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ASSESSMENT REPORT

ON A

GEOLOGICAL AND GEOCHEMICAL

PROGRAM

ON THE

BLUE GROUSE PROPERTY

BLUE GROUSE 1-8 CLAIMS

LAKE COWICHAN AREA

VICTORIA MINING DIVISION

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**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,579

NTS: 92C/16E
 LATITUDE: 48° 50'28" North
 LONGITUDE: 124° 13'21" West
 OWNER: W.R. Gilmour
 OPERATOR: Predator Syndicate
 CONSULTANTS: Discovery Consultants
 AUTHORS: E.D. Harrington, B.Sc.
 T.H. Carpenter, P.Geo.
 DATE: October 26, 1994

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SUMMARY

Work on the Blue Grouse and Sunnyside Mines began in 1906. Major mining operations began in 1952 and ended in 1960, during which period 249,298 tonnes of rock were mined. From this tonnage 6,814,623 kg of copper, 2,508,644 gm of silver and 218 gm of gold were produced.

In October of 1993, Discovery Consultants carried out an exploration program comprising geological mapping, and rock and soil sampling on the property. The purpose of the program was to evaluate the base and precious metal potential of the claims.

This report describes the 1993 work program and the program results.

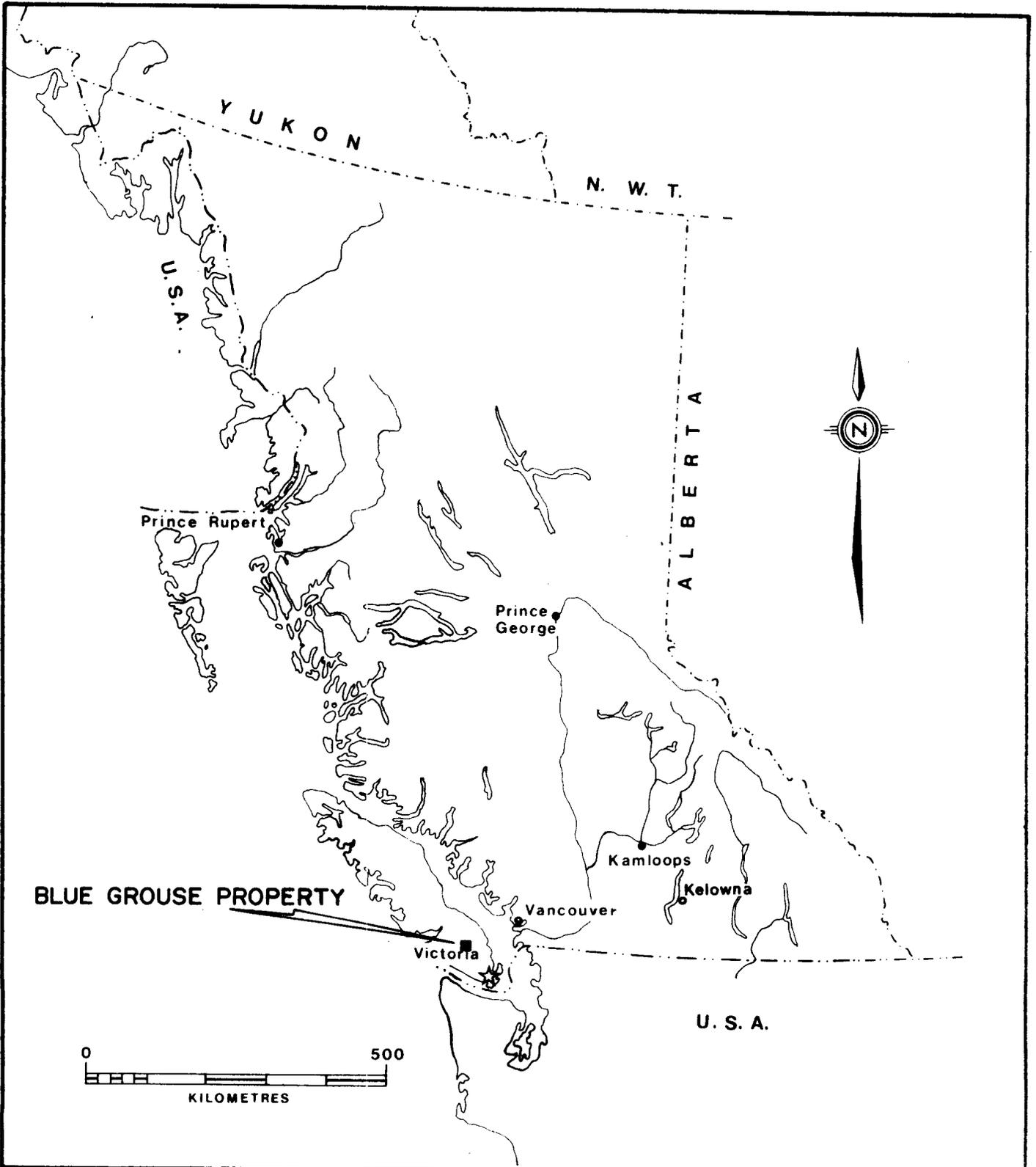
LOCATION AND ACCESS

The Blue Grouse property is located at Latitude 48°50'28" N and Longitude 124°13'21" W, near the southern shore of Lake Cowichan on Vancouver Island. The property lies approximately 40 km west of the town of Duncan, B.C., via Highway 18 to the town of Lake Cowichan and the village of Honeymoon Bay. From Honeymoon Bay a mixture of paved and gravel logging roads offer excellent two-wheel drive access to the property, which lies immediately west of Gordon Bay Provincial Park.

TOPOGRAPHY

Elevations range from 300 metres to 550 metres above sea level.

Ground cover is mature spruce and fir trees. There is little undergrowth in the area as Fletcher-Challenge carries out extensive silviculture programs including tree thinning, which creates a criss-cross ground cover of small trees which makes movement difficult.



