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GEOPHYSICAL ASSESSMENT REPORT

on the

RAIL CLAIM GROUP

LAC LA HACHE AREA

CLINTON MINING DIVISION

by

MURRAY S. MORRISON, B.Sc.

CLAIMS:	Rail 2, 4, 6, 8, 10, 12, 18-23 (12 units)
LOCATION:	The Rail property is situated 3 km southwest of Spout Lake, 18 km northeast of Lac La Hache, B.C. Lat 51°59'; Long. 121°26'; N.T.S. Map 92-P-14W.
OWNER:	M. S. Morrison
OPERATOR:	M. S. Morrison
DATE STARTED:	August 28, 1999
DATE COMPLETED:	September 1, 1999

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

Kelowna, B.C.

November 30, 1999

26,114

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ILLUSTRATIONS

SUMMARY

During late August and early September, 1999, a ground VLF-EM survey was conducted by the writer over the northwestern portion of the Rail Claim Group. The claim group is located midway between Rail and Spout Lakes, 18 km northeast of Lac La Hache in the Clinton Mining Division of British Columbia.

The Rail Claim Group, consisting of 12, 2-post mineral claims, was staked by the writer in September 1991 & 94 to cover a strong elongate airborne magnetic anomaly that is outlined on government aeromagnetic maps.

The staking of the airborne anomaly was inspired by the success achieved at the well-known Mount Polley deposit which is located within similar geology 64 km northwest of the Rail property. The Mount Polley geology consists of an alkaline laccolith that is intrusive into Nicola Group rocks. The geology features a late breccia phase and mineralization that is made up of magnetite with economic values of chalcopyrite and gold (i.e. mineable reserves of 81.5 million tons of 0.30% copper and 0.414 grams of gold). This deposit is currently being extracted by open-pit mining.

Encouraging drill results announced in May 1993 by GWR Resources Ltd from their Peach Lake property, located 7 km east of the Rail property, further prompted interest in the Rail Group. GWR Resources diamond drill hole 93-14 intersected 9.6 metres of skarn mineralization grading 0.86% copper, 47% magnetite and 0.26 g/t gold.

Ground magnetometer surveys conducted on the Rail property by the writer during the years 1992-95 clearly defined the borders of the strong airborne anomaly.

A percussion drilling program conducted under the supervision of the writer in February, 1996, was designed to test several strong magnetic anomalies within the general elongate

SUMMARY continued

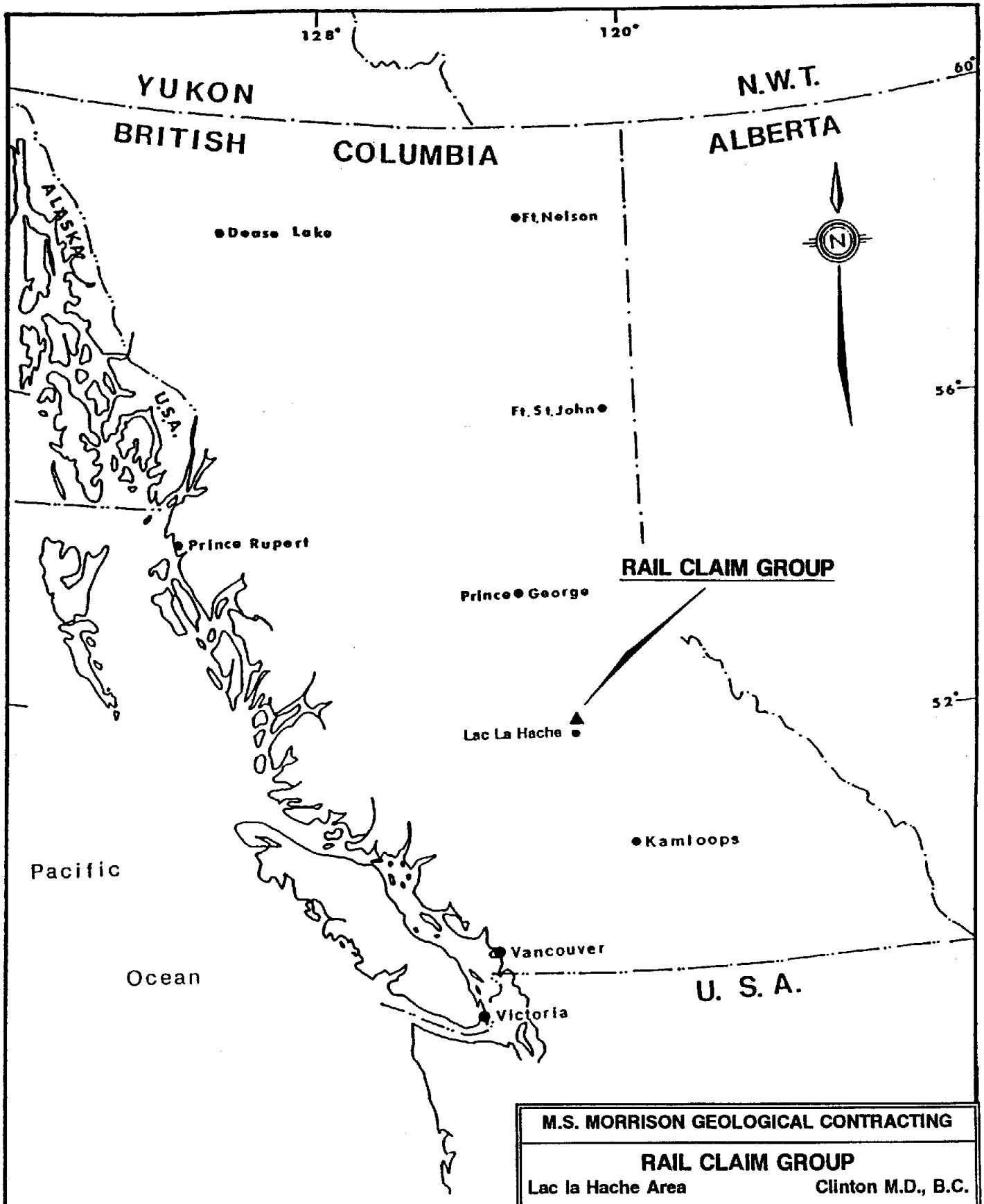
magnetic high. A total of 268 metres were drilled, but only three of the seven holes drilled reached bedrock and only 45.4 metres of bedrock geology were intersected. In the three drill holes that did reach bedrock, the rock was found to be a magnetite-rich microgabbro. One drill hole contained elevated copper values.

