ASSESSMENT REPORT

1997 DRILLING PROGRAM

Croesus Prospect on the
Attwood Property

NTS 82E/2 E

Lat: 49° 03' 30" N
Long: 118° 40' 00" W

Echo Bay Minerals Co.
921 Fish Hatchery Rd.
Republic, WA 99166
509-775-3157

Mike Rasmussen, Ph.D.
December, 1997

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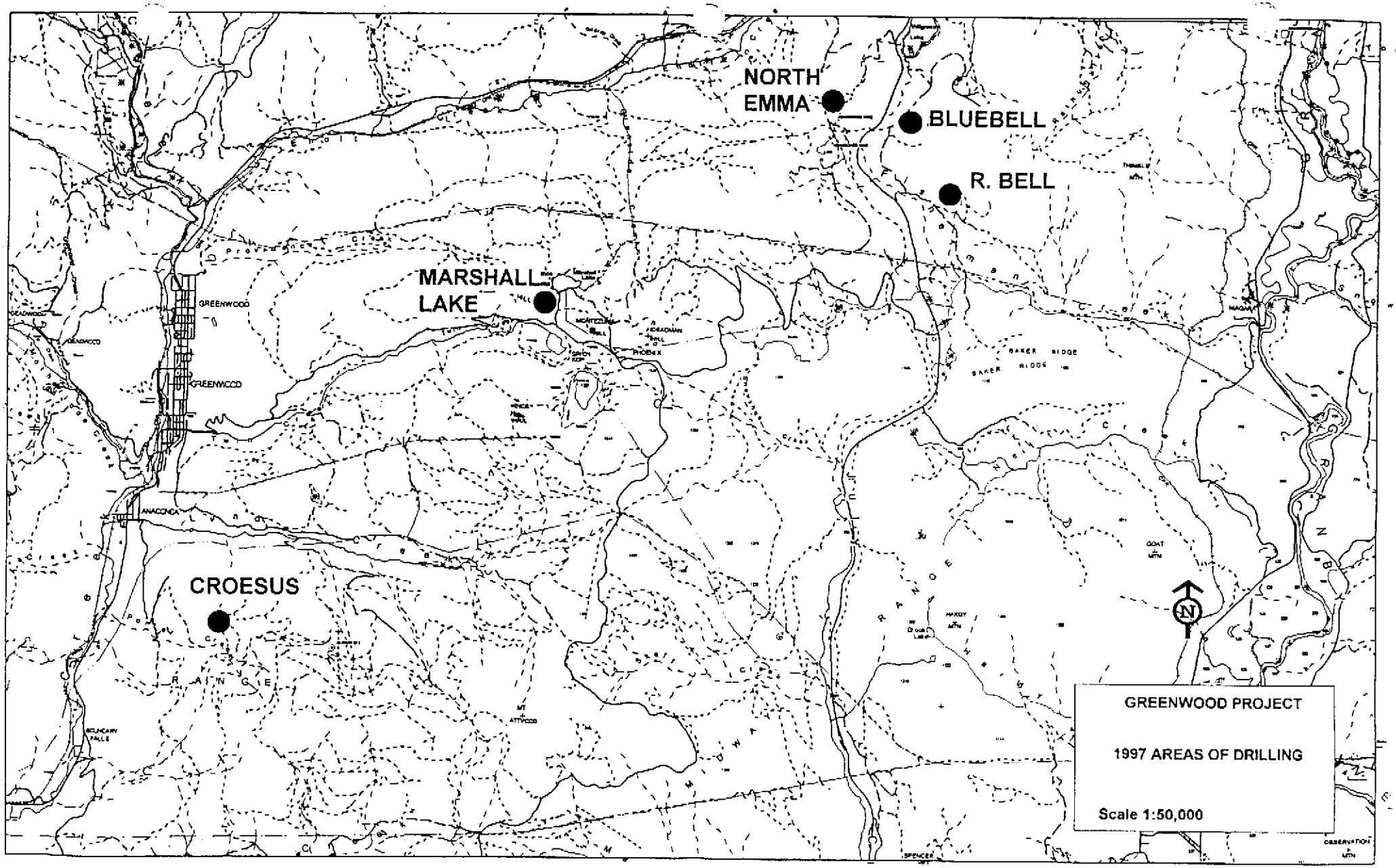
1.0 SUMMARY *(Note: Portions of the following section are excerpted from the 1996 Assessment Report on the Attwood Property and Bombini Option by Linda Caron, for Kettle River Resources.)*

The Attwood property is located about 4 kilometres east-southeast of Greenwood, B.C., on the north and west facing slopes of Mt. Attwood. Access to the claims is good, with numerous two and four wheel drive roads. The claims are underlain by Permian Attwood Group rocks, argillite, phyllite, limestone and volcanics, sandwiched between the underlying Mt. Attwood thrust fault and the overlying Lind Creek thrust. Serpentine is common along these thrusts. A number of different probable Cretaceous intrusions cut the older rocks.

Two areas of VMS type mineralization occur on the property. In the west, massive to finely laminated and disseminated pyrite and pyrrhotite occurs in argillite and hornfels, and at the contact of these rocks with overlying limestone, at the Croesus and Johannesberg showings. In the Croesus workings, the sulfide horizon can exceed 2 metres in thickness, and is exposed over a strike length of in excess of 100 metres. Copper, arsenic, bismuth, silver, and to a lesser extent, tungsten and gold, may be anomalous in samples of sulfide mineralization. Approximately 4 kilometres east, and on what may be the same stratigraphic horizon, massive sulfides (sphalerite, galena, pyrrhotite and pyrite) are exposed at the Sunnyside workings. Historical production from these workings was in the order of 50 tons, at an average grade of 0.24 opt Au, 52 opt Au, 9% Pb and 1% Zn. Again, sulfide material is anomalous in As, Bi, Cu, W, Ag and Au, plus Zn and Pb.

Although drill results are negative, an extended, more detailed heavy mineral survey could further test the claim area for potential gold zones. An airborne mag-EM survey is suggested to identify further pods of sulfide and to assist in defining positions of thrust faults.


NORTH EMMA
BLUEBELL
R. BELL
MARSHALL LAKE
CROESUS
GREENWOOD
GREENWOOD
ANACONDA
BAKER RIDGE
BAKER RIDGE
PHOENIX
RANGE
RANGE
GOAT MTN
MT ATTYCOO
SPENCER
OBSERVATION MTN
N
GREENWOOD PROJECT
1997 AREAS OF DRILLING
Scale 1:50,000

2.0 INTRODUCTION

2.1 Location, Access and Terrain

Work described in this report was done on the Croesus claim, located about 4 kilometres east-southeast of Greenwood, B.C. (see Figure 1). Access to the property is east from Greenwood on Lind Creek road, then south on various logging, mining and fire access roads. There is good road access to most parts of the claim block.

The claim is situated on the north and west facing slopes of Mount Attwood. Elevation ranges from about 3,000 feet in the Lind Creek valley in the northwest portion of the property, to about 5,000 feet near the summit of Mount Attwood in the southeast. The terrain is moderate to steep and vegetation is highly variable across the property. Much of this area was burned in the Attwood Fire in 1973 and locally, regeneration since the fire has been in the form of thick to virtually impassible alder forest (the Fanny Joe Basin area). To the west and at higher elevations, the forest is more open, consisting of pine, larch and fir, with little underbrush. In the Lind Creek valley, dense cedar forest is common.

The climate is generally quite dry, with hot summers and little rainfall. Snowfall is minimal, generally less than 1 metre. Water is available for drilling from the upper portion of Porter Creek.

2.2 Property and Ownership

The 1997 Croesus drilling is applied to 5 groupings of claims, Attwood 97-1 through Attwood 97-5. These groups consist of a total of 83 mineral claims (a total of 254 units), as shown in the Notices to Group and the accompanying claim maps in the preface pages of this report.

2.3 **History** *(Note: The following section is excerpted from the 1996 Assessment Report on the Attwood Property and Bombini Option by Linda Caron, for Kettle River Resources.)*

The Attwood property includes a number of historical workings on lapsed or reverted crown grants, including the Sunnyside, Rattler and Fanny Joe in the east and the Croesus, Johannesberg, Tanglefoot, Eholt in the west. A number of other lapsed historical claims and crown grants occur on the property and the reader is referred to the historical claim map of the Greenwood Mining District for locations of these properties (which include among others the Evening Star, Morning Star, Lexicon and Lead King). A brief summary of the history of the property is given below.

1894: The Lead King and Johannesberg claims were staked. A 9 foot vein of silver bearing rock with 40% lead is reported on the Lead King, exposed for 1000 feet (Ministry of Mines Annual Report).

1900-4: Reference made to the Rattler, Johannesberg, Lead King, Sunnyside (Ministry of Mines Annual Reports).

1908: Reference is made to the Fanny Joe (Ministry of Mines Annual Report).

1911: First reference is made to the Croesus and Lexicon in the Ministry of Mines Annual Reports.

