

MAP 2020-14
CORMACK
NEWFOUNDLAND AND LABRADOR

LEGEND

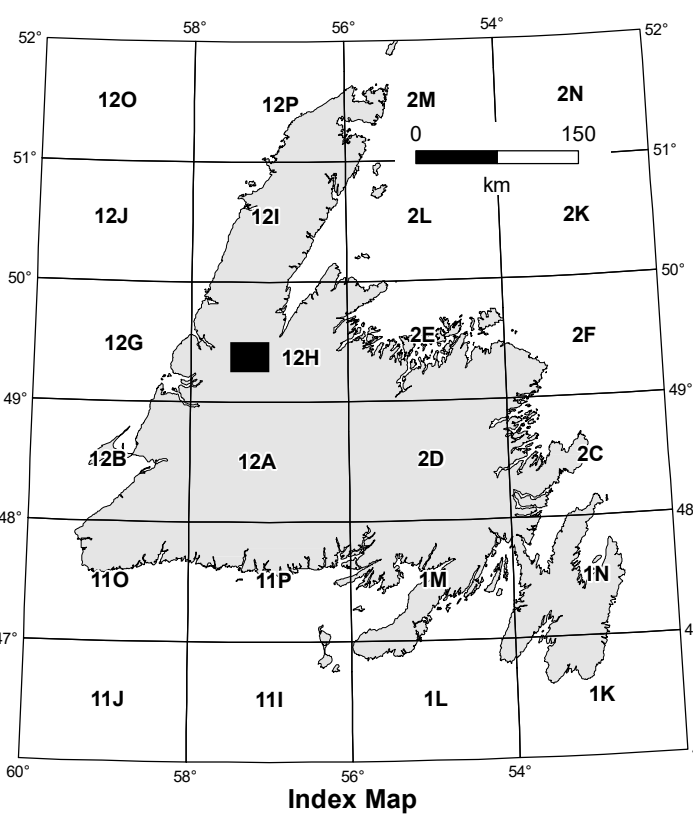
- Each outlined area is assigned a classification consisting of up to three genetic categories and modifiers that designate the types of deposits within each area. Each category within a classification is listed in order of dominance and is separated from the other categories by a dash (e.g., T-R). Generally, the areas are divided into three broad types 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 that sum less than 2 percent of the area are not included in the classification. Four variations of the classification system are as follows:
- When three different landforms are included in a single map unit they are each separated by a single dash (-) and their relative percentages are (50-40), (15-35), and (5-15).
 - When two landforms are included in a single map unit, a double dash (//) or single slash (/) is used to separate them, and their relative percentages are (80-20) or (5-95) (15-85) (15-40) for a single slash.
 - A hyphen between two landform types indicates that they are approximately equal in area. For example, T-R// indicates that till veneer and rock concealed by vegetation or a thin till are equal in area.
 - A composite symbol is used to show combinations of the above cases. For example, T//R indicates that about 60-85 percent of the area is covered by fluvial sediment, 15-40 percent by glaciofluvial sediments, and is underlain by till.

GENETIC CLASSIFICATION

Symbol	Depositional Environment	Origin and Material Characteristics
O	Big	Poverty drained accumulations of peat, post peat and other organic matter; developed in areas of poor drainage
F	Fluvial	Alluvium consisting of silt and clay to bouldery gravel; forms benches and plains associated with modern stream channels, their floodplains and deltas; usually less than 1 m thick; deposited by fluvial action at or below meander belt levels
C	Colluvial	Coarse-grained block-derived materials; 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 forms as dunes up to 10 m high transported and deposited by wind
G	Glaciofluvial	Fine-grained sand to coarse-grained rocky gravel; forms plains, ridge (beds), hummocks, terraces and deltas; generally greater than 1 m thick; deposited as outwash in an ice-contact or proglacial setting
L	Lacustrine	Silt, clay, gravel and sand; forms as plains and blankets; silt and clay is deposited in freshwater lakes from suspension; sand and silt by lake-floor currents; gravel and sand by subaqueous wave action
M	Marine	Clay, silt, gravel and detrital sand is present in some places; generally moderate to well sorted and commonly shelliferous; but may be massive; some beach ridges, dunes, terraces and sea stacks; shells, silt and silt deposited from suspension and surficial currents; gravel is generally a relict from suspension
Tv	Glacial	Includes all types of till composed of detritus transported and subsequently deposited before being glacial ice with no significant sorting by water; These include relictary till (T ₁) or till (T ₂), T ₁ or T ₂ till, till deposited from suspension, features produced by actively flowing till (T ₁ , T ₂ or T ₃) or sediment deposited through ice degradation (T ₁ , T ₂)
T ₁ T ₂ T ₃		
T ₁ T ₂		
T ₁ T ₂		
R	Rock	Bedrock, either exposed (R) or concealed by vegetation (Rc)
Rc		

