

83-#367-#11432

8/84

WENDY A. HARYETT

GEOLOGICAL ASSESSMENT REPORT

GEOLOGICAL SURVEY

OF THE

G.O.D. MINERAL CLAIMS GROUP

PRINCETON AREA

SIMILKAMEEN MINING DIVISION

BRITISH COLUMBIA

Latitude:	49° 27'.3 North
Longitude:	12° 24'.6 West
Geology:	Allan F. Bellamy, P.Eng.
Field:	T. Stokes, M.Sc. Geology William J. Weymark, P.Eng.
Office:	William J. Weymark, P.Eng.
Report:	Weymark Engineering Ltd.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

Weymark Engineering Ltd.  
1063 Balfour Avenue  
Vancouver, British Columbia

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11,432

WENDY A. HARYETT

Geological Assessment Report  
G.O.D. Mineral Claims  
Princeton Area  
Similkameen Mining Division  
British Columbia

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LOCATION

COPPER FARM MINERAL CLAIMS GROUP  
 SIMILKAMEEN MINING DIVISION  
 PRINCETON, BRITISH COLUMBIA

**WEYMARK ENGINEERING LTD.**

*Consulting Engineers*

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WEST VANCOUVER, B.C.  
CANADA

TELEPHONES:  
922-1536  
736-6812

Wendy A. Haryett  
P.O. Box 400  
Princeton, British Columbia

Madam:

Re: Geological Assessment Report  
G.O.D. Mineral Claims  
Similkameen Mining Division  
British Columbia

We are pleased to submit for your information, this Geological Assessment Report embodying the results of our field Survey of the G.O.D. Mineral Claims, - September 1982 - June 1983 and the subsequent review of the available information relating to the claims area.

The purpose of this Survey was to record and map the Geological Sections of the claims area and submit the relating Report for Assessment Work Requirements to the Department of Mines, Province of British Columbia.

1.0 PROPERTY

The G.O.D. Mineral Claims consist of 4 claim units located in the Similkameen Mining Division, British Columbia see Fig. 2.

The designated names and staking number, record number and dates are:

<u>Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Record Date</u>
G.O.D.	4 units	121 (9)	2 September 1976

The Reference Mineral Claim Map of the British Department of Mines is 92H/8W.

Check surveys have not been made of the claims boundaries, tags, posts, etc., relative to conformity with the requirement of the Mineral Act of British Columbia. The claims are currently in good standing with respect to Assessment Work Requirements for the period ending 20 September 1983.

There are no structural-buildings or equipment on the claims area belonging to the owner, apart from adits, underground workings, trenches, pits, etc.

## 2.0 LOCATION

The G.O.D. Claims are situated in the Princeton East area - 4 miles east of Princeton on paved Highway No. 3 - see Figure 3. The Geographic reference is N. Latitude  $49^{\circ} 27'.3$  and  $121^{\circ} 24'.6$  West Longitude.

The Land District is Similkameen Yale with Registry in Kamloops and the Mining Division is Similkameen with Recording Office in Princeton, British Columbia.

## 3.0 ACCESSIBILITY

Access to the claims is reached by Automobile from Princeton via paved Highway No. 3, - Princeton-Hedley section being four miles east of Princeton. Access to the mine workings is restricted because of private farm property and permission must be obtained from the owners - see Figure 3.

There are several logging roads and trails on the claims area affording access to most of the claims area. These roads are generally open year-round except in fire peril and heavy snowfall periods.

There are communication facilities available in Princeton and available on the claims area - including rail - truck - motor - bus - radio-telephone.

#### 4.0 DESCRIPTION

Records are available in the B.C. Minister of Mines Reports dating from 1918 when the property was owned by the Princeton Mining and Development Company and known as the Copper Farm Group. Original staking was in 1908. Most detailed recordings is in the B.C. Minister of Mines Report 1927 pp. C242-247 and in memoir 243, Geological Survey of Canada, Geology and Mineral Reports of the Princeton Map Area, British Columbia by H.M.A. Rice 1960 - see Appendix A. During the 1970-80 period the property was owned by Excel Exploration Ltd. (1973) who carried out inconclusive testing - see Assessment Reports Nos. 6601 and 7551.