1913: Reference is made to the Sunnyside showing, which is said to be similar to the Riverside in the Rock Creek area (Ministry of Mines Annual Report). Production of 30 tons of ore is reported from the Sunnyside. A total production of 50 tons (at an average grade of 0.24 opt Au, 52 opt Ag, 9% Pb and 1% Zn) is reported in the Minfile for the Sunnyside, from the years 1913, 1918-20, and 1934. Note that a second Sunnyside (L1646) occurs in the Jewel Creek area, which has caused some confusion in the historical reports.

1933: A 10' deep shaft is reported on the Fanny Joe, on a 4" quartz vein containing pyrite and galena, which strikes northerly and dips steeply east. A considerable amount of manganese is reported. (Ministry of Mines Annual Report). Similar quartz veins are reported in workings on the Rattler.

1950: W.E. McArthur shipped 8 tons of lead ore to Trail from the Lead King claims, which returned 22 oz Ag, 1143 lbs Pb and 1250 lbs Zn (Ministry of Mines Annual Report 1950).

1968: Ortega Minerals completed a soil sampling program in the Croesus - Johannesberg area at 200 foot intervals on 400 foot spaced lines, analysed for copper only. A number of areas of + 100 ppm Cu were detected (Hemsworth, 1968).

1969: Ortega Minerals completed IP and mag surveys over in the Croesus - Johannesberg area. Eight anomalies were identified and a zone encompassing 5 of these anomalies was defined, approximately 1.5 km in length, striking northwest and open in both directions along strike (Baird, 1969a and 1969b).

1973: A soil survey was completed over the Att claims (now lapsed - the claims covered a portion of the east side of the current Attwood property), by Granby. Analysis was for Cu and Zn only. Several strong Zn anomalies occurred in the southwest part of the grid (in the vicinity of the Sunnyside claim).

1976: Silver Falls Resouces did a very minor program of geological mapping, soil and rock sampling (Cu, Pb, Au analyses) and ground mag over a limited area on the Sunnyside and Fanny Joe claims. Anomalous gold values to 2 g/t were obtained from rock samples collected at old workings and a number of anomalous gold soils (to 120 ppb) occurred (McLeod, 1976).

1979: An insignificant program of geological mapping, ground mag and VLF was completed on the Okum property (in the vicinity of the Rattler - northcentral part of Attwood claim) (McLeod, 1979).

1980: Reconnaissance soil and silt sampling and preliminary geological mapping was done on the Okum and Rattler claims, for March Resources. Several anomalous gold values were detected, with values to + 200 ppb Au. (Madeisky and Symonds, 1980).

1983: Ashnola Mining Co. completed minor rock sampling in the Croesus - Johannesberg area for precious metal content (Blanchflower, 1983).

1995: Kettle River Resources acquired the Attwood claim (including the lapsed Sunnyside, Fanny Joe and Rattler crown grants) by staking.

1996: Kettle River Resources staked the Att claims, and optioned the Croesus-Johannesberg property from

Samuel Bombini. The geological mapping and rock sampling program described in this report was completed. Following this program, heavy mineral drainage samples were collected, and contour soil sampling done over a portion of the property.

1997: Kettle River Resources entered into an Exploration and Option Agreement with Echo Bay Minerals Co., Republic, WA. Echo Bay drilled six diamond core holes on the Croesus claim to test the VMS model for the property and to search for gold enrichment. Drill results suggest mineralization at Croesus is associated with intrusion-related silicification, rather than a syngenetic horizon. Highest gold intercept in the program was 0.049 opt Au over 5 feet.

2.4 Summary of Work Done, October, 1997

Six holes were drilled by diamond drill methods by Bergeron Drilling of Greenwood, B.C. A total of 1828 feet of drill core were obtained, logged, and sampled. Sampled core was split, and stored with unsampled core in the core yard facility of Kettle River Resources, Greenwood, B.C. Mike Rasmussen, Echo Bay Minerals Co., was project geologist, and was assisted by Tom Johnson (geologist) and John Hanks (geothechnician).

3.0 GEOLOGY AND STRUCTURE *(Note: The following section is excerpted from the 1996 Assessment Report on the Attwood Property and Bombini Option by Linda Caron, for Kettle River Resources.)*

The Greenwood area has been mapped on a regional basis by Fyles (1990), and prior to this, by Little (1983) and Church (1986). Fyles' mapping shows the pre-Tertiary rocks form a series of thrust slices, which lie above a basement high grade metamorphic complex. A total of at least five thrust slices are recognised, all dipping gently to the north, and marked in many places by bodies of serpentine. Fyles' interprets these serpentinite bodies as representing part of a disrupted ophiolite suite, belonging to the Knob Hill Group of late Paleozoic age. Commonly, these serpentinite bodies have undergone Fe-carbonate alteration to listwanite, as a result of the thrusting event.

The Greenwood area has been mapped on a regional basis by Fyles (1990), and prior to this, by Little (1983) and Church (1986). The distribution of rocks in the Greenwood area is controlled by a series of faults, including both Jurassic thust faults and Tertiary extensional (and detachment) faults hence an understanding of the structure of the area is critical to understanding the geology. The reader is referred to Fyles (1990) for an in-depth description of the regional geology and structure.

Fyles' mapping shows the pre-Tertiary rocks form a series of thrust slices, which lie above a basement high grade metamorphic complex. The thrusting event is felt to be an effect of the development of the Okanagan gneiss domes, which also results in the regional northward dip of rock units (Fyles, 1990). A total of at least five thrust slices are recognised, all dipping gently to the north, and marked in many places by

bodies of serpentine. Fyles' interprets these serpentinite bodies as representing part of a disrupted ophiolite suite, belonging to the Knob Hill Group of late Paleozoic age. Commonly, these serpentinite bodies have undergone Fe-carbonate alteration to listwanite, as a result of the thrusting event.

The oldest rocks in the camp belong to the late Paleozic Knob Hill Group of dominantly volcanic affinity, and consist mainly of chert, greenstone and related intrusives, and serpentine. Unconformably overlying these rocks are sediments and volcanics (largely argillite, siltstone, limestone and andesite) of the late Paleozoic Attwood Group. Rocks of the Knob Hill and Attwood Groups are in turn unconformably overlain by the Triassic Brooklyn Formation, represented largely by limestone, clastic sediments and pyroclastics. In many cases in the Greenwood area, evidence for thrusting is seen by the older Knob Hill Group rocks resting over the younger Attwood Group or Brooklyn Formation rocks. The historically important skarn deposits in the Greenwood area (i.e. Phoenix, Oro Denoro, Motherlode-Greyhound) area hosted within the Triassic rocks.

Three separate intrusive events are known regionally to cut the above sequence, the Jurassic aged Lexington porphyry, the Cretaceous Nelson intrusives, and the Eocene Coryell dykes and stocks.

Tertiary sediments and volcanics unconformably overly the older rocks with the distribution of these Tertiary rocks largely controlled by series faults. Regionally, three Tertiary fault sets are recognised, and early set gently east dipping set, a second set of low angle west dipping, listric normal detachment type faults, and a late, steep dipping, north to northeast trending set of right lateral or west side down normal faults (Fyles, 1990).

The Attwood property is located on the north and west facing slopes of Mount Attwood, within Fyles' fourth thrust slice. A wedge of Attwood Group rocks is sandwiched between the Mt. Attwood thrust fault below, and the Lind Creek thrust fault above, both which dip gently to the north. Both thrust faults are defined by exposures of serpentine. Fyles' mapping shows a basal volcanic unit, overlain by limestone (locally cherty), which is in turn overlain by a sedimentary package of siltstone, phyllite, and conglomerate. He describes the Attwood rocks as being tightly folded, with axial planes dipping moderately north, and on axes with low plunge to the northwest.

At the Croesus showings, massive, finely laminated pyrrhotite with pyrite and minor chalcopyrite occurs in a steeply dipping horizon up to 2 metres in width, at the contact of phyllite and limestone. Locally the massive sulfide horizon has well developed fragmental textures and clear glassy quartz eyes, to 4 mm in size.

To the northwest at the Johannesberg workings, finely lamellar, and locally massive, pyrrhotite, again with good vitreous quartz eyes within, occurs in a fine grained hornfels. A late granodiorite intrusive with minor associated quartz veining along margins, intrudes the older rocks in the area of the Croesus and Johannesberg showings. The intrusive can become quite strongly bleached and altered, with pyrite-pyrrhotite stockworking veinlets. A number of quartz veins, with galena, sphalerite, pyrite and chalcopyrite are known in the western portion of the property (on the Tanglefoot, Johannesberg, etc), which may be related to these intrusives.

