

5409

#5409

Geophysical Report on the IDE, AM, Ann,  
New Ide, New Ann, Mo and Jay Mineral  
Claims.

Highland Valley 50° 26' N, 121° 00' W. (NTS 92 I/SW).  
Kamloops Mining Division.

Highmont Mining Corporation Ltd.,

16th December, 1974 - 17th February, 1975.

92I/6E

By

A. J. Reed, P.Eng.

March 10th, 1975

Ashcroft, B.C.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 5409 MAP

92I/7W + 6E

AM 1-11, IDE NEW IDE ANN NEW ANN, PHYLLIS,  
LYND, MO, JAY

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<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT</p> <p>NO. <u>5409</u> ..... MAP .....</p>
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### INTRODUCTION

This report describes approximately 5 line-miles of VLF electromagnetic survey and approximately 30 line-miles of magnetometer survey performed by Highmont Mining Corporation Limited at Gnawed Mountain in the Highland Valley area of British Columbia. The centre of the survey area is located at 50° 26'N, 121° 00'W. Mineral claims covered by the survey are shown in Table 1. This survey is the second part of a continuing project of geophysical work between 16th October 1974 and 17th February, 1975. The first part of this project (16th October - December 11th, 1974) was described in an assessment report by A.J. Reed dated January 6th, 1975.

Access to Gnawed Mountain is by 28 miles of paved highway from Ashcroft to the Highland Valley and then by 5 miles of bush road southwards from the Lornex turnoff.

This survey was performed from 16th December 1974 to February 17th, 1975 with a snow-pack of 2 to 4 feet on the ground. Four-wheel drive vehicles were used for access from Ashcroft to the Lornex turnoff, snowmobiles from the Lornex turnoff to the survey area and snowshoes were used for the survey traverses.

TABLE 1

MINERAL CLAIM DATA

<u>NAME</u>	<u>RECORD NUMBER</u>	<u>ANNIVERSARY DATE</u>
AM 1	31188	February 18
AM 2	31189	"
AM 3	31190	"
AM 4	31191	"
AM 5	31192	"
AM 6 FR.	31193	"
AM 7	31194	"
AM 8	31195	"
AM 9	31196	"
AM 10	31197	"
AM 11	31198	"
IDE 1	24994	December 11
IDE 3	24996	"
IDE 4	24997	"
IDE 5	24998	"
IDE 6	24999	"
IDE 7	25000	"
IDE 8	25001	"
IDE 12	25710	March 19
IDE 13	25711	"
IDE 14	25712	"
IDE 15	25713	"
IDE 16	25714	"

TABLE 1 (cont.)

MINERAL CLAIM DATA

<u>NAME</u>	<u>RECORD NUMBER</u>	<u>ANNIVERSARY DATE</u>
IDE 17	25715	March 19
IDE 18	25716	"
NEW IDE 19	64034	May 8
NEW IDE 20	64036	"
ANN 3 FR.	45132	Feb 21
ANN 4 FR.	45133	"
ANN 7 FR.	45136	"
ANN 18FR.	46153	May 20
ANN 20 FR.	46155	"
NEW ANN 11 FR.	64030	May 8
PHYLLIS FR.	48513	February 5
LYNN 11	38239	September 20
LYNN 12	38240	"
LYNN 13	38241	"
LYNN 14	38242	"
LYNN 15	38243	"
LYNN 16	38244	"
MO 2 FR.	38524	November 24
MO 3 FR.	38525	"
JAY 102	37922	August 9
JAY 103 FR.	95214	February 23

GEOPHYSICAL SURVEY

East-west grid lines were cut and picketed over the Gnawed Mountain area in 1959. The present survey used the same lines, but because many of the pickets have been obliterated, a Topofil measurer was used to establish distances from the baseline.

The electromagnetic survey was performed by using a RONKA EM16 Electromagnetic Detector (Serial #78 ) made by Geonics Ltd. of Toronto, facing east to monitor the VLF radio signals transmitted from Seattle, Washington at a frequency of 18.6 KHz. Readings were taken every 50 feet along lines spaced 400 feet apart.

The magnetometer survey was performed by using a MF-1 magnetometer (Serial #811377) made by Scintrex Ltd. of Downsview, Ontario to measure the relative values of the vertical component of the earth's magnetic field. Readings were taken every 50 feet along lines spaced 400 feet apart. The observations were corrected for daily and diurnal variations by reading back to a base station every 2 hours.

