

Abstracted for
Geo-Science Data Index
Date _____

PRESTONIA
BUSINESS EQUIPMENT

"NEARLEATHER"
Crushed Expanding Envelope
No. 2013-3½ in. Expansion

MADE IN STRATFORD, ONTARIO

AEROMAGNETIC SURVEY

MARION LAKE - GLACIER AREA

NORTHWEST TERRITORIES

ATLANTIC RICHFIELD COMPANY GLACIER PERMITS

3586, 3587, 3588, 3589, 3590, 3591, 3592, and 3593

ATLANTIC RICHFIELD COMPANY



GEOPHYSICAL ASSOCIATES OF CANADA LIMITED

Calgary Alberta

29 September 1967

ATTACHMENTS

Maps: I. Index Map (Permit Block Outlines)
 II. Total Intensity (Permit Outlines, Flight Lines)

INTRODUCTION

Atlantic Richfield Company's Glacier Permits 3586-3593 are located in the Northwest Territories. They lie between $66^{\circ}21'$ and $66^{\circ}50'$ north latitude and extend from $129^{\circ}45'$ to $131^{\circ}00'$ but do not include all of this area. The outer perimeter of the permits is indicated by the heavy outline on the Index Map. The individual permits are shown on the Total Intensity Map.

The area is located approximately twenty-five miles northwest of Fort Good Hope. It is to the southwest of the Mackenzie River between the Gossage and Rampart Rivers.

AEROMAGNETIC SURVEY

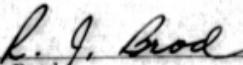
The aeromagnetic survey that is the subject of this report is designed to evaluate the ARCO Glacier permits. A one mile by six mile grid is employed. The principal flight direction is $N45^{\circ}E$ with tie lines spaced at six mile intervals in a direction normal to the flight lines. 2046 miles of productive flying cover the approximate 1680 sq mi area. The date of the first production flight is 1 June 1967 with the last production on 12 June 1967.

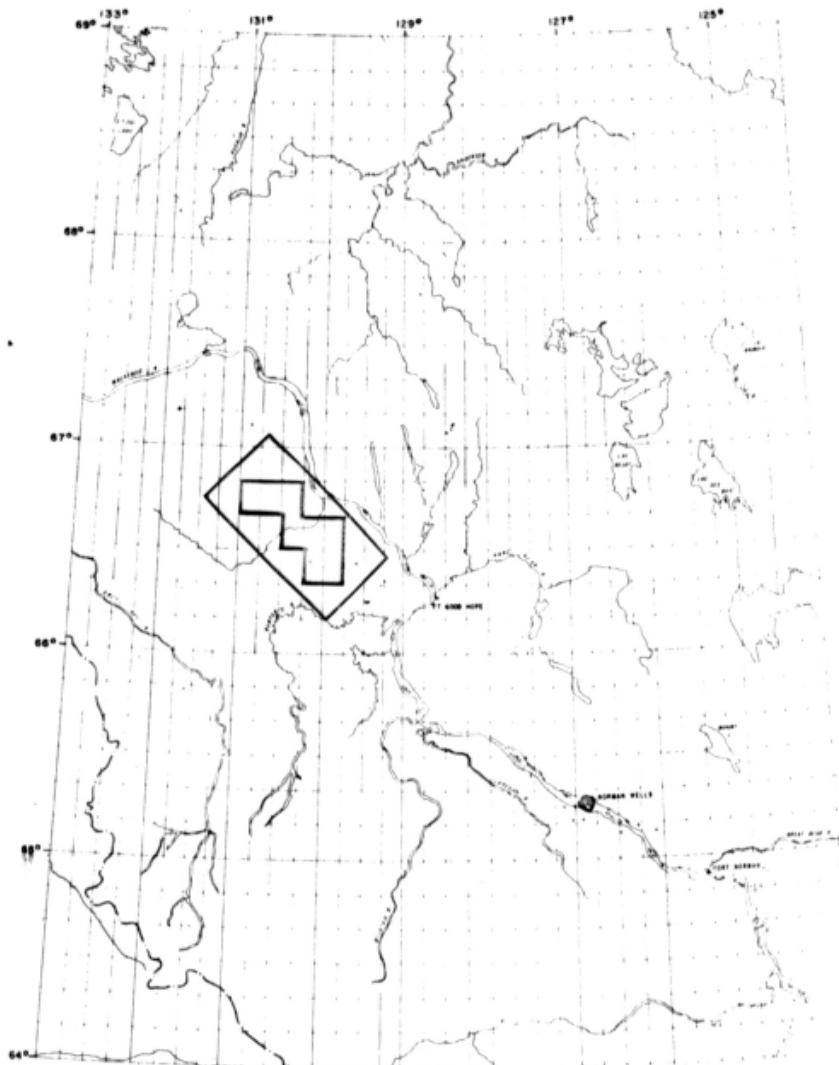
Contractor for the flying is Canadian Aero Service Limited. The quality control of field data is the responsibility of Geophysical Associates of Canada Limited. Specifications for the data equal or exceed those in common industry use.

