GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORTS

DEC 0 4 1996

REPORT

ON

THE NUGGET CLAIM GROUP YEOWARD MOUNTAIN AREA VERNON MINING DIVISION BRITISH COLUMBIA



NTS 82L/1W Latitude 50°10'N Longitude 118°25'W

On Behalf of

Harold V. Arnold

Ву

JAMES W. McLEOD, P.Geo. Delta, British Columbia FILMED

CEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

October 8, 1996

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INTRODUCTION

During the period July 8 - July 16, 1996, the writer conducted an exploration program on a portion of the Nugget claim group located on the westside of Yeoward Mountain in the Vernon Mining Division of British Columbia.

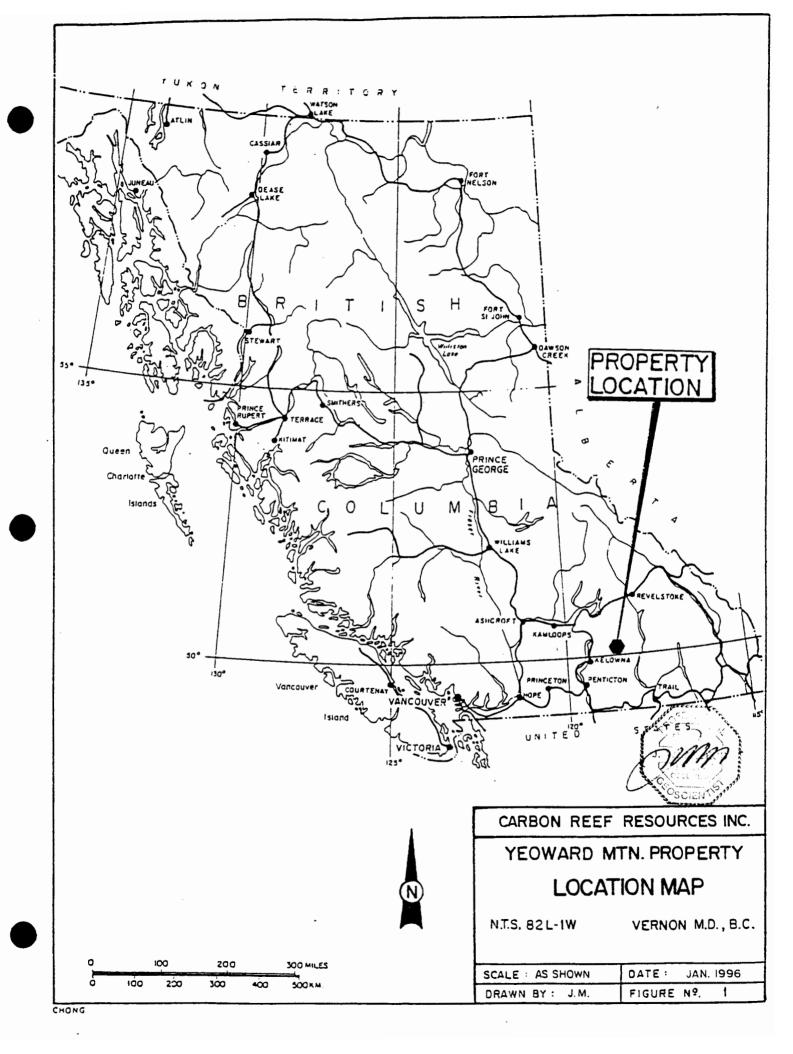
The program first required some 4x4 road rehabilitation to provide access from the Keefer Lake Road to the property. The subsequent exploration work consisted of rock exposure mapping and some grid controlled self (spontaneous) potential (SP) survey.

The current field work and report are being done on behalf of H.V. Arnold, the claim owner, of Vernon, British.Columbia.

LOCATION AND ACCESS

The Nugget claim group is located on the northwest-facing slope of Yeoward Mountain on the southside of Monashee Creek. The claim area may be located on map reference, NTS 82L/1W at latitude 50°10' north and longitude 118°25' west.

Access to the property was provided during this program by travelling on Highway #6 east of the Town of Lumby, B.C. for 60 kilometres to the Keefer Lake cut-off, then on a good all weather gravel road toward Keefer Lake for 10 kilometres to the property road (Yeoward Mountain 4x4 cut-off) to the north which is taken for approximately 9 kilometres to the central claim area.



