

84-#254 - 12190

4

REPORT ON GEOCHEMICAL AND GEOPHYSICAL SURVEYS

CLAIMS : D 1 to 3 12338 to 12340
R 1 to 3 12341 to 12343

MINING DIVISION : SIMILKAMEEN

N.T.S. : 92H/1DW

LATITUDE : 49°31'N

LONGITUDE : 120°54'W

OWNER : DAVID JAVORSKY/ROBERT STEINER

OPERATOR : IMPERIAL METALS CORP.

AUTHOR : F.R. CORVALAN

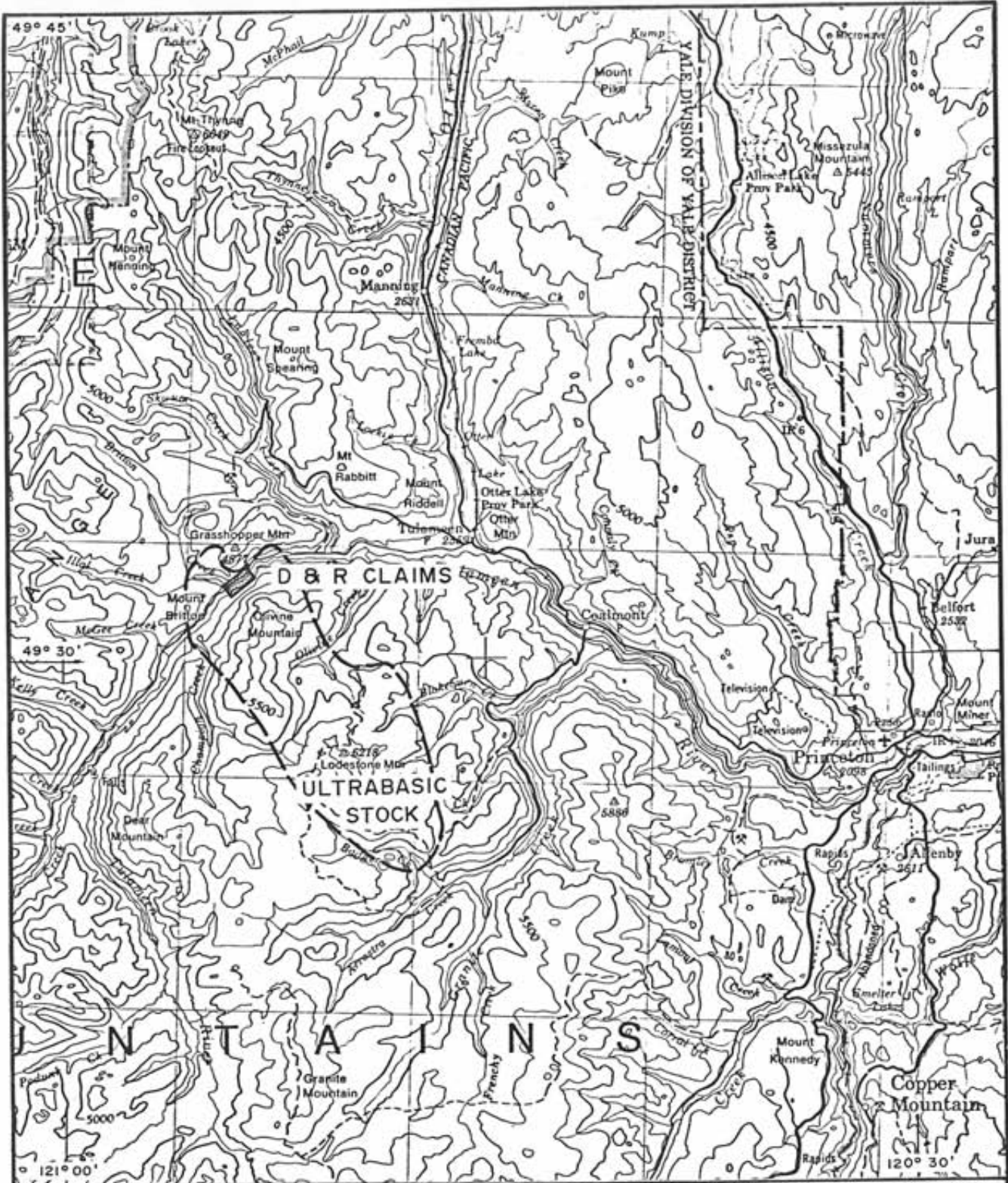
DATE : APRIL 8, 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,190

