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ASSESSMENT REPORT
on the
SHORTS ,CHEWMI and ANNES MINERAL CLAIMS

GREENWOOD MINING DIVISION

NTS 82E/8W and 82E/9W

49° 28' North latitude
118° 22' West longitude

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DAVID COFFIN

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,015

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1.1 INTRODUCTION/SUMMARY

The Shorts, Chewmi and Annes 1-4 mineral claims were the subject of exploration programs from September 21 to 29 and from Oct 23 to 28 1991. The programs included reconnaissance, 1:5 000 and 1:2 500 geological mapping and prospecting, grid emplacement, VLF-EM and soil sampling in order to follow up and expand on the results of work done in 1988 and 89. This report deals with the results of those programs.

An area of siliceous and argillic alteration first recognized in 1989 was found to have a width of 250 metres and a trend which has been seen followed for 500 metres and seen along 1500 metres of strike. The alteration is found within Coryell syenite along splays of the regional Granby-Burrell fault. A series of northerly trending, narrow quartz veins, the Ridge Veins, cutting monzonite along a strike of 300 metres along the western contact of the alteration zone returned between 500 ppb and 1.99 g/t gold with minor lead and copper in 7 of 10 rock samples collected.

The LJ showing, a narrow poly-sulphides vein which returned 12.3 g/t gold with lead, silver and minor copper over 5 cm, and 2.8 g/t gold across 1.5 metres of shear width, was re-located in 1991 2 500 metres along strike to the north of the Ridge Veins in sheared and silicified granodiorite and near areas of propylitic alteration.

A new showing, the Zap, was found in the area of the 1989 grid some 1 100 metres southwest of the Ridge veins. The Zap Showing is a small blackened and hematitic pod of polymetallic replacement mineralization with smithsonite and minor pyrite which returned 7.99 g/t gold and 263 g/t silver with minor lead, zinc, cadmium and copper. The showing is contained by bedding planes in andesitic tuff, near heavily bleached volcano-sediments in an area of poor outcrop exposure. The previously re-located WSW showing, silica alteration on a basalt/limestone contact which had been opened by a small blast trench and which returned 760 ppb gold, is located 400 metres northwest of the new Zap showing.

The grid was expanded to the west and by infill lines and 10 km of VLF-EM run to test the response of the Annapolis Md transmitter. The survey produced a strong to moderate response of 400 metres length between the Zap and WSW showings; the strike of the conductor(s) is roughly parallel to the trend of the southerly dipping volcano-sediments.

A profile of 22 soil samples taken across the Ridge alteration indicated 2 strong and several weaker multi-element highs above and below the veins, one of which is coincident with a 1 000 gamma peak in a 1989 magnetometer profile.

On the newly staked Dave's and Fault claims areas of argillic alteration and of semimassive pyrite-marcasite, silica and disseminated pyrite alteration, containing anomalous values of copper and gold, have been seen in structural settings similar to those in the northern half of the property.

1.2 CLAIM STATUS

The property consists of four perimeter staked mineral claims and four two-post claims located in the Greenwood Mining Division on mineral title maps 82E/8W and 82E/9W.

Name	Record No.	Units	Record Date	Owner
Shorts	215060	20	28/09/1986	S. Davies
Chewmi	215061	20	28/09/1986	" "
Annes 1-2	215979-80	2 x1	15/11/1990	E. Coffin
Annes 3-4	215981-82	2 x1	15/11/1990	D. Coffin
Daves'*	306157	20	26/10/1991	D. Coffin
Fault*	306158	20	27/10/1991	E. Coffin

* No assessment credit is being applied to the Dave's or Fault claims. This report is being submitted for credit applied to the other six claims which will hold them in good standing to September 1993 and November 1994.

1.3 LOCATION AND ACCESS

The property is located on Burrell Creek, 17 kilometres north of its confluence with the Granby River and 50 kilometres north of the town of Grand Forks, B.C. The property is reached from Grand Forks by following an all-weather asphalt road along the west side of Granby River for 46 km, crossing Burrell Creek just above its confluence with the Granby River, and following a fair-weather gravel road that leads along the creek for a further 12 km. Fair weather roads traverse the southern and central portions of the property.

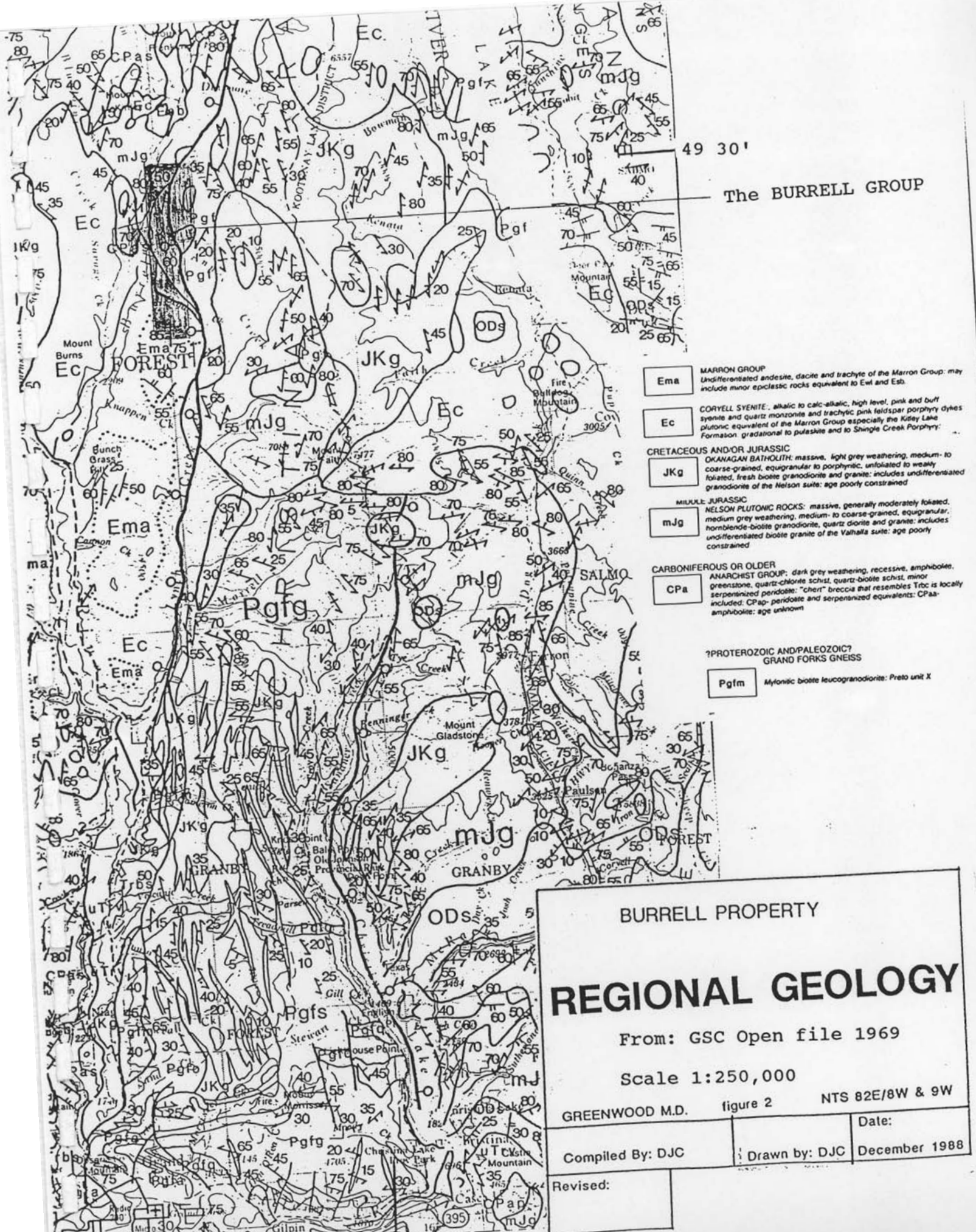
2.1 REGIONAL GEOLOGY AND MINERAL DEPOSITS

The oldest rocks in the region are Proterozoic to Permian volcano-sedimentary formations, the youngest of which, the Anarchist group, hosts a number of replacement type copper and precious metal deposits. Overlying the above formations is the Jurassic aged Rossland Group intermediate flows and fragmentals. All of these have been intruded by a series of Jurassic and/or younger felsic rocks of the Interior Batholith. Overlying all of the above are Eocene Kettle River detrital sediments and intermediate flows, in turn overlain and cut by Eocene Marron volcanics and contemporaneous Coryell intrusives of generally felsic composition, which are in turn overlain by late basalt flows. Cutting all units except the late basalt are northerly trending coarse grained and porphyritic felsic dykes.

The last regional mapping of the property area was by Little, for the GSC, in 1957. Since that time, and particularly during the last 5 years, various studies have changed the chronology of the intrusive suite and of the structural deformation in the property area, with the effect of limiting mineralizing events to the early Tertiary period, rather than to a major episode during the Jurassic similar to that of the Greenwood copper-gold deposits 50 km south of the property and a separate but lessor Tertiary event.

