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GEOLOGICAL REPORT WHITMORE LAKE GROUP JEWETT LAKE PROPERTY

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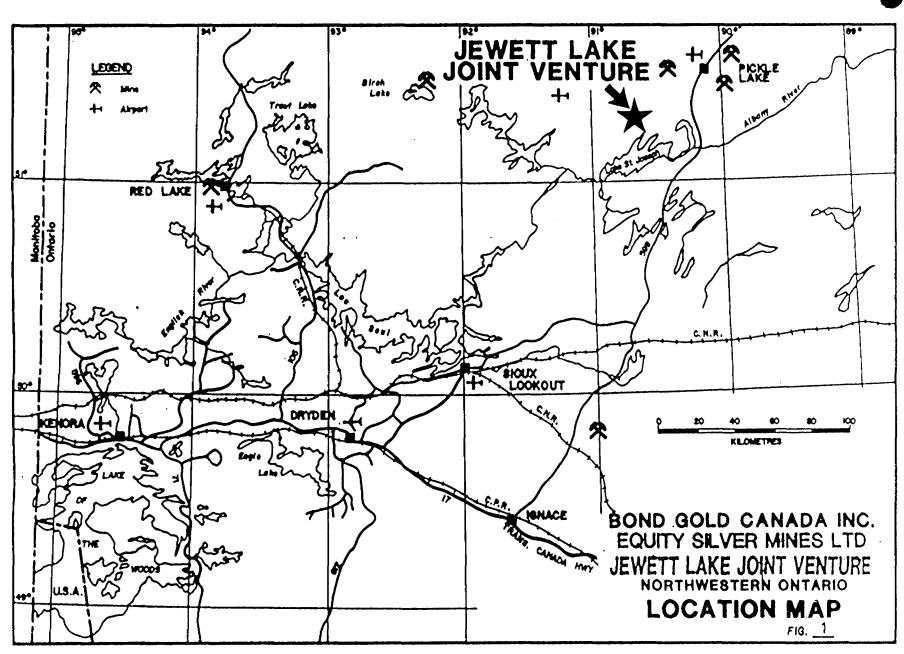
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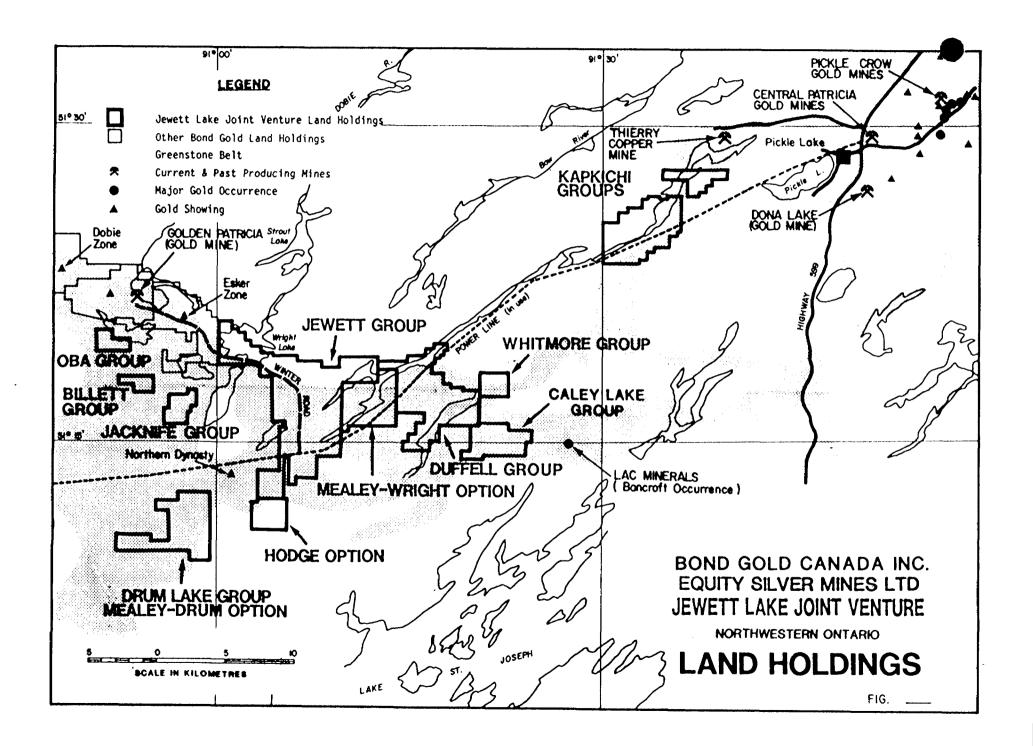
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EEB 1 7 1989

MINING LANDS SECTION

BOND GOLD CANADA INC. JANUARY, 1989





WHITMORE LAKE GRID

GRID LOCATION AND ACCESS

The Whitmore Lake grid is situated along the north shore of Whitmore Lake within the Duffell Lake group, 50km southwest of Pickle Lake (Figure 1). The area is accessible by float/ski equipped aircraft and by ATV or skidoo along the Ear Falls power line which bounds the western edge of the map area. A 100 line km grid with a baseline oriented at 280 degrees azimuth and line spacing of 100m was used for survey control. Topographically the area is generally flat with some small ridges and eskers. To the west the area is predominantly black spruce forest and swamp. As overburden thickens progressively to the east jackpine, birch and poplar become the predominant forest types. Geological mapping on the Whitmore grid commenced on the 31st of July and was completed on the 12th of August.

