85-366-13789

Assessment Report

Line-cutting and Geophysical Surveys

BAR GROUP

Cariboo Mining Division

Lat 53°06'30" NTS 93 G 1 Long 122°11'07"

For

MARY CREEK RESOURCE CORP.

Operator

by

Dirk Moraal

Record Numbers 7040(6), 7042(6), 7045(6), 7046(6)

Quesnel, June 7th, 1985

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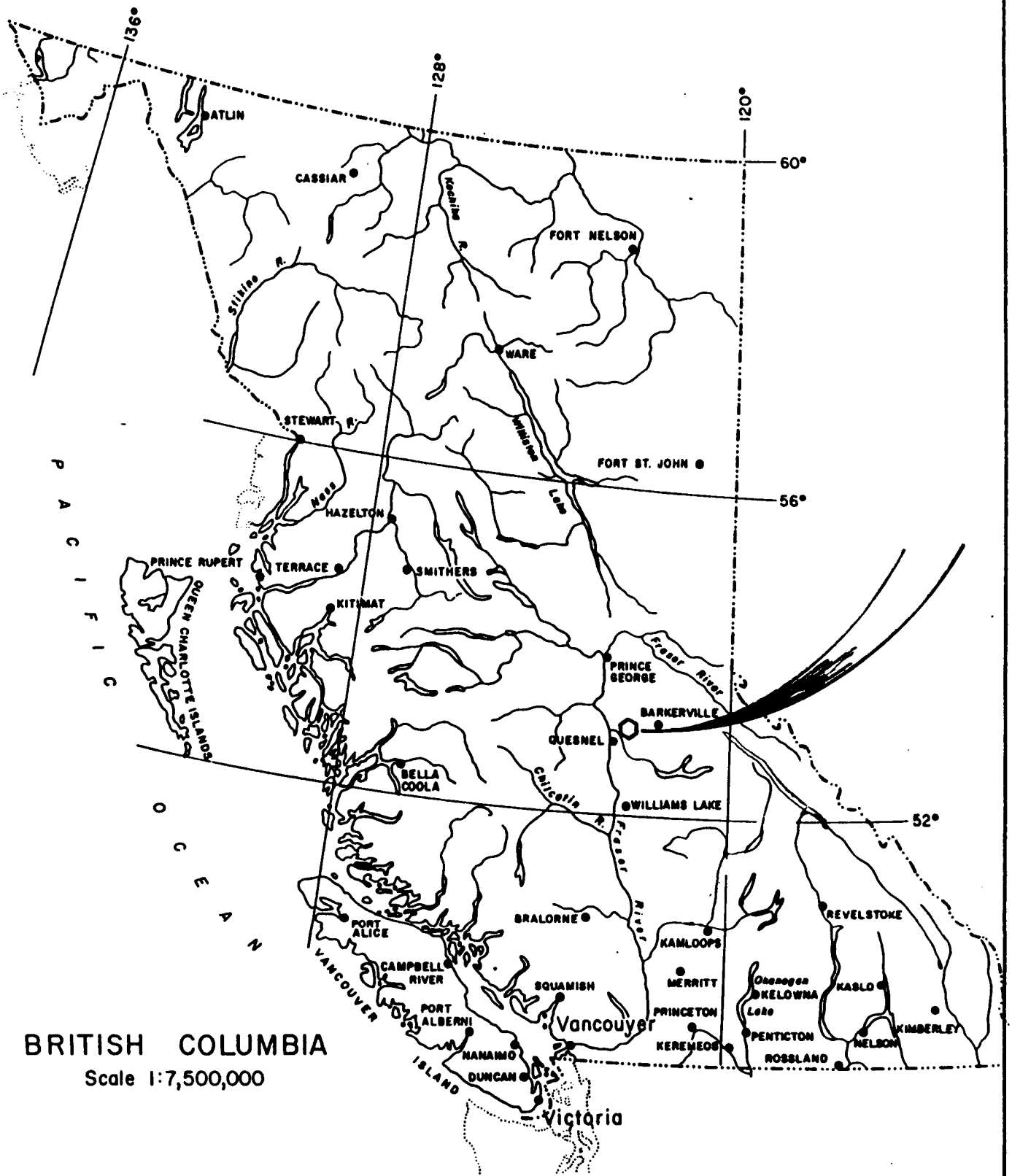
References

