BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1998/99
REPORT #:	PAP 98-16
NAME:	ROBERT CAMPBELL

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 Robert A. Campbell Reference Number 98/99-P26

LOCATION/COMMODITIES

Project Area (as listed in Part A) Chemainus River MINFILE No. if applicable 092B-137

Location of Project Area NTS 092 B / 13 Lat 48°50'30" Long 123°53'00"

Description of Location and Access The project is located 12-19 Km west-southwest of Chemainus + access is via the MacMillan Bloedel Copper Canyon - Chemainus River logging road. For more detail see attached report.

Main Commodities Searched For Mn, Au, Fe, Cu, Zn, Mo, Ag + Pb in Mn minerals, magnetite, hematite, goethite, pyrite, pyrrhotite, arsenopyrite, chalcopyrite, bornite, moly, sphalerite + galena.

Known Mineral Occurrences in Project Area - the Poly 2 Mn-Ag Showing - 092B-137 + Regal Expandable Shale Showing - 092B-085 - see the attached report

WORK PERFORMED - also see the attached report

1. Conventional Prospecting (area) - 19 Km² - approximately 50 Km of traversing (10d)
2. Geological Mapping (hectares/scale) 1 Km² at scales of 1:250, 1:5,000 + 1:10,000 (1d)
3. Geochemical (type and no. of samples) rock - 7 samples; stream sediments - 33 samples (5d)
4. Geophysical (type and line km) VLF-EM Surveying - 12.8 line Km (6d); Magnetic Surveying - 12.8 Km (4d)
5. Physical Work (type and amount) Flagged Grid Establishment - 15.0 Km. (12d)
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify)

SIGNIFICANT RESULTS

Commodities Mn - rock; Mn + Au, Ag, Cu in seds Claim Name unstaked - former Poly 2 claim

Location (show on map) Lat 48°50'30" Long 123°53'00" Elevation 600 m

Best assay/sample type Mn - 5.22 + 2.65 % (outcrop samples 13119 + 13120); Stream Sediment Samples - Mn - 16,754 ppm, 51 ppb Au, 568 ppb Ag, 250.7 ppm Cu, 420.3 ppm Zn, 4.3 ppm Mo + 19.3 ppm Pb - see attached report + maps

Description of mineralization, host rocks, anomalies Mineralization - Poly 2 Showing - up to 10 % pyrolusite + goethite, trace limonite + hematite in chert breccia of the Fourth Lake Formation exposed in a small pit + trench.
- Cherty tuff of the Fourth Lk Fm - with a 0.7 m shear + 2 % pyrite + tr. galena.
- up to 1 % magnetite + pyrrhotite in granodiorite + diorite of the Hill 60 Pluton
Anomalies - numerous stream sediment, mainly in tributary of Solly Cr.; narrow magnetic highs + lows over the plutonic rocks; 9 VLF-EM conductive zones, representing 6 bedrock features - see the 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) - R. A. Campbell (98/99-P26)

LOCATION/COMMODITIES

Description of Location and Access

The project area is comprised of 19 square km. of open ground, located 12 to 19 km. west-southwest of the town of Chemainus and 9 to 14 km. west-northwest of Duncan in the southeast part of Vancouver Island, NTS 092 B/13. The Chemainus River flows through the west-central part of the project and along the southern boundary in the east. Second and third growth forest and numerous deadfalls cover the area explored. Topographical relief increases from the Chemainus River and its tributaries, to over 360 meters in the north-central region. Figure 1 shows the location, access and topography of the project area.

The MacMillan Bloedal Copper Canyon-Chemainus River gravel forestry road bisects the project area, from east to west, giving good access to the areas forming the northern parts of the project. This road follows the Chemainus River, crossing the eastern boundary, approximately 11 km. from the Chemainus turnoff on the Island Highway (see figure 1). Two logging roads, the Humbird Creek and a second road located 0.7 km. from the hydrolines, lead northward from the Copper Canyon-Chemainus River Road, crossing the northeastern part of the project area. Four deactivated logging roads also cross the northern regions. The Poly 2 Showing and the North Grid are best accessed by the road near the hydroline.

The southwestern corner of the project area, including the area of the South Grid, can be accessed via Highway 18, west from Sorenos on the Island Highway. Twelve km. from the intersection of the Island Highway and Highway 18, a logging road trends west-northwest, crossing the southwest boundary of the project 5 km. from the highway. A deactivated old logging road, east-southeast from the Copper Canyon-Chemainus road, 2 km. west of the western boundary, also crosses the southeastern half of the program area.

Main Commodities Searched For

The commodities explored for are Mn., Au, Fe, Cu, Zn, Mo, Ag and Pb within Mn minerals, magnetite, hematite, goethite, pyrite, pyrrhotite, arsenopyrite, chalcopyrite, bornite, sphalerite, molybdenite and galena.

Known Mineral Occurrences in the Project Area

The Poly 2 Mn-Ag Showing (092B-137) lies in the north-central part of the program area (UTM - 5411150 m.N. and 434225 m.E., latitude 48 degrees, 51 minutes & 13 seconds and longitude 123 degrees, 53 minutes & 48 seconds) in the west-central part of the North Grid. Prospector E. Specogna excavated 2 small trenches over the showing in 1986 (assessment report 14919). Limited sampling, in 1987 by Canamin Resources (assessment report 16906), indicated that the showing is comprised of Mn oxides in a quartz vein and Mn rich chert, with rhodonite along the margins of the vein. The 0.7 m. wide vein assayed 1.82 % Mn in up to 10 % pyrolusite and psilomelane. The wall rock, on both sides of the vein contained 7.16 and 9.24 % Mn. Silver assays of up to 1.3 g/tonne were also reported.

The Regal expandable Shale Showing (092B-085) was discovered in 1986 by Shalex, along the Copper Canyon - Chemainus River Road in the western part of the project. Tests indicated that the shale was suitable for use as a lightweight aggregate in cement making.

WORK PERFORMED

Conventional Prospecting

The project area, covering approximately 19 square km. (figure 1), was prospected, concentrating on areas of road cuts and trails, creeks and the two detailed flagged grids. Approximately 50 line km. of prospecting traverses were run during the 10 day conventional prospecting program, between May 26 and 29, on June 4, 5, and 18 and between July 6 and 8, 1998. During the prospecting program outcrop and boulder locations were found, mineralization, veining and alteration noted, the old workings were located, and topographical features mapped. Points of reference are lettered and flagged at various locations on the project area. The results of the prospecting are presented on Maps 1 (Prospecting, Geology & Geochemical Compilation) and 2 (Detailed Prospecting, Geology & Geochemical), at scales of 1:10,000 and 1:5000, respectively.

Geological Mapping

Between June 19 and 22 and July 9 and 11, 1998, 7 field days were spent mapping all outcrop exposures, boulders, mineralization, veining deformation and alteration observed. Approximately 100 hectares were covered by mapped outcrop. The data collected in the geological mapping program is compiled in Map 1 (scale 1:10,000), showing the whole project area, and in figures a, b and c on Map 2, detailing the North Grid (scale 1:5,000), the South Grid (scale 1:5,000) and the Poly 2 Showing (scale 1:250), respectively.

Geochemical Surveying and Rock Sampling

Thirty-three stream sediment/silt samples were collected at 100 to 150 meter intervals: along the tributary to Solly Creek, near the Poly 2 Showing (samples R-01 to R-20); in Humbird Creek, in the northeast (samples R-21 to R-28); in a tributary flowing into the Chemainus River, between Solly and Humbird Creek (samples R-30 to R-33); and in an intermittent creek in the south-central region (sample R-29). A total of 5 days were spent, on June 6, 7, 9, 11 and 12, 1998, collecting the stream sediment/silt samples. The tributary of Solly Creek flows east-southeast to east, 700 meters north and east of the Poly 2 Showing, in the Mn rich Fourth Lake Formation sediments of the Buttle Lake Group. The samples collected in the western 1.4 km. of the tributary of Solly Creek, the tributary of the Chemainus River and the intermittent creek are thought to be underlain by these Fourth Lake Formation sediments. The samples collected in the eastern part of the tributary of Solly Creek and in Humbird Creek are underlain by sediments of the Benson and Halsam Formations, respectively, of the Nanaimo Group.

The samples were dried and sent to Acme Analytical Laboratories Ltd. in Vancouver. At the lab 30 gm. of each sample were sieved to 80 mesh. Twenty-three samples were digested by aqua regia (samples R-01 to R-18 and R-29 to R-33, thought to be underlain by the Fourth Lake Group sediments) and 34 element (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, W, Tl, Hg, Se, Te, and Ga) ICP analysis was performed. Au assaying was completed on these 23 samples, using the graphite furnace and the atomic absorption method of analysis. Because such low detection limits were not needed for the other 10 samples (R-19 to R-28) these samples were digested by 4 acids and thirty-five element ICP analysis was completed for 35 elements, those 34 listed above plus gold analysis.

