BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1999/2000
REPORT #:	PAP 99-18
NAME:	RAYMOND GRENIER

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations 15 to 17, page 6.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT.

Name Raymond Grenier Reference Number 99/2000 P38

LOCATION/COMMODITIES

Project Area (as listed in Part A) Gordon River MINFILE No. if applicable 092C16-145

Location of Project Area NTS 092C/16 Lat 48°49'20" Long 124°18'20"

Description of Location and Access 19 Km. west of the town of Cowichan Lake on Vancouver Island. Access is via Highway 18 and the logging road to Gordon River. (see accompanying report)

Main Commodities Searched For Au, Ag, Cu Zn and Fe (see attached report)

Known Mineral Occurrences in Project Area The Eagle Occurrence - minfile # 092C-145 - see accompanying report

WORK PERFORMED

1. Conventional Prospecting (area) approximately 14 Km^2 - 41 line Km. (12 field days)
2. Geological Mapping (hectares/scale) approximately 400 hectares (9 field days)
3. Geochemical (type and no. of samples) 14 outcrop samples + 35 stream sediments (6 field days)
4. Geophysical (type and line km) VLF-EM - 11.6 Km (6 days) + magnetic - 11.6 Km (5 days)
5. Physical Work (type and amount) Flagged Grid Establishment - 12.9 Km. (11 field days)
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify)

SIGNIFICANT RESULTS

Commodities Au in stream sediment (RG27) Claim Name open ground

Location (show on map) Lat. 48° 48' 34" Long 124° 18' 50" Elevation 380 m.

Best assay/sample type Au - 426.5 ppb in stream sediment RG27; 0.03 oz/ton Au in rock; 0.4 ppm Ag in sediment + 0.01 oz/ton Ag in rock (see attached report)

Description of mineralization, host rocks, anomalies up to 20% pyrite and pyrrhotite in iron-stained quartz-feldspar porphyry + 10% pyrite in sheared quartz-hornblende porphyry (Eagle Occurrence); 10% pyrite in rhyolite + dacite lava; and up to 3% pyrite in limestone; and ~~up~~ goethite and limonite in siltstone

Anomalies - numerous stream sediment geochemical anomalies and magnetic anomalies; and 6 VLF-EM anomalies, 5 representing bedrock features - see attached report

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act*.

B. TECHNICAL REPORT (continued) - Raymond Grenier (99/2000 P38)

LOCATION/COMMODITIES

Description of Location and Access

The project is located on 14 sq. km. of open ground in the southeastern part of Mineral Titles Reference Map 092C16W. The project area lies 19 km. west the town of Lake Cowichan and 9 km. west of the village of Honeymoon Bay on Vancouver Island, B.C.. Access is by pickup truck along paved Highway 18, from Lake Cowichan to 2 km. west of Honeymoon Bay, on the south shore of Cowichan Lake. At the end of the pavement, 12 km. west of Lake Cowichan, a gravel forestry road trends south and west, along Sutton Creek to Gordon River. This road crosses the southeast boundary, 7 km. from the highway. After a further 2 km., the south-central boundary is crossed near the Gordon River, at the intersection with a secondary logging road that crosses the west side of the project in a north-northwest direction, parallel to the Gordon River. This road continues to the north-northwest, joining the highway 2 km. east of Caycuse on the southern shore of Cowichan Lake. Numerous gated logging roads and trails cross the project (see Figures 1 & 2). Topographical relief on the project is high and active logging was being carried out on various sections of the project during the summer and fall of 1999.

Main Commodities Searched For

The commodities searched for are Au, Ag, Cu, Zn & Fe within various types of mineralization, including pyrite, arsenopyrite, pyrrhotite, chalcopyrite, bornite, magnetite and hematite.

Known Mineral Occurrences in the Project Area

The files at the Ministry of Energy and Mines indicates that there is one Minfile Occurrence (092C 145 - the Eagle Occurrence) thought to be located in the project area. The occurrence is comprised of several showings, located in the southern part of the alteration zone outlined by Malcolm in 1971. Minor Juriassic dykes and a small intrusive of the Island Plutonic Suite intrude faulted Vancouver Group basalts and sediments and volcanic rocks of the Bonanza Group. The showings lie in a northwest- southeast trending zone originating at the main showing, thought to lie in the central part of the 1999 project. At the main showing, chalcopyrite, bornite and pyrite was found in altered and brecciated feldspar porphyry within a shear zone associated with a northwest trending fault. In similar rocks, 250 meters south of the main showing, sphalerite and pyrite was discovered and Ag was found along fractures in volcanic rocks on the bank of Sutton Creek, in the eastern region. Approximately 2 km. northwest, along strike from the main showing, in the northwest part of the 1999 project, a gossen zone with pyrite, chalcopyrite and sphalerite was delineated in hematite rich tuff, intrusive breccias and feldspar porphyries, associated with faulting and brecciation. The showings forming the Eagle Occurrence are not well documented or sampled.

WORK PERFORMED

1. Conventional Prospecting

Approximately 41 km. of prospecting traverses were run on the project during 12 field days in 1999. Between May 29 to June 5 the lower elevations of the project area were prospected using the roads, trails, rivers, creeks as references. At this time the elevations above 650 meters were covered by snow. The area of the flagged grid and higher elevations were prospected in detail between Oct. 18 to 22, 1999. During the prospecting the positions of outcrop and boulders were defined, noting alteration, deformation and mineralization, and the topography was mapped.

The data collected while prospecting is presented on Figures 1 (Prospecting, Geology & Geochemical Compilation) and 2 (Detailed Prospecting & Geological Compilation) at scales of 1:10,000 and 1:5,000, respectively.

2. Geological Mapping

On 9 field days, between June 12 and 14 and Nov. 6 and 12, 1999, all outcrops found during the prospecting program were mapped. An area of approximately 4 square km. was mapped with the results being plotted on the enclosed Figures 1 and 2.

3. Geochemical Surveying and Rock Sampling

Along Sutton Creek and the Gordon River and in tributaries of the river, 35 stream sediment samples were collected. These 35 samples were taken over 5 days, between June 6 and 11, 1999. Samples RG01 to RG09 and RG19 to RG35 were collected at 100 to 200 meters along Sutton Creek and the Gordon River, respectively and samples RG10 to RG18 were taken at various locations in 9 tributaries flowing into Gordon River.

The sediment samples were dried and sent to Acme Analytical Laboratories Ltd. in Vancouver. At the laboratory 30 gm. of each sample were sieved to 80 mesh and digested by aqua regia. A 30 element (Au, Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, and W) ICP analysis was performed on each sample. Au assaying was also completed on these 35 samples by the wet extraction method (10 grams aqua regia digestion and MIBK extraction), using the graphite furnace and the atomic absorption spectrometry method of analysis on the organic phase.

