

by M. Pacey

Pacey, M. 2000: GIS-based interactive maps on the Web; *in* Report of Activities 2000, Manitoba Industry, Trade and Mines, Manitoba Geological Survey, p. 231.

SUMMARY

Web-enabled Geographic Information System (GIS) technology is a tool used to present geospatial data on the Internet. This technology provides the Internet client with 24-hour access to the Manitoba Geological Survey's information. To access the database, an Internet connection and a Java-enabled Web browser, such as Microsoft Internet Explorer or Netscape Navigator, are required. The website has a user-friendly GIS style, look and feel, with tools that allow query and analysis of the most current datasets relevant to the mining and mineral-exploration community. The 'GIS Map Gallery' is the access point for information on mineral claims, assessment files, orthophotography and geological databases. The GIS Map Gallery can be found at:

<http://www.gov.mb.ca/em/geoscience/gis/gis-index.html>

INTRODUCTION

Our clients have asked for a service that allows quick retrieval of the information essential to their business. The mining and mineral-exploration community operates worldwide, from the smallest northern settlement to the largest urban corporate headquarters. In response to our clients' needs, we have created the GIS Map Gallery, an easy-to-use, interactive, information reference mapping tool. This tool is provided via the Internet to accommodate both our most isolated clients and our centralized ones. The Internet has provided the medium for instant access to information from almost anywhere in the world. Prospectors, geologists, mining company staff and other interested stakeholders are now able to:

- see where mineral dispositions are located and what infrastructure exists in their area of interest;
- determine areas that are restricted in terms of staking and exploration;
- find out who holds what ground;
- find out what ground is available for staking in their area of interest;
- find out where recent staking has taken place; and
- find out what work was done in the area.

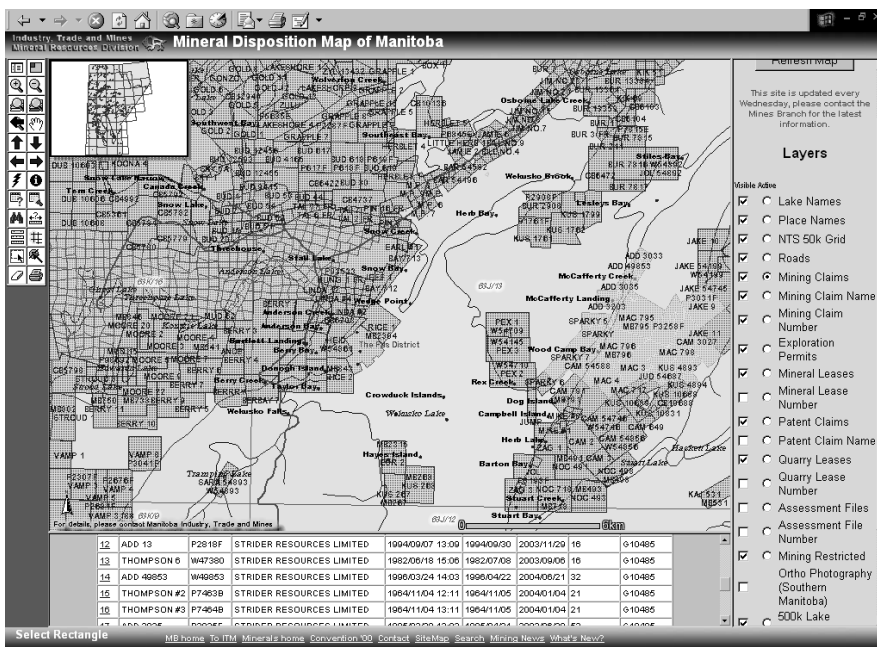
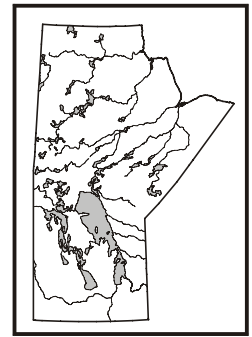


Figure GS-40-1: Screen capture from the GIS Map Gallery interface.



The graphic interface will aid clients in preparing exploration programs and in the decision-making process.

A NEW MINING AND EXPLORATION TOOL

The Web-enabled GIS Map Gallery is an interactive mapping system (Fig. GS-40-1) that allows users to zoom in and out, pan around the map, download reports, execute queries on databases, hyperlink to other websites, and print maps. Included is a detailed help facility that guides the visitor through the use of the navigation and query tools found in the interface. The databases are kept current and relevant to the activities of our clients. The system includes the following databases:

- Mining claims
- Assessment files
- Mineral leases
- Land-use information
- Orthophotography
- Exploration permits
- Quarry leases
- Patent claims
- Road network
- Bedrock geology

In addition to querying and selecting items from these data sets, the user is able to execute true GIS-type spatial queries, such as:

- Display mining claims that are within a certain distance of road access (by creating a buffer zone around the chosen road feature).
- Display all assessment files available in a selected NTS area.
- Highlight all mining claims due to expire within the next ten days, using the 'Search' tool.

Grid and UTM co-ordinate reference, distance measurements and sophisticated SQL (Structured Query Language) queries are also available within the interface. The completed analysis can be captured by printing out a reference or presentation copy of your work from your Internet browser.

Planned enhancements to the GIS Map Gallery include published documents from geological mapping projects, the ability to hyperlink from the map to download assessment files, and the ability to obtain publication information for the province. The ultimate goal is to enable the client to determine exploration targets in the privacy of home or office, with the help of the Manitoba Geological Survey's GIS Map Gallery.

ACKNOWLEDGMENTS

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