Between June 19 and 22, and July 9 and 11, 1998, while the geological mapping was being completed, 7 grab outcrop samples were collected of: sulphide mineralization; magnetite; Mn oxide; quartz-carbonate veining and alteration. At the Acme lab, 15 element (Mo, Cu, Pb, Zn, Ag, Ni, Mn, Fe, As, U, Th, Cd, Sb, and Bi) ICP analyses were performed on all 7 of the samples. Five samples (13121 to 13125), which were collected in rocks favorable to Au deposition, were also assayed for Au using the fire assay method.

The rock sample descriptions are shown in Table 1. The analysis/assay certificates for the stream sediments/silts and rock samples are included in Appendix 1.

Geophysical Surveying

Magnetic Survey

The total field magnetic survey was completed along the 12.8 km of flagged crosslines, during 4 days on June 13 and 14 and on July 2 and 5, 1998. A Gem Systems GSM 8 proton precession magnetometer was used to collect approximately 525 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 magnet ic 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. Base stations, for determining the magnetic diurnal variations, were established on line 5E at 4+50N (North Grid) and on line 3E at 15+75S (South Grid). The total field readings, corrected for diurnal variations and minus a base value of 55,000 gammas, were plotted in Figures 3a and 3b on Map 3 at scales of (1:5,000). In Figure 3a, of the North Grid, the magnetic values were contoured at 25 gamma intervals while in Figure 3b, of the South Grid, the values were contoured every 50 gammas.

VLF-Electromagnetic Survey

The very low frequency-electromagnetic surveys were completed using a Geonics EM-16 unit. Six days were spent collecting approximately 525 readings at 25 meter stations along the 12.8 km of crosslines, on June 15, 16, 17 and 30 and on July 1 and 4, 1998.

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 023 degrees.

The VLF-EM in-phase and quadrature data collected was plotted in percent in Figures 4a (North Grid) and 4b (South Grid) on Map 4 at a scales of 1:5,000. These values were then profiled at a scales of 1 cm. equals 10 %. The conductor axes were determined and given labels, A, B, C. etc. No priority or significance was attached to the labeling system.

Physical Work - Grid Establishment

A total of 15.0 km of grid lines were established, during 12 field days, by marking and flagging stations at 25 meter intervals at two grid locations on the project area. In the north-central part of the project, 7.1 km. of line flagging was completed covering 1.8 sq. km. that encloses the Poly 2 Showing and along strike in the Fourth Lake Formation sediments. The baseline was flagged at 115 and 295 degrees from the Poly 2 Showing. Crosslines were run at 025 and 205 degrees, at 200 and 300 meter intervals along the baseline. This work was completed between May 30 and June 3,1998 and the grid is labeled the North Grid on the accompanying maps and in the following pages.

In the south, 7.9 km. of grid lines (the South Grid) were also flagged and marked between June 23 and 29, 1998. This South Grid covers approximately 1.2 sq. km. over the Hill 60 plutonic rocks and the east end of a narrow band of Fourth Lake Formation in the south and central parts of the grid and Halsam Formation sediments in the north. The baseline was run at 120 degrees for 600 meters, approximately 500 meters south of the Chemainus River. Four crosslines were established at 150 and 300 meter intervals at 210 degrees from the baseline. A tieline was flagged from line 3E to 6E at 4+50S.

SIGNIFICANT RESULTS

Best Assay/Analysis & Sample Type

Sample No.	Type of Sample Collected	Best Assay or Analytical Result
13119	grab of outcrop	5.22 % Mn.
13120	grab of outcrop	2.65 % Mn.
13122	grab of outcrop	0.002 oz/ ton Au.
R-11	stream sediment/silt	51 ppb Au.
R-13	stream sediment/silt	19.3 ppm Pb.
R-17	stream sediment/silt	16,754 ppm Mn, 568 ppb Ag, 100.3 ppm. Zn & 4.3 ppm Mo.
R-18	stream sediment/silt	250.7 ppm Cu.
R-24	stream sediment/silt	7.22 % Fe.

The best assay/analysis locations and results are denoted on enclosed Maps 1 and 2.

<u>*Description of Mineralization, Host Rocks, Anomalies*</u>

<u>Prospecting, Geological Mapping and Outcrop Sampling</u>

Outcrop exposure in the areas prospected can be considered to be moderate, with sedimentary rocks mapped at numerous locations in the project area. Mafic and felsic intrusive rocks were also found in the north-central, south-central and southwest regions. Outcrops of cherty tuff and breccia, shale, argillite, and siltstone of the Fourth Lake Formation form a 1 to 1.5 km. wide band striking east east-southeast across the central part of the project. The cherty tuff and breccia are exposed in the north-central region at the Poly 2 Showing and cherty tuff outcrops at two locations along the Copper Canyon-Chemainus River road near Solly Creek and 1 km. to the west of the creek. The argillite, siltstone and shale outcrops lie near the hydroline and along the road, surrounding the outcrops of cherty tuff.

East of the band of sediments of Fourth Lake Formation, siltstone, argillite, greywacke and pebble conglomerate outcrop between the hydroline and Solly Creek, suggesting that Benson Formation sediments lie along the eastern side of the Fourth Lake Formation. These Benson Formation rocks appear to be in contact, to the east, with sediments of the Halsam Formation, as defined by exposures of siltstone, argillite and shale along Humbird Creek and the Humbird Creek logging road in the eastern part of the project area. Outcrops of gabbro and diorite lie in the central part of the program area, indicating that a 300 meter wide sill of Mount Hall Gabbro is in contact with the west side of the band of Fourth Lake Formation sediments, south of the North Grid. A second, northern sill of Mount Hall Gabbro outcrops (gabbro and diorite) just north of the north-central boundary, along the northeast edge of the band of Fourth Lake Formation sediments.

West of the southern sill of Mount Hall Gabbro, in the west and northwest parts of the project area, sedimentary rocks are exposed along the Copper Canyon Chemainus River road and deactivated logging roads north and south of the Chemainus River. The sedimentary rocks are comprised of shale, siltstone, argillite, pebble and granule conglomerate and greywacke of the Nanaimo Group. The conglomerate and shale outcrops west of the sill of Mount Hall Gabbro, suggesting that western Benson and Extension Formation rocks lie west of the sill, striking southeast through the part of the project, probably intercalated with bands of shale of the Halsam and Protection Formations. The western areas appear to be underlain by Halsam Formation sediments, southwest of the Benson and Extension conglomerates, since shale, siltstone and argillite outcrops along the Chemainus River and the deactivated road south of the river.

In the southwest corner of the project, large exposures of intrusive rocks delineate the position of the Hill 60 Pluton. Granite, granodiorite and diorite form a southeast trending intrusion, in contact with the Halsam Formation sediments to the north. Granodiorite outcrops predominate, grading into granite and diorite and containing xenoliths of Sicker Group massive andesite flows.

Small outcrops of quartz feldspar porphyry were mapped in or near exposures of Mount Hall Gabbro and Fourth Lake Formation sediments, just north of the northern boundary and near the hydroline, respectively.

Folding and faulting is exhibited at locations along the Chemainus River and along the logging road in the central part of the project. The cherty tuff outcrops of the Fourth Lake Formation located in the central region and along the Copper Canyon-Chemainus River road at Solly Creek are cut by south striking and up to 1 meter wide shear zones. The large outcrops of Nanaimo Group along the cliffs, north and south of the river in the west, appear to be faulted and folded.

Mineralization is mainly confined to the cherty tuff and breccias of the Fourth Lake Formation and the rocks of the Hill 60 Pluton. The detailed grids were flagged to cover the Poly 2 Showing in the north and the Hill 60 Pluton and the contacts with the sediments in the southwestern region, which had the best potential to host mineralization.

At the Poly 2 Showing, a western trench and eastern pit were exposed in a 100 meter long outcrop of cherty tuff and breccia. This outcrop is comprised of lineated cherty tuff striking east to east-southeast and dipping 45 to 80 degrees to the north. In the northern part of the outcrop of tuff, a zone of breccia, less than 5 meters wide, surrounds a 0.7 by 2.7 meter lense of quartz. The tuff is moderately to highly fractured and is cut by numerous quartz veins. The trench is 1 meter wide, 4 meters long and 1 meter deep, exposing the quartz lense cutting the fractured cherty breccia. The lense contains fragments of breccia host rock and less than 1 % pyrolusite and goethite (sample 13121) and the surrounding fractured breccia in the trench hosts up to 5 % pyrolusite and goethite and trace limonite and hematite (sample 13120). The circular 1.5 by 1.5 meter pit, 2 km. east of the trench, contains fractured cherty breccia, mineralized with up to 10 % pyrolusite and goethite and trace limonite and hematite on the fracture and lamalli planes (sample 13119). As expected the more mineralized breccia in the east pit (sample 13119) assayed 5.22 % Mn with the less mineralized breccia and lense within the trench containing 2.65 and 0.37 % Mn, in samples 13120 and 13121, respectively. There was less than 0.01 oz/ton Ag in the 3 samples and the vein assayed less than 0.001 oz/ton Au.