The stream sediment sample locations and sample numbers are plotted on Figure 1 at a scale of 1:10,000. The stream sediment samples with the highest concentrations of Au, As, Ag, Cu, Zn, Pb, Fe and Mn are highlighted on this figure. The geochemical certificates of analysis are included in Appendix 1.

Fourteen examples of mineralization, deformation and alteration were collected from outcrop exposures on the project during the mapping program. These grab samples (170726 to 170739) of outcrop were sent to the Acme Lab where all 14 samples were assayed for Au by the fire assay method. Five samples, 170726 to 170729 and 170738, were assayed for Ag, also using the fire assay method. ICP analysis was used to determine the amounts of Mn and Fe in sample 170737 and the concentrations of Cu in samples 170726 and 170727.

The locations of the rock samples and assay/analytical results are shown on Figures 1 and 2. The sample locations with the highest amounts of Au, Ag, Cu, Fe and Mn are also highlighted on these figures. A copy of the assay certificate is presented in Appendix 1.

4a. Geophysical Surveying - Total Field Magnetics

The total field magnetic survey was completed along the 11.6 km of flagged crosslines, from Nov. 1 to 5, 1999 (5 field days). A Gem Systems GSM 8 proton precession magnetometer was used to collect approximately 465 readings at stations flagged and marked at 25 meter intervals. The magnetic survey was performed to collect data which will help define contacts between rock units of varying magnetic susceptibilities and to delineate the locations of potential fault zones.

The GSM 8 magnetometer measures the total field intensity of the earth's magnetic field in gammas. The instrument has a sensitivity and repeatability of one gamma or better. A base station, for determining the magnetic diurnal variations, was established on line 0 at the baseline. The total field readings, corrected for diurnal variations and minus a base value of 55,000 gammas, were plotted on Figure 3 at a scale of 1:5,000. The magnetic values were then contoured at 100 gamma intervals.

4b. Geophysical Surveying - VLF-Electromagnetics

The very low frequency-electromagnetic surveying was conducted using a Geonics EM-16 unit. Six days, between Oct. 23 and 31, 1999, were spent collecting approximately 465 readings at 25 meter stations along the 11.6 km of crosslines.

The VLF-EM survey uses powerful radio transmitters located in different parts of the world which were established for military communications. Relative to the frequencies generally used in geophysical exploration, the frequencies used in VLF-EM surveying are considered to be high. These powerful radio waves induce electrical currents in conductive bodies thousands of miles away. The induced currents produce secondary magnetic fields which are detected at surface through deviations of the normal VLF field. This secondary field from the conductor is added to the primary field vector, so that the resultant field is tilted up on one side of the field vector and down on the other side. The VLF receiver measures the field tilt, with the in-phase and quadrature components of the vertical magnetic field as a percentage of the horizontal primary field, i.e. the tangent of the tilt angle and elipticity. The Geonics EM-16 unit has a repeatability and sensitivity of 1 %.

Interpretation of the results is quite simple, the conductor is located at the point marked at the crossover from positive tilt (vertical in-phase) to negative tilt. The main advantage of the VLF method is that it responds well to poor conductors and has been proven to be a reliable tool in helping to map faults-shear zones, mineralization, conductive horizons and rock contacts. The major disadvantage is that because of the high frequency of the transmitted wave, a multitude of anomalies from unwanted sources, such as swamp edges, lakeshores, creeks and changes in the topographical and bedrock relief, may be delineated. So some amount of care must be taken in interpreting the results collected in areas displaying the above-mentioned topographical features.

Because of the trends of the rock units underlying the project area and the proximity to the station, the transmitting station at Seattle, Washington (NLK), frequency 24.8 kHz was used. The readings were collected with the instrument facing 060 degrees.

The VLF-EM in-phase and quadrature data collected was plotted in percent on Figure 4 at a scale of 1:5,000. These values were then profiled at a scale of 1 cm. equals 20 %. The conductor axes were determined and given labels, A, B, C. etc. No priority or significance was attached to the labelling system.

5. Physical Work - Grid Establishment

A flagged grid was established in the central part of the project in an area where there is a good chance for mineralization and the topography is suitable for traversing. Approximately 1 square km. of the project is covered by 12.9 line km. of the flagged grid. The grid was flagged over 11 days from Oct. 7 to 17, 1999. The baseline was established at an angle of 185 degrees near the road on the east side of the mountain west of Sutton Creek. Crosslines were flagged at 100 meter intervals from 0 to 10 north at angles of approximately 095 and 275 degrees. The position of grid is shown on Figures 1, 2, 3 and 4.

SIGNIFICANT RESULTS

Best Assay/Analysis & Sample Type

Best Assay/Analytical Result	Sample Type	Sample Number
0.003 oz/ton Au	grab-outcrop	170737
0.01 oz/ton Ag	grab-outcrop	170726
0.04 % Cu	grab-outcrop	170726
9.94 % Fe	grab-outcrop	170737
0.39 % Mn	grab-outcrop	170737
426.5 ppb Au	stream sediment	RG27
0.4 ppm Ag	stream sediment	RG31 & RG34
52 ppm As	stream sediment	RG11
160 ppm Cu	stream sediment	RG02
310 ppm Zn	stream sediment	RG24
8.29 % Fe	stream sediment	RG29
24 ppm Pb	stream sediment	RG13
1618 ppm Mn	stream sediment	RG01

Description of Mineralization, Host Rocks, Anomalies

1. Prospecting, Geological Mapping and Outcrop Sampling

Outcrops on the project are exposed along the Gordon River and the sides and top of the mountain trending north through the eastern section. The most prominent and probably the oldest rocks are felsic to mafic metavolcanics of the Karmutsen Formation of the Vancouver Group, that underlie the southern ½ of the project, south of intermediate to mafic metavolcanics of the Bon-

anza Group. In the central part of the project, sediments of the Parson Bay and Quatsino Formations of the Vancouver Group lie near the contact between the metavolcanics of the Karmutsen Formation and Bonanza Group. These metavolcanic and sedimentary rocks are intruded by felsic, intermediate and mafic intrusive rocks.

The mafic metavolcanics are comprised of fine to medium-grained massive lava flows, feldspar rich tuff and vesicular lavas of basalt and andesite, that exhibit little deformation, alteration and mineralization. These mafic metavolcanics are slightly fractured, contain trace to 3 % pyrite and small southeast and east striking shears and are brecciated at one location near the Gordon River. Minor epidote and carbonate alteration was observed in the southern part of the project.

The outcrops of rhyolite and dacite are less frequently exposed on the project. These rocks are mainly mineralized, up to 10 % pyrite, fine-grained massive lavas. The rhyolites and dacites are fractured and lineated in a northeast direction, with the fracture planes hosting jarosite and iron-staining.