4.0 Drilling Program

4.1 Drill Hole Description

CR97-1 drilled toward and beneath the western trench of Croesus, where a tightly-folded horizon of massive pyrite plunges shallowly ESE against altered granodiorite. This hole would intersect at least one (the northern), or possibly both limbs of the fold if they persisted to a depth of 200 ft or more. Neither limb was encountered in the drilling, and the most ready explanation for the surface showing is a fault-related, post-intrusion fold in a sulfide-replaced horizon. No significant gold mineralization, although an interal (8 ft.) of pyroxene-epidote-marble skarn occurred within the limestone

CR97-2 intersected nearly 10 feet of massive pyrhhotite-pyrite-chalcopyrite (py-po-ccp) within a marble unit. Although no granodiorite occurs in this hole CR97-3 encountered a sill (?) of it 40 feet away. CR97-2 was stopped in old mine workings at 170 ft., CR97-3 steepened 10 ^{O} and drilled to 500 ft.; very little alteration or mineralization was seen in the CR97-3, which was surprising, given the massive sulfide showing in CR97-2.

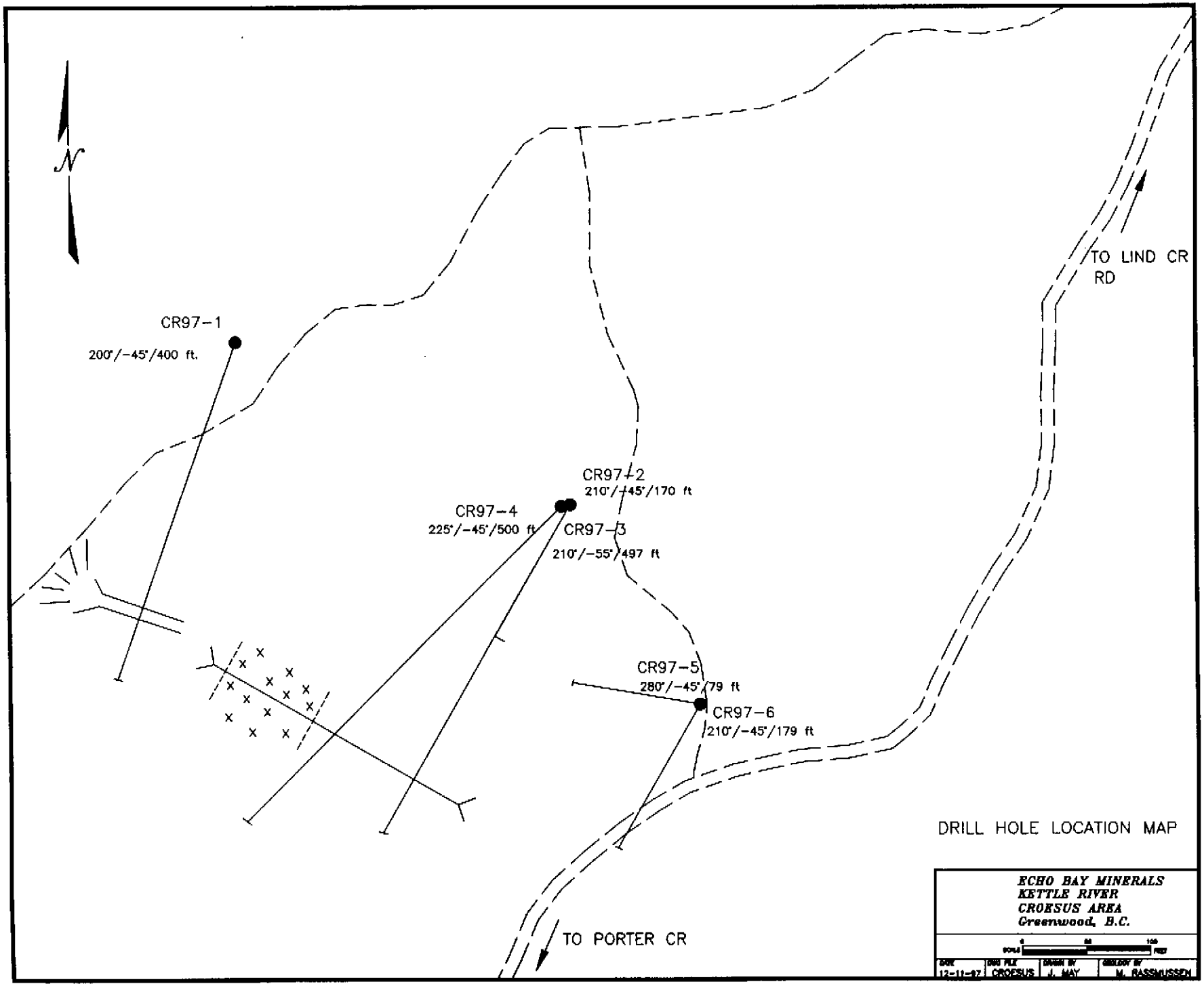
CR97-4 was an effort to intersect the massive py-po-ccp horizon again. It too failed. This core intersected 5 intervals of granodiorite, and most of the siltite was sharply hornfelsed. It seems likely that the massive sulfide of CR97-2 is an isolated pod without significant dimensions. The most continuous gold mineralization occurred within the hornfelsed siltite from 309-325 ft., where thin veinlets of qz-py-ccp were associated with three consecutive samples which ran 49, 24, and 19 milli-ounces per ton (e.g., 0.049 opt Au), each over about 5 ft.

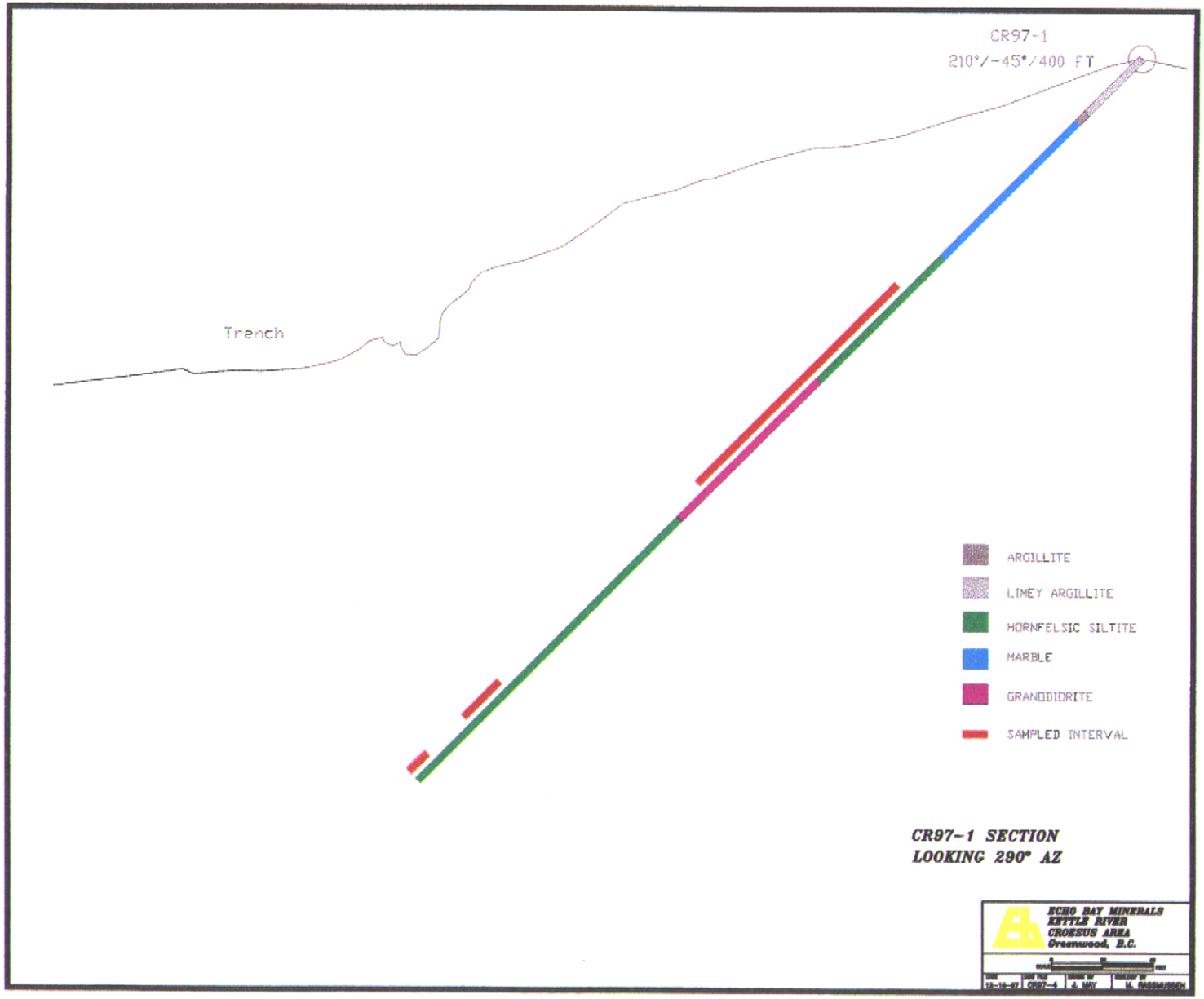
CR97-5 extended 79 feet westward into thoroughly silicified rock. Voluminous quartz, some of it possibly chert, most probably intrusion-related alteration, is perhaps controlled by a NE-striking structure or dike. A carbonate unit in this hole exhibited garnet spotty alteration over 20 ft.

