

DESCRIPTIVE NOTES

**INTRODUCTION**  
 The Maitland River area is located in the northern part of the Maitland River Basin. The Maitland River Basin is a sub-basin of the Mackenzie River Basin. The Maitland River Basin is a sub-basin of the Mackenzie River Basin. The Maitland River Basin is a sub-basin of the Mackenzie River Basin.

LANDSCAPE

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PREVIOUS WORK

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SYMBOLS

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REFERENCES

Adams, J.A. 1978. Geology of the Maitland River Basin. Ontario Geological Survey, Special Report 107, 100 p.

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ACKNOWLEDGMENTS

The author wishes to thank the following individuals for their assistance during the course of this project:

- John Smith
- Jane Doe
- Bob Johnson

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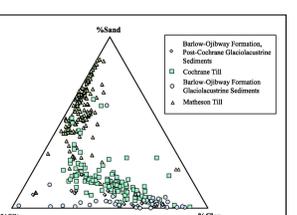


Figure 1. Crustal cross-section showing stratigraphic units from the Maitland River section. The units are labeled as follows: 1. Maitland River Formation, 2. Post-Cochrane Glaciolacustrine Sediments, 3. Cochrane Till, 4. Backwash Outwash Formation, 5. Glaciolacustrine Sediments, 6. Maitland Till.



Figure 2. Typical diastereomeric Maitland Till pebbles. The image shows three types of pebbles: Metavolcanic clasts, Palaeozoic carbonate clasts, and Felsic and intermediate intrusive clasts.

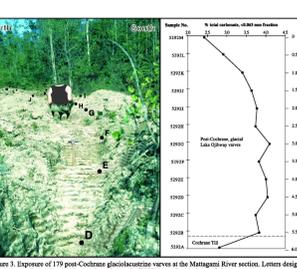


Figure 3. Exposed diastereomeric glaciolacustrine sediments in the Maitland River section. The figure shows a cross-section of the riverbed with various sediment types labeled.

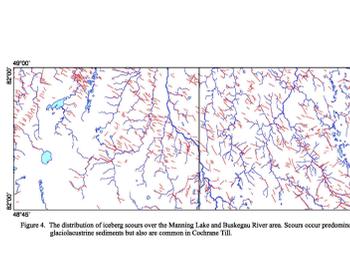


Figure 4. Distribution of pebbles across the Manning Lake and Backwash River areas. The figure shows a map of the area with pebbles scattered across the landscape.

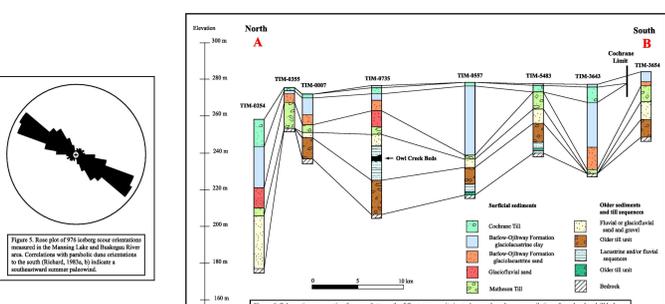


Figure 5. Base plan of 175 pebble observations. The figure shows a map of the study area with 175 numbered points indicating the locations of pebble observations.

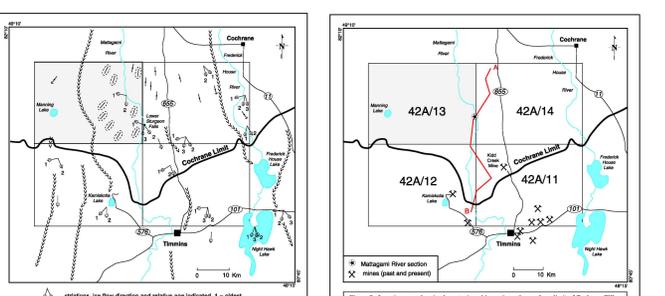


Figure 6. Schematic cross-section from north to south of Quaternary units. The figure shows a vertical cross-section of the Quaternary units, with different layers labeled and their relative positions shown.