The survey aircraft is an Aero Commander equipped with a Doppler navigation system and a Gulf Research and Development Mark III Magnetometer. A Gulf Research and Development Storm Monitor is operated to monitor the diurnal magnetic variations to insure against collecting data during periods of high magnetic activity.

The variations in the magnetic field of the earth are recorded on rectilinear charts. The data on each profile are reduced to a datum plane common to all other lines, corrected for regional gradient, and the results are posted on a latitude-longitude grid. These posted values are contoured at a ten gamma interval. The map that results is an isomagnetic representation of the total intensity of the magnetic field of the earth on an arbitrary datum.

GEOPHYSICAL ASSOCIATES OF CANADA LIMITED


R. J. Brod
Vice President



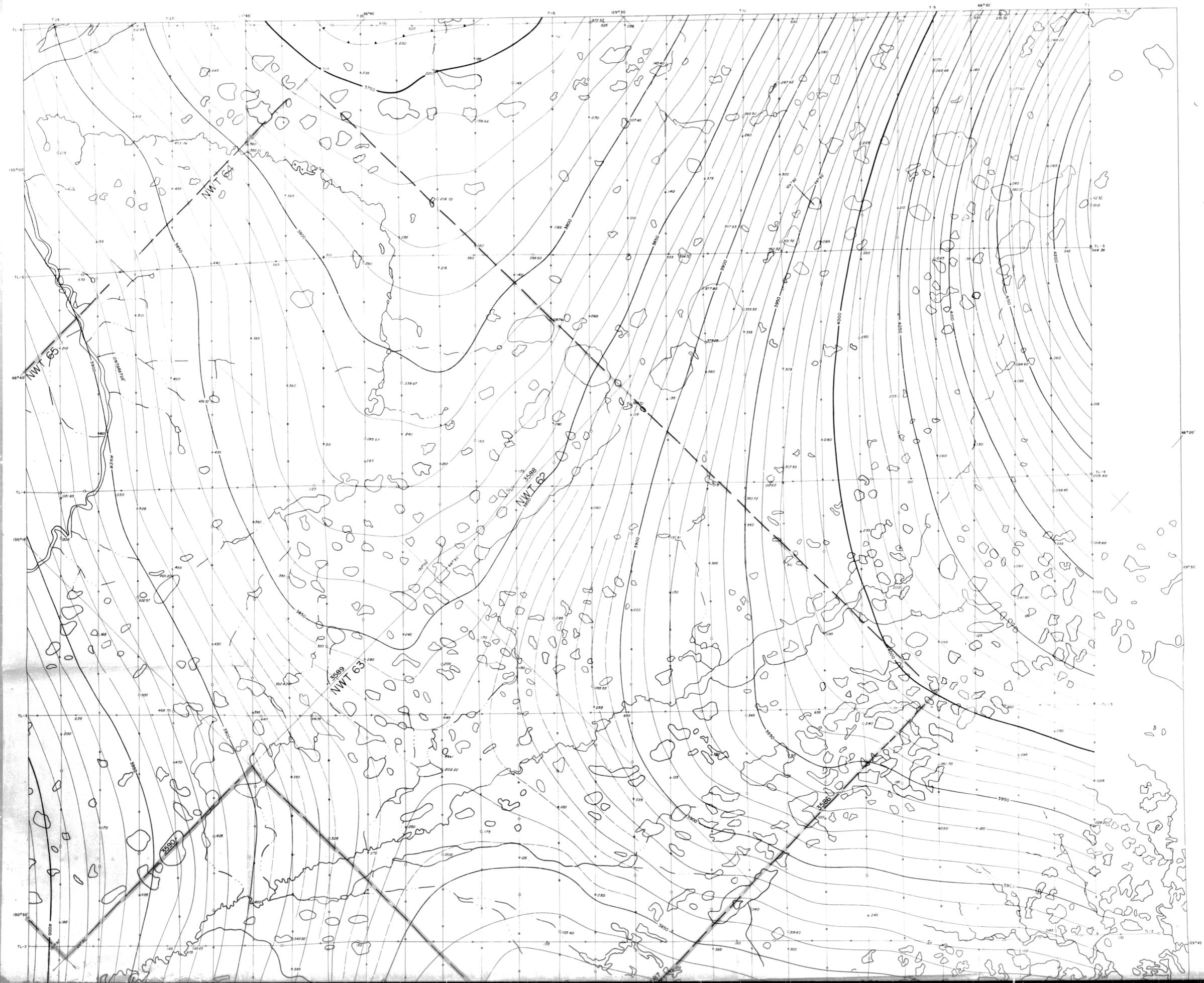
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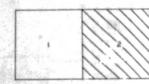
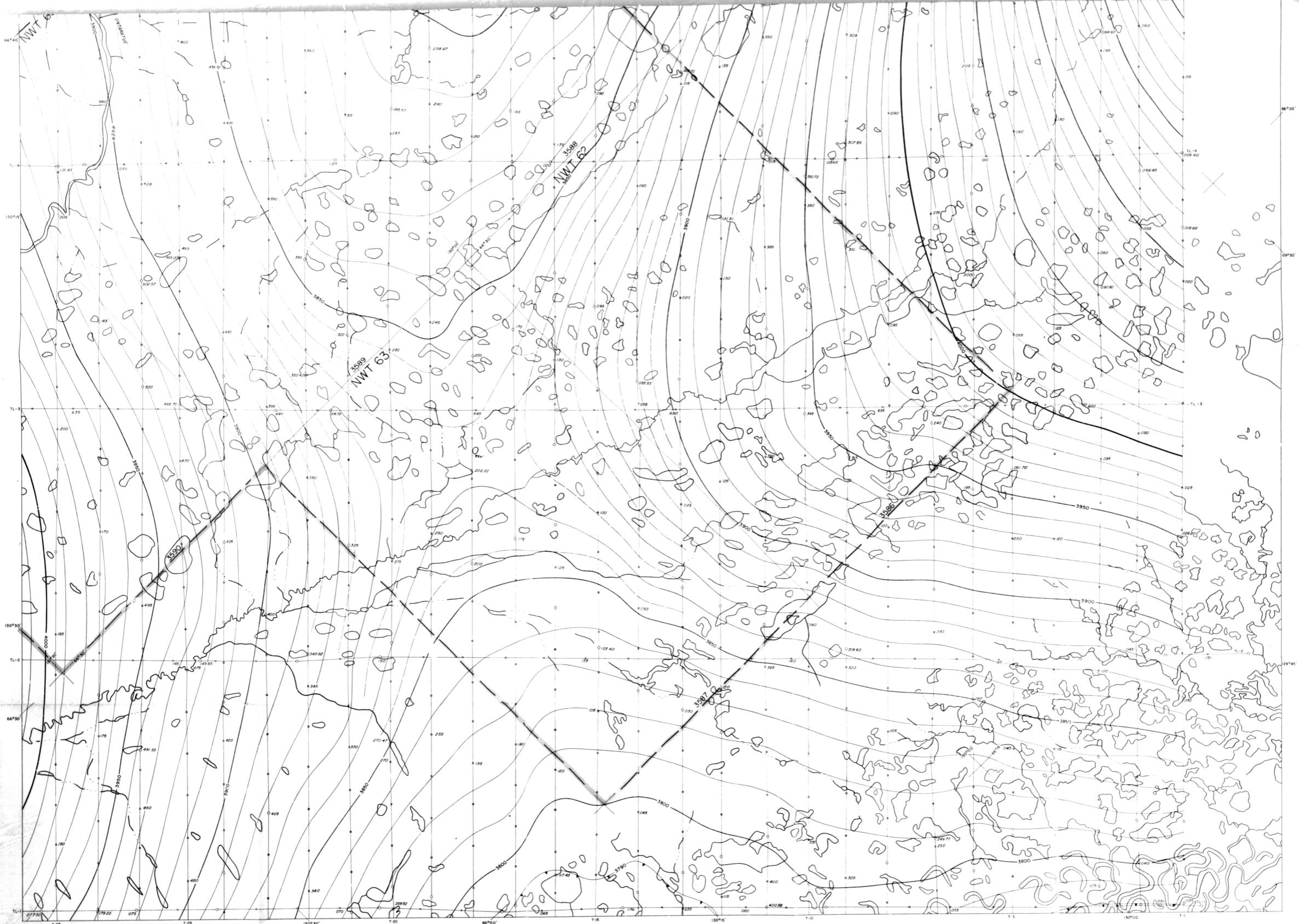
- Survey Outline
- Permit Block

