# REPGRT ON A MAGNETOMETER SURVEY ON THE JOHN X CLAFMS. SIMIZKAMEEN MINING DTVISION, BRITISH COLUMBIA ( $\mathrm{HAP} 92 \mathrm{H} / 10 \mathrm{H}$ ) $49^{\circ} 35^{\prime} \mathrm{N}, 120^{\circ} 50^{\circ} \mathrm{W}$ <br> FOR <br> NORTHERN LIGHTS RESOURCES LTO. (OPTIONOR OF CLAIMS FROM J. ABROSIMO, OWNER) <br> OPERATOR - NORTHERN LIGHTS RESOUREES LTD. CONSULTANT - R.W. PHENDLER, P.ENG. 

BY
R.W. PHENDLER, P.Eng.

Page
INTRODUCTION ..... 1
MAGNETOMETER SURVEY ..... 3
RESULTS. ..... 3
recommendations ..... 4
QUALIFICATIONS (AUTHOR) ..... 5
QUALIEICATIONS (OPERATOR). ..... 6
COST STATEMENT ..... 7
illustrations
FIG. 1 - LOCATION MAP - JOHN X CLAIMS ..... 1:50,000
FIG. 2 - MAGNETOMETER RESULTS - JOKN X CLAIMS - i: 4,800


R. W. phendier, P.Eng., gedlogical consultant.<br>EXploration ano mining<br>6175 Granville Street, Vancouver, B.C. V6M, 3E2, Canada

## BHTRODUCTION

At the request of Mr. K. Newton of Northern Lights Resources Ltd., the writer proposed and supervised a magetometer survey over part of the JOHN $X$ claims, where suiphide mineralization is known to exist. The JOHN $X$ claims are part of the 66 claim Mount Rabbitt property, which was the subject of a qualifying report by the writer dated October 2, 1978.

The JOHN $x$ claims are located at an elevation of $1,200-1,500$ meters about 40 kilometers northwest of Princeton in southwest British Columbia. The area is generally known as the Tulameen district, and is accessible by car from Painceton by following a paved road northwest through coalmont and Tulameen. One kilometer west of the town of Tulameen on the Tulameen River road a good gravel road forks to the north, providing access to the Rabbitt Mountain and Lawless Ereek area. Two roads depart from this road to the claims under discussion at the two mile and five mile point.

The JOHN $x$ claim group (see fig. i) is composed of 23 claims forming an irregular square covering Mount Rabbitt.

The claims under discussion cover the old Red Bird group, which was originally staked in 1913 and was taken over by the federation Copper
 crosscuts (Portals \#1 and 2 - fig. 2) and a short winze sunk from $\$ 2$. The upper crosscut was extended for 130 meters into the hill, but was still short by 30 meters of the downard projection of a second chalcopyrite zone scen on surface. The average copper content of the mineral
zones, which are as much as seven meters wide but average 0.7 meters wide, is about 2\%, with gold and silver values generally low feology and Mineral Deposits of the Princeton Map Area, British Columbia-H.M.A. Rice, Hemoir 243. Geological Survey of Canada - 1960).

There is evidence of diamond drilling on the property, but no records are available.

In 1968 Copper mountain Consolidated Lid. held claims presently covered by the John $x-3$ claim block. An induced polatization survey was carried out by Hunter Ltd., which detected an anomalous zone which strikes $N-S$ for about 200 meters. Brilling was recommended but not done.

In 1973 a magnetometer, VLF-EM and geochemical survey was carried out over an area that coincides with the JOHN $X-4$ and JoHN $X-2$ claims. This work was done by Geotroniss Ltd. and outlined the volcanic-granodiorite contact, but failed to outline any zoncs of magnetite concentrations, which are often associated with copper mincralization, i.e. Craigmont, Mattagami and Thompson, Manitoba.

The property is presently under option to Northern Lights Resources Lid. from John Abrosimo of Princeton, 8.C. Northern Lights carried out prospecting, road rehabilitation and some diamond driliing during 1978.

