

A REPORT ON THE MAGNETOMETER SURVEY

ON THE

**SUCKER CLAIM
SUCKER LAKE AREA
HORSEFLY, BRITISH COLUMBIA**

**CARIBOO MINING DIVISION
93A/6W**

CO-ORDINATES:

**52°18'45" North Latitude
121° ²⁰5'47" West Longitude**

OWNER:

**NORTHERN EAGLE MINES LTD.
1550 - 609 GRANVILLE STREET
VANCOUVER, BRITISH COLUMBIA**

OPERATOR:

**NORTHERN EAGLE MINES LTD.
1550 - 609 GRANVILLE STREET
VANCOUVER, BRITISH COLUMBIA**

CONSULTANT;

**HAROLD M. JONES, P.ENG.
721 - 602 WEST HASTINGS STREET
VANCOUVER, BRITISH COLUMBIA**

AUTHOR:

HAROLD M. JONES

DATE:

8 AUGUST 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,349

**HAROLD M. JONES, P.ENG.
CONSULTING GEOLOGIST**

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SUMMARY

The Sucker claim is located in the Cariboo Mining Division, 5 km southeast of Horsefly, B.C. It is very accessible by paved and gravel roads from Williams Lake.

The claim is located within the Quesnel Trough, a narrow fault-bounded belt of Lower Mesozoic volcanoclastic and sedimentary rocks which locally are intruded by stocks and batholiths of Mesozoic granitoid rocks. No outcrop is obvious on the claim. The nearest exposures are of Eocene and (?) Oligocene sediments.

Several significant copper-gold occurrences are known within the Quesnel Trough related to intrusive rocks, and have received extensive exploration. The Sucker claim is situated within an area of scattered exposures of intrusive rock. It warrants exploring for gold mineralization related to an intrusive contact.

A magnetometer survey was conducted on the claim between July 30 - August 2, 1984. The purpose of the survey was to use magnetics to help define geology, which is not exposed due to a complete overburden cover. A magnetic high could indicate an intrusive body. Magnetometer readings show very little variations. Readings ranged from 340 to 960 gammas.

It is concluded that geology underlying the claim is fairly uniform and that no intrusive-sediment contact is present.

It is recommended that a VLF-EM and soil survey be conducted on the claim.

INTRODUCTION

At the request of the Directors of Northern Eagle Mines Ltd., the writer, between July 30 - August 2, 1984, examined the Sucker claim located near Horsefly, B.C. During this period he also conducted a reconnaissance magnetometer survey over the property. The purpose of the survey was to use magnetics as an aid in searching for a possible intrusive body with which copper-gold mineralization may be related. This report describes the property and the magnetometer survey.

Location & Access

52°18'30" North Latitude
120°21'00" West Longitude

The Sucker claim is located in the Cariboo Mining Division of south central British Columbia. It is situated 56 km from Williams Lake and 5 km southeast of Horsefly. (Figure 1.) The claim straddles Horsefly River.

The claim is readily accessible from the small community of Horsefly, which is 65 km from Williams Lake by mostly paved roads. The claim is reached from Horsefly by 5 km of good gravel road (Black Creek Road) which follows the north side of Horsefly River. It is also traversed by a secondary road to Sucker Lake. (Figure 2.)

Topography & vegetation

The claim is situated within gently rolling terrain, typical of the Interior Plateau of southern British Columbia. On the claims the terrain is essentially flat, but is dissected by a number of shallow gulleys and the deeper channel of Horsefly River. Elevations range from 800 to 850 m. The claim is well forested with



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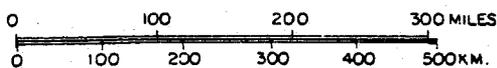
VANCOUVER, B.C.

**SUCKER CLAIM
LOCATION MAP**

HORSEFLY AREA

N.T.S. 93A-6 W

CARIBOO M.D., B.C.