Roeds, M.	Placer Gold Deposits of the Cottonwood Area
Breiner, S.	Applications Manual for Portable Magnetometers
Dept. of Mines and Technical Surveys,	Map. Bedrock Geology Cottonwood Area 93 G 1E 1:50000
Anderson, C.D.	Detailed magnetic profiles over an electromagnetic conductor. CMJ, Oct 1974
Fraser, D.C.	Profiling VLF-EM data



BRITISH COLUMBIA

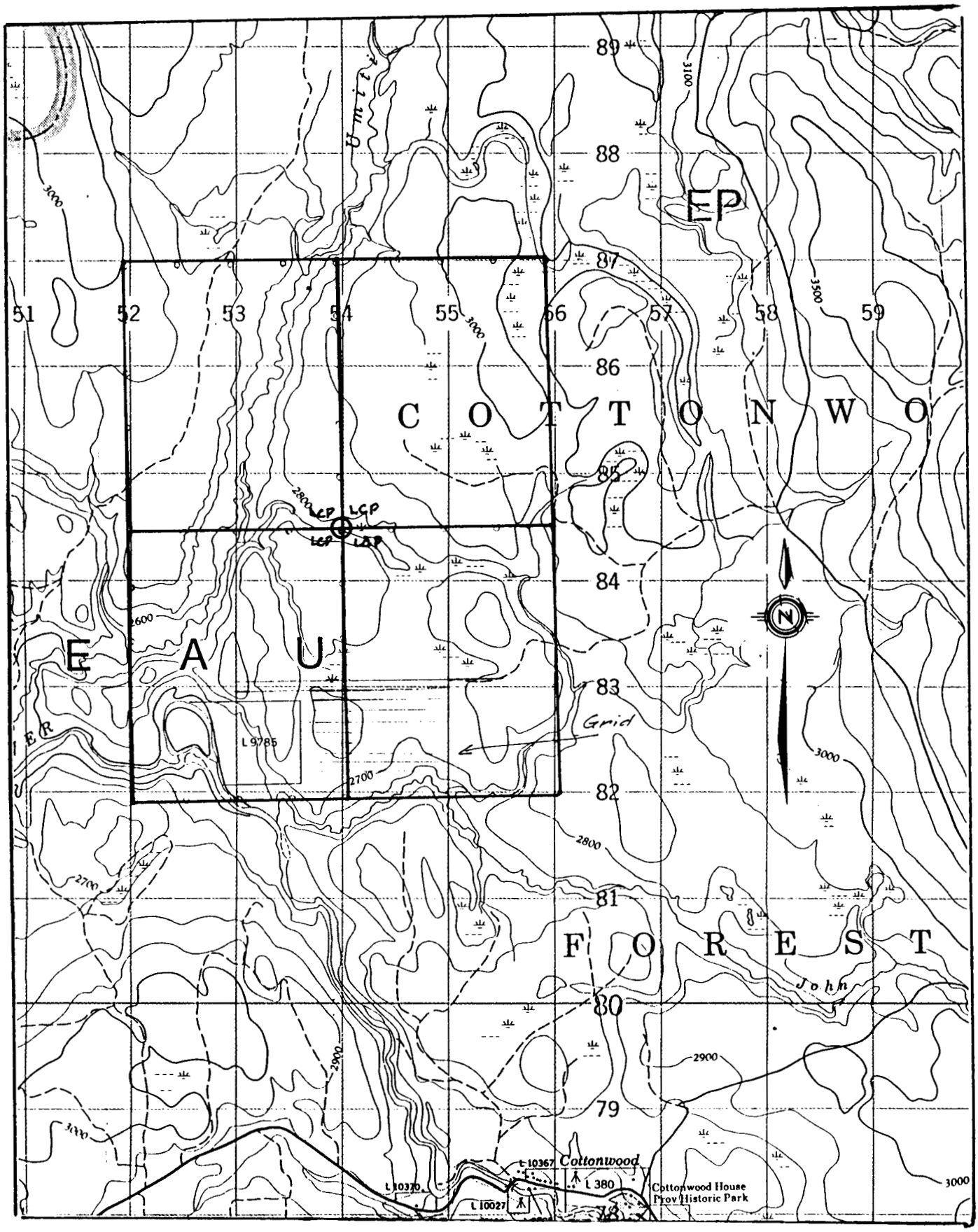
Scale 1:7,500,000

LOCATION MAP

○ Bar Group
Mineral Claims

D.M.	June, 1985

Plate 1



INDEX MAP
Bar Group
NTS 93 G/1

Plate 2

1.0 Introduction

The BAR Group, consisting of four, 20 unit claims staked under the modified grid system, are the result of several seasons work by Bryan Elliott of Kamloops, who prospected, sampled, and mapped in the area of John Boyd Creek, Umity Creek and the Cottonwood River Valley.
This information, complemented by physiographic features, an aeromagnetic low, and a dark area located on a much enlarged Landsat photograph, compiled from satellite infrared data led to the postulation that a Tertiary, volcanic vent could be located in the area.
Gold mineralization is held to occur in Tertiary, intermediate to felsic piles.
This report describes the work performed on the BAR Group of mineral claims, and is submitted for assessment purposes.

2.0 Location, Access and Topography

The BAR Group is located 25 Km east of the town of Quesnel, British Columbia and some 6 Km northwest of the locality of Cottonwood Historic Park on Highway 26, a paved road leading to the historical area of Barkerville.
Access is from Highway 26 from Cottonwood, via the 600 Main logging road. The visitor then travels on the 6B road which forks off from the 600 Rd at Km 9, in a westerly direction to the claims.
Two wheel drive vehicles can be used during the dry season, but four wheel drive truck is recommended during the rest of the year.