DISCOVERY	Consultants	PREDATOR SYNDICATE
BLUE GROUSE PROPERTY		LOCATION MAP
DATE: FEB. 8/1994	PROJECT: 611	SCALE: As Shown
NTS 92C/16E	M.D.: VICTORIA	FIGURE: 1

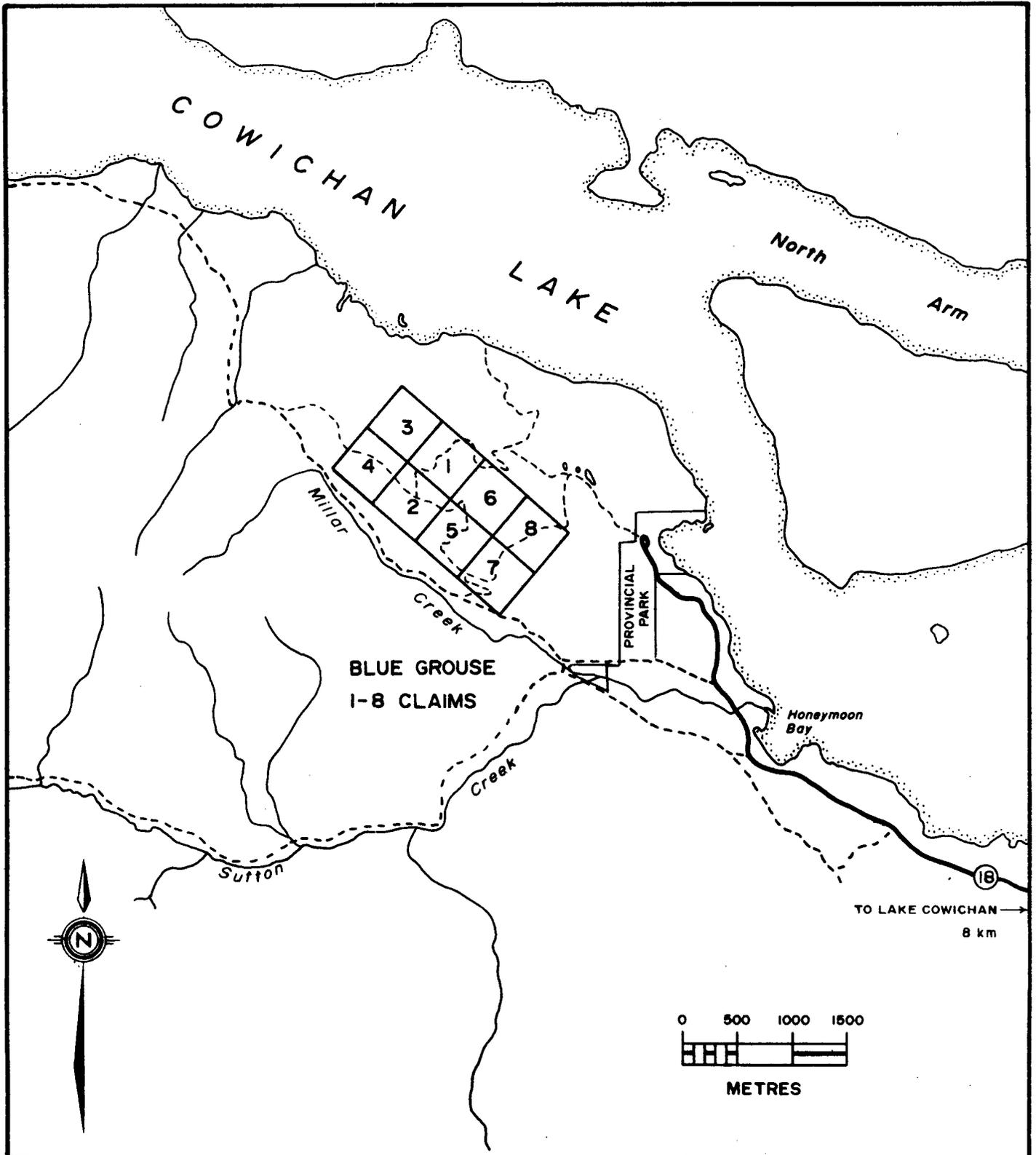
PROPERTY

The Blue Grouse property consists of eight 2-post claims, Blue Grouse 1-8. These claims lie within the Victoria Mining Division were located by E.D. Harrington and J. Graham on October 18, 1993 and were recorded in Vernon on November 3, 1993. These claims were staked following the reversion of Crown-granted claims L31-41.

<u>Claim Name</u>	<u>Record No.</u>	<u>Owner of Record</u>	<u>Anniversary Date*</u>
Blue Grouse 1	322298	W.R. Gilmour	October 18, 1999
Blue Grouse 2	322299	W.R. Gilmour	October 18, 1999
Blue Grouse 3	322300	W.R. Gilmour	October 18, 1999
Blue Grouse 4	322301	W.R. Gilmour	October 18, 1999
Blue Grouse 5	322302	W.R. Gilmour	October 18, 1999
Blue Grouse 6	322303	W.R. Gilmour	October 18, 1999
Blue Grouse 7	322304	W.R. Gilmour	October 18, 1999
Blue Grouse 8	322305	W.R. Gilmour	October 18, 1999

The claims are owned by W.R. Gilmour in trust for the Predator Syndicate.

* Pending acceptance of this report.



DISCOVERY

Consultants

PREDATOR SYNDICATE

BLUE GROUSE PROPERTY

CLAIM LOCATION MAP

DATE FEB. 8/1994

PROJECT 611

SCALE 1:50,000

NTS 92C/16E

M.D. VICTORIA

FIGURE 2

DWG-611-003

HISTORY

Two former copper producers, the Blue Grouse and the Sunnyside Mines, are located on the property.

Work began on the Sunnyside property in 1906 with open cuts, stripping and 35 feet (11 metres) of tunnelling completed. A sample of the sorted ore returned 9% Cu, 0.3 oz/T Ag and trace Au (MEMPR AR 1906).

Work began on the Blue Grouse in 1915 with open cuts, pits and an adit. The first shipment of ore, comprising three car loads, was made in 1916. One car was hand sorted and returned 11.1% Cu, 1.5 oz/T Ag and 0.08 oz/T Au (MEMPR AR 1916). The other two cars contained mine-run ore and returned 4.48% Cu and 0.84 oz/T Ag (MEMPR AR 1916).

In 1917, 1500 tons of ore were shipped from the Blue Grouse and 110 tons of ore were shipped from the Sunnyside. No further work of importance was carried out at the Sunnyside. In 1918, Consolidated Mining and Smelting Co. of Trail, B.C., acquired the rights to the Blue Grouse and shipped 740 tons of ore from 1918 until 1919. From 1917 to 1919 a total of 2113 tons was shipped, averaging 6.0% Cu and 0.86 oz/T Ag (MEMPR Bull. No. 37).