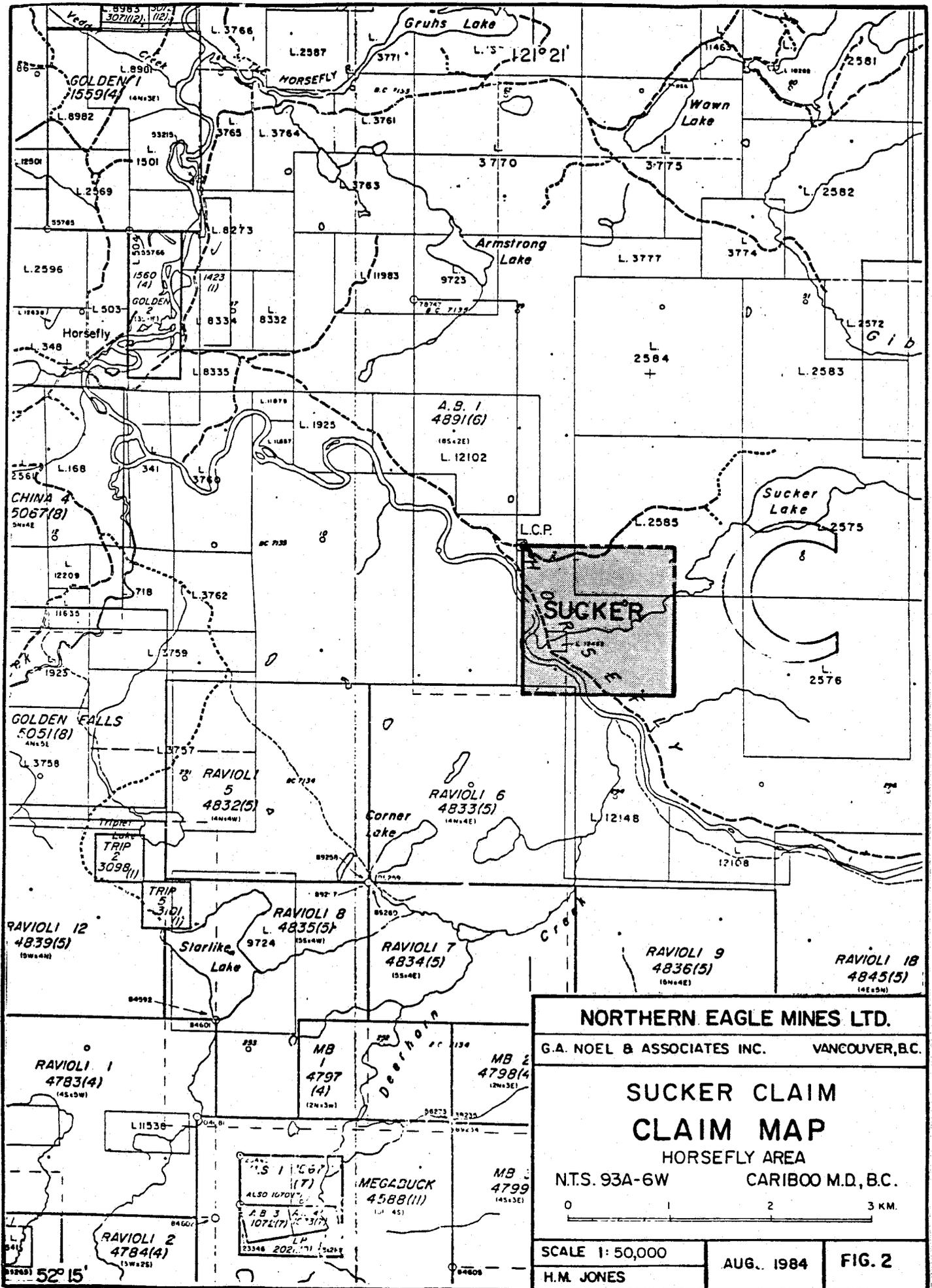


SCALE AS SHOWN

H. M. JONES

AUGUST 1984

FIG. 1



NORTHERN EAGLE MINES LTD.
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**SUCKER CLAIM
 CLAIM MAP**
 HORSEFLY AREA
 N.T.S. 93A-6W CARIBOO M.D., B.C.

0 1 2 3 KM.

SCALE 1: 50,000
 H.M. JONES

AUG. 1984
 FIG. 2

fir, pine, spruce and larch. Numerous swampy areas are present. A large open swampy meadow occurs at the northeast corner of the claim. Hay fields are present just north of this corner.

Property

The property consists of one-9 unit claim. It may be described as follows:

Claim Name	Record No.	No. of Units	Date of Record
Sucker	Not yet Available	9	17 Nov/1983

The claim is owned by Northern Eagle Mines Ltd., 1550 - 609 Granville Street, Vancouver, B.C.

