Geological, Geochemical and Geophysical Report on the Murray Claims

for

Operator: G.W.R. Resources, Inc.
Suite 820 - 800 West Pender St.
Vancouver, B. C.
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Covering: Murray Group (Murray 1, Murray 2, Murray 3 Murray 4, Murray 7, Murray 8, Fran 1) 45 Units

Work Performed: July 1987 through to August 1987

Location:
1. 50° 37' North, 117°58'30" (42") West
2. N.T.S. Map 82K 12/W
3. 48 kilometres south of Revelstoke, B.C.

Revelstoke M.D.

Owner(s): F. Jenkins
W.A. Cameron

Prepared by:

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October 16, 1987

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Summary

This report summarizes the work completed on the Murray claim group, Revelstoke Mining Division, during the 1987 field season. The Murray claims were originally staked in 1983 to cover a copper rich, volcanic hosted, polymetallic sulphide deposit. The original 120 unit claim group was reduced to 27 units and only a limited amount of work had been completed on the claims by the previous owners.

The property was optioned by G.W. R. Resources Inc. in late spring of 1987. The original claim block was then enlarged to a total of 45 units covering an area of approximately 1,050 hectares. A grid was established over the central part of the claim group and geophysical surveys (Electromagnetic and Magnetic) were completed. Upon the successful completion of the first phase of exploration a followup programme of detailed geophysics, with soil surveys and outcrop examination took place. This work is summarized herein and presented in report form. Based on the results of this years work and previous knowledge of the property, conclusions are made and recommendations for further work are presented in this report.

Introduction

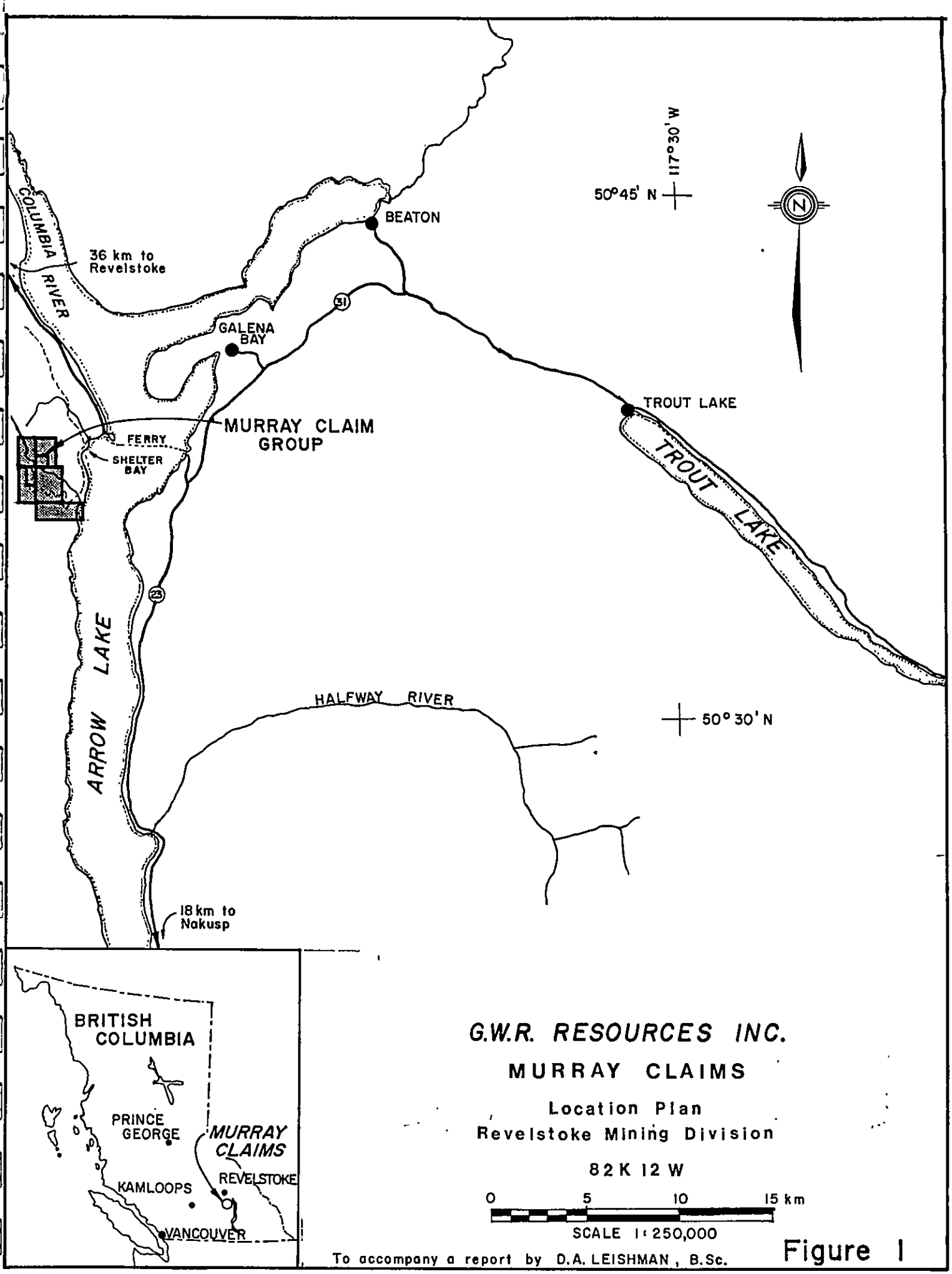
Upon the request of Mr. B. Gagne of G.W.R. Resources Inc. an exploration programme was planned and completed on the Murray claim group, Revelstoke Mining Division. This work included geophysical surveys (electromagnetic and magnetic), geochemical (soil) surveys and geological examination. In addition to the work initiated by G.W.R. Resources Inc. a petrographical study of rock specimens from the property is also included with this report. This petrographical study was completed in the spring of 1987. A series of figures are included with this report.

Location, Physiography and Access

The Murray claim group is located in east-central British Columbia approximately 48 kilometres south of Revelstoke, B. C. The geographic centre of the claim group is located at 50° 37' North latitude and 117° 58' 30" West longitude (Figure 1).