The drill results confirmed that the elongate magnetic anomaly does represent a basic intrusion.

This year's experimental VLF-EM survey was conducted in an attempt to better define the geometry of some of the magnetite-enriched zones within the elongate intrusive.

The conductors defined by this year's survey appear to outline the borders of a magnetite-rich core within the basic intrusion which extends the length of the property.

It is recommended that a deep-penetration Induced Polarization survey be conducted over the drift covered property in an attempt to outline magnetite-rich zones associated with the basic intrusion, or porphyry-style mineralization associated with the major transverse fault which cuts the intrusion. It is believed that economic concentrations of copper and/or gold could occur with either type of mineralization.



M.S. MORRISON GEOLOGICAL CONTRACTING	
RAIL CLAIM GROUP Lac la Hache Area — Clinton M.D., B.C.	
LOCATION MAP	
Drawn by M.M.	N.T.S. 92-P-14W
November 1999	FIGURE NO. 1

INTRODUCTION

This report, written for government assessment work requirements, discusses the results of a ground VLF-EM survey conducted over portions of the Rail 4, 6, 8 and 19-21 mineral claims by the writer during August-September, 1999.

The Rail Claim Group is comprised of 12 contiguous, 2-post mineral claims that were staked by the writer during September, 1991 & 94. The mineral claims which are located midway between Rail and Spout Lakes, 18 km northeast of Lac La Hache, B.C., were staked to cover an elongate magnetic anomaly that is outlined on Government Aeromagnetic Map 5232G-Lac La Hache.

It was considered at the time of staking that the elongate magnetic anomaly might represent an alkaline body that is intrusive into the Upper Triassic Nicola Group rocks that are thought to underlie the property. It was hoped that such a feature might represent the potential for locating an "alkaline intrusive-hosted" copper-gold porphyry deposit on the Rail property like that at the well-known Mount Polley copper-gold porphyry mine located 64 km to the northwest where the geological setting is similar.

A series of ground magnetometer surveys conducted by the writer (Morrison, 1992, 93 & 95) yielded good definition of a strong magnetic anomaly averaging 500 metres in width and crossing the entire property for 2200 metres. This anomaly which coincides with the northwestern portion of the airborne magnetic anomaly was interpreted to represent a magnetite-rich intrusive.

In February, 1996, a Percussion Drilling Program was conducted to probe the magnetic anomaly at scattered sites across the property. Only three of seven drill holes reached bedrock due to the excessive drift (+30 metres) overlying the property. The three drill holes which did reach bedrock encountered a magnetite-rich micro-gabbro. One of the three drill holes intercepted elevated copper values. Only 45.5 metres of the 268 metre drill program tested bedrock so the test of the property was inconclusive. The results, however, did

INTRODUCTION continued

indicate that the elongate magnetic anomaly which crosses the property does represent an intrusive.

