96-997-15647

RECONNAISSANCE GEOLOGICAL AND GEOCHEMICAL SURVEY ON THE BRE PROPERTY SKEENA MINING DIVISION QUEEN CHARLOTTE ISLANDS, BRITISH COLUMBIA

LOCATION:

NTS: 103F/9E

LATITUDE: 53°30'N

LONGITUDE: 132°11'W

CLAIMS

BRE #33-#50, BRE #1 Fraction

OWNER AND OPERATOR:

MUTUAL RESOURCES LIMITED
1100-1199 WEST HASTINGS STREET
VANCOUVER, B.C.
V6E 3V4

Prepared by

R.A. QUARTERMAIN

FEBRUARY 1987

MINING RECEIPT NUMBER 275 049J

15,917

GEOLOGICAL BRANCH
ASSESSMENT REPORT

SUMMARY

A reconnaisance soil and rock geochemical survey of two areas of interest on the BRE claims was successful in locating samples with anomalous concentrations of gold. Additional work including sampling, prospecting and mapping is recommended for the areas of anomalous samples at a cost of $60,000.

TABLE OF CONTENTS

LIST OF DRAWINGS

TABLES

APPENDICES

INTRODUCTION

A reconnaissance geological and geochemical survey was undertaken on the BRE claims from August 15th to August 19th, 1986 by R. A. Quartermain and A. Potter. The work had four objectives: 1) to map the rhyolite exposed along Canoe Creek; 2) to examine the area of anomalous mercury samples from a previous survey; and 3) to prospect the BRE 45 and BRE 46 calims which have not yet been examined. All objectives were met, with limited success, and further work is recommended in the area of claims BRE 44 through 50.

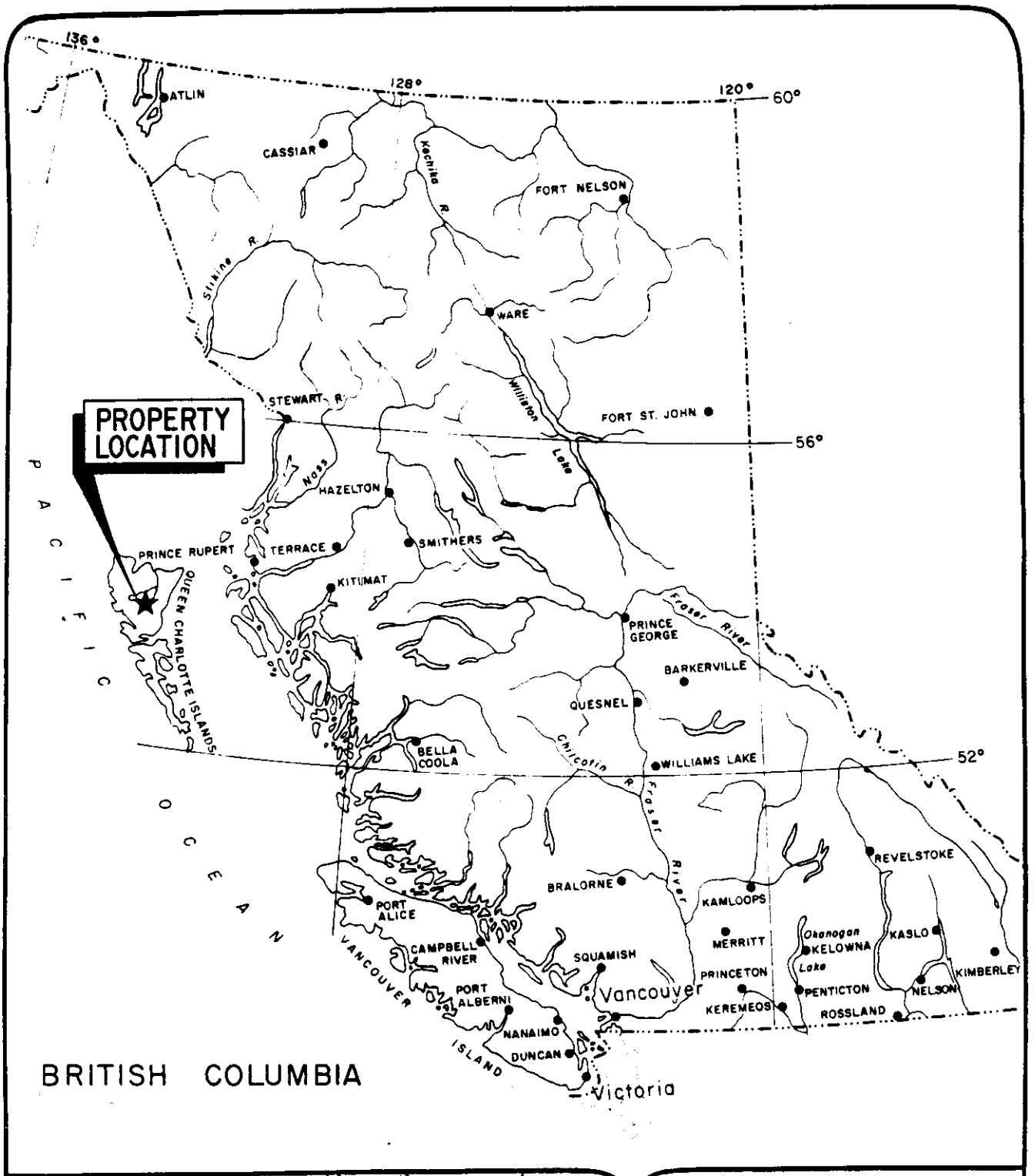
LOCATION AND ACCESS

The BRE 33 to 50 claims are located at 53° 30' north latitude and 132° 11' west longitude on Graham Island of the Queen Charlotte Islands. The claims are approximately 1 km north of the Cinola gold deposit.

The property is accessible from Port Clements 32 road-km northwest via a gravel road maintained by MacMillan Bloedel. Heavy logging vehicles use the road and for the purpose of safety, the MacMillan Bloedel headquarters at Juskatla should be notified before using the road. A gate on route 42 is controlled by Consolidated Cinola Gold Mines. Route 42 cuts across the eastern half of BRE claims 46 and 48, providing excellent property access.

TOPOGRAPHY AND VEGETATION

The topographic variation of the property is 100 m. Most rises are gentle though the banks of Canoe Creek are steep and in excess of 25 m. Outcrop with reliefs of 10 m occur along Canoe Creek at the west end of the property. The vegetation is dominated by mature cedar. Trees up to 600 years in age are common. Ground vegetation is minimal and the flatter areas of the property are quite pleasant to travers.



