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LIST OF ILLUSTRATIONS

SUMMARY

The H & H Group consists of 13 claims totalling 29 units. It is located on Olivine Mountain in the Similkameen Mining Division 8 km west-southwest of Tulameen, B.C. The property is readily accessible by gravel road from Tulameen.

The property is underlain by the Tulameen Ultrabasic Complex. This complex has been of interest for many years because of it being the source for platinum found in placer deposits over a considerable length of the Tulameen River.

A geological-geochemical program was conducted over a part of the H & H Group between May 25-June 5, 1983. A crew of one geologist and three assistants were employed.

A total of 133 soil and 46 rock samples were collected and assayed by geochemical methods for gold, platinum, palladium, chromium and nickel. Other soil samples were collected but not analyzed.

The results indicate two anomalous areas, one in gold and the other in both chromium and nickel.

It was recommended that the remaining soil samples taken but not assayed be analyzed, and that fill-in lines be run in the anomalous areas. It was also recommended that the remainder of the H & H Group be covered by geological mapping and geochemical soil sampling.

INTRODUCTION

At the request of Tarnation Mining Ltd., VLH Consultants Ltd. conducted a geological-geochemical survey on the company's H & H claim block, located in the Similkameen Mining Division 9 km southwest of Tulameen, B.C.

Field work was conducted by a crew of one geologist and three field assistants between May 25-June 5, 1983. Following completion of the work the results were reviewed by the writer who then compiled this report.

Location and Access

The H & H group is located on Olivine Mountain in southern British Columbia, 8 km west-southwest of Tulameen and 25 km west-northwest of Princeton. They are within the Similkameen Mining Division.

The claims cover the northeastern and eastern slopes of Olivine Mountain. They are approximately bounded by Tulameen River to the north, Hines Creek to the east, and Olivine Creek to the south.

The claims are readily accessible from Princeton via 20 km of paved road to Tulameen, then by 13 km of secondary road to a bridge crossing of the Tulameen River. From this point a 4-wheel drive road follows Hines Creek and provides access to the top of the mountain and the central part of the claims.

Topography & Vegetation

Topography of the area is typical of interior plateau terrain. Moderately steep slopes lead to rounded, somewhat flat to rolling peaks and ridge. Elevations range from 900 m at the Tulameen River to 1825 m at the top of Olivine Mountain.

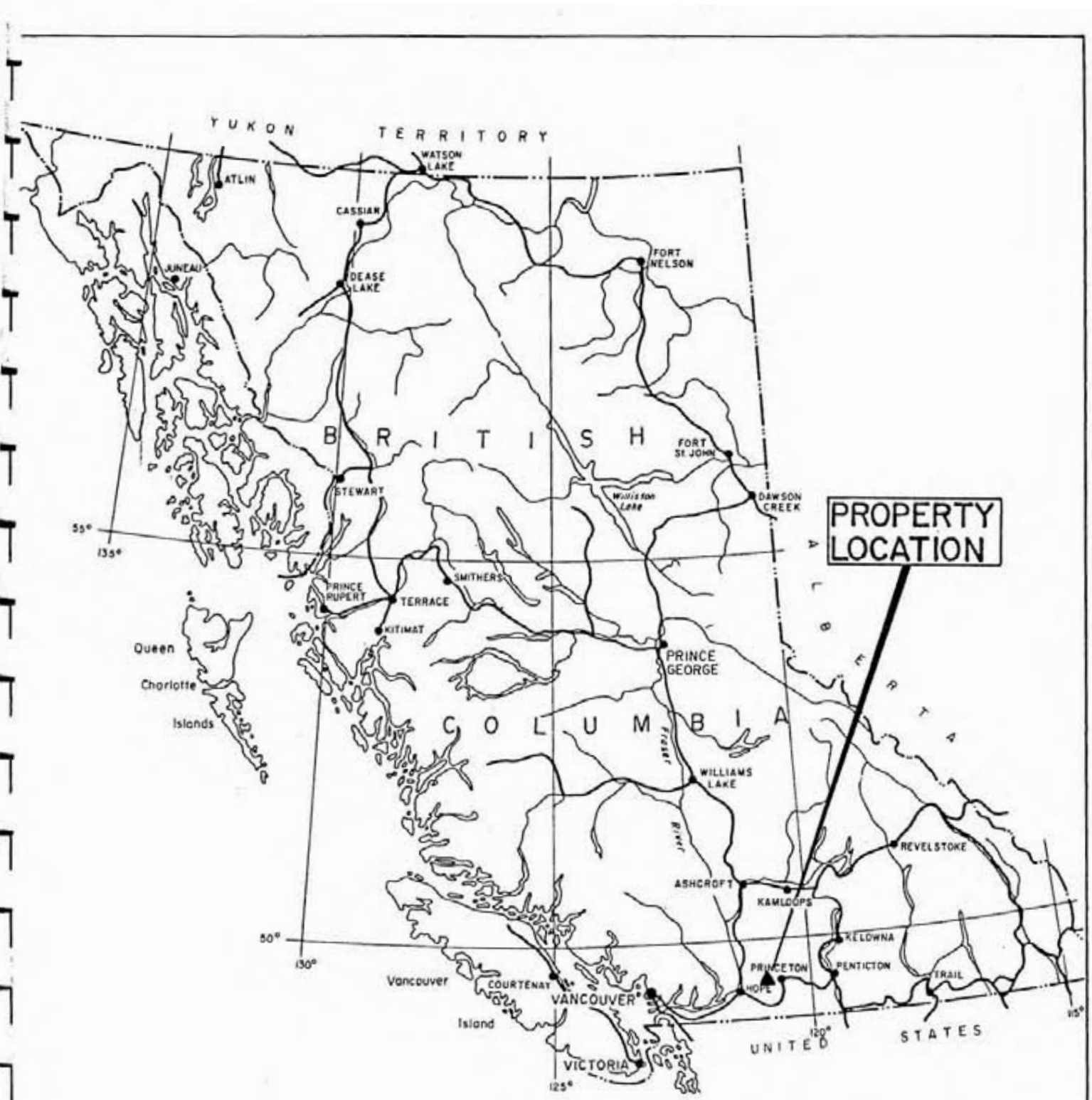
The claims area is well forested by fir and pine.

History & Previous Work

Attention was drawn to the Tulameen area about 1860 when placer gold was discovered in the Similkameen River near the confluence with the Tulameen River. Although platinum was known to occur with the gold, no attempt was made to save it until about 1886. Prospecting during the subsequent years has shown platinum to occur in the gravels of the Tulameen River at intervals from Princeton to Champion Creek, a distance of 40 km as the river flows. Intermittent mining from 1885 to 1923 produced about 32,500 ounces of platinum. The platinum was derived from the weathering of a zoned ultrabasic complex in the Olivine Mountain area.

Very little work appears to have been done in the Olivine Mountain area other than placer testing along the Tulameen River and its tributaries.

