DIAMOND DRILLING and GEOPHYSICAL REPORT

INDUCED POLARIZATION SURVEY

on the

OFFSET LAKE AREA

JAMBOREE PROPERTY

CARIBOO MINING DIVISION

NTS 93A 7W

LATITUDE 52° 15' W
LONGITUDE 122° 50' W

for

IMPERIAL METALS CORPORATION

Field Work Period: June 15 - July 8, 1988

DENNIS GORC
JANUARY, 1989
VANCOUVER, B.C.

SUMMARY

The Jamboree claims are situated in the Cariboo Mining Division 85 km east of Williams Lake, B.C. The property is set within the Quesnel Trough, a belt of Mesozoic volcanics and sediments. Significant gold and copper-gold mineralization has been discovered within this belt of rocks.

In 1988 an induced polarization and diamond drilling program was completed on the Offset Lake area of the Jamboree property.

A total of 8.825 km of induced polarization survey was completed outlining widespread moderate to strong chargeability highs and resisitivity lows. Several of these anomalies are likely due to graphite.

Two diamond drill holes totalling 320 m were drilled to test coincident geochemical and geophysical targets. Gold values returned were low. The best intersection was DDH JO-88-1 (89.3 m - 91.44 m) which returned 880 ppb Au and 1494 ppm As. Other samples were weakly anomalous in gold, arsenic, copper, zinc, molybdenum, nickel and chromium.

The drilling intersected interbedded calcareous felsic volcaniclastic/tuff and argillite. The volcaniclastic unit contained pyrite.

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1.0 INTRODUCTION

This report discusses an induced polarization survey and diamond drilling program completed on the Offset Lake area of the Jamboree property, Cariboo M.D. This work was completed during the period June 15 - July 8, 1988.

In preparation for the geophysical survey 13.35 km of linecutting was completed on the Offset Lake grid. Prior to drilling approximately 700 m of logging skid trail was upgraded by caterpillar to provide improved access.

Aim of the program was to discover the bedrock source of anomalous gold values returned from past soil sampling surveys in the Offset Lake area. Gold values up to 6395 ppb Au were returned from such surveys.

A rotary drill program completed in 1983 failed to discover an adequate bedrock source for this gold.

Exploration on the nearby Frasergold property is continuing with the mineralization now exposed by underground adits.

2.0 CLAIM DATA

The Jamboree claim block consists of 18 modified grid claims totalling 290 units. These claims are listed as owned by Imperial Metals Corporation, but are subject to a joint venture partnership which also includes Geomex Development Inc., Ruanco Enterprises Ltd., and International Display Corporation.

As of June 24, 1988 the Jamboree property has been divided into the following groups for assessment purposes:

Group 1	Claim Name	# of Units
	Jamboree 1	20
	Jamboree 2	20
	Jamboree 3	20
	Jamboree 4	20
	Jamboree 18	20
		100 units

Group 2	Claim Name	# of Units
	Jamboree 5	20
	Jamboree 6	8
	Jamboree 12	9
	Jamboree 13	9
	Jamboree 14	9
	Jamboree 15	20
	Jamboree 16	9
	Jamboree 17	8
		92 units

Group 3	Claim Name	# of Units
	Jamboree 7	20
	Jamboree 8	20
	Jamboree 9	20
	Jamboree 10	20
	Jamboree 11	20
		100 units

TABLE 1 - CLAIM DATA

Name	Units	Record No.	Record Date
Jamboree 1	20	3783 (6)	24/06/81
Jamboree 2	20	3784 (6)	24/06/81
Jamboree 3	20	3785 (6)	24/06/81
Jamboree 4	20	3786 (6)	24/06/81
Jamboree 5	20	3787 (6)	24/06/81
Jamboree 6	8	3788 (6)	24/06/81
Jamboree 7	20	4176 (11)	26/11/81
Jamboree 8	20	4177 (11)	26/11/81
Jamboree 9	20	4178 (11)	26/11/81
Jamboree 10	20	4185 (11)	26/11/81
Jamboree 11	18	4179 (11)	26/11/81
Jamboree 12	9	4180 (11)	26/11/81
Jamboree 13	9	4181 (11)	26/11/81
Jamboree 14	9	4186 (11)	26/11/81
Jamboree 15	20	4182 (11)	26/11/81
Jamboree 16	9	4183 (11)	26/11/81
Jamboree 17	8	4184 (11)	26/11/81
Jamboree 18	20	4353 (7)	12/07/82

3.0 LOCATION, ACCESS AND TOPOGRAPHY

The Jamboree property is situated approximately 85 km east of Williams Lake, B.C. in the Cariboo Mining Division. The claims straddle the Horsefly River near its junction with McKusky Creek. The latitude is 52°15'N and longitude is 120°50'W on NTS map sheet 93A/7W.

Access is by an all-weather logging road from the town of Horsefly, 20 km to the west. Secondary logging roads provide good access to peripheral areas of the claims, including the North Grid, Doreen Grid and Offset Grid areas.

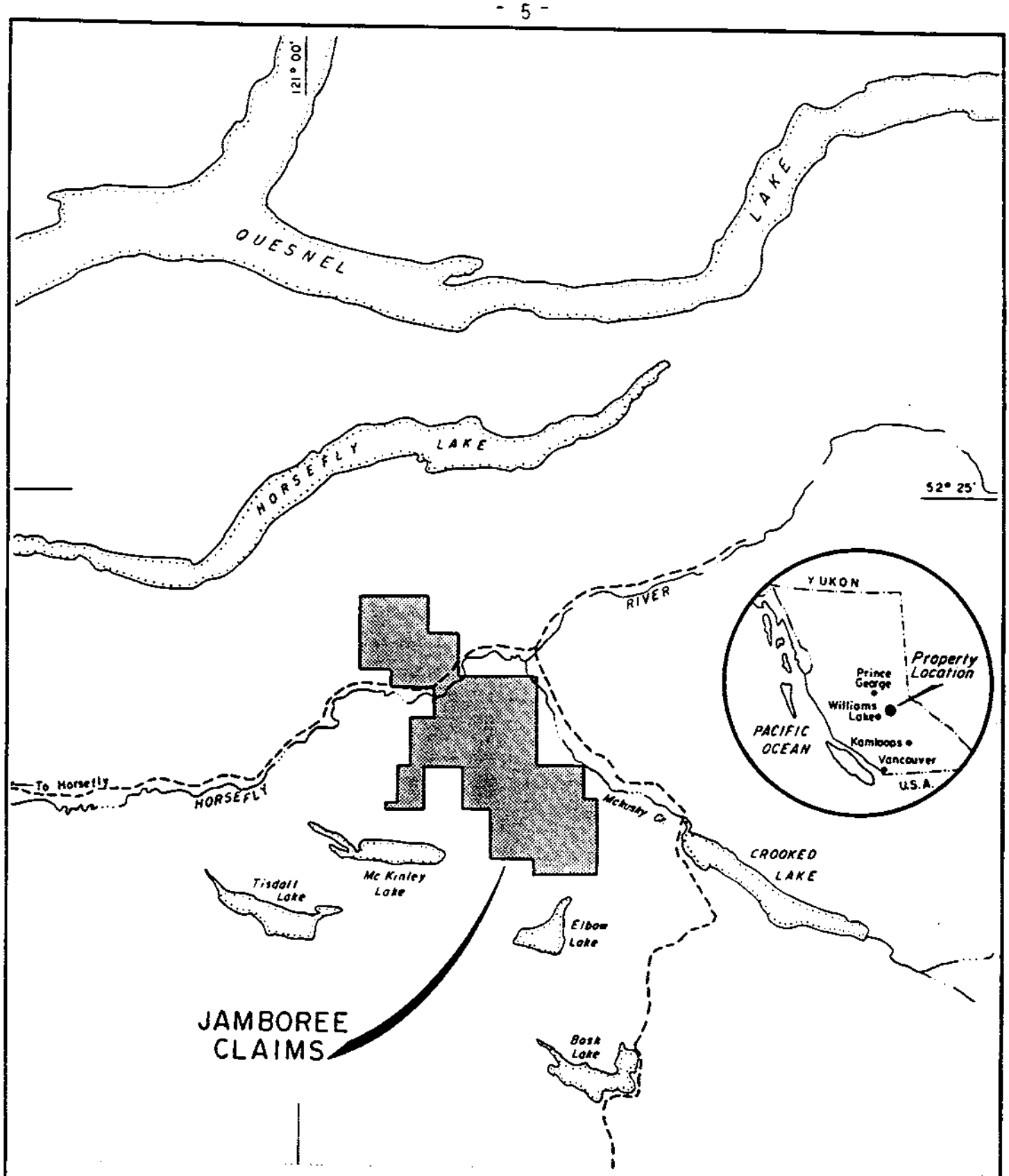
The Jamboree claims are located in the western foothills of the Cariboo Mountains. Elevations range between 900 meters on the Horsefly River to 1700 meters on the Ridge area in the central portion of the claim group. Much of the lower areas have been logged providing good exposure while the mature forests on the upper mountain slopes allow good walking. The central Ridge Area is relatively flat with several marshes and swamps among large stands of evergreen.

4.0 EXPLORATION HISTORY

The Jamboree claims 1-6 were staked in June, 1981 in response to the release of geochemical data by the British Columbia Government indicating the area was anomalous in arsenic. The Jamboree 7-17 claims were staked in October, 1981 after additional soil and silt sampling was carried out in the region. The Jamboree 18 claim was staked in July, 1982 to fill in open ground between Jamboree 7 and 15.

The 1982 exploration program began with the establishment of a geochemical sampling grid on the central area of the claim block. Reconnaissance lines were run elsewhere. Results were encouraging with several gold-arsenic anomalies outlined. One rock sample from outcrop in the Doreen lake area assayed 0.121 oz/ton Au over 1 meter.

In 1983 the geochemical grid was expanded to cover a much larger portion of the claim group. The original grid's baseline was extended to the Horsefly River in the northwest and to the Jamboree 11 claim in the southeast corner of the claim block.



IMPERIAL METALS CORPORATION

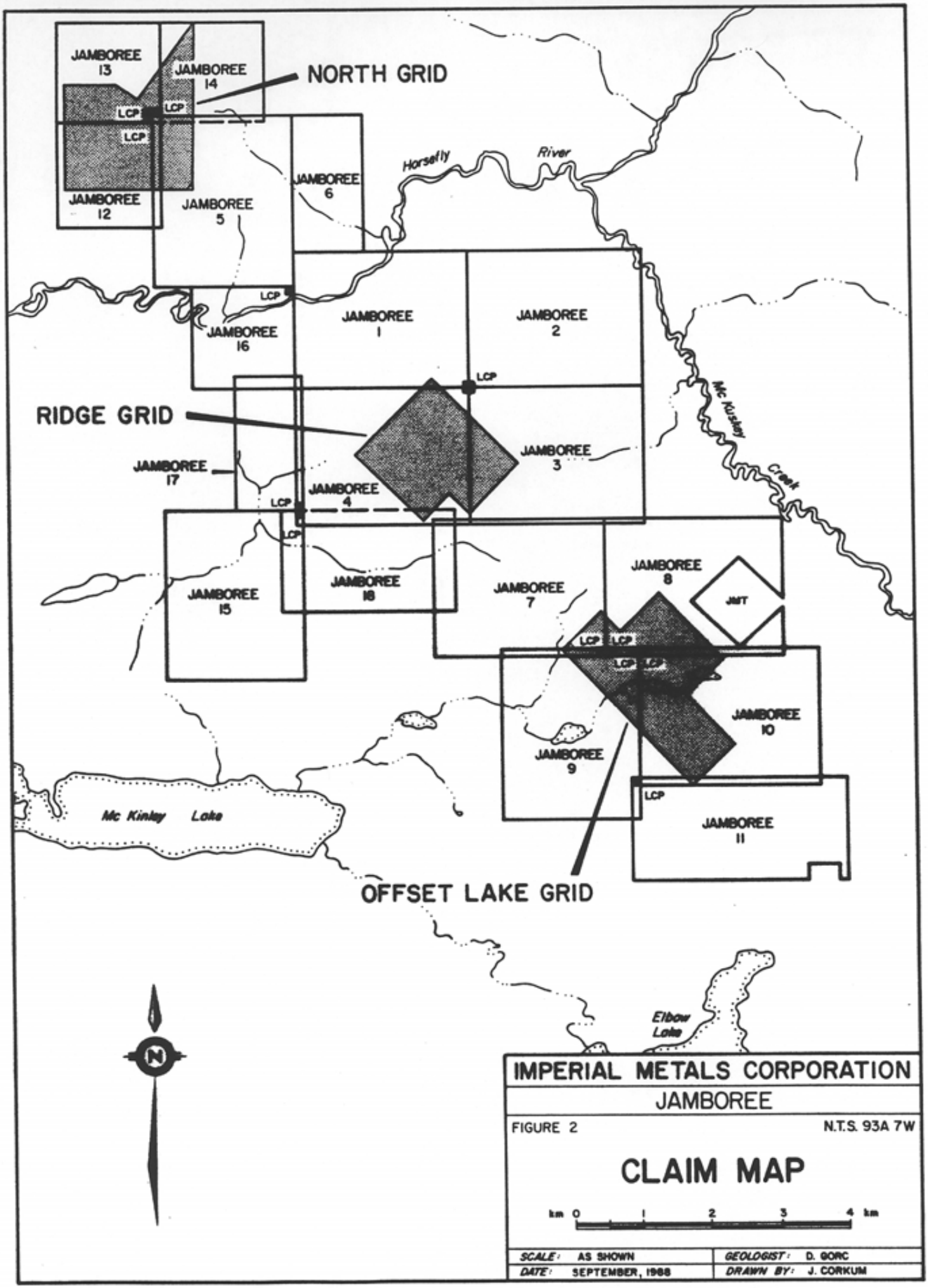
JAMBOREE

FIGURE 1 N.T.S. 93A 7W

LOCATION MAP

km 0 5 10 15 km

SCALE: 1:250,000	GEOLOGIST: D. GORC
DATE: JANUARY, 1988	DRAWN BY: J. CORKUM


JAMBOREE 13
JAMBOREE 14
NORTH GRID
LCP
JAMBOREE 12
JAMBOREE 5
JAMBOREE 6
Horsefly River
JAMBOREE 16
JAMBOREE 1
JAMBOREE 2
RIDGE GRID
JAMBOREE 17
JAMBOREE 4
JAMBOREE 3
Mc Kinley Creek
JAMBOREE 15
JAMBOREE 18
JAMBOREE 7
JAMBOREE 8
JMT
JAMBOREE 10
JAMBOREE 9
JAMBOREE 11
Mc Kinley Lake
OFFSET LAKE GRID
Elbow Lake
N
IMPERIAL METALS CORPORATION
JAMBOREE
FIGURE 2
N.T.S. 93A 7W
CLAIM MAP
km 0 1 2 3 4 km
SCALE: AS SHOWN
GEOLOGIST: D. GORC
DATE: SEPTEMBER, 1988
DRAWN BY: J. CORKUM

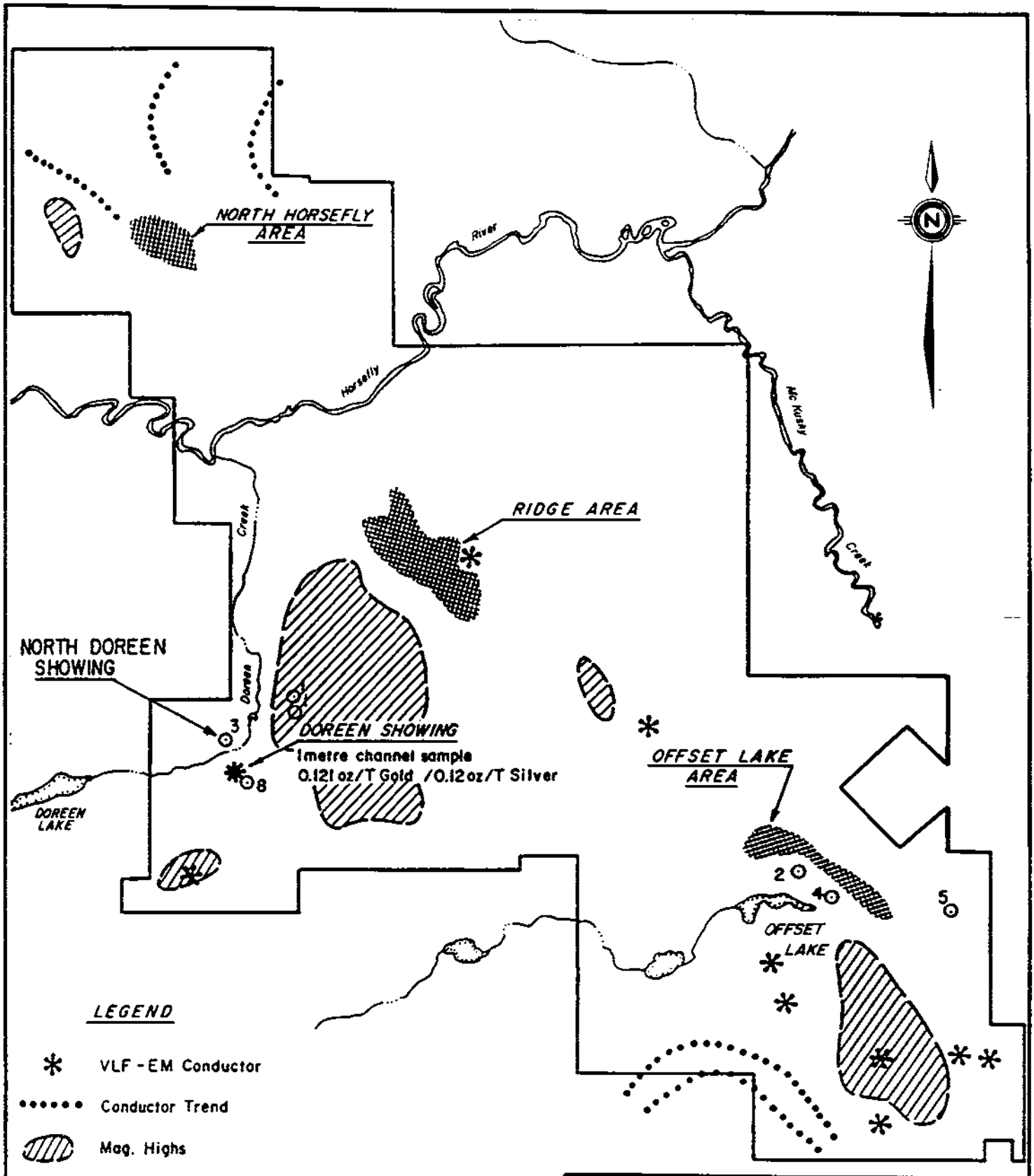
A program of soil and rock geochemical sampling and geological mapping was carried out. A total of 1760 soil samples were taken of which 103 returned gold values of greater than 25 ppb. The maximum value obtained was 5250 ppb Au. Over the course of geological mapping 230 rock chip samples were taken and geochemically analysed.

