

REPORT ON MAGNETOMETER SURVEY SMITHERS AREA, BRITISH COLUMBIA ON BEHALF OF FORTUNE CHANNEL MINES LIMITED

MAR. 12, 1970

by

Richard O. Crosby, B.Sc., P.Eng.

March 12, 1970

CLAIMS:

(see following page)

LOCATION:

About 24 miles southeast of Smithers, B.C. Omineca Mining Division 127° 54° NE

DATES:

December 7 to December 15, 1969 January 22 to February 13, 1970 CLAIMS :

LAIMS:
Name
BA 1 - 24
LB 1 - 20
CU 1 - 32
MAG 1 - 44
JANE 1 - 10
LYBDENUM 1 - 3
BARR 4
BARR 6
BARR 8
BARR 10
BARR 12
BARR 15 - 25
BARR 29
BARR 31
BARR 33 - 39
BARR 40 - 52
BARR 53 Fr
VAN DOO

Record Numbers 75291-314 75315-334 77528-559 75417-460 80208-217 25790-792 28811 28813 28815 28817 28819 28822-832 28836 28838 28840-846 49341-353 54237 65437

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# TABLE OF CONTENTS

	Page No.
SUMMARY	
INTRODUCTION	1
GEOLOGY	2
PRESENTATION OF DATA	2
DISCUSSION OF RESULTS	2
CONCLUSIONS AND RECOMMENDATIONS	3
APPENDIX "A"	
PLATES:	
(in text)	
Plate 1 - Property Location Map	$l^{11} = 4$ miles
(in envelope)	•

Plate 2 - Grid and Claim Plan1" = 1000'Plate 3 - Magnetometer Contour Plan1" = 500'

## SUMMARY

A magnetometer survey has revealed areas which are interpreted as alteration and contact zones within an acidic intrusive. These zones are presently being tested by diamond drilling. REPORT ON MAGNETOMETER SURVEY SMITHERS AREA, BRITISH COLUMBIA ON BEHALF OF FORTUNE CHANNEL MINES LIMITED

### INTRODUCTION

From December ~7 to December 15, 1969 and January 22 to February 13, 1970, a magnetometer survey was executed on behalf of Fortune Channel Mines Limited over a group of mineral claims in the Smithers area, British Columbia. The claims covered by the survey are listed on the title page.

The survey consisted of magnetometer measurements read at stations every 100 feet along traverses separated by 500 feet. The traverses are oriented generally north-south. The magnetometer operators was Mr. Jerrold Davis of Vancouver, British Columbia. The supervision of survey procedures and interpretation of data was by Mr. Richard O. Crosby, P. Eng.

The magnetometer was a Sharpe MF-1, vertical force, fluxgate magnetometer. Appendix "A", attached gives full details of the instrument.

The intensity of the earths vertical magnetic field in the survey area measures approximately 56,300 gammas.

The purpose of the present programme was to detail survey an area which had been interpreted as an acidic intrusive from an airborne magnetic map.

Alteration zones and contact zones within this intrusive could possibly be represented by depressions or by persistent gradients in the magnetic field.

#### GEOLOGY

The geology of the area as reported by M. K. Lorimer, of L. J. Manning and Associates is as follows: "The claims area has been mapped by the G.S.C. Map 671 A, as being almost completely covered by heavy overburden. To the west there is an extensive area of undivided volcanic rocks and lesser areas of the same rocks appear within a few miles to the north, east and south. The only mapped exposure near the property is a small body of fossiliferous tuff along the banks of the Bulkley River. Within the Barr Group of claims (south central part of the area) there is an outcrop of highly altered granodiorite which coincides with a magnetic depression".

## PRESENTATION OF DATA

Magnetic observations are presented in the form of a contour map of the observed vertical magnetic field on a scale of 1" = 500 feet, with a contour interval of 100 gammas. Corrections for diurnal variations and any possible instrumental drift have been made where required. A total of 46 miles of survey were completed.

#### DISCUSSION OF RESULTS

The observed magnetic relief is a total of about 2000 gammas and occurs mainly in the western part of the survey grid.

The remainder of the grid is relatively featureless except for limited areas of increased magnetic activity located between L 11000 and L 13000; and a 500 gamma gradient trending northwesterly from the southern part of L 5000 to the northern part of L 7000.

#### CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey has revealed features which tend to confirm the original interpretation of the aeromagnetic map of the area.

