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GEOPHYSICAL REPORT ON
THE CONTINENTAL "M.B." GROUP OF CLAIMS
FOR
GRAHAM BOUSQUET GOLD MINES LIMITED
HIGHLAND VALLEY AREA
ASHCROFT, B.C.

Claims Surveyed:

Continental "M.B." Group:

Recorded Nos: 18229A - 18252A incl.

Claim Names: "M.B." 1 - "M.B." 24 incl.

Location of the Continental "M.B." group would place it northwest of longitude 121°, latitude 50°, and 12 miles southeast of Ashcroft in the Highland Valley area, B.C.

The work was carried out during the period from 6th September to 4th October, 1956.

Prepared by:

E.B. Nicholls, B.Sc., A.Inst.P.,
Geophysicist.

Geo-Technical Development Company Limited,
24 Wellington Street West,
Toronto, Ontario.

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#1 Plan No. 1.....Iso-dynamic Contours of Magnetic Intensities,
and Geological Interpretation. (Drawing Ref:
132-10-56).

Graham Bousquet Gold Mines Limited,
Suite 1600,
100 Adelaide Street West,
TORONTO, Ontario.

Gentlemen,

The following report describes the results and interpretation of the geophysical survey carried out over the Continental "M.E." group of claims held by Graham Bousquet Gold Mines Limited, located in Highland Valley, 12 miles southeast of Ashcroft, B.C.

The magnetometer survey, carried out over the property, was conducted by Geo-Technical Development Company Limited, 24 Wellington Street West, Toronto, Ontario, during the period from 6th September to 4th October, 1956. The results of the survey are depicted on Plan No. 1 accompanying this report.

SUMMARY AND RECOMMENDATIONS

The geophysical survey indicated two magnetic anomalies of high intensity, and a series of anomalies of low intensity. These magnetometer anomalous zones are identified on the accompanying plan by the letters "M-1", "M-2", "M-3", "M-4", "M-5", "M-6" and "M-7" and the survey indicated an east-west strike trend.

The property is thought to be located either on the geological contact of the batholith and the volcanics, or very close to it. Magnetometer anomalies "M-1" and "M-2" can be associated with the batholithic rocks. It is possible that the volcanics have been eroded away from this area, but remain in the eastern half of the property. Faults, shear and fracture zones occur within the batholith close to this contact, and it is in these zones that the mineralization is found.

It is thought that the series of magnetic lows identified as the "M-3" and "M-4" zones on the accompanying plan could be associated with a N20°E striking fault, and that the zones from this main fault could be carrying mineralization. Such zones are indicated by anomalies "M-5", "M-6" and "M-7".

However, in order to ascertain whether or not the batholith-volcanic contact is on the property, it is recommended that the property be geologically mapped. It is further recommended before conducting a diamond drilling programme, that the possibility of mineralization being associated with these magnetic anomalies be further investigated by additional surface prospecting in the form of trenching, and that an electrical resistivity survey be carried out over the property. Any anomalous conditions located by this method could then be checked by geophysical soil sampling.

PROPERTY

The Continental "M.B." group of claims consists of 24 mineral claims, held by Graham Bousquet Gold Mines Limited. The claims are further described as follows:

The Continental "M.B." group;

Recorded numbers : 18229A - 18252A incl.

Claim Names : "M.B." 1 - "M.B." 24 incl.

LOCATION AND ACCESS

The property lies in the Highland Valley, southeast of Ashcroft, B.C. The Canadian Pacific Railway and the Canadian National Railway pass through the town of Ashcroft, which is about 220 miles northeast of Vancouver. Access to the property can be made by means of an unsurfaced, poorly ballasted road from Ashcroft, a distance of

approximately 30 miles. The property can also be reached by road from Kamloops and Merritt, the former being a distance of 60 miles, half of which is over unsurfaced roads, whilst the latter is 37 miles by a poorly ballasted road.

TOPOGRAPHY

Highland Valley is a broad, shallow depression extending south-easterly and easterly across the rolling upland which separates the deep valley of the Thompson River on the west from the shallow southerly trending valley of Guichon Creek and Kaskit Lake on the east.

The height of land is about 4,100 feet with patchy timber, meadows, swamps and small lakes. The bottom of Highland Valley has a deep cover of glacial drift. Eskers form low rounded hills and sinuous gravel ridges. The valley rises steeply at the sides, and the topography here is fairly rugged.

The property discussed in this report lies on the north slopes of the valley at an elevation of approximately 5,200 feet.

