

ARIS SUMMARY SHEET

District Geologist, Victoria

Off Confidential: 89.08.10

ASSESSMENT REPORT 18010

MINING DIVISION: Nanaimo

PROPERTY: Haslam  
LOCATION: LAT 48 56 00 LONG 124 01 00  
UTM 10 5420323 425537  
NTS 092C16E

CLAIM(S): Imperial H, Imp K

OPERATOR(S): Imperial Metals

AUTHOR(S): Delancey, P.R.

REPORT YEAR: 1988, 23 Pages

COMMODITIES

SEARCHED FOR: Copper, Zinc, Silver

GEOLOGICAL

SUMMARY: Upper Sicker Group greywackes, cherts, chlorite schists, gabbroic sills and dykes show ankeritic and pyritic zones. Soil and rock sampling returned only spot-anomalous values.

WORK

DONE: Geological, Geochemical  
GEOL 150.0 ha  
Map(s) - 1; Scale(s) - 1:5000  
ROCK 10 sample(s) ;ME  
SOIL 148 sample(s) ;ME

LOG NO: 1122	RD.
ACTION:	
23 p.	
FILE NO:	

**GEOCHEMICAL AND GEOLOGICAL  
ASSESSMENT REPORT**

on the

FILMED

**HASLAM CREEK PROPERTY ~~GEOLOGICAL BRANCH~~  
ASSESSMENT REPORT**

18,010

Specific Claims: IMP K 1246 and IMP H 1137

Mining Division: Nanaimo

N.T.S. : 92C 16E

Latitude : 48° 56' N

Longitude : 124° 01' W

Owner : Imperial Metals Corporation

Operator : Imperial Metals Corporation

Author : Peter Ross DeLancey

Date : November 1988

**SUB-RECORDER  
RECEIVED**  
 NOV 10 1988  
 M.R. # ..... \$ .....  
 VANCOUVER, B.C.

## SUMMARY

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In August 1988 geological mapping, soil sampling (148 samples) and rock sampling (10 samples) was completed on the IMP K and H mineral claims near Ladysmith, British Columbia.

Mapping indicates that the contact between the favourable Myra Formation quartz-sericite schists and the overlying "sediment-sill" unit of the Sicker Group is just south of the southern IMP K claim boundary. The IMP K claim is underlain by tuffaceous to argillaceous chlorite schists gabbroic rocks. Soil and rock sampling returned local anomalous values for Cu, Pb, Zn, Ag and Au.

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## 1.0 INTRODUCTION

This report discusses geological mapping, soil sampling and rock sampling completed in July-August 1988 on the IMP K and H mineral claims which is part of the Haslam Creek property.

## 2.0 CLAIM DATA

The Haslam Creek property consists of the following claims in the Nanaimo, M.D. All claims are owned by Imperial Metals Corporation.

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Date on Acceptance of Assessment</u>
IMP H	20	1137(4)	April 13	1990
IMP K	20	1246(8)	August 20	1989
IMP S	6	1268(10)	October 21	1989

## 3.0 LOCATION, ACCESS and TOPOGRAPHY

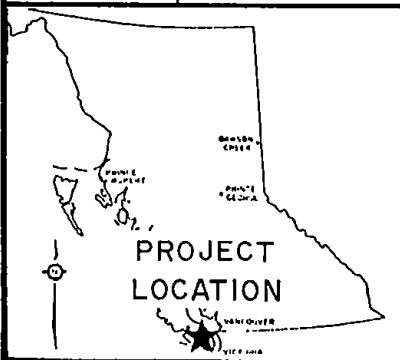
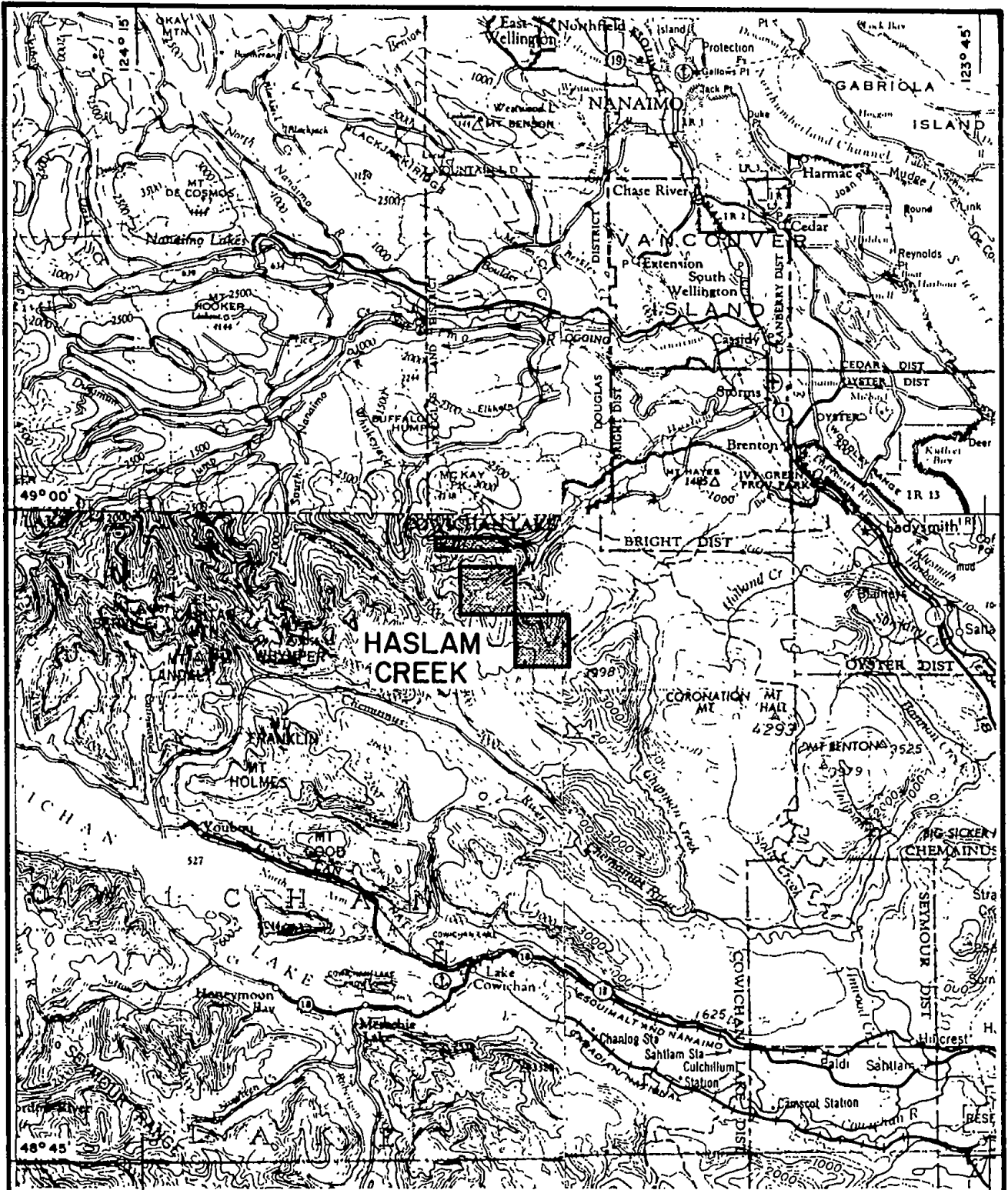
The property is located near the headwaters of Haslam Creek approximately 20km west of the town of Ladysmith on southern Vancouver Island. Access is by logging roads from Ladysmith.

