



12013SE0072 2 16694 WHITE LAKE (NORTH PART)

SPRUCE BAY PROPERTY

Amended Report on The Interpretation of Reprocessed Airborne Magnetic Data and The Compilation of Assessment Data

Homestake Canada Inc.

Qual # 2.10522

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August 16, 1996





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Introduction:

The Spruce Bay property was optioned by Homestake Canada Inc. from Winslow Gold Corp. late in April 1996. The first phase in a planned comprehensive exploration program involved the research and computer compilation of all known assessment data filed in the vicinity of the property, the reprocessing of a 1983 Aerodat/Scintrex airborne total field magnetic survey, and the geological and structural reinterpretation of known geology using the reprocessed magnetic data. This report outlines the results of the work and presents the data on the series of 1:10,000 scale maps accompanying this report (see back pockets).

Location and Access:

The Spruce Bay Property is located approximately 23 km northeast of Hemlo and 50 km east-northeast of Marathon, Ontario. The northeastern portion of the property straddles Spruce Bay located in the northwestern part of White Lake. The centre of the claim group is located in NTS 42C/13SE, within UTM Zone 16, at 596000E, 5404000N.

Access to the claims is via boat/snowmobile for 8 to 9 km on White Lake north from a landing situated near Highway 17, or by road (truck/snowmobile) 10 to 12 km east from Highway 614 to the Theresa Lake dam and then 3 km south by trail (ATC/snowmobile/foot) to the property.

Property:

The property consists of eight, contiguous, unpatented mining claims (45 units, approximately 728 hectares) in the Wabikoba Lake Area (claim map G-622) of the Thunder Bay Mining Division, Ontario. The claims are held on option from Winslow Gold Corp. and are numbered as follows:

Claim #	No. of Units
1097947	1
1183294	1
1186730	13
1186978	5
1186979	14
1195626	6
1210344	4
1210345	1

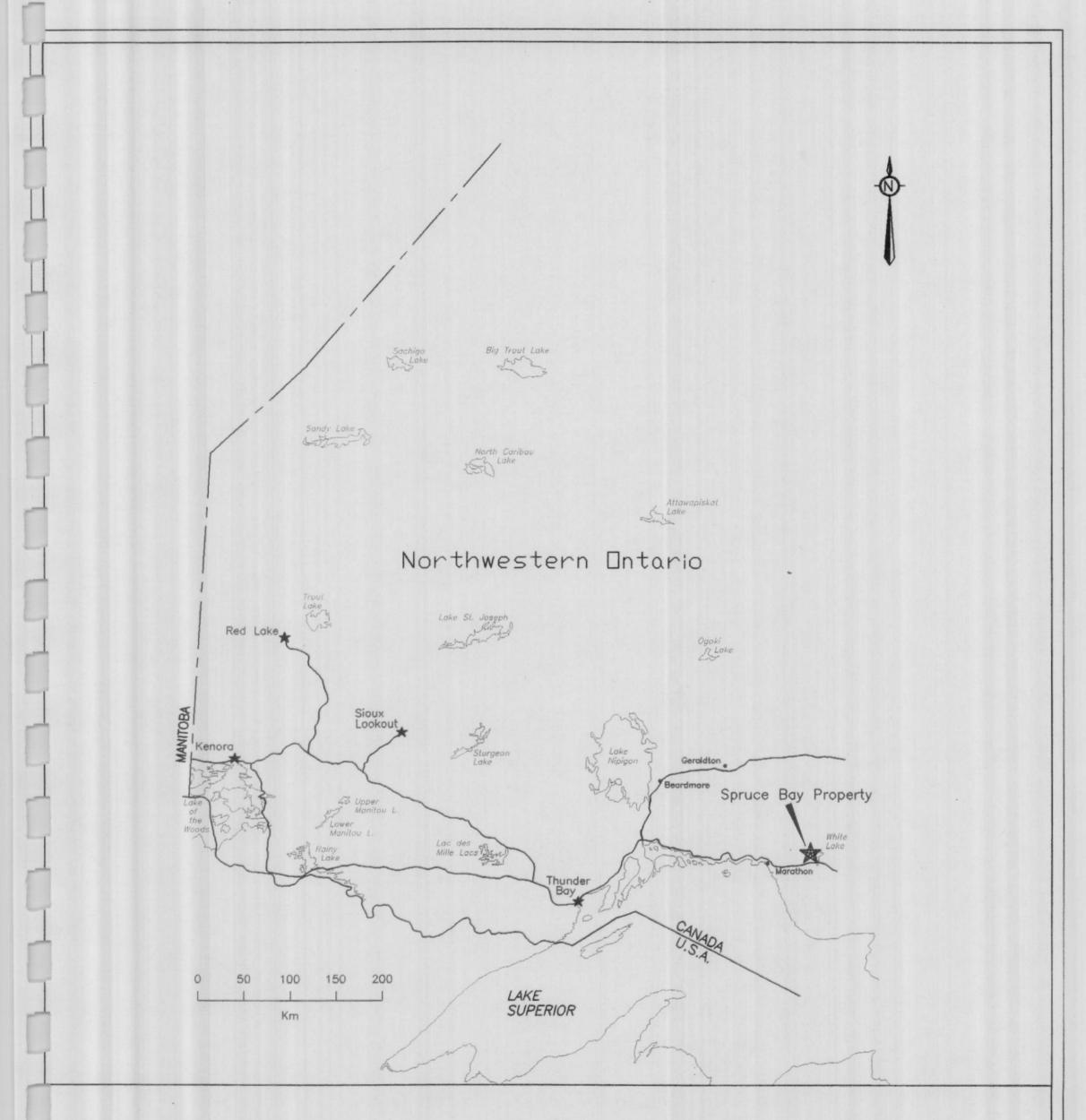
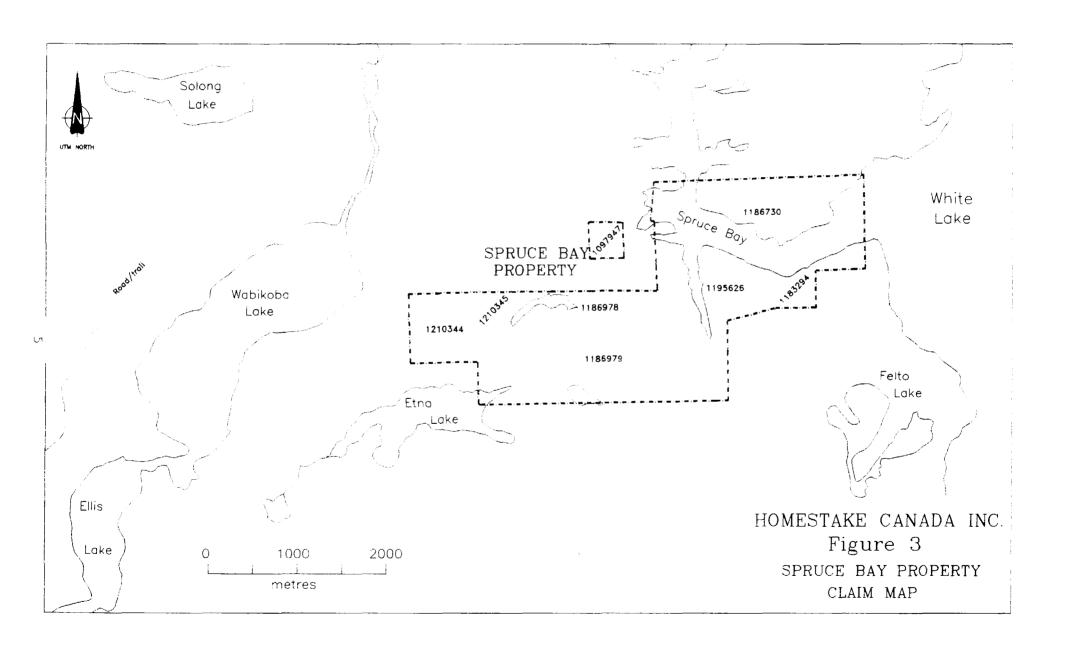


