



QUATERNARY

HOLOCENE

NONGLACIAL ENVIRONMENT

**O ORGANIC DEPOSITS:** peat and muck up to 1 m thick; formed predominantly by the accumulation of vegetative material in bogs; occurs in depressions, along valley bottoms and in areas once submerged by glacial lakes where they may overlie fine-grained lacustrine sediments; may contain ice-wedge polygons. Small unmapped organic deposits occur in most terrain units.

**A ALLUVIAL DEPOSITS:** gravel to silt size sediment, 1 to 5 m thick, deposited by modern streams and rivers; deposits range from massive to well stratified; associated with meandering, braided and floodplain environments.

PLEISTOCENE (WISCONSIN GLACIATION)

GLACIAL ENVIRONMENT

**L GLACIOLACUSTRINE DEPOSITS:** silt, sand and gravel; 1 to >10 m thick; cross-stratified to planar bedded sands; deposited in temporary glacier-dammed lakes; associated with deltas and raised beaches indicated by symbols; may contain massive ground ice.

**GLACIOFLUVIAL DEPOSITS:** sand, gravel, and minor silt more than 1 m thick; sorting ranges from good to poor, and stratification from massive or cross-stratified to planar bedded; deposited by water flowing from, or in contact with, glacier ice; may contain massive ground ice, 1 to >10 m thick.

**G2 Outwash:** rounded gravel and sand; massive to cross-stratified; probably less than 20 m thick; occurs as braided fans and outwash plains, commonly containing ice-wedge polygons.

**G1 Esker sediments:** sand, silt, and gravel; in planar, cross-stratified, and massive beds; 1 to 20 m thick; forms ridges with both sharp-crested and flat-topped segments, mounds, and flanking aprons; deposited at or behind the ice margin; formed subglacially or in subaerially exposed ice-walled channels. Zones of washed bedrock (meltwater scours), isolated kame deposits and boulder lags are shown by symbols.

**TILL DEPOSITS:** unsorted glacial debris (diamicton), consisting of a silty sand matrix containing pebbles, cobbles, and boulders, with minor lenses of sorted sediments; deposited beneath or along the margin of glaciers as lodgement till, meltout till, and gravity flow deposits; may contain massive ground ice.

**T3 Hummocky Till:** generally >5 m thick; forms irregular to rolling terrain with relief up to 15 m, locally forming hills and ridges up to 3 km long; some areas have abundant small meltwater channels and lag concentrations of boulders in depressions. Stabilized retrogressive thaw flow slides may be indicative of ice-rich till.

**T2 Till Blanket:** from 2 to 10 m thick; occurs as till plains mimicking bedrock topography or as drumlinoids. Small rock outcrops in this unit are shown by symbols.

**T1 Till Veneer:** less than 2 m thick; rock structure is generally visible on airphotos; unit includes patches of bedrock and till blanket.

PRE-QUATERNARY

**R Bedrock:** Archean metasedimentary, metavolcanic, granitic and gneissic rocks, Proterozoic sedimentary rocks, mafic dykes and sills; may include patches of till veneer or glaciofluvial deposits; areas of shattered and frost-heaved rock are designated by symbols. R1-metavolcanic rocks; R2-metasedimentary rocks; R3-granitic and gneissic rocks; R4-sedimentary rocks; R5-gabbro sills.

- Geological boundary
- Ice-wedge polygon
- Retrogressive thaw flow slide
- Solifluction lobe
- Thermokarst
- Frost heaved and shattered rock
- Raised beach
- Lag concentration of glacially abraded boulders
- Area of meltwater scour
- Subglacial or proglacial meltwater channel
- Esker (direction of flow known, unknown)
- Kames
- Moraine
- Drumlinoid till form
- Rock erag-and-till tail form
- Roche moutonnée or whaleback
- Striation (ice flow direction known, unknown; 1=oldest)
- Gossan
- Small rock outcrop
- Sample site
- Mine waste and settling ponds (symbol overlies pre-development geology indicated on map)