History

The claim is located within an area which has a long mining history. Placer gold was discovered in the early 1860's at and near the present community of Horsefly. The main occurrences were Wards Horsefly mine, Hobson's Horsefly mine and the Miocene mine, the first two of which were considered to be re-concentrations of older placers in Miocene gravels.

In 1902 the Mogul claim (now included within the FRM 2 claim), located 7 km southwest of the Sucker claim, was located to explore native copper lava flows. It was considered at that time that free gold might possibly occur in these mineralized lavas along with copper. This same ground was tested by El Paso Mining and Milling Company in 1974, who drilled four shallow diamond drill holes exploring for copper in the lava flows. Two of these holes passed through weakly

mineralized basalt into a paleostream channel. A third hole was collared in the channel. While recovery was poor, one sludge sample from the quartz-rich paleochannel returned an assay of 405 ppb gold.

During the 1950's to early 1970's the general area was actively explored for copper and other base metals. A number of properties were located and explored in detail, many by Helicon Explorations Ltd. They conducted geological, geophysical, geochemical and drilling programs on a number of properties located between Quesnel Lake and Moffatt Creek, 16 km north and 20 km south, respectively, of Horsefly. Work at this time was concentrated on copper occurrences. Also being assessed at this time was the Gibraltar and Cariboo-Bell deposits, located 57 km and 27 km, respectively, northwest of Horsefly.

One copper deposit, the Ho, which is located near the Sucker claim, is mentioned in the B.C. Mineral Inventory File. It is described as "chalcopyrite and malachite disseminated in quartz and orthoclase stringers in quartz-biotite gneiss of Jurassic or Cretaceous age. Area is covered by recent glacial deposits".

With the increase in gold prices, the area once again is being actively explored for gold. This work resulted in the discovery of Dome Mine's QR deposit and Eureka Resources' Eureka deposit. E & B Explorations have re-assessed the Cariboo-Bell deposit in light of its low grade gold content. Placer Development Ltd. until recently explored the Megabuck gold prospect located 6 km south of the Sucker claim.

