

## MINERAL OCCURRENCE DATA SYSTEM

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### ABSTRACT

*The Mineral Occurrence Data System (MODS) is the principal repository for geological information on the province's mineral resources and comprises summaries of data on approximately 6200 mineral occurrences. It offers fast and easy access to the data and is searchable from the Geological Survey's website (<http://www.nr.gov.nl.ca/mines&en/geosurvey>).*

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### INTRODUCTION

The Mineral Occurrence Data System (MODS) is the principal repository for geological information on the province's mineral resources and is a two part infobase consisting of a mineral occurrence database and a collection of mineral occurrence maps (O'Driscoll *et al.*, 1991). The MODS comprises summaries of data on known mineral occurrences, and is designed to offer fast and easy access to information. It contains approximately 6200 mineral occurrence descriptions, covering all of Newfoundland and Labrador. The main delivery point for the MODS data is the Geological Survey of Newfoundland and Labrador (GSNL) website (<http://www.nr.gov.nl.ca/mines&en/geosurvey>).

### MINERAL OCCURRENCE DATABASE

#### MODS (ORACLE™)

The MODS data is housed within the Oracle™ database management system; however, data entry is achieved using an application of MS-Access™ database software (Stapleton and Smith, 2004). MS-Access™ connects to the Oracle™ database using object database connectivity (ODBC) technology. In addition to increasing the security of the MODS data, Oracle™ will become the common database platform for all geological survey databases, which will enable more efficient sharing of information between them. For example, the MODS will be able to link directly to Geofiles, the Geological Survey's bibliographic database. The MODS internet application is dynamically linked to the Oracle™ database, giving clients same-day access to updated information.

#### MODS FOR GIS

##### Geoscience Resources Atlas Online

Detailed MODS data can be queried and viewed in a map environment in conjunction with other geoscientific

datasets on-line, using the Geoscience Resources Atlas from the Geological Survey's website.

