GEOLOGICAL BRANCH ASSESSMENT REPORT

13,284

GEOLOGICAL AND GEOCHEMICAL EVALUATION

OF THE

WINTER GROUP MINERAL CLAIMS

Cariboo Mining Division British Columbia NTS 93A/11W

Latitude 52° 37' Longitude 121° 19'

HOMESTAKE MINERAL DEVELOPMENT COMPANY VANCOUVER, B.C.

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1.0 INTRODUCTION

1.1 Summary

This report records the results of part of a regional geological and geochemical reconnaissance program carried out in the Quesnel Trough of British Columbia during the summer of 1984 by Homestake Mineral Development Company staff. Some areas received detailed geochemical sampling and geological mapping as follow-up to the reconnaissance work. A linear belt of Upper Triassic black phyllitic argillites on the eastern margin of the Quesnel Trough was the principal exploration target in all areas (0.F. 574 Campbell R.B. 1978).

The Winter Group mineral claims were recorded in December 1983 following the announcement by Eureka Resources of significant gold values intersected in diamond drilling on their Frasergold property. A stratabound precious metal deposit similar to the model described on the Frasergold property 55 kilometer to the southeast was the objective.

During June and July 1984 reconnaissance geochemical soil and silt surveys were conducted over the Winter Group mineral claims. Results indicate single sample weak gold and moderate base metal anomalies. Follow-up work did not improve the significance of the initial results.

A total of 9 rock chip, 6 silt and 34 soil samples were collected within the Winter Group. A reconnaissance geological map of the claims at a scale of 1:10,000 accompanies this report.

1.2 Location and Access

The Winter Group is located north of Quesnel Lake 75 kilometers northeast of Williams Lake, B.C. (see Figure 1 & 2). The property is centered at Latitude 52° 37' and Longitude 121° 19'. There is poor access to the southern portion of the claims via an abandoned logging road. New road construction will access the claims in the west.

Outcrop exposure on the property is poor, occurring primarily as cliffs and creek beds and represents less than 2% of the total area.

1.3 Physiography and Vegetation

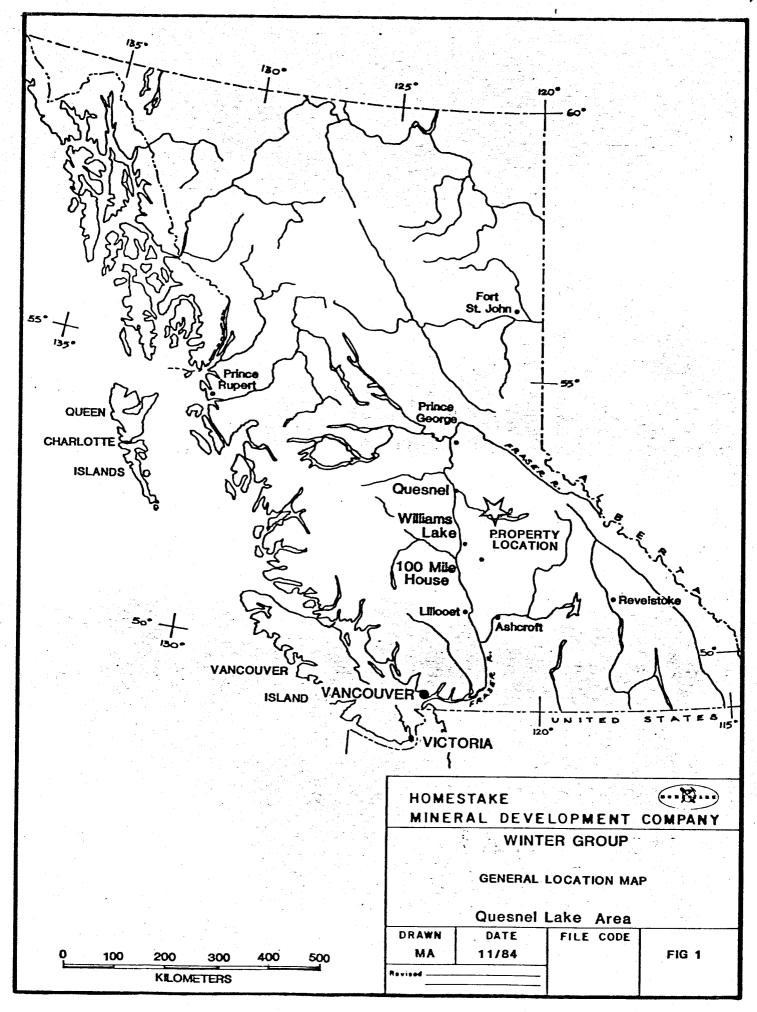
Topographic relief within the Winter Group is moderate to steep with elevations ranging from about 1,220 meters (4,000 feet) a.s.l. on Winter 2 to about 1,675 meters (5,500 feet) a.s.l. on Winter 3. Logging is presently in progress on the western portion of the claims. Vegetation of the unlogged forests generally consist of good commercial stands of cedar spruce and fir with moderate underbrush cover.

