GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

LEGEND FOR SURFICIAL GEOLOGY MOSAICS OF SIPIWESK (63P) and SPLIT LAKE (64A), MANITOBA

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GEOLOGIC MAP UNIT	MATERIAL	LANDFORM: ORIGIN	LANDFORM: TOPOGRAPHY	ASSUMED THICKNESS (range in feet)	ORGANIC COVER AND PERMAFROST	GENERAL COMMENTS
(C,S)Af	sand, silt and clay	alluvial floodplain	nearly flat or gently irregular surface in places marked by abundant channels; local relief up to 5 ft.	5 to 20	fen is widespread over poorly drained parts which include about 50% of the surface; open and closed stands of mostly Aspen, black Spruce and Jack Pine occur	poor source of aggregate; the floodplains occur within lacustrine plains and may include in-place or reworked clay; where mainly clay, the floodplains or valley bottom deposits are mapped as lacustrine units
SFn	sand, silt and gravel	proglacial outwash	broad rise or series of rises from 10 to 50 ft. above adjacent terrain	10 to 50	generally thin or absent; tree cover is open to closed stands of mostly Jack Pine and Aspen	good source of fine aggregate
(S,G)Fv			surface reflects topography of underlying material	0 to 10		mostly poor source of aggregate; limited amounts of agregate may be recovered locally; mostly occurs on the flanks of bedrock knolls and hills
(C,S)L(p,b,k)	clay, silt and sand	glacial lake	plains are extensive (tens of miles) nearly flat or gently irregular surfaces with 5 to 25 ft. local relief which commonly are marked by scattered knolls of bedrock; basins are not as extensive (10 miles or less) and are associated with strongly irregular, bedrock controlled surfaces with local relief of more than 25 ft.	10 to 50	bog and fen are widespread on most of the plains areas, whereas they commonly occur as discontinuous patches in the basins between bedrock hills, knolls and ridges; bog is 2 to 9 ft. thick and permafrost occurs at 1 to 4 ft. depth and commonly continues to more than 10 ft.; ice content is high and in places makes up the bulk of samples; particularly near the contact with underlying unconsolidated sediments; open to closed stands of Black Spruce occur on most bogs; tree cover on better drained sites on the flanks and tops of clay mantled bedrock knolls and hills is open to closed stands of mostly Aspen, Black Spruce and Jack Pine	clay and silt are commonly varved and overlie sand, till or bedrock; they commonly overlie bedrock on the stoss slopes of hills and sand or till on the steeper lee slopes and on most of the low relief terrain
(C,S)Lv			surface reflects topography of underlying materials; where it overlies gently irregular or broadly rolling till or bedrock plains, local relief is from 5 to 25 ft.; where it mantles areas of numerous knolls or hills of bedrock or till, relief is from 15 to more than 100 ft.	0 - 10		
(S,G)I(r,n,h,k)	sand, silt and gravel	ice-contact outwash (kames and eskers)	ridges, knolls and hills that occur as isolated landforms or as complexes along linear trends continuous for tens of miles; local relief is highly variable and ranges from low rises of 10 to 50 ft. relief to prominent hills some 100 to 300 ft. above adjacent terrain; some landforms are locally pitted and channelled with local surface relief from 10 to 100 ft.	10 to 300	generally thin or absent; tree cover is mostly closed stands of Aspen and Jack Pine	good source of aggregate; hills, knolls and ridges commonly have sandy surfaces devoid of boulders or gravel; gravelly surfaces occur in places and gravel probably occurs at depth within the central parts of sandy surfaced landforms particularly in the vicinity of abandoned channels
TM(p,d)	mostly sandy till, high in igneous rock detritus; minor gravel and sand	ground moraine	gently irregular or broadly rolling till plain with 5 to 25 ft. local relief; areas of higher relief are marked by scattered drumlins, drumloids and bedrock rises and knolls	0 to 100	bog and fen are widespread on most of the plains areas, whereas they occur as discontinuous patches in areas of higher relief; bog is 2 to 9 ft. thick and permafrost occurs at 1 to 4 ft. depth and commonly continues to more than 10 ft.; ice content is high and in places makes up the bulk of samples, particularly near the contact with underlying sediments; open to closed stands of Black Spruce occur on most bogs; on better drained sites found in areas of higher relief tree cover is open to closed stands of mostly Aspen, Black Spruce and Jack Pine	heterogeneous mixture of silt, sand and bouldery gravel suitable as fill material
TMv			surface reflects topography of underlying bedrock knolls and hills with local relief from 15 to more than 100 ft.	0 to 10		occurs as discontinuous patches on the lee slopes and flanks of bedrock hills and knolls, and in shallow depressions on bedrock plains
TMn		end moraine	broadly hummocky topography with 15 to 50 ft. relief between knolls and depressions	15 to 100		heterogeneous mixture of silt, sand and bouldery gravel suitable as fill material
R(p,b,r,n,h)	mostly Precambrian granitic rocks	preglacial and glacial erosion	the terms 'plain' and 'basin' are used in a more restricted sense than where applied to areas of thick lacustrine deposits: plains are stretches of gently irregular bedrock with 5 to 25 ft. relief where bedrock exposures are common and the drift cover is patchy; basins are local low areas between bedrock knolls and hills where the drift cover appears to be thin. Ridges, knolls and hills are gently irregular to strongly irregular surfaces with 15 to more than 100 ft. local relief	not applicable		prominent bedrock hills and intervening basins and valleys reflect a somewhat glacially modified preglacial terrain; this is indicated by the distinctive structural trends reflected by many bedrock landforms and by the lack of a glacially formed fabric in the gross aspects of the bedrock landforms; evidence of a glacially modified landscape is widespread in the form of polished and grooved bedrock surfaces of the stoss slopes of low rises and the glacially plucked aspect of the lee slopes

