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MINERAL OCCURRENCE DATA SYSTEM

G.J. Stapleton, J.L. Smith and J.E. Duke
Mineral Deposits Section

ABSTRACT

The Mineral Occurrence Data System (MODS), which is the principal repository for 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.

INTRODUCTION

The Mineral Occurrence Data System (MODS) (O'Driscoll *et al.*, 1991) comprises summaries of all data on known mineral occurrences, 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. 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 web site (*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 the Island of 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**n**Lead and Related Mineralization, Newfoundland; Mississippi Valley Type Lead**n**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 and encompasses information previously contained in the manual Wordperfect™ and computerized R-base files. The main delivery point to clients for MODS data is the search index on the Geological Survey's web site (*http://www.geosurv.gov.nf.ca*). The MODS internet appli-

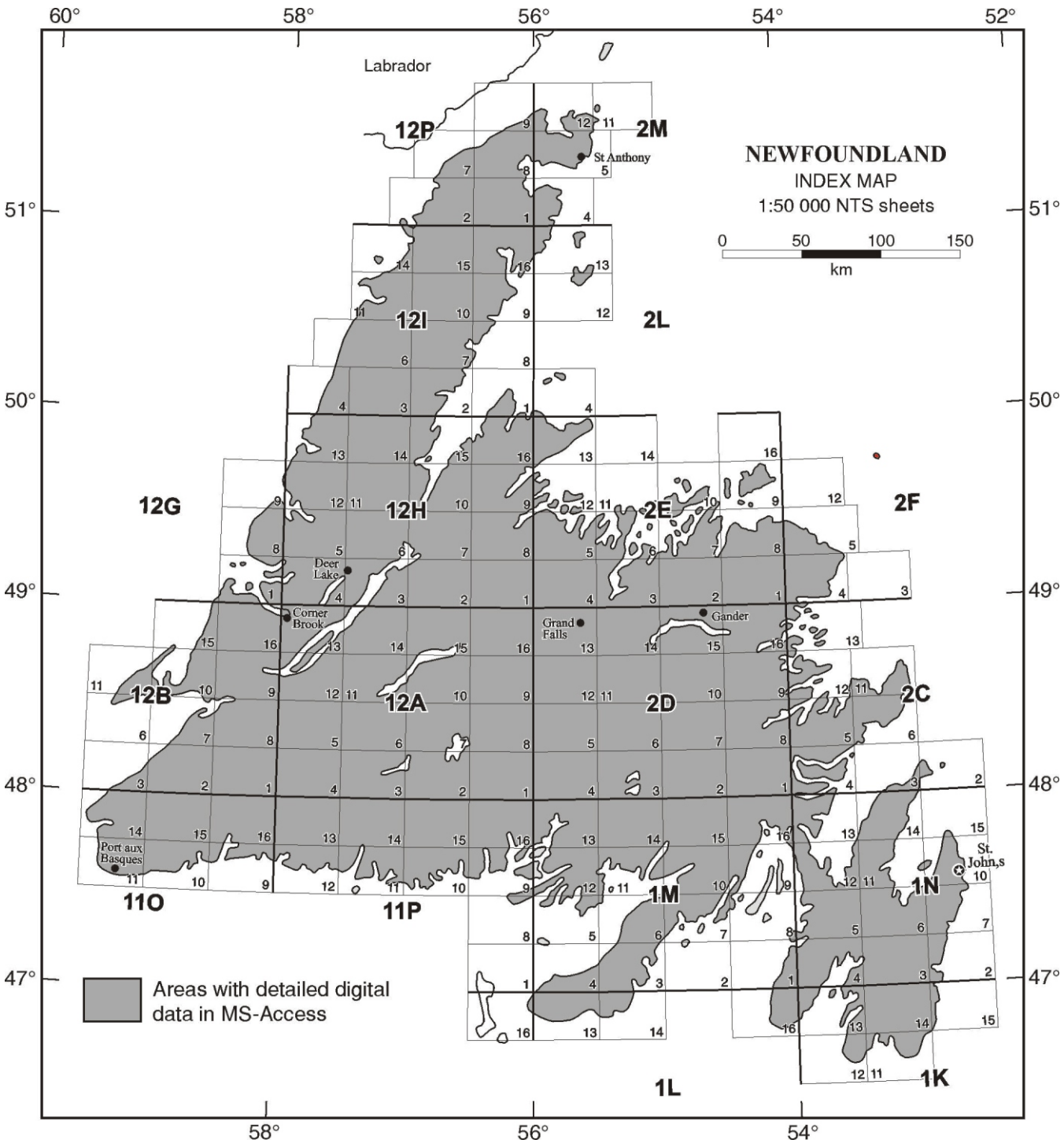

Figure 1. *Index map for Mineral Occurrence Data System project, Insular Newfoundland.*

cation is dynamically linked to the MS-Access database, which gives clients immediate access to updated files.