SCALE: 1 IN/40 MI

INDEX MAP

G A C





SHEET INDEX
NORMAL VARIATION
CORRECTION APPLIED



(APPROX)
HORIZONTAL CONTROL BASED ON
1:250,000 TOPOGRAPHIC MAPS AND THE
DOPPLER NAVIGATION SYSTEM

AIRBORNE MAGNETOMETER SURVEY
MARION LAKE AREA
NORTHWEST TERRITORIES
ATLANTIC RICHFIELD COMPANY

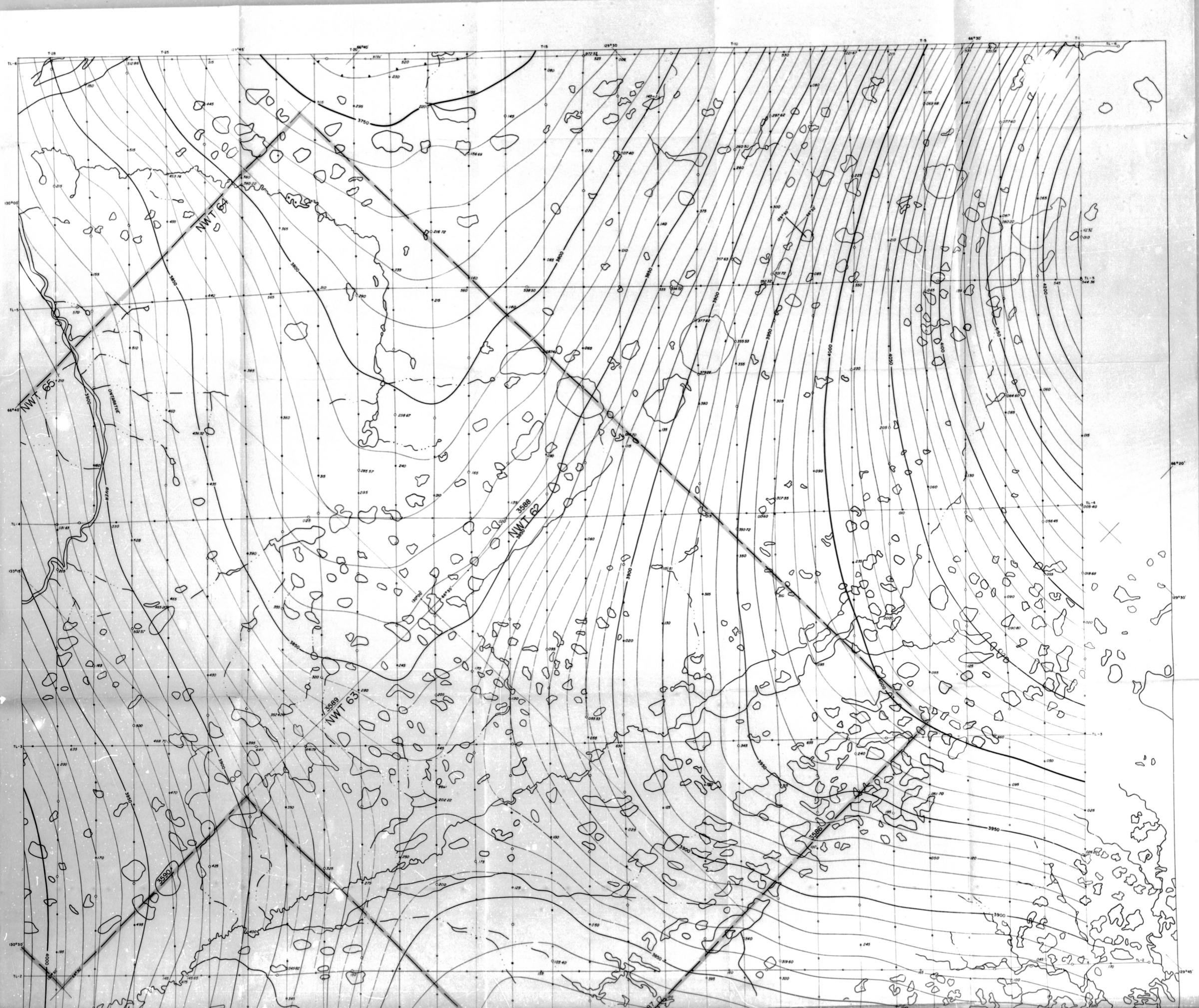
SCALE: 1 INCH TO 4000 FEET
4000 0 4000 8000 12000 FEET