Access to the property is by taking Highway 23 south along the west side of the Columbia River towards the Shelter Bay ferry terminal. From this point, a graveled logging road is taken south along Upper Arrow Lake for approximately 4 kilometres to where an old logging trail leading to the west is located. This trail is followed for approximately 1 kilometre (uphill) onto the south-central portion of the claim group. When in good repair this road is driveable by 2 wheel drive vehicles, however the steepness usually necessitates a 4 wheel drive vehicle (Figure 2).

An alternative route to the northwest part of the claim group is by following a northwesterly logging road approximately 1 kilometre south of the Shelter Bay ferry terminal for about 7 kilometres and then switching back towards the southeast. This road passes near



G.W.R. RESOURCES INC.

MURRAY CLAIMS

Location Plan

Revelstoke Mining Division

82 K 12 W

0 5 10 15 km

SCALE 1:250,000

To accompany a report by D.A. LEISHMAN, B.Sc.

Figure 1

the gravel pit as marked on Figure 2 and is within the boundaries of the claim group. Recent logging activity in the upper levels of the claim area has resulted in improved access.

The Murray claims lie at an elevation that ranges from approximately 1,600 feet a.s.l. near the southeast boundary of the claims to approximately 4,3000 feet a.s.l in the west central portion of the claim group and up to 4,450 feet a.s.l. in the northeastern part of the claim group (Figure 2).

The southeastern part of the claim group was logged 20 to 30 years ago resulting in a number of old logging roads and trails most of which are in poor repair. However, the majority of these roads could be reopened at little expense. Recent logging activity in the eastern part of the claim group has resulted in a much improved access for this part of the property. However the small, deeply incised stream beds draining towards the east and southeast tend to make foot traverses extremely difficult in places and could hinder future exploration.

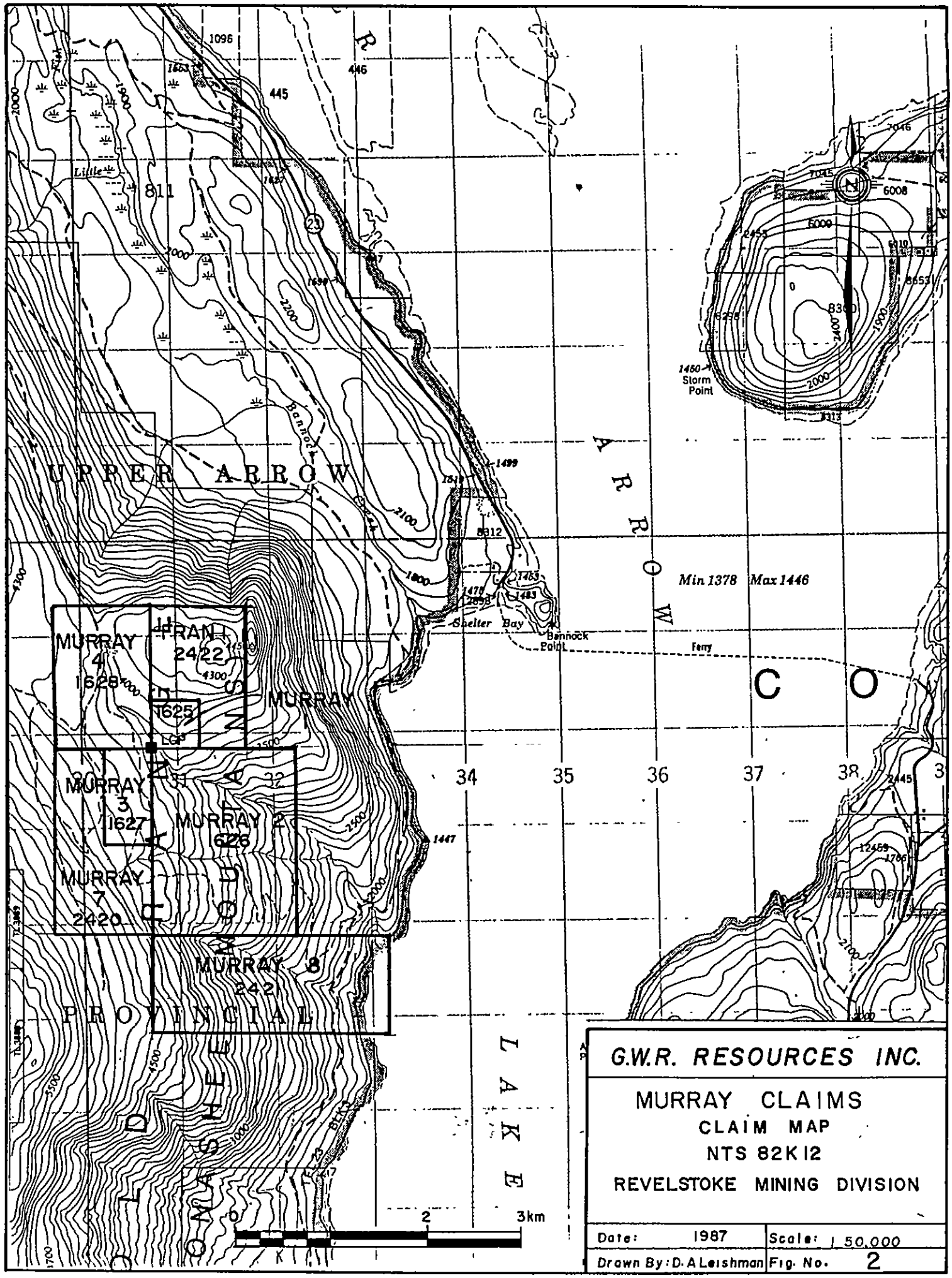
The area of the claim group receives heavy rainfall and is usually not free of snow until mid-May. The marketable timber consists mainly of fir, hemlock and cedar. Ferns, slide alder and devils club are abundant in the logged areas and the narrow drainages and tend to hinder travel by foot.

