

# MINERAL INVENTORY PROJECT

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## ABSTRACT

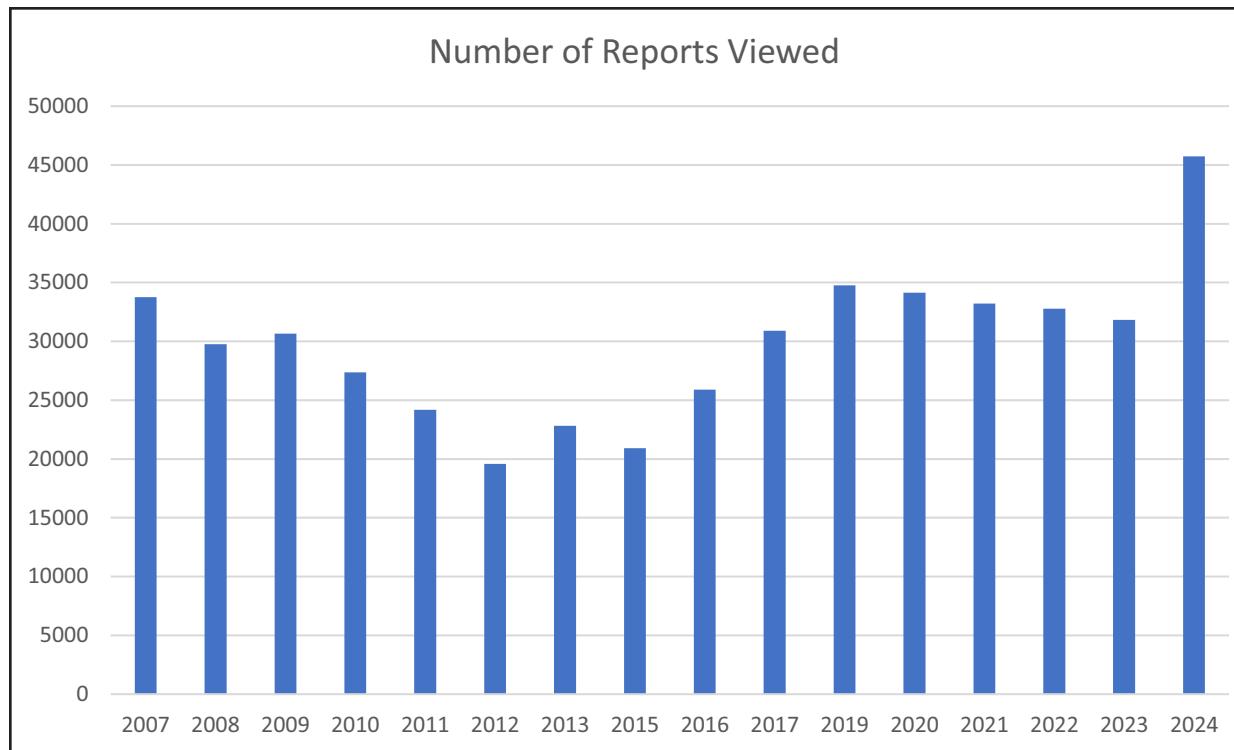
*The mandate of the Mineral Inventory Project is to document the geological- and mineral-resource information of the province's mineral occurrences and to make the information available to the public. Updates in 2024 were province-wide with some focus on critical minerals as well as updating earlier mineral occurrence records.*

## INTRODUCTION

The Mineral Inventory Project is the principal repository for geological information on the province's mineral resources (see DIET, 2024). The Mineral Occurrence Data System (MODS) is a digital mineral-occurrence database containing over 7500 records. It is a useful mineral-exploration tool that is consistently used by the mineral exploration and mining industries (Figure 1). Updating of the database is an ongoing process and in 2024 it continued

using data taken mainly from assessment reports and mineral industry press releases.

The MODS consists of summaries of data including location, geological descriptions, mineralogy, deposit type, work histories, resource and/or reserve statistics, analytical results and bibliography on known mineral occurrences. It offers fast and easy access to mineral occurrence information throughout all of Newfoundland and Labrador. The main delivery point for the MODS data is the Geological



**Figure 1.** Number of MODS reports viewed per year from 2007–2024 (data for 2014 and 2018 unavailable).

Survey website. Clients can search the database using either the “Geoscience Atlas” (<https://geoatlas.gov.nl.ca/>) or the MODS “Search Form” (<https://gis.geosurv.gov.nl.ca/mods/mods.asp>). It provides a current, high-quality, online mineral deposit database that helps to further define the province’s mineral potential and highlight its prospectivity.

