

9QH/9W, 10E

GEOPHYSICAL REPORT

GROUND MAGNETICS

on

E J GROUP

(E J 1-18, 45, 47)

Summers Creek; 16 miles North of Princeton, B. C.

Latitude $49^{\circ}41' N$

Longitude $120^{\circ}31' W$

92 H 10

by

Charles A. R. Lammle, P. Eng.

April 26, 1973

for

VARGAS MINES LIMITED

Vancouver, B.C.

Work Performed:

Claim Survey: August 7-12, 1972

Lines, Magnetics: April 9-26, 1973

4346

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Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 4346 MAP

35°

75

76

77

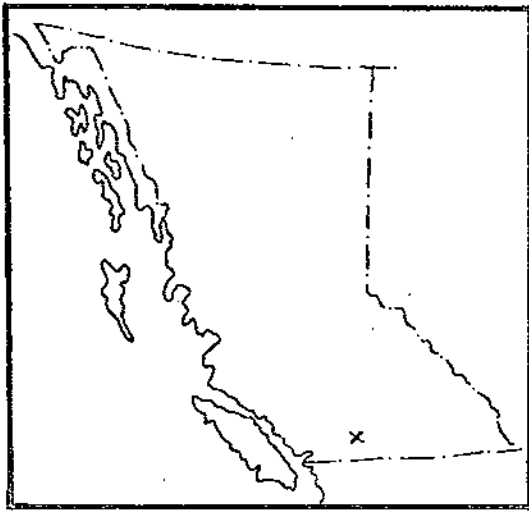
78

67° 30' W. E

92/9

120° 30'

25000



RIO ALGOM

Summers Cr L 3345

L 3346

L 3347

VARGAS MINES LTD

L 3347

ADONIS MINES LTD

North Zone

MISSEZUL MOUNTAIN 5445

West Zone

Adit Zone

South Zone

4346

Rampart Lake

Creek

L 3348

Swanson

Gravel Pit
L 2467
L 4227
L 3754
L 2967
Allison Lake
L 4726
L 3192
LAKE PARK
ACampson
L 1513
B.M. 2706

Creek

Springer Lake

LAKE PARK

B.M. 2706

L 1513

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4346 MAP #1

CONTENTS

	page
INTRODUCTION	1
PROPERTY	1
LOCATION AND ACCESS	2
HISTORY	2
BACKGROUND GEOLOGY	3
GROUND MAGNETICS	3
Instrument and Survey Procedure	3
Factors Influencing the Earth's Magnetic Field	4
RESULTS AND INTERPRETATIONS	4
CONCLUSIONS AND RECOMMENDATIONS	6
ITEMIZED TIME DISTRIBUTION AND EXPENDITURES	
ATTACHMENTS:	
#1 1. Location Map 1:50,000	faceplate
#2 2. Ground Magnetics 1:6,000	pocket

Charles A. R. Lammle, P. Eng.
HIGHLAND GEOLOGICAL SERVICES

April 26, 1973

GEOPHYSICAL REPORT
GROUND MAGNETICS

EJ Group
92 H 10, Similkameen M.D., B.C.

INTRODUCTION

During the fall of 1972, Vargas Mines Limited commissioned a preliminary claims survey preparatory to performing a magnetometer survey on its 28 claim copper prospect on Summer's Creek, some 16 airmiles north of Princeton, B.C. The claims survey was carried out during the interval August 7-12, 1972, and the magnetometer survey was carried out this spring, during the interval April 9-26, 1973. This report will give some historical and background geological detail, as well as the usual instrumental and procedural documentation accompanying the survey results. An interpretation of the survey results will be given. Tabulated details regarding workmen's time distribution and expenditures incurred are itemized at the end of the report.

