

1972 Ground Magnetic Survey on the
Dote #1-9 incl.
Dote #11-37 incl. owned by Dawood Mines Ltd.

Located at Aspen Grove

Latitude 49°58'N Longitude 120°37'W

Nicola Mining Division 92 H 15

By G.M. DePaoli & T.J.R. Godfrey, P. Eng. (B.C.)

For Amax Exploration, Inc. 92H/15E

Work was carried out during September 4 -
September 13, 1972

4079

1972 Assessment Report

4079

TITLE	Ground Magnetic Survey on the Dote Claims (Dawood Mines Limited)
AUTHORS	G.M. DePaoli and T.J.R. Godfrey, P.Eng. (B.C.)
DATE	January 15, 1973
COMMODITY	Cu
LOCATION-Area	Aspen Grove
-Mining Division	Nicola
-Coordinates	Latitude 49°58'N Longitude 120°37'W
-NTS	92 H 15

AMAX Vancouver Office

Department of Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 4079	MAP #1

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INTRODUCTION

During the summer of 1972 Amax Exploration, Inc. signed an option agreement with Dawood Mines (N.P.L.) to execute an exploration program on the latter's Dote claim group. The work program included a ground magnetometer survey which extended and in part overlapped previous ground magnetic surveys carried out in 1970 (Refer to Assessment Report 2468 by Sherwin F. Kelly). The survey was conducted by G.M. DePaoli during the period September 4 to September 13, 1972. A proton precession magnetometer was employed in anticipation of relatively low magnetic gradients within the central portion of the grid.

Location and Access

The Dote group consists of 36 mineral claims which straddle Highway #5 at Aspen Grove, a small settlement approximately 16 miles southeast of Merritt, B.C. They lie within the Nicola Mining Division, National Topographic Sheet 92 H 15 at 49°58'N latitude and 120°37'W longitude. In addition to Highway #5 several secondary roads also exist which allow easy access to the property.

Grid Control

The grid consists of two north-south baselines spaced 5200 feet apart having east-west cross lines every 400 feet. One baseline lies approximately 3600 feet east of Highway #5 while the other is situated 1600 feet west of the highway. The eastern baseline and its cross lines were established in 1970 while the western baseline and its cross lines were cut in 1972. The other grid was reflagged and several of its lines were extended westerly to the highway and merged with the new grid. All the grid lines and the two baselines were picketed at 100 foot station intervals.

GENERAL GEOLOGY

The property is underlain by the Nicola series of volcanics and sediments of Triassic age. The series is predominantly of volcanic origin comprising andesitic flows and volcanic

breccias with minor interbedded tuffs. Drilling has indicated a sequence of argillites and greywackes of unknown thickness which underlie the main valley. The Nicola rocks have been intruded in Jurassic time by batholiths and smaller plugs mainly of diorite, quartz diorite and granodiorite composition. Many of these intrusions and intrusive contacts are mineralized and have resulted in numerous copper showings in the Aspen Grove area.

MAGNETOMETER SURVEY

Introduction and Theory

Topographically the central portion of the property lies along a valley bottom. Alluvial fill and a large elongate swamp lies immediately east of Highway #5. The extreme western and eastern portions of the property lie along ridge flanks and rock types are well exposed. A magnetometer survey was undertaken to aid in extrapolating the extent and distribution of major rock types within the overburden covered area. Sharp magnetic gradients would also define dominant structure trends and possible faults.

The magnetism of all rocks is controlled by their content of ferromagnetic material, i.e. substances possessing a relatively high susceptibility and capable of acquiring permanent magnetization. Often intrusions are accompanied by widespread hydrothermal alteration zones in which ferromagnetic minerals, principally magnetite, may be redistributed in such a way that the altered zone is characterized by a distinctive magnetic signature.

Instrument and Procedure

The instrument employed was the Model G-806 portable Proton Magnetometer manufactured by Geometrics (914 Industrial Avenue, Palo Alto, California 94303). This proton free precession magnetometer operates on the principals of nuclear magnetic resonance to produce a measurement of the total magnetic intensity of the earth's field. The instrument is comprised of an electronics

package (9.5 lbs.), battery pack (10.0 lbs.) and a sensor (3.5 lbs.). Sensitivity is ± 1 gamma and values are obtained from a digital display readout. Operating temperatures are from 0-50°C.