## MINERAL OCCURRENCE DATA SYSTEM (MODS)

The MODS data are housed within an Oracle database management system; however, data entry is achieved using an application of the Microsoft-Access database software (Stapleton *et al.*, 2005). Microsoft-Access connects to the Oracle database using object database connectivity technology (ODBC).

The MODS data are obtained from three main sources: mineral industry assessment reports/press releases, government reports and academic reports. Data is reviewed to ensure compliance with the MODS coding standards before information is delivered to clients as occurrence specific, mineral inventory reports *via* the Geoscience Atlas and the MODS query form. Fields from the MODS database record (Table 1) can be downloaded from the Geoscience Atlas, which gives clients the ability to use the data in a GIS environment.

The MODS internet application is dynamically linked to the Oracle database, which serves as the common platform for all Geological Survey’s databases. This enables efficient sharing of information between the databases giving clients same-day access to updated information.

## 2024 UPDATES

Areas updated in 2024 include parts of NTS 1M, 2D, 2E, 2M, 11P, 12A, 12I, 12H and 12P (Newfoundland, Figure 2), and 3D, 3E, 13B, 13L, 13K, 13N, 14L and 23H (Labrador, Figure 3). Updates were implemented province-wide with a focus placed on updating and documenting occurrences related to critical minerals in areas with ongoing mineral exploration programs.

## CRITICAL MINERALS

In 2024, a review of the MODS records associated with critical minerals in the province was undertaken (unpublished data, 2025; also *see* DIET, 2023). The objective for this review was to update the records within the MODS showing their latest mineral resource estimates, as well as to re-evaluate their primary *versus* secondary commodity con-

**Table 1.** Field and field descriptions from MODS for GIS record

Depname	Usual name
Altname	Alternate name
Recid	Record ID number
Nmino	National mineral inventory number
Comname	Major commodity present
Modslabel	Symbol for major commodity present
Commods	Secondary commodities present
Deptpe	Deposit type; coded genetic classification of deposit
Desc	Description of deposit type
Status	Indicating amount of work done, and hence, the amount of information available on a deposit
Producer	Producer - Commodity is extracted for sale
Developed	Developed Prospect - Reserves or demonstrated resources of the commodity can be calculated, but the commodity has not yet been produced ( <i>i.e.</i> , three dimensional data plus grade)
Past Producer	Past Producer Dormant - The commodity is no longer produced, although there are known reserves or demonstrated resources
Past Producer	Past Producer Exhausted - The commodity is no longer produced and there are no longer reserves or demonstrated resources
Prospect	Prospect - Two-dimensional data and grade are available, but not enough data to calculate reserves
Showing	Showing - Mineralization exists in outcrop with little information known about its spatial extent; assay data exists
Indication	Indication - An indication of the existence of the commodity ( <i>i.e.</i> , field observation, map symbol)
Depchar	Deposit description
Geoprov	Geological province
Tectbelt	Tectonostratigraphic zone
Strunit	Stratigraphic unit
Stratigrap	Stratigraphic age of the host unit
Rocks	Rock type(s) associated with deposit
Trench	Trenching? y = trenching done
DDH	Number of drillholes into the deposit
Working	Type of mine workings
	Underground - u
	Open Pit or Quarry - o
	Underground and Open Pit - uo
Adit	Adit? y = adit present
Shaft	Shaft? y = shaft present
Utmeast	Easting coordinate
Utmnorth	Northing coordinate
Utmzone	UTM Zone

