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FILE NO:

REPORT ON THE GEOLOGICAL AND GEOCHEMICAL EXPLORATION WORK ON THE BRAVO PROPERTY

Lat. 51 20'N; Long. 122 25' 30"W

N. T. S. 92 O/8

CLINTON M. D.

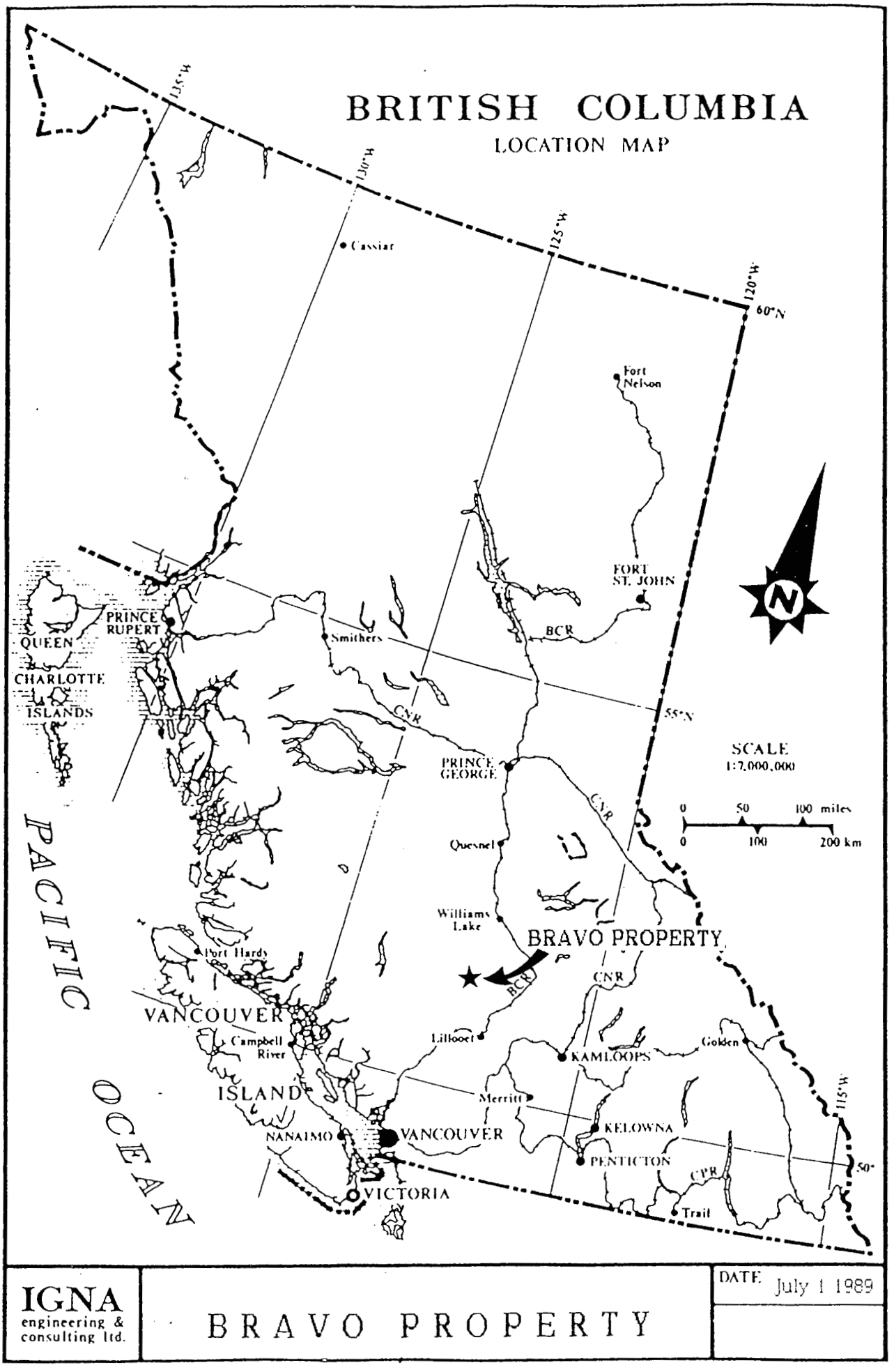
for

G. BRAVO AND G. BIASON

by

I. BOROVIC, P. Eng.
geologist

VANCOUVER, B. C.
July, 2 1989.



IGNA engineering & consulting ltd.	BRAVO PROPERTY	DATE July 1 1989

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SUMMARY CONCLUSIONS AND RECOMMENDATION

The Bravo property is located on the slopes of the Black Dome Mountain and stradles Porcupine Creek about 3.5 km east of Blackdome Mine; 107.0 km west of Clinton, B. C.

The property is composed of 2 located mineral claims with a total of 22 units.

The area of the Black Dome Mountain is underlain by early to mid-Tertiary volcanic rocks and associated volcaniclastic sediments, cut by narrow intermidiate to mafic dykes.

