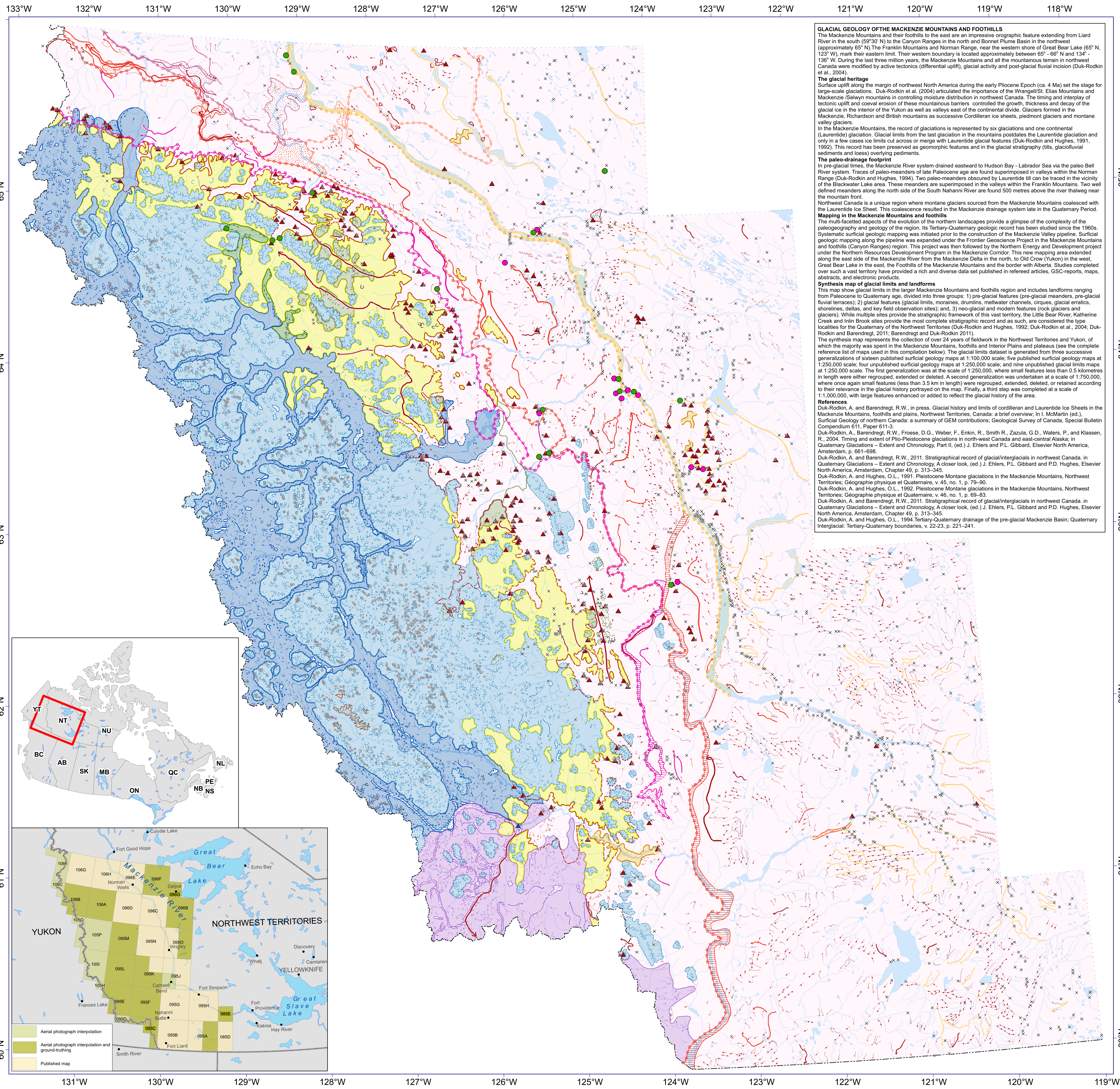


GLACIAL LIMITS, MACKENZIE MOUNTAINS AND FOOTHILLS,
NORTHWEST TERRITORIES, CANADA

A. Duk-Rodkin¹



HOLOCENE AND YOUNGER NEOLITHIC	CONTINENTAL GLACIATION LAURENTIDE GLACIATION MACKENZIE RIVER PHASE (ca. 9 ka)	EARLY-LATE PLEISTOCENE CORDELIAN GLACIATION (YUKON PROVINCE) AND MOUNTAIN RIVER GLACIATION (MACKENZIE MOUNTAINS PROVINCE) (ca. 150-250 ka)
<p>PRESENT DAY (1985) LIMITS</p> <ul style="list-style-type: none"> Limit defined Rockfall area Rock glacier 	<ul style="list-style-type: none"> Limit defined Limit inferred Meltwater channel, wide (up to 3 km in width) Limit defined Limit inferred 	<ul style="list-style-type: none"> Limit defined Limit concealed Glaciated area Moraine ridge
<p>LATE PLEISTOCENE MONTANE GLACIATION LOCAL GLACIERS: GATNA RIVER GLACIATION (ca. 24 ka)</p> <ul style="list-style-type: none"> Limit inferred Limit concealed Glaciated area Minor (up to 10 km in length) Major (up to 40 km in length) Cirque Moraine ridge Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Showings of former lake: low, ridged beach deposits of sand and gravel Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<ul style="list-style-type: none"> Limit defined Limit inferred Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Limit inferred Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<p>MONTANE GLACIATION LOCAL GLACIERS: MOUNTAIN RIVER RIVER GLACIATION (ca. 150-250 ka)</p> <ul style="list-style-type: none"> Limit defined Limit inferred Limit concealed Glaciated area Cirque Moraine ridge Meltwater channel, narrow Minor
<p>CORDELIAN GLACIATION MCKONNELL GLACIATION (YUKON PROVINCE) AND GATNA RIVER GLACIATION (MACKENZIE MOUNTAINS PROVINCE) (ca. 22 ka)</p> <ul style="list-style-type: none"> Limit inferred Limit concealed Glaciated area Cirque Moraine ridge Meltwater channel, wide (up to 3 km in width) Limit defined Limit inferred Limit concealed Limit approximated Limit inferred Meltwater channel, wide (up to 3 km in width) Limit defined Limit approximated Limit inferred Meltwater channel area Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Showings of former lake: low, ridged beach deposits of sand and gravel Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<ul style="list-style-type: none"> Limit defined Limit inferred Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Limit concealed Meltwater channel area Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<p>PRE-GLACIAL PRE-GLACIAL FLUVIAL REMNANTS</p> <ul style="list-style-type: none"> Limit defined Limit concealed Paleo-moraine area
<p>CORDELIAN GLACIATION NORTHEAST BRITISH COLUMBIA PROVINCE (ca. 22 ka)</p> <ul style="list-style-type: none"> Limit defined Limit concealed Glaciated area Cirque Moraine ridge Meltwater channel, wide (up to 3 km in width) Limit defined Limit inferred Limit concealed Limit approximated Limit inferred Meltwater channel, wide (up to 3 km in width) Limit defined Limit approximated Limit inferred Meltwater channel area Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Showings of former lake: low, ridged beach deposits of sand and gravel Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<ul style="list-style-type: none"> Limit defined Limit approximated Limit inferred Meltwater channel, wide (up to 3 km in width) Limit defined Limit approximated Limit inferred Meltwater channel area Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<p>UNCORRELATED</p> <ul style="list-style-type: none"> Unpublished terrain extent Limit defined Unpublished terrain area