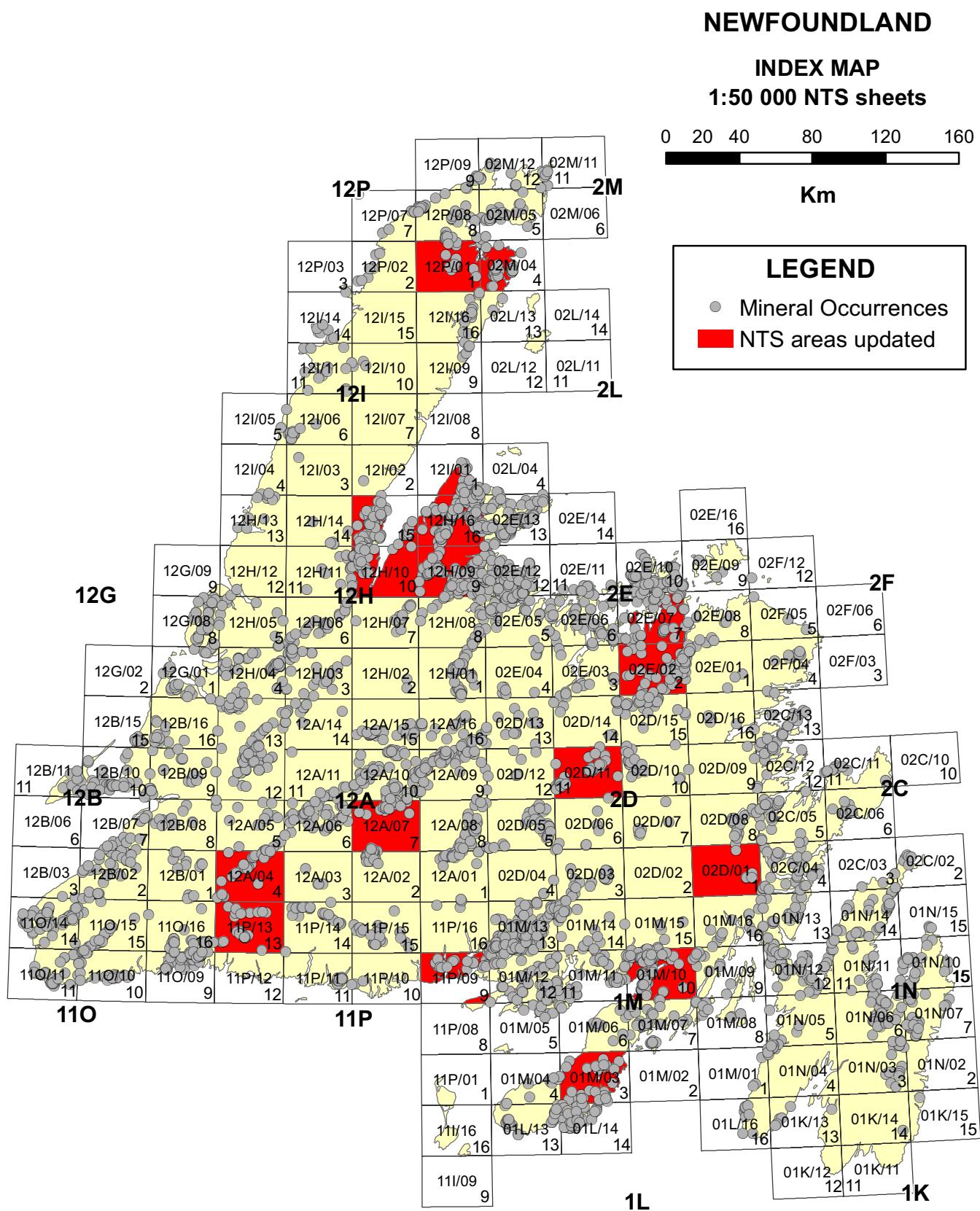


Figure 2. NTS areas updated, Newfoundland.

