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DIAMOND DRILLING REPORT

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GOLD CORE 1 CLAIM

Missezula Lake Area  
Similkameen Mining Division

92H-7E  
(49° 44' 30" N. Lat., 120° 24' 30" W. Long.)

for

HAROLD ADAMS  
Box 1329  
Princeton, B.C.  
VOX 1W0  
(Owner and Operator)

by

GRANT F. CROOKER, B.Sc., F.G.A.C.  
Geologist

October 1989

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,335

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### SUMMARY AND RECOMMENDATIONS

The Gold Core 1 claim is located approximately 34 kilometers north of Princeton and 7 kilometers east of the south end of Missezula Lake in southern British Columbia. The property consists of 1 claim totalling 4 units and is located near the headwaters of Dillard Creek. Access to the property is via several logging roads which pass by Missezula Lake and lead to Dillard Creek.

The property is underlain by Upper Triassic Nicola Group volcanic and sedimentary rocks. The most predominate rock type is a grey green fragmental which has been called a lahar breccia. Subangular clasts of monzonite, dacite, trachyandesite? porphyry and syenite are found within the unit.

Two BQ diamond drill holes totalling 152.44 meters were drilled to test surface sulphide mineralization for copper and gold values.

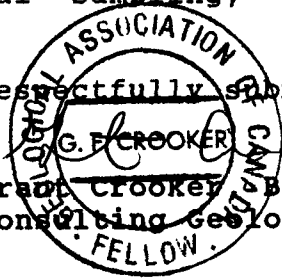
Two types of mineralization were observed within the drill core. The first consists of pyrite, magnetite and epidote occurring within the lahar breccia. Traces of chalcopyrite were noted in several sections of the core. The second consists of carbonate altered zones with quartz veining, pyrite, traces of fine grained grey sulphides (galena?) and minor mariposite.

Only two sections of the core were assayed, with neither containing anomalous copper values. However both intervals returned weakly anomalous gold values (69, 341 ppb). No assaying has been carried out on the carbonate altered zones, and the presence of quartz veining, sulphide mineralization and mariposite make the altered zones a target for gold mineralization.

Recommendations are as follows:

- 1) Assaying should be carried out on all of the carbonate altered zones to test for gold mineralization.
- 2) The sections of the core containing the highest concentrations of pyrite should also be tested for copper and gold mineralization.
- 3) Surface exploration should be carried out on the property before additional drilling is considered. This program should consist of geochemical sampling, prospecting and geological mapping.

Respectfully submitted,

  
G. F. CROOKER  
Grant Crooker, B.Sc., F.G.A.C.,  
Consulting Geologist  
FELLOW.

## 1.0 INTRODUCTION

### 1.1 GENERAL

Diamond Drilling was carried out on the Gold Core 1 mineral claim between June 28th and July 16th, 1989. Harold Adams supervised the drilling and Grant Crooker was retained to prepare the report. The two holes were drilled to test sulphide mineralization within Nicola volcanic and sedimentary rocks.

### 1.2 LOCATION AND ACCESS

The property (Figure 1) is located approximately 34 kilometers north of Princeton and 7 kilometers east of the south end of Missezula Lake in southern British Columbia. The property lies at 49°44'30" north latitude and 120°24'30" west longitude (NTS 92H-9W, 16W).

A number of good two wheel drive logging roads provide access to the claim with the two most commonly used roads leading off the Princeton-Merritt Highway. The first road turns onto the Summers Creek-Missezula Lake road 9 kilometers north of Princeton. One follows this road to the south end of Missezula Lake and then turns east along Dillard Creek for approximately 8 kilometers. An alternative route is to turn off the Princeton-Merritt Highway 12 kilometers south of Aspen Grove. This road passes north of Missezula Lake and along Dillard Creek to the claim, a distance of approximately 25 kilometers.

### 1.3 PHYSIOGRAPHY

The property lies at the headwaters of Dillard Creek within the Thompson Plateau of southern British Columbia. Topography is gentle and elevation varies from 1475 to 1600 meters above sea level.