TABLE OF CONTENTS

	<u>Page</u>
1. Introduction	
1.1 Location and Access	2
1.2 Property	2
1.3 History	2
1.4 Geology	4
1.5 Mineralization	4
1.6 Summary of Work Done	4
2. Geochemical Mapping Report	
2.1 Local Geology	6
2.2 Stratigraphy	6
2.3 Mineralization	7
3. Conclusions and Recommendations	10
4. Bibliography	11
5. Annexes	
ANNEX #1 : Statement of Expenditures	
ANNEX #2 : Affidavit	
ANNEX #3 : Statement of Qualifications	
ANNEX #4 : Geochemical Results	
5. Figures	
Figure #1 : Location Map	1
Figure #2 : Claim Map	3
Figure #3 : Regional Geology	5
6. Maps	
Figure #4 : Geological Map	In pocket
Figure #5 : Sample Location Map	In pocket



IMPERIAL METALS CORPORATION
 D & R CLAIMS
 FIGURE 1 N.T.S. 92H
LOCATION MAP
 Km 5 0 5 10 Km
 SCALE: 1 : 250 000
 DATE: APRIL 1984
 GEOLOGIST: I.R. CORVALAN
 DRAWN BY: S. HAWORTH

1. INTRODUCTION

1.1 Location and Access :

The D and R claim group is located at the confluence of Britton Creek and Tulameen River, 10 km east from the village of Tulameen, Similkameen Mining Division. The terrain is rugged with elevations ranging from 300m to 850m. Access is by a gravel road that runs beside the Tulameen River from the village of Tulameen.

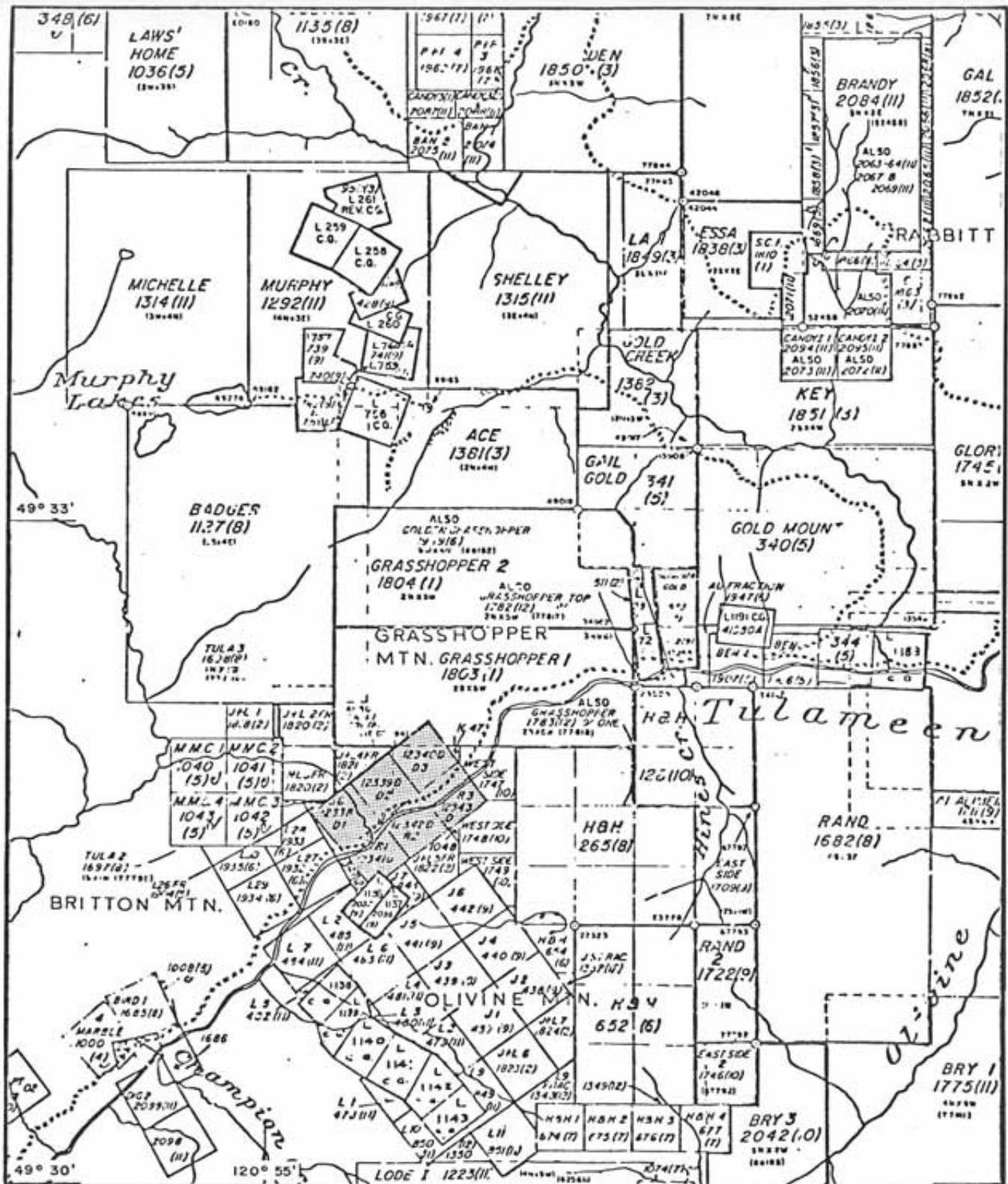
1.2 Property :

The property is covered by the following claims optioned by Imperial Metals Corporation, Vancouver, B.C.