#### 5.0 CLIMATE

Climatic conditions within the claims area are Central Interior with Hot Summers and Cold Winters. Temperatures are about 50° F - 110° to -20° F with precipitation being 10-15 inches annually.

Exploration work may be carried out year round except in Fire Peril and heavy Snowfall periods.

## 6.0 PHYSIOGRAPHY

The claims are within the Similkameen sub-classification of the Okanagan Mountain Range and the Northern flank of Mt. Darcy. Elevations range from the bottom land of the Similkameen River of 2,000 ft. above sea level to over 4,000 ft. of Mt. Darcy. The landform of the claims is rugged with steep slopes and ravine gullies and is mostly tree covered with coniferous. Overburden ranges from bedrock to 10 feet or more in the creek gullies and consists of gravels-silts-rock talus. The Southern sections of the claims are open range. See Figure 3.

## 7.0 GEOLOGY

Geological references are Geological Survey of Canada Memoir 243, Geology and Mineral Deposits of the Princeton Map-Area, H.M.H. Rice 1960 and Map 888A - Figure 4. The chronological age sequence of the formations are given thereon. As referenced in Appendix A, the claims are underlain by Coast Intrusive bodies of Granodiorites, Granite, Quartz Diorite and Gabbro which intrude Nicola Group Volcanics. These base formations have been sheared-fractured and faulted producing lenses and brecciated fractured schist sections which have been altered, silicified and mineralized. These zones are steeply dipping and quartz veins are generally near the contact with Diorites or Quartz porphyry dykes. Metallic Mineralization consists of Pyrite, Chalcopyrite, Tetrahedrite and secondary nonmetallics of Azurite-Malachite and Bornite. Contained commercial metal metallics are Copper-Gold-Silver. Figure 5 portrays the outcrop geology of the claims area.

Mapping in the field was carried out by T. Stokes, M.Sc., Geology, McGill. Surface and underground workings control was referenced to the base line - see Figure 5.

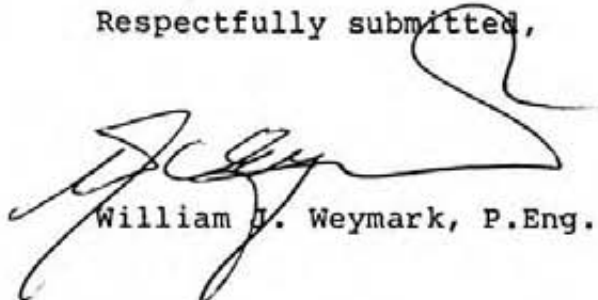
The rock formations designation in mapping conformed to that of Rice-Memoir 243 - Figure 4. The dominant formations exhibited are the Nicola Volcanics which have been intruded by Granite-Grandodiorites-Diorites and pink Quartz porphyry. The trend of the Volcanics is Northerly with steep dip and the intrusives are West-Easterly striking. Structurally the dominant feature is the North-South shear-schist-fault zone along which the mine workings have been directed.

Mineralization consists of metallic-pyrite-chalcopyrite and related sulphides; - non-metallics of quartz-calcite-carbonates-chlorite and related mafics. Secondary minerals are malachite and azurite-bornite. These occur mainly along the contact zones with the intrusives, particularly the quartz porphyry dykes.

#### 8.0 CONCLUSIONS AND RECOMMENDATIONS

In view of the interesting Geological-Lithological-Structural features of the claims area and previous commercial mining history, further detailed geological investigations are warranted.

Respectfully submitted,



William J. Weymark, P.Eng.