Topography of the IMP K and H claims varies from moderate to steep slopes, with elevations ranging from 600m to 1100m.

## 4.0 EXPLORATION HISTORY

The central portion of the Haslam Creek property was staked in 1982 with additional staking completed in 1983. The location of claims was largely based on the suspected source of anomalous stream sediments. In 1982 Imperial Metals Corporation contracted Questor Surveys of Toronto to fly an Input EM and magne-



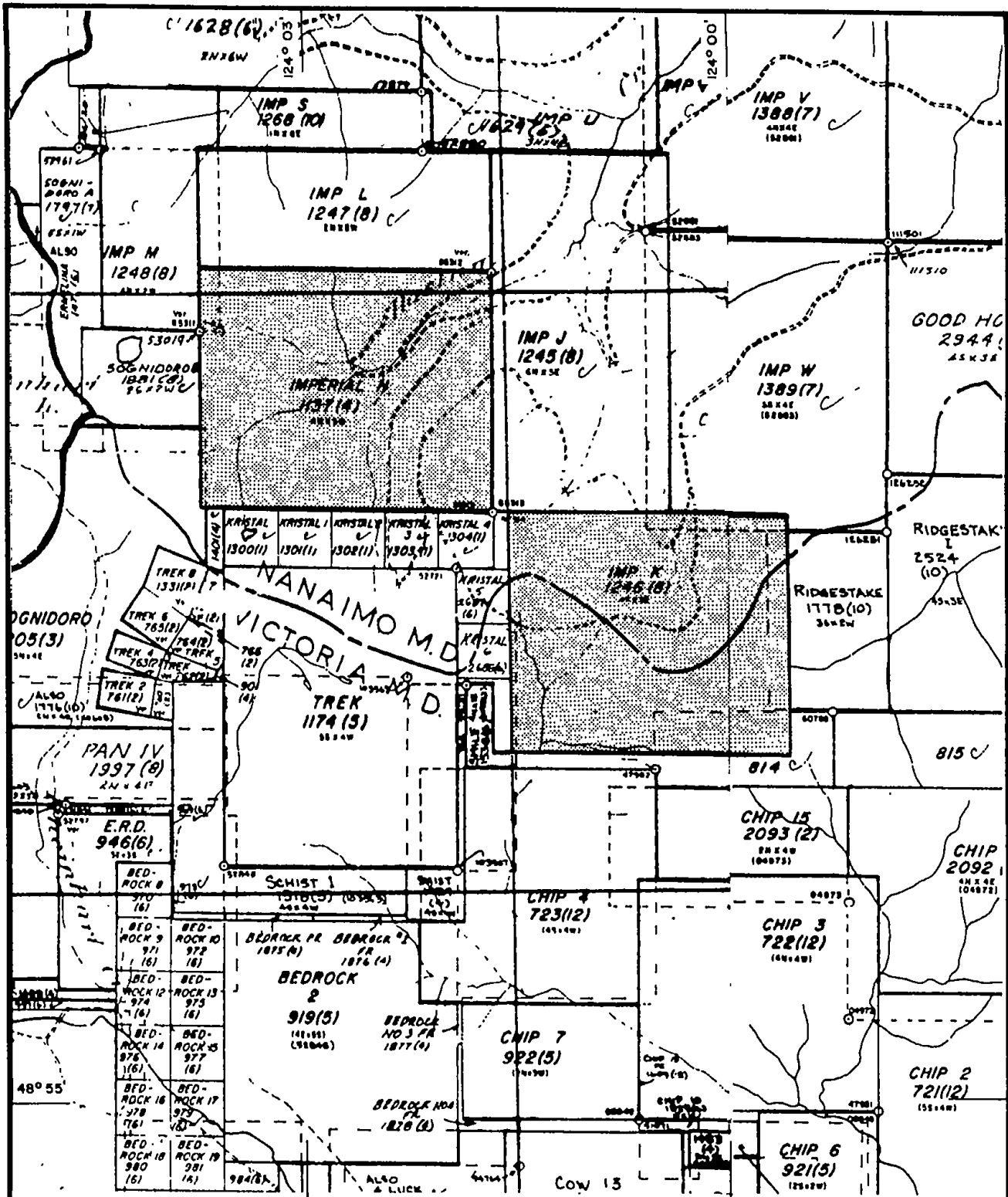


**IMPERIAL METALS CORPORATION**  
**HASLAM CREEK**  
 FIGURE 2 N.T.S. 92C  
**LOCATION MAP**

Km 5 0 5 10 Km

SCALE: 1:250 000  
 DATE: NOVEMBER 1988

GEOLOGIST: P. DELANCEY  
 DRAWN BY: S. HAWORTH



**IMPERIAL METALS CORPORATION**  
**HASLAM CREEK**  
 FIGURE 3 N.T.S. 92B/13W & C/16E  
**CLAIM MAP**

Km 1 0 1 2 Km

SCALE: 1 : 50 000	GEOLOGIST: P. DELANCEY
DATE: NOVEMBER 1988	DRAWN BY: S. HAWORTH





tometer survey over the IMP H claim. Several EM anomalies were defined. Geological mapping and limited rock chip sampling (33 samples) and soil sampling (109 samples) was completed as a follow up to airborne geophysical survey.

In 1983 a Genie-electromagnetic survey was conducted over the IMP H claim delineating the Input EM anomalies. In addition, grid soil sampling was completed over portions of the IMP H and L claims. Due to encouraging results another airborne Input EM survey was completed over the remainder of the Haslam Creek Property not yet surveyed. Further Input EM anomalies were outlined.

