

## MINERAL OCCURRENCE DATA SYSTEM

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### ABSTRACT

*The Mineral Occurrence Data System (MODS), which is the principal repository for geological information on the province's mineral resources, has traditionally been a three-part infobase consisting of a manual Mineral Inventory File, published mineral occurrence maps on geological bases, and a computerized Mineral Inventory Database. The MODS record has been redesigned in Microsoft Access and now contains merged information formerly contained in the manual Mineral Inventory File and the computerized Mineral Inventory Database. The redesigned MODS is now the platform on which mineral deposit information is compiled, maintained and delivered to clients.*

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### INTRODUCTION

The Mineral Occurrence Data System (MODS; O'Driscoll *et al.*, 1991) comprises summaries of all data on known mineral occurrences within the province, and is designed to offer fast and easy access to information on the province's mineral resources. It presently contains approximately 6000 descriptions, covering all of Newfoundland and Labrador. The MODS project, which began in the early 1970s as a three-part infobase consisting of a manual Mineral Inventory File, published mineral occurrence maps, and a computerized Mineral Inventory Database, is presently in transition from the old format. Information fields from the manual file (WordPerfect™ format) are being merged with fields from the computerized database (R:Base format) to form one database in Microsoft Access™ (MS-Access™), which is searchable from the MODS page on the Geological Survey of Newfoundland and Labrador website (<http://www.geosurv.gov.nf.ca>).

### MANUAL MINERAL INVENTORY FILE

The manual Mineral Inventory File consists of approximately 5000, pre-1999 occurrence-specific reports in WordPerfect™ format that summarize data on known mineral occurrences in the province. When merging is complete, all of its contained data will have been incorporated into the new MS-Access™ database, thus allowing the manual Mineral Inventory File to be archived.

### MINERAL OCCURRENCE MAPS

Mineral occurrence maps on geological bases have been published at 1:250 000 scale. In addition, selected

areas have been published at 1:50 000 and 1:100 000 scales. An industrial minerals map for insular Newfoundland, at 1:1 000 000 scale on a coloured geological base, is also available. These maps provide the location, minerals present, and status of each occurrence. All mineral occurrence locations are plotted on 1:50 000-scale topographic maps and are available for viewing at the Geological Survey's offices in St. John's.