In 1928, Pacific Tidewater Co. acquired the property but allowed its option to lapse in 1929.

In 1952, Cowichan Copper Co. Ltd., took over the property and continued mining operations until 1960. During this period was carried out 7,201 ft. (2195 metres) of raising, 10,759 ft.

(3279 metres) of drifting, 6,372 ft. (1942 metres) of cross-cutting, 49,865 ft. (1520 metres) of underground drilling and 14,247 ft. (4343 metres) of surface drilling. From the 249,298 tonnes of rock mined during this period, 6,814,623 kg of copper (2.73%), 2,508,644 gm. of silver (10.06 gm/tonne) and 218 gm. of gold (.0009 gm/tonne) were produced.

In 1956 and 1959 self-potential surveys were carried out and indicated some anomalies to the northwest of the Blue Grouse Mine.

In 1964 Cowichan Copper carried out surface geological mapping and geochemical soil sampling.

Canex Placer acquired the property in 1976 and conducted further SP surveys but soon dropped their option.

Corrie Copper Ltd. optioned the property in 1979 and rehabilitated the workings. They concluded that there was copper mineralization of mineable grade at the 1100 level. In 1980 they carried out a vector pulse EM survey which indicated strong conductors near the Blue Grouse workings. Surface drilling, penetrating the zone immediately above the 1100 level, intersected 60 cm of chalcopryrite mineralization within a 9.1 metre band of limestone. This intersection ran 8.85% Cu, 0.35 oz/ton Ag and 0.004 oz/ton Au.

In 1981 an underground drilling program of 2,132 feet was completed on the 1100 level. Some results were as follows.

<u>Width Ft.</u>	<u>Cu %</u>	<u>Ag (oz/ton)</u>	<u>Au (oz/ton)</u>
0.5	1.3	0.11	--
0.5	2.16	--	0.005
13.0	4.94	0.37	--
47.0	2.85	0.20	--

From this program no mineable mineralization was delineated either above or below the level (EMPR Ass. Rpt. 19387).

In 1987, Shangri-La Minerals carried out an exploration program to the north and northwest of the Blue Grouse Mine consisting of geological mapping, soil sampling, ground magnetometer and airborne VLF-EM surveys.

In 1989 Daiwan Engineering Ltd. carried out an exploration program, also to the northwest, consisting of a soil sampling program, geological mapping and sampling of the tailings from the Blue Grouse mine.

REGIONAL GEOLOGY

Lake Cowichan lies at the eastern end of the Cowichan uplift, a major geanticline on Vancouver Island. The area is underlain by pyroclastic, sedimentary and volcanic rocks of the Paleozoic Sicker Group, the Mississippian to Permian Buttle Lake Formation, the Upper Triassic Vancouver Group and the Lower Jurassic Bonanza Group. Intrusions include Triassic gabbro (informally named Mount Hall) and Early to Middle Jurassic plutonic rocks. Upper Cretaceous sediments of the Nanaimo Group overlap the older rocks.

PROPERTY GEOLOGY

In general, the property is underlain by rocks of the Vancouver Group consisting of Karmutsen Formation volcanic rocks, overlain by limestones of the Quatsino Formation, which in turn are overlain by clastic sediments of the Parson Bay Formation. Tuffaceous argillites and breccias of the Parson Bay Formation lie immediately west of the property.

The Karmutsen volcanics (basalts) are dark green to black, fine-grained to aphanitic and generally exhibit brownish weathered surfaces. Locally the basalts are porphyritic (plagioclase and pyroxene phenocrysts) with pillow structures and amygdules common. The pillows range from 25 cm to 1 metre in diameter and are roughly ellipsoidal. Some chloritic alteration and disseminated pyrite and magnetite are present.

The Quatsino limestone is massive, dark grey and sericitic with common calcite-filled fractures and stringers. Fyles (1955) stated that the limestones in this area are right-side-up and dip 40° - 50° westward.

The Blue Grouse mine occurs in basaltic flows, tuffs and agglomerates of the Karmutsen Formation which is intruded by irregular masses of dioritic feldspar porphyry. Most contacts are fractured and sheared but appear to strike northwest to northeast and dip 25° - 50° eastward and westward.

Chalcopyrite, pyrite and pyrrhotite mineralization occurs in a pipe shaped replacement skarn in volcanic rock. The skarn

appears to be controlled by fracturing caused by the intersection of two shear zones - one striking 350° , dipping 45° W and the other striking 280° , dipping 35° S. The line of intersection of the two shears rakes 34° at roughly 212° (MEMPR AR 1956). The skarn is a fine to medium grained aggregate of reddish-brown garnet with local epidote and actinolite. The chalcopyrite, pyrite and pyrrhotite occur as disseminated grains and veinlets.

Post-mineral slips and faults are numerous in the mine area. Northwest-southeast and north-south strikes predominate, with dips being less than 50° west to southwest. One fault, striking west-northwest and dipping 35° south, cuts the skarn zone at the 1340 level, producing a horizontal displacement of 15 feet. The existence of near-parallel faults suggests the existence of a fault zone in which movement has been taken up on a number of irregular and discontinuous breaks, each representing a limited movement (MEMPR AR 1956).

During production, ten separate copper zones were indicated in underground workings and diamond-drill holes.

WORK PROGRAM

The work carried out on the property in 1993 comprised soil sampling and geological mapping with associated rock sampling.

Soil Sampling

Soil samples were taken at 50 m intervals along the claim line, which was used for ground control (Figure 4). Sample material was placed in 10x26 cm kraft sample paper bags and shipped to Bondar-Clegg Laboratories in North Vancouver, B.C. for analysis.

The highest Cu value (2332 ppm) was obtained at 9+50E. Coincident anomalous values are 203 ppm Co and 9413 ppm Mn with elevated values in Au (30 ppb), Zn (134 ppm) and As (41 ppm).

Soil samples taken at 3+50E and 5+00E returned the highest Au values, 433 and 495 ppb respectively with coincident anomalous Cu values of 398 and 441 ppm. Site 4+00E returned an anomalous Cu value of 609 ppm.

Site 0+00E exhibited anomalous Au & Cu values of 186 ppb and 382 ppm respectively, along with an elevated Zn value of 122 ppm.

Site 1+50W exhibited an anomalous Au value of 252 ppb with a coincident Pb value of 111 ppm and an elevated Zn value of 132 ppm.