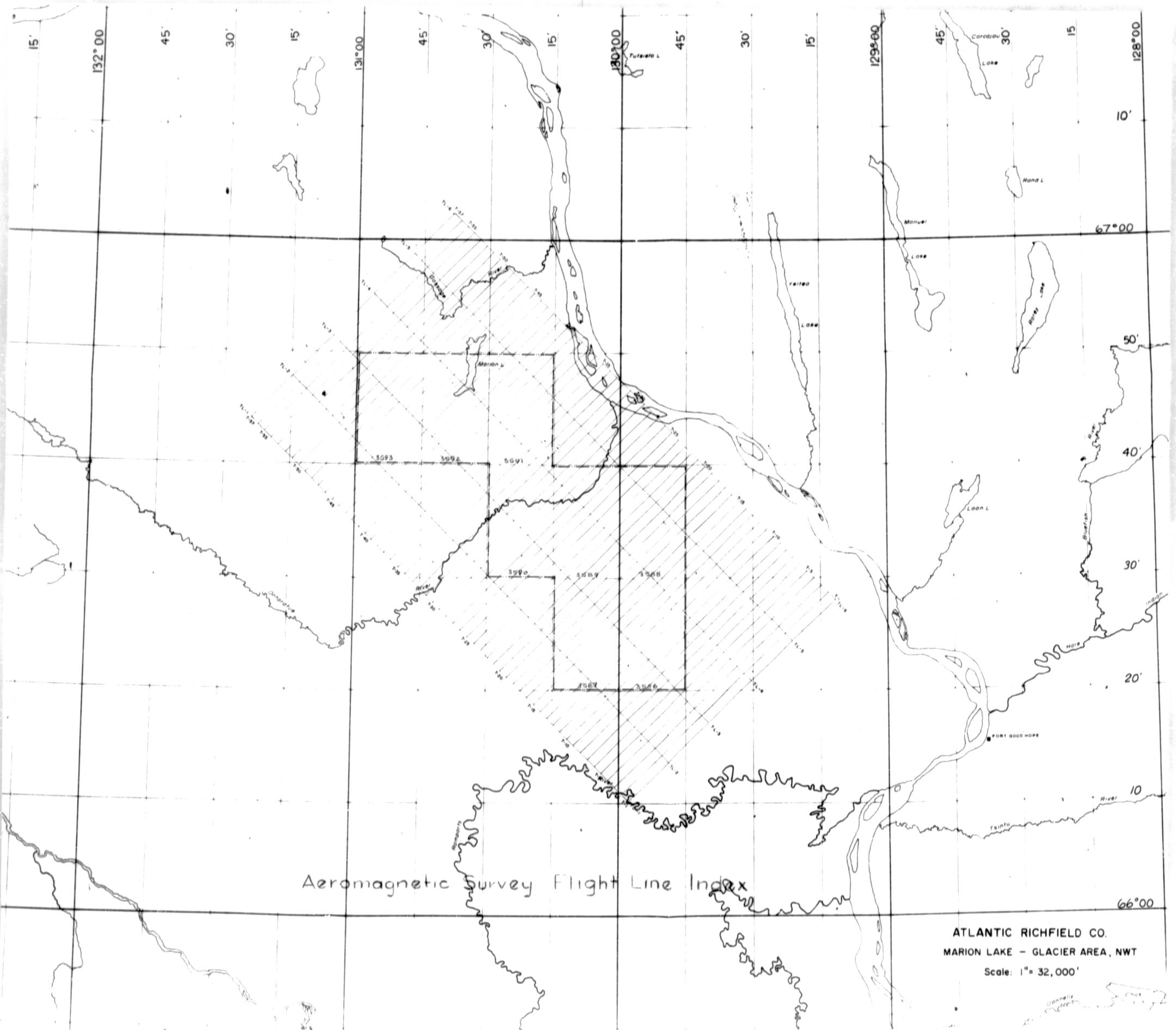
FLIGHT ALTITUDE
1500' ASL
TRaverse INTERVAL
1 MILE
CONTROL LINE INTERVAL
6 MILES
CONTOUR INTERVAL
10 GAMMA
BASE INTENSITY
ARBITRARY