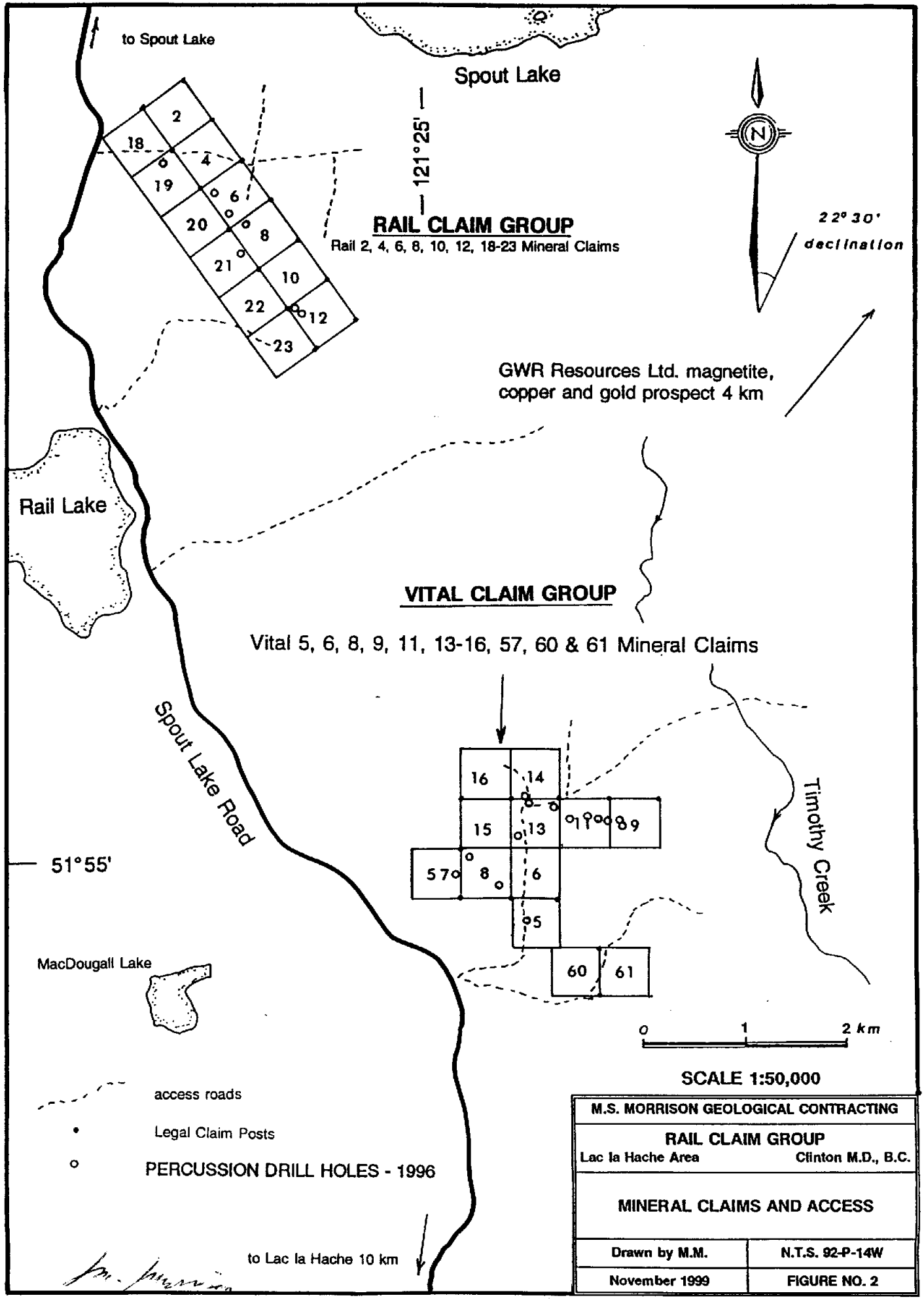
This year's experimental VLF-EM survey was designed to cross the elongate magnetic anomaly over the northwestern portion of the property. It was hoped that the results of the survey might better define the geometry of magnetite-enriched zones within the basic intrusive. It was also thought that the survey might identify structures (i.e. faults and intrusive contacts) that are hidden by the deep cover of drift.

The strong Seattle, Washington VLF signal was used for the survey. The In-Phase Dip Angle and Field Strength data for this year's survey are illustrated on Figure 3. Figure 4 represents the In-Phase Dip Angle data after it has been Fraser Filtered and contoured.

LOCATION AND ACCESS

The Rail property is located midway between Rail Lake and Spout Lake, 18 km northeast of Lac La Hache, B.C. (Lat. 51°59', Long. 121°26'; N.T.S. Map 92-P-14W).

Access to the property from Highway 97 at Lac La Hache is via the Spout Lake Road (23.6 km) and dirt logging roads which extend east from the Spout Lake Road, as illustrated on Figure 2.



M.S. MORRISON GEOLOGICAL CONTRACTING	
RAIL CLAIM GROUP Lac la Hache Area — Clinton M.D., B.C.	
MINERAL CLAIMS AND ACCESS	
Drawn by M.M.	N.T.S. 92-P-14W
November 1999	FIGURE NO. 2

PHYSICAL FEATURES AND CLIMATE

The Rail property covers an area of very subdued relief at the 1120 m elevation near the centre of the Fraser Plateau.

The property is located at the height of land midway between Rail Lake, 2 km to the southwest, and Spout Lake, 2 km to the northeast. Drainage on the property is internal and flows into large shallow marshes.

The entire property is covered by 30 to 50 metres of Pleistocene drift. Geomorphic features include low glacial ridges and shallow meltwater channels.

Forest cover on the property is predominantly lodgepole pine - some of which has been recently clear-cut logged. Other forest species include poplar and spruce which fringe the grassy marshes and generally grow in lower poorly drained regions on the property.

The property and surrounding countryside are used as summer rangeland for cattle.

The Fraser Plateau has a moderate climate with summer highs seldom exceeding 30° C and winter lows usually not dropping below -30° C. Precipitation equals approximately 40 cm annually and one-third of it occurs in the form of snow. The snow begins to accumulate around the first of November and generally lingers in the forested areas until early April.