TOPOGRAPHICAL AND PHYSICAL ENVIRONMENT

The property lies on the western flank of Yeoward Mountain (which rises to 2,131 metres or 6,990 feet) and the claim ranges in elevation from 1,220 to 1,830 metres (4,000 - 6,000 feet) mean sea level.

The claim area occurs in rounded to steep mountainous conifer covered (spruce, cedar and pine) terrain which forms a gentle plateau and a moderate to steep north slope down to Monashee Creek.

The biotic position of the property is generally sub-Alpine which is transitional between the Interior wet belt and the Alpine zone.

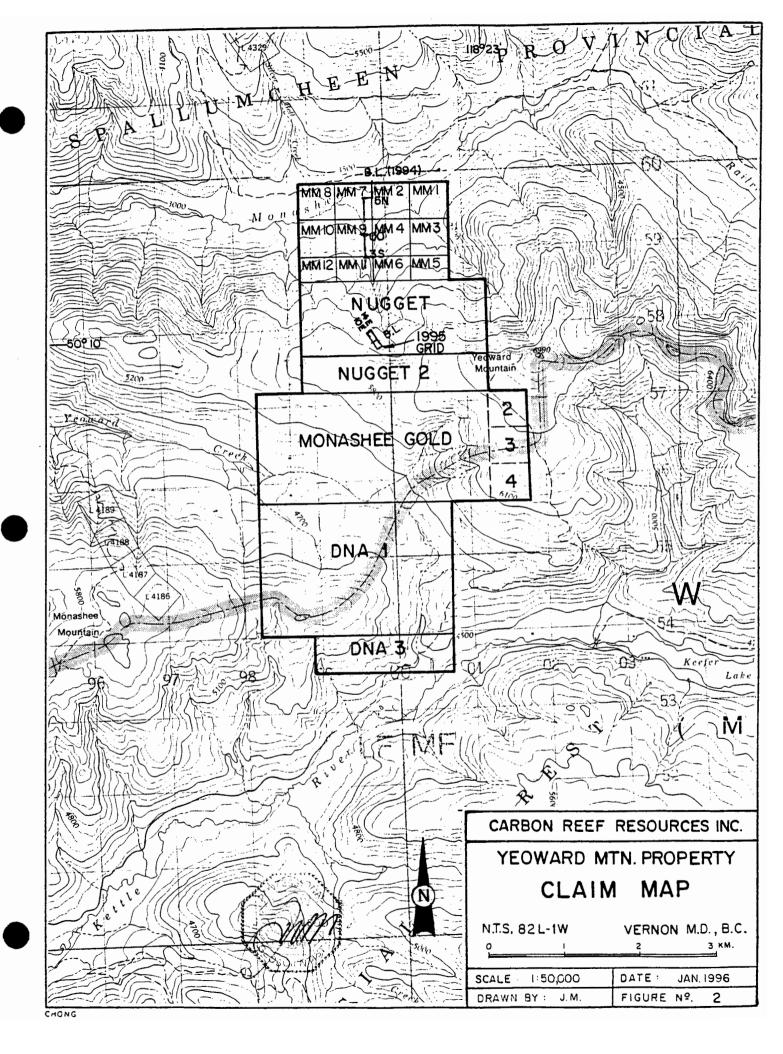
The area experiences approximately 120 centimetres (50 inches) of precipitation per year, of which 15 to 20 centimetres occur as a snow equivalent.

PROPERTY AND OWNERSHIP

The Nugget claim group consists of two contiguous lode mineral claims comprising a total of 15 units which are described as follows:

Nugget 2, tenure number 259133, 5 units, anniversary date August 4 and **Nugget**, tenure number 259063, 10 units, anniversary date October 21.

The claims covers an area of 375 hectares (927 acres).



The claims are owned 100% by Mr. Harold V. Arnold of 4410 25th Street, Vernon, British Columbia, V1T 4S6.