Figure 1: Northwestern Ontario Location Map - Spruce Bay Property.



Regional and Property Geology:

The Spruce Bay Property occurs near the northeastern edge of the Archean Schreiber-Hemlo greenstone belt within the Wawa Subprovince of the Superior Province Williams et al (1991) state that the greenstone belt stretches from Schreiber in the west, to White River in the east, and is split into distinct and separate eastern and western segments by the 1108 Ma Mesoproterozoic Coldwell alkalic complex (Heaman and Machado 1987). The eastern part of the belt exhibits amphibolite-facies regional metamorphism and is subdivided into the Hemlo-Black River assemblage (2.77 Ma) to the north and the Heron Bay (2.70 Ma) assemblage to the south (Corfu and Muir 1989). The Hemlo-Black River assemblage hosts the Hemlo gold deposit and, as described by Williams et al. (1991), consists of a basal sequence of pillowed, massive and foliated, tholeiitic mafic flows intruded by mafic and ultramafic bodies and an overlying sequence of mafic to felsic, banded, calc-alkalic pyroclastics and flows which may be transitional into greywacke, iron formation, and conglomerate. Volcanic units predominate in the western part of the assemblage, with an increasing abundance of aluminous clastic sedimentary rocks to the east (Muir 1982). These supracrustal rocks exhibit widely varying states of strain, with well-preserved primary textures and structures visible within some units and almost completely obliterated original textures in others. The assemblage has been intruded by the Cedar Lake pluton (2688 Ma) and the Cedar Creek stock (2684 Ma), in the south, and by the Musher Lake pluton, in the northeast. It is bound by the Black-Pic batholith/Gowan pluton (2678 Ma) in the northwest, the Dotted Lake pluton in the east, and the Lake Superior-Hemlo fault in the south (Williams et al. 1991, Corfu and Muir 1989)