CLAIM STATUS

The Rail Claim Group is comprised of the Rail 2, 4, 6, 8, 10, 12, and 18-23 contiguous 2-post mineral claims which are located in the Clinton Mining Division.

The mineral claims are owned by the writer, M. Morrison of Kelowna, B.C.

The mineral claims included in the Rail Claim Group are listed below:

CLAIM NAME	UNITS	TENURE NUMBER	DATE OF RECORD	EXPIRY DATE*
Rail 2	1	304274	September 8, 1991	September 8, 2000
Rail 4	1	304276	September 8, 1991	September 8, 2000
Rail 6	1	304278	September 8, 1991	September 8, 2000
Rail 8	1	304280	September 8, 1991	September 8, 2000
Rail 10	1	304282	September 8, 1991	September 8, 2000
Rail 12	1	304284	September 9, 1991	September 9, 2001
Rail 18	1	330642	September 7, 1994	September 7, 2000
Rail 19	1	330643	September 7, 1994	September 7, 2000
Rail 20	1	330644	September 7, 1994	September 7, 2000
Rail 21	1	330645	September 7, 1994	September 7, 2000
Rail 22	1	330646	September 8, 1994	September 8, 2000
Rail 23	1	330647	September 8, 1994	September 8, 2000

* **Note:** The Expiry Dates are based on the acceptance of this report for Assessment Work Credits.

HISTORY AND PREVIOUS WORK

The Rail Property covers a portion of ground that was formerly covered by the WB mineral claims of Amax Exploration Inc. in 1972-73. The WB mineral claims comprised one of several properties that Amax had staked in the early '70's to surround their prime exploration target on the WC and Peach/Pit properties located south and east of Spout Lake, respectively (see Regional Mineralization).

In 1972, Amax conducted a helicopter magnetometer survey over several of their properties including the WB, and in 1973, followed-up the airborne survey with a ground magnetometer survey. Five kilometres of Induced Polarization survey were conducted on the WB property in 1973 and six percussion drill holes, totalling 381 metres, were drilled on the WB 24, 30, 41 and 45 mineral claims (G.E.M. 1972 & 73).

Some old roads located on the present Rail property could date back to the early 1970's, and some pyroxenite sand that could represent percussion drill chips was noted at grid 21N, 4+25W on the Rail property.

There is no record of any work having been done on the property from 1974 until 1992. In 1992, the writer conducted a ground magnetometer survey over the Rail 5-10 mineral claims on a 25 by 200 metre grid. In 1993, the survey was expanded to cover the Rail 2, 4, 12, 14, 16 & 17 mineral claims on a grid spacing of 25 by 100 or 200 metres and in 1995 expanded further to cover portions of the Rail 18-23 mineral claims at a grid spacing of 25 by 50 or 100 metres (Morrison 1992, 93 & 95).

An attempt was made to test several of the strong magnetic anomalies identified during the 1992-95 surveys with seven percussion drill holes in February, 1996. A total of 268 metres of drilling was completed on the Rail 6, 8, 12, 19 & 21 mineral claims. The drill holes ranged from 20 to 61 metres in depth, but only three of the seven reached bedrock. A magnetite-rich micrograbbo was discovered in the three drill holes that did reach bedrock. One drill hole returned elevated values for copper.

REGIONAL GEOLOGY

The regional geology of the Lac La Hache area is illustrated on the Bonaparte Lake, 1"=4 mile, map sheet (#1278A) of the Geological Survey of Canada (Campbell and Tipper, 1971). Much of the Fraser Plateau to the west and south of Lac La Hache is mantled with thick Tertiary lava flows of Miocene and/or Pliocene age. However, a wide window in the Tertiary volcanics east of Lac La Hache exposes a 16 by 40 km belt of Upper Triassic Nicola Group volcanics and sediments. The western edge of the large Takomkane Batholith of Triassic or Jurassic age intrudes the Nicola Group rocks at Spout Lake, Mount Timothy, Timothy Lake and Spring Lake 17 km to the northeast and east of Lac La Hache. A 6.5 km wide dioritic and syenodioritic contact phase of the batholith extends 11 km north from Mount Timothy to Spout Lake.

A late fault coincident with Timothy Creek cuts through the centre of the Nicola Group belt on the Bonaparte Map and crosses the countryside 2 km east of the Rail property.

Map 1278A indicates that the Rail property lies just to the north of the window in the Tertiary volcanic cover, but the results of the 1992, 93 & 95 magnetometer surveys and the 1996 drill program suggest that the Tertiary volcanics do not overlie much of the Triassic rocks on the property. The elongate airborne magnetic anomaly that is outlined on the Government Aeromagnetic Series Map 5232G-Lac La Hache, which is covered by the Rail Claim Group, is believed to represent a calcalkaline-rich body that is intrusive into the Nicola Group rocks which are believed to underlie the property. The 1996 drill holes confirmed that at least part of the anomaly is caused by a magnetite-rich microgabbro intrusive.

A very thick (30 to 50 metre) Pleistocene drift covers the entire property.