June 28, 1983

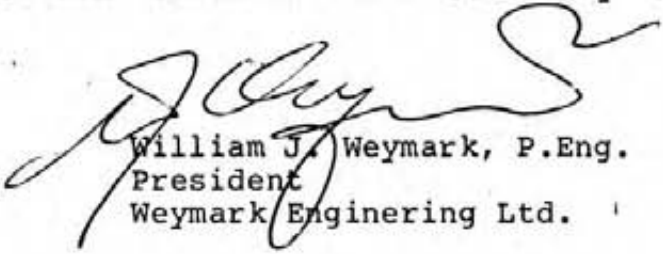


CERTIFICATE

I, William J. Weymark, P.Eng., Consulting Engineer, President of Weymark Engineering Ltd., of the District of West Vancouver, of the Province of British Columbia, hereby certify that:

1. I am a graduate of Mining Engineering of Queen's University Kingston, Ontario, B.Sc. 1940 and have been practising my profession for thirty-five years.
2. I am a member of the Association of Professional Engineers of the Province of British Columbia, the Consulting Engineers Division of the Association of Professional Engineers of British Columbia and the Association of Consulting Engineers of Canada.
3. I am a practising Consulting Engineer and reside at 3310 Westmount Road, West Vancouver, British Columbia.
4. I am a member of the Canadian Institute of Mining and Metallurgy and of the American Institute of Mining, Metallurgical and Petroleum Engineers and of the American Geophysical Union.
5. I have no direct or indirect interest whatsoever in the G.O.D. Mineral Claims.
6. The findings of the accompanying report are based on my personal examination of the G.O.D. Mineral Claims Group in October 1982 - June 1983 and of the Princeton area 1960 - 1983.

Dated at West Vancouver, British Columbia this 30th day of June, 1983.

  
William J. Weymark, P.Eng.  
President  
Weymark Engineering Ltd.

APPENDICES

western margin of the Copper Mountain stock. Mineral deposits occur at several places along the creek, the principal one being on the Wheeler group, situated a short distance up from the mouth of the creek. Here the Nicola volcanic rocks and the hybrid, marginal phase of the stock are cut by a number of pegmatite dykes, all of which carry bornite, chalcocite, and chalcopyrite in bunches and disseminated grains. At no place, however, were these minerals found in the intruded rock adjacent to the dykes. As the ore is confined to the pegmatite dykes, and as these dykes are small, it follows that no larger orebodies can be expected. Dolmage, however, points out the possibility of finding large bodies in either the stock or the volcanic rocks in the vicinity, for it is evident that the residual magmatic liquids were rich in copper. Prospecting is greatly hampered by lack of outcrops.

**Princeton Mining and Development Company, Limited (53)**

*References:* Ann. Repts., Minister of Mines, B.C.: 1918, p. 214; 1920, p. 159; 1921, p. 179; 1922, p. 168; 1923, p. 189; 1924, p. 174; 1925, p. 210; 1926, p. 222; 1927, pp. 242-244; 1928, pp. 261-263.

The property of Princeton Mining and Development Company, fourteen claims in all, is situated on the south side of Similkameen River 4 miles east of Princeton. The original staking was done prior to 1908. In 1917 the present company acquired the Copper Farm group of three claims and the remaining eleven claims were added later. From 1918 to 1928 the property was developed continuously; three main adits and several raises and crosscuts were driven, and a considerable amount of surface trenching done. This work, however, failed to develop commercial sized orebodies, and the property was shut down and has remained inactive since.

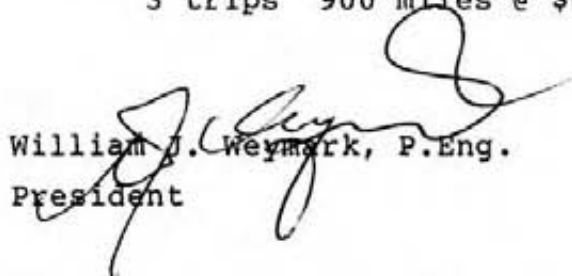
The claims are underlain by a body of diorite cutting Nicola volcanic rocks, both formations being cut by a large, pink, quartz porphyry dyke. Both intrusions and volcanic rocks have been sheared so as to produce a series of north-striking, steeply dipping, narrow, lenticular lenses of breccia. Although these lenses may be 10 feet or more wide their mineralized parts consist of stringers, seldom more than a few inches wide, of chalcopyrite, pyrite, and occasionally tetrahedrite. These veins may occur along one or other side of the breccia zone, and though chalcopyrite and pyrite commonly also form disseminated grains in the breccia, nowhere is this dissemination sufficiently concentrated to constitute ore. The mineral stringers are of good grade, but explorations have revealed few places where they occur over mineable widths. Where tetrahedrite occurs the silver values may run to 50 ounces a ton or more, but this mineral is rare in most of the mineral deposits.