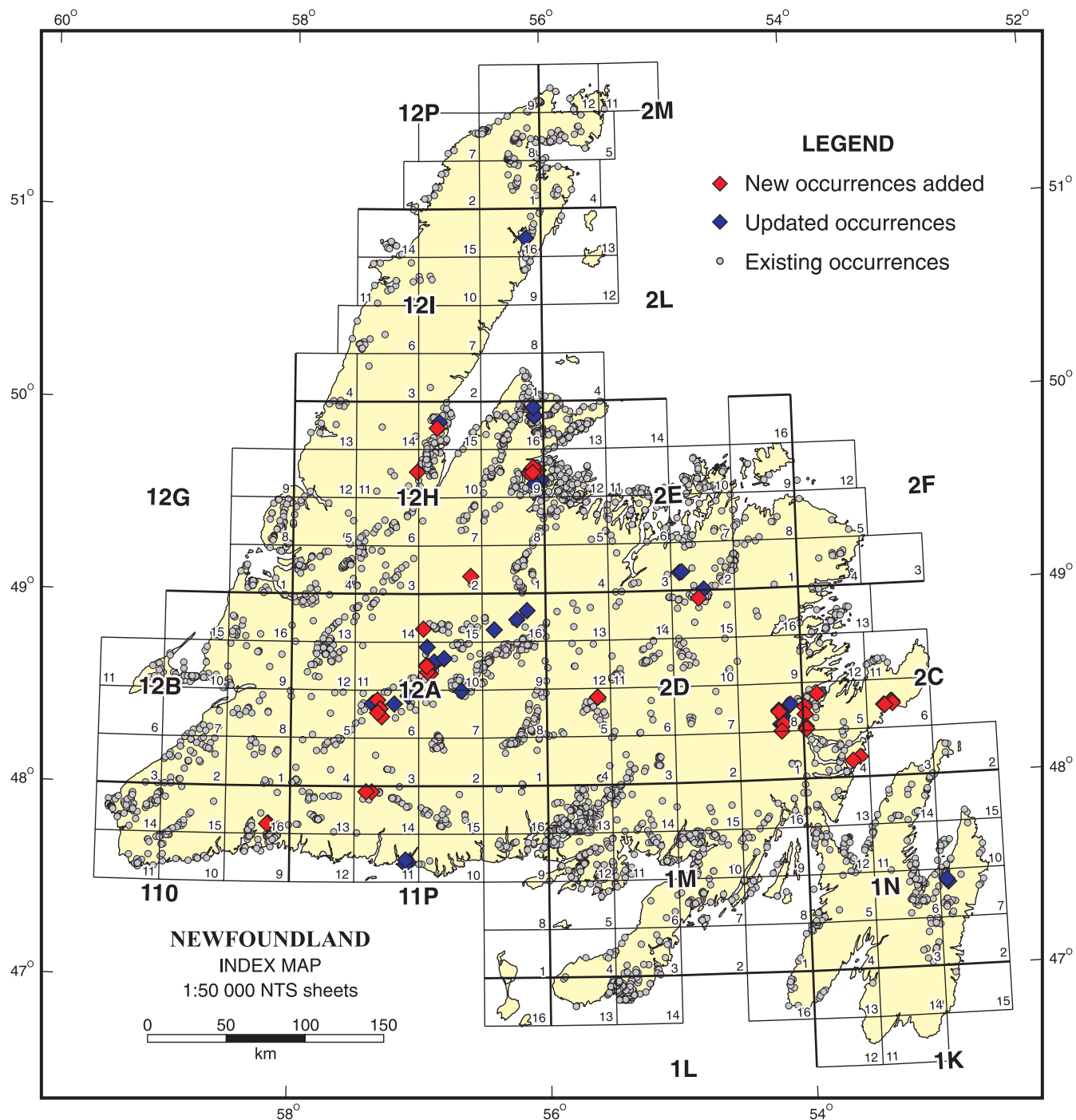
#### MapInfo™ and ArcView™

Selected fields from the mineral occurrence database are also available on CD ROM as part of the Geoscience Atlas of Newfoundland (Davenport *et al.*, 1999a) and the Geoscience Atlas of Labrador (Davenport *et al.*, 1999b). Both operate as "turn key" systems on personal computers in MapInfo™ and ArcView™ formats. These publications enable clients to better visualize geo-referenced data in broader geoscientific contexts. Updated MODS GIS datasets are available on request from the Geological Survey of Newfoundland and Labrador.

### MINERAL OCCURRENCE MAPS

Mineral occurrence maps on geological bases have been published at 1:250 000 scale and 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. Mineral occurrence locations are also plotted on 1:50 000-scale topographic maps and are available for viewing at the Geological Survey's offices in St. John's, NL.

The MODS project has also published six, 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; Volcanogenic Massive Sulphide Deposits, Dunnage Zone, Newfoundland; and Metallic Mineral Occurrences of the Avalon Zone, Newfoundland.



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

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

areas 2D and updating and adding information on new discoveries in NTS areas 1N, 2C, 2E, 11O, 11P, 12A, 12I (Figure 1) and NTS areas 13K, 14D, 23G, 23J (Figure 2).

## PROGRESS UPDATE

During the past year, attention focused on systematically compiling and updating mineral occurrence data for NTS

## MINES OF NEWFOUNDLAND POSTER

As part of a joint project with the Geological Survey of Newfoundland and Labrador (GSNL) Publications and