During July 1983 an airborne magnetometer and EM survey was completed. Results of this initial phase of exploration outlined three major target areas warranting further exploration. A trenching and subsequent rotary/ percussion drilling program was carried out on the Doreen Creek area (Jamboree 15 claim block) and the Offset Lake area (Jamboree 8 and 10). This phase of exploration yielded encouraging results including two trench samples at Doreen Lake which ran 0.145 and 0.118 oz/t Au over 2 meters. The third exploration target outlined was the Ridge area which includes most of Jamboree 1, 3, 4 and 7 claims. In the Ridge area geochemical soil sampling outlined several areas of anomalous gold and arsenic. A large soil anomaly along a creek on the north-central area of Jamboree 4 also yielded high Au values from outcrop exposed along the canyon walls.

In June 1987 a VLF electromagnetic and magnetometer survey was completed along 17 kilometers of new grid on the above Ridge area. In addition, 639 soil samples and 31 rock samples were collected.

In October 1987 grids were completed in the Offset Lake and North Horsefl areas. A total of 385 soil samples were taken on the North Grid and outlined several weak gold anomalies.

A total of 562 soil samples were taken on the Offset Grid. Results from the soil sampling defined soil anomalies for gold, copper, arsenic, nickel and chromium.


NORTH HORSEFLY AREA
River
Horsefly
Creek
Mc Kinley
Creek
RIDGE AREA
NORTH DOREEN SHOWING
Doreen
DOREEN SHOWING
1metre channel sample
0.121 oz/T Gold /0.12 oz/T Silver
DOREEN LAKE
OFFSET LAKE AREA
OFFSET LAKE
N
LEGEND
VLF - EM Conductor
Conductor Trend
Mag. Highs
Areas Of Anomalous Gold Geochem. Values
Drill Area and number of holes
IMPERIAL METALS CORPORATION
JAMBOREE
FIGURE # 3
N.T.S. 93A 7W
EXPLORATION HISTORY COMPILATION
km 0 1 2 3 km
SCALE: 1:50 000
DATE: JANUARY, 1988
GEOLOGIST: D. GORC
DRAWN BY: J. CORKUM
AFTER E & B EXPLORATIONS INC., JULY 1987

5.0 REGIONAL GEOLOGY

The Jamboree claims lies within the Quesnel Trough, a narrow tectonic depression in which Mesozoic sedimentary and volcanic rocks were deposited. The Trough extends from the U.S. border to 57°N latitude.

In the vicinity of the Jamboree property the Quesnel Trough is fault-bounded to the west by the Paleozoic Cache Creek Group and to the east by Paleozoic and Precambrian strata. The prevailing structural trend is northwesterly.

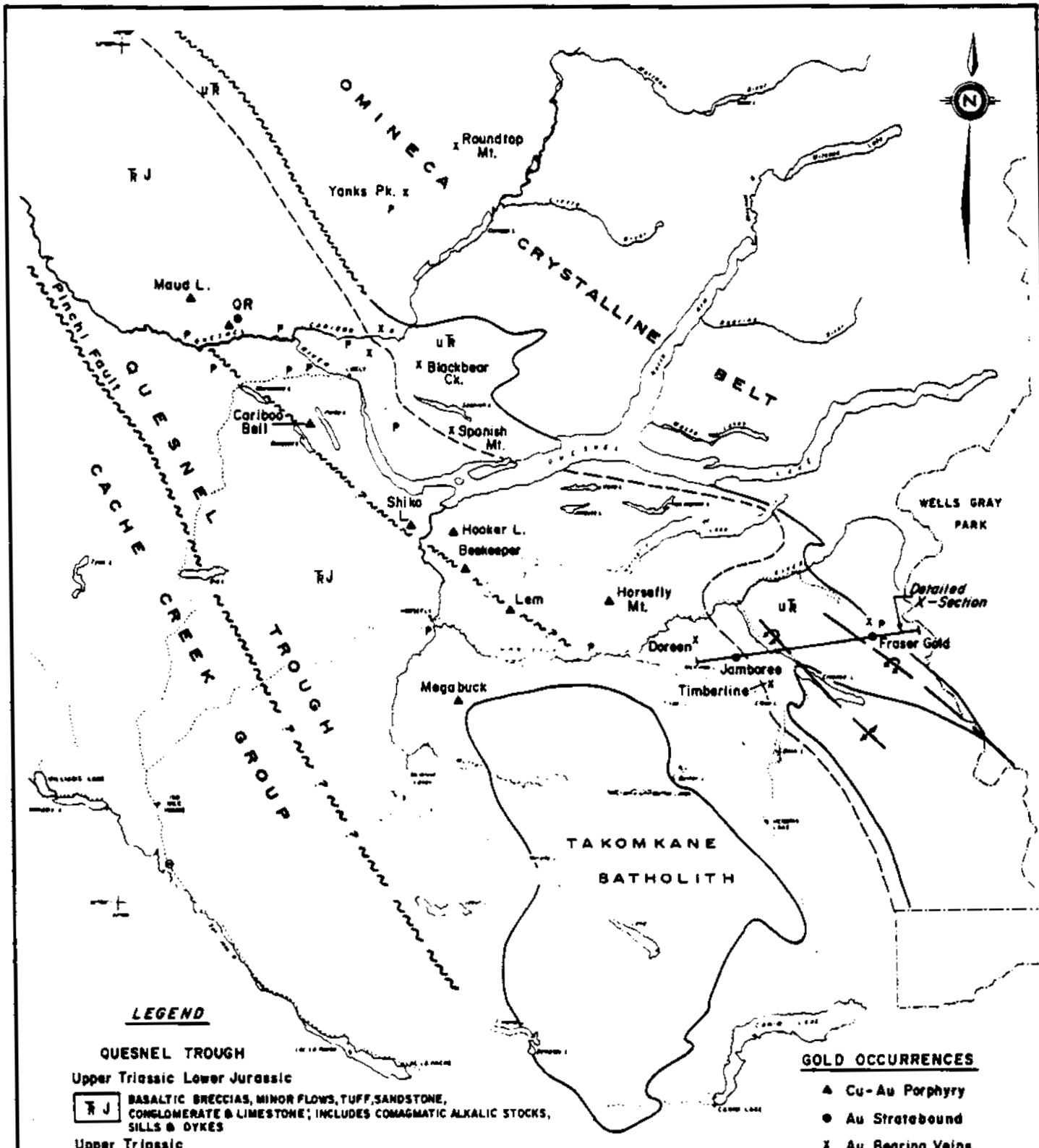
The Quesnel Trough is the host for several important gold and copper-gold deposits included the Cariboo-Bell deposit (100,000,000 tons grading 0.37% Cu and 0.015 oz/ton Au); QR deposit (950,000 tons grading 0.21 oz/ton); Ingerbelle-Copper Mountain (200,000,000 tons grading 0.5% Cu, 0.005 oz/ton Au).

6.0 PROPERTY GEOLOGY

The Jamboree claim group is underlain by an Upper Triassic - Lower Jurassic volcaniclastic - sedimentary assemblage assigned to the Quesnel River Group by Campbell (G.S.C. open file 544, 1978).

The regional bedding trend strikes north to the northwesterly with moderate to steep easterly dips. Regional metamorphism increases in intensity to the east where interbedded tuffs and argillites have been converted to phyllites.

The rocks underlying the property have been divided into three main units based largely upon field geological mapping carried out by G. Richards and R. Simpson from June 9 to October 15, 1983. These are a lower tuff-argillite sequence, a middle volcanic breccia zone and an upper, predominantly argillitic sequence. The lower unit is intruded by a dioritic stock and associated andesitic sills and/or dykes assigned to a fourth unit.



LEGEND

QUESNEL TROUGH

Upper Triassic Lower Jurassic

TRJ — BASALTIC BRECCIAS, MINOR FLOWS, TUFF, SANDSTONE, CONGLOMERATE & LIMESTONE; INCLUDES COMAGMATIC ALKALIC STOCKS, SILLS & DYKES

Upper Triassic

uTR — ARGILLITE, AUGITE-PORPHYRY BRECCIA, BASALTIC TO ANDESITIC TUFF POSSIBLE DYKES & SILLS

GOLD OCCURRENCES

- ▲ Cu-Au Porphyry
- ● Au Stratabound
- x Au Bearing Veins
- P Placer Au (major occurrence)

AFTER WESTERN MINER, APRIL 1984

IMPERIAL METALS CORPORATION

JAMBOREE

FIGURE 34 — N.T.S. 93A 7W

REGIONAL GEOLOGY

km 0 10 20 30 40 km

SCALE: AS SHOWN	GEOLOGIST: D. GORC
DATE: JANUARY, 1988	DRAWN BY: J. CORKUM

The lower part of the unit 1 assemblage is exposed near Doreen Creek and consists of interbedded and commonly laminated, argillites and tuffs. The rocks are virtually unmetamorphosed with the exception of a hornfels halo developed around a dioritic stock. Equivalent rocks exposed north of the Horsefly River are cherty tuffs overlain by laminated tuffs with occasional lapilli tuff horizons.

Higher in the section, resistant andesitic tuffs, including minor crystal and lapilli tuff, form cliffs and knobs on the upper slopes of the central hill. These are overlain by more recessive interbedded tuff and argillite with minor volcaniclastic sandstone near the top.

Massive uniform andesite containing hornblende needles 1-4 mm long and aphanitic, dark green andesite containing small (.5 mm) hornblende crystals and no readily discernable breccia texture. These rock types are commonly foliated and chloritized.

The andesite breccia is overlain by unit 3, a predominantly sedimentary sequence of black to brownish argillite and shaly phyllite with minor interbedded phyllitic tuff. This unit is recessive and poorly exposed.

In the Doreen lake vicinity, argillites and tuffs of unit 1 have been intruded by a fine grained diorite stock resulting in a hornfels halo extending 200 to 300 meters from the contact exposed in two creek beds east of Doreen Creek. Hornfels development is more widespread on the hillside north of Doreen Lake. The diorite and related hornblende andesite - microdiorite sills and/or dykes are assigned to unit 4 but may be contemporaneous with the andesite breccia of unit 2.

The presence of numerous, sub-angular, glacial float boulders combined with a prominent magnetic anomaly located southeast of Offset Lake, indicates the presence of a gabbro-hornblendite body. Thick glacial deposits cover this area and no outcroppings have been uncovered.

Unit 1 is conformably overlain by a resistant andesite breccia zone (unit 2) which varies from 150 to 300 meters in thickness. On top of the central hill, fragments of the andesite breccia are of two types; andesite fragments characterized by tabular hornblende crystals 4 to 10 mm long and 3 to 5 mm wide; and andesite fragments with acidular hornblende crystals 1 mm wide and 3 to 4 mm in length. The size of the clasts is generally greater than 10 cm in diameter but decreases to 1 cm

within 100 m of the top. Graded bedding is more evident in the top 100 m with fragments decreasing in size to less than 3 mm within 50 m of the top. A dust tuff horizon, normally less than 10 m in thickness, occurs with fragments decreasing in size to less than 3 mm within 50 m of the top. A dust tuff horizon, normally less than 10 m in thickness, occurs at the top of unit 2. Finer grained lenses occur within the coarser breccias and the most southeasterly outcrops of this unit. In the Offset Lake area, the andesite breccia typically contain 10% dioritic fragments with some gabbro and hornblendite fragments in a microdiorite matrix. Fragments are extremely angular and vary widely in diameter from a few centimeters to several decimeters.

7.0 GEOLOGY - OFFSET LAKE GRID

7.1 Introduction:

A total of two diamond drill holes were completed on the Offset Lake grid to test gold soil anomalies and induced polarization resistive anomalies. The drilling was done by J.T. Thomas Drilling of Smithers, core size was NQ. Sections of core mineralized with pyrite were split and submitted to Acme Laboratories of Vancouver.

Hole No.	Grid Co-ordinates		Azimuth	Dip	Depth (m)
JO-88-1	5215 E	475 N	045°	-45°	152.4
JO-88-2	5210 E	169 N	020°	-45°	167.6
					320.0

7.2 Lithologies:

The diamond drilling intersected a sequence of interbedded black argillite and pale whitish green calcareous felsic volcaniclastic or tuff. Most geological units are fine-grained although there are some lapilli tuffs with clasts to 5 mm across. These two rock types are often finely interbanded giving the core a distinctive laminated appearance. Andesitic, chloritic tuffs and tuffaceous limestone were also noted. (See Appendix IV - Petrographic Report).

7.2.1 Calcareous Felsic Volcaniclastic/Tuff:

This unit is generally fine-grained and well foliated. Thin wispy layers of argillite to 0.25 cm often give the unit a laminated appearance. This rock type contains significant carbonate and is always highly reactive to acid. Petrographic work suggests that much of this carbonate is calcite although several horizons also contain a significant amount of dolomite. The dolomictic horizons are generally marked by iron stained porphyroblasts of carbonate to 0.25 cm suggesting some recrystalization of the carbonate.

This rock type is also marked by thin wispy concentrations of pyrite along the bedding. The pyrite would appear to be syngentic although there are also cross-cutting thin pyrite veinlets.

Occasional calcareous horizons also have a cherty appearance. It is unclear whether such siliceous-carbonate rich horizons are due to deuteric/hyrothermal alteration or instead represent exhalative horizons. The appearance of such horizons in core and the associated syngentic pyrite suggest that the horizons are exhalative although there is likely some superimposed recrystalization of the chert and carbonate.

It is difficult to determine the proportion of tuff within the various horizons since the carbonate content is generally so high. Indeed several horizons have been called tuffaceous limestone since they were judged to have too low a tuffaceous content to be labelled as tuffs.

Although this rock type is generally fine-grained there were a few horizons of more coarsely textured lapilli tuff noted. Such horizons were marked by abundant small (2-5 mm) elongated clasts of argillite and tuff.

One other geological feature noted within this rock type was the presence of bright green mariposite. Although only present in trace amounts this mineral was commonly noted within this rock type.

7.2.2 Calcareous Andesitic Tuff:

This rock type is fine-grained,pale to medium green and generally well foliated. The unit is noteably calcareous and generally shows a strong reaction to acid. This unit is characterized by a noticeably higher chlorite content than the felsic volcaniclastic unit. Overall pyrite content would also appear to be lower than the felsic volcaniclastic unit although some wispy pyrite concentrations are still noted within the unit generally within well defined 0.5 to 1 m thick horizons containing up to 10% pyrite.

7.2.3 Argillite:

This rock type is characteristically very fine-grained, black and generally well foliated although this does vary. Thin 0.25 - 1 cm bands of calcareous pyrclastic often give the unit a distinctive laminated appearance. The number of these felsic interbands varies from nil to abundant. Pyrite is largely restricted to felsic interlayers. Occasionally argillite members are graphitic. At times, graphite is restricted to occasional thin seams along foliation and at other times graphite content is much more abundant with seams of graphite to 0.5 cm thick.

7.3 Core Geochemistry

A total of 184 core samples were split and submitted to Acme Laboratories for analysis for gold by atomic adsorption and 30 element ICP analysis.

Core samples returned values weakly anomalous in gold, arsenic, copper, zinc, molybdenum, nickel and chromium.

Only two samples returned greater than 100 ppb Au including a high of 880 ppb Au returned from a 2.1 m sample of chloritized fault zone intersected in DDH JO-88-1 (89.3 - 91.44 m).

A total of 84 core samples returned greater than 100 ppm copper including a high of 836 ppm Cu.

A total of 6 samples returned greater than 20 ppm molybdenum including a high of 124 ppm Mo.

A total of 28 samples returned greater than 150 ppm zinc including a high of 3029 ppm Zn (JO-88-1; 53.4 - 53.8 m).

A total of 5 samples returned greater than 100 ppm nickel including a high of 199 ppm Ni.

A total of 10 samples returned greater than 150 ppm chromium including a high of 392 ppm Cr.

A total of 17 samples returned greater than 100 ppm arsenic including a high of 1494 ppm As. One should note that the high of 1494 ppm As corresponds to the gold high of 880 ppb Au.

8.0 INDUCED POLARIZATION SURVEY

8.1 Instrumentation, Procedures, Survey Details

A Scintrex IPR11 time domain microprocessor based induced polarization receiver was used for the survey. Readings were taken using a 2 second alternating square wave. The chargeability for the eighth slice (690 to 1050 milliseconds after shutoff; midpoint at 870 milliseconds) is the value that has been plotted on the accompanying plans and pseudosections.

A Scintrex IPC7 2.5 kilowatt transmitter was used on the Doreen Lake survey, and a Scintrex TSQ4 10.0 kilowatt transmitter was used on the Offset Lake and Ridge surveys.

The survey data was archived, processed, and plotted using a Sharp PC7000 microcomputer running Scintrex Soft II and proprietory software.