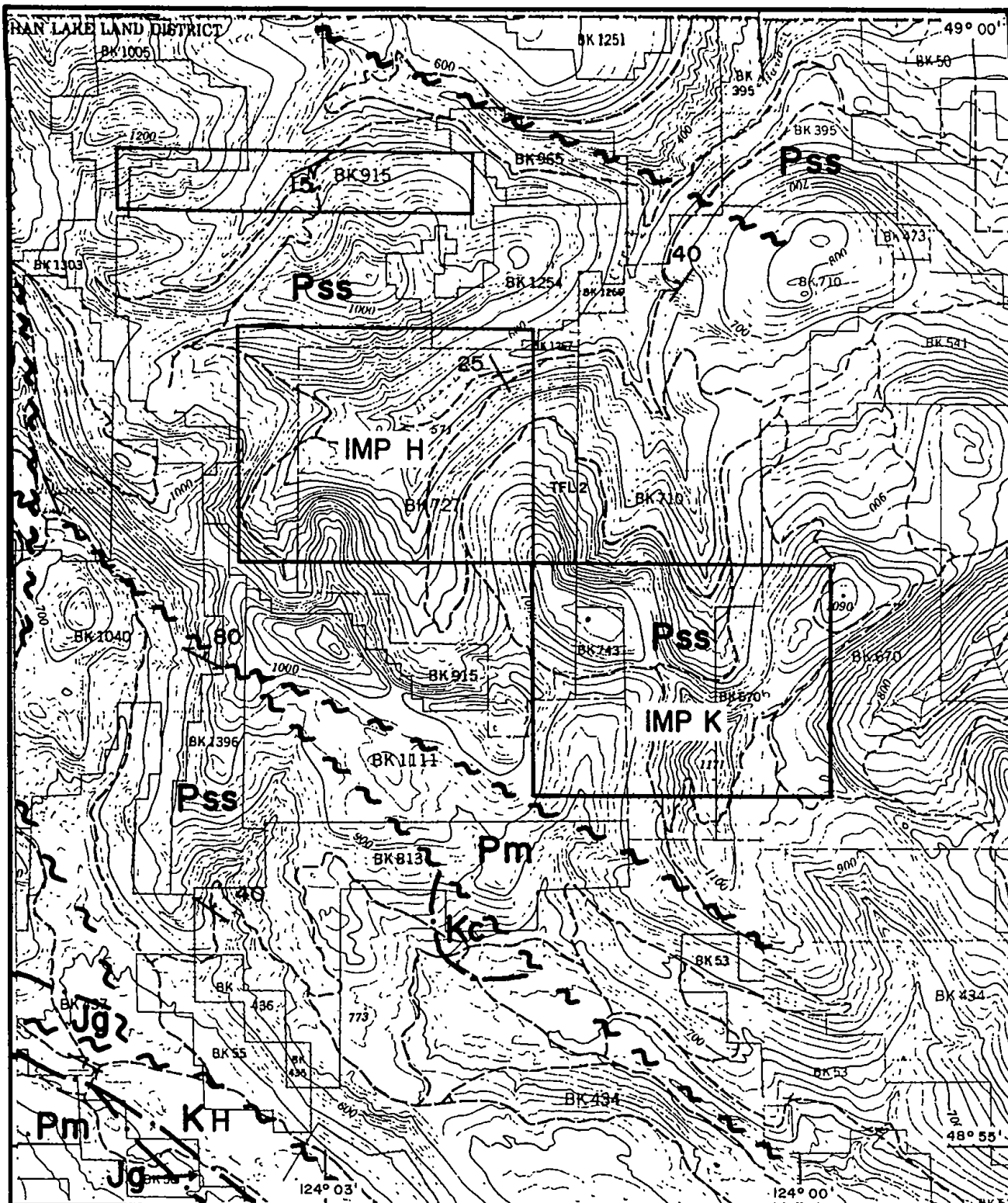
In 1984 two soil grids were established over two of the airborne Input EM anomalies one grid over an Input EM anomaly on the IMP J claim and another grid on an EM anomaly on the IMP L claim. Magnetometer surveys were completed over the same two grids.

In 1985 one of the 1984 soil grids was extended and an additional soil grid established over an Input EM anomaly on the IMP K and W claims. Soil sampling, magnetometer and VLF surveys were completed on both grids.

In 1986, a drill hole tested a combined EM conductor and soil anomaly on the M1 grid. Highly conductive graphitic argillites were intersected near the top of a squence of cherts, tuffs and gabbroic sills. Property mapping suggested the favourable Myra Formation might be exposed along the southern boundary of the claims.

## 5.0 REGIONAL GEOLOGY

Work by Muller (1982) shows the Haslam Creek area to lie within the Sicker Group, particularly what is described as a sill-sediment unit. This consists of interbedded argillite and siltstone, interlayered with basic sills. Fyles (1955) mapped numerous intertonguing bands of Sicker Group sediments and diabase that he associated with the Karmutsen formation in the upper Haslam Creek area. The sediments of the unit are generally thinly bedded, turbidite like, massive argillite and siltstone that are much silicified and show conspicuous dark-light banding on joint faces. Silicification is in part diagenetic and in part a contact reaction with the enclosed diabase sills (Muller, 1980).



**LEGEND:**

- KH** Haslam Formation
- Kc** Comox Formation
- Jg** Island Intrusions
- Pss** Sediment - Silt Unit
- Pm** Myra Formation
- · -** Geological Boundary, Approximate
- ~ ~** Fault, Approximate
- + -** Bedding - Inclined, Vertical
- ↖ ↗** Foliation



**IMPERIAL METALS CORPORATION**

**HASLAM CREEK**

FIGURE 4

N.T.S. 92B/13W 8C/16E

**REGIONAL GEOLOGY**



SCALE: 1: 50 000

GEOLOGIST: P. DELANCEY

DATE: NOVEMBER, 1988

DRAWN BY: S. HAWORTH

## 6.0 PROPERTY GEOLOGY

The IMP K claims are underlain by the sediment-sill unit that lies within the Sicker Group. The sediments on the property are comprised of several types: well bedded pale grey and green cherty and fine grained tuffs, foliated (kink banded) chlorite sericite schists and phyllites, medium grain grey to black quartz sandstones to green greywacke and intermediate tuffs, carbonaceous to cherty argillites. The gabbro units vary from coarse grain gabbros to basalt and possibly dacite. The gabbros generally form sills, however, the contact relationships are locally more complex.

The volcanic sediments of the area are generally intermediate in composition. Although, much of the sediment is cherty it is believed to be either biogenic chert or later silicification of fine grained sediment rather than rhyolite. This is supported by field evidence and some previous thin section descriptions in previous work reports (Clark, 1984). Jasper beds or lenses were noted in the south west portion of the claim. Mapping along the south boundary of the Imp K claim indicated that the favourable felsic volcanics (Qtz-Py schists) of the Myra formation lie just south of the southwest corner of Imp K (Figure 5).

### 6.1 Mineralization

There are two classes of epigenetic mineralization exhibited on the property.

Ankeritic zones associated with shearing were noted and sampled (PD-88-1,2,12,22) in both the south west corner and the mid-eastern areas of the claim block. The ankerite zones are of variable widths and orientations and cut both sediments, volcanics and gabbros. No significant geochemical values were reported from samples of these ankeritic zones.

A second type of mineralization consists of pyrite which is locally disseminated along bedded cherty sequences. The pyritic zones appear to be strongly associated with the gabbro units and are probably caused by them. Experience in areas to the north indicates that these pyritic zones do not contain precious metals. Samples taken of these pyritic zones along the south boundary of the Imp K claim, did not have any significant values.

## 7.0 SOIL GEOCHEMISTRY

Soil samples were collected for four flagged grid lines. Samples were taken of the B horizon at approximately 30cm depth. Although several anomalous values are indicated, no significant anomalous areas were outlined (Figure 5).

## 8.0 CONCLUSIONS & RECOMMENDATIONS

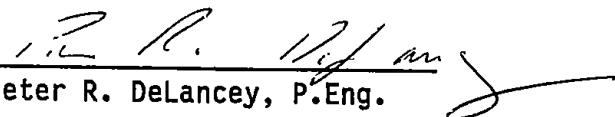
The IMP K claim is underlain by a sediment-gabbro sill unit of the Paleozoic Sicker Group. Two types of mineralization have been noted. One type is associated with ankeritic shear zones and the other consists of pyritic zones within sedimentary rocks which are likely associated with the gabbro sills. Soil and rock sampling has not indicated any specific areas for follow-up exploration.

9.0 STATEMENT OF QUALIFICATIONS

I, Peter Ross DeLancey, of 1748 Dunbar Street, Vancouver, British Columbia do hereby certify that:

1. I am a Senior Geologist employed by Imperial Metals Corporation, Suite 800 - 601 West Hastings Street, Vancouver, British Columbia.
2. I have been practising my profession as an exploration geologist since 1967, and have been involved in mining exploration in British Columbia for 18 years.
3. I am a Professional Engineer registered with the Professional Engineering Association of British Columbia.
4. I am a Fellow of The Geological Association of Canada.
5. I obtained my Master of Science Degree from The University of Manitoba, Winnipeg, Manitoba in 1967.

