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DIAMOND DRILLING REPORT  
ON THE  
ECHO PROPERTY

FILMED

Cowichan Lake Area  
Victoria Mining Division  
British Columbia

NTS: 92C/16E  
48 47' North 124 11' West

OWNERS: P. AND J. GALLANT

OPERATOR: CONSOLIDATED RAMROD GOLD CORPORATION

AUTHOR: N.C. CARTER, PH.D. P.ENG.

DATE: SEPTEMBER 3, 1993

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

23,009

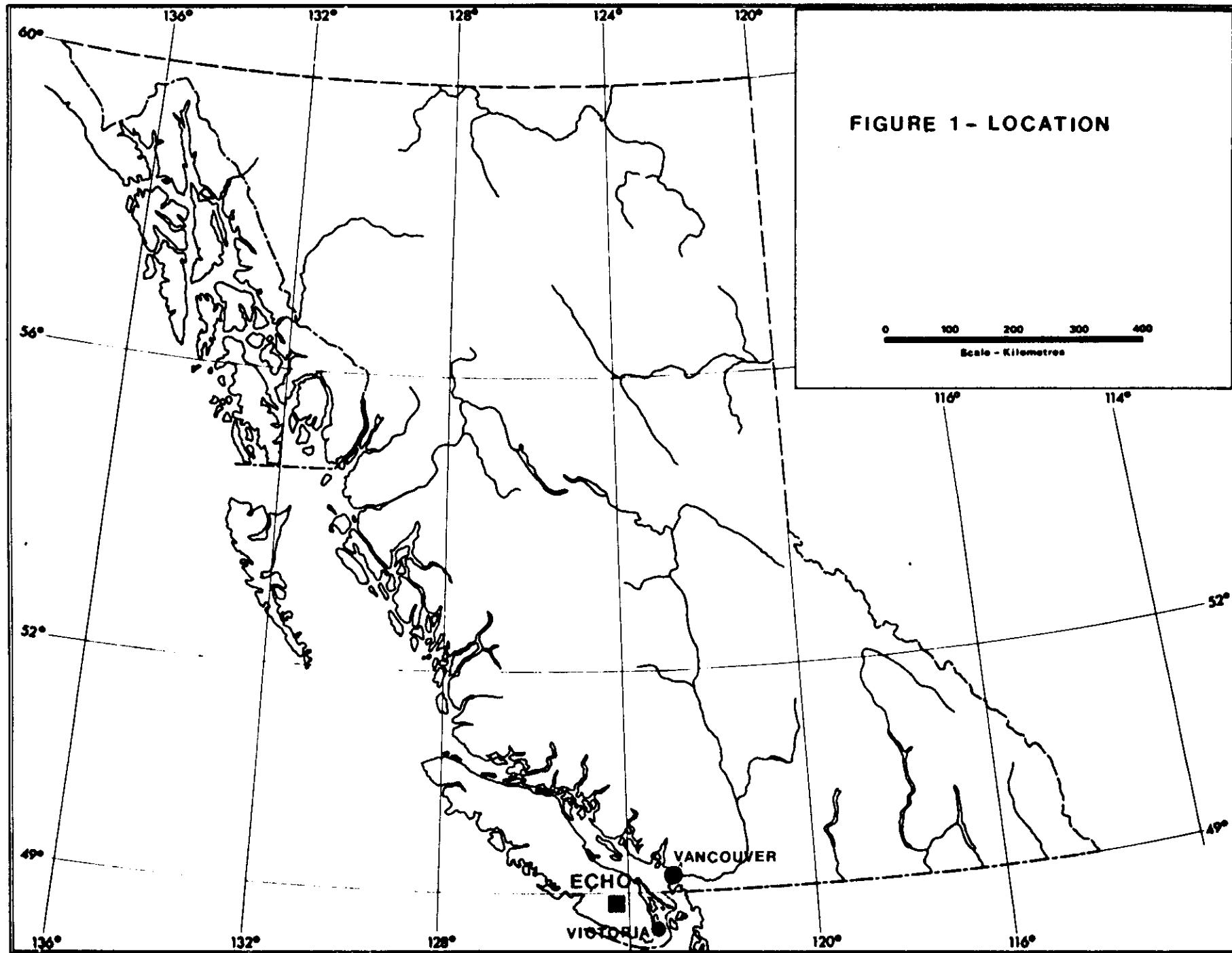
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## INTRODUCTION

### **Location and Access**

The ECHO property, south of Cowichan Lake, is situated 70 km northwest of Victoria on Vancouver Island (Figure 1). The geographic centre of the property is at latitude 48 47' North and longitude 124 11' West in NTS map-area 92C/16E.

The property is readily accessible by way of secondary logging roads which extend up Nineteen Creek from Mesachie Lake (Figure 2). The area of 1993 diamond drilling is 9.5 km by road from Mesachie Lake on the south shore of Cowichan Lake which is 32 km west of Duncan.

### **Mineral Property**

Assessment work credits related to the diamond drilling program which is the subject of this report are being applied to nine mineral claims which are central to a larger claim block located in the Victoria Mining Division. The claims are shown on Figure 3 and details are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Date of Record</u>
ECHO 1	1	260703	June 13, 1984
ECHO 2	1	260704	"
ECHO 3	1	260705	"
ECHO 4	1	260706	"
ECHO 5	1	261411	June 11, 1989
ECHO 6	1	261412	"
ECHO 7	1	261413	"
ECHO 8	1	261414	"
ECHO 9	20	261415	"