Doreen Lake Grid: pole dipole array "a" spacing = 25 meters n = 1 to 5 current electrode north of receiving electrodes. A total of 8.825 km surveyed. Field work completed June 15-18, July 3-8, 1988.

Dominique Berube, Geophysisist, was party chief for the Offset Survey.

8.2 Discussion

A preliminary examination of the results of these induced polarization surveys indicates the presence of extensive areas of moderate to strong chargeability responses. Many of the chargeability highs on the Offset Grid are coincident with very low resistivity (less than 10 ohm meters), and are probably primarily due to the presence of graphite.

These very conductive features are often bounded by apparent resistivity highs with relatively low chargeability. To some

extent these resistivity highs are artificial and merely reflect the current being channeled into the neighboring highly conductive graphitic unit. However, those areas of high resistivity too extensive to attribute to such current channelling may represent silicified units, which area, in some environments, highly prospective targets for gold mineralization.

With these preliminary observations in mind, a detailed examination of the correlation of the results of this survey to geological and geochemical information, is recommended.

9.0 CONCLUSIONS

The two diamond drill holes completed on the Offset Grid intersected an interbedded sequence of argillite and calcareous felsic volcaniclastic/tuff. The felsic tuff is characterized by abundant carbonate and thin wispy horizons of pyrite. Occasionally, horizons have cherty appearance. It is unclear whether the abundant carbonate and occasional siliceous zones are due to hydrothermal alteration or represent an exhalative horizon.

The core samples taken during drilling returned disappointly low values although some samples did return weakly anomlous in gold, copper, zinc, molybdenum, nickel, chromium and arsenic. The most significant result was from DDH JO-88-1 (89.3 m - 91.44 m) which returned 880 ppb Au and 1494 ppm As. This was a sample from a chloritic fault zone.

Detailed geological mapping and trenching is recommended in the Offset Grid area.

10.0 STATEMENT OF QUALIFICATIONS

I, DENNIS M. GORC, residing at Apartment 202, 270 West 1st Street in North Vancouver, British Columbia, V7M 1B4 state that:

(1) I graduated from Queen's University, Kingston, Ontario with a B.Sc. (Eng.) degree in mineral exploration in May 1976.

(2) Since 1976, I have supervised mineral exploration programs in British Columbia, N.W.T., Manitoba and Ontario.

(3) I am presently employed as a geologist with Imperial Metals Corporation, Suite 800, 601 West Hastings Street in Vancouver, British Columbia.

(4) I supervised the work on the Jamboree property.

Dated this:

17 day of January, 1989

DENNIS M. GORC
IMPERIAL METALS CORPORATION

Vancouver, British Columbia

11.0 REFERENCES

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A P P E N D I X I

COST STATEMENT

COST STATEMENT

Linecutting, Induced Polarization, Diamond Drilling
Offset Lake Area
Jamboree Property, Cariboo M.D.

June 15 - July 8, 1988

WAGES		
D. GORC: May 21, June 1, 12, 13, 14 July 3, 4, 9, 10	$2,600.00	
L. LAY : May 27, June 3, 4, 9, 10 July 3, 4	630.00	3,230.00
CAMP		
Accommodation and Meals	3,275.00	
Equipment and Field Supplies	700.00	
Truck	525.00	4,500.00
LINECUTTING		
Contract with Amex Exploration Services	1,752.00	
Supplies	200.00	1,952.00
DIAMOND DRILLING		
1,050 feet of NQ drilling	21,000.00	
Site preparation, Road - 4.5/hr D-8 catepillar	825.00	
184 geochemical analyses Au by AA and 30 element ICP	2,504.00	24,329.00
GEOPHYSICS		
8.825 m Induced Polarization Survey	14,615.00	
Expenses	650.00	15,265.00
REPORT		
Drafting, computer, typing, etc.		1,500.00

COST SUMMARY

Wages	$ 3,230.00	
Camp	4,500.00	
Linecutting	1,952.00	
Diamond Drilling	24,329.00	
Geophysics	15,265.00	
Report	1,500.00	
		$50,776.00

APPENDIX II

LINECUTTING

LINECUTTING

Offset Lake Grid - Jamboree Property

Line	From (m)	To (m)	Length (m)
L 1 S	5400E	5800E	400
L 0 N	4900E	5800E	900
L 1 N	4900E	5800E	900
L 2 N	4800E	5800E	950
L 3 N	4700E	5800E	1100
L 4 N	4500E	5800E	1300
L 5 N	4400E	5800E	1400
L 6 N	4200E	5800E	1600
L 7 N	4200E	5800E	1600
L 8 N	4200E	5800E	1600
L 9 N	4200E	5800E	1600
			13,350 (m)

Lines marked by pickets every 50 m with flags marking intermediate 25 m stations.

A P P E N D I X III

GEOCHEMICAL RESULTS

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 58001	1	108	12	83	.5	92	25	1368	5.23	101	5	ND	2	980	1	2	2	143	8.01	.077	3	315	4.33	23	.01	2	4.17	.06	.02	1	1
C 58002	1	96	15	91	.5	101	32	1168	5.77	127	5	ND	2	756	1	2	2	153	6.39	.092	4	320	4.86	22	.01	3	4.81	.03	.03	1	1
C 58003	1	126	13	83	.7	57	29	1167	5.96	61	5	ND	1	684	1	2	2	136	5.88	.084	3	216	4.17	31	.01	2	4.31	.01	.04	1	1
C 58004	1	124	14	87	.7	88	30	1226	5.82	90	5	ND	1	724	1	2	2	142	6.12	.077	3	305	4.52	19	.02	2	4.42	.03	.03	1	1
C 58005	1	116	14	87	.6	136	32	1281	5.51	158	5	ND	1	698	1	2	2	147	6.04	.090	3	392	5.13	24	.01	2	4.57	.03	.03	1	1
C 58006	1	127	15	88	.7	116	28	1400	5.00	135	5	ND	2	902	1	2	2	124	7.10	.083	3	303	4.42	16	.01	3	3.93	.01	.02	1	2
C 58007	11	133	12	340	.9	94	21	1059	4.74	99	5	ND	2	710	4	3	2	97	5.37	.077	2	165	2.99	36	.01	2	2.88	.02	.06	1	3
C 58008	15	110	18	452	1.3	43	11	556	3.65	56	5	ND	1	356	7	6	2	41	2.78	.076	2	23	1.17	57	.01	2	1.20	.01	.10	1	20
C 58009	17	88	13	618	.9	32	10	451	3.36	41	5	ND	1	336	9	6	2	32	2.55	.081	2	12	1.02	63	.01	2	1.11	.01	.11	1	25
C 58010	10	136	18	332	1.4	31	13	517	4.20	51	5	ND	1	296	6	6	2	27	2.33	.097	2	10	1.02	59	.01	7	.97	.01	.13	1	24
C 58011	1	102	10	153	.5	66	26	1004	6.09	81	5	ND	1	564	1	2	2	93	4.21	.100	3	163	3.80	43	.01	2	3.92	.02	.06	1	2
C 58012	1	93	7	80	.4	50	20	1154	5.11	61	5	ND	2	855	1	4	2	85	5.98	.077	3	149	3.15	44	.01	2	3.15	.01	.04	1	1
C 58013	1	96	9	80	.4	49	24	1235	4.98	73	5	ND	1	920	1	4	2	75	6.56	.075	3	120	3.01	37	.01	3	3.09	.02	.05	1	1
C 58014	1	92	9	99	.5	47	21	1161	5.10	66	5	ND	2	862	1	2	2	70	6.22	.079	3	132	3.11	28	.01	6	3.06	.02	.04	1	1
C 58015	6	103	12	157	.6	37	13	575	3.92	57	5	ND	2	621	1	7	2	37	3.40	.080	2	19	1.07	44	.01	5	1.16	.02	.09	1	3
C 58016	2	66	8	71	.3	14	7	911	2.89	13	5	ND	4	552	1	2	2	21	4.35	.067	3	10	.82	62	.01	6	.81	.03	.09	1	2
C 58017	1	50	7	60	.3	8	8	883	2.75	7	5	ND	4	672	1	2	2	16	3.97	.067	4	7	.76	60	.01	5	.85	.01	.08	1	1
C 58018	1	70	7	81	.5	17	9	660	3.18	19	5	ND	3	440	1	2	2	31	3.27	.074	3	23	1.17	36	.01	3	1.23	.02	.07	1	1
C 58019	15	155	19	603	1.7	55	13	596	3.80	60	5	ND	1	569	9	10	2	50	3.77	.079	2	29	1.12	47	.01	2	1.10	.02	.09	1	30
C 58020	19	136	21	426	1.8	63	9	398	3.01	57	5	ND	1	258	7	9	2	26	2.62	.054	2	14	.84	60	.01	3	.57	.01	.10	1	24
C 58021	15	131	22	345	1.1	41	8	622	3.47	67	5	ND	2	420	6	6	2	24	4.22	.048	2	9	.86	64	.01	6	.39	.01	.10	1	18
C 58022	5	96	13	252	.7	46	15	820	4.38	69	5	ND	1	551	4	4	2	44	4.65	.078	3	33	1.89	57	.01	2	1.05	.03	.08	1	6
C 58023	21	108	39	494	1.4	57	12	504	3.16	81	5	ND	2	306	8	6	2	29	3.58	.047	2	9	.89	67	.01	7	.31	.02	.10	1	10
C 58024	3	27	14	78	.6	7	3	776	1.30	7	5	ND	11	371	1	2	2	2	5.09	.028	4	2	1.11	91	.01	7	.27	.01	.12	1	1
C 58025	1	95	10	80	.5	10	13	1285	4.81	46	5	ND	1	385	1	2	2	52	4.77	.127	4	16	1.48	52	.01	2	1.95	.02	.10	1	1
C 58026	9	61	20	322	.8	33	8	693	2.71	65	5	ND	1	163	6	2	2	14	2.20	.053	2	9	.66	52	.01	6	.74	.01	.10	1	17
C 58027	1	96	9	92	.4	19	15	1177	5.71	30	5	ND	2	438	1	2	2	83	5.77	.142	4	22	2.22	33	.01	5	2.82	.02	.07	1	17
C 58028	1	145	9	86	.4	18	25	1212	6.75	38	5	ND	2	440	1	2	2	119	5.52	.157	5	38	2.80	33	.01	2	3.59	.03	.07	1	3
C 58029	6	84	14	187	.7	34	11	507	3.78	51	5	ND	1	282	4	4	2	34	2.76	.080	3	23	1.26	51	.01	5	1.41	.01	.11	1	1
C 58030	1	69	9	110	.7	40	19	1416	4.98	63	5	ND	1	662	1	2	2	70	8.57	.067	3	123	3.56	62	.01	2	2.14	.06	.03	1	1
C 58031	2	98	14	97	.8	39	14	951	4.26	96	5	ND	1	403	1	2	2	37	5.83	.052	2	37	1.84	42	.01	2	1.60	.02	.06	1	6
C 58032	7	64	15	135	1.4	40	8	971	2.80	61	5	ND	2	374	1	7	2	5	5.47	.076	3	6	1.87	44	.01	7	.21	.01	.09	1	9
C 58033	12	43	12	115	1.2	30	5	1384	1.81	33	5	ND	3	1067	1	5	2	7	16.22	.050	4	2	1.01	51	.01	6	.12	.01	.07	1	4
C 58034	28	79	25	388	1.8	67	9	618	2.90	74	5	ND	2	312	6	10	2	18	3.93	.104	4	6	1.02	59	.01	8	.52	.01	.12	1	9
C 58035	8	57	23	112	.7	31	11	985	3.74	54	5	ND	3	669	1	2	3	10	5.97	.077	3	6	1.50	54	.01	3	.50	.02	.07	1	11
C 58036	1	99	9	80	.3	31	19	1363	5.29	39	5	ND	2	622	1	2	2	47	4.98	.100	2	29	2.52	73	.01	2	1.95	.01	.17	1	2
STD C/AU-R	17	57	41	130	6.7	67	28	1054	4.03	38	17	6	36	48	17	17	20	56	.48	.088	39	55	.92	172	.06	35	2.02	.06	.14	11	490

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 58037	1	95	8	59	.2	24	18	1391	5.27	38	5	ND	2	466	1	3	3	43	5.67	.113	2	32	2.54	69	.01	6	1.55	.01	.12	1	1
C 58038	1	163	8	72	.6	33	21	1408	5.25	396	5	ND	1	535	1	3	2	27	6.34	.093	2	26	2.70	50	.01	6	1.12	.01	.11	1	2
C 58039	1	138	12	129	.5	26	21	1355	5.98	87	5	ND	2	880	1	3	3	60	6.11	.135	2	35	2.70	46	.01	2	2.34	.01	.12	1	1
C 58040	27	147	18	553	1.1	76	33	818	3.42	58	6	ND	5	421	7	4	2	43	4.93	.081	2	18	1.48	56	.01	5	.95	.02	.13	1	9
C 58041	124	262	37	3029	1.5	199	13	660	2.76	171	5	ND	5	274	44	53	2	197	3.51	.077	2	25	.80	88	.01	6	.82	.01	.17	1	24
C 58042	1	85	14	99	.3	13	16	1304	5.13	42	5	ND	6	406	1	2	2	44	5.49	.150	5	11	1.87	52	.01	5	2.14	.01	.10	1	88
C 58043	3	108	14	138	.5	61	19	1511	5.98	62	6	ND	3	411	1	3	4	87	5.84	.120	3	72	2.92	53	.01	5	3.49	.01	.10	1	1
C 58044	1	104	14	84	.2	76	25	1547	6.76	88	5	ND	2	342	1	2	2	103	4.82	.109	2	96	3.43	34	.01	3	4.17	.01	.07	1	1
C 58045	1	170	14	67	.3	31	16	1207	5.16	29	5	ND	3	395	1	2	2	79	5.35	.106	5	79	2.32	29	.01	2	2.62	.01	.07	1	1
C 58046	1	151	13	66	.2	35	22	1311	6.31	39	5	ND	2	374	1	2	1	104	4.54	.075	3	73	2.65	31	.01	2	3.03	.01	.06	1	1
C 58047	1	172	11	60	.3	48	24	1398	6.34	66	5	ND	1	496	1	2	2	81	5.11	.091	2	96	3.62	42	.01	2	2.81	.01	.09	1	1
C 58048	1	192	12	57	.2	45	25	1364	6.24	51	5	ND	1	518	1	2	2	108	5.13	.082	3	122	3.16	31	.01	8	3.26	.02	.06	1	1
C 58049	1	96	9	67	.1	33	16	1093	6.35	17	5	ND	2	395	1	3	2	62	3.73	.100	3	61	2.55	48	.01	7	2.81	.01	.08	1	1
C 58050	1	137	11	58	.2	29	21	919	5.33	36	5	ND	3	433	1	3	2	55	4.58	.109	6	58	2.26	67	.01	5	2.73	.01	.14	1	1
C 58051	1	19	4	15	.1	7	5	672	2.04	23	5	ND	8	432	1	3	2	13	4.62	.070	18	8	.62	89	.01	36	.85	.03	.18	1	1
C 58052	1	5	6	6	.2	5	2	790	1.15	26	5	ND	6	771	1	2	3	4	7.19	.050	8	3	.32	76	.01	41	.28	.02	.17	1	55
C 58053	1	10	6	12	.1	6	3	610	1.33	8	5	ND	9	394	1	2	2	7	4.19	.059	19	5	.48	90	.01	5	.53	.01	.20	1	1
C 58054	1	20	5	15	.1	8	4	611	1.82	9	5	ND	9	358	1	2	2	12	3.61	.063	17	8	.62	71	.01	10	.63	.04	.15	1	1
C 58055	5	70	6	16	.1	5	7	643	2.16	19	5	ND	7	434	1	2	2	7	4.92	.090	5	1	.73	79	.01	3	.36	.01	.19	1	3
C 58056	1	86	7	25	.3	10	13	994	4.35	54	5	ND	5	536	1	2	2	14	4.70	.128	3	2	1.47	69	.01	2	.27	.01	.14	1	96
C 58057	1	52	8	24	.3	9	8	652	3.97	31	5	ND	4	93	1	3	2	36	.84	.113	4	4	.62	59	.01	2	.44	.01	.12	1	123
C 58058	1	123	8	32	.1	9	15	1052	4.63	42	5	ND	6	422	1	3	2	23	4.15	.142	6	5	1.64	65	.01	9	.88	.01	.12	1	21
C 58059	1	135	8	81	.1	13	16	592	5.25	19	5	ND	8	109	1	2	2	66	1.26	.160	15	18	1.89	53	.01	6	2.34	.02	.11	1	3
C 58060	1	133	10	37	.1	12	12	622	5.69	30	5	ND	7	52	1	2	2	64	.72	.136	14	16	1.81	35	.01	9	2.34	.01	.08	1	4
C 58061	1	146	7	42	.1	12	14	920	5.47	18	5	ND	7	145	1	2	2	71	1.99	.171	15	15	2.00	49	.01	4	2.31	.03	.11	1	1
C 58062	1	13	7	31	.1	10	9	2058	5.51	23	5	ND	5	352	1	2	3	36	4.61	.168	7	9	1.72	58	.01	5	.82	.01	.15	1	1
C 58063	1	48	6	28	.1	8	11	1544	4.23	23	5	ND	5	537	1	3	2	18	5.96	.142	7	4	1.78	61	.01	5	.41	.03	.12	1	12
C 58064	2	2	5	31	.1	9	6	1656	4.24	4	5	ND	5	448	1	2	2	58	6.31	.136	14	10	1.73	64	.03	2	.81	.02	.10	1	1
C 58065	1	26	8	34	.1	10	8	3468	7.01	28	5	ND	2	626	1	2	2	30	7.25	.023	3	12	.81	11	.01	3	1.39	.01	.01	1	29
C 58066	4	92	9	45	.1	22	9	3233	7.56	1184	5	ND	2	310	1	2	2	24	4.54	.032	3	9	1.17	18	.01	2	1.06	.01	.05	1	880
C 58067	1	311	9	43	.4	13	14	1107	4.29	46	5	ND	3	465	1	3	3	13	4.53	.240	4	3	1.57	49	.01	7	.38	.02	.15	1	19
C 58068	1	60	5	37	.1	12	9	1152	3.84	39	5	ND	2	684	1	2	2	10	5.49	.127	3	2	1.68	49	.01	8	.21	.02	.13	1	23
C 58069	1	36	7	29	.2	12	9	1025	3.10	45	5	ND	1	1476	1	3	2	8	8.76	.105	3	3	1.34	44	.01	11	.18	.01	.09	1	9
C 58070	1	120	8	35	.5	13	12	928	4.03	54	5	ND	3	712	1	4	3	10	5.04	.120	2	2	1.63	37	.01	11	.15	.01	.08	1	50
C 58071	1	65	7	36	.4	27	10	1334	4.46	42	5	ND	3	677	1	2	2	10	6.28	.089	3	11	2.46	53	.01	3	.29	.01	.18	1	30
C 58072	5	102	6	19	.2	10	4	1227	4.40	27	5	ND	6	479	1	2	2	7	7.11	.066	4	5	1.23	40	.01	5	.26	.02	.11	1	11
STD C/AU-R	17	58	41	132	6.8	67	29	1068	4.06	60	20	7	38	49	17	17	18	57	.49	.090	40	57	.92	174	.07	38	2.02	.06	.14	12	510

