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Lenton, P.G. 1998: Geoscience Information Services projects; in Manitoba Energy and Mines, Geological Services, Report of Activities, 1998, p. 214-215.

SUMMARY

Manitoba Energy and Mines is shifting the focus of map and report production to encompass new technologies. Reports will include, where possible, CD-ROM supplements. These products will also be maintained and updated through the Departmental web site. Internet map server technology will be used to publish geological maps and databases to the Internet. Geological compilation projects are focussing on conversion of the 1:250 000 Bedrock Geology atlas series to Geographic Information System (GIS) and revision of the 1:1 000 000 Geological Map of Manitoba.

NATMAP SHIELD MARGIN PROJECT

The 1:100 000 geological compilation of the Flin Flon-Snow Lake belt of Manitoba and Saskatchewan was completed early in 1998. The maps were originally to be printed using electronic "on demand" technology and released early in the spring. The production format was changed, partially for financial reasons, to a formal release of press-printed colour maps accompanied by a brief summary report. Consequently, substantial effort went into upgrading the cartographic quality and designing a new NATMAP presentation style. The final map package was released November 1, 1998. It comprises 6 colour geology maps (1:100 000) depicting the exposed and sub-Phanerozoic Precambrian geology, 1 map at 1:325 000 of the exposed Phanerozoic geology, 1 synoptic tectonic synthesis map (1:325 000), one legend sheet, and an accompanying report.

The map package is the first of two components that comprise the final report on the project. The second component is a comprehensive CD-ROM release of maps in electronic form, image data (geophysical and remote sensing), and databases. This data represents much of the information gathered during the 6-year duration of the project, as well as historic data used in the project. The target date for release of the CD-ROM has been set at 6 months after the release of the printed maps.

CANADIAN GEOSCIENCE PUBLICATIONS DIRECTORY

The Canadian Geoscience Publications Directory (CGPD) is an active, online Internet based bibliography system. It can be found at <http://ntserv.gis.nrcan.gc.ca>. The following description is abstracted from that site:

"A number of working groups, committees, and special interest groups within the Canadian geoscience community have identified the need for improved access to Canadian geoscience metadata. In early 1997, a proposal for an Internet directory was presented to the National Geological Surveys Committee (NGSC), which is composed of the directors of provincial and territorial geological surveys and the Geological Survey of Canada (GSC). The proposed Canadian Geoscience Publications Directory (CGPD) would provide graphical access to distributed metadata describing all Canadian Geoscience publications. The location of maps and reports to be displayed in polygonal form on a back-drop generated from national regional geological maps using popular web browsers and a free Mapguide plug-in. The proposal was endorsed by the NGSC and a team of GSC and provincial survey technical experts was formed to prepare the web site, adopt required metadata standards, and upgrade survey metadata as required."

Manitoba Energy and Mines undertook in 1998 to capture all of the necessary bibliographic information required for the CGPD project. To that end the GSC was supplied, in late September, with a geo-referenced database containing location and description of all maps and reports available from Manitoba Energy and Mines. This Internet database will compliment the GSC publication list already available on the NGSC web site.

BEDROCK GEOLOGY COMPILATION MAP SERIES

The Bedrock Geology Compilation Map Series (1:250 000) continues, with printing of the final map produced by manual drafting, Norway House (63H), to be released in January 1999. All subsequent maps will be produced using GIS technology. The focus of the compilation program will shift temporarily from production of new maps to conversion of all existing 1:250 000 maps into a seamless digital compilation using ArcInfo. Currently, this project comprises 6 completed maps and 5 maps at various stages of production. The objective is to complete the conversion of all existing 1:250 000 compilation maps into the GIS system by the end of 1999.

The seamless 1:250 000 compilation base will be used as the basis of a planned revision of the currently outdated Geological Map of Manitoba (Map 79-2, 1:1 000 000 scale). Our preliminary goal is to produce the revised map by the end of 2000. A similar project to revise the 1:1 000 000 scale Surficial Geological Map of Manitoba (Map 81-1) is targeted for the same time period.

The existing Geology of Manitoba (Map 79-2) has been converted to digital form by the GSC. This map was subsequently extensively modified by L. Chackowsky of Manitoba Energy and Mines to resolve problems with projection accuracy. This improved geological coverage was combined with GSC magnetic and gravity data into a series of thematic images. This data will be released early in 1999 as a joint MEM-GSC open file report on CD-ROM.

DATA PUBLISHING

In a move to improve client access to data, Manitoba Energy and Mines has started a program of releasing data on CD-ROM to accompany, supplement or replace printed reports. To this end, the September release of the results of the 1997 Operation Superior Multimedia Geochemical Survey was in dual format; printed report containing a CD-ROM as a supplement and a "stand-alone" CD-ROM version. The CD contains all of the data used to generate the printed report as well as the complete report in Adobe Portable Document Format files that allow a user to print an equivalent to the printer report from the CD. The data is included in a variety of formats: generic ASCII text files, MS Word documents, MS Excel spreadsheets and Environmental Systems Research Institute, Inc. (ESRI®) shape files. The GIS shape files can be read using Arcview™ from ESRI® or with a "freeware" data viewer from ESRI® called ArcExplorer™. Programs to install ArcExplorer as well as Acrobat® Reader (© Adobe Systems Inc.) for reading the PDF file format are included on the CD-ROM.

The Manitoba Stratigraphic Map Series and Manitoba Stratigraphic Database (Bezys and Conley, in prep.) is the first of a series of related data releases (see Conley and Bezys, GS-32, this volume) on CD-ROM and Internet. The CD contains 30 subsurface geological maps in AutoCad® version 14 format and as generic DXF files. The non-confidential data from the Manitoba Stratigraphic Database used to generate these maps is included as MS Access97 databases, comma delimited ASCII tables and Adobe Portable Document Format files. The CD also contains the program to install Acrobat® Reader (© Adobe Systems Inc.) for reading the PDF files.

INTERNET PROJECTS

Energy and Mines recently acquired ArcView Internet Map Server from ESRI®. This software package allows maps to be "published" to the Internet. Clients do not require any software other than a web browser to view and query maps. The software is currently undergoing in-house testing and development of data sets. When placed online it will provide access to mining claim information, geological maps and mineral occurrence data in mapped format that will link site location with detailed databases.

REFERENCES

Bezys, R.K. and Conley, G.G.

in prep.: The Manitoba Stratigraphic Map Series (Paleozoic and Mesozoic maps) and the Manitoba Stratigraphic Database: new and previously released subsurface geological data; Manitoba Energy and Mines, Open File Report OF98-7, 30 maps at 1:2 000 000 and database on CD-ROM.

Fedikow, M.A.F., Nielsen, E., Conley, G.G. and Matile, G.L.D.

1998: Operation Superior: multimedia geochemical survey results from the Edmund Lake and Sharpe Lake greenstone belts, northern Superior Province, Manitoba (NTS 53K); Manitoba Energy and Mines, Open File Report 98-5.

Manitoba Mineral Resources Division

1979: Geological Map of Manitoba, scale 1:1 000 000, Map 79-2.

Manitoba Mineral Resources Division

1981: Surficial Geological Map of Manitoba, scale 1:1 000 000, Map 81-1.

NATMAP Shield Margin Project Working Group

1998: Geology, NATMAP Shield Margin Project Area (Flin Flon Belt), Manitoba-Saskatchewan; Geological Survey of Canada Map 1968A, Manitoba Energy and Mines Map A-98-2 Sheets 1 to 7, Saskatchewan Geological Survey Maps 258A-1 to 258A-7, scale 1:100 000