The Spruce Bay property is underlain by a southeast-trending portion of the eastern Hemlo-Black River assemblage, directly adjacent to the Dotted Lake Pluton and straddling the southeastern tail of the Musher Lake pluton. Maps 1 and 4 (see back pocket) shows that the claims are primarily underlain by amphibolite with subordinate amounts of wacke, conglomerate, and paragneiss (Milne 1969, Siragusa 1985). The amphibolites are intruded by altered gabbro and ultramafic (serpentinized peridotite) bodies and all rock-types are crosscut by north-northeast- to northeast-trending diabase dykes, possibly of the Marathon swarm (Osmani 1991). The metavolcanic and metasedimentary rocks may have been folded about an east-west-striking, west-plunging syncline proposed by Milne (1968) (see Map 1). Siragusa (1985) does not define this axis on his map. Almost all foliations in the vicinity of the property dip moderately to steeply southwest to south-southwest. The northeast-striking White Lake fault crosscuts the eastern portions of the claims and truncates most of the supracrustal and mafic to ultramafic intrusive units.

This property is approximately 11 km southeast and apparently along strike of the North Limb property, owned by Hemlo Gold Mines Inc. Hemlo Gold's 1995 Annual Report states that the North Limb results have been encouraging. Diamond drilling has returned a number of interesting, although subeconomic, gold intercepts within strongly altered rocks similar to those observed within the Hemlo deposit.

Exploration History:

The earliest recorded exploration in the Spruce Bay area was completed in 1976 and work since that time has been sporadic. All known exploration and the past geological mapping has been summarized below and compiled onto Map 1 (see back pocket):

- 1976: Noranda Exploration Company Limited completed linecutting and Crone horizontal loop electromagnetic (CEM), vertical loop electromagnetic (VLEM), and magnetometer surveys over a 40 claim group including the east-central part of the present property. The CEM and VLEM surveys detected numerous weak conductive zones that were not considered worthy of follow-up work
- 1983: Aerodat Limited completed a helicopter-borne multifrequency, multicoil EM, VLF-EM, and cesium vapour magnetometer survey over the Hemlo area. This data was purchased and submitted for assessment by a number of companies in the Spruce Bay area during the same year. Brass Ring Resources Ltd. and Sunexco Energy Corporation submitted this data, but no other work, on adjacent properties that included the northeast and north-central portions of the present Spruce Bay claims. The Aerodat total field airborne magnetic data was compiled and reprocessed by Homestake Canada Inc. (see Map 2, back pocket) and used to produce a Calculated First Vertical Derivative map (see Map 3, back pocket) of the Spruce Bay-Wabikoba Lake area.
- 1983: Trident Resources Inc. filed the Aerodat airborne data described above on a 22 claim property adjacent to and north of the western portion of the present group. Trident, through contractor Agilis Engineering Ltd., then proceeded with linecutting, geological mapping, rock sampling, soil geochemistry, and ground VLF-EM surveys. The VLF-EM survey delineated 5 major conductive zones within the eastern part of the claims that were thought to have bedrock sources. The geochemical survey detected numerous Au-in-soil anomalies with values ranging from between 20 and 310 ppb. The better soil anomalies roughly coincide with ground VLF-EM conductors (see Map 1, back pocket). No rock samples returned significant Au or Mo values.
- 1983: Ventora Resources Limited filed the Aerodat data and completed a reconnaissance grid (200 m line-spacing), preliminary geological mapping, and a soil geochemistry survey on 37 claims overlapping the western 30% of the Spruce Bay claims. The soil survey detected a few weakly anomalous Mo, As, and Zn values; however these were not thought to be significant and no other work was done
- **1984:** A reconnaissance grid (200 m line-spacing) and ground magnetometer and VLF-EM surveys were completed by *David Burda* on an 18 claim group straddling the centre of the present property. Numerous short strike-length VLF-EM conductors were detected,

most associated with the volcano-sedimentary contact or diabase dykes. One conductor ('A') was thought to represent a fault located along the granitoid-sedimentary contact in the south part of the claims.