The volcanic horizons strike NNE with shallow 10-20 dips to the southeast. Tension fractures are the loci of the epithermal, precious metal-bearing veins. The fractures were apparently, the result of uplift by volcanic doming. Minor normal faulting effects dislocation of some units and preserves some erosional remnants of younger rocks.

The gold and silver mineralization occurs in typical epithermal quartz veins, most of which are hosted by rhyolite and dacitic andesite.

Mineral exploration of the area started with exploration on gold and silver mineralization found during 1947 work on and around the Black Dome Mountain and Porcupine Creek area.

The observed geological and structural relations during the writer's geological and soil surveys show that gold, silver mineralization contained in quartz veins within the volcanic and volcanoclastic formations could also underly the Bravo property

The property is well located with respect to potentially favorable geological environs, strong faulting, folding, fracturing and intrusive contacts.

It appears that the property's geological, structural and mineralogical relations point to the possibility of finding a mineral deposit in the property area. Ease of acces, excellent location and proximity to the facilities of the Blackdome Mine add to the property's potential economic value.

Therefore a comprehensive basic mineral exploration program is strongly recommended.

It is the writer's opinion that detail mapping, sampling, geochemical and geophysical surveys followed by trenching and diamond drilling have to be done before a comprehensive evaluation of the property's mineral potential should take place.

An essential operation in an exploration program is an economic appraisal at each critical juncture in addition to the feasibility study prior to development. The present value of the exploration venture at any time in its history should have a marked impact on the design of the remainder of the exploration program.

The exploration program is therefore to consist of two phases, whereby the second phase is dependant on the results of the first phase.

EXPLORATION PLAN AND ESTIMATED BUDGET 1989.

Exploration work should start by surveying of the grid over the whole property; grid lines running in the easterly direction in order to crosscut possible northerly striking mineral bearing structures.

Geological detail mapping, detail soil, VLF-EM and ground magnetic surveys, at an estimated cost of $ 57 000.00 in the Phase I should be done in order to evaluate mineral potential of the property.

PHASE 1

Geology,engineering,supervision,mapping.....	$	9 000.00
Room & Board.....	$	3 000.00
Line cutting(50 km @ $ 200.00/km....).....	$	10 000.00
Geochemical soil survey(50 km lines)..... ..	$	6 000.00
VLF-EM (50 km @ $150.00/km).....	$	7 500.00
Ground magnetic survey (50 km @ $ 80.00/km) ..	$	4 000.00
Transportation (vehicle rental, fuel).....	$	3 000.00
Trenching.....	$	5 000.00
Total	$	47 500.00
Admin., office and misc.(20% of total).....	$	9 500.00
Total Phase 1.....	$	57 000.00

PHASE 2

Geology, engineering, supervision, evaluation.	$	35 000.00
Room & Board.....	$	10 000.00
Buldozer support.....	$	5 000.00
Diamond drilling.....	$	350 000.00
Assaying.....	$	20 000.00
Transportation.....	$	10 000.00
Total	$	420 000.00
Admin.office and misc.(20% of total).....	$	84 000.00
Total Phase 2.....	$	504 000.00

INTRODUCTION

Mr. G. Bravo and Mr. G. Biason of Vancouver, B.C. owners of the Bravo property have asked the writer to examine the Bravo property and write an evaluation of its mineral potential.

The following report is a summary of information obtained from the various published reports which are listed in the Bibliography on page 9; from the writer's personal knowledge and experience gained through research and work on similar style deposits and also from the personal examination and work on the Bravo property. The writer visited and examined the property on June 19. and 20. 1989.

PROPERTY

Location:
(see Location Map B. C.)

Lat: 51 20'N; Long: 122 25' 30"W; N. T. S. 92 O/8
Clinton Mining Division.

The property is situated on the slopes of the Black Dome Mountain, Camelsfoot Range. It stradles Porcupine Creek. It is 3.5 km east from Blackdome Mine, and 77.0 km westnorthwest from Clinton B. C.

Access

The property is reached by 140.0 km of Empire Valley gravel road leading westerly from provincial highway #97 starting 18.0 km north of Clinton.

The old Porcupine Creek road passes through the middle of the property and Blackdome Mine access road passes about 150.0 metres from the northern end of Bravo #1 claim.

Claims:
(Fig. 2)