The intensely anomalous area in the extreme western part of the survey grid is interpreted as arising from shallow basic volcanics. The remainder of the grid is underlain by interpreted acidic intrusive rocks, with altered zones indicated by magnetically quiet areas. These are especially evident between L 15000 and L 20000; and in the extreme northeast quadrant.

Three major faults are also revealed by the magnetic survey. A pair of northwest-southeast trending faults extending from the southern part of L 20500 to the northern part of L 23000 and from the southern part of L 5000 to the northern part of L 7000.

. A third fault is interpreted as trending northeasterly from the southern part of L 20500 to L 15000.

It is recommended that the area be field checked and that the interpreted alteration zones and structurally disturbed zones be tested by diamond drilling.

Respectfully submitted,

SEIGEL ASSOCIATES LIMITED

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Vancouver, B. C. March 12, 1970. Richard O. Crosby, B.Sc., P.Eng. Geophysicist.

#### APPENDIX "A"

#### SPECIFICATIONS OF FLUXGATE MAGNETOMETER MODEL MF-1 Ranges: Plus or minus -1,000 gammas f. sc. 3,000 .. 10.000 30.000 100.000 Sensitivity 20 gammas/div. 50 200 .. 500 .. .. 2,000 Taut-band suspension 1000 gammas scale 1%" long — 50 div. 3000 gammas scale 1 11/16" long — 60 div. 1000 to 10,000 gamma ranges $\pm$ 0.5% of full scale 30,000 and 100,0000 gamma ranges $\pm$ 1% of full scale $-40^{\circ}$ C to $+40^{\circ}$ C -40°F to +100°F Less than 2 gammas per °C (1 gamma / °F) Total 1 gamma P-P <u>+</u> 1 gamma for 24 hours at constant temperature 10,000 to 75,000 gammas by 9 steps of approximately 8,000 gammas and fine control by 10 turn potentiometer. Convertible for southern hemisphere or + 30,000 gammas equatorial. 1.7 ma per oersted for 1000 to 100,000 gamma ranges with maximum termination of 15,000 ohms. DC to 5 cps (3db down) Amphenol 91-MC3F1 12 x 1.5V-flashlight batteries "C" cell type) (AC Power supply available) 50 milliamperes Instrument - 61/2" x 31/2" x 121/2" 165 x 90 x 320 mm Battery pack — 4" x 2" x 7" 100 x 50 x 180 mm Shipping Container - 10" dia x 16" 254 mm dia. x 410 mm Instrument — 5 lbs. 12 oz. 2.6 kg. 1.0 kg. Battery Pack - 2 lbs. 4 oz. Shipping - 13 lbs. 6.0 kg.

Meter:

Accuracy:

**Operating Temperature:** 

**Temperature Stability:** Noise Level: Long Term Stability: **Bucking Adjustments:** (Latitude)

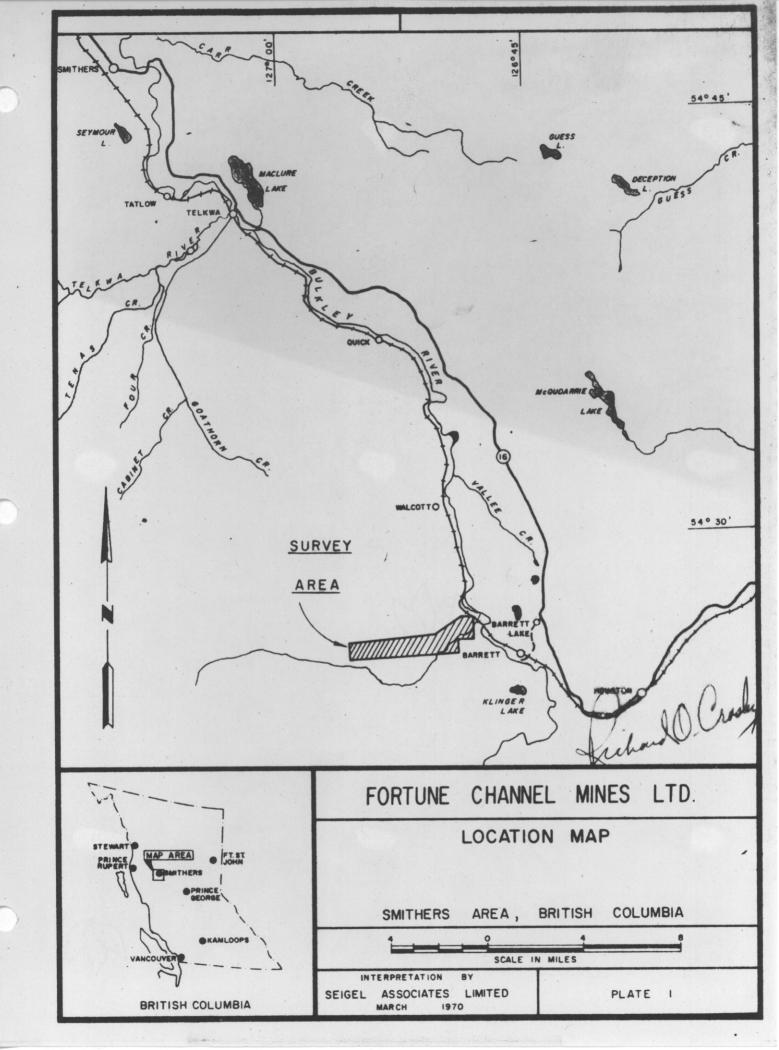
**Recording Output:** 

Response: **Connector:** Batteries:

**Consumption: Dimensions:** 

Weights:

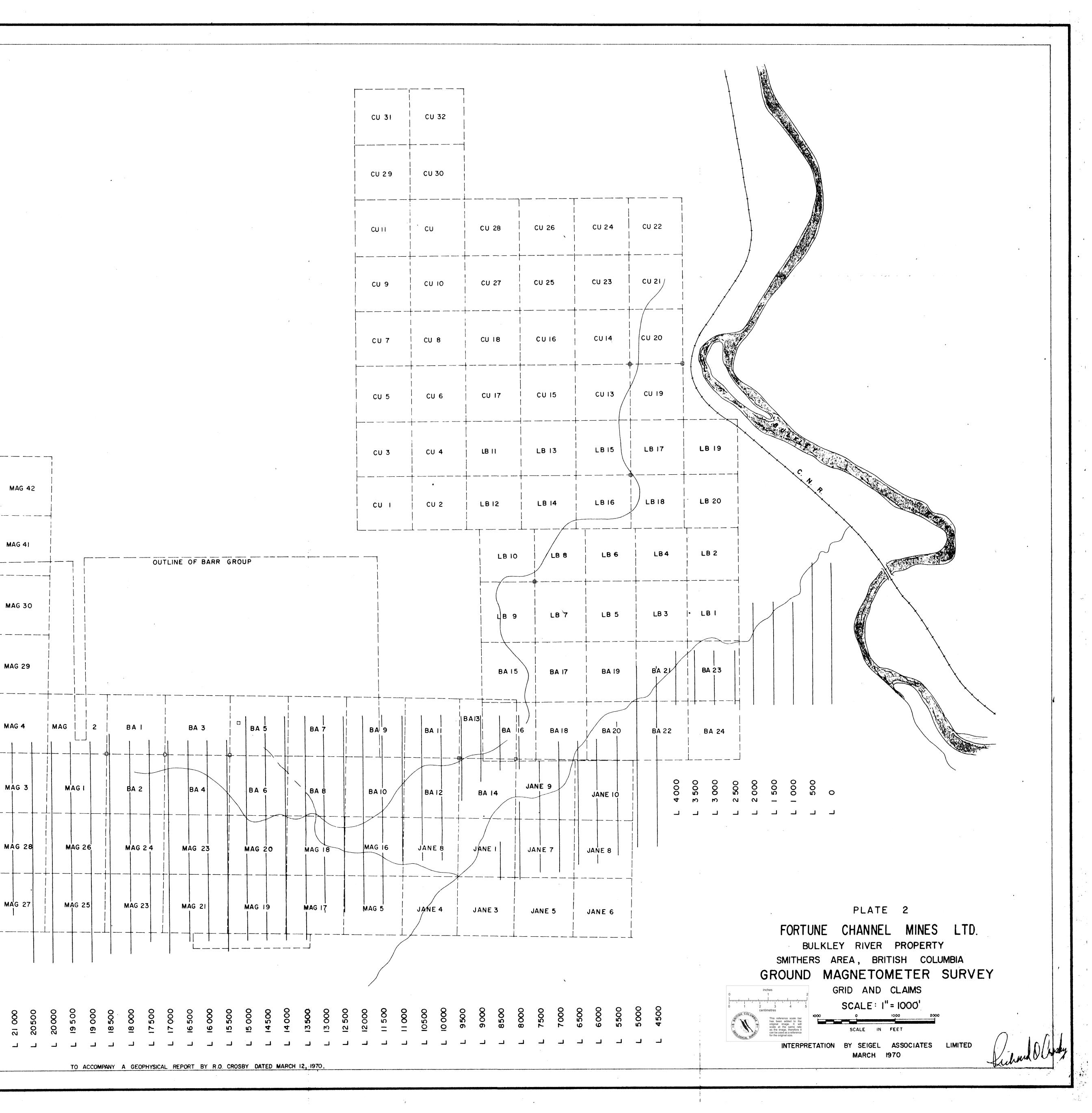
IREX LIMITED 79 Martin Ross Avenue, Downsview, Ontario, Canada

