, LTD.  
(Owner & Operator)

BY

D.G. MacIntyre

30 November 1978

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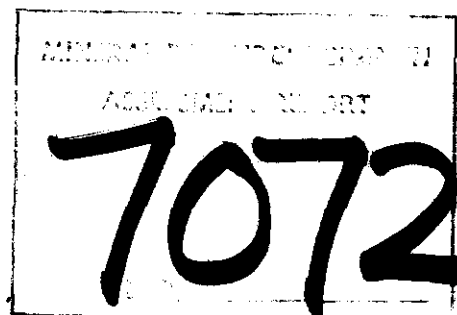


TABLE OF CONTENTS

	<u>PAGE</u>	
SUMMARY	1	
LOCATION & ACCESS	1	
CLAIMS	2	
WORK DONE IN 1978	2	
REGIONAL GEOLOGY	3	
PROPERTY GEOLOGY	4	
GEOCHEMISTRY	4	
COPPER	5	
LEAD	7	
SILVER	8	
MERCURY	8	
ARSENIC & GOLD	9	
CONCLUSIONS	9	
REFERENCES		
<u>APPENDICES</u>		
A	SUMMARY OF EXPENDITURES, 1978	
B	ANALYTICAL RESULTS, 1978	
C	ANALYTICAL PROCEDURES	
D	SAMPLES CONTAINING ORGANIC MATERIAL	
	STATEMENT OF QUALIFICATIONS	
<u>FIGURES</u>		
1	LOCATION MAP, Parrott Lakes Prospect	
2	Claim Location Map, Parrott Lakes Prospect	
3	Regional and Property Geology	
4	Copper in Soils	In Pocket
5	Lead in Soils	In Pocket
6	Zinc in Soils	In Pocket
7	Silver in Soils	In Pocket
8	Mercury in Soils	In Pocket
9	Arsenic/Gold in Soils	In Pocket
<u>TABLES</u>		
1	Statistical Parameters	

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Vancouver, B.C. 30 Nov/78

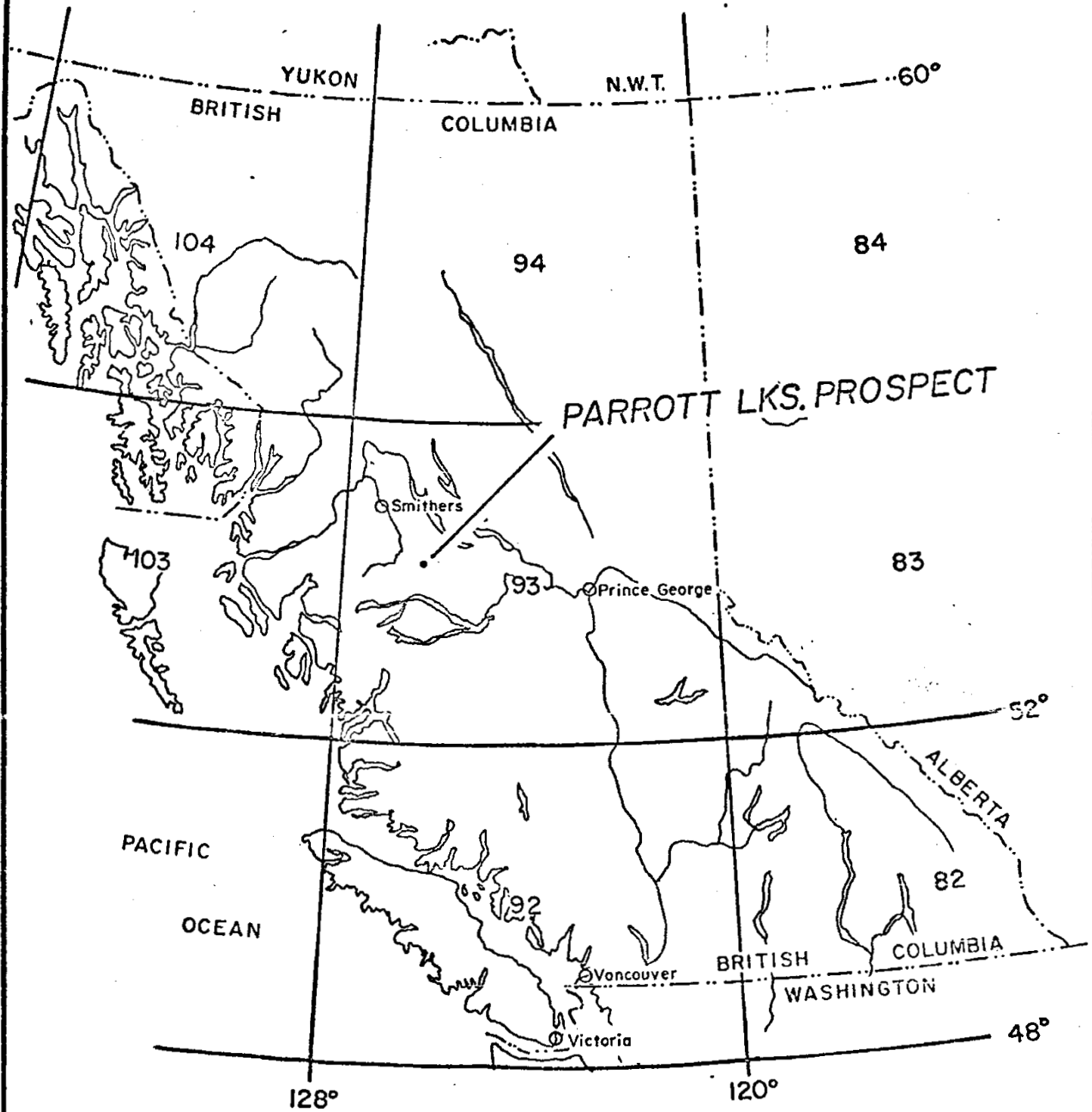
British Columbia  
Omineca M.D. 93L/2E  
Parrott Lakes Area  
Parrott Lakes Project

SUMMARY

Geochemical soil sampling on the Parrott Lakes Prospect during 1978 has defined several coincident Zn, Cu, Pb and Ag anomalies on the IRK VI claim. An outcrop of altered volcanic breccia with malachite staining was located in one anomalous area, confirming the presence of bedrock mineralization. Some of the anomalous concentrations are clearly due to drainage accumulations, and/or organic contamination. For the most part, the geochemical anomalies are considered valid exploration targets and further work is recommended.

LOCATION AND ACCESS

The Parrott Lakes Prospect is located in West Central British Columbia (Figure 1), at Longitude 54°12', Latitude 126°38' (NTS 93L/2E, Omineca Mining Division), approximately 10 miles SSE of the town of Houston. The property now consists of a total of 26 claim units (500m x 500m) as 7 separate claims, IRK I-VII, covering an area of 650 hectares just north of the northernmost tip of the Parrott Lakes (Figure 1). The terrain in this area is characterized by broad valleys and glacially-rounded ridges with elevations ranging from 2800 to 4200 feet above sea

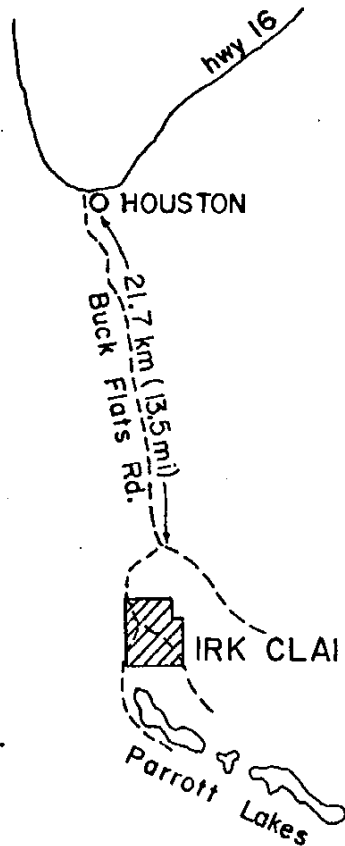
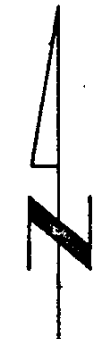
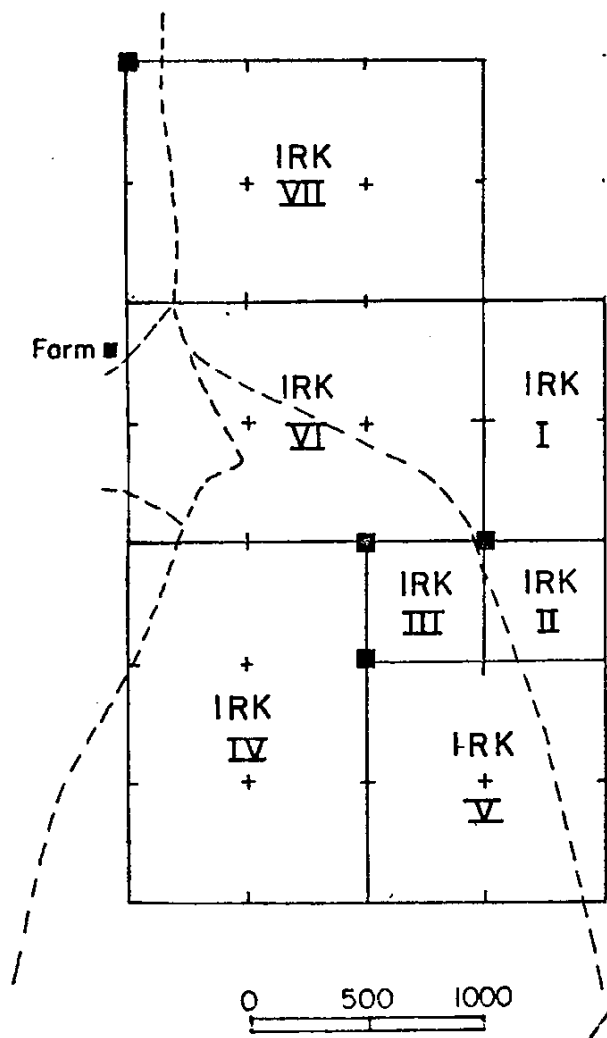


**ASARCO**

Vancouver

**PARROTT LKS. PROSPECT  
LOCATION MAP**

Drawn by	Date	N.T.S.	Figure
D.G.M.	9 Nov. 78	93L/2E	1



<b>ASARCO</b>		Vancouver	
<b>PARROTT LKS. PROSPECT</b> OMINECA M.D. CLAIM LOCATION MAP			
Drawn by	Date	N.T.S.	
DGM	9 Nov 78	93L/2E	Fig. 2

VanCal

level. The property is readily accessible via 6.4 KM (4 mi.) of well-maintained logging road which branches off from the all-weather Buck Flats Road at approximately 21.7 KM (13.5 mi.) south of Houston (Figure 2).