DATED the 9<sup>th</sup> day of Oct., 1988 at Vancouver, British Columbia.

  
Peter R. DeLancey, P.Eng.

10.0 ITEMIZED COST STATEMENT

DATES	:	July 18-25, August 5, 1988	
WAGES	:	Senior Geologist, 6 days @ \$270/day = \$1,620 Field Assistant, 8 days @ \$105/day = \$ <u>840</u>	\$ 2,460.00
MEALS	:	13 mandays @ \$30/day	\$ 390.00
ACCOMMODATION	:	8 days @ \$50/day	\$ 400.00
TRANSPORTATION:		8 days @ \$60/day	\$ 480.00
GEOCHEMISTR	:	148 soils @ \$15/sample = \$2,220 10 rocks @ \$15/sample = \$ <u>150</u>	\$ 2,370.00
REPORT PREPARATION	:	2 days @ \$270/day = \$ 540 1 day @ \$150/day = \$ <u>150</u>	\$ <u>690.00</u>
TOTAL	:		<u><u>\$ 6,790.00</u></u>

11.0 REFERENCES

- Baknes, M. and Gorc, D.; November 1987 "Assessment Report - Geological and Geochemical, Haslam Property", Imperial Metals Corporation
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- Fyles, J.; 1955 "Geology of the Cowichan Lake Area, B.C." (B.C. Dept. of Mines Bulletin 37) G.S.C. Paper 79-30
- Muller, J.; 1982 "The Paleozoic Sicker Group of Vancouver Island, B.C." Open File #821, Geological Survey of Canada
- Quin, S.P.; November 1983 "Progress Report - Haslam Creek Property" Imperial Metals Corporation
- Walcott, P.; January 1985 "A Report of Electromagnetic Survey - October 16-28, 1984" Peter Walcott and Associates

APPENDIX I

Geochemical Laboratory  
Methodology



## GEOCHEMICAL LABORATORY METHODOLOGY

### Appendix I

#### Sample Preparation

1. Soil samples are dried at 60°C and sieved to -80 mesh.
2. Rock samples are pulverized to -100 mesh.

#### Geochemical Analysis (AA and ICP)

0.5 gram samples are digested in hot dilute aqua regia in a boiling water bath and diluted to 10ml with demineralized water. Extracted metals are determined by:

1. Atomic Absorption (AA)

Ag\*, Bi\*, Cd\*, Co, Cu, Fe, Ga, In, Mn, Mo, Ni, Pb, Sb\*, Tl, V, Zn  
(\*denotes with background correction).

2. Inductively Coupled Argon Plasma (ICP)

Ag, Al, As, Au, B, Ba, Bi, Ca, Dc, Co, Cu, Cr, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

#### Geochemical Analysis for Au

10.0 gram samples that have been ignited overnight at 600°C are digested with hot dilute aqua regia, and the clear solution obtained is extracted with Methyl Isobutyl Ketone.

Au is determined in the MIBK extract by Atomic Absorption using background correction. (Detection Limit = 5ppb direct AA and 1ppb grahite AA.)

APPENDIX II

Geochemical Results



IMPERIAL METALS CORP. PROJECT 4204 FILE # 88-2986

SAMPLE#	MO	CU	PB	ZN	AG	NI	CO	MO	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CR	CA	P	LA	CF	MG	BA	TI	B	AL	HA	K	W	AU*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
10000E 10725N	1	71	23	122	.1	36	12	1086	9.88	37	5	ND	2	5	1	2	2	141	.03	.103	10	38	.52	49	.06	2	2.71	.01	.03	1	1	
10000E 10700N	1	30	20	81	.1	31	7	611	5.17	31	5	ND	1	4	1	3	2	112	.02	.083	6	16	.15	60	.05	2	2.08	.01	.02	1	1	
10000E 10675N	1	35	23	52	.6	16	4	327	2.32	21	5	ND	1	5	1	2	2	54	.03	.044	14	16	.13	80	.03	2	1.91	.01	.04	3	4	
10000E 10650N	1	59	27	132	.1	65	11	1245	8.34	47	5	ND	1	4	1	2	2	66	.01	.119	29	17	.17	48	.03	2	1.46	.01	.03	1	5	
10000E 10625N	1	35	26	83	.1	25	12	16088	5.91	22	5	ND	1	4	1	2	2	56	.02	.120	34	25	.05	130	.02	5	1.55	.01	.03	1	10	
10000E 10500N	2	28	17	95	.1	36	7	1434	5.62	48	5	ND	1	4	1	2	3	74	.02	.082	21	12	.07	46	.03	2	.73	.01	.04	1	1	
10000E 10575N	2	45	24	91	.1	30	8	1956	6.10	35	5	ND	1	6	1	2	2	62	.02	.122	21	21	.30	71	.04	3	1.87	.01	.03	1	1	
10000E 10550N	1	45	28	96	.1	24	12	5932	8.47	42	5	ND	1	4	1	2	2	75	.02	.256	14	23	.22	70	.03	2	1.92	.01	.04	1	3	
10000E 10525N	1	73	25	143	.1	48	14	5775	7.19	53	5	ND	1	5	1	2	4	46	.04	.161	16	31	.52	93	.02	2	2.55	.01	.04	1	5	
10000E 10500N	1	52	27	79	1.8	23	11	5419	3.69	8	5	ND	3	4	1	2	2	43	.02	.232	10	84	.83	41	.04	4	4.72	.01	.03	1	8	
10000E 10475N	1	7	4	17	.1	4	1	178	.66	5	5	ND	1	3	1	3	2	14	.01	.023	29	6	.03	54	.01	3	.61	.01	.01	1	1	
10000E 10450N	3	36	23	88	.5	29	8	1643	6.78	15	5	ND	2	5	1	2	2	60	.02	.129	30	35	.23	54	.03	2	1.93	.01	.05	1	5	
10000E 10425N	1	41	23	95	.1	29	13	6873	7.60	33	5	ND	1	7	1	3	2	64	.05	.150	13	24	.26	59	.02	2	1.61	.01	.04	1	3	
10000E 10400N	1	30	25	76	.1	24	9	5712	7.63	31	5	ND	1	5	1	2	2	74	.02	.197	13	21	.14	77	.03	2	1.68	.01	.03	1	3	
10000E 10375N	2	48	22	114	.3	36	10	2962	7.30	34	5	ND	1	4	1	2	2	54	.02	.109	14	27	.51	64	.02	2	2.23	.01	.03	1	14	
10000E 10350N	1	34	26	94	.1	20	11	12931	5.66	13	5	ND	1	7	1	2	2	59	.03	.152	11	15	.06	177	.02	2	1.55	.01	.03	2	1	
10000E 10325N	1	21	24	63	.2	18	7	993	7.53	17	5	ND	2	4	1	2	2	103	.02	.102	10	20	.14	83	.09	2	1.90	.01	.03	1	1	
10000E 10300N	2	20	13	42	.1	17	4	312	3.21	14	7	ND	1	3	1	2	3	81	.04	.062	13	10	.07	45	.03	2	1.05	.01	.03	1	1	
10000E 10275N	1	45	25	119	1.2	43	16	5192	5.86	14	5	ND	1	4	1	2	2	100	.04	.134	11	31	.59	85	.14	2	4.07	.01	.04	1	1	
10000E 10250N	1	27	28	106	.1	26	9	1364	9.86	17	5	ND	1	4	1	2	2	93	.02	.142	9	32	.49	77	.14	2	2.80	.01	.04	1	1	
10000E 10225N	1	25	21	82	.3	22	8	1276	7.06	9	5	ND	1	3	1	2	3	123	.03	.093	10	26	.29	73	.13	3	2.45	.01	.04	1	1	
10000E 10200N	2	40	22	97	.1	28	10	1688	8.06	11	5	ND	2	5	1	2	2	84	.04	.138	13	50	.49	99	.09	6	2.67	.01	.04	1	1	
10000E 10175N	1	48	25	87	.2	24	8	1688	7.30	13	5	ND	1	4	1	2	2	69	.04	.141	13	46	.44	58	.06	2	2.96	.01	.05	1	1	
10000E 10150N	1	114	29	175	.1	72	16	2345	7.37	22	5	ND	4	3	1	2	2	64	.01	.133	15	37	.87	129	.03	8	5.23	.01	.02	1	12	
10000E 10125N	1	43	23	96	.3	35	9	1267	6.55	18	5	ND	1	5	1	2	2	73	.04	.087	13	30	.62	91	.03	2	2.24	.01	.04	1	3	
10000E 10100N	1	43	21	98	.1	57	8	794	5.22	12	5	ND	2	4	1	3	4	79	.02	.046	16	89	1.23	93	.02	5	2.65	.01	.03	1	1	
10000E 10075N	1	78	33	153	.4	64	14	2710	6.36	29	5	ND	1	5	1	2	2	60	.02	.111	17	31	.88	126	.03	2	2.48	.01	.03	1	1	
10000E 10050N	1	41	27	53	.1	10	5	618	2.49	3	5	ND	1	7	1	4	2	46	.10	.078	8	15	.27	84	.08	4	1.37	.01	.02	2	3	
10000E 10025N	1	24	19	44	.2	18	5	332	3.91	8	5	ND	2	4	1	3	2	73	.03	.075	10	22	.26	55	.11	5	1.33	.01	.02	3	4	
10000E 10000N	1	24	22	58	.1	35	8	487	6.61	14	5	ND	1	6	1	2	2	114	.04	.075	13	72	.62	94	.08	2	2.29	.01	.03	1	1	
R-0	2	39	28	86	.1	23	21	1222	6.46	7	5	ND	1	20	1	2	2	128	.37	.054	10	41	.61	74	.29	2	3.45	.01	.04	1	1	
R-25	1	90	19	83	.1	34	12	499	4.88	2	5	ND	2	16	1	2	5	100	.35	.069	7	45	1.06	87	.27	2	4.61	.02	.05	1	1	
R-50	1	36	20	66	.1	21	11	421	7.73	2	5	ND	2	13	1	2	2	156	.21	.076	5	39	.58	58	.37	4	3.10	.01	.04	1	3	
R-75	1	53	20	79	.1	20	13	454	5.37	2	5	ND	1	17	1	2	2	119	.38	.063	6	32	.62	68	.30	3	3.11	.01	.05	1	1	
R-100	1	43	20	70	.2	26	19	457	5.29	2	5	ND	1	11	1	2	2	112	.23	.101	6	46	.70	83	.25	4	3.78	.01	.05	1	1	
R-125	1	51	19	70	.1	26	11	611	4.79	2	5	ND	2	12	1	2	2	111	.28	.078	5	35	.85	122	.26	3	3.48	.01	.06	1	1	
STD C/AU-S	18	58	39	132	7.1	68	28	1096	4.06	38	16	7	36	47	17	16	20	57	.46	.085	39	55	.91	171	.06	32	1.95	.06	.13	13	52	

