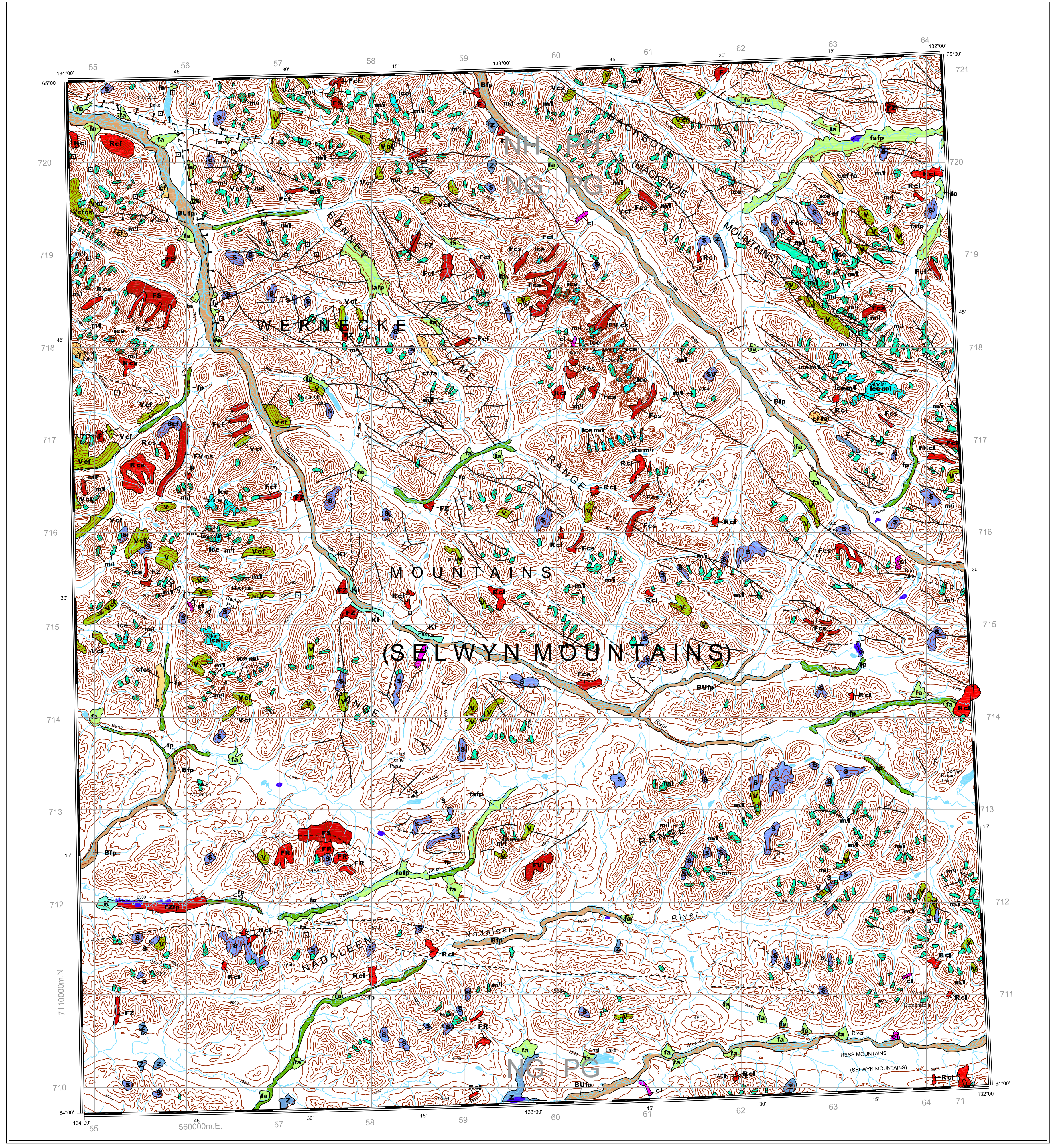
Yukon Government

YUKON GEOLOGY PROGRAM

Canada

NATIONAL TOPOGRAPHIC SERIES NTDB (1995) D.I.A.N.D. N.A.P. LAND RESOURCES CANADA SHEET 106C



TEN THOUSAND METRE UNIVERSAL TRANSVERSE MERCATOR GRID NAD 83

ZONE 8

NOTE: THIS MAP HAS BEEN PRODUCED BY THE COMPILATION OF DATA FROM VARIOUS SOURCES. IT IS NOT TO BE USED TO DEFINE LEGAL BOUNDARIES.

THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.

EDITION: 2 PRINT DATE: JULY 22, 1999

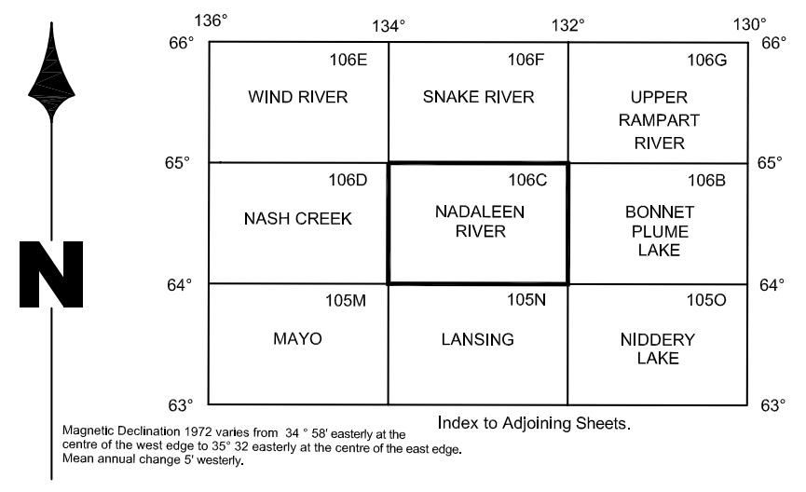
NADALEEN RIVER

YUKON TERRITORY
106 C

Scale

10 0 10 20 30 km
5 0 5 10 15 miles

CONTOUR INTERVAL 500 FEET Elevations in Feet above Mean Sea Level
North American Datum 1983 Transverse Mercator Projection
Universal Transvers Mercator Grid ZONE 8



Index to Adjoining Sheets.