<u>Claim Name</u>	<u>Record No.</u>	<u>Due Date</u>
D-1-3	12338 - 12340	April 8, 1984
R-1-3	12341 - 12343	April 8, 1984

1.3 History :

Mineral exploration activity in this area began in 1960 when placer gold was discovered in the Similkameen River near the confluence with the Tulameen River. It was not until 1885 however, when rich placers were found and the Region came into prominence, in 1891 was recognized to be the most important producer of platinum in North America. The origin of the gold and platinum in the placer deposits is believed to be the gold-bearing veins of Grasshopper Mountain and vicinity. Erosion of these bodies may release their metal content. Since glacial valleys and old river beds are cut by some of the valleys other possible origin of gold-platinum placers is from reconcentration of metal eroded from preglacial placers. H.H.A. Rice (1947) consider unlikely that glacial and post glacial streams could have formed placer deposits of the Tulameen except by reworking deposits that were already rich. Several attempts have been made to locate high grade platinum and gold lode deposits in the Grasshopper Mountain area, several gold veins have been identified, the economic potential of these veins still remain to be tested.



IMPERIAL METALS CORPORATION
D & R CLAIMS

FIGURE 2 N.T.S. 92H/10W

CLAIM MAP



SCALE: 1:50 000
DATE: APRIL 1984
GEOLOGIST: I.R. CORVALAN
DRAWN BY: S. HAWORTH

1.4 Geology :

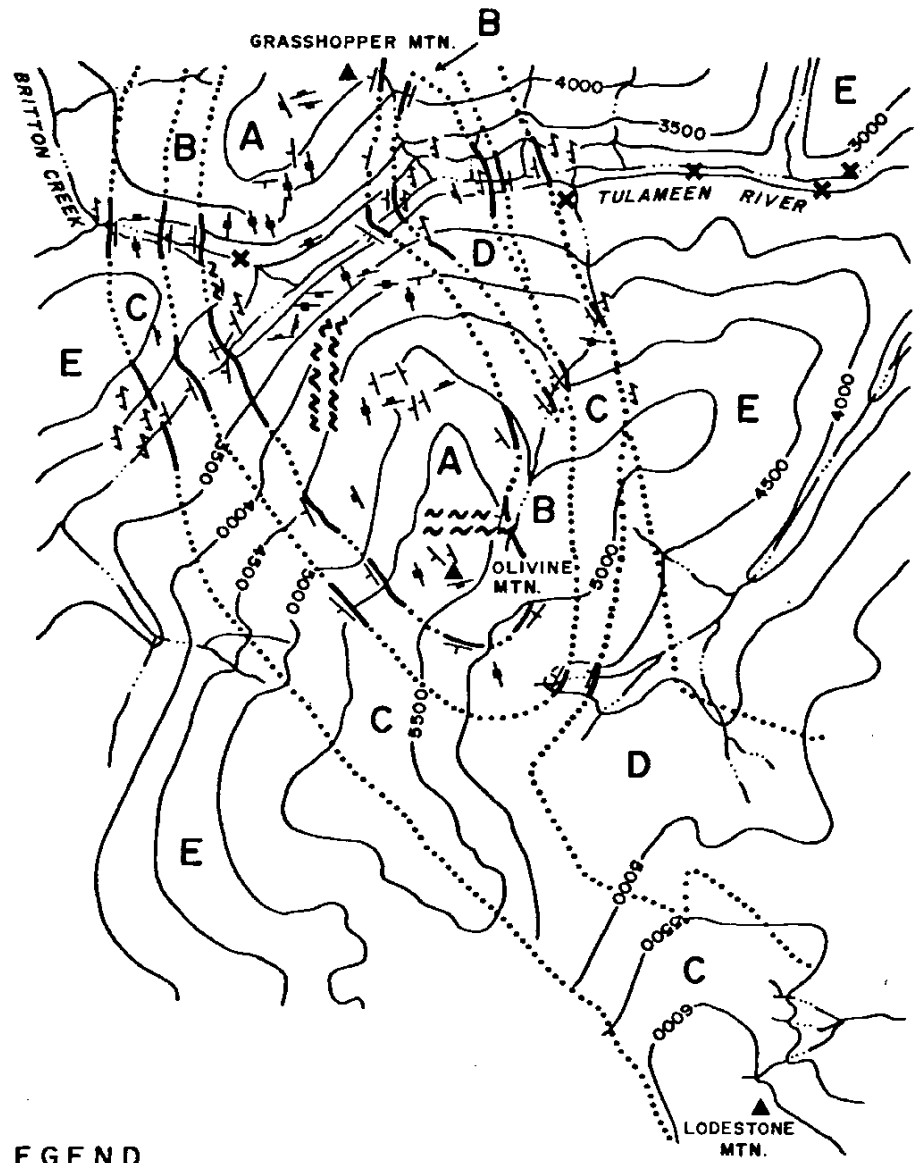
The claim area is underlain by the Tulameen complex (Findlay, 1963). The Tulameen complex is an elongated body of ultramafic and gabbroid rocks with an exposure area of 22 square miles that has been emplaced in folded meta volcanic and meta sedimentary rocks of late Triassic age. The major ultramafic rocks of the intrusion are dunite, olivine pyroxenite and hornblende pyroxenite. The rocks of the complex are arranged in a concentric pattern in the northern part of the intrusion and form parallel to subparallel units in the central and southern parts of the body. The D and R claims are located on the northern part where dunite form the core of the intrusion, which is successively enclosed by olivine pyroxenite and hornblende pyroxenite towards the margins (see figure No. 3)