IMPERIAL METALS CORP. PROJECT 4204 FILE # 88-2986

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Al	Si	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Pb	Al	Na	K	W	Au*										
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM										
R-150	2	70	21	85	.2	38	13	72.9	4.83	2	5	ND	1	11	1	1	1	1	1	1	3	2	98	.24	.055	9	42	1.15	133	.26	4	6.15	.02	.07	2	2
R-175	1	50	18	70	.5	27	10	589	6.02	2	6	ND	1	12	1	1	1	1	1	1	3	2	111	.25	.045	8	45	1.07	120	.27	2	4.89	.02	.08	1	3
R-200	1	47	13	83	.4	28	19	664	5.75	2	5	ND	1	16	1	1	1	1	1	1	2	2	113	.37	.031	9	45	.86	101	.26	2	3.56	.02	.06	1	1
R-225	1	129	21	90	.2	51	24	811	4.65	7	5	ND	1	21	1	1	1	1	1	1	2	2	90	.51	.074	11	47	1.31	193	.20	4	4.17	.02	.11	3	2
R-250	1	180	20	111	.2	55	29	1215	5.08	2	5	ND	1	18	1	1	1	1	1	1	4	2	86	.36	.073	13	48	1.37	200	.15	3	5.24	.02	.07	1	2
R-275	1	102	13	89	.3	63	19	655	4.74	5	5	ND	1	22	1	1	1	1	1	1	2	9	83	.52	.040	10	48	1.42	144	.18	2	4.15	.02	.07	1	3
R-300	2	72	16	115	.5	25	27	1008	8.59	2	5	ND	1	7	1	1	1	1	1	1	2	7	130	.14	.153	6	50	.74	61	.19	2	5.10	.01	.02	1	1
R-325	1	37	21	176	.2	16	30	1133	10.06	2	5	ND	1	22	1	1	1	1	1	1	2	7	131	.51	.323	13	16	1.54	127	.27	7	4.47	.01	.34	1	1
R-350	1	115	16	114	.2	52	25	1133	5.64	6	5	ND	1	16	1	1	1	1	1	1	2	2	97	.31	.130	9	48	1.52	188	.21	5	4.25	.02	.12	1	2
R-375	1	10	18	161	.1	2	44	1244	12.36	8	5	ND	1	37	1	1	1	1	1	1	2	3	227	.87	.298	24	1	2.15	69	.43	2	4.99	.04	.34	1	1
R-400	1	115	17	92	.3	51	23	1041	5.67	4	5	ND	1	19	1	1	1	1	1	1	2	2	98	.40	.085	10	59	1.58	142	.22	6	4.12	.02	.10	1	1
R-425	1	91	25	106	.2	54	21	890	6.01	2	5	ND	1	13	1	1	1	1	1	1	2	2	102	.25	.138	9	57	1.34	119	.22	3	4.99	.02	.06	1	2
R-450	1	129	18	107	.1	53	24	1072	5.65	4	5	ND	1	16	1	1	1	1	1	1	2	5	100	.39	.079	9	61	1.62	153	.22	2	4.45	.02	.09	1	2
R-475	1	112	25	114	.4	75	38	1424	7.58	7	5	ND	1	22	1	1	1	1	1	1	2	2	135	.22	.129	7	87	2.36	105	.35	7	5.93	.01	.09	1	1
R-500	1	152	14	92	.1	60	31	991	5.62	5	5	ND	1	33	1	1	1	1	1	1	2	5	115	.58	.110	8	54	1.59	138	.28	2	3.62	.02	.14	1	1
R-525	1	94	18	94	.4	47	23	742	6.67	3	7	ND	1	20	1	1	1	1	1	1	2	4	122	.27	.126	8	60	1.26	115	.31	4	4.63	.01	.07	1	1
R-550	1	135	20	110	.3	79	34	997	6.82	2	5	ND	1	32	1	1	1	1	1	1	2	10	113	.44	.089	8	84	2.17	133	.31	4	5.05	.01	.11	2	1
R-575	1	109	16	91	.2	83	28	521	7.19	2	5	ND	1	36	1	1	1	1	1	1	2	2	96	.28	.331	6	128	2.13	60	.29	3	6.41	.01	.02	1	1
R-600	1	180	22	112	.3	109	39	734	7.57	2	5	ND	1	39	1	1	1	1	1	1	2	2	112	.41	.116	8	92	3.37	99	.41	2	6.11	.01	.10	1	2
R-625	1	35	13	72	.2	9	12	581	5.40	2	5	ND	1	5	1	1	1	1	1	1	2	2	159	.08	.056	3	16	.59	54	.14	3	3.68	.01	.02	1	1
R-650	1	164	16	144	.4	246	69	1235	8.82	2	5	ND	1	58	1	1	1	1	1	1	2	2	112	.97	.094	7	332	4.48	88	.48	2	6.35	.01	.03	1	1
R-675	2	132	18	114	.5	23	77	3253	7.42	5	5	ND	1	33	1	1	1	1	1	1	2	2	61	.43	.105	8	23	.85	148	.10	4	5.58	.01	.03	1	1
R-700	1	91	18	152	.3	36	62	1497	8.44	10	5	ND	1	23	1	1	1	1	1	1	2	2	101	.59	.094	7	30	1.10	45	.10	6	5.42	.01	.02	1	2
R-725	1	98	18	121	.3	56	29	748	5.74	2	5	ND	1	21	1	1	1	1	1	1	2	2	97	.36	.043	6	55	1.61	251	.28	2	4.39	.02	.05	1	3
R-750	1	87	23	121	.4	32	25	536	6.65	2	5	ND	1	12	1	1	1	1	1	1	2	3	110	.17	.044	7	45	1.00	81	.31	3	4.47	.01	.03	1	1
R-775	1	63	12	104	.1	24	20	523	6.79	5	5	ND	1	22	1	1	1	1	1	1	2	5	102	.30	.095	4	31	.94	76	.25	3	4.00	.01	.04	1	1
R-800	1	83	18	99	.2	37	27	820	5.74	2	5	ND	1	25	1	1	1	1	1	1	2	2	96	.46	.076	7	42	1.25	113	.22	2	4.48	.01	.05	1	1
R-825	1	140	13	110	.3	63	33	1447	6.69	5	5	ND	1	21	1	1	1	1	1	1	2	2	117	.35	.093	9	59	1.94	177	.26	2	5.13	.02	.12	1	2
R-850	1	115	15	118	.3	33	32	1266	8.48	2	5	ND	1	48	1	1	1	1	1	1	2	2	132	1.08	.178	14	35	2.05	280	.29	2	5.04	.05	.41	1	1
R-875	9	100	26	104	.4	36	27	1208	7.35	6	5	ND	1	17	1	1	1	1	1	1	2	2	107	.30	.090	11	44	1.07	122	.27	5	4.43	.02	.07	1	1
R-900	1	109	16	105	.3	46	25	1025	6.13	2	5	ND	1	26	1	1	1	1	1	1	2	2	107	.55	.096	10	48	1.66	192	.28	6	4.62	.03	.13	1	2
R-925	1	142	16	126	.2	40	33	1658	5.73	9	5	ND	1	19	1	1	1	1	1	1	2	2	98	.41	.129	9	42	1.34	146	.20	4	3.66	.01	.04	1	1
R-950	2	293	26	179	.8	36	41	3810	5.95	16	5	ND	1	80	1	1	1	1	1	1	2	2	83	2.43	.802	30	30	1.34	178	.11	5	4.46	.01	.06	1	1
R-975	1	152	18	103	.5	50	30	1427	6.04	13	5	ND	1	26	1	1	1	1	1	1	2	2	95	.53	.103	12	58	1.72	189	.19	6	3.99	.01	.09	1	2
R-1000	1	149	21	99	.3	55	29	1398	6.69	8	5	ND	1	29	1	1	1	1	1	1	2	2	105	.45	.074	13	59	2.00	267	.21	2	4.20	.01	.10	1	1
R1-0	1	81	16	80	.3	50	21	619	5.70	3	5	ND	1	25	1	1	1	1	1	1	3	2	105	.40	.176	12	82	1.76	62	.34	4	4.02	.01	.08	1	1
STD C/AU-S	18	58	38	127	7.1	66	29	1074	3.98	38	17	8	37	47	17	17	18	55	.45	.087	38	55	.90	175	.06	33	1.93	.06	.14	12	12	51				