Magnetic Declination 1972 varies from 34 ° 58' easterly at the centre of the west edge to 35° 32 easterly at the centre of the east edge. Mean annual change 5' westerly.

GEOPROCESS FILE - SUMMARY REPORT

NADALEEN MAP AREA - NTS 106C

INTRODUCTION

The GEOPROCESS File is a compilation of information and knowledge on geological processes and terrain hazards, including mass movement processes, permafrost, flooding risks, faults, seismic activity and recent volcanism, etc. Please refer to the GEOPROCESS File User Guide for more in-depth information on how the maps were developed, which other GEOPROCESS File maps are available, how to utilize this inventory and how to interpret the legend. Special interest should be taken in the detailed description of the terrain hazard map units. Appendices in the User Guide include summary papers on the geological framework, permafrost distribution, and Quaternary geology in Yukon and a list of comprehensive GEOPROCESS File references.

This report includes a brief discussion of the scope and limitations of the GEOPROCESS File compilation maps followed by summaries of the bedrock geology, surficial geology and terrain hazards for this NTS map area, and a list of references.

Geological Processes and Terrain Hazard Compilation Maps

The GEOPROCESS File map units were drafted on the 1:250 000 topographic base maps through interpretation from bedrock geology maps, surficial geology maps and in some cases terrain hazard maps at various scales. The compilation maps have a confidence level reflecting the original source material. All materials used to produce the maps are listed in the references on each map. A file containing the documentation used to construct these maps is available at the Indian and Northern Affairs library in Whitehorse, Yukon. Areas for which no surficial geology or terrain hazard information is published were left blank. Summary reports on surficial geology and terrain hazards for these map sheets were written by extrapolating the data from adjacent map sheets or smaller scale maps. Information from small scale (e.g., 1:1 000 000) maps was used for the summary reports, but not redrafted onto the 1:250 000 GEOPROCESS File maps.

The GEOPROCESS File compilation maps are intended as a first cut planning tool; the legend on the maps describes the general aspects of terrain hazards (also see below) and associated geological processes. **These maps should never replace individual site investigations for planning of site specific features, such as buildings, roads, pits, etc.**

Bedrock Geology Summaries

Each 1:250 000 NTS map area is described according to morphogeological belts and terranes defined by Gabrielse et al. (1991) and Wheeler et al. (1991). Bedrock geology (including structure) and mineral occurrences are briefly described and taken largely from the referenced, most recent 1:250 000 geological map with additional contributions from Wheeler and McFeely (1991), and Yukon MINFILE (1993). A summary paper ("A Geological Framework for Yukon") in Appendix A of the User Guide provides a framework and context for each of the bedrock summaries.

The level of knowledge and understanding of Yukon geology is constantly evolving with more detailed mapping and development of geological models. Names, ages and terrane affinities of rock units on the most recent 1:250 000 geological maps may, in some cases, now be considered incorrect. Thus information contained within some of the bedrock geology summaries may be out of date. Although much of the information reflects the knowledge at the time that the source map was published, additional information has been inserted whenever possible to assist the user in merging the information with current geological maps, concepts and understanding. The age ranges for similar packages of rocks may also vary between map areas since the actual rocks, or at least the constraints on their age, may vary between map areas.

BEDROCK GEOLOGY

The Nadaleen River map area is in the Foreland Belt and has typical Rocky Mountain topography. The bedrock geology is mainly within the Mackenzie Platform of Ancient North America.

Three pre-550 million year old rock packages dominate the Nadaleen River map area: 1) the Backbone Ranges, in the northeastern map area, are underlain by sandstone, conglomerate, shale, slate, quartzite, limestone and dolomite of the Sekwi Formation, Backbone Ranges and Atan Group; 2) the Wernecke Mountains and Rackla Range, in the central map area, are underlain by Wernecke Supergroup (Gillespie, Quartet and Fairchild Lakes Group) quartzite, conglomerate, sandstone, siltstone, limestone and dolomite, and Pinguicula Group sedimentary rocks; 3) the Nadaleen Range, in the southern map area, is largely underlain by Hyland Group siltstone, conglomerate, sandstone, quartzite and limestone.

Younger rocks in the map area are dominated by the 530-390 million year old Road River Group shale, conglomerate and limestone, and the 390-325 million year old Earn Group shale and conglomerate in the Wernecke Mountains and Nadaleen Range. The 360-320 million year old Keno Hill quartzite is also present in the Nadaleen Range, adjacent to Road River Group rocks and juxtaposed against Hyland Group rocks along the easternmost extent of the northerly verging Dawson Thrust.

Rocks in the Backbone Ranges and southwest of the Snake River are deformed into northwest-trending fault panels typical of Rocky Mountain-style geology. The Wernecke Supergroup rocks in the Wernecke Mountains are cut by numerous vertical faults. A series of enigmatic breccia bodies (areas of shattered rock), some of which are enormous, outline a significant arcuate, west- to west-northwest-trending zone of structural weakness and are known as the Wernecke Breccias. The eastern part of this arc occurs in the northern part of the map area. In the Nadaleen Range, the structures are dominated by, and sub-parallel with, the Dawson Thrust.

Mineral Deposits and Occurrences

The Nadaleen River map area contains 91 mineral prospects of which 70 host mineralization. Most of the mineralization consists of Mississippi Valley type and associated vein lead-zinc-silver deposits. Many of the mineral occurrences have been drilled and a few have defined tonnages: the Craig deposit contains 480 800 tonnes averaging 8.2% lead, 13.3% zinc and 106 grams per tonne silver; the Vera deposit contains 1.36 million tonnes of approximately 3.7% combined lead and zinc with 306 grams per tonne silver; the Val deposit contains 272 000 tonnes of 137 grams per tonne silver with minor lead; and the Goz Creek deposit contains approximately 2.5 million tonnes of 11% zinc. Other deposit types in the map area include several uranium-copper Wernecke Breccias and copper-cobalt veins.