**PRINCETON-ASPEN GROVE COPPER BELT**

North from Copper Mountain to the border of Princeton map-area is an area several miles long along which copper prospects, including those of the Aspen Grove Copper camp, are numerous. At the southern end of this belt, just northeast of Princeton, are three prospects, the Shamrock, Lucky Strike, and Dry Creek, that occur in or close to large granitic bodies or close to apophyses from them, and are clearly related to these bodies. The deposits are in part of the contact metamorphic type, and chalcopyrite and pyrite with, in the Dry Creek prospect, galena and sphalerite, are the ore-bearing minerals. One other property of this type, the King George, occurs to the southeast of Missezula Lake. The remaining deposits consist of chalcopyrite, bornite, chalcocite, and, rarely, pyrite, occurring in fractures and disseminated grains in Nicola volcanic rocks. No intrusive rocks are known to be related to them, and their only structural connection seems to be their common occurrence along the trend of the faults up Allison Valley and Summers Creek. These faults if projected to the south

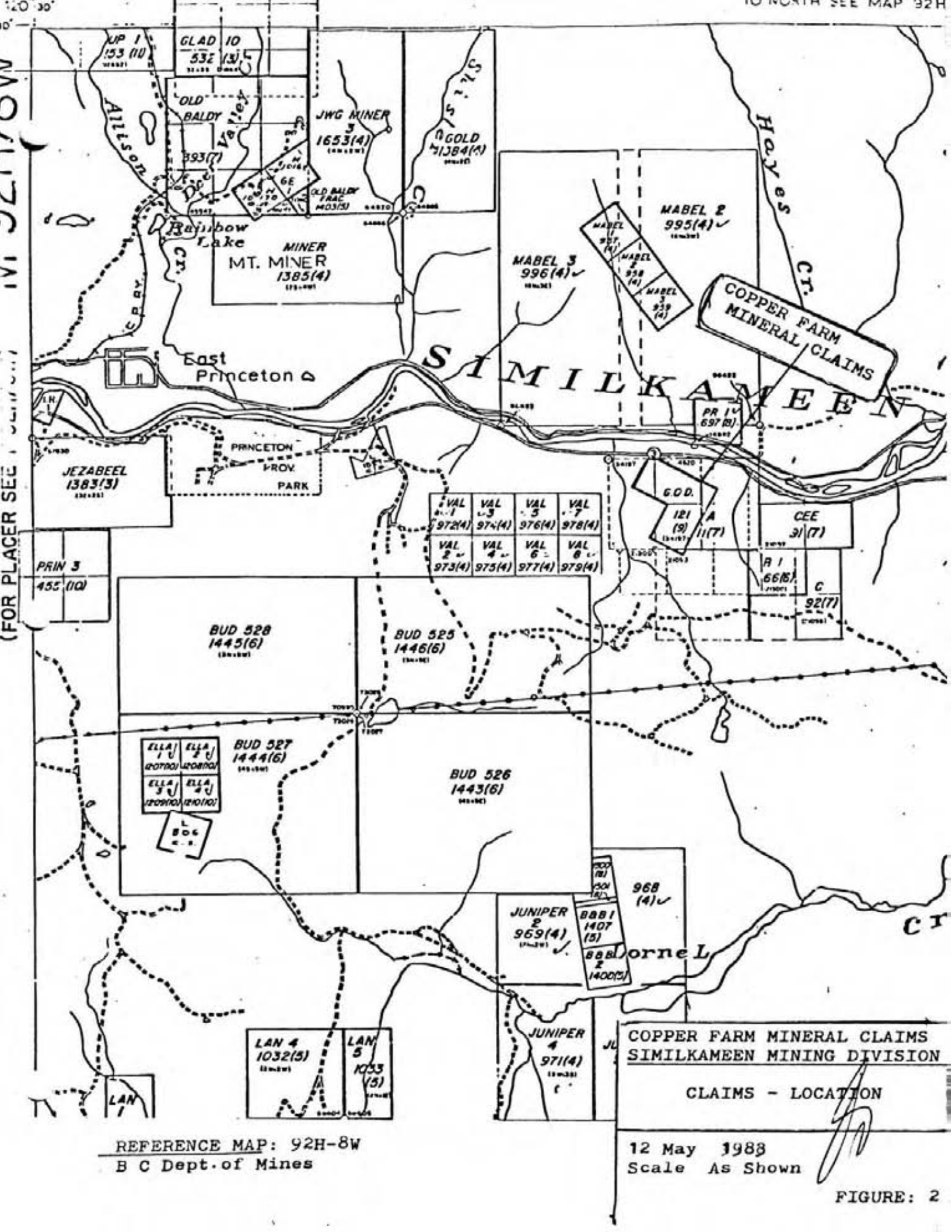
Cost Distribution

