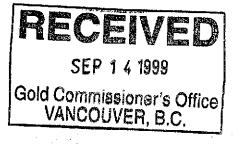
# Geological and Geochemical Report on the Big Bar Property

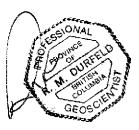


Clinton Mining Division, British Columbia

Latitude 51°10<sup>e</sup> North Longitude 122° 7' West

by: GEOLOGICAL SURVEY BRANCH Rudolf M. Durfeld, B.Sc., P.GG9ESSMENT REPORT August 1999.





# TABLE OF CONTENTS

	Page
A.) INTRODUCTION	1
1) Location	1
2) Access and Physiography	1
3) Ownership	1
4) Work Program	1
C.) GEOCHEMICAL SURVEYS	2
1) Geochemical Sample Collection and Analysis	2
2) Geochemical Results	2
D.) GEOLOGY	2
1) Alteration	3
E.) DISCUSSION	3

# TABLE OF ILLUSTRATIONS

Figure 1	Location Map (1:250,00)	after page 1
Figure 2	Claim Map (1:40,000)	after page 2
Figure 2	Claim Map (1:20,000)	after page 2
Figure 3	Geology Map (1:5,000)	attached

## **APPENDICES**

Appendix I	Itemized Cost Statement
Appendix II	Statements of Qualifications
Appendix III	Geochemical Results

# A.) INTRODUCTION

#### 1) Location

The Big Bar Property, comprised of the Big Bar 11A mineral claim in the Clinton Mining Division, is located west of the Fraser River, 39 kilometres at 280 degrees from Clinton. More precisely, the property is located at 51 degrees and 10 minutes north latitude and 122 degrees and 7 minutes west longitude. (National Topographic System Map 920/1E)

#### 2) Access and Physiography

Access to the property is from Clinton to the Big Bar Ferry via all weather gravel roads by Kelly Lake or Big Bar Lake. The Big Bar Reaction Ferry crosses the Fraser River to the west side. On the west side of the river, the road continues to the southwest and crosses the property after approximately 1 kilometre from the ferry.

The terrain of the property is characterized by ravines and plateaus in the Fraser River Canyon from a maximum elevation of 1100 metres (3600 feet) to the river bed at 300 metres (985 feet) above sea level.

The vegetation on the Big Bar Property is characterized as arid grassland. The lower elevations are predominantly covered with sage that gives way to sparse pine forest at the higher elevations.

#### 3) Ownership

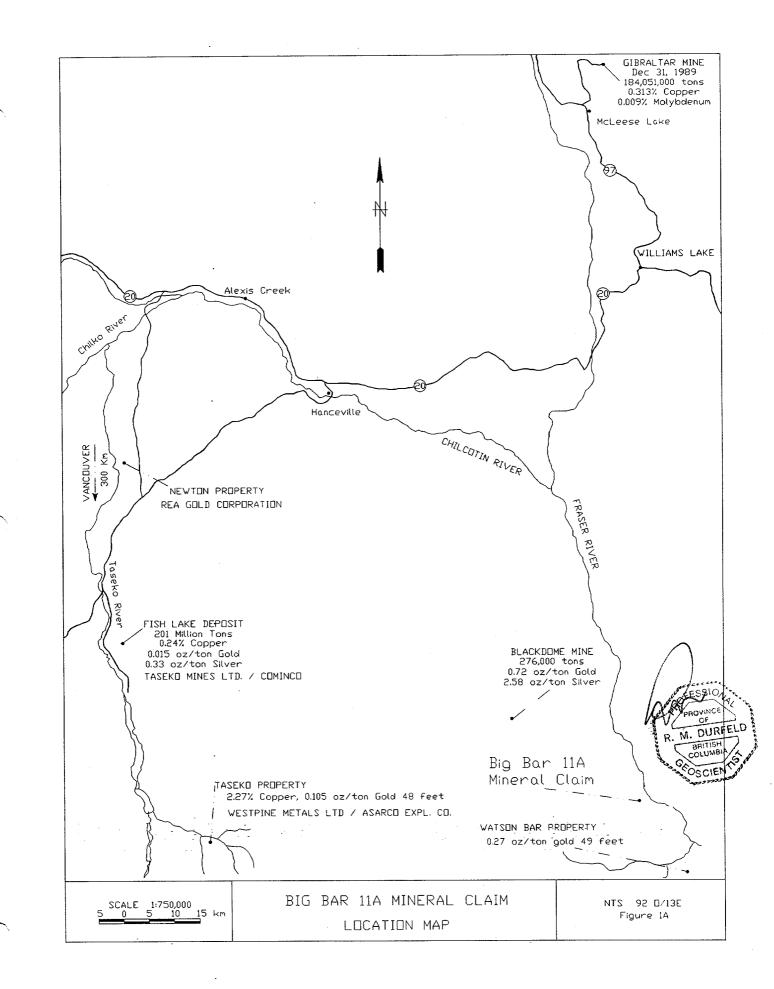
The Big Bar Property, comprised of the Big Bar 11A mineral claim, totals 20 claim units and covers 500 hectares. The status of the claim is summarized below and the relative claim location is plotted as figure 2.