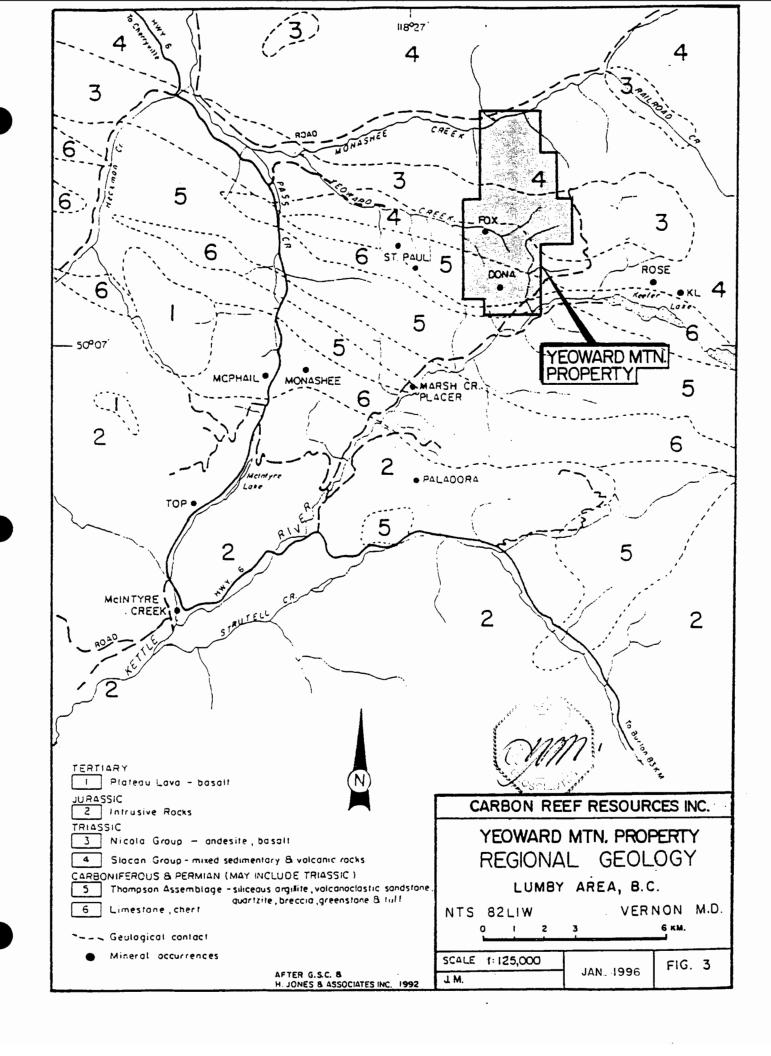
HISTORY

Table 1

Year	Work Performed	By Whom
Pre-1962	3 pits (shaft) approx. turn-of-century.	N/A
1962-73	Hand trenching, prospecting.	Harry Arnold
1974	Reconnaissance geochemical survey on 400' x 400' grid.	Phil Nielsen
1975-77	Prospecting	Harry Arnold
1978	Reconnaissance geochemical survey on 100' x 400' grid.	Clem Paseika4
1979	Bulldozer trenching.	Dave King
1980-92	Prospecting, physical work on road and Yeoward Creek trail.	Harry Arnold
1993-Present	Road work, mapping, geophysics and rock geochem.	Carbon Reef Resources Inc.

REGIONAL GEOLOGY

The general area is underlain by a west-northwest trending package of sediments and volcanics of the Thompson Assemblage which has been assigned a Carboniferous-Permian (possibly to Triassic) age, formerly referred to as the Cache Creek Group. The Thompson Assemblage is seen to be overlain unconformably on the north by mixed sediments and volcanics assigned to the Slocan Group which are thought to be of Triassic or older age. The Slocan Group is in turn overlain on the north by volcanic rocks of the Nicola Group which are assigned a Triassic age.



The sedimentary-volcanic units are seen to generally reflect low grade (greenschist facies) regional metamorphism.

The general area has been affected by Valhalla Complex intrusive events of Jurassic age. The intrusive rocks observed in the general area are most often as granodiorite to diorite (rhyodacite to andesite) composition.