<u>CLAIMS</u>

The Whitmore Lake grid covers 84 claims with the following numbers:

PA1020411-1020454 PA1020457-1020468 PA1020471-1020478 PA1020483-1020486 PA1020643-1020650 PA1020656-1020658 PA1020711-1020713

PREVIOUS FIELD WORK

There is no documentaton of previous work on the grid area, however field observation did show evidence of a previous detailed mapping program and possibly a geochemical survey as recent as 1983. Clearings were found to the northeast of Billy Bob Lake, however no drill collars were seen.

GEOLOGY

(Map 1, 2)

The Whitmore Lake grid lies within the Dempster Lake volcanic cycle and the geology consists of a sequence of immature to mature sediments interbedded with thick horizons of mafic flow which have in turn been intruded by subconcordant gabbro sills and granitic dykes. The granitic intrusives are found exclusively in the eastern portion of the grid and increase in frequency to the northeast. These may be the result of the relative proximity to the Kawinogans Lake Pluton. All units strike east - west, with dips to the north.

Intrusives

Two types of intrusives were observed on the property, a gabbro (6b) and a granite (9k).

The gabbro is dark green, fine to coarse-grained, equigranular and massive. The mafic content occasionally ranges up to 60% hornblende.

Texturally the gabbro was easily identified in the field primarily by the weathered surface. The gabbro was not significantly magnetic and did not contain disseminated sulphides. This mafic intrusive was predominant in the eastern and central portions of the grid as large wedges up to 400m wide. In the west the gabbro occurred as isolated pods up to 200m x 50m in size.

Granite is found in the eastern section of the property predominantly as dykes up to 5m wide oriented at 80 degrees and 130 degrees azimuth. The dykes are commonly pegmatitic with feldspar crystals up to 20cm long. The dykes are locally compositionally segregated and appear highly siliceous but on a larger scale they fall into the granitic classification. In the north-eastern sector there appears to be a contact between amphibolite grade mafic flow and the Dobie Lake Batholith located north of the property.

Metasediments

Three types of sediments were seen on the property:

Quartzose-arenite (5a), feldspathic wacke (5c) and mafic source-derived sediments (5g). The sediments are all interbedded. The most mature, well sorted sediments are thinly to thickly bedded (1 cm to >10 cm). These beach deposits locally contain bands of detrital magnetite and other heavy minerals. This unit is easily recognized in the field due to its granular texture and its very high quartz-feldspar content.

The feldspathic wacke varies somewhat in the degree of sorting, angularity of the clasts and mafic content of the matrix. The framework is composed of fine-grained sub-angular feldspar and quartz grains in a finer grained matrix of similar composition. Locally the matrix has a high mafic content.

The mafic source-derived volcaniclastic sediments are generally well foliated containing more than 10% biotite, and commonly garnetiferous. The sediments occur mostly in the eastern portion of the grid. Very few outcrops of metasediments were observed in the western or central portion.

Metavolcanics

Mafic metavolcanics are the dominant rock type on the property comprising 60-70% of the outcrops. The unit varies from massive flow (1a) to moderately foliated flow and is dominantly fine to medium-grained with hornblende and feldspar crystals. Due to the metamorphic grade most primary structures are masked, however amygdules and pillows were observed locally.

Structure

The geological trend is roughly parallel to the baseline (90-120 degree azimuth strike) and northerly dipping for the most part. The metasedimentary and metavolcanic sequences have been intruded subconcordantly by gabbro sills and by a set of granitic dykes striking from 80 to 130 degrees. The area appears to be tightly folded along a 300 degree azimuth trend with a moderate, 40 degree, westerly plunge. Minor shears have been observed mostly, (but not exclusively) in the metavolcanics to the west.

Alteration

Rocks in the eastern portion of the property, predominantly the metavolcanics, are weakly silicified. The silica alteration is locally concentrated along discrete bands with ubiquitous, fine-grained, disseminated pyrite and locally arsenopyrite, pyrrhotite and chalcopyrite. Silica-sulphide alteration bands have been observed in all major rock types with the observed width being less than 1 m. Where outcrop scale folding has been observed it is tight but not isoclinal. Silica-sulphide alteration in these outcrops occurs concentrated in fold noses and in bands subparallel to the fold axis. Several significant silicified zones (eq. 5% combined sulphides and over 1 m in width) have been observed on widely separated outcrops. These silicified bands are thought to offer excellent potential for gold mineralization on the property.