Claim Name	Number of Units	Tenure Number	<b>Record Date</b>	Year of Expiry		
Big Bar 11A	20	346294	May 30, 1996	2000		

The Year of Expiry reflects the Statement of Work filed on May 28, 1999 the work for which is documented in this report. Stephen G. Lehman is the registered owner of the Big Bar 11A mineral claim.

#### 4) Work Program

The objective of the 99 program was again to establish better mapping control for which 1:20,000 trim data was acquired. All previous work was transferred to this new topographic base. The



1998 GPS control showed good correlation with the trim data and was added to the control which was also used to compile the previous work. The topographic contours are at 20 metre intervals.

Previous work outlined a large westerly trending alteration zone to the west of the Edge Fault. The 1999 field work was as traverses through this zone during which 12 soil, 2 rock and one silt sample were collected. These samples were sent to TSL Assayers in Vancouver tor analysis for gold and 30 element ICP. The results are given as Appendix III to this report.

#### **B.) GEOCHEMICAL SURVEYS**

1) Geochemical Sample Collection and Analyses

The twelve soil samples were taken as residual, poorly developed B-horizon soils at 20 metre intervals up 2 well developed gullies. The two rock samples were as random chips of outcrop. The single silt was taken as dry fines in the creek. All soil and silt samples were placed in pre-numbered kraft sample bags and the rock samples were placed in plastic bags with pre-numbered assay tags. The sample locations are plotted on the attached Geology Sketch / Sample Location Plan (Figure 3).

The samples were shipped to TSL Assayers at 8282 Sherbrooke Street in Vancouver. At the TSL Laboratory, the rock samples were crushed and pulverized. All samples were the digested and pulverized before analysis for 30 element ICP and gold by atomic absorption. The geochemical results for this sampling are included as Appendix III of this report.

#### 2) Geochemical Results

The soil samples show several sites with >30 ppb gold with anomalous arsenic >60 ppm and zinc >70 ppm. The two altered rock samples were not anomalous and would not explain these anomalous sites.