REGIONAL MINERALIZATION

Copper occurrences are common east of the Timothy Creek Fault within basaltic and andesitic volcanic rocks or the Nicola Group, particularly where they are intruded by micro-dioritic syenodioritic or monzonitic Intrusive bodies. Mineralization consists of chalcopyrite or bornite and ranges from low grade disseminations to higher grade veinlets associated with shearing. Skarn development has also been noted at intrusive-volcanic contacts on the old WC property of Amax Exploration Inc. located immediately south or Spout Lake. Chalcopyrite occurs with magnetite at the skarn occurrences.

Similar chalcopyrite-magnetite mineralization occurs at the contact of an alkalic intrusive complex emplaced into Nicola Group rocks on the old Peach Lake property of Amax Exploration Inc. located just 4 km east of Spout Lake.

The Spout Lake and Peach Lake properties, located 4 km and 8 km east of the Rail property respectively, are now owned by GWR Resources of Vancouver. A vigorous exploration effort was conducted on these properties in the early 1990's in an attempt to prove up an economic deposit of magnetite, copper and gold. In May, 1993, it was reported that diamond drill hole 93-14 had intersected 9.6 m of skarn mineralization grading 0.86% copper, 47% magnetite and 0.13 g/t gold.

Also, in the early 1990's, a discovery or native copper, chalcopyrite and chalcocite mineralization was announced by Liberty Gold Corp. from their Tim property located near Mount Timothy, 12 km southeast of the Rail property. In 1990, drill hole 90-1 on the Tim property returned 41 metres of 0.40% copper, including 7.0 metres of 2.05 copper, and drill hole 90-10 returned 51.8 metres of 0.25% copper, including 5.2 metres of 1.02% copper (Vancouver Stockwatch, October 17, 1991, p. 39).

REGIONAL MINERALIZATION continued

As early as 1968, A. Sutherland Brown noted the "'marked similarity of the Spout Lake geology with that of the Cariboo Bell area (now called Mount Polley area) located 65 km northwest of Spout Lake (Report of the Minister of Mines, 1968, pp. 155-159).

The main feature of the Mount Polley geology is an alkaline muliphase laccolith that is intrusive into (and coeval with) Nicola Group rocks. The phases range from syenodiorites to monzonites to pyroxenites, and include a very important semi-discordant breccia phase that has been mineralized with late magnetite and chalcopyrite. Native gold occurs within chalcopyrite grains. A pyrite "halo" extends east (or geologically above) 1000 metres from chalcopyrite-magnetite mineralization.

The current mineable reserves at the Mount Polley property were calculated at 81.5 million tonnes grading 0.30% copper and 0.414 grams of gold (George Cross News Letter, Nov. 2, 1995) and the deposit is currently being mined by open-pit.

PROPERTY GEOLOGY

There is no bedrock exposed on the Rail property. In fact, the results of the 1996 drilling program indicate that the property is covered with over 30 metres of Pleistocene drift. The drift is comprised of sand, pea-gravel and gravels which were possibly deposited as lacustrine sediments. A 3 to 7 metre thick silty-boulder till covers the old sediments on much of the property.

Only three of the seven drill holes drilled in 1996 reached bedrock. The bedrock in each hole was comprised of a magnetite-rich (5 to 10%) microgabbro. The microgabbro exhibits some variation from drill hole to drill hole. The pyroxene content was higher in PDH 96-4 (19+12N, 4+56W) than elsewhere, and there was notable replacement of the microgabbro by serpentine and talc in this drill hole. The microgabbro of PDH 96-6 (31+40N, 4+62W) has a

PROPERTY GEOLOGY continued

gneissic texture and many slickenside surfaces were noted. The microgabbro at PDH 96-6 is intruded by a pink aplite dyke.

The microgabbro of PDH 96-5 (20+03N, 4+66W) is more leucocratic than that of PDH 96-4 located just 100 metres away. The entire bedrock intersection of PDH 96-5 contained elevated copper values (174 parts per million from 31.7 - 36.6 metres and 258 ppm from 36.6 metres to the bottom of the hole at 45.7 metres).

Drill holes PDH 96-5 & 6 are located 1100 metres apart and the results from the drilling program suggest that the 2200 metre elongate magnetic anomaly which crosses the property at 145 degrees represents a basic intrusion of which microgabbro is at least one phase.

The results of the 1992-95 ground magnetometer surveys suggest that the intrusive dips to the northeast. The data from the 1995 survey also indicates that the northwestern portion of the intrusive has been offset 350 metres to the southwest by a transverse fault. The magnetic data further suggests that the transverse fault zone is 300 metres wide and that the magnetite of the intrusive has been destroyed within the fault zone (presumably by hydrothermal solutions?).

VLF-EM SURVEY - 1999

Grid

This year's survey is centred over the boundary between the Rail 2, 6 & 8 mineral claims which lie to the northeast and the Rail 19-21 mineral claims which lie to the southwest. The Location Line of the Rail 19-21 mineral claims at a bearing of 145 degrees was used as Baseline 4+75W for the survey. Thirteen flagged grid lines spaced at 100 metre intervals were measured perpendicular to the Baseline for distances averaging 225 metres to the

southwest and 175 metres to the northeast. Grid stations were marked at every 25 metres along each line. Two intermediate lines (33+50N and 34+50N) were added to the grid late in the survey.

In all, 1200 metres of Baseline and 6200 metres of flagged grid were established with a Silva Ranger compass and a Topolite belt chain.