CLAIMS

The Parrott Lakes Prospect includes the following claims:

<u>CLAIM</u>	<u>UNITS</u>	<u>RECORD NO.</u>	<u>ANN. DATE</u>	
IRK I	2	336	28 June/81	)
IRK II	1	337	28 June/81	)
IRK III	1	338	28 June/81	) Par Grp.
IRK IV	6	441	14 Oct/79	)
IRK V	4	442	14 Oct/79	)
IRK VI	6	953	21 Mar/79	)
IRK VII	6	1245	20 July/79	)

WORK DONE

Three people spent a total of 14 man-days working on the IRK VI claim. This work was done between July 30, 1978 and August 4, 1978. The following has now been completed.

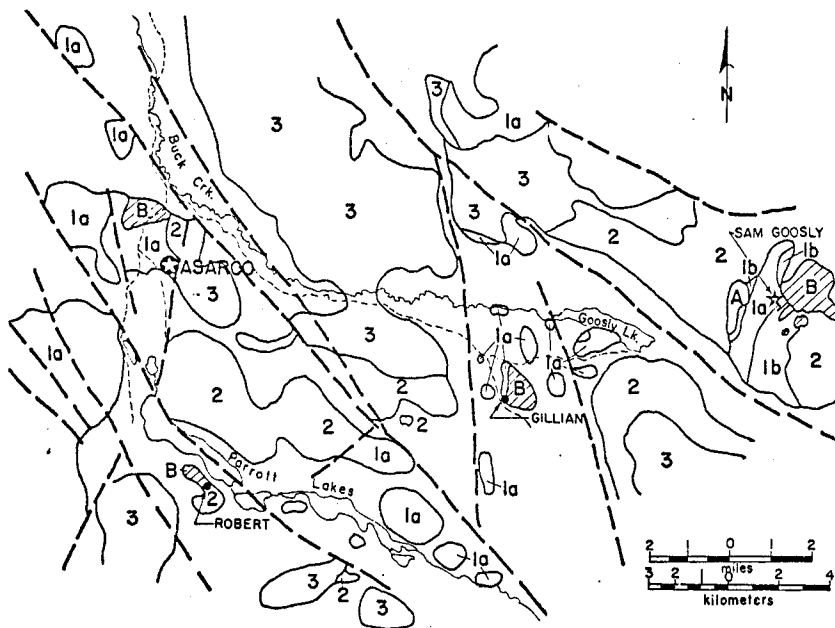
- (1) Location of 6.9 km of ribbon line forming a grid covering the IRK VI claim.
- (2) Determination of Cu, Pb, Zn, Ag, Hg, As, and Au concentrations for 137 soil samples.
- (3) Preparation of topographic base map from altimeter readings taken on each sample site.

The total cost of the work including drafting and report preparation was \$ 3,164. Costs are itemized in Appendix "A".

### REGIONAL GEOLOGY

The regional geologic setting of the IRK claims is shown in Figure 3. The oldest rocks in the area are the Tip Top Hill Volcanics of Cretaceous age. These rocks are exposed in uplifted and tilted fault blocks which are bounded by northwest, north-northwest and northeast normal and reverse faults. In the Parrott Lakes area, the Tip Top Hill Volcanics are a complex mixture of varicolored flows and pyroclastic rocks ranging in composition from andesite to rhyolite. These rocks are unconformably overlain by volcanic rocks of Eocene age. On the ridges north of Parrott Lakes, flat-lying trachytic flows predominate, and these have been given the name of Goosly Lake Volcanics by Church (1971). Further to the north, the trachytic flows are apparently conformably overlain by aphanitic, amygdaloidal and vesicular andesite and dacite flows of the Buck Creek Volcanics. Minor amounts of basalt, flow breccia and clastic sedimentary rocks also occur within the Buck Creek Volcanic succession.

The only plutonic rocks unroofed in the Parrott Lakes area are four small, steep-sided circular stocks of syenomonzonite and gabbro, and one small stock of quartz monzonite. The quartz-deficient intrusions are Eocene in age and are referred to as the Goosly Lake Intrusions. They



**REGIONAL GEOLOGIC SETTING  
PARROTT LAKES PROSPECT**

**QUATERNARY**



Alluvium, till, gravel

**EOCENE**



Buck Creek Volcanics - andesite and dacite flows, minor basalt



Goosly Lake Volcanics - trachytic flows

B

Goosly Lake Intrusions - syenomonzonite, gabbro

A

Nanika Intrusions - quartz monzonite

**CRETACEOUS**



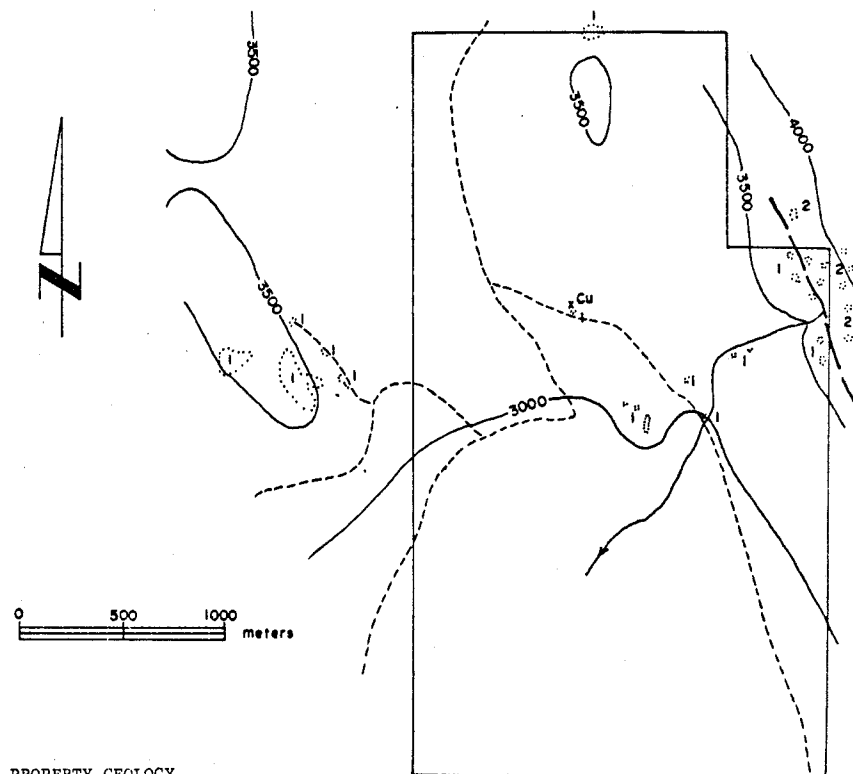
Tip Top Hill Volcanics - a. andesite to rhyolitic flows and pyroclastic rocks. b. sandstone, shale, conglomerate.



Major Fault



Mineral Prospect



**PROPERTY GEOLOGY**

**EOCENE**



Buck Creek Volcanics - massive amygdaloidal to vesicular basalt, andesite and placcite plus related pyroclastic rocks.

**CRETACEOUS**



Tip Top Hill Volcanics - mainly red to dark grey crystal lithic-tuff lapilli-tuff, volcanic breccia and lahar.



-topographic contour



-outcrop



-access road



-limit of Zn anomaly



-claim boundary

<b>ASARCO</b>		Vancouver	
<b>PARROTT LKS PROSPECT REGIONAL &amp; PROPERTY GEOLOGY</b>			
Drawn by	Date	N.T.S.	
D.G.M	9 Nov. 78	93L/2E	Fig. 3



are probably the subvolcanic equivalents of the Goosly Lake Volcanics which have a similar age and composition to the intrusive rocks.

#### PROPERTY GEOLOGY

Outcrop on the IRK claims is restricted to the upper slope of a northwest-trending ridge which cuts across the eastern boundary of the IRK I claim. The lowermost exposures on this ridge appear to be nearly flat-lying beds of light grey, reddish-brown and dark green partly-welded to non-welded lithic lapilli-tuff and crystal lithic tuff with intercalations of volcanic breccia, lahar, conglomerate and minor porphyritic biotite dacite and andesite. Similar rocks underlie the IRK VI claim (Figure 3), and on the basis of composition and lithologic similarity, they have been mapped as part of the Tip Top Hill Volcanics (Church, 1971). On the IRK I claim, these rocks are conformably overlain by dark green and grey vesicular and amygdaloidal basalt and andesite flows, considered to be part of the Buck Creek Volcanics. These rocks crop out as a capping on the ridge to the east of the IRK claims.

#### GEOCHEMISTRY

A total of 137 soil samples were collected and analyzed for Cu, Pb, Zn, Ag, Hg, As and Au. Results are given in Appendix "B" and plotted on Figures 4-10 (in pocket).

Analytical procedures are summarized in Appendix "C".

All soil samples were collected from "B" or "C" soil horizons at depths ranging from 10 to 35 cm. Samples with organic content are listed in Appendix "D" and are shown on the geochemical maps. In general, soils on the IRK 6 claim range from moderate to well-drained sandy pebble till to clay-rich, poorly drained soil underlying thick organic accumulation.

Anomalous and background levels for the geochemical data were determined using the graphical method described by Sinclair (1974). Probability plots for the individual elements are shown on the geochemical maps and the background and anomalous levels that were determined are summarized in Table 1.

#### COPPER

Soil samples containing greater than 34 ppm Cu are considered to be statistically anomalous for the IRK 6 claim. There is moderate overlap of the background and anomalous populations in the 25 to 34 ppm range; values less than 25 ppm are considered to be background. Four major anomalies are recognized on the claim, the most significant of which occurs near the center of the claim and measures roughly 400 m x 100 m. This anomaly occurs in the vicinity of a small outcrop of altered volcanic breccia containing minor amounts of malachite and abundant iron oxide. Although the

TABLE # 1

SUMMARY OF STATISTICAL PARAMETERS

SOIL GEOCHEMISTRY - PARROTT LAKES PROSPECT

N= 137

<u>ELEMENT</u>	<u>NO. OF POPULATIONS</u>	<u>RATIO A:B:(C)</u>	<u>99% A</u>	<u>A + B</u>	<u>B + C</u>	<u>99% B or C</u>
Cu	2	15:85	>34	25-34	-	< 25
Pb	2	65:35	>55	46-55	-	< 46
Zn	2	50:50	> 380	128-380	-	< 128
Ag**	2	25:75	>1.0	.5-1.0	-	<.5
Hg	3	20:40:40	>68*	55-68	35-55	<35

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As                     $\bar{x}$  =                    12.7;  $\bar{\sigma}$  = 6.8

\* ppb

\*\* background corrected.