MODS FOR GIS

Selected fields from the computerized Mineral Inventory 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 "turnkey" systems on microcomputers in both ArcInfo™ and MapInfo™ formats. These publications enable users to view mineral occurrence data in broader geoscientific contexts.

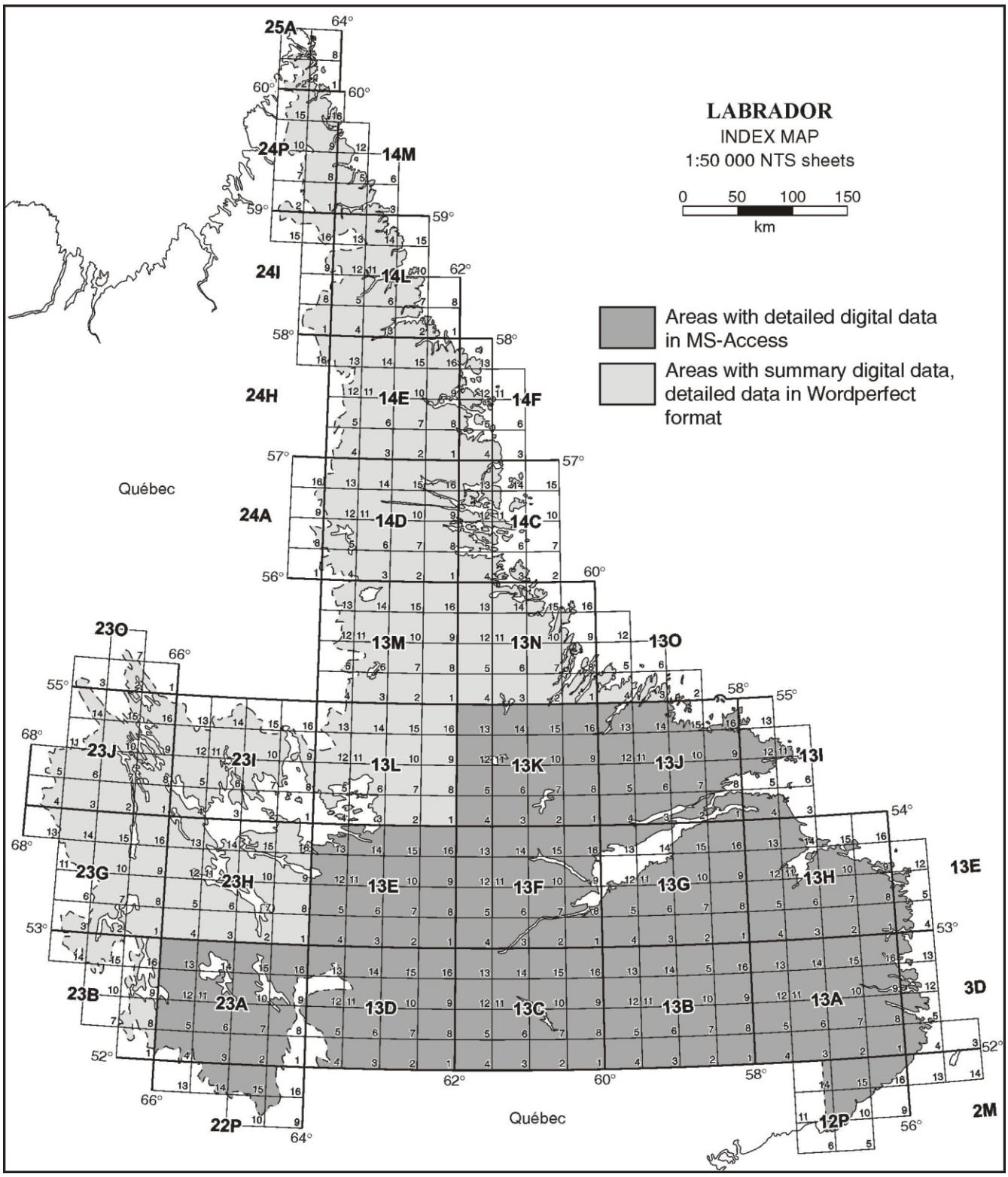

Figure 2. *Index map for Mineral Occurrence Data System project, Labrador.*

PROGRESS UPDATE

During the past year, integration of information contained in the manual Wordperfect™ reports into the new MS-Access database was completed for insular Newfoundland (Figure 1) and progress was made on the integration of the Labrador data set (Figure 2).

The MODS project continued to document and update mineral discoveries in central Labrador, with efforts concentrating in and around the Harp Lake Intrusive Suite, Seal Lake and Letitia Lake areas.

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

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