The general area has undergone folding, faulting and fracturing and rock alteration which is suggestive of regional stress; possibly compressional to the northeast, generating the broad undulatory or repeating folds and the attendant changes of dip such as is observed along Monashee Creek;

The offsets in some of the highly graphitic beds which may serve as markers, are examples of faulting; the abundant quartz veins or sills offer examples of fracture closure and welding and various degrees of rock alteration together may indicate close-at-hand, underlying intrusive activity. Generally speaking, mineralization found in the area is as vein fillings of galena, dark coloured sphalerite, chalcopyrite, most always associated with arsenopyrite and possibly tetrahedrite and accompanying silicification. The silver and gold values encountered are thought to be associated with the arsenopyrite. Two separate phases of mineralization may be locally present.

Localized occurrences throughout the general area of Tertiary plateau basalts are observed as cap and localized valley flows.

PROPERTY GEOLOGY

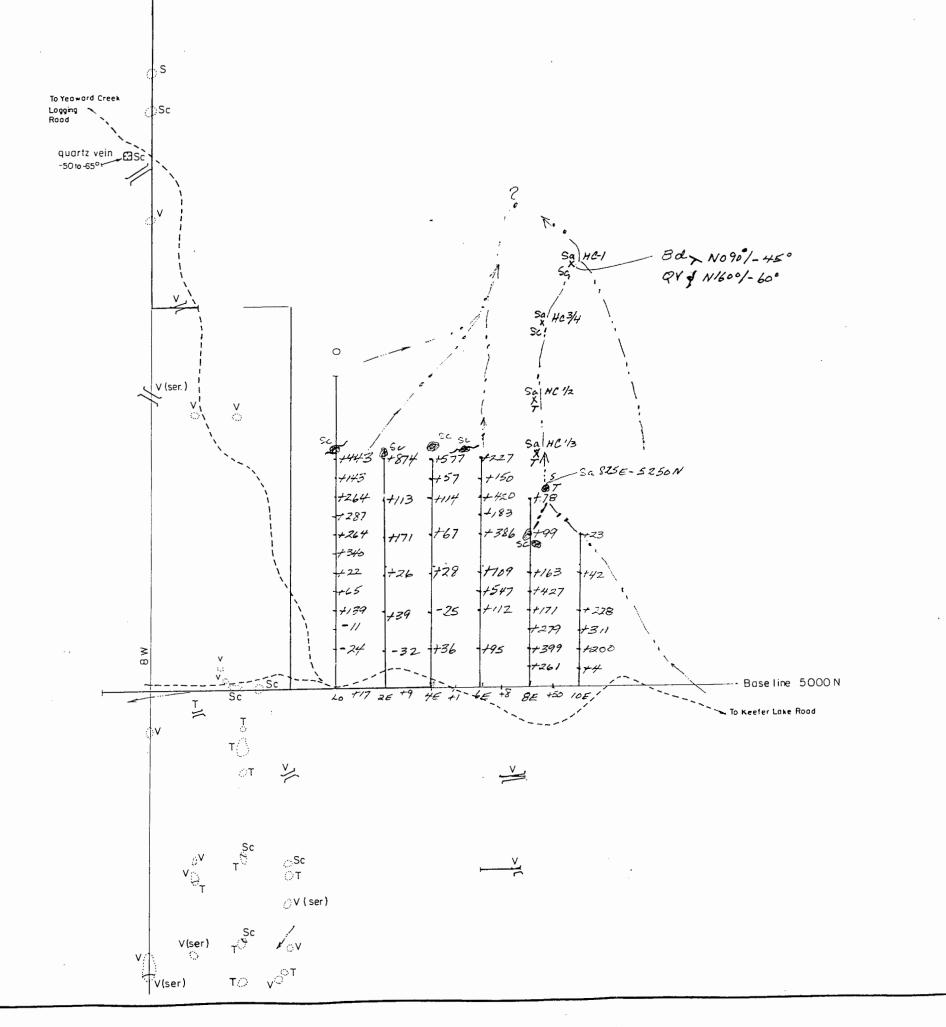
The Nugget group is underlain by interlayered sediments and more abundant tuffaceous volcanics with east-west striking contacts and southerly dips which exhibit low to moderately strong alteration as chlorite, sericite, talc and silicification which is related to all observed sulphide mineralization. The silicified (mineralized) zones are often normal to one another ie. as a set, with a general trend of northwest and/or southeast with a varying dip direction. The silicified areas are seen to occur as flat to steeply dipping. The sediments generally occur as aphanitic to fine grained schists and phyllites. The schists are often carbonaceous (graphitic). The volcanics range from vitric and lithic flow tuffs to crystalline tuffs and aphanitic to fine and medium grained volcanics of rhyodacite composition. These rocks are seen to express low to moderate alteration as chlorite, sericite and pervasive and widespread silicification as quartz stringers (<1mm) to large veins of several metres in thickness. Minor limonite with cubic "boxwork" structure (after pyrite) and localized, accompanying manganese stain are observed in several locations on the property.