Property and Ownership

The Murray 1 to 4 claims were originally staked in the summer of 1983 by Cameron and Jenkins as part of a 6 claim group consisting of 120 units. Because of the large assessment expenditures required for this block of ground some of the original claims were dropped and the Murray 1 to 4 claims were reduced to the size listed below. Upon G.W.R. Resources Inc. optioning the ground in the spring of 1987 the claim block was expanded to the present size by the staking of the Murray 7, Murray 8 and Fran 1 mineral claims. The Fran 1 and Murray 7 claims were staked to expand the area covered by the Murray 1 and Murray 3 claims. The Murray 1 and Murray 3 claims will be allowed to lapse and upon their expiry the Fran 1 and Murray 7 claims will be the valid claims. The table below lists all the pertinent claim data regarding the Murray claim group.

Claim Name	Record Number	Units	Expiry Date
Murray 1	1625	1	August 22, 1988
Murray 2	1626	12	August 22, 1988
Murray 3	1627	2	August 22, 1988
Murray 4	1628	6	August 22, 1988
Murray 7	2420	8	July 9, 1988
Murray 8	2421	10	July 9, 1988
Fran 1	2422	6	July 9, 1988

The registered owners of the claims are Mr. Bill Cameron and Mrs. Fran Jenkins of Revelstoke, B. C. The claims are under a purchase agreement with G.W.R. Resources Inc. of Suite 820-800 West Pender St., Vancouver, B. C.



G.W.R. RESOURCES INC.

MURRAY CLAIMS

CLAIM MAP

NTS 82K12

REVELSTOKE MINING DIVISION

Date: 1987	Scale: 1:50,000
Drawn By: D. A Leishman	Fig. No. 2

History

There is no documented history of mineral exploration on the area covered by the Murray claims. The area of the claims remains unmapped by the Provincial or Federal Governments. The lack of mapping may be partially due to the problem of accessibility . The only record of any work in the area is by the Geological Survey of Canada in 1977 when results for a regional stream sediment sampling programme were made available. One sample was collected from Longsworth Creek which drains the mineralized area of the claim group. However despite the copper rich, massive sulphide mineralization found within the area of drainage, the stream sample (silt) failed to return any anomalous values in base or precious metals.

The mineral inventory file lists no mineral occurrence in the immediate area of the Murray claim group. Small excavations have been found by the property owners (Cameron and Jenkins) along the banks of Longsworth Creek however it is not possible to determine when they were excavated. A number of exploration companies have visited the Murray claims over the past 3 years and data collected by these companies (Canamax, Billiton, Eureka) comprises the only documented information on the claim group.

Regional Geology

The area underlain by the Murray Claims remains unmapped on a regional scale (Provincial or Federal mapping). This may be related to lack of accessibility. It is only recently that Highway 23 has been extended along the west side of the Columbia River to Shelter Bay which has greatly improved the accessiblity of this area.

The Murray claims lie very near the northern border of the N.T.S. Map Sheets 82 K and 82 L. Examination of these map sheets indicate a major northwesterly (north 330° west)

fault system along the valley of the Columbia River which separates a younger (Permian Age) group of phyllites and metasediments of the Milford Group to the east from older units of the Shuswap Terrane (Archean) from the west. Open File 288 shows the area immediately to the northeast of the claim group to be underlain by the Galena Bay Stock, an intrusive mass of monzonite through to muscovite-biotite granodiorite of Cretaceous to Jurassic age which has been mapped outcropping on both sides of the northern section of Upper Arrow Lake. The Murray claim group is underlain by a sequence of fine grained metavolcanics very probably belonging to the Shuswap Terrane, however this has not been substantiated.

Overlying these units are areas of thick overburden (Quaternary Age). This thick cover of glacial and avalanche debris tends to make mapping difficult and unproductive.

Property Geology

The Murray claim group has never been mapped in detail. Information derived from property visits by various companies (ie: Vanderpoll (Canamax), Shanks/Leishman (Billiton), Kerr (Eureka)) have contributed a large amount to the data base on the property. Vandesrpoll had completed the most detailed work on the property with his reconnaissance map showing areas of outcrop distribution. Several areas are indicated where granite or granodiorite outcrop. These units are probably related to the Galena Bay Stock. Most of the other units mapped by Vanderpoll within the area of the Murray claims are refered to as quartz-biotite gneiss and hornblende gneiss.

Employees of Billiton described units of quartz-biotite schist through to choritic schists and chloritic quarztites has hosting the shear related semi-massive to massive sulphide mineralization.

The writer, Leishman, acquired a series or representative rocks of the property from Jenkins and Cameron with the purpose of assigning more definitive names and determining a

genetic origin of the units hosting the mineralization. A suite of 5 rock samples were selected and detailed petrographic descriptions were completed. These descriptions are found in the Appendix.

The conclusions made were the horizons hosting the sulphide mineralization are metavolcanics (some tuffaceous) with quartz, chlorite, biotite, epidote and garnets as the primary accessory minerals. The rock type is essentially a chlorite schist and contains enough quartz and plagioclase to have originally been felsic to intermediate volcanics. Up to 10% sulphides are present as fine disseminated grains and more locally within late fractures and peripheral to quartz veins.

The three main areas hosting the mineralization are underlain by the same sequence of metavolcancis (chloritic schists). These units have a structural trend and fabric striking north 330° west and dipping to the northeast. The mineralization present, disseminated through to semi-massive to massive sulphides, appears to be stratiform in nature. The thin section work indicates some remobilization and recrystallization of the sulphide mineralization along both bedding planes and crosscutting veins and fractures. The mineralization itself consists of semi-massive to massive sulphides (pyrite, chalcopyrite, pyrrhotite, with lesser galena and sphalerite) in semiconformable shears with true widths up to one metre in places. Assay values of up to 0.18 ounces/ton gold have been taken from some of the higher grade copper zones (ie. 9% copper).

Small, narrow, aplitic dykes (1 to 2 metre width) have been mapped in the deeply incised creek bed where the Creek showing is located. (Figure 5) These unmineralized dykes have been found associated with some of the mineralized shear zones. The dykes are thought to be related to the nearby intrusive units. Pegmatite dykes have also been mapped on the property.

