

2563

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT  
NTS 92 I-1  
50° 120° NW

GROUND MAGNETOMETER SURVEY

MAG GROUP

NIC PROPERTY

MERRITT AREA, NICOLA M. D., B.C.

September 4, 1970

John M. Hamilton, P. Eng.

Work was performed on the  
Mag Group during the period  
August 1 - August 31, 1970

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ATTACHMENTS

Statutory Declaration Re Expenditures

Statement of Expenditures

#1 Plate 1, Claim Location Sketch *(Rear)*

#2 Plate 2, Contoured Magnetometer Plan *(Rear)*

<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT</p> <p>NO. <u>2563</u> MAP.....</p>
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## S U M M A R Y

Eleven miles of ground magnetometer survey on the Mag Group (Nic Property) have located a 250 gamma magnetic low which correlates with Nicola Volcanics. Two 1000 gamma magnetic highs have no outcrops associated with them, but aeromagnetic evidence suggests that they are caused by hornblende metadiorite.

## I N T R O D U C T I O N

The Mag group, known to Cominco as the Nic Property, consists of 53 contiguous mineral claims, and was staked by Cominco in the late summer of 1969 to cover a soil copper anomaly located during a reconnaissance geochemistry program. Work in 1970 includes establishing a picket-line grid, detailed soil geochemical work, geologic mapping, and magnetometer surveys on the western third of the property, which is located on property of the Quilchena Cattle Company, and for which Cominco holds all metal rights. The eastern two-thirds of the property are located on the Douglas Lake Ranch, and in this area Cominco holds precious metal rights only, as base metal rights are presently optioned to Craigmont Mines Ltd. This report discusses results obtained on the magnetometer survey.

## G E O L O G Y

The western portion of the Mag Group is largely underlain by Upper Triassic Nicola Group rocks which locally consist largely of fine grained green and grey andesite flows and tuffs, with minor pyroxene basalts and black fine grained biotitic volcanics or sediments. The extreme western portion of the surveyed area is underlain by quartz monzonite of the Nicola Batholith. The centre of the claim group, not covered by the magnetic survey, is underlain by hornblende metadiorite, which could be a highly metamorphosed equivalent of Nicola volcanics. Locally, amphibolitic volcanics and diorite are present, again suggesting regional metamorphism of the Nicola volcanics.

Up to 1% pyrite occurs in the volcanics and metamorphics, and magnetite is common in the diorites and amphibolites. Chalcopyrite and bornite have been observed, mainly as irregular fracture fillings in the volcanics and metamorphics.

## M A G N E T O M E T E R   S U R V E Y

### METHOD :

The survey was performed by A.C. Freeze Jr. under the supervision of the writer, using a Sharpe MF-1 fluxgate magnetometer. This instrument has a maximum sensitivity of 20 gammas per scale division, and a maximum readability of 5 gammas. The effects of diurnal variation and instrument drift were monitored by using a standard looping procedure, returning to a base station at periodic intervals.

### DATA PRESENTATION:

The following data plans accompany this report:

Plate 1, Claim Location Sketch, Scale 1" = 1000'.

Plate 2, Contoured Magnetic Plan, Scale 1" = 500'.

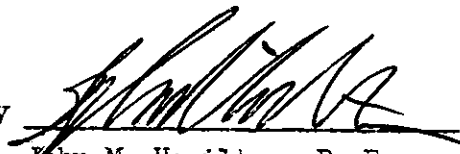
...continued...

RESULTS:

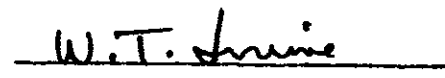
The magnetic map is dominated by a 250 gamma magnetic low which is located in the north central portion of the surveyed area. This magnetic low correlates with unmetamorphosed volcanics, and reference to G.S.C. aeromagnetic data (shown as an insert) reveals that this low is a west-southwest trending limb of a stronger low centred just east of the surveyed grid.

Two elongated magnetic highs of up to about 1000 gammas amplitude were mapped in the south-central portion of the grid. No outcrops occur in their vicinity, but the aeromagnetic data shows that these highs are probably part of a much stronger high located just east of the grid, and known to be underlain by hornblende metadiorite.