1.5 Mineralization :

Platinum is reported to be present in the dunite and pyroxenite of the ultramafic stock, particularly where serpentinization was strong, or where the rock was rich in chromite (Camsell, 1913). Kemp (1902) sampled all phases of rocks in the Tulameen District, but although he obtained high platinum assays they were erratically distributed. Our research tried to investigate serpentine veins, magnesium altered areas and shear zones as possible source platinum gold placer.

1.6 Summary of Work Done : (March 26-28, 1984)

The claim group was visited to determine existence of economic Pt-Au mineralization in the D and R claims. The geological work consisted of four traverses; covering an area of 50,000 square meters, data was plotted at 1:5,000 scale, total of 27 rock samples and 15 soil samples were collected.



LEGEND

- River
- Contour
- ~ ~ Fault
- ··· Lithological Contact - Observed, Implied
- /// Lithological Contact Orientation
- /// Joint
- /// Foliation - Schistosity
- ✕ Active Placer Workings

LITHOLOGY:

- | | |
|-------------------------|--------------------------------------|
| A Dunite | D Alkalic Gabbro |
| B Olivine Pyroxenite | E Schist (Metavolcanic /Sedimentary) |
| C Hornblende Pyroxenite | |

IMPERIAL METALS CORPORATION
D & R CLAIMS

FIGURE 3 N.T.S. 92H/10W

REGIONAL GEOLOGY



SCALE: 1:140 000 Approx.	GEOLOGIST: I R CORVALAN
DATE: APRIL 1984	DRAWN BY: S. HAWORTH

2. GEOLOGICAL REPORT

2.1 Local Geology :

Geological mapping completed during the writer's visit consisted of preliminary mapping of the north side of Tulameen River, and 2 traverses up to Grasshopper Mountain.

Ground control was obtained by chain and compass, all traverses were tied up to claim posts.

The objective of this program was:

1. - To clarify the distributions of individual rock types in the area.
2. - To locate structural zones of possible interest.

All rock names are field names only, rock outcrop was good along the Tulameen River and Britton Creek, along road or up the hill traverses presented poor rock exposure.

2.2 Stratigraphy :

The rock units are represented as follows (see Map No. 1)

- Unit A: Dunite breccia, serpentized.
- Unit B: Dunite fractured, fissure filling serpentine.
- Unit C: Olivine Pyroxenite, minor fissure filling serpentine.
- Unit D: Hornblende Pyroxenite, 20-50% hornblende some magnetite.
- Unit E: Serpentinite dykes.

Unit A is located in the confluence of Britton Creek with Tulameen River, it is a pseudo breccia produced by close spacing fracturing of the Dunite unit "serpentine is the matrix cementing Dunite clast". Other outcrop was found 1000m down the Tulameen River. Unit B is more extensive and surrounds unit 1, fractures are more spaced than in unit 1 serpentinization is less intense, several serpentine dykes are present mostly along Britton Creek. Platinum is thought to be associated to units No. 1 and 2.

Olivine Pyroxenite (Unit C) was observed along Tulameen River in irregular contact with Unit B, it is the most extensive area within the mapped area.

Hornblende Pyroxenite (Unit D) was observed along a small creek about 900m below Britton Creek, along the Tulameen River.

Unit E; serpentine dykes up to 500m wide are observed mostly in Britton Creek. Strike of these dykes seems to converge towards the summit of Grasshopper Mountain.

2.3 Mineralization:

Chromite was observed associated to units 1 and 2, being associated with areas of magnesium alteration (along Britton Creek). Free platinum was not observed.

Pyrite, chalcopyrite was observed in a quartz stockwork in the north side of Tulameen River, 900m below the mouth of Britton Creek. This quartz stockwork seems to be part of a shear zone close to a regional fault striking N40°W. This quartz lineal was float traced for about 300m. This finding may be the most important mineral occurrence detected within the claim area.