Geological Mapping and Rock Sampling

The claim line was used as ground control and work was concentrated in the area surrounding the Blue Grouse and Sunnyside mine sites and along available logging roads. Rock

samples were sent to Bondar-Clegg Laboratories in North Vancouver, B.C., for analysis.

The area of the Blue Grouse mine is underlain predominantly by weakly calcareous, fine-grained, grey amygdaloidal basalt intruded by medium to coarse-grained dioritic quartz-feldspar porphyry with local pillow basalt and minor coarse-grained gabbro.

The pillow basalts in the area of BG24 exhibit a shear at 340°, dipping 50°W, which corresponds to the orientation of one of two intersecting shears postulated to form the mineralized pipe. Local shears formed in the interstices between pillow lavas show iron staining and weak sulphide mineralization. Sample BG24 consists of this sheared material with copper oxide bloom and roughly 1% combined pyrite and chalcopyrite. This sample is located immediately above a back-filled decline in a moderately to strongly argillically altered amygdaloidal basalt. Mineralization within the alteration zone consists of weak pyrite and chalcopyrite with trace azurite. Access to the underground workings is possible from this site.

One hundred metres south is a back-filled adit surrounded by fine grained basalt and amygdaloidal basalt. These rocks have been intruded by local diabase dykes and are separated from the decline to the north by medium-grained quartz-feldspar porphyry. This area shows strong propylitic alteration (serpentinized volcanics with ≤ 3 mm veins of calcite - BG26) and mineralized, argillically altered shears in basalt. Sample BG25 consists of a

0.5m chip sample across a heavily mineralized 10 cm shear containing massive chalcopyrite in limy basalt. This shear strikes 250° and dips 60°N.

No "ore" was seen on site at Blue Grouse but grab samples BG27,28,29 and 31 are assumed to be representative of the mined material. In general these samples consist of strongly garnetiferous skarn, heavily hematized, with moderate to strong manganese staining and minor actinolite. Sulphide mineralization is massive, comprising 30%-50% of the rock and consisting of chalcopyrite, pyrrhotite and pyrite.

The Sunnyside workings are underlain by limy tuffs, basalt, and dark-grey to black, fine-grained limestone. Geological contacts appear to be generally north-south with a vertical dip. The limy volcanics exhibit local fracturing, containing calcite and white zeolite as well as epidote alteration. Mineralization is confined to sheared volcanics exhibiting strong argillic alteration. Samples of skarn showed strong garnetization with massive euhedral actinolite. Sulphide mineralization is spotty and is composed of chalcopyrite and pyrite.

Mapping of the roadcuts indicates black shales in vertical contact with the Karmutsen volcanics at the eastern end of the claim group (Figure 3). This contact trends generally east-west and passes just south of the Sunnyside workings. The black shales contain black, flattened, siliceous ellipsoids along bedding planes. The volcanics along the road immediately west of the Sunnyside consist of limy tuff and volcanic conglomerate of

the Karmutsen Formation. The rocks are well fractured and exhibit local calcite and white zeolite vein filling.

The area to the south of the Blue Grouse mine (Fig. 3) is predominantly underlain by fine-grained, grey basalt with minor fine-grained, grey amygdaloidal basalt (amygdules generally \leq 5mm). Epidote alteration is not uncommon but is very minor. Samples BG 4 and BG 5 were taken from a small gossan in fine-grained basalt. Hematization is moderate to strong and sulphide mineralization is \leq 2%, primarily pyrite with trace chalcopyrite.

Samples BG9 and BG10, further to the south, are taken from quartz veins in fine-grained basalt. The quartz veins (\leq 25 mm) are not extensive. Epidote alteration is present as is copper bloom and weak hematite and limonite.

CONCLUSIONS

The mined ore mineralization on the property appears to have been podiform (up to 10 separate mineralized zones reported). Previous reports give mixed indications on the existence of remaining mineralization. There is no evidence on surface of additional economic grade mineralization.

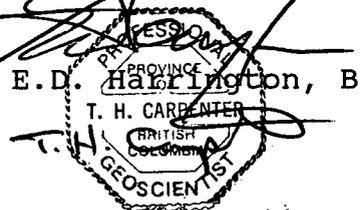
RECOMMENDATIONS

A program of additional exploration should consider the following points:

1. A more extensive soil sampling survey.
2. IP, Resistivity and/or magnetic surveys to define structures, fault dislocation and related mineralization.
3. Attempt to access underground workings and:
 - a) examine uppermost decline, which allows access to underground at present.
 - b) open lower adit, where mineralization has reportedly been developed and through mapping, sampling and diamond drilling evaluate the remaining ore potential.

Respectfully submitted,


E.D. Harrington, B.Sc.


T.H. Carpenter, P. Geol.

Vernon, B.C.
October 26, 1994

REFERENCES

British Columbia Ministry of Energy, Mines and Petroleum Resources (BCMEMP) Annual Report (A.R.).

1906: Annual Report, p. 212
1915: Annual Report, p. 290
1916: Annual Report, p. 312
1917: Annual Report, p. 267-268
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1960: Annual Report, p. 115
1965: Annual Report, p. 241

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Fyles, J.T. 1955, EMPR Bull. No. 37 Geology of the Cowichan Lake

Ettlinger, A.D. and Ray, G.E.

1989: Precious metal enriched skarns in British Columbia; BCMEMP Paper 1989-3.

MINFILE No. 092C 017

EMPR Paper 1989-3

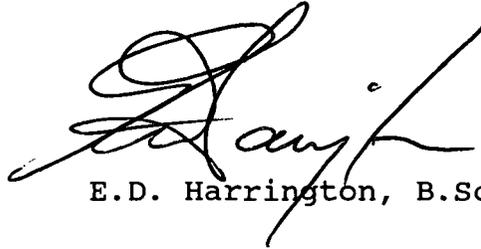
STATEMENT OF COSTS

1.	Professional Services		
	W.R. Gilmour, P.Geo.		
	Supervision, report writing		
	1.0 day @ \$400/day	\$ 400.00	
	K.L. Daughtry, P.Eng.		
	Supervision		
	0.5 days @ \$450/day	225.00	
	E.D. Harrington, B.Sc.		
	Travel - 1 day @ \$308/day	308.00	
	Mapping & sampling (Oct 18 -20)		
	2.5 days @ \$308/day	770.00	
	Report writing		
	3 days @ \$280.00/day	<u>840.00</u>	\$ 2543.00
2.	Field Personnel		
	J. Graham		
	Travel - 1 day @ \$280/day	280.00	
	Sampling & prospecting (Oct 18 - 20)		
	2.5 days @ \$280/day	<u>700.00</u>	980.00
3.	Transportation (4x4 vehicle)		350.00
4.	Meals & Lodging		200.00
5.	Geochemical Analysis		
	<u>Soil samples</u>		
	Au geochem + 28 element ICP		
	38 @ \$13.70	520.60	
	<u>Rock samples</u>		
	Au geochem & 28 element ICP		
	30 @ \$15.60	468.00	
	Assorted check assays	<u>115.75</u>	1104.35
6.	Drafting		600.00
7.	Data compilation, secretarial		400.00
8.	Field Supplies		50.00
9.	Printing, data processing, telephone & shipping		<u>200.00</u>
			sub total \$ 6427.35
10.	G.S.T.		<u>449.91</u>
		Total	<u>\$ 6877.26</u>