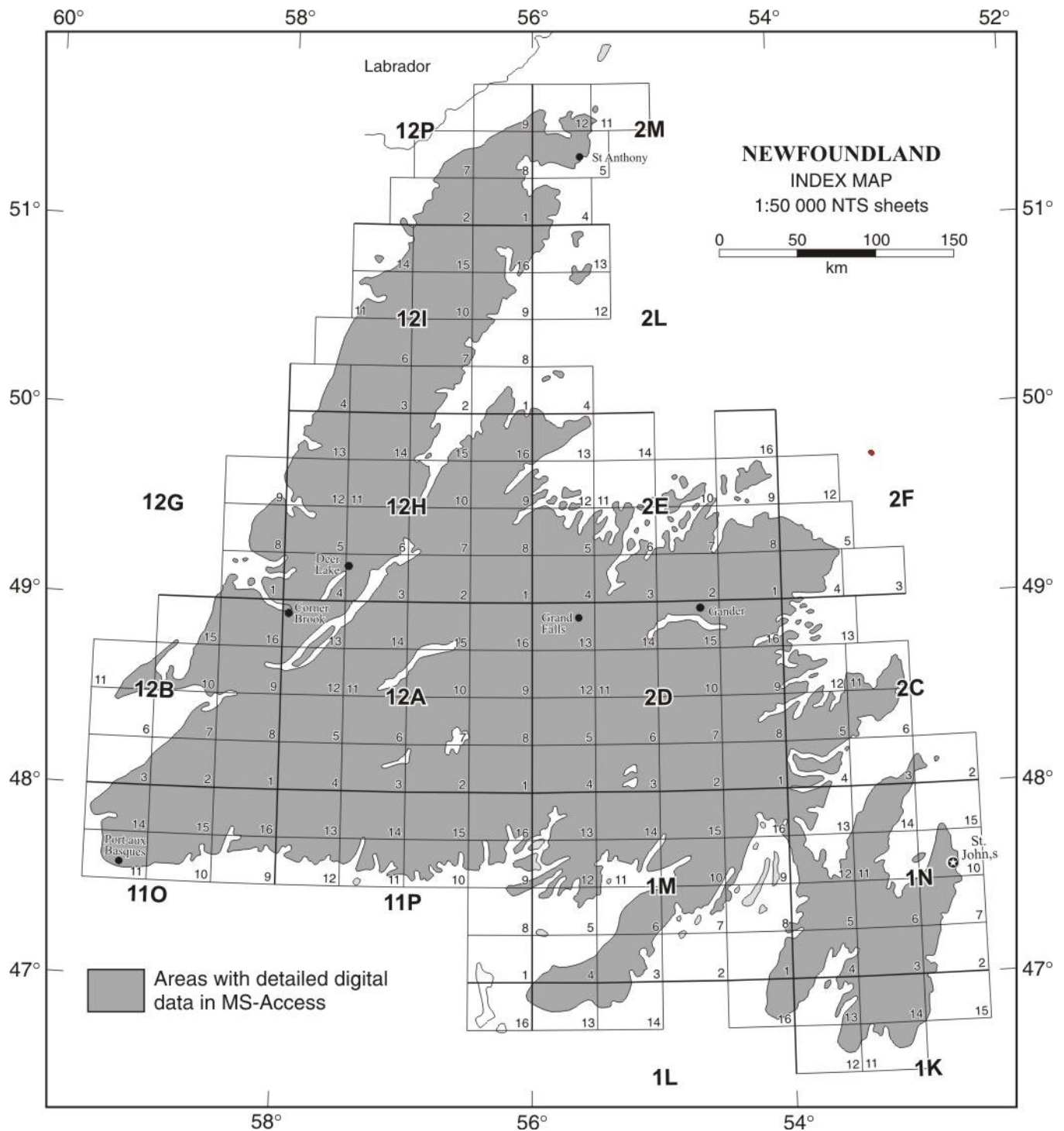
The MODS project has also published five on-demand thematic mineral occurrence maps on geological bases. These are, Epigenetic Gold and Related Mineralization, Newfoundland; Copper and Associated Mineralization, Newfoundland; Zinc-Lead and Related Mineralization, Newfoundland; Mississippi Valley-Type Lead-Zinc Mineralization, Newfoundland; and Volcanogenic Massive Sulphide Deposits, Dunnage Zone, Newfoundland.

All maps are available from the Geological Survey's Geoscience Publications and Information Section, upon request.

### COMPUTERIZED MINERAL INVENTORY DATABASE

#### MODS (MS-ACCESS™)

In 1998, the computerized Mineral Inventory Database was redesigned using MS-Access™ to be the sole repository of MODS data and to serve as a common platform from which data can be input and delivered to clients (Stapleton and Smith, 1999). The redesigned MODS record contains 61 fields that encompass information previously contained in the manual WordPerfect™ file and computerized R:Base