1987 Work Programme

The work completed on the Murray claims in the 1987 field season consisted of establishing a grid, geophysical surveys with limited geochemical and geological examinations. Petrographical work was also completed. All work was performed by Geoquest Consulting Ltd. of Penticton, Barnes Creek Minerals Corporation, Chase and D. A. Leishman of Kamloops. The exploration programme was based on consultation between W. Gruenwald of Geoquest, D. Leishman and B. Gagne of G.W. R. Resources Inc.

The initial grid work consisted of cutting, blazing and chaining a baseline 3.5 kilometres in length. (Figures 3 to 5). Cross lines were established every 200 metres and in some cases 100 metres along the length of the base line. Approximately 22 kilometes of grid lines were chained and flagged. Stations were established every 25 metres along lines with an azimuth of North 60° East. Where possible the grid was tied into topographic features (roads, creeks, etc.) for better control.

Geophysical Surveys

Introduction

The geophysical survey work was contracted to Barnes Creek Minerals Corporation and crew. The two plans presented in this report (Figures 3 & 4) are replots of the work completed by Barnes Creek personnel. All grid lines (Figures 3 & 4) were surveyed with a Sabre Electronics VLF-EM unit, and a Geonics Proton Precision magnetometer (digital readout), which reads the total field magnetics to a 1 gamma accuracy.

Instrumentation and Survey Method

All lines were surveyed with a Sabre Electronics VLF-EM unit, model 27, with readings taken at 25 metre intervals along all cross lines. The direction of the grid lines was north 60° east and the Seattle transmitting station was used as the source of the primary field.

The Sabre Electronics VLF-EM unit and method of reading is similar to other VLF-EM equipment. The method of reading is to locate the orientation of the transmitting station, (in this instance Seattle) from the null of field strength. From orientation at right angles to the transmitting station, the maximun field strength (100%) is adjusted by a gain control knob. The unit is then held vertical, with the coil at right angles to the transmitting station, and rotated to locate the field strength null position. The angle of rotation is therefore recorded either to the right (+) or left (-).

Lines are normally recorded in field notes as if all lines were surveyed in a west to east direction. This is done to facilitate the use of the Fraser Filter Method in order to calculate and display anomalies.

The following calculation illustrates the Fraser Filter Method:

West __†_____†____F_____†_____†___ East
a b c d

where a, b, c, d are station readings. F is the Filtered Value with
F= (a +b) -(c +d).

The Fraser Filter Method serves three useful purposes in the display and interpretation of results.

(1) Crossovers, (normal anomaly interpretation) are displayed as high positive numbers, which may be contoured to correlate the varying strength of the conductor along its axis, and to

enhance interpretation and the display of the better conductors.

(2) Topography has a major effect in the reading of ground EM equipment. Steep hills will influence either the positive or negative orientation of the hill. Consequently ridges will be displayed as apparent crossovers. The Fraser Filter Method smooths out some of the topographic effects, consequently, resulting apparent anomalies are not as significantly displayed as if they had been shown as profiles of the raw data.

(3) For the same reasons, strong anomalies may in fact not produce an actual crossover in steep terrain. The Fraser Filter Method enhances these anomalies to their proper perspective.

The Geonics Magnetometer operates as any normal field magnetometer. The digital readout allows a 1 gamma reading ability. The operator has the option to carry the sensor head in a backpack or on a extended rod. In this case the backpack was utilized. A base station was established off the claim area and this base was read every morning and evening. All magnetic readings were corrected to this base.

Presentation of Results

Fraser Filtered data is plotted on Figure 3 as presented by Barnes Creek Mineral Corporation. Data is contoured at +5° intervals. Filtered data calculated as negative is not contoured.

The corrected magnetic data is plotted on Figure 4 and contours are interpreted at 200 gamma intervals. A number of magneticly active areas are highlighted on the plan.

Discussion of Results

The results obtained in the E. M. survey were disappointing. The writer has reviewed a considerable amount of E. M. data in the past and the readings obtained in this survey would normally be of little interest. In all but one instance the Fraser Filtered data produced anomalies less than +20°. It is possible that for geological reasons that the V.L.F.-E.M. method of survey is not a viable exploration tool on this particular property. The area of the most interesting conductor (Line 11+00S, 5+00E, +39°) was examined in the field by the writer and found to be a buried culvert. Although this did prove the effectiveness of the E. M. system used it did little to locate buried, massive sulphide conductors.

There were no conductors located near the Creek Showing which indicates the sulphide bodies in this area were not massive enough (in strike length or dip extension) to respond as a E. M. conductor. However the lines in this area were cut short of Longsworth Creek for topographic reasons. This would tend to hinder the outlining of conductors near the eastern end of the lines (in the valley of Longsworth Creek). The topography in the area of the creek showing is not well represented on Figure 5. The sidehills are actually quite steep making traverses very difficult if not impossible. Most of the discovered mineralization is in the valley bottom of the creek with the grid lines crossing the projected strike of the mineralized zones well above the creek. Consequently there may be a problem with the depth of penetration of the survey method used relative to the conductivity of any buried mineralized body.

A number of the better conductors were detailed in further follow-up by Barnes Creek personnel. All of these conductor axis are shown on Figure 3 and 5. The shorter lines seen on Figures 3 & 5 indicate areas of follow-up. This follow-up also included soil sampling over the axis of the conductors as well as field examination by Leishman.

All of the more significant conductors were examined by Leishman on the ground and none were found to have obvious geological explanations. In many cases the conductor axis coincided with narrow ridge crests flanked by parallel swampy areas. This was likely an indication of changes in the underlying stratigraphy.