GEOLOGY

General Geology

The claim is located within the Quesnel Trough, a

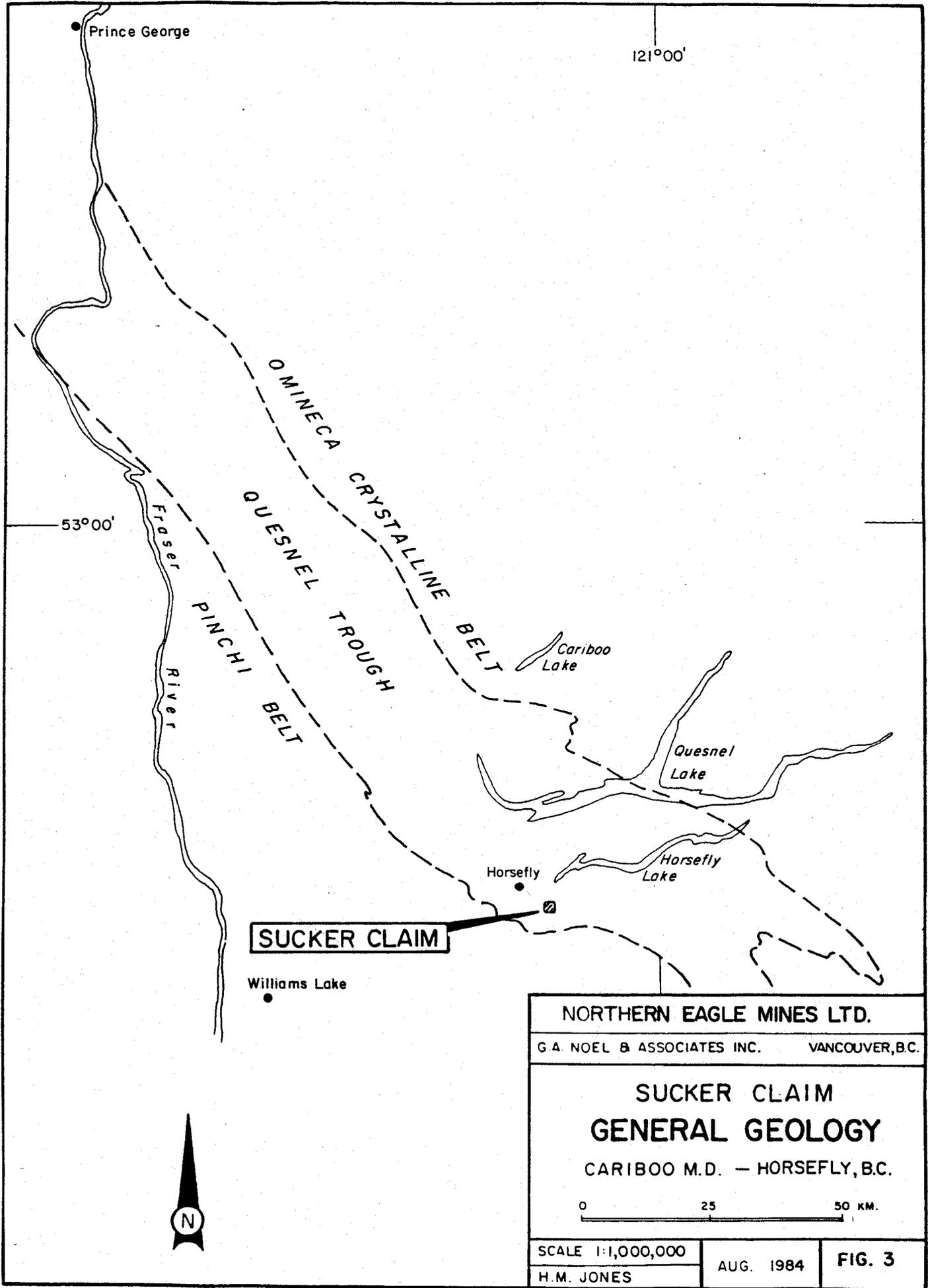
northwesterly-trending fault bounded structure about 35 km wide. It consists of a thick sequence of mainly Upper Triassic and Lower Jurassic volcanoclastic and sedimentary rocks flanked on the east by Proterozoic and Paleozoic strata of the Omineca Geanticline and on the west by Upper Paleozoic rocks of the Pinchi Geanticline. The west side of the Quesnel Trough, especially to the west and south of Horsefly, is overlain by Tertiary sediments and Plateau basaltic flows.

A number of intrusive rocks are located within the Quesnel Trough. These include: Triassic and/or Jurassic plutons and batholiths which vary in composition from granodiorite to quartz-diorite and small alkalic stocks which vary in composition from syenite through diorite to pyroxenite; and Tertiary plutons of biotite quartz-monzonite and granodiorite composition. The QR and Cariboo-Bell deposits, and the Megabuck prospect are all related to intrusive rocks.

Triassic intrusive stocks are exposed 5 km due south of the Sucker claim on the Megabuck property until recently being explored by Placer Development Ltd. Upper Triassic/Lower Jurassic intrusives occur 6 km northeast of the Sucker claim (Campbell 1978). A number of other small stocks or plugs occur throughout the general area. These intrusive rocks follow the regional northwest trend and extend along the southwestern part of the Quesnel Trough. The Sucker claim is located within the general trend of this intrusive belt, as is Cariboo-Bell and the Megabuck property.

Local Geology

No outcrop was seen while traversing the magnetometer grid, nor is any exposed along the Black Creek logging road. An examination could not be made along the Horsefly River due to high



water. There is no shoreline exposed between the river and the thick brush-covered banks.

A small area of Eocene or (?) Oligocene sediments is inferred near the southeast corner of the Sucker claim (Campbell 1978).

MAGNETOMETER SURVEY

A grid was laid out using a Silva Compass for bearings and a Hip Chain for measurements. A due east trending baseline was laid out from the legal corner post rather than using the claim line which appeared to deviate from the true bearing. Lines were run due north-south at approximately 200 meter separations. Survey stations were marked at 50 m intervals along each line. All lines and stations were marked with flagging tape. When each line was completed, its ends were tied to the adjoining line or baseline. The position of some lines, or parts of lines, had to be shifted due to swamps, and in one case, a small cluster of houses. The grid, as shown on Figure 4, represents the ground position of all lines and stations. A total of 9.2 line kms were surveyed.

