

### In Brief:

- 17,000 mineral occurrences compiled with location data throughout Manitoba
- Most of the 2023 updates were focused on parts of the Superior province
- MDD updates continue to be shared in GeoFile 5

### Citation:

Rinne, M.L. 2023: Progress report on the Manitoba Mineral Deposits Database; *in* Report of Activities 2023, Manitoba Economic Development, Investment, Trade and Natural Resources, Manitoba Geological Survey, p. 1–3.

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### Summary

The Manitoba Mineral Deposits Database contains data relating to mineral occurrences and deposits throughout the province, including information on critical minerals. Updates to the database during the last year were primarily focused on parts of the Superior province. The latest version includes approximately 17 000 occurrences with location data, and will be provided in GeoFile 5-2023.

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### Introduction

The Manitoba Geological Survey (MGS) has been working to update the Mineral Deposits Database (MDD) since 2020. The project rationale and mineral occurrence definitions used for this work are explained in Rinne (2020, 2021, 2022). Specific methods used to help collect mineral occurrence data—including the use of scripts to automate the export of geochemical data tables from scanned PDF files, along with a series of keyword search expressions applied to the main text of industry assessment reports—are described mostly in Rinne (2021). This year’s report provides a broad summary of the most recent set of updates to the MDD, followed by an explanation of changes made to allow for faster publication of more preliminary mineral occurrence data.

### Results

Since 2020, approximately 35 000 mineral occurrences have been identified in Manitoba, of which nearly half now include preliminary location data. The occurrences with location data are shown in Figure GS2023-1-1, and will also be shared in an updated version of GeoFile 5.

Although new mineral occurrence data have been added from throughout the province, most of the updates during the past year have been focused on parts of the Superior province, where the number of occurrences is now sufficient to resolve the shapes of some greenstone belts and major structures (e.g., Figure GS2023-1-1). For a depiction of the 2023 MDD updates shown at the scale of greenstone belts (and further separated by commodity type), see the report on the Bird River area (Martins et al., 2023).