SURFICIAL GEOLOGY

A surficial geology map derived entirely from air photo interpretation was drafted by Ricker (1974). This 1:125 000-scale map presents geomorphic information only, with some interpretation as to active and inactive processes, glaciation and deglaciation sequence, and type and distribution of landforms.

Glaciers covering this area were part of a large transection glacier system which flowed generally northwestward. Most valleys were interconnected through this major ice network. In the Wernecke Mountains, several cirque glaciers contributed to the main ice bodies. Three major ice advances are inferred based on geomorphic evidence only.

The extent of the oldest glaciation (Pre-Reid; Bostock, 1966) is not well defined in this area and is assumed based on evidence in adjoining map sheets. Evidence of the intermediate Reid glaciers (Bostock, 1966) consists of erosional surfaces and the presence of erratic boulders. From these, an ice elevation of 1430 m a.s.l. is assumed in the western boundary of the map, and was possibly 200 m higher at Nadaleen Mountain and around Rackla Lake. The terminus of these glaciers is located beyond the boundary of map 106C.

The more recent glaciation (McConnell Glaciation; Bostock, 1966) shows a more restricted distribution with large ice-free surfaces at high elevations and smaller tributary glaciers. Based on geomorphic evidence, ice elevation ranged from 1525 m in the east and north to 1300 m in the west. In the northern portions of the Snake and Bonnet Plume River valleys, ice was as low as 900 m a.s.l. and in some of the tributaries of the Arctic Red River valley, glaciers were only a few tens of metres above their valley floor. Approximately 80% of the cirques had active glaciers at that time. Numerous rock drumlins, faceted rock exposures and grooves provide erosional evidence of this glaciation. Most morainal deposits in the map area, except for the very recent deposits of Neoglacial ice, are related to the McConnell glaciation. Moraine thickness ranges from 45 m in the major valley to a complete absence in some valleys northwest of the Snake River area. Glaciofluvial deposits are present along the walls of most large river valleys, such as the North Rackla, Bonnet Plume and Snake River valleys.

Approximately 3000 years B.P., cooling of the climate triggered a small ice age, and again, approximately 600 years B.P., as witnessed by the accumulation of ice and the development of cirque, valley and small glaciers. No accurate dates exist for these recent glaciers and their moraines.

Modern processes include the development of fans which can modify drainage and affect roads. The ongoing impact of frost shattering and weathering and slope processes contributes to the formation of colluvial fans and talus.

Terrain Hazards

Seismicity

There are 26 recorded seismic events within the Nadaleen River map area. Twenty-two of these events are located in the northwest corner of the map area. All of the recorded events are 4.0 to 4.999 in magnitude or less.

Mass Movements

Several large rock slides in the 30 to 50 million cubic metre class are indicative of possible rapid and severe mass movements. One of these slides blocked the drainage of the Bonnet Plume River (Wheeler, 1954) on the eastern map boundary. Sedimentary rocks are prone to such catastrophic slumps when the bedding plane is subparallel to steep slope surfaces. This was the case here, as the source of the slump is in limestone with the slide plane parallel to the bedding plane on one limb of a faulted fold. Ricker (1974) mentions "house-sized debris overshot the river and rebounded off the opposite valley slope". There is another large slide in the centre of the map sheet. Two fairly recent large slumps up Corn Creek, one on the north side of Mt. McDonald and several more throughout the map area confirm the tendency of the shale, carbonate and quartzitic bedrock to slump under the appropriate combination of fault or bedding plane and surface plane.

Quaternary and recent deposits can also be prone to slumping. Mudslides and debris slides are mapped throughout the map area. Disturbance of surface vegetation and slope can also trigger permafrost degradation and associated mass movements such as detachment and retrogressive thaw slides. Solifluction lobes, soil creep and polygonal ground are present on many of the hillsides and valley walls, and are a indication of permafrost. Colluvial fans and talus cones are considered to be unstable and in many cases are ice-rich.

Permafrost

This area lies within the extensive discontinuous permafrost zone (Heginbottom and Radburn, 1992), with low to moderate ice content in morainal and colluvial deposits above valley floors, low to moderate ice content in alluvial and fluvial deposits, and moderate to high ice content in fine-grained glaciolacustrine deposits, such as the deposits around McQuesten Lake, and in fine-grained alluvial fans and terraces above stream level. Permafrost is assumed to be absent or thinner under south-facing, well-drained slopes.

In the adjacent map area, 106D, Vernon and Hughes (1966) quote observations from McTaggart (1960) of permafrost thickness in excess of 122 m (400 ft). Permafrost as thick as 137 m has been reported near Elsa, 80 km to the southwest of the map area. Although not mapped by Ricker (1974), felsenmeer, nivation hollows, patterned ground, thermokarst pits and solifluction lobes are assumed to be present throughout the map area. Valley bottom with thick peat deposits, evidence of patterned ground, or cryoturbation should be avoided, as disturbance of permafrost may trigger long term surface subsidence, slope movement and poor drainage.

Rock glaciers and debris-covered glaciers, as well as ice-cored or ice-rich talus cones are widespread in the area.

Flooding

Braided rivers have unstable channels and are subject to seasonal flooding after ice thaw and rain storms. Expansive river icing takes place on most streams. Floods related to ice-jams, snow melt and summer rainstorms are a possible hazard in lower reaches of most streams in the area. In addition to flooding risk, the steep portions of alluvial fans are also exposed to the additional possibility of mud flows and debris flows associated with rapid discharge increases.

References: Nadaleen Map Area - NTS 106C

To be thorough, check the references for adjacent NTS map sheets and the General Reference List (See User Guide).

Most of the following references should be available for viewing in the DIAND library on the third floor of the Elijah Smith building in Whitehorse.

Bell, R.T., 1986a. Geological map of northeastern Wernecke Mountains, Yukon Territory. Geological Survey of Canada, Open-File 1207.

* Blusson, S., 1974. Drafts of five geological maps of northern Selwyn Basin (Operation Stewart), Yukon and District of Mackenzie, N.W.T. (includes NTS 106A, B, C and 105N, O). Geological Survey of Canada, Open File 205. (NTS 106A, 106B, 106C, 105N, 105O)

Blusson, S., 1974. Geology of 106C/6, 7, 11, 12, 13, 14, 15. Geological Survey of Canada, Open File 206.