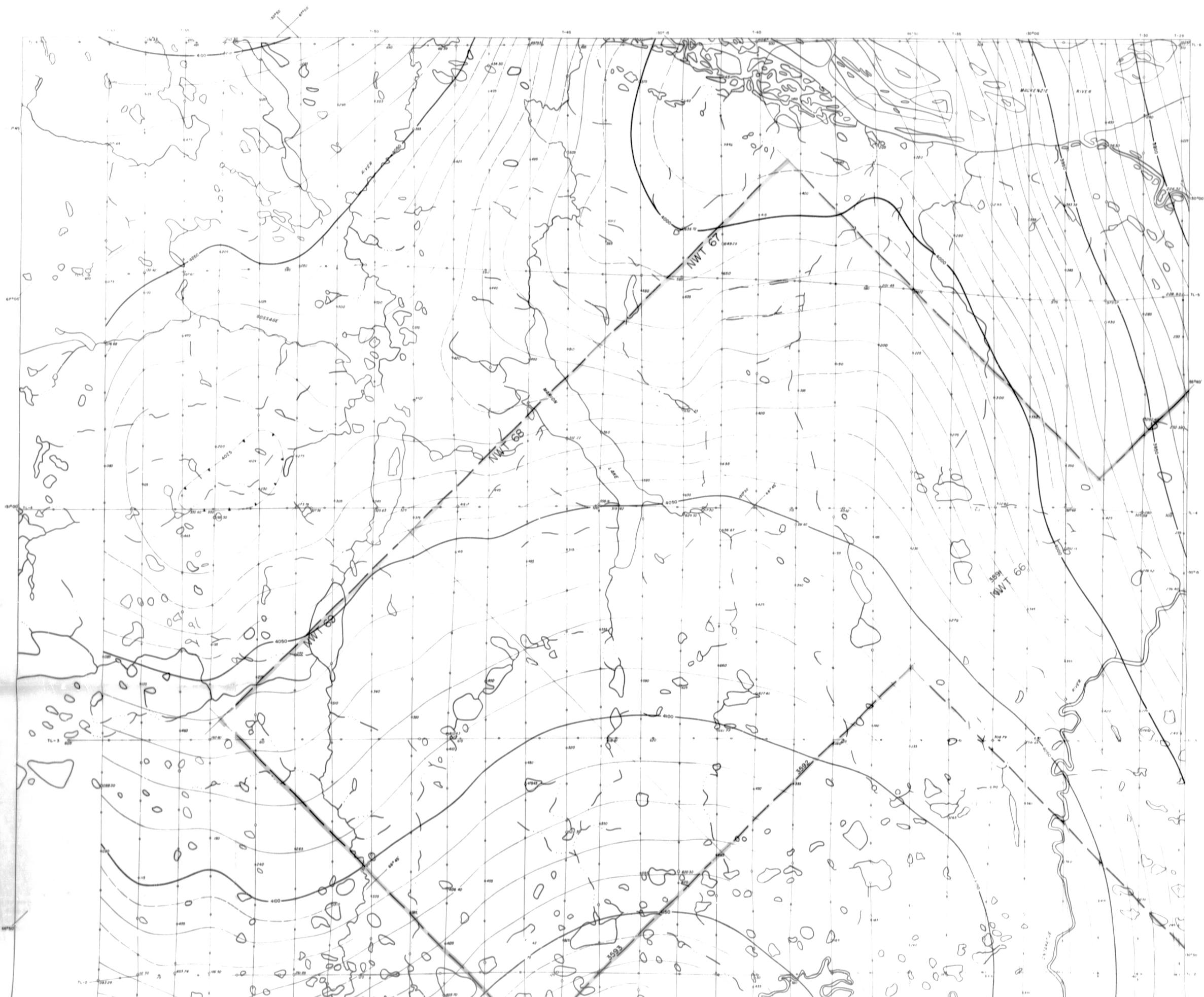
INTERPRETED AREA INCLUDES
ACIER PERMITS
1-16, 3587, 3588, 3589, 3590