Little and previous regional mappers had assigned a Jurassic age to a sequence of granitic and granodioritic intrusions running northwards from the property for 50 kilometres on the assumption that they were contemporaneous with the Nelson Batholith located 70 kilometres to the east. Radiometric dating by Parrish and Carr of these rocks in the Ladybird ridge area indicates an age of 59 to 55 million years, from work done in 1987 and 1988, for granite which Little had called the Valhalla series and which is referred to by Carr and Parrish as the Ladybird granite suite.

The suite is described as "homogenous, biotite (+/- muscovite, +/-



The BURRELL GROUP

- Ema** MARRON GROUP
Undifferentiated andesite, dacite and trachyte of the Marron Group; may include minor eplesic rocks equivalent to Ew1 and Ew2.
- Ec** CORYELL SYENITE, alkalic to calc-alkalic, high level, pink and buff syenite and quartz monzonite and trachytic pink feldspar porphyry dykes plutonic equivalent of the Marron Group especially the Kitley Lake Formation; gradational to pulaskite and to Shingle Creek Porphyry.
- JKg** CRETACEOUS AND/OR JURASSIC
OKANAGAN BATHOLITH: massive, light grey weathering, medium- to coarse-grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite; includes undifferentiated granodiorite of the Nelson suite; age poorly constrained
- mJg** MIDDLE JURASSIC
NELSON PLUTONIC ROCKS: massive, generally moderately foliated, medium grey weathering, medium- to coarse-grained, equigranular, hornblende-biotite granodiorite, quartz diorite and granite; includes undifferentiated biotite granite of the Valhalla suite; age poorly constrained
- CPa** CARBONIFEROUS OR OLDER
ANARCHIST GROUP: dark grey weathering, recessive, amphibole, greenstone, quartz-chlorite schist, quartz-biotite schist, minor serpenized peridotite; "chern" breccia that resembles Trbc is locally included; CPaP- peridotite and serpenized equivalents; CPaA- amphibolite; age unknown
- PgfM** ?PROTEROZOIC AND/PALEOZOIC?
GRAND FORKS GNEISS
Mylonitic biotite leucogranodiorite: Preto unit X

BURRELL PROPERTY

REGIONAL GEOLOGY

From: GSC Open file 1969

Scale 1:250,000

GREENWOOD M.D. figure 2 NTS 82E/8W & 9W

Compiled By: DJC	Drawn by: DJC	Date: December 1988
Revised:		

garnet) bearing leucocratic quartz monzonite to granite batholiths, stocks and pegmatites." (Carr, 1989). This suite, with the successive Averill monzonite/pyroxinite and the Coryell syenite suites form an Eocene intrusive complex for the area. Further work by Carr has restricted movement on the Granby/Burrell fault to early post-Coryell, or roughly 50 million years, although some evidence on the property indicates movement during emplacement of the intrusions.

Ore deposits in the area have largely derived from the alteration of impure limestone of the Anarchist group to chalcopyrite-magnetite skarn during intrusion of the Jurassic Batholith. The most notable of these are located in the Phoenix/Deadwood camp, 20 kilometres west of Grand Forks: "22 million tons of copper ore containing gold and silver were mined..." from the camp in the early part of the century (Little, 1957). Vein deposits, which are found filling fissures and shears in both country rock and batholith near their contact, have been mined chiefly for gold and silver.

A second important ore type in the region is gold-silver and lesser amounts of base metals contained in Eocene epithermal quartz veins. Examples of this type are the Knob Hill and Golden Promise mines operated by Hecla Mining Co. at Republic, Washington State, 70 km south of the property; the Golden Promise veins, which went into production in 1987, had a reserve base of 467,059 tonnes at 27.4 g/t gold and 64.1 g/t silver at the end of it's first production year (Dayton, 1988). At the Outback property of Inco Ltd., located 20 km northwest of the property, reporting of preliminary work done in 1989 indicates that values up to 6125 ppb gold and 127 ppm silver were obtained from drusey quartz veining associated with faulting and alteration which is similar to that on the Burrell property (Bohme, 1989). Inco conducted an extensive program on the property in 1991, the results of which are not available.

Five kilometres north of the Burrell property is the Franklin mining camp. Mineralization similar to that described above was found

here in 1896. Numerous bodies of skarn and fissure vein deposition containing pyrite, chalcopyrite, galena, sphalerite and gold/silver mineralization were found. The most significant of these, the Union, mined 171,000 tonnes of ore at a grade of 14 g/t gold, 340 g/t silver and varying amounts of zinc, lead and copper from an easterly trending (080/V) fissure vein cutting Anarchist units proximal to the granodiorite (Ladybird) intrusive suite.

Recent work at Franklin camp has also included the investigation of the early Tertiary "Averill" mafic intrusives for platinum group (PGE) deposition. Platinum is found in the augite or biotite rich core of small, northwesterly trending, zoned, mafic-rich monzonite plugs. The PGE are associated with chalcopyrite and iron sulphides.

2.2 PROPERTY HISTORY

The area was prospected in the early part of the century when the Franklin Camp was active; no mineralization was reported on the east side of Burrell Creek, but a number of occurrences were staked in Anarchist greenstone west of the creek.

During 1973 and 1974, the east side of Burrell Creek was opened by logging roads. Prospecting at this time by Walter Buller discovered three areas of mineralization on which he staked small claim blocks.

In May and June of 1988 a program was conducted to locate Buller's showings, and to assess the geochemistry of the property and its potential for further work. Two of Buller's showings, WSW and Burr, were located and sampled. Soil geochemistry was tested with a small suite of samples at the Burr showing.

The Burr showing is an area of east-west trending fractures with minor limonite and chalcopryrite in altered granodiorite which had been opened by bulldozer trenching. Four chip samples taken at this showing in '88 were anomalous in copper and zinc.

The WSW showings, located approximately 1.5 km south-southwest of the Burr showing, consist of easterly to southeasterly trending stringers mineralized with pyrite, chalcopryrite, sphalerite and galena. Three samples taken from these showings ran between 410 ppb and 1600 ppb gold, 7.5 to 29.7 ppm silver, and up to 0.84% lead and 0.75% zinc. Three short holes which had been drilled by Buller into these showings with a packsack drill indicated continuity to shallow depths; Buller did not assay his core samples.

3.1 PROPERTY GEOLOGY

The southern and eastern part of the property is composed of Coryell syenite and areas of Tertiary volcanic and sedimentary rocks, large areas of which have undergone siliceous and argillic alteration. Regional mapping indicates that Coryell syenite intrudes Permian intermediate volcanics and granodiorite in the west part of the property, and the northwest part is composed of granodiorite which has been reclassified as Eocene Ladybird intrusive. Mapping in 1991 and comparison to regional stratigraphy indicates that rock in the grid area, southwest portion of Shorts claim, is the upper portion of the Eocene Kettle River formation volcano-sediments. In particular, work by Drysdale (1915) describes an arcogenic grit unit, seen on the Shorts claim as a bleached equivalent.

The Ladybird granodiorite is fine to medium grained, equigranular, and contains up to 15% hornblende or biotite as dark minerals. Portions of the unit contain smoky quartz and an allotriomorphic texture, and usually accompanied by 1% magnetite.

Coryell intrusive is salmon to pink coloured and contains 5 to 10% chlorite after ?hornblende and usually contains magnetite. It varies in grain size from fine grained containing indistinct phenocrysts of orthoclase up to 1 cm. long in the western portion of the property, to areas containing poorly formed but well segregated megacrysts up to 15 cm long found east of the Burrell fault.

The Tertiary volcano-sedimentary sequence found in the west central portion of the property is composed primarily of andesitic to more felsic flows and tuffs. Included in the sequence are one or several calcareous mudstone and grey limestone units. The sequence trends at 110 degrees and dips to the south at 45 to 55 degrees. 1991 grid mapping and rock sampling of this area are presented on figure 4.

4.1 1991 ROCK SAMPLING AND RESULTS

An area of siliceous and argillic alteration first recognized in 1989 was found to have a width of 250 metres and a trend which has been seen followed for 500 metres and seen along 1500 metres of strike; the trend is lost in overburden to the north and has not been fully examined along a 700 metre portion to the south where similar alteration was seen in St. Annes Creek valley in 1989. The alteration is found within Correl syenite along splays of the regional Granby-Burrell Fault which is a westerly dipping Tertiary extensional feature.

A series of northerly trending, narrow quartz veins, the Ridge Veins, cutting monzonite along a strike of 300 metres immediately west of the alteration zone were found to contain between 500 ppb and 1.99 g/t gold with minor lead and copper in 7 of 10 rock samples collected. The sample locations are plotted on figure 3 and descriptions and analytical results are found in Appendix B.

The LJ showing was re-located during 1991, 2 500 metres along strike to the north of the Ridge Veins in sheared and silicified granodiorite and near areas of propylitic alteration. The LJ is a narrow poly-sulphide vein which returned 12.3 g/t gold with lead, silver and minor copper over 5 cm (sample BRE 101), and 2.8 g/t gold across 1.5 metres of shear width (BRE 102). Propylitic alteration in northerly and north-northwesterly trending zones, including minor chalcopyrite and malachite, has been seen in several areas between the LJ showing and the Ridge veins.