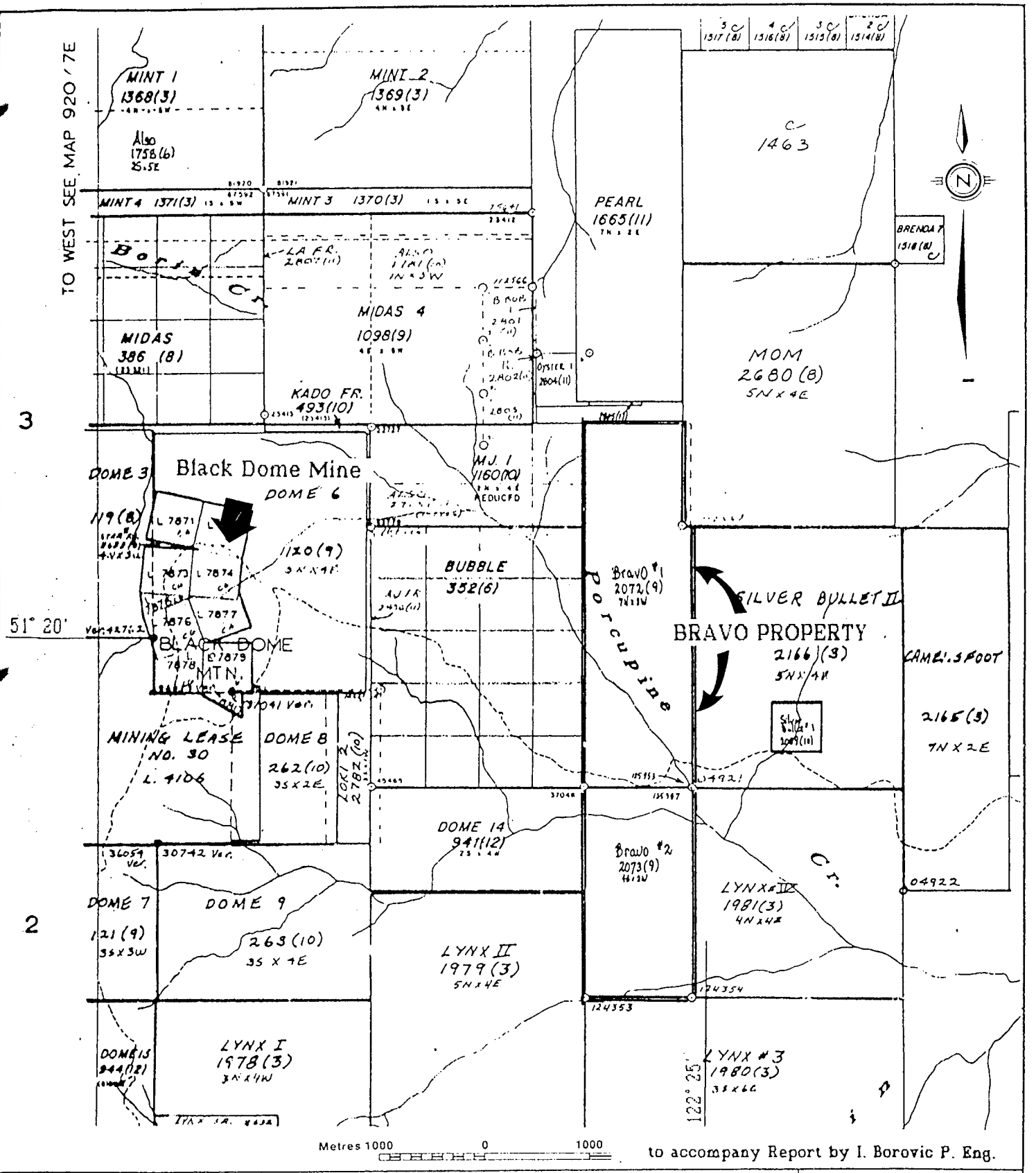
The Bravo property is composed of 2 located mineral claims with total of 22 units as follows:

Claim	No. of Units	Rec. #	Aniv. Date
BRAVO # 1	14	2072	9/18/89
BRAVO # 2	8	2073	9/18/89

Owners:

Mr. Gianpietro Bravo
1155 Harwood St.
Vancouver, B. C.

Mr. Giuseppe Biason
203-1617 Gravely
Vancouver, B. C.



to accompany Report by I. Borovic P. Eng.

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BRAVO PROPERTY
Claim Map

Scale:
N.T.S. 92 O/8
Date: July 1 1989
Figure: 1

G E O L O G Y

Regional Geology

(Tipper, H. W. 1978, Vivian, G. et al 1987; Faulkner, E. L. 1986; Church, B. N. 1980, 1982 and 1987)
(Fig. 2)
The region is underlain by Cretaceous and Tertiary volcanic and volcaniclastic rocks and related feeder dykes.

The Black Dome Mountain Area

The area of the Black Dome Mountain is underlain by rocks of early to mid-Tertiary volcanic rocks and associated volcaniclastic sediments, cut by narrow intermidiate to mafic dykes.

Lower Miocene to Upper Oligocen porphyritic basalt flows are the youngest rocks of the sequence. Underlying the basalts is a series of Eocene porphyritic andesite flows. A thin, irregular and dicontinuous clastic unit underlies the porphyritic andesite.

This unit, which is up to 30 m thick, varies from a volcaniclastic sandstone to coarse agglomerate with mafic bombs up to 40 cm long. A " chaotic rhyolite" unit, which underlies the porphyritic andesite is actually a mixture of volcanic wacke. Underlying "chaotic rhyolite" and beneath the clastic horizon at the base of the andesite unit, north and northeast of the "chaotic rhyolite", is a series of Eocene porphyritic dacite flows. Andesite flows (with propyllitic alteration), tuffs and agglomerate underlie the dacite unit, costituting the oldest units on the property.