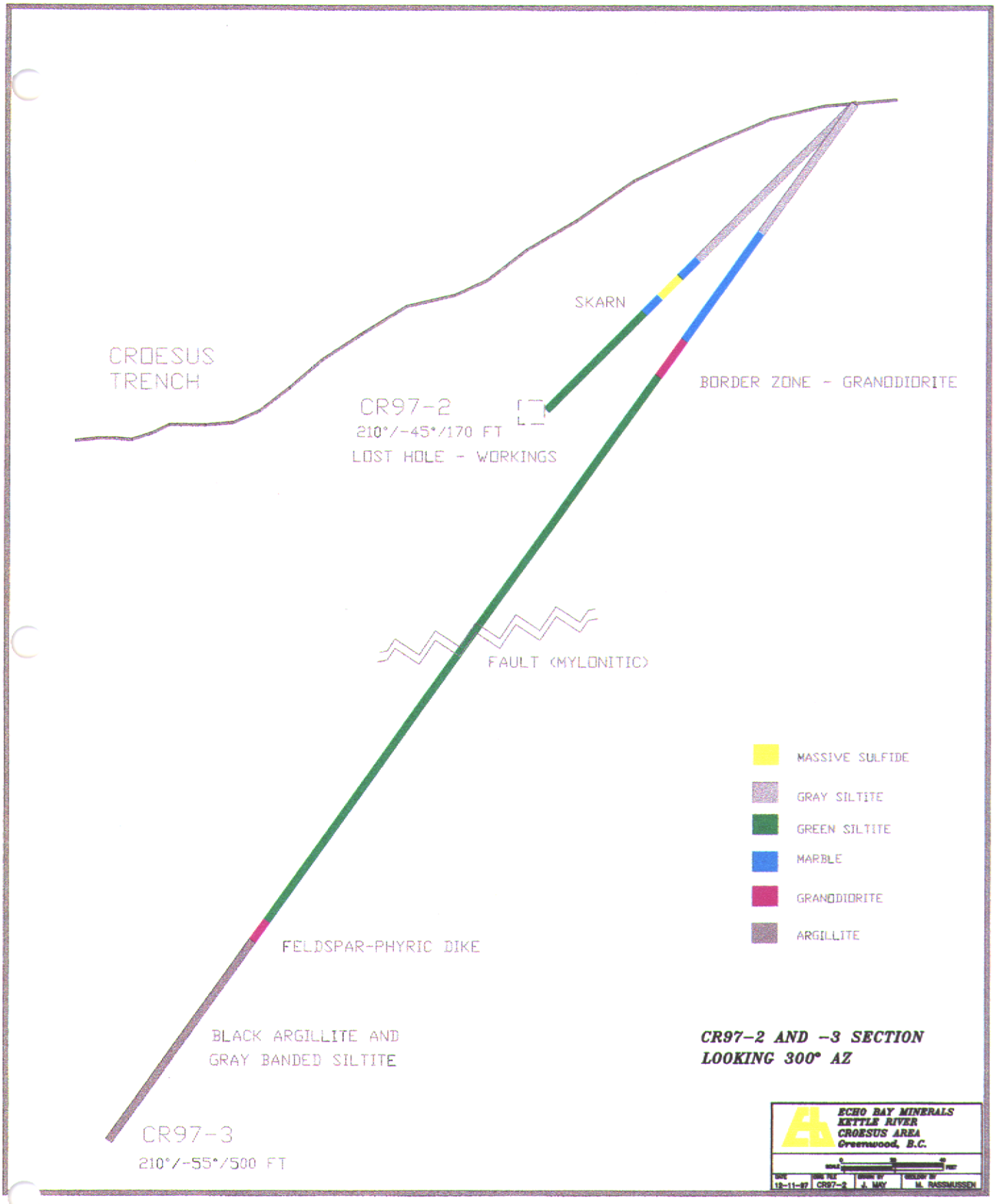
CR97-6 drilled under the eastern end of the Croesus trench, through strongly silicified and Fe-oxide stained rock, none of which, unfortunately, carried gold mineralization.

4.2 Interpretation

The core presents much more an appearance of intrusive-related alteration and sparse mineralization than it does of syngenetic stratbound mineralization. It is possible that intrusion-related recrystallization and skarning of carbonate and hornfelsing of clastic lithologies has overprinted a package of marine sediments containing a mineralized horizon or two, but that is not the simplest explanation of these results. Support, however, for the latter scenario is found in the felsic tuff(?) which is better exposed on the east end of the trench and in subcrop on the road. Perhaps an EM survey would elicit evidence of massive sulfide to the east of the trenches.


CR97-1
200°/-45°/400 ft.
CR97-2
210°/-45°/170 ft
CR97-4
225°/-45°/500 ft
CR97-3
210°/-55°/497 ft
CR97-5
280°/-45°/79 ft
CR97-6
210°/-45°/179 ft
TO LIND CR RD
TO PORTER CR
DRILL HOLE LOCATION MAP
ECHO BAY MINERALS
KETTLE RIVER
CROESUS AREA
Greenwood, B.C.
DATE 12-11-97
DWG FILE CROESUS
DRAWN BY J. MAY
GEOLOGY BY M. RASSMUSSEN

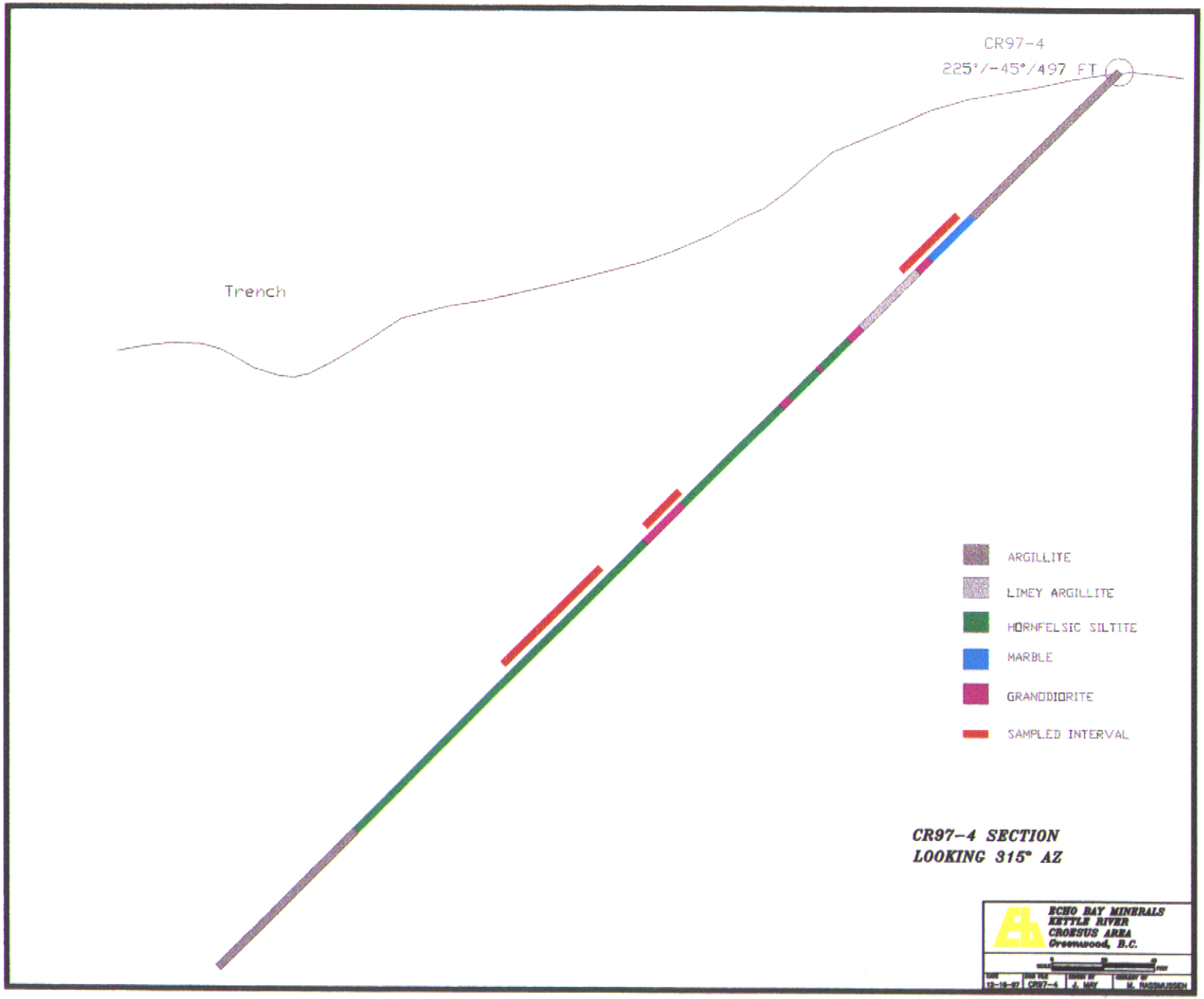

CR97-1
210°/-45°/400 FT
Trench
ARGILLITE
LIMEY ARGILLITE
HORNFELSIC SILTITE
MARBLE
GRANODIORITE
SAMPLED INTERVAL
CR97-1 SECTION
LOOKING 290° AZ
ECHO BAY MINERALS
KETTLE RIVER
CROESUS AREA
Greenwood, B.C.