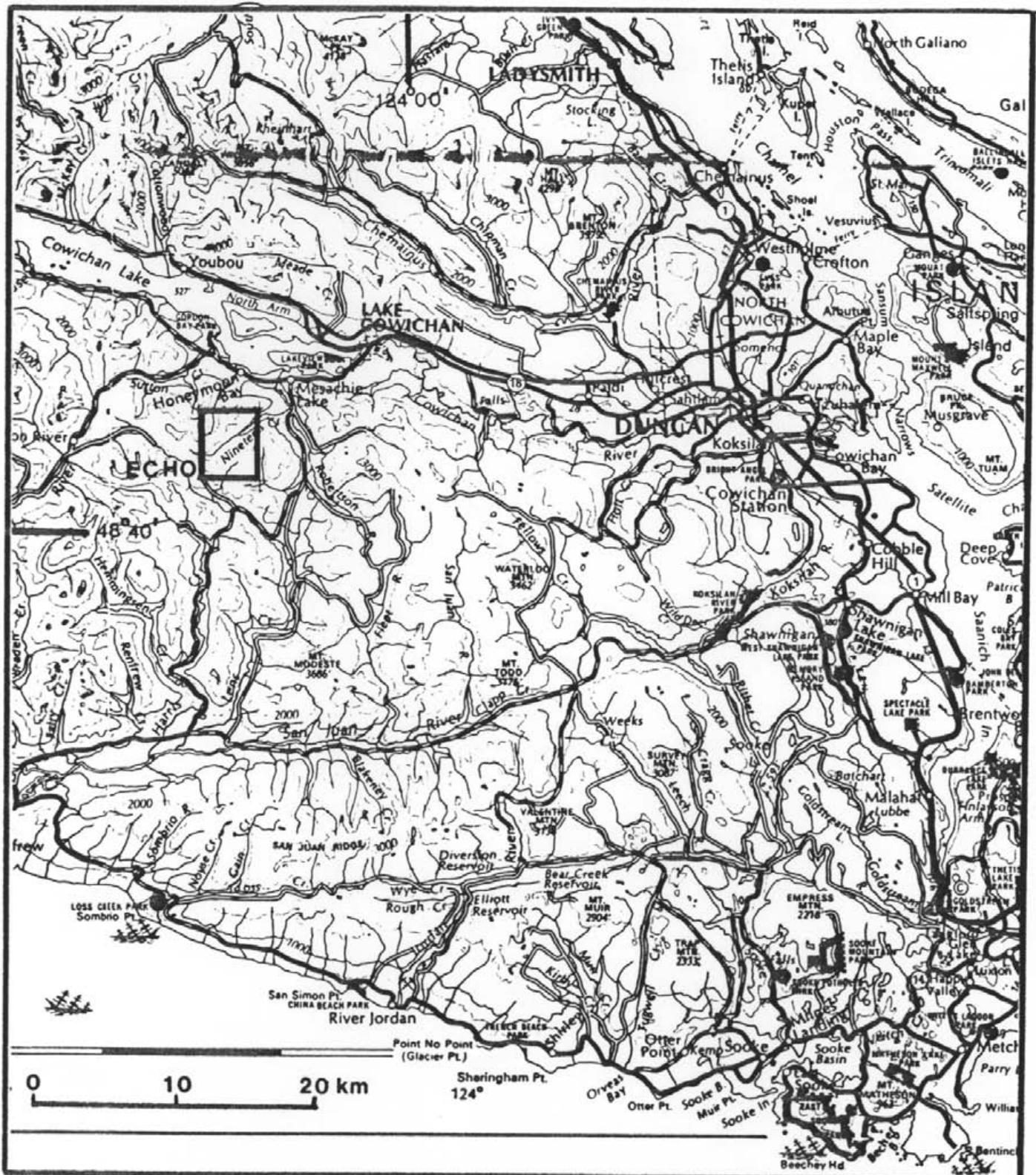


FIGURE 2 - LOCATION - ECHO PROPERTY

### **History**

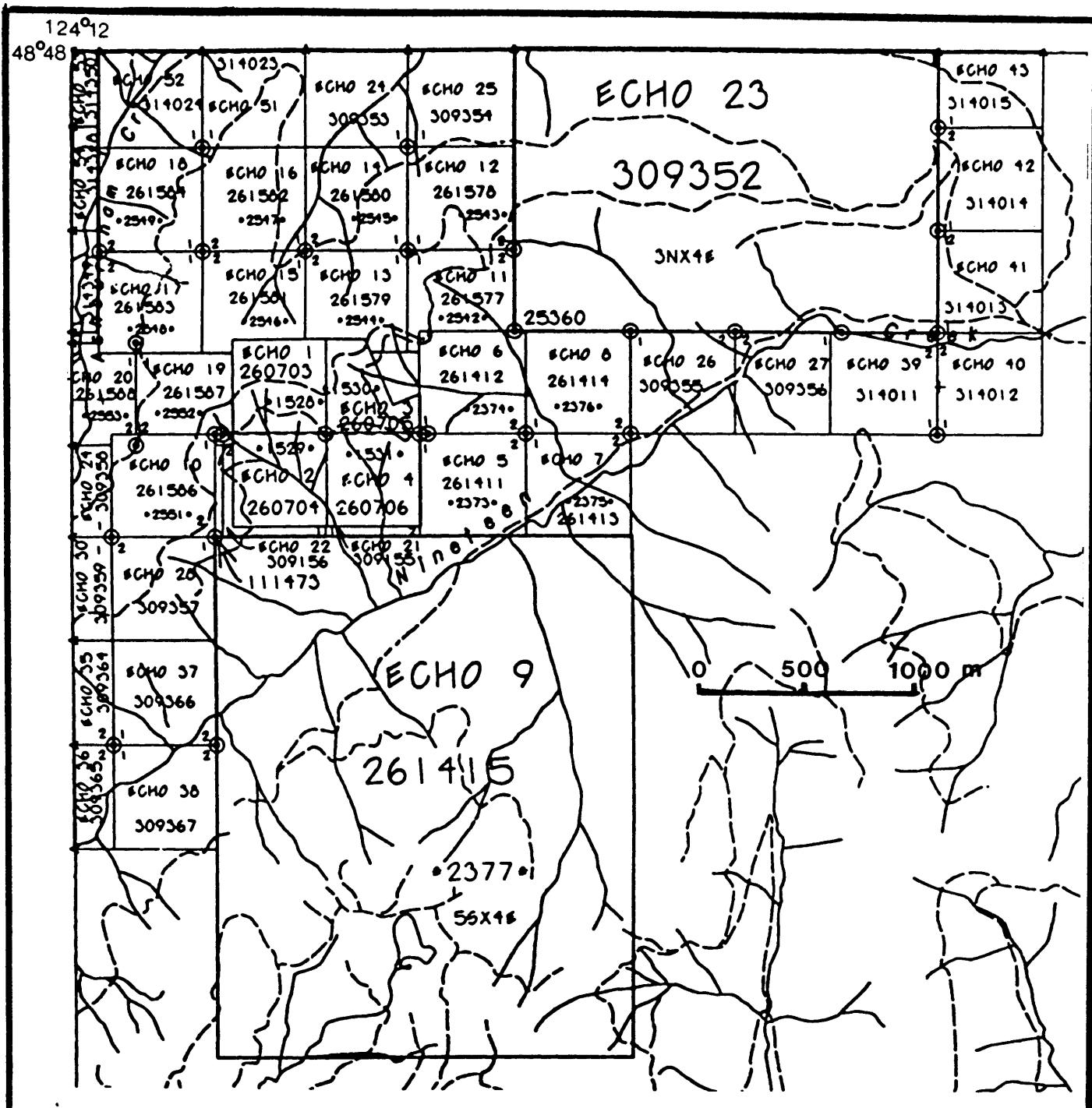
Principal gold-copper showings at 620 metres elevation north of Nineteen Creek were discovered by prospector Wally Deans following logging road construction in 1957. After the return of mineral rights to the Province by E & N Railway in the 1970's, some Winkie drilling and prospecting was carried out in the area of the principal showings.

The claims comprising the present property were located by the Gallants in the mid-1980's and a prospecting and sampling program was conducted by Orbex Industries Ltd. in 1986. Noranda Exploration Company, Limited carried out a limited rock sampling program in 1990.

### **Present Status**

The property owners negotiated an option agreement with Consolidated Ramrod Gold Corporation (formerly Kokanee Explorations Ltd.) in 1992. In addition to a diamond drilling program which is the subject of this report, this company completed a soil geochemical survey over five grids established on claims peripheral to the main showings area in late 1992 (Meeks, 1993) prior to returning the property to the owners.

This report deals with a four hole, 293.6 metres diamond drilling program completed in the area of the principal



### **FIGURE 3 - ECHO MINERAL CLAIMS**

showings by Consolidated Ramrod Gold Corporation in July of 1993. Drill logs, analytical results and a statement of expenditures were provided by the Company but no report on this program was completed. This report, submitted in support of assessment work credits and prepared at the request of the property owners, incorporates the data provided by Consolidated Ramrod Gold Corporation.

## GEOLOGY AND MINERALIZATION

### Physical Setting

The principal showing on the ECHO property is at an elevation of 620 metres on a fairly steep south-facing slope above Nineteen Creek (Figure 2). Forest cover is second growth which has been thinned locally; elsewhere, dense undergrowth is prevalent.

### Geological Setting

The ECHO property is underlain by Lower Jurassic Bonanza Group felsic to intermediate fragmental volcanic rocks and lesser intravolcanic sedimentary units. The sequence is locally cut by felsic intrusive rocks of similar age.

The principal mineral showing is exposed in a roadcut on the ECHO 1 claim. Andesitic crystal tuffs are variably

sheared and brecciated within a 19 metre wide zone which trends north-northeast and dips steeply east. Chalcopyrite and bornite, mainly oxidized to malachite, azurite and chalcocite, occur on fractures and are commonly accompanied by free gold.

Better gold grades are contained within the westernmost 5 or 6 metres of the exposed zone. Surface sampling by the writer in early 1992 yielded weighted average grades of 27.22 g/t and 9.63 g/t over widths of 6 and 5.1 metres respectively.

#### DIAMOND DRILLING PROGRAM

##### Nature of Program

One vertical and three inclined diamond drill holes, totalling 293.6 metres, were drilled in the area of the principal mineral showing between July 27 and 29, 1992. NQ-size drill cores are stored at the home of the property owners at 4368 Bruce Road, RR#3, Ladysmith, B.C.

Drill core was logged by D.L. Pighen of Consolidated Ramrod Gold Corporation; drill logs are included as Appendix II and complete analytical results as Appendix III. Drill hole locations are shown on Figure 4.

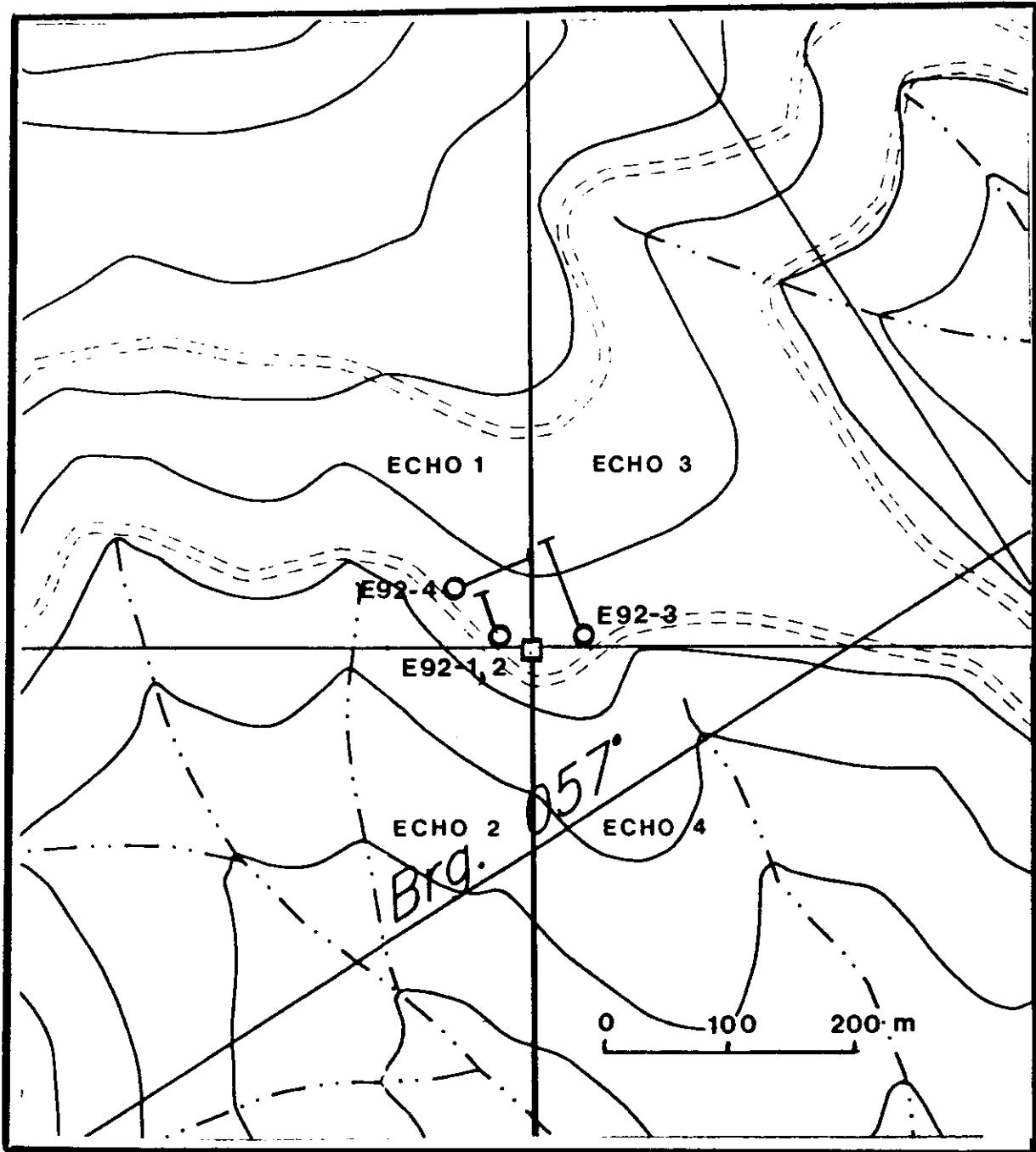


FIGURE 4- DIAMOND DRILL HOLE LOCATIONS

**Program Results**

Detailed sampling of drill cores (161 samples) yielded low gold, copper and silver values. In the writer's opinion, a partial explanation for this may be due to the fact that holes E92-1 and -4 were drilled oblique to the north-northeast trend of the zone; vertical hole E92-3 was too far away to intersect the zone and hole E92-4 was not drilled deep enough.

**CONCLUSIONS AND RECOMMENDATIONS**

Detailed structural mapping in the area of the principal mineral showing is recommended to determine controls of mineralization prior to any further drilling.

### COST STATEMENT

(Note - the following is based mainly on a Statement of Expenditures provided by Consolidated Ramrod Gold Corporation which is included as Appendix I. Work was carried out between July 15 and 31, 1992).