RESULTS AND INTERPRETATION

VLF - EM

Figure (1) shows the numerical dip angle data recorded on a plan of the grid lines and the mineral claims together with the filtered values obtained by the method described by Fraser (1969, 1971). Because of an error in applying the somewhat confusing convention of "east dips negative" in the filtering calculation, the anomalous areas are represented by high negative values instead of the more usual high positive values. Contours are drawn on the filtered results at values of -10 units to outline areas of anomalous values. This report is concerned only with the data shown on the northern part of Figure (1). (i.e. Line 144N to Line 176N ) as the data to the south ( Line 68N to Line 140N ) was described in the assessment report by A.J.Reed dated January 6th, 1975.

Several narrow anomalies with a northerly or eastnorth-easterly trend are indicated by the VLF-EM survey. On the AM#7 MC a narrow anomaly extending to L152 N 4 E is the northward extension of the anomaly associated with the highgrade molybdenite shoot in the Highmont #2 ore-zone.

On the AM#8 M.C. a strong eastnortheast-trending anomaly occurs at L144N 21E. A broad north-trending anomaly

occurs at L144N 27E and L148N 27E.

On the AM#9 M.C. a north-trending anomaly between L156N 9E and L164N 9E carries the strongest filtered value (-30) obtained during this survey.

On the AM#11 M.C. an eastnortheast -trending anomaly extends from L168N 3W to L176N 0W.

These anomalies warrant further work and I recommend detailing of the VLF-EM data by surveying lines 100 feet apart between the 400 foot spacing of the lines in the present survey. This should be followed by detailed soil geochemistry during the summer months.

#### MAGNETOMETER

Figure (2) shows the corrected magnetometer readings on a plan of the gridlines and mineral claims. The magnetometer readings range from a low of 5700 gammas on the IDE #12 M.C. to a high of 6900 gammas on the AM #4 M.C. In general there is a weak magnetic gradient across the property from northeast to southwest which is in accordance with the regional geology and the government aeromagnetic data.

A westnorthwest trending zone low values (less than 6000 gammas) crosses the IDE#3, #4, #6, #8 and #17 mineral claims and appears to coincide with the outcrop of the Bethsaida porphyry dyke.

The known Highmont ore-bodies do not have any expression in this magnetometer survey and no new exploration targets are generated by this survey.



REFERENCES

1. Fraser, D.C. (1969)  
"Contouring of VLF-EM Data, Geophysics  
XXXIV, 6, pp. 958-967. December, 1969
  
2. Fraser, D.C. (1971)  
" VLF-EM Data-processing ", CIM Bulletin,  
January, 1971 pp. 39-41.

*Alan J. Reed,*  
*10<sup>th</sup> March, 1975*

STATEMENT OF PERSONNEL & COSTS

M.J.Porter Box 144 Savona, B.C.	Superintendent	16 Dec.1974 - 17 Feb.1975	\$2000.00
G.H.McDonald #37 2400 Oakdale Way Kamloops, B.C.	Engineer	3 - 17 Feb. 1975	500.00
A.J. Reed Box 158 Ashcroft, B.C.	Geologist	14 - 17 Feb. 1975	200.00
4 X 4 Pickup		16th Dec. 1974 - 17 Feb. 1975	1000.00
Topofil, Magnetometer & Ronka EM-16 Rental		16th Dec, 1974 - 17 Feb. 1975	200.00
Snowmobile		16th Dec. 1974 - 17th Feb. 1975	800.00
Preparation on Report			300.00

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\$5000.00

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*Alan J. Reed*

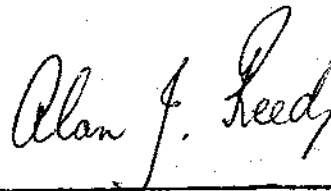
A.J.Reed, P.Eng.

March 10th,1975

CERTIFICATE

I, Alan James Reed of Ashcroft, British Columbia, do hereby certify that :

