

MAR 19670017: WESTERN ALBERTA

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19670017

MAGNETOMETER EVALUATION

OF

IRON PROSPECTING PERMIT NO. 32, ALBERTA

FOR

CITY SAVINGS & TRUST COMPANY

BY

OVERLAND EXPLORATION SERVICES LTD.

LOCATION AND ACCESS

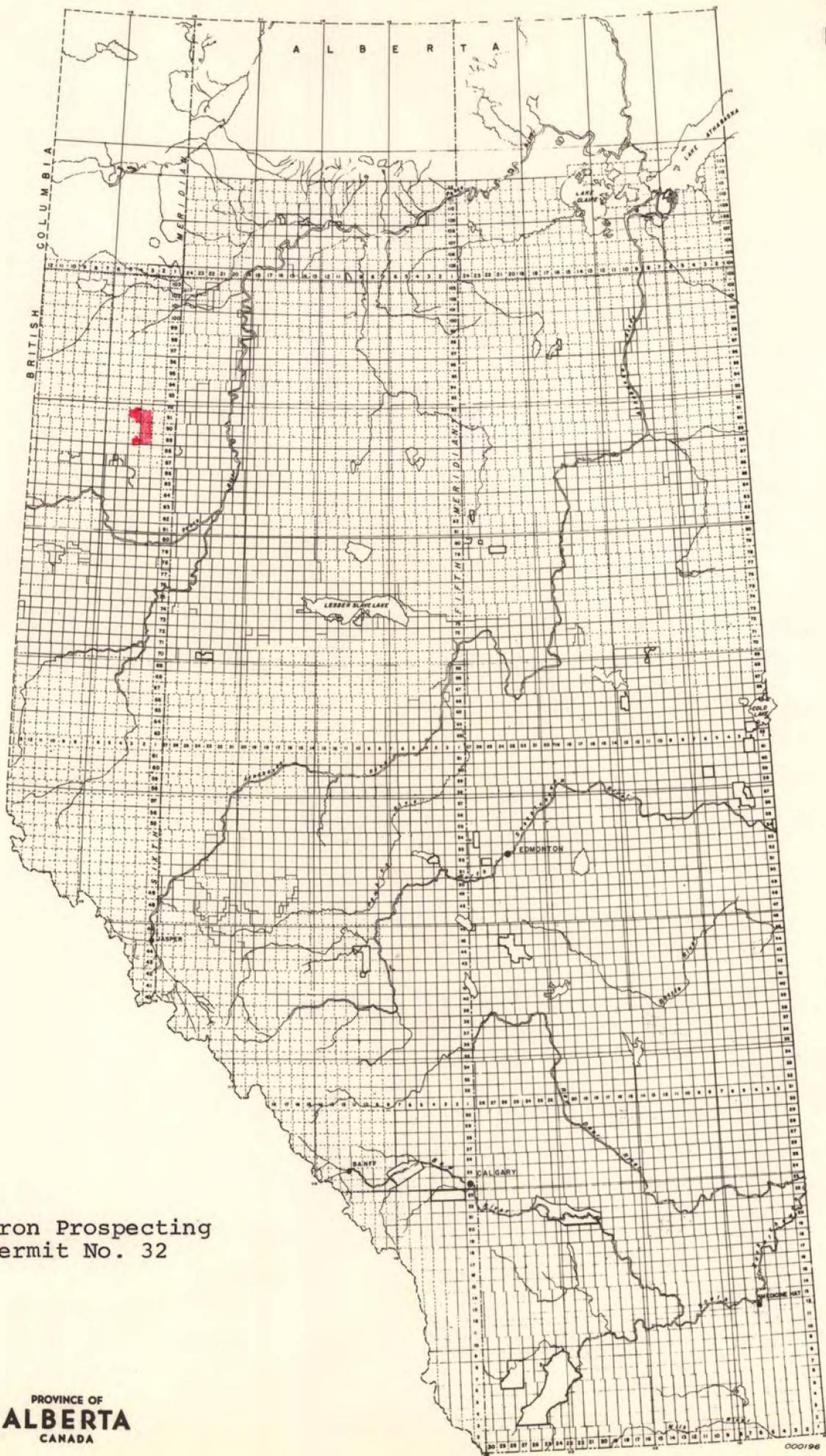
Iron Permit No. 32 is located in Townships 89, 90, 91 and 92, Ranges 3 and 4, West of the Sixth Meridian. This is in northwest Alberta, 70 miles northwest of Peace River town, 45 miles east of British Columbia-Alberta border, and 300 miles northwest of Edmonton.