The sheared cherty tuff of the Fourth Lake Formation, that outcrops along the road near Solly Creek, is mineralized with 2 to 5 % pyrite in blebs and stringers and trace galena. The 0.7 meter wide and south striking shear is chlorite and limonite rich and assayed 0.02 oz/ton Au (sample 13122).

The granodiorite and diorite of the Hill 60 Pluton, exposed in the southwest part of the South Grid, is slightly mineralized. The granodiorite contains up to 1 % magnetite (sample 13124) and the diorite trace to 1% pyrrhotite (sample 13123). A xenolith of andesite within the granodiorite was shown to host quartz-carbonate stringers (sample 12125). The assay results for these three samples were low.

Geochemical Stream Sediment/Silt Survey

The analytical data collected in the stream sediment/silt survey shows that all 33 samples contain anomalous to very high amounts of Mn, 502 to 16,754 ppm. Twenty-four of these samples, including 15 samples along the tributary of Solly Creek, all the samples in Humbird Creek and 1 of the samples obtained in the tributary of the Chemainus River, exhibited values of over 1000 ppm Mn. The highest concentration of Mn, as expected, was in the tributary of Solly Creek underlain by the Fourth Lake Formation sediments in the north-central part of the project, 0.7 to 1 km. east of the Poly 2 Showing. The very high value of 16,754 ppm Mn, in sample R-17, was situated 0.7 km. east of the showing and samples R-16 and R-15, of 4648 and 6031 ppm Mn, were collected 100 and 200 meters downstream from sample R-17. Anomalous values of 568 ppm Ag, 100.3 ppm Zn, and 4.3 ppm Mo were also found in sample R-17. Samples R-18, R-13 and R-11, also in this tributary, contained 250.7 ppm Cu, 19.3 ppm Pb and 51 ppb Au, respectively. The closest outcrops to these samples are Fourth Lake Formation sediments: cherty tuff and breccia at the Poly 2 Showing to the west; and shale intruded by quartz feldspar porphyry and in contact with Benson Formation conglomerates to the east. The highest Fe result, of 7.22 % Fe, lies in Humbird Creek, in an area underlain by Halsam formation siltstone, argillite and shale.

The above-mentioned geochemical surveying results indicate that the rocks underlying area are rich in Mn. The high to very high Mn values, in the tributary of Solly Creek, proves that potential Mn mineralization lies upstream and in the vicinity of these samples collected in the North grid, underlain by the sedimentary rocks of the Fourth Lake Formation. Anomalous Au, Ag, Pb, Mo, Cu and Zn results also show that precious and base metal mineralization may also lie within these rocks underlying the north-central part of the project area.

Magnetic Surveying - North Grid

The magnetic values are low, generally less than 55,500 gammas, exhibiting low relief of 25 to 100 gammas in the area of the North Grid. Because of the high magnetic gradient beneath the hydroline no readings were obtained in this area. The magnetic contours strike east-southeast across the grid, forming narrow weak highs and lows. The only outcrop exposed in the areas surveyed are the polyclastic cherts hosting the Poly 2 Showing. The magnetic results prove that the rocks underlying the North Grid are homogeneous with low magnetic susceptibilities and low magnetite content, suggesting that the cherty tuff-breccia may underlie the area surveyed. The weak high delineated in the south-central part of the grid may be caused by the sill of Mount Hall Gabbro, lying just south of the grid.

The Poly 2 Showing lies in an area of low magnetic relief and expression. There is no particular magnetic signature over the showing. The tributary of Solly Creek, containing the high Mn and anomalous base and precious metal geochemical values, lies in small and weak magnetic highs and lows, southwest of the hydroline.

Magnetic Surveying - South Grid

The magnetic contour pattern is complex in the southern part of the South Grid, exhibiting a local relief of up to 800 gammas. The magnetic values in the southern 1/3 of this grid, vary from 160 to 1119 gammas, forming a contour pattern striking east to east-southeast across this region. Outcrops of granite, granodiorite, diorite and andesite xenoliths of the Hill 60 Pluton have been mapped here. The narrow highs in the southern part of the South Grid could be caused by narrow zones of diorite, andesite xenoliths or pyrrhotite-magnetite mineralization in the granites and granodiorites. The lows lying due north of the stronger highs, appear to be the result of the dipolar nature of magnetism, with the highs producing the lows to the north. The lows, not associated with highs to the south, may represent granitic zones with little magnetite or mafic minerals.

The contact between the Hill 60 Plutonic rocks and sediments to the north, is well defined by the magnetic results. North of the complex pattern of highs and lows in the south, the values are low, with little relief. The values in the northern 2/3 of the grid are indicative of homogeneous sedimentary rocks of the Halsam Formation-shales, argillite and siltstone. The contact between the sediments and plutonic rocks, as represented by the change from high to low relief, strikes east-southeast across the grid, between 12 and 13S.

VLF-Electromagnetic Survey

The data collected in the very low frequency-electromagnetic survey delineated 19 individual crossovers forming 9 conductive zones (A to I) on the 2 grids. Zones A to E cross the North Grid and Zones F to I were outlined crossing the South Grid. It appears that 6 of the 9 conductive zones could represent bedrock features, such as contacts, shears and faults. Descriptions of each conductive zone are presented on the following page:

Zone A is a moderate strength conductor, lying along the tributary of Solly Creek, containing the high and anomalous geochemical values and within weak magnetic highs and lows. This zone could represent a possible shear or fault zone in Fourth Lake Formation sediments.

Zone B is a moderate strength conductor in a weak magnetic high. It may be caused by a shear in Fourth Lake Formation sediments.

Zone C is situated in a weak magnetic high, exhibiting weak to moderate strength and possibly delineating a potential weak shear in the sediments of the Fourth Lake Formation.

Zone D is a weak strength conductor, within a weak magnetic low and lying along a hill. This anomaly appears to be the result of an underlying change in topographical relief.

Zone E is a weak strength conductor, located along the edge of a hill, 150 meters south of the Poly 2 Showing. It crosses the magnetic contour pattern and appears to represent the change in topographical relief.

Zone F is positioned near outcrop of the Hill 60 Pluton, along the side of a hill. This zone is weak in strength and is positioned within a high and low. It appears that Zone F could represent the change in topographical relief.

Zone G is a weak strength conductor in weak magnetic highs and lows, representing a possible, weak shear in sediments of the Fourth Lake Formation.

Zone H crosses a weak magnetic high and is weak to moderate in strength. It may define the contact between the plutonic rocks to the south and the sediments to the north.

Zone I is a weak strength conductor, located in a weak magnetic low. It could be caused by a weak shear in the Halsam Formation sediments.

TABLE 1 - Rock Sample Descriptions

Sample No.	Type	Sample Descriptions
13119	grab	Chert breccia in the eastern pit of the Poly 2 Showing, moderately to highly fractured with the chert lamilli and fractures filled with 5 - 10 % pyrolusite and goethite, trace limonite and specular hematite.
13120	grab	Chert breccia in the western pit of the Poly 2 Showing, moderately to highly fractured with up to 5 % pyrolusite and goethite on the fracture planes and chert lamalli planes, trace specular hematite and limonite. Collected near the quartz lense.
13121	grab	White quartz lense with minor fragments of chert host rock, less than 1 % pyrolusite and goethite.
13122	grab	Cherty tuff containing a 0.7 meter wide shear zone, chlorite and limonite rich, 2 to 5 % pyrite in blebs and stringers of pyrite and trace galena.
13123	grab	Medium grained diorite, light gray in color with epidote on the fracture planes, trace to 1 % pyrrhotite.
13124	grab	Fine grained granodiorite, with up to 1 % magnetite, fractured near the contact with a large andesite zenolith.
13125	grab	Massive andesite xenolith in granodiorite, light gray-green in color, contains quartz-carbonate stringers, no apparent sulphides.

APPENDIX 1

GEOCHEMICAL AND ROCK
ANALYSES & ASSAY 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.)