A new showing, the Zap, was found in the area of the 1989 grid some 1 100 metres southwest of the Ridge veins. The Zap Showing is a small blackened and hematitic pod of polymetallic replacement mineralization, with smithsonite and minor pyrite, a grab of which returned 7.99 g/t gold and 263 g/t silver with minor lead, zinc, cadmium and copper (sample BRM 001); a 40 cm chip across the mineralization ran 5.35 g/t gold and 219 g/t silver (BRC 203). The

showing is contained by bedding planes in andesitic tuff, near heavily bleached volcano-sediments in an area of poor outcrop exposure.

The previously re-located WSW showing, silica alteration on a basalt/ limestone contact which had been opened by a small blast trench, is located 400 metres northwest of the Zap showing. Sampling of the WSW in 1991 returned 760 ppb gold and 0.3 ppm silver across 40 cm in an area devoid of sulphides (BRC 208), 540 ppb gold and 23.1 ppm silver across 60 cm including a seam of galena and sphalerite (BRE 107) and 660 ppb gold and 87.6 ppm silver from a picked sample of the sulphides (BRE 108).

Location of the grid area rock samples are found on figure 4.

4.2 GRID EMPLACEMENT

The existing baseline was extended for 280 metres to the east, to Station 0+00S, 16+80E, and a second baseline run west from 5+00S, 0+00E for a distance of 400 metres. Grid lines were run north to Burrell creek from 1+00W to 4+00W and infill lines at 1+50E, 0+50E and 0+50W. All of the cross lines were compass and flagged using 20 metre stations. Portions of the existing grid were re-flagged or re-emplaced, as necessary. As well, three short lines were run east from line 0+50E at 4+80, 5+20 and 5+60 S to check readings around the Zap showing.

4.3 VLF-EM SURVEYS

In 1989 VLF-EM was conducted using the station in Seattle Wa on the assumption that conductive features would include southwesterly trending splays of the Burrell fault. The survey indicated conductive features that appeared to trend in an east-southeasterly direction and which were therefore poorly represented by the Seattle survey. For this reason, the survey was rerun in 1991 using more appropriate stations.

8.5 km of grid was surveyed, using a Saber Electronics receiver, tuned to the transmitters in Annapolis, Md, and a further 1.5 km of check readings using stations at Mona Lousa Hw and Cutler, Me. The readings are presented in tabular form as Appendix C, and as contoured Fraser filter units on Figure 5. The survey indicates a very strong feature centred on 0+50E, 3+80S and which has a trend of roughly 120 degrees along a distance of 400 metres. The trend is parallel to the orientation of the lithologies in the area and of the WSW and Zap bedding plane controlled showings.

4.4 SOIL GEOCHEMISTRY

Two sets of soil samples were collected in 1991, 27 to box a lead-zinc anomaly on the lower grid and 22 to profile the alteration trend along the baseline.

The 27 grid samples were taken at 20 metre intervals on lines 0+50W, 0+00 and 0+50E and centred on 4+00S. Samples were analyzed for a standard 30 element suite using ICP and for Hg and Au using a wet A.A. method with a detection limit of 0.3 ppb for gold. Samples were taken at depths from 20 to 60 cm. from light brown fine grained B horizon material or from the top of the C horizon where the B horizon was absent.

Although the original lead anomaly was reproduced, the presence of a trend was not strongly indicated. Based on the lower detection limit and smaller gradation of the readings for gold, a gold anomaly of 8.4 ppb is placed roughly coincident with the VLF trend on line 0+50W. The 0+50W line, unlike the other two lines, is underlain by alluvial fan material and this relatively low level anomaly may therefore be of significance, as any soil samples collected in this material previously returned quite low metal values.

The baseline samples were collected at 30 metre intervals from 7+80E to 14+10E and were analyzed for a 30 element suite using ICP, for

Au, Pt and Pd by fire assay and analyses by ICP/graphite furnace, and for pH. Samples were collected at depths of 20 to 35 cm. from the top of a light brown fine grained B horizon, or from C horizon where the B was absent. A 15 to 20 cm. heavily leached horizon sits above the B in places, particularly higher on the ridge. The impression from the profile is that the soils on the ridge are a good medium for exploration sampling if care is taken to avoid leached material.

The 22 sample profile indicated 2 strong and several weaker multi-element highs above and below the veins. The anomaly at 10+50E is particularly strong in Pb, Zn and Cd and is coincident with a 1 000 gamma peak in a 1989 magnetometer profile. The anomaly at 12+00E is particularly strong for Cu, Cr, Pb, Zn and Ba, and includes the peak Au return of 9 ppb.

5.1 CONCLUSIONS AND RECOMMENDATIONS

The 250 metre wide silica and argillic alteration zone and the adjacent Ridge veins represent an area of Tertiary (Eocene?) epithermal mineralization which is similar to that of numerous economic gold deposits in the cordillera. Results of the soil profile indicate that the B horizon soil sampling represents a good tool to further define the extent and disposition of metalliferous deposits within the alteration package, and that several areas of enhanced base metal values, in soil, are located within the alteration zone.

The Ridge and LJ showings are felt to occupy the same structural controls and probably represent the same mineralizing event. The area to the east of the LJ showing is therefor considered a prime target for reconnaissance traversing.

A new showing, the Zap, was found in the area of the 1989 grid some 1 100 metres southwest of the Ridge veins. The Zap Showing is a small blackened and hemitized pod of polymetallic replacement mineralization. The showing is contained by bedding planes in andesitic tuff, near heavily bleached volcano-sediments in an area of poor outcrop exposure. The previously re-located WSW showing, silica alteration on a basalt/limestone contact which had been opened by a small blast trench and which returned 760 ppb gold, is located 400 metres northwest of the new Zap showing in a similar setting.

The relationship between the Ridge alteration and the Zap showing is not clear. It appears that the Zap is stratigraphically controlled and it is inferred from this that it may represent a lower portion of the epithermal system than the Ridge, which explains its base metal content, and is therefore analogous to a Kuroko deposit. The bleaching and mudstone/limestone affinity of the Zap and the WSW showings, is also typical of Kuroko deposits. Finally, the presence of slightly younger gold in quartz vein deposits proximal to Kuroko type

mineralization is considered typical in Japan.

In order to investigate both the stratiform mineralization and the structurally controlled alteration package, two grid orientations are required. It is recommended that the present north-south oriented grid be expanded to cover all of the layered lithologies on the property plus the adjacent alluvial fan areas. This grid should then be used to conduct a soil survey, a magnetometer survey and a loop-EM survey, as well as to complete detail mapping. The results of these surveys would then be used to plan backhoe trenching and/or drilling targets, dependant on the location of anomalies vis a vis the fan material. The area of the strong VLF-EM anomaly located in 1991 would represent a trenching target.

An east-west oriented grid should be run from 600E through 2000E for 1000 metres north and south of the present baseline. this grid would be used for soil, magnetometer and VLF-EM surveys, as well as completing detailed mapping. The results the surveys would be used to develop trenching targets where amenable, in order to determine possible advanced geophysical techniques and drilling targets.

A further consideration for the property is the possibility of "porphyry style" disseminated copper/gold mineralization related to areas of propylitic alteration. No work has been specifically targeted on this mode of mineralization, but once the extent of the propylitic alteration is understood an induced polarization survey may be considered to test for this model.

5.2

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5.3

Qualifications

I attended the Haileybury School of Mines, Ontario, in the department of Mining Technology, from 1975 to 1977. Subsequent to that I have completed university courses in geography and economics, and numerous short courses and seminars dealing with geochemistry and Cordilleran geology and mineral deposits.

Since 1974 I have worked at a variety of jobs in the Canadian mineral exploration field, including regional and detailed prospecting, detailed geological mapping, core logging, property management and program development.

Since 1986 I have been a self employed exploration consultant and partner in the firm of Vanguard Consulting Ltd. Much of the work involved contract and sub-contract supervision of early stage exploration programs for small mining companies, largely for vein type gold deposits in coastal and "interior" B.C.

I hold a direct interest in the Burrell Property.