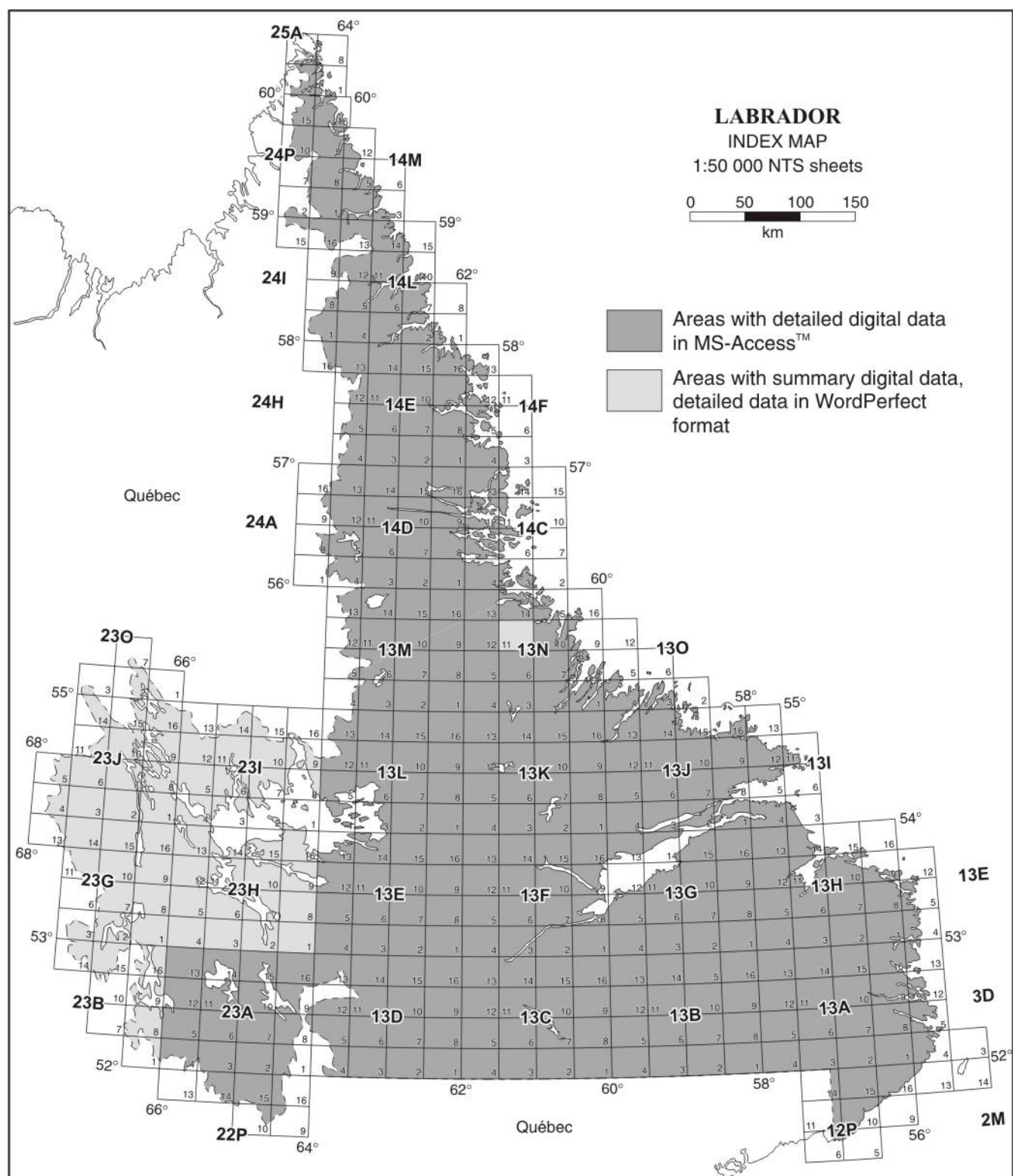
**Figure 1.** Index map for the Mineral Occurrence Data System project, insular Newfoundland.

record. The new MS-Access™ database presently contains approximately 6000 MODS records. The main delivery point to clients for MODS data is the search index on the Geological Survey's website. The MODS internet application is dynamically linked to the MS-Access™ database, which gives clients immediate access to updated files.

#### MODS FOR GIS

##### MapInfo™ and ArcView

Selected fields from the computerized Mineral Inventory Database are also available on CD-ROM as part of the



**Figure 2.** Index map for the Mineral Occurrence Data System project, Labrador.

Geoscience Atlas of Newfoundland (Davenport *et al.*, 1999a) and the Geoscience Atlas of Labrador (Davenport *et al.*, 1999b). Both operate as "turnkey" systems on micro-computers in both MapInfo™ and ArcView™ formats. These publications enable users to view mineral occurrence data in broader geoscientific contexts.

### **"Geoscience Resource Atlas" Online**

Detailed MODS data can also be viewed and queried in conjunction with other geoscientific data sets online using the "Geoscience Resources Atlas" from the Geological Survey's website (<http://www.geosurv.gov.nf.ca>).

## **PROGRESS UPDATE**

Integration of information contained in the manual WordPerfect™ reports into the MS-Access™ database was completed for insular Newfoundland (Figure 1) in 2001 and progress continues on the integration of the Labrador data set (Figure 2).

The MODS project continues to document and update mineral discoveries in the province.

## **MODS USERS**

The MODS is used by mineral exploration company personnel, mineral exploration consultants, independent prospectors, geotechnical consultants, personnel and students of academic organizations, and the general public. It is used daily by government geologists in land-use planning. Advice is given to various government departments through the Interdepartmental Land Use Committee (ILUC) referral

process on establishing wilderness areas, hydro developments, provincial and national parks, cottage developments, water reservoirs, etc., so that where possible, these developments proceed in areas of low mineral potential.

It is made available to various federal government agencies such as the Mineral Policy Sector and the Geological Survey of Canada.

## **REFERENCES**

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