GEOCHEMICAL EXTRACTION-ANALYSIS CERTIFICATE

Campbell, Robert PROJECT CHEMAINUS RIVER File # 9805047

413 Victoria Road, Nanaimo BC V9R 4R2 Submitted by: Rob Campbell

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm
R-01	1.0	60.8	9.2	57.3	142	25	16	846	2.96	16.6	<5	<2	20	.23	.5	<.2	73
R-02	1.2	72.8	7.2	72.9	156	32	18	502	3.84	23.3	<5	<2	16	.11	.5	<.2	97
R-03	1.0	58.4	7.4	50.8	126	25	15	677	2.73	14.2	<5	<2	18	.19	.5	<.2	66
R-04	1.1	74.2	11.3	96.5	246	29	24	1982	3.32	19.2	<5	<2	32	.42	.8	<.2	76
R-05	1.0	71.7	11.6	84.3	213	28	18	1003	3.29	19.2	<5	<2	25	.28	.6	<.2	78
R-06	1.0	65.5	12.3	69.4	170	25	18	1113	2.95	17.9	<5	<2	29	.30	.7	<.2	70
R-07	.8	42.2	6.2	68.2	78	20	19	1245	3.76	13.6	<5	<2	12	.10	.4	<.2	70
R-08	1.0	75.4	11.2	71.8	215	29	20	924	3.53	21.0	<5	<2	25	.27	.8	<.2	83
R-09	1.2	93.3	12.3	76.7	425	37	25	1312	3.90	24.6	<5	<2	28	.41	.7	<.2	85
R-10	1.0	75.1	12.7	69.5	209	30	20	1097	3.42	19.6	<5	<2	28	.32	.7	<.2	81
R-11	1.3	92.4	14.0	72.1	403	28	29	1931	2.88	17.4	<5	<2	32	.53	.5	<.2	62
R-12	2.0	102.3	15.9	64.8	331	26	41	2748	2.57	19.3	<5	<2	37	.86	.8	<.2	57
R-13	1.8	111.6	19.3	58.5	389	24	46	2872	2.48	18.4	<5	<2	45	.88	.8	<.2	54
R-14	1.8	124.1	6.2	76.6	466	42	46	1290	2.92	25.1	<5	<2	23	.31	.5	<.2	65
RE R-14	1.8	126.0	6.2	75.3	510	41	47	1284	2.90	25.7	<5	<2	23	.32	.5	<.2	65
R-15	2.3	118.1	15.8	67.1	312	23	57	4648	3.03	23.2	<5	<2	38	1.04	.7	<.2	63
R-16	2.6	111.8	14.2	67.8	339	24	52	6031	3.23	28.2	<5	<2	33	1.12	.9	<.2	65
R-17	4.3	191.6	12.0	100.3	568	40	84	16754	4.00	43.2	<5	<2	35	1.99	.8	<.2	79
R-18	1.7	250.7	5.5	47.4	391	22	18	526	2.50	31.6	<5	<2	19	.26	.7	<.2	77
R-29	1.0	51.9	6.3	59.6	182	27	19	890	3.38	19.4	<5	<2	21	.15	.5	<.2	86
R-30	.7	42.7	10.9	91.2	139	44	23	943	3.18	6.6	<5	<2	33	.16	.3	<.2	75
R-31	.7	40.9	11.2	89.0	134	43	23	899	3.20	5.8	<5	<2	31	.15	.4	<.2	78
R-32	.7	44.1	14.0	98.1	162	46	25	1179	3.25	7.0	<5	<2	40	.19	.4	<.2	75
R-33	.7	52.5	7.3	70.9	136	37	19	768	3.88	6.6	<5	<2	32	.13	.4	<.2	114
STANDARD	22.3	112.6	87.8	240.7	1958	30	16	991	4.01	74.4	20	19	51	2.19	8.8	17.9	71

SAMPLE#	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm	Au+ ppb
R-01	.40	.046	7	28	.69	126	.09	<3	2.37	.01	.03	<2	<.2	47	.4	<.2	5.4	5
R-02	.30	.049	7	32	.79	134	.12	<3	2.96	.01	.04	<2	<.2	62	.3	<.2	7.7	2
R-03	.42	.053	9	25	.64	103	.08	3	2.30	.01	.03	<2	<.2	64	.3	<.2	5.4	3
R-04	.74	.073	13	27	.73	177	.08	<3	2.79	.01	.04	<2	<.2	174	.5	<.2	6.0	3
R-05	.56	.064	11	30	.73	154	.08	<3	2.78	.01	.04	<2	<.2	60	.5	<.2	6.5	3
R-06	.68	.054	12	27	.67	151	.08	3	2.48	.01	.03	<2	<.2	53	.4	<.2	5.5	2
R-07	.23	.062	4	24	.74	71	.09	<3	1.87	.01	.03	<2	<.2	27	<.3	<.2	5.4	3
R-08	.55	.054	10	33	.73	159	.07	<3	2.80	.01	.04	<2	<.2	74	.4	<.2	5.9	3
R-09	.61	.068	12	35	.77	204	.07	<3	3.39	.01	.04	<2	<.2	107	.8	<.2	6.9	3
R-10	.61	.058	12	32	.75	166	.08	<3	2.74	.01	.04	<2	<.2	43	.4	<.2	5.7	3
R-11	.76	.065	16	29	.54	193	.07	3	2.91	.01	.05	<2	<.2	111	.9	<.2	5.3	51
R-12	1.01	.074	21	24	.50	176	.06	3	2.87	.01	.04	<2	<.2	154	1.8	<.2	5.1	4
R-13	1.29	.084	27	22	.44	191	.05	4	2.97	.01	.03	<2	<.2	170	2.2	<.2	4.3	3
R-14	.57	.084	15	31	.58	154	.07	<3	4.61	.01	.03	<2	<.2	169	1.4	<.2	6.2	5
RE R-14	.57	.086	14	31	.57	154	.08	4	4.65	.01	.03	<2	<.2	159	1.6	<.2	6.5	3
R-15	1.12	.077	22	25	.46	192	.06	<3	2.82	.01	.03	<2	<.2	170	2.2	<.2	4.7	3
R-16	.97	.073	18	24	.45	194	.06	<3	2.65	.01	.03	<2	<.2	177	2.1	<.2	4.6	17
R-17	.99	.102	25	27	.52	430	.04	<3	3.40	.01	.03	<2	<.2	210	2.5	<.2	5.3	6
R-18	.51	.045	15	28	.51	116	.08	3	2.76	.01	.02	<2	<.2	47	.7	<.2	8.4	4
R-29	.39	.046	10	32	.75	147	.10	<3	2.62	.01	.04	<2	<.2	40	.4	<.2	6.3	18
R-30	.50	.059	9	38	.83	124	.03	3	2.18	.01	.06	<2	<.2	59	.6	<.2	5.6	3
R-31	.46	.050	9	37	.80	121	.03	3	2.17	.01	.06	<2	<.2	63	.5	<.2	5.8	3
R-32	.62	.076	10	39	.84	151	.02	<3	2.34	.01	.07	<2	<.2	98	.4	<.2	6.0	20
R-33	.62	.060	9	44	.99	123	.09	<3	2.24	.02	.05	<2	<.2	43	.4	<.2	6.5	1
STANDARD	.70	.105	15	50	1.09	230	.12	26	2.19	.04	.61	12	1.9	917	.5	1.8	6.6	43

Standard is STANDARD D2/C3/AU-S.

ICP - 15 GRAM SAMPLE IS DIGESTED WITH 90 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 300 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 GA AND AL. SOLUTION ANALYSED DIRECTLY BY ICP. MO CU PB ZN AG AS AU CD SB BI TL HG SE TE AND GA ARE EXTRACTED WITH MIBK-ALIQUAT 336 AND ANALYSED BY ICP. ELEVATED DETECTION LIMITS FOR SAMPLES CONTAIN CU,PB,ZN,AS>1500 PPM,Fe>20%.
- SAMPLE TYPE: SILT AU+ - AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: NOV 12 1998 DATE REPORT MAILED: Nov 20/98 SIGNED BY. . . . . D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data I FA ___

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Campbell, Robert PROJECT CHEMAINUS RIVER File # 9805046
413 Victoria Road, Nanaimo BC V9R 4R2 Submitted by: Rob Campbell

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 %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm
R-19	<2	83	17	98	<.5	33	21	1172	4.85	34	<10	<4	3	210	.7	<5	5	180	1.98	.073	19	62	1.17	578	.71	6.98	1.50	.82	<4	24	<2	27	6	<1	16
R-20	2	82	15	93	<.5	34	22	1075	4.81	32	<10	<4	3	194	.7	<5	5	172	1.84	.071	18	60	1.16	562	.65	6.75	1.38	.78	<4	25	<2	25	7	<1	15
R-21	<2	52	7	81	<.5	36	22	1424	7.13	15	<10	<4	4	310	.5	<5	<5	273	3.01	.061	18	75	1.60	617	1.35	6.71	2.01	1.08	<4	30	<2	23	14	<1	16
R-22	<2	53	7	82	<.5	36	24	1418	6.73	7	<10	<4	4	302	<.4	<5	<5	260	2.86	.066	20	71	1.57	636	1.19	7.05	2.03	1.10	<4	30	<2	24	14	<1	16
R-23	<2	47	5	72	<.5	34	21	1248	6.02	8	<10	<4	4	323	<.4	<5	<5	231	2.91	.062	19	67	1.52	650	1.10	7.05	2.14	1.12	<4	34	<2	23	13	<1	16
RE R-23	<2	47	<5	90	<.5	34	20	1267	6.03	8	<10	<4	2	321	.8	<5	<5	230	2.92	.062	17	67	1.54	640	1.08	7.09	2.13	1.11	<4	27	<2	21	11	<1	16
R-24	<2	59	5	76	<.5	34	22	1485	7.22	7	<10	<4	3	319	.8	<5	<5	261	3.06	.062	19	74	1.58	619	1.35	6.79	2.08	1.06	<4	28	<2	23	13	<1	17
R-25	<2	45	8	76	.5	37	23	1327	5.91	9	<10	<4	3	306	1.0	<5	<5	231	3.19	.051	18	65	1.75	586	1.16	6.52	1.93	1.02	<4	25	<2	22	13	<1	18
R-26	<2	52	8	74	.6	34	21	1405	7.09	<5	<10	<4	3	311	.8	<5	<5	265	2.93	.059	18	73	1.52	604	1.30	6.77	2.06	1.05	<4	29	<2	22	14	<1	16
R-27	<2	49	<5	72	<.5	36	21	1460	7.08	6	<10	<4	3	314	.6	<5	<5	271	3.09	.060	20	77	1.60	606	1.41	6.65	2.01	1.06	<4	27	<2	24	16	<1	16
R-28	<2	61	<5	76	<.5	35	20	1233	5.86	6	11	<4	6	298	.7	<5	<5	222	2.74	.062	19	69	1.56	647	1.02	6.95	1.96	1.06	<4	29	<2	22	12	<1	16
STANDARD CT3	26	69	45	184	6.1	38	13	933	4.05	58	28	<4	27	235	23.1	22	21	132	1.51	.102	25	251	.89	1029	.39	7.25	1.91	2.10	29	44	19	17	16	4	8
STANDARD G-2	2	7	24	56	<.5	6	5	749	2.45	9	<10	<4	8	785	.4	<5	<5	55	2.81	.096	25	73	.68	1012	.25	8.66	3.01	3.45	<4	7	<2	19	17	1	5