STATEMENT OF QUALIFICATIONS

I, EDWARD D. HARRINGTON, of 3476 DARTMOOR PLACE, VANCOUVER, BRITISH COLUMBIA, do hereby certify that,

1. I am a geologist in mineral exploration.
2. I have been practising my profession for thirteen years in Canada and the Sultanate of Oman.
3. I am a graduate of Acadian University, Wolfville, Nova Scotia with a Bachelor of Science degree in Geology.
4. This report is based upon knowledge of the Blue Grouse property gained from examination, mapping and sampling of the property, from the study of reports on the area, and from the conduct of the work herein described.
5. I hold no beneficial interest in the Blue Grouse property.



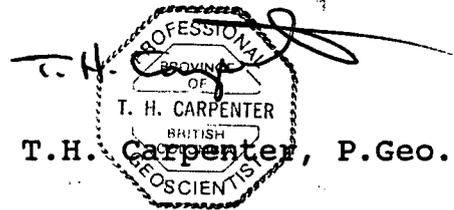
E.D. Harrington, B.Sc.

Vernon, B.C.
October 26, 1994

STATEMENT OF QUALIFICATIONS

I, THOMAS H. CARPENTER of 3902 14th Street, Vernon, B.C.,
V1T 3V2, DO HEREBY CERTIFY that:

1. I am a consulting geologist in mineral exploration associated with Discovery Consultants, Vernon, B.C.
2. I have been practising my profession for 23 years.
3. I am a graduate of the Memorial University of Newfoundland with a Bachelor of Science degree in geology.
4. I am a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia.
5. This report is based upon knowledge of the Blue Grouse property gained from supervision.
6. I hold no interest either directly or indirectly in the Blue Grouse property.



Vernon, B.C.
October 26, 1994

APPENDIX 1

ROCK SAMPLE LOCATIONS AND DESCRIPTIONS

ROCK SAMPLE LOCATIONS AND DESCRIPTIONS

<u>Sample No.</u>	<u>Location</u>	<u>Description</u>
BG 1	580W, 000N	Fine-grained rusty volcanic. Very well broken. No visible mineralization
BG 2	005W, 017N	Fine-grained dark grey amygdaloidal basalt. Quartz-carbonate blebs. Rusty with local bleached fractures.
BG 3	034W, 010S	Fine-grained grey basalt with moderate epidote alteration.
BG 4	065W, 015S	Gossan
BG 5	075W, 012S	Gossan in trench. Pyrite 1-2%. Trace chalcopyrite.
BG 6	230W, 060S	Weak skarn contact between amygdaloidal and fine grained basalt. Euhedral epidote. Weakly magnetic.
BG 7	235W, 055S	Grab. Skarn.
BG 8	220W, 095N	Grab. Skarn. Pyrite 2-3%. Trace chalcopyrite.
BG 9	200E, 370S	Quartz vein \leq 25mm in basalt. Intense local hematite with minor epidote. No effervescence. No visible mineralization.
BG 10	215E, 350S	Quartz stringer \leq 10 mm with epidote, hematite and limonite. Cu bloom.
BG 11	Sunnyside	Skarn float from workings. Strongly hematized with actinolite. Chalcopyrite 4%, pyrite 3%.
BG 12	Sunnyside	Massive skarn in limy tuff breccia. Massive pyrite 2%, trace chalcopyrite. Cu bloom. Stringers of calcite.
BG 13	Sunnyside	Skarn in limestone. Cu bloom. Pyrite, chalcopyrite \leq 2%.
BG 14	Sunnyside	Sheared argillic zone. Chip sample (7m). Cu bloom, local sulphides \leq 1%.
BG 15	Sunnyside	Gossan in fine grained basalt. Well fractured with calcite and white zeolite stringers.
BG 16	Sunnyside	Gossanous shear in limy basalt. Brecciated. Cu bloom.
BG 17	Sunnyside	Sheared gossan. Chip sample (1.0 m). Weak Cu bloom.
BG 18	Sunnyside	Sheared gossan. Weak Cu bloom.
BG 20	Sunnyside	Sheared gossan. Chip sample (1.0 m). Strong Fe and Mn stain.
BG 21	Road Traverse	Volcanic conglomerate with skarn between boulders. Limy. Dark green with weak to moderate Fe and Mn stain. Trace pyrite boulders, \leq 20 cm.
BG 22	Road Traverse	Dark green alteration (skarn). Well fractured with carbonate stringers.
BG 23	Road Traverse	Weak skarn in tuff with carbonate-filled fractures. Very well fractured.
BG 24	Blue Grouse Mine Site	Weak gossan in shear in pillow basalt. Cu bloom. Fe and Mn stain. Sulphides 1%.

<u>Sample No.</u>	<u>Location</u>	<u>Description</u>
BG 25	Mine site	Chip sample (0.5 m). Massive chalcopyrite in shear in limy basalt.
BG 26	Mine site	Grab. Dark grey propylitic alteration, with carbonate stringers. Well sheared.
BG 27	Mine site	Grab. Skarn. Vuggy with calcite stringers and Mn stain.
BG 28	Mine site	Grab. Massive chalcopyrite, bornite. Weakly magnetic.
BG 29	Mine site	Grab. Skarn in basalt. Massive sulphide. Pyrite 7%, chalcopyrite 3%. Strongly magnetic.
BG 30	Mine site	Grab. Crushed waste rock. No visible mineralization. Weakly magnetic.
BG 31	Mine site	Skarn. Grab. Red garnets. Cu bloom. Pyrite \leq 2%, trace chalcopyrite.

