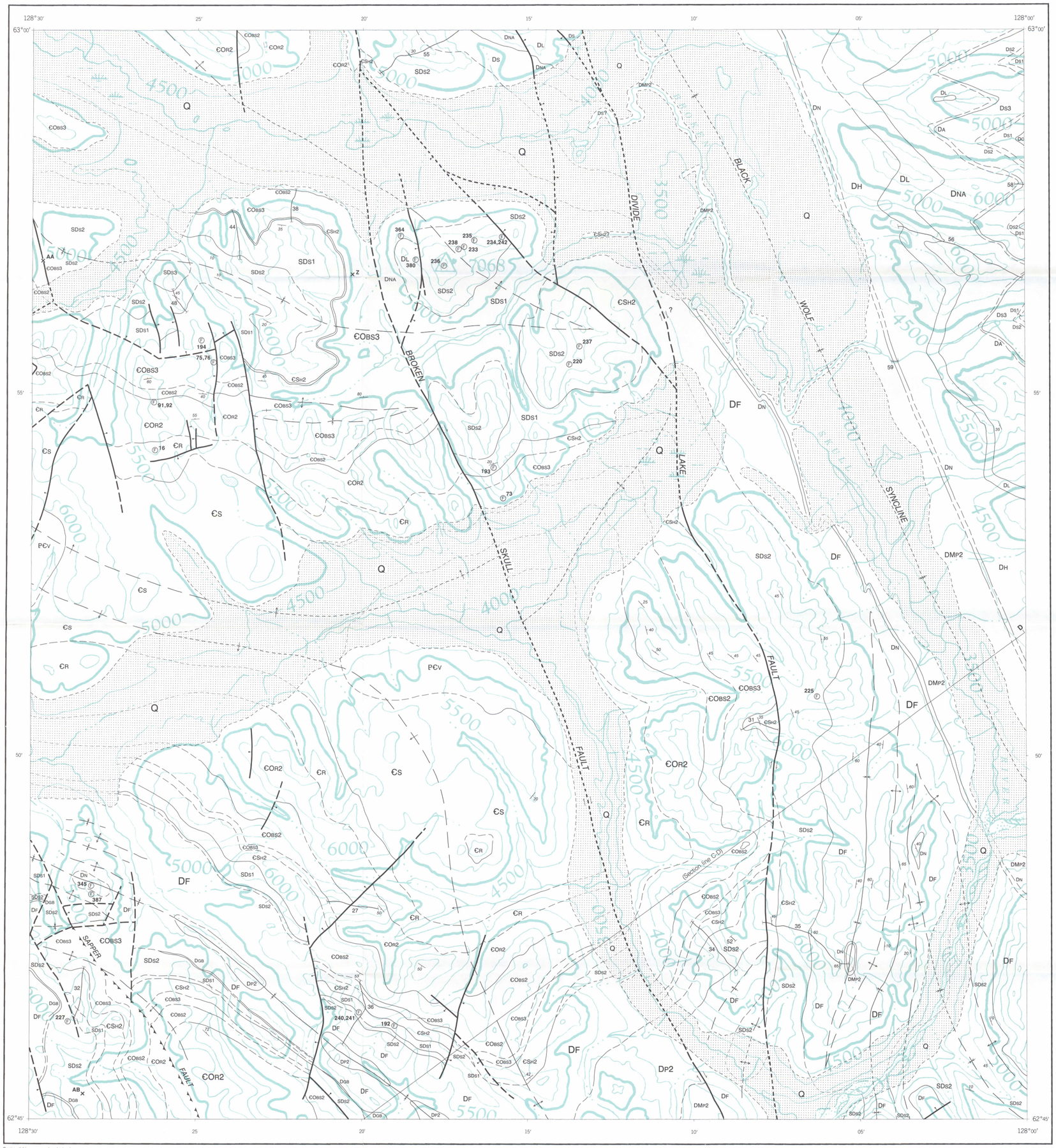
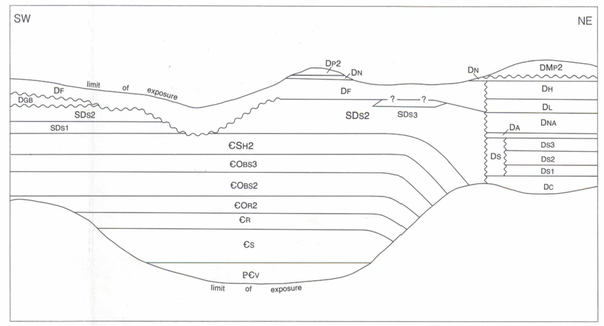
Energy, Mines and Resources Canada
Énergie, Mines et Ressources Canada

GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

1992





Diagrammatic rock stratigraphic cross-section

LEGEND

CENOZOIC
PLEISTOCENE AND RECENT

Q — *Unconsolidated glacial and alluvial deposits*

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

DMP — *PREVOST FORMATION:* **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*

DEVONIAN
MIDDLE DEVONIAN

DF — *FUNERAL FORMATION: buff-orange weathering recessive, thin bedded, fine crystalline, variably argillaceous to silty limestone*

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:* **SDS1**, *(limestone member - lower Sapper) blue-grey weathering, thin bedded, cryptocrystalline to fine crystalline, black limestone;* **SDS2**, *(silty limestone member - upper Sapper) tan, buff, or dark grey weathering, recessive, thin bedded, laminated argillaceous, fine crystalline limestone;* **SDS3**, *(dark limestone member) dark grey weathering, thin- to medium-bedded, fine crystalline, black limestone; stratigraphic relations uncertain*