The Mary Jensen property is located on the mountain top. It was tested between 1915-1919 by a number of trenches and pits. The ultrabasic is cut by two sets of shear zones. A north striking set carries quartz veins with sparse pyrite, chalcopyrite and



TARNATION MINING CO.		
G.A. NOEL & ASSOCIATES INC.	VANCOUVER, B.C.	
H & H CLAIM GROUP		
LOCATION MAP		
OLIVINE MOUNTAIN, TULAMEEN AREA N.T.S. 92H-10W SIMILKAMEEN M.D., B.C.		
SCALE : AS SHOWN H.M.J.	JULY 1983	FIG. 1

pyrolusite. The east set carries no quartz but has chalcopyrite as fine stringers on cleavage and as disseminated grains throughout. Trace amounts of gold and silver and up to 3% copper are reported.

In 1969 a magnetometer survey and reconnaissance geologic mapping was conducted on the J-L claims, formerly Cathy claims, located on the west slope of Olivine Mountain. Platinum was found in highly serpentinized peridotite, and appeared to grade higher in sections containing chromite. No economic zones were encountered. A report by Coveney (1980) recommended a detailed geological mapping and sampling program be conducted over the claims.

Property

The H & H Group consists of five mineral claims and eight 2-post claims They are:

Claim Name	No. of Units	Record No.	Expiry Date
H & H	4	128(10)	18 Oct/83
H & H	9	265(8)	29 Aug/86
H & H	6	652(6)	22 June/84
East Side	2	1709(3)	9 Sept/83
East Side 2	3	1746(10)	5 Oct/83
West Side	1	1747(10)	5 Oct/83
West Side	1	1748(10)	5 Oct/83
West Side	1	1749(10)	5 Oct/83
H & H	1	654(6)	29 June/83
H H 1	1	674(7)	27 July/83

H & H 2	1	675(7)	27 July/83
H & H 3	1	676(7)	27 July/83
H & H 4	1	677(7)	27 July/83

All of the claims are either owned or held under option by Tarnation Mining Ltd, 750-385 Dunsmuir Street, Vancouver, B.C.

GEOLOGY

General Geology

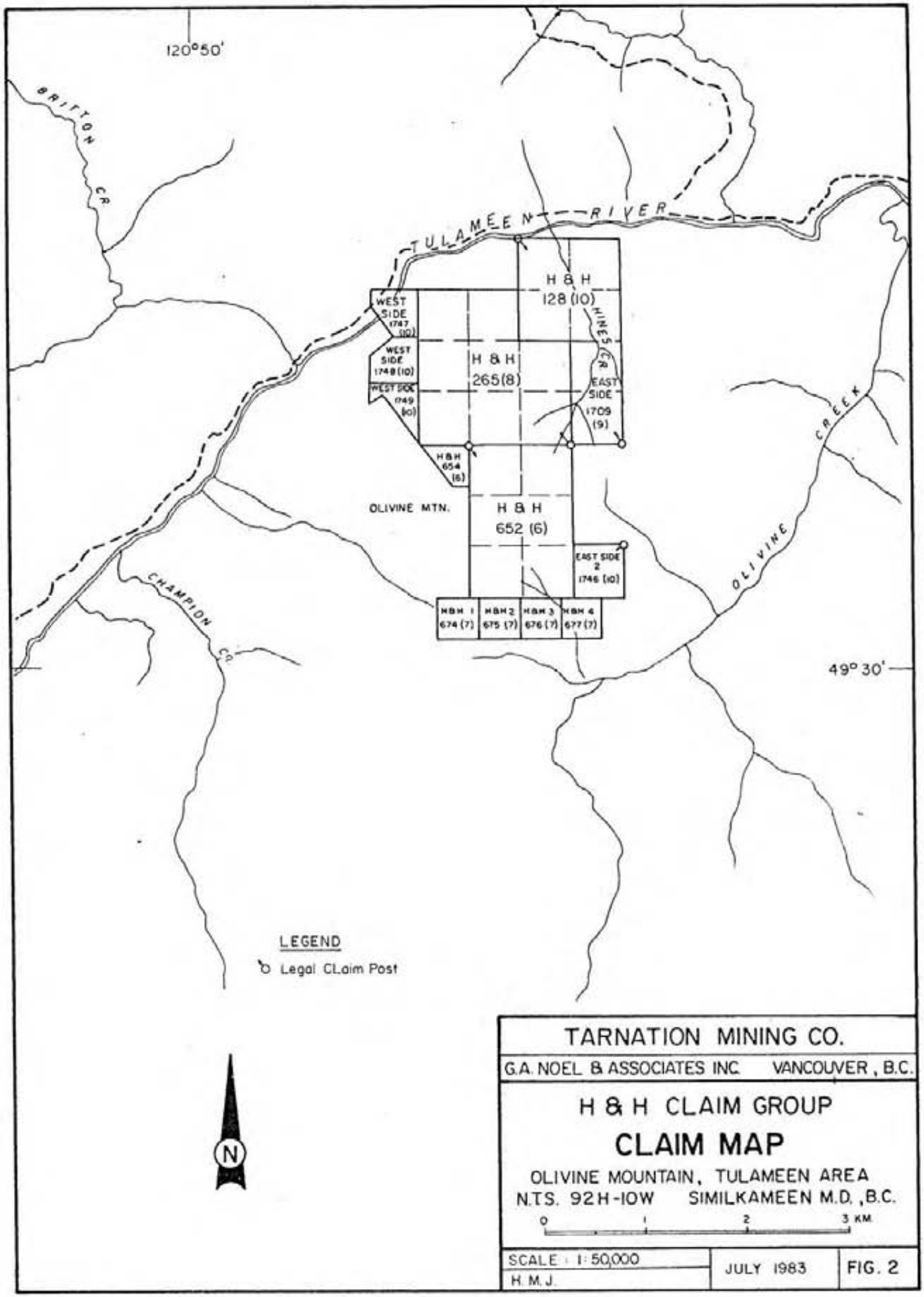
The area is underlain by Late Triassic Tulameen Ultrabasic Complex which intrudes Late Triassic Nicola Group metavolcanics and metasediments. The Eagle granodiorite lies just west of the margin of the complex and is slightly younger than it.