2.4 Assay Results:

Sample Number	Rock	Width	Location	Assay Results				
				Cu ppm	Ag ppm	Cr ppm	Au ppb	Pt ppb
87701	Shear Zone	Grab	Near Tulameen River	6748	11.8	12	23	2
87702	Shear Zone	1.5m	Near Tulameen River	874	1.3	58	6	2
87703	Shear Zone	1m	5m from 702	1821	3.2	7	18	2
87704	Shear Zone	1.5m	25m from 703	57	.9	6	5	2
87705	Serpentine vein	0.5m	Tulameen River	15	.1	49	1	145
87706	Dunite breccia	Grab	Britton and Tulameen River	276	.3	72	1	18
87707	Dunite breccia	1.5m	28m below Britton Cr.	89	.2	109	2	160
87708	Dunite breccia	1.5m	40m below Britton Cr.	237	.1	119	1	43
87709	Dunite breccia	1m	60m below Britton Cr.	84	.2	99	1	17
87710	Altered dunite	1m	221m below Britton Cr.	11	.1	45	1	68
87711	Serpentine dyke	0.5m	325m below Britton Cr.	5	.1	69	1	150
87712	Quartz float	Grab	Road	101	6.2	22	78	2
87713	Quartz float	Shear zone	237m from 701	27	.7	3	18	12
87714	Pyroxenite float	Shear zone	247m from 701					
87715	Quartz float	Shear zone	280m from 701	126	.2	1	13	2

2.4 Assay Results:

Sample Number	Rock	Width	Location	Assay Results				
				Cu ppm	Ag ppm	Cr ppm	Au ppb	Pt ppb
87716	Shear zone	50cm	from 320	71	.1	63	4	2
87717	Shear zone	5m	60m from above mouth of Britton Creek	569	.8	223	6	120
87718	Shear zone magnesium weathered dunite	50cm	98m above mouth of Britton Creek	16	.1	35	2	340
87719	Serpentine Vein	20cm	106m above Britton Creek mouth	49	.1	254	2	110
87720	Shear zone. Magnesium carbonate	Grab	126m above Britton Creek mouth	6	.1	32	1	2
87721	Peridotite	Composite	194m above Britton Creek mouth	70	.3	138	2	55
87722	Altered serpentine	Grab	242m above Britton Creek mouth	20	.1	188	1	2
87723	Serpentine	Grab	203m	4	.2	28	1	2
87724	Serpentine (?)	Grab	242m above Britton Creek mouth	5	.1	341	1	2
87725	Chronite sample	Float	75m below Britton Creek mouth	13	.1	213	4	62,000
87726	Black Sand concentrate		415m below Britton Creek	19	.6	491	4,100	31,000
87727	Shear zone	Grab	207m from 701	10	.6	78	28	2
87728	Shear zone	Float	230m from 701	20	2.6	271	52	2

CONCLUSIONS AND RECOMMENDATIONS

Sample results showed that no gold was present on the quartz shear zone (samples #87701 to 87704 and 87712-87718).

The sampling of the different rock types looking for significant content of platinum, also proved negative (sample #87705 to 87711 and 87720 to 87724).

The only exception being:

- 1) Sample #87725 correspond to chronite rich pods, blasted during a previous exploration program.
- 2) Sample #87726 black sand concentrate. Our results seems to confirm Kempt and Camsell reports on the sense that platinum mineralization is highly erratic. The results also showed anomalous platinum content in dunite, but not high enough to constitute an economic deposit. We recommend to return the claim to the owners or farm out since this project is of low priority for Imperial.

BIBLIOGRAPHY

- C. Camsell, 1913 "Geology and Mineral Deposits of the Tulameen District, B.C. G.S.C. Memoir No. 26.
- C.J. Coveney, 1980 'Report on the J-L Claims' Internal Report, Ricard Resources Ltd.
- D. Hart, 1982 'Prospect evaluation - mineral exploration in B.C. Canada and Arizona U.S.A. Sc. thesis, University of London.
- J.F. Kemp, 1902 "The geological relations and of platinum and associated metals" U.S.A. Geological Survey, Bulletin No. 193.

ANNEX #1

Statement of Expenditures on the D & R Claim Group for 1984
(March 26 - 28)

Wages and Salaries			
I.R. Corvalan	3 days @ \$200/day	\$	600.00
Geochemical Analysis			481.50
Transportation			
Truck Rental	3 days @ \$50/day		150.00
Gas			106.61
Room and Board			
Hotel			102.72
Food			69.35
Report Preparation			<u>170.00</u>
TOTAL		\$	<u><u>1,680.18</u></u>

ANNEX #2

IN MATTER OF THE
B.C. MINERAL ACT

AND

IN MATTER OF A OUTCROP SAMPLING
CARRIED OUT ON THE

D & R CLAIM GROUP

LOCATED IN THE SIMILKAMEEN MINING DIVISION
OF THE PROVINCE OF BRITISH COLUMBIA
MORE PARTICULARLY N.T.S. 92H/10W

A F F I D A V I T

I, I. RUBEN CORVALAN, P. ENG., OF THE CITY DISTRICT OF NORTH VANCOUVER
IN THE PROVINCE OF BRITISH COLUMBIA, MAKE OATH AND SAY :

