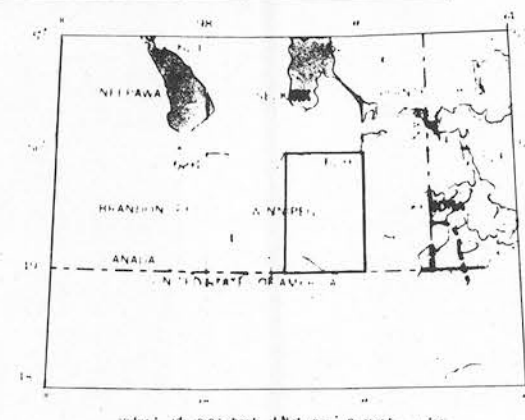


Base-map produced by Surveys and Mapping Branch
Department of Energy Mines and Resources, printed 1967

Geology by M.M. Fenton, 1973
To accompany PhD thesis The Quaternary Geology of
Part of Southeastern Manitoba, M.M. Fenton

Scale 1:250,000 Échelle
Kilometres 6 0 6 12 18 Kilomètres
Miles 4 0 4 8 Miles

hard surface, all weather
hard surface, all weather
stabilized surface, all weather
loose surface, dry weather



Unit Composition Geomorphology Origin

9	Alluvium	Sand, silt, and clay: stratified, moderate to well sorted, some organic layers and lenses.	Flood plains or bars; relief < 2m (6ft).	Deposited in rivers and on adjacent bars and flood plains.
Organic Units				
8a	8a shallow: generally < 1m (3ft).	Fibrous to mucky sedge, sphagnum, to reed peat.	Plain, level to sloping (0.8-1.6m/km, 4-8ft/mi), 8a also filling small depressions, relief < 1m (3ft).	Accumulation of organic material in poorly drained areas following the fall of Lake Agassiz.
8b	8b deep: > 1m (3ft).	Fibrous sedge and sphagnum peat.		
Lacustrine Units				
7	Sand and gravel	Sand and gravel: stratified, moderate to well sorted.	Generally individual ridges or hills, in some places on or adjacent to unit 1 forms subparallel ridges, relief < 4m (12ft).	Formed by the wave and current action of Lake Agassiz.
6	Clay overlain by < 1m (3ft) of sand.	Clay: silty, Sand: coarse to fine.	Plain: flat, relief < 1m (3ft).	Sand moved over clay as Lake Agassiz fell.
5	Clay: > 2m (6ft).	Clay: silty; 5a silty; clayey.	Plain: flat, sloping westward (0.8m/km, 4ft/mi); relief < 1m (3ft).	Deposited by Lake Agassiz, generally silt shoreward of clay.
4	Sand: generally > 2m.	Sand: medium to fine; well sorted.	Plain: flat to undulating; partially dune covered; relief < 4m (12ft).	Sand moved lakeward by Lake Agassiz, later aeolian reworking in some areas.
Glacial Units				
	Till, partially overlain by sand to clay - 3a to d	Till: silty to sandy, some clasts, calcareous.		Deposited by glacial ice.
3a	3a > 90 % covered by > 2m (6ft) of sand.	Sand, medium to fine, often with some clay between it and the till. Locally the till may be absent and the sand rests directly on earlier stratified sediment.	Plain: flat to undulating sloping westward to north-westward (0.7-1.4m/km, 3-6ft/mi); relief < 2m (6ft).	Sand and clay deposited in Lake Agassiz; possibly some later aeolian reworking of sand. Gravel is a lag deposit.
3b	3b 50 to 90 % covered by < 2m (6ft) of sand.	Sand: medium to fine; a thin gravel layer at the base or where the sand is absent. Locally clay is present between sand and gravel.		
3c	3c < 50 % covered by < 2m (6ft) of sand.	Sand: medium to fine; a thin gravel layer at the base or where sand is absent.		
3d	3d > 90 % covered by < 2m (6ft) of clay.	Clay: silty; to silt: clayey.		
2	Glaciofluvial sand and gravel:	Sand and gravel: stratified; poorly to well sorted.	Hills and ridges: relief 4-9m (12-30ft).	Drift deposited at the ice margin into a proglacial lake: kame-deltas
	Glaciofluvial sand.	Sand: coarse to fine; well sorted.		
1a	1a wave-eroded.	Sand: partially covered by a boulder lag; locally overlain by lacustrine deposits and till.	Plain: flat to undulating; irregular ridges where dissected by later stream erosion; relief < 4m (12ft); partially dune covered.	Deposited between ice masses and later eroded by Lake Agassiz and then reworked by wind.
1b	1b wave-washed.	Sand: locally till covered.	Highland: flat to ridge covered; partially scarp bordered; partially dune covered; relief < 4m (12ft).	
<p>Shallow discontinuous peat cover over the deposits indicated.</p> <p>Discontinuous dune cover over the deposits indicated.</p> <p>Geological boundary: defined; approximate; gradational.</p> <p>Scarp: over 6m (20ft) high; less than 6m (20ft); approximate or poorly developed</p> <p>Photo lineament: usually a minor ridge or vegetation stripe; intersecting lineaments, location approximate</p>				