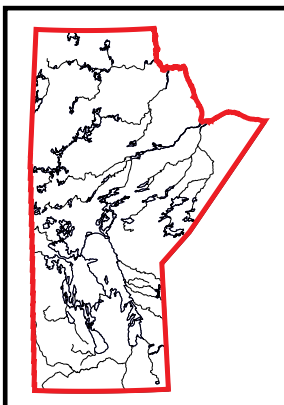
### Changes to the MDD release format

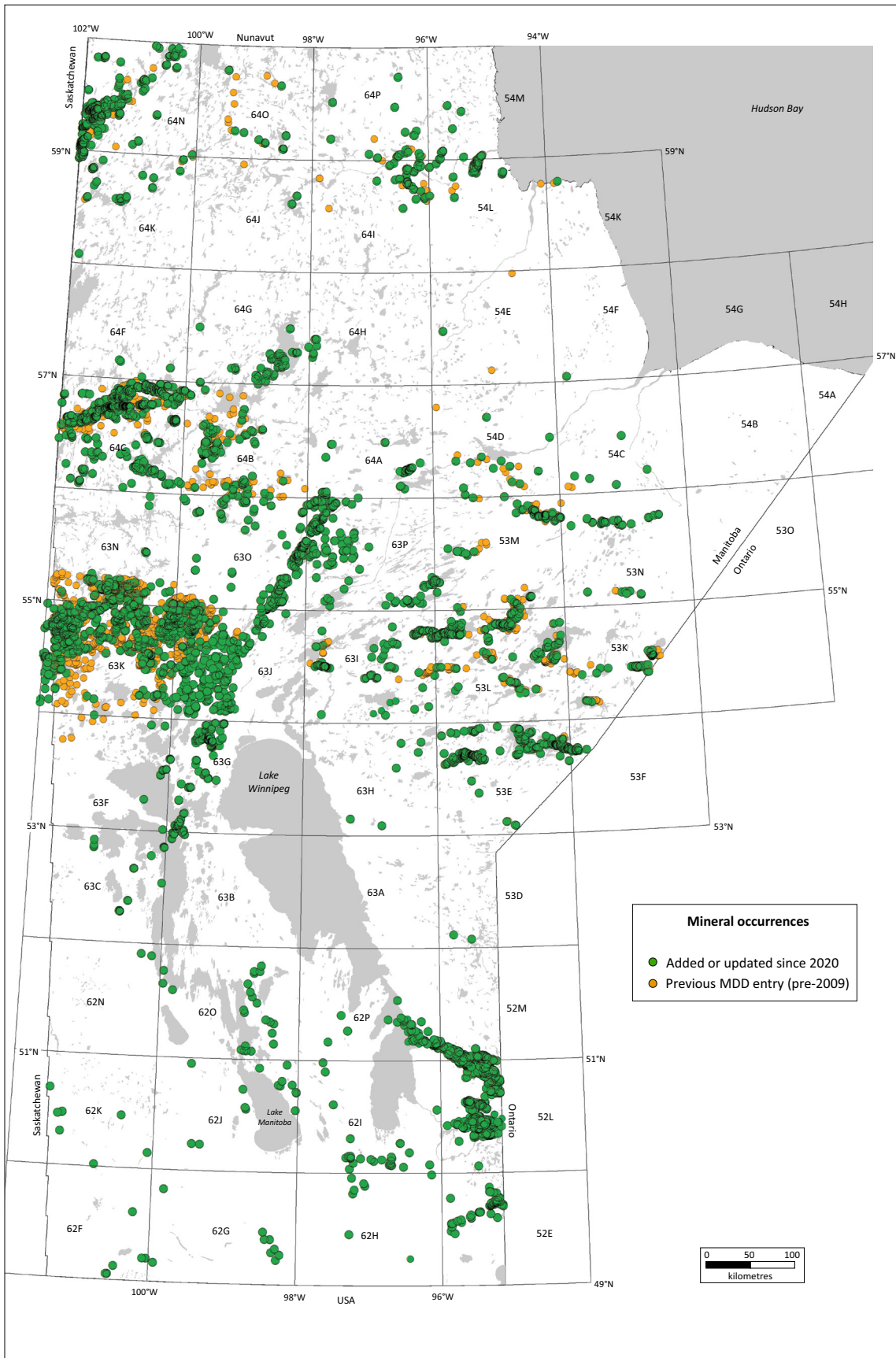
Client requests and feedback helped guide the format of the upcoming MDD release, which has been partially adjusted with the aim of sharing preliminary data more quickly. Compared to last year’s release, changes to GeoFile 5 will include the following:

- Partially blank “MDD number” field. Following convention in the previous generation of the MDD (e.g., Conley et al., 2009), the MDD number is a unique identifier assigned to every mineral occurrence in Manitoba. Starting this year, new mineral occurrence numbers are not assigned to new records until other data (especially occurrence locations) have been entered and verified. MDD numbers will be retained for all existing records.
- Partially updated “occurrence classification” field. Occurrence classifications (e.g., mineral occurrence, occurrence with mineral resource estimate, or active mine) have not yet been completed for the more recent mineral occurrence entries, as this requires more information or further review. In addition to a few other fields left partially blank in more recent entries, these columns will be populated as updates continue.
- Addition of a “Surface/subsurface/other” field, in response to helpful feedback and potential-use cases suggested by MGS Quaternary geologists.

### Future plans

Updates to the MDD continue primarily by region, but focus may be directed to specific regions or commodity types as required. Once most of the basic occurrence information has been compiled province-wide, additional information may be appended as necessary. Among the major deposits





**Figure GS2023-1-1:** Map of Manitoba showing mineral occurrences added to the Manitoba Mineral Deposits Database (MDD) since 2020. All of the green points indicated here will be included with relevant data in GeoFile 5-2023, although many are preliminary data that may be changed or removed with further updates.

and more developed prospects, this will include the addition of a revised mineralization style or deposit model classification that is compatible with nationwide mineral occurrence data standards being developed as part of the Pan-Canadian Geoscience Strategy (National Geological Surveys Committee, 2022).

### **Economic considerations**

Expanding the MDD leads to improved commodity potential assessments, which in turn allows for better-informed land-use plans (such as park development and infrastructure planning), community-focused economic development strategies, and related activities such as geological survey fieldwork plans. In the private sector, mineral occurrence data are key to mineral exploration decisions. The dissemination of new mineral occurrence data can therefore lead to renewed exploration efforts in some parts of Manitoba.

### **Acknowledgments**

Much of the Mineral Deposits Database update project relies on the assistance of students such as J. Janssens and H. Chow from the University of Manitoba, especially in the collection of sample location information. Thanks are also owed to E. Yang and C. Couëslan for their reviews.

### **References**

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