Starting at station 32+00S the western baseline was surveyed in a northerly direction to station 0+00S, then resurveyed back to station 32+00S. Special care was observed on cross line intersections and corrections were made for the diurnal variation. In a similar fashion magnetic reference points were obtained for the southern half of the baseline. A closed loop was also surveyed between the two baselines to establish reference points on the eastern baseline. The east-west cross lines were then surveyed at 100 foot station intervals and diurnal corrections were calculated from baseline reference points. Corrected values were plotted on a scale of 1"=400' and are presented in Figure 2.

Results and Discussion

The data was contoured employing a 200 gamma interval and the resulting magnetic patterns are shown in Figure 2.

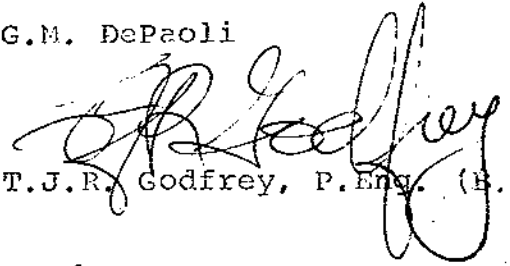
The central portion of the grid area displays relatively low magnetic relief reflecting rock types of low susceptibility. This is believed to reflect a sequence of vertically dipping non-magnetic argillites and crystal tuffs which have been intersected by drilling immediately east of the highway.

The western portion of the grid area is dominated by an elongate distinct 1200 gamma low having an average width of 1000 feet and trending northwesterly through the property. This zone coincides with a band of chert pebble conglomerate devoid of magnetite. The highly erratic magnetic pattern west of this region can be attributed to moderately magnetic amygdular basalts. Several outcrops of diorite have been noted along the baseline at 28S and is believed to be the reason for the magnetic high along the western baseline north of 28+00S.

A large part of the eastern portion of the grid is exposed and mapped as andesitic volcanics and is reflected by relatively high magnetic susceptibilities. The highest magnetic anomaly obtained on the property occurs in the extreme northeast corner centered at coordinates 4+00S, 25+00E.

Two magnetic trends are apparent on the property. A northwest trend is accentuated by the low magnetic pattern over the chert conglomerate which suggests this unit may be fault controlled along its western contact. The andesite units on the eastern part of the grid also display a general northwest trend but it is interrupted by several strong north-east breaks suggesting later faulting.

G.M. DePaoli



T.J.R. Godfrey, P. Eng. (B.C.)

REFERENCES

- COCKFIELD, W.E., 1948; Geology and Mineral Deposits of Nicola
Map Area
G.S.C. Memoir 249
- KELLY, S.F., 1970; Report on Geochemical-Geophysical Surveys of
Dote Mineral Claims
Assessment Report 2468
- READ, W.S., 1969; Geochemical Survey of the Dote Claims
Assessment Report 1910
- RICE, H.H.A., 1947; Geology and Mineral Deposits of the Princeton
Map Area
G.S.C. Memoir 243
- STEVENSON, R.W., 1971; Report on Geological Survey - Dote Claims
Assessment Report 3051

ASSESSMENT DATA

Claim	Record Numbers	Expiry Date	Work to be Applied for
Dote 35	36905	May 27, 1975	3 years
Dote 36	36906	May 27, 1973	5 years
Dote 37	36907	May 27, 1973	5 years