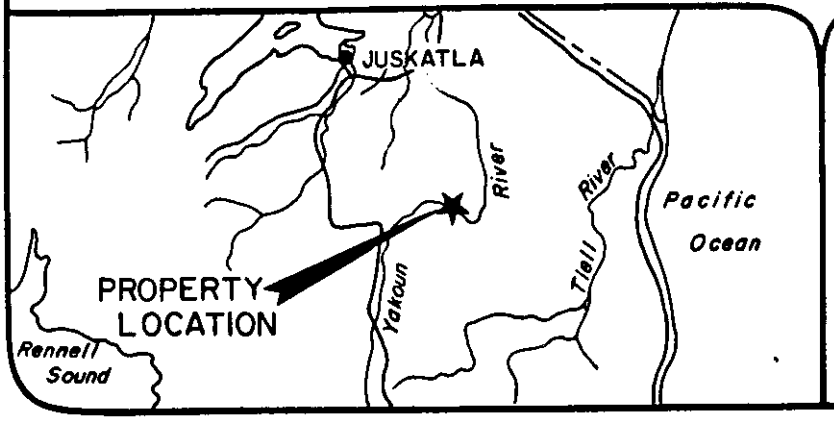


FIGURE 1

MUTUAL RESOURCES LTD.

LOCATION MAP

BRE CLAIMS

FEB. 1987

CLAIMS

The property consists of 50 two-post claims and two fractions.

Claim	Anniversary
BRE #1-16	Nov/86
BRE #17-32	Nov/88
BRE #33	Nov/89
BRE #34-50	Nov/88
BRE #1 Fr, Woof Fr	Nov/88

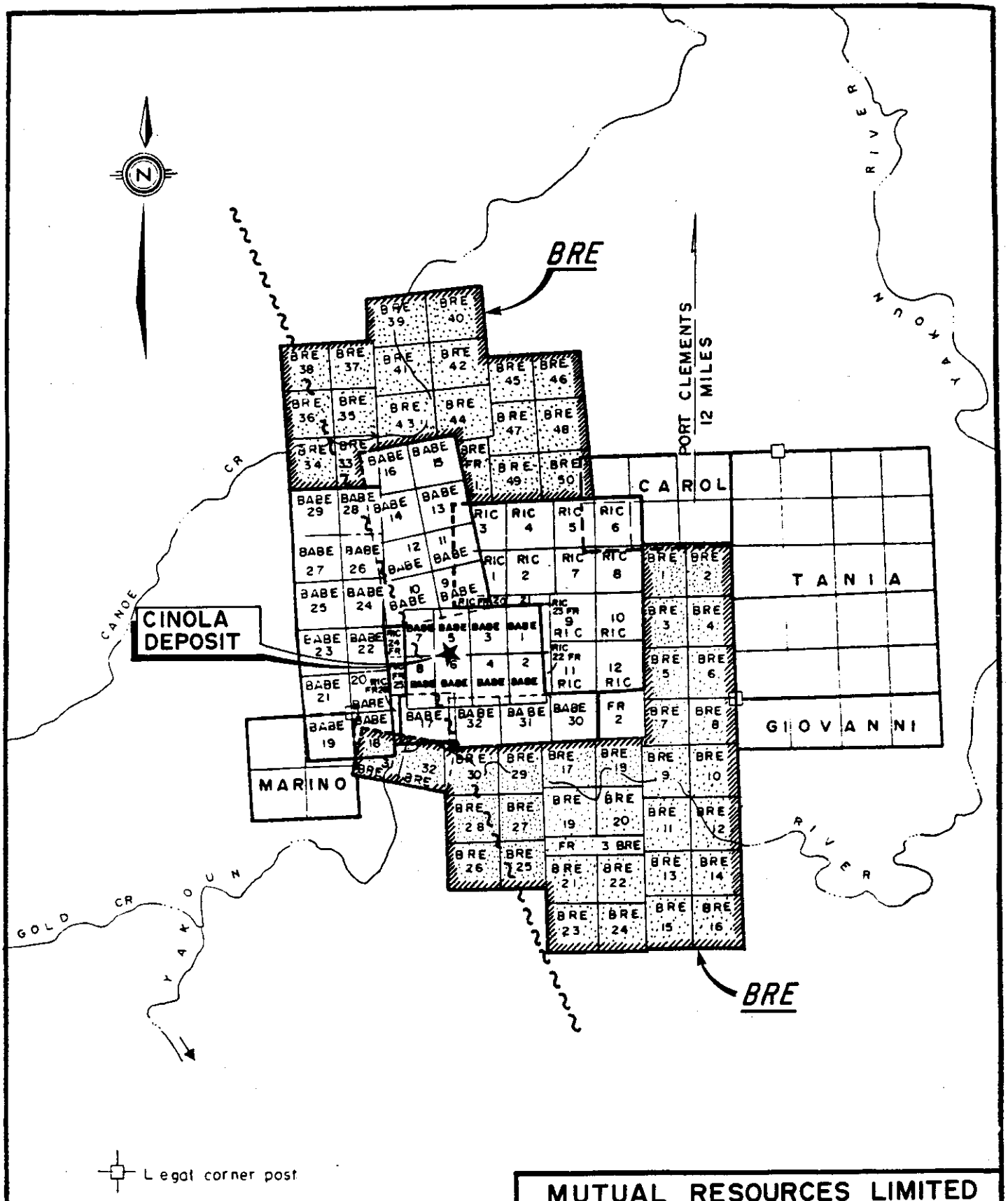
PREVIOUS WORK

The BRE claims were staked along with Efrem Specogna's RIC and BABE claims which cover the Cinola gold deposit of City Resources (Canada) Ltd. In the past, these claims have been optioned to Kenneo (1971), Cominco (1972), Silver Standard (1973) and Quintana (1974-76). The BRE claims were retained by Silver Standard Mines in 1973 and optioned to Mutual Resources in 1979. A soil survey was carried out over the property in 1980 and an I.P. geophysical survey conducted over the BRE 1-32 claims in 1985.

CURRENT PROGRAM

A limited reconnaissance geological and geochemical survey was undertaken to follow-up on the 1980 program. In 1980, sheared felsic volcanics were noted in Canoe Creek along strike of the ore-controlling (?) Specogna fault. These volcanics were re-examined in detail. Similarly, the area of anomalous mercury samples on BRE 44 was re-examined.

The rhyolite was examined for sulfide mineralization. One location with 2% disseminated pyrite did not contain any significant gold. The felsic volcanics can be traced from the Cinola property to Canoe Creek.