Muddy and sandy limestone appear to form a possible 5 bands, trending east to southeast, in the metavolcanics of the Karmutsen Formation, south of the contact with the metavolcanics of the Bonanza Group. Usually, the limestones are unaltered and not mineralized, with only one example of trace to 3 % pyrite being observed. An outcrop of highly altered siltstone, containing goethite, minor limonite and 5 % fine-grained pyrite was mapped in the south-central part of the project.

Diorite and granodioriote (Island Plutonic Suite ?) intrude the metavolcanics at 4 separate locations on the project. Most of these rocks are fractured and contain up to trace amounts of pyrite.

Examples of mineralized felsic to intermediate porphyritic intrusive rocks lie at various locations on the property. These quartz-feldspar-hornblende, feldspar and quartz-feldspar porphyries host up to 20 % pyrite and pyrrhotite. North-northeast and east-southeast shearing and fracturing was mapped in these intrusive rocks.

The 14 examples of mineralization and alteration that were sampled (grab samples of out-crop), host rocks and assay results are shown in the following table.

Sample No.	Mineralization and Host Rocks	Assay Results
170726	Up to 10 % pyrite in small 20 cm. wide shear zones cutting highly fractured and iron-stained quartz-feldspar-hornblende porphyry containing inclusions of dacite.	< 0.001 oz/ton Au 0.01 oz/ton Ag 0.004 % Cu
170727	20 % pyrite and pyrrhotite in fractured and iron-stained, fine-grained quartz-feldspar porphyry.	< 0.001 oz/ton Au < 0.01 oz/to Ag 0.003 % Cu
170728	10 % pyrite in iron-stained and jarosite rich, fine to medium-grained massive rhyolite lava.	< 0.001 oz/ton Au < 0.01 oz/ton Ag
170729	Up to 5 % very fine-grained pyrite in massive fine-grained, iron-stained and fractured rhyolite lava, with jarosite on the fracture planes.	0.001 oz/ton Au < 0.01 oz/ton Ag
170730	Trace to 3 % sulphides in muddy limestone.	< 0.001 oz/ton Au

Sample No.	Mineralization and Host Rocks	Assay Results
170731	1 to 5 % sulphides in massive, fractured and siliceous rhyolite lava.	< 0.001 oz/ton Au
170732	Trace amounts of pyrite in fractured medium-grained granodiorite.	< 0.001 oz/ton Au
170733	5 to 10 % fine-grained disseminated pyrite and pyrite in blebs and along the fracture planes in fine-grained massive dacite lava.	< 0.001 oz/ton Au
170734	5 to 8 % disseminated pyrite in iron-strained fine-grained massive dacite lava.	< 0.001 oz/ton Au
170735	3 to 5 % disseminated pyrite in fractured feldspar porphyry.	< 0.001 oz/ton Au
170736	5 % fine-grained disseminated pyrite in fine-grained massive rhyolite lava.	0.002 oz/ton Au
170737	Goethite and limonite rich altered siltstone.	0.003 oz/ton Au 9.94 % Fe 0.39 % Mn
170738	Iron-stained and sheared fine-grained dacite lava.	< 0.001 oz/ton Au < 0.01 oz/ton Ag
170739	2 to 3 % disseminated pyrite and pyrite on fracture planes in fractured fine-grained rhyolite lava.	< 0.001 oz/ton Au

The poorly documented Eagle Occurrence wasn't well defined by the prospecting. The main showing is probably located at the exposures of porphyry situated near the road in the northern part of the project (samples 170726 and 170727). The porphyry here is sheared and mineralized with pyrite and pyrrhotite, but no chalcopyrite or bornite was observed in the outcrops. The sphalerite and pyrite mineralization indicated to lie 250 meters south of the main showing wasn't found and the gossened zone to the northwest appears to be situated somewhere west of the project.

The Au and Ag assay results were very low, with only 4 samples containing measurable amounts of Au (3 samples with up to 0.003 oz/ton) and Ag (1 sample with 0.01 oz/ton). The highest Au assay of 0.003 oz/ton was found in the goethite and limonite rich siltstone outcrop, which also contained 9.94 % Fe and 0.39 % Mn. The two samples collected in the vicinity (?) of the Eagle Occurrence contained very low concentrations of Cu (0.003 and 0.004 %). Even though the assay results were disappointing and no chalcopyrite, bornite, arsenopyrite, magnetite and hematite was observed. Mapping indicates that the underlying geological environment has the potential to host

a) Cu-Au-Ag-Zn Bearing Veins in Metavolcanics along Shears, Faults and Fracture Zones
b) Au, Ag, Cu and Fe in Chalcopyrite Bearing Skarns
c) Porphyry Copper Type Mineralization

2) Anomalous Stream Sediments

The amounts of Au, As, Zn, Fe and Pb in the 35 stream sediment samples collected on the project are relatively high and the concentrations of Ag and Cu are low. Four samples contain over 50 ppb Au (with 2 of these samples assaying 426.5 and 261.5 ppb) and 14 samples with over 10 ppb Au, indicate that the stream sediments in the southern part of the project host anomalous to high amounts of Au. Moderate concentrations of As (8 samples over 25 ppb), Zn (3 samples over 150 ppm) and Fe (10 samples over 7 %) were also delineated. The Cu (1 sample over 150 ppm) and Ag (only 10 samples higher than the detection limit of 0.3 ppm) amounts in the 35 sediment samples were low.

The geochemical stream sediment results thought to be anomalous and their geological environments are shown below.

Element & Analysis	Sample	Location	Geological Environment
Au - 426.5 ppb	RG27	in the Gordon River	at Karmutsen Fm. basalt & andesite
Au - 261.5 ppb	RG20	in the Gordon River	at Karmutsen Fm. basalt & andesite
Au - 192.6 ppb	RG03	in Sutton Creek	at Karmutsen Fm. basalt
Au - 58.5 ppb	RG19	in the Gordon River	at Karmutsen Fm. andesite
Cu - 160 ppm	RG02	in Sutton Creek	at Karmutsen Fm. basalt
Zn - 310 ppm	RG24	in the Gordon River	at Karmutsen Fm. basalt
Zn - 213 ppm	RG21	in the Gordon River	at Karmutsen Fm. basalt
Zn - 182 ppm	RG11	tributary-Gordon R.	no outcrop in the vicinity
Fe - 8.29 %	RG29	in the Gordon River	at Karmutsen Fm. basalt
Pb - 24 ppm	RG13	tributary-Gordon R.	at Bonanza Gp. dacite

The 4 samples with very high Au concentrations all lie in the south part of the project forming an anomalous zone lying along outcrops of mafic metavolcanic rocks of the Karmutsen Formation.

