Title:

Geological and Geochemical Report on

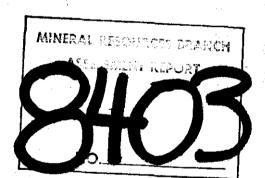
the Magee Property

Claims:

Magee 1 1716 (9 units) Magee 2 1717 (9 units) Magee 3 1718 (9 units)

Crown Grants

Melvin 1867 Melvin No. 1 Fr 1868 Melvin No. 2 Fr 1869 Melvin No. 3 Fr 1870 Tacoma 5107 Chinook 5108 Boise 5109 Grand Ridge 5110 Millie 5111 Snoqualmie 5112



Mining District: Skeena

NTS Location:

550 56' 1290 55'

Owner:

Western Hemisphere Mining Corporation

Consultant:

Nevin Sadlier-Brown Goodbrand Ltd.

Authors:

D.J. Brownlee, Geologist

B.D. Fairbank, P.Eng.

Dates Work Done:

July 16 - 31, 1980

Submitted:

16, SEP, 1980

### NEVIN | SADLIER-BROWN | GOODBRAND | LTD

Suite 401 - 134 Abbott St., Vancouver, B.C. Canada V6B 2K4 (604) 683-8271

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Mining District: Skeena

NTS Location:

550 561

129° 55'

Owner:

Western Hemisphere Mining Corporation

Consultant:

Nevin Sadlier-Brown Goodbrand Ltd.

Authors:

D.J. Brownlee, Geologist

B.D. Fairbank, P.Eng.

Dates Work Done:

July 16 - 31, 1980

Submitted:

16. SEP. 1980

GEOLOGISTS AND ENGINEERS

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Suite 401 - 134 Abbott St., Vancouver, B.C. Canada V68 2K4 (604) 683-8271

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### SUMMARY

Nevin Sadlier-Brown Goodbrand Ltd. conducted a geological and geochemical survey on Western Hemisphere Corporation's Magee Property, Skeena Mining District.

This report is for submittal under Mineral Act Regulations to apply assessment work.

The property is located at Latitude 55° 56' and Longitude 129° 55'. The Magee property consists of the Magee 1 to 3 mineral claims and the Melvin, Melvin No. 1 Fr, Melvin No. 2 Fr, Melvin No. 3 Fr, Tacoma, Chinook, Boise, Grand Ridge, Millie and Snoqualmie Crown Grants.

The property is located on the eastern margin of the Bowser Basin in the Coast Crystalline Belt.

The property is underlain by overturned Hazelton assemblage rocks, forming the Mt. Rainy syncline, and unconformably overlain by the Bowser assemblage.

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The rocks contain series of northeast striking shear zones which dip steeply northwest. These shear zones contain mineralized quartz veins.

Geology was mapped at a scale of 1:20 000 (Drawing \*).

In conjunction with the geological survey, fifteen rock samples were taken and analyzed for Ag, Pb, and Cu. Also, fifty-two soil samples were collected and analyzed for Ag, Pb, and Cu. These samples were taken on two lines and are portrayed on map and profile, Drawing 5.

The results showed good correspondence to the shear zones mapped in the area.

We have recommended to our client that exploration be continued.

1

### 1.0 INTRODUCTION

### 1.1 Terms of Reference

Nevin Sadlier-Brown Goodbrand Ltd. has been retained by Western Hemisphere Mining Corporation as technical consultants on their Magee Property. We conducted geological and geochemical surveys on the claims, during July 1980. We have prepared this report for submission to the Ministry of Energy, Mines and Petroleum Resources as required under Mineral Act Regulations to apply assessment work.

### 1.2 Location and Access

The property is located at Latitude 55° 56' and Longitude 129° 55' and is covered by NTS sheet 103P/13 (Drawing 1).

Access is by helicopter from the Municipality of Stewart,

British Columbia.

### 1.3 Terrain

The property lies on the eastern margin of the Cambria

Icefield in the Coast Mountains. The topography is mountainous,
with local relief up to 1500 metres. The drainage is dentritic

. . ]

in pattern and is generally glacial fed. The vegetation is of alpine grasses, flowers and mosses, with seventy-five percent of the property ice and tulus covered.