The mount Rabbitt property (of which the JOHN x claims are a part) contains chalcopyrite mineralizalion within fracture zones and as rich pods and disseminations. The possibility exists that economic copper mineralm ization exists on the property and warrants further exploration. The geological setting is similar to the similkameen copper deposit of Newmont Ltd. - i.e. fractured andesite with nearby granodiorite plugs.

About 14 kilometers of line were run by compass, chained and flagged and magnetometer readings recorded every 30 meters between September 16 and 20 , 1978.

Fourteen kilometers of flagged grid were established in sixteen northsouth lines spaced sixty meters apart. Stations were established at 30 meter intervals on the cross lines ( $N-5$ ) which were set off the eastwest base line.

Magnetometer readings were first taken on the base line stations to establish them as base stations relative to a magnetometer base station located at base line $6+60 \mathrm{E}$ nar the access road. Readings were then taken at the 30 meter stations on the north-south cross lines. The operator checked back to the base station every two or three hours to minimize the effect of diarnai variations. Adjustments were made (corrections) to readings according to the differences when crossing the base line stations each time.

Magnctometer readings were taken by R.B. Newton using a Sabre Vertical Intensity Magnetometer - Mark V. Mr. Newton calculated all corrected readings and plotted the results (fig. 2).

## RESULTS

Magnetic values range from 367 to 474 gammas over the area covered with a weak area of higher values in the southwest quadrant fin excess of 450 gammas). This area is the scene of buildozer trenching where disseminated pyrite and chalcopyrite were seen by the writer across a meter width (assayed $1.64 \%$ Cu). The VLF survey carried out in 1973 outilined a weak anomaly in this area, and the tnduced Polarization survey conducted in 1968 disclosed the presence of an area of high chargeability with readings 3 to 4 times background of 3.0 to 4.0 milliseconds. Diamond drilling is recommended in this area.

The general narrow range of values indicates that the host rock Nicola andesite volcanics are relatively homogeneous with no iron-rich intrusive dykes of any size present. if magnetite is associated with the known
chalcopyrite bearing veins or zones in the area of previous underground development, they are of insufficient width to be detected by the magnetometer. The values recorded represent the vertical component of the magnetic field and the readings in gammas are relative.

## RECOMMENDATIONS

It is recommended that a combination detailed geochemical-magnetometer survey be conducted over the more favourable areas and that follow-up magnetometer work be done where reconnaissance geochemical work discloses the presence of copper soil anomalies.

Respectfully submitted,


## QUALIFICATIONS

1, Roy William Phendler of the City of Vancouver in the Province of British Columbia, hereby certify as follows:

1. That $i$ am a registered Professional Engineer in the Province of British Columbia, \#442才.
2. That I am a graduate of mcGill University, Montreal, Quebec, with a Bachelor of Science in Geology.
3. That 1 have practiced my profession as mine, exploration and consultant geologist continuously for the past twenty-six years throughout Canada, the U.S.A., Mexico. Peru, Colombia and Chile.
4. I have not received nor do $t$ expect to receive any interest directly or indirectly in the JOHN $X$ claims, nor do 1 own directly or indirectly any securities in Northern Lights Resources Led. or any affiliated companies.
5. That the information contained in this report was compiled as a result of my examination of the said property on September 16, 1978 during the time the magnetometer survey was conducted.


BEG



6017 Larch Street, Vancouver, B.c., December 21, 1978

This is confirmation that 1 , Robert B. Newton, have, for the past six years, conducted field and exploration work for Northern Lights Resources Etd. (N.P.L.) and Exel Explorations Ltd. (N.P.L.). Such work has consisted of scintillometer surveys, magnetometer surveys, geo-chemical surveys, sampling, trenching, claim-staking and diamond drilling. With a Bachelor of Arts in Geography to my credit, I meet many of the basic prerequisites associated with the mining industry, with studies in geology, geomorphology, mineralogy and cartography.
At all times, any work that $\mid$ have done $i n$ the past has been under the supervision of a qualified mining engineer.
Dated this 2ist day of December, 1978.

