MAR 19670015: WESTERN ALBERTA

Received date: Dec 31, 1967
Public release date: Jan 01, 1969

DISCLAIMER
By accessing and using the Alberta Energy website to download or otherwise obtain a scanned mineral assessment report, you ("User") agree to be bound by the following terms and conditions:

a) Each scanned mineral assessment report that is downloaded or otherwise obtained from Alberta Energy is provided "AS IS", with no warranties or representations of any kind whatsoever from Her Majesty the Queen in Right of Alberta, as represented by the Minister of Energy ("Minister"), expressed or implied, including, but not limited to, no warranties or other representations from the Minister, regarding the content, accuracy, reliability, use or results from the use of or the integrity, completeness, quality or legibility of each such scanned mineral assessment report;

b) To the fullest extent permitted by applicable laws, the Minister hereby expressly disclaims, and is released from, liability and responsibility for all warranties and conditions, expressed or implied, in relation to each scanned mineral assessment report shown or displayed on the Alberta Energy website including but not limited to warranties as to the satisfactory quality of or the fitness of the scanned mineral assessment report for a particular purpose and warranties as to the non-infringement or other non-violation of the proprietary rights held by any third party in respect of the scanned mineral assessment report;

c) To the fullest extent permitted by applicable law, the Minister, and the Minister’s employees and agents, exclude and disclaim liability to the User for losses and damages of whatsoever nature and howsoever arising including, without limitation, any direct, indirect, special, consequential, punitive or incidental damages, loss of use, loss of data, loss caused by a virus, loss of income or profit, claims of third parties, even if Alberta Energy have been advised of the possibility of such damages or losses, arising out of or in connection with the use of the Alberta Energy website, including the accessing or downloading of the scanned mineral assessment report and the use for any purpose of the scanned mineral assessment report so downloaded or retrieved.

d) User agrees to indemnify and hold harmless the Minister, and the Minister’s employees and agents against and from any and all third party claims, losses, liabilities, demands, actions or proceedings related to the downloading, distribution, transmissions, storage, redistribution, reproduction or exploitation of each scanned mineral assessment report obtained by the User from Alberta Energy.
MAGNETOMETER EVALUATION

OF

IRON PROSPECTING PERMIT NO. 30, ALBERTA

FOR

CITY SAVINGS & TRUST COMPANY

BY

OVERLAND EXPLORATION SERVICES LTD.
LOCATION AND ACCESS

Iron Permit No. 30 is located in Townships 89 and 90, Ranges 5 and 6, West of the Sixth Meridian. This is in northwest Alberta, 70 miles northwest of Peace River town, 45 miles east of the British Columbia-Alberta border, and 300 miles northwest of Edmonton.

The area is accessible by car 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 bushroads and seismic trails which are only passable during the winter months.

Map. No. 1 shows the location of the Permit on an Alberta Base Map and Map No. 2 shows the land included in the Permit, which totals 97,794 acres.
IRON PROSPECTING PERMIT No. 30

CITY SAVINGS & TRUST COMPANY,
M'LEOD BLDG.,
EDMONTON, ALBERTA

DATE OF ISSUE - JANUARY 25, 1967
AREA - 97,794 ACRES
GENERAL STATEMENT

Included in this report are the results of an aerial magnetic map which includes Permit area No. 30. 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 the occurrence with magnetic material.
IRON PROSPECTING PERMIT # 30

The isodynamic pattern within Iron Prospecting Permit # 30 is quite variable. The highest reading is over 2770 gammas and the lowest reading is less than 2600 gammas giving a contrast of over 170 gammas. The main features present include two closed highs, one closed low and one very abrupt high nose.

The largest closed high is present near the center of Township 89, Range 5, West of the Sixth Meridian. The gamma value near the center of this high is in excess of 2700 and the feature has an egg shape with a north-south strike. A long high nose extends north from this feature into the southeast part of Township 90, Range 5, West of the Sixth Meridian. A tributary of the Whitemud River flows eastwards through this isodynamic high.

A smaller closed high is located near the center of Township 90, Range 6, West of the Sixth Meridian. The gamma value in this high is in excess of 2650 and the values drop more or less uniformly in all direction a tributary of the Notikewin River flows through this feature.

The closed low covers about three square miles and is located in the southwest corner of Township 90, Range 5, West of the Sixth Meridian. Readings within this area are below 2600 gammas, but rise uniformly in all direction except to the northeast, where low readings persist.

The large high nose occupies most of Township 89, Range 6, West of the Sixth Meridian. The strike of this feature is nearly north-south and the small closed high previously discussed
is on the north end of this feature. This nose shows a drop in value of 120 gammas in five miles.

In conclusion, we suggest that this 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 PROSPECTING PERMIT No. 30

CITY SAVINGS & TRUST COMPANY,
M'CLEOD BLDG.,
EDMONTON, ALBERTA

DATE OF ISSUE - JANUARY 25, 1967
AREA - 97,794 ACRES