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 58073	1	62	6	27	.1	15	7	1621	4.06	5	5	ND	3	612	1	2	2	86	7.64	.128	12	40	2.07	16	.01	2	1.74	.03	.04	2	1
C 58074	1	836	12	34	.5	47	31	2331	9.96	35	5	ND	2	912	1	2	2	112	7.71	.050	5	12	2.41	7	.01	2	3.07	.04	.01	1	8
C 58075	1	29	4	14	.1	8	3	1246	2.57	15	5	ND	3	828	1	2	2	21	8.81	.121	10	4	1.22	45	.01	5	.74	.01	.10	1	1
C 58076	1	66	11	38	.1	17	16	1276	6.50	33	5	ND	2	554	1	2	2	128	6.06	.150	6	43	2.56	30	.01	2	3.19	.03	.05	1	1
C 58077	6	148	6	16	.4	11	12	998	3.12	18	5	ND	2	840	1	2	2	21	8.27	.107	3	8	1.33	35	.01	9	.55	.03	.10	1	4
C 58078	1	37	4	12	.2	13	6	1171	2.44	34	5	ND	3	669	1	2	3	8	7.44	.130	4	2	1.79	29	.01	14	.19	.03	.09	1	1
C 58079	1	19	5	21	.1	31	5	1259	2.66	20	5	ND	3	804	1	2	2	11	7.37	.122	5	8	1.96	43	.01	7	.22	.01	.12	2	1
C 58080	1	5	4	14	.1	12	3	1139	1.88	11	5	ND	3	680	1	2	2	19	7.01	.119	7	8	1.87	38	.01	3	.51	.03	.11	1	1
C 58081	1	67	8	23	.1	7	5	1147	3.77	8	5	ND	6	572	1	2	2	38	6.75	.109	16	7	1.29	37	.01	2	1.62	.04	.11	1	58
C 58082	1	446	14	50	.5	16	23	1693	12.54	92	5	ND	4	505	1	2	10	110	5.57	.100	4	28	2.03	17	.01	5	3.64	.05	.05	1	7
C 58083	1	120	11	30	.1	11	8	2047	7.99	20	5	ND	2	765	1	2	2	78	9.08	.069	3	22	1.67	56	.01	2	1.51	.03	.03	1	6
C 58084	4	35	5	25	.1	18	9	1326	3.90	27	5	ND	3	486	1	2	2	29	6.68	.120	5	21	2.07	52	.01	4	.63	.03	.13	1	8
C 58085	1	39	6	17	.1	7	8	628	3.12	53	5	ND	6	404	1	3	2	6	3.83	.077	4	2	1.20	36	.01	7	.19	.03	.08	1	12
C 58086	1	75	7	16	.1	7	8	536	2.97	29	5	ND	7	297	1	2	2	5	3.00	.068	4	2	.88	40	.01	16	.20	.02	.09	1	2
C 58087	1	90	7	23	.2	9	11	821	3.38	115	5	ND	6	312	1	2	2	13	3.87	.083	7	5	1.22	39	.01	13	.32	.03	.12	1	7
C 58088	1	257	6	22	.2	8	10	630	2.82	23	5	ND	8	267	1	2	2	17	3.32	.075	9	6	.92	35	.01	21	.55	.02	.10	1	1
C 58089	1	143	10	38	.2	12	12	730	4.39	23	5	ND	4	378	1	2	2	33	4.71	.112	5	14	1.58	33	.01	10	1.32	.02	.09	1	7
C 58090	1	174	7	48	.1	16	17	1014	4.61	24	5	ND	2	688	1	2	2	15	5.67	.095	2	6	1.97	34	.01	9	.43	.03	.10	2	3
C 58091	1	78	6	23	.2	9	9	821	2.98	19	5	ND	4	457	1	2	2	6	4.47	.084	4	4	1.01	60	.01	8	.23	.01	.16	1	19
C 58092	1	75	5	29	.2	7	11	975	3.73	18	5	ND	4	530	1	2	2	8	5.06	.106	5	2	1.37	46	.01	14	.22	.02	.12	1	76
C 58093	1	70	7	34	.1	7	9	892	3.41	17	5	ND	4	364	1	2	4	14	4.33	.101	5	4	1.11	53	.01	8	.66	.02	.15	1	2
C 58094	1	172	7	68	.1	31	13	878	3.81	22	5	ND	4	380	1	2	2	21	4.32	.113	5	11	1.25	58	.01	4	1.14	.03	.16	1	1
C 58095	1	40	9	45	.1	9	12	957	3.65	14	5	ND	4	463	1	2	2	23	4.83	.103	11	10	1.18	58	.01	2	1.44	.03	.16	1	1
C 58096	4	108	9	34	.2	12	13	906	3.60	16	5	ND	5	444	1	2	2	13	4.54	.082	9	9	1.35	50	.01	7	.83	.01	.17	1	1
C 58097	1	48	5	33	.1	20	12	960	3.12	25	5	ND	3	743	1	2	3	7	5.65	.060	5	10	1.03	38	.01	7	.27	.04	.14	1	1
C 58098	1	225	7	41	.1	13	13	921	3.97	6	5	ND	4	555	1	2	3	25	5.02	.111	13	21	1.44	40	.01	3	1.59	.02	.14	1	18
C 58099	1	57	5	27	.1	7	8	807	2.56	2	5	ND	7	499	1	2	2	16	4.27	.089	13	7	.96	53	.01	2	1.18	.03	.17	1	1
C 58100	1	126	8	38	.1	43	16	1122	3.72	5	5	ND	3	659	1	2	2	23	5.95	.076	5	39	1.91	40	.01	31	1.28	.01	.14	1	3
C 58101	2	111	14	81	.3	89	23	680	4.39	19	5	ND	3	171	1	2	2	56	3.03	.100	6	123	1.72	77	.16	2	1.72	.02	.25	1	2
C 58102	1	86	14	83	.4	67	18	1227	5.42	40	5	ND	3	387	1	2	2	58	5.86	.108	20	185	1.53	87	.01	4	1.95	.01	.23	1	1
C 58103	1	69	10	77	.2	31	13	904	4.50	15	5	ND	4	230	1	2	2	56	3.76	.122	17	38	1.50	74	.01	10	2.00	.02	.19	1	4
C 58104	1	60	9	68	.1	17	13	1087	4.47	14	5	ND	3	273	1	2	2	61	3.68	.150	20	24	1.78	63	.01	11	2.26	.03	.15	1	1
C 58105	1	88	12	119	.3	55	18	867	5.05	31	5	ND	3	328	1	2	2	56	4.37	.101	11	89	1.93	70	.01	6	2.32	.02	.16	1	1
C 58106	1	65	14	99	.3	46	12	611	3.38	21	5	ND	2	312	1	2	3	29	4.64	.067	12	52	1.30	82	.01	6	1.27	.03	.19	1	2
C 58107	1	85	18	93	.3	77	17	1046	5.17	39	5	ND	3	394	1	2	3	57	5.45	.126	11	111	1.89	63	.01	5	2.17	.03	.14	1	1
C 58108	1	98	15	112	.3	47	11	591	3.34	17	5	ND	3	196	1	2	2	19	3.21	.069	4	12	1.44	82	.01	6	.49	.03	.17	1	1
STD C/AU-R	17	57	39	132	7.2	67	28	1045	3.95	42	18	7	37	48	17	16	17	56	.47	.086	39	56	.90	171	.06	37	1.92	.06	.13	12	500

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 58109	1	106	9	94	.3	28	16	691	4.57	23	5	ND	2	237	1	3	2	35	3.93	.115	2	20	1.85	91	.01	4	.53	.06	.19	1	6
C 58110	1	103	9	138	.3	30	14	732	4.42	155	5	ND	1	415	2	2	2	22	4.99	.104	2	12	1.92	82	.01	3	.38	.04	.19	1	19
C 58111	1	99	7	127	.3	28	16	879	5.16	192	5	ND	2	626	1	4	2	25	4.32	.102	2	11	1.79	91	.01	3	.36	.05	.18	1	77
C 58112	1	60	11	57	.2	24	16	852	4.47	42	5	ND	1	516	1	4	2	36	5.43	.062	2	28	2.53	58	.01	2	.44	.04	.10	2	10
C 58113	1	69	8	82	.2	28	28	1076	6.12	177	5	ND	1	440	1	2	3	63	5.42	.112	3	46	2.55	52	.01	2	1.16	.05	.11	2	12
C 58114	1	70	12	92	.1	35	30	1091	8.30	52	8	ND	2	464	1	2	2	201	6.03	.100	5	121	3.28	24	.01	2	3.90	.07	.02	1	1
C 58115	13	73	29	106	.1	34	26	911	6.46	52	5	ND	1	690	1	2	2	143	7.86	.079	3	100	2.85	20	.01	2	2.73	.04	.01	1	4
C 58116	1	57	30	83	.1	53	32	1229	7.65	66	5	ND	1	636	1	2	2	210	7.33	.055	3	197	4.22	10	.01	2	3.17	.02	.01	2	31
C 58117	2	41	8	62	.2	61	25	1032	6.25	279	5	ND	1	783	1	4	2	57	7.31	.068	2	68	3.35	22	.01	2	.75	.04	.05	2	34
C 58118	1	134	14	75	.2	35	19	972	5.32	729	5	ND	2	398	1	2	3	58	5.85	.090	4	67	1.88	105	.01	2	2.54	.04	.15	1	22
C 58119	1	35	7	60	.1	33	23	1002	5.64	71	5	ND	1	725	1	2	2	56	7.03	.081	2	72	3.10	25	.01	2	.93	.05	.05	2	8
C 58120	1	75	11	59	.2	32	17	866	4.51	69	5	ND	1	535	1	2	2	20	5.76	.079	2	21	1.79	98	.01	35	.75	.06	.16	2	14
C 58121	1	42	9	77	.2	31	18	1040	5.05	36	5	ND	2	379	1	2	2	39	4.67	.096	3	39	2.14	74	.01	8	1.68	.04	.13	1	16
C 58122	1	74	12	76	.1	27	18	936	5.18	31	5	ND	1	391	1	2	2	48	5.10	.089	2	39	2.05	69	.01	2	1.61	.05	.13	2	5
C 58123	1	62	10	78	.2	30	18	981	5.12	56	6	ND	1	403	1	2	3	38	5.45	.097	2	16	1.91	67	.01	2	.64	.05	.16	2	25
C 58124	2	99	10	231	.3	32	16	858	4.72	90	5	ND	1	345	2	2	2	15	5.01	.096	2	10	1.76	70	.01	3	.55	.04	.18	2	6
C 58125	2	82	6	116	.2	33	18	833	4.14	39	5	ND	1	296	1	2	2	11	4.84	.087	2	7	1.59	83	.01	2	.43	.02	.24	1	1
C 58126	2	101	10	310	.2	39	17	880	4.82	124	5	ND	2	302	1	2	2	13	4.47	.108	2	8	1.66	77	.01	36	.46	.04	.21	2	6
C 58127	6	111	8	227	.3	38	12	573	4.08	117	5	ND	2	397	2	2	2	11	3.88	.105	2	3	1.63	65	.01	8	.29	.03	.17	1	8
C 58128	2	120	7	100	.2	33	17	659	4.88	66	5	ND	3	393	1	2	2	20	3.76	.099	2	6	1.58	62	.01	2	.38	.04	.14	2	14
C 58129	6	97	7	84	.2	30	21	998	5.52	48	5	ND	1	617	1	2	2	21	6.14	.123	2	9	2.46	77	.01	6	.38	.03	.15	2	10
C 58130	1	139	12	82	.2	31	23	1138	5.84	38	5	ND	2	591	1	2	3	92	6.09	.100	3	71	2.91	56	.01	2	2.60	.05	.07	1	1
C 58131	2	102	13	131	.3	35	18	1095	4.96	44	5	ND	2	485	1	2	2	65	6.16	.098	4	78	2.52	51	.01	5	2.66	.03	.09	1	4
C 58132	17	176	23	418	.8	76	19	634	4.91	13	5	ND	3	263	5	3	3	39	3.51	.104	2	14	1.06	67	.01	4	1.22	.02	.16	1	7
C 58133	1	65	11	101	.1	74	25	1400	5.71	94	5	ND	2	602	1	2	2	102	6.74	.079	3	207	3.96	36	.01	2	3.86	.04	.05	1	1
C 58134	5	130	14	252	.4	40	16	504	4.96	12	5	ND	3	247	2	2	2	36	3.36	.100	3	29	1.64	63	.01	2	1.84	.02	.12	1	5
C 58135	1	76	9	85	.2	12	15	880	5.19	9	5	ND	4	353	1	2	2	56	8.77	.113	5	19	1.72	38	.01	4	1.95	.05	.07	1	1
C 58136	3	125	14	214	.4	35	15	402	5.13	7	5	ND	4	150	2	2	2	38	2.05	.100	4	23	1.63	58	.01	2	1.92	.02	.13	1	2
C 58137	3	111	14	155	.3	32	14	534	5.06	15	5	ND	5	188	1	2	3	47	2.57	.096	7	23	1.92	52	.01	2	2.17	.03	.09	1	1
C 58138	1	86	6	80	.5	55	23	1246	6.01	548	5	ND	1	1131	3	6	2	34	8.41	.055	3	47	3.81	50	.01	2	.47	.03	.08	2	18
C 58139	3	103	10	151	.2	23	11	574	4.34	6	5	ND	5	253	1	2	3	29	3.47	.086	12	14	1.32	64	.01	2	1.44	.02	.11	2	5
C 58140	6	118	12	236	.6	29	12	794	4.25	7	5	ND	3	375	2	2	2	26	4.96	.089	8	9	1.01	59	.01	2	1.14	.03	.11	1	7
C 58141	3	115	10	142	.3	36	22	924	6.29	28	5	ND	3	366	1	2	2	85	8.45	.103	5	46	2.44	52	.01	2	2.89	.03	.09	1	3
C 58142	14	111	16	656	.7	42	11	398	3.85	31	5	ND	5	216	9	2	3	32	2.44	.083	3	14	.94	76	.01	7	1.05	.02	.15	1	9
C 58143	1	106	11	96	.3	47	27	1244	6.65	89	5	ND	2	716	1	2	3	89	6.22	.073	2	95	3.49	57	.01	2	1.91	.04	.06	1	2
C 58144	6	99	14	238	.5	28	13	675	4.34	6	5	ND	3	349	2	3	4	32	4.98	.098	9	12	1.30	61	.01	3	1.30	.05	.12	1	9
STD C/AU-R	17	58	38	132	6.7	66	28	1047	4.00	39	20	7	38	47	17	17	19	55	.48	.086	38	55	.91	178	.06	34	2.00	.06	.14	12	495