Metamorphism

There is a marked metamorphic gradient from upper greenschist facies in the southwest corner of the property to upper amphibolite facies towards the northeast. The majority of the property lies within amphibolite facies metamorphic grade and this has overprinted most of the primary features.

This high grade of metamorphism made consistent mapping of several rock types formidable. In particular, distinguishing between mafic source sediments, mafic flows and fine-grained gabbro was difficult. All of the aforementioned rock types could be classified as an amphibolitized volcanic (10) in the field. Care had to be taken in extrapolating the geology.

ROCK GEOCHEMISTRY

Rock samples collected during mapping have yielded results up to 137 ppb Au in a mafic volcanic. Sample locations are shown on geology maps 1,2.

CONCLUSIONS AND RECOMMENDATIONS

The area is composed of a sequence of immature to mature sediments interbedded with thick horizons of mafic flow which have in time been intruded by subconcordant gabbro sills and granitic dykes. The granitic intrusives are found exclusively in the eastern portion of the grid and increase in frequency to the northeast. These may be the result of the relative proximity to the Kawinogans Lake Pluton.

Of particular interest is the existence of strong silicification, sulphide mineralization quartz veining and within the quartzose-arenite to quartzite beds of this sedimentary package at the mafic volcanic contact. If any of these assays return significant values it would represent a new style of gold mineralization in this greenstone belt. The guartzite beds which could act as a good conduit for hydrothermal fluids contain grains of heavy minerals, including magnetite, which may have a role in precipitating metals from solution similar to oxide iron formations cross-cut by hydrothermal systems.

If any of the conductors outlined by ground geophysics correspond to these sediment - volcanic boundaries, a comprehensive drill program could be outlined to test these for gold mineralization.

CERTIFICATION

- I, Jeffrey Scott Ackert, do hereby certify that:
- 1) I have graduated from the University of Toronto with a Specialist Bachelor of Science Degree in Geology 1985.
- 2) I have actively practiced as a Geologist since that time.
- 3) I have worked on the aforementioned property and all comments and data are true and correct.
- 4) I live at 117 Parkside Drive, Toronto, Ontario MGR 2Y8.

Date: JANUARY 31, 1989

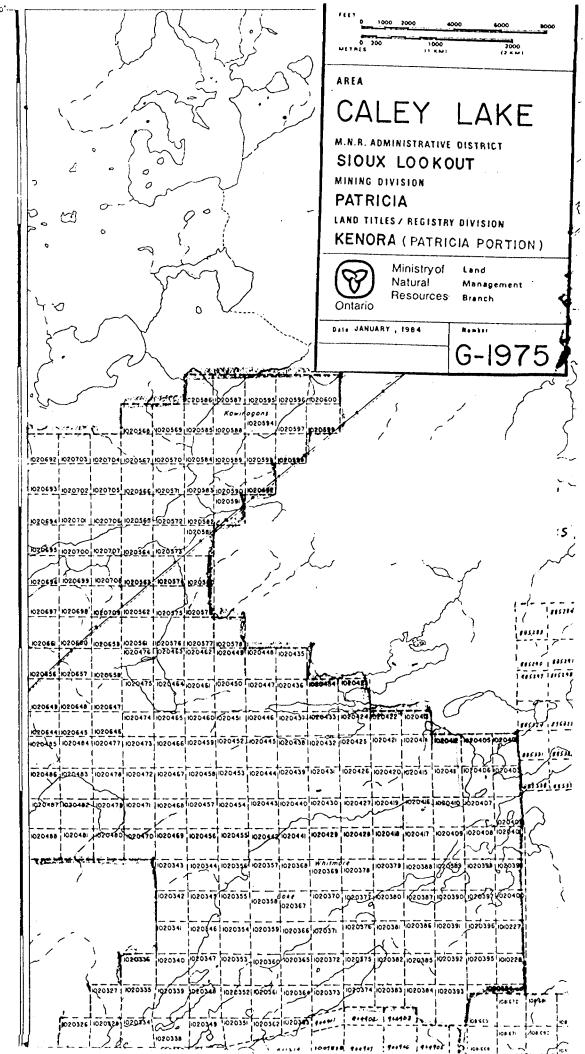
SIGNED:

Jeff Sekert.