Structure

A northeasterly trend dominates the structure of veins and host rocks in the main area as a result of tensional forces in the northwest-southeast direction during Eocene time. Blackdome Mountain and the dacitic domes form a northeasterly line of eruptive centres along the axis of a broad anticline with a shallow northeasterly plunge. Feeder dykes strike northeast. Flows generally strike northeast also, with gentle dips to the northwest or southeast seldom exceeding 20 degrees. The dips are not entirely depositional: in the Ridge zone, the direction of flow lineations and the direction of dip differ by up to 30 degrees, indicating that the ridge zone has been uplifted relative to the summit area.

Mineralization

There are at least 12 quartz veins or vein systems within the Blackdome Mine area. Although the surface trace of some of the veins is sinuous, they generally strike north 40 degrees east, with moderate to steep northwesterly dips. The veins commonly follow shear zones. The veins occupy tensional openings; where movement on the faults has been determined, it is normal.

Titles to the Claims have been examined by the writer in the Mining Recorder's offices in Vancouver, B. C. and found to be in order. Title is held by Mr. Gianpietro Bravo.

Climate

The area is part od subalpine country with moderate to high snow cover and severe winters. Precipitation is high from 40 to 180 cm.

Physiography

The Bravo property is located within the Camelsfoot Range of the Fraser Plateau area of central B. C.
The area is characterised by high peaks (to 7500') and deeply incised creek valleys.
Most of the area bellow 6500' is wooded with spruce, alpine fir, pine Douglas fir, alpine larch etc.

Facilities and Services:

Room and board for the exploration crew is available on timely request in the accomodations of the Blackdome Mine some 3.5 km west from the Bravo property.

Property facilities:

Timber and water for drilling is available on the property from the Porcupine Creek and its tributaries.

The gold and silver mineralization occurs in typical epithermal quartz veins, most of which are hosted by rhyolite and dacitic andesite.

Above tree line the veins either outcrop or occur beneath areas containing quartz float. Bellow tree line they have been found by trenching precious metal soil geochemical anomalies.

The vains very from a few centimetres to a few metres in width and from weak stringer zomes to sheeted, vuggy veins composed almost entirely of quartz. The best precious metal values occur only in veins with a high percentage of quartz, but abundant quartz does not guarantee precious metal values.

HISTORY OF EXPLORATION

The mineral prospecting in this area began with the discovery of gold-bearing quartz veins close to the summit of Black Dome Mountain in 1947 by L. Frenier. Empire Valley Gold Mines gained control of the property in 1952 and completed underground testing of the vein system. In 1953 Silver Standard Mines Limited secured an option and continued drilling and trenching. Following sharp increase in gold prices during 1977 Barrier Reef Resources Ltd. initiated another period of strong exploration activity of the area which continued under Blackdome Exploration Ltd and resulted in openning of the Blackdome gold-silver mine.
In early 1980th The Bubble Hotspring Deposit was found on the old Porcupine Creek road about one km west of the Bravo property.(Fig. 3)

FINDINGS 1989

Geochemical reconnaissance survey
(Fig.3 & 4)