The average altitude of the BAR Group is 850m A.S.L.. The property is situated on a flat bench, topographic relief being provided by low, north-south trending ridges and glacial features, while three creeks on the property are contained in flat to moderately steep gullies. Swamps and low wet areas cover a large portion of the claim. Forest cover is mainly mature stands of Spruce, Balsam, Fir and Jackpine, with little underbrush. Dense stands of Willow occur in all wet creek bottoms. Logged areas have been taken over by Aspen, Pine and brush.
Prevailing winds have left large amounts of blowdown timber making travel difficult in many areas.

3.0 Ownership and Claim Status

The BAR Group consists of 4 claims of 20 units each staked under the modified grid system. They are jointly owned by A. Fredrickson and R. Gobbi of Prince George, British Columbia, and Dirk Moraal of Kamloops, British Columbia. These claims are in good standing and have an anniversary date of June 7th, 1985.

Claim Name	Record Number	# of units
Bar 1	7040(6)	20
Bar 2	7042(6)	20
Bar 5	7045(6)	20
Bar 6	7046(6)	20

The BAR Group of mineral claims are currently under option to Mary Creek Resource Corp.

The LCP for all four claims is located at the southwest edge of a small lake located at UTM coordinates 554050m East and 5884450m North.

4.0 History and Previous Work

The writer could find no reports of work performed in past years, and no cutlines or other evidence of exploration work have been seen to date, although a two post final tag, much chewed by animals was found, bearing a 1981 date.
It is probably safe to assume that very little hardrock exploration work has been conducted in the area due to the glacial overburden, and the historic placer mining would guide to that kind of activity.
The author has knowledge of recent grass roots prospecting in the form of sampling over aeromagnetic anomalies, and the work of Elliott as reported verbally.