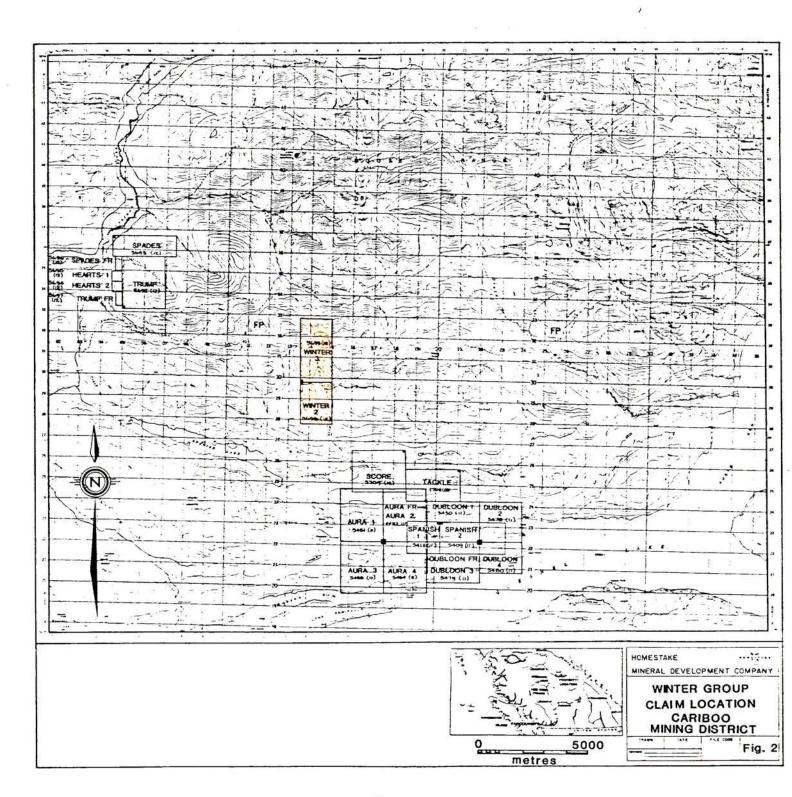
1.4 Claims Schedule: Winter Group

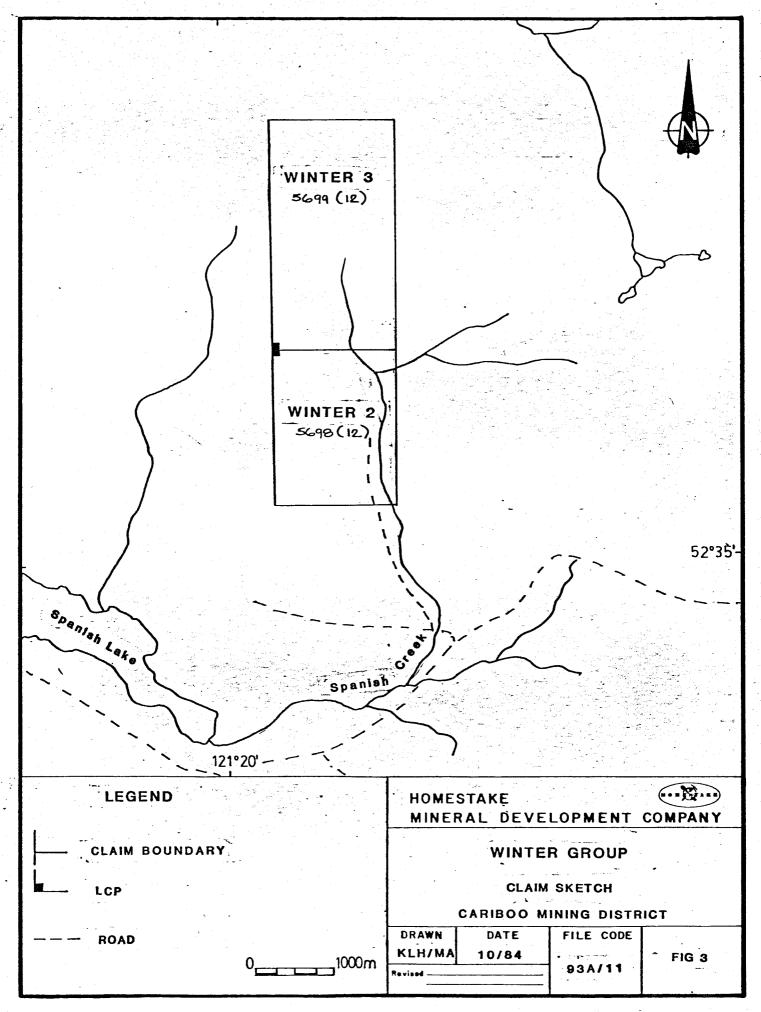
This report deals with those claims listed below and as outlined on the attached Claims Sketch (Figure 3):