\*\*\*\*\*

intensity of metal concentration in some of the soil samples reflects organic contamination, the anomaly is considered to be valid and to reflect bedrock mineralization. Other soil samples containing anomalous Cu concentrations occur in the extreme SW and NE corners of the claim, and as a long (>1000 m) narrow north-trending anomalous zone traversing the western half of the claim. These anomalies may also be due to subsurface mineralization.

#### LEAD

Soil samples containing greater than 55 ppm Pb are considered to be statistically anomalous and those with less than 46 ppm Pb are considered background. On this basis, soils in the central and west part of the IRK 6 claim contain anomalous concentrations of Pb. The anomalous area for Pb is more widespread than that for Cu and overlaps the area of anomalous Zn concentrations.

#### ZINC

Soils containing greater than 380 ppm zinc are considered anomalous on the IRK claims. There is also a large overlap of anomalous and background populations in the range 128 - 380 ppm Zn. Therefore, almost all of the soil samples collected on the IRK 6 are anomalous or possibly anomalous for Zn. Values range from 97 to 2000 ppm with the highest concentrations occurring in an area of residual soil on top of a small hill in the SE quadrant of the claim.

SILVER

Based on the probability plot shown on Figure 7 (in pocket), soil samples with greater than 1.0 ppm Ag are anomalous and those between 0.5 to 1.0 ppm are possibly anomalous. Both anomalous and possibly anomalous areas are outlined on Figure 7. There is a strong correlation between copper and silver, with the highest Ag concentrations occurring near the mineralized outcrop in the north central part of the claim. The silver analysis are all background-corrected and cannot be directly compared to previous work on adjoining claims which is not background-corrected. The amount of silver in the soils of the IRK 6 Claim ranges from 0.1 to 3.0 ppm with 25% of the total population being greater than 1.0 ppm (i.e., anomalous).

MERCURY

The probability plot for Hg is shown on Figure 8. In contrast to the bimodal distributions of Cu, Pb, Zn and Ag, the data for Hg suggests the presence of three populations in the ratio 20:40:40. Concentrations greater than 68 ppb are definitely anomalous, while those in the range 55-68 ppb are possibly anomalous. Between 35-55 ppb is a mixture of an intermediate population of uncertain significance and background values. Samples with less than 35 ppb are considered to be exclusively part of the background population. At least 20% of the samples collected from the IRK 6 claim are anomalous in Hg, the majority of these

occurring in the NW and NE corners of the claim. There is no specific correlation of Hg with one particular element although the higher Hg values do occur within the bounds of the Zn and Pb anomalies.

#### ARSENIC AND GOLD

Concentrations of As and Au in the soil samples from the IRK 6 claim are plotted on Figure 9 (in pocket). Arsenic values range from 3 to 70 ppm; Au from  $\lt$  5 to 30 ppb. The limited range of values and relatively small standard deviation about the mean for As suggests a unimodal population. Taking the mean plus two standard deviations, values greater than 26 ppm are considered anomalous. On this basis, only 12 samples, or approximately 10% of the data are anomalous in arsenic. There is no specific spatial correlation of As with other anomalies on the claim, although the anomalous samples are restricted to areas that are anomalous in at least one other element. Gold, on the other hand, is present in very low concentrations and all of the soil samples are considered to contain only background concentrations of this element.

#### CONCLUSIONS

Soils on the IRK 6 claim contain either anomalous or possibly anomalous concentrations of Zinc, in places in excess of 1000 ppm. Several areas on the claim are also

anomalous in Cu, Pb and Ag, and isolated samples are anomalous in Hg and As as well. A well defined multi-element anomaly occurs in the north central part of the claim in the vicinity of a small outcrop of oxidized and altered volcanic breccia with minor malachite staining. This is considered to be the main exploration target on the claim, with a high probability that anomalous metal concentrations in the soils reflects nearby bedrock mineralization. The second major target is the north-trending linear multi-element anomaly traversing the west half of the claim. This anomaly may be due to a north-trending mineralized fault or vein system located in this area.

*D. G. MacIntyre*

D.G. MacIntyre.

DGM:sm

REFERENCES

Church, B.N., 1970: Geology of the Owen Lake, Parrott Lakes and Goosly Lake Area; B.C. Dept. of Mines and Pet. Res., GEM, 1970, pp. 119-125.

Sinclair, A.J., 1974: Selection of Threshold Values in Geochemical Data using Probability Graphs; J. Geochem. Expl., V.3, pp. 129-149.

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APPENDIX "A"

1978 SUMMARY OF EXPENDITURES

PARROTT LAKES PROSPECT - IRK VI CLAIM

14 MAN-DAYS, JULY 30 - AUGUST 4, 1978

Accommodation and Meals @ \$ 10.00/man-day	\$ 140
Truck Rental @ \$ 550/mon (Bow Mac)	91
Gas - 500 miles @ 10 mpg - 50 gal @ \$0.98	49
Analytical - Min-En Labs, Inv. 8-373	2,303
Wages - D.G. MacIntyre (5 days)	305
- J. Morgan (5 days)	116
- R. Morgan (4 days)	160
Report Preparation & Draughting - 4 days @ \$ 50/day	200
	<hr/>
	\$ 3,364
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APPENDIX "B"

ANALYTICAL RESULTS

COMP

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## GEOCHEMICAL ANALYSIS DATA SHEET

No. 8-373

PROJECT No.:

MIN - EN Laboratories Ltd.

DATE: Aug. 26,

ATTENTION:

D. MacIntyre

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

13.6 / 6.2

1978.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	*Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
78 ISM1		35	48	400			30		66	3		4.5 *		40 mesh		
2		16	29	200			07		54	16		5				
3		21	30	195			08		52	16		10				
4		28	37	245			10		40	9		10				
5		26	60	710			11		23	20		5				
7		17	62	730			07		63	12		4.5				
8		16	40	1290			04		17	12		4.5				
9		18	56	840			06		25	24		5				
10		18	40	590			06		30	9		4.5				
11		15	64	450			09		83	20		5				
12		14	54	510			18		16	12		4.5				
13		48	42	420			14		*30	9		5 *		20 mesh		
14		26	72	630			09		17	20		5				
15		15	36	470			04		23	16		4.5				
16		17	40	480			03		*30	12		5				
17		12	69	560			01		11	9		4.5				
18		69	69	730			09		25	12		4.5 *		20 mesh		
19		22	51	400			01		*5	12		4.5				
20		94	79	860			07		16	16		10 *		20 mesh		
21		15	57	670			03		5	16		5				
22		15	44	420			04		40	9		15				
23		16	52	360			02		37	22		5				
24		13	44	500			04		17	5		5				
25		15	47	410			03		30	6		4.5				
26		14	62	660			03		33	21		5				
27		37	57	680			05		*23	22		4.5				
28		49	64	670			06		*23	22		10				
29		57	22	380			03		30	1		5 *		20 mesh		
30		13	48	430			01		63	19		5				
31		17	29	360			06		33	6		5				

\* Background Correction for Ag.

(\*20 Mesh Samples)

CERTIFIED BY

D. MacIntyre

COMPAN

Asarco Explorations

## GEOCHEMICAL ANALYSIS DATA SHEET

No. 8-373

PROJECT No.:

MIN - EN Laboratories Ltd.

DATE: Aug. 26,

ATTENTION: D. MacIntyre

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

11.8/5.5

1978.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	* Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb				
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
78IMS32		21	25	410			01		73	5		30				
33		18	28	146			01		45	8		15				
34		17	22	182			02		87	16		10				
35		16	22	430			02		38	7		30				
36		15	28	194			01		46	4		15				
37		42	34	198			05		5	10		5*		20 mesh		
38		19	32	2000			02		34	14		5				
39		34	83	1080			01		5	19		20*		20 mesh		
40		20	36	1120			01		* 42	12		20				
41		19	32	1700			01		56	6		20				
42		46	78	1000			01		11	10		10				
43		22	64	550			01		* 42	15		15				
44		20	32	590			08		62	9		5				
45		16	40	230			01		39	8		5				
46		17	28	156			02		23	10		5				
47		18	47	190			02		* 26	17		10				
48		12	40	192			01		27	17		25				
49		17	42	560			03		42	9		15				
50		13	42	430			01		33	9		5				
51		38	38	465			04		* 26	13		5				
52		13	52	610			02		42	9		15				
53		28	56	450			03		* 30	14		15				
54		27	82	1150			05		* 7	12		20				
55		14	48	580			02		40	9		15				
56		15	28	440			01		32	7		5				
57		16	32	540			01		25	5		10*		20 mesh		
58		24	47	198			02		11	4		10*		20 mesh		
59		15	40	630			04		43	6		15*		20 mesh		
60		20	50	1250			01		5	8		10*		20 mesh		
61		138	55	800			03		11	9		5*		20 mesh		

\* Background Correction for Ag. (\*20 Mesh Samples)

CERTIFIED BY

*D. MacIntyre*

COMPAN

Asarco Explorations

## GEOCHEMICAL ANALYSIS DATA SHEET

FILE NO. 8-373

PROJECT No.:

MIN - EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

12-7/6-84

DATE: Aug. 26,

ATTENTION: D. MacIntyre

PHONE (604) 980-5814

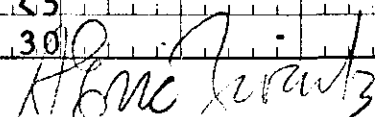
1978.