Submitted by

  
John M. Hamilton, P. Eng.  
Geophysicist

Endorsed for  
Release By

  
W.T. Irvine, P. Eng.,  
Manager, Western District

DISTRIBUTION:

Director, Exploration (1)  
Chief Geologist, Exploration (1)  
Mining Recorder, Vancouver (2) ✓  
Western District (2)  
Geophysics File (1)

JMH/mjb

DOMINION OF CANADA:  
PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of

STATUTORY DECLARATION RELATING  
TO EXPENDITURES ON A GEOPHYSICAL  
SURVEY ON THE MAG GROUP, NICOLA  
MINING DIVISION.

I, JOHN MURRAY HAMILTON, PROFESSIONAL ENGINEER

of City of NORTH VANCOUVER

in the Province of British Columbia, do solemnly declare that

1. Copies of a report regarding a geophysical survey on certain mineral claims situated in the Nicola Mining Division are being filed with the Mining Recorder in Vancouver.
2. Attached hereto, and marked with the letter "A" upon which I have signed my name at the time of declaring hereof, is a Statement of Expenditures incurred in connection with the Geophysical survey of the said claims showing in addition the period during which those making the said survey performed their work.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 8th  
day of September, 1970, A.D.

*Geoffrey H. Mott*  
A Commissioner for taking Affidavits within British Columbia or  
A Notary Public in and for the Province of British Columbia.

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

GEOPHYSICAL SURVEY COSTS

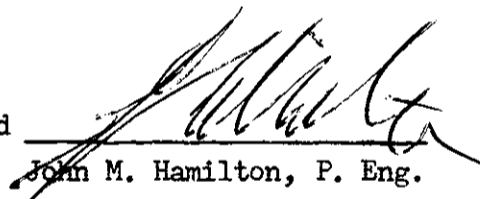
MAG GROUP, NIC PROPERTY, NICOLA LAKE AREA

NTS 92-I-1, 50° 120° N.W.

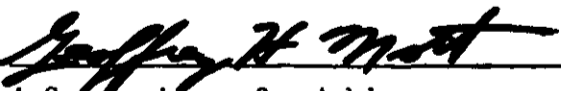
Magnetometer Rental from Scientrex Ltd.	\$152.50
Magnetometer Operator's Salary - 3 days at \$35.00	\$105.00
Domicile (Food and lodging)	\$ 35.25
Supervision, Report Writing, Drafting	\$130.00
	<hr/>
	\$422.75
	<hr/> <hr/>
Line Miles Surveyed = 10.8, Cost per Mile =	\$ 39.10

The above survey was done on the Mag Group during the period August 1 - August 31, 1970.