Winter Claim Group

Claim	Number	Record	Recording
Name	of Units	Number	Date
Winter 2	12	5698(12)	December 22, 1983
Winter 3	18	5699(12)	December 22, 1983
Total	30 Units		







2.0 REGIONAL GEOLOGY

The Winter Group is situated within a series of Upper Triassic sedimentary and volcanic rocks located near the eastern edge of the Quesnel Trough structural terrane. The Quesnel Trough rocks are fault bounded along the eastern margin against late Paleozoic schists, gneisses and phyllites of the Shuswap Metamorphic Complex of the Omineca Structural Terrane (O.F. 574 Campbell R.B. 1978).

Westward, the Quesnel Trough rocks consist of basic to intermediate volcanic, volcaniclastics, and sedimentary rocks that were intruded by Jurrasic and Cretaceous intrusive rocks.

The region is characterized by elongate northwesterly trending stratigraphic assemblages of sedimentary and volcanic rocks.

The claims are underlain by Paleozoic schists, Mississippian volcaniclastics and Upper Triassic phyllitic argillites and siltstones. The units trend north-south younging westward with major faults transecting the property (0.F. 920 Struik, L.C. 1982). Metamorphism reaches greenschist facies.

3.0 PROPERTY GEOLOGY

Geological mapping was hindered by deep snow in late spring. Subsequent property visits confirmed a lack of outcrop (less than 2% of the total area). All located outcrops have been accurately plotted at a scale of 1:10,000 on Map 1 and published maps have been consulted for the extrapolation of contacts.

3.1 Geology

The rocks have been divided into three map units. These include:

<u>Unit 1</u>, green to orange-white schist; <u>Unit 2</u>, dark to light green volcaniclastic; <u>Unit 3</u>, grey to black phyllitic argillite with minor siltstone.

The Hadrynian to Paleozoic Snowshoe Group, Map Unit 1, outcrops on the west side of the major south flowing creek on the Winter #3 claim. On the property this unit occurs as a greenish-white chloritic schist or as a less strongly metamorphosed orange-white sericitic phyllite.

Map Unit 2 consists of dark to light green well laminated volcaniclastics. This unit, the Slide Mountain Group (Mississippian to Permian), is characteristically chloritic. Locally, restricted zones of fine grained disseminated pyrite, up to 2%, are observed.

The Upper Triassic assemblage, <u>Unit 3</u>, consists of grey to black foliated phyllitic argillite and siliceous siltstone. Local variations within the argillite include graphitic zones, quartz stringers and coarsely spotted iron-carbonate alteration. This unit may correlate with the "knotted phyllite" unit as described on the Frasergold property currently being explored by Eureka Resources and Amoco. Siliceous

siltstone beds 3 to 15 centimeters in width carry fine grained disseminated pyrite locally up to 5%.

3.2 Alteration

Pervasive weak to moderate chloritic alteration occurs in the volcaniclastics of Unit 2. The iron-carbonate alteration, characteristic of the Upper Triassic assemblage observed in Unit 3, varies from nil to coarsely spotted. Their regional distribution suggests that they are porphyroblasts which were formed in response to a tectonic or metamorphic event. This conclusion reduces the significance of this texture as a guide to gold distribution.

3.3 Mineralization

No mineralization of economic significance was observed within the Winter Group. Pervasive fine grained disseminated pyrite occurs in the siliceous siltstone of Unit 3. Concentrations of up to 5% were observed near the center of the property. Unit 2 carries small zones of fine grained disseminated pyrite and blebs of pyrite. In one sample (4-7127) minor galena was observed.

3.4 Structure

Structural measurements were taken where exposure permitted. Two phases of deformation can be measured, however, the conflicting information limits structural interpretation. A major structural linement observed on stereophotographs trending north south through the property can be readily identified on Winter 3.