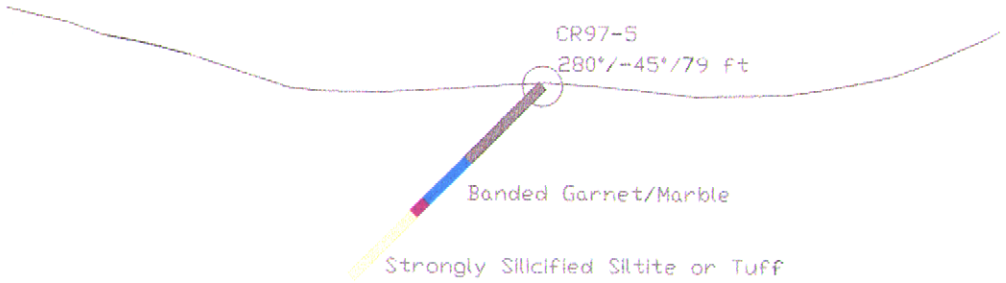


CR97-2 AND -3 SECTION
LOOKING 300° AZ

ECHO BAY MINERALS
KETTLE RIVER
CROESUS AREA
Greenwood, B.C.

DATE	DWG FILE	DRAWN BY	HOLIDAY BY
12-11-97	CR97-2	J. MAY	M. RASSMUSSEN


CR97-4
225°/-45°/497 FT
Trench
ARGILLITE
LIMEY ARGILLITE
HORNFELSIC SILTITE
MARBLE
GRANODIORITE
SAMPLED INTERVAL
CR97-4 SECTION
LOOKING 315° AZ
ECHO BAY MINERALS
KETTLE RIVER
CROESUS AREA
Greenwood, B.C.
12-19-97
CR97-4
J. MAY
M. RASMUSSEN



MASSIVE SULFIDE

GRAY SILTITE

GREEN SILTITE

MARBLE

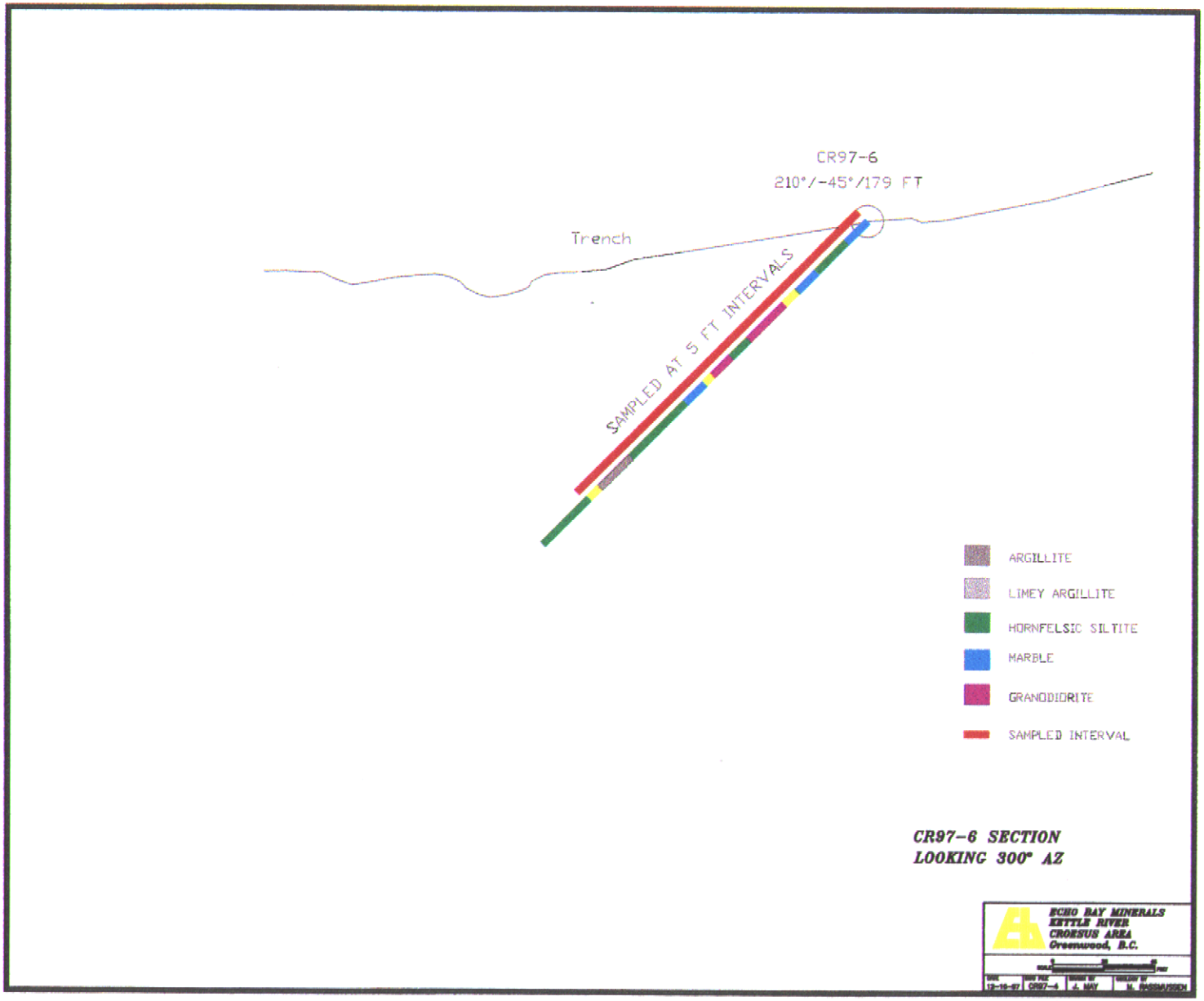
GRANODIORITE

ARGILLITE

CR97-5 SECTION
LOOKING 010° AZ

ECHO BAY MINERALS
KETTLE RIVER
CROESUS AREA
Greenwood, B.C.

DATE	DWG REF	DRAWN BY	CHECKED BY
12-16-97	CR97-5	J. MAY	M. RASMUSSEN


CR97-6
210°/-45°/179 FT
Trench
SAMPLED AT 5 FT INTERVALS
ARGILLITE
LIMEY ARGILLITE
HORNFELSIC SILTITE
MARBLE
GRANODIORITE
SAMPLED INTERVAL
CR97-6 SECTION
LOOKING 300° AZ
ECHO BAY MINERALS
KETTLE RIVER
CROESUS AREA
Greenwood, B.C.

5.0 RECOMMENDATIONS

Geological mapping has identified a VMS horizon within Permian Attwood Group rocks, with several occurrences of typical VMS type mineralization. No areas of economic or strongly anomalous precious metal content have been identified. Detailed heavy mineral drainage sampling is recommended to determine whether a gold enriched portion of the VMS horizon could exist. Contour soil sampling is also recommended to test projected favourable areas with heavy cover. An airborne geophysical survey (mag/EM) would be useful in identifying areas of mineralization for follow-up.

6.0 REFERENCES

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APPENDIX 1

Drill Logs

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-1 | Coord: N | E | Elev | Az | Incl -45 TD 480 | Date | Logger MC | Page 1 of 4

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Silica% Prv	Chl	Arg	Sd	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	thick	Au moz	Comments
0-26'			0-26' GRAY SILTITE. Fine grnd, siliceous rock, faintly bedded; FeOx coating on fract																											
26-35'			26'-35' Gray thin bedded/laminated limy argillite w/ thin beds of impure limestone			faults 6" zone									Abundant															
35-45'			35-45' Black argillite w/ limy interbeds & many cc veins																											
45-110			45-110 LIMESTONE/MARBLE · Mostly thin bedded impure limestone · banded gray/white/black · cm-scale bedding. Argillite-rich zones 63-65' 75-76 80-82 84-85																											
85			85 px-zo-[illegible] SKARN												Skarn (px-[illegible]) 85-93															
90-93			93 90-93 Black/white mottled marble																											

ECHO BAY MINERALS | Project CROESUS | Dhid CR-97-1 | Coord: N | E | Elev | Az | Incl -45° | 480 | Date | Logger MZ | Page 2 of 4

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Si	Prv	Chl	Arg	Sd	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	sp	si	Veins Type	no/ft	ang	thick	Au moz	Comments
105																														
110			109-110 - coarse mottled ls																											
			110' – 177.5'																											
115			V. fine pale grn/gry argillite grading												Bt Hornfels															
120			f- Bt- horn felsed siltst @ ~120																											
125																													
130			Biotite Hornfelsed SILTITE Transmuch Red																											
135															Hornfels	Biotite veinlets disseminated PY/Po		1-2%			0-1%							<2	130-135
140																													135-140
145																													140-145
150																													145-150
155																													150-155
160																													155-160
165																													160-165
170																													165-170
175																												29	170-175
180	+		177.5 Feldspathic altered GRANODIORITE SER/PY												177.5-178 sericite	175-175.5 PY		50% 1%											175-180
185	+																													180-185
190	+		TOTAL SILICIFIED AK + PY															10%											185-190
195	+														advanced prop/ser	Po						2%						190-195
200	+																												195-200

