

Copies of this map may be obtained from the Geological Survey of Canada 601 Booth Street, Ottawa, Ontario K1A 0E8 3303-33rd Street, N.W., Calgary, Alberta T2L 2A7

LOCATION MAP

116°00'

Geology by D.S. Lemmen, 1989,1990,1991

Digital cartography by S. Hinds, Geological Survey of Canada and D. Kurfurst, Geoscience Information Division

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Digital base map from data compiled by Geomatics Canada, modified by the Geoscience Information Division

MAP 1906A SURFICIAL GEOLOGY

115°00'

BUFFALO LAKE

DISTRICT OF MACKENZIE

NORTHWEST TERRITORIES

Scale 1:250 000 - Échelle 1/250 000

Kilometres 5 0 5 10 15 20 Kilom

Universal Transverse Mercator Projection
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Projection transverse de Mercator
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Copies of the topographic map for this area may be obtained from the Canada Map Office, Natural Resources Canada, Ottawa, Ontario K1A 0E9

Mean magnetic declination 1998, 24°56'E, decreasing 15.4' annually.

Readings vary from from 23°10'E in the SE corner to 25°30'E

in the NW corner of the map

Elevations in metres above mean sea level

85 C 85 B 85 A 1906A 1905A 84 P 84-0 84 P

114°00'

Published 1998

LEGEND

This legend is common to maps 1905A and 1906A Coloured legend blocks indicate map units that appear on this map

SURFICIAL DEPOSITS

ANTHROPOGENIC

W MINE WASTE: Tailings, reworked overburden, and settling ponds associated with Pine Point open pit mine operation (suspended 1991)

QUATERNARY HOLOCENE

NONGLACIAL ENVIRONMENT

ORGANIC DEPOSITS: >1 m thick (dominantly fen, bog / undifferentiated)

COLLUVIAL DEPOSITS: Mud to boulders, 2 to >5 m thick, produced through mass movement processes, forming aprons along bedrock escarpments and the banks of incised river valleys

ALLUVIAL DEPOSITS: Sand, silt, and clay, 1 to 10 m thick, forming floodplains and terraces

Alluvial terrace deposits: Sand, silt, and clay, stratified, 1 to 10 m thick, adjacent to seasonally active floodplain and related to fluvial incision and/or lateral accretion

Active floodplain deposits: Sand and silt, 1 to 5 m thick, on seasonally active floodplain, including the active delta of Slave River

LACUSTRINE DEPOSITS: Sand, silt, and clay, 1 to >15 m thick, deposited in nearshore and deltaic environments, forming a flat to low-relief plain

Modern lake deposits: Silt and clay, 1 to 2 m thick, organic rich, deposited in shallow-water environments during the late Holocene

Deltaic deposits: Clay, silt, and sand, coarsening upwards, 2 to >15 m thick, capped by thin alluvial deposits, forming an inactive delta plain which has been incised by the present-day river. Locally, sand has been extensively reworked by eolian processes

NONGLACIAL - PROGLACIAL ENVIRONMENT

EOLIAN DEPOSITS: Medium-to fine-grained sand, 2 to >15 m thick, commonly forming parabolic dunes and ridges. Sediment is derived primarily from glacial lake and deltaic deposits

HOLOCENE / LATE WISCONSINAN

LAKE AND GLACIAL LAKE DEPOSITS: Gravel, sand, silt, and clay deposited in offshore, deltaic, and shoreline environments of glacial Lake McConnell and other basins peripheral to the Laurentide Ice Sheet

!FN93712;Beach sediments: Gravel and sand, generally plane bedded, 1 to 5 m thick, forming ridges and swales with local relief up to 1.5 m. Most important source of coarse aggregate in region. Represents extensive reworking of till, moraines, glaciofluvial deposits, and bedrock

Fine-grained sediments: Medium-to fine-grained sand, silt, and clay, massive to well

Fine-grained sediments: Medium-to fine-grained sand, silt, and clay, usually massive,

laminated with scattered coarse clasts (ice-rafted debris) forming blankets 1 to >5 m thick over till or bedrock. Generally poorly drained with extensive organic cover; abundant small marl lakes (Lb-L) may constitute more than 50% of unit. Eolian veneer also common

Gravel veneers: Beach gravel, minor sand and silt, generally <1 m and commonly only a few clasts thick, overlying bedrock on isolated topographic highs. Clasts almost exclusively of local lithology

GLACIAL ENVIRONMENT

forming veneers <2 m thick over bedrock. East of Slave River veneer is discontinuous, and rock outcrop may constitute up to 50% of the unit

GLACIOFLUVIAL DEPOSITS: Sand and bouldery gravel, weakly to well stratified >3 m thick, deposited by flowing water in contact with or near glacier ice. Most commonly forming small eskers and subaqueous outwash fans

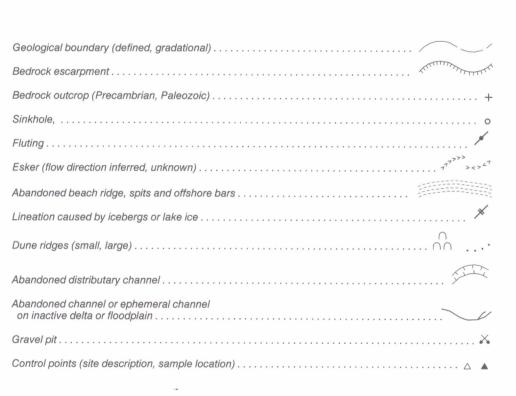
TILL: Unsorted glacial diamicton, slightly stony to stony with silty matrix, 1 to >30 m thick. Characteristics strongly influenced by the nature of the local bedrock

Tm End moraine complex: Till and ice-contact stratified drift forming ridges up to 20 m high, deposited subaqueously during ice retreat. Commonly mantled by fine-grained glaciolacustrine sediments or beaches

Washed till: Till with one or more of the following characteristics: 1) a discontinuous coarse lag produced through wave erosion; 2) isolated ridges of beach gravels generally <3 m thick; 3) a veneer of lacustrine deposits (generally <1 m thick); and 4) pockets of fine-grained lacustrine deposits up to 2 m thick. Occurs as blankets (Tb-W>2 m thick) and veneers (Tw-W<2 m thick) over bedrock. Generally forms a plain of limited relief but locally moulded into flutings

PRE-QUATERNARY

BEDROCK: Precambrian granite gneiss (R), sedimentary-metasedimentary rocks(R'), and Paleozoic sedimentary rocks(R). Units on the Canadian Shield may include up to 30% lacustrine and glacial sediment



ESIC CIST

APR 30 1998

Earth Sciences Secteur des sciences de la Terre

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Recommended citation: Lemmen, D.S. 1998: Surficial geology, Buffalo Lake, District of Mackenzie; Northwest Territories; Geological Survey of Canada, Map 1906A, scale 1:250 000