

Digital Information Services

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The Digital Information Services group is responsible for developing and maintaining the Mineral Resources Branch (MRB) Geographic Information System and associated databases, the NovaScan publications and maps database, for supplying digital data and services to clients and staff, and for developing and maintaining the MRB Internet web site. Permanent Digital Information Services staff consist of geologists/GIS specialists Brian Fisher, Jeff Poole, John MacNeil and Jeff McKinnon, Angie Ehler, a GIS specialist/cartographer, and web/desktop publishing technicians Susan Saunders and Barbara MacDonald. David Sun, a database specialist, was hired through the Career Starts Internship program to work on a number of MRB databases over a two year term. Students Hayley Pothier and Amiee Ehler were hired to work as GIS assistants during the summer of 2008.

Digital Geoscience Data Products

A collection of digital geology maps, databases and images of Nova Scotia (in DXF, ARC export, ArcView® shapefiles, TIFF, JPEG and MrSID formats in a UTM projection using the NAD83 datum, and in PDF format) has been developed, and is available for viewing or free download from the MRB web site (<http://www.gov.ns.ca/natr/meb/pubs/pub3.htm>). A licence agreement is issued with all digital data sets. This agreement allows unrestricted use of the data with the understanding that DNR remains the owner of the data and is not transferring copyright to the user. Since March 1999, when data were first made available for download from the MRB web site, until December 31, 2008, there have been over 218,800 downloads.

GIS Development

Digital Information Services (DIS) staff worked

cooperatively with MRB staff on several projects, including the Western Nova Scotia (Valley) Aggregate Project, the Central Meguma Mapping Project, the Whycocomagh (11F/14) Mapping Project, the Halifax Regional Municipality (HRM) Mapping Project, the Mineral Resource Atlas Project, the Provincial Groundwater Map Project, the Port Hawkesbury TGI-1 (11F/11) Mapping Project, The Coastal Mapping Project and the Liscomb Complex Mapping Project

The GIS version of the Registry of Mineral and Petroleum Titles database was updated two times in 2008. Two new versions of the Mineral Rights Disposition Map for the Province of Nova Scotia (Open File Map ME 2008-2, versions 1 and 2) were released along with two new versions (15 and 16) of the Mineral Rights Database.

Staff have been working with the Registry of Mineral and Petroleum Titles to assist in the development of a new Mineral Rights database and on-line staking system integrated with the MRB databases.

The section upgraded its GIS software from ArcGIS 9.2 to ArcGIS 9.3 and staff members have been taking training courses in the new software. Staff have begun the process of making the corporate GIS databases more readily useable by the geological staff of the branch using ArcGIS.

Scanning Activities

Work continued on the scanning of large format maps and illustrations. In 2008 section staff scanned 875 maps, bringing the total number of scanned maps and illustrations to 3257, all of which have been made available for free download through NovaScan and from the branch web site at <http://www.gov.ns.ca/natr/meb/download/gallery.htm>.

Section staff continue to scan assessment and property reports beginning with the most recent reports and working back in time. So far 3117 publicly released reports back to 1987 have been scanned and made available to the public for

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download through NovaScan and the branch web site at <http://www.gov.ns.ca/natr/meb/pubs/novascan.htm>. This represents 43% of publicly available reports.

Database Development

David Sun was hired in October 2006 on a two year term through the Career Starts Internship program to work on four databases; the abandoned mine openings, mineral occurrences, drillholes, and drill core databases. He has re-designed and converted the databases into SQL Server databases, developed new data entry applications and created a public search application to allow the public to query records in the databases using Internet Explorer® or Netscape®. Work is nearly complete on all the databases and their associated data entry and query applications. These databases will be available for public use in the first quarter of 2009.

Internet Map Server Applications

In 2008 the Mineral Resources Branch released a new Internet Map Server (IMS) application called Nova Scotia Groundwater Maps and Databases.

The purpose of the Nova Scotia Groundwater Maps and Databases IMS is to provide the public with an interactive IMS service containing layers of spatially referenced maps, databases, grids and images of interest to hydrogeologists, particularly those interested in the hydrogeological properties associated with identified groundwater regions.

The application displays a number of different layers of data, including some previously released digital products. These include:

- Groundwater Regions of Nova Scotia (DP ME 428),
- Observation Wells Database,
- Grids for Mineral Claims and Tracts (DP ME 009 and DP ME 012),
- Grids from the old and new map books used by well drillers to locate water wells,
- Nova Scotia Bedrock Geology (DP ME 043),
- Nova Scotia Mineral Occurrence Database (DP ME 001a),
- Nova Scotia Drillholes Database (DP ME 002),
- Nova Scotia Abandoned Mine Openings Database (DP ME 010), and

- Shaded Relief Images of Nova Scotia (25 metre) (DP ME 056).

The Nova Scotia Groundwater Maps and Databases IMS can be accessed at <http://gis4.natr.gov.ns.ca/website/nsgroundwater>.

Digital Products and Open File Maps Released in 2008

The following new digital products, open file maps, and updated versions of digital products were released in 2008. In order to see a complete list of all digital products please go to the following web page <http://www.gov.ns.ca/natr/meb/pubs/pubs3.htm>.

All digital products can be downloaded for free from the URL listed with the product.

Digital Products

DP ME 051, Version 15 (March 12, 2008) and Version 16 (November 7, 2008), Nova Scotia Mineral Rights Database. Digital product compiled by B. E. Fisher. Available in E00, SHP and DXF/DBF formats. Available as a free download from the MRB website at <http://www.gov.ns.ca/natr/meb/download/dp051.htm>.