Robert B. Newton

## STATEMENT OF EXPLORATION ANO DEVELOPMENT EXPEASES

Physical
Supplies
1 box dynamite ..... $\$ 42.00$
3 packages of fuses ..... 22.50
Power chain saw－ 3 days e \＄ $\mathrm{i} 0.50 / \mathrm{day}$ ..... 31.50
2 wheel drive truck－\＄33／day，less 20\％ ..... 79.00
Wages
Slashing－ 2 days－ 10 hrs．／day＠$\$ 8 / \mathrm{hr}$ ． ..... 160.00
Repair washout－ 2 days－ 8 hrs．／day＠$\$ 8 / \mathrm{hr}$ ． ..... 128.00
Road ciearing－ 2 days $-8 \mathrm{hrs} /$.day e $\$ 8 / \mathrm{hr}$ ． ..... 128.00
Fuel－truck，chainsaw－ ..... 10.00
General wages－ 5 days $e \$ 100 /$ day500.00

## Geological Magnetic Survey

Wages－ 10 days e $\$ 100 /$ day ..... $\$ 1,000.00$
Truck rental ..... $1,100.00$
Room and board－ 10 days＠$\$ 70 /$ day ..... 700.00
Gasoline ..... 95.00
Assaying and engineefing ..... 300.00

## Statement of Exploration and Development


Agent for NOPTHERN LIGHTS RESOHESES LT ( Name ) (NB.

GOA? LARCH SC
(Address)
$\qquad$
VANCOUVER BC.
Valid subsisting F.M.C. No.-. 167318
$\qquad$

## state that

1. I have done, or caused to be done, work on the ....KEY... CLAMM...ARCLP


 to the value of at least ... $\$ 0.15$. 00 ............. .. dollars. Work was done from the ..... 4.

2. The following work was done in the 12 months in which such work is required to be done:
(COMPLETE APPROPRIATE SECTIONS) A, B, C, D, FOLLOWING)
A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)
(Give details as required by section 13 of regulations.)
tUPLES: ..... BOX DYNAMITE
3 PACKAGFS PF FUSES
Power CHA IA SAM - З DAYS C Fi0.50/DAY
2 Wider PROve TR, TKK

WAGES: $\quad$ GASHING- 2 DAYS - $10+H E / D A Y$ Q $8.00 / H R$ $\qquad$
REQAR WASHOUT 2 DAYS $\overline{\text { WIRS/DAY }}$ Q KG.ए0/HR.
READ CLEAR! HG . 2 DAYS 5 Hes/bAY \& \& CC/ HR
3. 

22:50
31.50
7.9 .00

B. PROSPECTING (Details in report submitted as per section 9 of regulations.) (The itemized cost statement must the par of the report.)

Total physical and raoshocing
I wish to apply $\$ \ldots+00.20$.... of this work to the claims listed below.
(Slate number of years to be applied to each claim and ins month of record.)
f. YEAR APPLIED TO CUAMMS :



Address $\qquad$ 6017 - ARECH.....ST.
VANLOLi $V$ ER VGA 4E5
Portable Assessment Credits (PAC) Withdrawal Request
Amount to be withdrawn from owner (s) account (s):
Name of Owner
(May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.)
$\qquad$
2...



I wish to apply $\$$..
(State number of years to be applied to each cham and its month of record.) 1 YEAR APPHED TO: JOHN X-1-4 ( 23 uNITS
RECORD NO $116-119$ (q)
$\qquad$ RECD NO $116-119$ (a) JOHN $x-5$, JOHN $x-6 ; 2$ units RECORD NO 164,165 (11)
$\qquad$
$\qquad$
Value of work to be credited to portable assessment credit (PAC) account (s).
(May only be credited from the approved value of $C$ and (or) $D$ not applied to claims.)

Name
In owners (s) name.

1. $\qquad$
$\qquad$
$\qquad$
2. 

$\qquad$
In operators) name (person paying for the work).

Name
$\qquad$
$\qquad$
$\qquad$

CM MES



