

6334
GEOPHYSICAL REPORT
of the
GROUND MAGNETOMETER SURVEY
ON THE
HOMESTEAD MINERAL CLAIMS
ASPEN GROVE, B.C. AREA
NICOLA MINING DIVISION
PART
B

Longitude: 120°38'W; Latitude: 49°46'N

N.T.S. 92H/15E

on behalf of

QUINTANA MINERALS CORPORATION

<u>CLAIM NAME</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY</u>
Homestead 1	120	June 24
Homestead 2	123	June 24
Homestead 3	124	June 24
Homestead 4	125	June 24
Homestead 5	68	June 23
Homestead 8	204	December 10

by:

P.P. NIELSEN, B.Sc., GEOPHYSICIST

NIELSEN GEOPHYSICS LTD.

VERNON, B.C.

July, 1977

MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

NO. _____

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INTRODUCTION

During the period from April 25 to June 22, 1977 a grid was installed and a ground magnetometer survey executed over the Homestead Mineral Claims which are located 8 miles south of Aspen Grove, B.C. in the Nicola Mining Division.

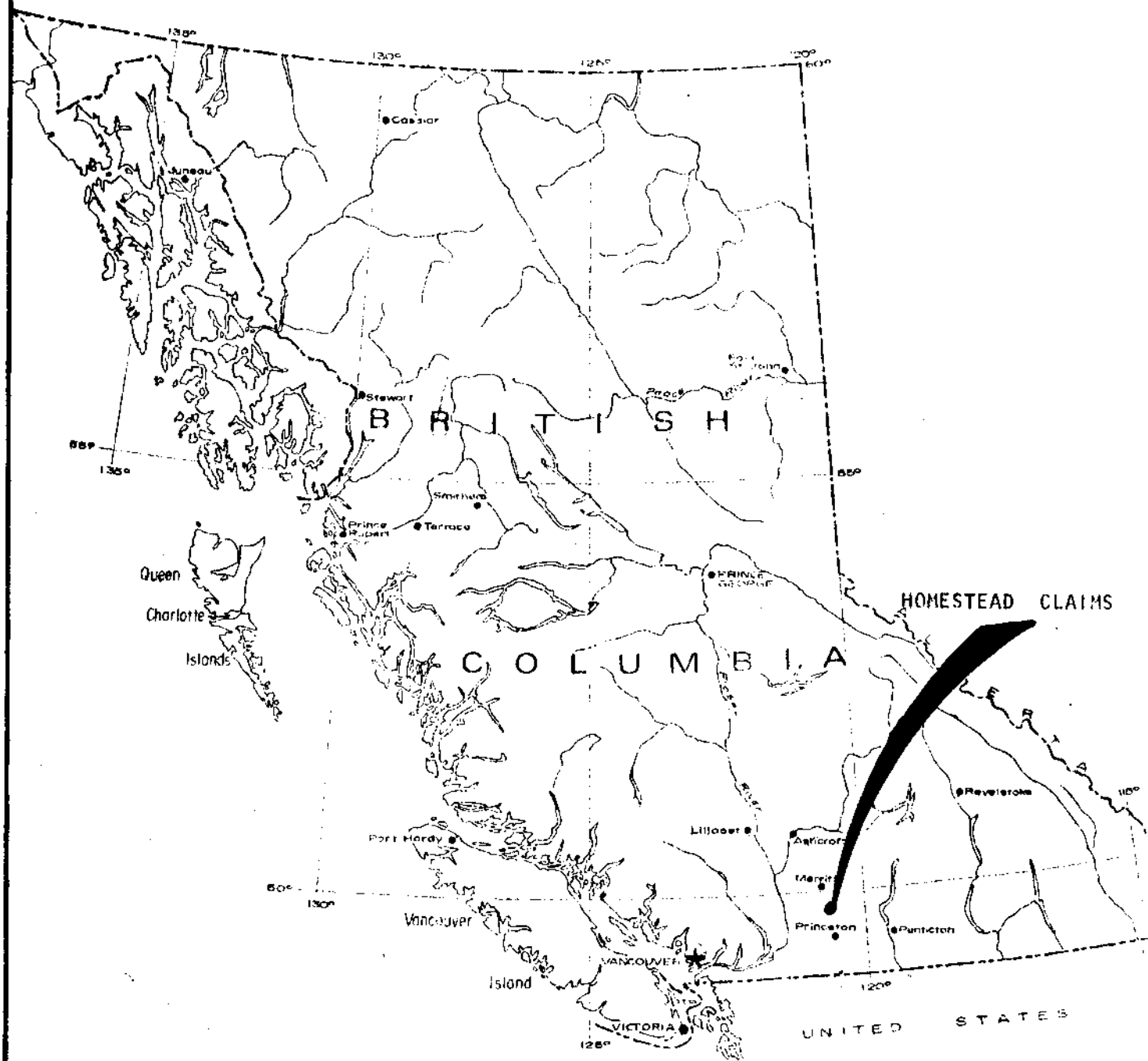
The work was carried out by Nielsen Geophysics Ltd. on behalf of Quintana Minerals Corporation to assist in the geological mapping of the property and in the hopes that a potential mineralized breccia pipe might be expressed and detected magnetically.