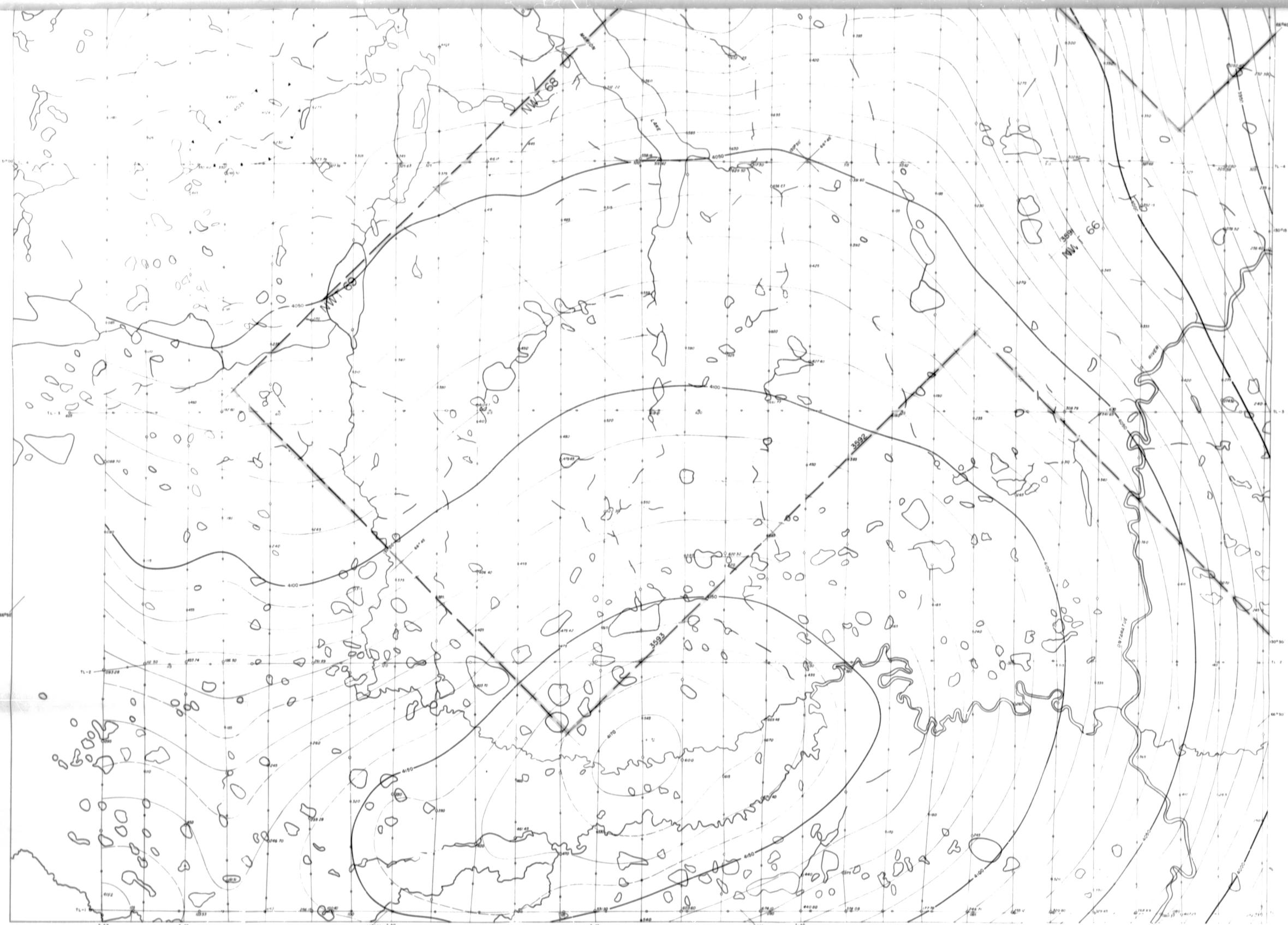
CANADIAN AERO SERVICE LIMITED
OTTAWA, ONTARIO