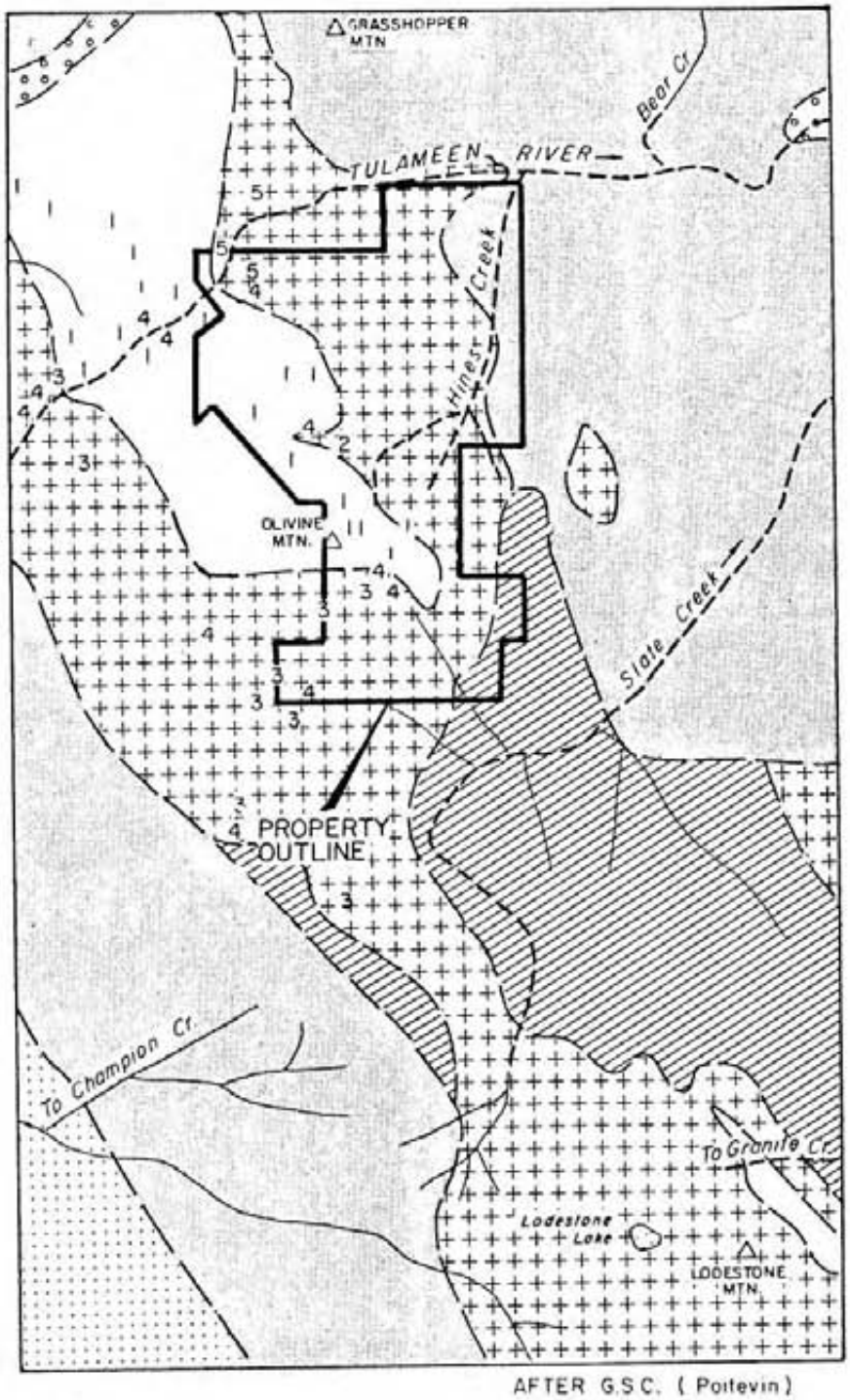
The Tertiary Princeton Group of coal-bearing sedimentary rocks, volcanic rocks and basaltic flows unconformably overlies the eastern margin of the complex. Glacial deposits cover much of the complex, and outcrops are rare in the southern part of the area.

FIELD PROGRAM

The field program consisted of reconnaissance geological mapping and geochemical sampling. It was conducted between May 25-June 5, 1983 by a field crew of one geologist and three field assistants operating out of a fly camp.

A grid was laid out consisting of a 2000 m baseline with cross lines perpendicular to the baseline, at 200 m intervals.


120°50'
BRITTON CR.
TULAMEEN RIVER
H & H
128 (10)
WEST SIDE 1747 (10)
WEST SIDE 1748 (10)
WEST SIDE 1749 (10)
H & H
265 (8)
HINES CR.
EAST SIDE 1709 (9)
H&H 654 (6)
OLIVINE MTN.
H & H
652 (6)
EAST SIDE 2 1746 (10)
H&H 1 674 (7)
H&H 2 675 (7)
H&H 3 676 (7)
H&H 4 677 (7)
CHAMPION CR.
OLIVINE CREEK
49° 30'
LEGEND
Legal CLaim Post
N
TARNATION MINING CO.
G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.
H & H CLAIM GROUP
CLAIM MAP
OLIVINE MOUNTAIN, TULAMEEN AREA
N.T.S. 92H-10W SIMILKAMEEN M.D., B.C.
0 1 2 3 KM
SCALE : 1:50,000
H. M. J.
JULY 1983
FIG. 2



AFTER G.S.C. (Poitevin)

LEGEND

- PLATINUM - GOLD PLACERS
- STREAM AND GLACIAL DEPOSITS
- GRANODIORITE

TULAMEEN ULTRABASIC COMPLEX

- GABBRO
- PYROXENITE — 5. Feldspathic 4. Olivine 3. Koswite and magnetite
- DUNITE AND PERIDOTITE — 2. Peridotite 1. Dunite
- TULAMEEN GROUP

TARNATION MINING CO.

G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.

H & H CLAIM GROUP

GENERAL GEOLOGY

OLIVINE MOUNTAIN, TULAMEEN AREA

N.T.S. 92H-10W SIMILKAMEEN M.D., B.C.

0 1 2 3 KM.

SCALE : AS SHOWN	JULY 1983	FIG. 3
H. M. J.		

These were run east and west for 500 m. Due to magnetic declination problems, the baseline did not maintain a true south bearing.

Soil samples were collected along each grid line and along the baseline at 50 m intervals.

RESULTS

Geological Survey

Outcrop is sparse within the survey area. Most outcrops were of pyroxenite, some mixed pyroxenite and peridotite, and a few of peridotite. Some float boulders were mapped and marked accordingly in case they may be nearly in place. Geology is shown on Figure 4.

At the northwest corner of the mapped area a contact is inferred between diorite (field term used for syenogabbro - syenodiorite) and pyroxenite. It cannot be traced beyond this small area.

Mineralization consisting mostly of disseminated magnetite occurs as disseminations, segregations and small veinlets within the ultrabasic rocks. Chromite was thought to be recognized in some outcrops. Sufficient magnetite is present to cause local deflections when running the grid lines.

Geochemical Survey

Soil samples were collected along all grid lines and the

baseline at 50 m intervals. The samples were taken, using a mattock, from depths ranging from 6 cm to 25 cm. Samples were placed in kraft envelopes upon which was marked the co-ordinate of the sample site. When sampling was completed, the samples were sent to Min-En Laboratories Ltd., 705 West 15th Street, North Vancouver for analysis of their gold, platinum, palladium, chromium and nickel contents. Initially, only alternate samples from the grid were assayed. These totalled 133 soil samples.