1. THAT I AM AN EMPLOYEE OF IMPERIAL METALS CORPORATION AND AS SUCH
HAVE A PERSONAL KNOWLEDGE OF THE FACTS TO WHICH I HEREINAFTER
DISPOSE;
2. THAT ANNEXED HERETO AND MARKED AS "ANNEX #1" IS A TRUE COPY OF
EXPENDITURES ON A GEOLOGICAL AND SURVEY PROGRAM CARRIED OUT
ON THE D & R CLAIM GROUP;
3. THAT THE SAID EXPENDITURES WERE INCURRED THE PERIOD MARCH 26-28
1984, FOR THE PURPOSE OF MINERAL EXPLORATION ON THE ABOVE CLAIMS.



I.R. CORVALAN, P. ENG.

ANNEX #3

IMPERIAL METALS CORPORATION

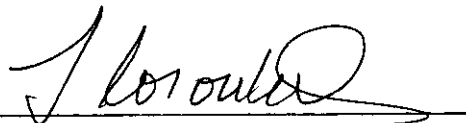
STATEMENT OF QUALIFICATIONS

I, I. RUBEN CORVALAN, P. ENG. OF THE CITY OF NORTH VANCOUVER,
BRITISH COLUMBIA, HEREBY CERTIFY :

1. THAT I AM A PROFESSIONAL ENGINEER RESIDING AT #117 - 908
BERKLEY ROAD, NORTH VANCOUVER, BRITISH COLUMBIA;
2. THAT I GRADUATED WITH A MINING ENGINEERING DEGREE FROM THE
UNIVERSITY OF CHILE, CHILE, IN 1969;
3. THAT I HAVE PRACTICED GEOLOGY AND GEOCHEMISTRY IN SOUTH
AMERICA AND CANADA FOR THE LAST 15 YEARS.

DATED THIS 1st DAY OF May, 1984
AT VANCOUVER, BRITISH COLUMBIA.

SIGNED


I.R. CORVALAN, P.ENG.

ANNEX #4
ASSAY RESULTS

ACME ANALYTICAL LABORATORIES LTD.
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
 PHONE 253-3158 TELEX 04-53124

DATE RECEIVED: APR 2 1984
 DATE REPORT MAILED: *Apr. 2/84*

GEOCHEMICAL ICP ANALYSIS

A .500 GRAM OF SAMPLE DIGESTED WITH 3ML OF 3-1-3 OF HCL-HNO3-H2O AT 95 DEG. OF WATER BATH FOR ONE HOUR.
 DILUTED TO 10 ML WITH WATER. PARTIAL LEACHED FOR MN, FE, CA, P, CR, MG, BA, TI, B, AL, NA, K, W, SI, ZR, CE, SN, Y, NB AND TA
 AU DETECTION LIMIT 3 PPM SAMPLE TYPE: ROCK CHIPS

ASSAYER: *D. Toy* DEAN TOYE. CERTIFIED B.C. ASSAYER

IMPERIAL METALS FILE # 84-0465

PAGE 1

SAMPLE#	CU PPM	AG PPM	CR PPM	AU** PPB	PT** PPB
87701	6748	11.8	12	23	2
87702	874	1.3	58	6	2
87703	1821	3.2	7	18	2
87704	57	.9	6	5	2
87705	15	.1	49	1	145
87706	276	.3	72	1	18
87707	89	.2	109	2	160
87708	237	.1	119	1	43
87709	84	.2	99	1	17
87710	11	.1	45	1	68
87711	5	.1	69	1	150
87712	101	6.2	22	78	2
87713	27	.7	3	18	12
87715	126	.2	1	13	2
87716	71	.1	63	4	2
87717	569	.8	223	6	120
87718	16	.1	35	2	340
87719	49	.1	254	2	110
87720	6	.1	32	1	2
87721	70	.3	138	2	55
87722	20	.1	188	1	2
87723	4	.2	28	1	2
87724	5	.1	341	1	2
87725	13	.1	213	4	62000
87726	19	.6	491	4100	31000
87727	10	.6	78	28	2
87728	20	2.6	271	52	2
STD A-1/FA-AU	31	.3	74	53	-

Suggest Co, Ni, V Analysis

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS, VANCOUVER B.C.
PH:253-3158 TELEX:04-53124

DATE RECEIVED APR 2 1984

DATE REPORTS MAILED *Apr 9/84*

GEOCHEMICAL ASSAY CERTIFICATE

A .500 GM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 90 DEG.C. FOR 1 HOUR.
THE SAMPLE IS DILUTED TO 10 MLS WITH WATER. ELEMENTS ANALYSED BY AA : CU, AG.
SAMPLE TYPE : SOIL - DRIED AT 60 DEG C., -80 MESH.
AU* - 10 GM, IGNITED, HOT AQUA REGIA LEACH MIX EXTRACTION, AA ANALYSIS.