Geological/Geochemical Surveys

Field Observations

The field observations made by the writer were limited to re-examining the area of the Creek Showing and quick field traverses across areas where conductors were located by Barnes Creek personnel. Areas of outcrop were noted and are outlined on Figure 5 with descriptive notes. Two major units were observed on the property. First were the metavolcanics (quartz biotite schists throught to chlorite schists) hosting the sulphide mineralization which appear to be overlain by a younger sequence of flat lying metasediments (mudstones) found in the upper parts of the claim group (western part of the grid area). Dykes of pegmatite and aplite were found to be intruding the lower sequence of metavolcanics. The frequency of these dyke units appears to be greater in the area of the Creek Showing and the Pit Showing. This could indicate a relationship between this later intrusive activity and the shear controlled mineralization. As the original hypothesis was that the sulphide mineralization was syngenetic to the host metavolcanics more study is needed in regards to the former.

Petrographical Studies

A series of 8 samples were submitted by D. A. Leishman (marked A through H) and 5 of the above were chosen as being representative (Samples A., C, F, G, and H) of the various styles of copper mineralization and host rocks. They were sent for thin section and were later stained for potassium feldspar (K. Spar) and tested for magnetic properties. Individual descriptions of various specimens are found in the Appendix. Sample locations are shown on the compilation plan (Figure 5).

Briefly virtually all samples (except G) contain copper mineralization with fine disseminated, or coarse, semi-massive chalcopyrite or malachite and azurite staining on fracture surfaces. None of the samples were taken from a significant distance away from the copper mineralization.

Samples A and B contain lenses and blebs of semi-massive chalcopyrite and pyrrhotite with minor pyrite and are strongly magnetic. The host rocks for both samples appears to be altered, garnet-biotite-chlorite schists, probably originally metavolcanics since subject to Lower Amphibolite grade of regional metamorphism. This metamorphism and deformation has largely destroyed original textures and much of the chalcopyrite appears to have been remobilized. Pyrrhotite has largely replaced pyrite.

Samples C, D, E and H contain very little fine pyrrhotite and are very weakly magnetic. They are essentially chloritic schists plus or minus epidote and garnet and contain enough quartz and plagioclase to have originally been felsic to intermediate metavolcanics, possibly tuffs. Up to 10% sulphides are present, mainly chalcopyrite and pyrite as fine disseminated grains and locally within late fractures and peripheral to quartz veins. Up to 4% disseminated and vein carbonate is present in these rocks.

Sample G appears to have come from near a strong fracture zone or shear. It features

strong brecciation on the microscopic scale and probably silica and ptassium introduction (much quartz and K. Spar) and fine, magnetic pyrrhotite.

Geochemical Sampling

A total of 69 soil samples and 33 rock samples were submitted to Kamloops Research and Assay Laboratory Ltd. for geochemical analyses. The samples taken by Gruenwald, (4 soil and 11 rock) were analysed for gold only. Most of the samples taken by Leishman and Barnes Creek personnel were analysed for both gold and copper.

The samples taken by Gruenwald were part of a preliminary examination of the property while the 52 soil samples taken by Barnes Creek were in areas of follow-up E. M. surveys. The objective was to test the geochemical response over the significant E. M. conductors. The remaining 13 soil and 21 rock samples were taken by Leishman in areas of previous geochemical/geological interest (Figure 5).

In soil sampling the "B" soil horizon was taken . All samples were collected in waterproof kraft envelopes and sent for analysis to Kamloops Research and Assay Laboratory Ltd.

Laboratory Determination

All samples were analysed for gold and in most instances, copper.

The soil samples were dried and sieved (minus -80 mesh, stainless steel). A sample of 0.5 grams was then digested in hot dilute aqua regia in a boiling water bath and diluted to 10 millilitres with demineralized water. The extracted metals were then determined by the Atomic Absorption method with results given in parts per billion (ppb) for gold and parts per million (ppm) for copper.

Rock samples were analysed in a similar way, however sample preparation included crushing and pulverizing.

Presentation of Results

All the values obtained in the rock and soil sampling programme were plotted on a 1:5,000 base plan (Figure 5). Due to scale limitations the samples from the Pit Showing could not be plotted individually. Since no gold values of significance were found in the Pit this was not considered necessary. Due to the lack of a large data base no statistical treatment of the data was attempted nor considered.

Discussion of Results

The most obvious observation made of the geochemical data was the almost complete lack of gold values (rock or soil) outside of the area of the Creek Showing.

None of the 69 soil samples taken returned any value greater than 3 ppb gold. This was despite higher than background values in copper (ie: greater than 100 ppm) in several instances. From the rock samples there were a number of samples anomalous in gold. All of these were chip and grab samples taken from the area of the Creek Showing. Here values up to 1,280 ppb gold were obtained from specimens of semi-massive to massive sulphide mineralization.

There were two areas where anomalous copper values (soils) were located. Firstly in the northern part of the grid from Line 11+00N, 6+50E to Line 15+00N, 6+00E where 2 anomalous values in copper (145 and 150ppm, Figure 5) were found to be associated with a weak E. M. conductor. A second area, (grid co-ordinates 12+50S, 2+50E) where several very high copper values were found along an old road cut (values to 4,000 ppm copper). The soils

here appeared to be non residual. Further work is necessary to locate the source for these exceptionally high copper values.

Only 1 sample taken from the Pit Showing (Pit 8, 20 ppb gold) returned a value above 3 ppb Gold. The remaining samples from the Pit Showing were all disappointingly low.

Conclusions and Recommendations

The work completed on the Murray Claims of G.W.R. Resources Inc. was of a preliminary nature. However important observations were made. Namely the semi-massive to massive sulphide mineralization observed in the area of the Creek Showing does not respond well (if at all) to the electromagnetic or magnetic instruments used in this survey. This could indicate improper choice of survey equipment or lack of significant bodies of sulphide mineralization. The second important observation made was the apparent lack of gold values outside of the immediate area of the Creek Showing.

However there are three areas where future work is warranted and in order of priority these are:

1. The Creek Showing: Lack of E. M. and Magnetic response was dissappointing. However the massive sulphide mineralization present in this area cannot be ignored. Trenching (tracked backhoe) should be completed in this area. A certain amount of road building will be necessary due to the steepness of the terrain. This trenching and road building would give a better indication of the extent of overburden as well as potential strike length of the various mineralized shears.