Wages

D.L. Pighen - 12 days @ \$200/day	\$2,400.00
B. Collison - 10 days @ \$125/day	\$1,250.00

Analytical Costs

Core samples - 30 element ICP + fire assays	\$4,350.57
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Accommodation, Meals

July 15 - 31	\$1,205.53
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Transportation

Vehicle rental - 12 days @ \$100/day	\$1,200.00
Airfare - Cranbrook - Vancouver Island	\$578.00

Diamond Drilling

293.6 metres @ \$64.47/metre	\$18,927.80
Water truck - 53.5 hours @ \$50/hour	\$2,675.00

Report Preparation

N.C. Carter - 1.5 days @ \$500/day	\$750.00
Word processing, duplicating	\$50.00

<b>Total Expenditures</b>	<b>\$33,386.90</b>
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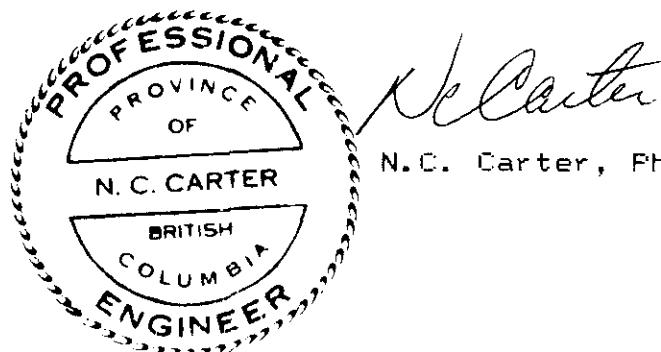
**REFERENCES**

- Ashton, A.S.(1982): Report on Ash Claim, Cowichan Lake,  
Victoria Mining Division, B.C., BCMEMPR  
Assessment Report 10331
- Carter, N.C. (1992): Property examination notes; private  
report.
- Fox, P.E.(1986): Prospecting Report, ECHO 1-4 Claims,  
Cowichan Lake Area, Vancouver Island, B.C.,  
BCMEMPR Assessment Report 14996
- Meeks, David P.(1993): Assessment Report on Grid Soil  
Geochemistry, ECHO Claims, Victoria  
Mining Division, Cowicahn Lake Area,  
Vancouver Island, BCMEMPR Assessment  
Report

**AUTHOR'S QUALIFICATIONS**

I, NICHOLAS C. CARTER, of 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc.(1960), Michigan Technological University with M.S.(1962) and the University of British Columbia with Ph.D.(1974).
3. I have practised my profession in eastern and western Canada and in parts of the United States for more than 25 years.
4. The foregoing report is based on information provided by Consolidated Ramrod Gold Corporation and on several examinations of the ECHO property by the writer in early 1992.



N.C. Carter, Ph.D. P.Eng.

Victoria, B.C.  
September 3, 1993

**APPENDIX I**  
**STATEMENT OF EXPENDITURES**

**ECHO PROPERTY**  
**CONSOLIDATED RAMROD GOLD CORPORATION**

**STATEMENT OF EXPENDITURES**  
**DIAMOND DRILL PROGRAM**  
**(HOLES E92-1 TO E92-4)**

Work performed from July 15, 1992 to July 31, 1992.

**Salaries:**

D.L. Pighin - Geologist - 12 days @ \$200/day	\$ 2,400.00
B. Collison - Labourer - 10 days @ \$125/day	\$ 1,250.00

**Equipment Rental:**

Truck to haul water to drillsite Drillwell Enterprises Ltd, Cowichan Bay, B.C.	53.5 hours @ \$50.00/hour	\$ 2,675.00
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**Assays:**

Acme Analytical Laboratories Ltd. (invoices 92-2202 + 92-2222) 852 East Hastings Street Vancouver, B.C. V6A 1R6	130 core samples (30 element ICP & Fire)	\$ 4,350.57
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**Domicile:**

Meals	\$ 398.66
Lodging (Fuller Lake Motel)	\$ 806.87

**Transportation:**

1 - 4x4 truck - 12 days @ \$100/day	\$ 1,200.00
Airfare - Vancouver Island to Cranbrook, B.C., return	\$ 578.00

**Drilling Contractor:**

LeClerc Drilling Ltd. Box 94 Beaverdell, B.C. VOH 1A0	4 holes totalling 963 feet(293.6 m)	<u>\$18,927.80</u>
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**TOTAL**

**\$32,586.90**

APPENDIX II  
DIAMOND DRILL LOGS

KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page No. 1

Horz. 34.64

Name of Property: ECHO      Corr. Dip: -45°

Remarks:      Vert. 34.64

Hole No.: E92-1      Length: 49.0 m

Location: ECHO 1 CLAIM      Start Date: 07/25/92

Finish Date: 07/26/92

Elevation:      Azimuth: 339°

Collar Dip:

Core Size: HQ      Tests at:

Logged by: D.Pighin      Date: 07/26-27/92

METERAGE	DESCRIPTION	Sample						Cu ppm	
		No.	From	To	Au oz/t	Ag oz/t	Pb lb	Zn lb	
0.0-1.52	CASING								
1.52-3.3	TUFF: Fine grained, crackle brecciated, healed by gouge and soft gritty white feldspar?	1801	1.50-2.50 m		0.003	0.03	-	-	-
		1802	2.50-3.30 m		0.002	0.02	-	-	-
3.3-7.3	CONTACT MINERALIZED STRUCTURE: At 3.3m. Cuts core at 33°. Seems to be the principle copper-gold bearing fracture.	1803	3.30-4.30 m		0.001	0.02	-	-	-
		1804	4.30-5.30 m		0.001	0.01	-	-	-
		1805	5.30-6.30 m		0.001	0.02	-	-	-
	Tuff; green, fine grained, massive, weakly hematitized through-out. Strongly calcareous, weakly crackle brecciated, healed by calcite and red iron ochre. Chalcopyrite and copper carbonates occur mainly in thin fractures which cut core at 60°. Chloritization, along 60° to core fractures. Samples: 1.5-2.5, 2.5-3.3, 3.3-4.3, 4.3-5.3, 5.3-6.3. (Box 1).								

## KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page: 2

Property: ECHO

Hole No.: E92-1

Location: ECHO 1 CLAIM

METERAGE From To	DESCRIPTION	Sample							
		No.	From	To	Au oz/t	Ag oz/t	Pb g	In g	Cu ppm
7.3-13.6	<u>CRYSTAL TUFF</u> ; Dark, reddish grey, massive, medium grained, weakly crackle brecciated. Healed by calcite and iron ochre. Rare speck of bornite, strongly calcareous, strongly hematitized. Sampled: 6.3-7.3, 7.3-8.3, 8.3-9.3, 9.3-10.3, 10.3-11.3 (Box 2)	1806	6.30	7.30 m	0.001	0.01	-	-	-
		1807	7.30	8.30 m	0.001	0.01	-	-	-
		1808	8.30	9.30 m	0.001	0.01	-	-	-
		1809	9.30	10.30 m	0.001	0.01	-	-	-
		1810	10.30	11.30 m	0.001	0.01	-	-	-
13.6-14.6	<u>TUFF</u> : Light green, finely crackle brecciated, healed by calcite, copper carbonate. Some chalcopyrite and bornite, iron and ochre.								
14.6-16.6	<u>TUFF</u> : Green, fine grained. Weakly brecciated, limy. Some iron ochre and limonite.								
16.6-18.3	Strongly sheared and brecciated, some gouge on fractures. Samples: 11.3-12.3, 12.3-13.3, 13.3-13.6, 13.6-14.6; footwall of mineralized structure, strongly chloritic, shears cut core at 45°. 14.6-15.6, 15.6-16.6.	1811	11.30	12.30 m	0.001	0.01	-	-	-
		1812	12.30	13.30 m	0.001	0.01	-	-	-
		1813	13.30	13.60 m	0.001	0.02	-	-	-
		1814	13.60	14.60 m	0.004	0.10	-	-	-
		1815	14.60	15.60 m	0.001	0.01	-	-	-
		1816	15.60	16.60 m	0.001	0.01	-	-	-
		1817	16.60	17.60 m	0.001	0.01	-	-	-

# KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page: 3

Property: ECHO

Hole No.: E92-1

Location: ECHO 1 CLAIM

MATERIAL	DESCRIPTION	Sample						
		No.	From	To	Au oz/t	Mg oz/t	Pb ppm	Zn ppm
From	To							
18.3-37.5	TUFF: Reddish grey, with green patches, crackle brecciated, strongly calcareous, breccia healed by calcite and rare iron ochre. Tuff is generally hematitic, chlorite common on fracture planes. Some patches of epidote, as with thin quartz filled fractures.	1818	17.60	18.60 m	0.001	0.01	-	-
		1819	18.60	19.60 m	0.001	0.01	-	-
		1820	19.60	20.60 m	0.001	0.01	-	-
		1821	20.60	21.60 m	0.001	0.01	-	-
		1822	21.60	22.60 m	0.001	0.01	-	-
		1823	22.60	23.60 m	0.001	0.01	-	-
		1824	23.60	24.60 m	0.001	0.01	-	-
		1825	24.60	25.60 m	0.003	0.01	-	-
		1826	25.60	26.60 m	0.001	0.01	-	-
		1827	26.60	27.60 m	0.001	0.01	-	-
		1828	27.60	28.60 m	0.001	0.01	-	-
		1829	28.60	29.60 m	0.001	0.03	-	-
		1830	29.60	30.60 m	0.001	0.01	-	-
		1831	30.60	31.60 m	0.001	0.01	-	-
		1832	31.60	32.60 m	0.001	0.04	-	-
		1833	32.60	33.60 m	0.001	0.02	-	-
		1834	33.60	34.60 m	0.001	0.02	-	-
		1835	34.60	35.60 m	0.001	0.01	-	-
		1836	35.60	36.60 m	0.001	0.03	-	-
		1837	36.60	37.60 m	0.005	0.03	-	-
		1838	37.60	38.60 m	0.002	0.01	-	-
		1839	38.60	39.60 m	0.003	0.01	-	-
		1840	39.60	40.60 m	0.001	0.01	-	-
		1841	40.60	41.60 m	0.001	0.01	-	-
		1842	41.60	42.60 m	0.001	0.01	-	-
		1843	42.60	43.60 m	0.001	0.01	-	-

KOKANEE EXPLORATIONS LTD.  
DRILL HOLE RECORD

Page: 4

Property: ECHO

Role No.: E92-1

Location: ECHO 1 CLAIM

**KOKANEE EXPLORATIONS LTD.****DRILL HOLE RECORD**

Page No. 1

Name of Property: ECHO      Corr. Dip: -90°      Remarks:  
Hole No.: E92-2      Length: 61.6 m  
Location: ECHO 1 CLAIM      Start Date: 07/26/92      Finish Date: 07/27/92  
Elevation:      Azimuth:  
Core Size: HQ      Tests at:      Logged by: D.Pighin      Date: 07/27-28/92