Bostock, H.S., 1966. Notes on glaciation in central Yukon Territory. Geological Survey of Canada, Paper 65-36, 18 p.

Brown, R.J.E., 1967. Permafrost in Canada. Geological Survey of Canada, Map 1246A, (scale 1:7 603 200).

*Canadian Earthquake Epicentre File; Maintained by the Geological Survey of Canada, Geophysics Division.

Cecile, M.P., 1982. The lower Paleozoic Misty Creek embayment, Selwyn Basin, Yukon and Northwest Territories. Geological Survey of Canada, Bulletin 335, 78 p. (includes map). (NTS 105M, 105N, 105O, 106B, 106C, 106D, 106E, 106F)

Cecile, M.P., 1984. Evidence against large-scale strike-slip separation of Paleozoic strata along the Richardson-Hess fault system, northern Canadian Cordillera. Geology, Vol. 12, p. 403-407.

Delaney, G.D., 1978. Stratigraphic investigations of the lowermost succession of Proterozoic rocks, northern Wernecke Mountains, Yukon Territory. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1978-10 (report and maps). (NTS 106C, 106D, 106F)

Delaney, G.D., 1981. The mid-Proterozoic Wernecke Supergroup, Wernecke Mountains, Yukon Territory. In: Campbell, F.H.A. (ed.), Proterozoic Basins of Canada. Geological Survey of Canada, 1-10, p. 1-23.

Eisbacher, G., 1978. Two major Proterozoic unconformities, Northern Cordillera. In: Current Research, Part A, Paper 78-1A, Geological Survey of Canada, p. 53-58.

Gabrielse, H. and Yorath, C.J. (eds). Geology of the Cordilleran Orogen in Canada. Geological Survey of Canada, No. 4, 844 p.

Geological Survey of Canada, Regional Stream Sediment and Water Geochemical Reconnaissance Data - NTS 106D, parts of 106C, 106E, 106F. Geological Survey of Canada, Open File 2175.

Heginbottom, J.A. and Radburn, L.K. (comps.), 1992. Permafrost and ground ice conditions of northwestern Canada. Geological Survey of Canada, Map 1691A, scale 1:1 000 000.

Hughes, O.L., 1969. Surficial geology of northern Yukon Territory and northwestern District of Mackenzie, Northwest Territories. Geological Survey of Canada, Paper 69-36.

McTaggart, K.C.,1960. The geology of Keno and Galena Hills, Yukon Territory. Geological Survey of Canada, Bulletin 58

Norris, D.K., 1984. Geology of the northern Yukon and northwestern District of MacKenzie. Geological Survey of Canada, Map 1581A, scale 1:500 000. (NTS 116SE, 116NE, 106SW, 106NW, 117SE, 107SW)

Norris, D.K. and Hopkins, W.S., Jr., 1977. The Geology of the Bonnet Plume Basin, Yukon Territory. Geological Survey of Canada, Paper 76-8.

Osborne, G.M., Narbonne, G.M. and Carrick, J., 1986. Stratigraphy and economic potential of Precambrian boundary strata, Wernecke Mountains, east-central Yukon. In: Yukon Geology, Vol. 1, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, p. 131-138.

* Ricker, K.E., 1974. Surficial geology map of Nadaleen River map-area, Yukon Territory and District of Mackenzie, N.W.T. Geological Survey of Canada, Open File 207, scale 1:125 000.

Thorkelson, D.J. and Wallace, C.A., 1994a. Geological map of Fairchild Lake map area (106C/13), Wernecke Mountains, Yukon. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Canada/Yukon Economic Development Agreement, Geoscience Open-File 1994-6(G) (scale 1:50 000).

Thorkelson, D.J. and Wallace, C.A., 1994b. Geological setting of mineral occurrences in Fairchild Lake map area (106C/13), Wernecke Mountains, Yukon. In: Yukon Exploration and Geology, 1993, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, p. 79-92.

Thorkelson, D.J. and Wallace, C.A., 1995a. Geological map of the "Dolores Creek" map area (106C/14), Wernecke Mountains, northeastern Yukon. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, Canada/Yukon Economic Development Agreement, Geoscience Open File 1995-6(G) (scale 1:50 000).

Thorkelson, D.J. and Wallace, C.A., 1995b. Geology and mineral occurrences of the "Dolores Creek" map area (106C/14), Wernecke Mountains, northeastern Yukon. In: Yukon Exploration and Geology, 1994. Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. p. 19-30.

Vernon, P. and Hughes, O.L., 1966. Surficial geology, Dawson, Larsen Creek and Nash Creek map areas, Yukon Territory. Geological Survey of Canada, Bulletin 136, 25 p.

Wheeler, J.O.,1954. A geological reconnaissance of the northern Selwyn Mountains region, Yukon and the Northwest Territories. Geological Survey of Canada, Paper 53-7.

Wheeler, J.O., Brookfield, A.J., Gabrielse, H., Monger, J.W.H., Tipper, H.W. and Woodsworth, G.J., 1991. Terrane map of the Canadian Cordillera. Geological Survey of Canada, Map 1713.

* Wheeler, J.O. and McFeely, P., 1991. Tectonic Assemblage map of the Canadian Cordillera and adjacent parts of the United States of America. Geological Survey of Canada, Map 1712A.

Williams, G.K., 1988. A review of the Bonnett Plume area, east-central Yukon Territory (including Snake River, Solo Creek, Noisy Creek and Royal Creek areas). Geological Survey of Canada, Open File 1742. (NTS 106C, 106D, 106E, 106F)

Yukon MINFILE, 1994. 106C - Nadaleen. Exploration and Geological Services, Yukon Region, Indian and Northern Affairs Canada.

* References used in compiling this map

NOTE: A new digital compilation of Yukon Geology is now available by Steve Gordey and Andrew Makepeace (GSC Open File D3826 and/or DIAND Open File 1999-1(D)), and more recent MINFILE updates should also be verified (Yukon MINFILE, 2001).