Rock geochemical samples were collected from many of the outcrops located while mapping the geology. A total of 46 rock samples were collected, appropriately marked, and sent to Min-En Laboratories Ltd. for similar analyses.

Geochemical soil and rock assay results are shown on Figures 5-9.

A statistical study was made of the geochemical results. The following values were obtained for soils.

	Au	Pt	Pd	Cr	Ni
Possibly Anomalous	20-40 ppb	20-40 ppb	10-20 ppb	70-140 ppm	40- 80 ppm
Probably Anomalous	40-60 ppb	> 40 ppb	> 20 ppb	140-210 ppm	80-120 ppm
Definitely Anomalous	> 60 ppb			> 210 ppm	> 120 ppm

For rock samples, the following values were obtained:

Definitely Anomalous	> 60 ppb	> 40 ppb	> 20 ppb	> 400 ppm	> 120 ppm

On the geochemical maps, only the "probable anomalous" contour was used for soils and the "definitely anomalous" contour rocks. When the remainder of the samples are assayed, detail contouring will be applied to the results.

a) **Gold Geochemistry**

A gold anomalous zone is indicated extending from approximately Line 6S, 200 W to Line 2S, 500 E. While it is not a strong anomaly, it may reflect a northeast striking mineralized structure.

b) **Platinum and Palladium Geochemistry**

These elements show several isolated anomalies. No trends are indicated.

c) **Chromium and Nickel Geochemistry**

Chromium and nickel anomalies, when viewed together, are mostly located between Lines 8S - 18S and west of the baseline. Coincident Cr-Ni anomalies occur on Line 10 S at 300-500 West, 95 B/L and 18S 250 west, with other scattered Cr or Ni anomalies in the general area. These probably reflect areas of strong serpentine alteration which carry variable chromium and nickel mineralization.

CONCLUSIONS

It is concluded that a weak gold anomaly is present in the northeastern part of the grid and a chromium-nickel anomalous area in the southwestern part. The source of the gold anomaly is unknown due to the lack of outcrop. The chromium-nickel anomaly is probably due to serpentinized zones within the ultrabasic rocks. Both areas warrant follow-up work.

RECOMMENDATION

It is recommended that the remaining soil samples be assayed and that fill-in lines be run to add more detail to the above anomalous zones. It is also recommended that the remainder of the H & H claim block be geologically mapped and soil sampled.

Respectfully submitted,

Harold M. Jones, P.Eng.

REFERENCES

CHISHOLM, E.O. (1982) Geological Report on the H & H Claim Group, Olivine Mining District, British Columbia, private report for Tarnation Mining Company.

COVENEY, C.J. (1980) Report on the J-L Claims, Similkameen Mining District British Columbia, report for Richard Resources Ltd.

RICE, H.M.A. (1960) Geology and Mineral Deposits of the Princeton Map Area, British Columbia, Geological Survey of Canada, Memoir 243.

ST. LOUIS, R.M. (1982) Platinoids in the Tulameen Ultramafic Complex in Geol. Fieldwork 1981, B.C. Minister of Mines, p. 218-222.

B.C.M.M. Annual Reports 1915-1917

CERTIFICATE

I, HAROLD M. JONES, of the City of Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geological engineer with G.A. Noel & Associates, Inc., 721-602 West Hastings Street, Vancouver, B.C.

2. I am a graduate of the University of British Columbia in Geological Engineering, 1956.

3. I have been practising my profession as a geological engineer for 25 years.

4. I am a member of the Association of Professional Engineers of British Columbia, Registration No. 4681.

5. The writer did not work on the property during the recent exploration program. He did review the data from it and compiled the report.

DATED at Vancouver, British Columbia this 14th day of July 1983.

Harold M. Jones, P.Eng.

APPENDIX I

STATEMENT OF COSTS

APPENDIX I

STATEMENT OF EXPENDITURES

The following costs were supplied by Tarnation Mining Ltd.

Wages	David Nelles - May 25-June 5	$ 1,518	
	Rand Tildon - May 27-June 5	990	
	John Travis - May 29-June 5	898	
	John Ziegler - May 29-June 5	1,373	
	Victor Ryback-Hardy - May 25-May 26	600	5,379.00
Room and Board:			
	138 man days @ $50/man/day		1,900.00
Vehicle Rental:			
	Pick-up Truck -10 days @ $35/day	350	
	Van - 8 days @ $35/day	280	
	Car - 2 days @ $39/day + mileage	150	
	ATC Motorcycle-10 days @ $25	250	1,030.00
Gas, Oil - for vehicles			179.00
Field Supplies			677.79
Miscellaneous Equipment - Chain Saw, Hand Tools			100.00
Assays - 133 soil samples, 46 rock samples			3,540.00
Report and Map preparation			
	Review and compilation - H.M. Jones, P.Eng	$ 950.00	
	Drafting map reproduction	350.00	
	Secretarial	137.48	1,437.48
			$14,243.27

APPENDIX II

GEOCHEMICAL ASSAY RESULTS

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project Tarnation Mining Eastside Date of report June 16/83.

File No. 3-333 Date samples received June 6/83.

Samples submitted by:

Company: VLH Consultants

Report on: 133 soils, 46 rocks Geochem samples

Assay samples

Copies sent to:

1. VLH Consultants, Richmond, B.C.
2.
3.

Samples: Sieved to mesh -80 soil Ground to mesh -80 rock

Prepared samples stored ☒ discarded ☐

rejects stored ☐ discarded ☒

Methods of analysis: Au,Pb,Pt-fire. Cr-nitric,perchloric digestion.

A.A.

Remarks:

SPECIALISTS IN MINERAL ENVIRONMENTS

COMPANY: VLH Consultants

GEOCHEMICAL ANALYSIS DATA SHEET

File No. 3-333

PROJECT No.: Tarnation Mining Eastside

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

DATE: June 16 1983.

ATTENTION: V. Hardy

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb fire	Pd ppb fire	Pt ppb fire	Cr ppm
1000		185	5+00W		28		•					82	54	142	35
02			400		20		•					<1	4	3	40
04			300		90		•					22	4	14	140
06			200		21		•					<1	<1	<1	45
08			100W		19		•					2	<1	<1	40
10		185	0+50E		24		•					1	4	<1	25
12			350E		23		•					9	4	10	30
14			250		24		•					7	5	2	40
16			150		25		•					6	4	5	40
18			50E		22		•					23	5	15	40
20		185	50W		39		•					7	3	5	55
22		145	4+50E		17		•					<1	4	10	20
24			350		35		•					<1	3	7	100
26			250		22		•					<1	1	4	10
28			150		29		•					<1	1	6	40
30		145	50E		20		•					15	2	<1	25
32		145	50W		32		•					2	6	3	30
34			150		220		•					<1	5	9	100
36			250		44		•					2	5	6	90
38			350		19		•					1	6	1	15
40		145	4+50W		46		•					<1	4	11	255
42		105	5+00E		10		•					2	6	3	20
44			400E		11		•					10	6	7	20
46			300		20		•					6	6	11	25
48			200		20		•					34	6	9	30
50			100E		28		•					5	4	4	40
52		105	0+50		38		•					<1	3	10	45
54		85	100W		22		•					5	2	6	10
56			200W		21		•					<1	2	9	30
1058		85	300		22		•					<1	3	9	30