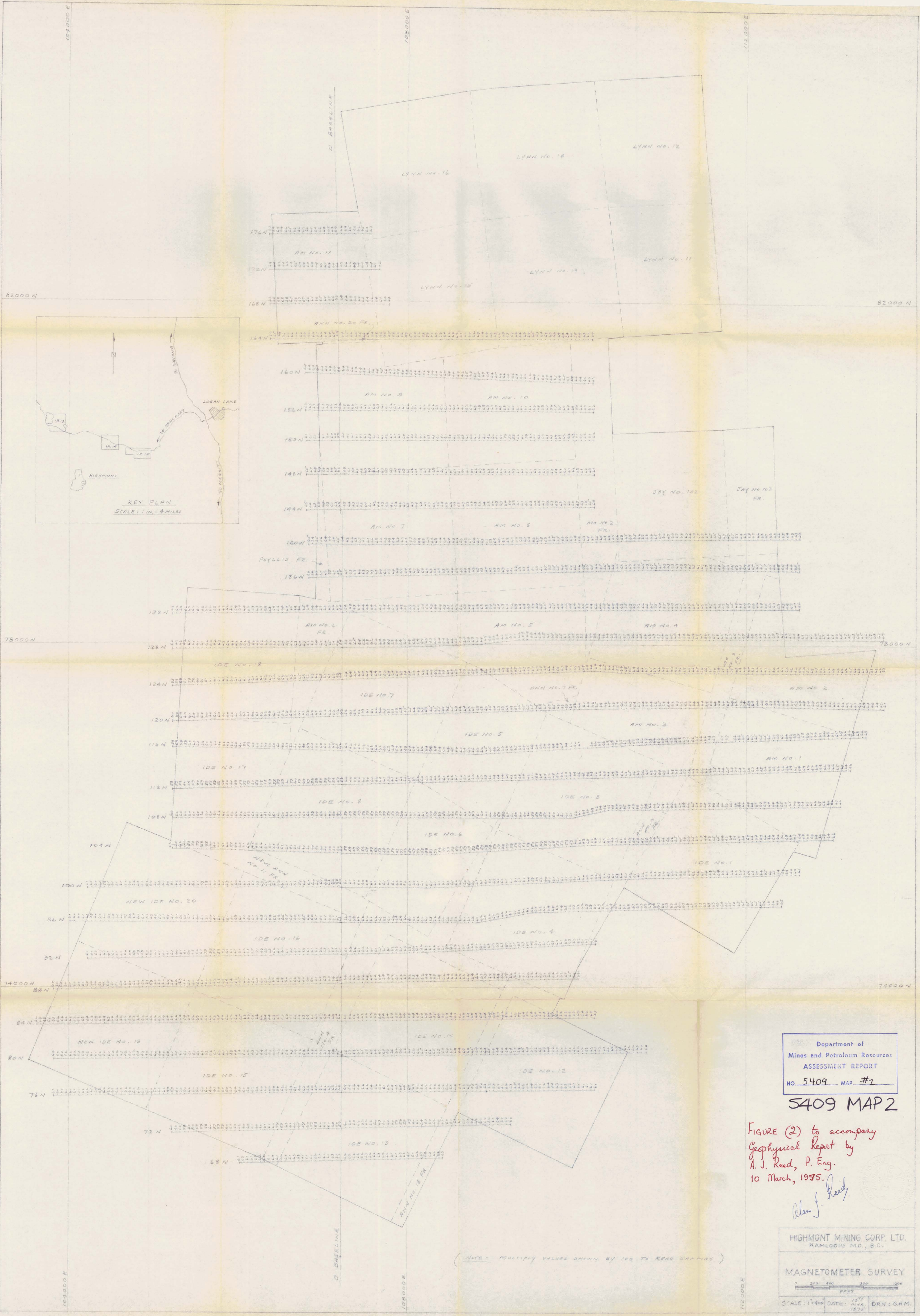
1. I am a geologist employed by Highmont Mining Corporation Ltd. of 1199 West Hastings Street, Vancouver, B.C.
2. I am a Professional Engineer registered in the Province of British Columbia and the Province of Ontario.
3. I am a graduate of the University of Leeds with a B.Sc. (Hons. 1963) in Geology.
4. I have practised my profession since 1963 while employed with the Geological Survey of Jamaica, Siscoe Metals of Ontario Ltd., and Highmont Mining Corporation Ltd.
5. This report deals with work performed on the IDE,AM, NEW IDE,NEW ANN, MO and JAY mineral claims under my supervision during the period 16th December 1974 to 17 February 1975.



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A. J. Reed, P.Eng.

March 10th, 1975



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Mines and Petroleum Resources  
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NO. 5409 MAP #2  
**5409 MAP 2**

FIGURE (2) to accompany  
Geophysical Report by  
A. J. Reed, P. Eng.  
10 March, 1975.