Legal corner post

MUTUAL RESOURCES LIMITED

BRE CLAIMS

Scale = 1.25 inches to 1 mile approx

SCALE

Mile 1 0 1 Mile

Prepared by: J.S.C Drawn by: A.T.K	Date : Dec 6/75 Revised: July 8/75	NTS MAP AREA 103 - F	DRAWING No.

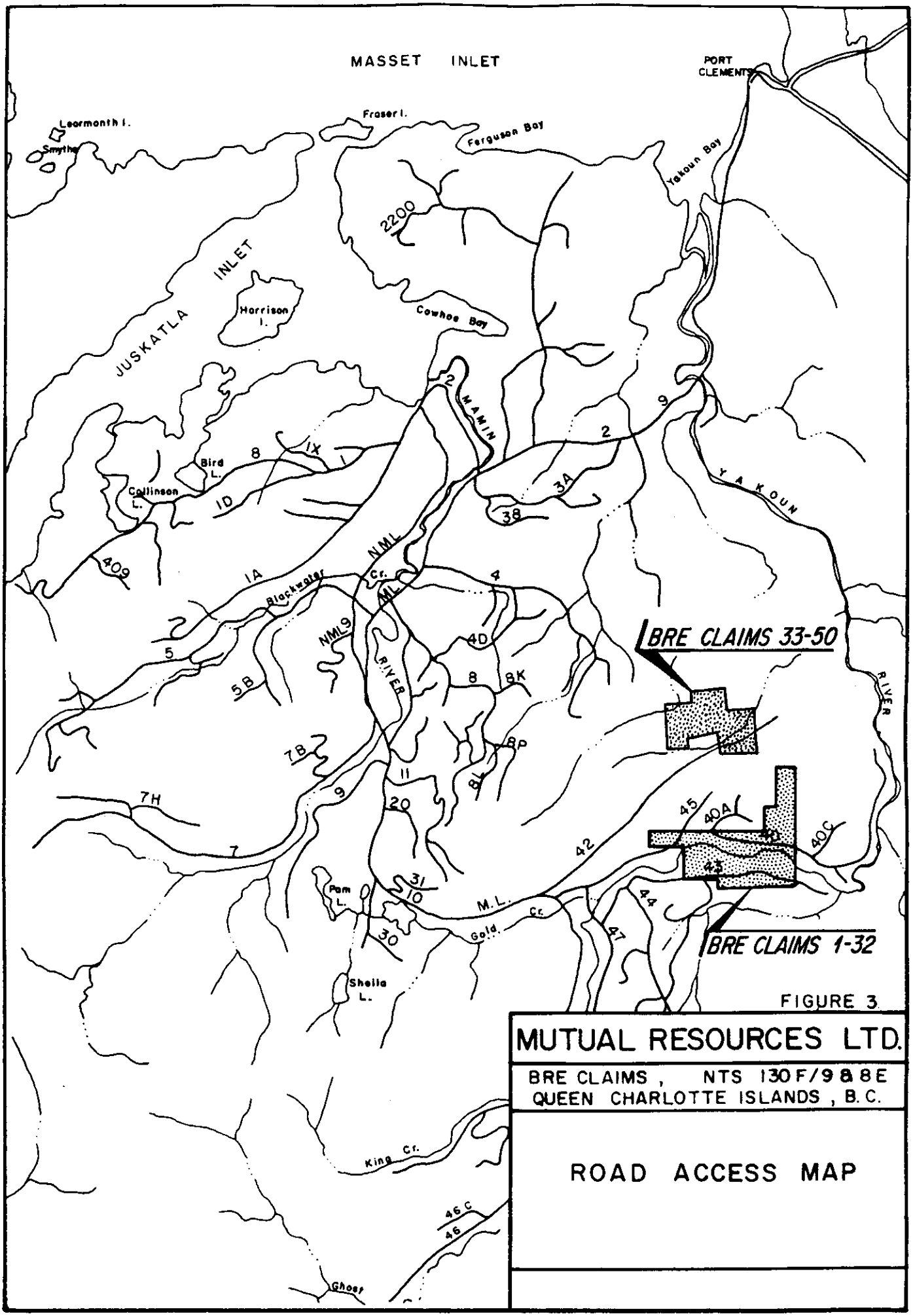


FIGURE 3

MUTUAL RESOURCES LTD.

BRE CLAIMS, NTS 130F/9&8E
QUEEN CHARLOTTE ISLANDS, B.C.

ROAD ACCESS MAP

Conglomerate float was found along a drainage on claim 44. It is a polymictic paraconglomerate with angular to rounded fragments, similar to the conglomerate on the Cinola property. Float of a white, massive finely laminated chert is exposed along Canoe Creek.

GEOLOGY

Three days were spent examing outcrop along Canoe Creek and lesser drainages at the west end of the property. The dominant rock type is a homogeneous fine-grained felsic tuff. Lesser amounts of a quartz-eye (10%) rhyolite are exposed along the creek. A number of 0.1 to 1.5 m wide fault zones were noted in which the felsic material has been milled. There is minor folding developed in the tuff though the dominant structure is a north trending foliation. The felsic volcanics have been koalinized throughout.

Two north-striking, non-magnetic fine-grained diabase dykes outcrop in Canoe Creek on claim BRE 34. Between lines 3700 E and 3800 E, an unconsolidated congolmerate outcrops in the Creek. It is bedded and has a shallow dip. It has a texture similar to that of the basal till overlying it but the contact between the two is unconformable.

The property is carved by thick overburden which may be in excess of 30 m in thickness. The overburden consists of seven well-developed distinct horizons: a surface organic layer, a black organic soil, a red brown course till, a bright orange loamy horizon, a thin white bleached horizon, a grey gley horizon, a thick lower poorly-sorted conglomerate till with 5% wood bark.