- 1989 to 1991, 1994: Considerable prospecting, outcrop stripping, bedrock trenching, and rock sampling was completed by *Daniel Carroll* on 6 claims, including TB 1097947 of the present Spruce Bay claim group. Samples of pyritic metasedimentary rocks, taken in 1990 from adjacent trenches, returned analyses of 6850 ppb Au (0 20 ounces/ton) and 79 ppm Ag from one sample (DC-SB-100) and 5400 ppm Zn from another (SB-3). Another pyritic metasediment sample, taken in 1991 from a trench located approximately 150 m to the south of the 2 samples above, contained 745 ppb Au, 6730 ppm Zn, 2.4 ppm Ag, and 54 ppm Mo. *Oracle Minerals Inc.* optioned the claims in 1994 and completed geological mapping and sampling. The results of the rock sampling were negative. No further work was submitted
- **1992:** A 25 claim property, which included claims that now form the eastern portion of the Spruce Bay property, was explored by *Brian Fowler and Angus MacDonnell*. Work completed included geological mapping, prospecting, trenching and sampling. The trenches were excavated in an area west of the present property, near Wabikoba Lake, and will not be described in this report.
- 1993 and 1994: Work was completed on the Spruce Bay property, almost in its present form, by *Brian Fowler*, *Mike Shuman*, *George Daniels*, *and Doug Kakeeway*. In 1993 the owners completed prospecting, sampling, and a beep map survey. One sample of altered pyritic metasediments, taken from a 2 m wide gossanous zone exhibiting coincident ground VLF-EM, and magnetometer anomalies, returned an analysis of 2132 ppm Zn (see Map 1, back pocket). The owners attempted to drill this zone, but collared the hole too far north and missed the target. Exploration in 1994 consisted of linecutting (winter grid, 200 m line-spacing), ground magnetometer, VLF-EM, MaxMin-II (HLEM), and limited IP-EM surveys. The HLEM survey was completed over the entire claim block and outlined 4 conductors of various strengths and strike-lengths. The VLF-EM survey was completed over the western portion of the group, in order to aid in better defining geology and structure, and outlined several east-west-trending conductive zones thought to have bedrock sources. The property was optioned to Winslow Gold Corp. in 1995, but there is no record of any work being done until Homestake Canada Inc. optioned the claims in late April 1996

Reprocessing of Airborne Magnetic Data:

An integral part of the initial phase of exploration on the Spruce Bay Property is the reprocessing and reinterpretation of the data from a helicopter-borne total field magnetic

survey of the Hemlo area flown by Aerodat between March 2 and June 14, 1983. A total of 15,770 line kilometres of high quality data were acquired during this survey at a nominal line spacing of 100 m. The instrument used was a Geometrics G-803 proton precession magnetometer with the sensor towed in a bird 15 m below the helicopter. Instrument sensitivity was 1 gamma at a 0.5 second sample rate. Helicopter-borne surveys of this type have the capability to produce data that is almost as detailed as ground magnetic surveys.

There has been considerable advancement in the computer processing and imaging of geophysical data since the Aerodat survey was flown and the resultant maps allow geologists and geophysicists to observe much finer structural and geological detail and thereby make much more useful interpretations of the existing geology. The reprocessing and imaging methodology used by Homestake Canada Inc. is presented below:

Methodology: The total field magnetic grid for the Spruce Bay Property was set up by extracting the dataset from the Aerodat Hemlo Master Supergrid using UTM coordinates to define the subgrid. This was achieved utilizing GEOPAK's Frequency Domain Filtering Package (F2D). At this time the vertical magnetic gradient was also calculated on the Spruce Bay data subset using the F2D filters.

The resultant grids were then imaged using GEOPAK's RTICAD (imaging and plotting package) with superimposed vector topographic data and title block information. These vector data were initially digitized in AutoCAD Release 12 from 1:50,000 NTS topographic maps and then converted to vector data using the ACAD2RTI conversion utility.

The final plots (Maps 2 and 3, see back pocket) were plotted to scale (1 10,000) via RTICAD and a Hewlett Packard HP Design Jet 650c.

Geological and Structural Reinterpretation:

The geological and structural reinterpretation of existing geology made from the reprocessed airborne magnetic data of the Spruce Bay area is presented in Map 4 (see back pocket). The magnetic data, particularly the vertical gradient, have allowed the authors to define the existence of previously unknown units, redefine previously known, but often inferred, geological contacts, and highlight the existence of many brittle faults. For comparison purposes the geological contacts originally defined by Milne (1968) are presented on Map 1 (see back pocket).

Methodology: The interpretation presented in Map 4 began with a close examination of both the total field and vertical gradient maps to identify offset or truncated magnetic features that often define faults. Once the faults were identified the more obvious geological contacts, corresponding with diabase dykes or other magnetic intrusive bodies, were then

Certificate of Qualification

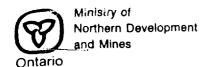
- I, Allan D. MacTavish of 548 McMaster St., Thunder Bay, Ontario, do hereby certify that
 - 1) I hold a Bachelor of Science (Honours) Degree in Geology (1977) from Laurentian University, Sudbury, Ontario.
 - 1 hold a Master of Science Degree in Geology (1992) from Lakehead University, Thunder Bay, Ontario.
 - 3) I am a Fellow, in good standing, of the Geological Association of Canada.
 - 4.) I have been practising my profession in Ontario, the Northwest Territories, and Manitoba since 1975.
 - I have been employed directly by Noranda Exploration Company Limited, Canadian Superior Exploration Co. Ltd., Amax Minerals Inc., Kerr Addison Mines Ltd., St. Joe Canada Inc./Bond Gold Canada Inc./LAC Minerals Ltd., the Ontario Geological Survey, and Falconbridge Limited, and am currently employed by Homestake Canada Inc.
 - 6.) I have based this report, and the conclusions and recommendations herein, on a rigorous compilation of assessment data, interpretation of reprocessed airborne magnetic data, and Ontario government geology reports and maps.
 - 7) I hold no interest, directly or indirectly in this property, nor do I expect to receive any interest or considerations from the same.