A total of 32.0 line kms. of grid was installed by two men amounting to 12 man-days including travel time. The magnetometer survey was carried out by the author and required 8.5 man-days which included supervision and traveltime.

LOCATION AND ACCESS

The property is located about 8 miles south on Highway #5 from Aspen Grove which places it approximately midway between the towns of Merritt (to the north) and Princeton (to the south).

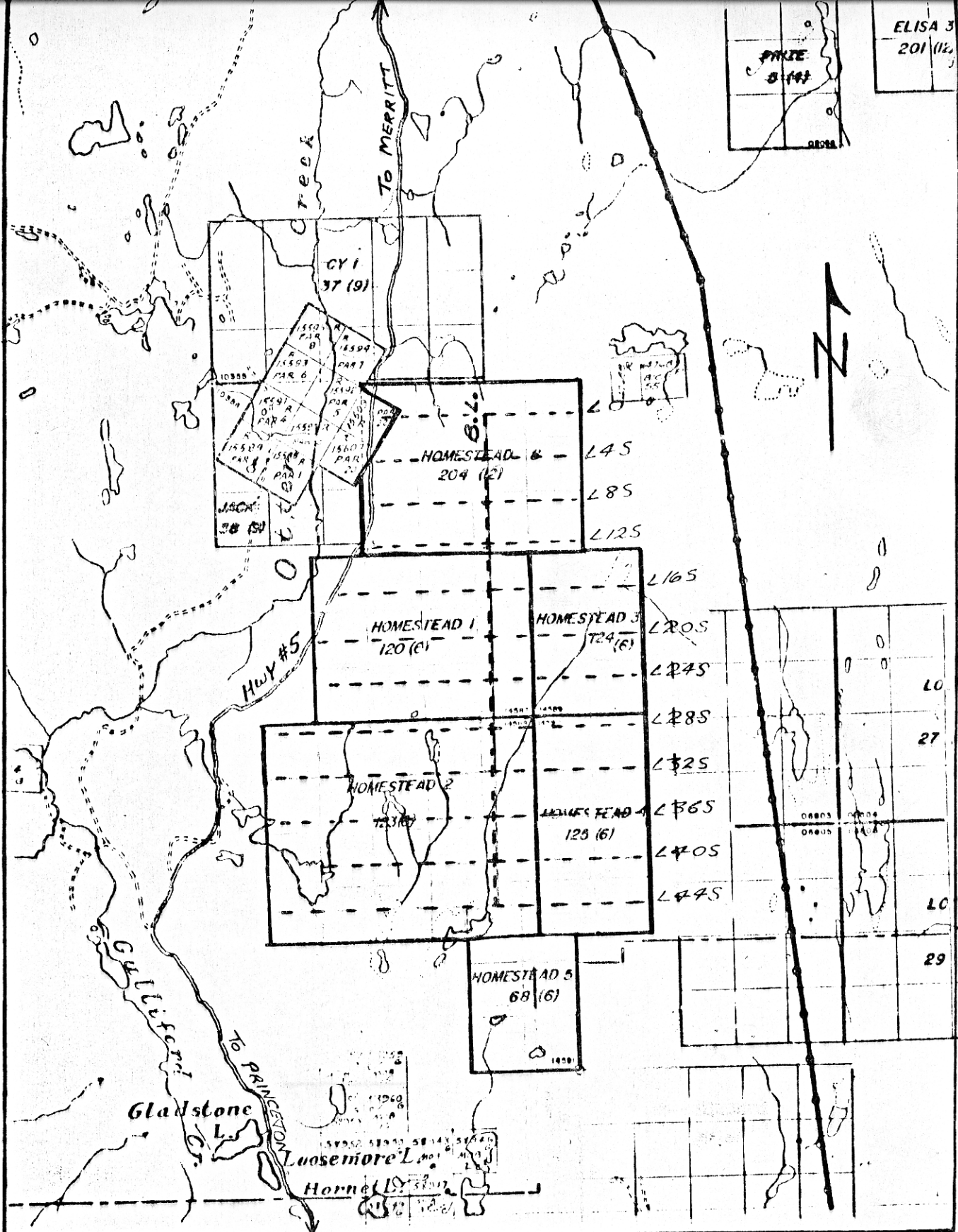
There is good local access to virtually all parts of the property through a maze of logging roads and skid trails.