3) Magnetic Anomalies

The magnetic expression on the gridded area is highly complex with numerous highs and lows forming anomalous zones striking east-southeast to northeast. The magnetic values vary from 54,874 to 57167 gammas and local relief of up to 1500 gammas across 100 meters is common.

Fifteen individual highs over 56,000 gammas and the surrounding values, over 55,700 gammas, form 6 anomalous zones defining the high magnetic susceptibilities of the underlying rocks. Three of these anomalous zones strike east-southeast: at the west ends of lines 0 to 1N; across 200 meters from the western boundary of the grid on lines 6N to 4N to the baseline, between lines 3N and 5N; and a 200 to 300 meter wide zone from line 8N near 4E to line 4N at 7E to 9E. The other 3 anomalous zones of highs trend south-southwest: from line 10N to 2N, near the baseline; from line 6N at 3E to line 0 at 1N; and crossing lines 5N and 4N, near 4+50E. These highs cover approximately 2/3 of the grid and are probably caused by mafic metavolcanics containing moderate amounts of magnetite.

There are three broad, 150 to 400 meter wide anomalous zones of magnetic lows, 2 striking east-southeast through the southwest and eastern regions and the third trending northeast

along the west ends of lines 7N to 10N. The magnetic values and shapes of these lows indicate that three bands of sedimentary rocks cross these areas.

Narrower and discontinuous lows were outlined at numerous locations on the grid. These areas could be underlain by units of felsic to intermediate metavolcanics and/or small felsic to intermediate intrusive bodies.

The magnetic contour pattern is highly distorted, with many contours being offset or broken, indicating that possible faults trend southeast to east-southeast across the surveyed area.

4) VLF-Electromagnetic Anomalies

There are 6 VLF-electromagnetic anomalous zones (A to F) formed from the axes of 14 individual crossovers. Five of these anomalies represent possible bedrock features (shears and contacts) and the sixth appears to be the result of conductive overburden or topographical relief.

Descriptions of these 6 anomalous zones are described below.

Zone	Topography/Magnetics	Possible Geological Setting
A	Crosses magnetic highs on the top of the mountain, near outcrops of dacite and andesite at the baseline.	Shear in intermediate metavolcanics
B	Along the edge of a weak low, along an intermittent creek, on the east side of the mountain.	Conductive overburden or change in bedrock relief.
C	Crossing a magnetic high, between outcrops of limestone and basalt.	Shear along the south edge of a band of sediments (limestone).
D	In a magnetic high, along the eastern flank of the mountain.	Shear in mafic metavolcanics.
E	along the north side of a magnetic crossing west side of the mountain.	Shear along a contact between andesite and sediments.
F	Line 2N is in a magnetic low, near outcrop of basalt at the west side of the crest.	Line 2N - sheared contact between basalt and sediments.
	Line 0 is in a magnetic high along the west side of the crest.	Line 0 - shear in mafic metavolcanics.

Appendix 1 - Assay/Analysis Certificates

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9002 Accredited Co.)

ASSAY CERTIFICATE

Grenier, Ray PROJECT GORDON RIVER File # 9904871

P.O. Box 434, 1195 Davie, Vancouver BC V6E 1N2 Submitted by: Ray Grenier

SAMPLE#	Cu %	Ag** oz/t	Au** oz/t	Fe %	Mn %
170726	.004	.01	<.001	-	-
170727	.003	<.01	<.001	-	-
170728	-	<.01	<.001	-	-
170729	-	<.01	.001	-	-
170730	-	-	<.001	-	-
170731	-	-	<.001	-	-
170732	-	-	<.001	-	-
170733	-	-	<.001	-	-
170734	-	-	<.001	-	-
170735	-	-	<.001	-	-
RE 170735	-	-	<.001	-	-
170736	-	-	.002	-	-
170737	-	-	.003	9.94	.39
170738	-	<.01	<.001	-	-
170739	-	-	<.001	-	-
STANDARD R-1/AU-1	.838	2.83	.099	-	-

GROUP 7 - MULTI ELEMENT ASSAY - 1.000 GM SAMPLE, AQUA - REGIA DIGESTION TO 100 ML, ANALYSED BY ICP-ES.
AG** & AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE. FE & MN BY LIBO2 FUSION, ICP FINISHED.
- SAMPLE TYPE: ROCK Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: DEC 21 1999 **DATE REPORT MAILED:** Jan 14/2000 **SIGNED BY** .... D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data [illegible] FA

[illegible] ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC [illegible] PHONE([illegible]) FAX(604)[illegible]-1716
(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Grenier, Ray PROJECT GORDON RIVER File # [illegible] Page [illegible]
P.O. Box 454, 1130 Davie, Vancouver [illegible] Submitted by: [illegible]