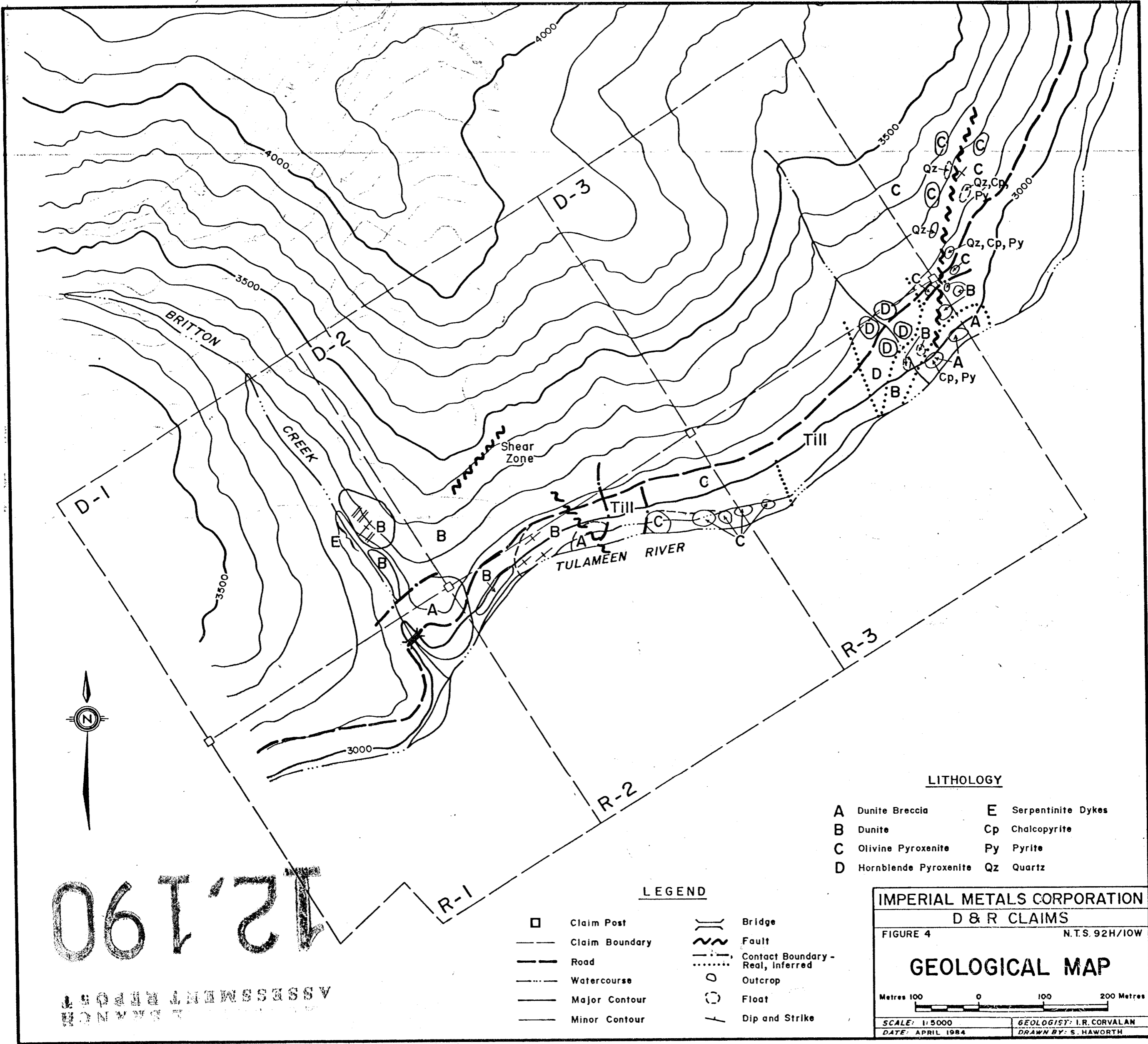
ASSAYER *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

IMPERIAL METALS

FILE # 84-0465

PAGE# 2

SAMPLE	CU PPM	AG PPM	AU* PPB
S-1	70	.1	5
S-2	66	.1	70
S-3	52	.1	5
S-4	68	.5	5
S-5	115	.1	5
S-6	90	.3	5
S-7	112	.1	5
S-8	92	.4	5
S-9	168	.3	5
S-10	170	.3	5
S-11	186	.3	5
S-12	224	.2	5
S-13	96	.1	5
S-14	72	.1	5
S-15	172	.3	5