ICP - .250 GRAM SAMPLE IS DIGESTED WITH 10ML HCLO4-HNO3-HCL-HF AT 200 DEG. C TO FUMING AND IS DILUTED TO 10 ML WITH DILUTED AQUA REGIA. THIS LEACH IS PARTIAL FOR MAGNETITE, CHROMITE, BARITE, OXIDES OF AL,W,ZR & MN AND MASSIVE SULFIDE SAMPLES. AS, CR, SB, AU SUBJECT TO LOSS BY VOLATILIZATION DURING HCLO4 FUMING.
- SAMPLE TYPE: SILT Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: NOV 12 1998 **DATE REPORT MAILED:** Nov 20/98 **SIGNED BY**.......D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Data __ FA ____

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

Campbell, Robert PROJECT CHEMAINUS RIVER File # 9805048
413 Victoria Road, Nanaimo BC V9R 4R2 Submitted by: Rob Campbell

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag oz/t	Ni %	Co %	Mn %	Fe %	As %	U %	Th %	Cd %	Sb %	Bi %	Au** oz/t
13119	<.001	.001	<.01	<.01	<.01	.016	.001	5.22	1.16	.01	<.01	<.01	<.001	.003	<.01	-
13120	<.001	.002	<.01	<.01	<.01	.008	.001	2.65	.83	<.01	<.01	<.01	<.001	<.001	<.01	-
13121	<.001	.001	<.01	<.01	<.01	.001	<.001	.37	.37	<.01	<.01	<.01	<.001	<.001	<.01	<.001
13122	.001	.012	<.01	<.01	<.01	.003	.001	.06	4.46	.01	<.01	<.01	<.001	<.001	<.01	.002
RE 13122	.001	.012	<.01	<.01	<.01	.004	.001	.06	4.46	.01	<.01	<.01	<.001	.001	<.01	<.001
13123	<.001	.001	<.01	.01	<.01	<.001	.001	.13	4.13	<.01	<.01	<.01	<.001	<.001	<.01	<.001
13124	<.001	.002	<.01	.01	.01	.001	.002	.08	4.57	<.01	<.01	<.01	<.001	<.001	<.01	<.001
13125	<.001	.004	<.01	.01	.01	.004	.002	.09	3.91	<.01	<.01	<.01	<.001	<.001	<.01	.001
STANDARD R-1/AU-1	.087	.843	1.29	2.27	2.91	.027	.025	.09	6.60	.95	.01	.01	.045	.168	.03	.096

1.000 GM SAMPLE DIGESTED IN 30 ML AQUA - REGIA, DILUTE TO 100 ML, ANALYSIS BY ICP.
- SAMPLE TYPE: ROCK AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: NOV 12 1998 **DATE REPORT MAILED:** Nov 20/98 **SIGNED BY**.......... D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

