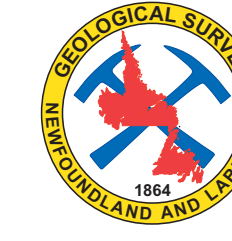


MAP 2003-27  
**UNTITLED**  
 NEWFOUNDLAND  
 Scale 1:50 000

14D/05



**LANDFORM CLASSIFICATION**

Each outlined area is assigned a classification consisting of up to three genetic categories and modifiers that designate the types of deposits within each area. Each category within a classification is listed in order of dominance and is separated from the other categories by a slash (e.g., Tv/R). Generally, the areas are divided so that three landforms or deposit types are identified within a given area. The classification system is also used to denote the approximate percentage of landforms occurring within an outlined area, but those which comprise less than 5 percent of the area are not included in the classification. Four notations of the landform system are as follows:

- Where three different landforms are included in a single map unit they are each separated by a single slash (/) and their relative percentages are (85-95) and (5-15) for double slash, or (60-80) and (15-40) for a single slash.
- Where two landforms are included in a single map unit, a double slash (//) or single slash (/) is used to separate them, and their relative percentages are (85-95) and (5-15) for double slash, or (60-80) and (15-40) for a single slash.
- A hyphen between two landform types indicates that they are approximately equal in area. For example, Tv/Rc indicates that fluvial erosion and rock-controlled vegetation are equally important in the area.
- A composite symbol is used to show combinations of the above cases. For example, T//Rc indicates that about 60-85 percent of the area is covered by fluvial erosion, 15-40 percent by glaciofluvial sediments, and is underlain by till.

The station data reported on this map have been referenced from the Newfoundland Station Database (Taylor, 2001).

**LANDFORM CLASSIFICATION: GENETIC**

| Symbol | Depositional Environment | Origin and Characteristics of Materials  |
|--------|--------------------------|--|
| F      | Fluvial                  | Alluvium consisting of silt and clay to bouldery gravel; forms terraces and plains associated with modern stream channels, their floodplains and deltas; usually less than 1 m thick, deposited by fluvial action at or below mean flood level.  |
| C      | Colluvial                | Colluvium consists of coarse-grained bedrock-derived materials, but may include sand, silt or clay; accumulates on the lower parts, or at the base of steep rock faces; transported by gravity.  |
| E      | Aeolian                  | Medium to fine grained sand and silt, well sorted, poorly compacted; commonly occur as dunes up to 10 m high; transported and deposited by wind.   |
| G      | Glaciofluvial            | Fine grained sand to coarse grained gravel occur as plains, ridges (eskers), hummocks, terraces and deltas; generally greater than 1 m thick, deposited as outwash in areas of contact between glacial ice and rock.   |
| L      | Lacustrine               | Silt, clay, gravel and sand; occur as deltas and blankets; silt and clay deposited in freshwater lakes from suspension, sand and silt by lake-floor currents; gravel and sand by shoreline wave action.  |
| M      | Marine                   | Clay, silt, gravel and diatomite; sand is present in some places; generally moderately to well sorted and commonly stratified, but may be massive; occurs as beach ridges, deltas, terraces and bars deposited in a marine environment; gravel and sand by shoreline wave action; may include shells, clay silt deposited from suspension and turbidity currents; gravels generally are well-sorted. |
| T      | Glacial                  | Includes all types of silt, composed of diatomite; transported and subsequently deposited by ice from glacial ice with significant sorting by water.   |
| O      | Bog                      | Floppy peat accumulations of peat, peat moss and other organic matter; developed in areas of poor drainage.  |
| R      | Rock                     | Bedrock  |