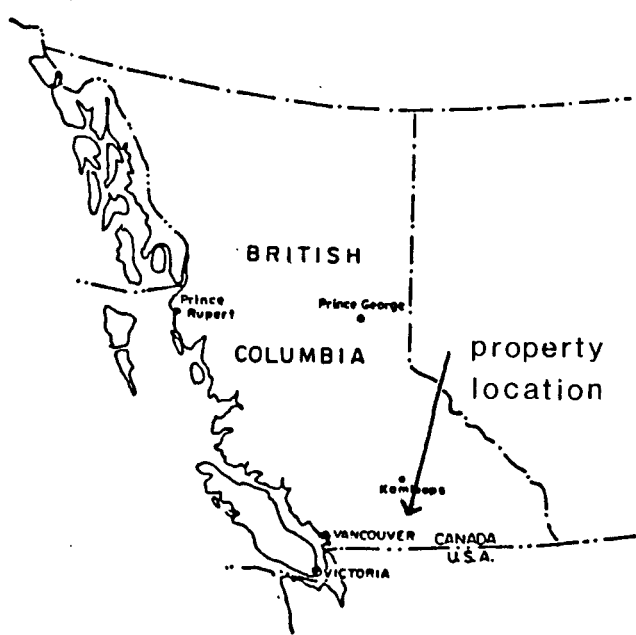
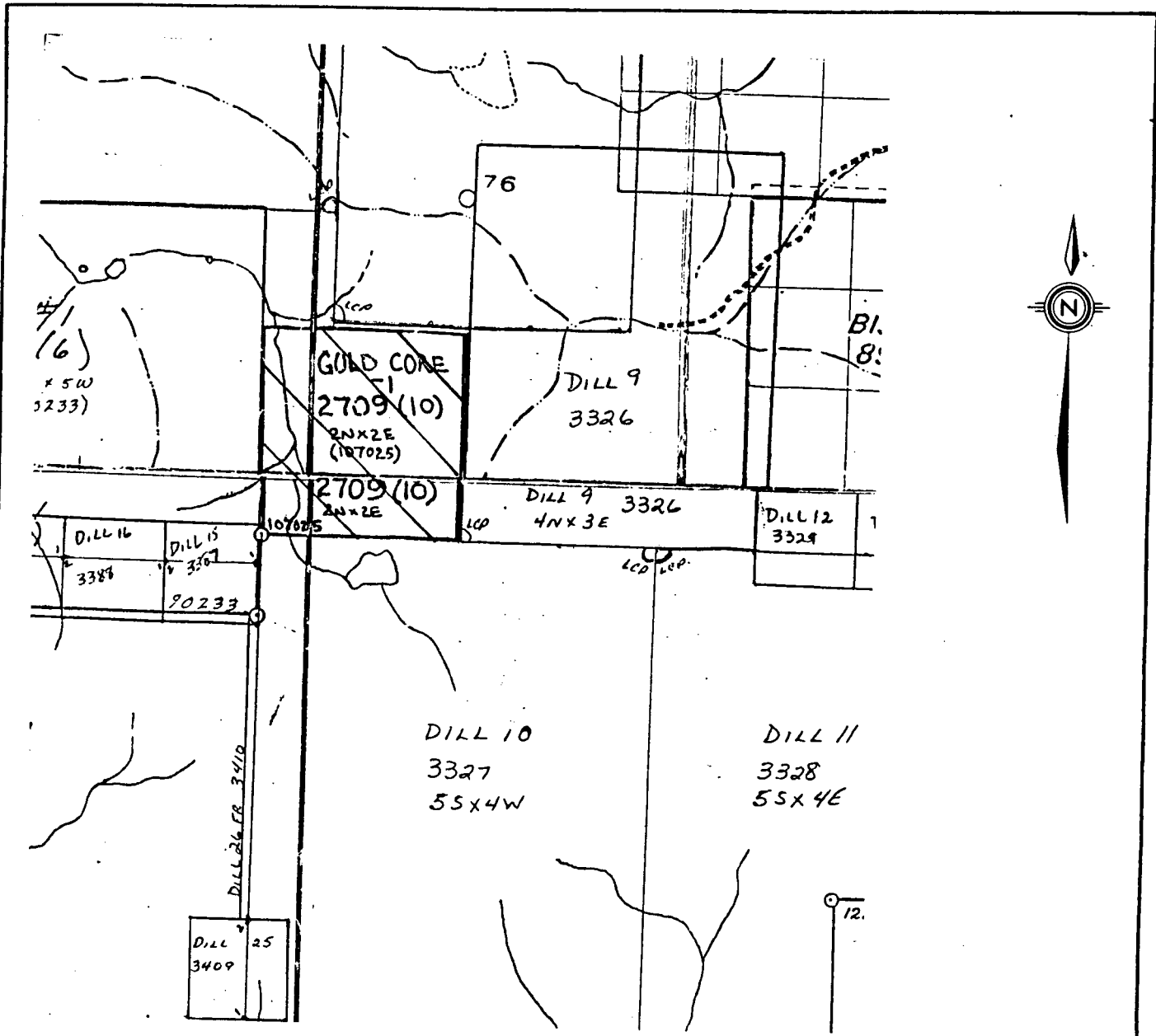
Pine and fir trees cover most of the property, with varying amounts of brush and several swamps.

