

COASTAL LABRADOR AGGREGATE RESOURCE PROJECT

by

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Introduction

1983 marked the beginning of aggregate resource inventory mapping in the coastal areas of Labrador.

The initial phase of the program included field sampling in communities from Lodge Bay to Rigolet. The project was conducted in a similar pattern to the Inventory of Aggregate Resources Program, which completed sampling within a 6 km wide corridor study area along all existing and proposed transportation routes in Newfoundland and Labrador.

Objectives

Aggregate deposits of sand, gravel, stone, etc. suitable for construction purposes are a finite nonrenewable resource. The present need in Labrador for data on these deposits is considered to be even greater than it was in Insular Newfoundland because of the lack of available information or mapped data in Labrador, and the general lack of overburden and granular materials.

By completing a mapping program of this nature, we hope to aid community development and help prepare communities for future expansion.

We plan to identify sources of sand and gravel as well as carry out field and laboratory analyses. This range of analysis is considered essential for proper resource management, i.e. to identify high grade materials that should not be used for sub-grade (ballast or fill) construction and reserved for future road topping or concrete uses in local communities.

In cooperation with municipal or community councils, we plan to delineate resource sites and have them protected by zoning on the municipal plans.

The project involves locating and detailed sampling of any aggregate reserves in the proposed areas. In areas lacking quality grade aggregates, alternative sources such as till with a low silt/clay content and/or suitable bedrock are

assessed in regards to current and future local needs. The designation of the aggregate resources as extraction areas within specific locations will ensure that aggregates can be preserved to meet the present and future demands of the domestic and commercial aggregate consumer. After the aggregate resources reserves are depleted, quarry areas are to be rehabilitated to a state suitable for other proposed uses and the area moved from the extraction designation.

Other objectives of the project are to identify surface landforms, with particular emphasis on determining areas suitable or unsuitable for a variety of purposes such as hydrogeological formations for screened or drilled wells and for various community needs (e.g. housing, recreation, roads or servicing, etc.). Geotechnical properties of the subsoil, overburden and bedrock materials will be identified to assist preengineering studies of route selection for roads or water or sewage mains.

Field Work, 1983

Field work involved sampling of overburden materials, with particular emphasis on materials suitable for construction purposes; particular attention was given to problem or hazardous areas. In addition, terrain analysis identified areas most suited for municipal services and residential development.

Field work was concentrated around the coastal communities of Mary's Harbour, Fox Harbour, Lodge Bay, Black Tickle, Charlottetown, Williams Harbour, Paradise River, Port Hope Simpson, Rigolet and Cartwright. Some reconnaissance work was also conducted at Battle Harbour, Ratteau, Domino, Pinsent Arm and Spotted Island.

Field work involved extensive foot traverses to sample and accurately delineate zones of aggregate potential previously identified by aerial photographic interpretation. Helicopter and boat traverses were done in areas inaccessible by foot traversing. Approximately 200 samples were collected for particle size analysis and lithological investigation.

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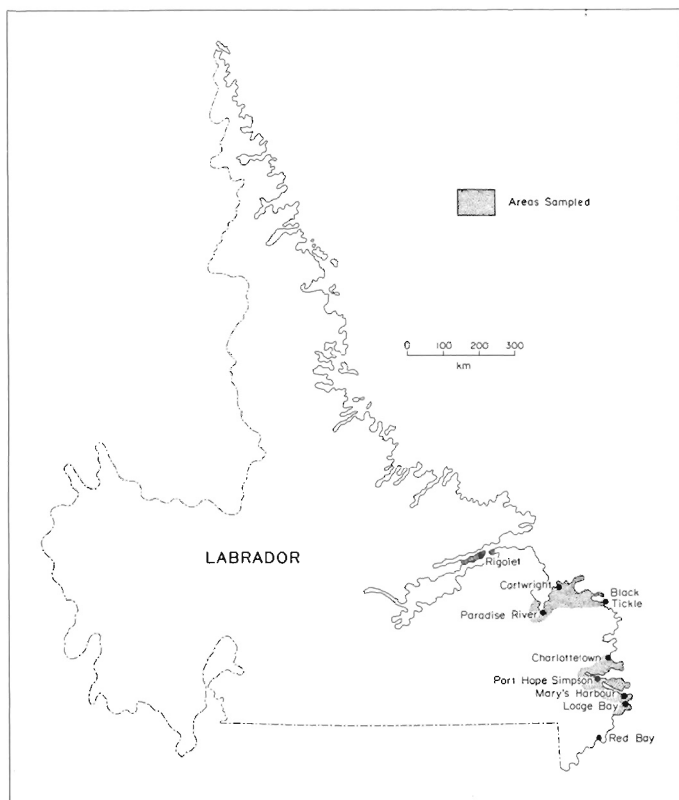


Figure 1: Detailed aggregate resources, coastal Labrador.

Mapping was normally conducted at a scale of 1:50,000, although 1:25,000 maps were used in some areas.

Office Program

During the winter of 1983-84, sample analyses will be done and maps compiled. This will include the production of two sets of 1:50,000 scale maps, consisting of approximately 15 maps each. One series of maps will include sample localities and zones of aggregate potential; the other series will show landform classification.

Work will also be started on two sets of 1:250,000 scale maps consisting of 3 maps each. One set will give a summary of aggregate zones as depicted on the 1:50,000 maps; the other 1:250,000 scale map set will give a summary of the bedrock geology with emphasis on the geotechnical aspects of bedrock, including marginal notes on each map with a unified legend.

Plans

Future work (subject to Management Committee approval) will include field sampling in the communities of Postville, Davis Inlet, Nain and the proposed relocation sites for Hopedale. A reconnaissance trip to these communities at the end of the 1983 field season has shown areas of aggregate potential as well as problems in some areas with regards to aggregate extraction. Davis Inlet, for example, has a sandy terrace within the community. Housing development has begun to occur at the top of this deposit. With proper mapping and sampling, this area should be designated as an area of aggregate extraction for community and local needs, to be followed later by housing development.

Acknowledgements

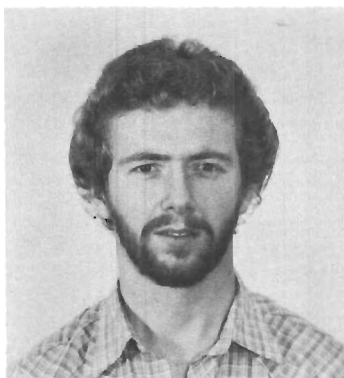
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References

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