

Digital mapping in the geosciences

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At present, most geoscientific data is produced in map form at various scales and cartographic projections. Because of this, earth scientists find it very difficult to store, retrieve, update and manipulate such information. Analyzing such information takes considerable effort and invariably some data is either misinterpreted or generally neglected altogether. The end result is that explorationists do not have a complete data base with which to work.

With the advent of computer technology, more and more earth scientists have turned to this media to store, retrieve and display their information. Geophysicists and geochemists who deal with numerical data were the first to take advantage of the new technology. Geologists, until recently, tended not to make use of computers for mapping purposes because most geologic data could not be adequately stored in a manner that is readily accessible.

The development of digital mapping systems have now made it more practical for geologists to take advantage of computer technology. Digital mapping systems have been available in Canada for some time.

Two of these systems are the Canadian Geographic Information System and the Canadian Hydrographic Service. Such systems led to the creation of digitally stored topographic maps. Several such maps have been created for New Brunswick and are available from the National Digital Topographic Data Base at Surveys and Mapping, E.M.R.

The Computer Aided Resource Information System (C.A.R.I.S.), a digital mapping system, has been adopted by the Land Registration and Information Services (L.R.I.S.) to produce digitally all topographic base maps for the Maritimes. Availability of such maps is the first step in making digital mapping of geoscientific data practical. The Mineral Resources Division of the New Brunswick Department of Natural Resources has just completed a feasibility project of using C.A.R.I.S. to store, retrieve, manipulate and display geoscientific data. The project was successful and the Mineral Resources Division is proposing to implement the system to handle all provincial geoscientific data.