GENERAL GEOLOGY

The general geology of the area is shown on Map No. 1010A accompanying Memoir 262, Ashcroft Map area, B.C., by S. Duffell and K.C. McTaggart, published by the Department of Mines and Technical Surveys.

The property discussed in this report lies within an area underlain by the Guichon Creek batholith. This diorite complex occupies a large area east of the Nicola River. The rocks are typically grey with some pink and greenish-grey phases. The mineralization of the area is found in breccias and fault zones

and is intimately related to this complex of igneous rocks that have intruded the older granite rocks of the Guichon Creek batholith. As the valley bottom has a deep cover of glacial drift, outcrops in the area are scarce. Joints are conspicuous in many of the outcrops and are important because much of the copper mineralization in the area is found in them. However in most instances the batholith is massive, but it has been subjected to stresses in certain areas, that have created fault and shear zones. Joints are especially closely spaced in the vicinity of the faults in the mineralized areas.

Whilst magnetite is known to be an accessory mineral in the batholith, it apparently is not associated with the copper mineralization. In most of the mineral occurrences in the Highland Valley, the mineralization occurs in fracture zones within the batholithic rocks, and consists of chalcocite, bornite, chalcopyrite, azurite, malachite, some pyrite and specular hematite.

FIELD OPERATIONS

A base line was established in an east-west direction and located so as to pass through the centre of the property. Picket lines were then turned off at right angles to this base line at 400 foot intervals; all were laid out by a transit and were picketed every 100 feet. The final layout of the picket lines is shown on the plan accompanying this report.

All major topographic features were noted, and wherever possible claim posts located; these are also plotted on the accompanying plan.

Owing to the fact that it is very difficult to locate claim posts a few of the lines were extended beyond the property boundaries. This condition is found along the north boundary and in the southeast corner of the property.

A Sharpe magnetometer, Model A-2, with a sensitivity of 24.6 gammas per scale division was used for the magnetometer survey. A more detailed discussion of the survey method is given in the following paragraphs.

EXPLANATION OF THE MAGNETOMETER METHOD

A main base control station was established on the base line at Line 0400. This control station had a value of 409 gammas and all other station readings are relative to this point.

At various points along the base line, subsidiary control stations were established using the method that is general in laying out control stations in magnetic and gravimetric work. Readings were taken at these control stations every 2-3 hours, so that the diurnal variation could be accounted for.

All readings taken during the survey were converted to gammas and all variations were allowed for. The resulting readings were then plotted on the plan accompanying this report.

INTERPRETATION OF THE GEOPHYSICAL SURVEY

The results of the magnetometer survey conducted over the Continental "M.B." group of claims held by Graham Bousquet Gold Mines Limited are depicted on Plan No. 1 accompanying this report.

The magnetometer readings are expressed in gammas and are plotted to the east of the traverse line.

The magnetometer survey indicates that the property is an area of fairly uniform magnetic intensity with the readings increasing slightly from east to west. The exception to this is the area of magnetic highs located in the northwest corner of the property. These main anomalous zones show a somewhat higher order of magnetic intensity than is observed over the immediate adjacent areas, and are identified on the accompanying plan as the "M-1" and "M-2" zones.

These magnetic highs, indicated by anomalies "M-1" and "M-2", can be associated with Coast Intrusions which form the Guichon Creek batholith. The magnetometer readings over the eastern portion of the property show a relatively low overall background with only minor variations; these readings could be associated with the volcanics of the Kamloops group.

It is therefore possible that the geological contact between the batholith and the volcanic is located in the eastern part of the property. In most instances the batholith is massive, but it is possible that it has been subjected to stresses that have caused spears and fractures to form, hence the contact is not very distinct. In many places also, the younger rocks of the Kamloops group have been eroded away exposing the batholith rocks; this structure could also account for the two magnetic anomalies.

Any fault, shear or fracture zone would tend to stand out as a magnetic "low", and these zones usually occur along or near to the contact, but within the batholith. The vein deposits of the Highland Valley ores are known to occur in these fracture zones.

From the contours of the magnetometer results it will be noted that a series of magnetic "lows" are to be found in a N20°E

direction through the centre of the property. This zone is identified on the accompanying plan by the letters "M-3" and "M-4". Small zones of magnetic "lows" are found to lie off this main zone; these are identified by the letters "M-5", "M-6" and "M-7".

It is possible that these magnetic lows are associated with fracture or shear zones within the batholith. The strike of these zones as indicated by the contouring are in the general direction of the known vein deposits found in the area. However, the magnetometer survey in this particular instance does not provide enough conclusive evidence to assume that mineralization is to be found in these anomalies. Further work in the form of geological mapping, followed by an electrical resistivity survey next summer, is recommended to investigate the true potential of this claim group.