**LANDFORM CLASSIFICATION: MORPHOLOGY**

| Symbol | Morphology                 | Description   |
|--------|----------------------------|---|
| a      | apron                      | A relatively gentle slope at the foot of a steeper slope, commonly used to describe colluvium at the base of a rock escarpment; consists of materials derived from the usually steeper upper slope.   |
| b      | blanket                    | Any deposit greater than 1.5 m thick; minor irregularities of the underlying unit are masked but the major topographic forms still evident.   |
| c      | consolidated by vegetation | Vegetation that developed on either colluvium surface or a thin layer of angular frost-shattered and frost-heaved rock fragments overlying bedrock; includes areas of shallow (less than 1 m), discontinuous overburden.  |
| d      | drumlinoid                 | Elongate ridges between 1.5 and 20 m high, 50 and 200 m wide, and 200 to 5000 m long; ridges have a rounded end pointing in the up-ice direction and gently curving sides that taper in the down-ice direction; either a convex longitudinal profile, commonly with a steeper slope in the up-ice direction; consist of subglacially formed deposits shaped in a streamlined form parallel to the direction of glacial flow; commonly consist of silt, although some may contain stratified drift; may have a rock core.                                      |
| e      | eroded and dissected       | Series of closely spaced gullies or deeply incised channels; can have a dendritic pattern or may be a single straight or arcuate channel; gullies and channels may contain underfit streams.  |
| f      | fan                        | A gently sloping accumulation of debris deposited by a stream issuing from a valley onto a levelled low to rise as the result of the valley from which the stream issues; the fan shape results from the deposition of material as the stream swings back and forth across the levelled floor; fans are usually derived from eroded glacial and glaciofluvial deposits; glaciofluvial fans (deltas) are deposited in standing water rather than a terrestrial environment; outwash fans are derived from bedrock and are usually steeper (i.e., cone shaped). |
| h      | hummock                    | An apparently random assemblage of knobs, mounds, ridges and depressions without any pronounced orientation, slight form or orientation; formed by glacial melting during ice stagnation and disintegration; includes subglacial, englacial, supraglacial and stratified materials.   |
| k      | kettle                     | A basin or bowl-shaped closed depression or hollow in glacial drift; results from the melting of a buried or partly buried detached block or lens of glacial ice; commonly occurs in association with hummocks.   |
| i      | inverted                   | Elongate spindle-shaped ridges between 60 and 60 m high, 75 and 300 m wide and up to 4000 m long; ridges are commonly straight sided, taper at one or both ends, and have a flat longitudinal profile; consist of subglacially formed deposits shaped in a streamlined form parallel to the direction of glacial flow; commonly consist of till, although some may contain stratified drift; may have a rock core; includes esker/beach ridge (O).  |
| p      | plain                      | A comparatively flat, level or slightly undulating tract of land; materials are either fluvial, glaciofluvial, alluvial, marine, lacustrine or organic sediments; bedrock features are commonly masked by the overlying sediments.  |
| r      | ridge                      | Narrow, elongated and commonly steep-sided features that rises above the surrounding terrain; materials are either rock, till, glaciofluvial, fluvial, marine, lacustrine, aeolian, or organic sediments; includes stringtop (O).   |
| t      | terrace                    | Long, narrow, level or gently inclined step-like surface, bounded along one edge by a steeper descending slope or scarp and along the other by a steeper ascending slope or scarp; materials are either till, glaciofluvial, fluvial or lacustrine sediments; generally formed by fluvial and glaciofluvial erosion and marine wave action.   |
| v      | veneer                     | Any deposit less than 1.5 m thick; morphology of the underlying unit is evident.  |
| w      | weathered                  | A thin layer, generally less than 1 m thick, of frost-heaved and frost-shattered bedrock fragments.   |
| x      | complex                    | Commonly used to indicate numerous eskers ridges that are closely spaced, can be used where any genetic category identifies numerous surface expressions in a small area, and in which no single element can be defined.  |

**LANDFORMS AND SURFICIAL GEOLOGY OF THE NTS 14D/05 MAP SHEET (Untitled)**

MAP 2003-27

**LANDFORM CLASSIFICATION**

| GENETIC               |  |                                |
|-----------------------|--|--------------------------------|
| Tv                    | Fb, Fp, Ft, Fd, Fv, Ft, Fv, F                  | Lb, Lc, Lp, Lr, Ls, Lx, Lx, L  |
| Tb, Tb, Td, Tt, Tx, T | Gp, Gt, Gt, Gt, Gt, Gp, Gc, Gc, Gc, Gc, Gc, Gc | Mb, Mb, Mb, Mb, Mb, Mb, Mb, Mb |
| Th, Tk                | Eb, Eh, El, Ev, Ev, E                          | Rc                             |
| Td, Tt, Tr            | Ca, Cb, Cc, Cc, Cc, Cc, C                      | Rd, Re, Rr, Rr, Rr, R          |
| O                     |  |                                |

**SYMBOLS**

|  |       |
|--|-------|
| Geological boundary (assumed)                    | ..... |
| Scarp face at edge of fluvial terrace            | ..... |
| Esker (flow direction known or assumed, unknown) | ..... |
| Melwater channel (small, large)                  | ..... |
| Crevasse of major moraine ridge                  | ..... |
| Trench of ribbed or steep moraine ridges         | ..... |
| Beach ridge                                      | ..... |
| Crevasse fill ridge                              | ..... |
| Sand dunes                                       | ..... |
| Duress   | ..... |
| Crag-and-tail hill                               | ..... |
| Flagging   | ..... |
| Rock outcrops                                    | ..... |
| Stratification (direction known, unknown)        | ..... |
| Kettle hole (small, large)                       | ..... |
| Sinkhole (small, large)                          | ..... |
| Observation site                                 | ..... |

Elevation in feet above mean sea level. Contour interval 50 feet.  
 NOTE: All symbols and classifications may not occur on this map.

Geology by M.J. Batterson, Geological Survey, Department of Mines and Energy, Government of Newfoundland and Labrador.  
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 http://www.geop.gov.nl.ca

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 Taylor, D.M.  
 2001. Newfoundland Station Database. Newfoundland Department of Mines and Energy, Geological Survey Branch, Open File NFD 2195 (version 4).  
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