### 1.4 Property

The Magee Property consists of three contiguous mineral claims (Drawing 2):

<u>Claim</u>	Record No.	<u>Units</u>	
Magee 1	1716	9	
Magee 2	1717	9	
Magee 3	1718	9	

and ten adjacent Crown Grants:

Melvin	1867
Melvin No. 1 Fr	1868
Melvin No. 2 Fr	1869
Melvin No. 3 Fr	1870
Boise	5109
Snoqualmie	5112
Tacoma	5107
Chinook	5108
Grand Ridge	5110
Millie	5111

### 1.5 Previous Work

The Melvin group of claims were acquired by the Melvin Syndicate in September of 1928. In the latter part of the

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year two showings were found on the property. One was a narrow vein on the boundary between Crown Grants 4731 and 1867 (Drawing 2), with values up to 125 oz. of silver being reported. A second zone was found in a shear zone up to a foot wide with 6 inches of sulphide ore at one location reportedly assaying nearly 700 oz. silver.

A tunnel was driven on the shear starting in the fall of 1928, and continued in 1929. According to a Premier Gold Mining Co. Ltd. map this adit was driven a total of 128 feet. Four samples were taken and assayed:

Location	<u>Width(ft</u> )	<u>Gold</u>	Silver	<u>Lead%</u>	Zinc%
Portal + 36'	1.0	0.01	25.24	1.5	3.4
+ 40'	1.0	Tr	13.88	Tr	-
+ 115'	3.0	Tr	4.76	Tr	_
+ 128'	6.0	Tr	0.72	Tr	Tr

Also, twenty feet from the portal a winze was sunk to a depth of seven feet. A 26 inch vein was exposed and two samples were taken assaying:

Width(ft)	Gold oz/ton	Silver oz/ton	<u>Lead%</u>	Zinc%
14	0.06	2.0	Tr	7.0
12	0.02	5.5	Tr	7.0

No further indication of work being done on the Melvin property has been found till the staking of the Magee 1 to 3 claims in August 1979. These showings were not prospected or surveyed during the time the present work was done.

### 2.0 GEOLOGY

### 2.1 Regional Geology

The property is situated on the western boundary of the Bowser Basin in the Coast Crystalline Belt. There are four plutons, ranging in composition from granite through to porphyritic augite diorite in the region.

Of these four plutons, two, the Hyder and Glacier Creek Plutons are significant in the geological setting of the property (Drawing 3). The Hyder quartz monzonite is situated in the area of Hyder and Stewart, extending up along the Marmot River. The quartz monzonite ranges from a medium grained porphyritic biotite quartz monzonite near Hyder, to a hornblende quartz monzonite along the Marmot River. The

Glacier Creek augite diorite is situated north of Mt. Magee on the Glacier Creek. The pluton is basically a massive dark brownish green augite diorite which unlike the Hyder pluton has been extensively and intensely altered.

These plutons intrude the lower to middle Jurassic
Hazelton assemblage. The Hazelton assemblage is composed
of volcanogenic sediments with interbedded siltstone,
sandstone, and limestone. The Hazelton assemblage is unconformably overlain by the Bowser assemblage, Upper Jurassic
in age, also intruded by the Glacier Creek pluton.

The overlying Bowser assemblage found in the area is a lower unit comprised mainly of red and green conglomerates grading into thin bedded dolomites and sandstones.

Intruding these sediments are lamprophyre dikes and minor basalt dikes.

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### 2.2 Property Geology

The property is comprised of reddish to beige colored rhyodacitic agglomerates with interbeds of minor limestone, siltstone, and some graphitic siltstone (Drawing 4). These rocks comprise the Hazelton assemblage and have been mapped as a single complete unit. The assemblage has been overturned and forms the Mount Rainy syncline with beds dipping steeply to the northwest and trending to the northeast, except for the northwest corner of the property where the beds are upright.

On the eastern portion of the property, the rocks are fine grained green sandstones and siltstones, unconformably overlying the Hazelton assemblage. These rocks comprise the Bowser assemblage and are middle to upper Jurassic in age.

This sequence of rocks has been cut by northwest trending lamprophyre dikes, of which one was found on the northwest ridge of the property. The dike is .5 - 1.5 metres wide and 30 metres long weathering a light dirty brown.