DP ME 152, Version 1, 2008. Digital Geological Data and Shaded Relief Image Generated as Part of the Western Halifax Regional Municipality Aggregate Study Area, Halifax County, Nova Scotia (Part of NTS Sheets 11D/12, 11D/13, 21A/09 and 21A/16). Digital product compiled by G. Prime, F. J. Bonner, B. E. Fisher, J. S. McKinnon and A. E. Ehler. Available in E00, SHP and DXF/DBF formats. Available as a free download from the MRB website at <http://www.gov.ns.ca/natr/meb/download/dp152.htm>. (The following geological maps are derived from this digital product: OFM ME 2007-3, Geological Map of Western Halifax Regional Municipality Aggregate Study Area, Halifax County, Nova Scotia, Showing Sample Locations and Aggregate Test Results (Part of NTS Sheets 11D/12, 11D/13, 21A/09 and 21A/16), and OFM ME 2007-4, Digital Elevation Model Map of Western Halifax Regional Municipality Aggregate Study Area, Halifax

County, Nova Scotia (Part of NTS Sheets 11D/12, 11D/13, 21A/09 and 21A/16.)

DP ME 182, Version 1, 2008. Digital Version of Nova Scotia Department of Natural Resources Open File Map ME 2008-4, Bedrock Geology Map of the Liscomb Complex, (Parts of NTS 11E/01, 11E/02, 11E/07 and 11E/08), Nova Scotia, Scale 1:50 000, by P. S. Giles, A. K. Chatterjee and K. L. Ford, 2008. Digital product compiled by P. S. Giles, A. K. Chatterjee, K. L. Ford, B. E. Fisher and A. E. Ehler. Available in E00, SHP and DXF/DBF formats. Available as a free download from the MRB website at <http://www.gov.ns.ca/natr/meb/download/dp182.htm>.

DP ME 382, Version 1, 2008. Digital Geological Data Generated as Part of the Targeted Geoscience Initiative Project, Geological Mapping for Mineral Development, South-central Cape Breton Island, 2000-2003, NTS 11F/14. Digital product compiled by C. E. White, R. C. Boehner, B. E. Fisher, J. D. MacNeil, J. S. McKinnon, A. E. Ehler and M. L. Huskins. Available in E00, SHP and DXF/DBF formats. Available as a free download from the MRB website at <http://www.gov.ns.ca/natr/meb/download/dp382.htm>. (The following geological map is derived from this digital product: OFM ME 2008-1, Bedrock Geology Map of the Whycomagh Area, NTS Sheet 11F/14, Inverness County, Nova Scotia.)

DP ME 428, Version 1, 2008, Digital Version of Nova Scotia Department of Natural Resources Open File Map ME 2008-3, Groundwater Regions Map of Nova Scotia, scale 1:500 000, 2008. Digital product compiled by G. W. Kennedy, J. Drage and B. E. Fisher. Available in E00, SHP and DXF/DBF formats. Available as a free download from the MRB website at <http://www.gov.ns.ca/natr/meb/download/dp428.htm>.

Open File Maps

OFM ME 2008-1, Bedrock Geology Map of the Whycomagh Area, NTS Sheet 11F/14, Inverness County, Nova Scotia, scale 1:50 000, by C. E. White and R. C. Boehner. Available as a free PDF download from the MRB website at

http://www.gov.ns.ca/natr/meb/data/mapgallery/ofm/htm/ofm_2008-001.htm.

OFM ME 2008-2, Mineral Rights Disposition Map for the Province of Nova Scotia, Version 1 (March 12, 2008) and Version 2 (November 7, 2008), scale 1:500 000, by B. E. Fisher and A. S. Wenning. Available as a free PDF download from the MRB website at http://www.gov.ns.ca/natr/meb/data/mapgallery/ofm/htm/ofm_2008-002.htm.

OFM ME 2008-3, Groundwater Regions Map of Nova Scotia, scale 1:500 000, by G. W. Kennedy and J. Drage. Available as a free PDF download from the MRB Website at http://www.gov.ns.ca/natr/meb/data/mapgallery/ofm/htm/ofm_2008-003.htm

OFM ME 2008-4. Bedrock Geology Map of the Liscomb Complex (Parts of NTS Sheets 11E/01, 11E/02 and 11E/08), Nova Scotia, scale 1:50 000 by P. S. Giles, A. K. Chatterjee and K. L. Ford. Available as a free PDF download from the MRB website at http://www.gov.ns.ca/natr/meb/data/mapgallery/ofm/htm/ofm_2008-004.htm

NovaScan

NovaScan is the geoscience publications and maps database on Nova Scotia and its offshore regions. As of December 31, 2008, the database contained 15,716 MRB records, consisting of 7611 mineral exploration assessment and property reports, 3940 publications and maps, 2904 open files, 832 theses, 224 contribution series, 184 digital products, and 21 outside publications.

Each month, a list of new publicly released assessment and property reports is generated from NovaScan. This list is distributed to the DNR Library in Halifax, the Core Library in Stellarton, and to the three Regional Geologists in Coxheath, Truro and Bridgewater. PDF versions of the released reports are posted to the web site monthly. Quarterly lists of open assessment and property reports are produced and published in the *Nova Scotia Minerals Update* newsletter. One hundred and fifty-four assessment reports were released in 2008.

In order to provide better service to our staff and clients the branch maintains a public search

application which allows the public to query records in the database using Internet Explorer® or Netscape®. NovaScan can be searched by Title, Author/Organization, Subject, Area, Map Sheet (NTS), Map Type, Licence Type, Licence Number, Document Type, Document Number, Year and

Scale. NovaScan is updated monthly as new geoscience maps, publications, open files, theses, mineral exploration assessment reports and property reports become available. The search interface can be accessed at <http://gis4.gov.ns.ca:8008/novascan>.