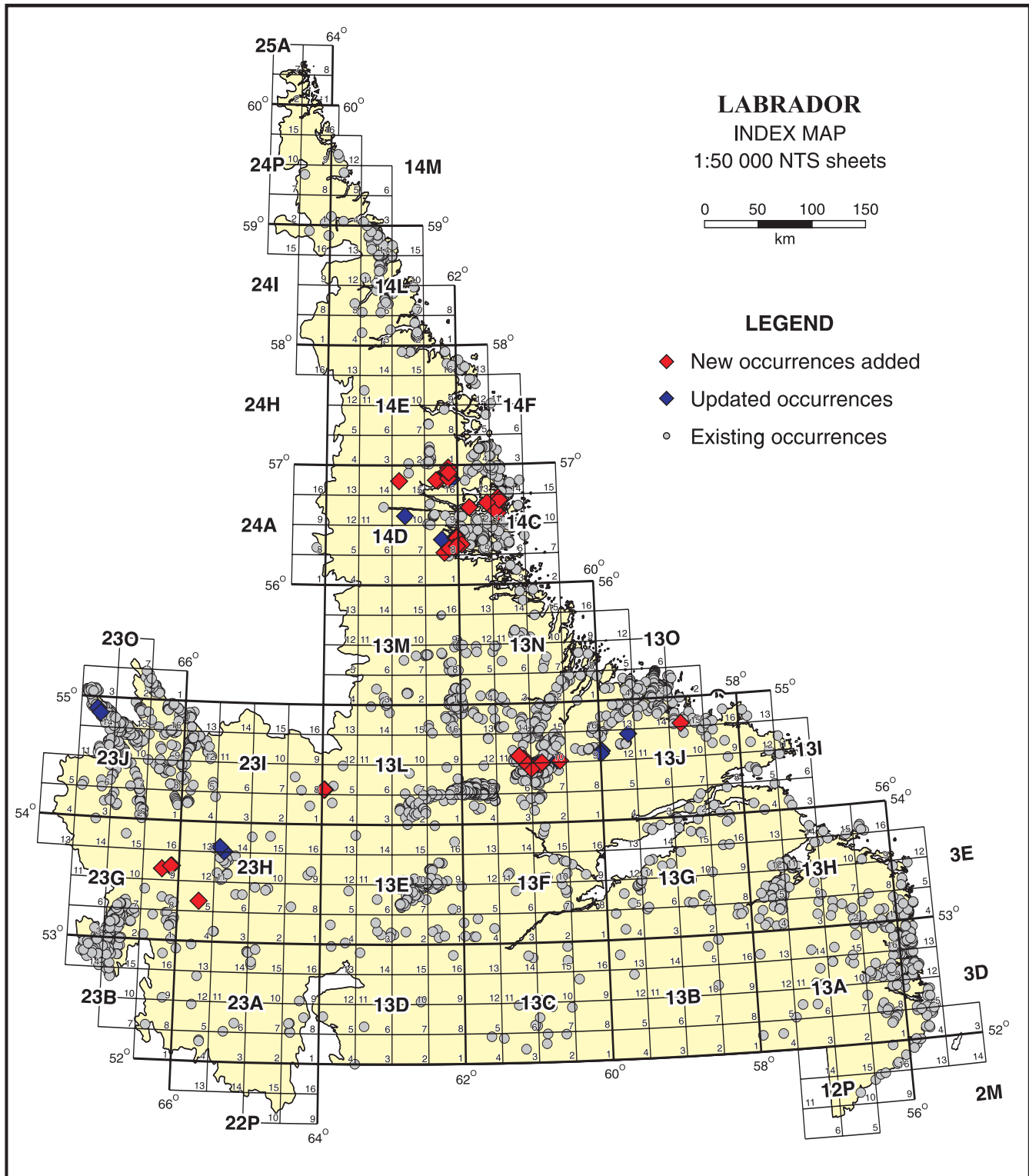


Figure 2. Index map for Mineral Occurrence Data System project, Labrador.

Information Section, a poster depicting the locations of mineral deposits having historical production and historical photographs is being prepared (Figure 3). The poster is cur-

rently in the first draft phase of production and when finished will become part of the GSNL outreach program.