Signed

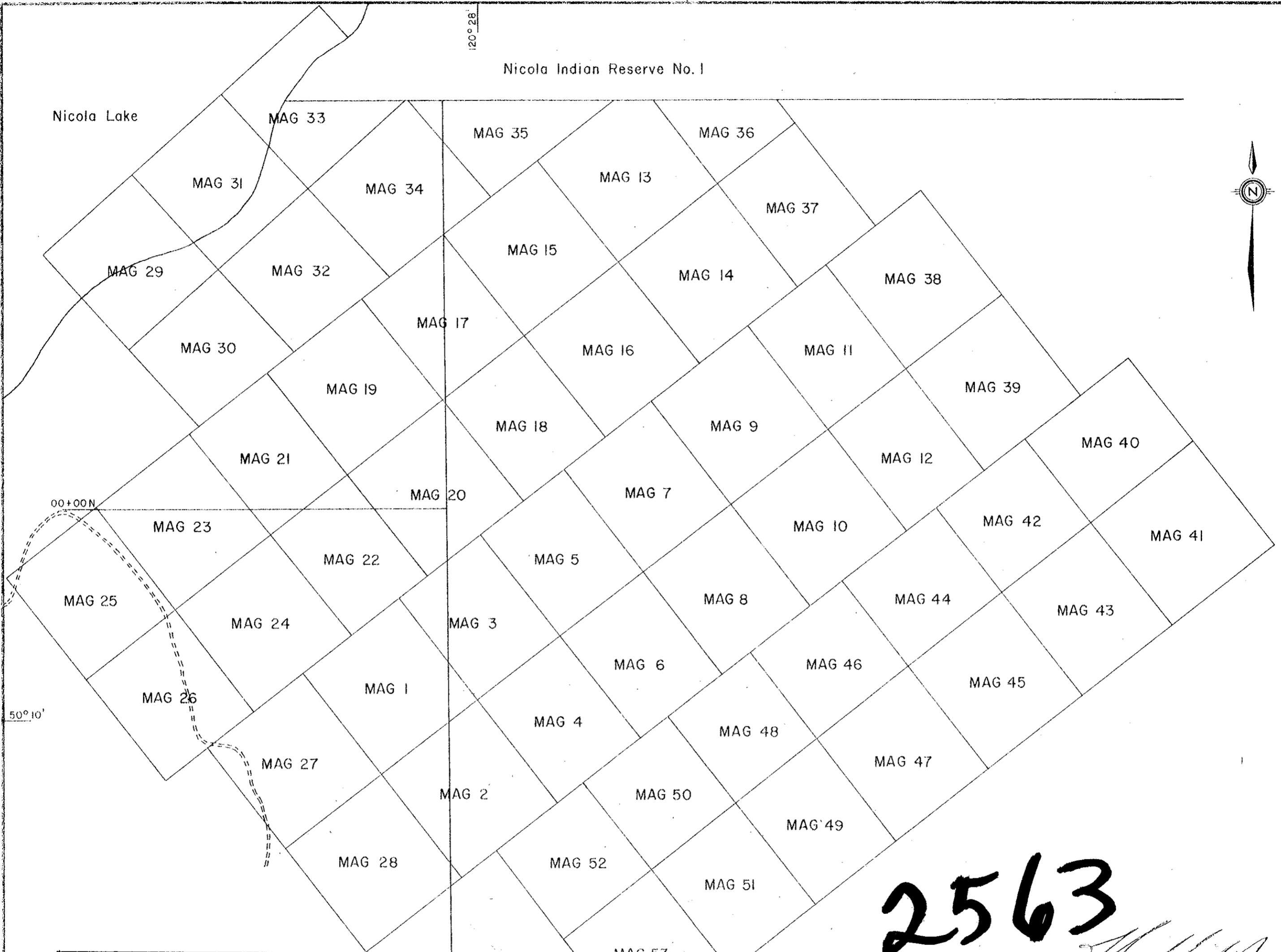
  
John M. Hamilton, P. Eng.

This is Exhibit "A" to the Statutory Declaration of John M. Hamilton declared before me this ~~8~~ day of September, 1970.