METERAGE	DESCRIPTION	Sample						
		No.	From	To	Au oz/t	Ag oz/t	Pb g	Zn g
0.0-1.5	OVERBURDEN							
1.5-4.0	<p><u>CRYSTAL TUFF</u>; light green, strongly chloritic, medium grained, vuggy (generally pin point vugs). Generally crackle brecciated, thin films of mylonitization line fractures. Dominant shearing with gouge cuts core at 8°. Limonite, iron-ochre, malachite, chalcopyrite and bornite weakly disseminated throughout (Mineralized Zone 1.5 to 4.0 m - contacts are destroyed by brecciation). Some scattered calcite crystals or thin veinlets within mineralized zone.</p> <p>1.5-2.5 m; 30% core loss. 2.5-3.5 m; 100% recovery. 3.5-4.0 m; 100% recovery.</p>	1850	1.5-2.5m		0.001	0.10	-	-
		1851	2.5-3.5m		0.001	0.06	-	-
		1852	3.5-4.0m		0.001	0.14	-	-

# KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page: 2

Property: ECHO

Hole No.: E92-2

Location: ECHO 1 CLAIM

METERAGE From To	DESCRIPTION	Sample							
		No.	From	To	Au oz/t	Ag oz/t	Pb g	Zn g	Cu ppm
4.0-61.6	CRYSTAL TUFF; purplish grey, scattered euhedral to subhedral crystals of chloritic calcite after feldspar throughout unit. Widely scattered iron-ochre, some massive patches of iron-ochre, rare specks of specularite (Hematite) and magnetite. Thin, irregular veinlets occur throughout the section. Calcite veinlets cut core mainly at 58° and 72°. Thin shears with gouge cut core at 12° at 8.0 m. At 18.0 m thin calcite-ochre shear cuts core at 43°. At 26.0 m calcite-ochre-chlorite shear cuts core at 12°. At 29.0 m medium seam cuts core at 12°. 30.0-30.4 m breccia and soft gouge cuts core at 36°. At 35.0 m 10 cm zone of epidote with rare disseminated iron ochre. Some late calcite veining. At 36.0 m thin calcite-epidote-chlorite shear cuts core at 59°. 40.8-42.0 m epidotized crystal tuff, scattered specks of iron ochre, widely scattered, thin, calcite veins cut epidote zone, host disseminated chalcopyrite and copper carbonates.	1853	4.0-5.0m		0.001	0.01	-	-	-
		1854	5.0-6.0m		0.001	0.04	-	-	-
		1855	6.0-7.0m		0.001	0.01	-	-	-
		1856	7.0-8.0m		0.001	0.11	-	-	-
		1857	8.0-9.0m		0.001	0.01	-	-	-
		1858	9.0-10.0m		0.001	0.01	-	-	-
		1859	10.0-11.0m		0.001	0.01	-	-	-
		1860	11.0-12.0m		0.001	0.16	-	-	-
		1861	12.0-13.0m		0.001	0.02	-	-	-
		1862	13.0-14.0m		0.001	0.01	-	-	-
		1863	14.0-15.0m		0.001	0.08	-	-	-
		1864	15.0-16.0m		0.001	0.12	-	-	-
		1865	16.0-17.0m		0.001	0.12	-	-	-
		1866	17.0-18.0m		0.001	0.08	-	-	-
		1867	18.0-19.0m		0.001	0.04	-	-	-
		1868	19.0-20.0m		0.001	0.01	-	-	-
		1869	20.0-21.0m		0.001	0.03	-	-	-
		1870	21.0-22.0m		0.001	0.06	-	-	-
		1871	22.0-23.0m		0.001	0.01	-	-	-
		1872	23.0-24.0m		0.001	0.11	-	-	-
		1873	24.0-25.0m		0.001	0.13	-	-	-
		1874	25.0-26.0m		0.001	0.10	-	-	-
		1875	26.0-27.0m		0.001	0.01	-	-	-
		1876	27.0-28.0m		0.001	0.01	-	-	-
		1877	28.0-29.0m		0.001	0.17	-	-	-
		1878	29.0-30.0m		0.001	0.01	-	-	-
		1879	30.0-31.0m		0.010	0.09	-	-	-
		1880	31.0-32.0m		0.001	0.19	-	-	-

# KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page: 3

Property: ECHO

Hole No.: E92-2

Location: ECHO 1 CLAIM

<u>METERAGE</u> <u>FROM</u>	<u>TO</u>	<u>DESCRIPTION</u>	<u>Sample</u>							
			No.	From	To	Au ppb	Ag ppm	Pb g	Zn g	Cu ppm
		Calcite veinlets cut core at 53.0 m. Contacts on epidote zone are gradational. 43.2-43.3 m epidotized zone, copper carbonate, calcite veining, chalcopyrite. 43.3-60.5 m scattered veins rarely more than 2 cm thick cut core at 25°, these veins commonly contain weakly disseminated chalcopyrite and rare bornite. Iron ochre as disseminations is commonly present. 43.5-61.6 m scattered, very irregular veins of calcite rimmed by red iron ochre.	1881	33.0	33.1m	1	0	0.005	0.007	8
			1882	33.4	33.7m	62	1	0.005	0.009	485
			1883	33.9	34.4m	25	0	0.005	0.01	71
			1884	35.0	35.1m	36	0	0.005	0.009	212
			1885	35.9	36.0m	1	0	0.005	0.006	53
			1886	37.6	37.7m	3	0	0.005	0.006	88
			1887	39.0	39.1m	3	0	0.005	0.005	134
			1888	40.2	40.3m	2	0	0.005	0.006	58
			1889	40.8	41.8m	3	0	0.005	0.005	133
			1890	41.8	43.3m	1	0	0.005	0.007	27
			1891	44.8	44.9m	2	0	0.005	0.006	20
			1892	46.2	46.3m	1	0	0.005	0.006	11
		END OF HOLE AT 61.6 m	1893	47.0	47.1m	1	0	0.005	0.005	58
		The core is stored at the home of P & J Gallant (prospector) in Ladysmith, B.C.	1894	49.3	49.4m	17	0	0.005	0.007	197
			1895	50.2	50.3m	2	0	0.005	0.005	38
			1896	51.8	51.9m	1	0	0.005	0.005	36
			1897	52.8	52.9m	1	0	0.005	0.005	83
			1898	54.0	54.1m	223	0	0.005	0.006	33
			1899	56.1	56.2m	60	0	0.005	0.01	27
			1900	57.7	57.8m	33	0	0.005	0.01	3
			1901	59.4	59.5m	24	0	0.005	0.01	24
			1902	60.4	60.5m	24	0	0.005	0.005	209

# KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page No. 1

Name of Property: ECHO      Corr. Dip: -45°      Remarks: *Hov. 80.82m*  
 Hole No.: E92-3      Length: 114.3 m      *Vinf. 80.82m*  
 Location: ECHO 3 CLAIM      Start Date: 07/27/92      Finish Date: 07/28/92  
 Elevation:      Azimuth: 339°      Collar Dip:  
 Core Size: HQ      Tests at:      Logged by: D.Pighin Date: 07/28-29/92

METERAGE From To	DESCRIPTION	Sample						
		No.	From	To	Au ppb	Ag ppm	Pb ppm	Zn ppm
0.0-1.8	<u>OVERBURDEN</u>							
1.8-9.8	<u>CRYSTAL TUFF</u> ; purplish grey, calcareous, coarse white and green crystals, commonly euhedral. Crystals are calcite and chlorite after feldspar. Matrix appears to be fine, hematitic volcanic ash. Calcite and white feldspar veinlets are abundant, cut core at 75' to 55', but many are irregular and wispy. At 9.8 m thin shear cuts core at 40°.	1903	4.9-5.1m		11	0	0.005	0.01
		1904	8.6-8.7m		20	0	0.005	0.008
9.8-66.0	<u>CRYSTAL TUFF</u> ; light green, fine grained, weak to strongly calcareous. Crystals are typically subhedral, limy to siliceous. Matrix is chloritic and siliceous, cut by white calcite and feldspar veins as above. Some iron ochre along calcite veinlets. 20.0-21.0 m very fine grained, light green to yellowish tuff.	1905	14.2-14.4m		20	0	0.005	0.007
		1906	16.1-16.2m		16	0	0.005	0.005
		1907	20.7-20.8m		51	0	0.005	0.007
		1908	29.0-30.0m		260	0	0.005	0.01

KOKANEE EXPLORATIONS LTD.  
DRILL HOLE RECORD

Page: 2

Property: ECHO

Hole No.: E92-3

Location: ECHO 3 CLAIM

METERAGE From To	DESCRIPTION	SAMPLE							
		No.	From	To	Au ppm	Ag ppm	Pb g	Zn g	Cu ppm
	30.0-32.0 m epidotized tuff, epidotization mainly of feldspar crystals. Some matrix, green chloritization is also abundant. Still weakly limy, rare, late calcite veinlet, rare disseminated pyrite and chalcopyrite.	1909	30.0-31.0m		921	0	0.005	0.006	26
		1910	31.0-32.0m		12	0	0.005	0.008	108
	At 32.3 m shear cuts core at 51°.	1911	36.1-36.2m		39	0	0.005	0.009	5
	32.0-45.6 m calcite-feldspar veinlets are rare, but generally cut core at 75°, veins rarely more than 3 mm thick.	1912	44.4-44.5m		6	0	0.005	0.008	5
	44.0-45.0 m widely scattered (2 cm or less) dark grey, angular tuff clasts.	1913	47.9-48.1m		6	0	0.005	0.005	9
	46.5-48.8 m abundant calcite veining and calcite matrix breccia. Some associated epidote.	1914	51.9-52.0m		6	0	0.005	0.01	9
	52.0-52.2 m Epidotized Zone - rare specks of pyrite.	1915	52.4-52.5m		61	0	0.005	0.006	5
	52.0-52.2 m Epidotized Zone - rare specks of pyrite.	1916	53.1-53.2m		15	0	0.005	0.005	9
	55.2-55.4 m calcite vein, cuts core at 60°.	1917	55.9-56.0m		34	0	0.005	0.009	6
	64.5-65.0 m epidote-calcite matrix breccia, some disseminated pyrite.	1918	56.2-56.4m		90	0	0.005	0.01	166
		1919	59.4-59.5m		15	1	0.005	0.01	16
		1920	61.5-61.6m		9	0	0.005	0.009	17
		1921	65.5-65.7m		16	0	0.005	0.008	76
66.0-79.0	TUFF: dark grey, generally fine grained, relatively soft. Some magnetite crystals, unit is magnetic, locally very chloritic. Unit is very calcareous. Scattered calcite veinlets throughout, mainly at 70°, rarely more than 3 mm thick.	1922	67.5-67.6m		5	0	0.005	0.009	43

# KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page: 3

Property: ECHO

Hole No.: E92-3

Location: ECHO 3 CLAIM

METERAGE	DESCRIPTION	Sample							
		No.	From	To	Au ppb	Ag ppm	Pb g	In g	Cu ppm
	At 68.0 m calcite-chlorite shear (1 cm thick) cuts core at 15°. 76.5-77.5 m strongly brecciated and healed by calcite and chlorite, zone cuts core at about 70°.	1923	73.0-73.1m		2	0	0.005	0.01	43
		1924	75.6-75.7m		1	0	0.005	0.007	10
		1925	76.9-77.0m		1	0	0.005	0.007	22
79.0-105.7	<u>AGGLOMERATE</u> ; with crystalline tuff matrix, generally dark reddish brown-grey, clasts are generally reddish brown, generally silicified, rarely soft, very limy. Feldspar crystals appear to be replaced by calcite. Clasts are sharply angular, 1 to 2 cm in size. Chlorite and iron ochre are abundant in matrix. Unit is strongly magnetic, some feldspar crystals are replaced by epidote. At 81.5 m thin calcite-chlorite shear cuts core at 20°. 93.0-105.7 m agglomerate unit is a deep reddish brown, very hematitic, some green chloritic sections. At 102 m calcite-chlorite vein 20 cm thick cuts core at 45°. Clasts appear to be larger and deeper into the agglomerate unit, common 4 to 5cm in size - still magnetic. Base of agglomerate unit at 105.7 m at 73.0'	1926	82.5-82.6m		4	0	0.005	0.007	21
		1927	83.6-83.7m		4	0	0.005	0.008	55
		1928	87.0-87.1m		5	0	0.005	0.009	31
		1929	89.9-90.0m		4	0	0.005	0.009	18
		1930	92.8-92.9m		10	0	0.005	0.005	16
		1931	100.8-100.9m		3	0	0.005	0.008	24
		1932	101.4-101.5m		4	0	0.005	0.005	51



KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page No. 1

Horz. 47.44  
Vert 47.44

Name of Property: ECHO                   Corr. Dip: -45°                   Remarks:  
 Hole No.: E92-4                           Length: 67.1 m  
 Location: ECHO 3 CLAIM                   Start Date: 07/28/92                   Finish Date: 07/28/92  
 Elevation:                                 Azimuth: 067°                           Collar Dip:  
 Core Size: HQ                             Tests at:                           Logged by: D.Pighin Date: 07/29/92

METERAGE	DESCRIPTION	Sample							
		No.	From	To	Au PPM	Ag PPM	Pb g	Zn g	Cu PPM
0.0-1.5	<u>OVERBURDEN</u>								
1.5-14.0	<u>AGGLOMERATE</u> ; dark reddish grey, medium grained. Small scattered red hematitic clasts, 1 to 2 cm in size. Feldspar crystals are replaced by calcite and chlorite, generally limy throughout. Clasts are widely scattered. Some patches of silicification.	1937	6.0-6.1m		2	0	0.005	0.005	10
		1938	9.0-9.1m		4	0	0.005	0.007	14
14.0-23.0	<u>AGGLOMERATE</u> ; reddish green, as above lithologically. Calcite veining is rare (all magnetic). At 6.1 m calcite-chlorite shear cuts core at 38°. At 12.2 m thin calcite-chlorite shear cuts core at 25°.	1939	15.2-15.3m		19	0	0.005	0.005	9
		1940	19.8-19.9m		12	0	0.005	0.007	10

# KOKANEE EXPLORATIONS LTD.

## DRILL HOLE RECORD

Page: 2

Property: ECHO

Hole No.: E92-4

Location: ECHO 3 CLAIM

METERAGE From To	DESCRIPTION	SAMPLE							
		No.	From	To	Au ppb	Ag ppm	Pb %	In %	Cu ppm
23.0-67.1	TUFF; generally green, medium to coarse grained, generally limy. Rare patch of silicification, generally weakly magnetic. At 24.8 m calcite-chlorite breccia. At 26.2 m calcite-chlorite breccia. At 43.5 m calcite-epidote vein cut at 20°. 44.3-44.8 m calcite-chlorite vein. Minor pyrite - rare chalcopyrite. 2' to core. 44.8-62.0 m epidote-calcite veinlets cut core at 10°, 20° and 5°. Host disseminated pyrite and chalcopyrite. Pyrite is also weakly disseminated in tuff.	1941	24.7	24.8m	19	0	0.005	0.005	15
		1942	26.1	26.2m	6	0	0.005	0.006	41
		1943	43.4	43.5m	5	0	0.005	0.005	50
		1944	44.3	44.8m	3	0	0.005	0.005	33
		1945	44.8	45.8m	2	0	0.005	0.006	54
		1946	45.8	47.0m	3	0	0.005	0.006	20
		1947	47.0	48.0m	2	0	0.005	0.006	17
		1948	48.0	49.0m	1	1	0.005	0.006	19
		1949	49.0	50.0m	1	0	0.005	0.006	18
		1950	50.0	51.0m	2	0	0.005	0.005	16
		1951	51.0	52.0	2	0	0.005	0.006	17
		1952	52.0	53.0m	2	0	0.005	0.006	21
	END OF HOLE AT 67.1 m	1953	53.0	54.0m	3	0	0.005	0.008	10
	Core is stored at the home of P & J Gallant (prospector) in Ladysmith, B.C.	1954	54.0	55.0m	9	0	0.005	0.008	13
		1955	55.0	56.0m	1	0	0.005	0.008	11
		1956	56.0	57.0m	1	0	0.005	0.008	19
		1957	57.0	58.0m	2	0	0.005	0.008	16
		1958	58.0	59.0m	1	0	0.005	0.007	19
		1959	59.0	60.0m	1	0	0.005	0.008	20
		1960	60.0	61.0m	2	0	0.005	0.007	12
		1961	61.0	62.0m	7	0	0.005	0.006	7

APPENDIX III  
ANALYTICAL RESULTS

## ASSAY CERTIFICATE

Kokanee Explorations Ltd. PROJECT ECHO File # 92-2202 Page 1  
 104 - 135 - 10th Ave S., Cranbrook BC V1C 2N1 Submitted by: D.L. PIGHIN

	SAMPLE#	INTERVAL (m)	Cu %	Ag** oz/t	SAMPLE wt. gm	AU-100 oz/t	NATIVE Au mg	AVG. oz/t
	01801	15 - 25	.093	.03	2700	.003	ND	.003
	01802	25 - 33	.103	.02	3300	.002	ND	.002
	01803	33 - 43	.070	.02	4100	.001	ND	.001
	01804	43 - 53	.155	.01	3300	.001	ND	.001
	01805	53 - 63	.055	.02	4000	.001	ND	.001
	01806	63 - 73	.075	.01	2300	.001	ND	.001
	01807	73 - 83	.001	.01	4000	.001	ND	.001
	01808	83 - 93	.001	.01	5000	.001	ND	.001
	01809	93 - 103	.001	.01	4300	.001	ND	.001
	01810	103 - 113	.001	.01	3800	.001	ND	.001
	01811	113 - 123	.001	.01	5000	.001	ND	.001
	01812	123 - 133	.007	.01	4000	.001	ND	.001
	01813	133 - 134	.001	.02	1900	.001	ND	.001
	01814	134 - 144	.129	.10	3000	.004	ND	.004
	01815	144 - 154	.001	.01	4100	.001	ND	.001
	01816	154 - 164	.001	.01	3700	.001	ND	.001
	01817	164 - 174	.006	.01	2900	.001	ND	.001
	01818	174 - 184	.003	.01	4200	.001	ND	.001
	01819	184 - 194	.003	.01	4500	.001	ND	.001
	01820	194 - 204	.009	.01	5500	.001	ND	.001
	01821	204 - 214	.001	.01	3700	.001	ND	.001
	01822	214 - 224	.005	.01	3500	.001	ND	.001
	01823	224 - 234	.002	.01	3450	.001	ND	.001
	01824	234 - 244	.001	.01	3700	.001	ND	.001
	01825	244 - 254	.001	.01	3900	.003	ND	.003
	01826	254 - 264	.001	.01	4300	.001	ND	.001
	01827	264 - 274	.004	.01	4300	.001	ND	.001
	01828	274 - 284	.002	.01	4600	.001	ND	.001
	01829	284 - 294	.002	.03	4000	.001	ND	.001
	01830	294 - 304	.001	.01	4200	.001	ND	.001
	01831	304 - 314	.001	.01	3700	.001	ND	.001
	01832	314 - 324	.001	.04	5000	.001	ND	.001
	01833	324 - 334	.001	.02	4800	.001	ND	.001
	01834	334 - 344	.001	.02	4000	.001	ND	.001
	01835	344 - 354	.001	.01	4200	.001	ND	.001
	01836	354 - 364	.001	.03	3700	.001	ND	.001
	STANDARD R-1/AG-1		.842	.98	-	-	ND	-

AG\*\* BY FIRE ASSAY FROM 1 A.T. SAMPLE. -100 MESH AU BY FIRE ASSAY FROM 1 A.T. SAMPLE.  
 - SAMPLE TYPE: CORE

DATE RECEIVED: JUL 29 1992 DATE REPORT MAILED:

Aug 7/92 SIGNED BY: C. L. Toye, C. Leong, J. Wang; CERTIFIED B.C. ASSAYERS



	SAMPLE#	INTERVAL (m)	Cu %	Ag** oz/t	SAMPLE wt. gm	AU-100 oz/t	NATIVE Au mg	AVG. oz/t
	01837	36.6 - 37.6	.001	.03	4100	.005	ND	.005
	01838	37.6 - 38.6	.001	.01	4900	.002	ND	.002
	01839	38.6 - 39.6	.001	.01	3500	.003	ND	.003
	01840	39.6 - 40.6	.001	.01	3500	.001	ND	.001
	01841	40.6 - 41.6	.001	.01	6600	.001	.01	.001
E92-1	01842	41.6 - 42.6	.001	.01	4100	.001	ND	.001
	01843	42.6 - 43.6	.001	.01	4800	.001	ND	.001
	01844	43.6 - 44.6	.001	.01	4150	.001	ND	.001
	01845	44.6 - 45.6	.001	.02	2600	.001	ND	.001
	01846	45.6 - 46.6	.054	.02	4700	.006	ND	.006
	01847	46.6 - 47.6	.001	.01	5000	.001	ND	.001
	01848	47.6 - 48.6	.002	.01	3300	.001	ND	.001
	01849	48.6 - 49.6	.001	.01	1300	.001	ND	.001
	STANDARD R-1/AG-1		.855	.98	-	-	ND	-

Sample type: CORE.