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
RG-01	2	132	14	142	<.3	78	38	1618	7.56	10	<8	<2	<2	53	<.2	<3	<3	215	1.15	.083	9	104	2.98	83	.21	10	4.14	.02	.08	<2	11.8
RG-02	2	160	14	123	<.3	69	36	1519	7.83	9	<8	<2	<2	46	<.2	<3	<3	259	1.12	.083	8	96	2.70	60	.42	11	4.01	.03	.07	<2	27.6
RG-03	1	135	12	130	<.3	67	34	1509	6.81	5	<8	<2	<2	56	<.2	<3	<3	211	1.31	.078	8	91	2.62	75	.27	11	3.90	.02	.07	<2	192.6
RG-04	2	129	18	122	<.3	65	33	1431	6.53	9	<8	<2	<2	49	<.2	<3	<3	202	1.15	.075	8	87	2.53	75	.39	9	3.64	.02	.07	2	5.9
RG-05	2	127	13	117	<.3	64	33	1389	7.32	8	<8	<2	<2	48	<.2	<3	<3	242	1.08	.071	8	88	2.48	85	.35	9	3.50	.02	.07	<2	11.1
RG-06	3	138	15	121	<.3	71	34	1497	6.64	8	<8	<2	<2	51	<.2	<3	<3	207	1.21	.073	8	96	2.66	69	.31	11	3.83	.02	.07	<2	10.8
RG-07	1	121	13	107	<.3	68	32	1186	7.01	6	<8	<2	<2	42	<.2	<3	<3	237	.99	.074	8	75	2.45	52	.39	9	3.30	.02	.06	<2	6.6
RG-08	1	137	9	111	<.3	65	34	1389	7.15	7	<8	<2	<2	52	<.2	<3	<3	231	1.20	.079	8	87	2.86	69	.39	9	3.71	.02	.07	2	6.8
RG-09	1	116	9	93	<.3	49	30	1113	6.63	6	<8	<2	<2	44	<.2	<3	<3	226	.99	.079	8	63	2.25	52	.40	9	3.12	.03	.06	<2	41.5
RG-10	1	60	7	113	<.3	12	30	1397	6.92	12	<8	<2	<2	66	<.2	<3	<3	209	.97	.108	11	16	1.68	134	.17	8	3.36	.02	.09	2	8.2
RG-11	7	71	18	182	<.3	16	27	1298	5.30	62	<8	<2	<2	63	.9	3	<3	135	1.11	.138	13	19	1.36	70	.18	7	3.07	.01	.08	2	9.0
RG-12	4	85	8	72	<.3	17	19	1020	4.53	14	<8	<2	<2	37	.2	<3	<3	170	.75	.093	10	29	.88	93	.18	9	3.29	.02	.06	2	6.2
RG-13	5	54	24	107	<.3	9	16	1315	3.27	28	13	<2	<2	66	4.4	<3	<3	114	2.51	.129	18	19	.89	77	.06	11	3.31	.02	.04	<2	11.0
RG-14	3	50	7	117	.3	30	20	1155	4.41	30	<8	<2	<2	50	1.7	<3	<3	127	1.14	.118	11	43	1.41	100	.03	6	3.16	.01	.07	2	6.5
RG-15	2	74	3	76	<.3	42	24	1130	5.54	12	<8	<2	<2	32	<.2	<3	<3	194	.75	.080	10	71	1.56	103	.20	6	1.80	.02	.06	<2	7.5
RG-16	2	106	8	94	<.3	22	20	1073	5.09	9	<8	<2	<2	38	<.2	<3	<3	188	.92	.090	11	35	1.08	68	.24	7	3.79	.02	.05	<2	9.0
RG-17	1	122	6	85	<.3	53	27	945	5.84	4	<8	<2	<2	37	<.2	<3	<3	210	1.04	.064	8	74	2.17	37	.41	9	2.95	.01	.05	<2	5.1
RG-18	2	115	11	81	<.3	50	26	927	6.07	3	<8	<2	<2	38	<.2	<3	<3	231	1.06	.065	6	71	1.98	30	.45	9	2.67	.03	.04	<2	14.2
RG-19	1	60	14	107	<.3	21	25	1119	7.39	18	<8	<2	<2	47	<.2	<3	<3	251	.84	.079	10	37	1.62	82	.29	7	2.93	.02	.06	<2	58.5
RG-20	2	61	11	108	<.3	20	26	1149	6.61	18	<8	<2	<2	47	<.2	<3	<3	210	.79	.082	12	31	1.66	71	.16	7	3.24	.02	.06	2	261.8
RE RG-20	1	57	12	102	<.3	18	24	1088	6.37	22	<8	<2	<2	45	<.2	<3	<3	204	.76	.078	12	30	1.60	66	.16	6	3.07	.02	.06	2	12.9
RG-21	1	70	17	113	<.3	24	27	1233	7.63	21	<8	<2	<2	45	<.2	<3	<3	258	.83	.082	10	40	1.71	92	.16	8	3.20	.02	.06	2	5.6
RG-22	2	80	10	139	<.3	30	29	1412	4.79	21	<8	<2	<2	51	<.2	3	<3	204	.92	.092	9	40	2.23	95	.19	8	2.70	.02	.08	4	6.5
RG-23	1	68	8	127	<.3	26	27	1508	6.01	22	<8	<2	<2	57	.4	<3	<3	175	.97	.088	9	35	1.87	105	.15	7	3.78	.02	.08	3	4.5
RG-24	1	61	6	110	<.3	22	25	1157	6.03	18	<8	<2	<2	40	<.2	<3	<3	189	.73	.076	9	33	1.80	77	.17	8	3.13	.02	.06	<2	16.9
RG-25	3	85	6	111	.3	26	26	1268	6.59	17	<8	<2	<2	44	<.2	<3	<3	219	.86	.081	10	39	1.65	87	.21	6	3.26	.02	.06	2	4.9
RG-26	<1	59	13	106	.3	21	26	1172	8.29	20	<8	<2	<2	41	<.2	<3	<3	278	.83	.083	10	43	1.60	66	.14	4	2.96	.02	.06	2	4.0
RG-27	1	64	11	123	.3	23	29	1409	7.47	23	<8	<2	<2	49	<.2	<3	<3	233	.92	.097	11	37	1.61	109	.12	4	3.48	.02	.07	<2	426.8
RG-28	<1	66	16	126	<.3	22	24	1131	6.86	20	<8	<2	<2	41	<.2	<3	<3	173	.78	.084	9	33	1.87	68	.14	6	3.07	.02	.06	<2	3.9
RG-29	<1	61	14	121	.3	19	26	1351	6.12	20	<8	<2	<2	45	<.2	3	<3	165	.86	.088	11	32	1.57	102	.12	8	3.33	.02	.07	<2	9.1
RG-30	1	59	6	120	<.3	24	25	1277	5.99	23	<8	<2	<2	42	<.2	<3	<3	177	.80	.090	10	31	1.81	82	.12	7	3.36	.02	.07	<2	4.4
RG-31	<1	53	8	115	.4	22	25	1214	5.74	26	<8	<2	<2	37	.8	<3	3	165	.67	.088	10	29	1.68	92	.10	7	3.27	.02	.06	3	3.9
RG-32	1	49	10	105	.3	17	21	775	6.14	20	<8	<2	<2	44	<.2	3	<3	210	.83	.084	11	30	1.61	107	.10	6	3.16	.02	.06	2	9.7
RG-33	<1	56	8	121	.3	24	24	1336	6.04	22	<8	<2	<2	41	.2	<3	<3	173	.76	.092	10	31	1.87	101	.09	7	3.43	.02	.06	3	4.4
STANDARD DS2	16	133	31	163	.3	38	13	874	3.28	63	18	<2	4	30	11.8	9	13	84	.56	.088	16	177	.63	182	.12	6	1.84	.04	.17	10	217.1

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: STREAM SED. AU* BY ACID LEACHED, ANALYZE BY ICP-MS. (10 gm)
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: DEC 21 1999 DATE REPORT MAILED: Jan 12/2000 SIGNED BY.......... D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Date ___ FA ___