LEGEND

LEGEND TERRAIN HAZARDS

MAP SYMBOL	TERRAIN HAZARDS	ASSOCIATED RISK LEVELS, COMMENTS
	Mass Movement Processes	
A	Snow Avalanched.	high
F	Extremely slow to moderate rates of failure in soil and bedrock, including soil creep, rock creep, earthflow, soil or rock slump, debris or rock slide.	low to intermediate
R	Moderate to extremely rapid rates of failure in soil and bedrock (1.5 m/d to >3 m/s), including rock slump, debris slide, rock slide, debris flow, debris torrent, debris avalanche, rockfall, rock avalanche.	high
	Arctic, Alpine and Periglacial Processes	
X	Permafrost present.	low
K	Thermokarst present.	low
S	Soliflucted.	low to intermediate
Z	Grouped, cryoturbated, soliflucted, nivated.	low to intermediate
	Fluvial Processes	
B	Braided, unstable channels, risk of flooding.	intermediate to high
E	Fluvial erosion, deposition and low risk of flooding.	low to intermediate
J	Anastomosing.	intermediate to high
U	Flooded regularly.	intermediate to high
	Miscellaneous Erosion Processes	
T	Karst.	intermediate
P	Piping.	intermediate to high
V	Gullied.	low to intermediate
	On Site Symbols	Risk Level
	Unit boundary (defined, approximate).	
	Erosional escarpment.	high
	Landslide escarpment.	high
	Landslide (includes source and runout areas).	high
☮	Pingo.	high
	Rock glacier.	high
* ⊠	Spring or saline seep.	low
▽ ▽	Observation of frozen soil or ground ice.	low
(T)	Rapid mass movements (debris torrent) with known point source. Limits of runout not implied by symbol.	high
(E)	Slow mass movement (earth flow) with landslide, escarpment source. Limits of landslide runout not implied by symbol.	intermediate to high

LEGEND SEISMIC EVENTS

SYMBOL	MAGNITUDE REPRESENTED	SYMBOL	MAGNITUDE REPRESENTED
⊡	<2.0	⊡	4.0 to 4.999
⊡	2.0 to 2.999	⊡	5.0 to 5.999
⊡	3.0 to 3.999	⊡	>6.0

LEGEND GEOLOGICAL PROCESSES

MAP SYMBOL	DESCRIPTION	INFERRED HAZARDS
cf	Talus fan or apron, moderate to steep slope, coarse angular bedrock fragments, sources are often areas of rapidly disintegrating bedrock.	Rock fall and debris flows common on active fans, steep slopes generally unstable to traffic.
cl	Landslide, moderate slope, varies from large blocks of bedrock to finer material.	Landslides generally are recurrent in susceptible areas and may be become active if disturbed.
cs	Colluvium covered slope, gentle to moderate slope, underlain by unsorted rubble, solifluction and other periglacial features common.	Areas of fine textured materials and gentle slopes at high elevations, where there is ground ice will be susceptible to high solifluction rates and thermokarst if disturbed.
fa	Alluvial fan, active.	Subject to shifts in channel and bar positions, occasionally subject to flooding.
fp	Floodplain.	Subject to shift in channel and bar positions, occasionally subject to flooding.
ice	Glacier ice.	Crevasses.
Im	Mountain ice caps.	Avalanches, ice and rock falls, and crevasses.
is	Cliff glacier.	Avalanches, ice and rock falls.
l	Lacustrine or glaciolacustrine sediments.	Silt and clay, usually susceptible to frost heaving and, if permafrost present, to thermokarsting when disturbed.
m/i	Rock glacier, debris covered glacier.	Ice at depth make surface susceptible to thermokarst, unstable slopes.
o	Organic.	Thick organic matter is often underlain by permafrost. Disturbance of permafrost may cause poor drainage and thermokarsting.

LEGEND FAULTS

Fault
defined, approximate, assumed,
extrapolated beneath overburden

Fault
Solid circle indicates downthrown side
Arrows indicate relative movement

Thrust Fault (teeth indicate upthrust side)