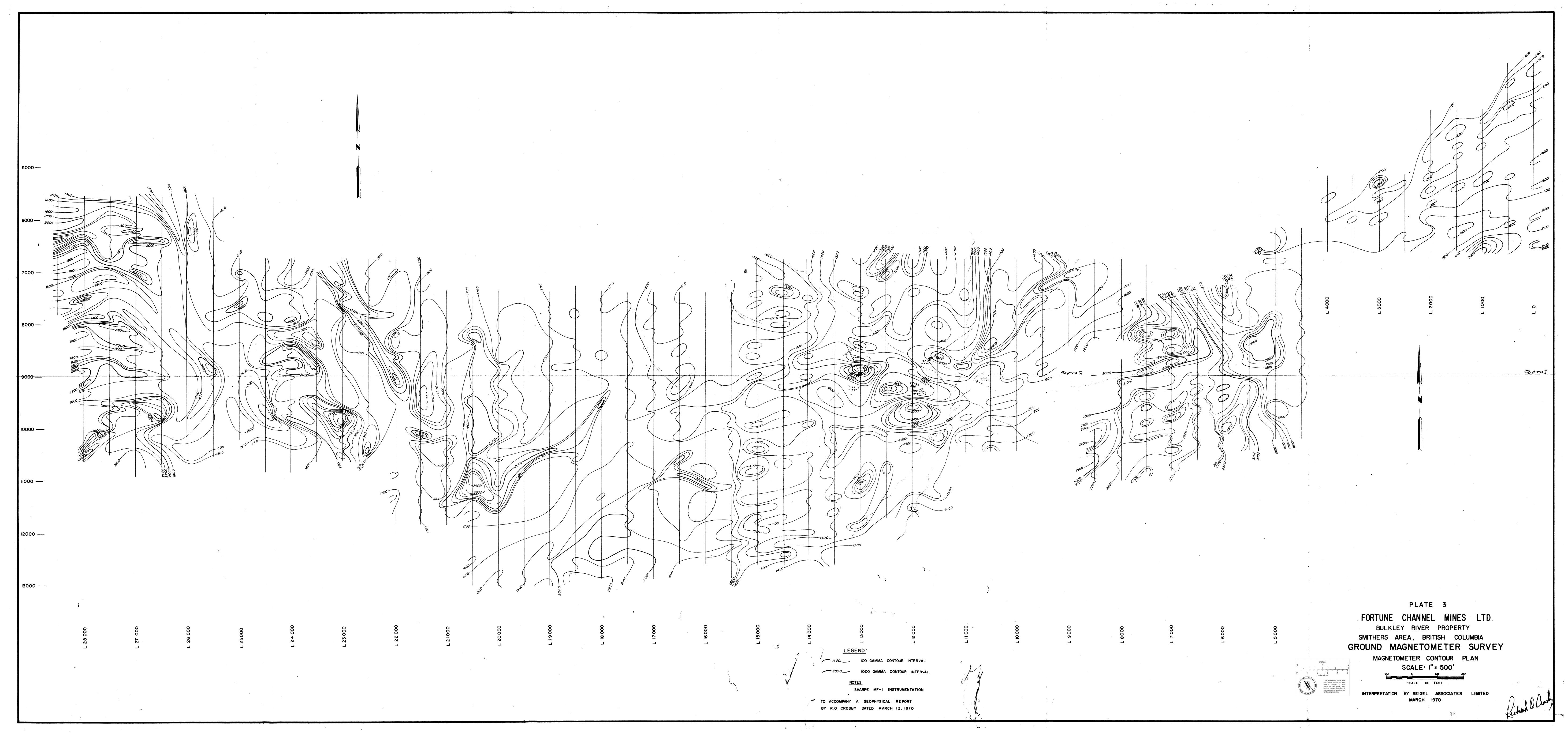


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MAG 44 MAG 42 MAG 43 MAG 41

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BY R.O. CROSBY DATED MARCH 12, 1970

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