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST., COVIER B.C. V6A 1R6

PHONE (604) 253-3150 FAX (604) 253-1716

## GEOCHEMICAL ANALYSIS CERTIFICATE

Kokanee Explorations Ltd. PROJECT ECHO File # 92-2222 Page 1

104-1351-1901 AVES, Cranbrook BC V1C 2N1 Submitted by D.L. PIGG

SAMPLE# (m)	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Tb ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca ppm	P %	La ppm	Cr ppm	Mg %	Ba ppm	Y ppm	B ppm	Al %	Na %	K %	Li ppm	Au <sup>a</sup> ppb
01881 33.0-33.1	1	8	4	67	21	135	41	1421	7.14	11	5	ND	2	121	.2	2	2	162	5.12	119	9	107	4.03	48	15	4 3.72	.14	.07	1	1	
01882 33.4-33.7	1	485	5	90	14	146	41	1484	6.59	9	5	ND	1	59	.2	2	4	107	3.23	115	7	106	3.77	27	17	2 3.56	.02	.06	1	62	
01883 33.7-34.4	1	71	6	102	12	146	42	1632	6.93	9	5	ND	1	58	.2	2	6	108	5.72	111	7	101	3.74	32	18	2 3.43	.04	.08	1	25	
01884 35.0-35.1	1	212	4	89	13	131	35	1361	6.37	8	5	ND	1	81	.2	2	3	113	7.20	105	6	99	3.22	21	21	2 3.61	.02	.05	1	36	
01885 35.0-35.0	1	53	3	57	1	133	37	1333	6.12	11	5	ND	2	172	.3	2	2	130	7.75	100	7	93	2.79	20	26	9 4.47	.02	.04	1	1	
01886 37.0-37.7	1	88	2	66	1	151	45	1209	6.51	9	6	ND	2	297	.2	2	2	175	5.81	129	9	100	2.84	64	28	5 4.07	.29	.06	1	3	
01887 37.0-39.1	1	134	3	52	1	123	32	1040	5.59	9	5	ND	2	145	.2	2	3	150	5.01	109	8	84	2.49	51	27	15 3.31	.07	.04	1	3	
01888 40.0-40.3	1	58	5	61	1	138	36	1313	6.26	9	5	ND	2	89	.2	2	4	142	4.54	117	8	100	3.03	17	25	6 2.53	.04	.04	1	2	
01889 40.0-41.3	1	133	9	27	13	130	26	549	2.89	13	5	ND	1	375	.2	2	2	66	4.23	099	5	88	1.59	7	15	6 2.36	.01	.02	1	3	
01890 41.0-43.8	1	27	5	69	1	144	40	1243	6.03	8	5	ND	1	125	.2	2	2	107	4.10	117	7	114	3.28	15	22	4 2.74	.04	.03	1	1	
01891 44.0-44.7	1	20	4	55	1	144	39	1557	6.55	7	5	ND	1	101	.2	2	2	152	5.71	117	7	114	3.53	53	27	7 2.85	.07	.04	1	2	
01892 46.0-46.3	1	11	2	60	1	161	41	1525	7.07	8	5	ND	2	144	.2	2	2	166	5.89	111	8	106	4.10	47	29	6 3.36	.15	.04	1	1	
01893 47.0-47.1	1	58	2	53	1	142	36	1331	6.45	2	5	ND	1	159	.2	2	2	155	4.92	114	9	104	3.54	37	26	2 3.06	.15	.05	1	1	
01894 47.0-47.2	1	197	3	74	1	126	34	1049	4.77	4	5	ND	1	229	.2	2	2	98	7.67	097	6	104	3.26	9	22	3 2.92	.02	.01	1	17	
01895 57.0-50.3	1	38	2	46	1	114	31	1319	6.22	2	5	ND	2	191	.4	2	2	165	5.78	107	8	81	3.02	59	23	3 3.10	.19	.06	1	2	
01896 5.0-51.0	1	36	5	53	1	138	37	1126	6.02	2	5	ND	1	257	.2	2	4	153	4.64	122	9	88	2.90	61	26	7 3.79	.25	.04	1	1	
01897 5.0-52.0	1	83	7	50	1	139	36	1163	5.48	4	5	ND	1	218	.2	2	2	143	4.67	115	9	98	2.76	55	29	5 3.15	.16	.04	1	1	
01898 54.0-54.1	1	33	8	56	1	121	32	1024	6.23	9	5	ND	1	326	.2	2	2	166	3.86	121	9	87	1.97	40	15	7 4.11	.39	.06	1	223	
01899 56.0-56.2	1	27	5	96	1	6	18	1098	4.91	6	5	ND	2	180	.2	2	3	106	4.51	085	12	7	1.42	50	21	7 3.28	.09	.04	1	60	
01900 57.0-57.9	1	3	7	120	1	13	21	1398	5.54	3	5	ND	1	94	.2	2	2	101	2.54	096	13	4	2.11	44	17	2 2.45	.16	.08	1	33	
01901 57.4-59.5	1	24	9	112	1	6	19	1103	5.09	4	5	ND	2	110	.6	2	2	101	4.49	092	13	4	1.83	60	25	3 2.42	.07	.06	1	24	
01902 60.4-60.5	1	209	9	26	3	83	18	507	2.38	3	5	ND	1	248	.6	2	2	73	3.88	115	8	101	1.08	10	28	2 1.52	.02	.01	1	24	
01903 47.0-51.1	1	10	7	115	1	3	16	993	4.38	4	5	ND	1	120	.2	2	2	66	1.95	098	18	6	1.03	75	14	7 2.61	.05	.13	1	11	
01904 8.0-8.7	1	4	7	79	1	14	14	971	3.59	3	5	ND	2	124	.4	2	2	48	1.57	076	17	9	1.03	77	13	7 3.19	.04	.15	1	20	
01905 14.2-14.4	1	3	3	74	1	11	14	1325	3.50	4	5	ND	2	67	.2	2	2	40	3.75	075	12	7	1.18	49	12	3 2.08	.02	.10	1	20	
01906 10.1-16.2	1	32	2	45	1	21	11	643	2.67	2	5	ND	2	134	.2	2	2	48	6.02	067	10	18	.72	29	18	2 1.89	.04	.10	1	16	
01907 20.0-20.9	2	63	7	73	2	10	13	826	2.80	3	5	ND	2	148	.2	2	2	54	2.94	077	10	18	1.22	38	23	4 2.23	.04	.08	1	51	
RE 01904	1	6	7	82	1	12	15	989	3.63	3	5	ND	2	126	.2	2	2	49	1.62	076	17	8	1.10	78	03	8 3.25	.04	.15	1	15	
01908 20.0-30.0	1	14	2	97	1	15	16	947	3.40	2	5	ND	1	93	.2	2	2	39	2.10	083	10	9	1.79	28	13	3 2.23	.05	.10	1	260	
01909 20.0-31.0	1	26	3	64	1	11	13	625	2.26	2	5	ND	1	143	.2	2	2	30	1.77	078	9	8	1.12	35	11	2 1.77	.07	.15	1	921	
01910 31.0-32.0	1	108	8	77	1	10	13	648	2.65	2	5	ND	1	88	.2	2	5	27	1.32	002	10	7	1.25	37	14	2 1.85	.04	.15	1	12	
01911 36.0-36.2	1	5	6	87	1	12	14	772	2.95	2	5	ND	1	105	.2	2	2	37	1.82	081	10	17	1.45	51	14	4 2.04	.10	.16	1	39	
01912 44.0-44.5	1	5	3	75	1	9	15	1576	3.56	3	5	ND	2	93	.2	2	2	56	5.41	079	12	8	1.60	92	17	2 1.97	.08	.28	1	6	
01913 47.0-47.1	1	9	7	52	1	12	12	2379	2.44	2	5	ND	1	84	.2	2	2	42	9.75	056	9	6	.98	35	13	2 1.35	.02	.09	1	6	
01914 51.0-52.0	1	9	4	117	1	10	26	1236	5.99	2	5	ND	1	106	.2	2	2	138	5.91	106	9	12	1.86	33	35	2 3.35	.03	.06	1	6	
01915 52.0-52.5	2	5	6	61	1	11	13	656	2.45	2	5	ND	2	161	.2	2	2	47	3.21	072	9	17	1.07	35	20	6 1.79	.08	.10	1	61	
01916 53.0-53.2	1	9	4	46	1	10	10	833	2.32	6	5	ND	2	60	.2	2	2	33	7.02	068	10	6	.73	42	18	2 1.32	.03	.16	1	15	
STANDARD C/AU-R	19	57	42	134	17.5	75	32	1065	4.05	43	23	7	38	52	18.8	15	21	58	.69	097	38	62	.90	180	19	35 1.90	.07	.15	10	492	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3NL 3-1-2 HCl-MnO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti & W AND LIMITED FOR Na K AND Al. Au DETECTION LIMIT BY ICP IS 3 PPB.

- SAMPLE TYPE: P1 TO P3 GEO P4 ASSAY      Au<sup>a</sup> ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

Samples beginning 'RE' are duplicate samples.

Aug 18/92

ACME LABORATORIES LTD.

8521 104TH AVENUE NW  
EDMONTON, ALBERTA T6C 1Z6

OVER D.C. VCA INC.

PHONE (604) 253-3158 FAX (604) 253-1716

KOKANEE EXPLORATIONS LTD. PROJECT MACHO #1 File # 92-2222

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SAMPLE#	Cu * oz/t	Ag** oz/t	SAMPLE wt. gm	AU-100 oz/t	NATIVE AG oz/t	Avg oz/t
01850	1.5 - 2.5	.077	.10	1800	.001	.001
01851	2.5 - 3.5	.015	.06	3000	.001	.001
RE 01855		.011	.02	-	ND	-
01852	3.5 - 4.0	.020	.14	1900	.001	.001
01853	4.0 - 5.0	.019	.01	4500	.001	.001
01854	5.0 - 6.0	.005	.04	4650	.001	.001
01855	6.0 - 7.0	.011	.01	4300	.001	.001
01856	7.0 - 8.0	.045	.11	4600	.001	.001
01857	8.0 - 9.0	.025	.01	4100	.001	.001
01858	9.0 - 10.0	.006	.01	3500	.001	.001
01859	10.0 - 11.0	.059	.01	3800	.001	.001
01860	11.0 - 12.0	.008	.16	4500	.001	.001
01861	12.0 - 13.0	.009	.02	4400	.001	.001
01862	13.0 - 14.0	.004	.01	4000	.001	.001
01863	14.0 - 15.0	.007	.08	4200	.001	.001
01864	15.0 - 16.0	.016	.12	4600	.001	.001
01865	16.0 - 17.0	.009	.12	4400	.001	.001
01866	17.0 - 18.0	.008	.08	4200	.001	.001
01867	18.0 - 19.0	.005	.04	4600	.001	.001
01868	19.0 - 20.0	.009	.01	4300	.001	.001
01869	20.0 - 21.0	.006	.03	4200	.001	.001
01870	21.0 - 22.0	.005	.06	5100	.001	.001
01871	22.0 - 23.0	.003	.01	4600	.001	.001
01872	23.0 - 24.0	.006	.11	4400	.001	.001
01873	24.0 - 25.0	.003	.13	4500	.001	.001
01874	25.0 - 26.0	.004	.10	4500	.001	.001
01875	26.0 - 27.0	.006	.01	4800	.001	.001
01876	27.0 - 28.0	.002	.01	4200	.001	.001
01877	28.0 - 29.0	.005	.17	3600	.001	.001
01878	29.0 - 30.0	.011	.01	3000	.001	.001
01879	30.0 - 30.5	.010	.09	1500	.010	.010
01880	32.0 - 32.1	.002	.13	1000	.001	.001
STANDARD R-1/AG-1		.853	.99	-	ND	-

- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP.