### 1.4 PROPERTY AND CLAIM STATUS

The Gold Core-1 property (Figure 1) consists of one four post claim covering 4 units in the Similkameen Mining Division. The property is owned by Mr. Harold Adams of Tulameen B.C..

Claim	Units	Mining Division	Record No.	Record Date
Gold Core 1	4	Similkameen	2709(10)	Oct. 5, 1987

Upon acceptance of this report the claim will be in good standing until 1999.



HAROLD ADAMS	
GOLD CORE PROPERTY LOCATION MAP	
SCALE 1:50,000	
DRAWN BY: G. Crooker	N.T.S. : 92H-9w.16w
DATE: Oct 1989	FIGURE N <sup>o</sup> . 1

## 1.5 AREA AND PROPERTY HISTORY

The mining history of the Princeton area goes back to the late 1800's. Initial prospecting was for placer gold, with hard rock prospecting following shortly afterwards.

The Gold Core 1 Claim lies almost midway between two historical mining camps, the Missezula Lake section of the Princeton-Merritt copper belt to the west and the Siwash Creek Camp to the northeast.

The Siwash Creek Camp is located approximately 6 kilometers northeast of the property. Mineralization in the Siwash Creek area consists of quartz veins following fractures in the Osprey Lake granodiorite, the Siwash Creek granite and in Nicola volcanic rocks near the contact of the granodiorite. Sulphide mineralization consists of pyrite, sphalerite and galena occurring within the quartz veins. The galena often carries significant values in silver and gold, and a few tons of ore have produced a limited amount of lead, silver and gold.

A number of copper prospects occur in the Missezula Lake-Summers Creek area located approximately 8 kilometers west of the property. In this area copper mineralization occurs within diorite and monzonite stocks and Nicola volcanic rocks. The most significant mineralization is chalcopryite, bornite, native copper and/or chalcopryite, pyrite disseminations in brecciated zones and along fractures in diorite and monzonite stocks and in nearby Nicola volcanic rocks.

The most significant property appears to be the Axe located approximately 15 kilometers southwest of the Gold Core 1 claim. Copper mineralization consists mostly of widespread chalcopryite and variable amounts of pyrite disseminated and coating fractures in volcanic and associated intrusive rocks. Indicated reserves released by the property owners are in the order of 60 million tons at 0.50% copper (Preto, 1979).

More recent work within this area has concentrated on developing the gold potential associated with the copper mineralization. Brican Resources Limited has been working on the Man Property located to the west of the Gold Core 1 claim. Drilling during December of 1988 on the Man Property gave a wide intersection of copper/gold mineralization grading 0.18% copper and 0.011 oz/ton gold across 265 feet. Narrower intersections gave values of 1.52% copper and 0.296 oz/ton gold across 3 feet.

There is no documented history of exploration on the Gold Core 1 claim.

## 2.0 EXPLORATION PROCEDURE

The program covered by this report consisted of two BQ diamond drill holes totalling 152.44 meters. The drill hole locations are shown on figure 2 and the core is stored at the residence of Mr. Harold Adams at Tulameen B.C..