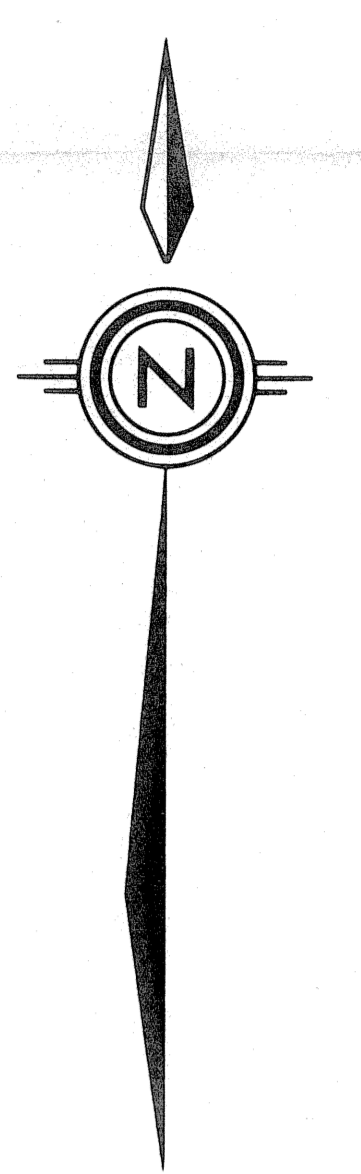
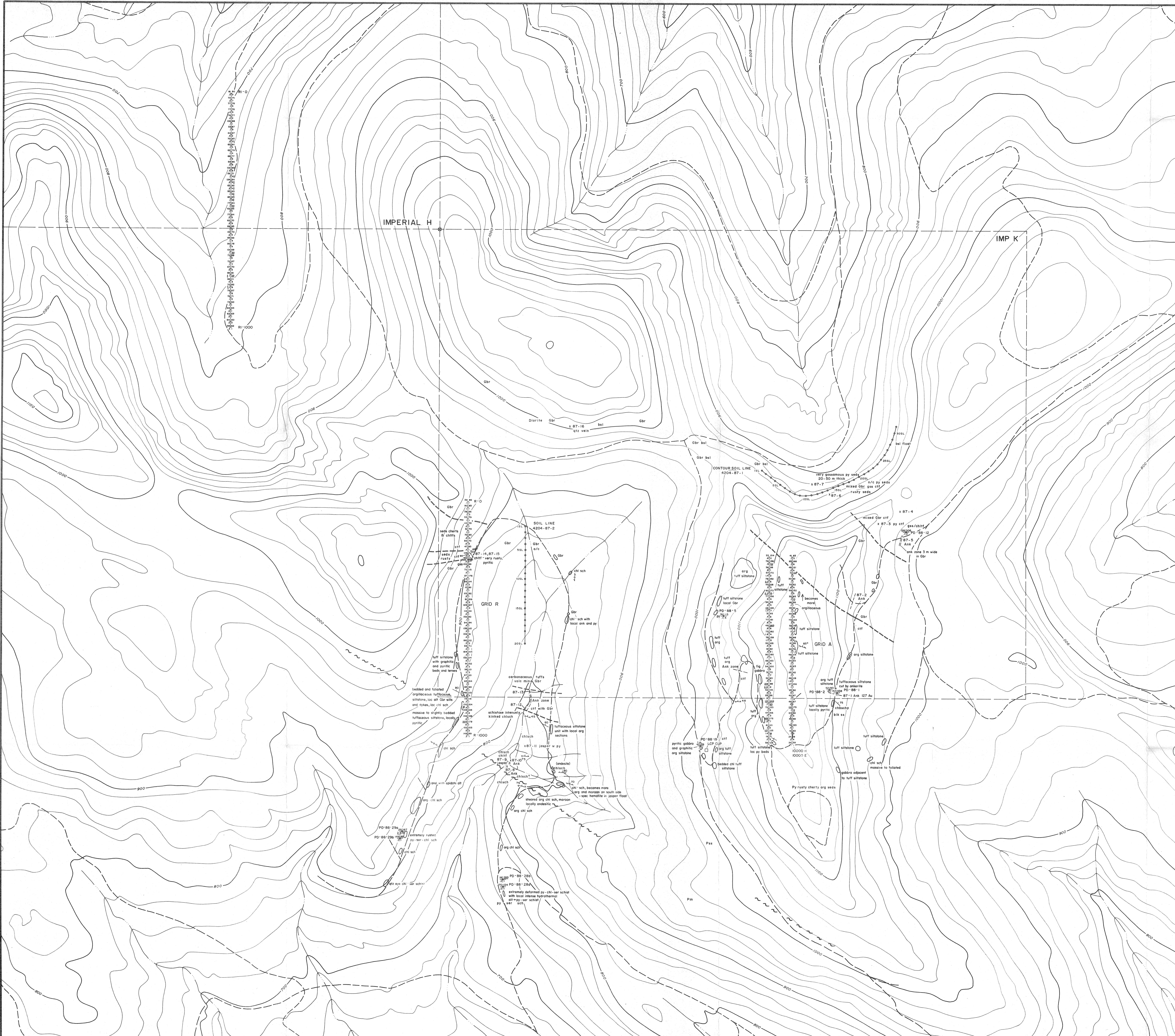
SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Hg PPM	Co PPM	Mn PPM	Fe PPM	As PPM	V PPM	Ca PPM	La PPM	Cr PPM	Mg PPM	Ba PPM	Pb PPM	Al PPM	Si PPM	Ca PPM	K PPM	W PPM	Au PPM		
RI-25	1	72	10	74	.2	37	17	510	5.53	2	2	100	.21	.310	12	94	1.26	49	.27	2	5.98	.01	.03	1	7
RI-50	1	77	9	78	.1	48	16	417	5.51	3	2	97	.28	.190	9	102	1.48	48	.35	3	5.72	.01	.04	1	3
RI-75	1	77	11	78	.2	48	22	908	5.33	3	2	112	.45	.099	9	92	1.56	89	.30	2	3.53	.01	.06	2	3
RI-100	1	76	12	77	.2	51	20	703	5.18	5	2	104	.47	.099	10	90	1.57	71	.29	2	3.58	.01	.05	1	2
RI-125	1	106	11	88	.1	67	25	858	5.65	2	2	105	.66	.138	14	111	2.21	99	.26	2	3.66	.01	.07	1	1
RI-150	1	53	9	87	.1	42	22	1015	5.37	2	2	113	.42	.062	9	80	1.40	91	.31	2	3.29	.01	.05	1	3
RI-175	1	44	14	97	.5	34	16	427	6.55	2	2	134	.34	.052	8	79	1.17	98	.39	2	3.64	.01	.03	1	2
RI-200	1	70	14	85	.2	48	26	1186	5.29	2	2	110	.55	.085	11	88	1.54	105	.28	2	3.25	.01	.08	1	3
RI-225	1	60	14	96	.1	49	25	1185	5.36	3	2	113	.40	.056	8	81	1.32	121	.27	2	3.89	.02	.04	1	3
RI-250	1	62	11	79	.1	41	21	842	4.39	2	2	106	.44	.060	9	66	1.29	117	.26	3	3.71	.02	.04	1	4
RI-275	1	68	13	77	.1	52	20	571	4.14	2	2	87	.63	.094	10	81	1.60	66	.24	4	3.48	.01	.05	1	3
RI-300	1	59	14	96	.2	53	21	629	5.70	2	2	115	.36	.041	6	98	1.69	67	.35	2	3.51	.01	.03	1	6
RI-325	1	122	10	68	.3	51	22	533	4.50	2	2	94	.68	.077	9	102	1.64	95	.24	5	3.15	.02	.01	1	5
RI-350	1	151	11	71	.1	50	21	858	4.35	2	2	94	.66	.083	9	74	1.57	149	.21	2	3.11	.02	.06	2	4
RI-375	1	124	5	84	.2	47	23	897	4.25	3	2	93	1.07	.065	9	75	1.48	149	.19	4	3.90	.03	.05	1	3
RI-400	1	63	11	82	.2	29	12	438	5.33	4	2	132	.31	.062	10	53	.73	119	.21	4	4.09	.01	.04	1	4
RI-425	1	93	7	65	.1	36	16	603	3.30	2	2	92	.57	.087	9	46	1.11	125	.21	4	2.98	.02	.04	1	5