Airphoto Lineament

LEGEND QUATERNARY VOLCANISM

No known recent volcanism in map area 106C

OTHER FEATURES

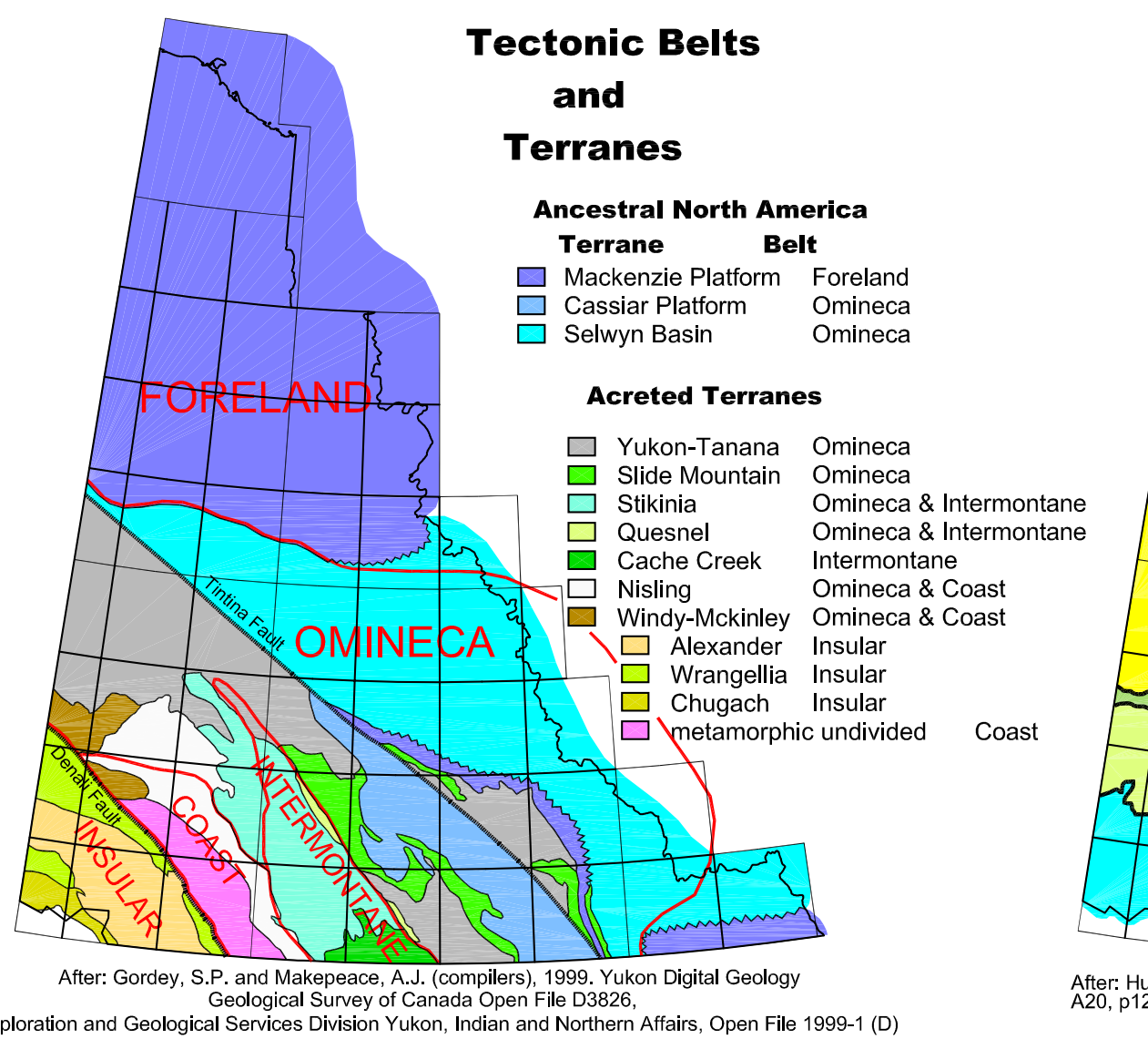
Roads

Streams

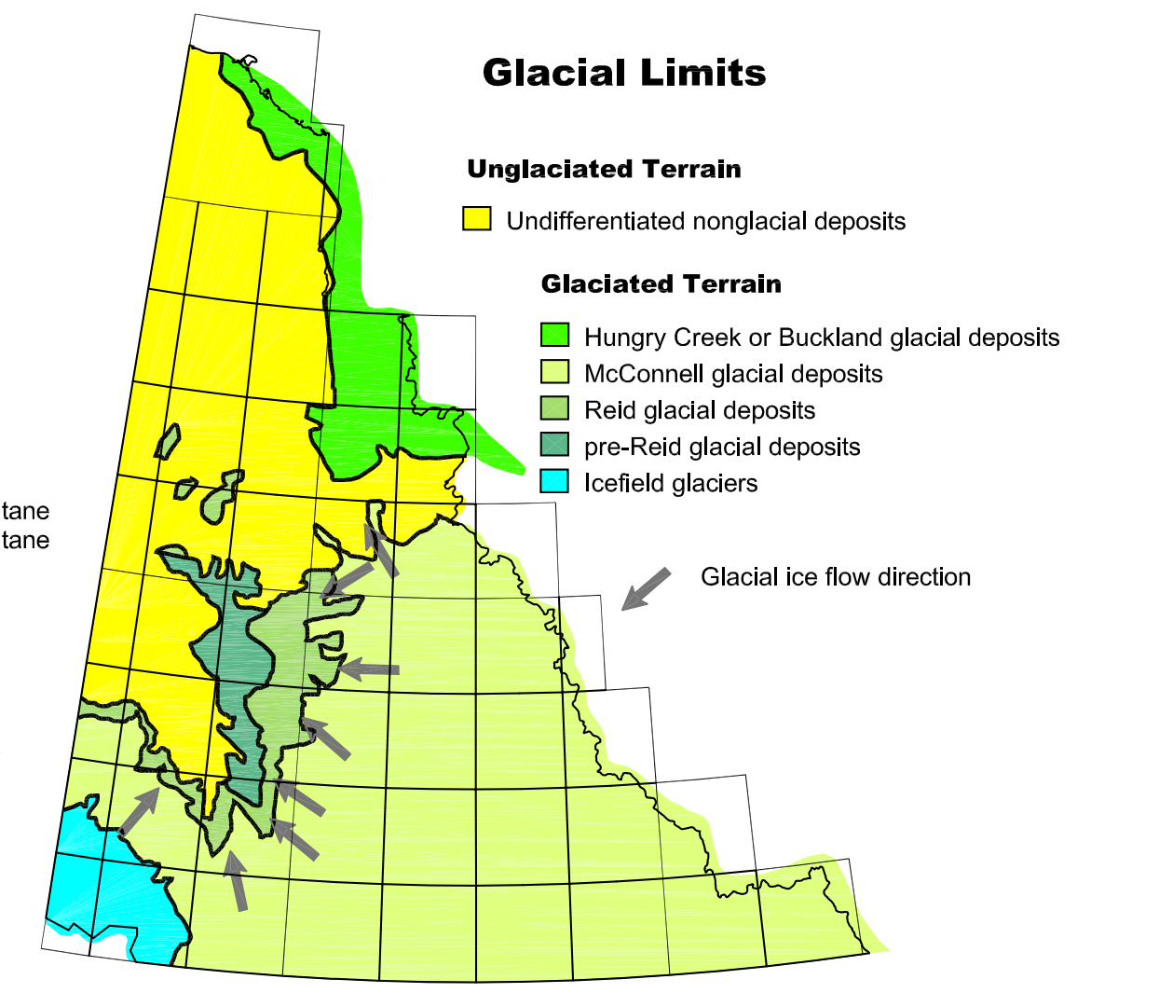
Lakes 🟦

Marsh 🟦

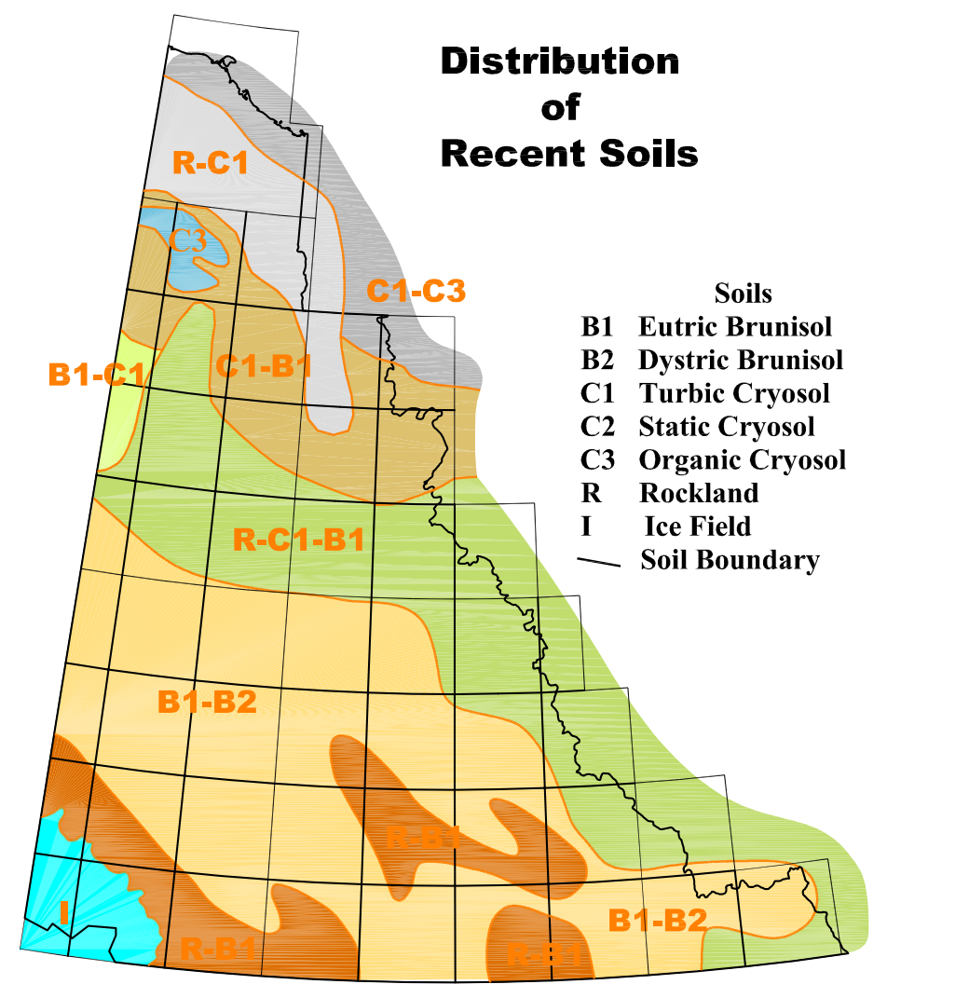
NOTE: Where areas have more than one identified process or hazard, the colour of the encompassing polygon is assigned based on a hierarchical scheme relating to the severity of the hazard. The