## 3.0 GEOLOGY AND MINERALIZATION

### 3.1 REGIONAL GEOLOGY

The property lies within the central portion of the Intermontane Belt of southern British Columbia. Upper Triassic Nicola group volcanic and sedimentary rocks underlie the property.

Preto (1979), carried out geological mapping approximately 7 kilometers west of the Gold Core 1 Claim. This mapping describes the Nicola assemblage as flows of greenish and greenish grey analcite-augite trachybasalt porphyry, reddish to greenish grey tuff, thinly bedded, commonly graded and/or crossbedded tuffaceous volcanic sandstone and siltstone and massive to crudely layered lahar deposits and lesser amounts of interbedded volcanic conglomerate and greywacke. The latter unit composed of lahar deposits, interbedded volcanic conglomerate and greywacke is described as being by far the most abundant rock type.

Pink granite and quartz diorite of the Late Jurassic Osprey Lake pluton would appear to intrude the Nicola rocks near the western boundary of the Gold Core 1 Claim.

A major structural feature, the Summers Creek-Quilchena Creek fault passes approximately 8 kilometers west of the property. This structural zone has been traced for more than 160 kilometers from south of Copper Mountain to at least as far as Kamloops.

### 3.2 CLAIM GEOLOGY

As observed in the drill core, the claim is mainly underlain by a grey green fragmental rock, probably a lahar breccia. Abundant subangular clasts of grey monzonite, grey to green dacite, dark green augite trachyandesite? and pink syenite are found within a grey green matrix of finer volcanoclastic material.

One section of drill core appears to have a narrow section of dark green augite trachyandesite? and grey green tuff.