PROPERTY

The property consists of 28 contiguous claims located along Summers Creek canyon, about 16 airmiles north of Princeton, B.C. Details of the claims are tabulated below:

Claim	Record No.	Expiry Date
EJ 1-18	35321 - 35338	April 28, 1973
EJ 37-42	35357 - 35362	April 28, 1973
EJ 45	35365	April 28, 1973
EJ 47	35367	April 28, 1973

Claims EJ 1-18 were located along Summers Creek road; claims EJ 37-38 and 41-42 were located from a location line some 6000' to the east; claims EJ 39, 40, 45 and 47 were located down into the canyon by witness post from near the edge of the canyon. The configuration of these claims, the posts, and the location of the survey lines and road are shown on Map 2, "Group Magnetics" in pocket.

LOCATION AND ACCESS (see location map)

The claims are located between elevations of 3000' and 5000' along and east of the canyon of Summers Creek, which is locally incised some 1500' into Thompson Plateau. The property is accessible via 12 miles of the all-weather Missezula Lake Road which joins with B.C. Highway 5 at a point 6 miles north of Princeton.

The steep, frequently rocky canyon sides are forested with merchantable fir and pine, and some mature spruce is found along the bottomland. Summer's Creek flows with a substantial volume all seasons of the year.

Co-ordinates of the center of the property are $49^{\circ} 41' N$ latitude; $120^{\circ} 31' W$ longitude.

HISTORY

The Adonis Mines property, on which several zones of low-grade copper mineralization have been delineated and which will eventually be mined, is contiguous with the EJ Group. Because of this proximity, the ground now covered by the EJ claims has had a staking and restaking history dating back half-a-dozen years or so. Former owners of the ground were prospectors and/or speculators. I have no knowledge of any exploration work having been done on the EJ ground; there are no known open cuts, pits, or other workings, and there is no evidence of exploration survey lines having been cut on the ground, excepting two Adonis lines that extend eastward onto the south part of the property. There are no assessment reports to my knowledge recording work on the area of the present EJ claims.

Ground to the south and east is owned by Adonis; ground to the south is optioned to Tech Corporation; to the north by Rio Algom; and ground to the northeast and east is owned by Noranda Mines and Tyee Lake Resources, respectively.

BACKGROUND GEOLOGY

Rocks of the area are agglomerates, flows, and tuffs of the Upper Triassic Nicola Group. These trend generally northeasterly in the region, and according to GSC Map 989 A, should dip towards the west. Diorite to granodiorite apophyses and dykes trend north-norhtwesterly across the area and tend to link Pike Mountain granodiorite with Osprey Lake Batholith. The major northerly Summers Creek fault, an enechelon series of fault zones, follows along the canyon eroded by the creek.

Mineralization in the area consists of fine iron and copper sulphides disseminated in propylitized volcanic rock, generally near intrusives or fault zones.

GROUND MAGNETICS

As the general geologic features in the area trend north-south, geophysical survey lines should ideally trend east-west. However, because of the irregular, northerly elongation of the property, and the rocky, bluffy character of Summers Creek canyon, a somewhat disjointed, northerly trending grid system was adopted as being the most practical and economical under the break-up circumstances. East-west traverses across the canyon were considered impractical and expensive, and too difficult to negotiate at this time of the year.

Instrument and Survey Procedure

The instrument used for the survey was the McPhar M 700 fluxgate magnetometer, an instrument designed to measure variations in the vertical componet of the earth's magnetic field.

Prior to commencing the survey, a series of random readings were taken in the general property area. This permitted setting the base level of the instrument to allow optimum use of the most sensitive scale ranges. The sensitivity of the instrument for virtually all of the survey was 20 gammas per scale division; a few readings were taken on the next most sensitive scale - 50 gammas per scale division.

The actual survey was commenced by establishing a series of master control stations along the main claim location line. Then the survey proper - systematic readings at 100 foot stations along lines spaced generally at 400 feet - was begun, and the master control stations were checked in, morning, noon and evening, to facilitate control and correction of diurnal variations.