1.	Adit Portal and Underground Workings Improvement Model Transfer, Princeton, British Columbia	\$ 940
2.	Field Mapping & Survey Control Allan Bellamy, P. Eng. Box 175, Ashcroft, B.C. October 2-5, 1982 May 20, 1983	500 250
	T. Stokes, M.Sc., Geology 304 - 2225 West 7th Avenue Vancouver, B.C. April 22 - May 3, 1983	1,200
	W.J. Weymark, P.Eng. 3310 Westmount Road West Vancouver, B.C. September 29 - October 1 May 1-3, 1983	300 300
3.	Report Weymark Engineering Ltd. Collation of Data, Fairdrawing, Preparation/assembly of Report, Printing and related	250
4.	Transportation Automobile - Vancouver-Princeton 3 trips 900 miles @ \$0.30	270
	Total	\$4,010.

  
William J. Weymark, P.Eng.  
President

WEYMARK ENGINEERING LTD.

ILLUSTRATIONS



FOR PLACER SEE 1 CLAIM ONLY

VAL 1 972(4)	VAL 3 974(4)	VAL 5 976(4)	VAL 7 978(4)
VAL 2 973(4)	VAL 4 975(4)	VAL 6 977(4)	VAL 8 979(4)

**COPPER FARM MINERAL CLAIMS**

**SIMILKAMEEN**

**COPPER FARM MINERAL CLAIMS  
SIMILKAMEEN MINING DIVISION**

**CLAIMS - LOCATION**

12 May 1983  
Scale As Shown

*[Handwritten Signature]*

REFERENCE MAP: 92H-8W  
B C Dept. of Mines

FIGURE: 2



INGTON

30'

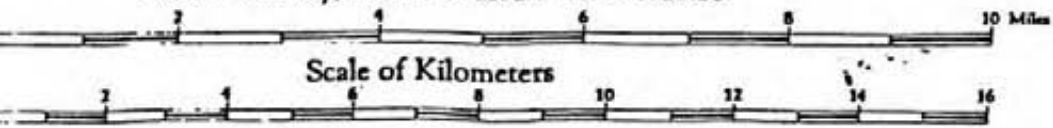
U. S. A.