Dated this 16th day of August, 1996 at Thunder Bay, Ontario.

Allan D. MacTavish, M.Sc., FGAC

1/DMailann

Senior Project Geologist



Report of Work Conducted After Recording Claim

Transaction Number W9640-245

Mining Act

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

Instructions: - Please type or print and submit in duplicate.

- Refer to the Recorder.

- A separate - Technical

JUL 23 1996

this forming LANDS BRANCH - A sketch, 900 Client No. Recorded Holder(s) Winslow Gold Corp 300299 elephone No. Suite 1290,112 - 4th Avenue S.W. Calgary, Alberta (403)266-3069 or G Plan No. Thunder Bau Dates Work Performed Work Performed (Check One Work Group Only) Type Work Group BECEIVED Geotechnical Survey JUL **2 3** 1996 Physical Work, Including Drilling MINING LANDS BRANCH Rehabilitation Other Authorized Assessment Compilation Report including Work **Assays** Assignment from Reserve 42000.00 Total Assessment Work Claimed on the Attached Statement of Costs The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification. Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report) Name Homestake Unada Inc., P.O. Box 20053, RPO tireentersoftize Thunder Boy, Ord PTE 6P2. Homestake Curada Inc., 637 Algorguin Bird. Eist. Shite 26, Timmins, Ord. Est PAN 9H9 Allan Maclavist Peter Wood (attach a schedule if necessary) Certification of Beneficial Interest * See Note No. 1 on reverse side Recorded Holder or Agent (Signature) I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder Certification of Work Report I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true. Name and Address of Person Certifying Allan MacTarish, P.O. Box 20053, RPO Green Acres Plaza, Thurden Boy, Ort.

857)475-8135 For Office Use Only Deputy Total Value Cr. Recorded Date Recorded Received Stamp Thunder Bay Mining Division Deemed Approval Date Date Approved of the proof. TULY 29.1996 Date Notice for Amendments Sent RECEIVED 0241 (03/91)

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark () one of the following:
1. Credits are to be cut back starting with the claim listed last, working backwards.
2. Credits are to be cut back equally over all claims contained in this report of work.
3. Credits are to be cut back as priorized on the attached appendix.
In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

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I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature & DMaclauml	Date 196

Ministry of and Mines

Ministère du Northern Development Développement du Nord et des Mines

Geoscience Assessment Office 933 Ramsey Lake Road 6th Floor Sudbury, Ontario P3E 6B5

Telephone: (705) 670-5853 (705) 670-5863

September 4, 1996

Our File: 2.16694 Transaction #: W9640.00245

Mining Recorder Ministry of Northern Development & Mines Suite B003 435 James Street South Thunder Bay, Ontario P7E 6S7

Dear Mr. Weirmeir:

SUBJECT: APPROVAL OF ASSESSMENT WORK CREDIT ON MINING LAND, CLAIM(S) 1183294 (ET AL.) IN WHITE LAKE AREA

Revisions to this report have been received and the assessment work has been accepted as providing new information to the geotechnical

Accordingly, assessment work credit has been approved as outlined on the Declaration of Assessment Work Form accompanying this submission. The credit has been approved under Section(s) 18, Other (DATA) of the Assessment Work Regulation.

The approval date is September 04, 1996. Please indicate this approval on the claim record.

If you have any questions regarding this correspondence, please contact Bruce Gates at (705) 670-5856.

Yours Sincerely, ORIGINAL SIGNED BY:

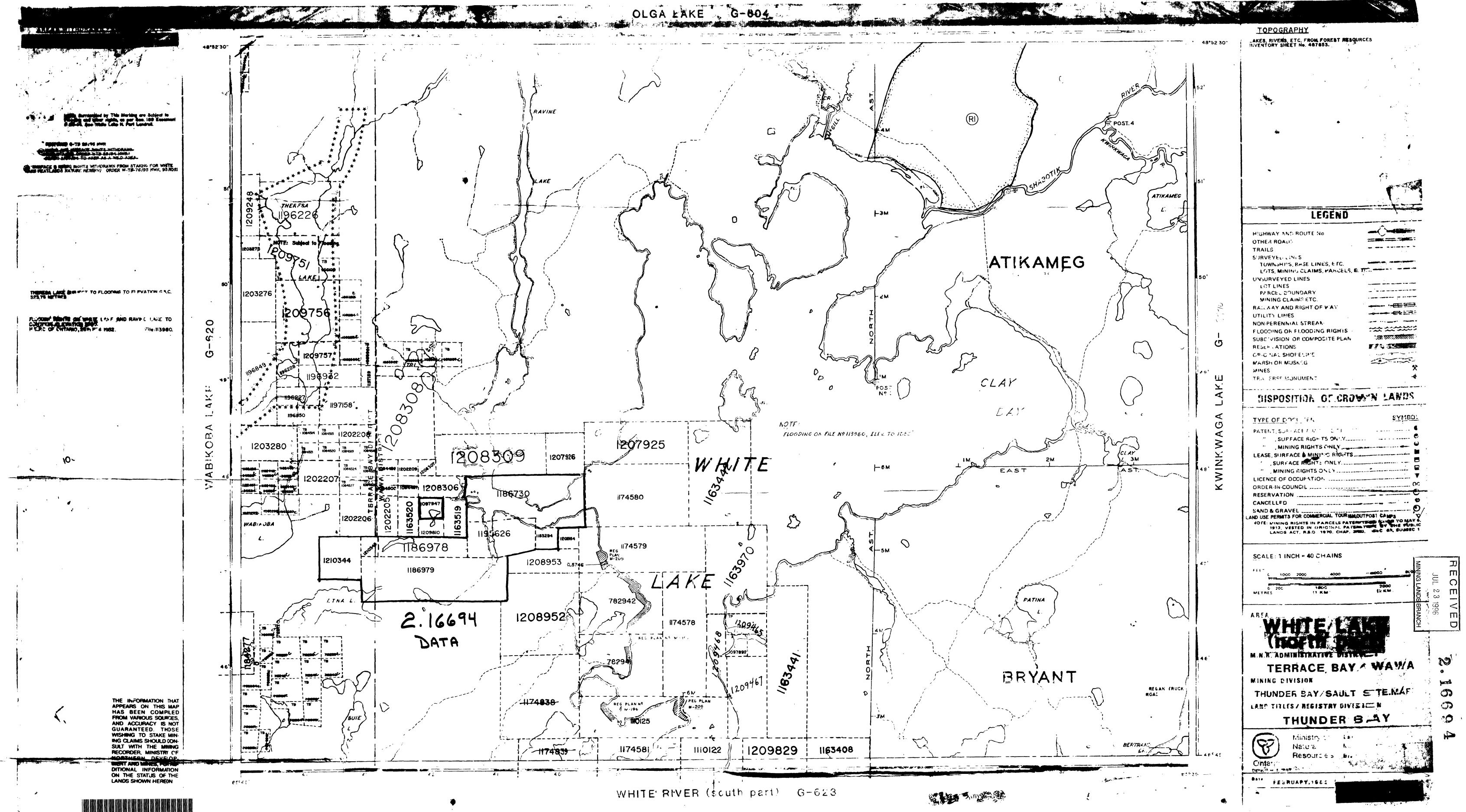
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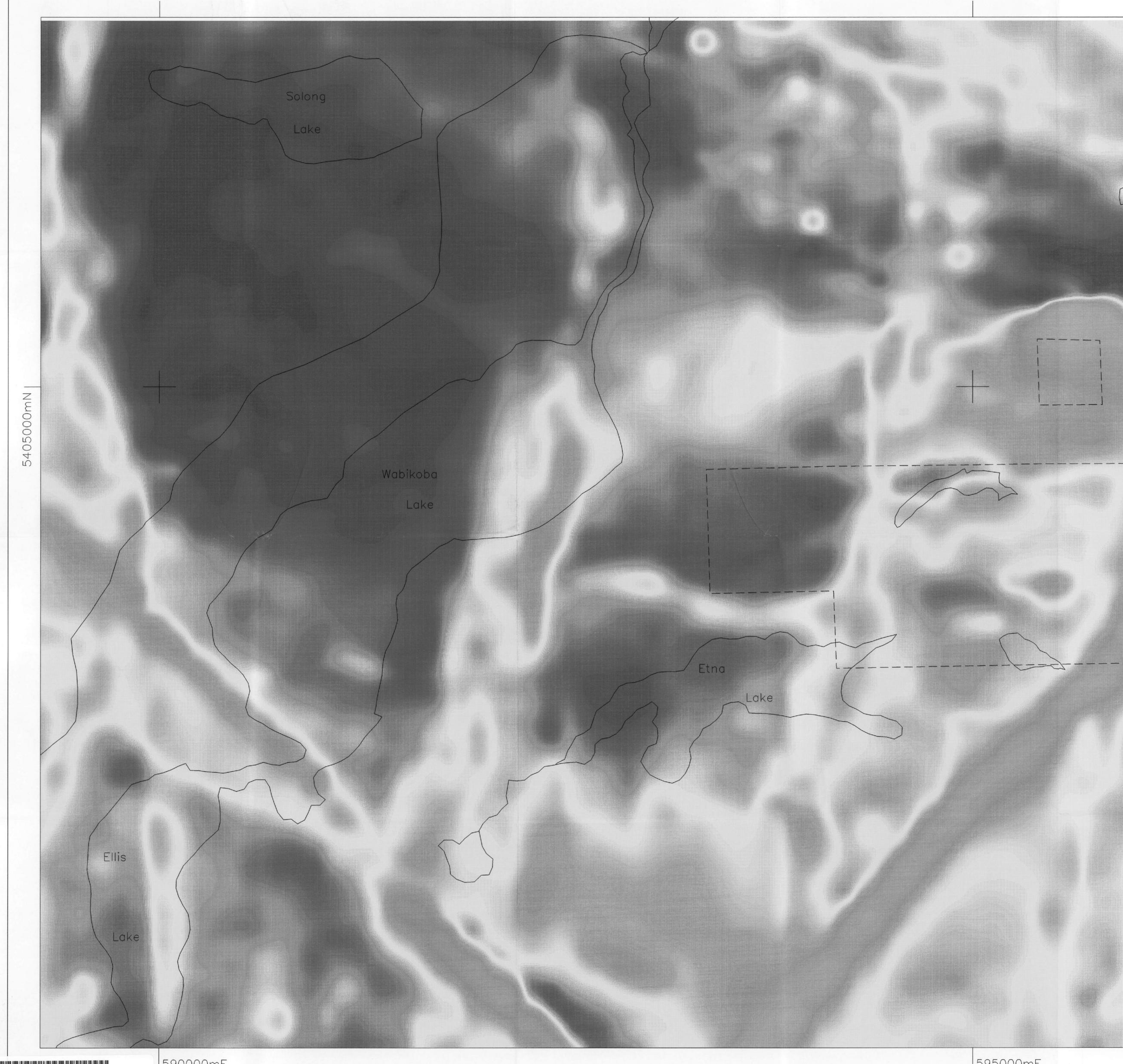
Ron C. Gashinski Senior Manager, Mining Lands Section Mines and Minerals Division