Factors Influencing the Earth's Magnetic Field

Some of the factors having an effect on the earth's magnetic field are tabulated below:

1. Variations in the amount of magnetic minerals in bedrock,
2. Variations in the amount of detrital magnetic minerals in overburden,
3. Concentrations of magnetic minerals,
4. Depth to the center of influence of an anomalous magnetic material,
5. Alteration and/or destruction of magnetic minerals, and
6. Combinations of the above.

RESULTS AND INTERPRETATIONS

The results of the survey are plotted and contoured at 100 gamma intervals on Map 2, pocket. This map shows about 970 individual readings comprising about 18.4 line miles of survey.

General magnetic relief of the area is moderate. For the most part this magnetic relief is of the order of 1000 gammas but extremes raise this to a maximum of 2500 gammas.

Map 2 makes several aspects of the ground magnetics of the area readily apparent. Firstly, the actual bottomlands of the canyon is marked by a sinuously paralleling, relatively uniform magnetic low. I would interpret this low to owe its origin to an overburden fill of relatively uniform depth, varying here and there. Magnetic fields in randomly-oriented cobbles and boulders of the overburden would have a self-cancelling effect and would create the moderate relief in this general low.

Secondly, magnetic readings along the canyon sides are of moderate, relatively positive intensity, and for the most part are interpreted to reflect normal variation in the magnetic susceptibility of bedrock. There is a suggestion of greater uniformity of this susceptibility on the west side of the canyon south of EJ 13 than on the east side. This is thought to be due to the predominantly tuffaceous strata on the west side, and by the dominantly agglomeratic, heterogenous volcanic strata on the east side.

Thirdly, the sinuous magnetic low along Summers Creek bottomlands is disrupted by a northwest trending magnetic high extending from EJ 14 to EJ 15. This high, on the basis of casual geologic observations appears to be caused by a coarsely crystallizing basalt of either flow or intrusive (?) origin. In many other places where magnetic highs were noted in the field notes, abundant diorite to granodiorite float was noted. It would appear, accordingly, that systematic magnetic highs might be related to intrusive rocks.

The property, and general geological alignment of the area is less than ideal and does not allow the magnetics to clearly define north-erly trending faults or particular strata. A strong south-dipping fault, however, might be interpreted to cut across the south side of EJ 14 and thence northwest across EJ 13.

CONCLUSIONS AND RECOMMENDATIONS

A clearer understanding of the magnetics of the area could be obtained if the geology of the area was known in detail comparable to the magnetics. Hence, I recommend geologic mapping of the claim group. Also, as there are appreciable areas covered by overburden or talus, a geochemical survey would allow a much more reliable and objective economic evaluation of the property. Geochemical sampling could be conveniently carried out in conjunction with geologic mapping. Accordingly, I also recommend this geochemical work.

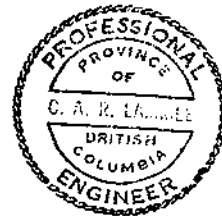
An estimate of costs for such geological and geochemical work can be made on request.

Respectfully submitted,

Chas. A. R. Lammle

Charles A. R. Lammle, F. Eng.

April 26, 1973



ITEMIZED STATEMENT

WORKMEN'S TIME DISTRIBUTION & EXPENDITURES INCURRED
- EJ MINERAL CLAIMS -

	Details	Days	Sub-totals	Totals
(A)	<u>CLAIMS SURVEY</u> (Brunton & chain)		\$	\$
	C. Lammle - Aug 7-11, 1972	5 days @ \$75	375-	
	J. Collinson - Aug 7-11, 1972	5 days @ \$40	200-	575-
(B)	<u>SURVEY LINES</u> (Brunton, Topochaix, Ribbon)			
	C. Lammle - Apr. 7-9, 1973	3 days @ \$75	225-	
	P. McIvor - Apr. 7-18, 1973	10 days @ \$45	450-	
	H. Windram - Apr. 7-18, 1973	10 days @ \$40	400-	
	Topochaix Rental, thread		49.50	
	Ribboning, misc.		21.70	1146.20
(C)	<u>MAGNETOMETER SURVEY</u>			
	C. Lammle - Apr. 10-19, 1973	9 days @ \$75	675-	
	Instrument Rental		165-	840-
(D)	VEHICLE, gasoline, etc.			190-
	APPLICABLE ASSESSMENT CREDIT			\$ 2,751.20