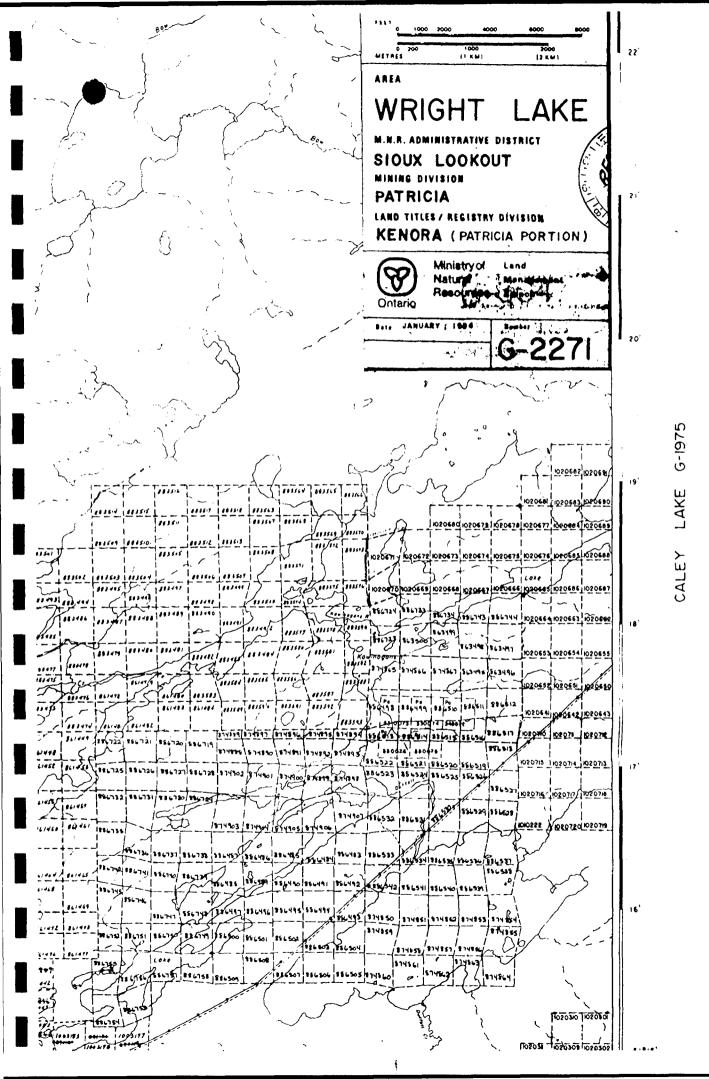
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WRIGHT LAKE G-227





Ministry of Northern Development and Mines

Geophysical-Geological-Geochemical Technical Data Statement

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APPENDIX I

WHITMORE LAKE GROUP

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PA	1020713	40
DAYS		2920

TOTAL

Mining Lands Section 3rd Floor, 880 Bay St. Toronto, Ontario M5S 128

Phone: (416) 965-4888

Your file: W8903-021 Our file: 2.12199

March 15, 1989

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Mining Recorder Ministry of Northern Development and Mines Court House Box 3000 Sioux Lookout, Ontario POV 2TO

Dear Sir:

DNTARC GEOLOGICAL SURVEY ASSESSMENT FILES OFFICE APR 17 1989 RECEIVED

Re: Notice of Intent dated February 23, 1989 Geological Survey on Mining Claims PA 1020411 et al in Caley Lake, Wright Lake Area

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

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Yours sincerely,

W.R. Cowan Provincial Manager, Mining Lands Mines & Minerals Division

DK/eb

Enclosures

- cc: Mr. G.H. Ferguson Mining and Lands Commissioner Toronto, Ontario
- cc: Resident Geologist Sioux Lookout

cc: Bond Gold Canada Inc. 100-20 Adelaide St. E. Toronto, Ontario N5C 2TW

Northern Development	Technical Assessment Work Credits		Date Feb 23, 1989	2.12199 Mining Recorder's Report Work No W8903-21
Recorded Holder Bond Gold Canada Inc. Township or Area Caley Lake, Wright Lal Type of survey and number Assessment days credit per cl Geophysical Electromagnetic Magnetometer Radiometric	Ke of aim days days	PA-1020411 to 1 1020420 to 2 1020424 to 2 1020431 to 1 1020437 to 2	Mining Claims Assessed 15 inclusive 22 incl. 26 incl. 33 incl.	W8903-21
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The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