2. The area of second priority is along the south end of the grid. Here a number of high values of copper in soil (up to 4,000 ppm) have been found along with copper stain in subcrop from old trenchs. Further work here should consist of extending the grid towards the south and west. Detailed mapping, (there probably is little if any outcrop) and detailed soil sampling should be completed. This should be followed up by backhoe trenching. Of interest in this area is an E. M. conductor located on Lines 15+00S, 3+25E and 17+00S, 3+65E that strikes northwesterly towards the area where these high copper values are found.

3. The third area of further follow-up should be in the area of the Pit Showing. Here a number of weak, often one line E. M. conductors are located with highly visible copper mineralization in the Pit. Several anomalous copper values in the soil sampling were outlined southeast of the Pit from Line 15+00N, 6+50E to Line 11+00N 6+00E. Suggested work in this area would include detailed soil sampling and mapping followed by trenching.

Even with the addition of the work outlined above the Murray Claims will be relatively unexplored. It is suggested that once more detailed work is completed in the area of the present showings the possible use of different geophysical methods should be investigated. It might be that Induced Polarization surveys are more appropriate to outline areas of potential economic mineralization within the Murray Claim group.

Douglas A. Leishman, B. Sc.
Kamloops, B.C.

October 16, 1987

References

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Kerr, J. R. Property Examination, Murray Claims, 2 pages notes with rock assay data, Eureka Resources, Inc., September 1985.

Leishman, D. A. Report on the Murray Claims for Cameron & Jenkins, private report May 1987.

Open File 288 Compilation Plan showing geology and mineral showings, Geological Survey of Canada, Mineral Deposits, Lardeau West Half (2 Maps).

Open File 515 Uranium Reconnaissance Programme, National Geochemical Reconnnaissance Maps 1977, Geological Survey of Canada, N.T.S. 82K

Wells, R. Private report, Petrographical Descriptions of host rocks to mineralization on the Murray Claims, May 1987

Assay data & notes, personal communications, with various people/companies who have examined the Murray Claims, (made available by Cameron/Jenkins).

Appendix I

Petrographical Descriptions

Detailed Petrographical Descriptions

Specimen A Garnet-Biotite-Chlorite Schist (Metavolcanic) with semi-massive sulphides

This sample is of a medium to dark green, metavolcanic rock with significant concentrations of sulphide minerals giving rusty, weathered surfaces.

Away from the sulphides the metavolcanic rock is a fine to medium grained, deformed, garnet-biotite-chlorite schist. The sulphides are predominantly coarse grained and form irregular, semi-massive lenses and blebs, locally up to forty percent of the rock. Sulphide mineralogy is Pyrrhotite>Chalcopyrite>Pyrite and locally is strongly magnetic.

Minerals are:

quartz	10-20%
biotite	15%
chlorite	10%
garnet	5%
actinolite	1-5%
plagioclase	5%
K-Spar	5%
pyrrhotite	25%
chalcopyrite	10%
pyrite	5%
magnetite	Trace

Metamorphism is essentially prograde and Lower Amphibolite. Much of the chalcopyrite is clearly late and remobilized occuring as distinct lenses or as fracture fill (veinlets) within earlier pyrrhotite and pyrite. Pyrrhotite has formed largely at the expense of pyrite. Introduction of potassium is possibly indicated by biotite and patchy K-Spar.

Sample C Garnet-Chlorite-Quartz-Plagioclase Schist (Metavolcanic)

This sample is of a medium, green-grey, metavolcanic rock which is fine to medium grained and moderately schistose. Originally this may have been a felsic to intermediate tuff. Fracture surfaces are strongly stained with malachite and some azurite. Up to 5 percent chalcopyrite and pyrite occur as fine, disseminated grains, fine fracture fill and at the margins of narrow quartz stringers.

Minerals are:

quartz groundmass	15%
quartz vein	10%
plagioclaase	30%
chlorite	20%
garnet	10%
sericite/K-Spar	3%
carbonate	4%
actinolite	2%
chalcopyrite	3%
pyrite	2%

Sample F Plagioclase-Quartz-Epidote-Chlorite Schist (Metavolcanic)

This sample is of a medium grey-green, predominantely fine grained schist with 1 to 3 mm. layering, locally fine garnet aggregates are apparent. Epidote, chlorite and quartz-plagioclase form distinct compositional layers Numerous fine carbonate stringers (fractures) cut the schistosity. Chalcopyrite, pyrite and minor pyrrhotite occur as fine disseminated grains or along fine crosscutting fractures and make up 3% of the rock.

Minerals are:

quartz	40%
chlortie	15%
epidote	8%
plagioclase	30%
K. Spar/sericite	3%
carbonate	2%
chalcopyrite	1-2%
pyrite	1%
pyrrhotite	trace

Sulphide minerals predominantly occur within chlorite layers or late fractures. A weak cleavage is evident at a large angle to the schistosity in thin section, this guides carbonate veins. Sulphides commonly occur as intergrowths(wormy) with recrystallized quartz later than this cleavage.

Specimen G Quartz-Chlorite Schist/Breccia

This sample is of strongly deformed, dark grey to green, massive to schistose metavolcanic? with zones of brecciation. The breccia zones consist of angular fragments up to 4 mm long of quartz with K-spar/serictie in a darker chloritic matrix. These areas contain significant fine pyrrhotite and are magnetic.

Minerals are:

Quartz	60%
K-Spar/sericite	15%
chlorite	5-10%
epidote (clino-azoisite)	3%
pyrrhotite	3%

This sample shows strong deformation on the microscopic scale with fairly strong brecciation and much recrystallization. Subhedral biotite is associated with later quartz and very little chalcopyrite appears to be present.

Specimen H Quartz-Plagioclase-Chlorite-Epidote Schist
(Metavolcanic, Tuff?)

