Figure 5

MINERAL DEVELOPMENT DIVISION
DEPARTMENT OF MINES AND ENERGY
GOVERNMENT OF NEWFOUNDLAND AND LABRADOR

CANADA NEWFOUNDLAND MINERAL
EXPLORATION AND EVALUATION PROGRAMME

# SURFICIAL GEOLOGY

## DANIELS HARBOUR MAP-AREA

1 MILE 0 1 2 3 MILES

### LEGEND

GENETIC OR PROCESS/ENVIRONMENT CATEGORIES OF TERRAIN CLASSIFICATION

| GEOMORPHIC MODIFIER | B ROCK | C COLLUVIAL | m MORAINAL | F FLUVIAL | GF GLACIOFLUVIAL | L LACUSTRINE | M MARINE | O ORGANIC | E EOLIAN |
|---|---|---|---|---|---|---|---|---|---|
| c concealed | obscured only by vegetation | – | – | – | – | – | – | – | – |
| w 'weathered' | frost-broken (felsenmeer) | – | ..... winnowed, "washed" and subdued by wave action ..... | | | | | – | blowouts |
| e eroded | ..... channelled by former streams of glacial meltwater, in a braided or parallel pattern ..... | | | | | | | – | – |
| g gullied | ..... dissected by modern ravines in a dendritic pattern ..... | | | | | | | | |
| k 'collapsed' | karst | – | kettled | – | kettled | kettled | kettled | – | – |
| p plain | plain | plain | plain | floodplain | outwash plain | plain | plain | 'high bog' | plain |
| v veneer | – | thin enough – usually less than 10 feet thick – to reveal geomorphic fabric of underlying formation | | | | | | | |
| r ridged | corrugated with parallel stratification ridges, igneous and tectonic foliation | terracettes | transverse elements: end, recessional, ribbed, De Geer moraines | point bars | eskerine complex | beach berms, strandlines and wave-cut benches | | string bog | dunes |
| h hummocky | – | – | ablational and chaotic disintegration moraine | – | kames | – | – | palsa | dunes |
| d drumlinoid | – | – | longitudinal elements: drumlins, fluting, crag-and-tail hills | – | – | – | – | – | – |
| l lineated | fractured | solifluction lines | – | meander scars | – | – | – | vegetation stripes | – |
| d delta | – | – | – | delta | – | delta | delta | – | – |
| f fan | – | talus cone | – | alluvial fan | – | – | – | – | – |
| a apron | – | scree slope | – | – | – | apron | apron | – | – |
| t terrace | – | antiplanation terrace; bench | – | terrace; bench | kame terrace | terrace; bench | terrace; bench | – | – |

### SYMBOLS

- Boundary of terrain units; defined, approximate, transitional
- Longitudinal ice-flow features
  - Drumlin, drumlinoid, fluting
  - Crag-and-tail hill
  - Röche moutonnée
  - Striation
- Transverse ice-flow features
  - Crestline of end moraine; prominent and continuous, subdued and broken
  - Ribbed moraine, De Geer moraine, minor moraine,
  - Esker, crevasse filling
  - Solifluction lines in colluvial and orgamic terrain
  - Stratification ridges in sedimentary and volcanic rocks; igneous and tectonic foliation
  - Depressional lineament along fracture or fault trace
  - Abandoned channel of former meltwater stream
  - Emerged shorelines of former proglacial lake or marine submergence
  - Landslide scar
  - Scarp of terrace, bench, delta
  - Marl sediment in lake or pond
  - Location of sample
  - Spring
  - Sinkhole, pond
  - Location of radiocarbon-dated organic material
  - Boulder train (dispersion fan of mineralized fragments)
  - Boundary of geochemical test area
  - Isopleth of per cent granite fragments in till
  - Down-ice edge of granite source area

### EXPLANATORY NOTES

COMPLEXES

Where two or more classes of terrain are interspersed in a mosaic or repeating pattern on a scale too small to warrant meaningful differentiation, the proportion of each component in the combination is given in a three-position designation set off by slashes denoting arbitrary percentage limits. For example "mv/Rk" means that at least 60% of the area is underlain by thin till, with up to 40% boggy areas, and less than 15% scattered rock outcrops. Rc/R indicates more than 60% bedrock concealed by vegetation and less than 15% outcrop.

MORPHOLOGIC OVERPRINT

Where a sequence of geomorphic processes has produced a multi-aspect or compound terrain fabric, the geomorphic modifier suffixes are appended in the inferred order of superposition; "mvdhe" means that a veneer of till has been moulded into a smeared or drumlinoid form, then mantled with hummocky till during ablation, and finally channelled by former meltwater streams.

TRANSITIONAL ASSOCIATIONS

Locally, two or more terrain units are juxtaposed by reason of related origin, temporal sequence, or ambiguous geomorphic distinction. Such situations are identified by a compound designation marked by a hyphen. Examples are: an outwash plain that slopes down and is transitional to a marine terrace ("GFp - Mt") or kame and kettle glaciofluvial topography that blends with hummocky disintegration moraine ("GFh - mhw").

STRATIGRAPHIC SEQUENCE

Natural exposures are rare, except along coasts, and are minimally shallow along roads, but where materials of different origin or texture are known to be superimposed, or can be reasonably confidently inferred, the sequence is indicated in conventional order using horizontal separators, such as, "$\frac{Dv}{mv}$", which indicates that thin muskeg has developed over a marine mantle on drumlinoid till.

TEXTURAL MODIFIER

Ordinarily, textural characteristics are implied by the genetic - morphologic assignment, but occasionally more specific grain-size information is available either from ground observation or by inference from distinctive morphology, or where texture differs significantly from that usually associated with a particular process, as in the case of a purely sand esker, or a gravelly alluvial plain. Textural designations are: 'r' for rocks and rubble; 'g' for gravel and sand; 's' for sand; 'st' for fine sand and silt; 'c' for silt and clay. Combinations such as 'gc' signify a stony pelite, like the sort of "till" produced by the accumulation of ice-rafted debris at the terminus of a floating glacier.

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