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APPENDIX I

WHITMORE LAKE GROUP

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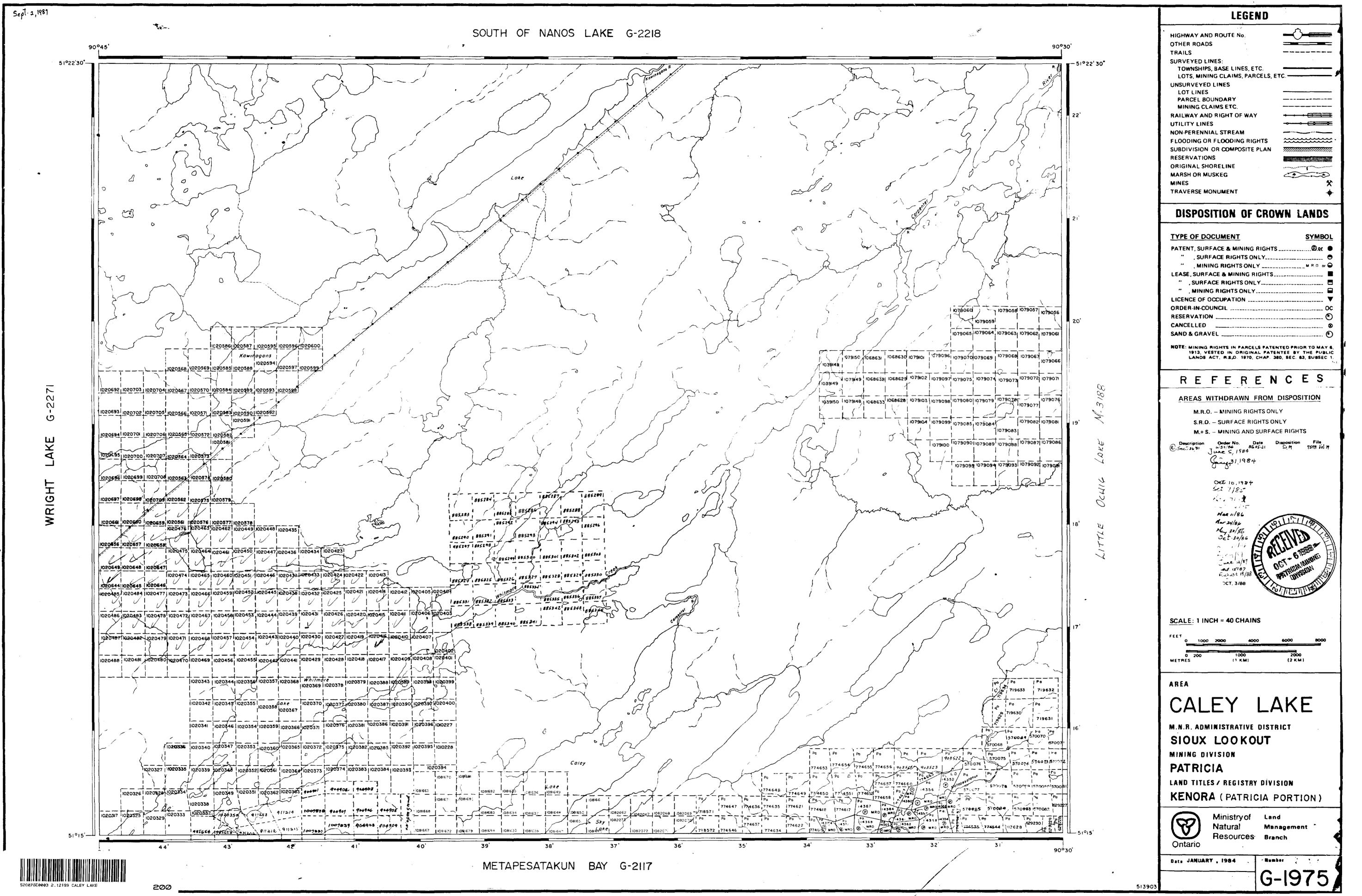
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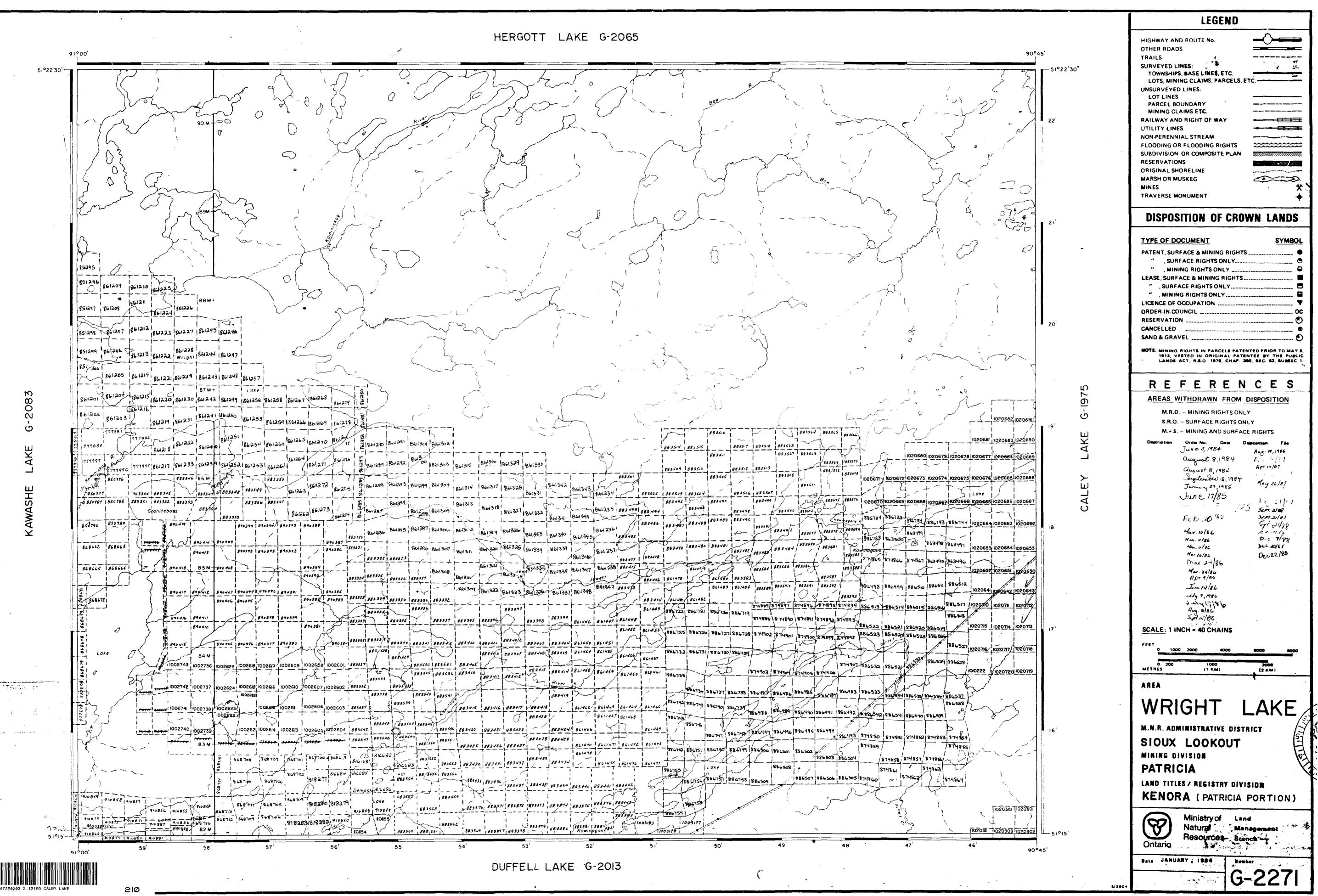
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