BIG/ Enclosure:

cc: Resident Geologist Thunder Bay, Ontario

ssessment Files Library Sudbury, Ontario





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UTM NORTH

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Data Source:
Aerodat Limited (1983)
Helicopter—borne, multifrequency, multicomultimed LANDS BRANCH
system, and Aerodat/Scintrex Cesium Vapour
Magnetometer Survey, Hemlo Area.

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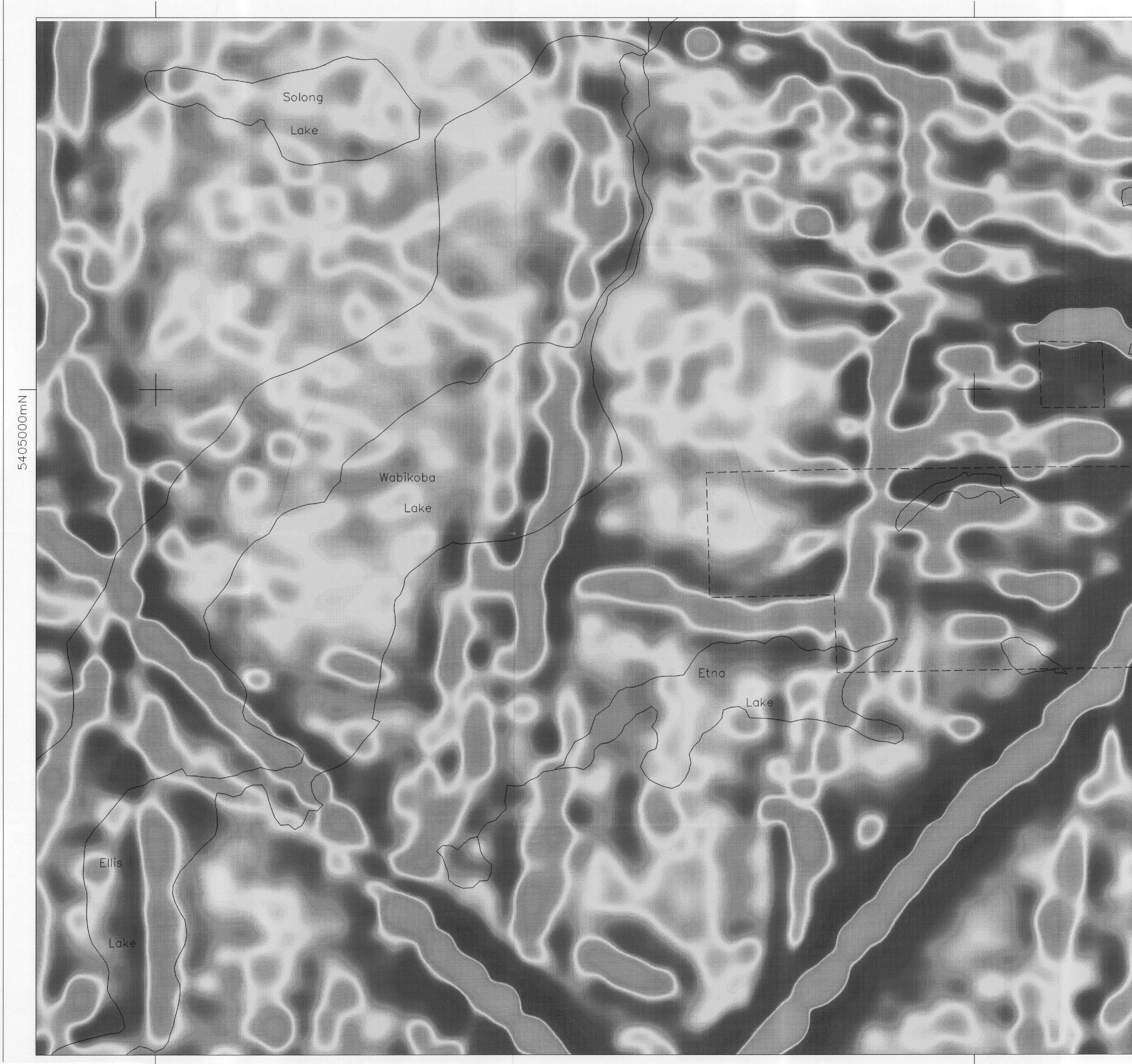
HOMESTAKE CANADA INC.