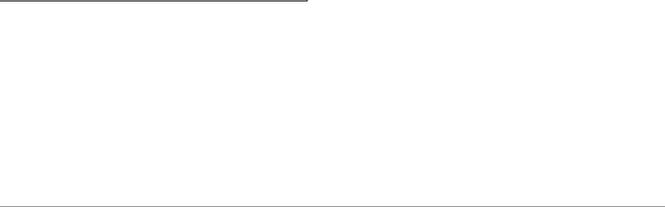


Figure 7. Location map showing selected stratigraphic sections. The figure shows a map of the study area with several locations marked for stratigraphic sections.

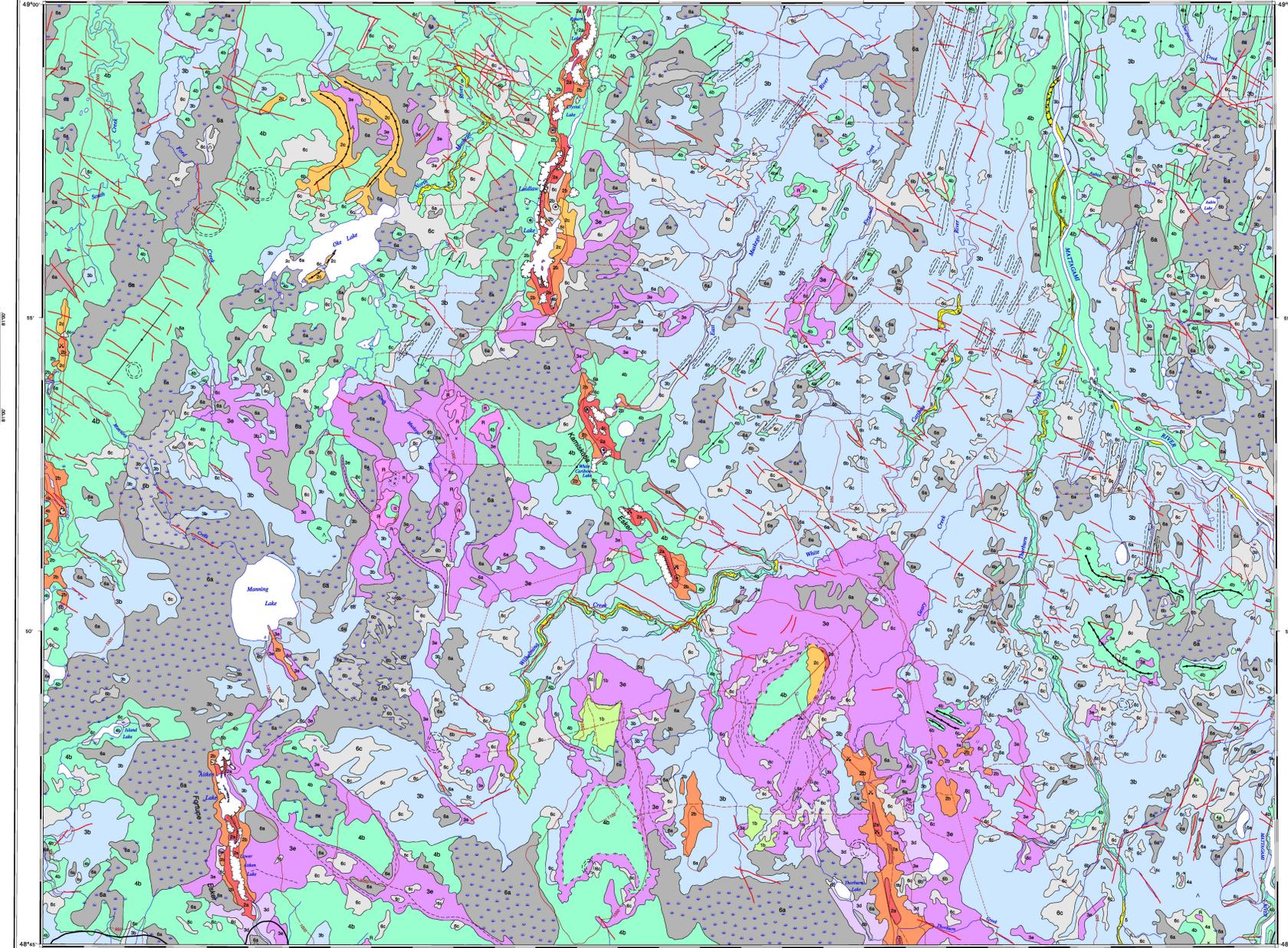


Figure 8. Geologic map of the Maitland River Basin. The map shows various geological units, including the Maitland River Formation, Cochrane Till, and Backwash Outwash Formation. The map is color-coded and includes a legend.

**OPEN FILE 3618**  
**SURFICIAL GEOLOGY**  
**MANNING LAKE**  
**NORTHEASTERN ONTARIO**

Scale 1:50 000 - Echelle 1:50 000

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada.

Digital map data compiled by Geomatics Division and modified by the Geomatics Information Division

Magnetic declination 1986, 10°44' W; increase 1.7° annually

Elevations in feet above mean sea level

Geology by R.C. Pallen and M.B. McCracken, 1991, 1996

Contribution to the Canada-Ontario Subsurface Agreement on Northern Ontario Development (1991-1996), under the Canada-Ontario Economic and Regional Development Agreement

Digital compilation by D. Viner, Geoscience Information Division

Electronic plot produced by the Geoscience Information Division

Elevations in feet above mean sea level

**LEGEND**  
 The legend is common to Open Files 3618 and 3619. Coloured legend blocks indicate units that do not appear on this map. Not all map symbols shown in the legend necessarily appear on this map.

- QUATERNARY**
- 5c Unconsolidated materials: bluish mud and/or peat layers occurring in unconsolidated weathered
  - 5b Fine sand: occurs in a pattern with water table at surface and/or intense channeling; surface texture is dominated by grasses and weeds near local ponds, and grassy ridge