The area can be reach by car by travelling north on Highway No. 2 from Grande Prairie to Fairview then from Fairview by secondary roads northwest to Worsley. Access to the area from Worsley is by bush roads and seismic trails which are only passable during the winter months.

Map No. 1 shows the location of the Permits on an Alberta Base Map and Map No. 2 shows the land included in the Permit, which totals 97,541 acres.

Map No. 1

19670017



Iron Prospecting
Permit No. 32

PROVINCE OF
ALBERTA
CANADA

Map No. 1
19670017

IRON PROSPECTING PERMIT No. 32

CITY SAVINGS & TRUST COMPANY,
MCLEOD BLDG.,
EDMONTON, ALBERTA

DATE OF ISSUE - JANUARY 25, 1967
AREA - 97,541 ACRES

TP. 92

TP. 91

TP. 90

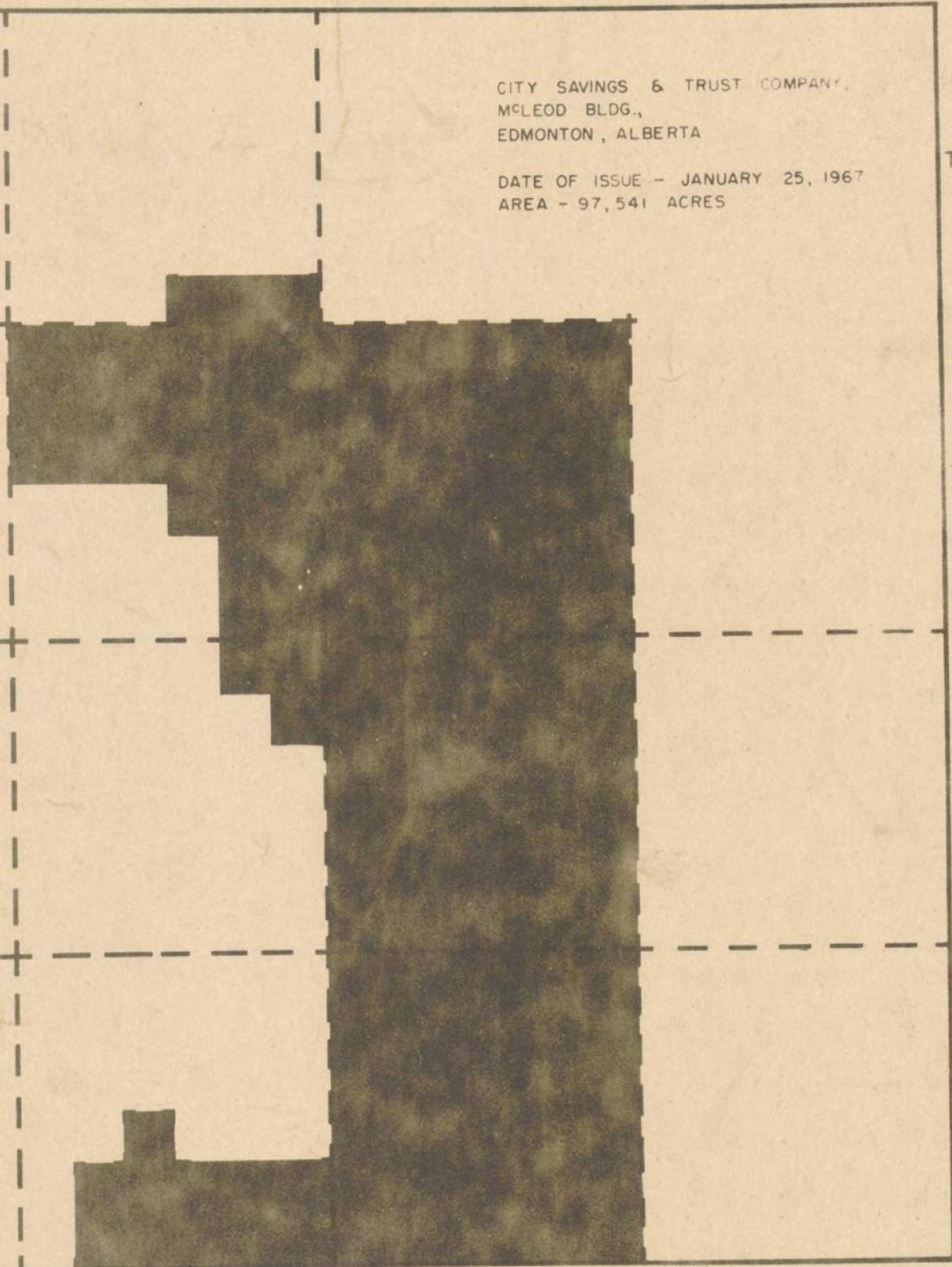
TP. 89

CORRECTION LINE

R. 4

R. 3

R. 2 W. 6 M.



GENERAL STATEMENT

Included in this report are the results of an aerial magnetic map which includes Permit area No. 32. This map has been computed by Canadian Aero Services Ltd. and is at present in the oil files of Overland Exploration Services Ltd.

In exploring new areas for minerals, particularly unmapped sedimentary basins, the airborne magnetometer is often used as a device for making preliminary estimates of the thickness of the sedimentary section. The premise is that sedimentary rocks are nonmagnetic, so that any magnetic anomalies must originate from within the igneous crystalline complex. Calculation of the depth to the magnetic material therefore yields an upper limit to the total thickness of the sedimentary strata. Since in this application only the depth of the source is required and the details of its shape are of little direct interest, the use of elementary models such as poles and dipoles is rather common.

One of the chief difficulties with aeromagnetic interpretations is that the instrument is placed as a rule so far above the magnetic body that the body no longer appears to be two-dimensional no matter how elongated it may be. Therefore two-dimensional models are of little value in aeromagnetic interpretations, and neither is the majority of characteristic curves used for interpreting ground surveys. For this and other reasons, the models that have achieved widespread use in

