



LEGEND

SURFICIAL MATERIALS

QUATERNARY

HOLOCENE

- Er** Eolian deposits: sand and silt sand, occurring largely as dunes derived from sandy lake deposits, 1-15 m thick
- Cl** Colluvial deposits: silt to clayey clastic, occurring as slope and slope deposits, derived largely from local sources, 1-15 m thick
- Ch** Shape failure deposits: silt to clayey clastic, hummocks and ridges formed by slope failure, <10 m thick
- Cx** Cultural complex: silt to clayey clastic, occurring as slope and slope deposits, derived largely from local sources, 1-15 m thick
- Ap** Alluvial fans: silt to clayey clastic, occurring as slope and slope deposits, derived largely from local sources, 1-15 m thick
- Al** Alluvial fans: silt to clayey clastic, occurring as slope and slope deposits, derived largely from local sources, 1-15 m thick
- At** Alluvial fans: silt to clayey clastic, occurring as slope and slope deposits, derived largely from local sources, 1-15 m thick
- Al** Alluvial fans: silt to clayey clastic, occurring as slope and slope deposits, derived largely from local sources, 1-15 m thick

LATE WISCONSINAN

LAKE AND GLACIAL LAKE DEPOSITS: generally fine sandstone, hummocks and other beds

- L1** Shoreline deposits: sand and silt, occurring as beach ridges, hummocks and other beds, <10 m thick
- L2** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L3** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L4** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L5** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L6** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L7** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L8** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L9** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick
- L10** Lake plain deposits: silt, sand, and clay, for surficial (relief less than 2 m) and sub-surficial (relief less than 10 m) lake deposits, 1-15 m thick

GLACIOLUVIAL DEPOSITS: sand and gravel deposited in contact with moraine or glacial covered plains and ridges, and in contact with floor deposits

- G1** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G1 - dominantly gravel, G1a - dominantly sand
- G2** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G2 - dominantly gravel, G2a - dominantly sand
- G3** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G3 - dominantly gravel, G3a - dominantly sand
- G4** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G4 - dominantly gravel, G4a - dominantly sand
- G5** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G5 - dominantly gravel, G5a - dominantly sand
- G6** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G6 - dominantly gravel, G6a - dominantly sand
- G7** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G7 - dominantly gravel, G7a - dominantly sand
- G8** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G8 - dominantly gravel, G8a - dominantly sand
- G9** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G9 - dominantly gravel, G9a - dominantly sand
- G10** Glacioluvial terrace deposits: sand, gravel, and boulders, generally above modern valley floors, <10 m thick, G10 - dominantly gravel, G10a - dominantly sand

MORAINAL DEPOSITS: sandy, clayey, silt-clayey (S1) to silty (S10) in thick where angle is <10° in where multiple layers

- Tw** Fill plain, undulating: silt, sand, and clay, hummocks and ridges, 1-15 m thick
- Th** Hummocky moraine: silt, sand, and clay, hummocks and ridges, 1-15 m thick
- Ti** Fill plain, flat: silt, sand, and clay, hummocks and ridges, 1-15 m thick
- Tp** Fill plain, gently undulating: silt, sand, and clay, hummocks and ridges, 1-15 m thick
- Tr** Fill plain, ridged: silt, sand, and clay, hummocks and ridges, 1-15 m thick
- Tu** Fill plain, undulating: silt, sand, and clay, hummocks and ridges, 1-15 m thick

THE LATE WISCONSINAN

- GA** Older alluvial channels: sand and gravel, stream deposits, generally less than 10 m thick

BEDROCK

MESOZOIC

- R** Pierre Formation: sand, silt, greenish brown sandstone, hard grey dolomite, and clay

Geological boundary (defined, approximate, assumed)

Streambed features (developed by glacioluvial flow)

Abandoned meander channel

Bank and point bar (developed by meander flow)

Equipment on meanderbed (developed by meander flow)

Minor meander ridge, rim edge

Major meander ridge

Esker (direction of flow shown)

Ice flow direction from stream on outlier pavement

Basin bottom

Groundwater

Palaeowater direction

Ground observation

Fill analysis site

Basin to top only, analysis available

ESIC CIST

Earth Science Sector de la carte

MAP 1922A

SURFICIAL GEOLOGY

VIRDEN

MANITOBA - SASKATCHEWAN

Scale 1:125 000 - Echelle 1:125 000

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