8

Frank Hawk

Co. [redacted] Claims — GEOCHEMICAL ANALYSIS DATA SHEET — No. 3-33

PROJECT No.: Tarnation Mining Eastside

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

DATE: June 1983

ATTENTION: V. Hardy

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb fire	Pd ppb fire	Pt ppb fire	Cr ppm
1060		85	400W		59							3	4	26	350
1062		85	500W		48							<1	3	17	140
1084		83	500E		18							<1	2	5	20
86			400		14							19	1	9	15
88			300		23							<1	3	7	25
90			200		24							18	5	10	30
92			100		31							8	7	13	45
94		95	0 E		43							7	8	26	30
96		65	450E		22							5	4	13	35
98			350		26							<1	3	12	15
1100			250		20							53	6	11	25
02			150		24							13	5	12	30
1104		65	50E		66							74	3	25	45
2002		205	50E		23							1	2	13	20
04			150		18							8	4	11	20
06			250		14							<1	<1	6	10
08			350		21							18	5	3	30
10			450		18							6	3	6	20
12		205	500W		18							20	8	14	30
14			150		28							6	4	14	30
16			250		26							4	1	8	30
18			350		21							6	3	5	40
20			450W		26							<1	<1	2	70
22		165	0 E		16							<1	2	3	20
24			100E		18							<1	<1	2	25
26			200		18							7	1	7	30
28			300		15							4	2	11	25
30			400		27							6	3	7	100
32			500E		24							30	1	4	15
2034		165	100W		27							6	4	10	30

CERTIFIED BY [signature]

COMPANY: VLH Consultants

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: Tarnation Mining Eastside

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

No. 3-33

DATE: June 1983.

ATTENTION: V. Hardy

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb fire	Pd ppb fire	Pt ppb fire	Cr ppm
2036		165	200W		29		•					9	4	8	50
38			300		26		•					12	11	11	30
40			400		29		•					13	2	<1	45
42			500		60		•					19	7	14	65
44		125	500E		20		•					4	3	3	40
46			150		18		•					13	8	13	20
48			250		21		•					<1	2	9	40
50			350		18		•					27	4	4	20
52			450E		10		•					<1	3	8	5
54		125	50W		30		•					2	1	10	50
56			150		67		•					<1	<1	6	50
58			250		20		•					31	4	4	20
60			350		18		•					2	3	5	35
62		125	450N		22		•					19	11	16	60
64		105	500W		20		•					<1	2	7	165
66			400		59		•					1	3	4	80
68			300		38		•					9	6	13	180
70			200		27		•					<1	1	5	40
2072			100		21		•					8	3	7	15
2102		BL	1900S		20		•					13	3	4	30
04			1350		62		•					19	5	12	75
06			1650		110		•					5	3	4	90
08			1500		20		•					28	3	<1	20
10			1350		22		•					2	2	6	45
12			1250		170		•					85	4	10	120
14			1100		91		•					<1	5	5	80
16		-	950S		79		•					47	1	10	90
18			850S		33		•					39	1	6	15
20			700S		26		•					47	<1	7	30
2122			550S		25		•					7	2	5	35

CERTIFIED BY:

COMPANY: VLH Consultants

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: Tarnation Mining Eastside

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

File No. 3-33

DATE: June 10, 1983.

ATTENTION: V. Hardy

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb fire	Pd ppb fire	Pt ppb fire	Cr ppm
2124		B4	450		64		•					3	4	2	75
26			300		62		•					22	7	1	50
28			150		36		•					9	7	5	40
2130			150S		40		•					<1	5	6	50
4000		ZS	BL		74		•					5	3	3	60
02			100E		28		•					13	5	<1	20
04			200		19		•					5	2	<1	25
06			300		25		•					55	10	17	40
08			400		18		•					24	11	15	20
10		ZS	500E		27		•					80	9	15	25
12		HS	450E		23		•					31	6	6	50
14		(40M)	350		8		•					56	7	12	15
16			250		18		•					38	3	8	30
18			150		24		•					3	6	5	30
20		4S	50E		46		•					1	4	2	35
22		DS	0E		20		•					<1	3	6	30
24			100		20		•					11	6	<1	25
26			200		18		•					6	7	10	35
28			300		16		•					<1	<1	4	25
30			400		18		•					<1	<1	11	40
32		0S	50OS		21		•					14	<1	8	25
32A		0S	50W		42		•					<1	1	13	50
34			150		17		•					13	3	7	35
36			250		18		•					4	6	15	30
38			350		32		•					26	2	11	60
40		0S	450W		20		•					17	1	21	50
40A		ZS	50W		40		•					5	1	4	40
42			150		30		•					5	<1	8	55
44			250		25		•					16	3	19	50
4046			350W		24		•					13	<1	11	40

COMPANY: VLH Consultants

GEOCHEMICAL ANALYSIS DATA SHEET

A No. 3-333

PROJECT No: Tarnation Mining Eastside

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

DATE: June 16 1983.

ATTENTION: V. Hardy

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb fire	Pd ppb fire	Pt ppb fire	Cr ppm
4048		25	450W		28		•					12	1	8	35
50		65	0W		29		•					102	1	28	20
52			100W		19		•					15	1	12	30
54			200		26		•					110	6	20	20
56			300		8		•					17	2	9	5
58			400		22		•					18	1	7	30
60			500W		14		•					18	2	9	15
62		45	450W		42		•					37	3	17	50
64			350		20		•					19	4	11	10
66			250		26		•					16	2	8	20
68			150		20		•					18	4	18	30
4070			50		36		•					14	2	13	35
2054		(DUP.)			48		•					15	1	5	65

CERTIFIED BY

COMPANY: VLH Consultants

PROJECT No.: Tarnation Mining Eastside

ATTENTION: V. Hardy

GEOCHEMICAL ANALYSIS DATA SHEET

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

FILE No. 3-333

DATE: June 16, 1983.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb fire	Pd ppb fire	Pt ppb fire	Cr ppm
3000					34							14	<1	2	20
01					29							18	5	3	20
02					47							19	4	3	25
03					15							17	8	<1	15
04					22							18	7	1	10
05					25							181	15	43	20
06					37							14	4	7	25
07					45							31	45	22	60
08					17							23	<1	<1	95
09					27							27	4	<1	20
10					46							42	3	16	110
11					60							30	<1	6	20
12					80							38	<1	46	910
13					89							27	<1	1	570
14					960							31	<1	4	150
15					97							29	<1	3	95
16					116							30	<1	21	1000
17					96							28	<1	<1	660
18					114							55	<1	13	750
19					70							43	4	16	470
20					144							42	2	9	510
21					134							79	4	26	530
22					156							64	4	18	540
23					164							23	6	<1	710
24					38							19	11	8	90
25					36							14	1	5	35
26					26							30	4	9	20
27					33							14	<1	2	120
28					40							11	<1	2	175
3029					24							17	1	1	25