.....
David Coffin 22/12/91

APPENDIX A - GEOCHEMICAL RESULTS



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppb
L0+50W 3+00S	1	46	16	106	.3	26	8	1058	3.09	2	5	ND	1	105	1.6	2	2	51	.95	.089	82	22	.32	298	.08	6	2.24	.03	.10	1	2	1	.8
L0+50W 3+20S	2	17	15	91	.5	10	7	455	2.63	2	5	ND	4	39	.5	4	4	40	.32	.359	16	14	.18	197	.16	4	3.53	.02	.05	3	2	1	1.1
L0+50W 3+40S	1	13	18	82	.5	9	5	648	2.38	2	5	ND	5	16	.4	3	3	37	.14	.232	15	14	.16	135	.16	2	3.53	.02	.08	2	2	1	8.4
L0+50W 3+60S	1	17	9	94	.1	9	5	921	2.44	2	5	ND	2	20	.2	2	2	39	.17	.248	14	13	.16	200	.16	2	3.54	.02	.09	1	2	1	.9
L0+50W 3+80S	1	17	15	71	.1	9	6	483	2.75	3	5	ND	4	30	.4	3	4	43	.28	.229	21	15	.19	199	.18	3	4.41	.02	.05	2	2	1	1.0
L0+50W 4+00S	1	16	19	83	.1	9	6	640	2.61	2	5	ND	3	25	.4	2	4	39	.21	.229	18	14	.18	176	.18	5	4.59	.02	.05	2	2	1	1.0
L0+50W 4+20S	1	17	11	82	.4	9	6	857	2.54	3	5	ND	6	23	.6	2	2	41	.18	.234	18	14	.17	218	.17	4	3.69	.02	.05	3	2	1	1.0
L0+50W 4+40S	1	16	15	61	.1	8	6	589	2.50	2	5	ND	2	24	.4	2	2	40	.20	.181	20	13	.16	198	.17	3	3.89	.02	.07	2	2	1	.4
L0+50W 4+60S	1	17	9	65	.2	10	8	524	3.22	6	5	ND	6	24	.5	4	2	55	.24	.198	29	18	.21	179	.17	2	3.87	.02	.05	4	4	1	.4
L0+00 3+20S	1	30	9	87	.2	29	5	189	2.05	2	5	ND	3	61	.6	2	2	24	.51	.058	57	17	.27	231	.10	4	2.29	.03	.07	1	2	1	.9
L0+00 3+40S	1	13	12	98	.2	9	8	349	3.53	2	5	ND	6	45	.7	3	2	62	.48	.271	30	21	.21	149	.13	4	2.29	.02	.05	2	2	1	.4
L0+00 3+60S	2	16	18	101	.5	10	6	425	2.69	6	5	ND	4	18	.8	4	2	43	.15	.284	16	15	.17	171	.17	3	3.74	.03	.05	2	6	1	.3
L0+00 3+80S	2	40	27	116	.8	42	11	440	3.27	11	5	ND	9	30	.6	4	2	56	.33	.068	23	34	.56	211	.11	2	2.92	.02	.06	3	2	1	2.8
L0+00 4+00S	1	24	15	90	.6	7	12	2262	2.39	16	5	ND	1	61	1.2	4	2	34	.91	.114	9	11	.35	269	.05	3	2.01	.03	.09	2	2	1	1.1
L0+00 4+20S	2	35	216	213	.5	12	11	2302	2.75	8	5	ND	1	36	2.4	2	2	43	.36	.130	14	19	.36	159	.07	3	2.03	.02	.06	1	2	1	3.7
L0+00 4+40S	1	24	23	80	.1	12	8	887	2.58	6	5	ND	3	39	.6	2	2	40	.38	.112	55	20	.31	193	.13	4	3.02	.02	.05	2	2	1	2.0
L0+00 4+60S	1	26	27	103	.4	11	7	1050	2.42	5	5	ND	3	33	.6	3	4	36	.36	.096	27	17	.28	266	.11	2	2.67	.02	.06	2	2	1	1.4
L0+00 4+80S	1	46	38	130	.4	12	9	1195	2.60	7	5	ND	2	26	.5	2	2	38	.23	.188	36	18	.31	288	.08	4	1.90	.02	.06	1	2	1	.9
L0+50E 3+40S	1	14	16	80	.1	14	7	433	2.40	2	5	ND	2	29	.2	2	2	37	.28	.133	23	22	.30	214	.12	2	2.51	.02	.06	1	2	1	1.0
L0+50E 3+60S	1	13	13	83	.1	14	6	502	2.26	3	5	ND	4	34	.2	2	2	34	.33	.247	23	20	.25	180	.13	2	2.54	.02	.06	1	2	1	1.0
L0+50E 3+80S	1	11	10	84	.2	12	6	354	2.23	2	5	ND	3	24	.2	2	2	36	.20	.106	17	21	.25	153	.10	2	1.90	.02	.06	1	2	1	.4
RE L0+00 4+60S	1	27	28	107	.3	10	7	1059	2.47	2	5	ND	2	34	.6	2	2	36	.37	.097	28	17	.28	271	.11	5	2.82	.02	.06	1	2	1	2.0
L0+50E 4+00S	1	14	13	100	.2	13	6	639	2.17	3	5	ND	3	28	.6	2	2	33	.26	.196	21	18	.25	197	.13	4	2.59	.02	.07	1	2	1	1.9
L0+50E 4+20S	1	19	14	78	.2	12	6	689	2.32	4	5	ND	4	25	.4	2	6	36	.28	.187	27	19	.25	215	.13	2	3.02	.02	.06	1	2	1	1.5
L0+50E 4+40S	1	22	16	77	.1	10	7	738	2.50	2	5	ND	2	23	.2	2	4	38	.25	.143	21	19	.27	198	.13	2	2.88	.02	.07	1	2	1	1.4
L0+50E 4+60S	2	62	41	146	1.1	15	12	1972	2.95	10	5	ND	1	51	.8	2	3	42	.45	.185	73	21	.31	299	.09	2	1.96	.02	.07	1	2	1	2.5
L0+50E 4+80S	1	24	16	75	.3	10	7	513	2.35	5	5	ND	5	24	.4	2	2	36	.23	.098	31	18	.25	184	.13	4	2.83	.02	.06	1	2	1	.5
L0+50E 5+00S	1	23	12	90	.1	10	6	781	2.10	8	5	ND	2	65	.3	2	2	31	.56	.115	29	16	.25	229	.15	2	3.00	.04	.06	1	2	1	.9
STANDARD C/AU-S	20	61	40	136	7.3	76	32	1111	4.01	42	22	8	38	52	18.4	16	21	58	.50	.089	39	60	.90	176	.09	34	1.90	.06	.16	13	2	1	45.8

Samples beginning 'RE' are duplicate samples.



GEOCHEMICAL ANALYSIS CERTIFICATE

Vanguard Consulting Ltd. PROJECT BUR File # 91-5322

404 - 1666 Pendrell St., Vancouver BC V6G 1S8

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**	Pt**	Pd**	pH
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppb	ppb	-
BL 7+80E	2	26	15	54	.1	10	5	837	1.92	2	5	ND	4	42	.2	2	2	30	.57	.096	63	15	.22	140	.13	2	2.85	.03	.05	1	5	1	1	6.2
BL 8+10E	1	15	12	68	.1	8	5	434	1.75	3	5	ND	1	39	.2	2	2	31	.56	.066	29	14	.21	115	.08	2	1.72	.03	.05	1	5	1	1	6.3
BL 8+40E	1	16	15	88	.1	11	5	408	2.18	2	5	ND	4	37	.2	2	2	34	.46	.047	31	19	.27	142	.09	2	2.15	.02	.06	1	6	1	2	6.4
BL 8+70E	3	81	14	95	.1	12	6	1818	1.68	2	5	ND	1	54	.6	2	2	27	.72	.049	70	21	.26	166	.09	2	1.83	.03	.05	1	6	1	1	6.3
BL 9+00E	2	56	11	121	.1	15	14	747	2.25	3	5	ND	2	58	.3	2	2	33	.76	.040	65	26	.33	153	.10	2	2.52	.03	.06	1	6	1	1	6.4
BL 9+30E	3	135	17	88	.6	27	7	1101	2.33	2	5	ND	1	79	.6	2	2	35	1.08	.051	245	47	.41	170	.09	2	2.16	.03	.06	1	6	1	1	6.4
BL 9+60E	2	16	13	106	.1	11	5	318	2.13	2	5	ND	4	33	.2	2	2	33	.33	.051	38	18	.22	121	.11	2	2.41	.02	.06	1	4	1	1	6.3
BL 9+90E	2	13	15	112	.1	10	5	581	1.94	2	5	ND	3	26	.2	2	2	30	.36	.105	13	15	.21	128	.13	3	2.67	.02	.08	1	6	1	1	6.2
BL 10+20E	2	16	15	225	.1	8	5	391	1.71	3	5	ND	2	22	.7	2	2	29	.30	.065	12	12	.17	108	.14	2	2.63	.03	.06	1	3	1	3	6.3
BL 10+50E	2	20	44	882	.3	8	6	862	1.99	2	5	ND	3	30	3.5	2	2	33	.40	.056	19	15	.24	168	.13	2	2.71	.02	.06	1	2	1	1	6.2
RE BL 11+70E	1	12	16	96	.1	8	4	718	1.65	2	5	ND	2	27	.2	2	2	26	.31	.234	11	10	.17	212	.11	4	2.04	.02	.06	1	2	1	1	5.7
BL 10+80E	1	21	34	116	.3	9	6	805	2.12	2	5	ND	2	41	.7	2	2	35	.52	.079	33	15	.29	132	.14	4	3.06	.03	.06	1	2	1	1	6.0
BL 11+10E	1	25	26	68	.1	6	6	1064	1.88	2	5	ND	1	31	.4	2	2	37	.35	.095	11	11	.30	150	.13	2	2.74	.03	.06	1	5	1	2	5.9
BL 11+40E	1	12	21	68	.1	5	5	1004	1.51	4	5	ND	1	26	.5	2	2	32	.31	.051	10	8	.25	157	.07	2	1.23	.03	.06	1	1	3	1	6.0
BL 11+70E	1	11	11	90	.1	8	4	704	1.69	2	5	ND	2	27	.2	2	2	27	.31	.231	12	10	.17	206	.11	2	2.03	.02	.06	1	1	1	1	2.5.6
BL 12+00E	2	91	33	437	.1	18	5	1161	2.46	2	5	ND	1	120	.9	2	2	26	.81	.090	263	4	.22	834	.07	2	3.13	.03	.13	1	9	1	1	6.0
BL 12+30E	4	20	22	177	.1	9	7	1155	2.03	2	5	ND	1	44	.9	2	2	27	.31	.258	18	11	.20	220	.09	2	1.90	.02	.06	1	3	6	6	5.8
BL 12+60E	2	7	6	120	.1	6	4	487	1.22	2	5	ND	1	21	.4	2	2	23	.13	.048	12	7	.12	112	.08	2	1.16	.02	.05	1	5	5	5	4.8
BL 12+90E	3	18	18	254	.1	11	4	661	1.72	2	5	ND	2	29	1.0	2	2	28	.23	.043	23	11	.18	190	.09	2	1.68	.02	.06	1	5	8	11	5.4
BL 13+20E	3	10	27	158	.1	7	4	527	1.59	2	5	ND	1	26	.8	2	2	27	.17	.085	12	11	.17	204	.08	2	1.13	.02	.06	1	1	1	1	5.5
BL 13+50E	1	7	40	99	.1	5	3	1073	1.12	2	5	ND	1	32	.5	2	2	21	.22	.069	8	6	.14	275	.06	2	.90	.02	.05	1	4	5	3	5.4
BL 13+80E	1	4	11	55	.1	5	3	182	1.96	2	5	ND	4	50	.5	2	2	38	.36	.075	27	14	.22	96	.07	2	.68	.01	.04	1	2	4	7	5.8
BL 14+10E	1	9	20	111	.1	7	4	827	1.70	3	5	ND	2	39	.5	2	2	27	.25	.342	16	7	.17	384	.09	2	1.80	.02	.07	1	5	7	2	5.7
STANDARD C/FA-10R	19	57	38	132	7.0	70	33	1053	3.95	42	16	6	36	52	18.9	16	19	55	.49	.090	37	59	.89	176	.09	32	1.87	.05	.15	13	451	455	468	-