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 58145	1	125	9	92	.4	140	34	1165	6.14	217	5	ND	1	866	1	2	2	57	5.63	.081	4	301	5.32	25	.01	7	2.94	.01	.07	1	3
C 58146	7	94	15	96	.3	27	16	1100	4.06	49	5	ND	3	417	1	3	3	26	4.09	.090	4	36	2.20	73	.01	2	.77	.01	.17	1	2
C 58147	8	123	15	263	.3	37	10	470	2.47	9	5	ND	1	106	5	2	2	13	1.44	.053	4	8	.63	95	.02	35	.52	.02	.22	1	2
C 58148	2	63	22	78	.5	22	12	1153	4.01	39	7	ND	7	370	1	22	2	38	4.42	.105	7	75	1.48	73	.01	25	1.98	.02	.01	12	1
C 58149	1	62	8	65	.1	18	12	915	3.92	10	5	ND	1	315	1	2	2	31	3.85	.083	9	25	1.32	63	.01	2	1.56	.01	.14	1	3
C 58150	1	87	9	74	.2	12	14	1156	4.78	14	5	ND	5	360	1	2	2	51	4.78	.119	19	16	1.66	64	.01	2	2.25	.02	.13	1	12
C 58151	1	82	13	74	.2	22	21	1203	6.22	28	6	ND	3	413	1	2	2	144	5.73	.119	15	51	2.60	25	.01	2	3.14	.01	.05	1	2
C 58152	29	79	15	63	.4	38	12	752	2.71	17	5	ND	4	279	1	2	2	29	4.43	.073	16	16	1.35	53	.01	2	1.48	.01	.14	1	3
C 58153	1	73	8	62	.2	15	18	1320	4.92	19	5	ND	5	414	1	2	2	66	6.17	.107	10	32	2.04	53	.01	2	2.46	.01	.13	1	1
C 58154	23	53	13	119	.3	46	8	1428	3.05	14	5	ND	3	561	1	2	2	38	7.43	.069	7	31	1.70	50	.01	3	1.80	.01	.13	1	1
C 58155	8	105	10	159	.3	27	16	1159	4.74	8	5	ND	5	323	1	2	2	56	5.11	.134	8	24	1.74	57	.01	4	2.15	.02	.14	1	1
C 58156	1	86	10	71	.2	13	16	1236	5.06	13	5	ND	6	343	1	2	3	46	5.60	.141	12	34	1.69	60	.01	2	2.35	.03	.16	1	44
C 58157	1	77	8	60	.1	14	12	1061	4.68	12	5	ND	5	313	1	2	2	46	4.86	.124	17	13	1.57	62	.01	6	2.14	.01	.17	1	1
C 58158	4	83	14	96	.3	92	11	587	2.35	20	5	ND	3	167	1	2	3	18	2.52	.039	18	21	.87	46	.01	4	1.03	.01	.13	1	1
C 58159	1	85	8	59	.2	4	13	876	3.88	2	5	ND	7	294	1	2	2	25	6.59	.136	20	3	.90	69	.02	2	1.20	.01	.19	1	1
C 58160	4	45	16	66	.3	53	6	794	1.81	2	5	ND	2	280	1	2	2	13	4.55	.025	14	13	.48	36	.01	2	.58	.01	.09	1	2
C 58161	1	109	18	125	.1	23	17	1221	5.66	14	5	ND	4	360	1	2	2	55	5.43	.129	18	27	2.16	46	.01	2	2.64	.01	.12	1	1
C 58162	1	123	9	81	.1	22	19	1293	5.63	24	5	ND	3	410	1	2	2	62	5.81	.133	17	24	2.20	45	.01	2	2.75	.01	.12	1	1
C 58163	1	122	10	57	.1	11	16	1140	4.76	9	5	ND	4	344	1	2	2	46	5.15	.126	18	13	1.64	58	.01	30	1.89	.01	.13	2	2
C 58164	1	124	8	52	.2	7	11	1009	3.99	6	5	ND	5	251	1	2	2	33	4.15	.108	17	6	1.02	50	.01	2	.86	.01	.12	2	1
C 58165	1	100	13	73	.2	36	22	1648	5.95	34	5	ND	4	434	1	2	2	75	5.87	.124	13	52	2.63	46	.01	3	3.14	.01	.11	1	1
C 58166	1	151	10	95	.1	32	23	1508	5.77	31	5	ND	3	414	1	2	3	67	5.66	.105	13	55	2.56	44	.01	2	2.97	.01	.13	1	1
C 58167	1	157	7	35	.1	23	19	1044	4.58	17	5	ND	4	474	1	2	2	55	5.70	.111	18	39	2.08	43	.01	2	2.36	.01	.11	2	1
C 58168	1	97	6	41	.1	37	19	1097	5.59	20	5	ND	2	454	1	2	2	96	4.97	.104	12	73	2.77	37	.05	2	3.04	.02	.07	2	1
C 58169	1	249	12	47	.1	26	33	1323	6.53	27	5	ND	3	814	1	2	2	88	6.33	.102	11	44	2.51	38	.01	2	3.00	.01	.09	3	1
C 58170	1	432	11	32	.5	13	76	1681	8.91	46	5	ND	2	2152	1	2	4	57	7.92	.067	9	15	1.92	32	.02	2	2.55	.01	.15	2	22
C 58171	1	170	9	36	.2	24	32	2887	5.56	23	5	ND	2	922	1	2	2	55	7.43	.097	9	14	2.12	20	.02	2	1.75	.01	.10	1	1
C 58172	1	74	8	37	.2	30	21	1325	4.56	14	5	ND	2	784	1	2	2	57	7.32	.074	4	50	2.66	28	.01	2	1.39	.01	.11	1	6
C 58173	1	55	8	39	.1	24	18	1813	4.84	27	5	ND	1	457	1	2	2	57	4.89	.097	12	51	2.25	46	.01	2	2.53	.01	.12	2	7
C 58174	1	107	8	44	.2	31	20	1260	4.94	19	5	ND	3	703	1	2	2	71	6.07	.099	12	53	2.60	39	.01	2	2.57	.02	.11	2	1
C 58175	1	45	8	37	.1	30	16	1167	4.84	8	5	ND	3	625	1	2	2	112	5.64	.122	12	75	2.94	29	.01	17	2.79	.02	.08	1	1
C 58176	1	139	10	39	.1	19	17	903	4.72	33	5	ND	3	532	1	2	2	58	4.80	.114	12	42	1.93	48	.01	4	1.96	.02	.15	1	35
C 58177	2	240	8	35	.3	22	16	1039	4.34	61	5	ND	1	525	1	2	2	38	5.11	.110	5	45	2.05	51	.01	22	1.24	.02	.15	2	1
C 58178	1	213	8	27	.4	12	16	929	4.20	44	5	ND	1	595	1	2	2	15	5.35	.121	3	4	1.73	65	.01	4	.35	.02	.22	2	15
C 58179	1	27	6	22	.1	5	9	581	3.46	80	5	ND	1	398	1	2	2	10	5.65	.132	4	1	1.02	62	.01	36	.33	.02	.19	1	32
C 58180	1	492	7	29	1.0	10	15	892	3.99	38	5	ND	3	594	1	2	2	11	5.06	.127	4	2	1.60	56	.01	5	.24	.01	.17	2	17
STD C/AU-R	17	58	40	132	6.8	68	28	1056	3.99	39	20	6	36	48	18	16	21	57	.48	.089	39	55	.91	175	.06	33	1.98	.06	.13	11	470

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
C 58181	1	464	8	33	.6	13	16	954	5.00	31	5	ND	5	776	1	2	2	57	5.94	.116	14	13	1.60	57	.01	3	1.84	.06	.14	4	5
C 58182	2	240	9	31	.2	16	16	835	5.10	10	5	ND	3	476	1	2	2	57	4.58	.117	12	18	1.57	61	.01	3	1.97	.04	.18	1	4
C 58183	1	682	9	64	.4	35	15	996	5.65	20	5	ND	2	524	1	2	4	153	5.18	.102	9	72	3.19	29	.01	4	3.29	.07	.07	2	4
C 58184	1	63	7	42	.2	45	19	1136	5.18	27	5	ND	1	515	1	2	2	55	4.89	.048	2	53	4.35	59	.01	6	1.90	.07	.14	1	3

A P P E N D I X IV

PETROGRAPHIC REPORT

Harris
EXPLORATION
SERVICES

MINERALOGY AND GEOCHEMISTRY

534 ELLIS STREET, NORTH VANCOUVER, B.C., CANADA V7H 2G6 TELEPHONE (604) 929-5867

Report for: Dennis Gorc,
Imperial Metals Corp.,
P.O. Box 84,
800-601 West Hastings St.,
Vancouver, B.C.
V6B 5A6

Job 88-155

December 12th, 1988

PETROGRAPHIC STUDIES OF ROCKS FROM PROJECT 6307

Introduction:

9 samples were submitted for thin sectioning and microscopic examination. They are numbered as follows:

DDH JO-88-1	7.6m.	Slide 88-374X
DDH JO-88-1	49.0m.	Slide 88-375X
DDH JO-88-1	96.5m.	Slide 88-376X
DDH JO-88-1	106.0m.	Slide 88-377X
DDH JO-88-1	136.9m.	Slide 88-378X
DDH JO-88-2	46.2m.	Slide 88-379X
DDH JO-88-2	58.7m.	Slide 88-380X
DDH JO-88-2	89.8m.	Slide 88-381X
DDH JO-88-2	127.0m.	Slide 88-382X

Summary:

This is a suite of fine-grained, partially foliated rocks. These show a similar general mineralogy, consisting of felsitic plagioclase, sericite, chlorite and carbonate in various proportions and textural intergrowths.

Some of them appear to include a more or less strong tuffaceous component, whilst others are probably silty to argillaceous sediments or volcaniclastics.

Regional metamorphic effects appear generally weak, but some of the rocks show apparent cataclastic features. Others may display relict soft sediment deformation and intermixing

The composition of the carbonate in each sample was checked by XRD. In four of them (374X, 377X, 379X and 382X) it was found to consist of calcite, whilst in the remainder it is dolomite. Minor siderite is an accessory to the dolomite in 381X.

The same four rocks which contain calcite happen also to contain substantial chlorite, are distinctly foliated, and show more or less clearly recognizable relict fragments. They are classified as meta-tuffs.

One other rock (381X) exhibits tuffaceous features, but is dolomitic and contains no chlorite; it also includes a remobilized cherty component.

The remaining dolomitic rocks (375X, 376X, 378X and 380X) are tentatively classified as dolomitic (feldspathic) siltstones or mudstones. The dolomite commonly occurs as segregated, individual grains (porphyroblasts and/or clasts) which imparts a speckled, pseudo-fragmental texture.

The relative paucity of quartz in all these rocks suggests andesitic volcaniclastic affinities. Possibly the second group differs from the first mainly in lacking recognizable feldspathic or chloritic clasts, and are actually a form of ash tuff with a superimposed component of dolomite.

Most of the samples contain traces of disseminated sulfides, which appear to be of pre-metamorphic (primary/diagenic?) origin.

The rocks do not show recognizable hydrothermal effects in the sense of veining or pervasive alteration. Some syngenetic (exhalative) hydrothermal activity may be indicated by the abundance of carbonate and occasional chert development.

Individual petrographic descriptions are attached.

J.F. Harris Ph.D.

DDH JO-88-1 7.6m. (Slide 88-374X)

CALCAREOUS TUFF

Estimated mode

Quartz	1
Plagioclase	14
Carbonate	69
Chlorite	15
Rutile	1
Pyrite	trace

This is a fine-grained rock of layered aspect. It shows a distinct lenticular texture on the macro scale, emphasized by wisps of dark chloritic material.

In thin section it is found to consist predominantly of fine-grained carbonate, showing various degrees of intimate intergrowth with chlorite and a felsitic component. The latter appears to be mainly plagioclase, but may include an indeterminate proportion of cherty quartz.

The carbonate (principally calcite) is mainly of grain size 10 - 50 microns. It forms swarms of tiny flattened lenticles, locally developing to slightly coarser compact segregations. The carbonate lenses alternate, on a small scale, with wispy zones in which felsite or chlorite are dominant. Fine-grained flecks of rutile tend to be concentrated in the more chloritic zones.

The resultant fabric shows a distinct foliation. Flaky masses of chlorite also form augen-like segregations, 0.2 - 0.6mm in size. These have the aspect of altered lithic fragments or mafic crystal clasts. The orientation of the constituent flakes is discordant to the foliation. Rare, generally smaller augen of plagioclase are also seen, sometimes outlined by dusty rutile.

The rock contains traces of pyrite as grains 50 - 200 microns in size, associated with a concordant lens of coarser-grained carbonate, chlorite and possible microgranular quartz.

The streaky/lensy fabric is typical of a fine-grained tuff. Macro-examination reveals apparent fragments up to 3mm or more in size. The abundant carbonate may be a deuteric/hydrothermal alteration of mafic detritus, or a chemical-sedimentary continuum with which the tuffaceous material is intercalated.

DDH JO-88-1 49.0m (Slide 88-375X)

DOLOMITIC SILTSTONE

Estimated mode

Quartz	4
Plagioclase	28
Carbonate	52
Sericite	14
Chlorite	2
Rutile	trace
Pyrite	trace

This is a rock of similar general character to the previous sample, but without its well-defined foliation. It is a very fine-grained rock with occasional thin, sub-parallel, wispy zones.

It is composed predominantly of an even-grained, felsitic aggregate, of grain size 10 - 30 microns, with evenly intergrown, minutely fine-grained flecks of sericite. These show parallel orientation and clearly indicate that this is the product of mild regional metamorphism of a siltstone or ash tuff.

Carbonate (indicated as dolomite by XRD) is developed in distinctive mode as individual, equant, sub-angular grains, 50 - 200 microns in size, within the felsitic matrix. The carbonate grains are abundant, and often concentrate in lenticular swarms; they locally coalesce to form patches of granular mosaic aggregate.

The carbonate looks like the product of porphyroblastic recrystallization of an original dolomitic silt.

Quartz occurs as sporadic individual augen and rather irregular, sub-concordant lenses, pods and veniform segregations of granular mosaic, of grain size 0.05 - 0.2mm. Some twinned and un-twinned plagioclase is intergrown. These probably represent coarser, sandy intercalations in the dolomitic silt - somewhat deformed and disrupted by soft-sediment processes.

Pyrite is seen as a localized zone of disseminated subhedra, often with diagenetically or metamorphically developed fringes of lamellar, cherty quartz and/or flaky chlorite.

This rock shows no features specifically indicative of tuffaceous origin, and it is tentatively classified simply as a partially recrystallized dolomitic siltstone.

DDH JO-88-1 96.5m. (Slide 88-376X)
SILTY DOLOMITE

Estimated mode

Quartz	5
Plagioclase	20
Carbonate	67
Sericite	8
Rutile	trace
Pyrite) Pyrrhotite)	trace

This is a rock of similar general appearance to the previous sample. Macroscopically it is a weakly foliated aggregate of somewhat 'lumpy' aspect.

Thin section examination shows it to be of very similar composition to 375X, but of slightly different texture. Like that sample, it includes a silty component of plagioclase and accessory quartz, as an even-grained, partially recrystallized aggregate of grain size 10 - 30 microns. Fine-grained, well-oriented sericite occurs intergrown and as wispy segregations.

The orientation of the sericite and a local incipient flattening of the quartzo-feldspathic grains defines a perceptible foliation on the micro-scale.

Occasional coarser granularity, to 50 or 100 microns, is diffusely developed in the silty component, but the rock lacks the discrete segregations of 375X.

Carbonate (indicated as dolomite by XRD) is the major constituent. It occurs as sub-rounded grains, 0.2 - 0.5mm in size, often aggregating to clumpy and lenticular masses. A little finer-grained carbonate occurs as dispersed granules in the silty phase - which occupies an interstitial/interlayered relation to the dominant carbonate segregations.

Sericite often tends to concentrate peripherally to the carbonate clumps - a feature recognizable on the macro scale as micaceous flecks in the cut-off block.

Sulfides are very sparse, occurring as a single tiny lens of disseminated grains.

This rock appears to be a recrystallized but undeformed silty dolomite.

DDH JO-88-1 106m. (Slide 88-377X)
CALCAREOUS SILTY ARGILLITE (TUFFACEOUS?)

Estimated mode

Quartz	1
Plagioclase	27
Carbonate	28
Sericite	35
Chlorite	9
Rutile	trace

This is another very fine-grained, weakly foliated rock of notably homogenous appearance on the macro-scale.

Thin section examination reveals that it is of similar composition to the previous samples, in that it is an intimate intergrowth of silty or felsitic material, sericite and carbonate.

The quartzo-feldspathic aggregate (probably mainly plagioclase) has a grain size of 10 - 20 microns. Scattered individual grains or diffuse streaks of coarser granularity, up to 50 or 100 microns in size, are also seen.

Sericite is abundant, as fine-grained scaly segregations, forming streaky lensy concentrations throughout. Chlorite, of similar mode, forms diffuse, wispy networks and tiny clumps, seemingly independent of the sericite.

Carbonate is the other component, occurring as individual sub-equant grains, 50 - 100 microns in size, often aggregating as small clumps and lenses. XRD scans indicate its composition as calcite, though it does not appear to effervesce.

The four components are intimately intergrown. The orientation of sericite flakes, micaceous wisps and pockets and carbonate clumps and lenses defines a weakly foliated fabric.

The scattered, tiny, monocrystalline feldspar augen, and the clumpy/lensy concentrations of sericite, chlorite and carbonate have a somewhat fragmental aspect. This rock is an impure silty sediment of probable tuffaceous affinities.

DDH JO-88-1 136.9m. (Slide 88-378X)
FELDSPATHIC SILSTONE/ARGILLITE WITH DOLOMITE SPECKLES

Estimated mode

Quartz	6
Plagioclase	44
Carbonate	22
Sericite	28
Chlorite	trace
Rutile) Leucoxene)	trace
Pyrite	trace

This is another fine-grained rock of similar general type to the rest of the suite. Low-power examination of the cut-off block reveals the presence of a speckled texture, produced by rather abundant, small, discrete mineral grains and grain clumps, in a minutely fine-grained, essentially non-foliated matrix.

The latter is found, in thin section, to consist of a felsitic mosaic, of grain size 10 - 30 microns, apparently composed largely of plagioclase. Minutely fine-grained sericite forms diffuse, wispy intergrowths throughout. The individual sericite flecks are virtually without preferred orientation, but the distribution of sericitic wisps defines a very weak foliation.

Some streaky, anastomosing, sub-parallel zones of strong sericite enrichment occur. These are also of minutely felted, rather than foliaceous texture - attesting to a low degree of metamorphic crystallization in this rock.

The speckled effect is produced by abundant, individual, subhedral grains of dolomite, 0.2 - 0.5mm in size, locally clumped. These have a porphyroblastic appearance, and may be of diagenetic origin.

The carbonate grains are locally cemented by clumps of microgranular quartz, which is also seen as irregular to sub-concordant, veniform wisps, and as occasional individual augen (possibly recrystallized chert globules).

Chlorite, rutile and leucoxene form scattered, tiny flecks and semi-continuous schlieren.

Pyrite is seen as a single, discrete, lenticular clump, associated with fibrous chert and chlorite.

This rock appears to be a dolomitic feldspathic siltstone/argillite.

DDH JO-88-2 46.2m. (Slide 88-379X)
FINE-GRAINED META-TUFF(?)

Estimated mode

Quartz	trace
Plagioclase	18
Carbonate	30
Sericite	43
Chlorite	8
Rutile	1
Pyrrhotite(?)	trace

This rock shows a well-foliated microlenticular texture in thin section, somewhat similar to slide 374X; however, it is of much more sericitic composition than that sample.