6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	* Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb			
81	86	95	100	105	110	115	120	125	130	135	140	145	150	155	160
78		17	26	97			01		33	3		<5			
62															
63		18	34	380			06		5	9		5			
64		16	42	320			05		7	9		5			
65		22	62	520			04		12	15		5			
66		19	35	170			01		*5	5		5			
67		23	40	390			04		42	5		5			
68		18	29	420			03		5	3		<5			
69		26	60	540			04		67	12		10			
70		37	61	730			11		15	27		15*			
71		41	58	510			16		5	16		10*			
72		79	69	600			14		*12	18		10			
73		96	58	520			20		*19	15		10*			
74		34	76	780			10		*15	15		10			
75		26	53	500			02		*25	16		15			
76		16	60	280			01		8	9		5			
77		24	60	470			01		*15	16		<5			
78		87	59	640			02		43	10		5			
79		25	63	650			05		5	12		<5			
80		28	70	710			02		12	32		5			
81		54	84	860			07		67	10		5*			
82		42	107	830			04		*45	35		10			
83		19	78	580			01		65	24		5			
84		28	103	810			04		*77	14		15			
85		26	64	770			03		40	15		5			
86		32	70	1000			05		43	12		5*			
87		24	57	380			01		*25	16		5			
88		18	40	310			04		33	<1		5			
89		19	54	540			03		32	35		10			
90		16	54	560			02		32	16		<5			
91		17	45	380			02		*40	10		30			

\*Background Corrected for Ag.

(\* 20 Mesh Samples)

CERTIFIED BY



PROJECT No. \_\_\_\_\_

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PHONE (604) 980-5814

1978.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	* Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb			
81	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
78IMS92		18	60	910			03		nes	26		15			
93		18	59	260			02		*67	29		10			
94		14	42	170			01		72	35		5			
95		25	30	136			01		77	35		5*	20 mesh		
96		20	68	310			02		26	18		25			
97		18	49	320			10		102	24		20			
98		32	54	440			19		74	18		10*	20 mesh		
99		18	46	480			16		22	5		25*	20 mesh		
100		24	57	490			02		79	16		15			
01		20	46	430			01		*33	15		5			
02		20	44	480			02		33	21		5			
03		96	58	620			23		*67	10		5			
04		21	77	360			05		43	24		<5			
05		50	57	340			06		5	12		<5			
06		18	36	210			11		32	16		5			
07		22	51	280			02		*46	18		10			
08		17	42	370			02		51	10		5			
09		18	42	300			01		*59	16		5			
10		19	51	370			02		*62	24		5			
11		19	68	1230			01		66	16		5			
12		56	67	900			01		68	20		5*	20 mesh		
13		30	57	560			01		35	15		10*	20 mesh		
14		28	56	500			02		39	29		5			
15		42	82	1280			07		35	70		5*	20 mesh		
16		29	69	580			03		30	31		<5			
17		26	82	520			02		*78	15		<5			
18		100	110	1200			05		87	22		<5*	20 mesh		
19		40	57	510			05		5	10		5*	20 mesh		
20		26	61	420			04		*34	24		10			
121		29	29	480			02		*45	16		15			

\*Background Correction for Ag. (\*20 Mesh Samples)

PREPARED BY

*Annex Curants*

PROJECT No.: \_\_\_\_\_

MIN - EN Laboratories Ltd.

DATE: **Aug. 26, 1978.**

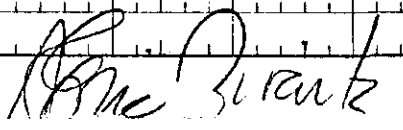
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
PHONE (604) 980-5814

ATTENTION: **D. MacIntyre**

6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	* Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb			
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	160
<b>78NS 122</b>		<b>not enough sample</b>													
<b>23</b>		<b>42</b>	<b>30</b>	<b>380</b>			<b>0.1</b>		<b>40</b>	<b>6</b>		<b>45</b>			
<b>24</b>		<b>32</b>	<b>42</b>	<b>200</b>			<b>0.1</b>		<b>15</b>	<b>29</b>		<b>10*</b>			
<b>25</b>		<b>29</b>	<b>46</b>	<b>310</b>			<b>0.4</b>		<b>80</b>	<b>27</b>		<b>5</b>			
<b>26</b>		<b>28</b>	<b>49</b>	<b>190</b>			<b>0.3</b>		<b>30</b>	<b>15</b>		<b>5*</b>			
<b>27</b>		<b>72</b>	<b>58</b>	<b>490</b>			<b>1.2</b>		<b>17</b>	<b>22</b>		<b>5</b>			
<b>28</b>		<b>32</b>	<b>47</b>	<b>196</b>			<b>0.7</b>		<b>18</b>	<b>24</b>		<b>5*</b>			
<b>29</b>		<b>33</b>	<b>52</b>	<b>470</b>			<b>0.4</b>		<b>12</b>	<b>16</b>		<b>10</b>			
<b>30</b>		<b>24</b>	<b>45</b>	<b>370</b>			<b>0.4</b>		<b>45</b>	<b>15</b>		<b>10*</b>			
<b>31</b>		<b>33</b>	<b>66</b>	<b>460</b>			<b>0.5</b>		<b>45</b>	<b>20</b>		<b>10*</b>			
<b>32</b>		<b>32</b>	<b>60</b>	<b>1180</b>			<b>0.7</b>		<b>45</b>	<b>18</b>		<b>5</b>			
<b>33</b>		<b>34</b>	<b>81</b>	<b>680</b>			<b>0.1</b>		<b>5</b>	<b>18</b>		<b>10</b>			
<b>34</b>		<b>30</b>	<b>59</b>	<b>740</b>			<b>0.2</b>		<b>19</b>	<b>12</b>		<b>10</b>			
<b>35</b>		<b>27</b>	<b>54</b>	<b>560</b>			<b>0.4</b>		<b>5</b>	<b>9</b>		<b>5</b>			
<b>36</b>		<b>26</b>	<b>49</b>	<b>590</b>			<b>0.5</b>		<b>*5</b>	<b>16</b>		<b>45</b>			
<b>37</b>		<b>19</b>	<b>51</b>	<b>560</b>			<b>0.1</b>		<b>5</b>	<b>16</b>		<b>5</b>			
<b>38</b>		<b>17</b>	<b>22</b>	<b>150</b>			<b>0.2</b>		<b>78</b>	<b>6</b>		<b>10</b>			
<b>139</b>		<b>20</b>	<b>23</b>	<b>180</b>			<b>0.4</b>		<b>73</b>	<b>6</b>		<b>5*</b>			

**\*These samples are 20 mesh.**

\* Background Correction for Ag.

CERTIFIED BY 

APPENDIX "C"

ANALYTICAL PROCEDURES



LAB PROCEDURES FOR HANDLING, PREPARATION AND ANALYSES OF  
GEOCHEMICAL MATERIALS.

Sample Preparation:

1. Samples are sorted numerically or in grid sequence and recorded on lab work sheets.
2. Soil and silt materials are air dried at 80°C. Drying time 12 - 16 hours.
3. Screen samples and retain all -80 mesh material. Other material of varying mesh size will be retained on request.
4. -80 mesh fraction is stored in powder seal coin envelopes for analyses and also for later dry storage. Geochem materials are retained for up to five years in Chemex storage facilities.

Sample Digestion, Chemical Preparation and Analyses.

1. For analyses of Cu, Mo, Pb, Zn, Co, Ni, Cd, Ag - a 0.5 gm sample of -80 mesh material is weighed into 22x175 mm test tubes. Detection limits 1 ppm or less.
2. Add 3 mls 70% HClO<sub>4</sub> and 2 mls conc. HNO<sub>3</sub> to sample. Slowly heat to 203°C. Digestion time 2-3 hours.
3. Add demineralized water to 25 ml volume, mix thoroughly, settle and analyse samples by standard atomic absorption procedures.
4. Gold (ppb) is analysed using a 5 gm sample of -80 mesh material. Sample is weighed into a crucible and ashed for 1 hour at 550°C. Residue is digested in aqua regia to dryness and dissolved in 25% HCl. Gold Bromide is extracted into MIBK and analysed by A.A. Procedures.
5. Uranium (ppm) is analysed fluorometrically. A 0.50 gm sample is digested in 4 M nitric to dryness. Digestion is repeated. A small portion of solution is transferred to a platinum dish and evaporated to dryness. Flux is added and sample is fused at 650°C. Fluorescence is determined using a Turner III Fluorometer.
6. Tungsten (ppm) is analysed colourimetrically using the dithol procedure. A 0.50 gm sample is mixed with pyrosulphate flux and fused in a closed furnace. Fused material is leached with HCl solution and a portion of sample is transferred to another test tube for complexation with zinc dithol reagent. Colour development is determined on a spectrophotometer.
7. Arsenic (ppm) is analysed colourimetrically by collecting arsine in pyridine and silver diethyldithiocarbamate reagent. Color intensity is determined using a flow through cell on a Spectronic 700 Spectrophotometer.

LAB PROCEDURES FOR HANDLING AND PREPARATION OF ROCK

GEOCHEMICAL MATERIAL.

1. Samples are sorted numerically and recorded on rock geochem lab sheets.
2. Samples are dried, then crushed through a jaw type crusher.
3. Secondary crushing to -1/8 inch is completed by passing sample through a gyro crusher.
4. Approximately 100 gms of crushed sample is split from reject for pulverizing and dried @ 80°C.
5. Sample is pulverized using a "Rocklabs" ring grinder.
6. Pulverized sample is retained in a suitably marked and numbered container.
7. Digestion and analytical technique for rock geochem materials is identical to that used for soils and silts.

APPENDIX "D"

Soil samples with possible organic contamination:

78 IMS	-	1
	-	20
	-	29
	-	37
	-	44
	-	70
	-	71
	-	72
	-	73
	-	74
	-	94
	-	95
	-	96
	-	97
	-	103

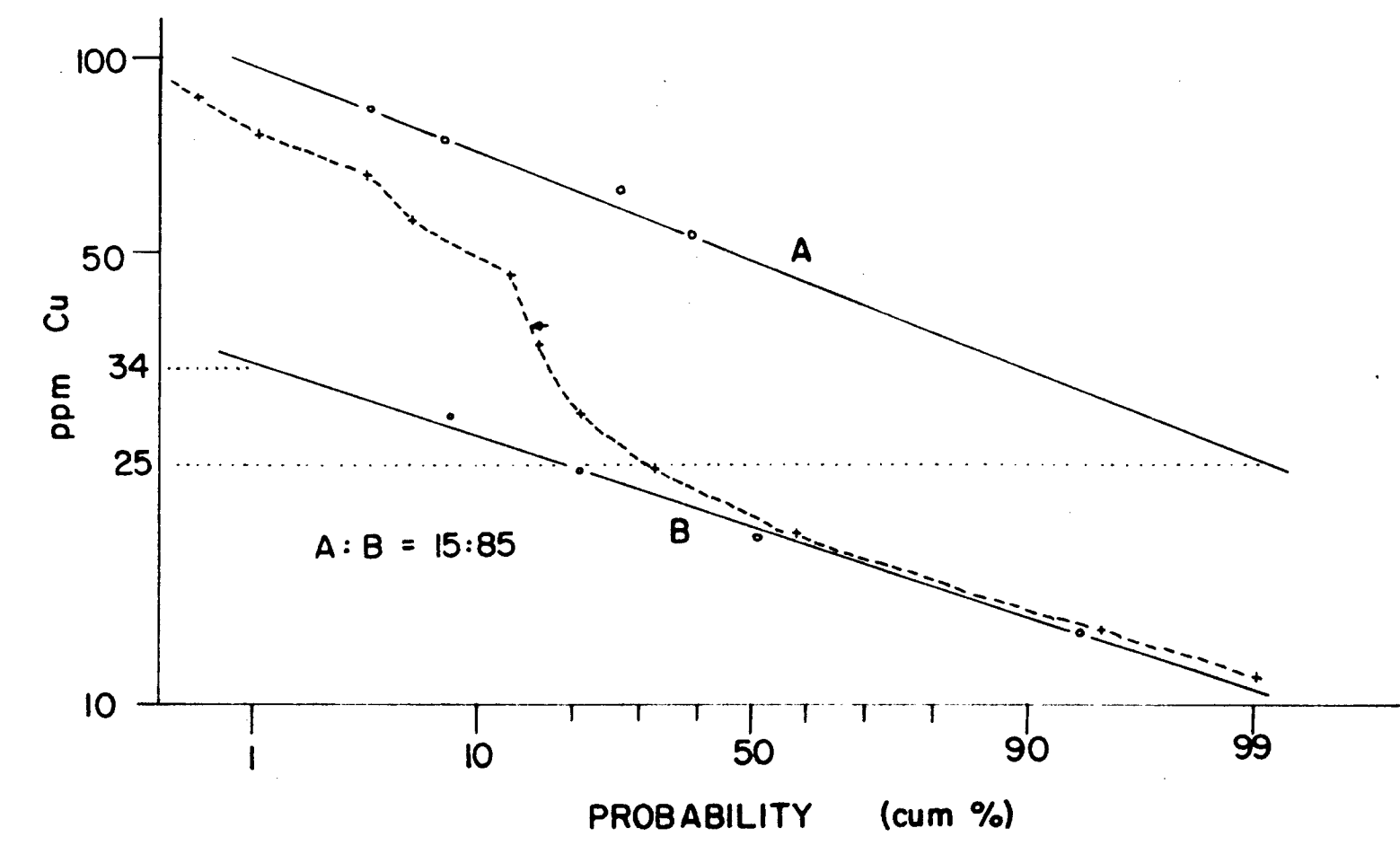
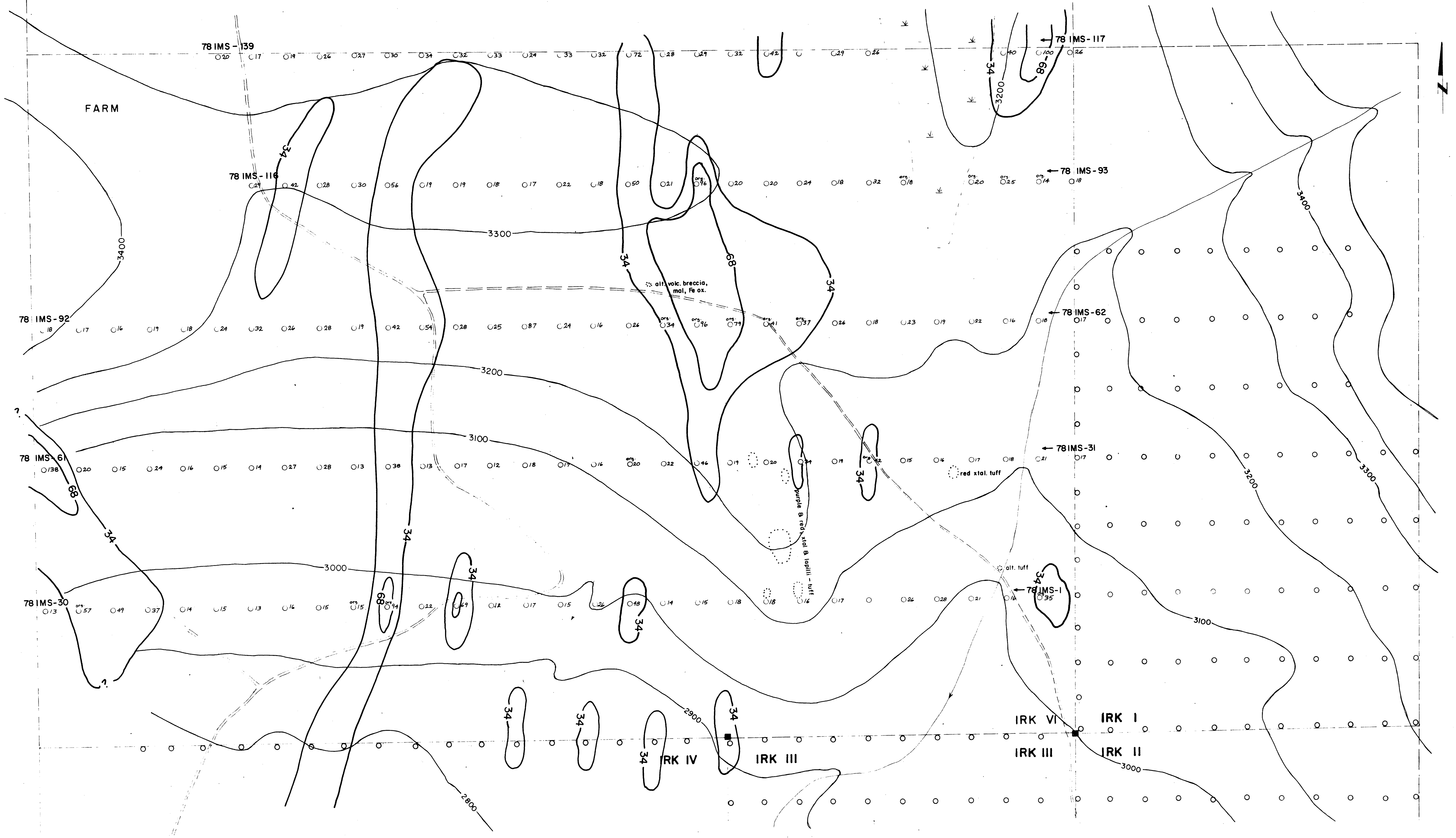
STATEMENT OF QUALIFICATIONS

I, Donald G. MacIntyre of 6020 Kalamalka Crescent,  
Richmond, B.C., certify that:

- (1) I am a graduate of the University of British Columbia with a Bachelor of Science degree in Honors Geology, 1971.
- (2) I am a graduate of the University of Western Ontario, with a Masters (1974) and a PhD (1976).
- (3) I have practiced my profession as a Geologist since 1967 in British Columbia and the Yukon Territory.
- (4) The information contained in this report was compiled by myself and that the geochemical survey was under my direct supervision.



D.G. MacIntyre,  
Geologist.