Mineralization reported from the property and examined by the writer occurs as:

- a) Galena-sphalerite-chalcopyrite-chalcocite?-cerussite?-quartz "eyes"-tetrahedrite? with silver and gold values; and
- b) Pyrrhotite-sphalerite (black)-chalcopyrite-arsenopyrite-pyrite and minor quartz.

Both occurrences appear as vein fillings.

The writer feels that the mineralization observed is related to fault-contact vein structures which in turn have experienced post-mineralization offsets due in part to northwest-



LEGEND

Schist (may be graphitic)

Tuff (crystal, some flow banded?)

Sediment (not tuffaceous)

Volcanic (f.-m. grained) may be intrusive (rhyodacite

Sericite

Outcrop

Direction of dip of quartz vein

Trench

Road

Spontaneous Potantial (S.P.) line

Drainage

Fauct

X Sa Sample X Bd Strike / dip



CARBON REEF RESOURCES INC.

YEOWARD MTN. PROPERTY PROPERTY GEOLOGY & S.P. GRID

LUMBY AREA, B.C.

SEPT/96

VERNON M.D. N.T.S. 82L-1W 300METRES FIG. 4

southeast faulting. A possible general sequence of events related to mineralization emplacement may be as follows:

- 1) Interlayered sediment and volcanic deposition, some of which may be sub-aerial.
- 2) General uplift and northeast compression causing major undulation and alternating dips of the bedding from southwest to northeast.
- Low angle separation of contacts and thrust faulting affording the system of conduits and depositional sites for widespread silicification as lenses and sills by hydrothermal activity.
- 4) Subsequent sulphide mineralization (carrying precious metal values) along eastwesterly trending structures. Possibly two phases are present.

Note: 3) and 4) may be contemporaneous and related to igneous activity.

5) Post-mineralization faulting causing offset in a north-northwest and south-southeast direction.

PRESENT WORK PROGRAM

The current fieldwork program included rehabilitation of the 4x4 access road from the Keefer Lake road near the south boundary of the claims to allow access to the property, installation of 2,050 meters of grid line with 50 metre flagged station intervals for the SP survey (see Appendix III - Results) and rock exposure mapping at a scale of 1:5,000 (see Figure 4 and Appendix I - Rock Descriptions), rock sampling was performed where possible. The samples were analysed at Acme Labs. In Vancouver, B.C. by inductive coupled plasma (ICP) following an aqua regia digestion and fire assay - AA finish for gold (see Appendix II).

The work program and report was conducted on behalf of Harry Arnold, the claim owner of Vernon, British Columbia.

CONCLUSIONS

The current program revealed a number of interesting features which may be instructive in discovering further precious metal bearing sulphide mineralization. The current more detailed and localized exploration work suggests either a new or revised outlook of the writer about the precious metal occurrences discovered to date on the Nugget claim group.

The currently known characteristics are listed as follows:

- Bedding attitudes of the interlayered sediments and volcanics (which reveal a varying degree of metamorphism) appear to be generally striking east-west and dipping to the south.
- 2) Certain of the layered units have undergone moderate alteration, strong fracturing with accompanying stretching and shearing of crystals particularly near the contact and abundant iron sulphide mineralization.
- 3) Silicification may be strong as quartz veining and fracture welding which generally occurs either sub-concordant to the bedding and/or foliation of the enclosing host rock or as a cross cutting filling or set of fracture fillings, ie. often southerly and generally westerly dipping.
- 4) Gravity data from the 1993 survey and reviewed by the writer in the vicinity of the present fieldwork area is thought to reveal an underlying intrusive body which may be

the cause of the currently observed alteration and mineralization in the overlying stratified units. Inspection of the magnetic gradients suggests a causative feature at a vertical depth from surface of 50-75 metres (165-246 feet). The intrusive may be viewed as being enveloped by the overlying older stratified rocks and to not have broken through or being denuded on the steep northside of the property to the extent necessary for its direct observation at the surface, but in this particular area it is much closer to the surface as is evident from the stronger alteration, fracturing and mineralization.