Throughout the property are generally northeast trending shears, 0.1 to 2 metres wide and dipping steeply to the northwest. These shear zones generally have accompanying quartz veins which have been extremely weathered leaving extensive limonite staining. Where quartz veins do accompany the shear zones, there is extensive fracture filling by the quartz in the wall rock of the shear zone. All mineralization found on the property is found in, or adjacent to the quartz veins.

While quartz veining is dominant, there are veins of jasper, generally trending west-east in the central area of the property. To the northwest of the jasper veins and below them in elevation is a stringer like zone of quartz with extensive specular hematite mineralization trending east-southeast and dipping moderately to the northeast. To the east of these veins and north of the jasper veins is a barite stringer with very minor galena present. This stringer is 0.5 metres wide and 10-15 metres long trending east-west and dipping steeply north.

### 2.3 Mineralization

The mineralization on the property occurs in quartz veins and adjacent to the quartz veins. Pyrite, and minor pyrrhotite are the only minerals occurring adjacent to the quartz veins, and this is very sparse.

The quartz is crystalline and vuggy, well coated with limonite and manganese staining.

Chlorite is the major mineral accompanying the quartz except at the 500 foot elevation on the south slope between Mt. Rainy and Mt. Magee. Here, specular hematite is the major constituent mineral along with the quartz.

Galena is present, but in very minor amounts, in the barite stringer.

### 3.0 GEOCHEMISTRY

Fifteen rock samples were taken for analysis. They were taken from shear zones, mainly weathered quartz, and analyzed for copper (Cu), lead (Pb), and silver (Ag). Sample #8995 was taken from the barite stringer, and analyzed for Cu, Pb, and Ag.

None of these samples, except for #8994, gave anomalous values. This is attributed to the weathering and leading of the shear zones (Drawing 5). Leaching was reported at depths of 60 metres in the Porter-Idaho Mine.

A total of fifty-two (52) soil samples were taken, forty-nine (49) on two soil lines (Drawing 6). Line A with 25 smaples was run along the top of the ridge between Mt. Rainy and Mt. Magee for a distance of 350 metres. Line B with 24 samples was run bearing 300° from a point 100 metres south of the Magee legal corner post.

Plotting the fifty-two (52) values on histograms it was decided the anomalous value cut-off for copper (Cu) was 110 ppm (parts per million), 140 ppm for lead (Pb), and 7 ppm for silver (Ag) (Drawing 6).

Line B gave no anomalous results except for 162 ppm lead at 2 + 65 west. This poor response is probably due to the thickness of the talus at this elevation. Line A gave good results, which also gave good correspondence to the shear zones mapped in the area except in the region of the old workings. The response which Line A gave shows that geochemistry should indicate shear zones and accompanying mineralized quartz veins in areas of shallow overburden.

### 4.0 <u>CONCLUSIONS AND RECOMMENDATIONS</u>

The mineralization on the property is limited to quartz veins occuring in or adjacent to shear zones. Further exploration should concentrate on finding and delineating the shear zones.

In areas where there is shallow overburden, soil geochemistry will provide a means of tracing shear zones. In view of this it has been recommended that a further geological mapping and some trenching is recommended.