A Scintrex MF-2 Fluxgate-type magnetometer was used on the survey. The calibration was set so that 50,000 gmmas were removed from the total vertical magnetic field. Readings were taken at each 50 m station on the grid lines.

A number of reference stations were set along the baseline at which magnetometer readings were taken both before and after surveying along the grid. These check readings showed very little variations (<100 gammas) and for this reason no adjustments were made to the readings.

All readings were plotted on a map on a scale of 1:10,000

To Horsefly 3 km.



LEGEND

- MAIN LOGGING ROAD
- SECONDARY ROAD
- SWAMP
- POWERLINE RIGHT-OF-WAY
- 600 MAGNETOMETER STATION, READING IN GAMMAS
- 600- MAGNETIC CONTOUR AT 200 GAMMAS INTERVAL
- STREAM



NORTHERN EAGLE MINES LTD.

G.A.NOEL & ASSOCIATES INC. VANCOUVER, B.C.

**SUCKER CLAIM
MAGNETOMETER SURVEY**

HORSEFLY AREA

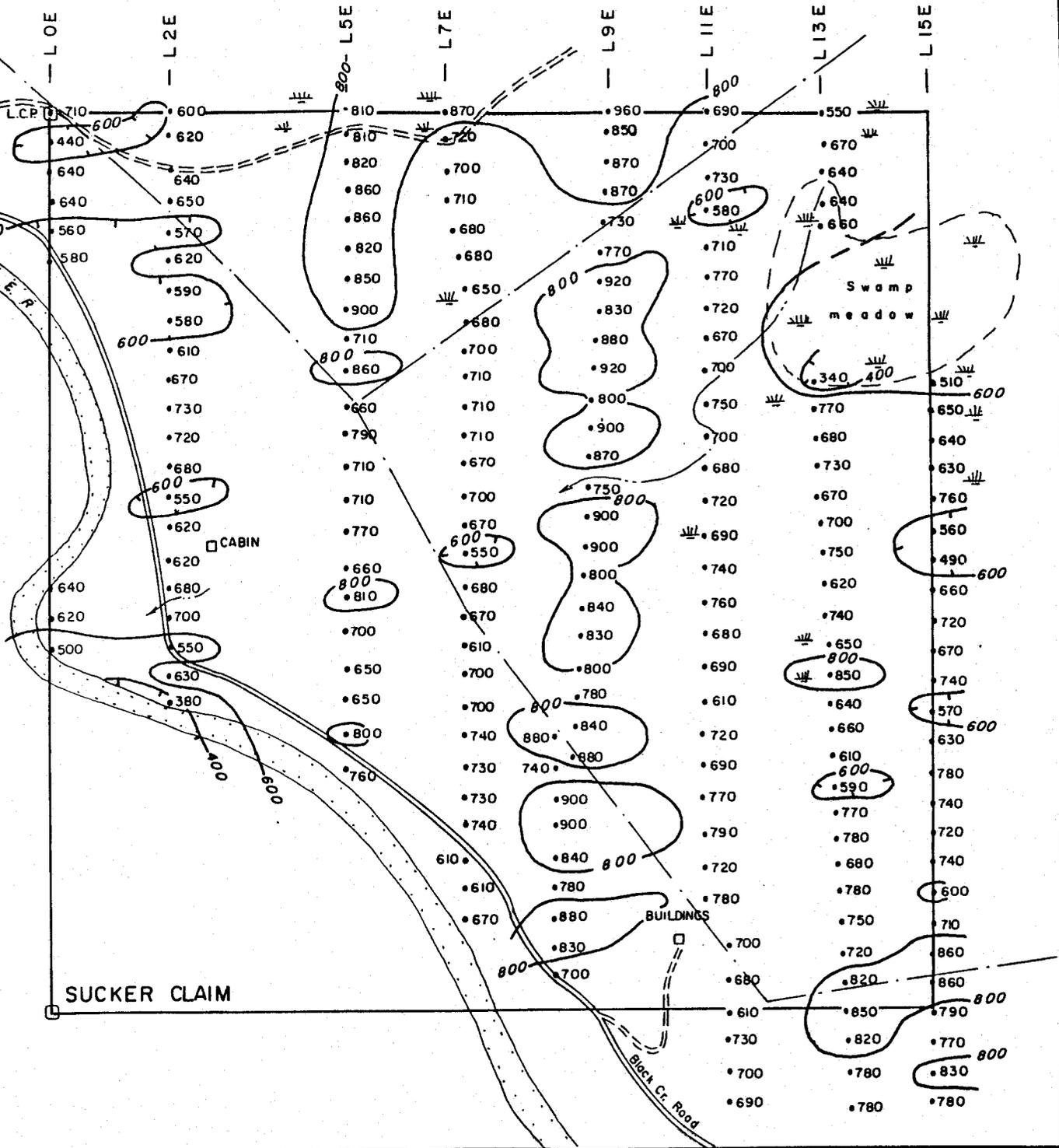
N.T.S. 93A-6W CARIBOO M.D., B.C.