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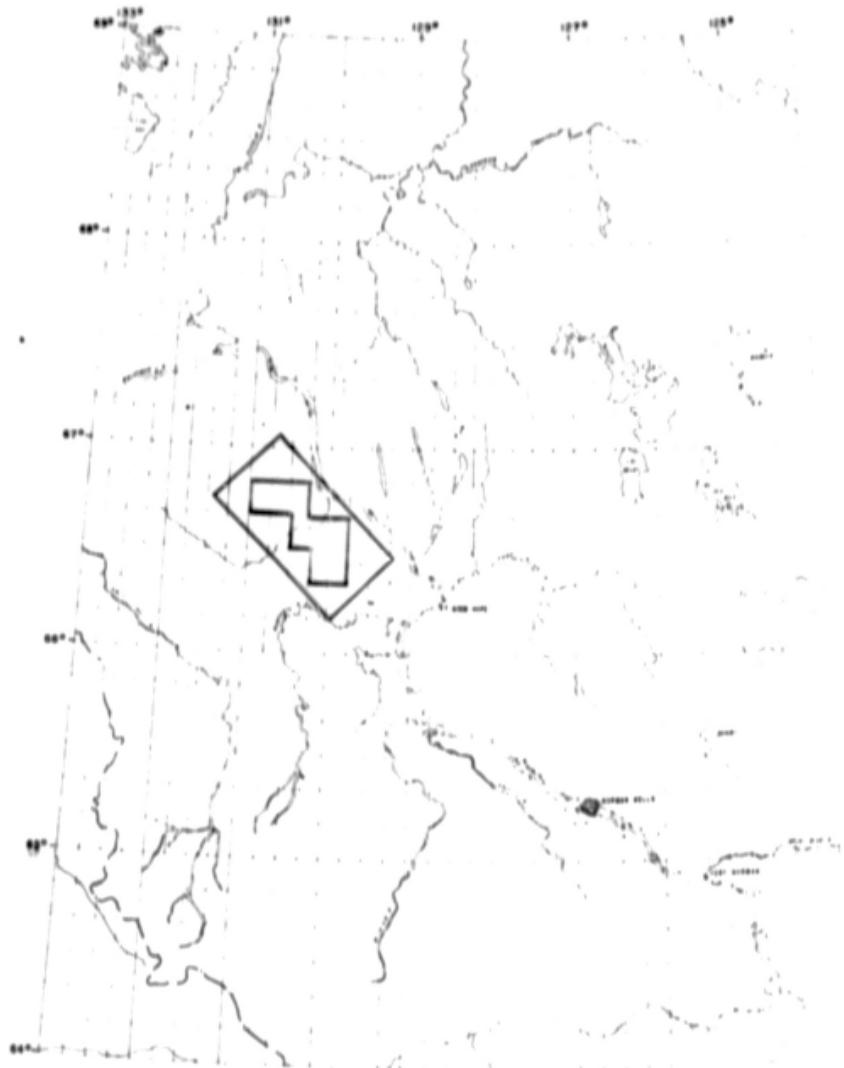
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GEOPHYSICAL ASSOCIATES OF CANADA LIMITED


R. J. Brod
Vice President



Legend

- Survey Outline
- Permit Block