MORPHOLOGY

Symbol	Morphology	Description
a	apron	A relatively gentle slope at the foot of a steeper slope, commonly used to describe collicium at the base of a rock escarpment; consists of materials derived from the usually steeper upper slope
b	blatney	Any deposit greater than 1.5 m thick; minor irregularities of the underlying unit are masked but the major topography from till evident
c	concealed by vegetation	Vegetation not developed on other collicial surfaces or a thin layer of angular frost-shattered and fragmented rock fragments covering bedrock; includes areas of shallow (less than 1 m), discontinuous outwash
d	drumfield	Drumfield (beds) between 1.5 and 30 m high, 20 and 300 m wide, and 300 to 8000 m long; ridges have a rounded end pointing in the up-ice direction; gently curving sides that taper in the down-ice direction; consist of subglacially formed deposits shaped in a reworked form parallel to the direction of glacial flow; commonly consist of till, although some may contain striated till; may have a rock core
e	eroded and dissected	A series of closely spaced ridges or nearly vertical 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 broad, flat to slope of the mouth 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 broad, level base and is usually derived from eroded glacial and glaciofluvial deposits; glaciofluvial fans (glafans) are deposited in flowing water that has a laminar environment; colluvial fans are derived from bedrock and are usually steeper (i.e., cone shaped)
h	hummock	An apparently random assemblage of mounds, mounds, ridges and depressions without any pronounced orientation; significant form or orientation; formed by glacial reworking during ice stagnation and deglaciation; includes subglacial, englacial, supraglacial and distal till features
k	ketle	A basin or bowl-shaped closed depression or hollow in glacial till; results from the melting of a buried or partly buried detached block or lens of glacial ice; commonly occur in association with hummocks
l	lineated	Elongate spine-shaped ridges between 6 and 60 m high, 75 and 300 m wide and up to 4000 m long; ridges are commonly straight, level, top or both sides, and have a flat longitudinal profile; consists of subglacially formed deposits shaped in a streamlined form parallel to the direction of flow; commonly consist of till, although some may contain striated till; may have a rock core; includes slope breasted top (S)
p	plain	A comparatively flat, level or slightly undulating tract of land; materials are either till, glaciofluvial, glacial, marine, lacustrine or organic sediments; bedrock features are commonly masked by the glaciofluvial deposits
r	ridge	Narrow, elongated and commonly steep-sided features that rise above the surrounding terrain; materials are either rock, till, glaciofluvial, fluvial, marine, lacustrine, aeolian, or organic sediments; includes string top (ST)
t	terrace	Long, narrow, level or gently inclined step-like surfaces, bounded along one edge by a steeper descending slope or scarp and along the other by a steeper ascending slope or rise; terraces are either till, glaciofluvial, fluvial or lacustrine sediments; generally formed by fluvial and glaciofluvial erosion of marine siltation
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 outer ridges that are closely spaced; can be used where any genetic category exhibits numerous surface expressions in a small area, and in which no single element can be defined at this scale



Index Map



SURFICIAL GEOLOGY
CORMACK MAP AREA
(NTS 12H/06)

MAP 2020-14

SYMBOLS

Geological boundary	Dunelm (direction known, inferred)
Sharp face at edge of terrace	Crags and talus fill
Crevasse	Till ramp
Fluvial	Ridge moulinette
Fluvial flow direction known or assumed, inferred	Striation (direction known, uncertain) (numbers indicate relative age)
Meltwater channel (small, large)	Kettle hole (small, large)
Crestline of major moraine ridge	Shrinkhole (small, large)
Trail of block or minor moraine ridge	Observation site
Beach ridges	Delta
Sand dunes	Radiocarbon date
Avulsion track	
Small landslide (face, slope movement)	
Large landslide (face, slope movement)	

Note: All symbols and classifications may not occur on this map.

Surficial geology by S. Heecher, GIS digital cartography by M.A. Stjepanec and K. Morgan
Editor: C.P.G. Powers

Digital elevation data supplied by the Shuttle Radar Topography Mission (SRTM) a partnership between NASA and the National Geospatial Intelligence Agency (NGA). Files courtesy of the NASA Shuttle Radar Mission (11 - 22 February 2000). Additional information available from: <http://topo.usgs.gov/products/srtm/submit.html>.

The age dates and glacial directions, where included, on this map have been obtained from Taylor (2001).

Copies of this map may be obtained from the Geological Survey of Newfoundland and Labrador, Department of Natural Resources, Government of Newfoundland and Labrador, P.O. Box 8700, St. John's, NL, Canada, A1B 4X8.

This map is subject to review and revision. Comments to the author concerning errors or omissions are invited.