- SAMPLE TYPE: P1 TO P3 GEO P4 ASSAY

AG\*\* BY FIRE ASSAY FROM 1 A.T. SAMPLE.

-100 MESH AU BY FIRE ASSAY 1 A.T. SAMPLE.

Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: JUL 30 1992 DATE REPORT MAILED:

Aug 13/92

SIGNED BY C. L. H. D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

## GEOCHEMICAL CATALYSTS CERTIFICATE

KOKANEE EXPLORATIONS LTD. PROJECT ECHO FILE # 92-2222

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P.002/005

SAMPLE# (m)	No ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Mi ppm	Co ppm	Mn ppm	Fe %	Mo ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	La ppm	Cr ppm	Mg %	Ba ppm	Y ppm	B ppm	Al %	Na %	K %	H ppm	Au <sup>a</sup> ppb		
01881 33.0-53.1	1	8	4	67	11	135	41	1421	7.14	11	5	ND	2	121	2	2	162	5.12	139	9	107	4.03	48	33	4.372	.14	.07		1			
01882 33.4-33.7	1	485	5	90	14	146	41	1484	6.59	9	5	ND	1	59	2	2	4	107	3.23	135	7	106	3.77	27	17	23.56	.02	.06		25		
01883 33.7-34.4	1	71	6	102	12	146	42	1632	6.93	9	5	ND	1	58	2	2	6	108	5.72	111	7	101	3.74	32	18	23.43	.04	.08		36		
01884 35.0-35.1	1	212	4	89	13	131	35	1361	6.37	8	5	ND	1	81	2	2	3	113	7.20	105	6	99	3.22	21	21	23.61	.02	.05		1		
01885 35.9-36.0	1	53	3	57	13	133	37	1333	6.12	13	5	ND	2	172	3	2	2	130	7.75	100	7	93	2.79	20	24	9.447	.02	.04		1		
01886 37.6-37.7	1	88	2	66	13	151	45	1289	6.51	9	6	ND	2	297	2	2	2	175	5.61	129	9	100	2.84	64	28	54.07	.29	.06		3		
01887 39.0-39.1	1	134	3	52	14	123	32	1040	5.59	9	5	ND	2	145	2	2	3	150	5.01	109	8	84	2.49	51	27	15.3.31	.07	.04		2		
01888 40.1-40.3	1	58	5	61	15	138	36	1313	6.26	9	5	ND	2	89	2	2	4	142	4.54	117	8	100	3.03	17	25	6.2.53	.04	.04		3		
01889 40.3-41.0	1	133	9	27	15	130	26	549	2.89	13	5	ND	1	375	2	2	6	66	4.25	109	5	88	1.59	7	15	6.2.36	.01	.02		1		
01890 41.0-43.3	1	27	5	69	16	144	40	1263	6.03	8	5	ND	1	125	2	2	2	107	4.10	117	7	114	3.28	15	22	4.2.76	.04	.03		1		
01891 44.0-44.7	1	20	4	55	17	146	39	1557	6.55	7	5	ND	1	101	2	2	2	152	5.71	117	7	114	3.53	53	27	7.2.85	.07	.04		2		
01892 46.2-46.3	1	11	2	60	18	161	41	1525	7.07	8	5	ND	2	144	2	2	2	166	5.89	111	8	106	4.10	47	29	6.3.36	.15	.04		1		
01893 47.0-47.1	1	58	2	53	19	162	36	1331	6.45	7	5	ND	1	159	2	2	2	155	4.92	114	9	104	3.54	37	26	2.3.06	.15	.05		17		
01894 47.2-47.4	1	197	3	74	20	126	34	1049	4.77	4	5	ND	1	229	2	2	2	98	7.67	107	6	104	3.26	9	22	3.2.92	.02	.01		1		
01895 50.2-50.3	1	38	2	46	21	114	31	1319	6.22	2	5	ND	2	191	4	2	2	165	5.78	107	8	81	3.02	59	23	3.3.10	.19	.06		2		
01896 51.0-51.7	1	36	5	53	22	138	37	1126	6.02	2	5	ND	1	257	2	2	4	153	4.64	122	9	88	2.90	61	26	7.3.79	.25	.04		1		
01897 52.2-52.9	1	83	7	50	23	139	36	1163	5.48	6	5	ND	1	218	2	2	2	143	4.67	115	9	98	2.76	55	29	5.3.15	.16	.04		223		
01898 54.0-54.1	1	33	8	56	24	121	32	1026	6.23	9	5	ND	1	326	2	2	2	166	3.86	121	9	87	1.97	40	15	7.4.11	.39	.06		60		
01899 56.1-56.2	1	27	5	96	25	6	18	1098	4.91	6	5	ND	2	180	2	2	3	106	4.51	106	12	7	1.42	50	21	7.3.28	.09	.04		33		
01900 57.1-57.8	1	3	7	120	26	13	21	1398	5.54	3	5	ND	1	94	2	2	2	101	2.54	106	13	4	2.11	44	17	2.2.45	.16	.08		1		
01901 59.4-59.5	1	24	9	112	27	6	19	1103	5.09	4	5	ND	2	110	4	2	2	101	4.49	102	13	4	1.83	60	25	3.2.42	.07	.06		24		
01902 60.4-60.5	1	209	9	26	28	83	18	507	2.38	3	5	ND	1	248	2	2	2	73	3.88	115	8	101	1.08	10	28	2.1.52	.02	.01		11		
01903 4.7-5.1	1	10	7	115	29	1	3	993	4.38	4	5	ND	1	120	2	2	2	66	1.95	108	18	6	1.03	75	14	7.2.61	.05	.13		20		
01904 8.6-8.7	1	4	7	79	30	14	14	971	3.59	3	5	ND	2	124	4	2	2	48	1.57	107	17	9	1.08	77	13	7.3.19	.04	.15		20		
01905 14.2-14.4	1	3	3	74	31	11	14	1325	3.50	4	5	ND	2	67	2	2	2	60	3.75	105	12	7	1.18	69	12	3.2.08	.02	.10		1		
01906 16.1-16.2	1	32	2	45	32	21	11	643	2.67	2	5	ND	2	134	2	2	2	48	6.02	107	10	18	.72	29	18	2.1.89	.04	.10		16		
01907 20.7-20.8	2	83	7	73	32	10	13	826	2.80	3	5	ND	2	148	2	2	2	54	2.94	102	10	18	1.22	38	23	4.2.23	.04	.08		51		
RE 01904	1	6	7	82	33	12	15	989	3.63	3	5	ND	2	126	2	2	2	49	1.62	106	17	8	1.10	78	03	8.3.25	.04	.15		15		
01908 29.0-30.0	1	14	2	97	34	15	16	967	3.40	2	5	ND	1	93	2	2	2	39	2.10	103	10	9	1.79	28	13	3.2.23	.05	.10		260		
01909 30.0-31.0	1	26	3	64	35	11	13	625	2.26	2	5	ND	1	143	2	2	2	30	1.77	103	9	8	1.12	35	11	2.1.77	.07	.15		921		
01910 31.0-32.0	1	108	8	77	36	10	13	648	2.65	2	5	ND	1	88	2	2	5	27	1.32	102	10	7	1.25	37	14	2.1.85	.04	.15		12		
01911 36.1-36.2	1	5	6	87	37	12	14	772	2.95	2	5	ND	1	105	2	2	2	37	1.82	101	10	17	1.45	51	14	4.2.04	.10	.16		39		
01912 44.4-44.5	1	5	3	75	38	9	15	1576	3.56	3	5	ND	2	93	2	2	2	56	5.41	109	12	8	1.60	92	17	2.1.97	.08	.28		6		
01913 47.9-48.1	1	9	7	52	39	12	12	2379	2.44	2	5	ND	1	84	2	2	2	42	9.75	106	9	6	.90	35	13	2.1.35	.02	.09		6		
01914 51.9-52.0	1	9	4	117	40	10	26	1236	5.99	2	5	ND	1	104	2	2	2	138	5.91	106	9	12	1.86	33	35	2.3.35	.03	.06		1		
01915 52.4-52.5	2	5	6	61	41	11	13	656	2.45	2	5	ND	2	161	2	2	2	47	3.21	102	9	17	1.07	35	20	6.1.79	.08	.10		1		
01916 53.1-53.2	1	9	4	66	42	10	10	833	2.32	6	5	ND	2	60	2	2	2	33	7.02	106	10	6	.73	42	18	2.1.32	.03	.16		15		
STANDARD C/AU-R	19	57	42	134	43	75	32	1065	4.05	43	23	7	38	52	18	18	15	21	58	.49	107	38	62	.90	180	09	35	1.90	.07	.15		492

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Ni Fe Sr Ca P La Cr Mg Ba Ti & V AND LIMITED FOR Na K AND Al. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: P1 TO P3 GEO P4 ASSAY      AU<sup>a</sup> ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.  
 Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: JUL 30 1992 DATE REPORT MAILED:

Aug 18/92

SIGNED BY.....