<p>CORDELIAN GLACIATION KATHERINE CREEK PHASE (ca. 22-28 ka)</p> <ul style="list-style-type: none"> Limit defined Limit inferred Limit concealed Glaciated area Cirque Moraine ridge Meltwater channel, wide (up to 3 km in width) Limit defined Limit concealed Limit approximated Limit inferred Meltwater channel area Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Showings of former lake: low, ridged beach deposits of sand and gravel Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<ul style="list-style-type: none"> Limit defined Limit approximated Limit inferred Meltwater channel, wide (up to 3 km in width) Limit defined Limit approximated Limit inferred Meltwater channel area Meltwater channel, narrow Minor (up to 10 km in length) Major (up to 40 km in length) Major (greater than 40 km in length) Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<p>OTHER</p> <ul style="list-style-type: none"> Massing line Eastern limit of study Provincial boundaries (Yukon, British Columbia and Alberta) Station location Fluvial station location Ground-truthing station locations Sites with important substrate determination using ¹⁴C / ¹³C biostratigraphy Sites with important ¹⁴C ages of pre-glacial deposits Glacial extent Derived from Canadian Shield region (pink granites most prominent) Cordelean provenance (white and light pink granites)
<p>LAURENTIDE ALL-TIME MAXIMUM (ca. 26-28 ka)</p> <ul style="list-style-type: none"> Limit defined Limit approximated Limit inferred Glaciated area Meltwater channel, narrow Major (up to 40 km in length) Major (greater than 40 km in length) Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<ul style="list-style-type: none"> Limit defined Limit approximated Limit inferred Glaciated area Meltwater channel, narrow Major (up to 40 km in length) Major (greater than 40 km in length) Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment Glacio-fluvial delta deposited into a glacial lake. Gently sloping surface ending in an escarpment 	<p>UNCORRELATED</p> <ul style="list-style-type: none"> Moraine or drumlinized ridge Meltwater channel, narrow, minor (up to 10 km in length) Showings of former lake: low, ridged beach deposits of sand and gravel



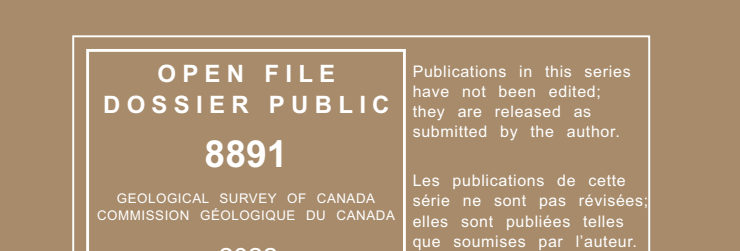
OPEN FILE 8891
GLACIAL LIMITS, MACKENZIE MOUNTAINS AND FOOTHILLS
NORTHWEST TERRITORIES, CANADA
1:1,000,000

0 25 50 100 150 200 km

Geomatics and cartography by F. Hardjowiggo
GIS data management by C. DeBlonde

Topographic Data from Natural Resources Canada
Map projection: Lambert Conformal Conic
Datum: North American 1983
False Easting: 0
False Northing: 0
Central Meridian: 126
First Standard Parallel: 63.5
Second Standard Parallel: 66.5
Scale Factor: 1
Latitude of Origin: 60
Units: Metre

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