

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT ON MAGNETOMETER SURVEY

KODAH NO. 5 GROUP

(Kodah M.C's 4,6,8,10-16, & 19-32)

Situated 25 mi. NW of Thutade Lake,

Omineca M.D., B.C.

57°22'N; 127°15'W

July 8 to 17, 1972

By: M.R. Hegge

D.A. Barr, P.Eng.

9TE/6W August 31, 1972'

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KENCO EXPLORATIONS, (WESTERN) LIMITED

REPORT  
ON  
MAGNETOMETER SURVEY

KODAH NO. 5 GROUP  
(Kodah Mineral Claims 4,6,8,10-16, and 19-32)

Situated 25 miles northwest of Thutade Lake,  
Omineca Mining Division,  
British Columbia

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57°22'N: 127°15'W

July 8 to July 17, 1972

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. <b>3836</b> MAP
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By

M. R. Hegge

D. A. Barr, P. Eng.

August 31, 1972

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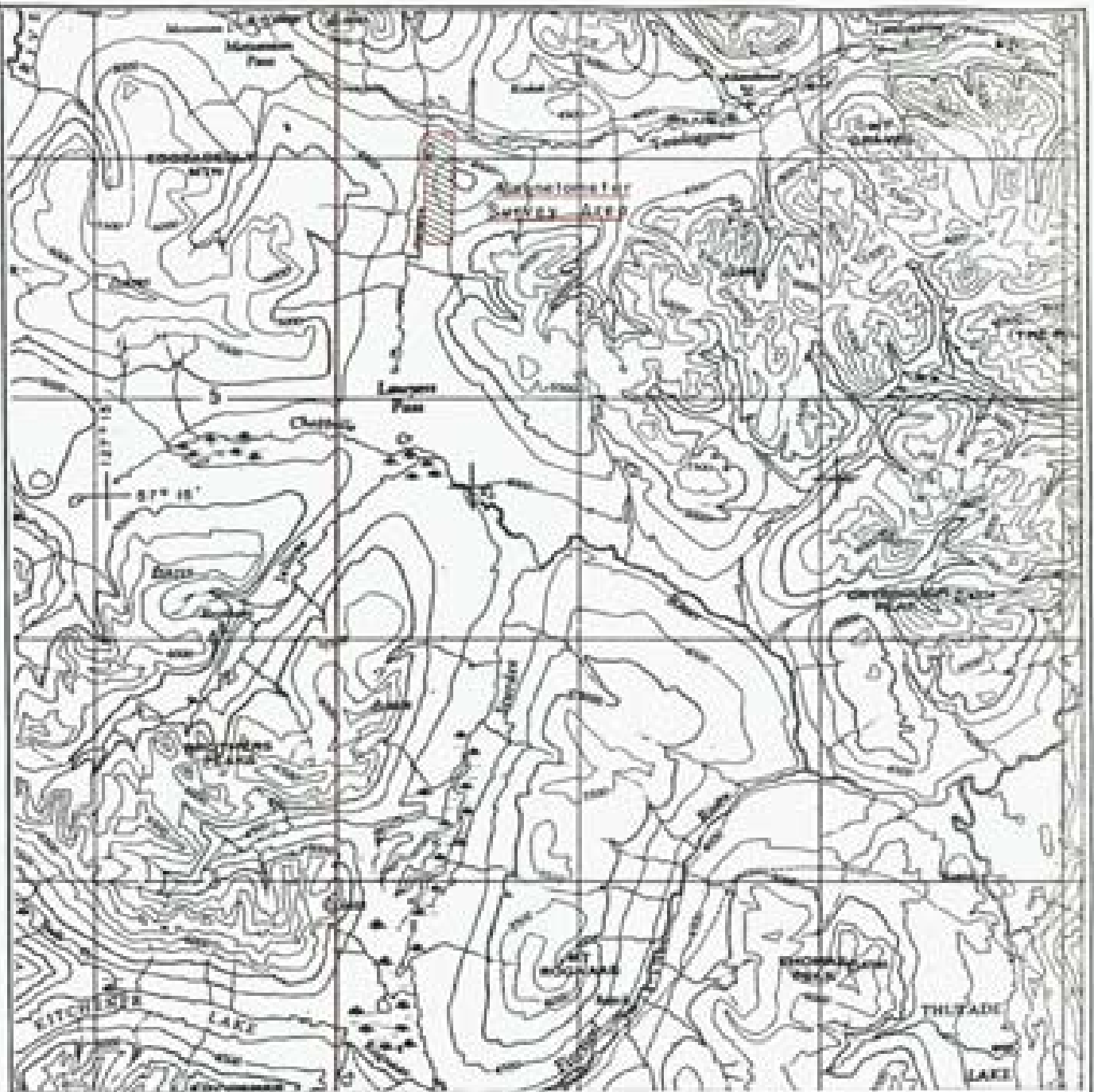
PLATES

#1 Location Map	1" = 250,000 Foll. p.1
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INTRODUCTION

The mineral property (Kodah Mineral Claims 4, 6, 8, 10-16 and 19-32) discussed in this report is situated 25 miles northwest of Thutade Lake, British Columbia. The exploration work on these claims consisted of a ground magnetometer survey done in the period July 8 to July 17, 1972.

The planning, interpretation, and writing of this report for the magnetometer survey was conducted by M.R. Hegge, B.Sc., P.Geol.(Alta.). Magnetometer operator for the survey was J. Payne; the recorder was I. Hayes. The work was carried out under the general supervision of K.A. Grace, P.Eng.



Kennco Explorations (Western) Ltd.

### Kodah Claims

Situated 25 Miles Northwest of Thutade Lake

Omineca M.D., B. C.

57° 127° SE

Scale: 1 : 250,000

Location Map

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Mines and Petrolours Resources  
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NO 3836 #1

1-M 282

LOCATION AND ACCESS

The property is situated at Latitude 57°22'N, Longitude 127°15'W, about 180 miles due north of Smithers. This is approximately 25 miles northwest of Thutade Lake (Location Map). The magnetometer survey area is at an elevation of about 4200' to 5000' above sea level, and is mostly below treeline.

Access is by fixed wing aircraft from Smithers to Black Lake (13 miles northwest of Thutade Lake), and by helicopter from there. Travel of the six-mile distance to the Kodah No. 5 Group from camp at Chappelle Creek is also via helicopter. Local travel in the survey area is relatively easy although there are local, low-lying areas of muskeg and heavy timber.

MAGNETOMETER SURVEY

Magnetic Survey Method

A control grid had been previously established by chain and compass survey, using surveyor's flagging to mark the stations. The baseline direction is due north and was termed Grid North for purposes of marking stations. Grid East-West crosslines were run at 400-foot intervals along the baseline. With this orientation, the grid crosslines were approximately 45° to the presumed NE and NW trend of structural discontinuities that were to be detected. Readings were taken at 100-foot intervals along the lines. A base map with a scale of 1" = 400' was compiled for use in plotting the 1145 magnetometer stations along 21.68 miles of line.

The instrument employed was a McPhar M-700 vertical field flux-gate magnetometer. On the 1000-gamma scale, this has a sensitivity of 20 gammas per scale division, and a resolution of 5 gammas, with a probable overall repeatability of about 10 gammas. On the 3000-gamma scale, the sensitivity is 100 gammas per scale division, and the resolution is 25 gammas. The instrument was adjusted so that a very high percentage of the readings were taken on the most sensitive scale. The lines were run in loop patterns, with the time between base station checks usually being about one hour. Drift corrections were made where necessary.



### Interpretation

The main purpose of the magnetometer survey was to indicate structural discontinuities, such as faults or strong fracture zones, and/or zones of intense silicification under drift cover ranging up to about 25 feet in thickness. The feasibility of this had been shown by surveys in 1970 over areas of similar geology on nearby mineral properties where silicified zones and quartz veins were delineated by magnetic lows. The magnetic data has been plotted as a contour map (Plate No. 1) with contour intervals of 100 gammas beginning at a base level of 1100 gammas.

Geological information accumulated to date indicates the survey area is underlain by a sequence of volcanic rocks and possibly younger, generally conformable, hypabyssal intrusives. The most common rock type is a trachyte porphyry with pink phenocrysts of K-feldspar in a grey-green, aphanitic groundmass composed namely of feldspar; it is generally homogeneous in magnetic character except where faulted, strongly fractured, and exhibiting silicification and clay-epidote alteration. Where silicification has been of such intensity that quartz veins are present, the wallrock commonly exhibits disseminated pyrite with traces of chalcopyrite and galena; this mineral assemblage may occasionally result in stronger magnetic contrasts being obtained between wallrock and quartz veining. Interbedded with the trachyte porphyry are thin lenses of lithic and crystal tuff of similar magnetic character to the porphyry. Conformable purple dacite porphyry with up to 0.5% disseminated magnetite is only of limited extent. A pink trachyte porphyry with local

syenitic phases may be a later hypabyssal rock type but it is of little economic significance and magnetically undistinguishable from the green trachyte porphyry. Since the majority of the rock types are uniform in magnetic character, it was assumed that a magnetometer survey would be useful in delineating the magnetically low areas representing silicified zones or quartz veins.

Results confirm the homogeneous magnetic character of the rocks underlying the survey area. A strong northwesterly-trending, lithologic grain is evident in the north half of the grid area where overburden depths are less. The zones of structural weakness paralleling this general trend are represented by topographic and magnetic lows which appear to be locally offset by a weaker, northwesterly trending fracture system. The magnetic response on the eastern part of the survey area is slightly ambiguous due to topographic variations.

The combination of linear magnetic lows bounded by areas of higher than normal magnetic character are thought to be of interest and are indicated in a number of areas. A known quartz vein and silicified fault zone at 18+00N; 0+00W is delineated in such a manner but sharper, more persistent magnetic contrasts are evident in the following areas:

1. between 40+00N, 11+00W and 36+00N, 7+00W.
2. 40+00N, 39+00W and southwest.
3. between 15+00S, 0+00W and 18+00S, 3+00E.

On the basis of the magnetic data, it is recommended that cat trenching or shallow diamond drilling be conducted in the vicinity of the aforementioned areas. Where initial results are

favourable, magnetic surveys on a more detailed scale might prove useful in tracing zones of interest through areas of heavier drift cover.

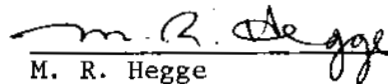
Vancouver, B. C.

August 31, 1972



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D. A. Barr, P. Eng.



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M. R. Hegge

STATEMENT OF COSTS INCURRED

Kodah Magnetometer Survey

The details and cost of the magnetometer survey on Kodah No. 5 Group are as follows:

Survey Details:

Time: 7 days - July 8-15 (one day off)

Magnetometer Operator: J. Payne

Magnetometer Recorder: I. Hayes

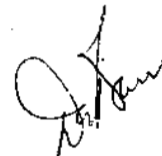
Instrument: McPhar M-700 Vertical Field Fluxgate

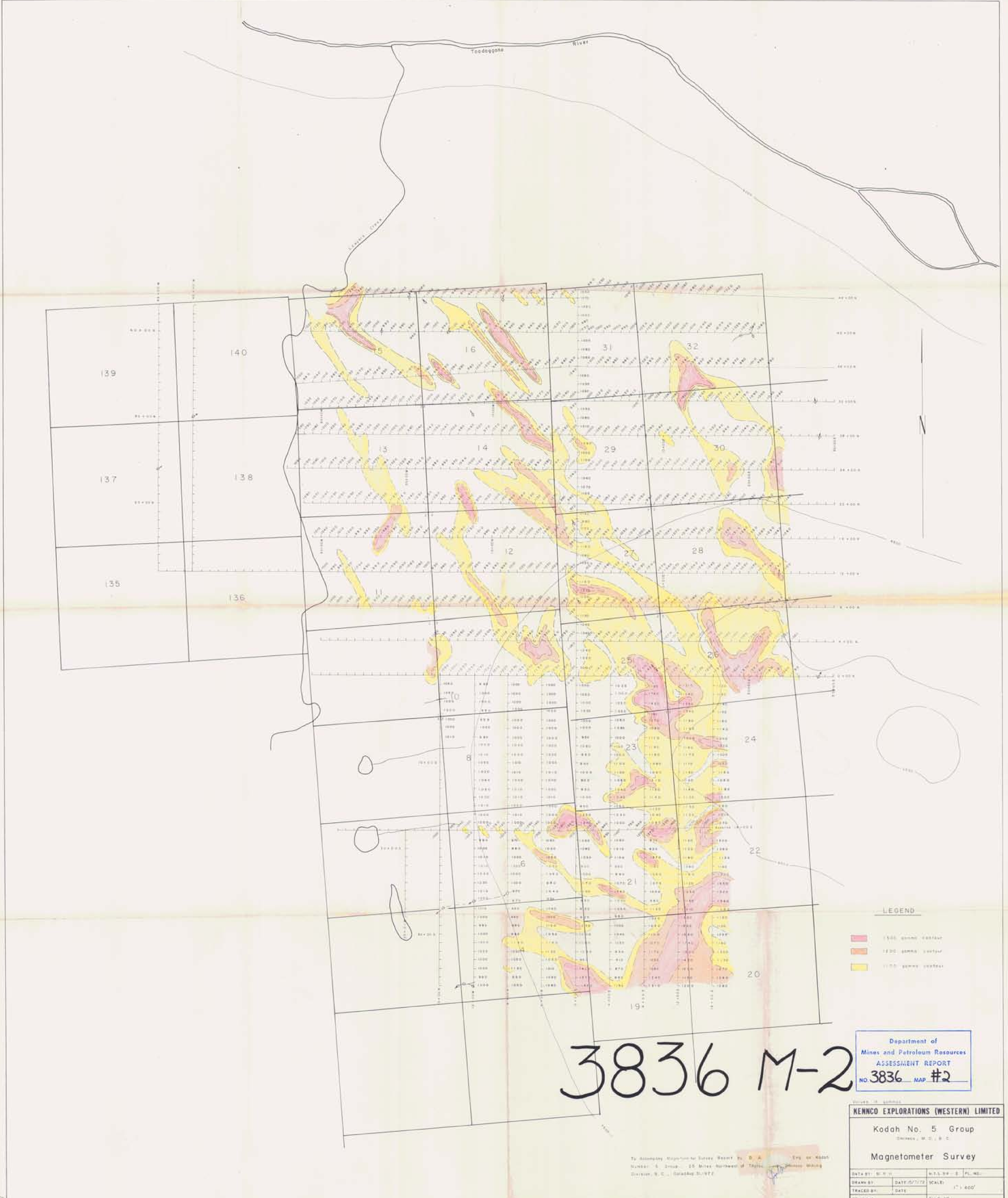
Line Miles of Survey: 21.68 (No. of Stations at 100' Intervals  
= 1145)

Survey Costs:

Magnetometer rental: 7 days x \$9.00/day	=	\$ 63.00
Wages: 14 man days x \$21.00/day	=	294.00
Room & Board: 14 man days x \$16.50/day	=	231.00
Helicopter time: (12 mile round trip x 2 trips/day) 7 days x ½ hr/day x [\$130/hr + \$48/hr for fuel (\$3/gal.at camp)]	=	623.00
Supervision & Interpretation: 2 man days x \$56.50/day (includes support)	=	113.00
Drafting & Typing of Report	=	+ 50.00
TOTAL	=	<u>\$1,374.00</u>

Or  $\frac{\$1374}{21.68} = \$63.37/\text{line mile}$





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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3836 MAP #2

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kodah No. 5 Group  
(District, M. D., B. C.)

Magnetometer Survey

DATA BY: S. H. W.	DATE: 5/7/72	SCALE: 1" = 400'
DRAWN BY:	DATE:	FILE NO.:
TRACED BY:	DATE:	
REVISIONS:		

To Assembly Magnetometer Survey Report No. 5 A  
Number 5 Group, 25 Miles Northwest of Tully,  
District, B. C., Dated July 1972