

Economic Evaluation of the Mineral Resources of Cape Breton Island: an Update

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Cape Breton Island has extensive and diverse mineral assets, but they are underexplored. The Cape Breton Mineral Team is a partnership amongst the Nova Scotia departments of Natural Resources (DNR) and Economic and Rural Development and Tourism (ERDT), Enterprise Cape Breton Corporation (ECBC) and the Strait-Highlands Regional Development Agency (SHRDA). Since 2000, the partnership has worked co-operatively on mineral-related development projects on Cape Breton Island. In 2012, the partnership began to develop a project to attract mineral exploration investment to the island. Details on the history of this project are found in the 2012 Report of Activities (DeMont, 2014).

The first phase of the project was the development of a web-based user interface to the Mineral Occurrence Database. This was completed by the Applied Geomatics Research Group (AGRG) located at the Nova Scotia Community College campus in Lawrencetown, Nova Scotia. This interface allows the database users to apply weightings to the mineral occurrence data for attributes such as distance from a port and distance from a 100-series highway. Once these economic factors are applied, a decision can be made on the best sites to invest in further exploration.

The Applied Geomatics Research Group completed the user interface in 2013. The project partners all agreed it is an excellent product. However, two product deficiencies were noted by the project team. First, the Mineral Occurrence Database requires an update. Second, each of the distance attributes noted above have to be calculated and inputted by the interface programmer; consequently, it would not be possible to change them. For example, if a new mineral occurrence is added to the database, a programmer would have to add distance data to the databases. The same thing

would apply if a new road was built or a new port facility opened. These distance attribute should be calculated automatically.

The project partners decided to address both deficiencies. The Nova Scotia Department of Natural Resources agreed to undertake the updates to the Mineral Occurrences Database, and the project partners agreed to find funding to contract AGRG to undertake phase 2 of the interface programming. This update would allow automated calculations of distance measurements as changes are made to the Mineral Occurrences Database or when changes are made to the economic attributes, such as new road infrastructure.

One of the project partners, Strait-Highlands RDA, was winding down operations as part of a provincial revamping of the RDA network; therefore, they could not participate in phase 2 of the project. On previous Cape Breton Mineral Team projects, Strait-Highlands RDA was the project manager and administrator. This created a challenge for the team. Cape Breton Partnership offered to take over the role previously played by SHRDA. A project proposal was developed and submitted to ECBC and ERDT for funding. Enterprise Cape Breton Corporation agreed to fund their component, but ERDT was not able to locate funds in their 2013–2014 budgets, and thus the programming component did not proceed.

In the period while the funding requests were being evaluated, the author started the review of mineral assessment reports required to update the Mineral Occurrences Database. All of the reports for map sheet 11F were reviewed, and updates were made to the Mineral Occurrences Database records. In total, 170 assessment reports were reviewed for the period 2000–2012. Many occurrences were updated, and 12 new occurrences were added to the

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databases: eight on map sheet 11F/14, two on map sheet 11F/15 and two on map sheet 11F/16. These occurrence updates and additions will be available in the next release of the Mineral Occurrences Database. This database update work was terminated once it was certain that the programming component of the project would not be funded in the fiscal year 2013–14.

Reference

DeMont, G. J. 2014: Economic evaluation of the mineral resources of Cape Breton Island; *in* Mineral Resources Branch Report of Activities 2012; Nova Scotia Department of Natural Resources, Report ME 2013-001, p. 3-4.