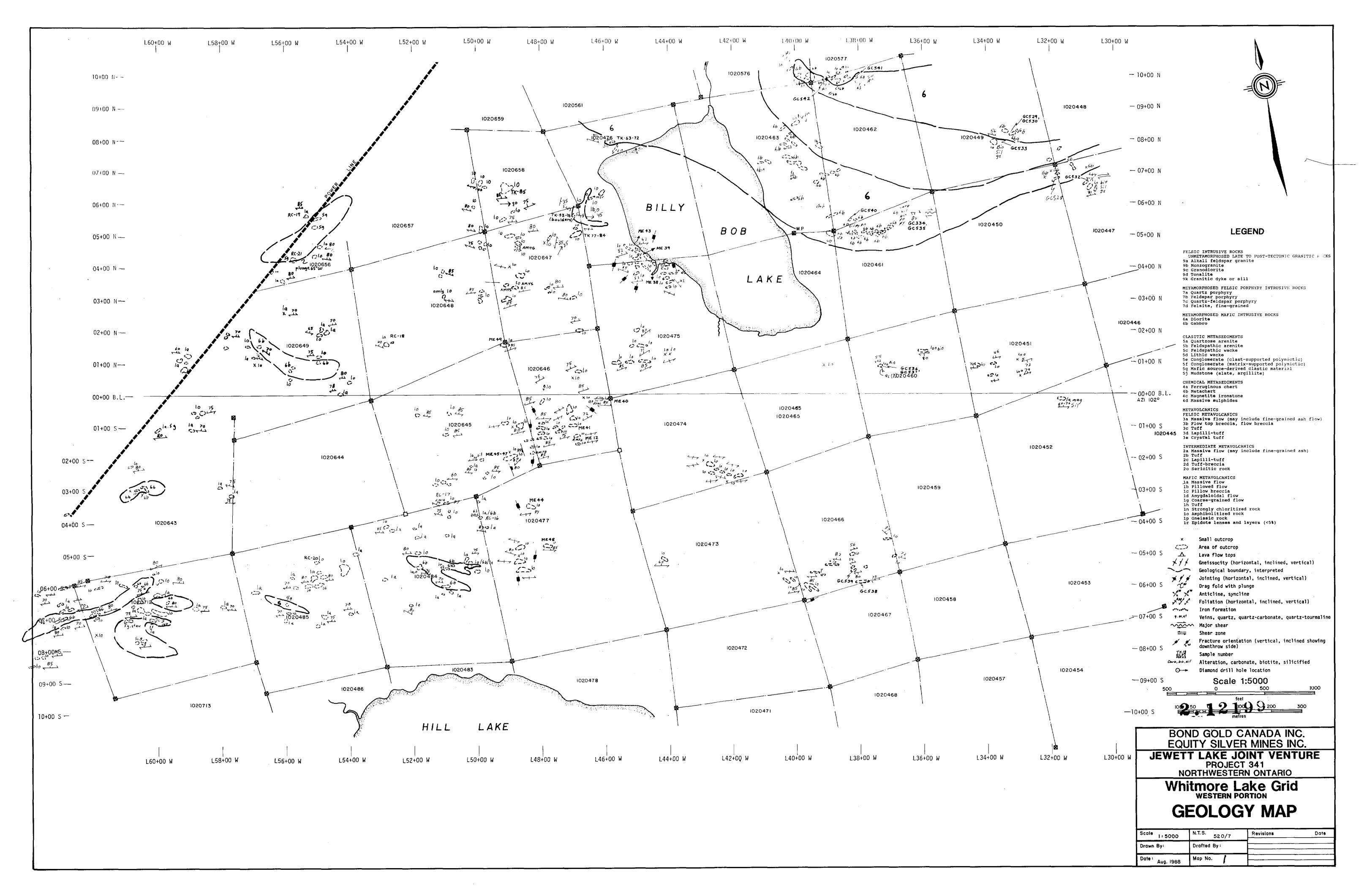
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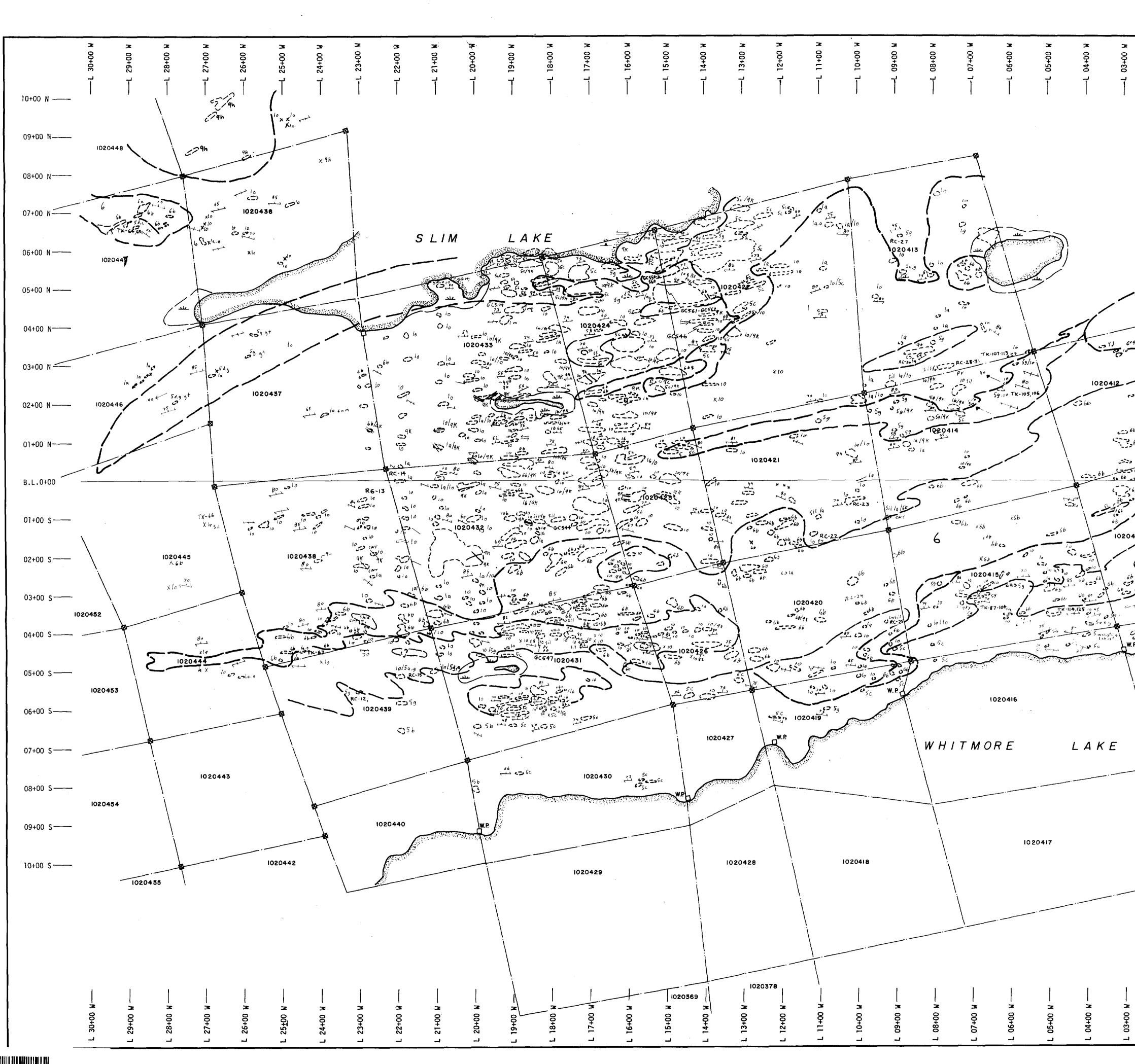