5) The precious metal values are associated with sulphides although two different types of occurrence and possibly association may be present on the Nugget group. First is the gold values which appear to be present with or in the arsenopyrite and the second appears that the association may be with galena. Both occurrences may be found to occur with elevated zinc and cadmium values, ie. in dark (iron-rich) sphalerite. The writer feels that based on his previous experience in the general area that two distinct phases of mineralization containing anomalous gold and/or silver values are present on this property.

There are indications on the Nugget claim group that further fieldwork is warranted to confirm a model of precious metal occurrence and that more detailed work will be required to test the model. For these reasons the following recommendations are made.

RECOMMENDATIONS

A program of scout drilling is recommended in the area of interest designated the HC area (see Figure 4). The holes should be situated so as to test both the indicated sulphide-range self potential values, the anomalous gold sample zones and previously acquired magnetometer and VLF-EM areas of interest data.

The recommended program is expected to take one month to complete at an estimated cost of \$50,000.

COST ESTIMATE

Geology, core logging and supervision, all inclusive	e \$ 8,000
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Scout drilling, 300 metres of AQ-wireline core, all inclusive 42,000

TOTAL \$50,000

Respectfully submitted

James W. McLeod, P. Geo:

STATEMENT OF COSTS

Geology and supervision	\$ 2,700
Grid installation	400
Geophysical surveys, spontaneous potential	1,300
Filing fees and permit	700
Transportation	500
Camp and board, 18 mandays @ \$80 per manday	1,440
Geochemical analyses and assays	400
Reports, maps	 560

\$ 8,000

CERTIFICATE

- I, JAMES W. McLEOD, of the Municipality of Delta, Province of British Columbia, hereby certify as follows:
 - 1. I am a Consulting Geologist with an office at #203, 1318 56th Street, Delta, B.C.,
- 2. I am a Professional Geoscientist registered in the Province of British Columbia and a Fellow of the Geological Association of Canada.
- I graduated with a degree of Bachelor of Science, Major in Geology, from the University of British Columbia in 1969.
- 4. I have practised my profession since 1969.
- I am President of Carbon Reef Resources Inc., the company that has an option on the Nugget claim.
- The above report is based on personal field experience gained by working on the claim during 1996.

DATED at Delta, Province of British Columbia this 8th day of October, 1996.

James W. McLeod, P.Geo. Consulting Geologist



GEOCHEMICAL ANALYSIS CERTIFICATE

Omega Exploration PROJECT NUGGET File # 96-4523 207 - 1318 - 56th St., Delta BC V4L 2A4