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. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: SOIL AU** PT** PD** BY FIRE ASSAY & ANALYSIS BY ICP/GRAPHITE FURNACE.
 Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 30 1991 DATE REPORT MAILED: Nov 4/91 SIGNED BY: *Chung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

GEOCHEMICAL ANALYSIS CERTIFICATE

Vanguard Consulting Ltd. PROJECT BUR File # 91-4798 Page 1

404 - 1666 Pendrell St., Vancouver BC V6G 1S8 Submitted by: DAVID COFFIN

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	
BRC 201	7	85	4	74	.3	18	13	712	3.96	30	5	ND	1	29	.2	2	2	54	.35	.091	15	32	1.08	153	.01	2	1.66	.04	.12	1	2	1	19
BRC 202	4	20	333	790	4.8	8	15	1251	5.36	57	5	ND	1	14	10.5	2	2	72	.23	.082	8	11	1.41	153	.01	2	2.41	.03	.16	4	5	1	290
X BRC 203	16	259	7986	6184	207.6	8	11	1398	8.44	373	5	2	1	26	64.2	12	2	50	.15	.056	4	24	.70	99	.01	2	2.06	.01	.16	32	2	1	4110
BRC 204	8	14	56	106	1.3	25	8	734	2.22	7	5	ND	1	44	.8	2	2	31	.74	.027	14	51	.63	56	.01	2	1.06	.06	.06	1	2	1	32
BRC 205	3	12	12	76	.3	5	10	918	4.86	26	5	ND	1	47	.2	2	2	78	.79	.093	3	12	1.25	49	.16	2	2.29	.08	.10	1	2	1	16
BRC 206	5	74	2746	3005	9.1	18	12	1447	5.78	15	5	ND	1	98	36.9	6	2	113	2.10	.048	2	36	2.46	112	.23	2	3.81	.07	.24	18	2	1	640
BRC 207	4	8	41	98	.1	1	2	566	2.67	5	5	ND	14	9	.3	2	2	10	.13	.057	41	3	.28	51	.02	2	.99	.04	.13	1	3	1	17
BRC 208	8	15	37	38	.3	12	3	345	1.14	2	5	ND	1	12	.2	2	2	25	.58	.013	2	77	.42	26	.04	3	.56	.01	.03	1	2	1	760
BRE 101	71	754	12536	86	24.9	5	6	232	2.85	3	5	10	2	25	1.2	2	10	17	.10	.012	2	1	.26	471	.01	2	.57	.01	.13	1	2	1	9720
BRE 102	9	632	3677	213	6.3	9	9	553	2.01	2	5	7	4	30	1.3	2	9	22	.28	.029	4	4	.59	685	.03	3	.90	.02	.14	1	2	1	2620
BRE 103	6	14	53	53	.1	5	2	283	1.07	2	5	ND	4	51	.2	2	2	11	.39	.047	11	7	.32	31	.11	3	.80	.03	.11	1	2	1	11
BRE 104	9	98	3268	80	19.5	8	6	298	1.13	2	5	2	1	32	1.6	2	28	14	1.16	.004	2	12	.36	9	.01	4	.41	.01	.02	1	2	1	1060
BRE 105	7	529	666	24	7.0	30	18	156	4.87	13	5	ND	1	9	.3	2	15	35	.07	.002	2	11	.19	6	.01	2	.32	.01	.01	2	2	1	210
BRE 106	2	102	191	61	.4	9	9	606	2.89	2	5	ND	3	33	.4	2	2	65	1.94	.037	4	35	1.29	30	.10	3	1.44	.02	.05	1	2	1	6
BRE 107	2	246	4869	7438	23.1	12	13	1395	5.91	23	5	ND	1	139	104.6	5	2	124	3.27	.052	2	13	2.35	127	.25	2	4.33	.09	.33	27	3	1	540
BRE 108	5	667	14811	56628	87.6	14	23	2651	8.61	69	5	ND	2	194	902.4	48	11	103	4.03	.030	3	8	1.78	91	.22	19	3.85	.10	.24	1	6	2	660
RE BRE 104	9	94	3160	80	19.1	7	6	291	1.11	2	5	2	1	31	1.5	2	28	14	1.14	.003	2	12	.35	8	.01	4	.39	.01	.01	1	2	1	1280
BRM 001	19	403	8096	5694	245.9	4	6	909	11.40	718	5	2	1	18	38.7	24	2	40	.09	.033	2	6	.34	97	.01	2	1.47	.01	.13	32	2	1	6270
BRM 002	4	23	115	192	1.7	7	2	487	2.66	4	5	ND	9	81	1.2	2	2	22	.60	.112	22	9	.69	146	.15	3	1.17	.03	.13	1	2	1	38
STANDARD C/AU-R	19	59	40	132	7.1	71	32	1042	3.97	43	18	6	38	52	18.7	14	18	57	.48	.089	38	58	.88	178	.09	36	1.89	.06	.15	11	2	3	480

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. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: P1 ROCK P2 SOIL AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.
 Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 30 1991 DATE REPORT MAILED: Oct 3/91 SIGNED BY: *Cherry* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE
Vanguard Consulting Ltd. File # 91-5323
 404 - 1666 Pendrell St., Vancouver BC V6G 1S8

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	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
BRC-209	1	12	17	53	.1	3	5	683	2.16	2	7	ND	12	28	.2	2	2	8	.18	.073	50	1	.05	427	.01	2	.35	.04	.17	1	1
BRC-210	5	6	4	19	.1	2	1	319	.53	10	5	ND	2	10	.2	2	2	1	.10	.017	16	5	.04	216	.01	2	.36	.02	.16	1	5
BRC-211	261	178	2	13	1.0	16	11	130	5.79	3	5	ND	1	45	.3	2	2	39	.39	.044	2	27	.42	20	.12	2	.53	.01	.06	1	6
BRC-212	13	270	4	9	2.3	57	22	114	14.64	53	5	ND	1	30	.2	2	4	34	.26	.047	4	10	.07	1	.05	2	.14	.01	.02	1	10
BRC-213	23	229	2	30	.8	19	15	236	4.68	4	5	ND	1	50	.2	2	2	60	.67	.082	4	39	1.09	21	.21	2	1.12	.05	.07	1	120
BRE-109	11	98	923	42	7.9	12	8	162	1.77	7	5	ND	1	22	.9	2	8	22	.48	.009	2	18	.31	4	.05	2	.36	.01	.02	1	880
BRE-110	2	11	8	8	.1	5	2	135	.47	2	5	ND	1	5	.2	2	2	7	.22	.004	2	9	.11	4	.02	2	.16	.01	.02	1	3
BRE-111	4	9	71	10	2.3	6	1	126	.33	2	5	ND	1	2	.2	2	2	4	.03	.002	2	37	.07	2	.01	2	.09	.01	.01	1	570
BRE-112	1	12	15	160	.1	4	6	631	2.12	2	5	ND	1	31	.2	2	2	24	.86	.053	7	11	.76	40	.01	2	.94	.04	.09	1	6
BRE-113	17	10	34	15	1.7	16	3	116	2.49	4	5	ND	3	78	.2	2	2	33	.16	.164	42	78	.31	61	.01	2	.59	.06	.15	1	35
BRE-114	2	27	4	65	.1	17	8	494	1.93	2	5	ND	8	32	.2	2	2	48	1.10	.038	3	54	1.11	31	.14	2	1.11	.03	.06	1	5
BRS-101	3	198	535	70	2.6	8	4	176	.76	2	5	ND	1	5	.5	2	2	10	.25	.003	2	11	.16	3	.01	2	.23	.01	.03	1	24
RE BRE-111	5	10	79	11	2.5	8	1	136	.36	2	5	ND	1	2	.2	2	2	4	.04	.002	2	43	.08	2	.01	3	1.10	.01	.01	1	580
BRS-102	3	58	135	149	.9	6	5	341	1.34	4	5	ND	1	17	.9	2	2	26	.75	.020	2	16	.57	12	.03	2	.58	.02	.03	1	26
BRS-103	8	43	354	35	3.8	8	2	146	.61	2	5	ND	1	5	.2	2	6	9	.22	.003	2	36	.15	4	.01	2	.19	.01	.02	1	10
BRS-104	56	129	3	24	.5	14	8	210	5.04	2	5	ND	1	84	.2	2	2	58	.87	.080	3	28	1.07	34	.21	2	1.17	.04	.08	2	4
STANDARD C/AU-R	17	58	36	128	6.8	66	29	952	3.95	38	15	6	36	47	17.9	16	19	55	.45	.083	36	56	.86	172	.08	33	1.87	.05	.14	11	510