**COPPER**

- > 34 ppm - anomalous
- 25 - 34 ppm - positive
- < 25 ppm - background

**LEGEND**

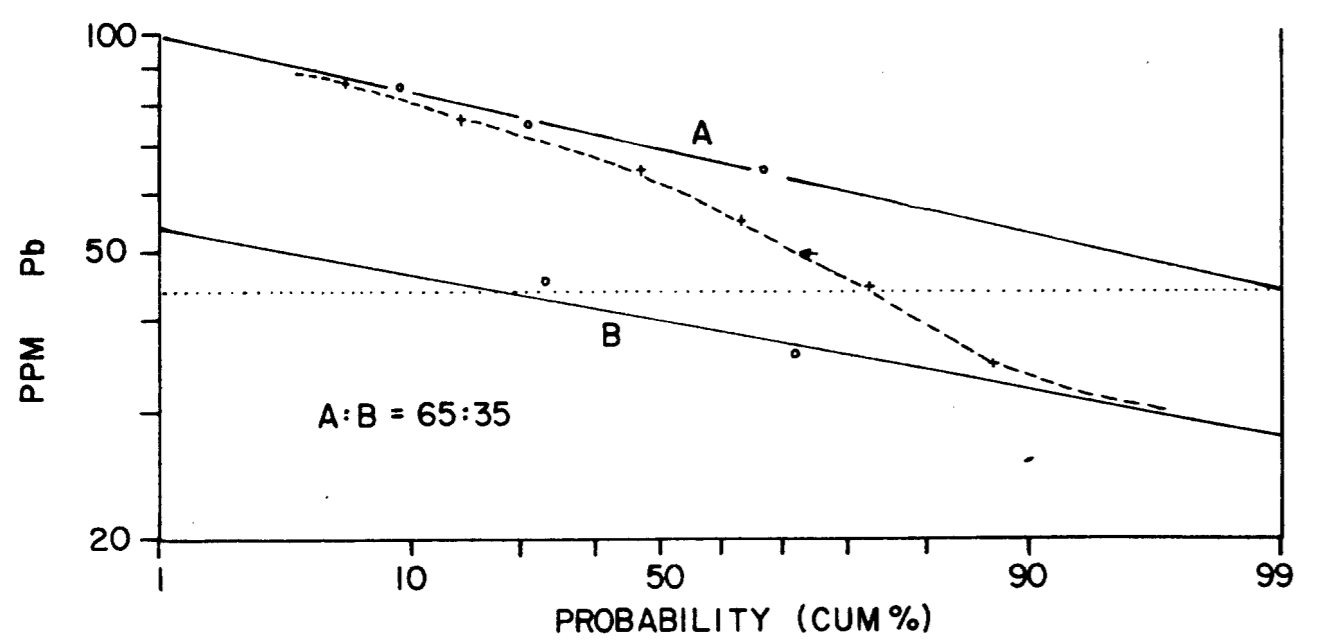
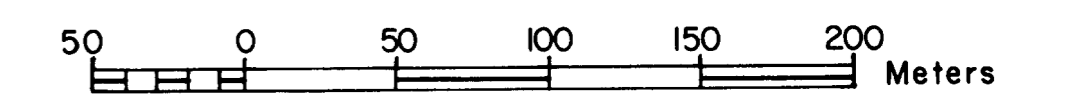
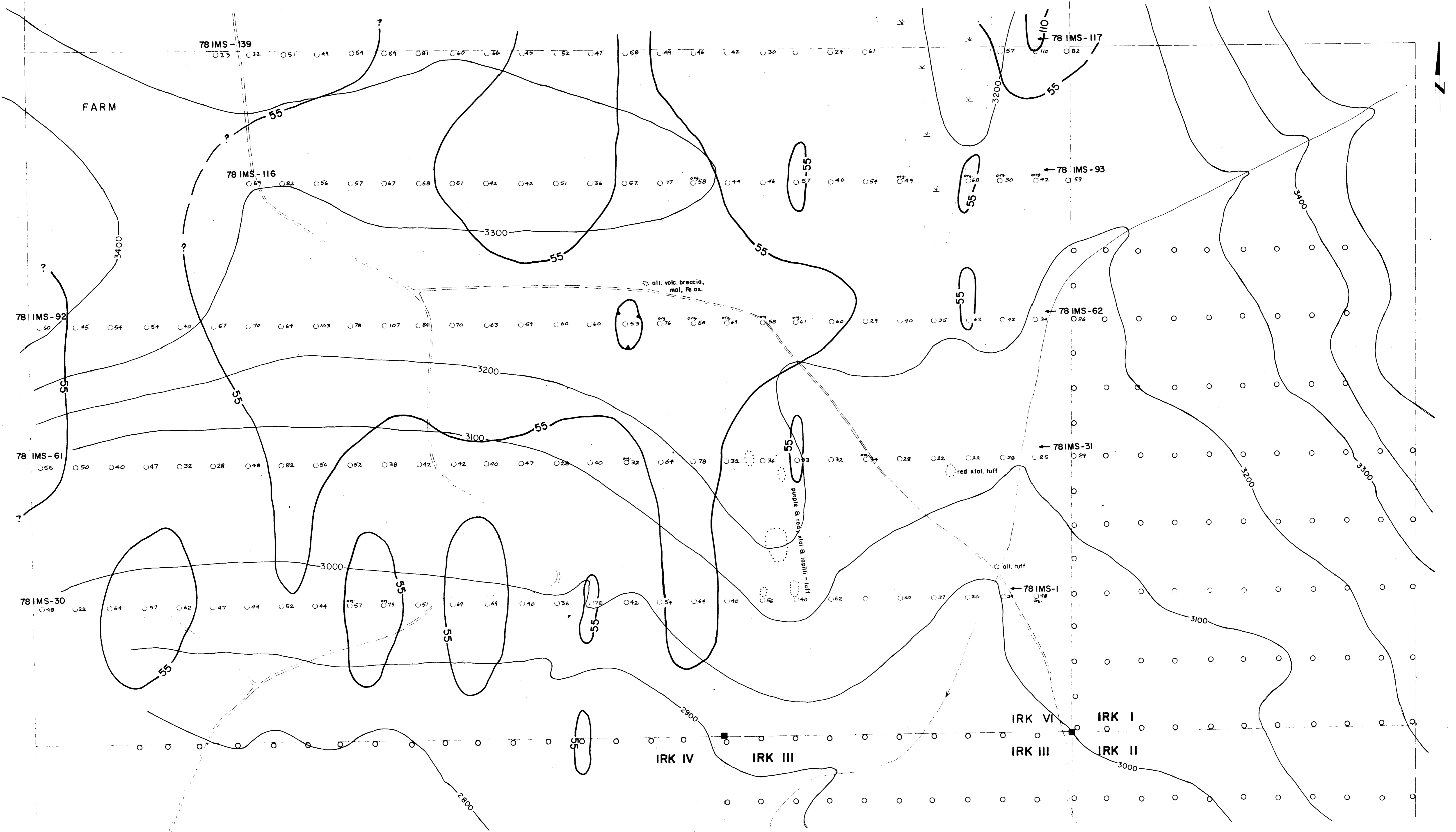
- ppm Cu soil sample
- 3000 topographic contour (feet)
- - - claim boundary
- legal corner post
- road
- outcrop

7072

**ASARCO** Vancouver

**PARROTT LAKES PROSPECT**  
IRK VI Claim - Omineca M.D.  
Cu in Soils

Drawn by	Date	N.T.S.	Figure
D.G.M.	9 Nov. 78	93L/2E	4



**LEAD**

- > 55 ppm - anomalous
- 46-55 ppm - positive
- < 46 ppm - background

**LEGEND**

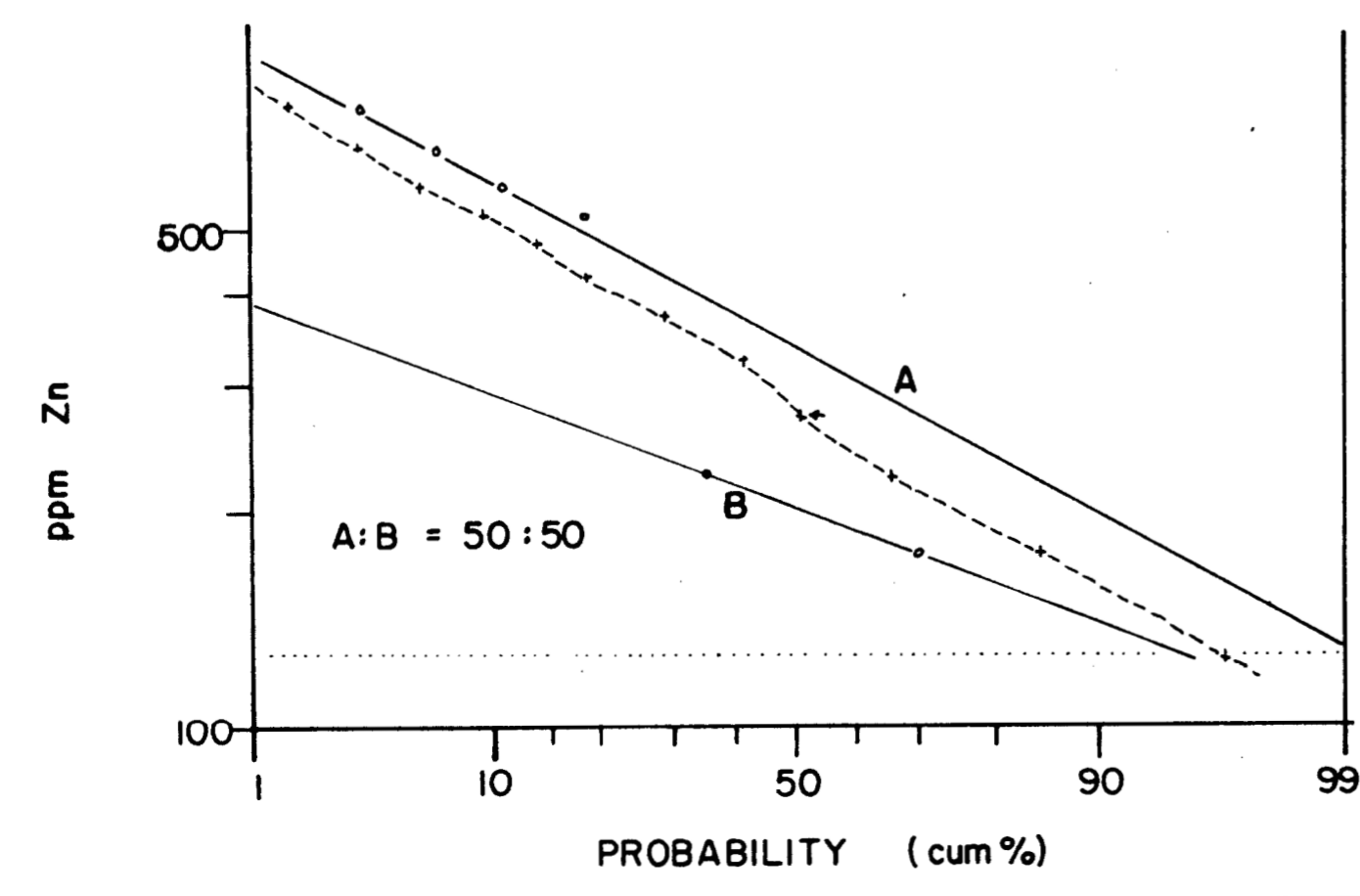
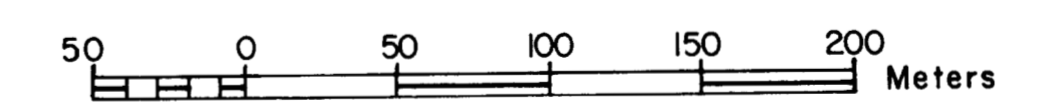
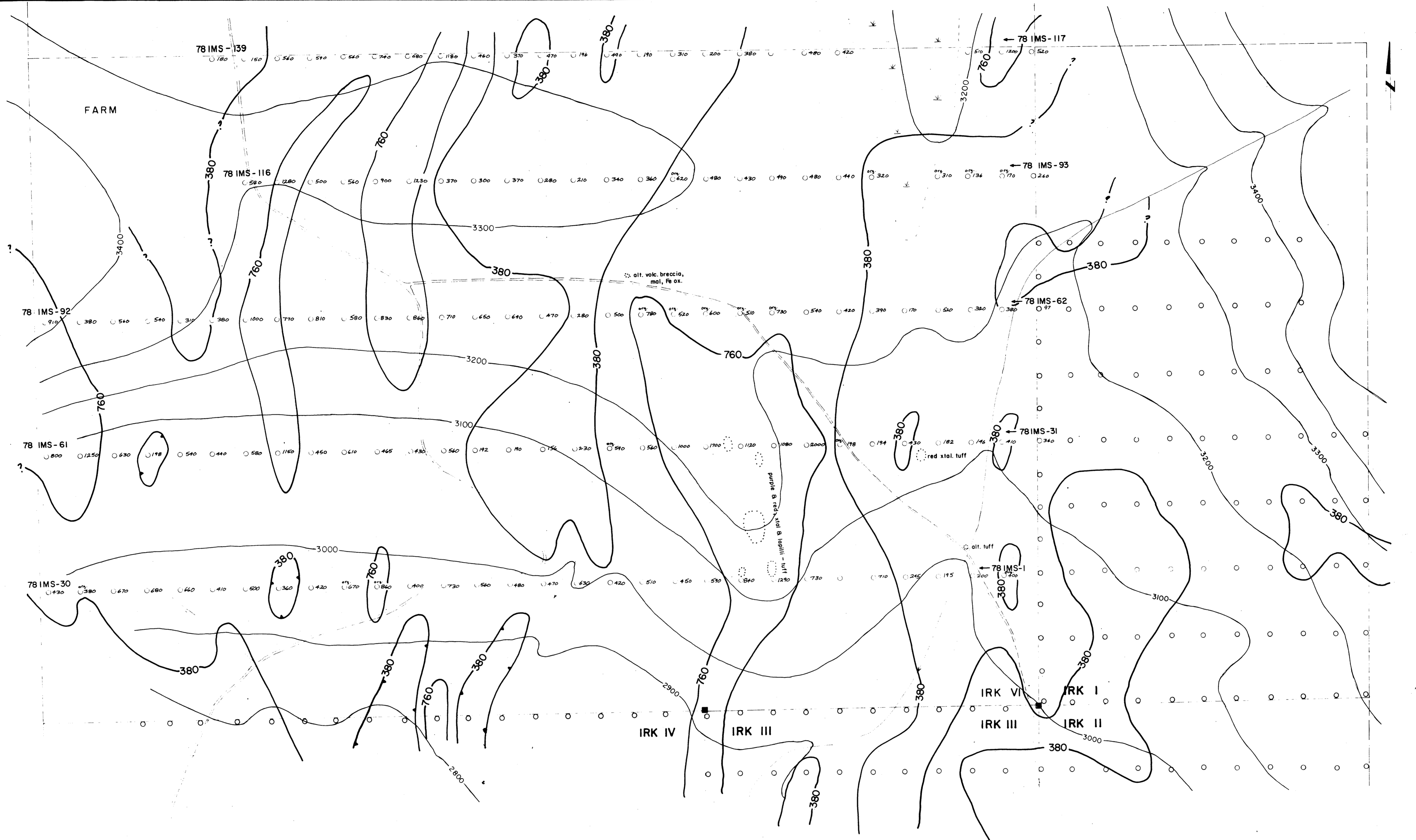
- ppm Pb soil sample
- 3000 topographic contour (feet)
- claim boundary
- legal corner post
- road
- outcrop

