TERRAIN CLASSIFICATION AND SENSITIVITY SERIES (PRELIMINARY)

GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

96 D

LEGEND

I	ORGANIC TERRAIN (including muskeg)	Peat, fen; peat-fen complex; commonly occuring 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. Pingos 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 gravelly-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 gravelly-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

Fulton, R.J., Surficial Deposits and Landform Maps, 1:250,000 NTS 96F (Mahony Lake), 96G (Fort Franklin) 96E Norman Wells (NE & NW quadrant); Geological Survey of Canada, Open File 21, 1970.

Hughes, O.L., Surficial Geology Maps, 1:125,000 NTS 96C (Fort Norman), 96D (Carcajou Canyon), 96E (Norman Wells), 106G (Upper Ramparts River), 106H (Sans Sault Rapids), Geological Survey of Canada, Open File 26, 1970, revised by P.T. Hanley, Geological Survey of Canada, 1972. 96B (Blackwater Lake) unpublished manuscript.

Unpublished bedrock geology maps and data by D.G. Cook, and C.J. Yorath, Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada, 1972.

Compiled by R.L. Monroe 1972

Preliminary map prepared for open file, January, 1973
Subject to revision and correction.

TERRAIN CLASSIFICATION AND SENSITIVITY SERIES

Produced for
Indian and Northern Affairs

by
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Task Force on Northern Oil Development

BEDROCK LEGEND

1 Resistant, competent carbonate rocks, potentially suitable for use as rip-rap.
Devonian limestone units Hume Formation, Ramparts Formation (Ramparts has been quarried and crushed for road and airstrip construction at Norman Wells). Devonian Bear Rock Formation (limestone and dolomite breccia) is variable in composition and consequently unpredictable in engineering qualities.
Cambrian and Silurian Ronning Group are hard cryptocrystalline dolomites suitable for rip-rap etc. In Mackenzie Mts. includes Precambrian cemented quartzites.

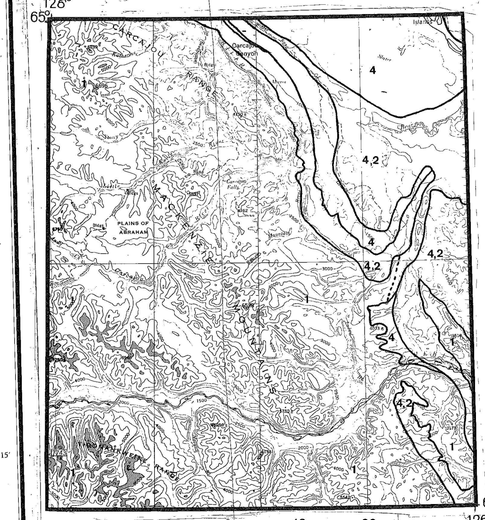
2 Coherent or moderately competent rocks; fairly resistant to erosion but not strongly cemented; probably would break down rapidly under heavy traffic (eg., if crushed and used for road surfacing). Includes Devonian Imperial Formation and Cretaceous sandstone, the latter of which locally weathers to an unconsolidated sand.

3 Moderately coherent rocks: more resistant than 4 and less easily eroded; capable of maintaining a steep cliff face 150 feet high. Mostly Devonian Hare Indian Formation shale with some thin limestone beds, but includes some Cretaceous siltstone and sandy shale.

4 Incoherent rocks: soft, easily eroded, subject to slumping, mostly Cretaceous shale but includes Devonian Imperial Formation shale. Includes ertiary shales and poorly consolidated sand, (96 C,E).

3,2 Undivided Ramparts Formation limestone and Hare Indian Formation limestone.

4,2 Undivided sandstone and shale, 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.



OPEN FILE
132
JAN 1973
GEOLOGICAL SURVEY
OTTAWA

CARCAJOU CANYON

DISTRICT OF MACKENZIE

NORTHWEST TERRITORIES

Scale 1:250,000 Échelle

Miles 5 0 5 10 15 20 Miles
Kilometres 5 0 5 10 15 20 25 30 Kilomètres

Transverse Mercator Projection
North American Datum 1927
Contour Interval 500 feet
Elevations in feet above Mean Sea Level

Projection Transverse de Mercator
Réseau géodésique nord-américain unifié 1927
Équidistance des courbes 500 pieds
Élévations en pieds au-dessus du niveau moyen de la mer

Roads:	Routes:	less than 2 lanes / moins de 2 voies	dry weather / période sèche
loose surface, all weather	de gravier toute saison		
cart track, trail	chemin de terre, sentier		
Spot elevation; precise, approximate	Point coté; précis, approximatif	950	950±
Boundary monument	Borne-frontière		
Pingo	Buttes de terre		
Depression contours	Courbes de cuvette		
Cliff or low relief	Falaise ou relief peu accentué		
Esker	Esker		

Building	Bâtiment	Intermittent stream	Cours d'eau intermittent
Post office	Bureau de poste P	Intermittent lake	Lac intermittent
Church	Église	Rapids; falls	Rapides; chute
School	École	Marsh or swamp	Marais ou marécage
Astronomical monument	Repère astronomique	String bogs	Marais en chapelet
R.C.M.P. Detachment	Poste de la G.R.C.	Icefield or Glacier	Champ de glace ou glacier
Horizontal control point	Point géodésique	Tundra Polygons	Sols polygonaux
Landing ground	Piste d'atterrissage	Tundra Ponds	Étangs de toundra

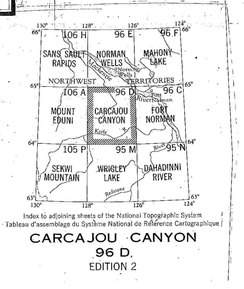


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Tableau d'assemblage du Système National de Référence Cartographique

CARCAJOU CANYON
96 D,
EDITION 2

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