APPENDIX 2

ROCK SAMPLING RESULTS

Date of Report: 93.11.19

Project 611

Blue Grouse

File: ROCK_93.WK3

Rock Sampling Results
1993

Reference: B-C v93-01138.0(1.6)

Sample ID	Cu ppm	Cu %	Ag ppm	Ag opt	Au ppb	Pb ppm	Zn ppm	Zn %	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm
B601	24		<0.2		<5	4	87		<1.0	<1	<5	7	<5	4	10
B602	111		<0.2		<5	11	75		<1.0	<1	<5	15	<5	96	35
B603	287		<0.2		<5	<2	44		<1.0	<1	18	5	<5	32	11
B604	2743		4.7		<5	18	135		<1.0	<1	39	5	<5	3	16
B605	10316		12.8		<5	14	192		2.2	<1	124	<5	<5	<1	16
B606	485		<0.2		22	<2	56		<1.0	<1	14	<5	<5	87	29
B607	124		<0.2		<5	9	54		<1.0	6	<5	<5	<5	56	24
B608	>20000		42.2		12	35	2332		16.1	40	38	8	<5	97	41
B609	2700		<0.2		7	7	125		<1.0	<1	<5	<5	<5	41	32
B610	4761		<0.2		<5	4	67		<1.0	<1	12	7	<5	28	18
B611	12286		5.4		<5	13	767		5.5	3	11	7	<5	<1	30
B612	10072		12.2		135	64	>20000	4.80	358.4	26	<5	17	<5	3	34
B613	>20000	2.58	3.0		9	29	489		3.1	7	102	6	<5	1	90
B614	>20000	2.50	7.4		20	31	431		4.5	11	19	<5	<5	<1	15
B615	>20000	19.12	10.5		45	76	882		1.8	68	11	<5	<5	478	483
B616	9503		1.0		32	8	82		<1.0	14	15	<5	<5	7	23
B617	>20000	2.36	1.5		13	30	102		<1.0	34	11	<5	<5	65	19
B618	16161		0.4		7	21	93		<1.0	20	42	6	<5	36	37
B620	5981		<0.2		<5	19	70		1.3	11	51	<5	<5	2	31
B621	308		<0.2		<5	3	82		1.3	10	<5	<5	<5	56	38
B622	1426		<0.2		<5	12	38		1.1	5	<5	6	<5	26	14
B623	79		<0.2		<5	<2	31		<1.0	14	<5	12	<5	106	22
B624	>20000	3.61	9.8		15	34	267		4.3	31	38	<5	<5	223	68
B625	>20000	3.62	17.0		20	22	841		6.2	33	23	<5	<5	145	96
B626	723		<0.2		25	4	99		1.3	20	30	<5	<5	214	45
B627	1481		11.9		13	7845	6050		21.9	15	26	8	<5	139	64
B628	>20000	15.82	>50.0	3.21	72	105	1638		14.4	76	145	<5	<5	45	118
B629	13279		15.2		24	27	573		10.7	9	172	<5	<5	45	102
B630	1780		<0.2		8	10	225		2.0	2	26	<5	<5	126	32
B631	14903		1.7		<5	29	180		4.0	22	5	<5	<5	5	14

Duplicate:

B609	2700		<0.2		8	5	113		<0.1	2	7	<5	<5	40	30
B627	1456		11.9				7448	5772	20.3	12	22	<5	6	135	61

Project 611

Blue Grouse

 Rock Sampling Results
 1993 (Part 2)

Sample ID	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	La ppm	Te ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %
BG01	19	3.57	970	68	7	11	8	5	<10	<20	<20	2.56	1.38	0.08	0.03	0.18
BG02	144	4.73	991	10	102	9	9	<1	<10	<20	<20	3.69	4.73	0.57	0.04	0.01
BG03	99	1.98	610	10	23	207	3	<1	<10	<20	<20	2.59	0.88	4.87	0.02	0.02
BG04	47	8.16	681	9	4	47	2	<1	<10	<20	<20	0.98	0.33	2.46	<0.01	<0.01
BG05	38	7.73	1046	7	<1	27	2	<1	<10	<20	<20	0.95	0.23	9.84	<0.01	<0.01
BG06	140	4.03	386	7	94	36	8	<1	<10	<20	<20	2.07	2.42	3.10	0.05	0.01
BG07	121	3.55	404	9	103	82	6	<1	<10	<20	<20	4.82	1.98	8.93	0.06	0.01
BG08	29	9.84	948	15	<1	<1	5	<1	15	<20	<20	0.28	0.09	6.92	<0.01	<0.01
BG09	160	5.40	719	3	77	124	5	<1	<10	<20	<20	2.00	1.32	1.22	0.02	<0.01
BG10	148	4.36	565	3	70	191	5	<1	<10	<20	<20	1.50	0.58	2.26	0.02	<0.01
BG11	11	7.12	8385	6	<1	11	<1	<1	<10	<20	<20	0.11	0.26	2.76	<0.01	<0.01
BG12	12	4.47	4590	<2	14	50	3	<1	57	<20	450	0.56	0.38	10.00	<0.01	<0.01
BG13	24	8.90	3030	<2	<1	2	1	<1	<10	<20	<20	0.12	0.16	10.00	<0.01	<0.01
BG14	19	>10.00	3718	13	5	4	<1	<1	<10	<20	<20	0.33	0.20	10.00	<0.01	<0.01
BG15	7	>10.00	291	<2	<1	6	<1	<1	67	<20	<20	0.20	0.11	0.46	<0.01	<0.01
BG16	43	>10.00	1548	12	32	152	12	6	23	<20	<20	2.55	1.34	6.53	0.02	0.06
BG17	35	>10.00	2174	7	20	37	9	<1	<10	<20	<20	1.39	0.82	8.66	<0.01	<0.01
BG18	10	>10.00	2805	20	<1	15	9	1	15	<20	<20	0.85	0.46	4.11	<0.01	<0.01
BG20	17	>10.00	3958	5	<1	1	5	<1	<10	<20	<20	0.66	0.19	10.00	<0.01	<0.01
BG21	86	>10.00	1205	88	229	38	16	5	<10	22	<20	3.25	2.07	3.64	0.04	0.04
BG22	96	9.90	1395	45	15	27	6	3	<10	<20	<20	1.16	0.53	6.59	0.05	0.08
BG23	160	6.31	498	22	74	106	6	2	<10	<20	<20	3.62	2.48	3.39	0.09	0.07
BG24	166	>10.00	908	7	27	51	7	2	12	<20	<20	1.51	1.06	6.48	<0.01	<0.01
BG25	77	>10.00	2297	29	485	37	10	1	<10	<20	<20	1.64	0.93	10.00	0.03	0.02
BG26	402	9.96	972	6	113	150	10	<1	<10	<20	<20	5.33	7.05	6.07	0.08	<0.01
BG27	126	9.92	3437	6	36	49	10	<1	20	<20	70	1.42	1.21	2.90	0.02	<0.01
BG28	27	>10.00	1140	<2	<1	<1	<1	<1	52	20	<20	0.11	0.09	4.30	<0.01	<0.01
BG29	35	>10.00	347	15	3	30	4	<1	<10	<20	<20	0.58	0.13	3.89	<0.01	<0.01
BG30	147	8.80	578	31	98	86	9	2	<10	<20	<20	2.39	1.71	3.58	0.13	0.04
BG31	42	>10.00	2075	5	<1	<1	<1	<1	<10	<20	<20	0.09	0.06	10.00	<0.01	<0.01