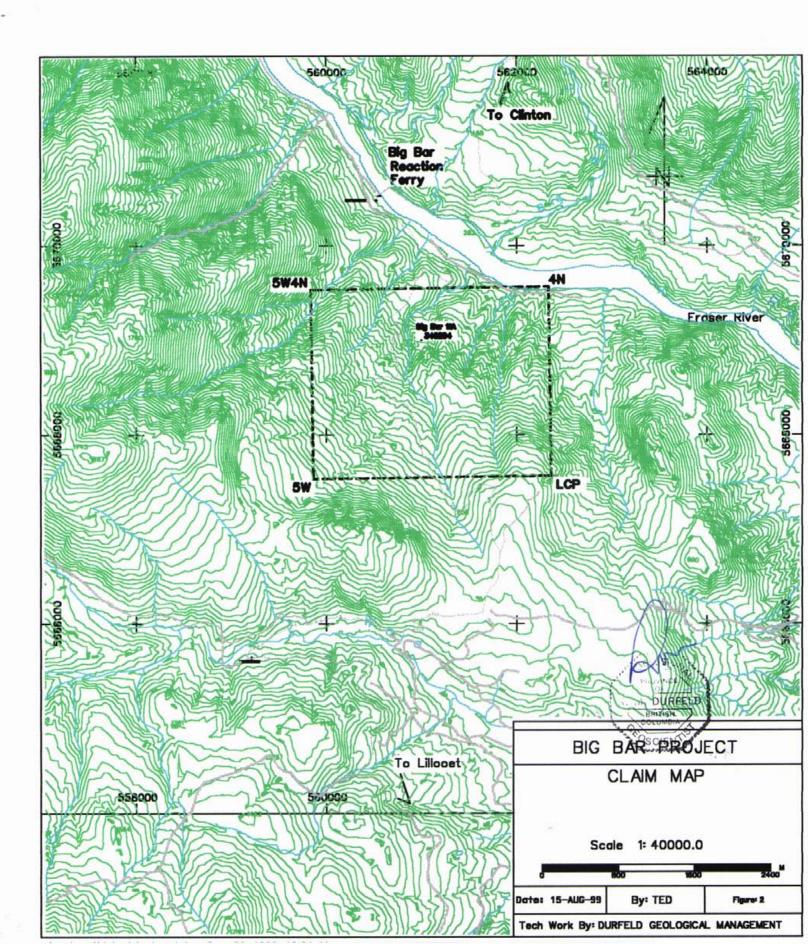
The single silt sample site was strongly anomalous in gold 308 ppb and silver 3.2 ppm. Detailed silt sampling of this drainage would be of assistance in defining areas warranting further work.

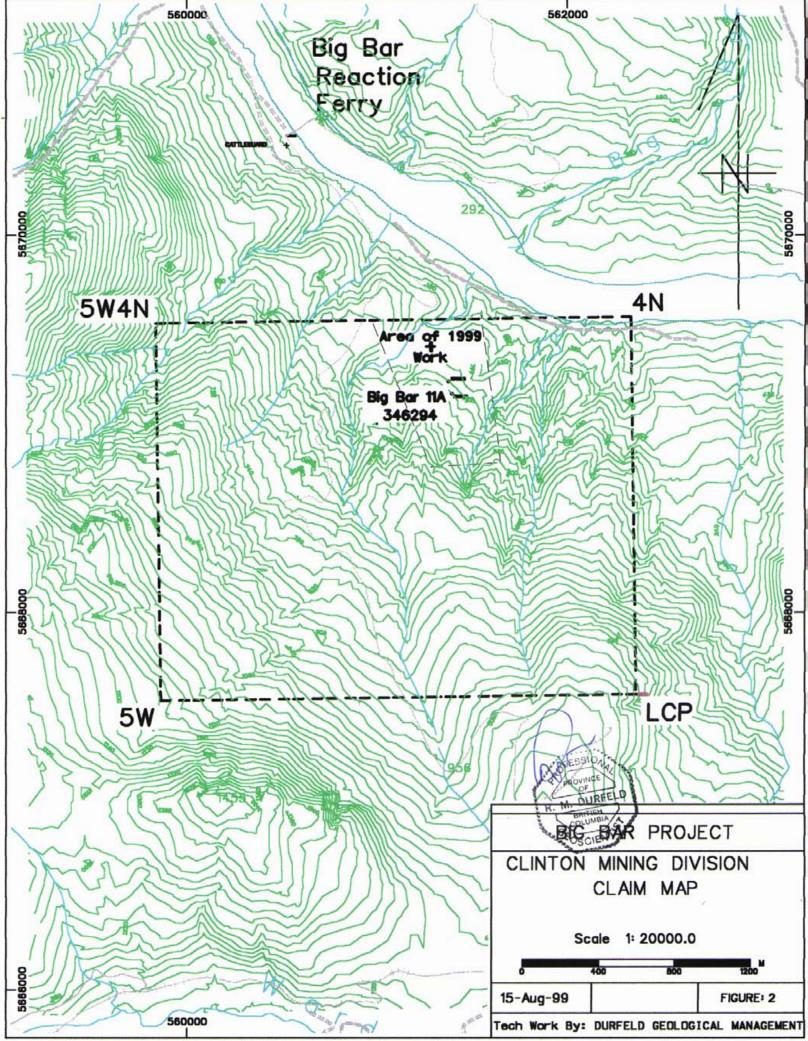
#### C.) GEOLOGY

The attached Geology Plan (Figure 3) compiles previous geological mapping in the area with recent traverses by the author.