PROPERTY LOCATION MAP

SCALE: 1" = 100 mi.

PRICE
\$ 147



CLAIMS & GRID LOCATION MAP

SCALE :- 1:50,000

TOPOGRAPHY AND GROUND CONDITIONS

The terrain consists of gently rolling hills interspersed by small lakes and "pot-holes" and varying in elevation from 3300 feet A.S.L., at the highway to the west to about 4500 feet A.S.L. along the western flank of a ridge to the east of the eastern boundary of the property.

Vegetation consists of open grassy fields, primarily along the western ends of the grid-lines, interspersed by poplar groves, pine and fir trees,

The majority of the grid area, however, is covered by stands of lodgepole pine, spruce and fir with the pine occurring in quite dense thickets containing windfalls in many localities along the grid lines.

Stands of willows and small alders are abundant around the lakes and ponds and along the gullies.

At the time of the survey the weather was dry and hot. Also, no magnetic storms were encountered.

GRID INSTALLATION

The grid was installed using the chain and compass method with milled wooden stakes being driven at 200 meter intervals. Orange flagging was tied to the vegetation every 50 meters along the lines and the stations marked by felt tipped pen. Due to the thick stands of conifers in some areas, considerable blazing and limbing of trees was necessary for survey control.

The baseline was run roughly through the center of the area to be surveyed for a distance of 4400 meters. Twelve cross-lines of varying lengths were turned normal to the baseline and spaced 400 meters apart.

A total of 32 Kms. (20 miles) of line was installed.

GENERAL GEOLOGY

- Reference: - G.S.C. "Memoir #243" by H.M.A. Rice (1944)
- B.C. Department of Mines - Geology of the Allison Lake
and Missezula Lake Area" by V.A. Preto (1975)
- Prospecting Report by C. Kowall (1977)

The majority of the Homestead claims are mapped by Rice as having been intruded by Coast Range diorites, granites and quartz-monzonites of Jurassic-Triassic age. The northeast corner and easterly edge of the claims are mapped as roof pendants of Nicola volcanics (upper triassic).

The intrusive rocks are described by Preto as the Allison Lake Pluton occurring between the Allison fault to the west and by the Summers Creek fault to the east, both of which are high angle, north-south striking structures thought to be an ancient rift system.

A few isolated exposures of Pleistocene and Recent valley basalt and Kingsvale andesite porphyry occur in the general area and, most probably, within the grid area.

Known mineralization in the area consists of disseminations of pyrite and chalcopyrite, within the Allison Lake pluton. A north trending narrow vein just south of the present grid cuts this pluton and is mineralized with argentite, galena, tetrahedrite, malachite, and azurite in a quartz-carbonate gangue. Also present in the Aspen Grove area are showings of chalcopyrite, chalcocite, secondary copper carbonates and minor native copper in breccia zones of Nicola augite andesite porphyry.

GROUND MAGNETOMETER SURVEY

Comment:

A total of 32.0 Km. was magnetically surveyed at a station interval of 50 meters. Intermediate stations (25 meters) were read in areas of anticipated or encountered steep magnetic gradients.

Instrument Used:

A McPhar Model 700 Fluxgate magnetometer was used to measure the relative variations in the earth's vertical magnetic field. It is hand held and levelled using a bubble level on the face of the instrument. Units of measurement are displayed on a meter in gammas. The instrument has five ranges and a polarity switch for a total range of $\pm 100,000$ gammas (γ 's)

Treatment of the Data:

The readings, time of readings, Station and Line number were recorded in a metal-free field book and transferred to a planimetric map for contouring after the diurnal and day-to-day corrections to the gamma values were made.