GEOCHEMISTRY

The gold content of rock and soil samples is shown on Figure 4. Although none of the analyses approach ore grade concentrations, there are a number of interesting anomalous values. Samples from the outcrop in Canoe Creek

Table I

Sample #	Rock Type	Location	Description	Au ppb
6544	Rhyolite	75m west #1 BRE36	Grey, aphanitic, brecciated much limonite stain	160
6545	Diabase	125m swest #1 BRE36	Fine-grained magnetic mafic dyke	30
6546	Q.E. Rhyolite	85m west #1 BRE36	White, brecciated with trace sulfides	45
6547	Q.E. Rhyolite	84m west #1 BRE36	Brecciated with Fe-Mn stain	10
6548	Rhyolite	90m west #1 BRE36	Fault gouge milled to <5mm	<5
6549	Diabase	113.5m swest #1 BRE36	Similar to 6545	<5
6550	Q.E. Rhyolite	280m swest #1 BRE36	Massive, flow-banded, trace sulfides	<5
8167	Chert	4200E 4700N	Float with trace sulphides	85
8168	Q.E. Rhyolite	136m swest #1BRE36	Siliceous with 1% biotite	15
8169	Qtz	BRE #2	Float, honeycomb brain quartz with pyrite	200
8170	Rhyodacite	Tree road + 100m w	Grey, mx, equigr, trace sulphides	25
8171	Conglomerate	N of Ric #4	Grey, ang-rounded clasts of rhyodacite, sulfides	20
8172	Conglomerate	5300E 4790N	Grey, rounded voc clasts, trace sulfides	35
8173	Conglomerate	Jtn Canoe/Float Crk's	Wood fragments similar to Cinola, trace pyrite	420
8174	Q.E. Rhyolite	4400E at creek	Float, rounded, x-cutting Q.V.	75
8175	Q.E. Rhyolite	75m Ne #1 BRE34	White, flow-banded minor koalin, Fe-Mn stain	<5
8176	Q.E. Rhyolite	100m Ne #1 BRE34	White, sheared, much Fe-Mn stain	<5
8177	Rhyolite (?)	8176	Coarse fragmental soil, milled 8176 (?)	85

Table II

Sample	Location	Description	Au ppb
8178	#2 BRE 34	Coarse, 40% clasts, matrix supported, poorly sorted	<5
8179	4400E at creek	Orange, coarse, equigr, soil, much FeO	<5
8180	#2 BRE 34	Compacted, hard, till with voc + wood fragments	<5
8181	8180	Bark selected from till	30
8182	4400E at creek	Grey, compacted, tree fragments, weathered rhyodacite	10
8183	4400E at creek	Typical, glaciofluvial, loose, red brown, poorly sorted	<5
8184	4400E at creek	Ao - 80% cedar bark 30-50mm diameter	1.5
BRNE#1	BRE 43	Typical dark brown glacial material	<5
BRNE#2	BRE 43	Typical brown "B" soil horizon	<5
BRNE#3	BRE 43	Typical brown "B" soil horizon	<5
BRNE#4	Canoe Creek	Coarse brown till	<5
BRNE#5	BRE 45/46	Typical dark brown "B"	<5
BRNE#6	BRE 48, new road	Typical red brown coarse "B" till	<5
BRNE#7	Cinola, high grade	Disturbed red brown till from centre of property	900 465

100 m west of the BRE #34 claims line, vary in gold content from 10 ppb to 160 ppb. The host is sheared rhyolite tuff with 10% liminite stain. The limonite is assumed to be associated with decaying vegetation, as no sulfides were observed in the unit. On claim BRE #44 samples 8169, 8172 and 8173 contain 200, 35 and 420 ppb gold respectively. Sample 8169 is float of a chalcedonic quartz vein while the other two samples are congolomerate float similar to that associated with the Cinola mineralization.

Examining the analytical results for multi-element analyses, there do not appear to be any other elements which are sympathetic with gold and anomalous in all three samples 6544, 8169 or 8173. There are, however, elements such as P, Ba, V, C, Sr which are enriched in some samples while K is depleted in other.

Soil sample 8177 which is located along the strike extent of thee Specogna fault has a gold content of 70 ppb in the -80 mesh fraction. Sample BRNE #1 which is located on BRE #44 claim in the vicinity of gold-anomalous conglomerate float contained 85 ppm old in the +80 mesh fraction. These two samples are significant as background samples assayed <5 ppb gold. Sample BRNE #7 contains 900 ppb gold in the -80 mesh and 465 ppb in the +80 mesh fractions. This sample was collected from the B horizon over the best ore grade surface portion of the Cinola deposit. The fact that this selected sample is an order of magnitude above the anomalous samples collected from the BRE property which in turn are an order of magnitude above background, indicate the anomalous samples from the BRE are significant and warrant follow-up.

DISCUSSION

From the discussion on geology and geochemistry, it is apparent that rock and soil samples from specific areas on the BRE claims are anomalous in gold. The fact that no analyses approaching Cinola grades were located, is disappointing. Further work on BRE 34 will probably show that the Specogna

Fault srike extent is anomalous in gold and any economic potential is likely to be along strike on BRE 36 or 38. The conglomerate float on claim BRE #44 could be derived from the Cinola deposit, though considering its abundance it is more likely to be locally derived. BRE #44 should be examined in greater detail as well as the topographic high on BRE #45 and #46.

RECOMMENDATIONS

1. Using the BRE #33-34 claim line, run grid lines east and west at 100 m intervals across the trace of the Specogna fault and include BRE #36.

2. Establish a baseline line between BRE #45 and #47 claims and run soil survey lines at 100 m spacings similar to lines 5500 E and 5700 E. Collect the samples as deep as possible.

3. Prospect and map the eastern four claims.

4. Survey the claim posts prior to logging.

PROJECT ESTIMATE

PROJECT DESCRIPTION		ACCOUNT	DAYS AT $	ESTIMATED COST AMOUNT $
NAME: BRE	02	FIELD DAYS REG.	GEOL. 10 : 250	2500
TYPE: Au PROV. B.C.	04		GEOPH. :	
PROJ.#MI001 N.T.S. 103/F 9E	02	FIELD DAYS TEMP.	GEOL. 30 : 125	3750
NO. OF CLAIMS AND/OR LOCATION	04		GEOPH. :	
BRE 1 - 50	13	OFFICE DAYS REG.	GEOL. 5 : 250	1250
Graham Island	13		GEOPH. :	
DUE DATE OF CLAIMS	13	OFFICE DAYS TEMP.	GEOL. :	
November 1988	13		GEOPH. :	
November 1989		EMPLOYEE BENEFITS		
		OFFICE SUPV.		500
SUMMARY OF WORK PROGRAMME	09	DRAFTING		1000
Follow-up geochem & geology				
	40	LIVING COSTS		
		40 mandays AT $ 50		2000
		AT $		
	42	SUPPLIES, TOOLS		200
	41	TRAVEL		1500
PROJECT SUPERVISOR	49	EQUIPMENT RENT + MAINTENANCE		
R.A. Quartermain		Plugger		500
NO. OF EMPLOYEES 4		Augers		100
REG. 1 TEMP. 3				
AGREEMENT DATED:				
N/A				
PARTIES	30	AIRCRAFT		
N/A				
	23	GROUND SURVEY - GEOPHYSICS - CONTRACT		
WORK COMMITMENT	23	AIRBORNE SURVEY - GEOPHYSICS - CONTRACT		
N/A	24	LINE CUTTING 10 AT $ 50		500
	26	STAKING AT $		
	25	TRENCHING AT $		1000
	27	DIAMOND DRILLING AT $		
JOINT VENTURER				
N/A	22	CONTRACT GEOCHEM AT $		
PROJECTED START UP	29	ASSAYING 200 @ $20		4000
June 1987				
COMPLETION DATE:	45	GOV'T FEES + LICENSES		200
September 1987	51	DATA PROCESSING		
PREPARED:	54	OPTION PAYMENT		
DATE:		SURVEY - LEGAL		10,000
APPROVED:				
	44	LEGAL FEES		
AUTHORIZED:		CONTINGENCY		1,500
		TOTAL EXPENSE		30,500
		RECHARGES		
		NET EXPENSE		