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. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 30 1991 DATE REPORT MAILED: Nov 4/91 SIGNED BY: *[Signature]* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



ASSAY CERTIFICATE



Vanguard Consulting Ltd. PROJECT BUR FILE # 91-4798R2

SAMPLE#	Ag** oz/t	Au** oz/t
BRC 203	6.38	.156
BRE 101	.82	.358
BRE 102	.17	.082
BRM 001	7.68	.233
RE BRC 203	6.25	.150
STANDARD AG-1/AU-1	.98	.097

AG** AND AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.
- SAMPLE TYPE: ROCK PULP
Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 22 1991

DATE REPORT MAILED: Nov 28/91.

SIGNED BY.....*C. Leong*.....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



ASSAY CERTIFICATE



Vanguard Consulting Ltd. PROJECT BUR FILE # 91-4798R

SAMPLE#	AG** SAMPLE AU-100 NATIVE			AVG.
	oz/t	wt. gm	oz/t Au mg	
BRC 208	.01	1250	.007	ND .007
BRE 104	.55	1420	.058	ND .058
BRE 105	.22	1440	.009	ND .009

-100 MESH AU BY FIRE ASSAY FROM 1 A.T. SAMPLE.
- SAMPLE TYPE: REJ.+ PULP

DATE RECEIVED: OCT 16 1991

DATE REPORT MAILED: Oct 24/91.

SIGNED BY.....*C. Leong*.....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



WHOLE ROCK ICP ANALYSIS



Vanguard Consulting Ltd. File # 91-5323R

SAMPLE#	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ba	Sr	La	Zr	Y	Nb	LOI	SUM
	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	%
BRC-210	74.03	14.75	1.35	.44	.23	4.47	2.40	.26	.08	.07	.002	1140	169	18	82	5	20	1.7	100.01
STANDARD SO-4	68.15	10.10	3.50	.96	1.63	1.29	2.05	.58	.22	.13	.005	782	214	30	317	20	20	11.2	100.02

.200 GRAM SAMPLES ARE FUSED WITH 1.2 GRAM OF LIBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: NOV 22 1991

DATE REPORT MAILED: Nov 26/91.

SIGNED BY: *C. Leong* .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

APPENDIX B - COST BREAKDOWNS

BURRELL GROUP
COST BREAKDOWN
SEPTEMBER 21 - 28

Consulting:

David Coffin:	
8 days @ \$325.00	\$ 2,600.00
Eric Coffin:	
8 days @ \$225.00	1,800.00
Michael Renning:	
7 days @ \$225.00	<u>1,575.00</u>
Subtotal	\$ 5,975.00

Expenses:

Motel	\$ 676.61
Meals, groceries	736.44
Vehicle rental, fuel	429.59
Bus ticket (1, one way)	54.62
VLF; 1 week @ \$60.00	60.00
Reports, maps, telephone	<u>62.42</u>
Subtotal	\$ 2,019.68

TOTAL COSTS, SEPTEMBER 21 - 29 TRIP: \$ 7,994.68

AMOUNT APPLIED ON STATEMENT OF WORK: \$ 7,973.00
ADD: PAC ACCOUNT WITHDRAWAL 427.00

TOTAL APPLIED TO CLAIMS, SEPTEMBER 30, 1991 \$ 8,400.00

BURRELL GROUP
COST BREAKDOWN
SEPTEMBER 29 AND OCTOBER 23-28

David Coffin:	
5 field days & 4 report days	\$ 2,925.00
Eric Coffin:	
5 field days @ \$225.00	1,125.00
Stuart Davies:	
4 field days @ 250.00	1,000.00
Subtotal	<u>\$ 5,050.00</u>

EXPENSES

Assays and Analyses:	
1 Whole Rock	\$ 10.00
4 Au,Ag Fire Assays	52.00
3 Metallic Au,Ag	87.00
49 Soils, 30 element ICP, Wet A.A. Au	594.00
33 Rocks, 30 element ICP, Wet A.A. Au	452.75
Meals and Accommodations	967.77
Vehicle Rentals	898.37
Field Supplies, Fuel	151.01
Drafting, Basemap Preparation, Report printing	663.00
Subtotal, Expenses	<u>\$ 3,875.90</u>
TOTAL COSTS - <u>\$ 8,925.90</u>	

APPENDIX C - VLF-EM DATA

BURRELL - SEPTEMBER 1991
 UNFILTERED AND FILTERED VLF READINGS
 STATION: ANNAPOLIS, MD.
 LINE 4+00W

LINE 2+00W

LINE 1+00W

```

=====
STATION RAW FILTERED FIELD :STATION RAW FILTERED FIELD :STATION RAW FILTERED FIELD
      STRENGTH :                STRENGTH :                STRENGTH
=====
500  -11                80 : 500  0                92 : 500  11                78
480  -12                72 : 480  2                86 : 475  9                85
460  -12   -1          67 : 460  0                1   85 : 450  12   -1          86
440  -10   -6          63 : 440  1   -4          86 : 425  9    9          98
420  -8    -8          63 : 420  5   -8          85 : 400  3   17          97
400  -6    -7          60 : 400  4    8          93 : 375  1   10          90
380  -5                60 : 380  -6   27          90 : 350  1    8          95
360                : 360  -12   25          85 : 325  -5   19         118
340                : 340  -15    7          75 : 300  -12  20         108
320                : 320  -10   -8          68 : 275  -12    5          93
300                : 300  -9   -10         62 : 250  -10   -5          92
                : 280  -6   -9          67 : 225  -9    -7          67
                : 260  -4  -10         60 : 200  -6    -8          69
                : 240  -1   -8          59 : 175  -5   -12          63
                : 220  -1   -5          62 : 150  2   -16          65
                : 200  1    -5          72 : 125  3    -9          65
                : 180  2    -7          65 : 100  3    -1          67
                : 160  5                65 : 75   3                67
=====

```

LINE 3+00W

```

=====
STATION RAW FILTERED FIELD
      STRENGTH
=====
500  -3                90
480  -4                80
460  -7    8          86
440  -8    1          96
420  -4   -2          90
400  -9    3          82
380  -6    0          72
360  -7    1          78
340  -9   -1          70
320  -3   -6          70
300  -7                64
280
=====

```

BURRELL - SEPTEMBER 1991

UNFILTERED AND FILTERED VLF READINGS

STATION: ANNAPOLIS, MD.

LINE 0+50W

LINE 0+00E

LINE 0+50E

=====			
STATION	RAW	FILTERED	FIELD STRENGTH :
=====			
700			: 700
680			: 680
660			: 660
640			: 640
620			: 620
600			: 600 3
580			: 580 5
560			: 560 10 -7
540			: 540 5 3
520			: 520 7 2
500	9		90 : 500 6 -8
480	12		92 : 480 14 -12
460	14	-13	100 : 460 11 -15
440	20	-9	105 : 440 24 -19
420	15	15	130 : 420 20 -5
400	4	31	140 : 400 20 20
380	0	22	114 : 380 4 46
360	-3	10	106 : 360 -10 42
340	-3	5	106 : 340 -8 15
320	-5	10	104 : 320 -13 8
300	-11	13	114 : 300 -13 2
280	-10		104 : 280 -10 -8
260			: 260 -8 -8
240			: 240 -7 -1
220			: 220 -10 -2
200			: 200 -3 -17
180			: 180 3 -19
160			: 160 3 -9
140			: 140 6 2
120			: 120 -2 11
100			: 100 0 -2
80			: 80 6 -12
60			: 60 4 -5
40			: 40 7 -3
20			: 20 6
0			: 0
=====			

BURRELL - OCTOBER 1991

UNFILTERED AND FILTERED VLF READINGS

STATION: ANNAPOLIS, MD.

STATION: ANNAPOLIS, MD.