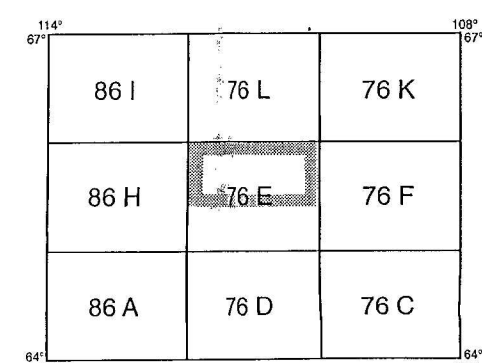
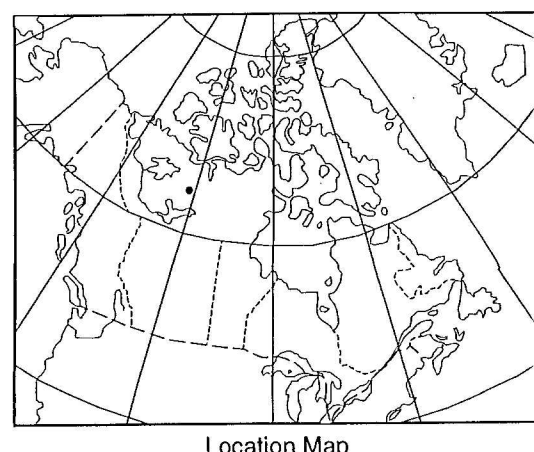
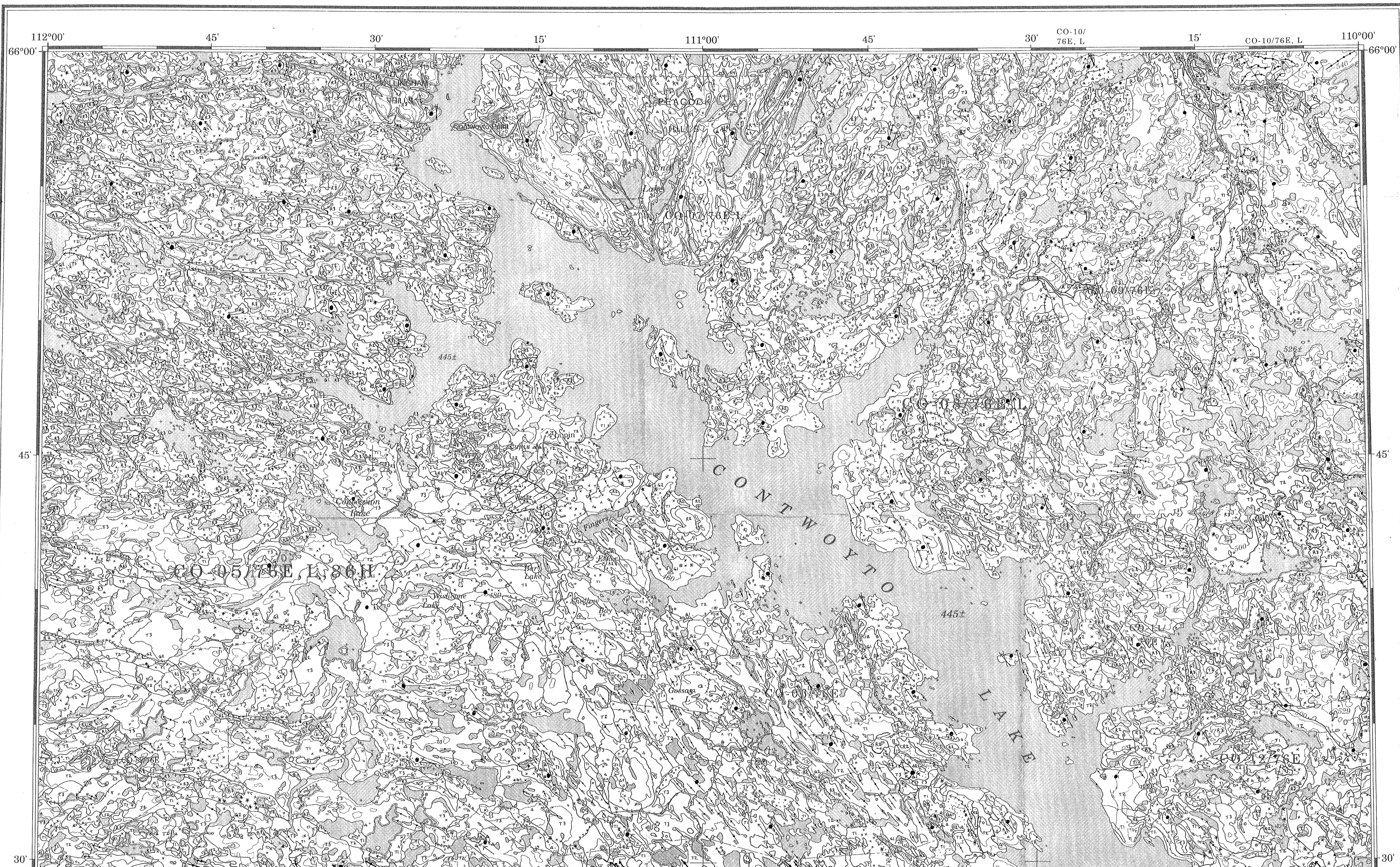
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GEOLOGICAL SURVEY OF CANADA  
COMMISSION GÉOLOGIQUE DU CANADA  
OTTAWA

1997



SURFICIAL GEOLOGY  
**CONTWOYTO LAKE**  
DISTRICT OF MACKENZIE  
NORTHWEST TERRITORIES

Scale 1:125 000 - Échelle 1/125 000  
Kilometres 2 0 2 4 6 8 10 Kilomètres

Geology based on air photo interpretation and ground verification by D.E. Kerr, S.A. Wolfe and L.A. Dredge, 1996, with assistance from R. Roberts; logistical support from the Polar Continental Shelf Project, publication number PCSP/EPSP 00897.

Contribution to the Slave Province NATMAP

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1997: Quaternary geology, Contwoyto Lake, District of Mackenzie, Northwest Territories (76E north half); Geological Survey of Canada, Open File 3459, scale 1:125 000.