As some small proportion of the work was carried out on unowned fractions, Assessment Credit Claimed is and is to be applied one year each to each of the following 26 claims:
EJ 1-18, 37-42, 45, 47

\$ 2600-

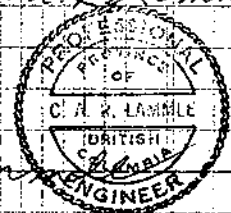
Chas. Lammle
Chas. Lammle P. Eng

Declared before me at the

of _____, in the
Province of British Columbia **VANCOUVER, B. C.**

day of _____, A.D.
APR 26 1973

[Signature]
Sub-Mining Recorder



DATE 26 April 73 Vancouver B C

AFFIDAVIT AND REPORT

Mining Recorder,
P.O. Box 9,
Princeton, B.C.

Dear Sir:

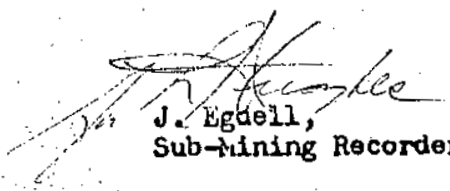
Re: Mineral Claims - EJ 1-18, 37-42, 45, 47 - 35321-338, 357-362,
Mining Division - Similkameen 35365, 35367 - Apr 28
Vargas Mines Ltd (NPL)
MR 81298E - \$131.00

A copy of the attached affidavit on application
for Certificate of work and -
Geological.....)
Geophysical.^{Mag}....) survey report
Geochemical.....)
Line cutting.....)

have been forwarded to the Chief Gold Commissioner for
approval. You will be notified of the amount approved and
the number of certificates of work that may be issued in
due course.

It is not necessary to write requesting approval
or forward copies of the affidavits in this instance.

Yours very truly,


J. Egge,
Sub-Mining Recorder.

Enc.

c.c. Chief Gold Commissioner, Victoria, B C

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 4346 MAP

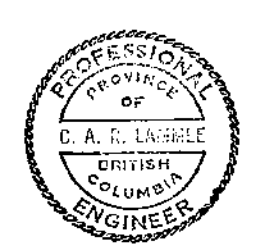


OUTLINE OF EJ MINERAL CLAIMS
 SHOWING CLAIM POSTS, CLAIM
 NUMBERS, AND SURVEY LINE
 CONFIGURATION

MAGNETIC READINGS IN GAMMAS -
 ABOVE AND BELOW ARBITRARY REFERENCE LEVEL OF ZERO GAMMAS.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 4346 MAP #2

4346 M-1



APR 26 1973
 Charles A. R. Lammle

VARGAS MINES LTD
 VANCOUVER B.C.
EJ MINERAL CLAIMS
 SUMMERS CREEK, SIMILKAMEEN M.D.
 92 H 9 & 10

GROUND MAGNETICS
 APRIL 1973
 FEET
 0 500 1000 1500 2000

SURVEY LINES - COMPASS, TOPOCHAIX AND RIBBONING
 INSTRUMENT - MAPHAR M700 VERTICAL FIELD FLUXGATE
 OPERATOR - CHARLES A. R. LAMMLE P.ENG.,
 CONTOUR INTERVALS - 100 GAMMAS

TO ACCOMPANY GEOPHYSICAL REPORT
 BY CHARLES A. R. LAMMLE, P.ENG.,
 DATED APRIL 26, 1973