RI-450	1	85	10	65	.1	40	19	609	3.84	4	2	94	.62	.077	9	59	1.22	101	.22	3	3.28	.03	.04	1	3
RI-475	1	77	16	84	.1	40	22	918	4.48	2	2	109	.55	.090	9	56	1.17	136	.21	2	3.39	.02	.06	1	53
RI-500	1	62	9	65	.1	33	13	390	4.40	2	2	104	.45	.080	7	50	1.05	67	.24	2	3.69	.02	.04	1	7
RI-525	1	77	13	84	.2	35	15	609	4.56	3	2	115	.41	.087	9	40	1.10	156	.20	3	3.63	.02	.07	1	5
RI-550	1	62	10	70	.2	23	10	289	4.88	6	2	109	.19	.237	10	51	.65	66	.16	4	6.90	.01	.02	1	9
RI-575	1	66	10	83	.1	37	15	463	4.88	2	2	111	.46	.083	8	51	1.16	98	.24	5	3.63	.02	.05	1	3
RI-600	1	101	15	70	.2	44	21	685	4.48	2	2	110	.67	.084	10	65	1.49	133	.24	3	3.71	.03	.09	1	5
RI-625	1	83	12	68	.1	41	18	590	4.47	2	2	112	.69	.070	9	62	1.25	119	.27	3	3.18	.03	.05	1	4
RI-650	1	90	11	78	.1	46	22	640	4.66	2	2	115	.70	.045	10	67	1.40	360	.28	2	3.33	.03	.06	1	4
RI-675	1	101	9	69	.1	53	20	609	4.44	2	2	105	.84	.065	8	75	1.46	193	.27	3	3.05	.04	.03	1	30
RI-700	1	72	10	59	.1	33	13	524	3.86	2	2	99	.58	.101	9	51	1.18	98	.23	2	3.22	.03	.05	1	5
RI-725	1	72	7	67	.1	49	18	542	4.24	2	2	103	.53	.073	8	83	1.47	75	.26	2	3.21	.02	.03	1	7
RI-750	1	67	11	70	.3	57	22	591	4.40	2	2	103	.58	.073	9	92	1.61	91	.23	2	3.45	.02	.05	1	3
RI-775	1	65	12	81	.1	33	15	473	5.04	5	2	129	.28	.054	7	52	.90	89	.25	2	4.13	.02	.04	1	23
RI-800	1	62	16	111	.4	41	49	1709	4.70	2	2	115	.32	.053	16	43	.89	155	.22	2	3.79	.02	.05	1	3
RI-825	1	70	13	82	.1	42	19	508	4.27	6	2	93	.41	.072	11	56	1.19	130	.22	2	4.13	.02	.05	2	9
RI-850	1	76	10	87	.1	37	22	822	4.40	5	2	103	.78	.076	10	54	1.26	116	.23	2	2.73	.04	.06	1	6
RI-875	1	76	3	71	.1	41	19	628	4.09	2	2	96	.95	.083	10	60	1.29	190	.25	3	2.55	.04	.07	1	3
RI-900	1	72	5	60	.1	39	16	534	3.53	4	2	93	.69	.079	8	72	1.36	112	.27	3	2.64	.02	.04	1	1
STD C/AU-S	17	57	38	132	7.1	67	29	1083	4.06	36	16	7	46	.090	39	57	.91	173	.06	34	1.97	.06	.14	12	50