Survey control

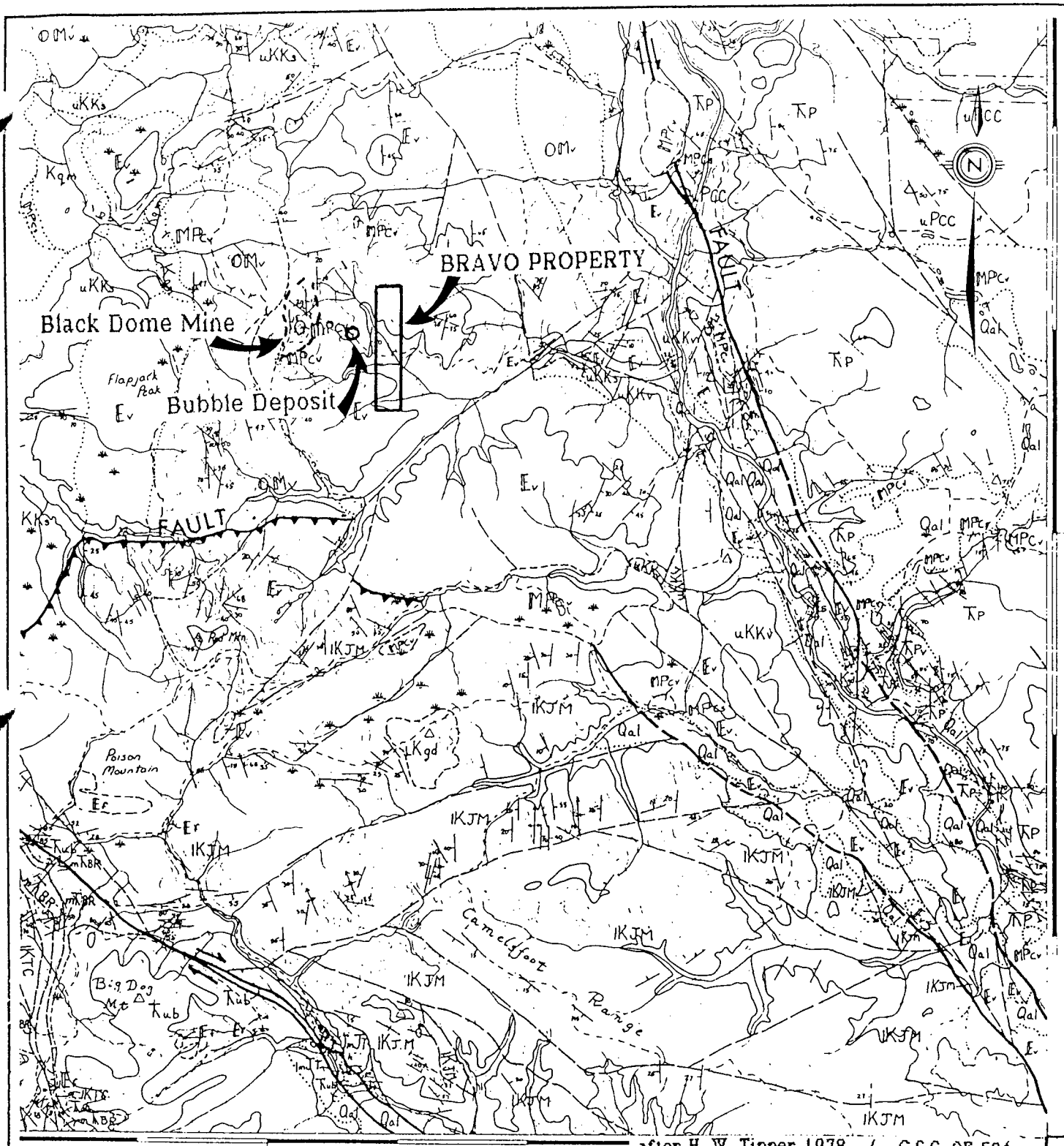
The soil reconnaissance survey line was done in the northern part of the Bravo #1 claim

Sampling method

Samples were taken from the subcrop becouse real soil does not exist but only for a few cm from the surface in this area of the property.
The material was collected with a spoon; cleaned of larger size rocks and put in the standard soil sample envelope. Samples were collected at regular 50 m intervals along the line. Total of 9 samples was collected and assayed.

Analytical methods

Soil samples were dried, pulverized, screened to -80 mesh and subsequent analyses were done by General Testing Laboratories Ltd. of Vancouver,B.C.



after H. W. Tipper 1978 / G.S.C. OF 534

51o

122 00'

to accompany Report by I. Borovic P. Eng.

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BRAVO PROPERTY
Regional Geology

Scale:
N.T.S. 92 O/8
Date: July 1 1989
Figure: 2

Following are assay results:

Sample #	type	oz/t Au	% Ag
rock			
RB #1	grab(at random)	0.006	0.05
RB #2	grab(at random)	0.010	0.01
subcrop(thin soil)		ppm Au	ppm Ag
RB A		0.52	21.4
RB B		0.26	23.9
RB C		0.20	15.7
RB D		0.23	20.0
RB E		0.39	24.7
RB F		0.52	20.1
RB G		0.48	25.5
RB H		0.14	15.0
RB I		0.05	17.8