SURVEY DATA

A base line was established in an east-west direction through the centre of the property. Picket lines were then turned off at right angles to this base line every 400 feet. These traverse lines were picketed every 100 feet to the north and south boundaries of the property. A total of 29.3 miles of line was cut and picketed.

Owing to the fact that it is very difficult to locate claim posts, a few of the lines were extended beyond the property boundaries. This condition is found along the north boundary and in the southeast corner of the property.

A magnetometer survey was conducted over these picket lines covering a total of 27.6 miles of line and requiring 1457 station readings taken at 100 foot intervals.

Respectfully submitted,

GEO-TECHNICAL DEVELOPMENT COMPANY LIMITED

E. B. Nicholls

E.B. Nicholls, B.Sc., A.Inst.P.,
Geophysicist.

Toronto, Ontario.
24th October 1956.

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APPENDIX A

LIST OF PERSONNEL EMPLOYED ON
GEOPHYSICAL SURVEY

E.B. Nicholls -		Geophysicist
M. Noack	}	Geophysical operators
J. Needham		
D. Connautin	}	Assistant geophysical operators
C. Puff		
Marc Gratton	}	Line cutters and chainer
Roland St Amour		
Claude Allaire		

STATEMENT OF EXPENDITURES, August 25th to September 3rd, 1956

Salaries

E.B. Nicholls	Aug. 25 - 31	104.38	
M. Noack	Aug. 23-Sept. 30	440.33	
J.R. Needham	Sept. 1 - 30	300.00	
D. Connauton	Sept. 20 - 30	81.00	
C. Puff	Sept. 20 - 30	81.00	1,006.71

Other Expenditures

Travel Expenses	98.60	
Hotel and meals	86.06	
Camp and field supplies	65.98	
Line cutting	1465.00	
Food supplies	130.07	
Vacation pay	42.25	
Postage and express	11.11	
Telephone and telegram	5.95	
Survey prints	2.21	
Truck expenses	5.00	1,912.23

\$ 2,918.94

Note:- The above expenditures to be applied against assessment work on the 24 claim group property of GRAHAM BOUSQUET GOLD MINES LIMITED located in Ashcroft, British Columbia, at \$121.62 (ONE HUNDRED AND TWENTY ONE DOLLARS SIXTY TWO CENTS) per claim.

CERTIFIED CORRECT as per the cost records of Geo-Technical Development Company Limited


Accountant.

C E R T I F I C A T E

I, E.B. Nicholls, of the City of Toronto, Ontario,
do hereby certify:

1. that I am a geophysicist employed by Geo-Technical
Development Company Limited of 24 Wellington Street West, Toronto,
Ontario, and that I reside at 39 Addison Crescent, Don Mills,
Ontario.

2. that I am a graduate of London University, England,
(B.Sc. 1947), majoring in physics.

3. that I am an Associate of the Institute of Physics,
London, England.