PROJECT SCHEDULE

START UP DATE June 1987 COMPLETION DATE September 1987

STAGE: Phase I

DESCRIPTION		J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
FIELD REG.	Geol.						5			5				
	Geoph.													
FIELD TEMP.	Geol.						15			15				
	Geoph.													
OFFICE REG.	Geol.													
	Geoph.													
OFFICE TEMP.	Geol.													
	Geoph.													
FIXED WING $														
HELICOPTER $														
GROUND SURVEY Km.														
claim legal Km.							X							
Km.														
AIRBORNE SURVEY Km.														
LINE CUTTING Km.							X							
STAKING														
BULLDOZING $														
DIAMOND DRILLING M														
CONTRACT GEOCHEM							X							
OPTION PAYMENT														

MEMO OF JUSTIFICATION

The 1986 program located soil and rock samples anomalous in gold. Some of these anomalies are associated with an area with soils anomalous in mercury identified in the 1981 geochem survey. Additional geochem is recommended followed by trenching after the results are in.

STATEMENT OF AUTHOR'S QUALIFICATIONS

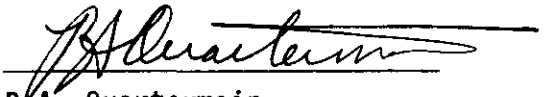
I, Robert Allan Quartermain, of 2303 - 1600-D Beach Avenue, Vancouver, British Columbia, do hereby certify that:

I am a graduate of the University of New Brunswick (BSc, 1977).

I am a graduate of Queen's University (MSc, 1981).

I am a member of the Geological Association of Canada.

I have been practising my profession as a field geologist since 1977, employed by Canadian and American mining companies involved in the exploration for and development of mineral deposits.



R.A. Quartermain

COST STATEMENT

Wages:	Field		$2,665.00
	1 Geologist 5 days @ $220/day	$1,100.00	
	1 Assistant 5 days @ $125/day	625.00	
	Office - Preparatory		
	1 Geologist 1 day @ $220	220.00	
	Office - Report		
	1 Geologist 2.5 days @ $220	550.00	
	1 Draftsman 1 day @ $170	170.00	
Accommodation:			350.00
	10 mandays commercial @ $35/day	350.00	
Transportation:			498.00
	4x4 rental 5 days @$40/day	200.00	
	400 kms @ $0.30/km	120.00	
	fuel	40.00	
	Prince Rupert - Queen Charlotte Is.	138.00	
Analyses:			871.50
	16 rocks for Au, 24 element ICP @$19.75 ea	316.00	
	28 soils for Au, 24 element ICP @$18.50 ea	518.00	
	2 biologicals for Au,Sb,As,Br,La,Ta,Th,U @$18.75 ea	37.50	
Supplies:			32.69
	Total		$4,417.19

APPENDICES

ANALYTICAL METHOD

The rock chip and soil samples were sent to Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver, B.C. V7J 2C1.

Rock

The rock samples were crushed in two stages using jaw and cone crushers. A subsample was taken and ring pulverized to -140 mesh. The precious metal content was determined by standard fire assay techniques and gravimetric finish. The semi-quantitative 24-element ICP was performed after metric-aqua-regia digestion of 0.5 gm of -140 mesh material.

Soil

Soil samples were collected from hand pits at depths of 10 to 100 cm. The soil samples were dried and then sieved into two fractions -80 mesh and +80 mesh. In the case of samples 8178 and 8183, the -35 mesh and +35 mesh were analized. A semi-quantitative 24-element ICP was performed after metric-aqua-regia digestion of 0.5 gm of -80 mesh material and on the +80, -35, and +35 mesh after they had been pulverized to -100 mesh.

Biogiochemical

Samples 8181 and 8184 dominated by vegetation, were dried and 50 gms of material pulverized to -80 mesh. The material was encapsulated and irraditated by neutron activation.

Chemex Labs Ltd.

•Analytical Chemists •Geochemists •Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Phone: (604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : CONSOLIDATED SILVER STANDARD MINES LIMITED

