



SURFICIAL GEOLOGY, RIDEOUT ISLAND (760, N/2) AND ELU INLET (77A, SW/4), NORTHWEST TERRITORIES

QUATERNARY

Holocene

NONGLACIAL ENVIRONMENT

O ORGANIC DEPOSITS: peat and muck up to 2 m thick but commonly less than 1 m thick; formed predominantly by the accumulation of vegetative material in bogs; occurs in depressions, along valley bottoms, and on marine silt and clay; may contain ice-wedge polygons. Small unmapped organic deposits occur in most terrain units.

A ALLUVIAL DEPOSITS: silt, sand and gravel deposited by modern streams and rivers; deposits generally are stratified and moderately sorted; 1 to 5 m thick; occurs as floodplains and terraces.

MARINE DEPOSITS: clay, silt, sand, and gravel; massive to well laminated silt and clay, and massive to cross-stratified and planar stratified sand; 1 to 20 m thick; deposited during marine regression resulting in a coarsening-upward sequence; may include fine-grained glaciomarine sediments exposed at the base of stratigraphic sections; may contain segregated and disseminated ground ice; rounded pebbles and cobble gravel form raised beaches indicated by symbols; commonly fossiliferous.

M3 Littoral sediments: medium to coarse sand with pebbles, may also consist of small cobbles and shingles; 1 to 3 m thick; blanket deposits with flat to gently undulating surface which in places overlie fine grained sediments; may contain beach ridges and ice-wedge polygons indicated by symbols.

M2 Marine blanket: undifferentiated clay and silt with minor sand and rare cobbles, from 2 to 20 m thick; commonly occurs as coarsening-upward sequence with flat to gently undulating surface; contains segregated ice; may be gullied and exhibits retrogressive thaw flow slides and ice-wedge polygons indicated by symbols.

M1 Marine veneer: undifferentiated sediment, consisting of a clay to sand matrix containing pebbles, cobbles, and boulders but predominantly silt and sand, less than 2 m thick; occurs as sediments infilling depressions between bedrock outcrops and as a lag on washed bedrock below marine limit.

PLEISTOCENE (WISCONSIN GLACIATION)

GLACIAL ENVIRONMENT

D GLACIOMARINE AND MARINE DELTAS: sand, gravel, and cobbles, massive to cross-stratified, up to 15 m thick; exhibits channelled surfaces, ice-wedge polygons, and beach ridges.

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. Zones of washed bedrock (melwater scours), isolated kame deposits, and boulder lags shown by symbols.

G2 Outwash: sand to rounded gravel; massive to cross-stratified; 2 to 20 m thick; deposited at or beyond the ice margin; occurs as braided fans and outwash plains with ice-wedge polygons; may exhibit raised beaches indicated by symbols.

G1 Esker sediments: silt, sand, 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; formed subglacially or in subglacially exposed ice-walled channels; may exhibit raised beaches and ice-wedge polygons indicated by symbols.

TILL DEPOSITS: unsorted glacial debris (diamiction), consisting of a silt to sand matrix containing pebbles, cobbles, and boulders; deposited beneath, or along the margin of, glaciers as lodgment till, meltout till, and gravity flow deposits; commonly fossiliferous below marine limit.

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; occurs as a discontinuous layer where rock structure is generally visible, and as a lag on washed bedrock below marine limit; unit includes bedrock outcrops, till blanket, and marine sediments below marine limit.

PRE-QUATERNARY

R Bedrock: Archean metamorphic, granitic, and gneissic rocks; Proterozoic sedimentary rocks, mafic dykes, and sills; may include patches of till and marine veneer; areas of scoured, shattered and frost-leaved rock are shown by symbols. **R1:** metamorphic rocks; **R2:** granitic and gneissic rocks; **R3:** sedimentary rocks; **R4:** gabbro sills and dykes.

- Geological boundary
- Retrogressive thaw flow slide
- Solifluction lobe
- Thermokarst
- Frost heaved and shattered rock
- Ice-wedge polygons
- Raised beach
- Lag concentration of glacially abraded boulders
- Area of meltwater scour
- Subglacial or proglacial meltwater channel
- Esker (direction of flow known, unknown)
- Kame
- Drumlinoid till form
- Rock crag and till tail form
- Roche moutonnée or whaleback
- Striation (ice flow direction known, unknown; 1=oldest)
- Gossan
- Small rock outcrop
- Sample site

Geology by D.E. Kerr, and R.D. Knight, 1997, and logistical support from the Polar Continental Shelf Project.

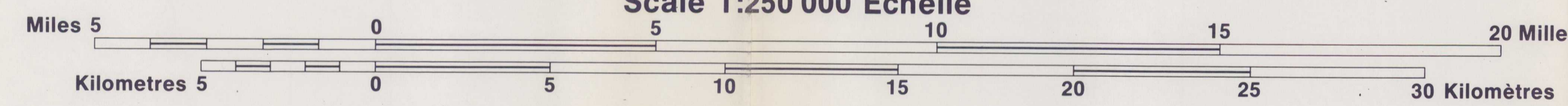
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**SURFICIAL GEOLOGY
RIDEOUT ISLAND (760, N/2)
ELU INLET (77A, SW/4)**

DISTRICT OF MACKENZIE
NORTHWEST TERRITORIES

Scale 1:250 000 Échelle



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| 77 C | 77 D | 67 C |
| 77 B | 77 A | 67 B |
| 76 M 76 N | 76 O 76 P | 66 M 66 N |