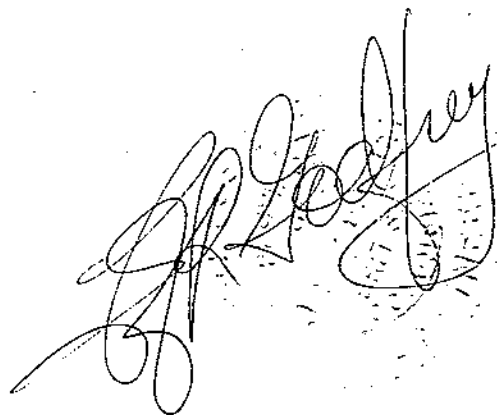
Period of Work - September 4 - 13, 1972

Summary of Work - Ground magnetometer survey - 24.3 line miles

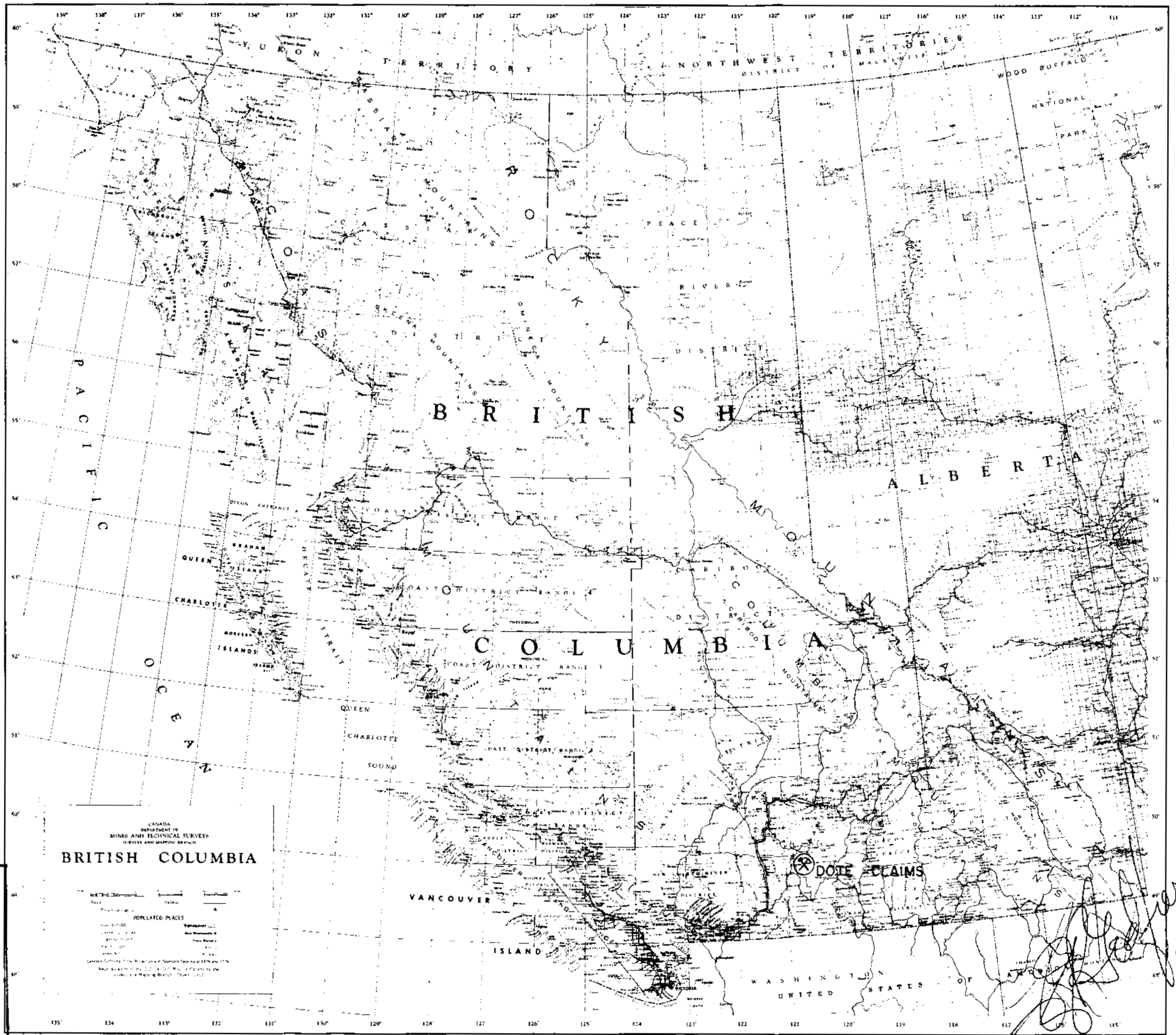
Personnel Employed

T.J.R. Godfrey, 601-535 Thurlow Street, Vancouver 5, B.C. Geologist, P.Eng., 1 day @ \$100.00	100.00
G.M. DePaoli, 601-535 Thurlow Street, Vancouver 5, B.C. Geophysicist, 12 days @ \$ 51.21	614.52
<u>Board</u> - 10 man days @ \$10.00/day	100.00
<u>Magnetometer Rental</u> - Geometrics G806 proton	300.00
<u>Report Preparation and Drafting</u>	250.00