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-1 | Coord: N | E | Elev | Az | Inc -45 | TD 400 | Date | Logger MLP | Page 3 of 4

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Silica% Prv	Chl	Arg	Sd	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sf	Veins Type	Veins no/ft	Veins ang	thick	Au moz	Comments
	+		GRANODIORITE																										<2	200-205
205	+																												↓	205-210
210	+																													210-215
215	+																													215-220
220																														220-225
225	Qz		Bull Qz 224-229 low sulf													py/chlor		1%												225-230
230	+		229 GRANODIORITE																											230-235
235	+																												↓	235-240
240	+																													
245	+																													
250	∴		248-250.5 SPOTTED HORNFELS																											
255	+		250.5-258 GRANODIORITE																											
260	∴		258- SILTITE - Hornfels																											
265	·		· Massive, thick bedded																											
270	·		· greenish gray													FeOx coating on fracture														
275	·															dissem po/py ~1%														
280	·		280-280.5 white Qz																											
285	·																													
290	·																													
295	·																													
300																														

ECHO BAY MINERALS | Project CROELES | Dhld CR-97-1 | Coord. N | E | Elev | Az | Incl -45 | TD 400 | Date | Logger | Page 4 of 4

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Silica% Cc	Dolo	Vn	Prv	Chl	Arg	Sd	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	sp	sl	Veins Type	no/ft	ang	Thick	Au moz	Comments
305			Qz vn 303' 1" wide																											
			306-307' volcanic detritus or flow																											
310			SILTITE, cont.																											
315																														
320																														
325																														
330																														
			sharp contacts																											
335			GRANODIORITE																											
			sharp, bx-like contact																											
			po lenses 1"x3" ~335'																											
340																														
345			sulfide (Po) in fractures																											
350																														
355																												<2	350-355	
360			Bt-Hornfelsed SILTITE													1" po vein												<2	355-360	
365																dissem po							2%					<2	360-365	
370																												.3	365-370	
375																														
380																														
385																														
390			Thin-bedded siltite + argillite 395-400																									16	390-395	
400			TD																										395-400	

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-2 | Coord: N | E | Elev | Az | Incl -45 TD 17? | Date | Logger | Page 1 of 2

Columns: Depth | Lith | RC | LITHOLOGIC DESCRIPTION | RQD | Rec | STRUCTURES Fractures/Faults | Cc | Dolo | Silica% (Vn, Prv) | Chl | Arg | Sd | Alt Code | ALTERATION DESCRIPTION | MINERALIZATION DESCRIPTION | Min Code | py | ml | hm | po | cp | ap | sl | Veins (Type, no/ft, ang) | thick | Au moz | Comments

Depth	Lith	LITHOLOGIC DESCRIPTION	STRUCTURES Fractures/Faults	MINERALIZATION DESCRIPTION	py	po	Au moz	Comments
		0-3 overburden						
5		3' - 67.5'						
10		Gray to black massive siltite						
15								
20		Bleached, variably coloured [illegible]						
25		Sparsely distributed						
30		30' - 50' FeOx on fractures						
35								
40		wk pattern [illegible]						
45								
50								
55								
60								
65		63-65 bleached, epith. qz vein @ 63.5'						
70		67.5 - 85 Thin bedded siltite	bedding @ 60° to core ∠					
75								
80	SK	76-85' [illegible] to cream, [illegible]						
85								
90		85' - ECH, Massive, silicified limestone [illegible] from [illegible] to 95 [illegible]						
95		97-98 Massive po		97-98 - mass. po - py	30	70	<2	95-100
100								

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-2 | Coord: N | E | Elev | Az | Incl -45 TD 170 | Date | Logger | Page 2 of 2

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Silica% Prv	Chl	Arg	Sd	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	thick	Au moz	Comments
			Massive Po-Py-Ccp															40			50	10							<2	100-105
105			106-113 Strong silicified rock, presum. carb. protolith Does not fizz												100% silicified														<2	105-108
110																														
115																														
120																														
125			Massive [illegible] [illegible] SULFITE																											
130																														
135																														
140																														
145																														
150																														
155																														
160																														
165			Very poor Recovery																											
170			TD = 170																											

ECHO BAY MINERALS | Project CROESUS | Dhid CR-97-12 | Coord: N | E | Elev | Az -55 | Incl | TD 600 | Date | Logger | Page 1 of 5

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Silica% Rpl	Chl	Arg	Sd	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	ml	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	thick	Au moz	Comments
			0 - 30																											
5																														
10			GRAY- BLACK SILTITE fine grained, massive																											
15			Grades to																											
20			BLACK ARGILLITE @ ~ 30'																											
25																														
30			- - - - -																											
35			BLACK ARGILLITE																											
40			- Variable bleaching on fractures																											
45			- Thick bedded to massive																											
50																														
55																														
			57 - 97'																											
60			VARICOLORED MARBLE (INCIPIENT SKARN -)																											
65			faint, finegrained mottling green & other colors pale & prominent px & gt.																											
70																														
75			MASSIVE SKARNED MARBLE																											
80																														
85																														
			IMPURE CARB/ARGILLITE																											
90			90-110'																											
95			BANDED LIMESTONE GRAY, cm-SCALE BEDDING Limy sediments																											
100																														

ECHO BAY MINERALS | Project CROESUS | Dhid CR-97-[illegible]3 | Coord: N | E | Elev | Az | Incl | TD | Date | Logger | Page 2 of

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	ROD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Silica% Prv	Silica% Chl	Arg	Sid	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	Au thick	Au moz	Comments
105			Limestone to 115'																											
110																														
115																														
120			115-131' MIXED ZONE Altered granodiorite + sicitite intervals																											
125																														
130																														
135			131-393' SICTITE, with weak hornfels, disseminated py/po & argillite intervals Mostly massive																											
140																														
145																														
150																														
155																														
160																														
165																														
170																														
175																														
180																														
185																														
190																														
195																														
200																														

115-20 <2

120-25 <2

125-31 <2

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-3 | Coord: N E Elev | Az - Incl -55 TD 500 | Date | Logger MR | Page 3 of 5

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Si	Prv	Chl	Arg	Sd	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sl	Veins Type	no/ft	ang	Thick	Au moz	Comments
205			Siltite to 393																										
210																													
215																													
220																													
225																													
230																													
235																													
240																													
245																													
250																													
255																													
260			gray green siltite																										
265			mylonite zone 264-267			ductile deform 264-267																								
270																													
275																													
280																disseminated py-po-cp 1-3%					2-5%							<2	277-280
285																												<2	280-285
290																												<2	285-290
295																												<2	290-295
300			Hornfelsed siltite																									<2	295-300

ECHO BAY MINERALS | Project CRAIGLIS | Dhid PR-97-3 | Coord: N | E | Elev | Az | Incl -55 | TD 500 | Date | Logger MJE | Page 4 of 5

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	ROD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Prv	Chl	Arg	Sid	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	ml	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	thick	Au moz	Comments
300																													<2	300-305
																					2-5								305-310
305																					↓								<2	
310																													<2	310-315
315																													<2	315-320
320			322-325 10-20% Po													322-325					10-20								<2	320-325
325																													<2	325-330
330																													<2	330-335
335																														
340																														
345																														
350																														
355																														
360																														
365																														
370																														
375																														
380																														
385																														
390																														
395	V	V	393-395 Chlrt. Hb-phyric Volcanic BANDED ARGILLITE																												
400																														

ECHO BAY MINERALS | Project CROWS | Dhid LR-97-3 | Coord: N E | Elev | Az | Incl -55 TD 528 | Date | Logger | Page 5 of 5

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Silica% Cc	Dolo	Sil	Prv	Chl	Arg	Sid	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	ml	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	thick	Au maz	Comments
405			Gray Banded Argillite																										
410																													
415																													
420																													
425																													
430			428-441 Black fsp-phyric Dike																										
435																													
440			441 Banded Argillite 441-460																										
445																													
450																													
455																													
460																													
465			Massive Argillite, gray to black 460-485																										
470																													
475																													
480																													
485			485-500																										
490			SILTITE, GRAY-GREEN v. fine grained																										
495																													
500																													

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-4 | Coord: N | E | Elev | Az | Incl | TD | Date | Logger | Page / of

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Silica% Prv	Silica% Chl	Silica% Arg	Silica% Sil	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	ml	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	Thick	Au moz	Comments
75			Black Argillite																											
80			81 Banded argillite / limestone 83																											
85			Thin bedded MARBLE with stringers + interbeds of clastic beds																									<2	83-88	
90																														
95																												<2	93-98	
100																												<2	98-103	