11th Floor, 1199 W. HASTINGS ST.
VANCOUVER, B.C.
V6E 3T5

CERT. # : A8617108-001-A
INVOICE # : I8617108
DATE : 10-SEP-86
P.O. # : NONE
C1000/M1003

Sample description	Au ppb FA+AA	Mo ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Mi ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)	Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)
6548 -80	<5	11	<10	83	260	8	<2	1.5	7	6	595	2.33	510	17	0.52	29	8.68	3.0	0.68	36	<0.2	0.265	88	3.33
8177 -80	<5	8	<10	118	170	18	<2	2.0	4	7	700	1.67	905	34	0.39	82	9.43	1.0	0.63	21	<0.2	0.815	139	1.94
8178 -35	<5	4	<10	74	245	2	<2	1.5	8	13	575	3.50	137	59	0.57	130	13.20	0.5	2.22	40	<0.2	0.881	450	2.42
8179 -80	<5	2	<10	35	455	2	<2	<0.5	2	7	465	9.71	330	40	0.53	120	10.40	<0.5	1.00	34	<0.2	1.030	205	1.25
8180 -80	<5	3	<10	96	300	14	<2	2.0	5	10	415	2.99	320	31	0.57	128	12.60	<0.5	1.64	35	<0.2	1.330	270	1.99
8182 -80	10	3	<10	107	280	12	<2	2.0	9	17	805	3.40	285	52	0.98	133	13.40	0.5	2.02	51	<0.2	1.150	380	2.13
8183 -35	<5	3	<10	95	885	8	<2	1.0	45	16	445	5.17	2110	73	0.56	107	9.49	1.5	0.61	37	<0.2	0.788	133	1.40
BRNE #1 -80	70	2	<10	37	285	72	<2	1.5	<1	5	460	1.07	215	31	0.24	47	5.39	<0.5	0.81	22	0.4	0.659	180	1.50
BRNE #2 -80	<5	1	<10	68	365	50	<2	1.5	4	11	545	2.73	345	58	0.79	93	7.60	<0.5	1.45	30	<0.2	0.650	270	1.92
BRNE #3 -80	<5	2	<10	70	555	6	<2	1.0	5	10	415	3.63	380	35	0.58	100	7.95	<0.5	0.90	22	<0.2	0.873	183	1.81
BRNE #4 -80	10	2	<10	147	860	70	<2	1.0	25	15	585	6.31	3810	52	0.90	121	10.40	0.5	1.23	46	<0.2	0.877	220	2.28
BRNE #5 -80	<5	<1	<10	53	700	10	<2	2.0	6	6	415	1.42	635	26	0.36	41	5.89	0.5	1.41	18	<0.2	0.517	240	1.62
BRNE #6 -80	<5	3	<10	102	370	16	<2	1.0	5	12	365	4.19	255	50	0.44	98	10.50	<0.5	0.66	49	0.4	0.566	159	1.60
BRNE #7 -80	900	2	<10	113	495	20	<2	1.0	1	6	310	4.50	245	40	0.27	106	6.84	<0.5	0.55	28	1.2	0.697	121	1.10
6548 +80	<5	4	<10	59	145	12	<2	1.0	3	4	620	1.39	172	31	0.34	25	7.27	2.5	0.67	25	<0.2	0.238	92	2.36
8177 +80	85	5	<10	86	105	18	<2	1.0	3	5	755	1.33	475	49	0.28	54	7.96	1.5	0.42	15	<0.2	0.447	99	1.60
8178 +35	<5	2	<10	75	510	10	<2	1.5	8	12	690	3.20	157	36	0.56	120	14.00	1.0	2.28	80	<0.2	0.917	435	3.14
8179 +80	<5	2	<10	34	445	2	<2	<0.5	3	9	385	9.06	540	40	0.54	114	10.70	<0.5	0.76	32	<0.2	0.885	152	1.10
8180 +80	<5	2	<10	91	180	12	<2	1.5	6	9	330	2.84	240	33	0.63	121	12.50	0.5	1.07	33	<0.2	1.270	182	1.49
8182 +80	<5	3	<10	114	220	2	<2	2.0	9	18	640	3.48	270	56	1.09	135	14.10	0.5	1.52	47	<0.2	1.010	280	1.65
8183 +35	<5	3	<10	92	910	2	<2	1.0	16	14	635	4.48	830	69	0.82	107	9.25	1.0	1.41	36	<0.2	0.756	230	2.58
BRNE #1 +80	<5	2	<10	22	255	6	<2	1.5	<1	7	715	1.24	180	105	0.27	62	6.75	0.5	0.67	15	<0.2	0.627	181	2.25
BRNE #2 +80	<5	2	<10	48	330	2	<2	1.0	5	12	710	2.65	355	110	0.79	91	8.22	<0.5	1.10	21	<0.2	0.607	240	2.36
BRNE #3 +80	<5	2	<10	58	535	8	<2	1.0	5	8	645	3.33	370	57	0.51	80	8.20	1.0	0.84	21	<0.2	0.598	174	2.22
BRNE #4 +80	<5	3	<10	91	570	2	<2	1.0	15	12	690	4.22	1720	40	0.67	89	9.30	1.0	0.87	25	<0.2	0.621	180	2.24
BRNE #5 +80	<5	2	<10	40	600	4	<2	1.5	6	7	585	1.70	605	120	0.34	43	6.50	1.0	1.10	18	<0.2	0.493	205	2.28
BRNE #6 +80	<5	3	<10	68	395	6	<2	0.5	6	12	510	3.69	320	72	0.60	113	9.30	<0.5	0.69	32	<0.2	0.556	183	2.35
BRNE #7 +80	465	2	<10	38	335	6	<2	0.5	2	8	515	3.73	275	125	0.33	110	6.83	<0.5	0.56	23	0.6	0.690	134	1.53

Certified by ..

Chemex Labs Ltd.

Analytical Chemists · Geochemists · Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Phone: (604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : CONSOLIDATED SILVER STANDARD MINES LIMITED

11th Floor, 1199 W. HASTINGS ST.
VANCOUVER, B.C.
V6E 3T5

CERT. # : A8617110-001-A
INVOICE # : I8617110
DATE : 29-SEP-86
P.O. # : NONE
C1000/M1003

Sample description	Prep code	Au NAA ppb	bio	Sb NAA ppm	bio	As NAA ppm	bio	Br NAA ppm	bio	La NAA ppm	bio	Ta NAA ppm	bio
8181	237	3.0		1.56		6.30		4.2		59.8		0.5	
8184	237	1.5		1.27		12.99		23.7		12.1		0.4	

VOI rev. 4/85

Certified by Hart Bichler

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Phone: (604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : CONSOLIDATED SILVER STANDARD MINES LIMITED

11th Floor, 1199 W. HASTINGS ST.
VANCOUVER, B.C.
V6E 3T5

CERT. # : A8617110-001-B
INVOICE # : I8617110
DATE : 29-SEP-86
P.O. # : NONE
C1000/M1003

Sample description	Prep code	Th NAA ppm bio	U NAA ppm bio				
8181	237	1.43	0.93	--	--	--	--
8184	237	2.64	1.42	--	--	--	--

VOI rev. 4/85

Certified by Hart Bichler

Chemex Labs Ltd.

•Analytical Chemists •Geochemists •Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Phone: (604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : CONSOLIDATED SILVER STANDARD MINES LIMITED

11th Floor, 1199 W. HASTINGS ST.
VANCOUVER, B.C.
V6E 3T5

CERT. # : A8617108-001-P
INVOICE # : I8617108
DATE : 10-SEP-86
P.O. # : NONE
C1000/M1003

Sample description	N % (ICP)																							
6548 -80	3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8177 -80	2.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8178 -35	1.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8179 -80	0.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8180 -80	1.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8182 -80	1.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8183 -35	1.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #1 -80	1.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #2 -80	1.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #3 -80	1.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #4 -80	1.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #5 -80	1.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #6 -80	1.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #7 -80	0.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6548 +80	2.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8177 +80	2.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8178 +35	2.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8179 +80	0.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8180 +80	1.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8182 +80	1.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8183 +35	2.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #1 +80	2.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #2 +80	2.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #3 +80	2.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #4 +80	2.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #5 +80	2.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #6 +80	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BRNE #7 +80	1.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Certified by .....

Chemex Labs Ltd.