# Mines of Newfoundland

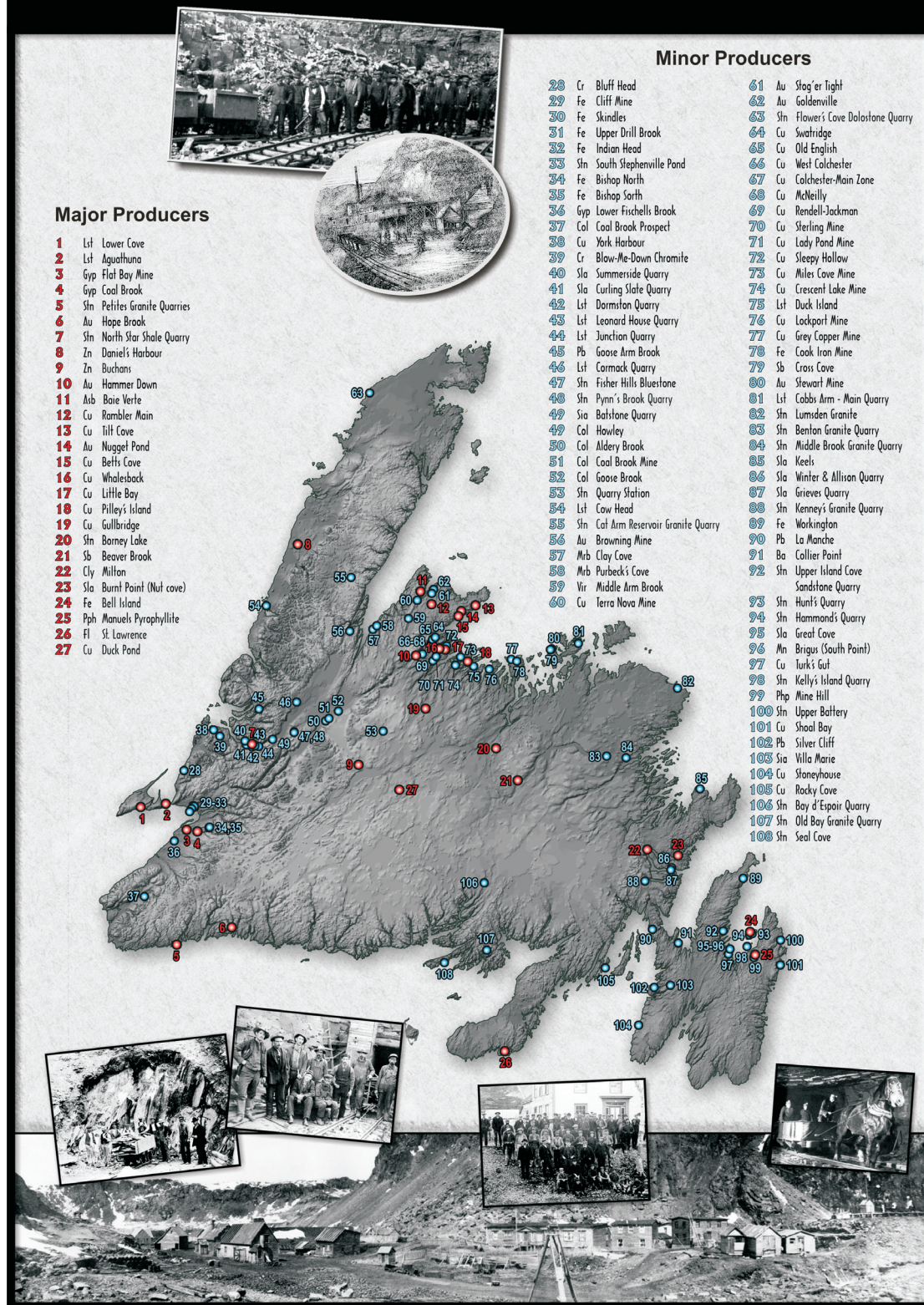


Figure 3. Mines of Newfoundland.

## MODS USERS

The MODS is used by mineral exploration company personnel and consultants, independent prospectors, personnel and students of academic organizations and the general public. It is also 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 Mines and Metals Sector of Natural Resources Canada and the Geological Survey of Canada (GSC).

## REFERENCES

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