It is made up predominantly of close-packed, small, en-echelon lenticles of felted sericite and fine-grained carbonate (calcite), 50 - 150 microns in size, in a minimal felsitic matrix. Wisps and networks of chlorite and micron-sized rutile tend to outline the sericitic/carbonate bodies, emphasizing the microlenticular foliation.

Sparse tiny granules of quartz and/or plagioclase occur scattered through the calcareous argillitic material, and there are rare, concordant intercalations of less sericitic, more felsitic composition.

The slide includes two irregular, discordant, somewhat deformed, veinlet-like bodies. These are composed of mosaic carbonate, with intergrown or fringing zones of well-crystallized, twinned plagioclase (andesine) and pockets or core-zones of felted chlorite.

The strongly microlenticular fabric of this rock suggests that it may be of tuffaceous affinities. The close-packed sericitic bodies may be compacted clasts, possibly of altered glass.

DDH JO-88-2 58.7m. (Slide 88-380X)
DOLOMITE CLASTS IN MUDSTONE

Estimated mode

Quartz	13
Plagioclase	7
Carbonate	43
Sericite	35
Chlorite	1
Rutile	trace
Pyrite	1

This is a rock of heterogenous texture.

Low-power examination of the cut-off block reveals a clearly-defined fragmental fabric of equant, sub-rounded bodies, 0.3 - 3.0mm in size, cut by an irregular vein or segregation of quartz.

In thin section the rock is found to consist essentially of an intergrowth of sericite and carbonate (dolomite, by XRD). The fragmental forms consist of abundant individual grains and microgranular aggregate masses of dolomite, 0.1 to several mm in size. These are set, with random orientation, in a matrix of non-foliated, minutely felted sericite. The latter locally shows textural effects suggestive of compaction of a fine clayey matrix between the carbonate bodies.

Sparse wisps of rutile/leucoxene tend to outline some of the carbonate clasts.

The quartzose vein or segregation consists of an intensely strained, partially recrystallized, crenulate-margined, varigranular aggregate of grain size 0.1 to several mm. The marginal zones of this mass commonly consist of well-crystallized, fresh, twinned andesine as subhedral grains to 0.5mm; sometimes with interstitial carbonate. The margins of the mass show complex interfingering and pockety intergrowth with the adjacent dolomite-sericite rock.

The origin of this rock is uncertain. The crypto-clastic carbonate bodies do indeed look like true fragments, and appear distinct from the porphyroblastic carbonate grains seen in some of the other samples.

It may be a hybrid intermixture of a dolo-arenite with a shale or mudstone. The quartzo-feldspathic mass may be a remobilized pod of chert, since recrystallized.

DDH JO-88-2 89.8m. (Slide 88-381X)

MELANGE OF DOLOMITIC TUFF AND CHERT

Estimated mode

Quartz	17
Plagioclase	12
Carbonate	50
Sericite	20
Pyrrhotite	1

This is another heterogenous rock, consisting of two distinct lithotypes in obscure intermixture.

One lithotype is an even-grained rock composed of abundant, equant/subhedral grains and grain clumps of carbonate, 0.1 - 0. 3mm in size, in a sericitic matrix. The latter sometimes appears to be a partially sericitized felsite, but, in part, consists of apparent clasts of plagioclase, up to 1mm in size, showing varying degrees of pervasive sericitization.

Occasional wisps and fragment-like segregations of monomineralic felted sericite are also seen, and the assemblage has the distinct aspect of a fragmental rock - probably a tuff.

The sericite tends to show a preferred orientation, as does the elongation of carbonate and plagioclase clumps, and the resultant fabric is distinctly foliated.

The other lithotype is non-foliated, and appears to consist of a diffuse, vari-granular aggregate of quartz, intimately shot through with carbonate in random, emulsion-like relation to the quartz matrix. It has the appearance of a recrystallized dolomitic chert.

This lithotype contains disseminated granules and trains of sulfides (probably pyrrhotite) often mantled by a fine-grained, very high-relief carbonate - probably siderite, as indicated by the XRD scan.

The cherty lithotype occupies about 40% of the area of the slide - forming a peripheral zone in irregular contact with the dolomitic tuff. This contact appears relatively sharp on the macro scale, but is seen to be complexly interfingered in the thin section. There are also local vein-like bodies of one type apparently cutting the other.

This rock is tentatively interpreted as a melange (slump breccia?) of dolomitic tuff and chert.

The principal carbonate is clearly indicated by XRD as dolomite. The tendency for it to effervesce with dilute acid is unexplained. Possibly there is local admixture with calcite.

DDH JO-88-2 127.0m. (Slide 88-382X)

PHYLLONITIC META-TUFF

Estimated mode

Quartz	2
Plagioclase	40
Carbonate	20
Sericite	29
Chlorite	7
Sphene	trace
Pyrite	1
Pyrrhotite	1

This is a rather homogenous rock, showing a distinct foliation.

It consists predominantly of a minutely fine-grained matrix of felsitic plagioclase, of grain size 5 - 20 microns. Throughout this matrix are developed abundant parallel, wispy/microlenticular intergrowths of sericite, carbonate and chlorite in various proportions. These form close-spaced, short, en-echelon streaks and lenses defining a distinct foliation.

Sometimes the texture - particularly as revealed by the chloritic wisps - appears to represent a phyllonitic texture of tight, sheared-out, isoclinal micro-folds.

Carbonate forms small segregated clumps and somewhat irregular laminar bodies, both concordant and discordant, within which the grain fabric shows strong flattening parallel to the foliation.

The laminar carbonate streaks and disrupted veinlets(?) often have intergrown, accessory, microgranular quartz.

The carbonate is indicated by XRD as being calcite, but it does not appear to effervesce with dilute acid.

The rock contains scattered, diffuse (partially recrystallized) patches of coarser plagioclase, 0.5 - 1.0mm in size, which appear to be relict clasts or phenocrysts. Some rather well-defined lenses and blocky patches of chlorite may be of related origin.

Sulfides are relatively abundant, and appear to include both pyrrhotite and pyrite. The former occurs as thin concordant wisps associated with certain chlorite and/or carbonate micro-lenticles; the latter forms individual, randomly disseminated euhedra, sometimes with fringes of fibrous chert and/or coarse chlorite.

This rock appears to be a strongly sheared, phyllonitic product, derived from an original calcareous tuff.

APPENDIX V

DRILL LOGS

DRILL RECORD

IMPERIAL METALS CORPORATION

PROPERTY : Jamboree
HOLE NO. : JO-88-1
COMMENCED : June 24, 1988
COMPLETED : June 25, 1988
OBJECTIVE : To test soil anamoly (Au, Cu, As), test geophysical anomaly (resistivity).

LOCATION : Offset Grid
LOC. : 5215E 475
ELEV. :
CORE SIZE : NQ

CORRECT DIP : -45°
TRUE BRG : 045°
SURVEY AT :
% RECOVERY : 100%
LENGTH : 152.4m (500 ft)

LOGGED BY : D. Gorc
DATE : July 1988
CORE STORED : At a nearby ranch
UNUSUAL FEAT. : (Geisbrecht)

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
0	3.05		**Casing**										
3.05	11.7		**Calcareous Felsic Lapilli Tuff**	58001	3.05	6.10	3.05		1				
			Abundant volcanic clasts and lesser argillite clasts to 4 mm across, clasts elongated along foliation bedding, medium grey to greenish grey, occasional seams of chlorite, bedding at 40° to CA at 30.5 m, highly reactive to acid, high carbonate content, iron stained carbonate porphyry clasts throughout, crosscutting calcite veinlets at 10° to 60° to CA, occasional calcite veinlet contains 3-5% disseminated pyrite with lesser pyrite alongside, approximately 1 veinlet per metre, remainder of unit contains only minor disseminated pyrite (0.1-0.2%).										
			3.05-6.1 - contains 9 - 1 cm calcite veins.										
			6.8-7.5 - 3-5% pyrite along fractures, lace network of veining.	58002	6.10	6.80	0.70		1				
				58003	6.80	7.50	0.70		1				
			7.5 - bedding? at 25° to CA.										
			7.5-11.7 - 1-3% pyrite, predominantly along fractures or within thin	58004	7.5	9.14	1.64		1				
			calcite veinlets to 0.5 cm.	58005	9.14	10.14	1.0		1				
			11.0 - bedding at 30° to CA.										

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			10.0 - clasts become smaller (1 mm to 2 mm).	58006	10.14	11.7	1.56		2				
				58007	11.7	12.8	1.10		3				
11.7	12.8		**Transition Zone**										
			Intermixed argillite and fine grained calcareous felsic volcaniclastic.										
			117.0-12.2 - 80% volcaniclastic, 20% argillite.										
			12.2-12.4 - 50% volcaniclastic, 50% argillite.										
			12.4-12.8 - 20% volcaniclastic, 80% argillite.										
			12.4-12.8 - thin wispy bands of volcaniclastic to 1 cm.										
			3-5% disseminated pyrite and thin wispy horizons of pyrite within volcani-										
			clastic bands, pyrite has syngenetic appearance.										
			Argillite is graphitic along thin seams.										
			12.8 - bedding at 35° to CA.										
12.8	17.2		**Argillite**	58008	12.8	15.24	2.44		20				
			Black fine grained, finely laminated appearance due to thin 0.1 to 1 cm	58009	15.24	16.64	1.40		25				
			bands of calcareous volcaniclastic, thin bands of volcaniclastic contain	58010	16.64	17.20	0.56		24				
			thin 1 mm seams of pyrite along bedding (sygenetic?), bands contain 3-5%										
			pyrite.										
			Occasional 0.5 cm clasts of pyritic volcaniclastic within argillite,										
			abundant thin (0.1 cm) calcite veinlets.										

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			Minor graphitic layers.										
			17.2 - bedding at 30° to CA.										
17.2	21.7		**Calcareous Felsic Volcaniclastic**	58011	17.2	18.3	1.10		1				
			Clasts to 2 mm, clasts of felsic volcaniclastic and argillite, seams of	58012	18.3	19.4	1.10		1				
			chlorite, strong reaction to acid, high carbonate content, 1-3% pyrite.	58013	19.4	20.8	1.40		1				
				58014	20.8	21.7	0.90		1				
21.7	22.2		**Graphitic Argillite**	58015	21.7	22.2	0.50		3				
			Contact at 25° to CA.										
			Crosscutting calcite veinlets, 3% disseminated pyrite.										
			22.2 - minor gouge, small fault?										
22.2	25.0		**Calcareous Felsic Volcaniclastic**	58016	22.2	23.6	1.40		2				
			Similar to 17.2-21.7, more thin (1 mm-2 mm) wispy graphitic and argillite	58017	23.6	24.4	0.80		1				
			layers, 2-4% pyrite.	58018	24.4	25.0	0.60		1				
25.0	32.2		**Argillite and Graphitic Argillite**	58019	25.0	25.9	0.90		30				
			Abundant calcareous volcaniclastic layers (thin), bedding at 20° to CA,	58020	25.9	27.43	1.53		24				
			1-3% pyrite within calcareous layers, minor crosscutting carbonate	58021	27.43	28.7	1.27		18				
			veinlets.	58022	28.7	31.4	2.70		6				
				58023	31.4	31.7	0.3		10				
			Core is broken up.	58024	31.7	32.2	0.5		1				

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			31.3-31.7 - fault, completely crushed rock, blackish oxidation.										
			28.7-30.6 - 40% thin bands of grey volcaniclastic, 3-5% disseminated										
			pyrite.										
32.2	45.8		**Interbanded Argillite and Felsic Calcareous Volcaniclastic**										
			Alternating 0.85 cm to 1 m thick bands of black argillite and light grey	58025	32.2	33.53	1.33		1				
			felsic volcaniclastic, thicker volcaniclastic bands have coarser texture,	58026	33.53	35.8	2.27		17				
			wispy thin horizons of pyrite within volcaniclastic, lesser pyrite seams	58027	35.8	36.6	0.80		17				
			in argillite, abundant thin crosscutting calcite veinlets, minor dolomite	58028	36.6	37.6	1.00		3				
			veinlets, 50% argillite, 50% volcaniclastic.	58029	37.6	39.6	2.00		1				
				58030	39.6	40.6	1.00		1				
			35.0 - bedding at 35° to CA.	58031	40.6	41.2	0.60		4				
				58032	41.2	42.0	0.80		9				
			40.8-41.1 - graphitic.	58033	42.0	43.7	1.70		4				
				58034	43.7	45.8	2.10		9				
45.8	51.5		**Calcareous Felsic Volcaniclastic**	58035	45.8	46.4	0.60		11				
			Light grey matrix, small clasts to 1-2 mm, abundant carbonate but not as										
			abundant as previous volcaniclastic units.	58036	46.4	47.9	1.5		2				
				58037	47.9	48.8	0.9		1				
			45.8-46.4 - siliceous, 3% pyrite.										
			46.4-51.5 - 1-3% pyrite along thin wispy bands.	58038	48.8	49.8	1.0		2				
				58039	49.8	51.5	1.7		1				
			Note: less carbonate veining than previously.										

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
51.5	53.8		**Finely Interbanded Argillite and Calcareous Felsic Volcaniclastic**										
			Alternating 1 cm to 10 cm bands of black argillite and light grey felsic	58040	51.5	53.4	1.90		9				
			volcaniclastic, distinctive laminated appearance, 1-2% pyrite.	58041	53.4	53.8	0.40		24				
53.8	76.2		**Calcareous Felsic Volcaniclastic**	58042	53.8	54.8	1.00		88				
			Light grey matrix, fine texture, abundant carbonate, 1% disseminated	58043	54.8	57.9	3.10		1				
			pyrite, a few argillite bands to 56.9 m.	58044	57.9	59.1	1.20		1				
				58045	59.1	60.96	1.86		1				
			Slightly more chloritic? than previous volcaniclastic units.	58046	60.96	63.3	2.34		1				
				58047	63.3	64.0	0.70		1				
			Note: occasional horizons of 2% pyrite.	58048	64.0	66.2	2.20		1				
			63.5 - minor pyrrhotite, chalcopyrite.										
			64.0 - bedding at 30° to CA.	58049	66.2	68.9	2.70		1				
				58050	68.9	70.3	1.40		1				
			64.9 - minor pyrrhotite-chalcopyrite.	58051	70.3	72.2	1.90		1				
			66.0 - decreased overall sulphide content to 0.5 to 1.0%, largely										
			pyrrhotite?										
			70.0 - a few chloritic clasts, occasional chlorite-pyrite veins, silaceous										
			zones.										
				58052	72.2	72.4	0.20		55				
			72.3 - 2 cm quartz vein at 40° to CA, minor pyrite.	58053	72.4	73.5	1.10		1				
				58054	73.5	76.0	2.50		1				

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			74.0 - bedding at 30° to CA.										
			74.0 - note clasts of iron stained carbonate.										
76.2	79.0		**Sheared Calcareous Felsic Volcaniclastic**										
			Foliation at 30° to CA, sections are very vuggy, unit contains 10-15%	58055	76.0	77.2	1.20		3				
			thin quartz veins, quartz veins are vuggy, 1-2% disseminated and fracture	58056	77.3	78.7	1.40		96				
			pyrite.	58057	78.7	79.0	0.30		123				
			76.9 - 0.25 cm thick veinlet, chlorite and mariposite.										
79.0	83.4		**Chloritized Calcareous Felsic Volcaniclastic**										
			79.0-79.85 - minor chlorite.	58058	79.0	80.0	1.00		21				
				58059	80.0	80.8	0.80		3				
			Porphyryoblasts of iron stained carbonate, 1-3% pyrite.										
			79.85 - start of increasing chlorite, slightly vuggy.										
			80.8-82.0 - fault zone, extremely chloritized, some gouge, 1-3%	58060	80.8	82.0	1.20		4				
			disseminated pyrite.										
			82.0 - decreased chlorite, still vuggy.	58061	82.0	83.0	1.00		1				
			83.0-83.4 - fault.	58062	83.0	83.4	0.40		1				

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
83.4	98.4		**Tuffaceous Limestone**										
			Abundant, light brown carbonate (dolomite?), irregular patches and	58063	83.4	85.3	1.90		12				
			alongside fractures.	58064	85.3	87.5	2.20		1				
			Occasional quartz-carbonate veins, veins less than 2 cm thick, approxi-										
			mately 1 per metre.										
			Minor pyrite, occasional 10-20 cm horizons of 1-2% pyrite but overall	58065	87.5	89.3	1.80		29				
			only trace pyrite.										
			85.5 - mariposite? along fracture.										
			87.6-89.4 - chloritic tuff, very carbonate rich, strong reaction to acid,	58066	89.3	91.44	2.14		880				
			lace network of chlorite veinlets, 1-3% fracture pyrite.										
			89.4-89.7 - silicified, beige silicification.										
			89.7-91.24 - fault zone, vuggy, highly chloritized.										
			91.24 - unit returns to original characteristics, light grey, abundant	58067	91.44	94.2	2.76		19				
			porphyryoblasts of dolomite?, occasional chlorite veinlets, 1-3%										
			disseminated pyrite.										
			91.64 - mariposite.										