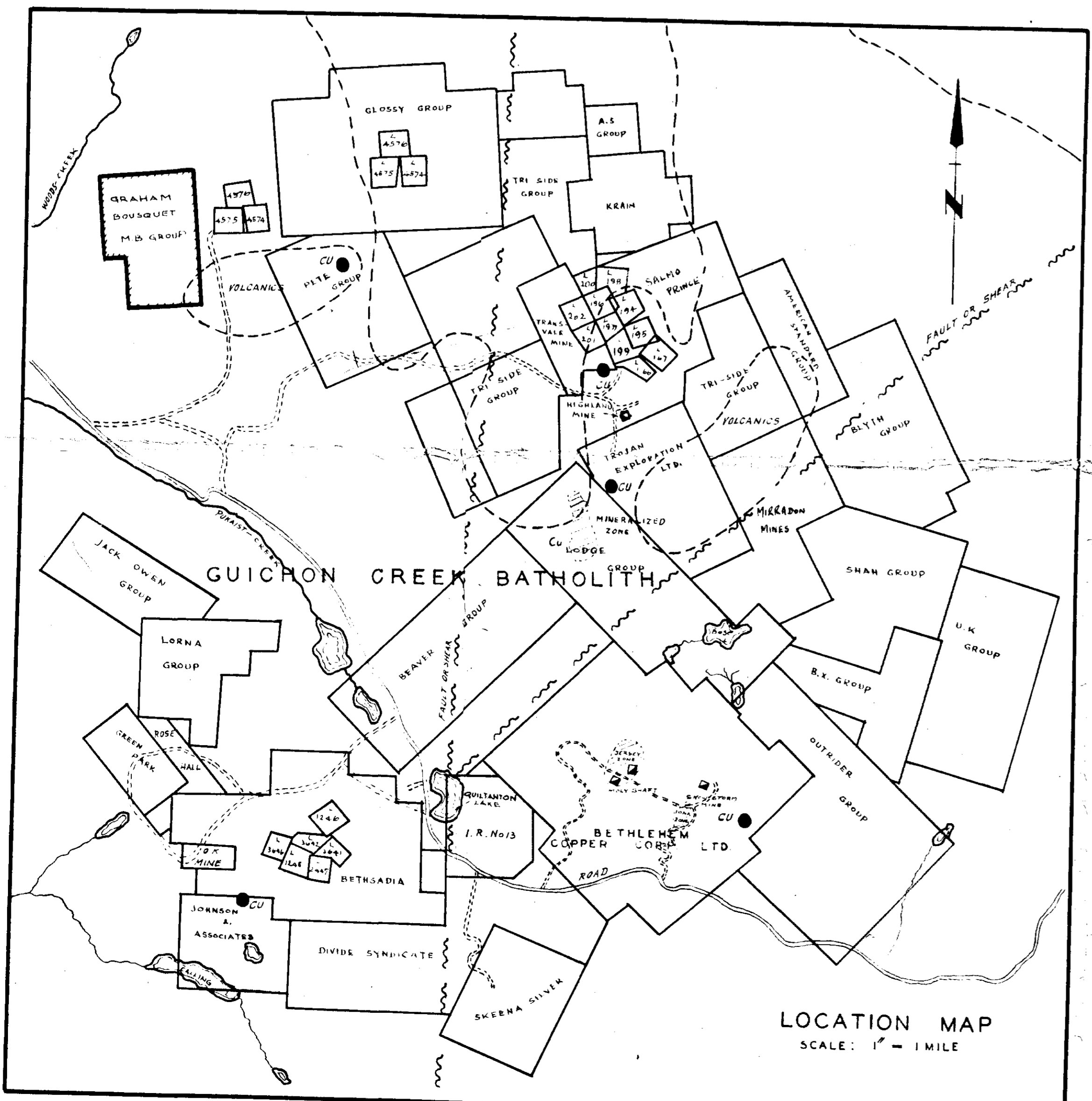
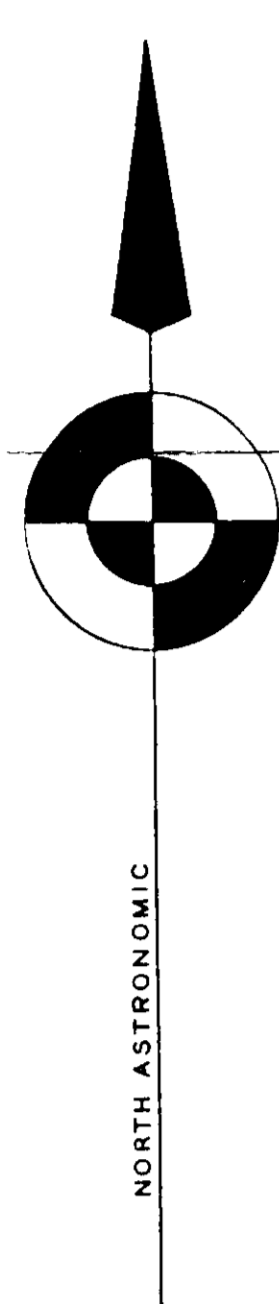
4. that I have been practising my profession since 1947.

E.B. Nicholls

E.B. Nicholls, B.Sc., A.Inst.P.

Toronto, Ontario.
24th October 1956.

EBN-mc.



- LEGEND
- LINES CUT AND CHAINED MAGNETIC READINGS OBSERVED AND PLOTTED ON EAST SIDE OF LINE CUT
 - MAGNETIC CONTOUR
 - M.B.C.S. MAGNETIC BASE CONTROL STATION
 - M.C.S. MAGNETIC CONTRY STATION
 - ⋄ OUTLINE OF HIGHER GROUND

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 MAGNETIC SURVEY DATA
GRAHAM - BOUSQUET
 CONTINENTAL (M)
 ISO-DYNAMIC CONTOURS OF
 AND
 GEOLOGICAL INT
 HIGHLAND V
 BRITISH COL
 GEOPHYSICAL SU
GEO-TECHNICAL DEVELOPI
 PLAN NO-1
 SCALE 1" = 1 MILE