100 0 200 400metres

SCALE 1:10,000

AUGUST 1984 FIG. 4

H.M. JONES



(Figure 4). Contours were drawn at 200 gamma intervals.

RESULTS

Magnetometer readings show very little variations over the property. Range of values is from 340 to 960 gammas. Contours were drawn for 400, 600 and 800 gammas. These do not indicate any trends. (See Figure 4)

The majority of the higher values occur along Line 9E, producing a "one line" anomaly. This is not considered as significant. It is probably due to diurnal variations over that part of the line.

The survey indicates a fairly uniform magnetic background. There is no hint of a geological contact or variations in bedrock geology.

CONCLUSION

The magnetometer survey does not show an anomalous area on the claim. It is therefore concluded that an intrusive body does not underlie the overburden-covered Sucker claim.

RECOMMENDATIONS

It is recommended that the property be covered by VLF-EM and soil sampling surveys. Any anomalous areas should then be tested by reverse circulation drilling.

Respectfully submitted,



Harold M. Jones, P.Eng.

REFERENCES

- Campbell, R.B. (1978)** Quesnel Lake Map Sheet, Geological Survey of Canada, Open File 574
- Campbell, R.B. and
Tipper, H.W. (1970)** Geology and Mineral Exploration Potential of the Quesnel Trough, British Columbia
C.I.M. Bulletin, Vol. 63, p. 785-790.
- Hodgson, C.J.,
Bailles, R.J. and
Verzosa, R.S. (1976)** Cariboo-Bell in Porphyry Copper Deposits of the Canadian Cordillera, C.I.M. Spec. Vol. 15, pp. 388-396.

CERTIFICATE

I, Harold M. Jones, of the City of Vancouver, British Columbia, do hereby certify that:

1. I am a Consulting Geological Engineer with offices at 721-602 West Hastings Street, Vancouver British Columbia.
2. I am a graduate of the University of British Columbia in Geological Engineering, 1956.
3. I have practised my profession as a Geological Engineer for 25 years.
4. I am a member of the Association of Professional Engineers of British Columbia, Registration No. 4681.
5. I conducted a magnetometer survey on the Sucker property between July 30 - August 2, 1984.

DATED AT VANCOUVER, B.C. THIS 8th day of August 1984.

A circular professional seal for Harold M. Jones, P. Eng. The seal features a signature at the top, the name "H. M. JONES" in the center, and the text "PROFESSIONAL ENGINEER" around the perimeter. The words "PROVINC OF" and "BRITISH COLUMBIA" are also visible within the seal's border.

Harold M. Jones, P. Eng.

APPENDIX I

STATEMENT OF COSTS

HAROLD M. JONES, P.ENG.
CONSULTING GEOLOGIST

STATEMENT OF COSTS

WAGES:

Harold M. Jones, P.Eng.
- geologist - magnetometer

Survey - 3 days	\$ 1,050.00	
Travel - 1/2 day	175.00	
		\$ 1,225.00

ROOM & BOARD

North Country Lodge		
3 days @ \$35	105.00	
Extra meals	15.00	
		120.00

MAGNETOMETER RENTAL

100.00

TRANSPORTATION

Air Travel	183.60	
Rental Car, including fuel	174.02	
		357.62

FIELD SUPPLIES

Flagging Tape, Hip Chain Thread, etc.		70.00
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REPORT AND MAP PREPARATION

Report	400.00	
Drafting	100.00	
Secretarial(word processing, xeroxing, etc.)	61.50	
		561.50

TOTAL:

\$ 2,434.12
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HAROLD M. JONES, P.ENG.
CONSULTING GEOLOGIST