ECHO BAY MINERALS | Project CROESUS | Dhid CR-97-[redacted]4 | Coord: N | E | Elev | Az -55 | Incl | TD | Date | Logger MR | Page 2 of 5

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Cc	Dolo	Silica% Vn	Prv	Chl	Arg	Sx	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	asp	sl	Veins Type	no/ft	ang	thick	Au moz	Comments
																													42	98–103
			103.5													103.5-104					45	5%								
105	+		Granodiorite																										42	103–108
110	+		massive po 109-110													109-110					45	5							15	108–112
			BLACK ARGILLITE MASSIVE																											
115			LIMY SILICIFIED GRAY ARGILLITE												silic,															
120				0											argil/FeOx															
125			GRAY ARGILLITE/SILTITE silicified												silic															
130																														
135																		Flo												
140			141.5 – 147																											
145	+ +		Granodiorite																											
150			147 – 164 SILTITE																											
155																														
160																														
165	++		Granodiorite																											
170			SILTITE																											
175																														
180																														
185	+ +		GRANODIORITE																											
190			SILTITE																											
195																														
200																														

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-04 | Coord: N | E | Elev | Az | Incl | TD | Date | Logger | Page 3 of

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	RQD	Rec	STRUCTURES Fractures/Faults	Ce	Dolo	Silica% Vn	Silica% Prv	Silica% Chl	Silica% Arg	Silica% Sid	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	thick	Au moz	Comments
205			GREEN SILTITE													205														
210			Ep alteration,													210														
215			Bt Hornfels													215														
220																220														
225																225														
230																230														
235																235														
240	+		238-285'													240														
245	+		granodiorite												Argillic alt'n to FeOX 254'	245												<2	240-245	
250	+		coarse-grained altered to 253'													250												<2	245-250	
255	+															255												<2	250-255	
260	+															260														
265	+															265														
270			264-424													270													276-281	
275			BT HORNFELSED													275												12	281-286	
280			SILTITE													280												<2	286-290	
285			↓													285												4	290-295	
290																290												<2	295-300	
295																295														
300																300														

ECHO BAY MINERALS | Project CROESUS | Dhid CR-97-4 | Coord: N E | Elev | Az | Incl | TD | Date | Logger | Page 4 of

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	ROD	Rec	STRUCTURES Fractures/Faults	Ca	Dolo	Silica% Vn	Silica% Prv	Silica% CN	Arg	Sid	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sl	Veins Type	Veins no/ft	Veins ang	Inlck	Au moz	Comments
305			Hornfelsed Siltite																										<2	300-305
310																													<2	305-309
315																													49	309-314
320																thin vein qz-py-ccp													24	314-320
325																													19	320-325
330																													<2	325-330.5
335																														
340																														
345																														
350																														
355																														
360																														
365																														
370																														
375																														
380																														
385																														
390																														
395			Hornfelsed Siltite																											
400																														

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-4 | Coord: N | E | Elev | Az | Incl | TD | Date | Logger | Page | of

Depth	Lith	RC	LITHOLOGIC DESCRIPTION	STRUCTURES ROD	Rec	Fractures/Faults	Silica% Cc	Dole	Vn	Frv	CN	Arg	Sil	Alt Code	ALTERATION DESCRIPTION	MINERALIZATION DESCRIPTION	Min Code	py	mt	hm	po	cp	ap	sl	Veins Type	no/ft	ang	thick	Au moz	Comments
405																													
410																													
415																													
420																													
425			424 - 500																										
430			BANDED B/W																										
435			MOSTLY																										
440			BLACK ARGILITE																										
445																													
450																													
455																													
460																													
465																													
470																													
475																													
480																													
485																													
490																													
495																													

ECHO BAY MINERALS | Project Greenwood / [illegible] CR-97-05 | Coord: N | E | Elev | Az -280 | Incl -45 | TD | Date | Logger | Page | of

Depth	Lithologic Description	Alteration Description	Mineralization Description	Au moz	Comments
0–4	0-4 Overburden				
5	4-21 - Black siliceous metased's - Wispy white silicification	silicification ① wispy ② poss dark pervasive	Heavy FeOx on fracture coating	6	4-10
10				<2	10-15
15				↓	15-21
20					
25	21-23 Fine gr. volcanic (?) gray-green				21-25
25	23-27 - Gray chert c tiny crystallites + sulfide		fine dissem ~27		25-30
30	27-30 Interbedded chert + white marble				
35	30-53 - Banded garnet marble; garnet: pale salmon color				30-35
40	↓ Garnet is pale green, possible px; v. hard			↓	35-40
45				15	40-45
50	48-53 mixed hb-monzonite with banded marble			<2	45-50
55				↓	50-55
60	53-79 GRAY CHERT - Portions (e.g. 53-60) resemble silicified fine grained volc or tuff.				55-60
65			mod FeOx coating on fractures		60-65
70	speckled texture 69-72				65-70
75					70-75
80				↓	75-79
85	TD = 79'				

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-06 | Coord: N | E | Elev | Az 210 Incl -45 TD | Date | Logger | Page of

Depth	Lithologic Description	Structures Fractures/Faults	Mineralization Description	py	Au moz	Comments
100	100-130				<2	100-05
105	- Siliceous hornfels v. fn. grnd. possible chert protolith dk brownish gray		sulfide stringer & seamlets			105-10
110						110-15
115				≤3%		115-20
120		Fault, hvy Fe ox	+ py dissem.			120-25
125	lighter gray - green color change			≤5%		125-30
130	130-145 Black Argillite Thin bedded, banding < .5 mm, defined by lighter-colored beds					130-35
135			<2% dissem. py	<2%		135-40
140				6		140-45
145	145-152 GRAY, SULFIDIC CHERT		145-146 QZ-PY veining			145-50
150			Qz veins + Fe ox	≥10		150-155
155	152-179 greenish gray-brown metasediment. Fine grained, probably a SILTITE, variably hornfelsed, v. weak sulfide dissem					
160						
165						NO SAMPLES
170						
175						
180	TD = 179'					

ECHO BAY MINERALS | Project CROESUS | Dhld CR-97-06 | Coord: N | E | Elev | Az 210° Incl -45TD | Date | Logger | Page 1 of 2

Depth	Lithologic Description	Structures Fractures/Faults	Alteration Description	Mineralization Description	Au moz	Comments
0–5	OVERBURDEN					OVERBURDEN
5–10	5-12 - White, oxidized, clayey marble			FeOx on coating		5-10
10–15	12-28 Gray to brownish gray siliceous metasediments, including coarse clastic textures ~~z~~ flattened clasts.					10-15
15–20				vuggy qz vn 15 1" wide, ‖ to core		15-20
20–25						20-25
25–30					11	25-30
30–35	28-38'				<2	30-35
35–40						35-40
40–45	38 - 45 38-39 - QZ PY VEIN Fractured siliceous rock, Heavy FeOx on fractures			38-39 QZ-PY VEIN FeOx coating on fracture		40-45
45–50	45 - 64.5 GRANODIORITE		STRONG SILICIFICATION			45-50
50–55	Strongly silicified, original texture variable relict textures					50-55
55–60						55-60
60–64.5						60-64.5
64.5–70	contact B'th hornfels ~~z~~ white qz vns					64.5-70
70–75	Coarse clastic textures fine siliceous hornfels					70-75
75–80	75-84' Altered granodiorite					75-80
80–85	strongly silicified FeOx			FeOx on coating 80		80-85
85–90	84'-90 Broken, silicified Fe-rich oxide zone			vuggy qz-sulf oxidized vn		85-90
90–95	90-98' Marble, ~~c~~ detrital chert					90-95
95–100	98-100	FAULT ZONE		FeOx rich 100		95-100

APPENDIX 2

Analytical Results

CUSTOM ANALYTICAL SERVICES
P.O. Box 722 * 101-4 Hwy 21 So.
Republic, WA 99166
(509) 775-3885

ECHO BAY MINERALS (1362)
2251 W KETTLE RIVER RD.
CURLEW, WA 99118
ATTN:MIKE RASMUSSEN
ATTN:DAN HUSSEY

November 13, 1997 R72189

TEST FOR:	Au	Ag
METHOD:	FIRE	FIRE
USED:	ASSAY	ASSAY
RESULTS IN:	oz/ton	oz/ton
CR-97-06:150-155R.A	<.002	.07
LGK: STANDARD	.146	-
LGK: STANDARD	.147	-
RAS.: SILICA BLANK	<.002	-
RAS. : SILICA BLANK	<.002	-

CHARGES

TOTAL CHARGES $0.00

Chris Kitchell, Mana

CUSTOM ANALYTICAL SERVICES
P.O. Box 722 * 101-4 Hwy 21 So.
Republic, WA 99166
(509) 775-3885