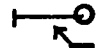


### 3.3 MINERALIZATION

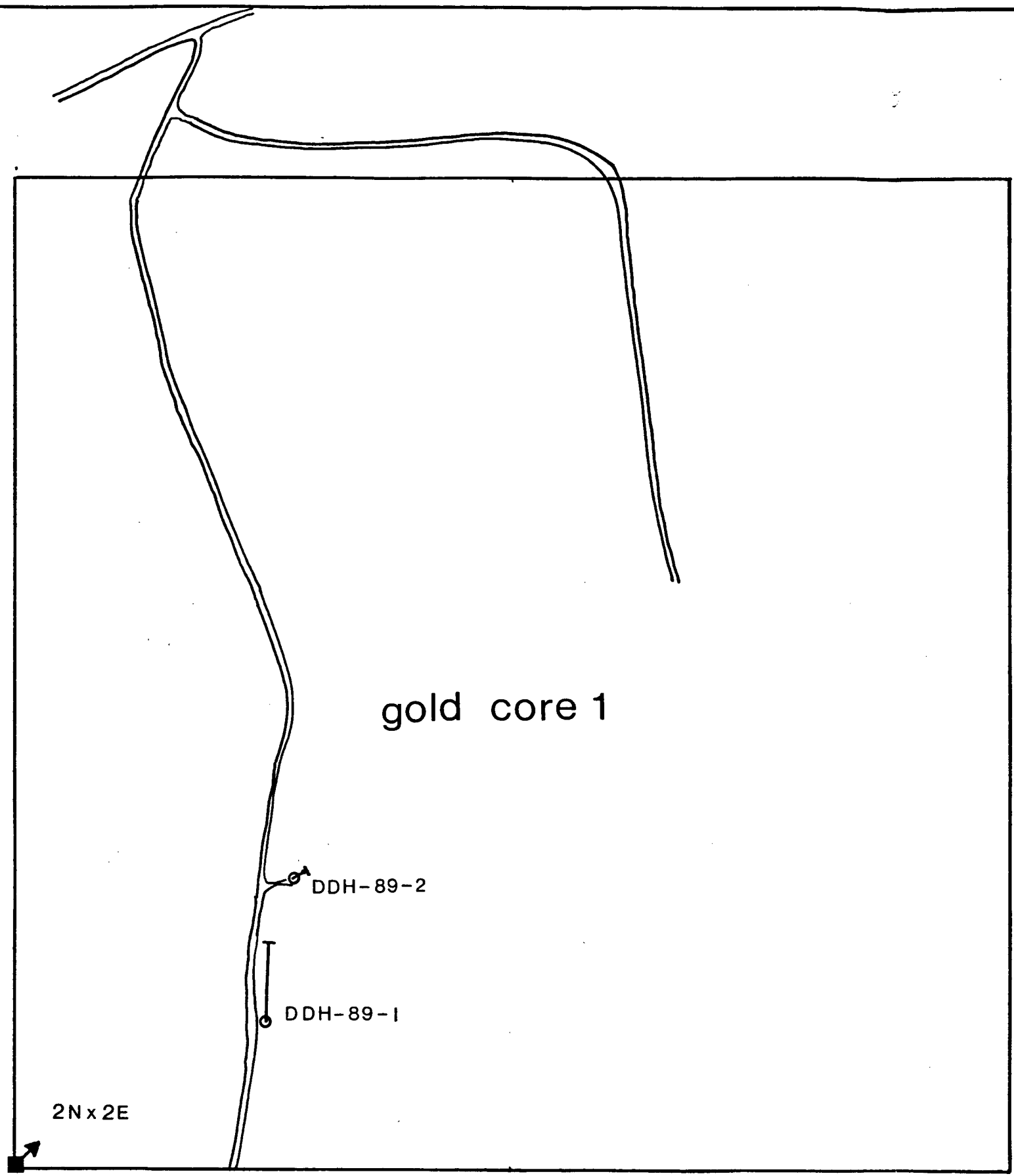
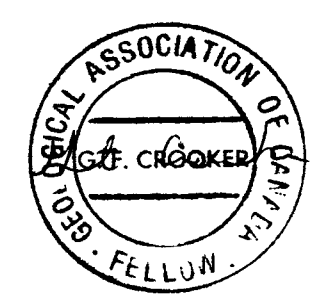
Mineralization on the property, as outlined by drilling consists of up to 5% pyrite, 2% magnetite and epidote occurring within the lahar breccia unit. Locally heavier concentrations of pyrite were noted, with large blebs of pyrite up to 3 centimeters in diameter. The mineralization occurs both along fractures and as disseminations, and in many instances appears to occur preferentially within the lahar breccia clasts. Traces of chalcopyrite were observed in several sections of the core.

A number of narrow carbonate zones with weak quartz veining, 1 to 5% pyrite and traces of mariposite were also noted. Most of these zones are only a few centimeters in width, but the widest zones may be up to 2 meters in width. Traces of a fine grained grey sulphide, possibly galena, was noted in several of these zones.





-  DRILL HOLE
-  LCP
-  ROAD



gold core 1

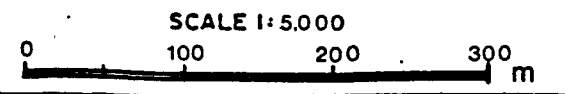
DDH-89-2

DDH-89-1

2N x 2E

HAROLD ADAMS

GOLD CORE PROPERTY  
DRILL HOLE LOCATIONS



DRAWN BY: G. Crooker	N.T.S. : 92H-9w.16W
DATE: Oct 1989	FIGURE NO. 2

## 4.0 DIAMOND DRILLING

Diamond drilling was carried out on the property between June 28th and July 16th, 1989. A summary of the pertinent data is given below.

Drill Hole No.	Bearing(°)	Angle(°)	Depth(m)
DDH-89-1	003°	-50°	128.66
DDH-89-2	064°	-50°	23.78

DDH-89-1 was drilled entirely within a grey green lahar breccia unit. The interval from 4 meters to 50 meters contains pyrite±magnetite±epidote, with the pyrite and epidote occurring in concentrations of up to 5% and the magnetite in concentrations up to 2%. The section from 50 meters to 119 meters contains 1 to 2% pyrite with little epidote or magnetite. The interval from 119 meters to 128.81 meters shows pyrite content increasing to 5% and epidote again appearing in concentrations up to 5%. Very little chalcopyrite was observed in the core.