5.0 Summary of Work Described in this Report

5.1 Preparatory Surveys. 16500m of gridlines and baseline were cut over the target area.

5.2 Geophysics. The grid was surveyed with a magnetometer to try to define the suspected vent.
A further survey using a Sabre VLF-EM receiver was conducted over the grid.

5.3 Soil samples were collected over the grid in areas of no swamp.

6.0 Geology

The BAR Group is covered extensively by glacial deposits consisting mainly of dry morainal till forming low, dissected or gullied plains, glacial outwash plains, and moderate to steep slopes of colluvial gravels and sand along stream banks on the west and south boundaries of the property, with alluvial gravels, sand and muds in the stream beds. These are related to the last, north moving glacier and vary considerably in depth.

The Department of Mines and Technical Surveys map of the bedrock geology of the Cottonwood area shows no outcrop mapped over 70% of the claims.

From the present knowledge of local geology, it seems safe to infer that bedrock consists mainly of upper Triassic argillites, siltstone, minor sandstone, and gabbro dikes. The southwest corner of the claims have been mapped by Department of Mines personnel as consisting of a northwest trending belt of upper Triassic augite basalt, basalt, tuff volcanic breccia, and siltstone, contacting the Tertiary Fraser Bend Formation to the southwest, which consists of platy clays. Directly south of the claims, an area about two Km by ½ Km along John Boyd Creek has been classified as Tertiary Australian Creek Formation, mainly clays, lignite and gravel.

The existence of a volcanic vent, one Km northeast of the confluence of John Boyd Creek and the Cottonwood River has been postulated, and this is supported, as mentioned in the Introduction, by Landsat imagery, aeromagnetic anomalies, and physiographic features. Two large photo-linear lines cross over this target area.

It is thought that this vent is of Tertiary to Cretaceous age, and is the result of hydrothermal activity after major faulting off the Cottonwood valley. This fault appears to be a large graben trending northwest along the Cottonwood River valley, as suggested by Roed.

A secondary fault or faults at angles to the northeast edge of the graben would provide a conduit for the fluids. The possibility of a major gold occurrence at or near the presumed volcanic vent is supported by volcanoclastic mudflows at the Toop Mine on Mary Creek, and an auriferous hydrothermal event on Alice Ridge, east of the BAR Group, where tuffaceous argillites of Triassic age have been altered by rising fluids, with a resulting in situ decomposition of the rock, and enrichment of graphite, manganese and iron oxides which are reported to contain gold in near economic quantities, plus mercury and rare elements.

Geology Con't.

Folding and other large tectonic features are represented by the Pundata Thrust and the Alice Creek Fault to the east and the Cottonwood anticline to the south of the BAR Group. Synclinal traces are found adjacent to the southwest of the Pundata Thrust, and on Alice Ridge.

7.0 Results

7.1 A grid consisting of a 1400m baseline, one 1000m tie line and 14100m of gridline was established over the south central portion of the property.
Line cutting progressed at a rather slow pace due to the large amount of deadfall timber over most of the grid area. Chainsaws were used for clearing the lines. No standing timber was cut. The lines were run by the compass-axe-saw method, and were subsequently measured using a surveyors chain to establish survey points at 25m intervals along the gridlines. A two man crew was employed to "swamp" out the logs and branches.

7.2 Magnetometer survey. The grid was surveyed with a Scintrex fluxgate magnetometer, using a 12.5m sample interval, to define areas of low magnetic intensity. The survey was conducted using a standard closed loop method. Corrections for drift were performed on a microcomputer using a simple programme developed by the writer to distribute drift around the loop and adjust readings for base shift. A filter was used to smooth the data for contouring which returns a product termed "magneticity", as it is used to define areas of higher or lower magnetic intensity due to the presence of more or less magnetic minerals, and remove anomalies of short wavelength caused by near surface sources. Basically, it is a 5 point average, as suggested by C.D. Anderson, P. Eng. in a 1974 contribution to the CMJ.
An area of low magnetic intensity, of broad extent was defined at the north end of the grid on lines 50+00N and 49+00N, extending to the west and open to the north. South of this anomaly, on both sides of the baseline, several linear areas of low magnetic intensity have been defined, suggesting felsic flows or dikes, and radiate away from the main anomaly. They are not interconnected, suggesting faulting in a northwest direction. The corrected magnetic readings have a range of 345 gammas to 750 gammas. Plotted values show a fairly erratic trace, suggesting a high content of magnetic minerals in the overburden. Filtered data shows broader lows, as is to be expected, while eliminating single low readings.