The property is underlain by a section of Eocene Age felsic to intermediate volcanic and intercalated sedimentary rocks.

The Eocene rocks in the property area are represented by a succession of Felsic to Rhyolitic flows





(2), and Andesitic flows (3), interlayered with rhyolitic tuffs, agglomerates and clastics (4). To the west of Reynolds Creek a section of brown to maroon dacite (5) and breccia (5a) dominate.

#### 1.) Alteration

A series of strong, white weathering, in part silicified, alteration zones are mapped on an eastwest trend. The 1999 mapping showed these alteration zones to be cut off by strong steep dipping strike slip faults on a 300 degree trend. The five 1998 rock and the 1999 soil samples were collected from a portion of these zones. Petrographic descriptions show this zone to be altered (silicified, chlorite and carbonate) lapilli tuffs. Just below this alteration zone Cyprus' work showed a series of rock samples anomalous in gold (up to 1650 ppb) arsenic (up to 9375 ppm) and antimony (up to 2120 ppm).

To the west of Reynolds Creek, the Kerr Zone, a shallow dipping quartz-carbonate vein zone that was the focus of previous drill programs. Assays from percussion drilling gave an intersection in hole 80-15 of 3550 ppb over 6 metres. This drilling and trenching have traced this zone over a 350 metre by 350 metre area.

#### D.) DISCUSSION

The Big Bar property is underlain by Eocene volcanic and clastic rocks. Work to date has identified the quartz-carbonate Kerr vein zone with strongly anomalous gold, mercury and arsenic values. This zone is open to the north and west.

The broad east-west silicified, chlorite alteration zone to the south of Reynolds Creek may have epithermal gold potential. This is supported by the associated strong mercury, arsenic and isolated gold values. More detailed mapping and sampling of this large alteration zone will define its full potential of hosting an economic epithermal gold deposit. The 1999 sampling tested a small area of this alteration potential.

# **APPENDIX I**

# Itemized Cost Statement

Technical Staff Mapping and Mobilization (May 20 and 21, 1999) R.M. Durfeld (1.5 day @ \$400)	\$ 600.00
Truck Rental	¢ 100.00
(2 day @ \$60)`	\$ 120.00
Geochemical Analyses	\$ 281.40
Acquisition of Trim Map	\$ 400.00
Report Preparation and Drafting	\$ 400.00
TOTAL COST OF PROGRAM	\$1,801.40

Dated at Williams Lake, British Columbia

R.M. Durfeld, B.So. Proved R.M. Durfeld, B.So. P

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# APPENDIX II

Statement of Qualifications

I, Rudolf M. Durfeld, do hereby certify:

1.) That I am a consulting geologist with offices at 1725 Signal Point Road, Williams Lake, BC.

2.) That I am a graduate of the University of British Columbia, B.Sc. Geology 1972, and have practiced my profession with various mining and/or exploration companies and as an independent geologist since graduation.

3.) That I am a member of the British Columbia and Yukon Chamber of Mines.

4.) That I am registered as a Professional Geoscientist by the Association of Engineers and Geoscientists of British Columbia (No. 18241)

5.) That this report is based on my personal knowledge of the property and geological mapping and geochemical sampling conducted on the Big Bar Property on the 21st day of May 1999.