SPRUCE BAY PROPERTY

TOTAL FIELD MAGNETICS

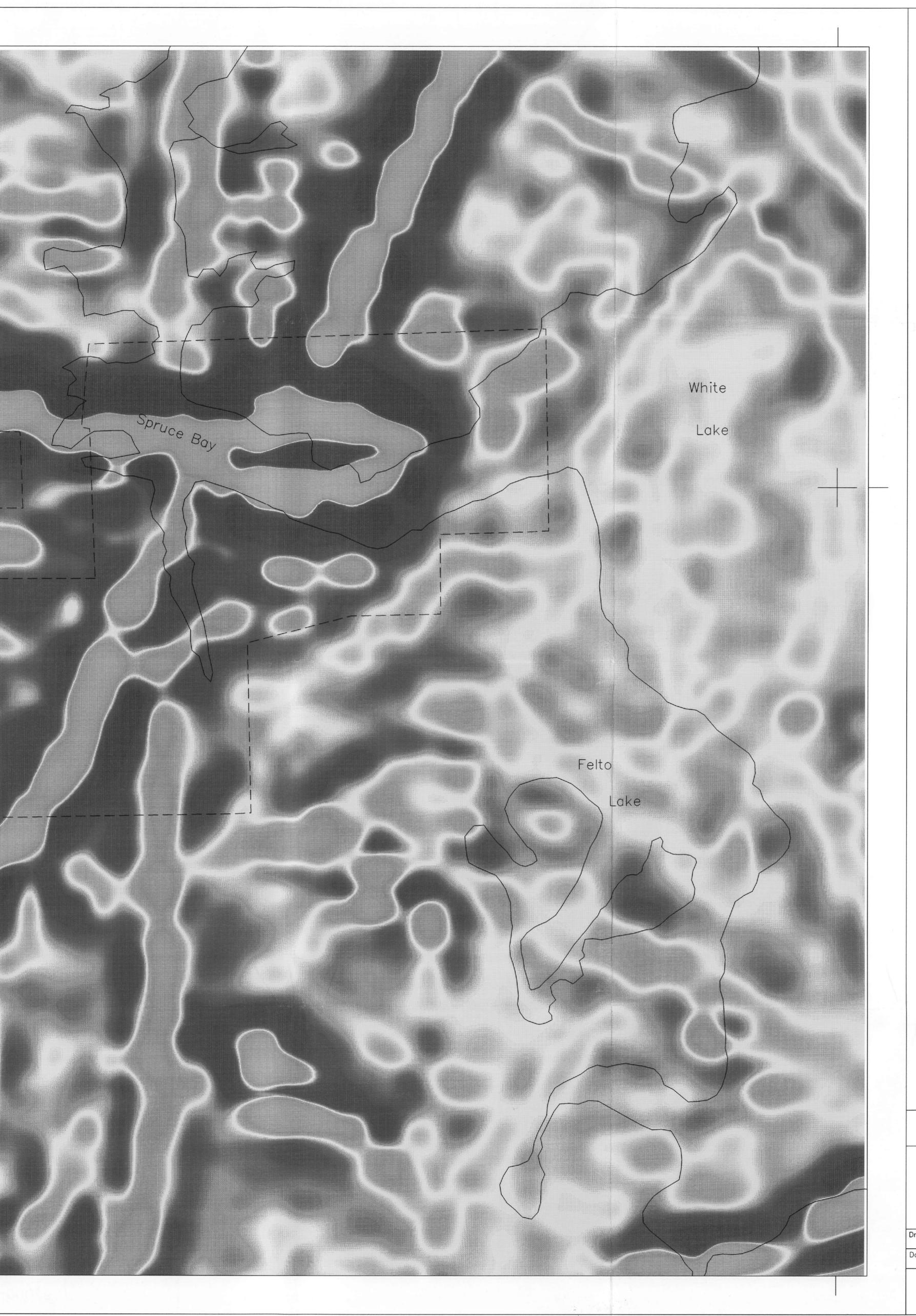
Map 2

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nanoTeslas/metre (nT/m)

RECEIVED

Data Source:
Aerodat Limited (1983)
Helicopter—borne, multifrequency, multicoil EM
system, and Aerodat/Scintrex Cesium Vapioning LANDS BRANCH
Magnetometer Survey, Hemlo Area.

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HOMESTAKE CANADA INC.

SPRUCE BAY PROPERTY

CALCULATED FIRST VERTICAL

DERIVATIVE

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ate: April, 1996	Revised:	Province: Ontario	NTS: 42C/13	
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