A number of carbonate altered zones with quartz veining, 1 to 5% pyrite and minor mariposite were observed in the core. The zones vary from a few centimeters to approximately 1.7 meters in width and several contain a fine grey sulphide, probably galena.

Two sections of the core were assayed. The interval from 46.8 to 47.56 meters gave an assay of 69 ppb gold, while the interval from 128.05 to 128.81 gave an assay of 341 ppb gold, 2.8 ppm silver and 269 ppm lead. Neither interval gave anomalous values in copper. Several other sections of the core were assayed but the results are not available to the author.

DDH-89-2 was a short hole again drilled mainly within the lahar breccia unit and up to 5% pyrite with epidote is present. One narrow carbonate altered zone with 2 to 3% pyrite was noted.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Fairly widespread pyrite mineralization occurs within the core, along with epidote, magnetite, pyrrhotite, traces of chalcopyrite and possibly galena. The mineralization occurs both along fractures and as disseminations. Pyrite content locally ranges to 10% with a few cubes up to 3 centimeters in diameter. No significant amounts of copper mineralization was observed.

A number of carbonate altered zones containing quartz, pyrite, mariposite and probably galena were also noted within the core.

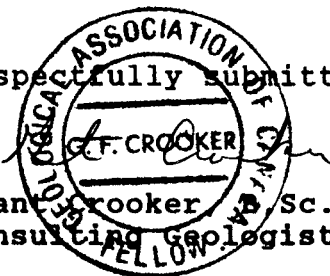
Only two sections of the core were assayed, with neither containing anomalous copper values. However both intervals returned weakly anomalous gold values (69, 341 ppb). No assaying has been carried out on the carbonate altered zones, and the presence of sulphide mineralization and mariposite make the altered zones a target for gold mineralization.

Recommendations are as follows:

- 1) Assaying should be carried out on all of the carbonate altered zones to test for gold mineralization.
- 2) The sections of the core containing the highest concentrations of pyrite should also be tested for copper and gold mineralization.
- 3) Surface exploration should be carried out on the property before additional drilling is considered. This program should consist of establishing a grid in the area of the drilling, and carrying out geochemical sampling, prospecting and geological mapping.

Respectfully submitted,

Grant Crooker, B.Sc., F.G.A.C.,  
Consulting Geologist



## 6.0 REFERENCES

Brican Resources Limited, (Feb, 2, 1989): News Release on the Man Property near Princeton, B.C.

Dawson, G.L. and Ray, G.E., (1988): Geology of the Pennask Mountain Area, B.C. Ministry of Energy, Mines and Petroleum Resources Open File Map 1988-7.

Preto, V.A., (1972): Geology of Copper Mountain, B.C. Department Of Mines and Petroleum Resources, Bulletin 59.

Preto, V.A., (1979): Geology of the Nicola Group between Merritt and Princeton, B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 69.

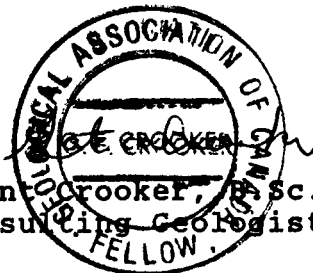
Rice, H.M.A., (1947): Geology and Mineral Deposits of the Princeton Map-Area, B.C., Geological Survey of Canada Memoir 243.

## 7.0 CERTIFICATE OF QUALIFICATIONS

I, Grant F. Crooker, of Upper Bench Road, Keremeos, in the Province of British Columbia, hereby certify as follows:

1. That I graduated from the University of British Columbia in 1972 with a Bachelor of Science Degree in Geology.
2. That I have prospected and actively pursued geology prior to my graduation and have practised my profession since 1972.
3. That I am a member of the Canadian Institute of Mining and Metallurgy.
4. That I am a Fellow of the Geological Association of Canada.
5. That I have no direct or indirect interest in the property.

Dated this 19th day of Nov. , 1989, at Keremeos, in the Province of British Columbia.