Respectfully submitted,

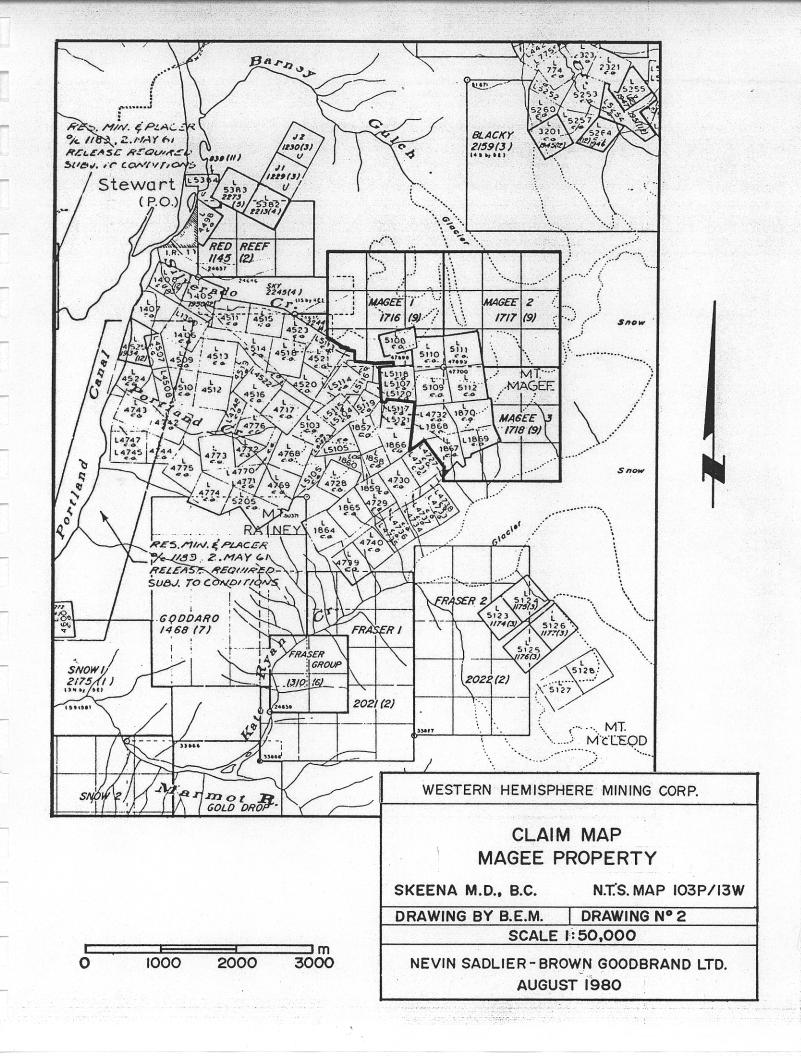
D.J Brownlee, Geologist

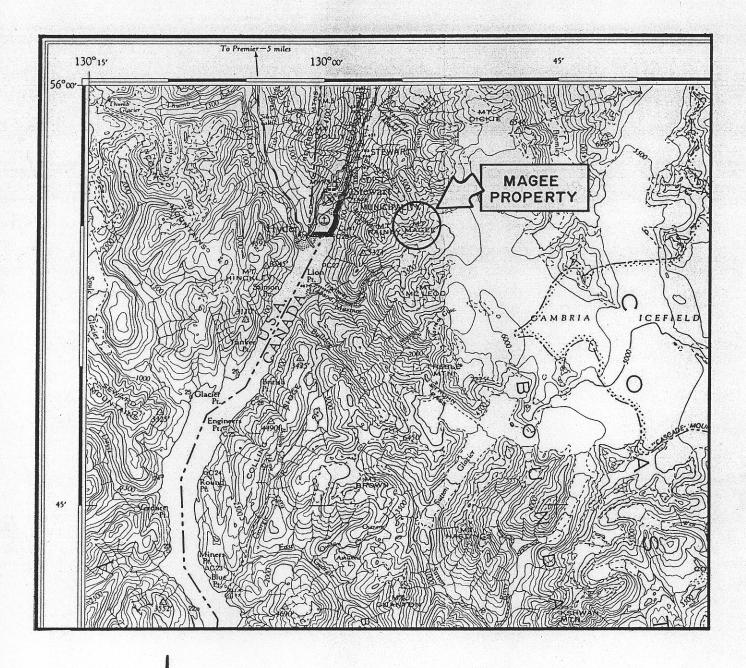
B.D. Fairbank, P.Eng.

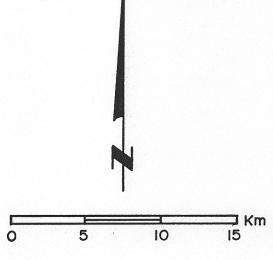
DJB/pm

### REFERENCES

- Grove, E.W.; "Geology and Mineral Deposits of the Stewart Area, British Columbia", Bull. No. 58, British Columbia Department of Mines and Petroleum Resources, 1971.
- Hansen, G.; "Bear River and Stewart Map-Areas, Cassiar District, B.C.", Geological Survey of Canada, Memoir 159, 1929.
- Hansen, G.; "Portland Canal Area, British Columbia", Geological Survey of Canada, Memoir 175, 1935.







WESTERN HEMISPHERE MINING CORP.

# LOCATION MAP MAGEE PROPERTY

SKEENA M.D., B.C.

N.T.S. MAP 103P/NW

DRAWING BY B.E.M. DRAWING N° I

SCALE 1:250,000

NEVIN SADLIER-BROWN GOODBRAND LTD. AUGUST 1980



# CHEMEX LABS LTD.

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: 984-0221 AREA CODE: 604 TELEX: 04-352597

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

. REGISTERED ASSAYERS.

### CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55144

TO:

Nevin Sadlier-Brown Goodbrand Ltd.,

INVOICE NO. 37787

401 - 134 Abbott St., Vancouver, B.C.

RECEIVED

August 1, 1980

V6B 2K4

ANALYSED

August 13, 1980

	102 -11.			
ATTN:	WESTERN	HEMISPHERE	Douglas	Brownlee

SAMPLE NO. :	PPM	PPM	PPM	
57(iii EE 770	Cu	Pb	Ag	
LINE A O W	34	16	1.0	
10	84	230	9.4	
20	86	200	4.6	
30	42	64	2.4	
45	38	68	2.4	
50	38	60	2.2	
<b>5</b> 5	48	52	1.4	
60	28	26	2.4	
70	108	28	1.4	
80	8	22	1.6	
105	130	36	4.2	
125	134	260	18	
135	88	172	5.8	
145	124	94	2.6	•
160	56	58	0.8	
175	128	64	1.0	
190	60	200	1.4	
210	18	44	0.2	
230	12	58	0.1	
250	30	76	0.4	
265	24	192	0.6	
285	34	140	0.8	
310	14	68	0.4	·
330	18	86	0.1	
LINE A 350 W	24	210	3.4	
257804	10	470	1.6	
267804	36	70	1.2	
267808	54	310	3.0	
LINE B O W	44	56	1.0	
10	52	82	0.6	
20	46	64	1.0	
40	42	58	0.6	
50	44	68	0.6	
60	26	84	0.1	
70	18	74	0.4	
80	24	46	0.1	
95	22	56	0.1	
105	20	72	0.1	
120	22	62	0.1	
LINE B 130 W	22	32	0.1	
2111 D 130 M	<del></del>	<u> </u>	O• T	

MEMBER

CERTIFIED BY: .....



TO:

### APPENDIX A (cont'd)

NORTH VANCOUVER, B.C. V7J 2C1 CANADA TELEPHONE: 984-0221 AREA CODE: TELEX:

212 BROOKSBANK AVE.

604 04-352597

CHEMEX LABS LTD.

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

### CERTIFICATE OF ANALYSIS

Nevin Sadlier-Brown Goodbrand Ltd.,

401 - 134 Abbott St.,

Vancouver, B.C.

V6B 2K4

ATTN: WESTERN HEMISPHERE

Douglas Brownlee

CERTIFICATE NO.

55145

INVOICE NO.

37787

RECEIVED

August 1, 1980

ANALYSED

August 13, 1980

WEDIEM HIMITOTHER		Douglas Brownies		
AMPLE NO. :	PPM	PPM	PPM	
	Cu	Pb	Ag	
INE B 140 W	22	34	0.1	
150	20	50	0.1	
175	26	44	0.1	
195	20	56	0.1	
205	20	88	0.1	
225	14	54	0.1	
240	18	70	0.1	
255	20	92	0.2	
265	28	162	0.2	
285	46	90	0.1	
305	28	34	0.1	
INE B 320 W	16	22	0.1	



ATTN:

### APPENDIX A (cont'd)

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: AREA CODE: 604 TELEX: 04-352597

CHEMEX LABS LTD.

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

. REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO.

55167

TO: Nevin Sadlier-Brown Goodbrand Ltd. 401 - 134 Abbott St.

INVOICE NO.

No. 19

37790

Vancouver, B.C.

RECEIVED

Aug. 1/80

V6B 2K4

ROCKS

ANALYSED

Aug. 13/80

TTN: Douglas	s Brownlee		ROCKS	ANALYSED	Aug. 13/80
SAMPLE NO. :	PPM	PPM	PPM		
SAMPLE NO. :	Cu	РЪ	Ag		·
8986B	98	26	2.6		
8987	148	2	4.8		
8988	10	106	0.1		
8989	4	18	0.1		
8990	4	14	0.1		
8991	38	76	2.8		
8992	22	20	0.1		
8993	2	4	0.1		
8994	182	470	>20		
8995	118	8	1.6		
8996	8	64	0.6		
8997	4	4	0.2		
8998	22	96	1.8		
8999	8	8	0.1		
9000B	48	4	0.1		·

MEMBER CANADIAN TESTING CERTIFIED BY: ..