12,190

ASSESSMENT REPORT

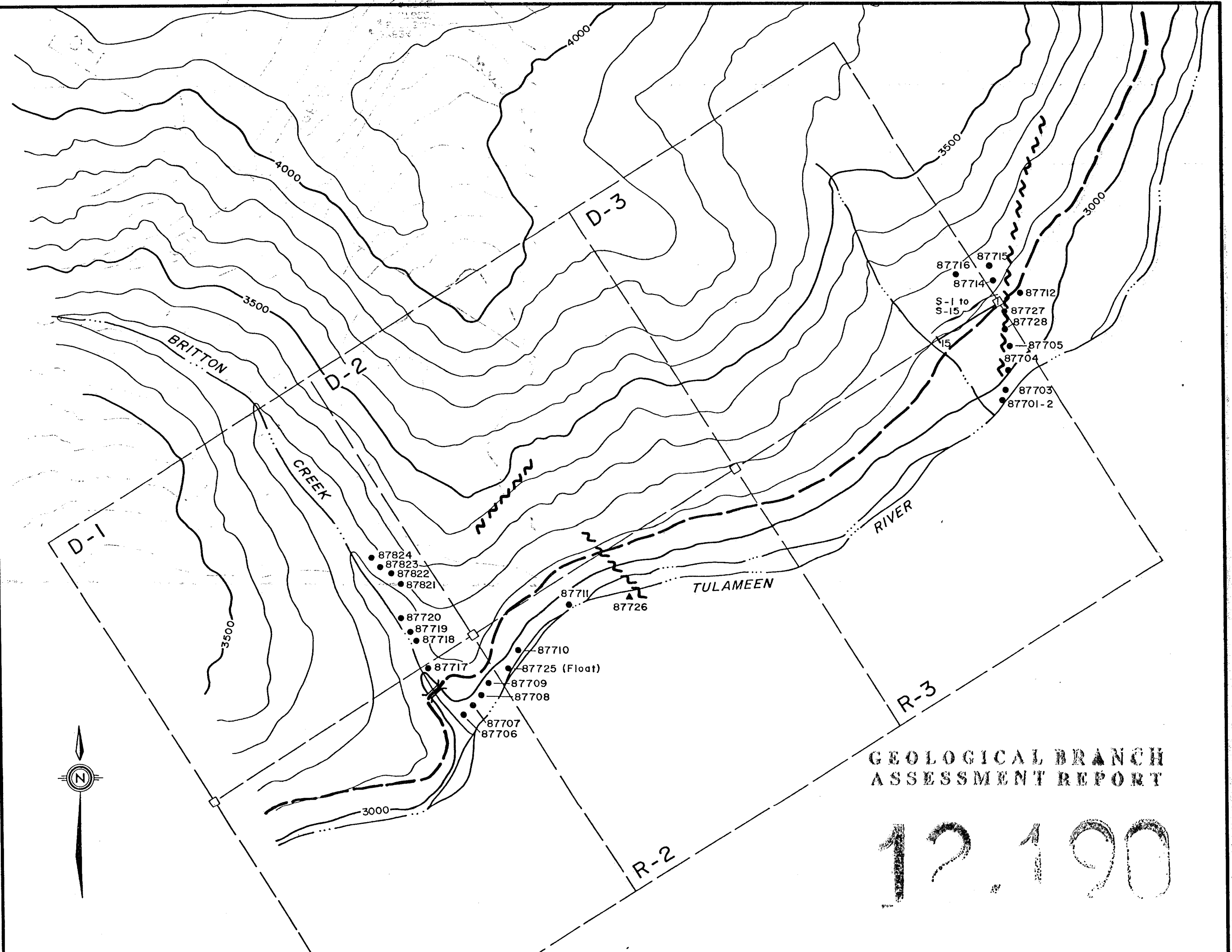
LEGEND

□	Claim Post		Bridge
---	Claim Boundary	~	Fault
---	Road	Contact Boundary - Real, Inferred
---	Watercourse	○	Outcrop
---	Major Contour	○	Float
---	Minor Contour	— —	Dip and Strike

LITHOLOGY

A	Dunite Breccia	E	Serpentinite Dykes
B	Dunite	Cp	Chalcopyrite
C	Olivine Pyroxenite	Py	Pyrite
D	Hornblende Pyroxenite	Qz	Quartz

IMPERIAL METALS CORPORATION
D & R CLAIMS
 FIGURE 4 N.T.S. 92H/10W
GEOLOGICAL MAP
 Metres 100 0 100 200 Metres
 SCALE: 1:5000
 DATE: APRIL 1984
 GEOLOGIST: I.R. CORVALAN
 DRAWN BY: S. HAWORTH



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12.190

LEGEND

- Claim Post
- Claim Boundary
- == Road
- Watercourse
- Major Contour (Ft)
- Minor Contour (Ft)
- == Bridge
- ~ Fault
- Rock Sample
- ▲ Black Sand Concentrate
- Talus Samples

IMPERIAL METALS CORPORATION	
D & R CLAIMS	
FIGURE 5	N.T.S. 92H/10W
SAMPLE LOCATION MAP	
SCALE: 1:5000	GEOLOGIST: I.R. CORVALAN
DATE: APRIL 1984	DRAWN BY: S. HAWORTH