

LEGEND

- I ORGANIC TERRAIN (including muskeg) Peat, fen; peat-fen complex; commonly occurring as a cover on Units II, IX and X; flat to moderately sloping.
- II SILT-CLAY PLAINS (marine and lake deposits) Clay and silt, commonly surfaced by sand or silty sand, with discontinuous organic cover (see Unit I). Principally forming plains bordering rivers and coastal areas. Highly unstable in eroded slopes.
- III THERMOKARST LAKE BEDS Clay, silt, peat, and local sand on low flat areas formerly occupied by tundra ponds. These materials generally less than ten feet thick over till or sand. Pings generally confined to this unit.
- IV BEACHES (marine and lake) Gravel and/or sand ridges or flat areas along present or former shorelines.
- V RIVER DEPOSITS-FINE Silt and silty sand in river channels, floodplains, low terraces adjoining rivers, and alluvial fans; includes organic silt, peat and minor gravel.
- VI RIVER DEPOSITS-COARSE Gravel and sand in river channels, floodplains, low terraces adjoining rivers and alluvial fans. Includes some silt, peat, and organic silt.
- VII GRAVEL-SAND HILLS, RIDGES AND TERRACES Gravel, sand and some silt. Includes eskers, and other glaciofluvial deposits, river terraces, sand dunes, and moraines consisting of deformed gravely-sandy strata.
- VIII SILT-CLAY HILLS AND RIDGES Mainly silt and clay with minor sand and gravel in moraines, strata tilted and folded.
- IX TILL PLAIN Till, occurring as ground moraine with low rolling relief or parallel drumlin ridges. Large areas are clayey to silty till as a thin veneer on shale; locally forms a thin veneer on other kinds of bedrock. Includes undifferentiated areas of Unit I.
- X HUMMOCKY TILL Clayey to gravely-sand till, local gravel, forming rolling to hilly moraine composed of individual and coalescent hummocks. Local contrasts in material and ground ice between well drained hills and poorly drained depressions. Includes small undifferentiated areas of Unit I.
- XI UPLAND AND PIEDMONT COMPLEXES Areas of moderate to low slope, in part hilly, surfaced by till, disintegrated bedrock, and local clay, silt, sand, or gravel. Unconsolidated deposits generally form a thin veneer over rock but in places they are thick (>100 feet).
- XII MOUNTAINOUS AND ROCKY AREAS Rock outcrop or rock thinly covered by rubble or drift. Moderate to steep slopes.
- XIII ERODED AND/OR ERODING RIVER BANKS, COASTAL CLIFFS, AND VALLEY WALLS (UNCONSOLIDATED MATERIAL) Various unconsolidated materials on moderate to steep slopes, generally with surface veneer of slope debris; includes unstable areas.
- XIIIR ERODED AND/OR ERODING RIVER BANKS, COASTAL CLIFFS, AND VALLEY WALLS (BEDROCK) Bedrock outcrops or bedrock partly covered by rock detritus or unconsolidated materials; slopes commonly steep; includes unstable areas.

Note: Detailed unit descriptions of terrain sensitivity and the performance rating table are presented on a separate sheet which accompanies this map.

SOURCES OF INFORMATION

- Rampton, V.N., 1970: Surficial Geology Maps of Demarcation Point (1170), Herschel Island (1170), Blow River (117A), and Aklavik West (107B), Geological Survey of Canada Open File 21.
- Rampton, V.N., 1972: Surficial Geology and Landforms, Aklavik (east) (107B), Geological Survey of Canada, Open File 119.
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- Jeletzky, J.A., 1958: "Uppermost Jurassic and Cretaceous Rocks of Aklavik Range, Northwestern Richardson Mountains N.W.T.", Geological Survey of Canada Paper 58-2.
- Unpublished bedrock geology maps and data by D.K. Norris Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada, 1972.

Compiled by R.L. Monroe 1972

Preliminary map prepared for open file, October, 1972. Subject to revision and correction.