### APPENDIX B

### Method of Analysis

- PPM Copper: A 1.0 gm portion of sample is digested in conc. perchloric-nitric acid (HClO<sub>4</sub>-HNO<sub>3</sub>) for approximately 2 hrs. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Copper is determined by atomic absorption techniques.
- PPM Lead: A 1.0 gm portion of sample is digested in conc. perchloric-nitric acid (HClO<sub>4</sub>-HNO<sub>3</sub>) for approximately 2 hrs. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Lead is determined by atomic absorption techniques using background correction for lead and silver analysis.
- PPM Silver: A 1.0 gm portion of sample is digested in conc. perchloric-nitric acid (HClO<sub>4</sub>-HNO<sub>3</sub>) for approximately 2 hrs. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Silver is determined by atomic absorption techniques using background correction for lead and silver analysis.

### APPENDIX C

### Itemized Cost Statement

· I	FEES						
	Name	Position	Dates	<u>s</u>	Wage	Cost	
	B.D. Fairbank	P.Eng.	Ju1y	16	\$312/day	\$ 312	
	T.L. Sadlier-Brown	Geologist	July	24,25	\$460/day	920	
	D.J. Brownlee	Geologist	July	16-31	\$225/day	3600	
	I. Montgomery	Geologist	July	16-31	\$155/day	2480	
					Sub Total	\$7312	
11	DISBURSEMENTS Travel, D.J. Brownlee				, 31		
	Incl. 1 night hotel accomodation Stewart, Vancouver return						
	Freight, to Stewart \$116.73, return \$131.60						
	D.J. Brownlee, I. Montgomery July 30th Hotel accomodation						
	T.L. Sadlier-Brown, t	ravel to Stew	art			174.25	
	Food for 16 days, and	propane				234.16	
	Helicopter, @ \$400/hr, July 17th - 2 hrs. July 24th5 hrs., July 25th5 hrs.						
	July 30th - 2 hrs					2000.00	
	Soil samples (52), an					166.14	
	Rock Samples (15), an	alyzed for Cu	, Pb,	and Ag		68.17	
					Sub Total	\$3549.95	

TOTAL \$ 10,861.95

### APPENDIX D

### STATEMENT OF QUALIFICATION

- I, Douglas J. Brownlee, hereby certify that:
- 1. My residence address is 206 1330 Bute Street, Vancouver, B.C., my office address is 4th floor -134 Abbott Street, Vancouver, B.C., V6B 2K4; and that I am a geologist by occupation
- I graduated from the University of Alberta in June, 1980 with a B.Sc. (specialization) in Geology. I have been practicing my profession since January, 1980
- I conducted the geological work described in this report.