aeromagnetics are different from those most often used for interpreting ground surveys.

Interpretation of magnetic data is based on the fact that the earth's normal magnetic field is uniform over areas of magnetically homogeneous composition but is distorted in certain regions of inhomogeneous composition, the amount of distortion depending on the relative magnetic susceptibilities of the subsurface materials and the relative masses and configurations of these component materials. Most magnetic anomalies are due to igneous rocks, iron ores, and those sedimentary deposits which contain magnetic material derived from igneous rocks. Magnetic methods are therefore directly applicable where the mineral whose presence is being explored is itself magnetic or is associated within its occurrence with magnetic material.

IRON PROSPECTING PERMIT # 32

The isodynamic pattern within Iron Prospecting Permit # 32 is quite variable. The highest reading is over 2800 gammas and the lowest reading is less than 2550 gammas giving a contrast of over 250 gammas. The main feature present is an abrupt drop in gamma value along the east border of the permit. There are no closed highs or lows within the permit area.

The strike of the isodynamic map along the east side of the permit is nearly north-south and the westward drop in gamma values is very rapid. A drop of 200 gammas in less than four miles is present along the north border of Township 91, Range 3, West of the Sixth Meridian. This feature probably represents a fault within the Basement.

A small closed low is present in the northeast corner of Township 90, Range 4, West of the Sixth Meridian and part of this feature cuts through the Permit. However, this closed low is very small and of no importance with respect to iron ore. A low nose extends southeastwards from this feature and occupies much of Township 89, Range 3, West of the Sixth Meridian. The Permit occupies part of Township 91, Range 4, West of the Sixth Meridian and the isodynamic pattern in this area is featureless.