LINE ~~050N~~

LINE 1+50E

0+50N

=====

STATION	RAW	FILTERED	FIELD	STATION	RAW	FILTERED	FIELD
			STRENGTH :				STRENGTH

=====

500	11		38 :	620	11		42
480	11		40	600	12		52
460	12	-9	40	580	16	-11	45
440	19	-12	45	560	18	-6	50
420	16	11	59	540	16	2	60
400	4	30*	65	520	16	9	60
380	1	18	63	500	9	15	60
360	1	4	60	480	8	17*	62
340	0	7	64	460	0	13	64
320	-5	18	65	440	4	9	64
300	-12	19*	50	420	-5	16	65
280	-12	7	50	400	-7	19	68
260	-12	0	45	380	-13	25	63
240	-12	-4	45	360	-24	24	45
220	-8	-9	44	340	-20	-3	42
200	-7	-10	44	320	-14	-19	40
180	-3	-10	45	300	-11	-18	38
160	-2	-8	44	280	-5	-14	35
140	0	-6	45	260	-6	-7	35
120	1	-5	45	240	-3	-3	37
100	2	-3	47	220	-5	-1	39
80	2	-5	45	200	-3	-9	35
60	6	-5	50	180	4	-13	56
40	3	-3	50	160	1	-2	62
20	8		52	140	2	4	60
0				120	-1	12	60
				100	-8	10	60
				80	-1	-4	55
				60	-4		63
				40			
				20			

BURRELL - OCTOBER 1991

UNFILTERED AND FILTERED VLF READINGS

STATION: ANNAPOLIS, MD.

STATION: ANNAPOLIS, MD.

LINE 3+00E

LINE 2+00E

STATION	RAW	FILTERED	FIELD STRENGTH :	STATION	RAW	FILTERED	FIELD STRENGTH
800	0		55 :	720	-1		55
780	-2		65	700	-1		50
760	-4	4	60	680	0	-8	50
740	-2	2	63	660	6	-16	46
720	-6	5	64	640	9	-14	47
700	-5	3	62	620	11	-14	50
680	-6	0	63	600	18	1	52
660	-5	0	70	580	1	16	60
640	-6	0	80	560	12	-2	65
620	-5	-1	95	540	9	6	70
600	-5	-1	47	520	-2	30	80
580	-5	2	47	500	-7	23	80
560	-7	1	60	480	-9	10	69
540	-4	0	45	460	-10	7	70
520	-8	5	44	440	-13	8	63
500	-8	3	40	420	-14	5	60
480	-7	-3	40	400	-14	-2	55
460	-6	-2	52	380	-11	-7	50
440	-7	0	55	360	-10	-6	52
420	-6	-5	60	340	-9	-2	48
400	-2	-9	60	320	-10	0	50
380	-2	-6	62	300	-9	-5	45
360	0	-4	61	280	-5	-13	45
340	0	1	72	260	-1	-13	46
320	-3	2	67	240	0	-7	45
300	1	-4	68	220	1	-5	45
280	0	-1	67	200	3	-4	48
260	-1	3	63	180	2	0	55
240	-1	-2	60	160	2	0	55
220	2	-8	58	140	3	-4	53
200	4	-7	60	120	5	-7	55
180	4	-1	63	100	7	-5	53
160	3	6	65	80	6	1	50
140	-1	6	67	60	5	10	52
120	2	-2	65	40	-2	14	48
100	2	-2	64	20	-1	4	50
80	1	3	67	0	0		50
60	0	6	70				
40	-3	6	72				
20	-2	0	67				
0	-1		61				

STRANGLER
ON CURVE?

correct?
OVERLAY?

BURRELL - SEPTEMBER 1991

UNFILTERED AND FILTERED VLF READINGS

STATIONCUTLER, ME.

STATION: ANNAPOLIS, MD.

LINE 3+00E

LINE 4+00E

```
=====
STATION RAW FILTERED FIELD ;STATION RAW FILTERED FIELD
          STRENGTH :                STRENGTH
=====
```

700	-2		49 :	760	10		56
680	1		52 :	740	10		60
660	9	-16	52 :	720	8	3	60
640	6	-3	57 :	700	9	-5	60
620	7	8	63 :	680	14	-12	60
600	0	13	63 :	660	15	-5	70
580	0	11	66 :	640	13	10	80
560	-4	11	67 :	620	6	21	98
540	-7	19	64 :	600	1	23	98
520	-16	14	60 :	580	-5	22	92
500	-9	-6	58 :	560	-10	14	90
480	-8		58 :	540	-8	3	85
460				520	-10	3	80
440				500	-11	1	85
420				480	-8	-5	74
400	-3	-11	77 :	460	-8	-5	70
380	-3	-4	73 :	440	-6	-3	65
360	-4	0	78 :	420	-7	-2	65
340	-2	-4	80 :	400	-5	-3	65
320	-1	-5	83 :	380	-5	-7	70
300	0	0	74 :	360	0	-9	68
280	-3	7	75 :	340	-1	-4	70
260	-5	4	72 :	320	0	-2	72
240	-2	-9	80 :	300	1	-2	70
220	3	-13	70 :	280	0	3	70
200	3	-7	70 :	260	-2	2	70
180	5	-7	72 :	240	1		70
160	8	-7	92 :	220			
140	7	4	80 :	200			
120	2	12	85 :				
100	1	11	80 :				
80	-3	11	93 :				
60	-5	9	76 :				
40	-6	7	72 :				
20	-9	4	67 :				
0	-6		62 :				

```
=====
```

BURRELL - SEPTEMBER 1991
 UNFILTERED AND FILTERED VLF READINGS
 EAST WEST LINES AROUND THE ZAP SHOWING

STATIONCUTLER, ME
 LINE 4+80S

STATIONCUTLER, ME
 LINE 5+20S

STATIONCUTLER, ME
 LINE 5+60S

```

=====
STATION RAW FILTERED FIELD :STATION RAW FILTERED FIELD :STATION RAW FILTERED FIELD
      STRENGTH :                STRENGTH :                STRENGTH
=====
  50    6                77 :  50    8                81 :  50    9                67
  70    9                82 :  70    9                79 :  70    9                86
  90   13   -7          85 :  90    9   -6          77 :  90    9   -2          87
 110    9    6          92 : 110   14   -8          78 : 110   11   -4          70
 130    7   11          85 : 130   12    2          82 : 130   11   -3          72
 150    4   11          85 : 150    9   7.          85 : 150   12   -2          78
 170    1   14          86 : 170   10    0          86 : 170   12    1          80
 190   -4   15.         86 : 190   11   -1          90 : 190   10    4.          82
 210   -6   10          83 : 210    9   14          100 : 210   10    2          82
 230   -7  -11          82 : 230   -2   36.         100 : 230   10    3          82
 250    8                78 : 250  -14   34          95 : 250    7                85
      : 270  -13    6          85 :
      : 290  -9          88 :
=====
  
```


BURRELL - SEPTEMBER 1991

UNFILTERED AND FILTERED VLF READINGS

STATION: HAWAII
BASELINE

STATION: HAWAII
BASELINE

```
=====
STATION RAW FILTERED FIELD :STATION RAW FILTERED FIELD
STRENGTH : STRENGTH
=====
```

			:	9		
			:	11		
400	9		100 :	1060	11	-2 92
420	7		100 :	1080	11	-3 92
440	10	-3	100 :	1100	14	-7 93
460	9	4	100 :	1120	15	-5 92
480	4	11	105 :	1140	15	-1 100
500	4	6	100 :	1160	15	1 98
520	3	3	100 :	1180	14	1 94
540	2	1	100 :	1200	15	-3 99
560	4	-2	97 :	1220	17	-5 97
580	3	-2	95 :	1240	17	-1 100
600	5	-4	92 :	1260	16	3 106
620	6	-4	92 :	1280	15	3 110
640	6	-2	95 :	1300	15	0 100
660	7	-4	95 :	1320	16	-1 110
680	9	-6	95 :	1340	15	1 114
700	10	-5	96 :	1360	15	4 117
720	11	-3	95 :	1380	12	8 114
740	11	-1	92 :	1400	10	9 112
760	11	-1	92 :	1420	8	6 118
780	12	-1	97 :	1440	8	1 122
800	11	1	96 :	1460	9	2 140
820	11	1	95 :	1480	5	7 116
840	11	2	96 :	1500	5	2 148
860	9	3	96 :	1520	7	-4 148
880	10	2	97 :	1540	7	3 150
900	8	1	97 :	1560	2	0 140
920	10	-4	95 :	1580	4	0 124
940	12	-1	95 :	1600	5	-5 134
960	7	5	98 :	1620	6	-4 132
980	10	1	97 :	1640	7	-1 142
1000	8	0	94 :	1660	5	2 140
1020	9	-2	95 :	1680	6	140
1040	11	-5	95 :			
	11		:			

```
=====
```



PROPERTY BOUNDARY

84

GRANITE + GRANDIORITE
WITH SECTIONS OF PROPYLITIC
ALTERATION IN NNW TRENDING
ZONES

100° 21' W

LCP CHEWMI
LCP SHORTS

L 839s

634

L 838s

MONZONITE + MAFICS

3000

SILICA ALTERATION

ARGILLIC ALTERATION

ALUEVIUM

VOLCANO -
SEDIMENTS
(See Fig. 4)

ANNE'S 1-4
#1 POST

ALUEVIUM

L 836s

L 857s

LCP DAVES

SYN

SYN

GNS

5000

BL. 0+00

10000

LEGEND

- MZN Monzonite
- SYN Syenite
- GDR Grandiorite
- GNS Greenstone
- Outcrop
- Contact
- Fault
- Bleaching
- Rock sample N° & location
- Flood



BURRELL PROPERTY	
PROPERTY GEOLOGY	
N.T.S. 82E-8	GREENWOOD M.D.C.
SCALE 1:5000	DATE: DEC 1991
COMPILED BY: E.C. & D.C.	FIGURE NO. 3