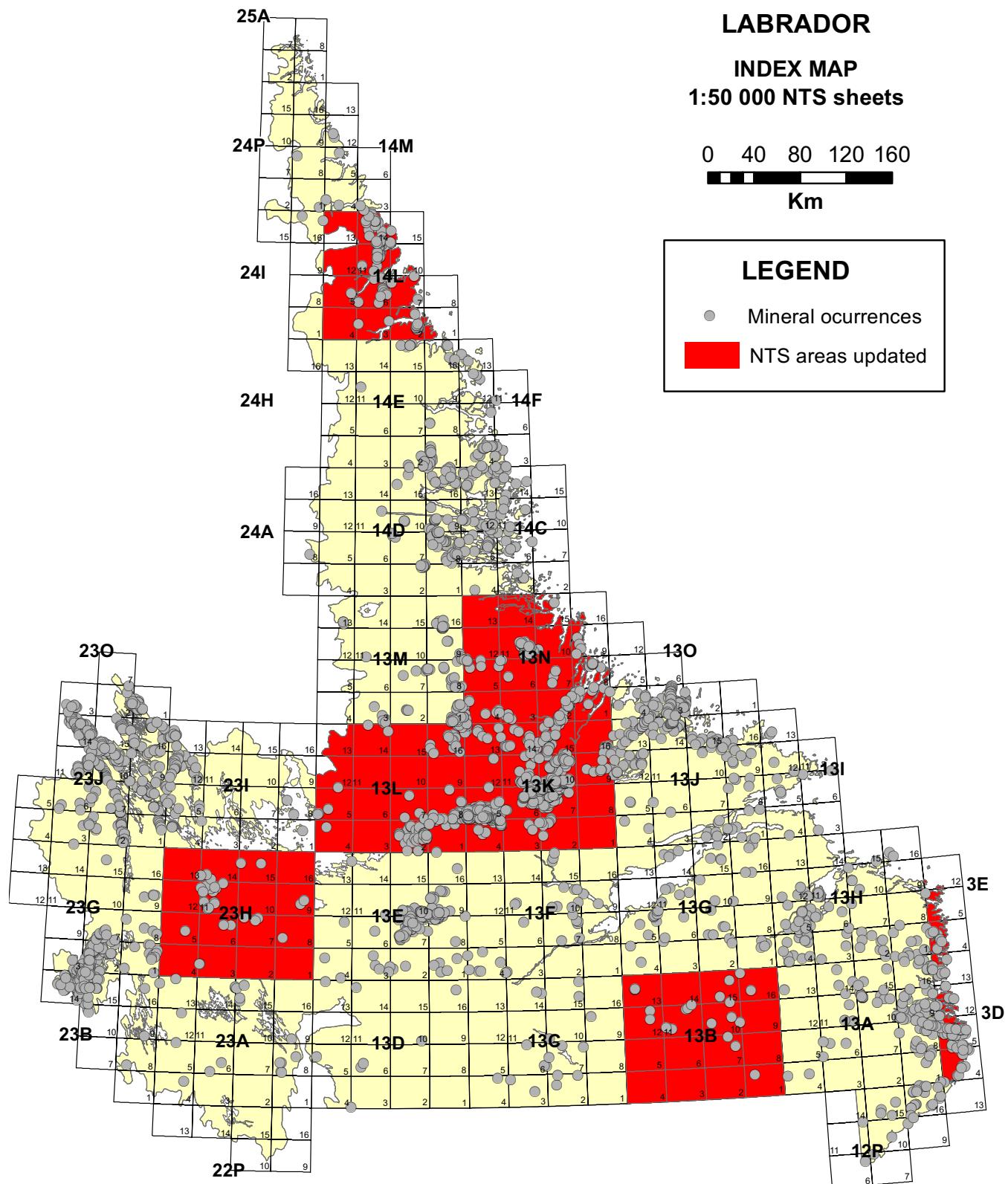


Figure 3. NTS areas updated, Labrador.

tent, based on the commodity that is most likely to be developed in the future.

## MODS USER STASTICS

The MODS is used by mineral explorationists to help guide their exploration programs and also by government in land-use planning. The 2024 web server statistics for the MODS indicate that it was accessed 45 728 times (Figure 1), an increase of over 13 000 hits from the previous year. Over the previous fifteen years, MODS has been consistently used, averaging 28 070 hits per year. A hit is logged when the user opens a MODS record. A detailed study of the 2013 web server statistics (Stapleton *et al.*, 2015) indicated that the database has a global audience, being accessed from over one hundred countries. It is accessed most frequently from Canada and the commodity of greatest interest is gold.

## SUMMARY

During 2024, consistent delivery of MODS data continued to be achieved through the query form and the graphical interface, with both updated and new non-confidential records copied to the public domain daily. This database provides the mineral exploration sector and other clients with a current dataset of the provinces mineral occurrences. The data generated by the Mineral Inventory Project contributes toward long-term benefits evidenced by increased investment in the provincial mineral exploration and mining industries (DIET, 2024).

## REFERENCES

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