ACME ANALYTICAL

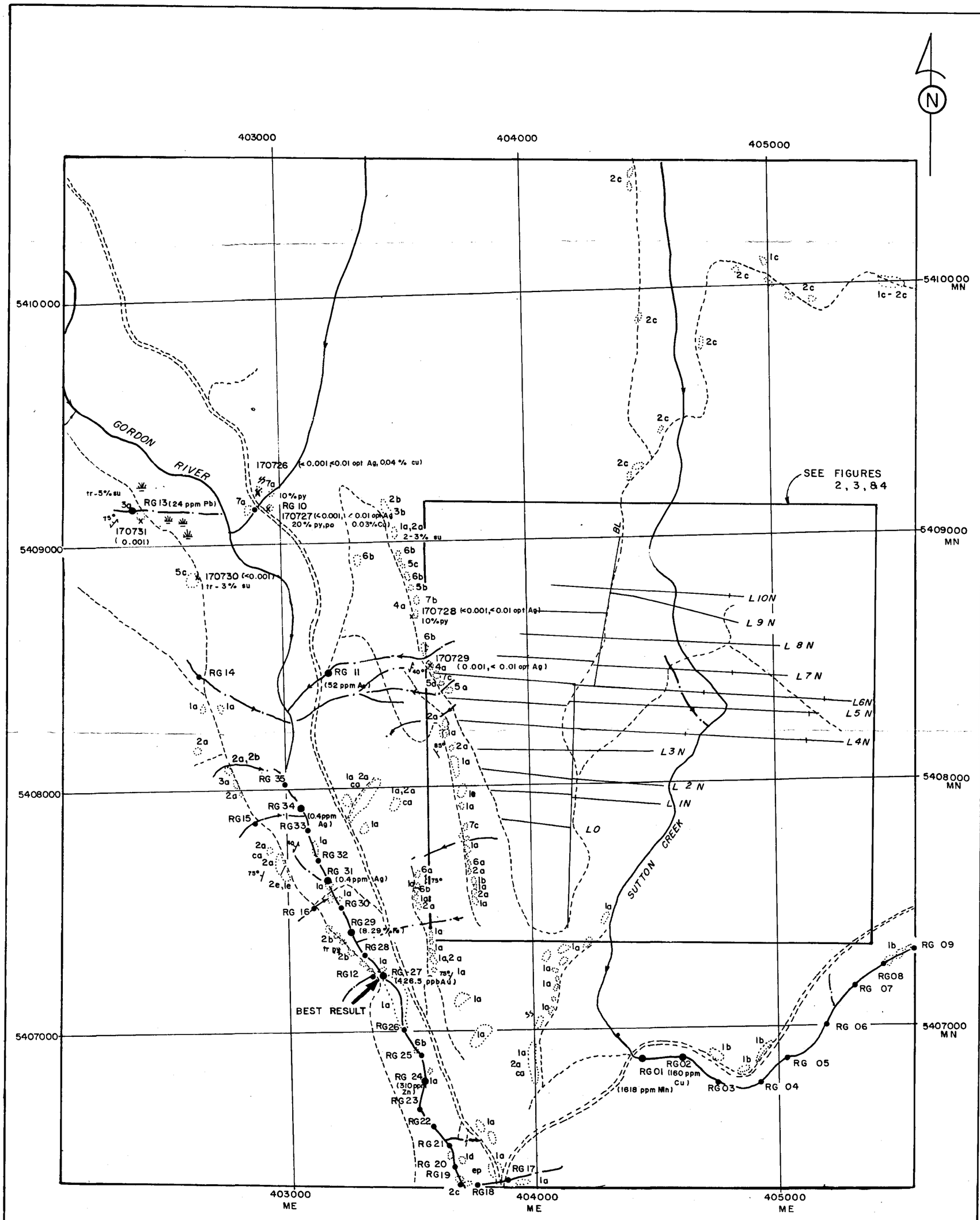
Grenier, Ray PROJECT GORDON RIVER FILE # 9904870

ACME ANALYTICAL

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
RG-34	2	65	15	136	.3	25	28	1610	6.74	26	<8	<2	<2	58	1.0	<3	<3	185	1.04	.097	12	36	1.92	137	.13	6	4.79	.03	.07	<2	3.7
RG-35	1	58	16	126	.4	17	27	1508	7.04	27	<8	<2	<2	48	.8	<3	<3	203	.86	.098	13	29	1.72	123	.12	6	4.38	.02	.07	<2	15.4
RE RG-35	1	59	16	128	.5	18	27	1535	7.27	23	<8	<2	<2	46	.6	<3	3	207	.84	.096	13	30	1.77	123	.10	4	4.37	.02	.06	<2	25.3
STANDARD DS2	13	123	34	188	.4	33	11	787	3.24	60	20	<2	6	28	10.7	5	12	77	.62	.080	16	159	.60	138	.11	3	2.00	.04	.15	6	181.9

Sample type: STREAM SED.. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ___ FA ___



LEGEND

7 FELSIC INTRUSIVE ROCKS
- a) QUARTZ - FELDSPAR PORPHRY
- b) FELDSPAR PORPHYRY
- c) QUARTZ - FELDSPAR PORPHYRY

6 INTERMEDIATE TO MAFIC INTRUSIVE ROCKS
- a) DIORITE
- b) GRANODIORITE

5 SEDIMENTARY ROCKS
- a) SILTSTONE
- b) SANDY LIMESTONE
- c) MUDDY LIMESTONE

4 RHYOLITE
- a) MASSIVE FINE-GRAINED FLOWS
- b) FLOW BRECCIA

3 DACITE
- a) MASSIVE FINE-GRAINED FLOWS
- b) MASSIVE MEDIUM - GRAINED FLOWS

2 ANDESITE
- a) MASSIVE FINED - GRAINED FLOWS
- b) MASSIVE MEDIUM - GRAINED FLOWS
- c) FELDSPAR RICH TUFF
- d) FLOW BRECCIA
- e) VESICULAR

1 BASALT
- a) MASSIVE FINE-GRAINED FLOWS
- b) MASSIVE MEDIUM - GRAINED FLOWS
- c) FELSPAR RICH TUFF
- d) FLOW BRECCIA
- e) VESICULAR

SYMBOLS

- OUTCROP
- CONTACT
- STRIKE & DIP OF LINEATION
- STRIKE & DIP OF FRACTURE
- SHEAR
- 170729x OUTCROP SAMPLE LOCATION WITH NO
- (0.001) ASSAY RESULT (opt Au)
- X BEST ASSAY RESULT SAMPLE LOCATION
- RG01 ● (400ppbAu) STREAM SEDIMENT SAMPLE LOCATION WITH NO. BEST SEDIMENT ANALYSIS & LOCATION
- DRIVABLE ROAD
- TRAIL OR GRADED ROAD
- SWAMP
- CREEK
- INTERMITTANT CREEK
- PROJECT BOUNDARY