VLF Survey. A Sabre VLF-EM unit was used to survey the grid. Lines 50+00N and 49+00N were surveyed at 12.5m intervals and the rest of the grid, at 25m intervals. The raw data was then treated to Fraser's Filter, using a microcomputer and a programme developed by the writer and tested against published data.

7.2 VLF Survey Con't.

Parameters recorded were Dip angle, Residual field strength, and Horizontal field strength. Due to the flat dip of the bedrock geology (estimated to be 30^{o} and dipping generally easterly) and the deep glacial overburden, dip angle measurments were relatively flat and the zero level had a generally positive bias. Filtered data, when matched with other surveys may convey a more definitive answer.
Probably the most important parameter is Horizontal field strength, which can be mapped and the peaks plotted to indicate structure.
On the Bar grid, these plotted peak axis coincide and parallel several of the linear mag lows, indicating that this is indeed the case.

7.3 Soil Sampling. 566 soil samples were collected over non marshy areas of the grid. Samples were collected with a shovel, the samplers digging down an average of 30 cm and collecting 0.5 Kg of material, which was placed in a Kraft paper bag and labelled for grid coordinates. In camp, the samples were air dried, and packaged in boxes for shipment to Kamloops, where the operator maintains offices. At this writing, the samples have not yet been analysed, this being the subject of another report.

8.0 Conclusions and Recommendations

The purpose of the work performed was to locate a magnetic low in the grid area that might be the signature of a felsic volcanic vent, and the writer feels that the surveys were successful in this. Further, it appears that the survey has located a faulted zone southeast and adjacent to the mag low, and radiating magnetic low linears that may be secondary structure to the main vent. This seems to be supported by a sharp bend in two adjacent creeks, which can be thought of as being the surface expression of the said fault. Unfortunately, glacial overburden obscures any geology in the area that might have been used to aid in resolving this question.
The VLF dip angles do not appear to be too conclusive, but further interpretation of the filtered data in the near future will probably shed more light on the subject. The Horizontal field strength, on the other hand, shows a remarkable coincidence with the magnetic lows, supporting the theory that the vent is structure controlled to a degree.

The writer recommends extension of the grid to the northwest and a change in azimuth of the baseline to 320^{o} or 330^{o} to cross the general strike of the geology, as indicated by the direction of the Horizontal field strength linears. The grid should then be surveyed with the magnetometer and the VLF unit to extend the known magnetic low. Extensive traverses to map geology, and airphoto interpretation should aid in the search. Soil sampling the grid extension should wait until results of the present soils have been received.

Statement of Costs

***Personnel**		
Line cutting crew	45 man days @ 126/day	$ 5,670.00
Geophysical crew	6 man days @ 126/day, Mag	756.00
	3 man days @ 126/day, VLF	378.00
Soil Samplying crew	6 man days @ 107.10/day	642.60
	6 man days @ 88.20/day	529.20
Road Repair, Loader & Cat		270.00
***Transportation**		
4x4 truck	1112 Km @ .30/Km	333.60
2WD Van	409 Km @ .30/Km	129.70
Motorcycles (2)	@ $100.00/month	200.00
Fuel	295 l	165.00
***Line Cutting and Expenses**		
Chainsaw rentals (2)	@ $100/month	200.00
Saw gas		40.00
Oil mix		10.00
Chain oil	2.5 gal	14.00
Saw parts		72.00
Survey supplies		182.00
Soil samplying supplies		50.00
Geophysical equipment costs		
Magnetometer rental	2 weeks @ $100/wk	200.00
VLF Rental	1 week @ $100/wk	200.00
Batteries		56.00
***Other Equipment Rentals**		
Office and Drafting set		100.00
Radiotelephone		50.00
Camp and Food Expenses	66 days @ $25/day	1,650.00
Camp Fuel	5 gal	33.50
Visitors Food Expense		36.40
Cost of Report		
Compilation and data reduction	3.5 days @ 126/day	441.00
Drafting	3.5 days @ 126/day	441.00
Typing	1 day @ 126/day	126.00
Reprographics		150.00
Supplies		25.00
	TOTAL	$ 13,051.50