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			94.6-94.8 - chert?? greyish silicification at 30° to CA, 2% disseminated	58068	94.2	94.5	0.30		23				
			pyrite, minor mariposite, minor chlorite.	58069	94.5	95.0	0.50		9				
			94.5-95.0 - greyish silicification? chert?										
			95.0-96.7 - contains 13 quartz veins 0.25+ 1 cm thick at 30° to CA, minor	58070	95.0	96.0	1.00		50				
			pyrite, occasional patchy mariposite.	58071	96.0	97.53	1.53		30				
				58072	97.53	98.4	0.87		11				
98.4	120.5		**Calcareous Andesitic Tuff**										
			Medium greyish-green colour, more basic than previous units, fine textured,	58073	98.4	99.2	0.80		1				
			high carbonate content, minor pyrite, occasional 10 cm sections of 10%										
			pyrite, with high chlorite and carbonate.										
			99.3-99.4 - 10% pyrite, high chlorite and carbonate.	58074	99.2	99.6	0.40		8				
			100.6-102.1 - contains 15 quartz veins from 0.256 m to 5 cm most of which	58075	100.6	102.1	1.50		1				
			are very thin, minor pyrite in veins, zone is bleached, slightly										
			silicified.										
			102.1-103.6 - 3-5% pyrite, disseminated and fracture pyrite.										
			103.6 - slightly fractured and bleached, minor calcite veining, very thin	58076	102.1	103.63	1.53		1				
			veins (less than 0.25 cm).										
			107.3 - 1 cm calcite vein at 60° to CA.	58077	107.2	108.2	1.00		4				

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			107.3-114.0 - bleached to light grey, abundant white calcite veins to 5 cm,	58078	108.2	110.9	2.70		1				
			minor pyrite in veins, minor disseminated pyrite, less than 0.5% pyrite.	58079	110.9	112.78	1.88		1				
				58080	112.78	114.0	1.22		1				
			116.0-117.0 - 2-3% fracture controlled pyrite.										
			117.45-117.75 - intense light brown ankerite alteration, local intense	58081	116.0	117.0	1.00		58				
			chlorite alteration, 2% disseminated pyrite.	58082	117.0	117.2	0.20		7				
				58083	117.2	118.2	1.00		6				
			118.9-120.5 - ankerite alteration, slightly bleaching.	58084	118.2	120.5	2.30		8				
120.5	126.4		**Tuffaceous Carbonate**										
			Light grey, 2-3% disseminated pyrite, trace mariposite, local 10-20 cm	58085	120.5	121.92	1.42		12				
			patches are silicified, visible scattered ankerite?	58086	121.92	122.3	0.38		2				
				58087	122.3	125.0	2.70		7				
			120.9-121.0 - white quartz vein with minor pyrite at 50° to CA.	58088	125.0	126.4	1.40		1				
				58089	126.4	128.0	1.60		7				
126.4	128.0		**Calcareous Andesite Tuff**										
			Dark greenish-grey, fine textured, minor pyrite.										
128.0	146.0		**Tuffaceous Carbonate**	58090	128.0	130.2	2.20		3				
			Coarse to medium texture, coarse texture from 128.0-130.0, light grey to	58091	130.2	133.0	2.80		19				
			light medium grey, reaction to acid, high carbonate, 1-3% disseminated	58092	133.0	134.1	1.10		76				
			pyrite.	58093	134.1	137.2	3.10		2				
				58094	137.2	138.6	1.40		1				

From	To	Syb	Description	Smp. No.	From	To	Lgth.	Rec.	Analysis				
Meters					Meters				Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			138.6 - slightly mauve-greenish tinge, occasional chlorite veins, 1-2%	58095	138.6	140.21	1.61		1				
			disseminated pyrite, coarse textures.	58096	140.21	143.26	3.05		1				
				58097	143.26	146.0	2.74		1				
146.0			**Calcareous Andesitic Tuff**	58098	146.0	148.0	2.00		18				
			Dark greenish-grey to dark green, fine to medium textured, 1-3%	58099	148.0	149.3	1.30		1				
			disseminated pyrite, bedding at 30° to CA.	58100	149.3	152.4	3.10		3				
			End of hole - 152.4 m (500 feet).										

DRILL RECORD

IMPERIAL METALS CORPORATION

PROPERTY : Jamboree
HOLE NO. : JO-88-2
COMMENCED : June 25, 1988
COMPLETED : June 26, 1988
OBJECTIVE : To test soil anamoly (Au, Cu, As), test geophysical anomaly (resistivity).

LOCATION : Offset Grid
LOC. : 5210E 169N
ELEV. :
CORE SIZE : NQ

CORRECT DIP : -45°
TRUE BRG : 020°
SURVEY AT : 100%
% RECOVERY : 167.6m (550 ft)
LENGTH :

LOGGED BY : D. Gorc
DATE : July 1988
CORE STORED : At a nearby ranch
UNUSUAL FEAT. : (Geisbrecht)

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
0	9.14		**Casing**										
9.14	15.24		**Overburden** boulders of andesite, argillite and quartz.										
15.24	20.0		**Calcareous Felsic Pyroclastic**										
			Light grey, thinly laminated, very subtle lamination, very fine grained,										
			no carbonate alteration, minor calcite and ankerite veining, 1-2% pyrite										
			and pyrrhotite along thin fractures, very thin 1 mm, occasionally lace										
			network, bedding at 35° to CA.										
			15.24-16.9 - very broken up.										
				58101	16.9	19.0			2				
			19.0 - small fault.	58102	19.0	20.0			1				
			19.0-20.6 - highly fractured, abundant thin white calcite veinlets										
			oriented in all directions.										
20.0	31.6		**Interbanded Calcareous Felsic Pyroclastic and Black Argillite**										
			Note: only trace pyrite, pyrite is fracture pyrite.										

From	To	Syb	Description	Smp. No.	From	To	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			Alternating 1 m to 2 m bands of felsic pyroclastic and black argillite,										
			felsic pyroclastic, light grey, fine to medium grained, pyroclastic										
			texture, occasionally slightly chloritic, highly carbonated strong										
			reaction to acid, thin wispy bands of argillite are common, black										
			argillite bands are finely and distinctly laminated and generally contain										
			thin 1-5 mm wispy bands of felsic tuff, thin bands of felsic tuff are										
			slightly carbonated, thin laminae of black graphite are common.										
			23.4-23.6 - small fault.										
			25.0 - bedding at 25° to CA.										
			29.6-29.8 - small fault.										
			30.5 - bedding at 25° to CA.										
			20.0-20.6 - black argillite, highly fractured, abundant calcite veining.	58103	20.0	20.6			4				
				58104	20.6	21.4			1				
			20.6-21.4 - felsic pyroclastic.	58105	21.4	23.4			1				
				58106	23.4	24.4			2				
				58107	24.4	25.7			1				
				58108	29.3	30.2			1				
			30.8 - start of thin wispy pyrite along bedding, 0.5% pyrite, minor	58109	30.2	31.2			6				
			fracture pyrite.										
				58110	31.2	31.6			19				

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
31.6	45.8		**Calcareous Felsic Pyroclastic**										
			Light grey, fine to medium textured, clasts to 2 mm, predominatly medium										
			textured, very minor argillite, essentially no argillite, a few rare										
			horizons, 3-5% disseminated pyrite and fracture pyrite, strong reaction to										
			acid, highly carbonated, occasional thin light brown ankerite veinlets.										
		*	31.6-42.2 - abundant quartz veins, predominantly at 50° to CA but	58111	31.6	33.5			77				
			essentially random orientation, some pyrite and carbonate in some veins,	58112	33.5	34.9			10				
			some silicification along some veins, occasional lace network of quartz	58113	34.9	36.7			12				
			veins, largest vein is 5 cm thick.	58114	36.7	37.4			1				
				58115	37.4	38.1			4				
			36.7 - pyrite content reduced to trace pyrite, still some pyrite in quartz	58116	38.1	41.0			31				
			veins.										
			36.7-45.8 - more intermediate in composition, noticeably greenish tinge										
			due to chlorite, rare spots of bright green mariposite.										
			40.8-41.2 - contains 3 quartz veins to 10 cm thick with pyrite and minor	58117	41.0	41.8			34				
			chalcopyrite, random orientation to veins.	58118	41.8	42.5			22				
45.8	54.1		**Calcareous Felsic Pyroclastic**										
			Fine to medium texture, light grey, still strong reaction to acid, high										
			carbonate content, locally flecks of light brown ankerite.										
			46.5-41.3 - 6 quartz-calcite veins to 5 cm thick with pyrite, brownish										
			tinge due to ankerite.										

From Meters	To Meters	Syb	Description	Smp. No.	From Meters	To Meters	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			45.8-47.3 - 2-3% fracture pyrite with some pyrrhotite	58119	45.8	46.5			8				
				58120	46.5	47.3			14				
			47.3-50.8 - 0.5% pyrite and pyrrhotite, predominantly fracture sulphide.	58121	47.3	48.0			16				
				58122	48.0	50.9			5				
			50.8 - start of 2-3% pyrite and pyrrhotite, fracture and disseminated.	58123	50.9	51.8			25				
				58124	51.8	53.5			6				
			52.8 - bedding at 35° to CA.	58125	53.5	54.1			1				
54.1	56.0		**Intermixed Argillite and Calcareous Felsic Pyroclastic**										
			50% argillite, 50% pyroclastic, strong reaction to acid, highly carbonated,	58126	54.1	56.0			4				
			minor fracture.										
56.0	63.4		**Calcareous Felsic Pyroclastic**										
			Light grey, high carbonate content, cut by numerous quartz-carbonate	58127	56.0	56.7			8				
			veins, very jagged irregular veins, some sulphides in veins, some ankerite	58128	56.7	57.8			14				
			in veins, 2-5% disseminated and fracture pyrite, largely 0.5 cm accumula-	58129	57.8	59.1			10				
			tions of pyrite, approximately 3-6 quartz veins per metre, random										
			orientation.										
			57.8-59.1 - intense ankerite alteration, most of core light brown in										
			colour, abundant jagged irregular quartz-carbonate veining, 3-5% fracture										
			and disseminated pyrite.										
			59.1-63.4 - 0.5% pyrite, predominantly fracture sulphide	58130	59.1	60.9			1				
				58131	60.9	63.4			4				

From	To	Syb	Description	Smp. No.	From	To	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			Sharp lower contact at 35° to CA.										
63.4	84.7		**Argillite**										
			Occasional 0.5 to 2 m bands of felsic pyroclastic, cut by abundant thin	58132	63.4	64.1			7				
			calcite veinlets, locally graphitic, thinly laminated appearance, predomi-										
			nantly black.										
			63.4-64.1 - 0.5% disseminated and fracture pyrite.										
		*	Laminated banded appearance due to abundant 0.1 mm to 1 cm light coloured										
			bands of felsic tuff, note disseminated pyrite in tuff bands, tuff bands										
			react to acid, are carbonate-rich.										
			0.5%-2% disseminated pyrite along bedding and fracture pyrite, disseminated										
			pyrite predominantly along bands of felsic tuff but some thin seams										
			also in argillite.										
			64.1-65.7 - felsic pyroclastic 2-3% disseminated and fracture pyrite.	58133	64.1	65.7			1				
			68.1-68.4 - felsic pyroclastic 2-4% disseminated and fracture pyrite,	58134	65.7	68.1			5				
			contact at 35° to CA.	58135	68.1	68.4			1				
				58136	68.4	70.0			2				
			71.1-72.5 - felsic pyroclastic, strong reaction to acid, trace pyrite.	58137	70.0	71.1			1				
			72.5-73.1 - argillite, 0.5% fracture pyrite.										

From	To	Syb	Description	Smp. No.	From	To	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			73.1-75.5 - felsic pyroclastic, visible spotty light brown ankerite, trace pyrite.										
			75.5 - back to argillite with thin bands of felsic tuff (0.1-1 cm), 0.5% to 2% disseminated pyrite and fracture pyrite, pyrite along bedding as thin 1 mm bands.	58138	75.5	77.0			18				
				58139	77.0	79.2			5				
				58140	79.2	81.1			7				
			79.2 - bedding at 30° to CA.										
			81.3-81.7 - felsic pyroclastic, 0.5% fracture and disseminated pyrite.										
			82.0-82.8 - felsic pyroclastic, 0.5% fracture and disseminated pyrite.	58141	81.1	82.8			3				
				58142	82.8	84.7			9				
84.7	117.8		**Calcareous Felsic Pyroclastic**	58143	84.7	86.6			2				
			Grey, fine grained, strong reaction to acid, 0.5% disseminated pyrite.	58144	86.6	87.4			4				
			86.6-87.4 - fault zone, core very broken up.										
			89.4-90.2 - moderate ankerite alteration, minor mariposite, 1% disseminated pyrite.	58145	87.4	88.8			3				
				58146	88.8	90.2			2				
				58147	90.2	90.5			2				
			90.2-90.5 - intermixed black argillite and tuff, crosscutting ankerite veins.	58148	90.5	92.1			1				
				58149	92.1	93.8			3				
				58150	93.8	94.9			12				
			97.5 - pyrite reduced to only trace.	58151	94.9	97.5			2				

From	To	Syb	Description	Smp. No.	From	To	Lgth.	Rec.	Analysis Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
			100.6-101.3 - intermixed argillite and tuff, bedding at 35° to CA.	58152	100.6	101.3			3				
				58153	101.3	102.7			1				
		*	101.3 - start of 1-2% pyrite along thin fractures or seams along bedding.	58154	102.7	103.5			1				
				58155	103.5	105.2			1				
				58156	105.2	106.6			44				
			102.7-103.5 - argillite, strong reaction to acid, trace pyrite.	58157	106.6	108.7			1				
				58158	108.7	109.9			1				
			105.0-105.2 - black graphitic argillite.	58159	109.9	110.7			1				
				58160	110.7	111.2			2				
			108.7-109.9 - black argillite contains 1-2% disseminated pyrite.	58161	111.2	112.7			1				
				58162	112.7	114.4			1				
			110.7-111.2 - black argillite.	58163	114.4	115.8			2				
				58164	115.8	117.8			1				
117.8			**Calcareous Andesitic Tuff**	58165	117.8	119.9			1				
			Medium grey to greenish-grey, strong reaction to acid, slightly darker	58166	119.9	121.9			1				
			more greenish colouration suggests slightly more basic composition, 1-3%	58167	121.9	125.0			1				
			disseminated pyrite.	58168	125.0	128.0			1				
				58169	128.0	130.0			1				
			130.0-130.3 - 1% disseminated pyrite.	58170	130.0	130.3			22				
				58171	130.3	131.2			1				
			165.1 - start of trace pyrite.	58172	131.2	134.0			4				
				58173	134.0	136.8			7				
			End of hole - 167.64 m (550 feet).	58174	136.8	139.9			1				
				58175	139.9	142.7			1				
				58176	142.7	145.5			35				
				58177	145.5	148.3			1				

From	To	Syb	Description	Smp. No.	From	To	Lgth.	Rec.	Analysis				
Meters					Meters				Au ppb	Ag ppm	Cu ppm	Zn ppm	Au oz/tn
				58178	148.3	151.0			15				
				58179	151.0	153.8			12				
				58180	153.8	156.5			17				
				58181	156.5	159.7			9				
				58182	159.7	162.0			4				
				58183	162.0	165.1			4				
				58184	165.1	167.64			3				

GEOLOGICAL BRANCH ASSESSMENT REPORT

18,267

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,267

IMPERIAL METALS CORP.

JAMBOREE - OFFSET GRID

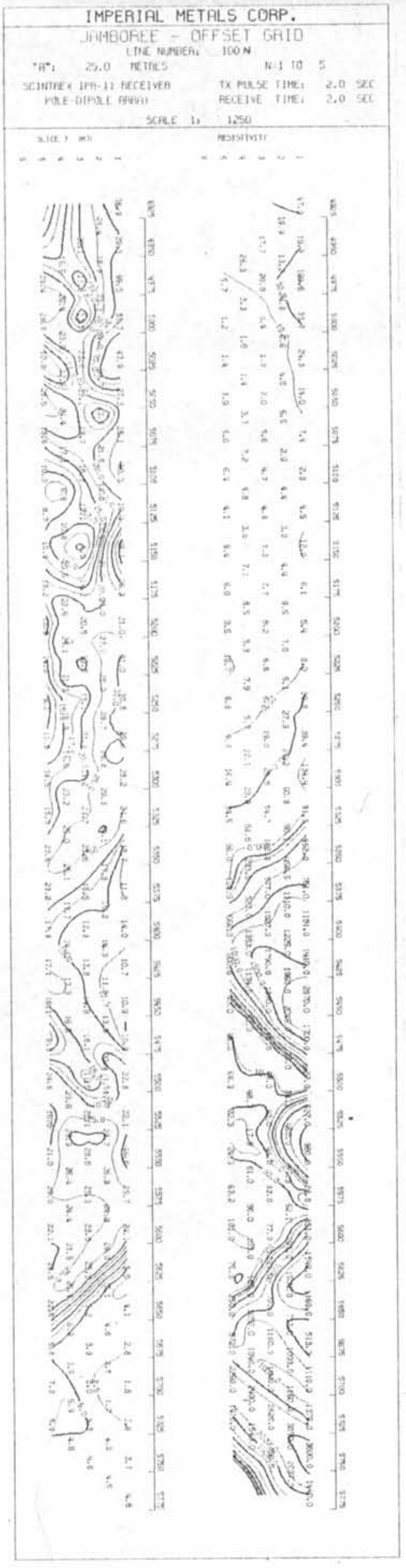
LINE NUMBER: 100 N

"A": 25.0 METRES N=1 TO 5

SCINTREX IPR-11 RECEIVER TX PULSE TIME: 2.0 SEC

POLE-DIPOLE ARRAY RECEIVE TIME: 2.0 SEC

SCALE 1: 1250



IMPERIAL METALS CORP.