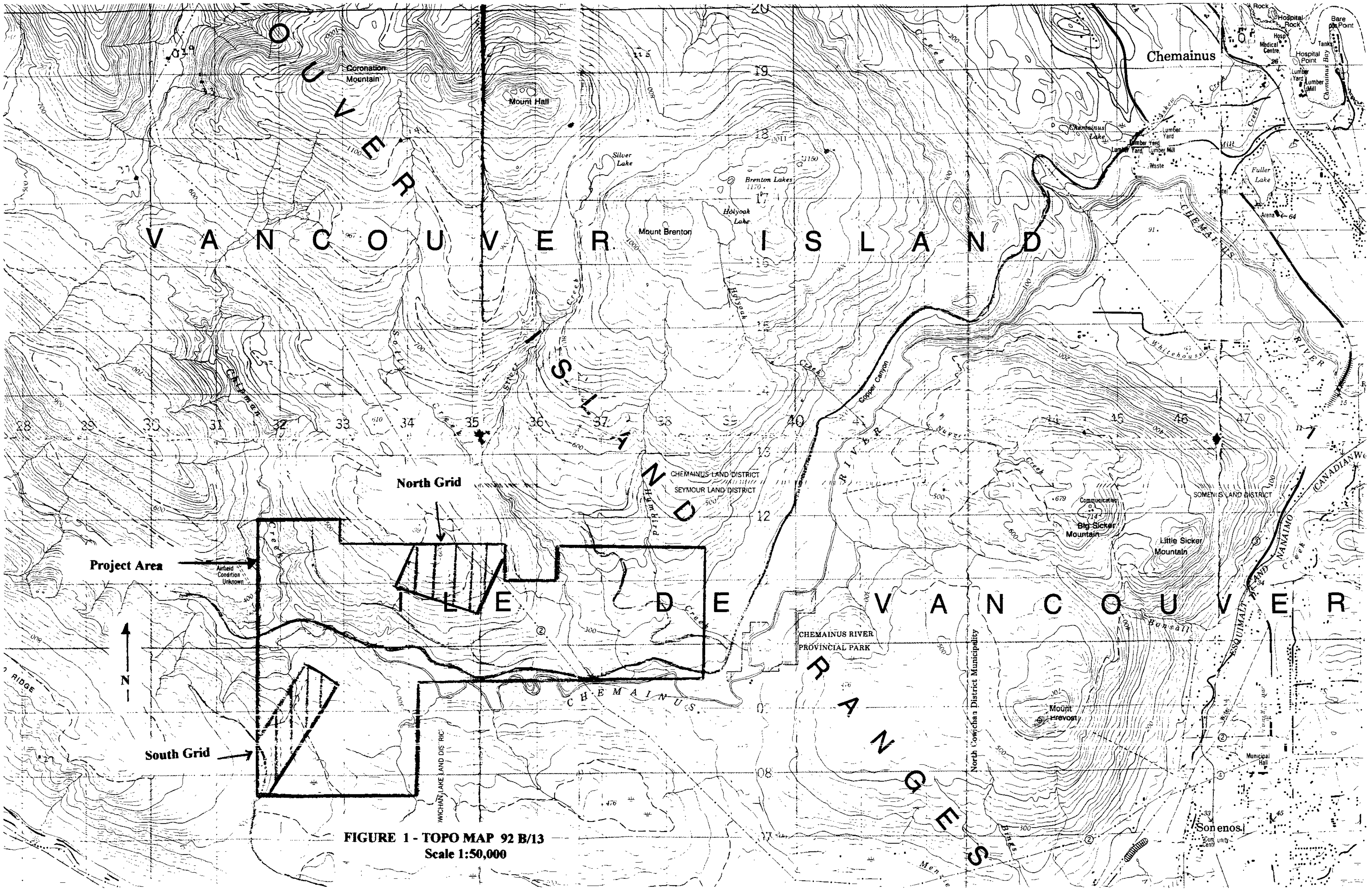


FIGURE 1 - TOPO MAP 92 B/13
Scale 1:50,000

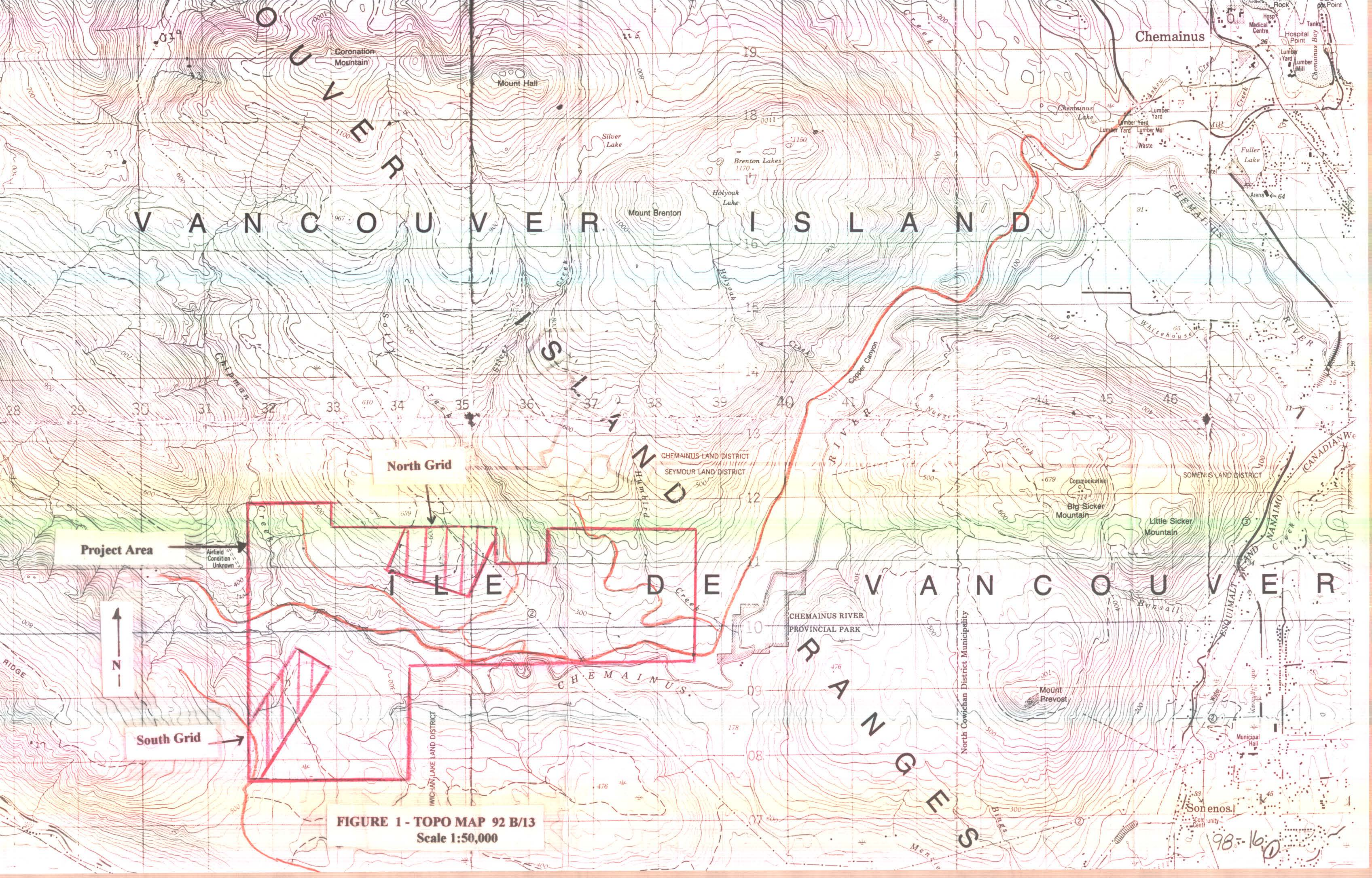
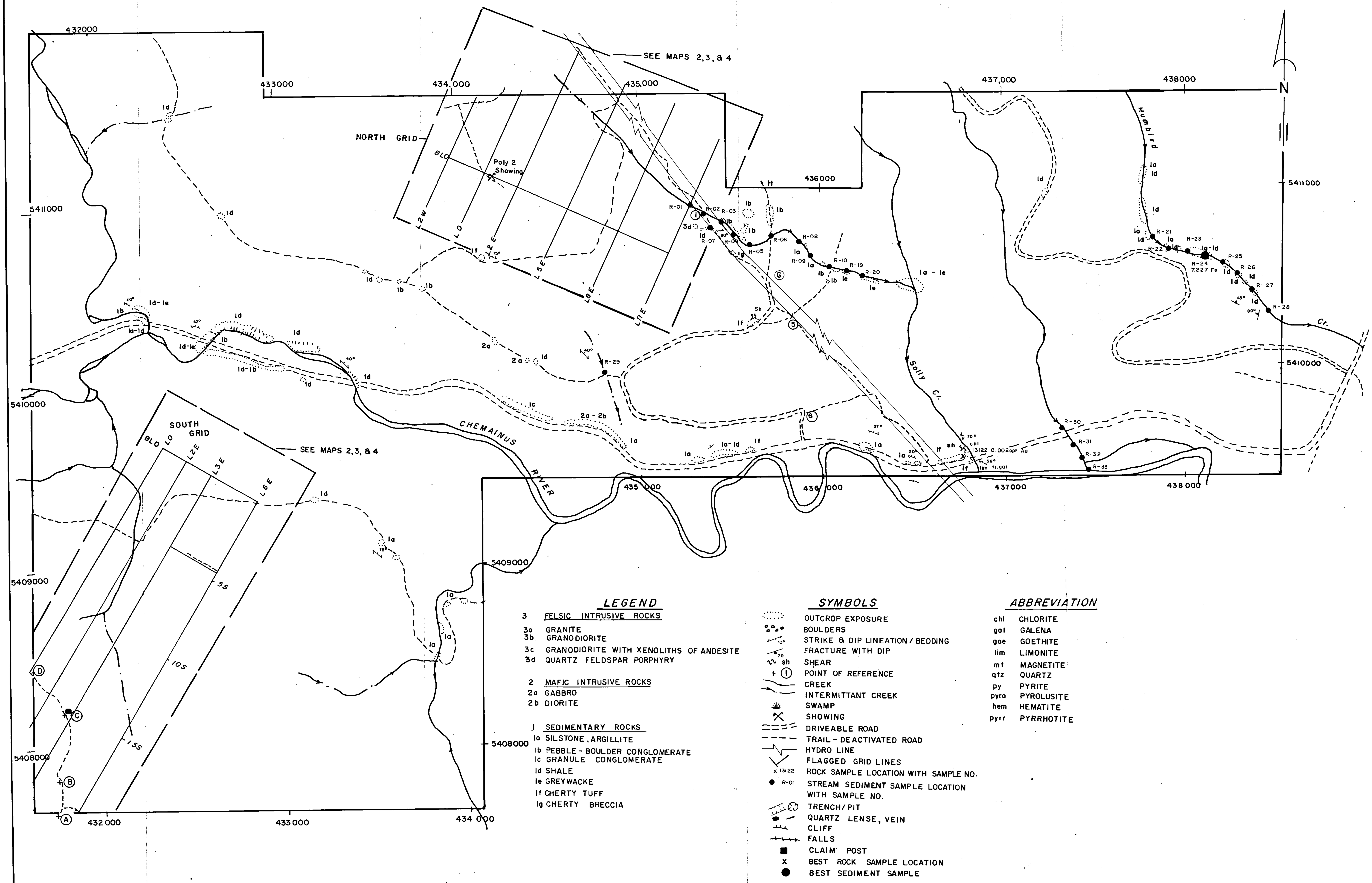


FIGURE 1 - TOPO MAP 92 B/13
Scale 1:50,000



LEGEND

3 FELSIC INTRUSIVE ROCKS
3a GRANITE
3b GRANODIORITE
3c GRANODIORITE WITH XENOLITHS OF ANDESITE
3d QUARTZ FELDSPAR PORPHYRY

2 MAFIC INTRUSIVE ROCKS
2a GABBRO
2b DIORITE

1 SEDIMENTARY ROCKS
1a SILSTONE, ARGILLITE
1b PEBBLE - BOULDER CONGLOMERATE
1c GRANULE CONGLOMERATE
1d SHALE
1e GREYWACKE
1f CHERTY TUFF
1g CHERTY BRECCIA

SYMBOLS

OUTCROP EXPOSURE
BOULDERS
STRIKE & DIP LINEATION / BEDDING
FRACTURE WITH DIP
SHEAR
POINT OF REFERENCE
CREEK
INTERMITTANT CREEK
SWAMP
SHOWING
DRIVEABLE ROAD
TRAIL - DEACTIVATED ROAD
HYDRO LINE
FLAGGED GRID LINES
ROCK SAMPLE LOCATION WITH SAMPLE NO.
STREAM SEDIMENT SAMPLE LOCATION WITH SAMPLE NO.
TRENCH / PIT
QUARTZ LENSE, VEIN
CLIFF
FALLS
CLAIM POST
BEST ROCK SAMPLE LOCATION
BEST SEDIMENT SAMPLE

ABBREVIATION

chl	CHLORITE
gal	GALENA
goe	GOETHITE
lim	LIMONITE
mt	MAGNETITE
qtz	QUARTZ
py	PYRITE
pyro	PYROLUSITE
hem	HEMATITE
pyrr	PYRRHOTITE

