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ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS
HONOURABLE LEO BERNIER, *Minister*
D. P. Douglass, *Deputy Minister* J. E. Thomson, *Director, Geological Branch*

Map 2239
Eby—Otto Area

SYMBOLS

- Glacial striae.
- Esker.
- Small bedrock outcrop.
- Area of bedrock outcrop.
- Bedding, top unknown; (inclined, vertical).
- Lava flow; top (arrow) from pillows shape and packing.
- Schistosity; (horizontal, inclined, vertical).
- Gneissosity, (horizontal, inclined, vertical).
- Geological boundary, observed.
- Geological boundary, position interpreted.
- Fault; (observed, assumed). Spot indicates down throw side, arrows indicate horizontal movement.
- Lineament.
- Jointing; (horizontal, inclined, vertical).
- Drag folds with plunge.
- Anticline, syncline, with plunge.
- Drill hole; (vertical, inclined).
- Vein, vein network. Width in inches.
- Shaft; depth in feet.
- MA — Magnetic attraction.
- RA — Radioactivity.
- (66) — Motor road. Provincial highway number encircled where applicable.
- Other road.
- Trail, portage or winter road.
- Building.
- Township boundary, approximate position only.
- Surveyed line, approximate position only.
- Property boundary, approximate position only.
- 6 (12) — Mining property; (surveyed, unsurveyed). See list of properties.

LIST OF PROPERTIES

EBY TOWNSHIP

1. Baldwin Consolidated Mines Limited.
2. Barker, Mrs. Cora K.
3. Cain, Mrs. Donna.
4. Dominion Gulf Company [circa 1952].
5. Fishkin, Morris.
6. Hansen, Aage.
7. Johnson, Angus [circa 1938].
8. Kaplan, M., and Hahn, R. J.
9. Keevil Mining Group Limited.
10. Lemu Investments.
11. Mundy [circa 1938].
12. Preston Mines Limited.
13. Roglick, Martin; Clark, Amelia; and Elliott, Richard.
14. Stewart, W.
15. Strome, Diane C.
16. Sylvanite Gold Mines Limited [circa 1945].
17. Taylor Gold Mines Limited.
18. Todora Kirkland Prospecting Syndicate [circa 1948].
19. Vagolaide, Ago and Ellen.
20. Walters, George W.

OTTO TOWNSHIP

21. Bottrell, Mrs. Helen.
22. Chavigny Gold Mines Limited.
23. Cochrane, W. M.
24. Gateford Mines Limited.
25. International Nickel Company of Canada Limited, The.
26. Simpson, William.
27. Strome, Diane C.
28. Todora Kirkland Prospecting Syndicate [circa 1948].

Date in square brackets, refers to last major work.

SOURCES OF INFORMATION

Geology of Eby Township, the three southern concessions of Otto Township and the northern part of Marquis Township by H. L. Lovell and assistants, 1967 and 1968.

Geology of the northern halves of lots 8, 9, 10, 11 and 12, concession VI, Otto Township from O.D.M. Map No. 1945-1, Township of Teck.

Geology of concession V and remainder of concession VI, Otto Township by K. D. Lawton and assistants, 1955; field maps and notes compiled by John Ramsden and H. L. Lovell, 1965.

Geology of concession IV, Otto Township, by John Ramsden, 1965.

Geology is not tied to surveyed lines.

Geological and geophysical maps and reports of mining companies.