SAMPLE#	Mo	Çu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Βi	٧	Ca	Р				Вa	Τi	В	A	lΝ			Au*	
Į.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ррп	ppm	×	%	ppm	ppm	%	ppm	%	ppm	1 2	ζ.	%	% ppm	ppb	
	1																					···		-								
TOP TRENCH	2	13	238	19	1.0	9	2	429	.69	39	<5	<2	<2	9	.2	<2	<2	4	.05	.007	1	19	.07	15	<.01	<3	.1!	5<.0	1 .0	27	123	
TRENCH L2W 4900N	1	78	10	61	<.3	21	20	653	3.57	<2	<5	<2	<2	96	.2	<2	<2	72	1.07	.093	4	32	1.46	63	.27	5	2.2	2 .0	3 .1:	5 <2	1	
HC 1/2	1	96	11	116	.5	19	23	978	4.31	18	<5	<2	2	175	.7	3	<2	69	2.71	.158	6	26	1.46	103	.26	5	2.1	в.О	5 .2	2 <2	3	
HC 1/3	<1	108	7	128	.6	24	26	972	5.54	<2	<5	<2	2	60	2.1	<2			.94	.142	7	27	2.07	114	.30	4	2.3	7 .0	4 .2	4 <2	1	
HC 3/4	<1	292	69	4236	3.6	12	13	440	11.71	14552			3	21	97.8	13	4	77	.40	,125	7	19	.99	81	.02	5	1.7	4 .0	2.2	1 <2	1580	
-	1																															
HC 1	1	17	36	283	1.3	6	3	933	2.74	61	<5	<2	<2	219	4.8	2	2	5	3.33	.015	4	10	. 19	28	<.01	<3	.3	7 .0	1 .0	4 2	19	
HC 1A	2	162	28050	15590	170.0	39	76	373	12.14	72	<5	<2	2	12	351.5	53	54	4	.27	.004	1	17	.13	8	<.01	·<3	.2	3.0	1<.0	1 <2	3250	
LO 2+63N	2	3	75	148	.4	7	3	930	2.65	<2	<5	<2	3	156	1.5	2	<2	21	.77	.045	9	16	. 75	29	.12	3	1.5	2 .0	3.0	54	11	
L4E 275-300N	2	60	132	126	.9	7	1	478	4.36	5	<5	<2	3	34	1.5	29	<2	48	.38	.128	7	36	1.30	181	.20	4	1.6	6.0	3 .2	5 <2	10	
L6E 300N	15	59	33	255	1.0	18	2	325	3.16	<2	<5	<2	5	46	4.1	2	2	115	.31	.062	7	61	.70	131	.23	3	1.1	4 .0	2 .1	9 <2	8	
L6E 240N	1	40	57	120	.5	10	7	770	3.71	<2	<5	<2	4	102	1.3	<2	<2	35	.93	.124	11	13	.89	175	.12	4	1.5	3.0	4 .2	6 <2	17	
L6E 200N	12	44	34	118	.6	10	3	427	2.71	16	<5	<2	4	40	2.2	3	<2	85	.41	.075	8	45	.97	108	. 12	4	1.2	9.0	2 .1	6 <2	8	
RE L6E 200N	12	44	34	114	.5	10	3	429	2.73	14	<5	<2	4	40	2.3	3	<2	85	.41	.076	8	44	.97	108	. 12	3	1.2	9.0	1 .1	72	2	
L6E 2+39N	3	29	24	133	.4	3	<1	411	4.36	12	<5	<2	4	39	.6	<2	<2	31	.30	.123	10	9	.68	124	.11	3	1.2	3 .0	3 .2	6 <2	104	
L6E 250N+7ME	14	47	17	268	.5	23	5	507	3.27	<2	<5	<2	4	20	3.8	3	<2	83	.37	.076	6	53	.81	128	. 13	3	1.3	2 .0	2 .2	5 <2	10	
1																																
L6E 150N+16ME	2	58	9	150	.4	16	16	1367	6.05	6	<5	<2	2	129	1.4	<2	<2	119	1.99	.111	6	38	2.35	143	.28	3	2.9	7.0	4 .1	0 <2	6	
L6E 125N+6ME	1	14	10	93	<.3	9	8	908	3.84	<2	<5	<2	5	34	.3	<2	<2	27	.50	.120	13	11	1.07	95	. 12	3	1.9	0.0	4 .2	0 <2	3	
L6E 100N+6ME	1	14	6	79	-4	9	7	1202	3.93	<2	<5	<2	6	99	.3	<2	<2	23	2.73	. 107	17	9	1.13	137	.08	. 4	2.1	4 .0	4 .3	0 <2	<1	
L6E 100N+35ME	1	17	23	493	.4	11	9	1118	3.72	148	<5	<2	6	112	7.0	<2	<2	8	3.39	.113	11	5	.51	137	<.01	3	.5	5 .0	4 .2	3 <2	7	
L8E 250N	2	64	8	49	.5	14	4	434	4.01	3	<5	<2	2	63	<.2	<2	<2	52	.59	. 150	6	76	1.24	212	.23	5	1.7	1 .0	3 .3	3 <2	4	
	-																															
L8E 125N	8	89	11	278	.7	10	3	747	7.46	3	5	<2	3	41	.9	3	<2	135	.33	. 166	7	59	1.94	184	.17	3	2.2	1 .0	3 .2	5 <2	118	
L8+25E 5250N	2	74	11	1638	.3	16	11	584	4.04	193	<5	<2	3	66	2.4	2	<2	36	. 84	.116	11	11	.84	105	.16	4	1.5	7 .0	3 .2	5 <2	8	
STANDARD C2/AU-R	22	63	45	152	7.5	76	39	1299	4.19	40	19	8	40	54	20.5	18	19	77	.54	.106	42	72	1.12	203	.08	31	2.2	3 .0	6 .1	4 10	484	