  
A Commissioner for taking  
Affidavits within British Columbia

Nicola Indian Reserve No. 1

Nicola Lake



**2563**

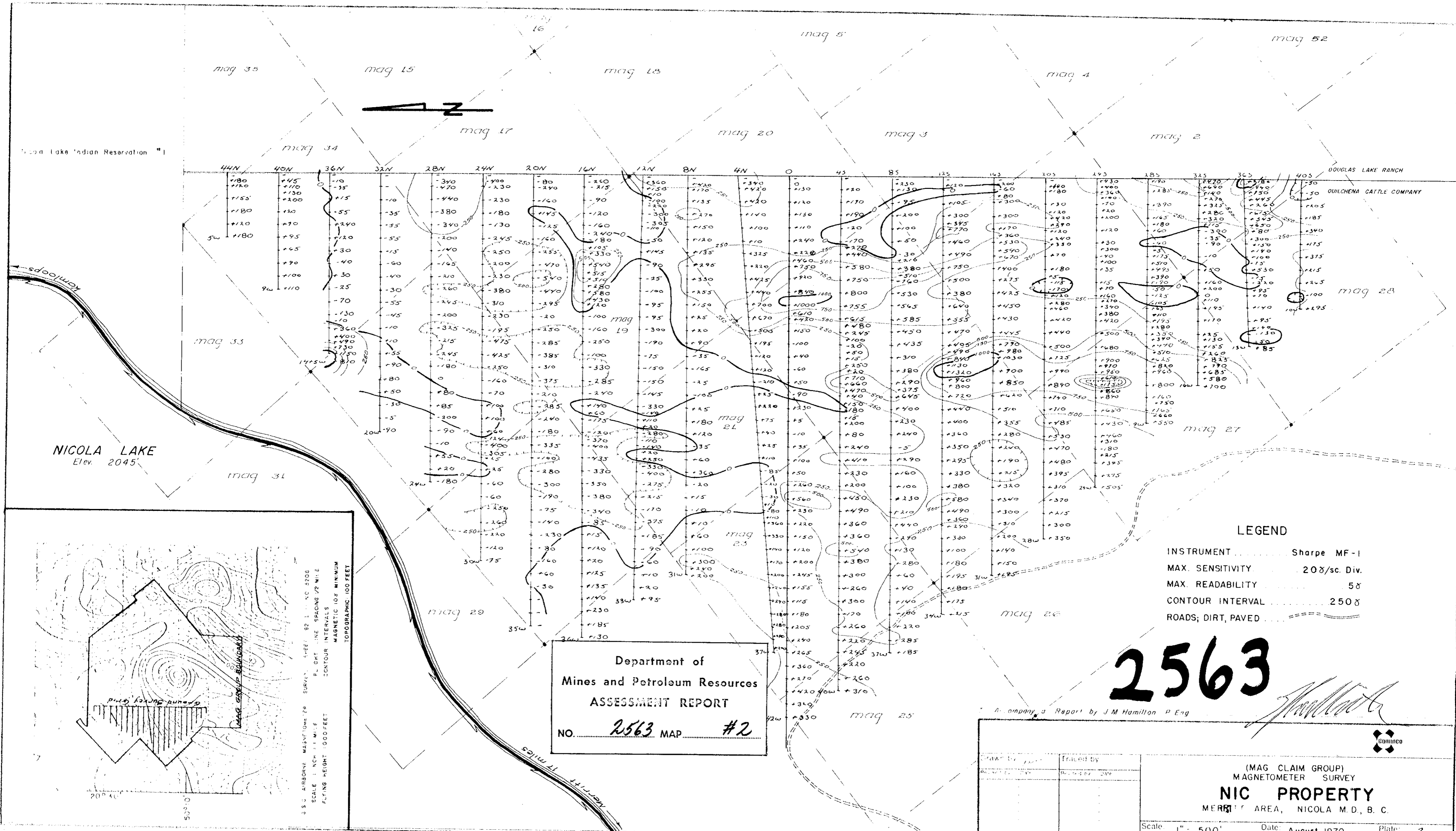
*J. Hamilton*

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 2563 MAP #1

TO ACCOMPANY A REPORT BY J.M. Hamilton, P. Eng.

Drawn by:	R.U.B.	Traced by:	T.G.B.
Revised by:	Date	Revised by:	Date

CLAIM LOCATION MAP  
 MAG GROUP, NIC PROPERTY  
 NICOLA LAKE AREA, NICOLA M.D., B.C.  
 Scale: 1" = 1000'      Date: SEPT. 1970      Plate: 1



NICOLA LAKE  
Elev. 2045'

LEGEND

INSTRUMENT ..... Sharpe MF-1  
 MAX. SENSITIVITY ..... 20  $\gamma$ /sc. Div.  
 MAX. READABILITY ..... 5  $\gamma$   
 CONTOUR INTERVAL ..... 250  $\gamma$   
 ROADS; DIRT, PAVED .....

**2563**

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. **2563** MAP **#2**

Company's Report by J.M. Hamilton P. Eng

Drawn by	Traced by	(MAG CLAIM GROUP) MAGNETOMETER SURVEY <b>NIC PROPERTY</b> MERRITT AREA, NICOLA M.D., B.C.
Date	Date	
Scale: 1" = 500'		Date: August, 1970
		Plate: 2

35 U. AIRBORNE MAGNETIC SURVEY, SHEET 22 11 10 2208  
 SCALE: 1 INCH = 1 MILE  
 FLYING HEIGHT: 1000 FEET  
 CONTOUR INTERVALS: MAGNETIC 100 FEET  
 TOPOGRAPHIC: 100 FEET