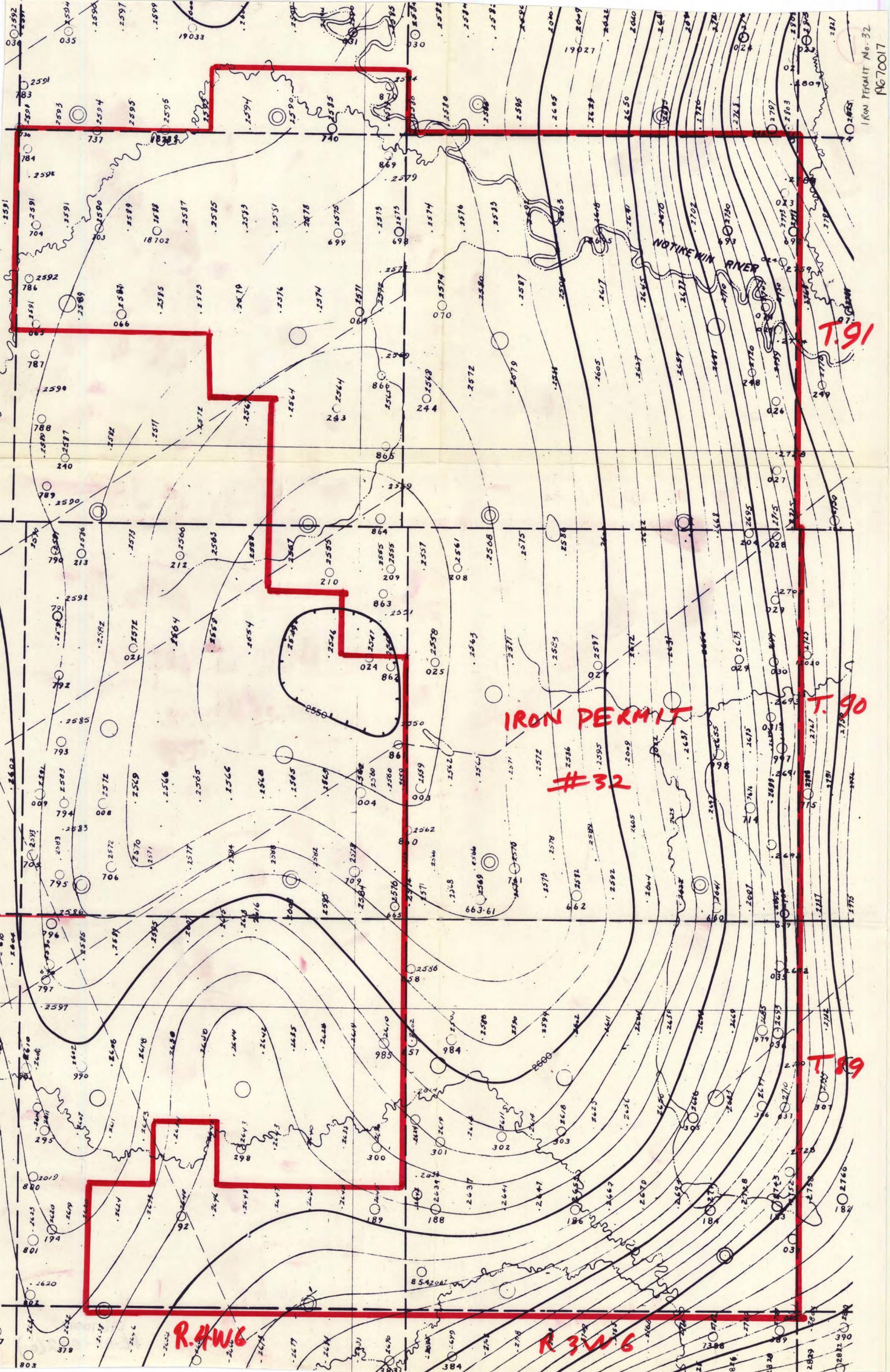
In conclusion, we suggest that the permit be dropped as there appears to be no isodynamic feature present which would indicate any extensive iron ore deposit.

Respectfully submitted by:



OVERLAND EXPLORATION SERVICES LTD.

WGC/jp



**IRON PERMIT
#32**

T.91

T.90

T.89

R.4WG

R.3WG

NOTIKEWIN RIVER

84D/9+10+15+16

IRON PROSPECTING PERMIT No. 32

CITY SAVINGS & TRUST COMPANY,
MCLEOD BLDG.,
EDMONTON, ALBERTA

DATE OF ISSUE - JANUARY 25, 1967
AREA - 97,541 ACRES

TP. 92

TP. 91

CORRECTION LINE

TP. 90

TP. 89

R. 4

R. 3

R. 2 W. 6 M.