•Analytical Chemists •Geochemists •Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Phone: (604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : CONSOLIDATED SILVER STANDARD MINES LIMITED

11th Floor, 1199 W. HASTINGS ST.
VANCOUVER, B.C.
V6E 3T5

CERT. # : A8617109-001-B
INVOICE # : I8617109
DATE : 17-SEP-86
P.O. # : NONE
C1000/M1003

Sample description	Au ppb FA+AA																							
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6544	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6545	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6546	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6547	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6549	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6550	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8167	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8168	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8169	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8170	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8171	20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8172	35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8173	420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8174	75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8175	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8176	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Certified by ....

Chemex Labs Ltd.

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Phone: (604) 984-0221
Telex: 043-52597

•Analytical Chemists •Geochemists •Registered Assayers

CERTIFICATE OF ANALYSIS

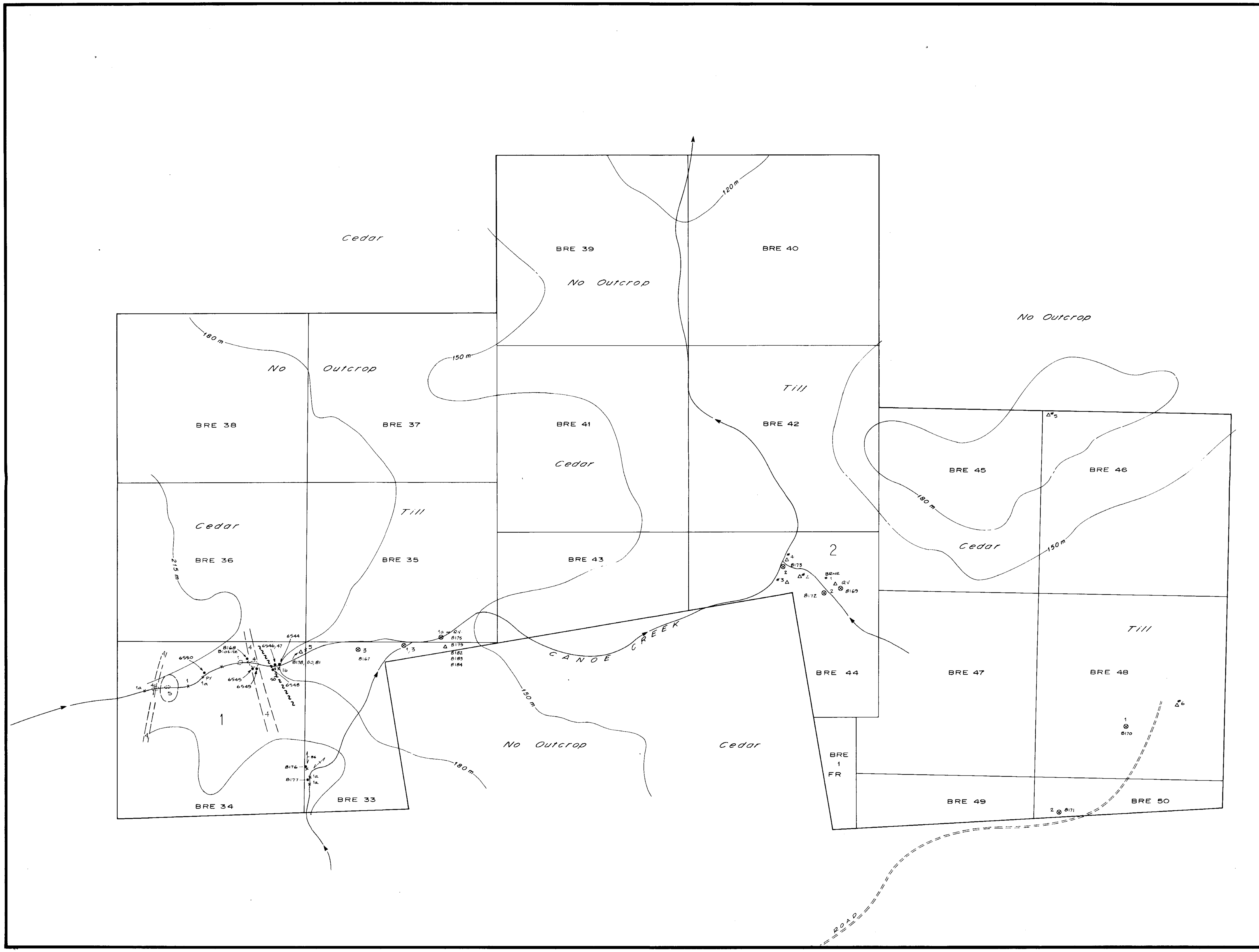
TO : CONSOLIDATED SILVER STANDARD MINES LIMITED

11th Floor, 1199 W. HASTINGS ST.
VANCOUVER, B.C.
V6E 3T5

CERT. # : A8617109-001-A
INVOICE # : I8617109
DATE : 17-SEP-86
P.O. # : NONE
C1000/M1000

Sample description	Mo ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Ba ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cr ppm (ICP)	Mg % (ICP)	V ppm (ICP)	Al % (ICP)	Be ppm (ICP)	Ca % (ICP)	Cu ppm (ICP)	Ag ppm AAS	Ti % (ICP)	Sr ppm (ICP)	Na % (ICP)	K % (ICP)
6544	11	<10	12	30	10	<2	<0.5	2	5	710	0.87	130	39	0.24	3	7.09	2.0	0.98	310	0.6	0.131	85	2.14	3.34
6545	1	<10	86	1210	2	<2	<0.5	12	16	375	4.87	1210	57	1.20	125	7.94	<0.5	5.22	89	<0.2	0.774	510	2.41	0.76
6546	4	<10	40	60	16	<2	<0.5	2	4	705	1.00	265	49	0.22	3	6.77	2.0	0.89	93	<0.2	0.119	89	2.12	4.12
6547	2	<10	15	40	8	<2	<0.5	<1	2	670	0.73	86	17	0.18	<1	6.61	1.5	0.76	30	<0.2	0.119	79	2.06	3.75
6549	2	<10	74	1190	2	<2	<0.5	14	16	305	4.53	670	59	1.07	126	8.52	<0.5	5.82	62	<0.2	0.743	585	2.60	1.29
6550	2	<10	90	800	10	4	<0.5	3	2	675	2.72	1100	43	0.49	3	7.04	2.5	1.79	35	<0.2	0.437	194	2.38	3.31
8167	1	<10	7	15	6	<2	<0.5	2	4	450	0.56	118	185	0.10	10	3.27	1.0	0.13	22	<0.2	0.045	33	0.08	0.85
8168	2	<10	42	<10	12	<2	<0.5	<1	1	2720	0.64	380	20	0.28	<1	7.66	2.5	1.14	17	<0.2	0.039	220	2.38	3.20
8169	<1	<10	<1	45	4	<2	<0.5	<1	3	155	0.44	26	255	0.02	4	1.10	0.5	0.07	7	<0.2	0.022	28	0.03	0.48
8170	3	<10	16	35	10	<2	<0.5	<1	3	785	1.04	130	92	0.08	<1	7.08	2.0	0.09	24	<0.2	0.198	47	3.48	4.24
8171	2	10	<1	20	4	<2	<0.5	<1	4	725	1.35	38	110	0.06	47	5.46	<0.5	0.07	14	<0.2	0.378	48	3.68	5.46
8172	1	<10	15	375	2	<2	<0.5	2	7	620	2.32	99	110	0.29	65	6.13	<0.5	0.25	19	<0.2	0.474	104	1.06	4.85
8173	6	<10	11	275	4	<2	<0.5	2	7	1070	1.92	111	130	0.30	79	6.03	<0.5	0.46	20	1.4	0.418	119	0.93	4.75
8174	1	<10	4	35	2	<2	<0.5	<1	3	440	0.45	130	52	0.10	2	4.38	1.5	0.06	5	<0.2	0.037	20	0.06	1.36
8175	2	<10	26	<10	8	<2	<0.5	<1	2	860	0.50	90	44	0.14	<1	6.59	2.0	0.24	13	<0.2	0.034	39	2.32	3.58
8176	3	<10	34	<10	8	<2	<0.5	2	2	965	0.59	1390	41	0.11	<1	6.26	2.0	0.15	9	<0.2	0.048	25	1.41	2.78