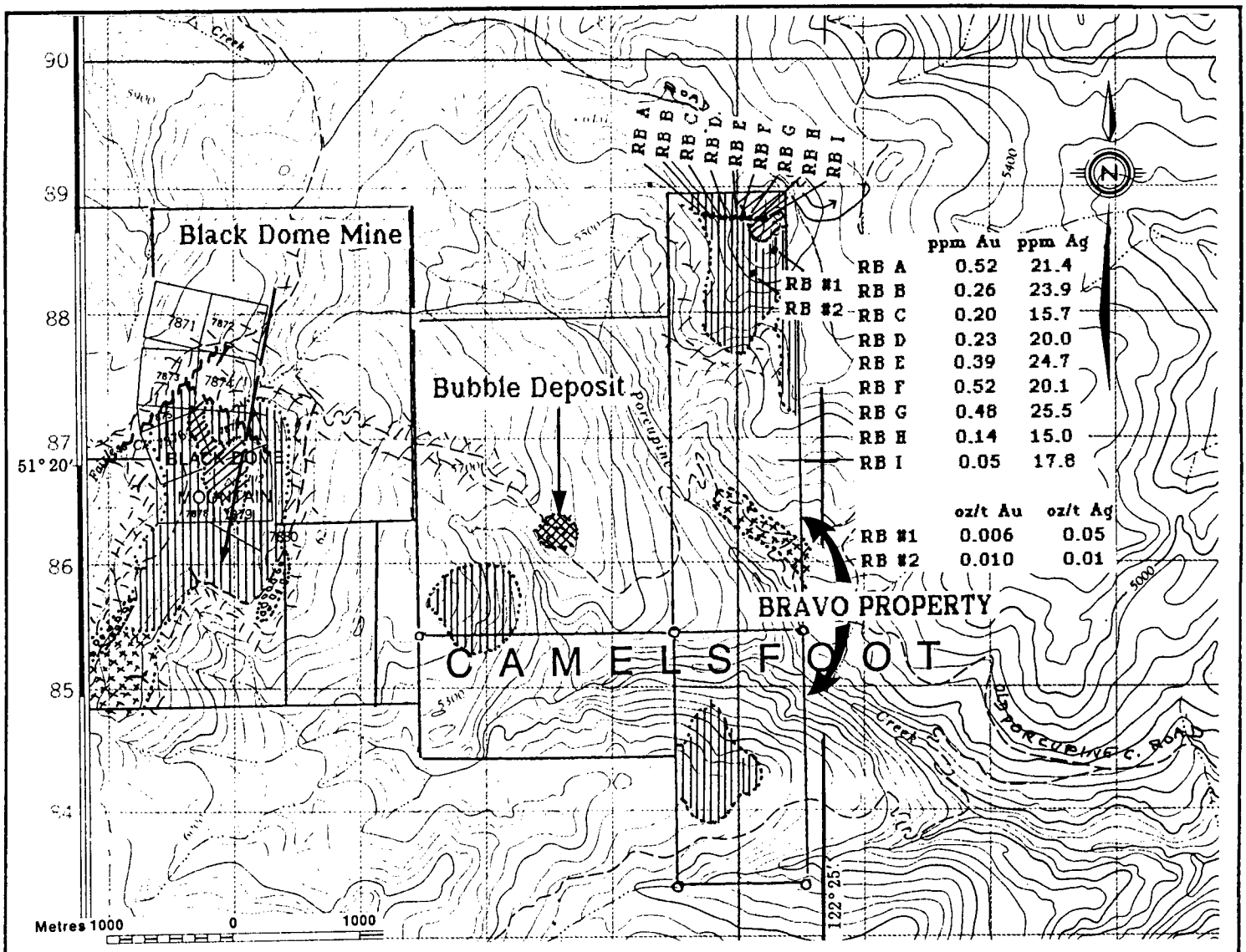
Coments:

Rock samples R #1 and #2 are quartz rich volcaniclastic rocks with no visible metalic mineralization.
Basically assays show existence of gold and silver in this area.

Results of assays of subcrop-"soil" samples show very high gold and silver content. Gold assays are as high as 0.52 ppm or 0.52 g/t and silver assays are from 15.0 ppm= 15.0 g/t to 25.5 ppm = 25.5 g/t (1/2 ounce to 2/3 of an ounce of silver per metric tonne).

Reconnaissance geological mapping
(Fig.s 3 & 4 I. Borovic 1989)

The writer, accompanied by an assistant, walked accessible areas of the Bravo claims.
The most abundant rocks appear to be Eocene andesite lava and breccia (Fig. 4 #2) outcropping in the southern and northern parts of the property.
Rhyolite lava and equivalent tuffs (Fig. 4 #1) are outcropping on the Porcupine Creek road in the central part of the property and Andesitic breccias and possibly Miocene basalts (Fig. 4 #3) are outcropping in the northern part of the property.
Main structural feature is series of strong quartz healed fractures striking 300 with dips 75 west to vertical and also crosscuting structure striking 20 with steep dips of 80 west.



Reconnaissance Geology of the Bravo Property and Adjacent Areas

Bravo Property geology by I. Borovic 1989
adjacent areas by B. N. Church 1986(1987-1)

LEGEND

MIOCENE

- *Basalt lava and agglomerate*
- *Yellowstone siliceous sinter and obsidian*

EOCENE

- *Dacitic andesite domes*
- *Andesite lava and breccia*
- *Rhyolite lava and tuffs*
- *Aphyric dacite, andesite and basalt*

subcrop sample---------- RB A
rock sample---------- RB #1

Geological contact
Fault
Road
Stream
Claim group boundary
Portal

to accompany Report by I. Borovic P. Eng.

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BRAVO PROPERTY
Area Geology and Location of Workings

Scale:
N.T.S. 92 O/8
Date: July 1 1989

Figure: 3

Following are assay results:

Sample #	type	oz/t Au	% Ag
rock			
RB #1	grab(at random)	0.006	0.05
RB #2	grab(at random)	0.010	0.01
subcrop(thin soil)		ppm Au	ppm Ag
RB A		0.52	21.4
RB B		0.26	23.9
RB C		0.20	15.7
RB D		0.23	20.0
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Geological mapping
(Fig. 3; I. Borovic 1989)

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Rhyolite lava and equivalent tuffs are outcropping on the Porcupine Creek road in the central part of the property and Andesitic breccias and possibly Miocene basalts are outcropping in the northern part of the property.
Main structural feature is series of strong quartz healed fractures striking 300 with dips 75 west to vertical and also crosscuting structure striking 20 with steep dips of 80 west.