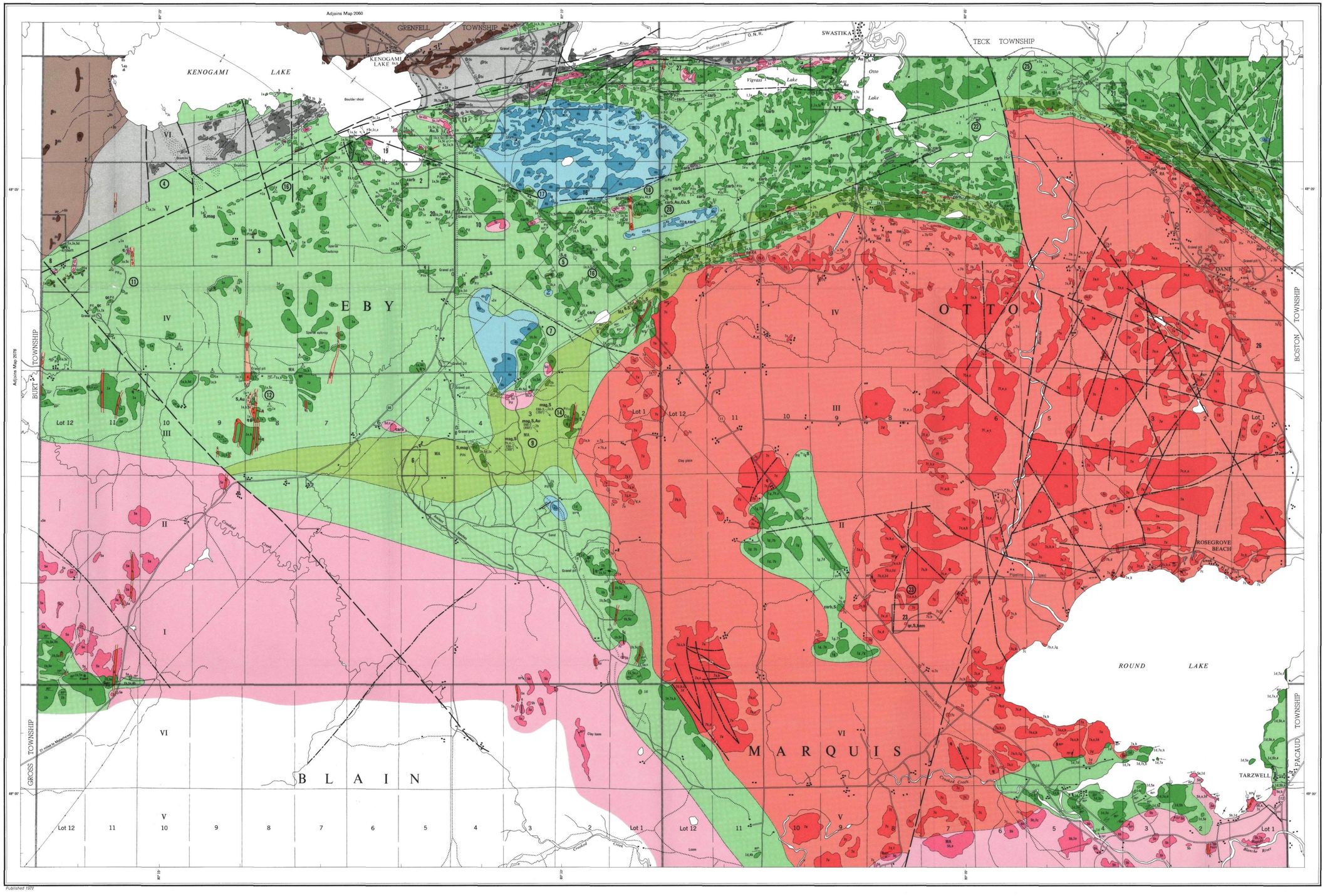
Geological Survey of Canada Aeromagnetic maps 289G and 1506G.

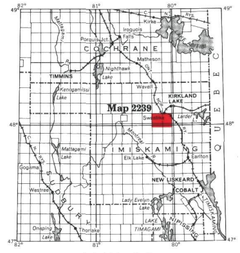
Preliminary maps P. 448 Eby Township and P. 501 Otto Township and northern part of Marquis Township. Scale 1 inch to ¼ mile issued 1968 and 1969 respectively.

Cartography by C. A. Love and assistants, Ontario Department of Mines and Northern Affairs, 1971.