*A. J. Reed*

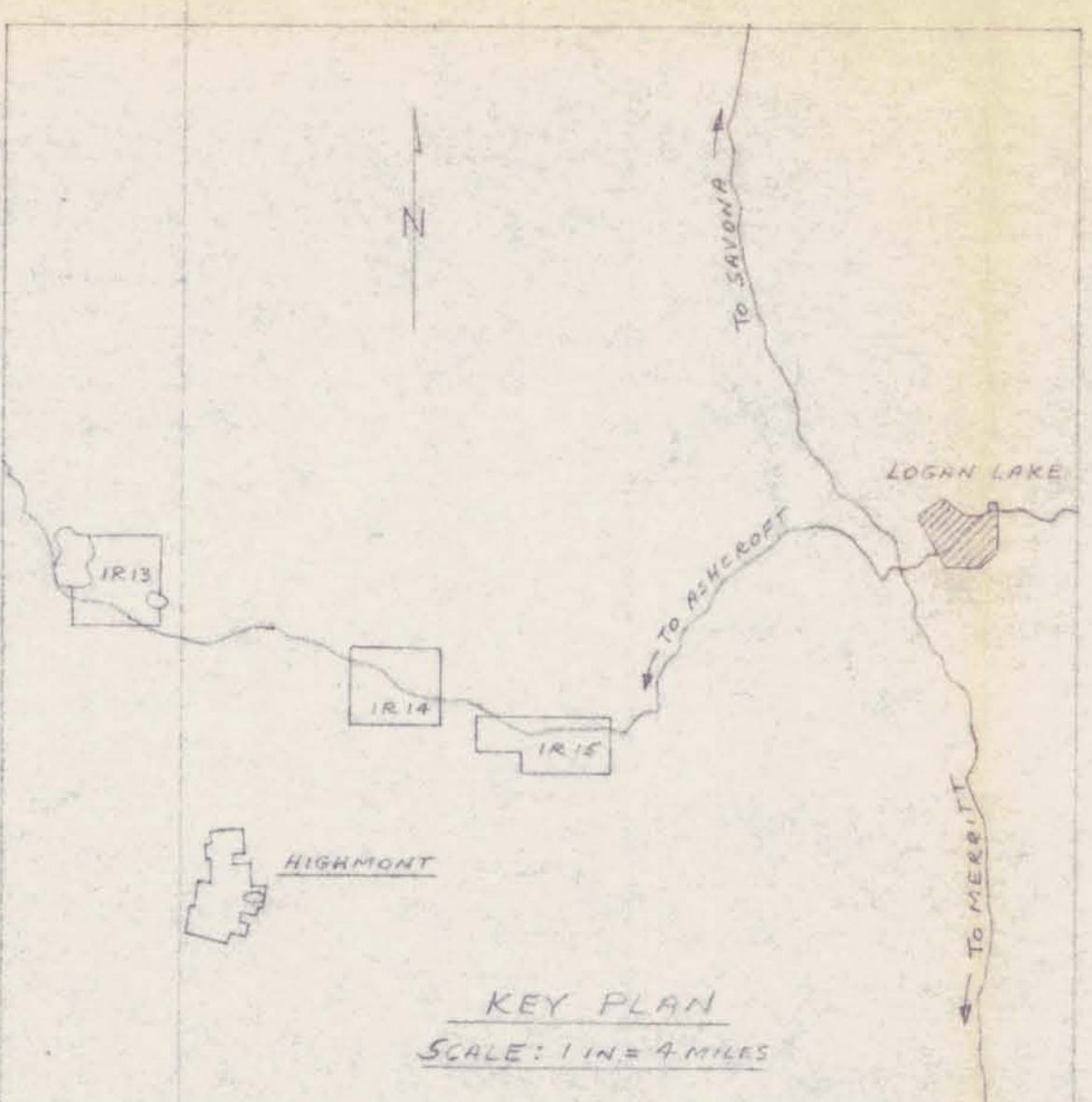
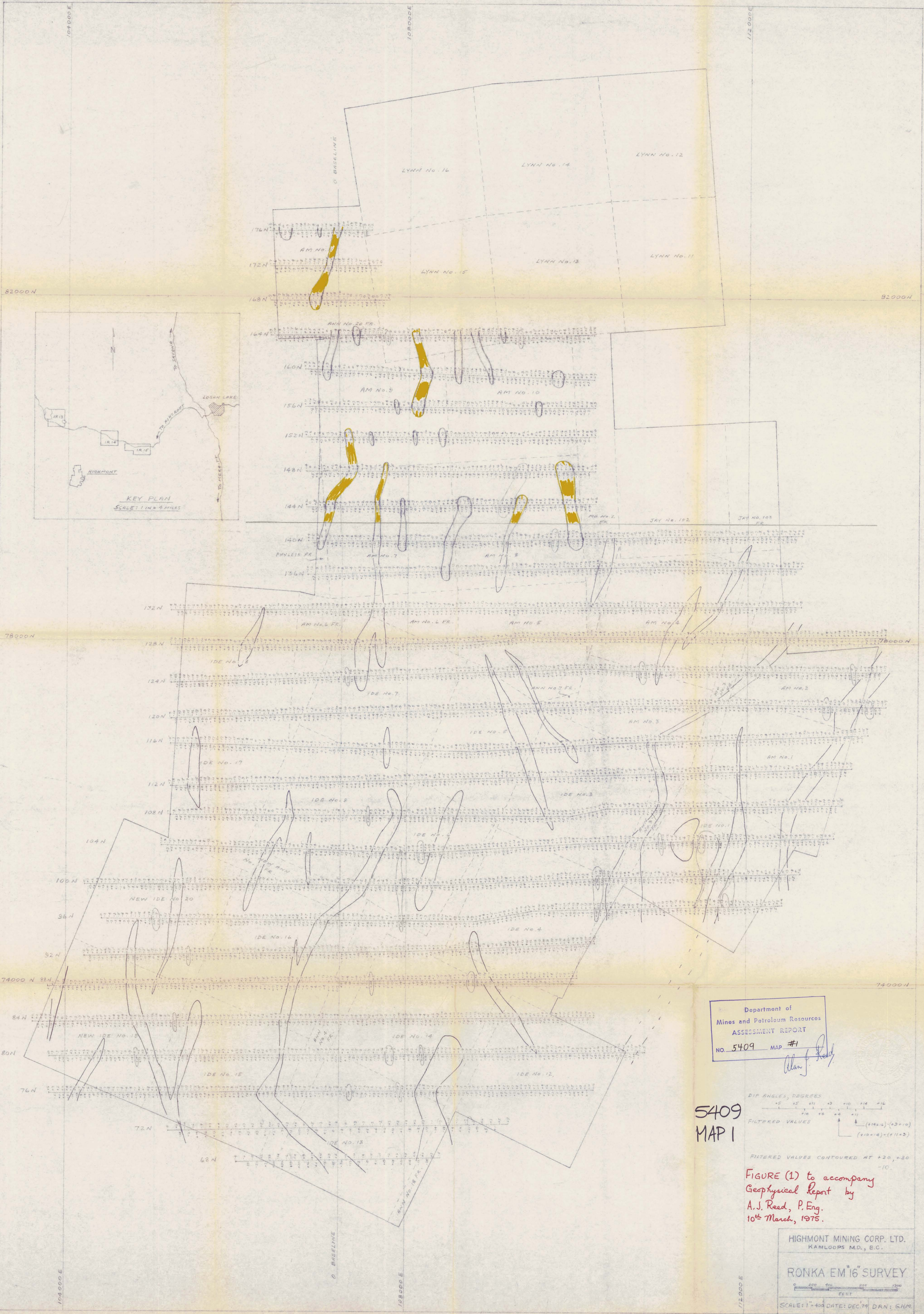
HIGHMONT MINING CORP. LTD.  
KAMLOOPS B.C.

MAGNETOMETER SURVEY

0 200 400 800 1200  
FEET

SCALE: 1"=400' DATE: 13<sup>th</sup> MAR 1975 DRN: G.H.M.

(NOTE: MULTIPLY VALUES SHOWN BY 100 TO READ GAMMAS)



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Mines and Petroleum Resources  
ASSESSMENT REPORT  
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*Alan J. Reed*

5409  
MAP I

DIP ANGLES, DEGREES  
+2 +5 +11 +3 +10 +14 +16  
FILTERED VALUES  
 $(49 \pm 14) - (13 \pm 10)$   
 $(210 \pm 4) - (111 \pm 5)$   
ENTERED VALUES CONTOURED AT +20, +30  
-10

FIGURE (1) to accompany  
Geophysical Report by  
A.J. Reed, P.Eng.  
10<sup>th</sup> March, 1975.

HIGHMONT MINING CORP. LTD.  
KAMLOOPS M.D., B.C.  
RONKA EM 16 SURVEY  
0 200 400 800 1200  
FEET  
SCALE: 1" = 400' DATE: DEC. 74 DRN: SHM