SURFICIAL AND GLACIAL GEOLOGY
RECONNAISSANCE SURVEY OF PART OF THE GREAT GULL POND MAP AREA (12H/1), NEWFOUNDLAND

by

D.G. Vanderveer

INTRODUCTION

In reviewing the available data on (a) glacial dispersion (b) the extent of overburden and (c) the presence of significant mineralized boulders of unknown source in the Great Gull Pond map area, the author undertook a brief field reconnaissance of the area during the 1982 field season. The area visited (bounded by South Brook, the CN railway and the Trans Canada Highway) is extensively mantled with overburden. The main aim of the survey was to evaluate the information contained in a M.Sc. thesis (O'Donnell, 1973) with respect to the direction(s) of glacial dispersion and the glacial stratigraphy in the area.

Mineral claims in the area as of October 18, 1982, were held by Rio Tinto, Brinex Ltd., Pacific Coast Mines and Lewis Murphy. In addition, parts or all of three Reid Lots, Charter lands to ANDCO (Abitibi-Price), and a concession to Brinco cover portions of the map area. Over 50 per cent of the area is Crown Land, available for claim staking.

STRATIGRAPHY

Glacial stratigraphy in the sand and gravel pit at the Gullbridge Mine site reveals approximately 4 to 6 m of compact lodgement till overlying 8 to 10 m of gravel and sand with an occasional silt lens. The extent of the outwash deposit was not determined by the reconnaissance survey but the elevation of the top of the outwash (base of the lodgement till unit) is approximately 32 m (± 5 m) above the level of Great Gull Pond (at an approximate elevation of 150 m). It was not possible to determine the amount of sand and gravel removed by glacial erosion nor was it possible to locate any till unit below the sand and gravel. O'Donnell's thesis does not mention the occurrence of till over outwash.

GLACIAL STRIAE

Observed striae record two glacial flow directions. The most recent was towards the north or northeast (350 to 030 azimuth), but some outcrops have striae which indicate an earlier northeastward to eastward flow (030-090). The relation of the two glacial flow directions to the glacial till deposits and the sand and gravel has not yet been determined.

CONCLUSIONS

Glacial dispersion in the Great Gull Pond area may have been affected by two glacial flows, an early northeastward to eastward flow followed by a later northward to northeastward flow.

The presence of lodgement tills over deposits of sand and gravel have been confirmed at three widely separated geographic areas (namely, Tulk's River, Buchans, and Gullbridge) within the Central Volcanic Belt (Vanderveer and Sparkes, 1982, and Sparkes, this volume). The advance (or readvance) of ice mass(es) that deposited the upper till unit(s) may have been related to a widespread glacial event, indicating that other occurrences of glacial stratigraphy (*i.e.* till over outwash over till) may be expected throughout this region of Newfoundland.

The presence of two till units (one unit presumably underlying the sand and gravel deposit) and of till overlying sand and gravel (that often contains lenses of silt) and the distribution of

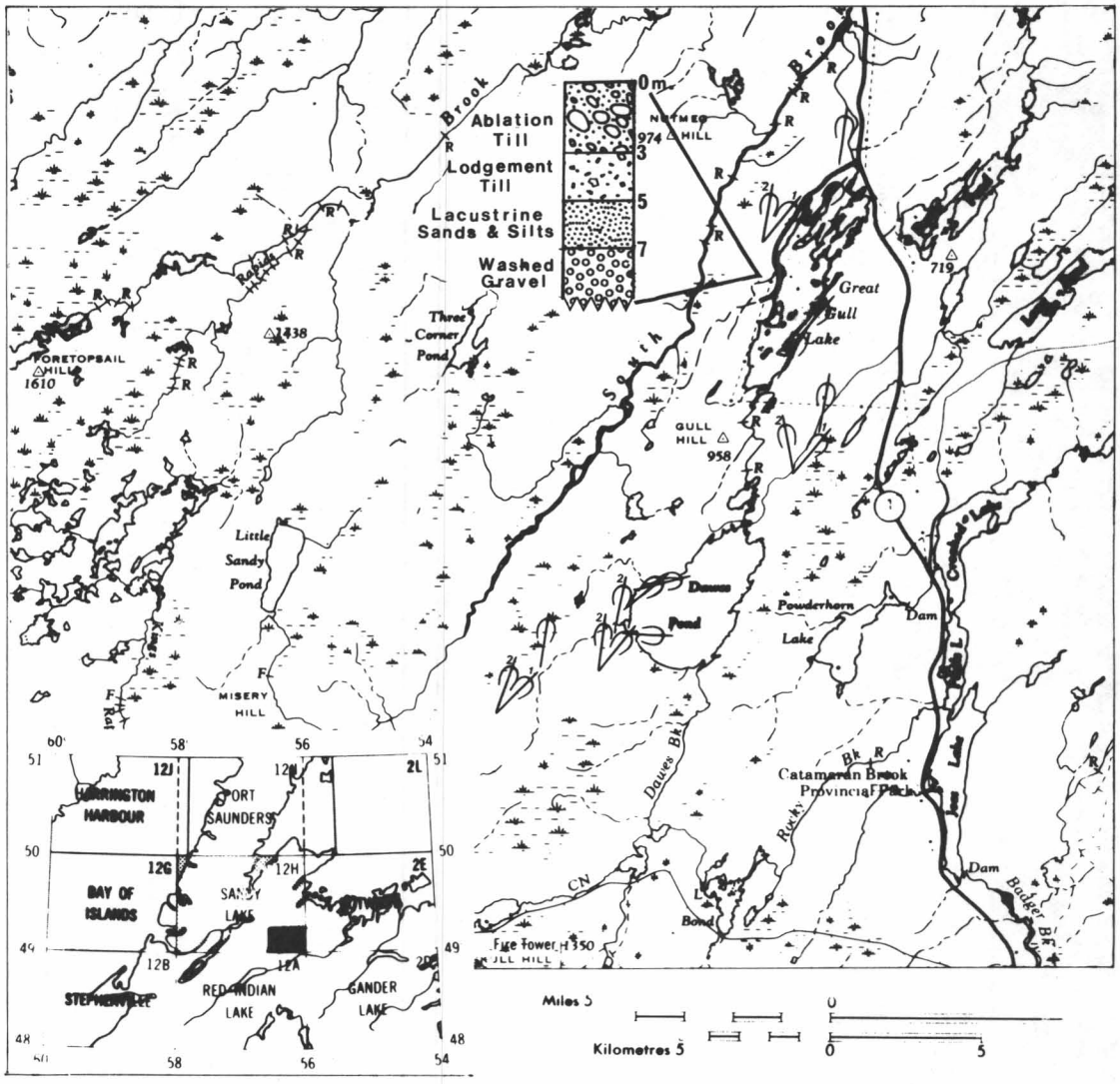

Figure 1. Great Gull Pond map area (12H/1), glacial striae (numbers indicate relative ages, No. 1 oldest) and overburden stratigraphy.

these sediments will complicate the interpretation of data from exploration activities in this area, particularly geochemistry, geophysics and boulder tracing.

Detailed mapping of the Great Gull Pond map area is proposed for 1983 as a continuation of the mapping conducted by Sparkes in 1982 (this volume).

REFERENCES

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