This sample is medium, green-grey, fine grained finely laminated schist. The layering is deformed by small scale fold and associated fractures. Compositional layering is well developed with alternating chloritic and quartz-plagioclase layers locally with epidote (clinozoisite) This rock may originally have been a felsic tuff. About 5% sulphides are present, predominantly as fine to medium, disseminated grains locally showing preference for particular layers. Fractures and weathered surfaces are rusty, locally with malachite and azurite staining.

Minerals are:

quartz	25-30%
plagioclase	25-30%
chlorite	10%
K-Spar/sericite	5%
epidote(cz)	3%
chalcopyrite	3-5%
pyrite	2-3%
pyrrhotite	trace

In thin seciton much of the silicate mineralogy is in various stages of recrystallization. Sulphides, in particular chalcopyrite, commonly form wormy intergrowths with polygonal recrystallized quartz. Fine fracturing is widespread with associated malachite.

Appendix II

Personnel

Werner Gruenwald	May 25, May 31, July 8
Paul Mullen	June 20 -26, June 30, July 1 - 7
Brian Cross	June 30, July 1 -7
Dan Gagne	May 25, June 20 - 26, June 30, July 1 - 7
D. Leishman	June 19, June 20, August 13,14,15, October 5,6,7,8,11,12,13,14,15,16,

Appendix III

Programme Costs

Personnel		
W. Gruenwald, B.Sc.	2.25 days @ $275./day	$618.75
D. A. Leishman, B.Sc.	11 days @ $275./day	$3,025.00
Paul Mullen	13.5 days @ $180./day	$2,430.00
Brian Cross	7.5 days @ $180./day	$1,350.00
Total Personnel Costs		**$7,423.75**
Expenses		
Sub-Contractor, Barnes Creek Mineral Corporation		$5,976.23
Geochemical Assay		$759.80
Petrography		$160.00
Truck and Expenses		$567.90
Room and Board		$2,101.00
Supplies / Miscellaneous		$755.65
Drafting/Report Binding		$400.00
Total Expenses		**$10,720.58**
Total Exploration Costs		**$18,144.33**
Dan Gagne, field supervision		4650.00
		22794.33

Appendix IV

Certificate of Qualifications

I, DOUGLAS A. LEISHMAN, of Kamloops, British Columbia, Do Hereby Certify That:

1. I am a self employed Consulting Geologist residing at Suite 2, Elm Tree Place, 423-1St. Avenue, Kamloops, British Columbia.

2. I am a graduate of the Northern Alberta Institute of Technology, Exploration Technology (Minerals Option), 1971, Edmonton, Alberta.

3. I am a graduate of the University of London, Imperial College of Science and Technology, Royal School of Mines, London, England, B.Sc. (Hons.) Mining Geology, 1981.

4. I am an Associate of the Geological Association of Canada and a Member of the Institute of Mining and Metallurgy (London, England).

5. I have been actively involved in mineral exploration since 1971.

6. This report is based on the review of all available data and personal observations made while visiting the Murray claim group. I, along with W. Gruenwald, planned and supervised the completed work described in this assessment report.

7. I have no interest in the Murray claim group and do not expect to receive any.

Douglas A. Leishman, B.Sc. (Hons.)

Douglas A. Leishman

Consulting Geologist

Kamloops, B. C.
October 16, 1987

LEGEND

- DRAINAGES
- 4x4 ROADS
- GRID LINES & STATIONS
- RIDGE
- CLIFF
- CLAIM OUTLINE
- PIT, TRENCH
- FRASER FILTERED VALUE
- FRASER FILTERED DATA, CONTOURED
- CONDUCTOR AXIS
- SEATTLE TRANSMITTER

SCALE: 100 0 100 200 metres

TO ACCOMPANY A REPORT BY D.A. LEISHMAN, B.Sc

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,361

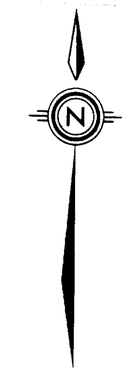
G.W.R. RESOURCES INC.

MURRAY CLAIM GROUP

VLF - E.M. Survey

REVELSTOKE MINING DIVISION
N.T.S. 82 K12W

TECHNICAL WORK BY : BARNES CREEK MINERALS CORPORATION	SCALE : 1 : 5000
DRAWN BY : DBM TECHNICAL SERVICES	DATE : JUNE , 1987
REVISIONS : OCT. , 1987	FIGURE NO. 3



LEGEND

- DRAINAGES
- 4x4 ROADS
- GRID LINES & STATIONS
- CLAIM OUTLINE
- RIDGE
- CLIFF
- PIT,
- 200 GAMMA CONTOUR INTERVALS
- MAGNETIC LOW
- MAGNETIC HIGH
- MAGNETIC READINGS REPRESENTS THE TOTAL FIELD INTENSITY IN GAMMAS (γ) + 50,000

INSTRUMENT TYPE GEONICS TOTAL FIELD MAGNETOMETER

SCALE: 100 0 100 200 metres

TO ACCOMPANY A REPORT BY D.A. LEISHMAN, B.Sc.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,361