Base map derived from maps of the Forest Resources Inventory, Ontario Department of Lands and Forests, with revisions by H. L. Lovell.

Magnetic declination in the area was approximately 9°21'W in 1969.





Scale, 1 inch to 50 miles

N. T. S. reference 41P/16, 42A/1

LEGEND

CENOZOIC[a]

PLEISTOCENE AND RECENT
Silt, clay, sand, gravel.

UNCONFORMITY

PRECAMBRIAN[b]

PROTEROZOIC

LATE MAFIC INTRUSIVE ROCKS (NIPISSING OR KEWEENAWAN)

9 *Diabase.*

INTRUSIVE CONTACT

HURONIAN
COBALT GROUP
GOWGANDA FORMATION

8a *Conglomerate.*
8b *Arkose, greywacke, argillite.*

UNCONFORMITY

ALKALIC INTRUSIVE ROCKS

7a *Coarse-grained syenite, syenite porphyry, pegmatite.*
7b *Mafic syenite, syenite contaminated by country rocks.*
7c *Medium-grained syenite, aplite dikes.*
7d *Syenite with numerous xenoliths and autoliths.*
7e *Lamprophyre.*
7f *Quartz syenite, granite.*
7g *Diorite.*

INTRUSIVE CONTACT

ARCHEAN

MAFIC INTRUSIVE ROCKS (MATACHEWAN OR NIPISSING)

6 *Diabase.*

INTRUSIVE CONTACT

FELSIC INTRUSIVE ROCKS (ALGOMAN)

5a *Granite, porphyritic granite, granodiorite.*
5b *Granodioritic gneiss.*
5c *Syenite and trachyte.*
5d *Mafic syenite and mafic trachyte.*

INTRUSIVE CONTACT

EARLY MAFIC AND ULTRAMAFIC ROCKS (HAILEYBURIAN, EARLY ALGOMAN, AND KEEWATIN)

4a *Serpentinite, peridotite.*
4b *Gabbro, diorite.*

INTRUSIVE CONTACT

METASEDIMENTS (TIMISKAMING AND KEEWATIN)

3a *Conglomerate.*
3b *Quartzite, greywacke.*
3c *Tuff, agglomerate, minor amounts of trachytic agglomerate, breccia.*

UNCONFORMITY AND INTERBEDDING

FELSIC METAVOLCANICS (KEEWATIN)

2a *Rhyolite, dacite.*
2b *Iron formation, silicic tuff, agglomerate.*
2c *Dacite porphyry, amygdaloidal and spherulitic dacite.*

MAFIC METAVOLCANICS AND METASEDIMENTS

1 *Unsubdivided mafic volcanics.*
1a *Basalt, andesite.*
1b *Chloritic mafic tuff, agglomerate.*
1c *Altered (bleached, carbonatized) volcanic and sedimentary rocks.*
1d *Amphibolite, garnet-epidote amphibolite, amphibolite gneiss.*
1e *Andesite porphyry, amygdaloidal and spherulitic dacite.*
1g *Biotite-garnet-pyroxene amphibolite.*

Au	Gold
carb	Carbonate
Cu	Copper
gf	Graphite
hem	Hematite
mag	Magnetite
ne	Nepheline
q	Quartz
qc	Quartz-carbonate
S	Sulphide mineralization
Zn	Zinc

[a] *Unconsolidated deposits. Cenozoic deposits are represented by the lighter coloured parts on the map.*

[b] *Bedrock geology. Outcrops and inferred extensions of each rock map unit are shown. Where in places a formation is too narrow to show colour and must be represented in black, a short black bar appears in the appropriate block.*

Map 2239

EBY-OTTO AREA

TIMISKAMING DISTRICT

Scale 1:31,680 or 1 Inch to ½ Mile

Chains 80 60 40 20 0 1 2 Miles
Metres 1000 0 1 2 3 Kilometres
Feet 1000 0 5,000 10,000 Feet