TEXTURAL (large capital letter)
- G - gravel and sand
- S - sand and silt
- C - silt and clay
- T - till
- R - bedrock

GENERIC (small capital letter)
- A - alluvial
- L - glaciolacustrine
- F - glaciofluvial
- I - ice-contact
- M - morainal

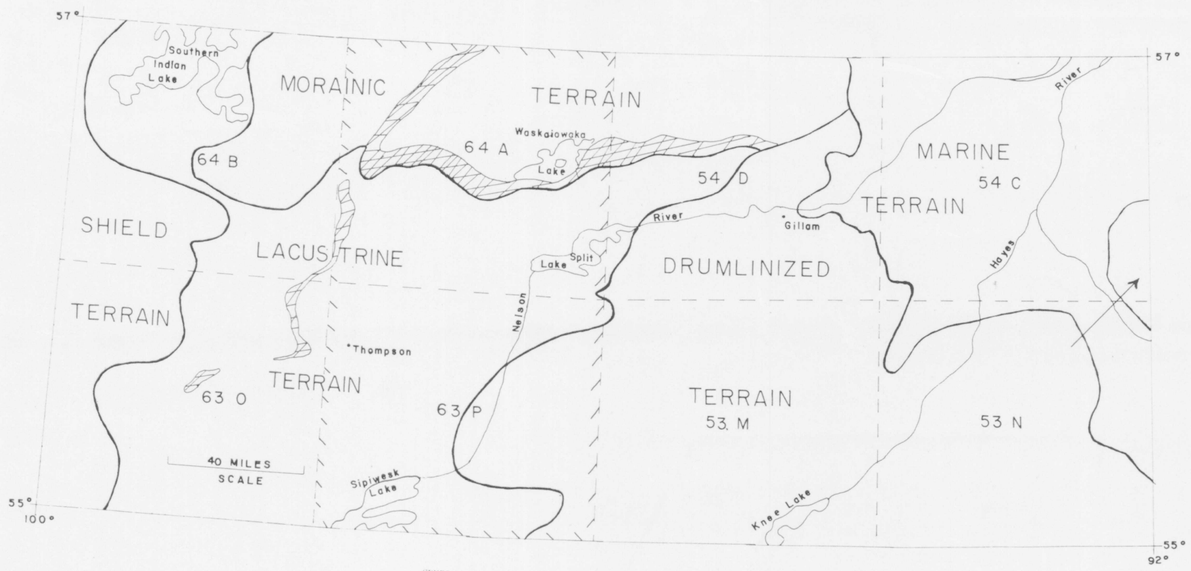
MORPHOLOGIC (lower case letter)
- n - knoll(s) (<50' relief)
- h - hill(s) (>50' relief)
- r - ridge(s)
- p - plain
- b - basin
- f - floodplain
- t - terrace
- v - veneer (commonly 2' to 10' thick)
- k - kettles

Boundaries (geologic, geologic and organic, organic)
Moraine ridge
Drumlin or Drumloid (ice direction shown, not shown)
Glacial striae (ice direction shown)
Esker (direction flow assumed, uncertain)
Abandoned beach
Partly buried channel (large, small)
Spillway or Meltwater channel (large, small)
Escarpment or steep bank
Minor intersecting lineaments
Limit of flooding
Helicopter landing site
Gravel Pit
Mine
Road

Complex Units: A horizontal line ——— separating two units indicates a veneer unit overlying a thicker and morphologically dominant unit e.g. $\frac{CLv}{Rn}$

Composite Units: A single slash / or double slash // between two units is used to designate areas where two distinctive units (mineral or organic) occur but are mapped as one unit. The first unit indicated comprises more than 50 percent (rough estimate) of the area; the second unit designated comprises from 25 to 50 percent where separated by a single slash e.g. $\frac{CLv}{Rn}/CLb$ or less than 25 percent where separated by a double slash e.g. $\frac{CLv}{Rn}//CLb$

Organic Units: Organic deposits designated as bog (1) and fen (2) cover the surficial sediments and bedrock in most of the low-lying poorly drained parts of the map-area. Bog is composed of peat material between 2 and 12 ft. thick (mostly 5 to 9 ft.) and commonly is several ft. or more above the water table; permafrost commonly occurs at a depth of 1 to 4 ft. depending upon local factors (tree cover, slope, drainage, etc.). Fen is peat covered by shallow water or water covered by a floating peat blanket; permafrost was not penetrated in fen areas and is at a depth greater than 10 feet or does not occur.



GENERAL TYPES OF TERRAIN WITHIN THE LOWER NELSON RIVER BASIN

Terrain type boundary
N.T.S. boundary
Kame moraine

OPEN FILE
150
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