TERRAIN CLASSIFICATION AND SENSITIVITY SERIES

Produced for Indian and Northern Affairs

by Department of Energy, Mines and Resources as part of the Environmental-Social Program, Task Force on Northern Oil Development

AKLAVIK NORTHWEST TERRITORIES

OF MACKENZIE

Échelle



107 B

AKLAVIK (West)

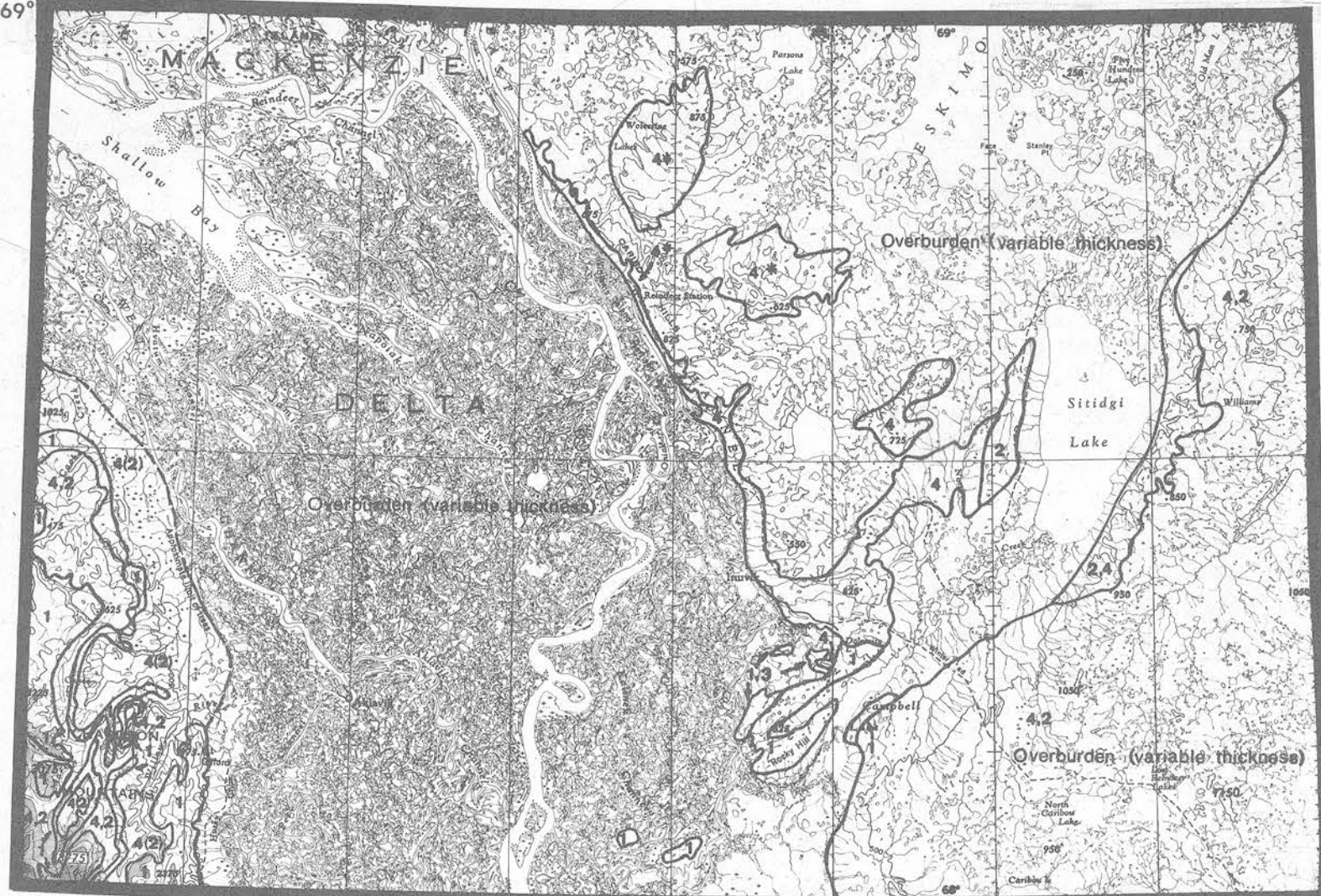
BEDROCK LEGEND

- 1 Resistant, competent quartz sandstone, and volcanic rocks, potentially suitable for use as rip-rap. Mid Jurassic Bug Creek Formation, and Lower Cretaceous Upper Berensian and Valangianian Formation, both comprise resistant quartz sandstone units in the Richardson Mts.
- 2 Coherent or moderately competent rocks; fairly resistant to erosion but not strongly cemented; probably would break down under heavy traffic (i.e. if crushed and used for road surfacing). In British Mts. includes Carboniferous Lisburne Group consisting of limestone and dolomitic limestone with highly shattered beds.
- 3 Moderately coherent rocks; more resistant than 4 and less easily eroded; capable of maintaining a steep face 150 ft. high. Includes Precambrian argillite as found in the Neruokup Formation. For the most part the argillite is interbedded with limestone, dolomite and/or sandstone.
- 4 (2) Mainly incoherent rocks; soft easily eroded, subject to slumping. Includes Jurassic Kingsburg Formation which is highly fissile, soft and recessive shale and siltstone, and the Cretaceous shale and siltstone recessive units of the Richardson Mts. and the Arctic Coastal Plain. Bedrock highly commonly of fine-grained sandstone occur interspersed within this unit and display a coherence rating of 2.
- 3,2 Undivided Precambrian Neruokup Formation. Argillite interbedded with limestone, dolomite and/or sandstone.