ABBREVIATIONS

ca	CARBONATE	py	PYRITE
ep	EPIDOTE	su	SULPHIDES
ja	JAROSITE	li	LIMONITE
po	PYRRHOTITE	go	GOETHITE

400 m 200 100 0 200 400 m

Scale: 1: 10,000

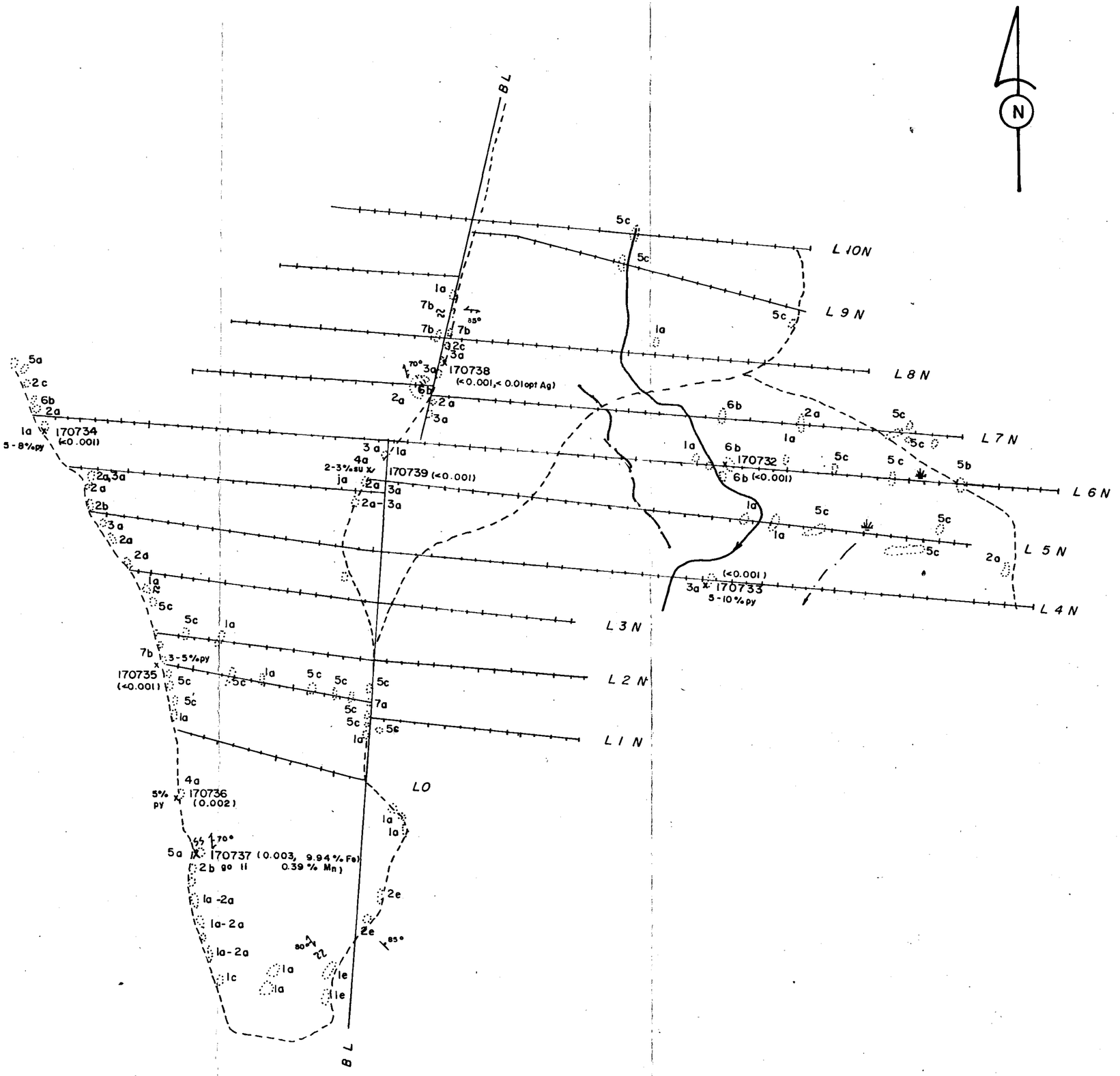
RAYMOND GRENIER

GORDON RIVER PROJECT

PROSPECTING, GEOLOGY & GEOCHEMICAL COMPILATION MAP

DATE: DEC., 1999	NTS: 92 C/16
SCALE: 1: 10,000	FIG. NO: 1

99-18



NOTE: FOR LEGEND SEE FIGURE 1

200m 100 50 0 100 200m

Scale: 1: 5,000

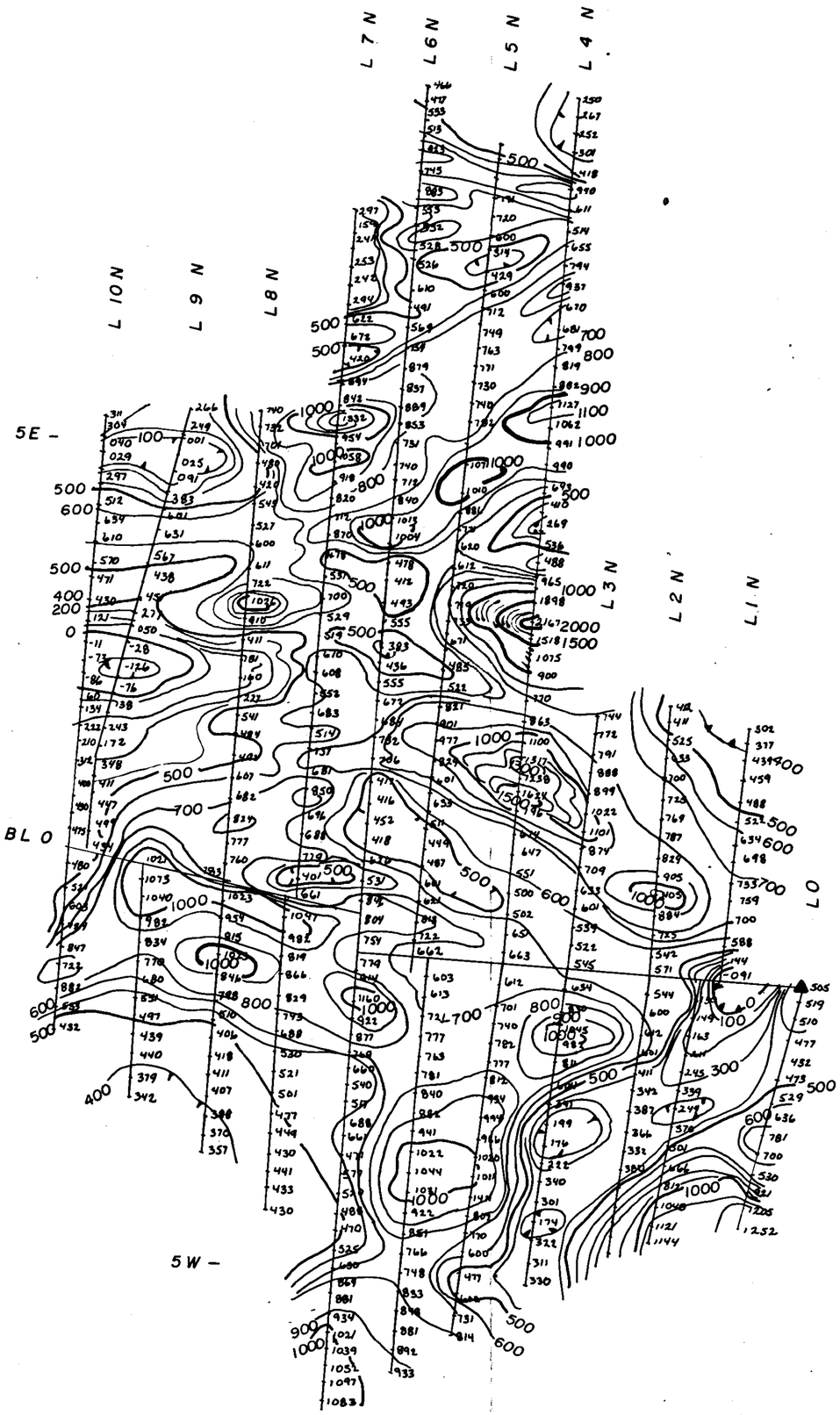
RAYMOND GRENIER

GORDON RIVER PROJECT

DETAILED PROSPECTING & GEOLOGICAL COMPILATION MAP

DATE: DEC. 1999	NTS: 92C/16
SCALE: 1: 5,000	FIG. NO: 2

99-18



LEGEND

EQUIPMENT USED: GEM SYSTEM GSM 8
PROTON PRECESSION MAGNETOMETER
READINGS ARE 55,000 GAMMAS PLUS
PLOTTED VALUES WHICH ARE CORRECTED