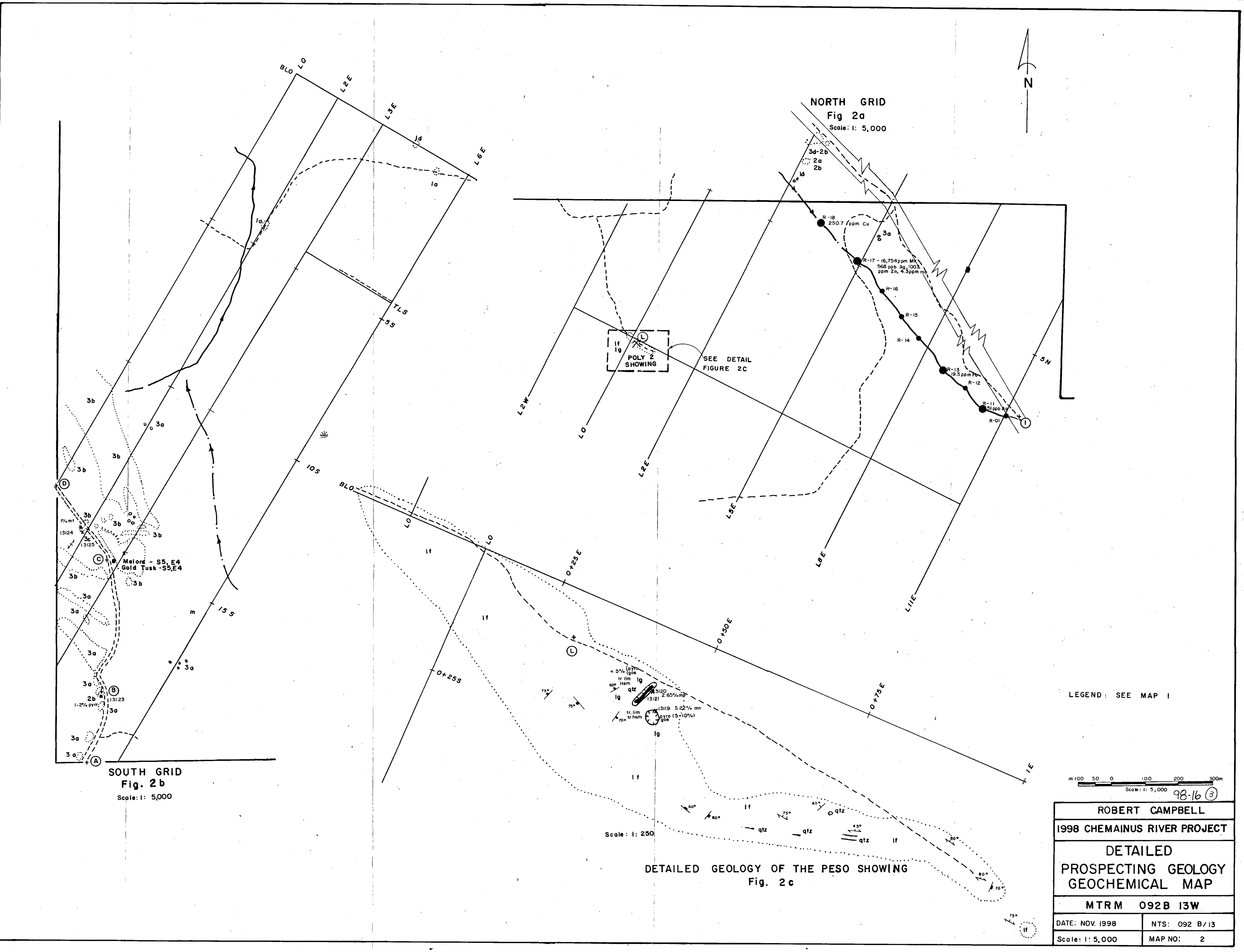
m 200 100 0 100 200 400 600
Scale : 1 : 10,000