relative order of severity is: Terrain Hazards (Mass Movement Processes then Fluvial Processes then Arctic, Alpine and Periglacial Processess) followed by Geological Processes.



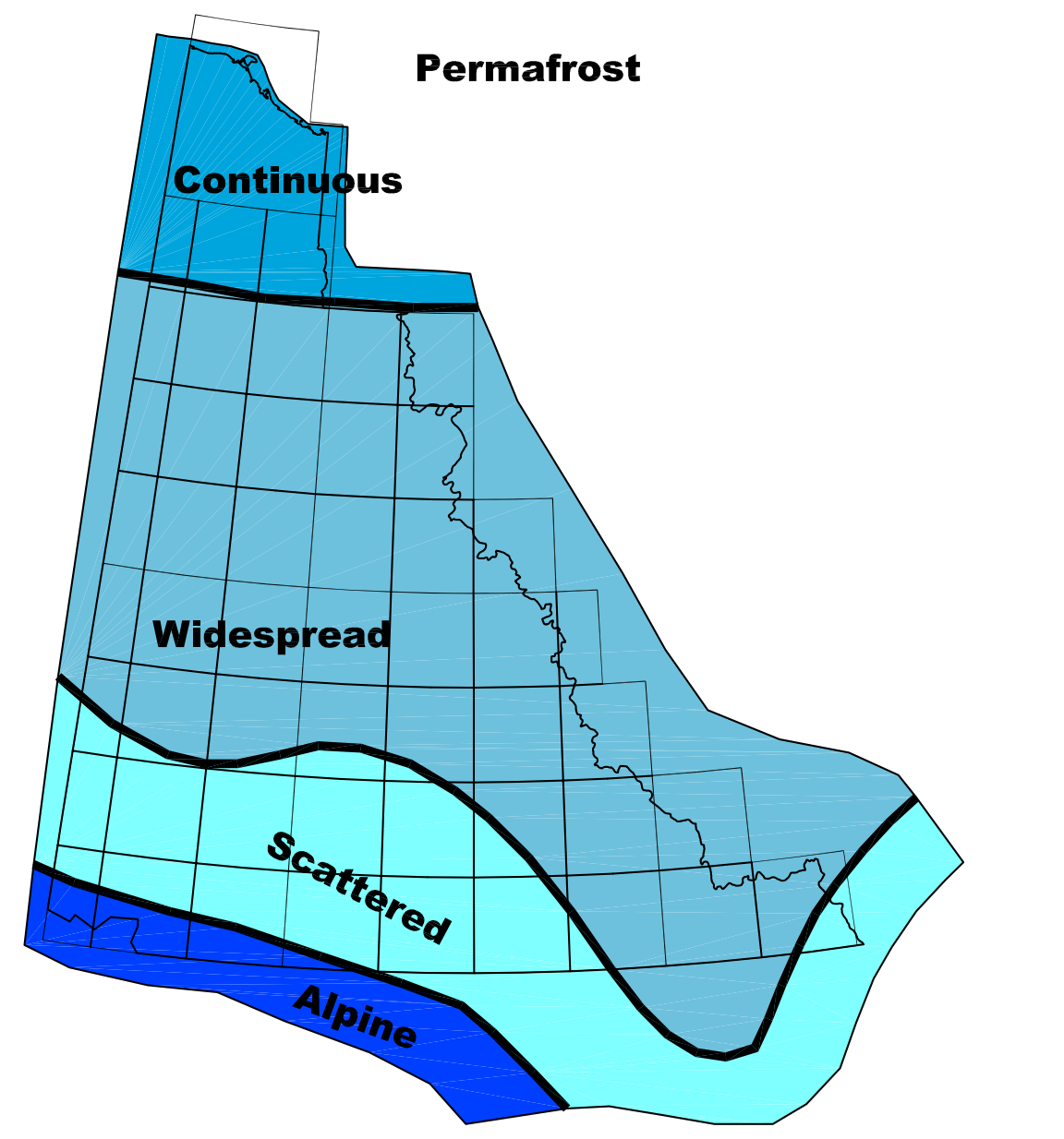
After: Gordey, S.P. and Makepeace, A.J. (compilers), 1999. Yukon Digital Geology Geological Survey of Canada Open File D3826, Exploration and Geological Services Division Yukon, Indian and Northern Affairs, Open File 1999-1 (D)