UPPER CAMBRIAN TO LOWER SILURIAN

ЄSH — *HAYWIRE FORMATION:* **CSH2**, *white to dark grey weathering, thick- to very thick-bedded, massive, grey, locally cherty dolostone*

CAMBRIAN AND ORDOVICIAN
UPPER CAMBRIAN AND LOWER ORDOVICIAN

ЄOBS — *BROKEN SKULL FORMATION:* **COBS2**, *(dolostone member - lower Broken Skull) grey to white weathering, thick bedded, massive, fine- to medium-crystalline, grey to black dolostone;* **COBS3**, *(limestone member - upper Broken Skull) blue-grey weathering, recessive, thin bedded, fine crystalline, dark grey to black limestone*

ЄOR2 — *RABBITKETTLE FORMATION:* **COR2**, *tan to orange brown weathering, thin bedded, fine crystalline, locally nodular, blue-grey limestone*

CAMBRIAN
MIDDLE CAMBRIAN

ЄR — *ROCKSLIDE FORMATION: tan to brown weathering, recessive, thin bedded, fine crystalline, grey limestone*

LOWER CAMBRIAN

ЄS — *SEKWI FORMATION: undivided;* **CS1**, *(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 crystalline, grey dolostone;* **CS2**, *(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 crystalline 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*

DEVONIAN
MIDDLE DEVONIAN

DN — *NAHANNI FORMATION: light grey weathering, resistant, thin- to thick-bedded, fine crystalline, dark grey limestone*

DH — *HEADLESS FORMATION: orange-brown weathering, thin- to medium-bedded, fine crystalline, light to dark grey limestone*

DL — *LANDRY FORMATION: light grey to brown grey weathering, resistant thin- to thick-bedded, fine crystalline, dark grey limestone*

LOWER DEVONIAN

DNA — *NATLA FORMATION: dark grey weathering, recessive, thin bedded, fine crystalline, black limestone, in part crinoidal*

DA — *ARNICA FORMATION: dark grey weathering, thick bedded, fine crystalline, black, cherty dolostone*

DS — *SOMBRE FORMATION: undivided;* **DS1**, *(white dolostone member - lower Sombre) light grey weathering, medium bedded, fine- to medium-crystalline, grey dolostone;* **DS2**, *(black dolostone member - middle Sombre) dark grey weathering, medium- to thick-bedded, dark grey, fine- to medium-crystalline, in part crinoidal dolostone;* **DS3**, *(stripped dolostone member - upper Sombre) basal part is like* **DS1**, *upper part includes alternating light and dark grey weathering, light and dark grey dolostone*

DC — *CAMSELL FORMATION: grey, black and white weathering, medium bedded, grey to black, fine crystalline dolostone*

MINERAL OCCURRENCES

	Property	Mineralization	Host
Z	JOLI GREEN	vein Zn	Haywire, Sapper, or Broken Skull fm.
AA	SKULL	vein Pb, Zn, Ag	Broken Skull or Sapper fm.
AB	HAN	stratiform Zn, Cu	Sapper Fm.

MINERALS

Copper ..... Cu — Silver ..... Ag
Lead ..... Pb — Zinc ..... Zn

Geological boundary (defined, approximate, assumed, extrapolated beneath overburden)
Bedding, top known (inclined, vertical) — 30
Fault, steeply dipping (defined, approximate, assumed or extrapolated beneath overburden; solid circle-indicates downthrow side)
Thrust fault (approximate; teeth indicate upthrust side)
Fault, strike slip (defined, approximate, assumed or extrapolated beneath overburden; arrows indicate relative movement)
Anticline (defined, approximate, extrapolated beneath overburden)
Syncline (defined, approximate, extrapolated beneath overburden)
Monocline (defined, approximate, extrapolated beneath overburden)
Fossil locality — (F)16
Location of measured section — 34
Mineral occurrence — Z

Geology by S.P. Gordey 1979-81, 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, 31°17' East, decreasing 13.2' annually

Elevations in feet above mean sea level

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

GEOLOGICAL SURVEY OF CANADA
COMMISSION GEOLOGIQUE DU CANADA
APR 27 1993
CGIC / CCIG
MAP LIBRARY / CARTOTHEQUE

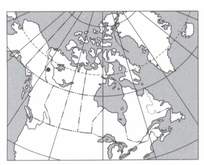
G3401.C5
1978-
S4
OMAPC

1-1992 sheet 6 of 6

To accompany GSC Memoir 428 by S.P. Gordey

Recommended citation:
Gordey, S.P.
1992: Geology, South Nahanni River area (105-I/16), District of Mackenzie, Northwest Territories; Geological Survey of Canada, Map 1-1992, Sheet 6 of 6, scale 1:50 000

Copies of this map may be obtained from the Geological Survey of Canada:
601 Booth Street, Ottawa, Ontario K1A 0E8
3303-33rd Street, N.W., Calgary, Alberta T2L 2A7
100 West Pender Street, Vancouver, B.C. V6B 1R8



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

LOCATION MAP

MAP 1-1992
SHEET 6 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
© Crown copyrights reserved
Projection transverse universelle de Mercator
© Droits de la Couronne réservés

Canada

Published 1992

This map has been produced from a scanned version of the original map
Reproduction par numérisation d'une carte sur papier