15'

# PRINCETON

BRITISH COLUMBIA

Scale 1:126,720 or 1 Inch to 2 Miles



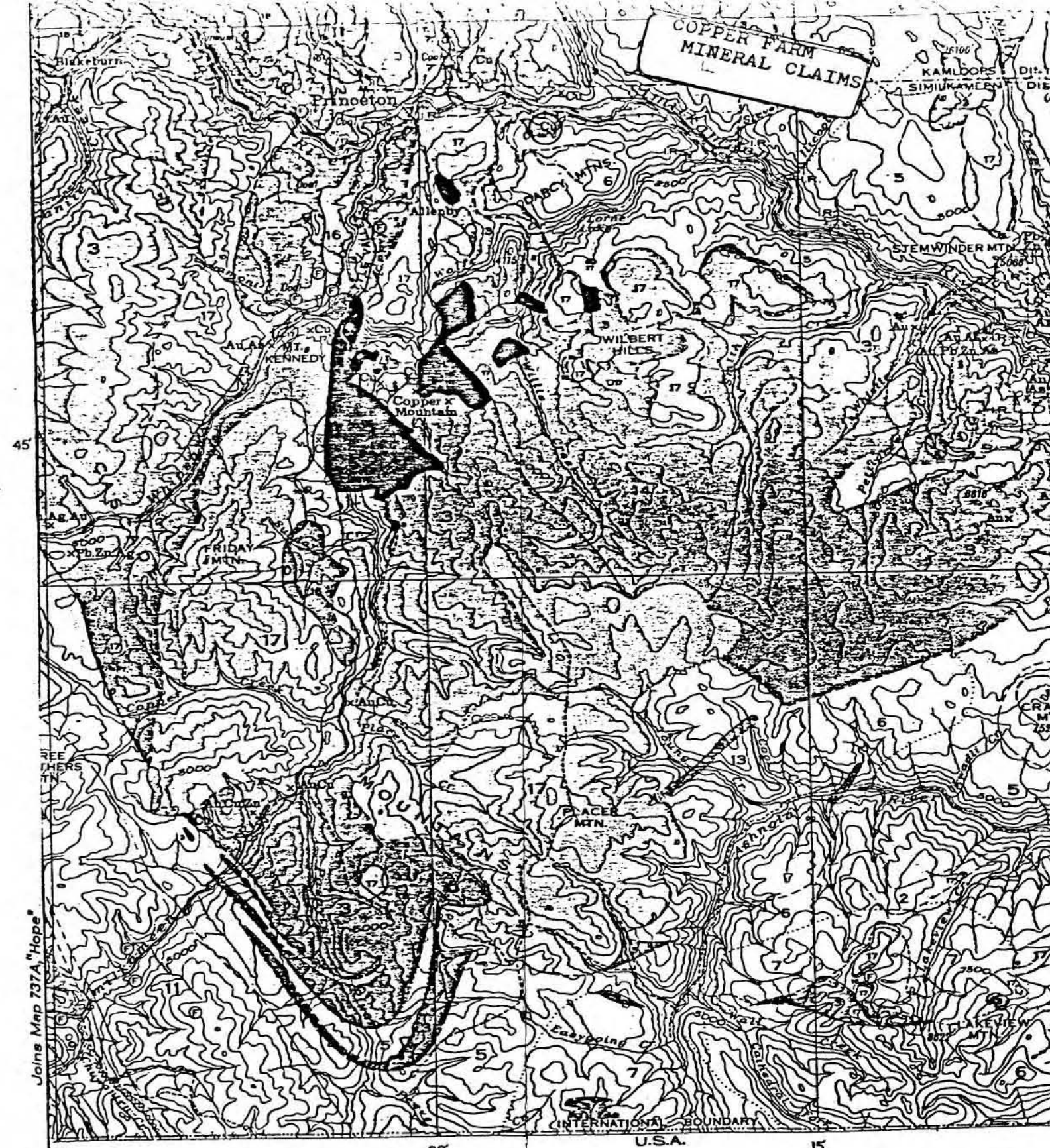
COPPER FARM MINERAL CLAIMS  
SIMILKAMEEN MINING DIVISION  
ACCESS - TOPOGRAPHY

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

11,432

LEGEND

- |  |   |  |
|--|---|--|
| GENOZOIC   | <b>TERTIARY</b><br>MIOCENE OR LATER   |  |
|  | 19  | Valley basalt: vesicular, varicoloured basalt  |
|  | 18  | Plateau basalt: amygdaloidal, brown basalt   |
|  | <b>MIOCENE OR EARLIER</b>   |  |
|  | PRINCETON GROUP   |  |
|  | 16  | 16, Mainly shale, sandstone, and conglomerate; coal  |
|  | 17  | 17, Varicoloured andesite and basalt   |
|  | <b>CRETACEOUS OR TERTIARY</b><br>UPPER CRETACEOUS OR LATER  |  |
|  | 14, 15  | 14, OTTER INTRUSIONS: pink and grey granite and granodiorite<br>15, LIGHTNING CREEK INTRUSIONS: grey quartz diorite  |
|  | <b>CRETACEOUS</b><br>LOWER CRETACEOUS   |  |
| KINGSVALE GROUP  |   |  |
| 12a-b, 13  | 12a, mainly volcanic breccia; 12b, mainly andesite and basalt porphyry<br>13, Andesite and basalt porphyry and volcanic breccia |  |