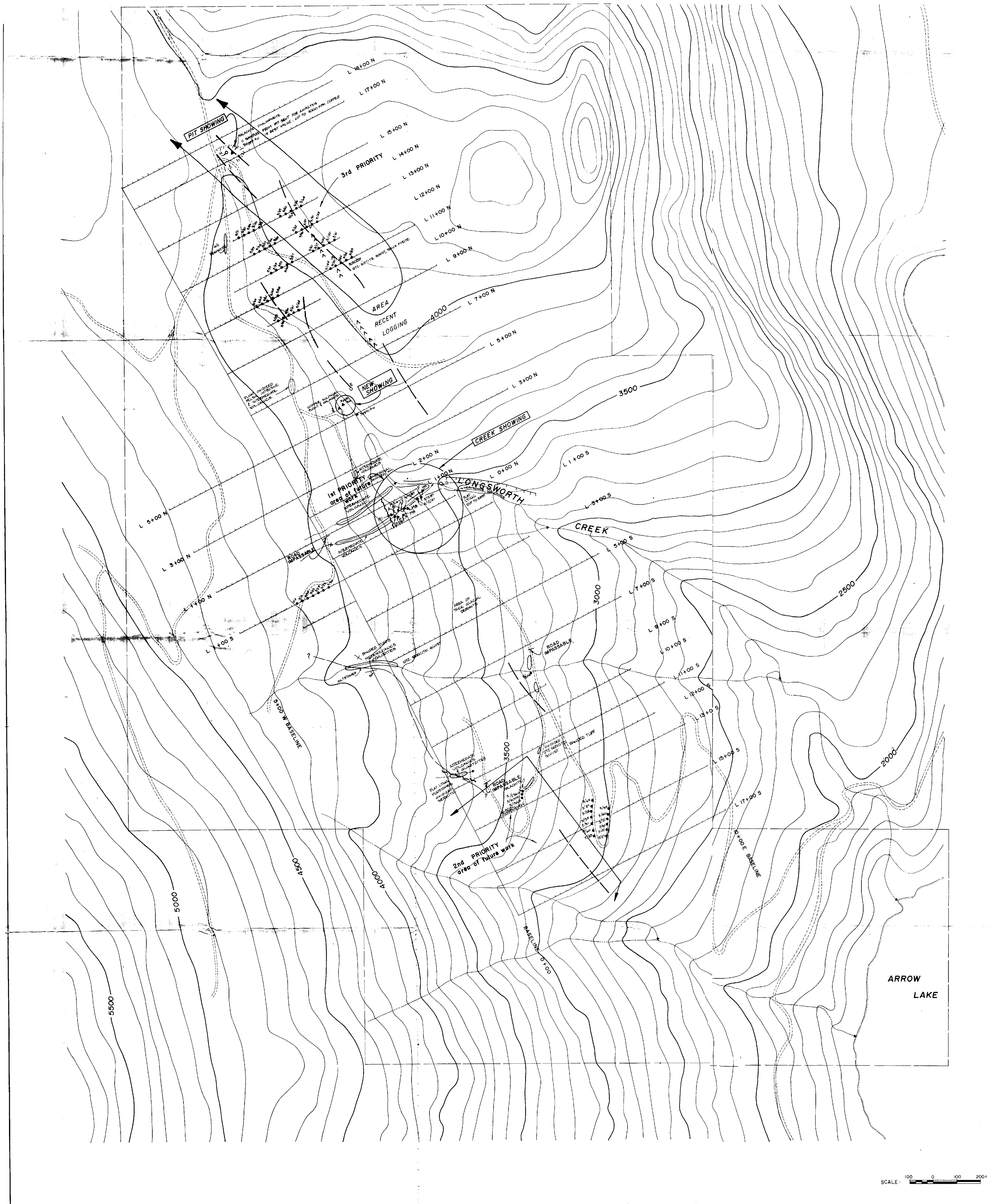
G.W.R. RESOURCES INC.

MURRAY CLAIM GROUP

Magnetometer Survey
Total Field Magnetics

REVELSTOKE MINING DIVISION
N.T.S. 82 K12W

TECHNICAL WORK BY: BARNES CREEK MINERAL CORPORATION	SCALE: 1:5000
DRAWN BY: DBM TECHNICAL SERVICES	DATE: JUNE, 1987
REVISIONS: OCT., 1987	FIGURE NO. 4



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MINERALIZED SAMPLES FROM CREEK SHOWING
TABLE I

CREEK SHOWING		
SAMPLE NO.	GOLD parts/billion	DESCRIPTION
M1	556 ppb	SHEAR ZONE 0.8m WIDE, 10% SULPHIDES, SCHISTOSITY 120°/25°NE
M2	445	HANGINGWALL OF SHEAR ZONE (0.8m WIDTH)
M3	850	SULPHIDE CORE OF SHEAR ZONE (0.8m WIDTH) Py, Po, Cpy, MALACHITE > 10%
M4	30	HOST ROCK, 20 METRES AWAY FROM MAIN SHEAR, NON-MINERALIZED
M5	245	SAMPLE ACCROSS SHEAR 1.5m TRUE WIDTH
M6	3.0	APLITE DYKE, CONFORMABLE TO SCHISTOSITY
M7	950	SEMI-MASSIVE SULPHIDES (.2m WIDTH)
M8	815	ACCROSS 1.4 METRE OXIDIZED ZONE WITH CORE MASSIVE SULPHIDES
2/12/87	1280	SHEAR ZONE IN CREEK, BELOW MAIN SHOWING, MASSIVE SULPHIDES
3/12/87	200	SHEAR ZONE. OXIDIZED. CHLORITIC. ACCROSS 1.0 METRE
4/12/87	205	CHLORITIC SCHIST, FOOTWALL OF APLITE DYDE
5/12/87	80	CHLORITIC SCHIST IN SHEAR ZONE
5/14/87	500	CHLORITIC SCHIST IN SHEAR ZONE, 10cm THICKNESS 4000 ppm COPPER

LEGEND

- DRAINAGES
- 4x4 ROADS
- GRID LINES & STATIONS
- GEOLOGICAL CONTACT
- >>>>> RIDGE
- CLIFF
- PIT, TRENCH
- CLAIM OUTLINE
- AREA OF OUTCROP
- ● 3/120 SOIL SAMPLE gold ppb / copper ppm
- ▲ 2/12/87 ROCK SAMPLE, WITH REFERENCE NUMBER (SEE TABLE ABOVE)
- ○ F PETROGRAPHICAL SPECIMEN LOCATION
- × MINERALIZED FLOAT
- AXIS OF VLF - E.M. CONDUCTOR

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,361

SCALE: 100 0 100 200 metres

TO ACCOMPANY A REPORT BY D.A. LEISHMAN, B.Sc

G.W.R. RESOURCES INC.

MURRAY CLAIM GROUP

Compilation Plan

REVELSTOKE MINING DIVISION
N.T.S. 82 K12W

TECHNICAL WORK BY: D.A.L.	SCALE: 1:5 000
DRAWN BY: DBM TECHNICAL SERVICES	DATE: JUNE, 1987
REVISIONS: OCT, 1987	FIGURE NO. 5