BRANCH  
ASSESSMENT REPORT  
**7072**  
NO

**ASARCO** Vancouver

**PARROTT LAKES PROSPECT**  
IRK VI Claim - Omineca M.D.  
Pb in Soils

Drawn by	Date	N.T.S.	Figure
D.G.M.	9 Nov. 78	93L/2E	5



**ZINC**  
 > 380 ppm - anomalous  
 128-380 ppm - positive  
 < 128 ppm - background

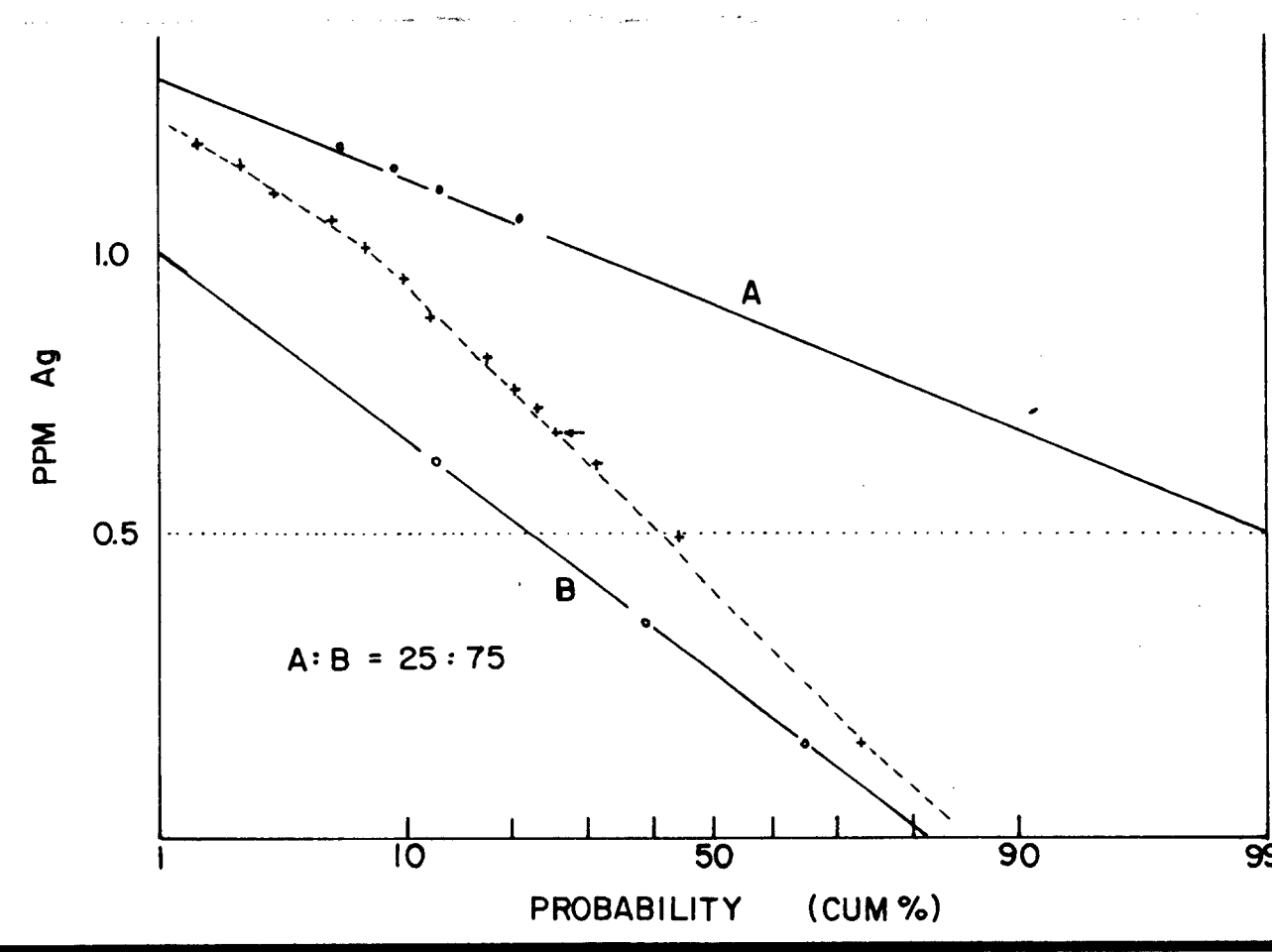
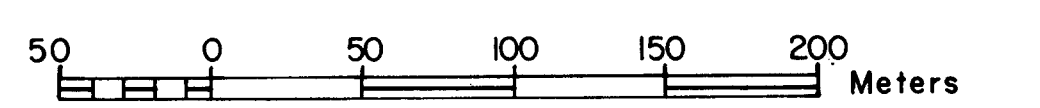
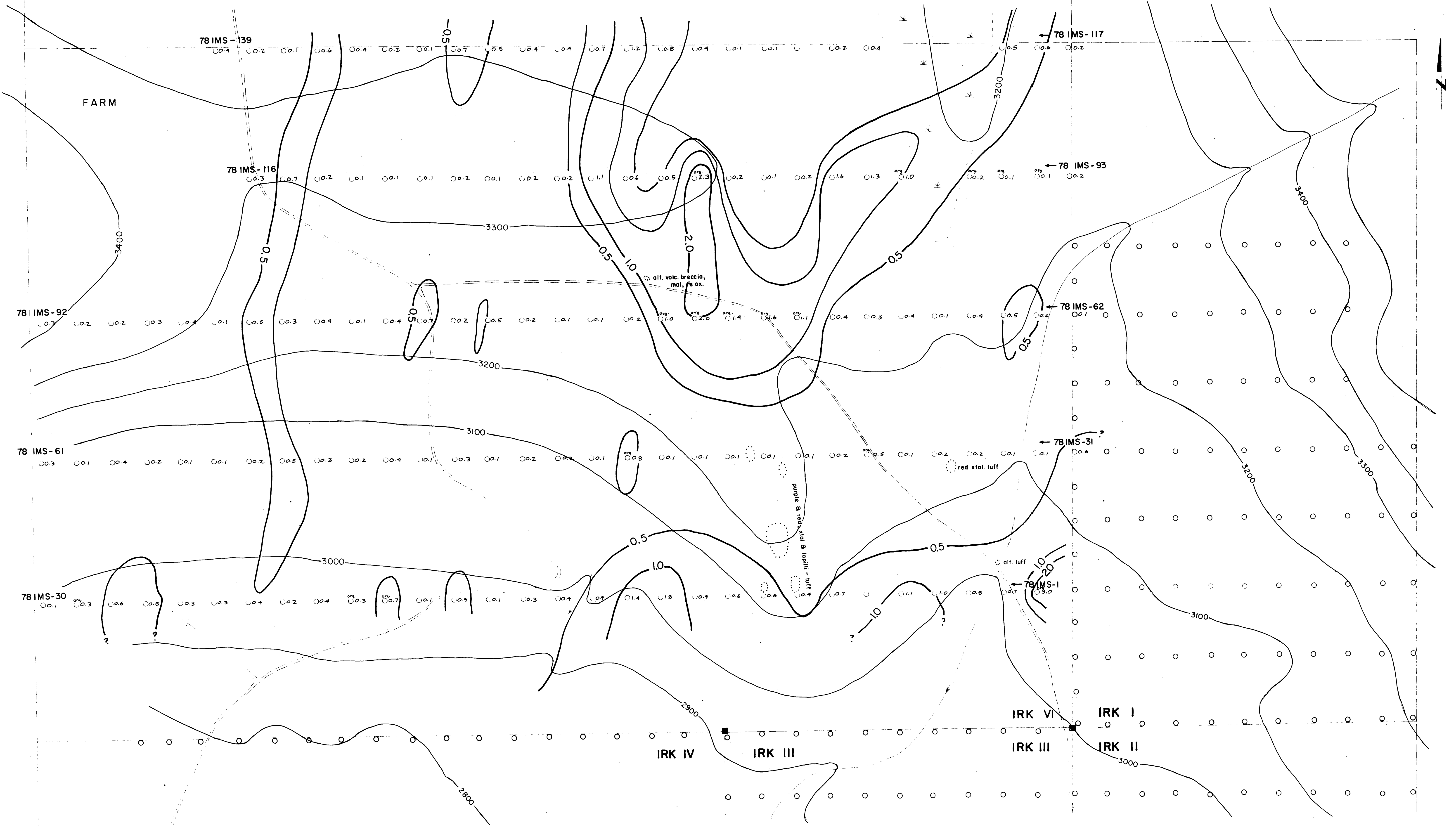
- LEGEND**
- soil sample
  - topographic contour (feet)
  - - - claim boundary
  - legal corner post
  - == road
  - outcrop

MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**7072**  
 NO.