Duplicate:

BG09	146	6.45	674	5	77	127	5	<1.2	<10	<20	<20	2.12	1.41	1.1	0.02	<.01
BG27	120	8.04	3307	6	36	49	10	<1	21	<20	68	1.45	1.19	2.46	0.02	<.01

APPENDIX 3

SOIL SAMPLING SURVEY

ANALYTICAL PROCEDURES AND RESULTS

ANALYTICAL PROCEDURES

Geochemical Analysis

by Bondar-Clegg :

ELEMENT		LOWER DETECTION LIMIT	EXTRACTION	METHOD
Au	Gold	5.0 ppb	fire-assay	atomic absorption
Ag	Silver	0.2 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Al*	Aluminum	0.02 %	HNO ₃ -HCl hot extr	ind. coupled plasma
As	Arsenic	5.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Ba*	Barium	5.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Bi	Bismuth	5.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Ca*	Calcium	0.05 %	HNO ₃ -HCl hot extr	ind. coupled plasma
Cd	Cadmium	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Co*	Cobalt	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Cr*	Chromium	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Cu	Copper	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Fe*	Iron	0.01 %	HNO ₃ -HCl hot extr	ind. coupled plasma
Hg■	Mercury	0.010 ppm	HNO ₃ -HCl leach	cold vapour atomic absorption
K*	Potassium	0.05 %	HNO ₃ -HCl hot extr	ind. coupled plasma
La*	Lanthanum	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Mg*	Magnesium	0.05 %	HNO ₃ -HCl hot extr	ind. coupled plasma
Mn*	Manganese	0.01 %	HNO ₃ -HCl hot extr	ind. coupled plasma
Mo*	Molybdenum	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Na*	Sodium	0.05 %	HNO ₃ -HCl hot extr	ind. coupled plasma
Ni*	Nickel	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Pb	Lead	2.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Sb*	Antimony	5.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Sn*	Tin	20.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Sr*	Strontium	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Te*	Tellurium	10.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
V*	Vanadium	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
W*	Tungsten	10.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Y	Yttrium	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma
Zn	Zinc	1.0 ppm	HNO ₃ -HCl hot extr	ind. coupled plasma

- Please note: certain mineral forms of those elements above marked with an asterisk will not be soluble in the HNO₃/HCl extraction. The ICP data will be low biased.

- Please note: Hg will only be analysed upon request.

Date of Report: 93.11.17

Project 611

Blue Grouse

File: ROCK_93.WK3

Soil Sampling Results
1993

Reference: BC v93-01137.0

Sample ID	Cu ppm	Ag ppm	Au ppb	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm
10 + 00W	136	<0.2	12	19	115	<1.0	1	16	<5	<5	85	28	86	4.88	1074
9 + 50W	130	<0.2	9	14	104	<1.0	<1	13	<5	<5	84	28	89	4.90	940
9 + 00W	115	<0.2	6	9	69	<1.0	<1	<5	<5	<5	49	18	66	3.97	762
8 + 50W	74	<0.2	6	27	95	<1.0	<1	<5	<5	5	63	23	42	4.21	1406
8 + 00W	71	<0.2	24	19	89	<1.0	<1	12	<5	<5	67	23	43	4.27	1467
7 + 50W	54	<0.2	18	18	70	<1.0	1	11	<5	<5	37	16	58	3.79	1073
7 + 00W	38	<0.2	<5	19	97	<1.0	2	20	<5	<5	12	11	21	4.30	920
6 + 50W	14	<0.2	27	16	28	<1.0	<1	<5	<5	<5	36	5	68	4.36	173
6 + 00W	29	<0.2	<5	23	70	<1.0	2	<5	<5	<5	9	5	22	3.90	200
5 + 50W	52	<0.2	150	28	125	<1.0	2	15	<5	<5	15	12	28	4.76	890
5 + 00W	9	<0.2	<5	23	29	<1.0	<1	<5	<5	<5	10	2	78	4.91	59
4 + 50W	60	<0.2	<5	24	76	<1.0	<1	<5	<5	<5	24	16	50	3.46	1127
4 + 00W	41	<0.2	34	17	93	<1.0	4	18	<5	<5	17	10	33	4.68	474
3 + 50W	49	<0.2	29	22	77	<1.0	<1	<5	<5	<5	11	11	25	5.17	727
3 + 00W	44	<0.2	<5	47	144	<1.0	<1	<5	<5	<5	21	7	45	4.76	391
2 + 50W	68	<0.2	6	57	102	<1.0	2	25	<5	<5	23	13	43	4.53	1542
2 + 00W	79	<0.2	36	25	93	<1.0	1	<5	<5	<5	35	14	60	4.53	675
1 + 50W	72	<0.2	252	111	132	<1.0	<1	<5	8	<5	24	10	59	4.3	484
1 + 00W	58	<0.2	14	25	74	<1.0	<1	<5	<5	<5	25	9	57	5.1	313
0 + 50W	79	<0.2	13	78	142	<1.0	<1	<5	<5	<5	30	10	56	5.01	404
0 + 00	382	<0.2	186	29	122	<1.0	<1	7	<5	<5	64	23	86	4.91	804
0 + 50E	40	<0.2	14	14	89	<1.0	<1	<5	<5	<5	39	15	73	3.19	1222
1 + 00E			n/a												
1 + 50E			n/a												
2 + 00E	129	<0.2	<5	14	92	<1.0	<1	8	<5	<5	37	18	54	3.62	1092
2 + 50E	52	<0.2	<5	20	144	<1.0	<1	11	9	<5	44	16	58	3.71	846
3 + 00E	28	<0.2	12	18	77	<1.0	<1	<5	<5	<5	20	22	41	2.61	2583
3 + 50E	398	<0.2	433	15	111	<1.0	<1	<5	<5	<5	58	25	75	4.37	1534
4 + 00E	609	<0.2	14	12	69	<1.0	<1	<5	<5	<5	58	23	63	4.25	656
4 + 50E	153	<0.2	<5	15	75	<1.0	<1	<5	<5	<5	36	17	39	4.31	1112
5 + 00E	441	<0.2	495	11	84	<1.0	2	<5	<5	<5	52	16	76	4.34	529
5 + 50E	101	<0.2	30	25	90	<1.0	1	<5	<5	<5	31	12	44	3.44	650
6 + 00E	110	<0.2	<5	28	89	<1.0	<1	<5	<5	<5	36	12	58	3.55	1435
6 + 50E			n/a												
7 + 00E	141	<0.2	<5	42	59	<1.0	<1	<5	<5	<5	20	6	34	3.91	556
7 + 50E	368	<0.2	68	68	70	<1.0	<1	13	<5	5	32	23	40	3.15	3372
8 + 00E	108	<0.2	20	18	76	<1.0	<1	7	<5	<5	28	10	67	4.70	576
8 + 50E	211	<0.2	<5	38	99	<1.0	<1	<5	<5	<5	35	12	69	4.59	1864
9 + 00E	170	<0.2	<5	17	106	<1.0	<1	<5	<5	<5	46	14	78	4.12	653
9 + 50E	2332	1.7	30	12	134	<1.0	7	41	<5	12	45	203	131	3.52	9413