CERTIFIED BY

COMPANY: VLH Consultants

PROJECT No.: Tarnation Mining Eastside

ATTENTION: V. Hardy

GEOCHEMICAL ANALYSIS DATA SHEET

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

P.O. No. 3-333

DATE: June 10 1983.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb fire	Pd ppb fire	Pt ppb fire	Cr ppm
3030					34							36	<1	12	30
31					38							292	2	33	25
32					44							15	1	<1	40
33					38							15	2	1	20
34					36							15	5	4	80
35					37							10	3	2	15
36					62							12	2	1	490
37					102							1	6	6	475
38					14							5	2	<1	10
39					44							18	9	17	25
40					34							12	11	28	60
41					40							5	1	7	40
42					36							31	19	53	50
43					50							26	18	13	120
44					34							23	12	7	10
3045					56							18	14	134	90

CERTIFIED BY

APPENDIX III

GEOCHEMICAL ANALYTICAL PROCEDURES

RECOMMENDED PROCEDURE FOR FIRE ASSAY
GOLD, SILVER, PLATINUM AND PALLADIUM

Samples are dried at 120°F and after being crushed on a primary crusher to inch size they are crushed on a secondary crusher to minus 10 mesh before being split on Jones' riffle. (In accordance with Gy's statistical rules.)

At the splitting, a 500 gram sub-sample is obtained, which is pulverized to minus 100 mesh. After that the sample is mixed, rolled and quartered.

A 30 gm sample is subjected to fire assay preconcentrations to produce a silver bead.

The assay is carried out on a one half assay ton sample, fire assayed at 1750°C with appropriate fluxes.

The lead bottom is than cupeled. (The silver bead can be weighed and the amount calculated, but its accuracy is questionable.) Then the small bead is dissolved in aqua regia and analysed on the atomic absorption instrument for platinum and palladium.

Results can be reported either in oz/ton 0.001 sensitivity or gram per metric ton upon request.

In every batch of 20 samples we have one in-house natural standard.

For silver a completely separate assay is preferred on a 5.000 gram of sub-sample, where the sample is dissolved in aqua regia with a chemical separation and filtering. The amount of silver is determined by Atomic Absorption instrumentation.

PHONE 980-5814

MIN-EN Laboratories Ltd.

Specialists in Mineral Environments

Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2

CHROMIUM ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

2.000 gram soil of minus 20 mesh is digested in beakers with the mixture of $HClO_4$-HNO_3 and HF for several hours. The samples arethen taken to almost dryness and cooled.

15 ml of HCl is added and brought to a boil.

After cooling samples the volumes are made up to 50 ml and the solutions are analysed by Atomic Absorption Spectrophotometers using Acetylene-Nitrous Oxide flame.

Using a suitable range of 12 standards a graph is obtained and than samples are calculated from this graph.

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MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
Corner 15th Street and Bewicke
705 WEST 15th STREET
NORTH VANCOUVER, B.C.
CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORK

PROCEDURES FOR Mo, Cu, Cd, Pb, Mn, Ni, Ag, Zn, As, F

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

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

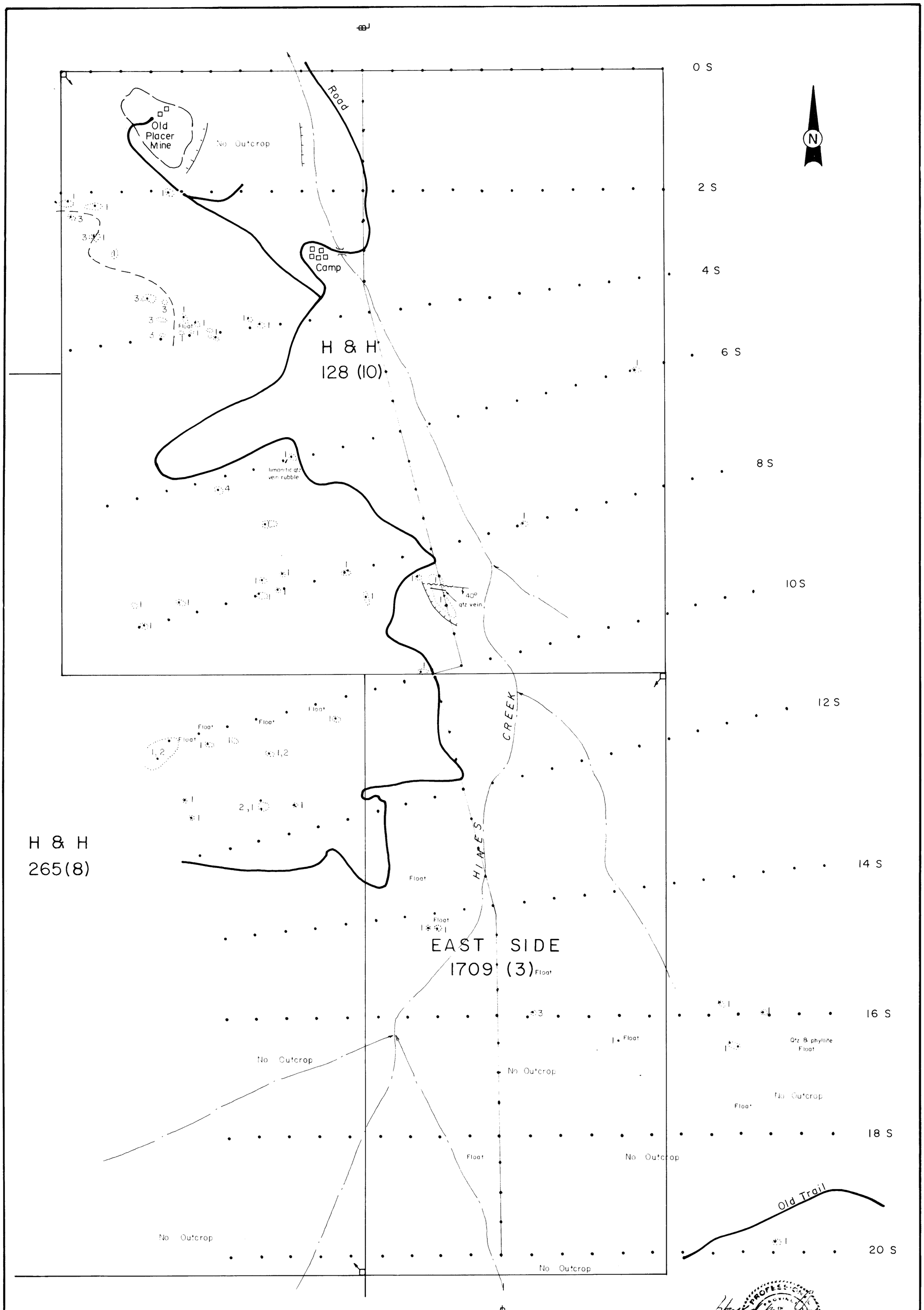
1.0 gram of the samples are digested for 6 hours with HNO_3 and $HClO_4$ mixture.