ECHO BAY MINERALS (1362)
2251 W KETTLE RIVER RD.
CURLEW, WA 99118
ATTN:MIKE RASMUSSEN
ATTN:DAN HUSSEY

November 13, 1997 R72189

TEST FOR:	Au	Ag
METHOD:	FIRE	FIRE
USED:	ASSAY	ASSAY
RESULTS IN:	oz/ton	oz/ton
104:341	<.002	.20
104:342	<.002	.05
104:343	<.002	.19
104:344	<.002	.12
CR-97-05:4-10	.006	.05
CR-97-05:10-15	<.002	.29
CR-97-05:15-21	<.002	.17
CR-97-05:21-25	<.002	.05
CR-97-05:25-30	<.002	.02
CR-97-05:30-35	<.002	.02
CR-97-05:35-40	<.002	.05
CR-97-05:40-45	.015	.17
CR-97-05:45-50	<.002	.06
CR-97-05:50-55	<.002	.07
CR-97-05:55-60	<.002	<.01
CR-97-05:60-65	<.002	.12
CR-97-05:65-70	<.002	.14
CR-97-05:70-75	<.002	.07
CR-97-05:75-79	<.002	<.01
CR-97-06:5-10	<.002	<.01
CR-97-06:10-15	<.002	.02
CR-97-06:15-20	<.002	.03
CR-97-06:20-25	<.002	.43
CR-97-06:25-30	.011	.04
CR-97-06:30-35	<.002	.31
CR-97-06:35-40	<.002	.04
CR-97-06:40-45	<.002	.36
CR-97-06:45-50	<.002	.07
CR-97-06:50-55	<.002	.04
CR-97-06:55-60	<.002	.02
CR-97-06:60-65	<.002	.09
CR-97-06:65-70	<.002	.19
CR-97-06:70-75	<.002	.15
CR-97-06:75-80	<.002	.18
CR-97-06:80-85	<.002	.15
CR-97-06:85-90	<.002	.21
CR-97-06:90-95	<.002	.06
CR-97-06:95-100	<.002	.16
CR-97-06:100-105	<.002	.14
CR-97-06:105-110	<.002	.14
CR-97-06:110-115	<.002	.12
CR-97-06:115-120	<.002	.25
CR-97-06:120-125	<.002	.11
CR-97-06:125-130	<.002	.09
CR-97-06:130-135	<.002	.19
CR-97-06:135-140	<.002	.18
CR-97-06:140-145	<.002	.22
CR-97-06:145-150	<.002	.16
CR-97-06:150-155	<.002	.06
CR-97-06:5-10 DUP.	<.002	.02

CUSTOM ANALYTICAL SERVICES
P.O. Box 722 * 101-4 Hwy 21 So.
Republic, WA 99166
(509) 775-3885

ECHO BAY MINERALS (1362)
2251 W KETTLE RIVER RD.
CURLEW, WA 99118
ATTN:MIKE RASMUSSEN
ATTN:DAN HUSSEY

November 21, 1997 R72250

TEST FOR:	Au	Ag
METHOD:	FIRE	FIRE
USED:	ASSAY	ASSAY
RESULTS IN:	oz/ton	oz/ton
CR-97-4:286-290	<.002	.14
CR-97-4:290-295	.004	.08
CR-97-4:295-300	<.002	.12
CR-97-4:300-305	<.002	.04
CR-97-4:305-309	<.002	.12
CR-97-4:309-314	.049	.06
CR-97-4:314-320	.024	.08
CR-97-4:320-325	.019	.08
CR-97-4:325-330.5	<.002	.06
CR-97-4:225-230DUP.	<.002	.06
CR-97-4:281-286DUP.	.012	.11
CR-97-4:305-310R.A	<.002	.08
HGK: STANDARD	.197	-
HGK: STANDARD	.199	-
RAS: SILICA BLANK	<.002	-
RAS: SILICA BLANK	<.002	-

CHARGES

TOTAL CHARGES $0.00

Chris Kitchell, Man

Excellence Begins Here...

CUSTOM ANALYTICAL SERVICES
P.O. Box 722 * 101-4 Hwy 21 So.
Republic, WA 99166
(509) 775-3885

ECHO BAY MINERALS (1362)
2251 W KETTLE RIVER RD.
CURLEW, WA 99118
ATTN:MIKE RASMUSSEN
ATTN:DAN HUSSEY

November 24, 1997 R72251

TEST FOR:	Au	Ag
METHOD:	FIRE	FIRE
USED:	ASSAY	ASSAY
RESULTS IN:	oz/ton	oz/ton
CR-97-3:115-120	<.002	.01
CR-97-3:120-125	<.002	.03
CR-97-3:125-131	<.002	.01
CR-97-4:83-88	<.002	.03
CR-97-4:240-245	<.002	.02
CR-97-4:245-250	<.002	.03
CR-97-4:250-255	<.002	.03
CR-97-4:250-255R.A	<.002	.03
HGK: STANDARD	.197	-
RAS: SILICA BLANK	<.002	-

CHARGES

TOTAL CHARGES $0.00

Chris Kitchell, Ma

CUSTOM ANALYTICAL SERVICES
P.O. Box 722 * 101-4 Hwy 21 So.
Republic, WA 99166
(509) 775-3885

ECHO BAY MINERALS (1362)
2251 W KETTLE RIVER RD.
CURLEW, WA 99118
ATTN:MIKE RASMUSSEN
ATTN:DAN HUSSEY

November 21, 1997 R72250

TEST FOR:	Au	Ag
METHOD:	FIRE	FIRE
USED:	ASSAY	ASSAY
RESULTS IN:	oz/ton	oz/ton
CR-97-1:130-135	<.002	.01
CR-97-1:135-140	<.002	.17
CR-97-1:140-145	<.002	.04
CR-97-1:145-150	<.002	.05
CR-97-1:150-155	<.002	.06
CR-97-1:155-160	<.002	.04
CR-97-1:160-165	<.002	.03
CR-97-1:165-170	<.002	.11
CR-97-1:170-175	.029	.10
CR-97-1:175-180	<.002	.11
CR-97-1:180-185	<.002	.16
CR-97-1:185-190	<.002	.10
CR-97-1:190-195	<.002	.07
CR-97-1:195-200	<.002	.08
CR-97-1:200-205	<.002	.08
CR-97-1:205-210	<.002	.09
CR-97-1:210-215	<.002	.11
CR-97-1:215-220	<.002	.11
CR-97-1:220-225	<.002	.16
CR-97-1:225-230	<.002	.17
CR-97-1:230-235	<.002	.06
CR-97-1:235-240	<.002	.02
CR-97-1:350-355	<.002	.06
CR-97-1:355-360	<.002	.02
CR-97-1:360-365	<.002	.02
CR-97-1:365-370	.003	.01
CR-97-1:390-395	.016	.06
CR-97-1:395-400	<.002	.05
CR-97-2:95-100	<.002	.04
CR-97-2:100-105	.006	.06
CR-97-2:105-110	<.002	.08
CR-97-2:110-113	<.002	.18
CR-97-3:277-280	<.002	.01
CR-97-3:280-285	<.002	.02
CR-97-3:285-290	<.002	.20
CR-97-3:290-295	<.002	.22
CR-97-3:295-300	<.002	.03
CR-97-3:300-305	<.002	.05
CR-97-3:305-310	<.002	<.01
CR-97-3:310-315	<.002	.07
CR-97-3:315-320	<.002	.01
CR-97-3:320-325	<.002	.02
CR-97-3:325-330	<.002	.13
CR-97-3:330-333	<.002	.01
CR-97-4:93-98	<.002	.02
CR-97-4:98-103	<.002	.09
CR-97-4:103-108	<.002	.01

APPENDIX 3

Cost Statement

COST STATEMENT

LABOR			
D. Hussey	1 day @ $400/day	400.00	
M. Rasmussen	12 days @ $300/day	$3600.00	
L.Caron2 days @ $250.00; 2 days @ $350		1200.00	
T. Johnson	13 days @ $150/day	1950.00	
J. Hanks	3 days @ $150/day	450.00	
		$7600.00	
DRILLING			
Bergeron Drilling			
1816 feet @ $14.20/ft		$25,787.20	
Mobilization, Cat Work, Reclamation		8,353.81	
		$34,140.81	
ANALYTICAL COSTS			
Custom Analytical Services, Republic, WA			
125 Au, Ag assays @$14/sample		$1,750(US)	2,310 (Cdn)
VEHICLES, SUPPLIES			
EB Fleet trucks, 25 days @ $25/day(US)		$625 (US)	825 (Cdn)
TOTAL		**$44,875.81 (Cdn)**	

APPENDIX 4

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Michael G. Rasmussen, certify that:

1. I am an exploration geologist residing at 868-7 Rupert Spur Rd., Republic, WA, USA
2. I obtained a B.A. in Biology at Andrews University, Berrien Springs, MI, in 1969.
3. I earned an M.S. degree in Geology at Loma Linda University, Riverside, CA, in 1983.
4. I graduated with a Ph.D. degree from the University of Washington in 1993 in Geological Sciences.
5. I have practised my current profession since 1990.
6. I am employed by Echo Bay Minerals Co. as a Senior Exploration Geologist.

Michael G. Rasmussen, Ph.D.

Date 2 Feb. 1998