Project 611

Blue Grouse

Soil Sampling Results
1993 (Part 2)

Sample ID	Ba ppm	V ppm	Sr ppm	Y ppm	La ppm	Te ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %
10 + 00W	62	147	23	5	3	<10	<20	<20	5.68	1.50	0.15	<0.01	0.06
9 + 50W	59	146	27	4	3	<10	<20	<20	5.67	1.52	0.18	<0.01	0.06
9 + 00W	80	123	25	7	5	<10	<20	<20	3.59	1.10	0.23	0.01	0.06
8 + 50W	86	91	60	4	3	<10	<20	<20	4.38	1.29	0.19	0.01	0.05
8 + 00W	88	93	63	4	3	<10	<20	<20	4.38	1.36	0.22	<0.01	0.05
7 + 50W	80	111	56	4	4	<10	<20	<20	3.51	0.81	0.23	0.01	0.04
7 + 00W	64	104	16	3	4	<10	<20	<20	4.18	0.62	0.10	0.01	0.07
6 + 50W	33	102	7	1	3	<10	<20	<20	1.49	0.36	0.04	0.01	0.05
6 + 00W	46	83	8	2	4	<10	<20	<20	2.96	0.38	0.04	0.01	0.06
5 + 50W	65	78	8	4	4	<10	<20	<20	6.11	0.59	0.05	0.01	0.08
5 + 00W	25	109	4	1	3	<10	<20	<20	0.54	0.07	0.03	0.01	0.05
4 + 50W	103	92	41	2	3	<10	<20	<20	4.10	0.46	0.18	0.02	0.09
4 + 00W	68	107	21	2	4	<10	<20	<20	4.14	0.47	0.08	0.01	0.06
3 + 50W	54	97	34	2	4	<10	<20	<20	5.29	0.59	0.13	0.01	0.05
3 + 00W	50	111	12	1	3	<10	<20	<20	3.40	0.50	0.06	0.01	0.04
2 + 50W	70	106	20	2	3	<10	<20	<20	3.82	0.67	0.14	0.02	0.07
2 + 00W	74	121	20	2	3	<10	<20	<20	4.35	0.97	0.10	0.02	0.06
1 + 50W	32	132	13	2	4	<10	<20	<20	2.55	0.85	0.17	0.02	0.03
1 + 00W	37	132	13	1	2	<10	<20	<20	3.79	0.73	0.11	0.01	0.04
0 + 50W	42	132	16	1	2	<10	<20	<20	3.44	0.78	0.22	0.02	0.04
0 + 00	37	127	22	8	3	<10	<20	<20	5.78	1.63	0.23	0.02	0.04
0 + 50E	107	96	33	2	3	<10	<20	<20	2.18	0.80	0.41	0.01	0.03
1 + 00E													
1 + 50E													
2 + 00E	69	117	67	3	3	<10	<20	<20	3.02	0.73	0.68	0.03	0.03
2 + 50E	155	102	20	2	4	<10	<20	<20	4.43	0.66	0.24	0.01	0.07
3 + 00E	107	102	42	3	4	<10	<20	<20	2.16	0.49	0.78	0.02	0.04
3 + 50E	34	163	65	5	2	<10	<20	<20	3.47	1.26	0.97	0.03	0.03
4 + 00E	30	145	56	9	3	<10	<20	<20	5.61	1.29	0.82	0.03	0.03
4 + 50E	42	170	48	3	1	<10	<20	<20	3.38	0.69	0.67	0.02	0.03
5 + 00E	44	160	37	2	2	<10	<20	<20	4.42	1.01	0.47	0.02	0.03
5 + 50E	37	105	53	2	2	<10	<20	<20	2.57	0.68	0.60	0.02	0.03
6 + 00E	51	113	44	2	2	<10	<20	<20	2.54	0.74	0.49	0.02	0.03
6 + 50E													
7 + 00E	46	143	70	2	2	<10	<20	<20	1.44	0.32	0.44	0.02	0.02
7 + 50E	60	80	50	3	1	<10	<20	<20	2.35	0.59	0.52	0.01	0.04
8 + 00E	30	132	24	2	1	<10	<20	<20	3.88	0.54	0.22	0.01	0.03
8 + 50E	58	147	33	2	3	<10	<20	<20	2.98	0.53	0.26	0.01	0.03
9 + 00E	39	118	24	2	2	<10	<20	<20	4.20	0.86	0.23	0.01	0.04
9 + 50E	29	104	18	24	11	<10	<20	<20	8.18	0.38	0.34	<0.01	0.02