- 4,2 Undivided shale, sandstone and/or limestone. This unit includes the Permian Saderschit Formation and the Jurassic Husky Formation in the Richardson Mts., and the undivided Jurassic unit in the British Mts.

AKLAVIK (East)

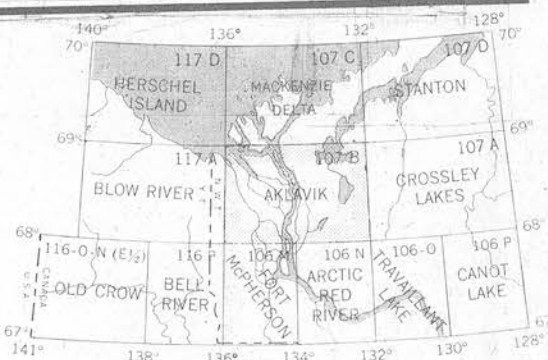
BEDROCK LEGEND

- 1 Resistant, competent carbonate rocks potentially suitable for use as rip-rap. Ordovician-Devonian limestone and dolomitic limestone, includes some Silurian carbonates.
- 2 Coherent or moderately competent rocks; fairly resistant to erosion but not strongly cemented; probably would break down rapidly under heavy traffic (e.g. if crushed and used for road surfacing). Clean quartz sandstone of Devonian (?) age.
- 4,4\* Incoherent rocks; soft, easily eroded, subject to slumping. Mostly Cretaceous shale and siltstone, but includes Tertiary Reindeer Formation\* sand, silt, and shale, which are poorly consolidated and interbedded with coal.
- 1,3 Areas of mixed coherence: resistant, competent rocks consisting of unmetamorphosed, undivided, Precambrian limestone and dolomite (rating 1); Precambrian, sandstone and shale, moderately coherent rocks (rating 3).
- 2,4 Undivided Cretaceous sandstone and shale, with the sandstone unit predominant.
- 4,2 Undivided shale and sandstone, either Cretaceous or Devonian Imperial Formation. Either lithology could be encountered at a given point but available data does not permit separation into more meaningful units.
- 4\* Properties and performance of the gravel-sand constituent of the Reindeer Formation are similar to those of map unit VII.



AKLAVIK BEDROCK GEOLOGY

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OTTAWA



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