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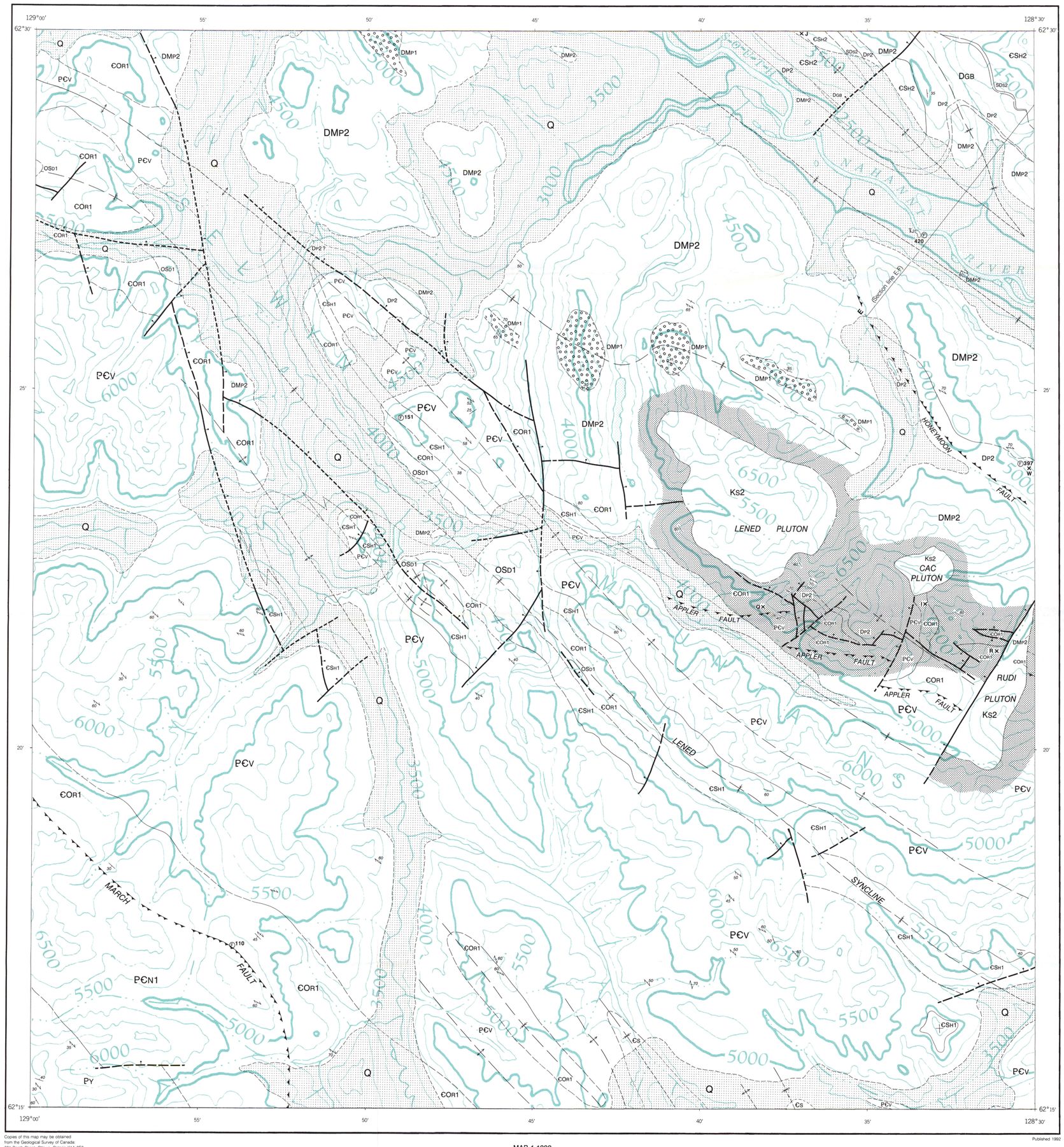
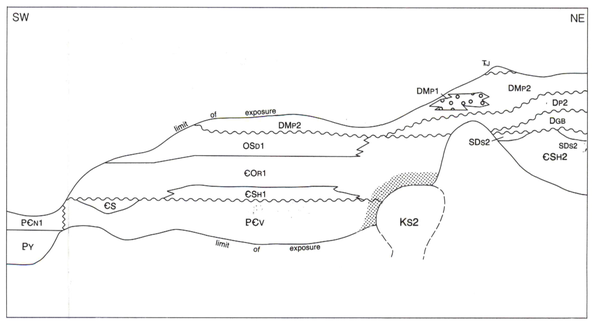
GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA





Diagrammatic rock stratigraphic cross-section

LEGEND

CENOZOIC
PLEISTOCENE AND RECENT

Q — *Unconsolidated glacial and alluvial deposits*

MESOZOIC
CRETACEOUS

KS — *SELWYN PLUTONIC SUITE:* **Ks2**, *locally megacrystic (K-feldspar) biotite granite and granodiorite; shading of country rock adjacent pluton shows extent of hornfels*

TRIASSIC

TJ — *JONES LAKE FORMATION: thin bedded, ripple cross-laminated, siltstone and fine grained sandstone; shale*

PALEOZOIC
DEVONIAN AND MISSISSIPPIAN
UPPER DEVONIAN TO MID-MISSISSIPPIAN
EARN GROUP (**DP** - **DMP**)

DMP — *PREVOST FORMATION:* **DMP1**, *(patterned) chert-quartz sandstone, chert pebble conglomerate; minor shale;* **DMP2**, *brown weathering shale; minor chert-quartz sandstone*

LOWER TO UPPER DEVONIAN

DP — *PORTRAIT LAKE FORMATION:* **Dp2**, *black, gun-blue and bluish-white weathering, black, siliceous shale; thin- to medium-bedded, black chert*

LOWER DEVONIAN

DGB — *GRIZZLY BEAR FORMATION: blue-grey weathering, resistant, thin- to very thick-bedded, grey crinoidal limestone characterized by abundant crinoid stem fragments with twin axial canals*

SILURIAN TO LOWER DEVONIAN

SDS — *SAPPER FORMATION:* **SDs2**, *(silty limestone member - upper Sapper) tan, buff or dark grey weathering, recessive, thin bedded, laminated, argillaceous fine crystalline limestone*

ORDOVICIAN AND SILURIAN
UPPER SILURIAN
ROAD RIVER GROUP (**OSD** - **Ss**)

Ss — *STEEL FORMATION: not present*

LOWER ORDOVICIAN TO MIDDLE SILURIAN

OSD — *DUO LAKE FORMATION:* **OSD1**, *black, gun-blue, or silvery white weathering, recessive, black shale and minor thin interbeds of fine crystalline black limestone and black chert*

CAMBRIAN AND ORDOVICIAN
UPPER CAMBRIAN AND LOWER ORDOVICIAN

ЄOR1 — *RABBITKETTLE FORMATION:* **ЄOR1** *white to buff weathering, laminated or thin bedded, fine crystalline, locally nodular, blue-grey limestone; minor local volcanic tuff*

LOWER CAMBRIAN

ЄS — *SEKWI FORMATION: undivided;* **ЄS1**, *(carbonate member - lower Sekwi) grey to buff weathering, thin bedded, locally wavy bedded and nodular, fine crystalline, blue-grey to black limestone; upper one-third of unit is white weathering, massive, fine crystaline, grey dolostone;* **ЄS2**, *(clastic member - upper Sekwi) light orange to brown weathering, medium- to thick-bedded, medium grained, grey quartz sandstone; purple weathering, purple siltstone and dolomitic siltstone; bright orange weathering, thin- to thick-bedded, fine crystaline dolostone*