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This map supersedes Map 2000-16, Open File 0124/0014/05.

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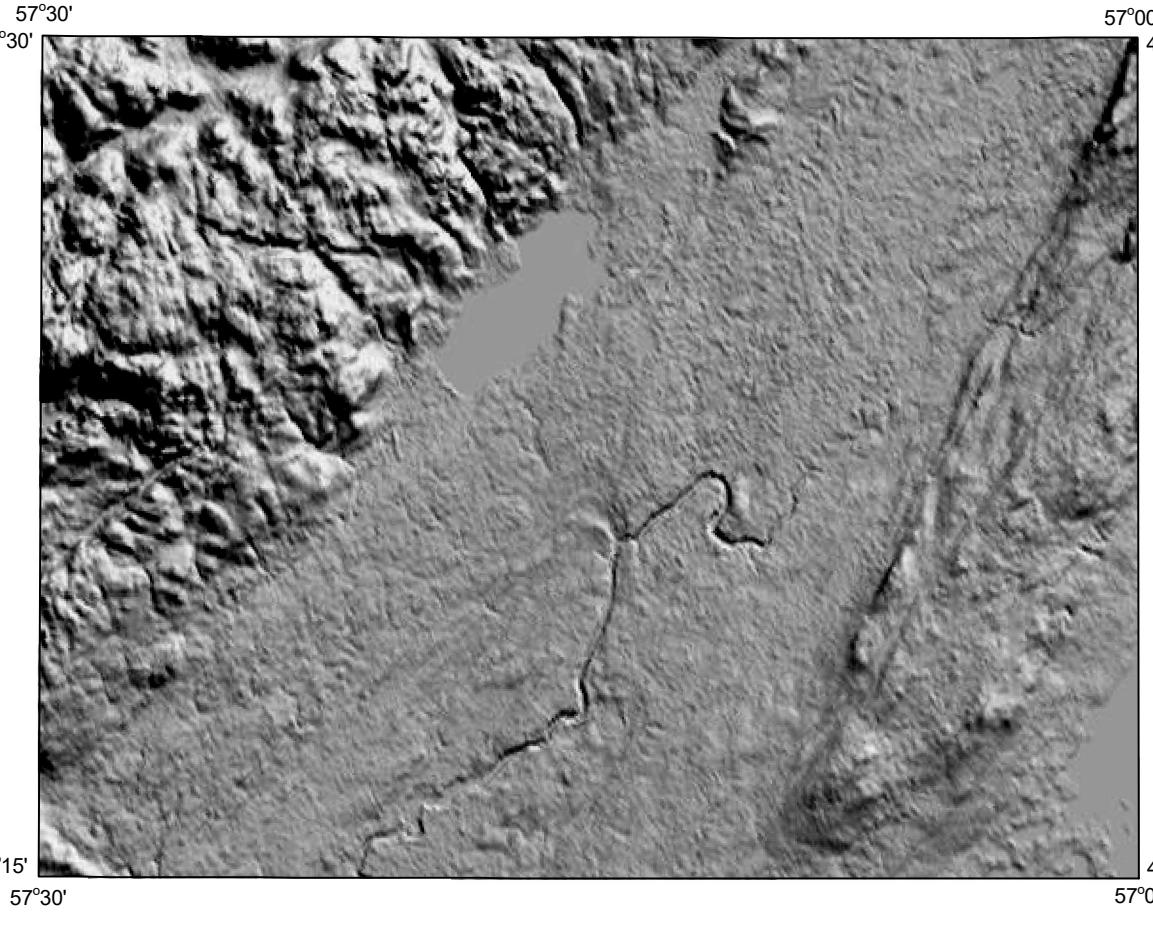
Department <http://www.gov.nl.ca/nl/>
Geological Survey <http://www.gov.nl.ca/nl/nrs/geological/>
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References
Heecher, S.
2001. Quaternary mapping and its bearing in Cormack (NTS 12H/06) and Silver Mountain (NTS 12H/11) map areas, western Newfoundland. Geological Survey, Department of Natural Resources, Government of Newfoundland and Labrador, Current Research 2010/01, pages 1-14.
Taylor, D.M.
2001. Newfoundland and Labrador Stratigraphic Database, Version 4. Newfoundland and Labrador Department of Natural Resources, Geological Survey, Open File NL02/0195. <http://gs.gov.nl.ca/nl/>

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Digital Elevation Model (DEM) from Shuttle Radar Topography Mission (SRTM) data of the Cormack map area (shaded from the northeast). The image provides surface information not readily illustrated on the surficial map. Terrain variability is evident, with areas of bedrock highlighted as rougher textured areas (consistent with surficial map), and areas of thicker till shown as smoother textured areas.