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

Copper, Lead, Zinc, Silver, Cadmium, Cobalt, Nickel and Manganese are analysed using the CH_2H_2-Air flame combination but the Molybdenum determination is carried out by C_2H_2-N_2O gas mixture directly or indirectly (depending on the sensitivity and detection limit required) on these sample solutions.

For Arsenic analysis a suitable aliquote is taken from the above 1 gram sample solution and the test is carried out by Gutzit method using Ag $CS_2N(C_2H_5)_2$ as a reagent. The detection limit obtained is 1. ppm.

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



LEGEND

- STATION
- CREEK
- ROAD
- LEGAL CORNER POST
- Contact
- Outcrop
- Fault
- Edge

TULAMEEN ULTRABASIC COMPLEX

- 1 PYROXENITE
- 2 PERIDOTITE
- 3 DIORITE
- 4 QUARTZ VEIN

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,736

WORK DONE BY V. H. CONSULTANTS

H. M. JONES — BRITISH COLUMBIA — ENGINEER

CARNATION MINING CO.

G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.

H & H CLAIM GROUP
PROPERTY GEOLOGY

OLIVINE MOUNTAIN, TULAMEEN AREA
NTS 92 H-10W SIMILKAMEEN M.D., B.C.

100 0 200 METRES

SCALE 1:5000	JULY 1983	FIG. 4
H.M.J		

Old Placer Mine

Road

Camp

CREEK

HINES

H & H
128 (10)

H & H
265(8)

EAST SIDE
1709 (3)

Old Trail

0 S
2 S
4 S
6 S
8 S
10 S
12 S
14 S
16 S
18 S
20 S

N

LEGEND

- STATION
- CREEK
- ROAD
- LEGAL CORNER POST
- 82 Au IN PPB
- SOIL SAMPLE (> 40 ppb - ANOMALOUS)
- ROCK " (> 60 " ")

WORK DONE BY VLH CONSULTANTS

CARNATION MINING CO.

G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.

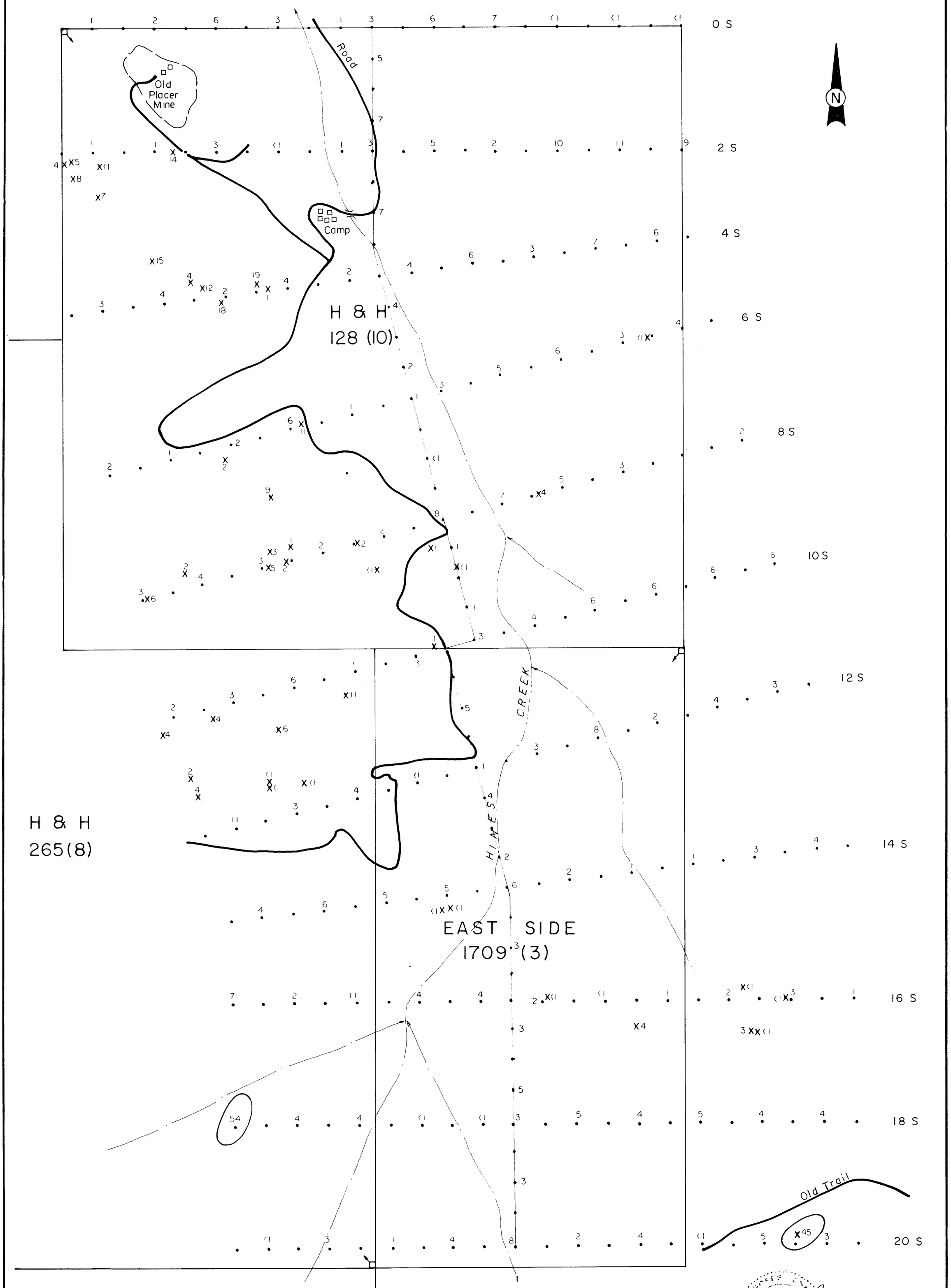
H & H CLAIM GROUP

GEOCHEMISTRY – Au

OLIVINE MOUNTAIN, TULAMEEN AREA
N.T.S. 92 H-10W SIMILKAMEEN M.D., B.C.

100 0 200 METRES

SCALE 1:5000	JULY 1983	FIG. 5
HMJ		



LEGEND

- STATION
- CREEK
- ROAD
- LEGAL CORNER POST
- Pd IN PPB
- SOIL SAMPLE (>10 ppb - ANOMALOUS)
- ROCK " (" " ")

WORK DONE BY VLH CONSULTANTS

TARNATION MINING CO.

G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.