UPPER CAMBRIAN TO LOWER SILURIAN

ЄSH — *HAYWIRE FORMATION:* **ЄSh1**, *(sandy carbonate member - local basal Haywire) maroon mudstone, thick bedded, fine- to medium-crystalline, light coloured dolostone, and medium bedded, medium- to coarse-grained quartz arenite;* **ЄSh2**, *white to dark grey weathering, thick- to very thick-bedded, massive, grey, locally cherty dolostone*

PROTEROZOIC AND PALEOZOIC
UPPER PROTEROZOIC AND LOWER CAMBRIAN

PЄV — *VAMPIRE FORMATION: dark brown to rust weathering, thin- to thick-bedded, greenish grey shale siltstone, and very fine grained quartz sandstone*

UPPER PROTEROZOIC AND LOWER CAMBRIAN
HYLAND GROUP (**PY** - **PЄN**)

PЄN — *NARCHILLA FORMATION:* **PЄN1**, *maroon, dark blue-grey, or green weathering, recessive shale, thin bedded or laminated in like colours; minor thin- to medium-bedded, fine grained, pale green, quartz arenite to subarkose and pale green to tan shale*

UPPER PROTEROZOIC

PY — *YUSEZYU FORMATION: grey to brown weathering, thin- to thick-bedded, fine- to coarse-grained, gritty quartz sandstone and quartz pebble conglomerate; brown to pale green shale; minor limestone*

MINERAL OCCURRENCES

Property	Mineralization	Host
I CAC	skarn W	Rabbitkettle Fm.
J NANCY	vein Pb, Zn	Haywire Fm.
Q LENED	skarn W	Rabbitkettle Fm.
R RUDI	skarn W	Rabbitkettle Fm.
W GHMS	stratiform Ba	Portrait Lake Fm.

MINERALS

Barium	Ba	*Tungsten*	W
Lead	Pb	*Zinc*	Zn

Geological boundary (defined, approximate, assumed, extrapolated beneath overburden)
Facies boundary (schematic and approximate)
Bedding, top known (horizontal, inclined, vertical)
Slaty cleavage (inclined, vertical)
Fault, steeply dipping (defined, approximate, assumed or extrapolated beneath overburden; solid circle indicates downthrow side)
Thrust fault (defined, approximate, assumed or extrapolated beneath overburden; teeth indicate upthrust side)
Anticline (defined, approximate, extrapolated beneath overburden)
Syncline (defined, approximate, extrapolated beneath overburden)
Fossil locality — F 22
Mineral occurrence — × J
Hornfels

REFERENCE

Green, L.H., Roddick, J.A., and Blusson, S.L.
1968: Geology, Nahanni, District of Mackenzie and Yukon Territory; Geological Survey of Canada, Map 8-1967

Geology by S.P. Gordey 1977-78, with contributions by S.L. Blusson, L.H. Green and J.A. Roddick 1968

Geological cartography by the Geological Survey of Canada

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base map enlarged from part of map 105-I published at 1:250 000 scale by the Army Survey Establishment R.C.E. in 1954

Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, K1A 0E9

Magnetic declination 1992, 30°39' East, decreasing 12.9' annually

Elevations in feet above mean sea level

Published 1992

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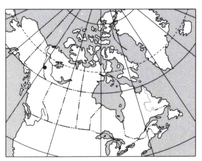

LOCATION MAP

MAP 1-1992
SHEET 2 OF 6
GEOLOGY

SOUTH NAHANNI RIVER AREA

DISTRICT OF MACKENZIE
NORTHWEST TERRITORIES

Scale 1:50 000 - Échelle 1/50 000

Kilometres 1 0 1 2 3 4 Kilomètres

Universal Transverse Mercator Projection
Projection transverse universelle de Mercator

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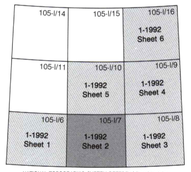

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

To accompany GSC Memoir 428 by S.P. Gordey

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Gordey, S.P.
1992: Geology, South Nahanni River area (105-I/7), District of Mackenzie, Northwest Territories; Geological Survey of Canada, Map 1-1992, Sheet 2 of 6, scale 1:50 000

Canada

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