**ASARCO** Vancouver

**PARROTT LAKES PROSPECT**  
**IRK VI Claim - Omineca M.D.**  
**Zn in Soils**

Drawn by	Date	N.T.S.	Figure
D.G.M.	9 Nov.78	93L/2E	6



**SILVER**

> 1.0 ppm - anomalous  
 1.0- 0.5 ppm - positive  
 < 0.5 ppm - background

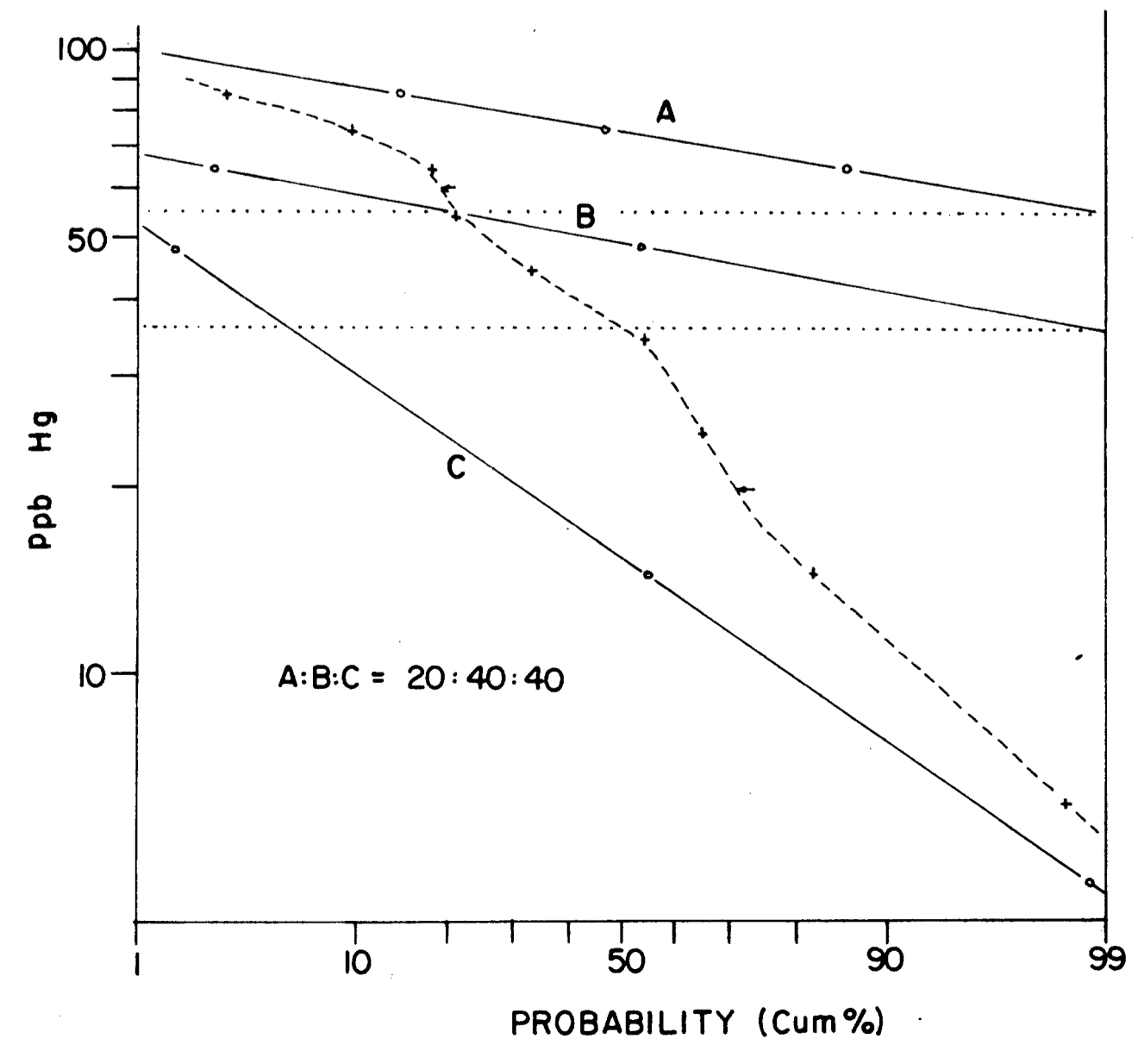
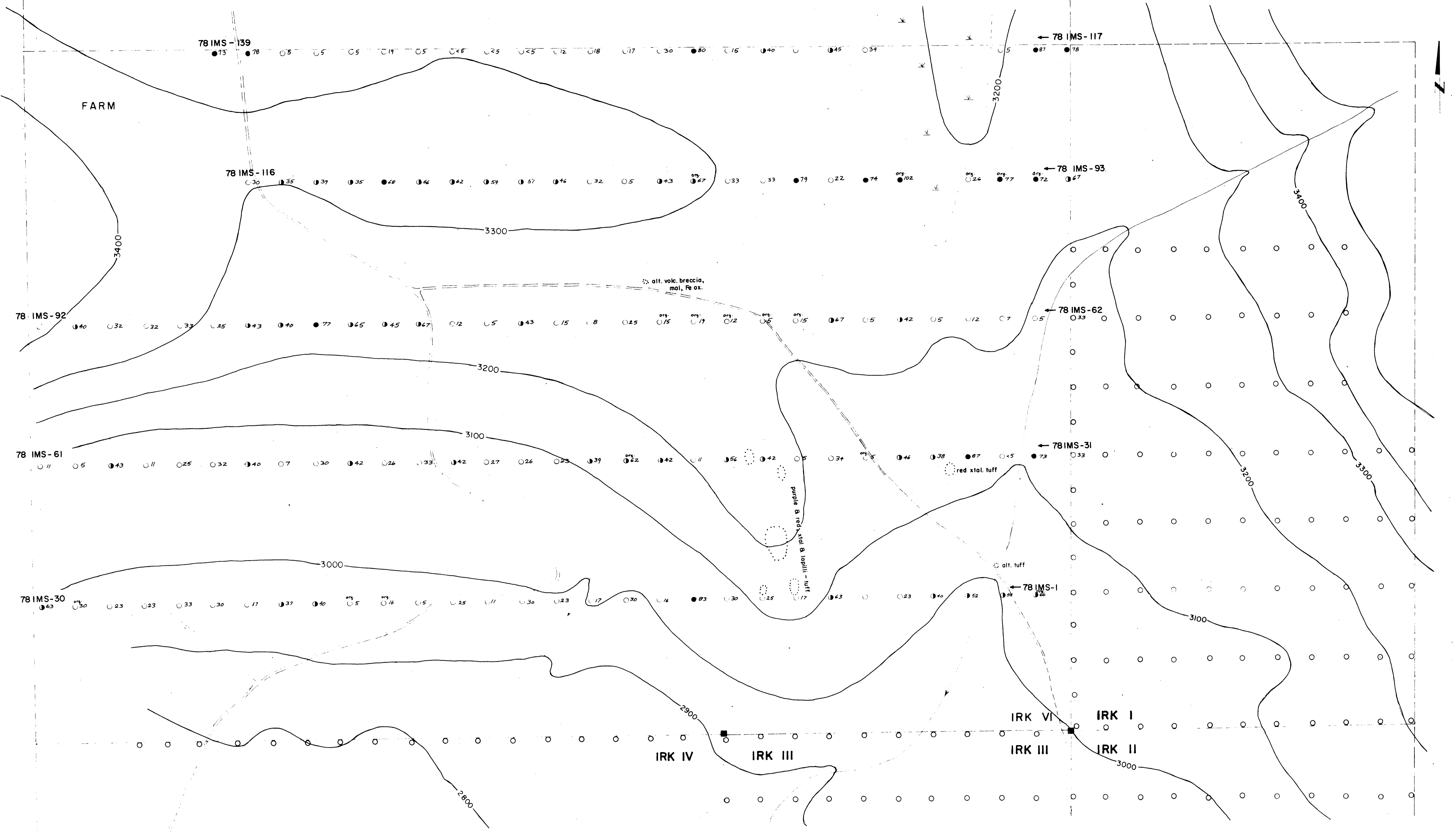
**LEGEND**

○ ppm Ag soil sample  
 -3000- topographic contour (feet)  
 --- claim boundary  
 ■ legal corner post  
 // road  
 ○ outcrop

ASSESSMENT REPORT  
**7072**  
 NO.

<b>ASARCO</b>		Vancouver	
<b>PARROTT LAKES PROSPECT</b>			
<b>IRK VI Claim - Omineca M.D.</b>			
<b>Ag in Soils</b>			
Drawn by	Date	N.T.S.	Figure
D.G.M.	9 Nov.78	93L/2E	7

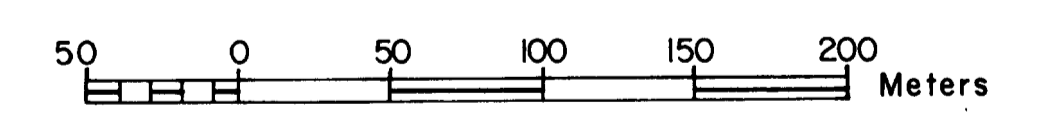




- > 68 ppb - anomalous
- ◐ 35-68 ppb - positive
- < 35 ppb - background

LEGEND

- soil sample
- topographic contour (feet)
- - - claim boundary
- legal corner post
- road
- outcrop



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

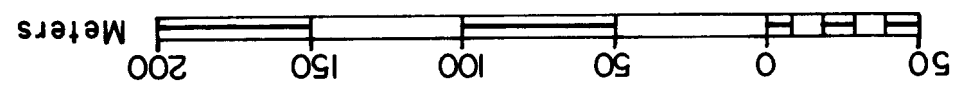
**ASARCO 7072** Vancouver

**PARROTT LAKES PROSPECT**  
IRK VI Claim - Omineca M.D.  
Hg in Soils

Drawn by	Date	N.T.S.	Figure
D.G.M.	9 Nov.78	93L/2E	8

9	Figure	Drawn by N.T.S.	Date 9 Nov. 78	D.G.M. 93L/2E
<b>ASARCO</b> <b>7072</b> MINERAL RESOURCES BRANCH VANCOUVER				
<b>PARROTT LAKES PROSPECT</b> <b>IRK VI claim - Omineca M.D.</b> <b>As/Au in Soils</b>				

- LEGEND**
- ppm As / ppb Au
  - soil sample
  - topographic contour (feet)
  - claim boundary
  - legal corner post
  - road
  - outcrop



ppm As / ppb Au