| PASAYTEN GROUP   |   |  |
| 11   | Mainly grit and shale;<br>11a, mainly purple lava, tuff, and breccia  |  |
| SPENCE BRIDGE GROUP  |   |  |
| 10   | Hard, reddish andesite and basalt   |  |
| <b>JURASSIC (?) AND CRETACEOUS</b><br>UPPER JURASSIC (?) AND LOWER CRETACEOUS<br>DEWDNEY CREEK GROUP |   |  |
| 9  | Tuff, volcanic breccia, grit, argillite; 9a, mainly conglomerate  |  |
| MESOZOIC   | <b>JURASSIC OR LATER</b>  |  |
|  | Copper Mountain Intrusions  | COPPER MOUNTAIN INTRUSIONS: syenogabbro, augite diorite, pegmatite   |
|  | 5, 6, 7   | COAST INTRUSIONS: 5, grey, slightly gneissic granodiorite; 6, mainly reddish, coarse-grained, siliceous granite and granodiorite; 7, light coloured granodiorite, quartz diorite, and gabbro |
|  | Peridotite, pyroxenite, gabbro  | Peridotite, pyroxenite, gabbro   |
| <b>TRIASSIC</b><br>UPPER TRIASSIC<br>NICOLA GROUP  |   |  |
| Varicoloured lava; argillite, tuff, limestone; chlorite and sericite schist                          | Varicoloured lava; argillite, tuff, limestone; chlorite and sericite schist   |  |