Statement of Qualifications

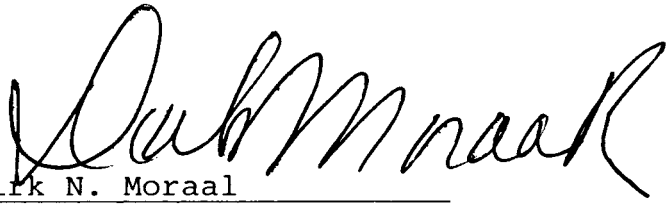
I, Dirk Moraal, of the City of Kamloops, British Columbia, do hereby state:

1. I am a professional prospector and geophysical operator.

2. I have been carrying out my profession continually since 1969.

3. I am a graduate of the British Columbia Department of Mines, Exploration Course for Prospectors, the Yukon College Underground Mining Course, and other related studies.

4. This report is based on information obtained by myself during the exploration programme.



Dirk N. Moraal

June, 1985

10+00 W | 09+00 W | 08+00 W | 07+00 W | 06+00 W | 05+00 W | 04+00 W | 03+00 W | 02+00 W | 01+00 W | BL 00+00 | 01+00E | 02+00E | 03+00E | 04+00E | 05+00E | 06+00E | 07+00E | 08+00E | 09+00E | 10+00E | 11+00E

N

L 48+00 N

L 47+00 N

L 46+00 N

L 45+00 N

L 44+00 N

L 43+00 N

L 42+00 N

11+00 E | 12+00 E | 13+00 E | 14+00 E | 15+00 E

400

500

500

500

500

600

Tie line

50+00 extension

LEGEND

Swamp

Creek

Line, station

Road

400 Isomagnetic line

S E corner BAR 6

SW corner BAR 5

Post S South

0 100 200 300 400 500m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,788

CLIENT: Mary Creek Resource Corp.

PROJECT/PROPERTY: BAR GROUP
CARIBOO MINING DIVISION

TITLE:
MAGNETICITY
CONTOURS

PREP. BY: D.M.	NTS No: 93 G/1	DATE DWN: June 1985
DWN BY: D.M.	AREA:	DATE REVISED
SCALE: 1:2500	COTTONWOOD	DRAWING NO 3

Base map Tirk Morgal 1985

10+00 W | 09+00 W | 08+00 W | 07+00 W | 06+00 W | 05+00 W | 04+00 W | 03+00 W | 02+00 W | 01+00 W | BL 00+00 | 01+00 E | 02+00 E | 03+00 E | 04+00 E | 05+00 E | 06+00 E | 07+00 E | 08+00 E | 09+00 E | 10+00 E | 11+00 E

L 48+00 N

L 47+00 N

L 46+00 N

L 45+00 N

L 44+00 N

L 43+00 N

L 42+00 N

11+00 E | 12+00 E | 13+00 E | 14+00 E | 15+00 E

50+00 extension

LEGEND

Swamp

Creek

Line, station

Road

tie line

S E corner BAR 6 — SW corner BAR 5

Post 5 South

0 100 200 300 400 500m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,789

CLIENT: Mary Creek Resource Corp.