CONCLUSIONS AND RECOMMENDATIONS

The examination of the property supported by the study of available literature, results of reconnaissance sampling and writer's personal knowledge of the geology, structure and mineralization of the Blackdome Mine area has resulted in following conclusions;

-the property is well located;

-geological, structural relations and mineral paragenesis are similar to ones of the Blackdome Mine, Bubble Hotspring deposit and other gold-silver properties in the region;

-assays of samples collected by the writer show that gold-silver mineralization is located within the Bravo property area. This fact alone gives us enough encouragement to continue exploration of the whole Bravo property.

BIBLIOGRAPHY

Church, B.N. (1980): Exploration for Gold in the Black Dome Mauntain Area, B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1979, Paper 1980-1, pages 52-54.

_____(1982): The Black Dome Mountain Gold-Silver Prospect, B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1981, Paper 1982-1, pages 106-108.

_____ (1987): The Bubble Hotspring Deposit Blackdome Area (920/8W), Geological Fieldwork, 1986, Paper 1987-1, pages 40-41.

Faulkner, E.L.(1986): Blackdome Deposit(920/7E, 8W), B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1985, Paper 1986-1, pages 107-109.

Tipper, H.W.(1987): Taseko Lakes(920) Map Area, Geol.Surv., Canada, Open file 534.

Vivian, G., Morton, R.D., Changkakoti, A. and Gray, J. (1987): Blackdome Eocene Thermal Ag-Au Deposit, B.C. Canada - Nature of Ore Fluids.

STATEMENT OF EXPENSES

PERSONNEL:

Senior geologist and assistant
(Assistant is a prospector with four years experience in mineral prospecting and exploration)

Field work:

-geological reconnaissance mapping and sampling	
geologist 2 days @ $ 450/day	$ 900.00
assistant 2 days @ $ 150/day	$ 300.00
-room and board 4 men/days @ $50/day	$ 200.00
-transportation car, fuel	$ 125.00
total field work	$1525.00

Office work

-research, study, interpretation, report	$1600.00
-assaying(General Testing Lab)	$ 114.25
-draughting 4 hours @ $25/hour	$ 100.00
-word processing 3 hours @ $30/hour	$ 90.00
-copying	$ 37.50
total office work	$1941.75

TOTAL EXPENDITURES (FIELD +OFFICE WORK)..... $3466.75

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C E R T I F I C A T E

I, I. Borovic, of the city of Vancouver, B. C., do hereby certify that:

1. I have personally examined and done the exploration work on the BRAVO CLAIMS located 140 km northwest of Clinton, B.C.

2 The expenditures claimed for the performance of the work are correct.

Respectfully submitted

I. Borovic, P.Eng.

Vancouver, July 5, 1989.

APPENDIX

AREA Bravo #1 DATE 6/20/89

SAMPLERS I. Bruns + L. Bruns

SOIL DESCRIPTION subcrops, mostly broken "chips" around outcrops (a cm or two of dirt supporting sparse vegetation)

COORDINATES		SOIL COMPOSITION AND COLOR, COORDINATES OF STREAMS, ROADS, CLAIM POSTS, ETC.	SAMPLE DEPTH	% RESIDUAL	GROUND SLOPE
LINE	STA.				
Recon	RB A	Subcrop, red chips from outcrop. Some vegetation, brown	12 cm		10°
	RB B	subcrop, red chips part of [illegible] dark brown	15 cm		10°
	RB C	subcrop, red chips some gravel dark brown	10 cm		10°
	RB D	subcrop, red chips 2-5 cm, some dirt	10 cm		15°
	RB E	subcrop, 5 cm "dirt" mixed w/ red chips	15 cm		15°
	RB F	subcrop, sparse veget. 2 cm dirt + red chips	10 cm		10°
	RB G	subcrop, red chips & 5-7 cm [illegible] soil	10 cm		1°
	RB 4	subcrop, red chips 3-5 cm [illegible] mixed w/ greenish brown	10 cm		1°
	RB I	subcrop. red chips + soil (fine material)	10 cm		1°

LOC	Bravo 1	DATE	6/19/89
MAP	92 O/8	MPD. BY	JS
ARPH	BC 79140 No 180	OBV. PT.	RB #2
ROCK or UNIT NAME	Volcaniclastic rock (agglomerate)		

COMPOSITION (%)					
Q 40	Plg	K-Sp	Mica	COLR.	dark brown
Amph	PyX			HRD.	6
Ca	Mg			TEXT.	breccia
				STRC.	
				FOL.	
ALTERATIONS (%)				JNTG.	
Chl. 15	Epi 5	Ser	K-Sp	FLDG.	
Biot.	Diop	Wol.	Grnt.	BDG.	
Ky				LAM.	
				CLVG.	
MINERALIZATION (%)				CONTACT	SHARP / GRAD.
Cpy	Cc	Mlc	Azt	XELT	
bn	Cov	Mo	Pb	GR. SZ.	SHAPE
Zn	Py	Ag	Au	INDUR.	
So	Sn	Hg	Ba	SORTG.	CEME.
Mgt	Pyr	W	Fe	Spl. No.	RB #2
Mn	Ni	N/Detected		Snp No.	