  - 5a Silt and clay: occurs in a pattern with fluctuating water table and commonly a mottled surface; post-surface is overlain by polyhumic mosses, reed stands, and short disturbed trees

- POST GLACIAL**
- 4b Till blanket: generally continuous cover, average thickness of more than 1 m
  - 4a Till veneer: discontinuous cover of Cochrane Till interspersed with rock outcrops; average thickness < 1 m, but may be thicker locally

**GLACIAL LAKE DEPOSITS (Backwash Outwash Formation and North Drift Formation)**  
 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j, 3k, 3l, 3m, 3n, 3o, 3p, 3q, 3r, 3s, 3t, 3u, 3v, 3w, 3x, 3y, 3z

- 3a Silt and sand: occurs in a pattern with fluctuating water table and commonly a mottled surface; post-surface is overlain by polyhumic mosses, reed stands, and short disturbed trees
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- GLACIOLACUSTRINE DEPOSITS (stratified sediments)**  
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- TILL (Maitland Till)**  
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- PREQUATERNARY**
- R Precambrian bedrock: unconsolidated; consists of mafic to felsic metasediments, metasediments, mafic to ultramafic and basic intrusive rocks, igneous, in places, a thin layer of silt and/or discontinuous cover of surficial sediments

**SYMBOLS**

- Circle: feature in defined terrain
- Allostratigraphic ridge: small
- Blowout
- Beach
- Wash on bench
- Kettle (large, small)
- Ice contact deposit
- Linear: direction of paleoflow indicated
- Buried drumlin or streamlined landform
- Quarried or streamlined landform
- Downflow, down-slope flow direction indicated
- Stratigraphic, glacial, and other small flow features (flow direction based on radiocarbon dating and tail, toes, and chertmarks); numbers indicate relative age - oldest
- Probable rock outcrop
- Rock outcrop, outcrop area
- Drained sand pit
- Limit of Cochrane Till (dotted)