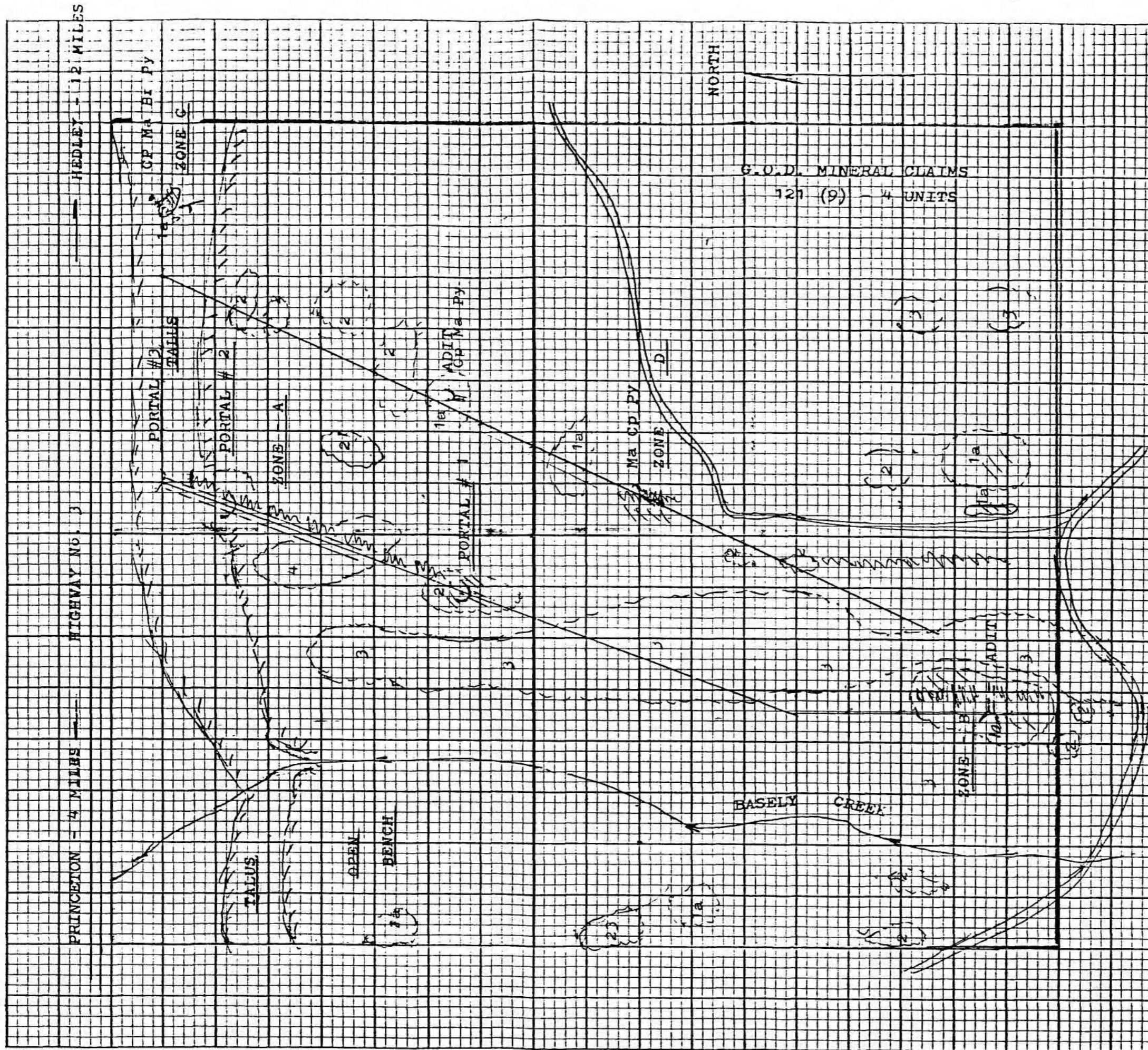
Joins Map 737A, "Hope"

MAP 888A  
**PRINCETON**  
YALE, KAMLOOPS, SIMILKAMEEN,  
AND OSOYOOS DISTRICTS  
BRITISH COLUMBIA  
Scale: 25:1 or 1 Inch to 4 Miles

COPPER FARM MINERAL CLAIMS  
SIMILKAMEEN MINING DIVISION  
REGIONAL - GEOLOGY  
12 May 1983  
SCALE: As Shown



G-6L  
 10 X 10 to the Inch, 5th lines heavy  
 MADE IN CANADA



LEGEND

- 4 PINK QUARTZ PORPHYRY
- 3 COAST INTRUSIVE - PINK GRANODIORITE
- 2 COAST INTRUSIVE - WHITE - GREY DIORITE
- 1 NICOLA GROUP VOLCANICS - MAINLY ANDESITES AND BASALTS
- 1a NICOLA GROUP METASEDIMENTS - LIMESTONE
- 1b NICOLA GROUP METASEDIMENTS - ARGILLITE
- ▲ BEDDING
- ▲ DYKE
- SHEARING - FAULT ZONE
- /// MINERALIZED ZONE - LIMONITES - PY
- GP - MALACHITE - BORNITE
- OUTCROP
- TRENCH

0 200 400 600 800 1000 1200 FEET  
 0 60 120 180 240 300 360 METERS

GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

11,452

PRINCETON COPPER FARM PROPERTY  
 G.O.D. MINERAL CLAIMS GROUP  
 SIMILKAMEEN MINING DIVISION  
 CLAIMS GEOLOGY - MINERAL ZONES

DRWN WJW SCALE: 1 in = 400ft  
 Date: 4-7-83 ONE cm = 50 METERS APPROX.