PROJECT/PROPERTY: BAR GROUP
CARIBOO MINING DIVISION

TITLE:

VLF PROFILES

PREP. BY: D.M.	NTS No: 93-G/7	DATE DWN: 1 June 1985
DWN. BY: D.M.	AREA:	DATE REVISED
SCALE: 1:2500	COTTONWOOD	DRAWING NO. 5

Base map Dirk Morgal 1985

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N

L 48+00 N

L 47+00 N

L 46+00 N

L 45+00 N

L 44+00 N

L 43+00 N

L 42+00 N

11+00 E | 12+00 E | 13+00 E | 14+00 E | 15+00 E

LEGEND

- Swamp
- Creek
- Line, station
- Road
- Major Axis
- Minor Axis

50+00 extension

TX.

SEATTLE

S E corner BAR 6 | SW corner BAR 5

Post S South

0 | 100 | 200 | 300 | 400 | 500m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,789

CLIENT: Mary Creek Resource Corp.

PROJECT/PROPERTY: BAR GROUP
CARIBOO MINING DIVISION

TITLE:

VLF HORIZONTAL FIELD STRENGTH
PEAK AXIS

PREP. BY: D. M.	NTS No. 93 G/1	DATE DWN.: 1 June 1985
DWN. BY: D. M.	AREA: COTTONWOOD	DATE REVISED
SCALE: 1:2500		DRAWING No. 4

Base map: Dirk Morgal 1985

10+00 W | 09+00 W | 08+00 W | 07+00 W | 06+00 W | 05+00 W | 04+00 W | 03+00 W | 02+00 W | 01+00 W | BL 00+00 | 01+00 E | 02+00 E | 03+00 E | 04+00 E | 05+00 E | 06+00 E | 07+00 E | 08+00 E | 09+00 E | 10+00 E | 11+00 E

N

L 48+00 N

L 47+00 N

L 46+00 N

L 45+00 N

L 44+00 N

L 43+00 N

L 42+00 N

11+00 E | 12+00 E | 13+00 E | 14+00 E | 15+00 E

LEGEND

Swamp

Creek

Line, station

Road

Contours 5ft-10ft

50+00 extension

S E corner BAR 6 — SW corner BAR 5

Post 5 South

Tie line

0 | 100 | 200 | 300 | 400 | 500m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,789

CLIENT: Mary Creek Resource Corp.

PROJECT/PROPERTY: BAR GROUP
CARIBOO MINING DIVISION

TITLE:

VLF FRASER FILTER CONTOURS

PREP. BY: D.M.	NTS No: 93 G/1	DATE DWN: 1 June 1985
DWN. BY: D.M.	AREA:	DATE REVISED
SCALE: 1:2500	C O I T O N W O O D	DRAWING No 6

Base map Dirk Mergal 1985

10+00 W | 09+00 W | 08+00 W | 07+00 W | 06+00 W | 05+00 W | 04+00 W | 03+00 W | 02+00 W | 01+00 W | BL 00+00 | 01+00E | 02+00E | 03+00E | 04+00E | 05+00E | 06+00E | 07+00E | 08+00E | 09+00E | 10+00E | 11+00E

L 48+00 N

L 47+00 N

L 46+00 N

L 45+00 N

L 44+00 N

L 43+00N

L 42+00 N

11+00 E | 12+00 E | 13+00 E | 14+00 E | 15+00 E

50+00 extension

LEGEND

Swamp

Creek

Line of station

Road

400 contours

-LOW-

400

500

600

Tie line

S E corner BAR 5

SW corner BAR 5

Post 5 South

0 100 200 300 400 500m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,709

CLIENT: Mary Creek Resource Corp.

PROJECT/PROPERTY: BAR GROUP
CARIBOO MINING DIVISION

TITLE:
VERTICAL FIELD
MAGNETIC CONTOURS

PREP. BY: D. M.	NTS No: 93 G/1	DATE DWN: June 1985
DWN. BY: D. M.	AREA:	DATE REVISED
SCALE: 1:2500	COTTONWOOD	DRAWING NO 7

Base map Dirk Moraal 1985