The scale of the values and contour map is 1" = 200 meters.

The values were contoured at an interval of 200 γ 's (400 γ above 1000 γ) with areas below 400 γ shown "ticked" and areas in excess of 1000 γ shown "hachured". Prominent features such as roads, creeks, lakes, grid-lines, and claim lines are also included on this map.

DISCUSSION OF RESULTS AND INTERPRETATION

The corrected magnetic values vary from 0 γ 's at six different stations to 3500 γ 's at L.4S; Stn. 3 + 00E for a total relative vertical field relief of 3500 γ 's over the survey grid.

There is a prominent north-south magnetic pattern which is due, in part, to the 8:1 grid bias caused by the sampling interval used and is also due to the general strike of the rocks in the area. The line-spacing of 400 meters was chosen in order to cover the maximum area without exceeding the budget monies available while still providing useful information.

The contour interval of 200 γ 's was changed to 400 γ 's above the 1000 γ level for clarity in that the highs are generally single-value highs resulting in contour conjection at those stations. These high values were primarily encountered along the eastern stations of Line 0 and Line 4S where boulders and apparent outcroppings of vesicular basalt were observed by the operator and are hereby called valley basalts. They seem to occur along and to the southeast of a magnetic linear interpreted as a Northeasterly striking fault.

The other areas above 1000 γ 's are interpreted to be generally underlain by Nicola volcanics (andesites) and the rest of the grid (i.e. below 1000 γ 's) is interpreted due to the Allison Lake pluton. No attempt is made to further categorize these intrusive rocks but due to the local nature of the "lows" (i.e. less than 200 γ 's), these areas are considered "anomalous" and deservant of further attention. It is possible that a zone of alteration exists connecting the lows at the east end of L.28S to the elongated low near the western extremities of L.4S and L.8S. This zone is indicated on the values and contour map.

CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey has assisted in mapping rock-types in a predominantly overburden covered area. Interpretation has been aided by personal observations of float and outcrops along grid lines and by the prospecting carried out and reported by Mr. C.Kowall.

No breccia zones, per se, have been interpreted, but should they exist on the survey grid, it would likely be within the possible alteration zone discussed above.

All further exploration on the present magnetic survey grid should be confined to this interpreted alteration zone and along its borders.

Respectfully submitted,



P.P. Nielsen, B.S., Geophysicist

PERSONNEL

P.P. Nielsen, B.Sc., - Geophysicist, magnetometer operator
supervisor and author of report.
R. Klanjscek - Linecutter
L. McGregor - Linecutter

STATEMENT OF COSTS

The following are the charges by Nielsen Geophysics Limited to carry out the work described in this report.

1. Grid Installation: 20 miles @ \$90/mile	\$1,800.00
2. Magnetometer Survey: 20 miles @ \$85/mile	1,700.00
3. Report and Administration	500.00
	<hr/>
Total charge	\$4,000.00

STATEMENT OF AUTHOR'S QUALIFICATIONS

I DO HEREBY STATE:

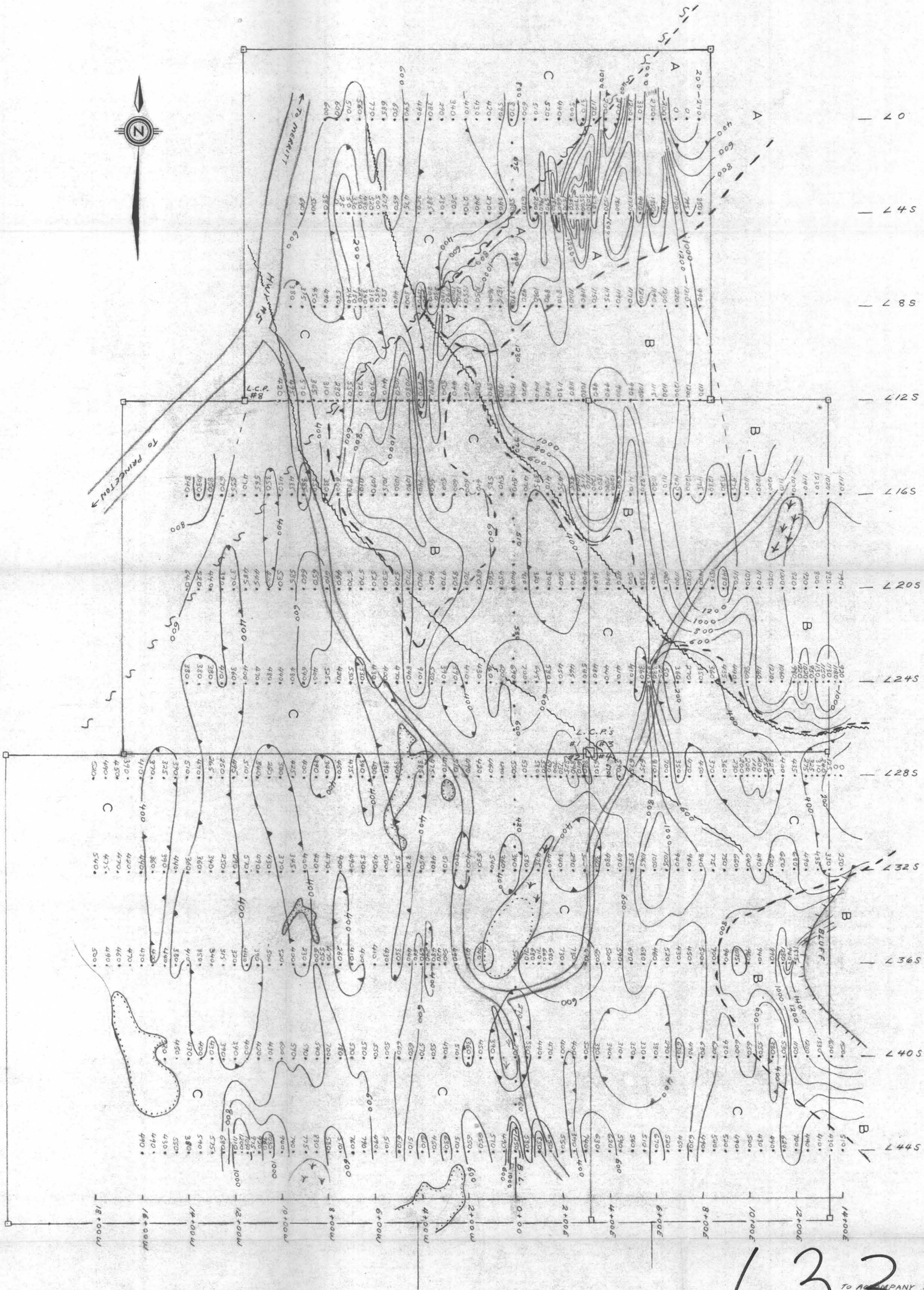
1. I am the author of this report and carried out the work described herein,
2. I have been actively and responsibly involved in all aspects of mining geophysics in Canada, the United States, Africa and Australia over the past 12 years.
3. I graduated with a B.Sc. degree in Geophysics from the University of B.C. in 1969.
4. I am President of Nielsen Geophysics Ltd, with business address at #205 - 2910-30th Avenue, Vernon, B.C. V1T 2B7
5. I am a member of the S.E.G., CIMM and the B.C.G.S.

Signed

P.P. Nielsen

Date

July 20/77.



LEGEND

- - - - - INTERPRETED GEOLOGICAL CONTACT
- ~~~~~ POSSIBLE ALTERATION ZONE
- - - - - FAULT
- A - VALLEY (VESICULAR) BASALTS
- B - NICOLA VOLCANICS
- C - ALLISON LAKE INTRUSIVE RX.

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CONTOUR INTERVAL: 200 G.S.
VALUES RELATIVE - VERT. COMPONENT
OF EARTH'S FIELD UNKNOWN.

INSTRUMENT: McPHAR M-700
VERT. FLUXGATE.

6334
TO A COMPANY REPORT BY
P.P. Nielsen
P.P. NIELSEN B.Sc., GEOPHYSICIST.

PART B-M-1

QUINTANA MINERALS CORP.
HOMESTED CLAIMS
ASPEN GROVE AREA, B.C.

GROUND MAGNETOMETER SURVEY
VALUES & CONTOUR MAP

NICOLA M.D. N.T.S. 92415

NIELSEN, GEOPHYSICS LTD.
VERNON, B.C.

DATE: JULY 77 SCALE: 1:1000 BY: P.P.N.