Program

The VLF (very low frequency) exploration method makes use of high-powered electromagnetic transmissions broadcast by naval radio communication stations distributed around the world. Those transmissions induce electric currents in conductive bodies. The induced current produces secondary magnetic fields which can be detected by measuring deviations in the normal VLF fields. VLF-EM instruments are designed to detect these deviations.

The strong Seattle, Washington VLF signal (24.8 kHz) which was used for the survey was received from a direction of 180 degrees azimuth.

A Sabre, Model 27, VLF-EM instrument made by Scintrex was used to conduct the survey over 6.2 km of grid on the Rail property. In-Phase Tilt Angle readings were taken facing a direction 360 degrees at each survey station. East tilts were recorded as positive (+) and west tilts were recorded as negative (-). Field Strength readings were also recorded at each survey station with the instrument facing 090 degrees, azimuth, perpendicular to the Signal Station.

Field Strength readings were taken along the Baseline and all grid station readings were then corrected for diurnal variation using the Base Stations along the Baseline in much the same manner as is used for magnetometer surveys. The corrected Field Strength values have been contoured on Figures 3, which also displays the In-Phase Tilt Angles.

VLF-EM SURVEY - 1999 continued

Program continued

The In-Phase Tilt Angle values have been Fraser Filtered and contoured on Figure 4. Fraser Filtering of VLF-EM data has had widespread use for several years, and a full explanation of the technique is given in the geophysical paper by Peterson and Ronka that is listed with the references at the end of this report.

The Fraser filtering technique may be briefly summarized as follows: by means of simple mathematical operations, the tilt data can be transformed into contourable form, and the effects of noise and topography can be filtered from data. By averaging pairs of stations and taking differences between pairs separated by the appropriate distance, values may be plotted and contoured in plan that transform cross-overs into peaks, and a low-pass smoothing mathematical operator reduces noise.

Results

Field Strength Data

All of the Field Strength values illustrated on Figure 3 fall within a narrow range (82 to 101) and on some lines (e.g. 37N) the range is only from 87 to 93.

It is very possible that the 30 metres of overburden which overlies much of the property masks most of the geophysical character of the bedrock geology. In spite of this, there is a zone of slightly elevated Field Strength values which coincides approximately with the VLF-EM conductors outlined on Figure 4. The Field Strength value of 94 has been contoured to outline the zone of elevated values and it is interesting to note that the highest Field Strength values within the contoured outline are very often coincident with the axes of Conductors B or C on Figure 4.

VLF-EM SURVEY - 1999 continued

Results continued

Field Strength Data (continued)

Although the distinction between high and low Field Strength values on Figure 3 is very subtle, the high values do equate with the axes of conductors on Figure 4 which are thought to represent bedrock geology.

Fraser Filtered In-Phase Data

The axes of three weak conductors (A, B & C) are illustrated on Figure 4. Conductors B and C converge into a single conductor on grid lines 37N and 34N, but they are otherwise recognized as two distinct conductors across the survey area.

In the comments that follow, the results of the VLF-EM survey are compared with the results of ground magnetometer surveys conducted over the same region by the writer in 1992, 93 & 95.

Conductor A

Conductor A is a weak conductor that extends 100 metres from L37N, 6+15W to L38N, 6+65W. The conductor is only weakly expressed in the Field Strength data (see Figure 3) and does not coincide with any features from the 1990's magnetometer surveys.

Conductor B

Conductor B is a weak to moderate strength conductor that extends the full 1200 metre length of the survey area. The conductor, for the most part, coincides with the

VLF-EM SURVEY - 1999 continued

Results continued

Fraser Filtered In-Phase Data continued

Conductor B continued

southwestern flank of a 100 metre wide core zone of high magnetic values which crosses the property. Conductor B converges with Conductor C on L37N at 4+75W and again on L34N at 4+70W. In each case, the early 1990's magnetic surveys recorded strong magnetic highs at these sites.

Some of the weaker zones along Conductor B probably represent bedrock that is covered with particularly deep overburden.

Conductor C

Conductor C is a weak to moderate conductor that, like Conductor B, extends the full 1200 metre length of the survey area. Conductor C coincides with the northeastern flank of the 100 metre wide core zone of high magnetic values mentioned earlier.

Conductor C is weak on the same lines as Conductor B. This fact reinforces the suggestion that the overburden is particularly deep below these grid lines.

DISCUSSION

It was discovered during the 1996 percussion drilling program, that the Rail property is overlain with 30 to 42 metres of Pleistocene sands and gravels. In spite of the deep overburden, the strong magnetics of the underlying bedrock geology were recorded during the early 1990's magnetometer surveys. This year's VLF-EM survey results also appear to define conductors associated with bedrock geology despite the very deep cover.

As mentioned under the previous title, Conductors B and C (see Figure 4) coincide with the southwestern and northeaster flanks of a 100 metre wide core zone of strong magnetics which crosses the property. The conductors converge on lines 37N and 34N where the magnetics are strongest, but elsewhere the conductors are separated by 75 to 100 metres.

It is believed that the VLF-EM survey is reacting to the high magnetite content in bedrock below lines 37N and 34N, but this is not the case throughout the survey area. There is a possibility that southeast of L34N, the conductors are defining the southwestern and northeastern contacts of a late phase of magnetite-enriched material that has intruded the main intrusion underlying the property.

Conductors B and C would also flank the core of high magnetics on the Rail 10 & 12 mineral claims if projected directly to the southeast of this year's survey area.

The VLF-EM survey failed to respond to a spur of high magnetics which extends southwestward from the main core zone of high magnetics on line 28N at 5+50W. The lack of response may be the result of the deep overburden in the area which during the 1996 drilling program was found to exceed 32 metres. Drill hole PDH 96-7 which was drilled nearby never reached bedrock.

There were no new surprise structures discovered by the VLF-EM survey. The very deep overburden may be responsible for masking the effects of most features.

DISCUSSION continued

The VLF-EM survey did little to enhance the development of the property. The survey simply reinforced some of the conclusions that were made after reviewing the magnetic data. Both surveys indicate that the intrusive underlying the property has a strong magnetic core zone.

The results of the 1996 drilling program suggest that a basic intrusion which is believed to underlie the property is responsible for the large elongate magnetic high which crosses the property. One of the drill holes also proved that elevated copper values are associated with the intrusion (see Property Geology).

The ground magnetometer survey of 1995 indicates that the northwestern end of the elongate intrusive has been offset 350 metres to the southwest by a wide transverse fault zone. The magnetite content of the intrusive appears to have been destroyed within the fault zone, presumably by hydrothermal solutions.

It is believed that there are at least two possibilities for the development of economic concentrations of copper and/or gold on the Rail property. First, there could be concentrations of copper and/or gold-bearing magnetite associated with late phases of the basic intrusion, or with the contacts of the main intrusion adjacent the Nicola Group rocks. Second, there could be porphyry-style copper/gold mineralization associated with the hydrothermal solutions that are believed to have destroyed the magnetite of the main intrusion where it has been cut by the wide transverse fault zone.

Further geophysical surveys will be required to explore the drift covered property. It is recommended that a deep-penetration induced polarization survey be conducted over both the main intrusive and the transverse fault. The survey should work well in defining magnetite concentrations that are near or within the intrusive. The survey should also outline disseminated mineralization within the wide transverse fault zone.

CONCLUSIONS AND RECOMMENDATIONS

This year's VLF-EM survey conducted over portions of the Rail 4, 6, 8 and 19-21 mineral claims identified two weak conductors that extend 1200 metres in a northwesterly direction across the entire survey area.

The two subparallel conductors, which are separated by 75 to 100 metres across much of the property, flank a core zone of very high magnetics which lies within a broad zone of high magnetics.

The results of a 1996 percussion drilling program suggest that the broad zone of high magnetics represents a Late Triassic or Early Jurassic basic body that is intrusive into Upper Triassic Nicola Group rocks which are believed to underlie the property.

It is not know if the two VLF-EM conductors represent the intrusive contacts of a late phase of material within the centre of the main intrusive or if they represent concentrations of magnetite. However, it is known that the conductors converge in two areas where the ground magnetics are particularly high.

No other VLF-EM features were discovered during the survey, but the very deep drift (+30 metres) which underlies most of the property may account for this.

In spite of the deep drift, work programs conducted over the property since 1992 have determined:

(a) that a basic intrusive which measures 500 metres wide by 2200 metres long most probably underlies the centre of the property coincident with a strong ground magnetic anomaly;

(b) that the intrusive appears to have a magnetite-rich core zone as well as other possible phases;

CONCLUSIONS AND RECOMMENDATIONS

(c) that at least one phase of the intrusive is a microgabbro;

(d) that there is at least one zone of elevated copper values within the intrusive;

(e) that the northern portion of the intrusive has been offset 350 metres to the southwest by a 300 metre wide transverse fault which crosses the Rail 2, 4, 18 & 19 mineral claims; and

(f) that the magnetite content of the basic intrusion has been destroyed across the fault zone, presumably by hydrothermal solutions.

As mentioned under the previous title (see Discussion), it is believed that there could be economic copper and/or gold deposits associated with magnetite-enriched zones related to the basic intrusive, or with the hydrothermal solutions that are believed to have invaded the wide transverse fault zone. In either case, a deep-penetration I.P. survey is recommended to test for ore deposits beneath the heavy drift which overlies the property (see Discussion).

There are several copper-gold deposits or occurrences in the Southern Cariboo Region that have geology similar to that which is believed to underlie the Rail property. The nearby Peach Lake property (7 km east of the Rail property) hosts magnetite with good copper and gold values, and the well-known Mount Polley copper-gold open-pit mine is located just 64 km to the northwest of the Rail property (see Regional Geology).

November 30, 1999
Kelowna, B.C.

Murray Morrison, B.Sc.

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1996: Five Years of Surveying with the VLF-EM Method, a paper presented at the 1969 Annual Meeting, Society of Exploration Geophysicists.

* Assessment Reports on file with the Ministry of Energy and Mines of British Columbia.

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, Murray Morrison, of the City of Kelowna, in the Province of British Columbia, do hereby state that:

1. I graduated from the University of British Columbia in 1969 with a B.Sc. Degree in Geology.

2. I have been working in all phases of mining exploration in Canada for the past thirty years.

3. During the past thirty years, I have intermittently held responsible positions as a geologist with various mineral exploration companies in Canada.