Dated at Williams Lake, British Columbia

this 15th day of August 1999. DURFELD

R.M. Durfeld, B.Sc., P.Geo. (Geologist)

P.O. Box 4438 Station Main, Williams Lake, B.C. V2G 2V5 Tel: 604/392-4691 • Cell: 604/398-0353 • Fax: 604/392-3070

# APPENDIX III

# **Geochemical Results**

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# DURFELD GEOLOGICAL MANAGEMENT

Attention: Rudi Durfeld

Project:

Sample Number

B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B-13 B-14

Sample: soil

TSL Assaye. Wancouver

8282 Sherbrooke St., Vancouver, B.C., V5X 4R6

Tel: (604) 327-3436 Fax: (604) 327-3423

Report No:9V0220 SJDate:Jul-01-99

## MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Ag ppm	Al %		Ba E ppm pp	e E m pp	3i om j	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	К %	Mg %		Mo Na ppm %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr Au-fire ppm ppb	
<0/2	0.98	20	160 < 130 <	586x22	<5	1.46 1.08	<1 <1	15 12		35 28		6.35,0345		- 928-000-889	2 0.03 2 0.02	47 38	11. 100000	12 14	51	3 3	<10 <10	89 79	0.18 0.14	50 41	197636	8 8	103 95	7, 31 8, 24	
<0.2	0.60	65 65	100 120	0.5	<5	1,63 1,72	<1 <1	7 12	15	18	1.98	0.27 0.21	0.4	0 300	2 0.02 2 0.02		240 560	20 10		2 3	<10 <10	94 101		38	<10 <10	7 8	59 80	5 65 6 30	j
-<0.2		25	160 <	82228-3	<5	1.50	<1	. 14	34			0.13	1.0	2 535	2 0.04		580		5	3	<10	107			<10	9	84,	9 13	ý.
0.4	G	165 10	110 < 130	0.5	<5	2.80 2.26	<1 <1	6 10		35	2.83	0.20	0.7	3 450	16 0.27 2 0.02	26	~ 전상 영상 문	22 12	5	2	<10 <10 <10	750 141 33	0.01 0.06 <0.01		1.00	2 12 7	39 72 78	6 52 5 11 2 15	5
<0.2 <0.2		40	30 140 <	0.5	<5	0.55	<1	, 2 13	<1 26	30	3.07	0,09 0,16 0,27	0.9	4 510	4 0.02 2 0.03 2 0.03	35	580	28 6 10	<5	3	<10 <10 <10	127 79	이 가장 이 가슴을	43	<10	7 8 7	77 69	7 16 5 31	19
<0.2	0.72	85	100 <			1.10 1.23	<1 	10	27			0.19	0.7		<2 0.02			10	1-18	2	<10	77	9928 1992	а - -		8	70	9 27	,
 <0.2	0.81 1.06 1.05	<5 15	180 < 130 <	0.5	<5	1.61 1.87		15 18	35 45	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.13 0.10		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	<2 0.08 2 0.04	2	1. O. W.		< < 5 < 5	3	<10 <10	98 155	0.21 0.25		<10 <10	8 8	75 72	9 19 14 308	5

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

	1,40
Signed:	ance-

## DURFELD GEOLOGICAL MANAGEMENT

Attention: Rudi Durfeld

Project:

Sample: ROCK

## TSL Assayers' Vancouver 8282 Sherbrooke St., Vancouver, B.C., V5X 4R6

Tel: (604) 327-3436 Fax: (604) 327-3423

Report No	:	9V0220 RJ
Date	:	Jul-01-99

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag Al As Ba Be ppm % ppm ppm ppm ppm	Bi Ca Cd Co Cr ppm ppm	Cu Fe K Mg Mn M ppm % % % ppm pp		Sc Sn Sr Ti V W ppm ppm ppm % ppm ppm	Y Zn Zr Au-fire ppm ppm ppm ppb
250501	<0.2 0.25 10 330 0.5	<5 1,57 <1 1 80	11 0.81 0.24 0.04 420	<2 0.03 1 50 256 5	1 <10 68 0.01 1 <10	5 112 5 7
250502	<0.2 0.68 20 220 0.5	<5 0,35 <1 1 164	14 1.03 0.16 0.02 55	2 0.62 4 60 88 5	1 <10 129 0.01 2 <10	6 227 7 5
	and a second					

A .5 gm sample is digested with 10 ml 3:1 HCl/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

Signed:

