

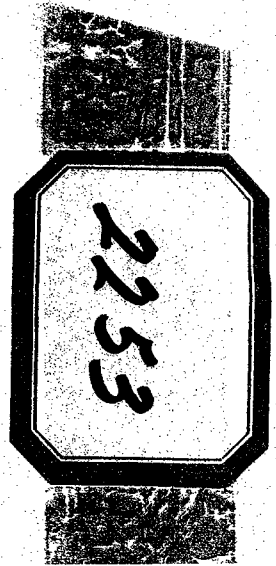
Geophysical Report on the  
KEN CLAIM GROUP  
for  
NORCAN MINES LTD.(NPL)

Situated one mile west of Cuisson Lake, 34 miles  
south southeast of Quesnel, British Columbia

Coordinates: 52° 28' north latitude  
122° 19' west longitude

Submitted by: F. Holcapek, Geologist

Work conducted by: AGILIS EXPLORATION SERVICES LTD.  
during the period February 4 - 18, 1970



2253

GEOPHYSICAL REPORT  
ON THE  
KEN MINERAL CLAIMS  
for  
NORCAN MINES LTD (N. P. L.)

**GEOPHYSICAL REPORT**

**ON THE**

**KEN MINERAL CLAIMS**

**FOR**

**NORCAN MINES LTD (N. P. L.)**

**February 1970**

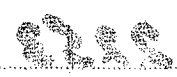
**F. Holcapek, Geol.**

**Vancouver, B. C.**

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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. **2253** MAP

**GEOPHYSICAL REPORT**  
**ON THE**  
**KEN MINERAL CLAIMS**  
**FOR**  
**NORCAN MINES LTD (N. P. L.)**

**INTRODUCTION**

The Ken Group comprises a total of 20 contiguous Mineral Claims situated approximately 1 mile west of Cuisson Lake, in British Columbia.

The claim group was located in February, 1969, along the possible western contact of a northwesterly trending intrusive mass outcropping to the east of Cuisson Lake.

Considerable interest is being focused on this area as a result of discovery of a major copper deposit on claims held by Gibraltar Mines 1 1/2 miles northeast of Cuisson Lake.

**LOCATION AND ACCESS**

The Ken Group of 20 claims lies approximately 1 mile west of Cuisson and 34 miles south-southeast of Quesnel, British Columbia.

Coordinates for the Ken Group are 52° 28' north latitude, 122° 19' west longitude.

The claim group is accessible by secondary roads from McLeese Lake, a distance of approximately 5 miles. McLeese Lake lies on Highway 37 approximately 34 miles south of Quesnel. Scheduled airplane service from Vancouver to Quesnel and then by motor car south along Highway 97, gives an alternative way of access.

A logging road leading to a powerline traversing the whole length of the property connects with the secondary road approximately 1 mile south of Cuisson Lake.

## PHYSIOGRAPHY

Topographic relief is generally low in the area and elevations average approximately 3000 feet above sea level. Maximum topographic relief is about 150 feet along a northwesterly trending cliff along the eastern part of the property.

Timber, consisting mainly of jackpine and spruce, is present over most of the property, but a wide cleared strip represented by a power transmission line traverses the whole length of the property.

Summers are warm with low to moderate rainfall. Freezing temperatures are common, and snow will be present throughout the winter months.

## PROPERTY

The Ken Group consists of the following mineral claims:

<u>Claim</u>	<u>Record Number</u>
Ken 1 - 8	48543 - 48550
Ken 10	48552
Ken 12 - 20	48554 - 48562

Ken # 9 and Ken # 11 are completely overlapped by the Jed 7, 18, 19, 20, 21, 23 claims which are in good standing.

## HISTORY

Considerable exploration has been conducted in the general Cuisson-McLeese Lake area since the late 1950's. Several copper deposits had previously been known of in the area and received intermittent exploration.

Recent work has been centered on the Gibraltar Mines Ltd property, immediately east of Cuisson Lake, where substantial tonnages of low-grade copper mineralization have been indicated by work to date, and where an extensive diamond drill program is currently in progress. Similar mineralization is also being extensively explored on the adjoining Duval property to the east.

Extensive staking has taken place and numerous companies are currently engaged in exploration work in the area.

A linecutting program followed by a ground magnetic survey has been conducted during February 1970. A total of 2 line miles of baseline and 19 miles of crosslines were established and surveyed.

## REGIONAL GEOLOGY

The following information has been taken from various government sources:

The geology of the area in the vicinity of McLeese and Cuisson Lakes is little understood. Most of the area is covered by extensive overburden or young Tertiary basalt flow.

The following age relationship between different rock units is indicated:

Cenozoic-Tertiary: Basaltic flows, andesites and related tuff and breccia, minor conglomerate, greywacke, shale and diatomite

Mesozoic: Intrusions of unknown age, but younger than Cache Creek Group: diorites, granodiorite, granites strongly foliated.

Paleozoic-Permian or earlier:  
Cache Creek Group. Chert, argillites, limestone, greenstone, minor greywacke, and conglomerate.

## STRUCTURAL GEOLOGY

The structural setting of the McLeese-Cuisson Lake area is not well known.

The Cache Creek group rocks are intruded and metamorphosed by foliated granodiorite. Small aplitic granitic dykes similar to the Granite Mountain intrusion are widely distributed and possibly are a late phase of the granodiorite or a separate intrusion. The southernmost granites have a sheet-like appearance.

All pre-Tertiary rocks are strongly foliated striking eastward and dips southward at 40°. Primary and secondary foliation in the stratified and plutonic rocks are nearly parallel.

A zone of tight folding and shearing passes from Soda Creek northward to McLeese Lake, following along the straight front of the Granite Mountain-Dragon Mountain range. No single, large fault has been traced along this front.

Tertiary rocks overlay the Permian Cache Creek group unconformably.



MINERALIZATION

The main economic mineral in the area is chalcopyrite, minor bornite and chalcocite along fractures, quartz vein and minor disseminations associated with shearing and intrusives or Cache Creek rocks.

AEROMAGNETIC MAP

The aero magnetic survey outlines a strong northwesterly trending low just east of Cuisson Lake. This low coincides with the northwesterly trending intrusive in the vicinity of Granite Mountains.

The area occupied by the Ken Group is outlined by a more complex pattern, which is probably due to the overlying Tertiary rocks.

GROUND MAGNETIC SURVEY

Object: The magnetometer survey was conducted as an indirect aid to locate zones of shearing or intrusion, both highly favourable to mineralization.

Instrument: A Sharp MF1 Fluxgate magnetometer was used. This instrument measures the vertical component of the earth's magnetic field. It has a maximum sensitivity of 5 gammas on the 1000 gamma scale.

The instrument is self orienting, requires only coarse levelling and has built-in temperature compensation.

FIELD PROCEDURE

Ground control was obtained by cut lines, 400 feet apart and 200 foot stations. Stations were marked on the ground by pickets and flagging.

The magnetometer was zeroed for this property and base stations established by taking three readings over a one half hour interval. The readings were averaged and corrected for short time variations.

The average of the corrected values was used as base station reading.

Following this, magnetometer readings were taken at 200 foot intervals on all crosslines, with each traverse starting and ending at the same base station. Elapsed time on these traverses never exceeded one hour.

Tolerable diurnal variation for any traverse was on gamma per minute.

The field data was corrected, plotted and contoured for interpretational purposes.

### INTERPRETATION

The magnetic contour map shows a complex pattern of alternating, roughly northwesterly trending high and lows. This trend is outlined by the airborne magnetic survey.

On the regional geological map, the contact between the Tertiary volcanics and the older Cache Creek group and associated intrusives would be to the north east of the base line.

A series of cliffs exposed along the north east of the property, trending northwesterly, could represent this contact.

A low magnetic zone trending northwesterly occurs within the cliff area.

For a more detailed interpretation, more local geological information is necessary.

### CONCLUSIONS

1. The Ken Group lies along the western contact between the older Cache Creek group and associated intrusives and the young Tertiary volcanics as indicated by the regional geology.
2. Air magnetometer work indicates a regional northwesterly trend of magnetic lows. Values compare to the one obtained over intrusive rocks, although the pattern is more complex due to interference caused by the younger rock units.
3. The ground magnetic survey has to be followed by detailed geological mapping over the whole claim group to facilitate the magnetic interpretation.

RECOMMENDATIONS

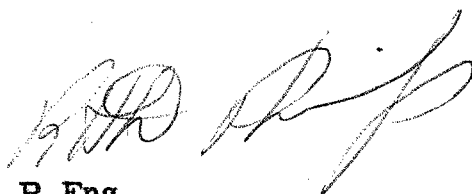
1. Detailed geological mapping at a scale of 1 inch = 400 feet
2. Geochemical survey on a 400 foot by 200 foot pattern over areas possibly underlain by Cache Creek and intrusive rocks.
3. Detailed geochemical survey on a 200 foot by 100 foot pattern on anomalous areas outlined.
4. Induced polarization on best geochemical anomalies obtained.
5. Trenching
6. Drilling.

Respectfully submitted,



F. Holcapek, Geologist

Endorsed by:



R.H.D. Philp, P. Eng.,

February 1970

## REFERENCES

Geological Survey of Canada, Map 12 - 1959 Quesnel,  
British Columbia, Sheet 9313

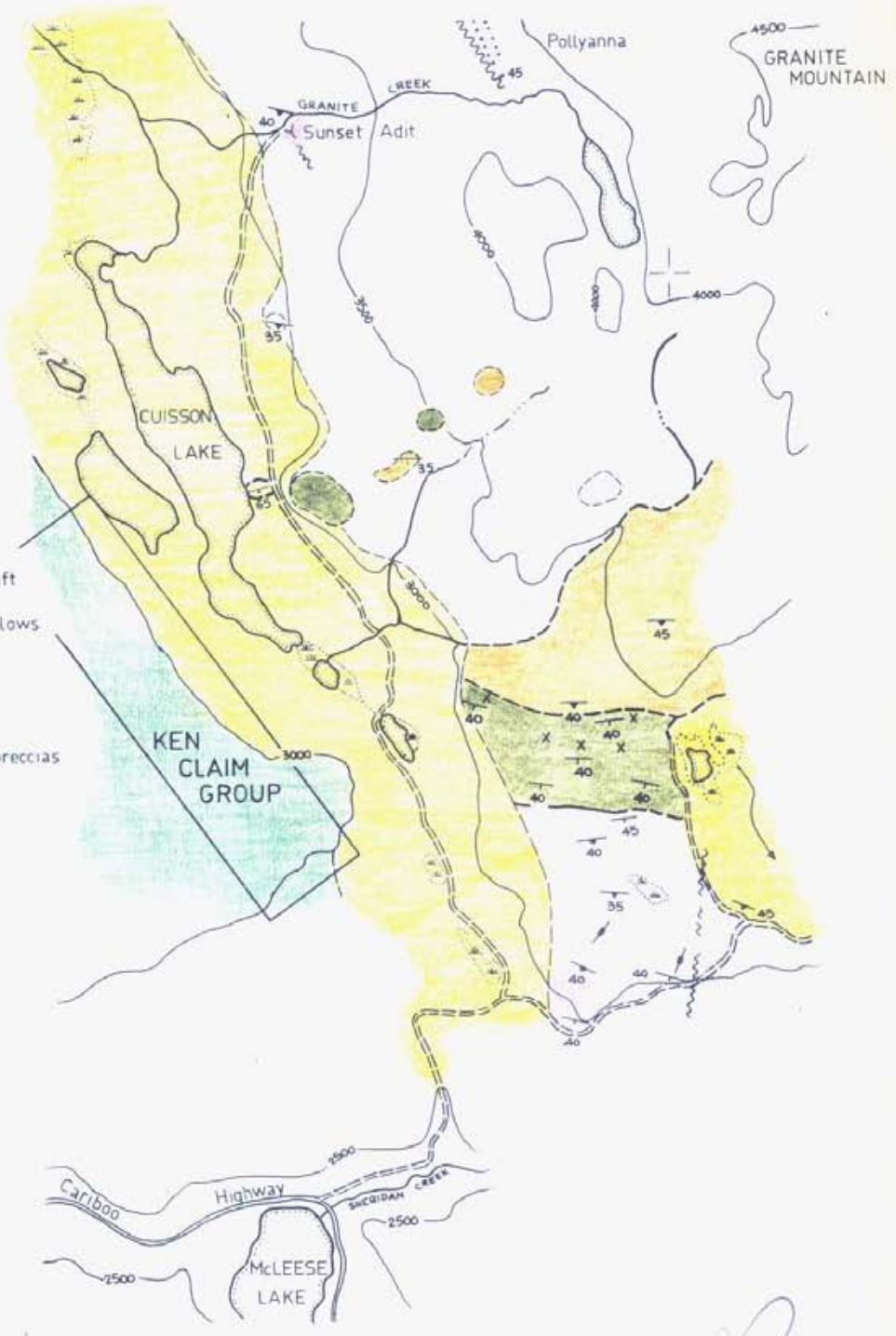
Minister of Mines, Annual Report 1957 pp. 14 - 18

1956 pp. 33 - 34

52° 30'

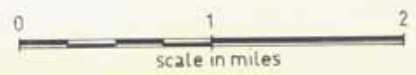
52° 30'

- LEGEND**
-  Deep alluvium and drift
  -  Late tertiary basalt flows
  -  Granitic rocks
  -  Dioritic rocks
  -  Tuffs, green schists, breccias and limestone
  -  Shear
  -  Bedding
  -  Foliation
  -  Sheeting (vertical)
  -  Showing
  -  Swamp



REGIONAL GEOLOGY

McLEESE LAKE-CUISSON LAKES AREAS



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ASSESSMENT REPORT

NO. **2253** MAP **#1**

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of the geophysical report  
on the KEN claims for NORCAN MINES LTD. (NPL)

I, F. Holcapek

of 201-714 West Hastings St., Vancouver 1, B. C.

in the Province of British Columbia, do solemnly declare that the following personnel were employed and costs incurred in conducting the surveys:

PERSONNEL:

F. Holcapek: Geologist, Field-Supervision	3 days @	\$ 75.00/day	225.00
" " Office - Reports	2 " @	75.00/"	150.00
R. Philp P. Eng. - Supervision, office	1/2 " @	100.00/"	50.00
B. Barnes: Party Chief-Magnetometer operator	16 " @	40.00/"	640.00
H. Hessian: Linecutter	16 " @	30.00/"	480.00
D. Jewell "	16 " @	30.00/"	480.00
P. Vlasveld, L. Marsh, -Drafting field data	36 hrs @	6.00/hr	216.00
			<u>\$ 2,241.00</u>

DISBURSEMENTS

Board and Room for 51 man days	324.16	
Truck rental 16 days	310.90	
Gas, mileage	128.50	
Magnetometer rental 16 days @ \$17.07 per day	273.12	
Plane ticket	47.50	
Supplies Misc.	143.16	
Typing, Telephone, Printing	104.00	
	<u>\$ 1,331.34</u>	
10% Overhead on disbursements	<u>133.13</u>	<u>1,464.47</u>
<u>Total Costs:</u>		<u>\$ 3,705.47</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 10  
day of March 1970, A.D.

*F. Holcapek*

*Joni Turner*  
A Commissioner for taking Affidavits for British Columbia or  
A Notary Public in and for the Province of British Columbia.



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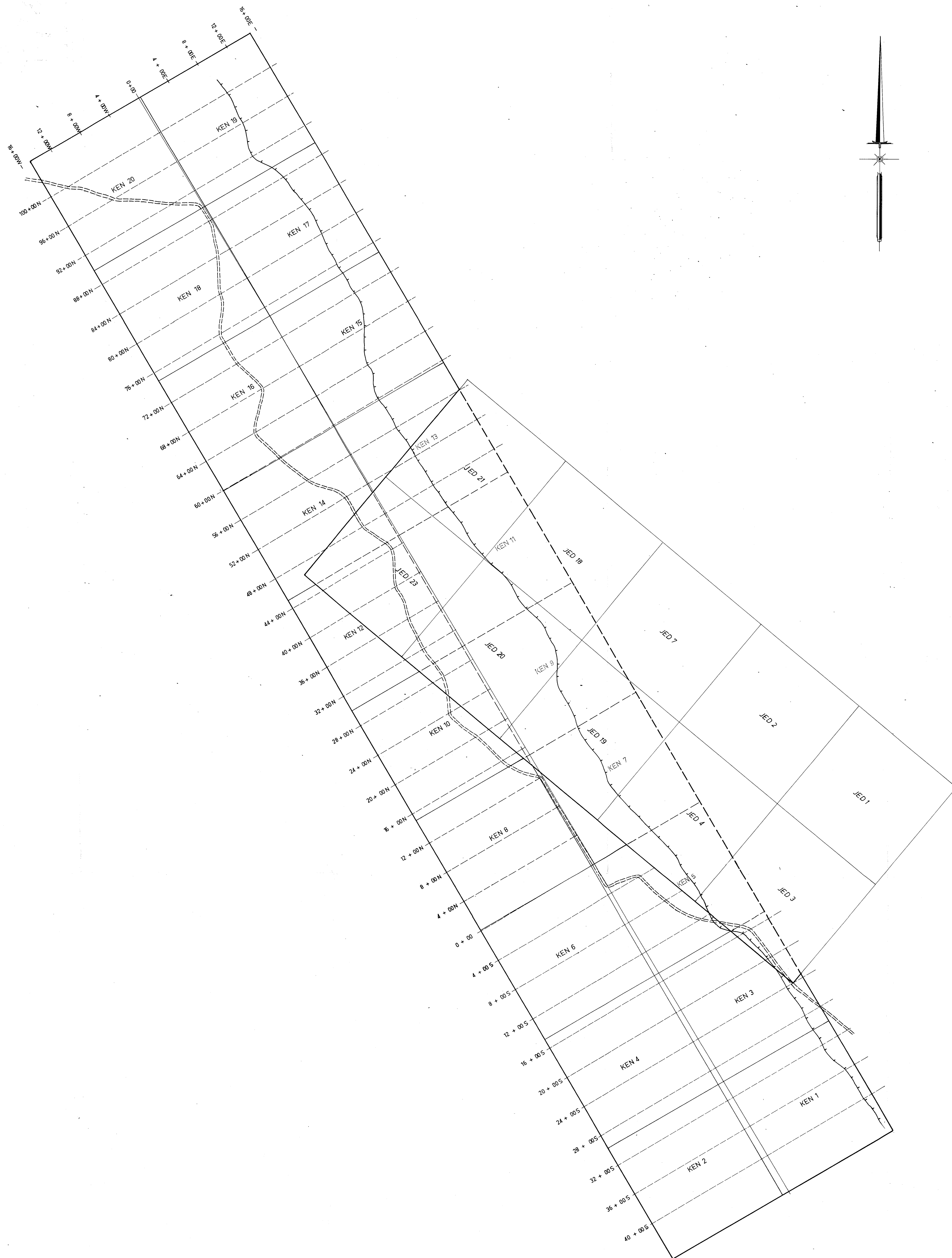
Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. **2253** MAP #3

AGLIS EXPLORATION SERVICES LIMITED  
NORCAN MINES LIMITED  
McLEESE LAKE AREA  
KEN CLAIM GROUP  
CARIBOO MINING DIVISION  
GROUND MAGNETOMETER SURVEY  
VALUES

500 0 500 1000  
scale in feet

DRAWN BY: P.V. DATE: FEBRUARY 1970  
CHECKED BY: F.H.

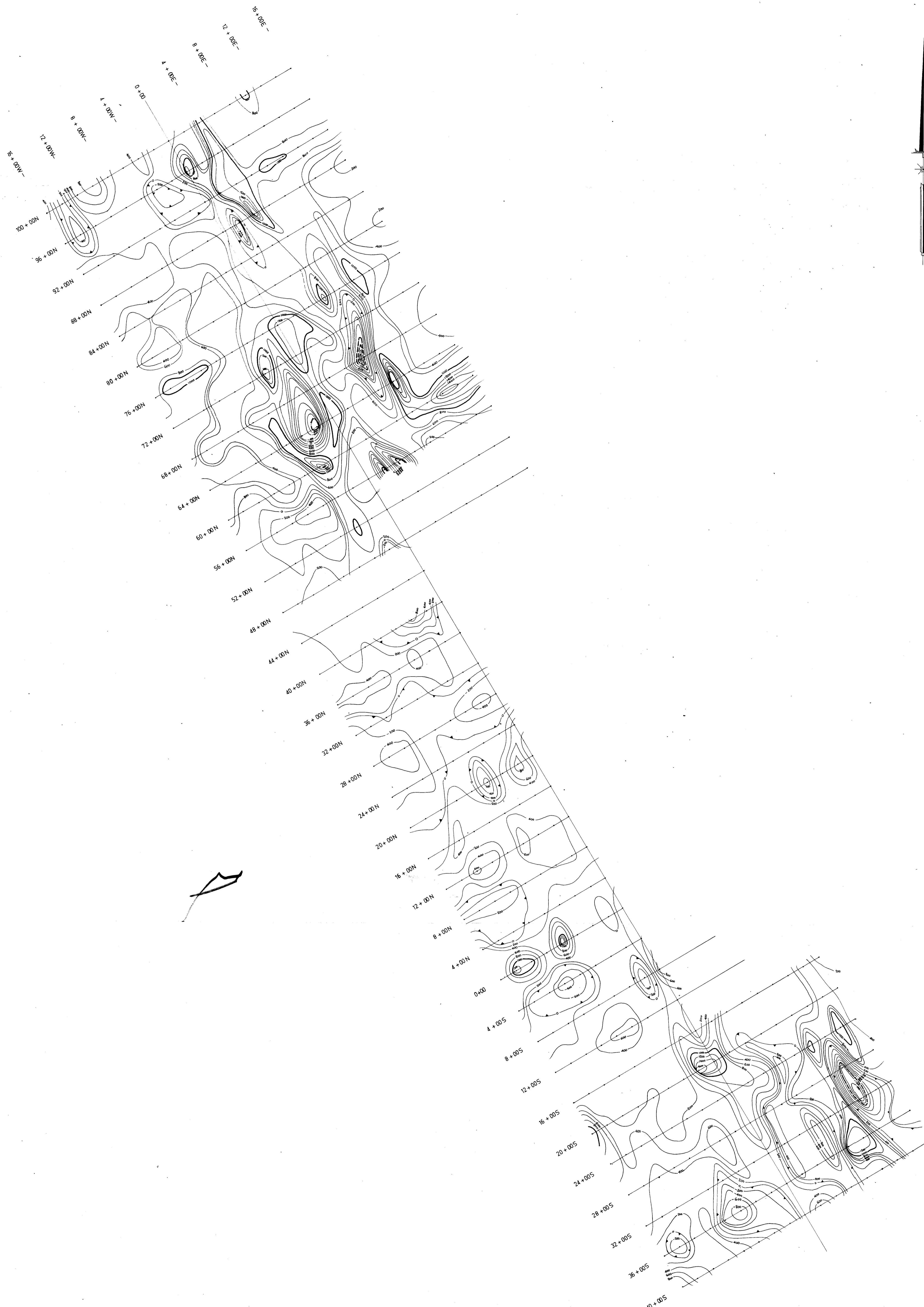




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ASSESSMENT REPORT  
NO. 2253 MAP #2

AGLIS EXPLORATION SERVICES LIMITED	
NORCAN MINES LIMITED	
McLEESE LAKE AREA	
KEN CLAIM GROUP	
CARIBOO MINING DIVISION	
BASE MAP	
DRAWN BY: P.V.	DATE: FEBRUARY 1970
CHECKED BY: F.H.	



LEGEND  
 Magnetic contours (contour interval 200 gammas)  
 Zero contour  
 Negative contour

Department of  
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 NO. **2253** MAP # **4**

**2253**

AGIUS EXPLORATION SERVICES LIMITED  
 NORCAN MINES LIMITED  
 McLEESE LAKE AREA  
 KEN CLAIM GROUP  
 CARIBOO MINING DIVISION  
 GROUND MAGNETOMETER SURVEY  
 CONTOURS

500 0 500 1000  
 scale in feet

DRAWN BY: P.V. DATE: FEBRUARY 1970  
 CHECKED BY: F.H.