FOR DIURNAL VARIATION

▲ BASE STATION

MAGNETIC LOW

CONTOUR INTERVAL 100 GAMMAS

m 200 100 50 0 100 200 m

Scale: 1: 5,000

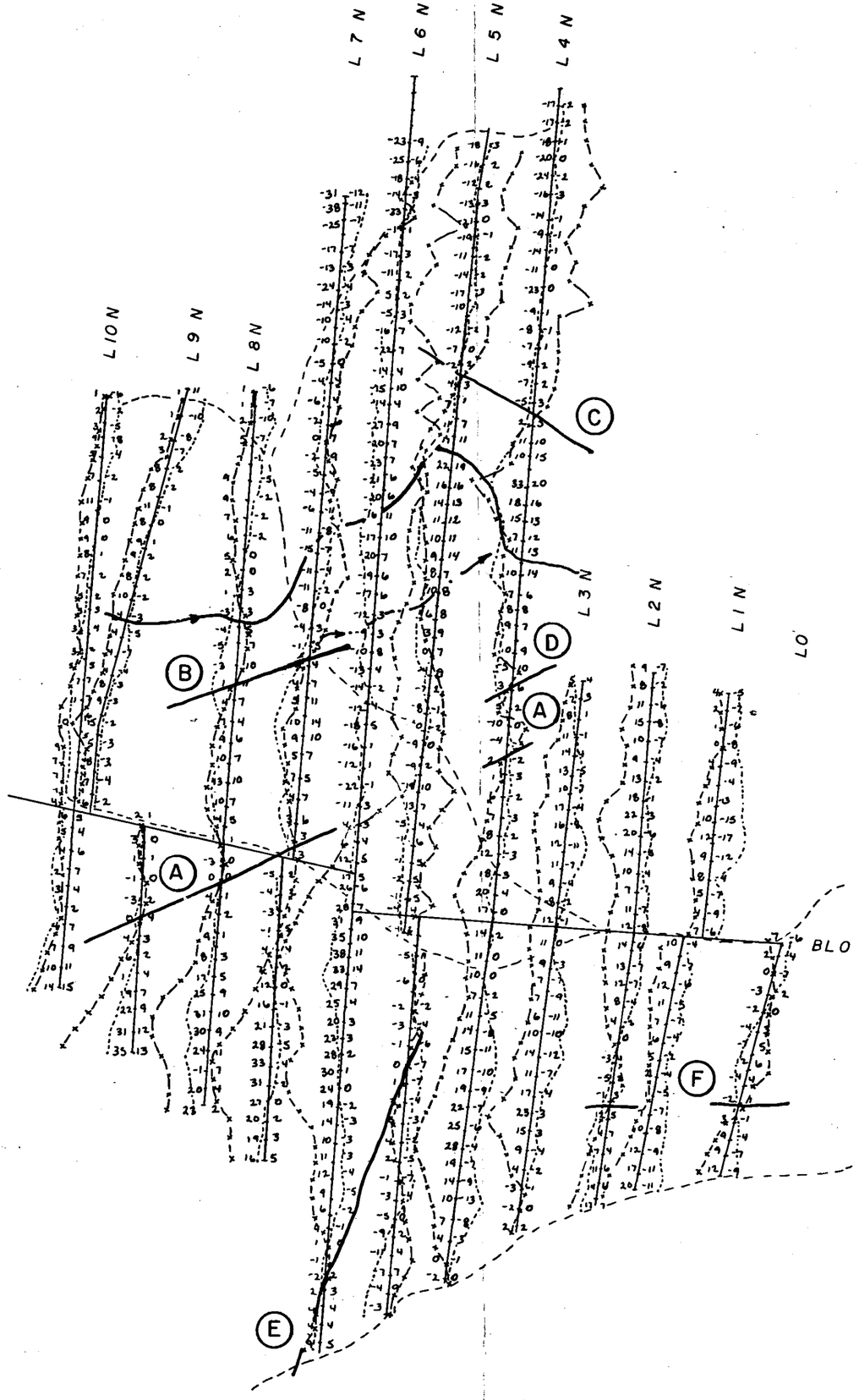
RAYMOND GRENIER

GORDON RIVER PROJECT

TOTAL FIELD MAGNETIC SURVEY

DATE: DEC, 1999	NTS: 92 C / 16
SCALE: 1: 5,000	FIG. NO: 3

99-18



LEGEND

PROFILE SCALE 1 cm = 20%

x——x IN PHASE READING - %

- - - - - QUADRATURE READING - %

\+ | -

5 | -5

I.P. % | QUAD %

(A) CONDUCTOR AXIS WITH LABLE

EQUIPMENT USED - GEONICS EM-16

STATION USED - SEATLE, WASH.

NLK - 24.8 kHz

READINGS COLLECTED FACING 060°

m 200 100 50 0 100 200m

Scale : 1: 5,000

RAYMOND GRENIER

GORDON RIVER PROJECT

VLF ELECTROMAGNETIC SURVEY

DATE: DEC, 1999	NTS: 92C / 16
SCALE: 1: 5,000	FIG. NO: 4

99-18