4.0 GEOCHEMISTRY

4.1 Sampling Procedures

Soil samples were initially collected on reconnaissance traverses perpendicular to the stratigraphy. Sampling intervals varied from 300 meters initially to 100 meters on follow up work. All soil and silt traverses were established with flagging, compass, altimeter and hip chains. Each sample site was identified with flagging and the appropriate sample number. Samples of the B horizon of the soil profile were collected from depths of 15 to 40 centimeters. The 500 to 750 gram sample was described as to colour, size fraction, and organic content prior to being placed in a kraft paper bag. All samples were dried prior to shipment to the analytical laboratory.

Rock samples were collected as composite grab samples or chip samples. Chip samples were collected in a narrow 5 to 10 centimeters swath as continuous chips across the strike of lithological units. All samples were terminated at prominent lithological or mineralogical contacts. Lengths of samples ranged from 2 to 5 meters. One to three kilograms of sample were collected.

Stream sediments were collected, during soil reconnaissance traverses. On stream sediment traverses, the samples were collected at intervals 200 to 300 meters. All samples were collected from the center of the stream. Field data including the width, depth and flow rate of the stream, and the colour, composition and organic content of the sample were recorded at each sample site. Sample weight ranged from 300 to 500 grams and each was stored in kraft paper bags. Samples were dried prior to shipment to the laboratory.

Each sample was assigned a nine digit code:

$$\underline{A} \ \underline{A} - \underline{2} \ \underline{5} - \underline{1} - \underline{7} \ \underline{3} \ \underline{0} \ \underline{4}$$

The first two digits are letters which refer to the claim group. The third and fourth digits are numbers identifying the individual claim. The fifth digit classifies the type of sample as follows:

- 1 = silt sample
- 3 = soil sample
- 4 = rock sample

The final four digits uniquely specify the sample.

For example, in AA-25-1-7304, "AA" refers to the Quesnel Lake area, "25" designates the Winter 2 mineral claim, "1" classifies the sample as a silt sample and "7304" names the specific sample.

On most maps, the initial four digits are omitted.

4.2 Geochemical Results

A total of 49 rock, soil and silt samples were collected during the initial reconnaissance traverses and follow-up work. All of the analytical results for gold were plotted on the "Gold Geochemistry" map at a scale of 1:10,000 (see Map 2).

Gold values ranged as high as 20 ppb in soils, 83 ppb in silts and 6 ppb in rock samples. Some base metal values were returned, 766 ppm Cu (3-7382) and 656 ppm Zn (3-7455), but were without corresponding precious metal values.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Much of the area covered by the Winter Group is underlain by Upper Triassic phyllitic argillites and siltstone. These lithologies may correlate with the similar lithologies which host the gold occurrence currently being explored by Eureka Resources and Amoco on their Frasergold property.

No significant precious metal mineralization was discovered. Some single sample, low order gold geochemical anomalies do exist, but these are not considered significant.

A major structure interpreted as a vertical fault transects the property north to south. This fault apparently offsets the low angle fault which overthrusts the Triassic assemblage on top of the Paleozoic Snowshoe Formation.

On the basis of the structural complexity, the absence of mineralization and the lack of encouraging geochemical results, no further work is warranted on these claims at this time.

6.0 REFERENCES

Campbell, R. B., 1978 Geology of the Quesnel Lake Map - Area B.C. 1:125,000 G.S.C. Open File 574.

Campbell, R. B., 1963 Quesnel Map Sheet 1" to 4 miles; G.S.C. Map 1-1963.

Struik, L.C., 1982 Spanish Lake Map - Area B.C. 1:50,000, G.S.C., Open File 920.

APPENDIX A

STATEMENT OF EXPENDITURES

WINTER GROUP

LABOUR (field 1984)

G. Cooper:	June 9		
	July 12,13,15		
	4 days @ \$122/day		\$ 488.00
M. O'Donnell:	June 9		
	1 day @ \$108/day		\$ 108.00
F. Speidel:	June 9 July 12,13		
	3 days @ \$93/day		\$ 279.00
P. Mudry:	July 15		
	1 day @ \$133/day		\$ 133.00
J. F. Gillan:	July 15		
	1 day @ \$250		\$ 250.00
		Sub Total	\$ 1,258.00
LABOUR (office	e 1984)		
G. Cooper:	2 days @ \$122/day		244.00
M. P. Mudry:	1 days @ \$133/day		133.00
Drafting & Typ	oing		200.00
		TOTAL LABOUR	\$ 1,835.00
TRANSPORTATION			
Truck:	One Truck 4 days @ \$50/day		200.00