  
Grant Crooker, B.Sc., F.G.A.C.  
Consulting Geologist  
FELLOW

Appendix I

CERTIFICATE OF ANALYSIS

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Ce	Hg	Ba	Ti	B	Al	Na	K	W	Au**	Pt**	Pd**
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPB	PPB	PPB
RX 041107	1	84	269	61	2.8	10	7	695	3.47	14	5	ND	1	60	1	2	2	101	4.56	.089	4	23	1.04	20	.05	3	1.59	.06	.08	1	341	1	3
RX 041108	1	77	42	35	.6	31	17	274	4.58	8	5	ND	1	42	1	2	2	95	1.79	.104	3	40	1.00	21	.10	2	.98	.03	.08	1	69	7	9

RX 41107 last 2 ft. of core 420-422.5 ft  
 RX 41108 core from 153.5 - 156.0 ft

**Appendix II**

**DRILL LOGS**







## DRILL HOLE EVALUATION SUMMARY

Company \_\_\_\_\_ Property \_\_\_\_\_ Section No. \_\_\_\_\_ Hole No. 00H-89-1

Started	Bearing	Lat.	Collar El.	Logged by
Completed	Anglo	Dep.	Bottom El.	Remarks
Driller	Length	Location	Level	

INTERVAL		CORE RECOVERED			DESCRIPTION	Sample No.	Interval	ASSAY		
From	To	Wt.	Fr.	%				Ag ppb	Ag ppm	Pb ppm
					39.25-40.42 - weak fracturing with 1 to 2mm calcite veinlets, py & hem @ 45° to 90°					
					47.81 - 2cm py bleb	R-1109	46.5-47.50	69	.6	42
50.26	51.98			85	grey to white carbonate altered and weakly silicified zone, up to 1cm wide quartz carbonate veinlets @ 60°, 1-5% py, fg grey sulphide?					
51.98	57.97			73	dark grey green labarbreccia, 1-2% py, tr epidote only,					
					55.39-55.54 - narrow carbonate altered zone @ 70°, weakly silicified, tr fg gr?					
					56.72-56.88 - carbonate altered and weakly silicified zone @ 60°, 1-2% py, minor magnetite, tr fg gr?					
57.97	59.16			65	altered zone, 1 to 5mm calcite veinlets, silicified fractures with hem, 1-2% py					
59.16	69.30			82	grey-green labarbreccia, 1% py					
69.30	71.19			52	carbonate altered zone, up to 5% diss py, tr grey sulphide, bright red mineral					



### DRILL HOLE EVALUATION SUMMARY

Company \_\_\_\_\_ Property \_\_\_\_\_ Section No. \_\_\_\_\_ Hole No. DDH-89-1

Started	Bearing	Lat.	Collar El.	Logged by
Completed	Anglo	Dep.	Bottom El.	Remarks
Driller	Length	Location	Level	

INTERVAL		CORE RECOVERED			DESCRIPTION	Sample No.	Interval	ASSAY		
From	To	Wt.	Ft.	%				A <sub>4ppb</sub>	A <sub>3ppm</sub>	P <sub>6ppm</sub>
					99.68 - 1cm py blebs					
					102.0 - bedding?, @ 30°					
					102.16 - 102.50 - 1 to 2 mm fractures with calcite @ 5°, 3cm py blebs					
					103.43 - 103.65 - quartz-calcite zone @ 60° 1% py					
					116.51 - 119.75 - bedding or banding @ 20°					
					119.20 - 128.81 - increase in py content to 5% with blebs up to 2cm in diameter, epidote increasing to locally 5%.					
					128.5 - tr ep y	R44107	128.55-129.51	341	2.8	269
					123.47 - 123.63 - narrow zone with quartz and calcite veinlets. 5% py					
	128.91				END OF HOLE					



**Appendix III**

**COST STATEMENT**

## COST STATEMENT

### SALARIES

- Grant Crooker, Geologist Sept. 7, 16, 17, 30, Oct. 2 1989 5 days at \$ 350.00 per day	\$ 1,750.00
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### DRILL COSTS

- Longyear 38 Diamond Drill 152.45 meters (BQ) @ \$ 75.00 per meter	11,433.00
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### PREPARATION OF REPORT

- Secretarial, reproduction, telephone, etc.	<u>350.00</u>
Total	\$ 13,533.00