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,015

4+00W

2+00W

0+00

2+00E

4+00E

B.L. 00

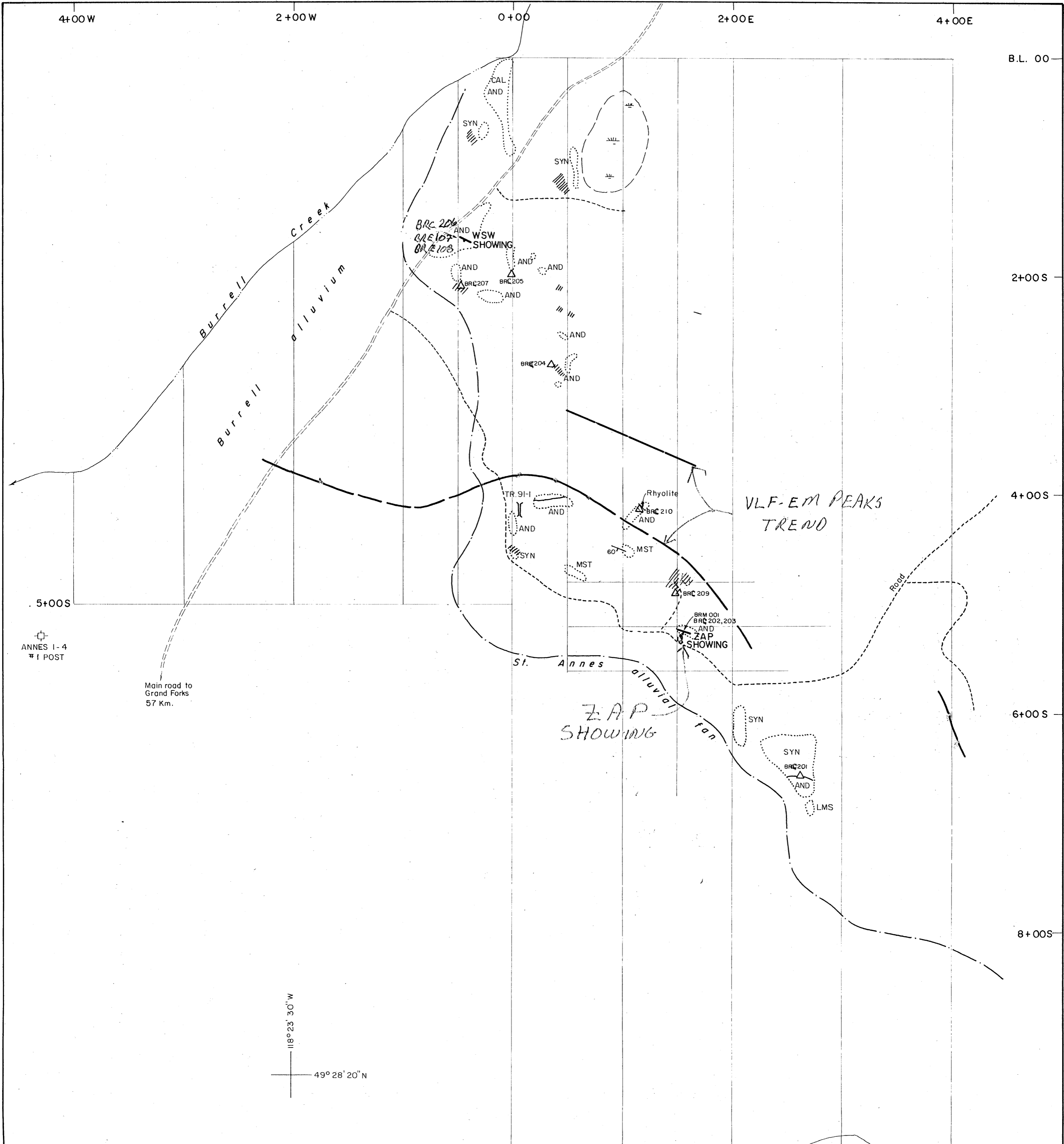
2+00S

4+00S

6+00S

8+00S

10+00S



ANNES 1-4
#1 POST

Main road to
Grand Forks
57 Km.

118°23'30"W
49°28'20"N

PROPERTY OUTLINE

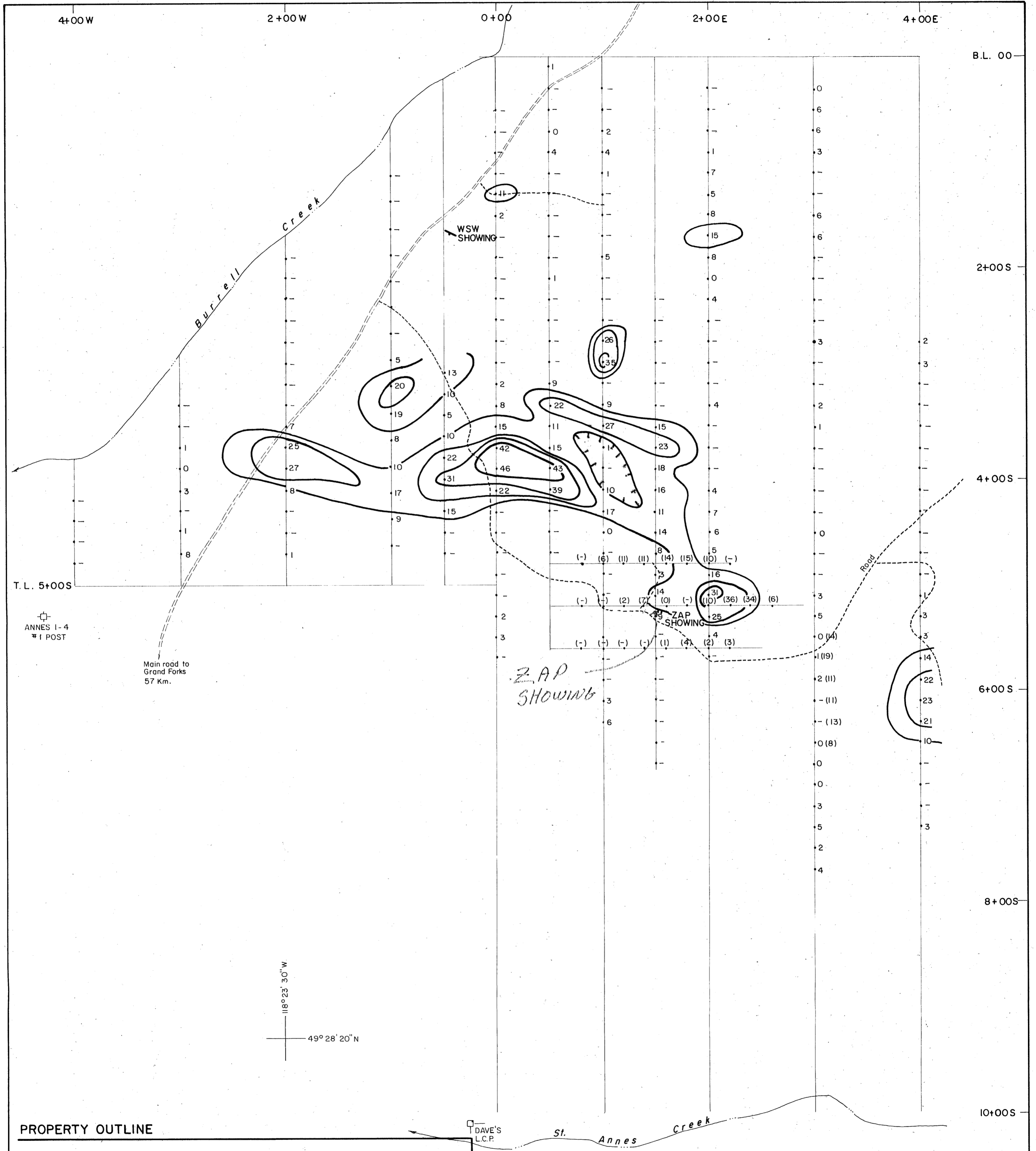
- LEGEND**
- AND ANDESITE
 - SYN SYENITE
 - MST MUDSTONE
 - LMS LIMESTONE
 - OUTCROP
 - /// BLEACHING
 - △ BRC 201 ROCK SAMPLE NO. & LOCATION
 - VLF-EM PEAKS TREND
 - II TRENCH

BURRELL PROPERTY	
GRID GEOLOGY	
N.T.S. 82E-8	GREENWOOD M.D., B.C.
0 50 100 200 metres	
SCALE 1:2500	DATE: DEC. 1991
COMPILED BY	FIGURE NO. 4

CHONG

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,015



PROPERTY OUTLINE

CONTOUR INTERVAL 10 FRASER-FILTER UNITS
 () BRACKETS : CUTLER STA.
 - DASH : NEGATIVE VALUE

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

22,015

BURRELL PROPERTY	
1991 VLF-EM SURVEY ANNAPOLIS FILTERED CONTOURS	
N.T.S. 82E-8	GREENWOOD M.D., B.C.
0 50 100 200 metres	
SCALE 1:2500	DATE : DEC. 1991
COMPILED BY: E.C. & D.C.	FIGURE N ^o . 5