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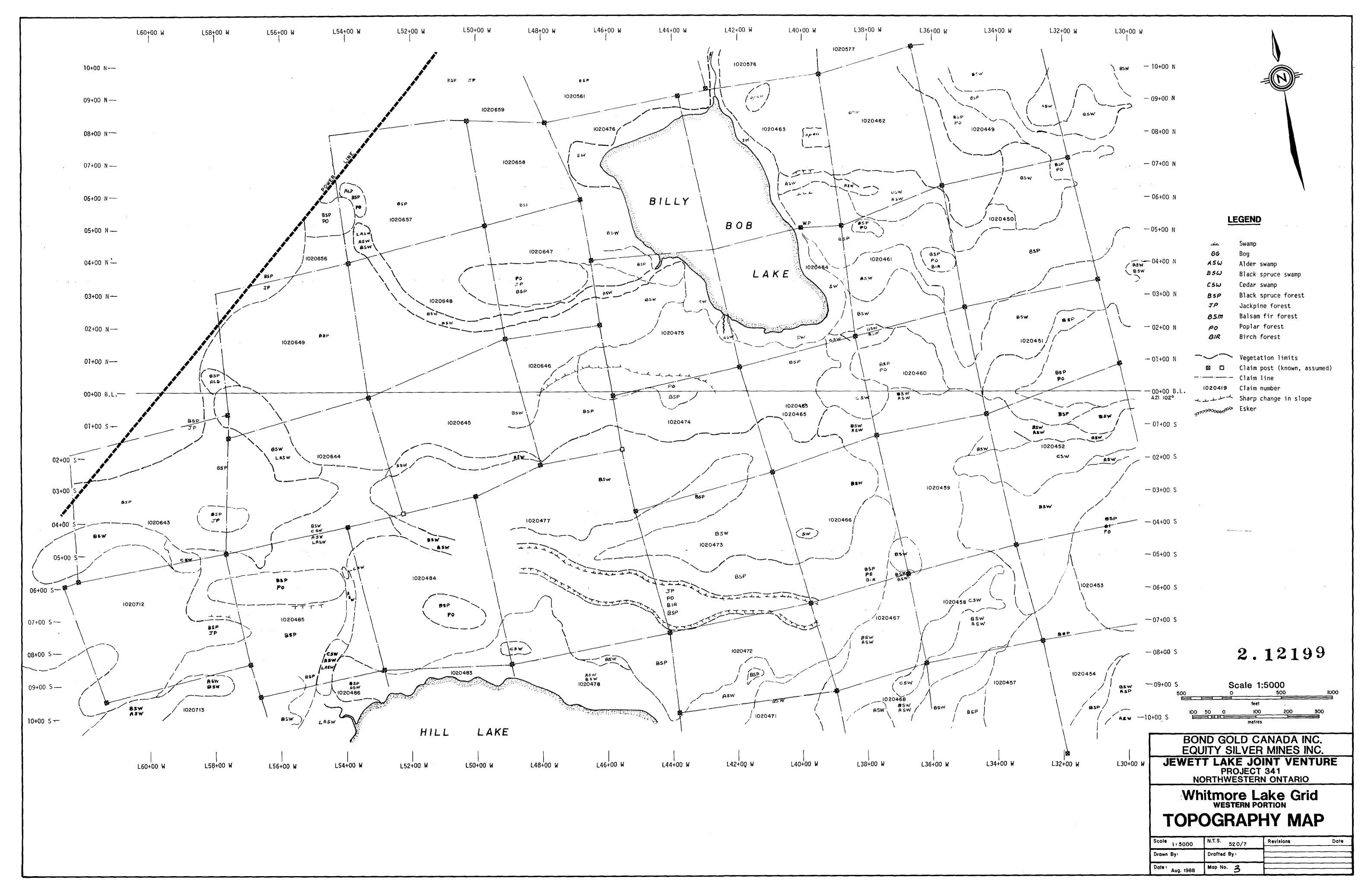
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053,0	5. c			, <u> </u>	04+00 S	Area of outcrop Lava flow tops
W. P.		A.C. D				Gneissocity (horizontal, inclined, vertical) Geological boundary, interpreted
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Ì.						Foliation (horizontal, inclined, vertical)
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