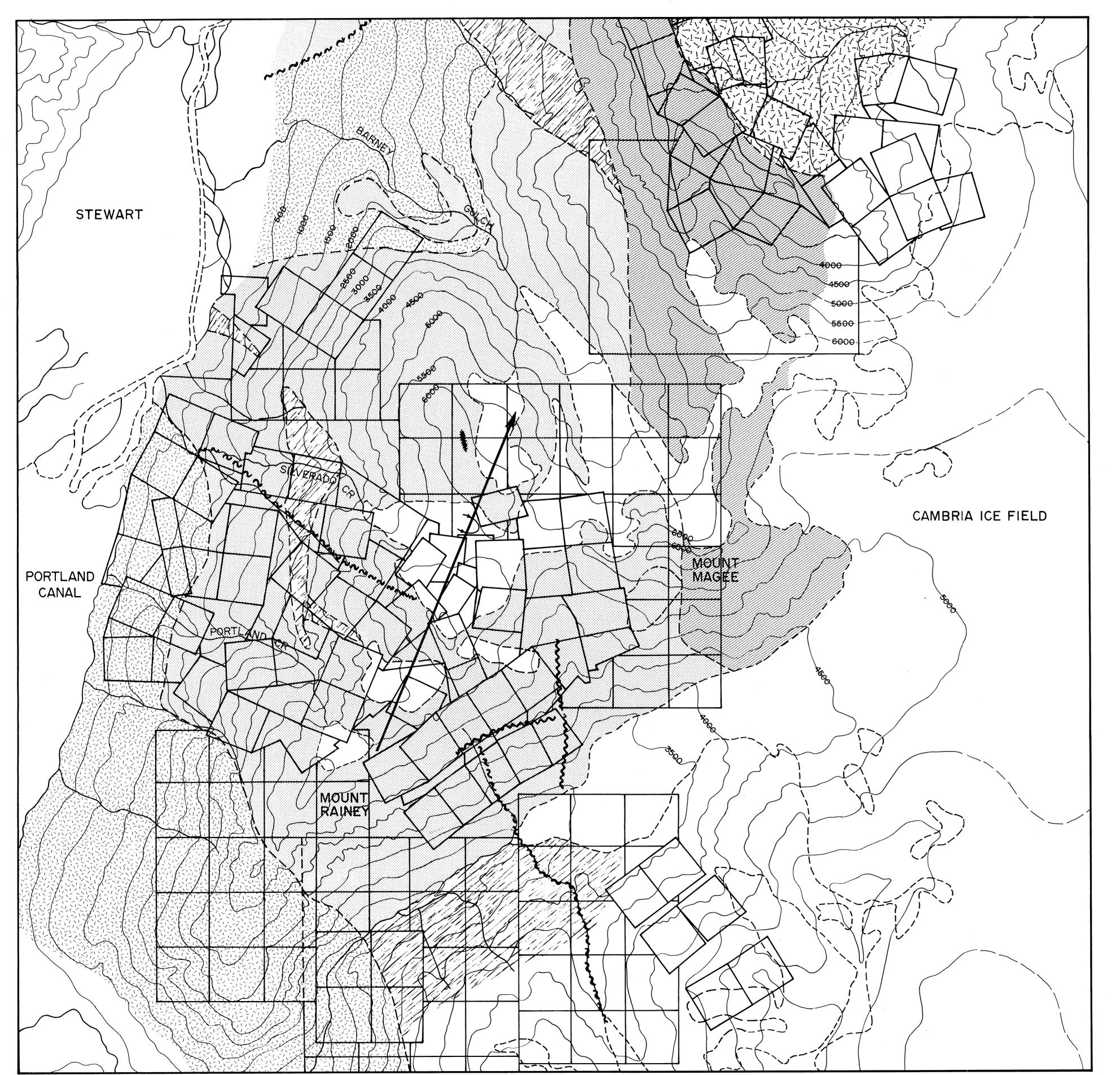
Douglas J. Brownlee, Geologist

### APPENDIX D

### STATEMENT OF QUALIFICATION

- I, Brian D. Fairbank, hereby certify that:
- My residence address is 342 West 15th Street, North Vancouver, B.C. V7M 1S5
- I am a consulting geologist with the firm of Nevin Sadlier-Brown Goodbrand Ltd., 401-134 Abbott Street, Vancouver, B.C. V6B 2K4
- 3. I hold a B.A.Sc. in Geological Engineering from the University of British Columbia. I have been practicing my profession since 1973, and I am a member of the Association of Professional Engineers (Geological) of the Province of British Columbia.
- 4. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy
- 5. I hold no direct or indirect beneficial interest in the above property nor in the securities of Western Hemisphere Corporation.

B.D. Fairbank, P.Eng.



## LEGEND

GLACIER CREEK AUGITE DIORITE



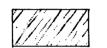
HYDER QUARTZ MONZONITE



BOWSER ASSEMBLAGE



HAZELTON ASSEMBLAGE



HAZELTON EQUIVALENT



TEXAS CREEK GRANODIORITE



LAMPROPHYRE DYKE

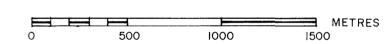


MT. RAINY SYNCLINE



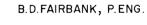
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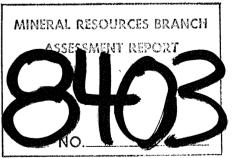




To accompany report entitled "GEOLOGY AND GEOCHEMICAL REPORT ON THE MAGEE PROPERTY", by D.J.Brownlee, Geo. & B.D.Fairbank, P.Eng. Dated 15.58P.1980







WESTERN HEMISPHERE MINING CORP.

MAGEE PROPERTY REGIONAL GEOLOGY

SKEENA M.D., B.C.

DRAWING BY B.E.M.

DRAWING N° 3 SCALE 1:20,000

NEVIN SADLIER-BROWN GOODBRAND LTD. AUGUST 1980