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 MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 17 1996 DATE REPORT MAILED

./. ./D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

APPENDIX I

ROCK LOG

Company: Carbon Reef Resources Inc.

Project: Nugget Claim Group

Location: Vernon Mining Division, B.C.

Area: Yeoward Mtn.
Date: October 8/96

Sample Number	Description									
L8E-125N	V. f. gr., high fractured, rusty, blk(yellow stain) Graphitic schist.									
HC 3/4	Dk. grey, f.gr., stretched X'stal intrusive or tuff. 3 frac. set, schistose texture, some vuggy br'n yellow stain and fracwelds by mod. mass. Py.									
L6E-240N L6E-100N & 6m. E.	F. gr., grey micaceous q'tz-feld. porph or crystal tuff. F. gr. grey, schistose (talc) q*tz-feld. porph. or tuff.									
Top Trench	Dk. schist bounding 2 cm. vuggy q'tz veinlet. Grey v.f. gr. X8stal'n r'x, very weak fol'n and diss. Py.									
16 m. E. L6E-125N & 6 m.E.	V.f.gr. intrusive (non-mag.) r'x (grey) with q'tz, plag., hornblende.									
L6E-300N	Dk. grey-bl'k v.f.gr., frac., schist with mod. dk.br'n-yell. Fe stain.									
L6E-100N & 35 m. E.	Wk. serPy in grey f.gr. X'stal. q'tz-feld. intrusive.									
L0-263N	Sim. to prev. r'x with 2-3 cm. q'tz-weld frac. with sercalcite.									
L815E-5250N L8E-250N	L.grey, v.f.gr., like two prev. fol. schist or intt with mod. diss. Py. Fol. + fract., rusty-brn, schistose int., with diss. Py.									

Sample Number	Description
HC 1/3	Dkbrn, rusty, + fract., f.gr. int. or tuff with diss. Py.
HC 1	Vuggyhq8tz v.3-4 cm. with slicken. walls, Py + hematite included.
L2W-4900N	Tr+ Py, brecc. grey f.gr. intrusive.
L4E-275-300	Aphanitic, 1.grey, foliated,schistose q8tz rock.
L6E-200N	V.f.gr, 1. grey, + Py, + serc. q'tz-feld. porphyry.
HC 1A	Galena. Mn st., Py in quartz.
HC 1/2	Dk. grey + diss. Po (Mag) q'tz-feld., v.f.gr int. or tuff.
L6E-250N & 7 m. E.	V.f. gr. bl'k schist or slatey shale with Fe st. on fol'n.
L6E-239N	High fractured, Fe-stained, v.f.gr. q8tz-feld. intrusive, monor foliation.

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APPENDIX III

APPENDIX III

SELF POTENTIAL RESULTS

<u>LO</u>		<u>L2E</u>		<u>L4E</u>		<u>L6E</u>	
0+50N 0+75 1+00 1+25 1+50 1+75 2+00 2+25 2+50 2+75 3+00N	-24 mv -11 +139 +65 +22 +340 +264 +287 +264 +143 +443 mv	11		0+50N 1+00 1+50 2+00 2+50 2+75 3+00N	+36 mv -25 +28 +67 +114 +57 +577 mv	0+50N 1+00 1+25 1+50 2+00 2+25 2+50 2+75 3+00N	+95 mv +112 +547 +109 +386 +183 +420 +150 +227 mv
<u> 18E</u>		<u>L10E</u>					
0+25N 0+50 0+75 1+00 1+25 1+50 2+00 2+50N	+261 mv +399 +279 +171 +427 +163 +99 +78 mv	0+25N 0+50 0+75 1+00 1+50 2+00N	+4 mv +200 +311 +228 +42 +23 mv				