TOTAL \$ 1,364.52
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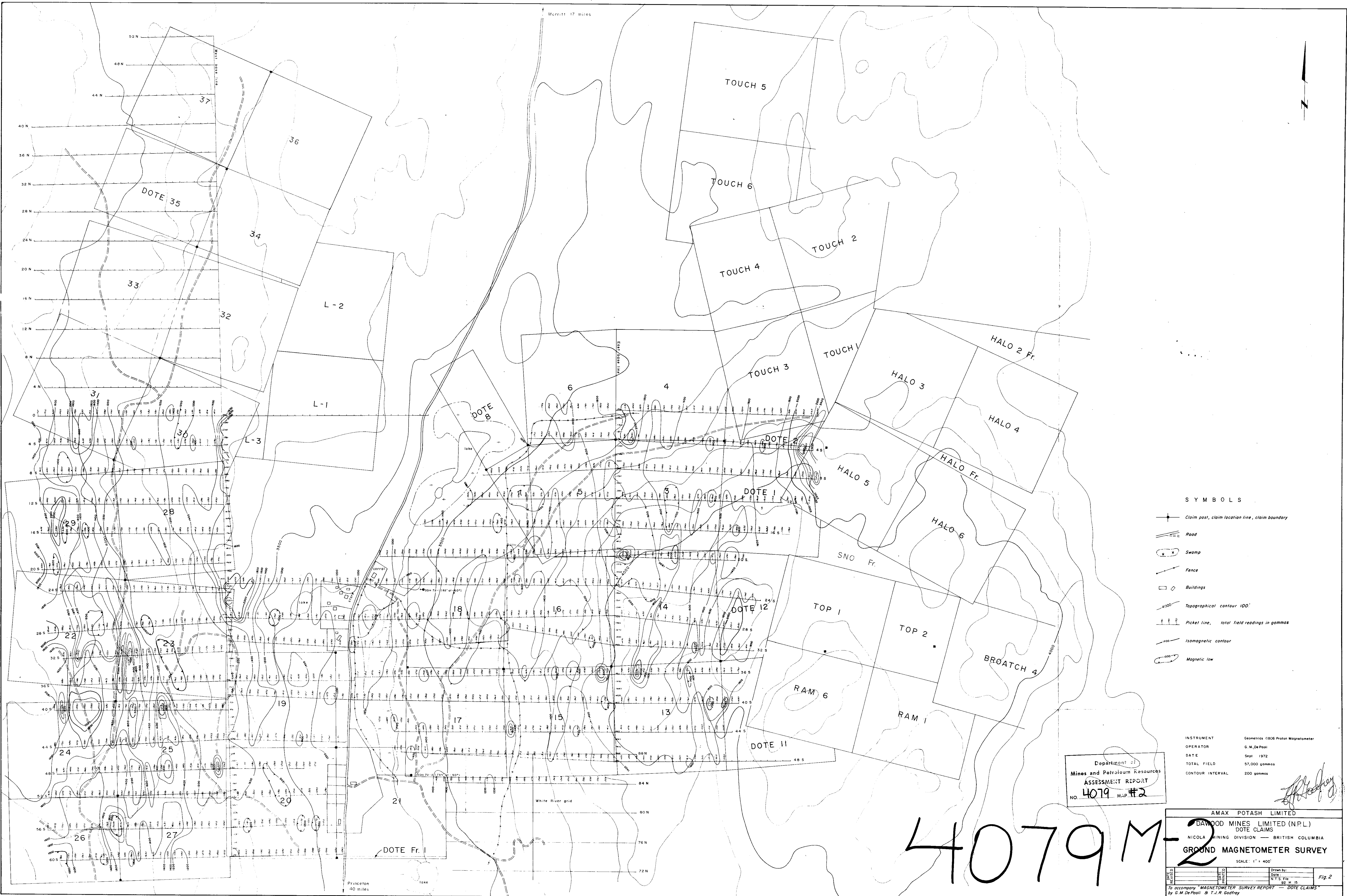
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NO. 4079 MAP #1



LOCATION MAP

N.T.S. Ref. 92H/15

Fig. 1



- SYMBOLS**
- Claim post, claim location line, claim boundary
 - Road
 - Swamp
 - Fence
 - Buildings
 - Topographical contour 100'
 - Picket line, total field readings in gammas
 - Isomagnetic contour
 - Magnetic low

INSTRUMENT Geometrics G806 Proton Magnetometer
 OPERATOR G. M. DePoli
 DATE Sept 1972
 TOTAL FIELD 57,000 gammas
 CONTOUR INTERVAL 200 gammas

Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 4079 MAP #2

AMAX POTASH LIMITED
 DAWOOD MINES LIMITED (N.P.L.)
 DOTE CLAIMS
 NICOLA MINING DIVISION — BRITISH COLUMBIA
GROUND MAGNETOMETER SURVEY
 SCALE: 1" = 400'

4079M-2

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 To accompany "MAGNETOMETER SURVEY REPORT — DOTE CLAIMS"
 by G. M. DePoli & T. J. R. Godfrey