D.TOE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

E92-3

E92-2

E92-1

P.002/005

AA  
LE



Kokanee Explorations Ltd. PROJECT ECHO FILE # 92-2222

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TO 1-489-1121

AUG-12-1992 12:33

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Os ppm	Sb ppm	Bi ppm	V ppm	Ca %	P ppm	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	U ppm	Al <sup>65</sup> ppb
01917 55.9-56.0	1	6	11	98	2	10	21	1346	5.05	4	5	ND	6	51	.6	2	2	51	4.75	102	16	7	1.86	43	.01	5	2.10	.01	.17	1	36
01918 56.2-56.4	1	166	6	99	2	10	24	1338	5.30	4	5	ND	5	49	.3	2	2	64	4.70	108	15	7	1.93	36	.01	5	2.42	.01	.16	1	90
01919 59.4-59.5	1	16	2	95	2	10	22	1517	6.00	2	5	ND	9	186	.2	2	2	92	5.59	104	12	6	1.97	59	.18	6	4.30	.05	.11	2	15
01920 61.5-61.6	1	17	2	86	2	8	13	1072	3.70	2	5	ND	3	44	.2	2	2	36	3.53	177	13	5	1.76	43	.09	4	2.11	.02	.19	1	9
01921 65.5-65.7	2	76	4	82	3	4	11	763	3.37	2	5	ND	5	176	.2	2	2	43	5.47	176	10	3	1.06	26	.17	5	2.98	.03	.08	1	16
01922 61.5-61.6	1	43	2	94	2	3	15	1187	5.14	2	5	ND	3	156	.2	2	2	73	3.02	102	14	3	1.53	96	.14	4	2.29	.13	.14	1	5
01923 73.0-73.1	1	43	6	108	3	5	22	1428	5.59	2	5	ND	3	206	.2	2	2	71	3.44	137	13	3	2.15	62	.17	5	3.99	.22	.16	1	2
01924 75.6-75.7	1	10	2	68	3	8	13	1683	3.62	2	5	ND	6	168	.4	2	2	39	5.38	177	17	6	1.50	44	.14	5	2.02	.07	.17	1	1
01925 76.9-77.0	1	22	2	65	3	11	16	952	4.48	2	5	ND	5	165	.2	2	2	69	4.86	102	12	9	1.10	41	.19	6	3.34	.05	.18	1	1
01926 82.5-82.6	1	21	2	65	3	20	14	1361	4.56	2	5	ND	4	97	.2	2	2	115	3.03	103	12	26	1.65	92	.24	4	2.03	.07	.11	1	4
01927 83.6-83.7	1	55	3	78	.6	23	18	1361	4.51	2	5	ND	3	113	.3	2	2	87	2.89	107	14	28	2.04	117	.18	5	2.29	.08	.08	1	4
01928 81.0-81.1	1	31	17	93	.3	20	15	924	3.81	2	5	ND	2	85	.2	2	2	69	1.72	103	11	23	1.91	33	.21	5	2.00	.04	.08	1	5
01929 89.9-90.0	1	18	2	92	.2	19	17	1097	3.86	2	5	ND	2	76	.3	2	2	53	1.96	106	10	19	2.14	26	.17	4	2.30	.03	.09	1	6
01930 92.0-92.1	1	16	4	45	.1	22	12	478	1.63	2	5	ND	2	155	.2	2	2	34	2.89	177	6	14	.85	10	.22	2	1.55	.03	.03	1	10
01931 100.0-100.1	1	24	7	79	.3	21	19	1265	4.95	3	5	ND	3	78	.2	2	2	118	3.42	172	10	24	1.60	44	.24	6	1.95	.06	.08	1	3
01932 101.4-101.5	6	51	2	40	2	6	9	545	2.35	2	5	ND	4	157	.2	2	2	60	20.70	100	7	5	.39	44	.16	4	3.11	.05	.03	2	4
01933 105.0-105.1	1	22	5	91	2	27	22	1194	5.65	2	5	ND	2	78	.2	2	2	120	2.41	179	9	25	2.51	33	.25	5	2.53	.05	.06	1	6
01934 107.1-107.2	1	17	4	68	2	9	15	856	4.11	2	5	ND	1	76	.2	2	2	88	3.13	106	9	10	1.35	26	.21	4	1.75	.04	.08	1	1
01935 110.0-110.1	1	21	6	43	2	9	10	435	1.95	2	5	ND	3	253	.3	2	2	54	2.26	103	6	14	.75	4	.25	6	1.78	.02	.01	1	5
01936 113.0-113.1	1	20	2	101	2	10	21	1048	5.20	2	5	ND	4	149	.3	2	2	93	2.75	105	8	7	2.06	23	.25	6	3.57	.05	.08	1	3
RE 01932	7	46	6	39	1	5	7	519	2.25	9	7	ND	2	155	.2	2	2	56	18.27	106	4	4	.38	44	.16	3	3.07	.05	.03	1	4
01937 6.0-6.1	1	10	2	52	1	7	9	594	3.02	2	5	ND	7	365	.2	2	2	66	5.43	105	15	6	.72	43	.09	5	6.96	.06	.09	2	2
01938 9.0-9.1	1	14	5	69	1	8	10	890	3.29	2	5	ND	2	89	.4	2	2	47	2.16	102	13	7	1.17	70	.14	3	1.78	.12	.14	1	6
01939 15.2-15.3	1	9	2	52	1	5	7	651	2.27	2	5	ND	1	77	.2	2	2	31	3.73	106	10	6	.86	32	.12	2	2.09	.03	.14	1	19
01940 17.8-17.9	1	10	3	69	1	7	11	783	3.12	3	10	ND	1	34	.3	2	2	34	2.21	106	10	6	1.36	45	.11	2	2.01	.03	.22	1	12
01941 24.1-24.2	1	15	2	53	1	6	9	738	2.58	3	5	ND	6	58	.3	2	2	29	7.11	102	12	5	1.04	27	.06	2	1.80	.02	.14	1	19
01942 26.1-26.2	1	41	5	58	1	9	14	1793	3.04	2	5	ND	9	93	.9	2	2	43	4.76	109	14	5	1.24	39	.10	4	1.58	.05	.10	1	6
01943 45.1-45.2	1	50	2	27	1	4	5	729	1.32	2	5	ND	6	97	.2	2	2	16	7.10	100	11	5	.41	21	.05	2	1.18	.02	.13	1	5
01944 44.3-44.4	1	33	2	52	1	6	9	795	2.78	2	5	ND	3	63	.2	2	2	32	2.81	102	13	5	1.00	54	.09	4	1.67	.02	.21	1	3
01945 44.8-45.0	1	54	2	58	1	6	9	780	3.00	2	5	ND	1	81	.2	2	2	32	2.59	105	12	5	1.11	61	.13	2	1.87	.04	.20	1	2
01946 46.0-46.1	1	20	2	55	1	6	9	853	2.68	2	5	ND	3	68	.2	2	2	28	2.76	108	13	5	1.03	42	.08	4	1.59	.02	.17	2	3
01947 47.0-47.1	1	17	8	60	1	7	10	1118	3.11	2	5	ND	5	126	.4	2	2	35	3.01	101	16	8	1.11	97	.09	4	1.73	.05	.17	1	2
01948 48.0-48.1	1	19	2	61	1	8	10	894	3.39	2	5	ND	5	105	.3	2	2	45	2.31	102	16	7	1.09	101	.12	6	1.82	.10	.16	2	1
01949 49.0-50.0	1	18	7	63	1	8	11	907	3.29	2	5	ND	3	121	.2	2	2	40	2.47	103	15	6	1.30	107	.11	3	1.84	.08	.16	1	1
01950 50.0-51.0	1	16	2	54	1	6	10	813	2.94	2	5	ND	1	85	.2	2	2	35	2.05	104	13	5	1.09	81	.11	2	1.64	.05	.16	1	2
01951 51.0-52.0	1	17	4	58	1	6	10	867	3.21	3	8	ND	4	80	.2	2	2	45	2.52	100	15	7	1.22	66	.12	4	1.79	.05	.13	1	2
01952 52.0-53.0	1	21	5	64	1	7	10	888	3.35	2	5	ND	3	107	.2	2	2	53	2.70	102	14	7	1.09	86	.15	4	1.94	.06	.12	1	2
STANDARD C/AU-R	20	64	38	129	7.2	71	32	1072	4.17	2	17	7	38	53	17.0	14	21	58	.50	101	60	57	.92	180	109	35	1.90	.07	.15	11	452

Sample type: CORE. Samples beginning 'RE' are duplicate samples.



## Kokanee Explorations Ltd. PROJECT ECHO FILE # 92-2222

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TO 1-489-1121

FROM ACME ANALYTICAL

AUG-12-1992 17:34

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Mg ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Co %	La ppm	Cr ppm	Mg %	Se ppm	Tl ppm	B ppm	Al %	Na %	K %	Mn ppm	Alu ppm
01953 53° 54°	1	10	3	78	12	10	17	1215	4.03	2	5	ND	1	107	2	2	2	55 3.17	084	15	8 1.64	99	14	4 2.12	.06	.12	1	3		
01954 54° 55°	1	13	4	75	13	9	17	1214	4.15	2	5	ND	1	101	2	2	4	60 3.27	087	14	8 1.65	76	16	7 2.23	.04	.09	1	9		
01955 55° 56°	1	11	7	79	13	11	16	975	4.38	2	5	ND	2	101	2	2	2	88 3.55	086	15	11 1.36	166	23	8 2.75	.06	.08	1	1		
RE 01956	1	19	4	88	13	9	17	1005	4.41	2	5	ND	2	101	2	2	2	100 4.10	084	16	9 1.34	113	22	4 2.97	.04	.08	1	1		
01956 56° 57°	1	19	5	88	13	12	16	1023	4.50	2	5	ND	1	101	2	2	2	101 4.16	085	16	8 1.36	114	22	5 3.06	.04	.08	1	1		
01957 57° 58°	1	16	4	75	11	12	16	936	4.44	2	5	ND	1	78	3	2	2	98 3.32	086	16	11 1.25	81	23	7 2.52	.04	.08	1	2		
01958 58° 59°	1	19	3	73	11	10	17	997	4.49	2	5	ND	1	86	2	2	3	83 3.28	087	15	9 1.32	78	22	7 2.43	.04	.09	1	1		
01959 59° 60°	1	20	5	78	11	12	18	1034	4.59	2	9	ND	2	84	2	2	2	83 3.30	092	16	10 1.33	66	22	6 2.41	.04	.09	1	1		
01960 60° 61°	1	12	4	68	11	8	16	941	4.27	2	5	ND	1	123	2	2	3	80 4.23	086	15	9 1.09	52	21	5 2.96	.04	.08	1	2		
01961 61° 62°	1	7	8	64	11	8	14	897	3.30	7	5	ND	1	92	2	2	2	53 4.71	075	12	9 1.11	35	16	6 2.04	.03	.10	1	7		
STANDARD C/AU-R	19	57	39	138	7.3	72	32	1113	4.17	61	22	7	39	53	18.8	14	21	58 .50	096	39	60 .91	188	109	35 1.95	.07	.16	11	530		

Sample type: CORE. Samples beginning 'RE' are duplicate samples.