-character - country rock sample
-Compare with subcrop soil samples in the general area
assay for Au & Ag

LOC	Bravo 1 x?	DATE	6/19/89
MAP	92 O/8	MPD. BY	JS
ARPH	BC 79140 No180	OBV. PT.	RB #1
ROCK or UNIT NAME	dark greenish gray brown volcaniclastic rock		

COMPOSITION (%)					
Q 30	Plg	K-Sp	Mica	COLR.	dark brown
Amph	PyX			HRD.	6
Ca	Mg			TEXT.	breccia
				STRC.	—
				FOL.	—
ALTERATIONS (%)				JNTG.	
Chl. 20	Epi 5	Ser	K-Sp	FLDG.	—
Biot.	Diop	Wol.	Grnt.	BDG.	—
Ky				LAM.	—
				CLVG.	—
MINERALIZATION (%)				CONTACT	SHARP — / GRAD. —
Cpy	Cc	Mlc	Azt	XELT	
bn	Cov	Mo	Pb	GR. SZ.	SHAPE
Zn	Py	Ag	Au	INDUR.	
So	Sn	Hg	Ba	SORTG.	CEME.
Mgt	Pyr	W	Fe	Spl. No.	RB #1
Mn	Ni			Snp No.	

sample is a character - rock sample for comparison with subcrop soil samples in the area.
(Au & Ag assay)

CERTIFICATE OF ASSAY

Date: June 27, 1989

File: 0103-0615

SGS SUPERVISION SERVICES INC.
General Testing Laboratories Division
1001 East Pender Street,
Vancouver, B.C., Canada. V6A 1W2
Telephone: (604) 254-1647
Telex: 04-507514

TO: MR. BRAVO
1437 Commercial Drive
Vancouver, B.C.
V5L 3X8

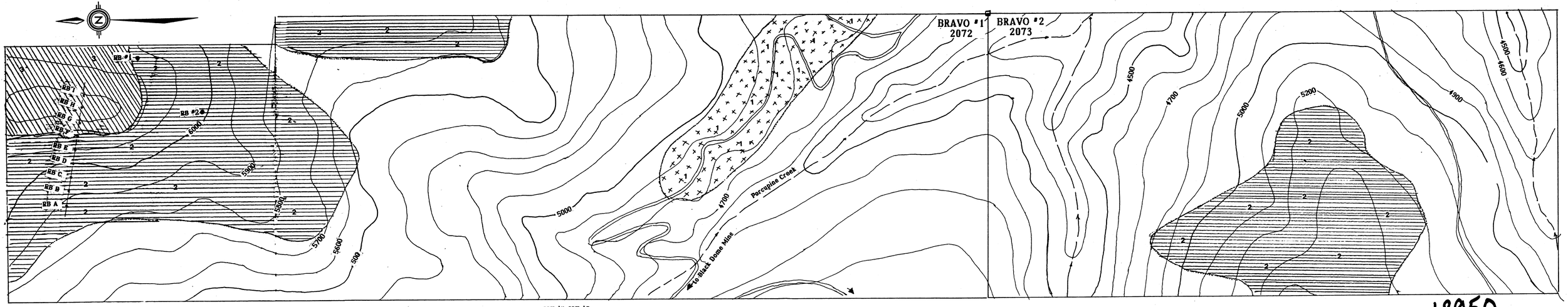
We hereby certify that the following are the results of assays on: Ore and Soil samples

MARKED	GOLD oz/st	SILVER oz/st	Gold Au (ppm)	Silver Ag (ppm)	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Ore					
RB - 1	0.006	0.05	-	-	
RB - 2	0.010	0.10	-	-	
Soil					
A			0.52	21.4	
B			0.26	23.9	
C			0.20	15.7	
D			0.23	20.0	
E			0.39	24.7	
F			0.52	20.1	
G			0.48	25.5	
H			0.14	15.0	
I			0.05	17.8	

cc. Mr. Borovic, Igna Engineering

NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS. ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR.

L. Wong
PROVINCIAL ASSAYER



	ppm Au	ppm Ag
RB A	0.52	21.4
RB B	0.26	23.9
RB C	0.20	15.7
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RB F	0.52	20.1
RB G	0.48	25.5
RB H	0.14	15.0
RB I	0.05	17.8

	oz/t Au	oz/t Ag
RB #1	0.006	0.05
RB #2	0.010	0.01

LEGEND

MIOCENE

3 Basalt lava and agglomerate

EOCENE

2 Andesite lava and breccia

1 Rhyolite lava and tuffs

- rubcrop sample — RB A
- rock sample — RB #1

Geological contact

Road

Stream

Claim group boundary

200 0 200 400 600 800

METRES

18950

to accompany Report by I. Borovic P. Eng.

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BRAVO PROPERTY
Property Geology

Scale: N.T.S. 92 O/8

Date: July 1 1989

Fig. 4