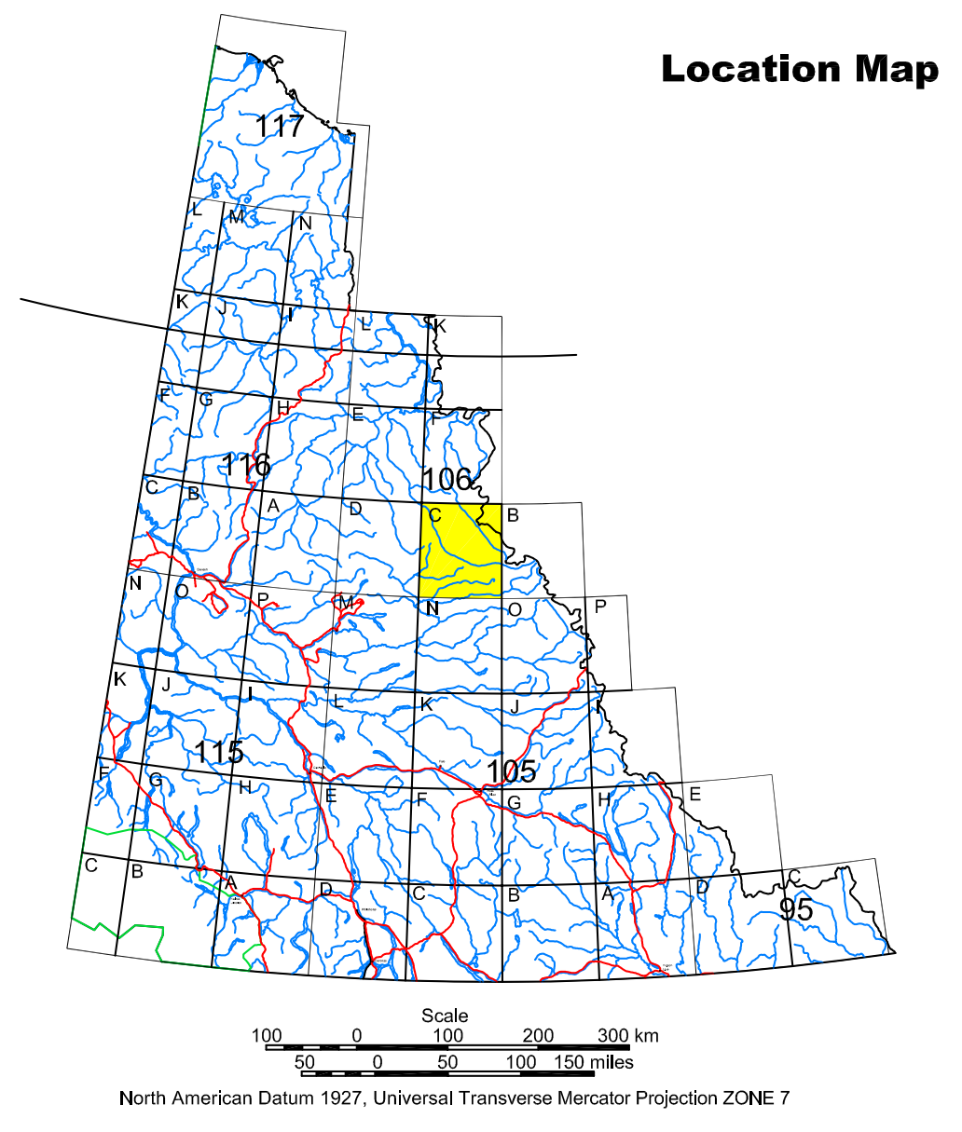
After: Hughes, O.L. in Morison, S.R. and Smith, C.A.S. (editors), 1987, XII th INQUA Congress Field Excursions A20, p12 to 16 - Research in Yukon, National Research Council of Canada, Ottawa, Canada, 110p



After: Morison, S.R. and Smith, C.A.S. (editors), 1987, XII th INQUA Congress Field Excursions A20a and A20b - Research in Yukon, National Research Council of Canada, Ottawa, Canada, 110p



After: Brown, R.J.E., 1978, Permafrost: Plate 32, Hydrological Atlas of Canada, Fisheries and Environment, Canada. 34 plates



Exploration and Geological Services Division
Yukon Region
Indian and Northern Affairs Canada

Yukon GEOPROCESS File

Geological Processes and Terrain Hazards of Nadaleen River 106C

by

Mougeot, C.M. and Walton, L.A.

Copies of this map and the accompanying Geological Summary
may be obtained from Geoscience and Information Sales
c/o Whitehorse Mining Recorder, Indian and Northern Affairs Canada,
Room 102, 300 Main Street, Whitehorse, Yukon Y1A 2B5
(867) 667-3266; FAX; (867) 667-3267

Recommended citation: Mougeot, C.M. and Walton, L.A., 1996.
Yukon GEOPROCESS File (2002), Geological Processes and Terrain Hazards of Nadaleen River, 106C
Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada, 1:250 000 scale.