H & H CLAIM GROUP

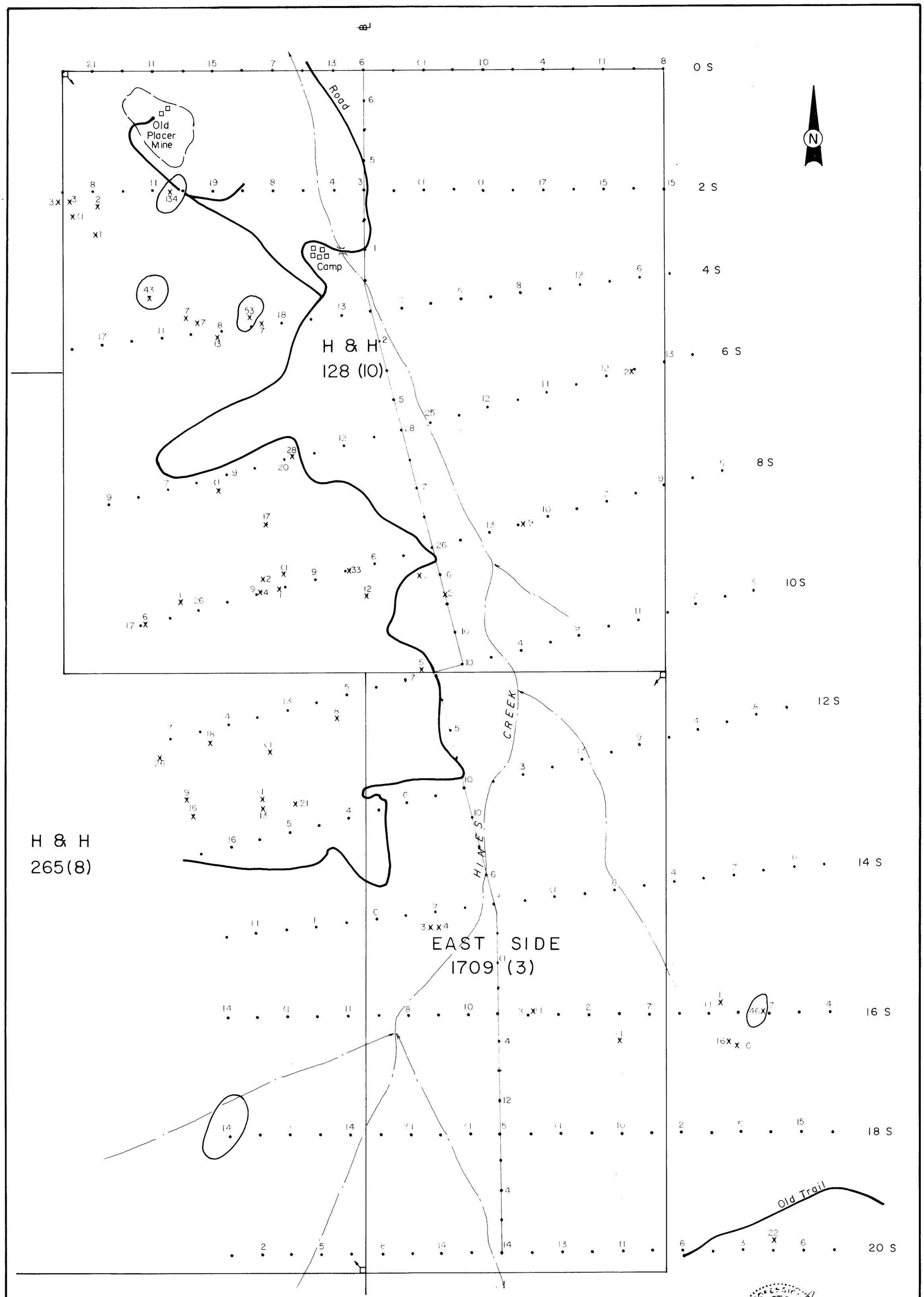
GEOCHEMISTRY – Pd

OLIVINE MOUNTAIN, TULAMEEN AREA

N.T.S. 92 H-10W SIMILKAMEEN M.D., B.C.

100 0 200 METRES

SCALE 1:5000	JULY 1983	FIG. 6
H.M.J.		



LEGEND

- STATION
- CREEK
- ROAD
- LEGAL CORNER POST
- 46 Pt IN PPB
- SOIL SAMPLE (>40 ppb - ANOMALOUS ~)
- ROCK " (" " " ~)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,736

WORK DONE BY VLH CONSULTANTS

H. M. JONES — BRITISH COLUMBIA — ENGINEER

TARNATION MINING CO.

G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.

H & H CLAIM GROUP

GEOCHEMISTRY - Pt

OLIVINE MOUNTAIN, TULAMEEN AREA
N.T.S. 92 H-10W SIMILKAMEEN M.D., B.C.

100 0 200 METRES

SCALE 1:5000	JULY 1983	FIG. 7
HMJ		

Old Placer Mine

Road

Camp

H & H
128 (10)

H & H
265(8)

EAST SIDE
1709 (3)

CREEK

HINES

Old Trail

0 S
2 S
4 S
6 S
8 S
10 S
12 S
14 S
16 S
18 S
20 S

N

LEGEND

- STATION
- CREEK
- ROAD
- LEGAL CORNER POST
- 70 Cr IN PPM
- SOIL SAMPLE (>140 ppm = ANOMALOUS)
- ROCK " (>400 " ")

WORK DONE BY VLH CONSULTANTS

TARNATION MINING CO.

G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.

H & H CLAIM GROUP
GEOCHEMISTRY – Cr

OLIVINE MOUNTAIN, TULAMEEN AREA
N.T.S. 92 H-10W SIMILKAMEEN M.D., B.C.

100 0 200 METRES

SCALE 1 : 5000
H.M.J.

JULY 1983

FIG. 8

Old Placer Mine

Road

Camp

CREEK

H & H
128 (10)

H & H
265(8)

EAST SIDE
1709 (3)

HIMEES

Old Trail

0 S
2 S
4 S
6 S
8 S
10 S
12 S
14 S
16 S
18 S
20 S

N

LEGEND

- STATION
- CREEK
- ROAD
- LEGAL CORNER POST
- 28 Ni VALUE IN PPM
- SOIL SAMPLE ( )80 ppm - ANOMALOUS ( )
- X ROCK " ( )120 " " ( )

GEOLOGICAL BRANCH
ASSESSMENT REPORT

1173

WORK DONE BY VLH CONSULTANTS

H. M. JONES — PROFESSIONAL ENGINEER — BRITISH COLUMBIA

TARNATION MINING CO.

G.A. NOEL & ASSOCIATES INC. VANCOUVER, B.C.

H & H CLAIM GROUP
GEOCHEMISTRY – Ni

OLIVINE MOUNTAIN, TULAMEEN AREA
N.T.S. 92 H-10W SIMILKAMEEN M.D., B.C.

100 0 200 METRES

SCALE 1:5000	JULY 1983	FIG. 9
H M J		