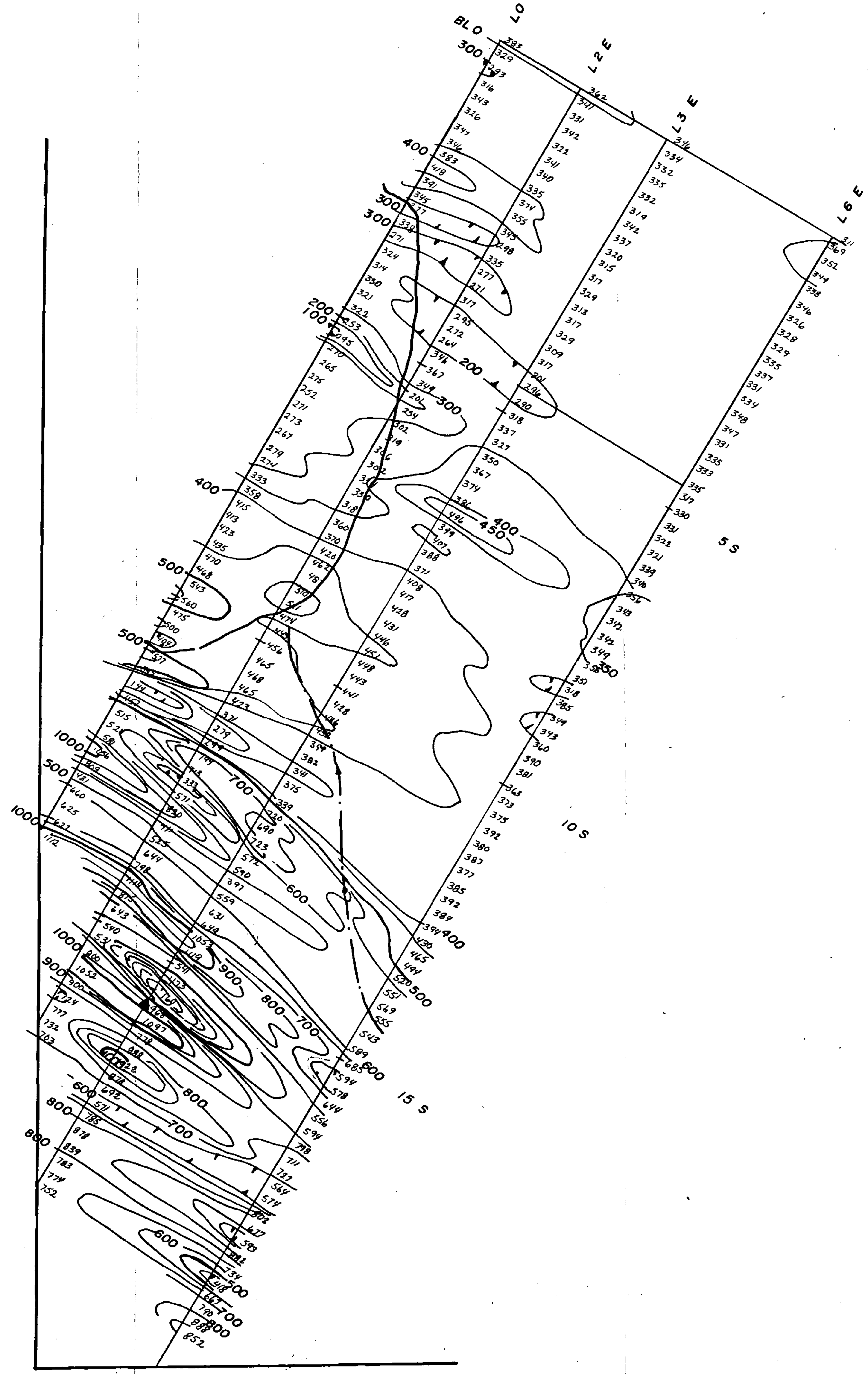
98-16 ②

ROBERT CAMPBELL
1998 CHEMAINUS RIVER PROJECT

GEOLOGY-PROSPECTING & GEOCHEMICAL COMPILATION MAP

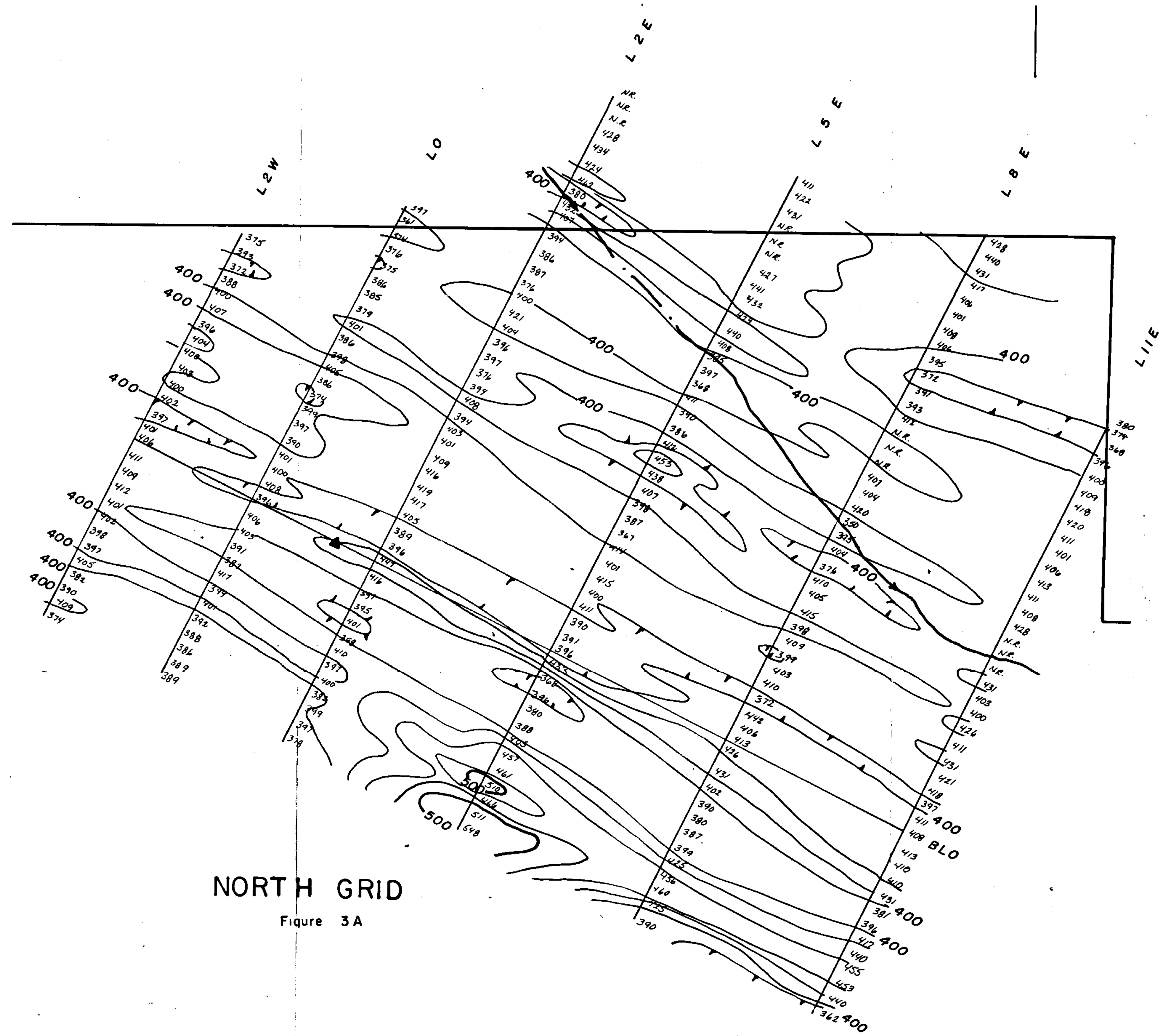
NTS: 092 B/13	SCALE: 1:10,000	Map No: 1


NORTH GRID
Fig 2a
Scale: 1: 5,000
R-18 250.7 ppm Cu
R-17 - 16,754ppm Mn 568 ppb Ag, 100.3 ppm Zn, 4.3ppm mo
R-16
R-15
R-14
R-13 19.3 ppm Pb
R-12
R-11 51ppb Au
R-01
POLY 2 SHOWING
SEE DETAIL FIGURE 2C
SOUTH GRID
Fig. 2b
Scale: 1: 5,000
Melord - S5, E4
Gold Tusk - S5,E4
DETAILED GEOLOGY OF THE PESO SHOWING
Fig. 2c
Scale: 1: 250
13120 2.65% mn
13119 5.22% mn
LEGEND: SEE MAP 1
Scale: 1: 5,000
98-16 (3)
ROBERT CAMPBELL
1998 CHEMAINUS RIVER PROJECT
DETAILED PROSPECTING GEOLOGY GEOCHEMICAL MAP
MTRM 092B 13W
DATE: NOV. 1998
NTS: 092 B/13
Scale: 1: 5,000
MAP NO: 2



SOUTH GRID

Figure 3b



NORTH GRID

Figure 3A

LEGEND

EQUIPMENT USED - GEM SYSTEMS - GSM 8 PROTON PRECESSION MAGNETOMETER
READINGS ARE 55,000 GAMMAS PLUS PLOTTED VALUES, CORRECTED FOR DIURNAL VARIATIONS

▲ BASE STATION

MAGNETIC LOW

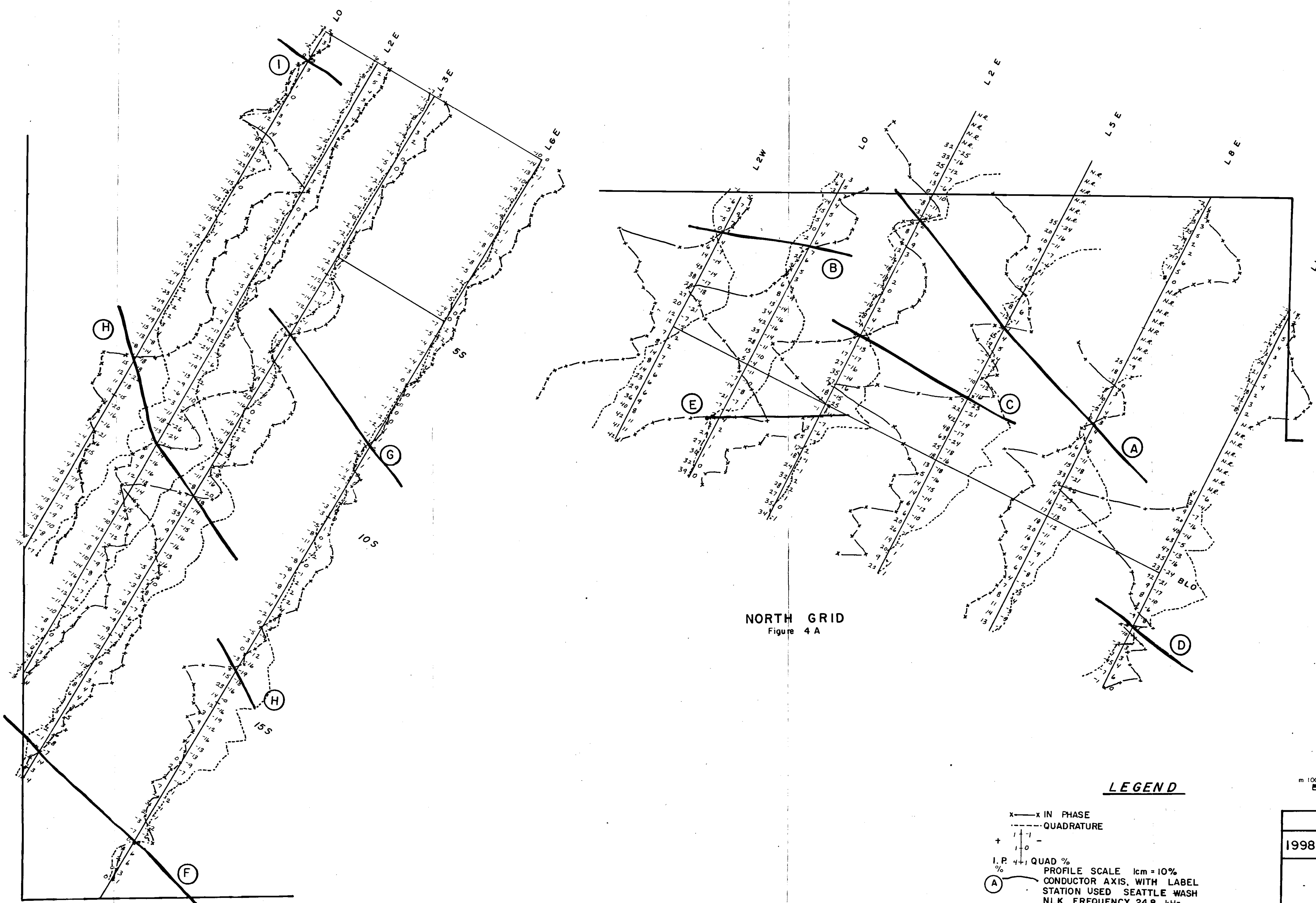
m 100 50 0 100 200 300m

Scale: 1:5,000

98-16 (4)

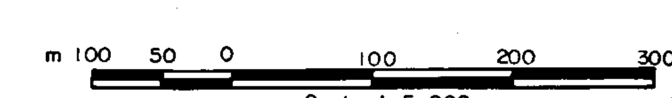
ROBERT CAMPBELL
1998 CHEMAINUS RIVER PROJECT
TOTAL FIELD MAGNETIC SURVEY
MTRM 092B 13W

DATE: NOV. 1998	NTS: 092 B/13
Scale: 1:5,000	MAP NO: 3



SOUTH GRID
Figure 4 b

NORTH GRID
Figure 4 A



98-16 (5)

LEGEND

x——x IN PHASE
-----QUADRATURE
I.P. % QUAD %
PROFILE SCALE 1cm = 10%
(A) CONDUCTOR AXIS, WITH LABEL
STATION USED SEATTLE WASH
NLK FREQUENCY 24.8 kHz
READINGS COLLECTED FACING 023°
EQUIPMENT USED - GEONICS EM-16

ROBERT CAMPBELL	
1998 CHEMAINUS RIVER PROJECT	
VLF ELECTROMAGNETIC SURVEY	
MTRM 092B 13W	
DATE: NOV. 1998	NTS: 092 B/13
Scale: 1: 5,000	MAP NO: 4