Certified by ..



LEGEND

5 Consolidated Till
4 Diabase
3 Chert
2 Conglomerate
1 Rhyolite
a Quartz eye
b Tuff

Geological contact
QV Quartz vein
6558 ● Rock sample
8172 ⊗ Float sample
#6 △ Soil BRNE #
× Outcrop
Road
Stream
Foliation

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,647

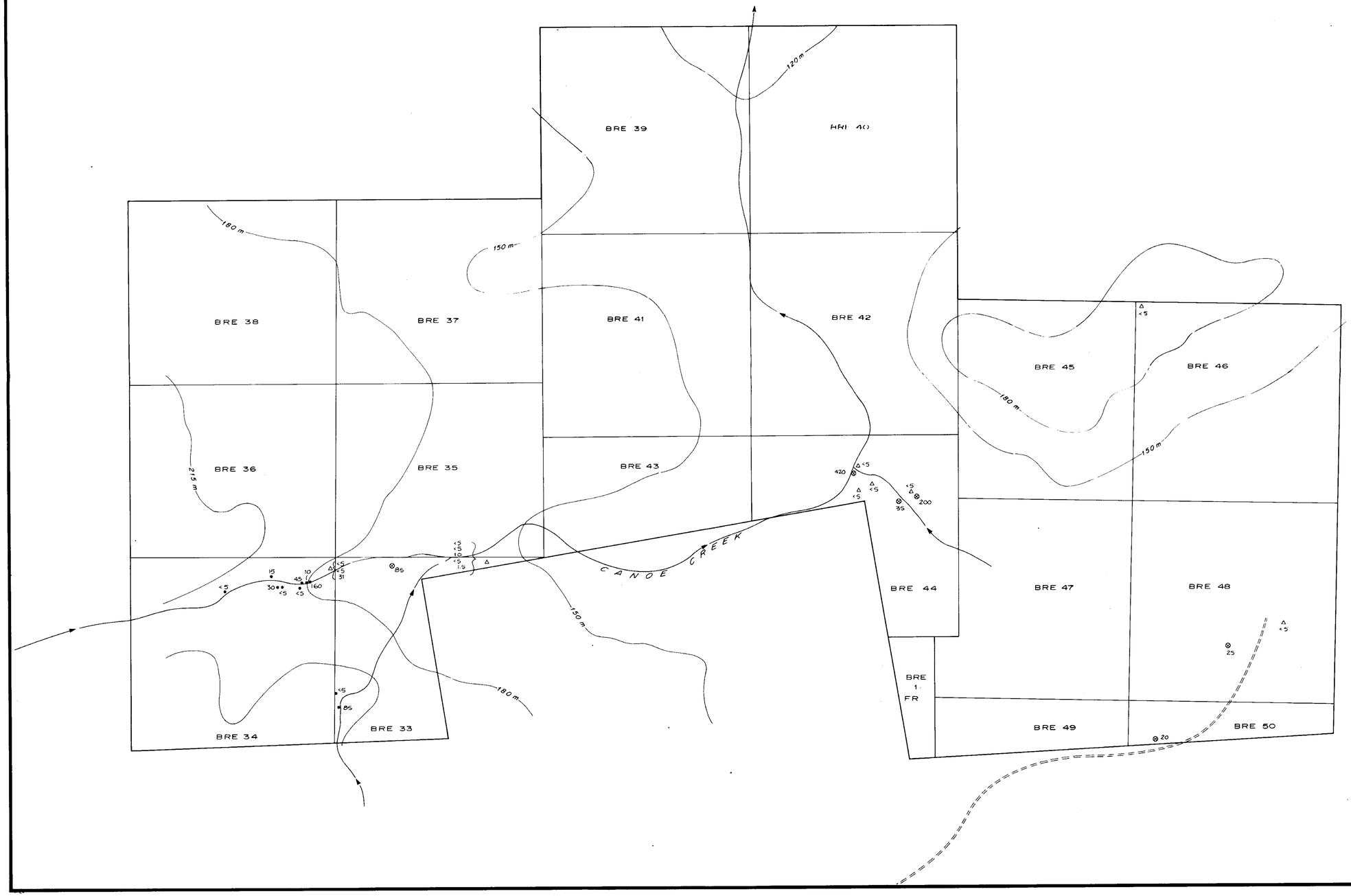
MUTUAL RESOURCES LTD

SKEENA MINING DIVISION, B.C.

RECONNAISSANCE GEOLOGICAL AND GEOCHEMICAL SURVEY

0 100 200 300 400 500
METRES

Compiled by:	Date: Feb. 1987	FIG. 4
Drawn by: WR	Scale: 1:5000	NTS: 103 F/9E



N

LEGEND

Values in ppb

15 • Rock sample

35 ⊗ Float sample

<5 △ Soil sample

MUTUAL RESOURCES LTD

SKEENA MINING DIVISION, B.C.

GOLD CONTENT IN SOIL AND ROCK SAMPLES

0 100 200 300 400 500
METRES

Compiled by:	Date: Feb. 1987	FIG. 5
Drawn by: WR	Scale: 1:5000	NTS: 103 F/9E