

**INTRODUCTION**

This legend is designed to provide a basic explanation of the terrain units and symbols used in Open File maps 55J, K, M, N, and O. Its purpose is to describe the principal components by which each terrain unit is identified. The maps are drawn largely from airphoto interpretation supplemented by ground checks made during the course of fifty helicopter traverses in the summer of 1973. Ground observations were made at 345 points scattered more or less evenly over the map area. Reference to properties of the glacial sediments and some discussion of the total mapping project (which also includes NTS map sheets 55L, 55P, 55F and 55D, to be published at a later date) may be found in reports 83 and 90 in Geological Survey of Canada Paper 74-1, pt A. Samples collected during the mapping and associated drift-prospecting project (700014) will be subjected to various geochemical and geotechnical tests to be reported upon at a later date. Data on active layer measurements, ground ice, and sources of granular materials will also be made available.

**TERRAIN UNITS**

Genetic Category letters are used to designate the specific origin of the terrain. Terrain units rarely consist of material of only one genetic category. Postglacial marine transgression resulted in a varying degree of modification of almost the entire glacial land surface. Post-marine transgression and modern active-layer processes have tended to increase the complexity of mixing of surficial materials.

The / symbol is used to separate, and indicate the relative importance of, discrete areas of different materials falling within the same terrain unit where problems of either textural gradation or mapping scale do not permit more detailed sub-division. Because of the reconnaissance nature of the ground checking, many areas where two distinctly different deposits are known to exist have been generalized into one unit by using a combination of symbols, each representing a deposit. Such areas are usually easily identified by their particular geomorphic patterns visible on air photographs (TIC, MIC, MA etc). However, in some cases, the presence of combined units is only revealed by ground checking (MSH, boulder-covered areas).

**LEGEND**

Genetic Category	Material	Terrain Unit	Description
A	alluvium	A	Areas of modern alluvial sands, gravels and cobbles. Will also contain scattered boulders. Normally associated with permanent river channels and may contain one or more terrace levels.
C	colluvium	C	Areas of moderate to steep slopes in unconsolidated sediments. Slope processes are active, and have modified the original sediments beyond simple definition.
MA	alluvium and sorted marine sediments washed from surrounding terrain, undifferentiated; fine sand to cobble/boulder	MA	Represents two morphological units with common texture and ground ice characteristics. The first is a low-lying, alluvial drainage way, found in all types of terrain but particularly between drumlin ridges, containing sand and scattered pebbles. The second is a more open plain, often associated with bedrock "embayments", and consisting of medium to fine sands. In both units, ice-wedge polygons are extensively developed, and peaty grass-sedge organic cover is 30cms to 1m+ thick.
MN	marine nearshore sediments; sands, gravels, cobbles	MN	Marine nearshore deposits usually forming beach ridges, spits, deltas etc., but also intertidal flats with a minor silt component. Often found fringing the bedrock outcrops.
		MIC	Eaches and aprons of gravels and sands derived from, or deposited as part of, an esker system. Usually form the outer parts of a marine-modified esker system. May carry modern drainage, particularly at contact of MIC and adjacent till plain.
		MT	Unit in which the till plain has been extensively modified by near-shore processes. In many instances, mixing of glacial and marine sediments has produced a pebbly-silty-sand which may resemble till or marine deposits, depending on the relative proportions of its constituents.
		MSH	Unit consisting of marine shells with no admixtures of mineral sediments. Largely confined to localities around Chesterfield Inlet.
IC	ice-contact stratified drift; cobbles to fine sand	IC	Stratified deposits containing numerous boulders and cobbles but composed mainly of gravels and sands. Largely represented by the central ridge or "core" of marine-modified eskers, and occasionally by the hummocky remnants of outwash plains.
T	till  grey to red silty, sandy till with few boulders and abundant cobbles; clay content varies from less than 2% in grey tills, to slightly more than 20% in red tills	T	Till unit with variable depths up to a recorded 30m. Often has scattered boulders at the surface. For more detailed description of properties, refer to reports 83 and 90 in G.S.C. Paper 74-1, Part A.
		T/R	Till plain with scattered outcrops and bedrock close to the surface. Minor marine beaches less than 1m high may be found on or around the bedrock outcrops.
		TMN	Till plain with minor amounts of marine nearshore sediments, grading into a washed till. Textures locally may be highly variable. The washed surface may consist of up to 1m of gravels and coarse sands over the till. Ice-wedge polygons have not been noted in this unit.
R	bedrock  mostly crystalline Precambrian gneisses, metavolcanic, basic and acid intrusive rocks, and metasediments except in the vicinity of Kazan River where late Precambrian flat-lying red slates, sandstones and acid volcanic flows occur	R	For general identification of the bedrock see G.S.C. Memoir 350. Bedrock is commonly frost-shattered and may carry thin surficial deposits in hollows.
		R/T/MN	A bedrock unit with widely scattered pockets of till, and thin, gravelly marine beaches located on and around some ridge crests.
		R/MN	A bedrock unit with widely scattered pockets of marine nearshore sands and gravels, or with gravelly marine beaches located on and around ridge crests.
		R/T	A bedrock unit with a discontinuous veneer of till deposits. The till surface is often scattered with boulders.
		R/M	A bedrock unit with a discontinuous veneer of marine silts. The silts are frequently fossiliferous, and exhibit mudboil activity.

\* Where these units are indicated as being boulder-covered (see explanation of symbols below), they consist of groups of bouldery mounds, up to 10 metres high, overlying the till. The mounds may contain reworked marine sediments including marine shells.

**TEXTURES**

Textures are mostly described in the Terrain Unit classification. Where it has been considered important to emphasize the dominance of a particular textural class, and only in the gravel and sand categories, the letters g and s have been appended to the Terrain Unit descriptor.

**SYMBOLS**

- |                  |  |   |  |
|------------------|--|---|--|
| Hummocky moraine |  | Esker   |  |
| Moraine ridges   |  | Meltwater channel                                 |  |
| Drumlin          |  | Raised beach                                      |  |
| Striation        |  | Marine limit                                      |  |
| Crevasse filling |  | Pingo   |  |
| Scarp            |  | Muddy Lake (lake with suspended mineral sediment) |  |
| Potential slump  |  |   |  |
| Flow/slide       |  |   |  |

Terrain in which the boulder cover is the single most important attribute in terms of restricting ground vehicle access, is indicated by the following overlay



OPEN FILE  
192  
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OTTAWA

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