4. I have conducted several geological, geochemical, and geophysical surveys on mineral properties in Southern British Columbia during the past thirty years.

5. I conducted the VLF-EM ground survey on the Rail 4, 6, 8 & 19-21 mineral claims.

6. I own a 100% interest in the Rail Claim Group.

November 30, 1999
Kelowna, B.C.

Murray Morrison - B.Sc.

APPENDIX B

STATEMENT OF EXPENDITURES - ON THE RAIL CLAIM GROUP

Statement of Expenditures in connection with a VLF-EM Survey carried out on the Rail Claim Group, located 18 km northeast of Lac La Hache, B.C. (N.T.S. Map 92-P-14W) for the year 1999.

VLF-EM SURVEY (6.2 km)

M. Morrison, geologist	4 days @ $300.00/day	$1,200.
Automobile (including gasoline and insurance)	4 days @ $45.00/day	180.
Meals and Lodging	4 days @ $55.00/day	220.
Instrument Rental	4 days @ $35.00/day	140.
Flagging and belt chain thread		20.
	Sub-total	1,760.

REPORT PREPARATION COSTS

M. Morrison, geologist (Fraser Filter calculations; plotting and contouring results; analyzing data and writing report.	2½ days @ $300.00/day	$ 750.
Drafting		53.
Typing		107.
Copying Reports		20.
	Sub-total	$ 930.

GRAND TOTAL **$2,690.**

I hereby certify that the preceding statement is a true statement of monies expended in connection with the VLF-EM Survey conducted August 28 to September 1, 1999.

November 30, 1999
Kelowna, B.C.

Murray Morrison, - Geologist

RAIL 18 M.C.

I.P.

to Spout Lake Road 500 metres

dirt road

F.P.

I.P.

N

22°30' magnetic declination

RAIL 4 MINERAL CLAIM

38+00N

A

37+00N

RAIL 19 MINERAL CLAIM

B

C

F.P.

I.P.

PDH 96-2

did not reach bedrock

36+00N

35+00N

34+00N

RAIL 6 MINERAL CLAIM

33+00N

RAIL 20 MINERAL CLAIM

32+00N

PDH 96-6

B

F.P.

I.P.

RAIL 8 MINERAL CLAIM

31+00N

C

30+00N

marsh

BASELINE

2+00W

PDH 96-7

did not reach bedrock

RAIL 21 MINERAL CLAIM

29+00N

4+75W

3+00W

4+00W

28+00N

5+00W

F.P.

27+00N

6+00W

7+00W

26+00N

Instrument: Sabre, Model 27, by Scintrex

Please see Figure 3 for Basic In-Phase and Field Strength Data

0 & 8 contour intervals

Axis of Conductor

Signal Station
Seattle, Washington

0m 50m 100 metres

Scale 1:2500

Claim Posts were tied-in with a compass and belt chain

Please see Figure 2 for the entire Rail Claim Group

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,114

To Accompany a Geophysical Assessment Report by M.S. Morrison.

M. S. Morrison

M.S. MORRISON GEOLOGICAL CONTRACTING	
RAIL CLAIM GROUP Lac la Hache Area — Clinton M.D., B.C.	
VLF-EM GROUND SURVEY FRASER FILTERED DATA RAIL 4, 6, 8 & 19-21 M.C.s	
Drawn by M.M.	N.T.S. 92-P-14W
November 1999	FIGURE NO. 4

RAIL 18 M.C.

I.P.

to Spout Lake Road 500 metres

dirt road

F.P.

I.P.

RAIL 4 MINERAL CLAIM

RAIL 19 MINERAL CLAIM

38+00N

37+00N

36+00N

35+00N

34+00N

33+00N

32+00N

31+00N

30+00N

29+00N

28+00N

27+00N

26+00N

RAIL 6 MINERAL CLAIM

F.P.

I.P.

PDH 96-2 did not reach bedrock

RAIL 20 MINERAL CLAIM

In-Phase (in degrees)

Field Strength

94 = contour interval

Signal Station
Seattle, Washington

F.P.

I.P.

PDH 96-6

F.P.

I.P.

RAIL 8 MINERAL CLAIM

marsh

PDH 96-7
did not reach bedrock

RAIL 21 MINERAL CLAIM

BASELINE

2+00W

3+00W

4+75W

4+00W

5+00W

F.P.

6+00W

7+00W

22°30' magnetic declination

Instrument: Sabre, Model 27, by Scintrex

Please see Figure 4 for Fraser Filtered Data

0m 50m 100 metres

Scale 1:2500

Claim Posts were tied-in with a compass and belt chain

Please see Figure 2 for the entire Rail Claim Group

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,114

To Accompany a Geophysical Assessment Report by M.S. Morrison.

M.S. MORRISON GEOLOGICAL CONTRACTING	
RAIL CLAIM GROUP Lac la Hache Area	Clinton M.D., B.C.
VLF-EM GROUND SURVEY IN-PHASE & FIELD STRENGTH DATA RAIL 4, 6, 8 & 19-21 M.C.s	
Drawn by M.M.	N.T.S. 92-P-14W
November 1999	FIGURE NO. 3