TRAVEL

Travel Expenses, Groceries,		
Accommodation, Meals 10 man days @ \$50/day		500.00
MATERIALS AND SUPPLIES		
Flagging, Topo fil, Kraft Bags, etc.		100.00
ANALYTICAL		
9 Rock sample prep	@\$2.75	24.75
34 Soil sample prep	@\$0.60	20.40
6 Stream Sediment		
Sample prep	@\$0.60	3.60
49 30 Element ICP	@\$6 . 00	294.00
49 Geochem Au by FA+AA	@\$5.50	269.50
37 Geochem Hg by AA	@\$3.00	111.00
	TOTAL GEOCHEMISTRY	723.50
GRAND TOTAL		3,358.50

APPENDIX B

GROUPING NOTICES

AND

ASSESSMENT FILINGS

WINTER GROUP



Ministry of Energy, Mines and Petroleum Resources MINERAL RESOURCES BRANCH-TITLES DIVISION

MINERAL ACT

FORM I

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NOTICE TO GROUP

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Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

MINERAL ACT

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APPENDIX C

ANALYTICAL PROCEDURES

ANALYTICAL PROCEDURES

All analyses were completed by Acme Analytical laboratories in Vancouver, B.C.

All rock, soil and silt samples were analysed utilizing 30 element Inductively Coupled Argon Plasma (ICP) techniques and geochemical fire assay plus atomic absorption (FA+AA) analytical procedure for gold.

All samples were prepared to a -100 mesh size fraction. Half gram samples are digested with 3 ml of dilute regia at 95°C for one hour, then diluted to 10 ml with water. Thirty elements were then analysed by ICP (Appendix D). This technique enables only a partial leach for 20 of the 30 elements analysed.

Gold analyses required 10 gram samples that were subjected to a fire assay preconcentration techniques to produce a lead button. The button was then digested with hot aqua regia. The quantity of gold was then determined from the solution by graphite furnace Atomic Absorption technique.

Mercury analyses require 0.5 gram samples which are digested with aqua regia and diluted with 20% HCl. The quantity of mercury is then determined by flameless Atomic Absorption.

APPENDIX D GEOCHEMICAL RESULTS WINTER GROUP

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APPENDIX E

STATEMENT OF QUALIFICATIONS
AND FIELD PERSONNEL

CERTIFICATE

I, JOHN F. GILLAN, of the City of Vancouver, British Columbia, do hereby certify that:

- 1. I am currently employed as Regional Geologist by Homestake Mineral Development Company with offices at 201, 856 Homer Street, Vancouver, B.C.
- 2. I am a Fellow of the Geological Association of Canada.
- 3. I am registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
- 4. I have been employed continuously as a geologist since 1971.
- 5. I graduated from the University of Western Ontario in geology (Bachelor 1969) and completed the Masters program in geology at Memorial University of Newfoundland (1971).

6. I supervised the preparation of this report which is based on my personal observations on the property as well as field work completed under my supervision

Vancouver, B.C.

John F. Gillan, P. Geol. FGAC

Regional Geologist

Homestake Mineral Development

STATEMENT OF QUALIFICATIONS

- I, George N. Cooper of 1662 Ralph Street, North Vancouver, British Columbia do hereby certify that:
 - I am currently employed as a geologist by Homestake Mineral Development Company with offices at #201 - 856 Homer Street, Vancouver, B.C.
 - 2. I have worked in the field of mineral exploration since 1977.
 - 3. I graduated from the University of McMaster with a B.Sc. in geology (1980).
 - 4. This report is based on my personal observation of the property and a review of all available pertinent data.

Respectfully submitted,

George N. Cooper

Geologist,

HOMESTAKE MINERAL DEVELOPMENT COMPANY

Karen Harrap BSc. Queens 1983 27 Harfleur Rd. Geologist C.E.T. Mining Engineering Agincourt, Ontario M1T 2X7 223 Trelaun Ave. Megan O'Donnell BSc. McGill 1984 Geologist Oakville, Ontario L6S 4R3 Friedrich Speidel BSc. McGill 1984 401 Des Ormes Geologist Laval, Quebec H7X 1R4 Phillip Mudry BSc. Calgary 1978 301-909 2nd Ave.N.W. Geologist Calgary, Alberta John F. Gillan BSc. Western 1969 201 -856 Homer St. Regional Geologist MSc. Memorial 1971 Vancouver, B.C.