IMPERIAL METALS CORP. PROJECT 4204 FILE # 88-2986

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Mi PPM	Co PPM	Mn PPM	Fe PPM	As PPM	V PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca PPM	La PPM	Cr PPM	Mg PPM	Ba PPM	Tl PPM	B PPM	Al PPM	Hg PPM	K PPM	W PPM	Au* PPM	
R1-925	1	94	7	83	.2	53	20	659	4.71	3	5	ND	2	36	1	2	2	108	.67	.062	9	75	1.51	145	.27	3	3.18	.03	.06	1	1
R1-950	1	62	11	69	.3	35	13	410	4.63	2	5	ND	1	19	1	2	2	113	.38	.057	8	59	1.02	85	.30	5	3.81	.02	.04	1	1
R1-975	1	64	7	60	.2	43	18	482	3.97	5	5	ND	1	24	1	2	2	97	.58	.082	8	78	1.31	66	.30	5	3.11	.02	.03	1	2
R1-1000	1	35	18	62	.3	22	12	360	4.86	2	5	ND	2	17	1	2	2	134	.30	.050	6	46	.71	56	.34	2	2.55	.01	.04	1	1
STD C/AJ-5	17	60	41	132	7.1	68	28	1089	4.07	39	19	8	37	48	17	18	22	57	.46	.089	39	56	.92	174	.06	33	1.98	.06	.13	12	48

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Mi	Co	Ni	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Ct	Mg	Ba	W	Al	Na	K	W	Au*	
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	
PD-88-1	1	133	14	208	.1	69	31	1605	7.37	102	5	ND	1	139	1	2	2	147	4.69	.046	7	78	2.20	115	.01	2	1.70	.01	.04	1	1
PD-88-2	1	52	11	90	.4	24	9	1718	4.74	13	5	ND	1	8	1	2	3	64	.27	.013	4	26	1.85	117	.27	3	2.49	.01	.06	1	1
PD-88-5	1	74	10	113	.1	40	11	1469	3.98	9	5	ND	2	5	1	2	3	30	.08	.030	10	16	.54	157	.01	3	1.25	.01	.06	1	4
PD-88-12	1	126	19	106	.1	39	40	1371	10.18	66	5	ND	1	213	1	2	2	275	5.95	.109	19	1	2.19	61	.01	2	.55	.01	.04	1	1
PD-88-19	1	42	8	59	.1	10	15	1094	5.75	3	5	ND	1	6	1	2	2	36	.12	.025	3	8	.72	30	.05	2	1.08	.02	.06	1	1
PD-88-22	1	105	6	78	.1	16	19	2318	5.77	2	5	ND	1	134	1	2	5	147	5.34	.110	12	15	1.62	230	.02	2	1.82	.02	.03	1	1
PD-88-28a	1	170	22	124	.2	17	28	969	7.74	31	5	ND	1	42	1	2	2	33	2.99	.119	7	7	1.62	23	.01	2	1.96	.02	.13	1	1
PD-88-28b	1	18	30	269	.2	7	12	560	6.74	4	5	ND	2	10	1	2	2	17	.22	.138	9	5	.72	43	.01	2	1.45	.02	.09	1	1
PD-88-29a	1	25	36	167	2.6	10	23	442	10.69	20	5	ND	1	7	1	2	2	32	.13	.114	3	6	1.19	30	.01	2	1.62	.02	.11	1	4
PD-88-29b	1	142	30	131	.2	4	14	121	21.49	18	5	ND	5	4	1	5	7	12	.01	.193	5	1	.11	31	.01	2	.66	.01	.19	1	1
STD C/AU-2	18	59	37	132	6.5	67	31	1042	4.08	39	17	7	36	48	17	17	22	58	.46	.094	40	58	.93	174	.07	33	1.97	.06	.13	12	515





**LEGEND**

- Road
- Stream
- Claim Post
- - - Claim Boundary
- ~ ~ ~ Fault
- - - Contact, known
- - - Contact, assumed
- 20 85 Soil Sample & Number
- x87-3 Rock Sample & Number
  
- Gbr Gabbro
- bsl Basalt
- cff Banded green white grey fine grain cherty tuff, foliated
- gss Medium coarse grain greywacke sandstone
- sta Siltstone
- chitf Dark green chloritic tuff, foliated
- schp Chloritic sericite schist/phyllite
- chitf Schistose purple grey lapilli lithic stee tuff
- giff Schistose green grey lapilli lithic stee tuff
- Agp Augite porphyry
- chisch Greenish red purple chlorite schist
- chschp Chlorite bleb schist
  
- py Pyritic
- Ank Ankeritic
- arg Argillite

**GEOCHEMICAL LEGEND**

Cu <sub>2</sub>	Rock Value
Ag <sub>2</sub>	Rock Value
Cu <sub>2</sub>	Soil Value
Ag <sub>2</sub>	Soil Value
Cu	≥ 100 ppm
Zn	≥ 200 ppm
Ag	≥ 2.0 ppm

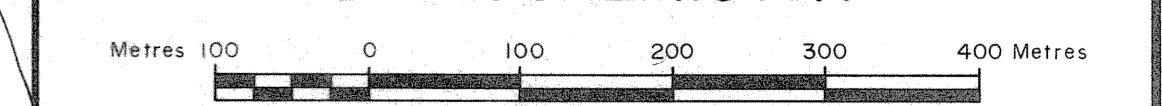
**GEOLOGICAL BRANCH ASSESSMENT REPORT**

**18,010**

**IMPERIAL METALS CORPORATION  
HASLAM CREEK**

FIGURE 5 N.T.S. 92C/16E

**IMP K & H CLAIMS  
PROPERTY GEOLOGY  
& GEOCHEMISTRY**



SCALE: 1:5000 GEOLOGIST: M.B., P.D.  
DATE: NOVEMBER, 1988 DRAWN BY: S.H., J.C.