JAMBOREE - OFFSET GRID

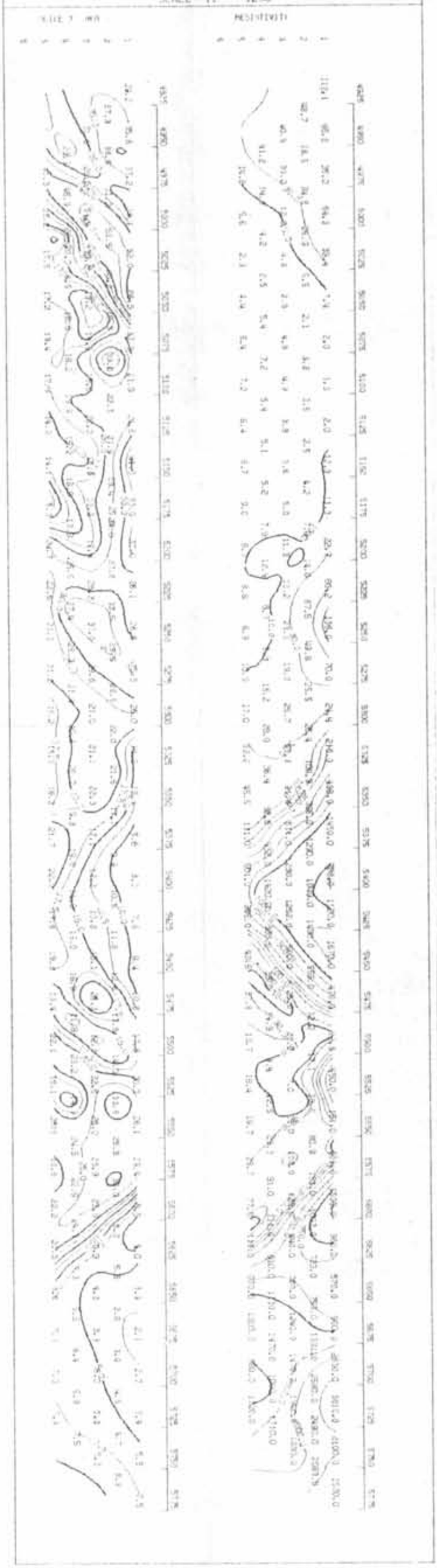
LINE NUMBER: 0

"A": 25.0 METRES N=1 TO 5

SCINTREX IPR-11 RECEIVER TX PULSE TIME: 2.0 SEC

POLE-DIPOLE ARRAY RECEIVE TIME: 2.0 SEC

SCALE 1: 1250



IMPERIAL METALS CORP.

JAMBOREE - OFFSET GRID

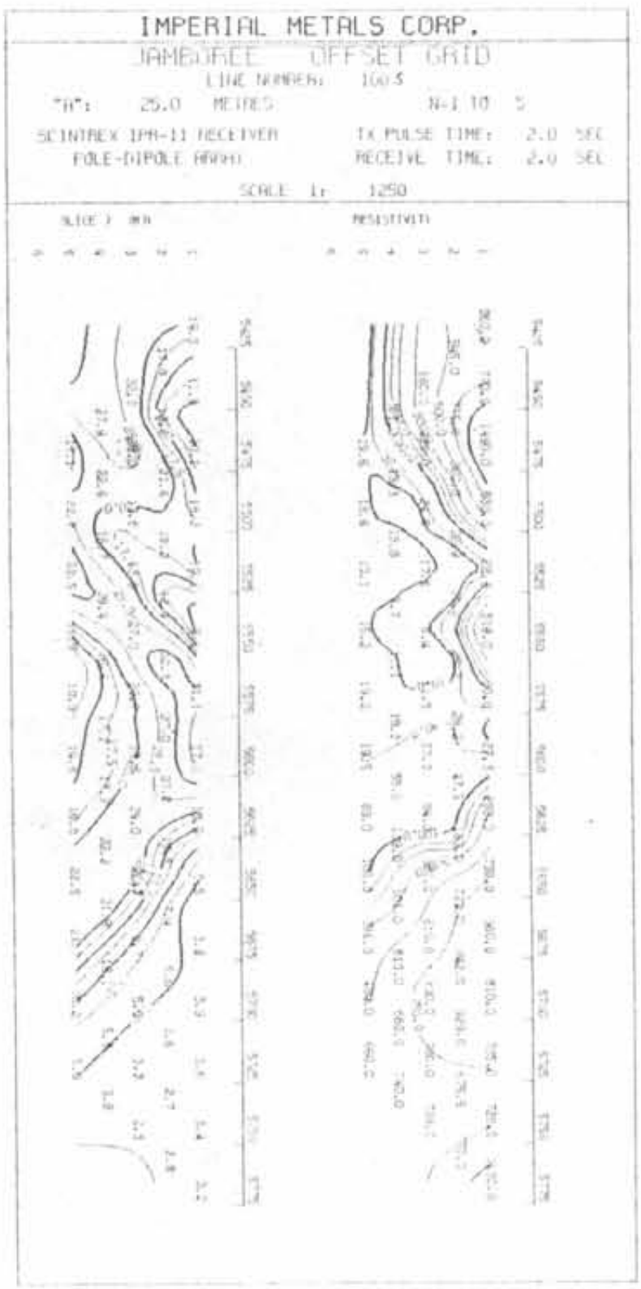
LINE NUMBER: 100 S

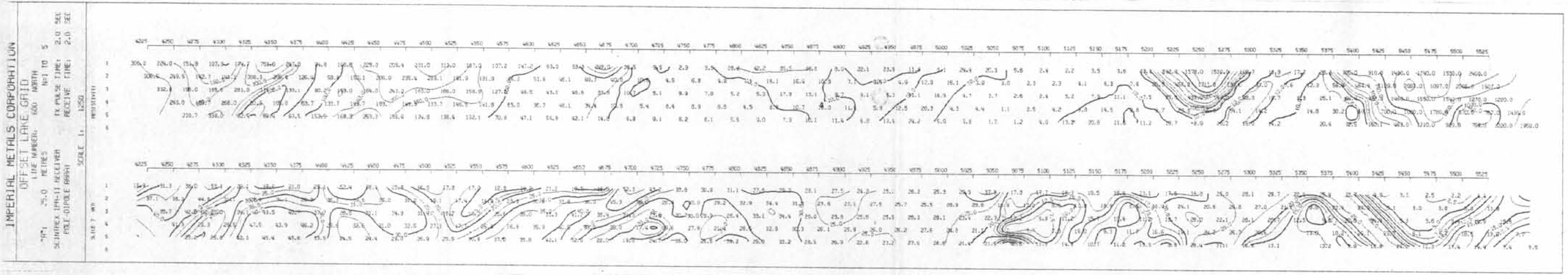
"A": 25.0 METRES N=1 TO 5

SCINTREX IPR-11 RECEIVER TX PULSE TIME: 2.0 SEC

POLE-DIPOLE ARRAY RECEIVE TIME: 2.0 SEC

SCALE 1: 1250





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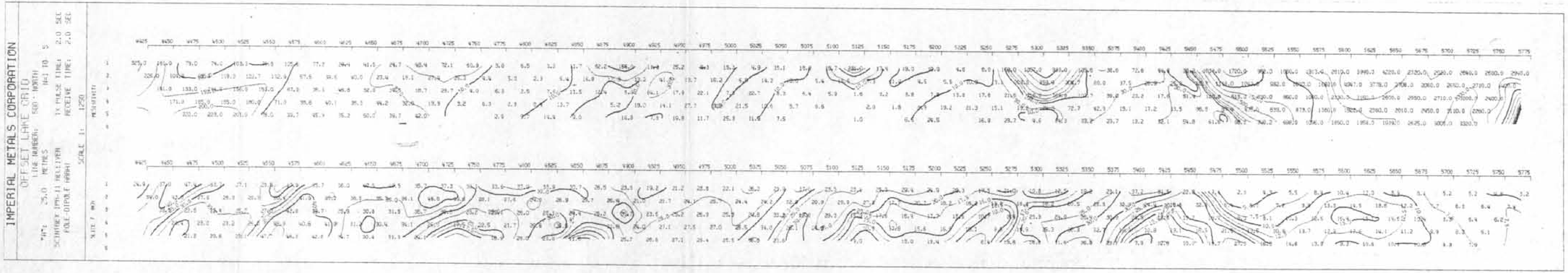

4000 E 4200 E 4400 E 4600 E 4800 E 5000 E 5200 E 5400 E 5600 E 5800 E

L 14 N L 12 N L 10 N L 9 N L 8 N L 7 N L 6 N L 5 N L 4 N L 3 N L 2 N L 1 N L 0 N L 1 S L 2 S L 4 S

JAMBOREE 7
JAMBOREE 8
JAMBOREE 9
JAMBOREE 10

OFFSET LAKE
LAKE
LAKE

JO-88-1 (-45°)
JO-88-2 (-45°)
JO-83-18
JO-83-19
JO-83-15
JO-83-14
JO-83-16
JO-83-17

5386 540

GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,267

GRID NORTH
TRUE NORTH
45°

LEGEND

- Geochemistry (Au (ppb))
- Claim post
- Claim boundary
- Road
- Stream
- Swamp
- Diamond drill hole (1988)
- Rotary drill hole (1983)
- Soil geochemical anomaly: Gold
- Soil geochemical anomaly: Copper
- Soil geochemical anomaly: Arsenic
- Soil geochemical anomaly: Chromium
- Induced polarization anomaly: High resistivity

IMPERIAL METALS CORPORATION

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FIGURE 5 N.T.S. 93A/7W

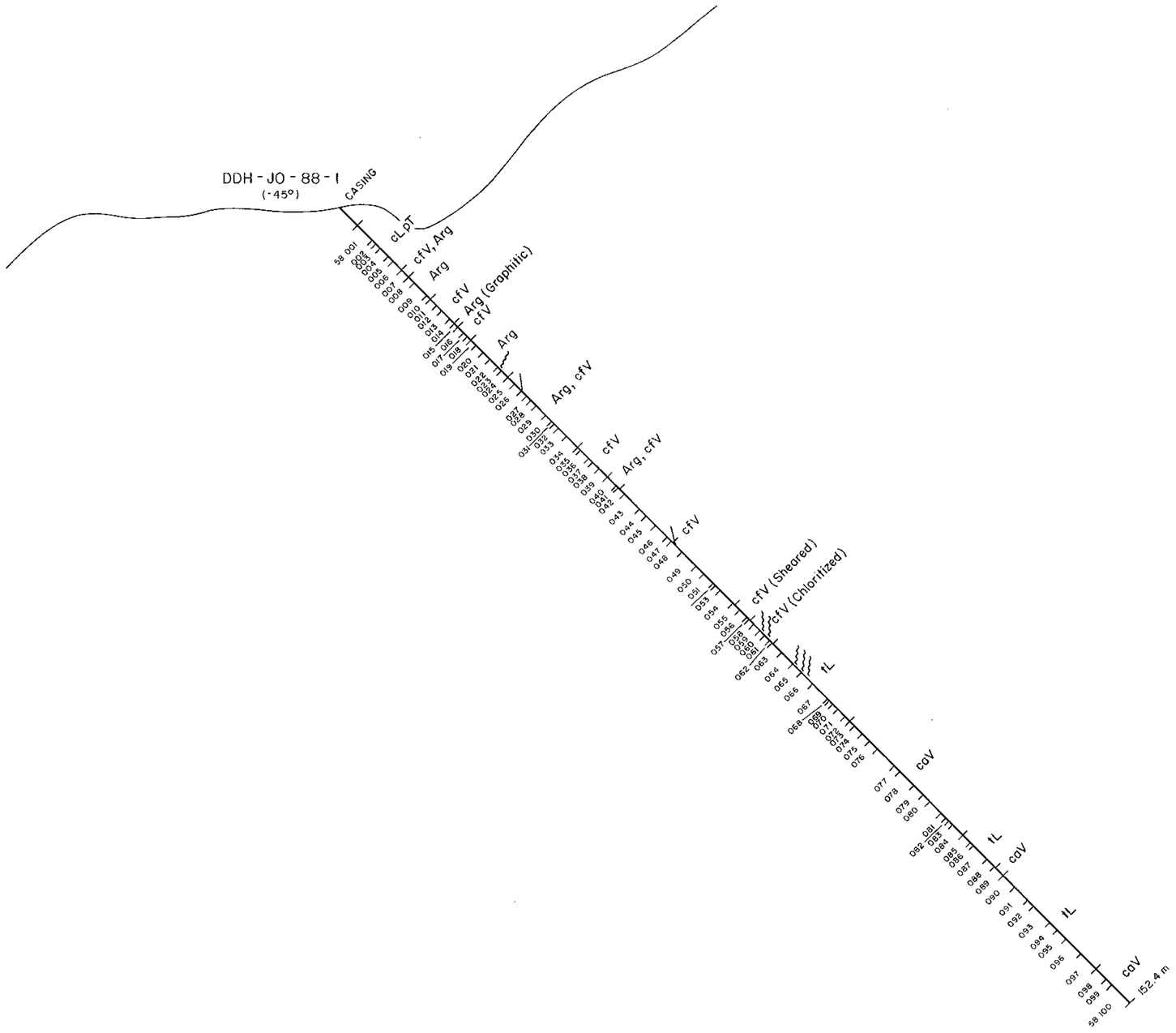
OFFSET GRID

DIAMOND DRILL HOLE LOCATION AND COMPILATION MAP

Metres 50 0 50 100 150 200 Metres

SCALE: 1:2500 GEOLOGIST: D. GORC

DATE: JANUARY 1989 DRAWN BY: S. HAWORTH



LEGEND

- cfV — CALCAREOUS FELSIC VOLCANICLASTIC
- cLpT — CALCAREOUS LAPILLI TUFF
- cgV — CALCAREOUS ANDESITIC TUFF
- Arg — ARGILLITE
- tL — TUFFACEOUS LIMESTONE
- BEDDING ORIENTATION
- FAULT
- SAMPLE No. SB 101 — CORE SAMPLE INTERVAL

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FIGURE 6 N.T.S. 93 A/7 W

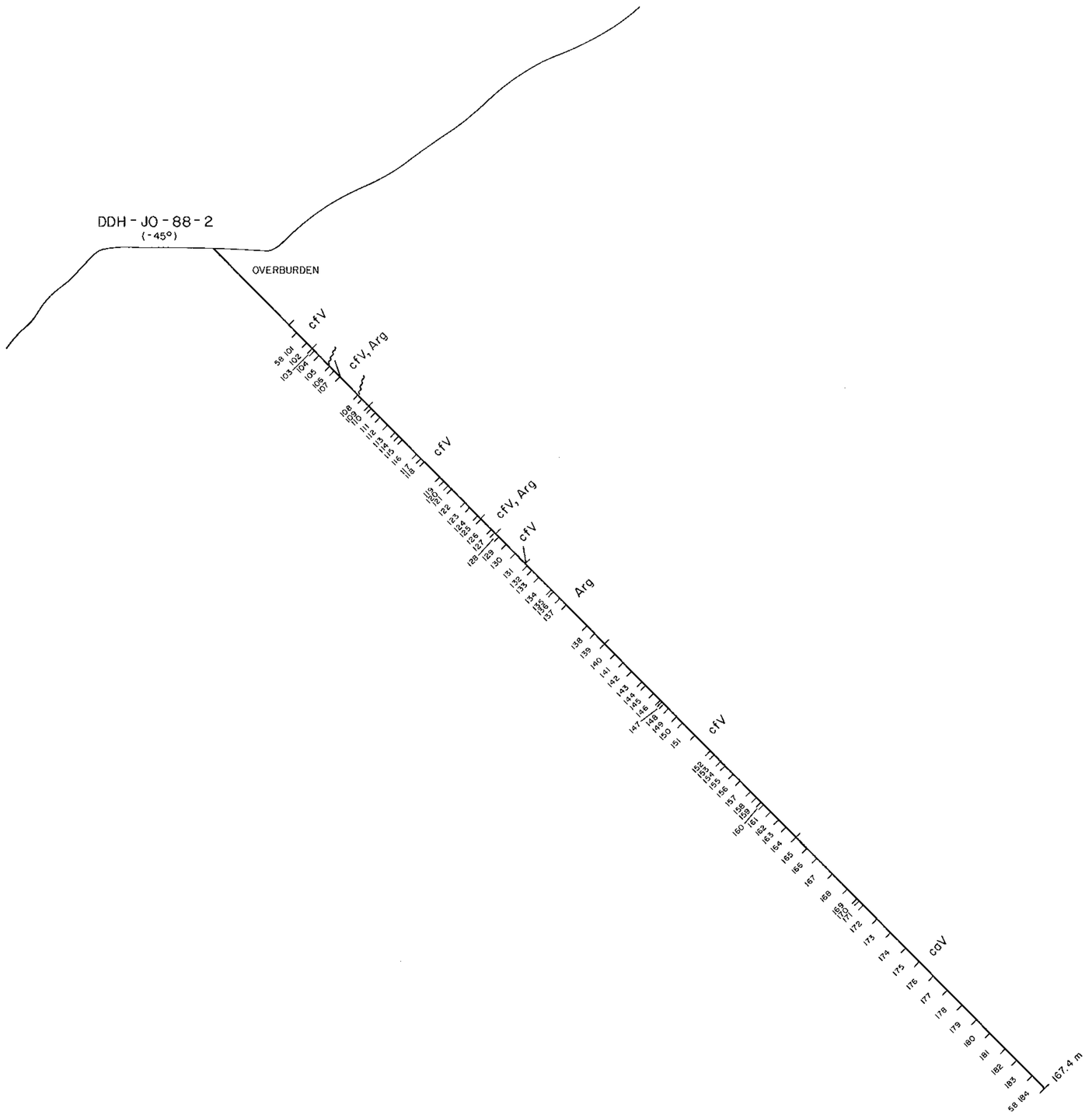
OFFSET GRID DRILL PROFILE

DDH JO - 88 - 1

(LOOKING WEST)

metres 0 10 20 30 40 50 metres

SCALE: 1:500	*GEOLOGIST:* D. GORC
DATE: JANUARY, 1989	*DRAWN BY:* J. CORKUM



LEGEND

- cfV — CALCAREOUS FELSIC VOLCANICLASTIC
- cLpT — CALCAREOUS LAPILLI TUFF
- caV — CALCAREOUS ANDESITIC TUFF
- Arg — ARGILLITE
- tL — TUFFACEOUS LIMESTONE
- BEDDING ORIENTATION
- FAULT
- SAMPLE No. — CORE SAMPLE INTERVAL

18,267

IMPERIAL METALS CORPORATION

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FIGURE 7 N.T.S. 93 A/7 W

OFFSET GRID DRILL PROFILE

DDH JO - 88 - 2

(LOOKING WEST)

metres 0 10 20 30 40 50 metres

SCALE: 1:500	GEOLOGIST: D. GORC
DATE: JANUARY, 1989	DRAWN BY: J. CORKUM