GEOLOGICAL SURVEY OF CANADA — COMMISSION GÉOLOGIQUE DU CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES

LEGEND

POST-EMBAYMENT UNITS

DEVONIAN

UPPER DEVONIAN

uDs — *FORT SIMPSON FORMATION: shale, dark grey, partly siliceous; siltstone. Includes Horn River Formation equivalents*

MIDDLE DEVONIAN

mDN — *NAHANNI FORMATION: limestone, dark grey, medium grey weathering, thick bedded, fairly crystalline, coralline and bioclastic; locally dolomitized to Manetoe facies*

mDH — *HEADLESS FORMATION: limestone, dark grey, brown weathering; thin to medium bedded, argillaceous, nodular, bioclastic; locally dolomitized to Manetoe facies*

mDLHN — *LANDRY, HEADLESS AND NAHANNI Formations: undivided*

MIDDLE DEVONIAN (?)

Dm — *Manetoe facies: dolomite, white coarsely crystalline, vuggy; partly dolomite breccia; recrystallized, equivalent of Arnica, Landry, Headless and/or Nahanni formations. Included in respective formations where not mappable*

EMBAYMENT UNITS

DEVONIAN

MIDDLE DEVONIAN

mDF — *FUNERAL FORMATION: shale, grey, calcareous; limestone, argillaceous and slightly bioclastic, thin bedded and platy, buff weathering*

LOWER AND MIDDLE DEVONIAN

lmDAb — *ARNICA FORMATION (basinal member): dolostone and limestone, finely crystalline, black, thin bedded, with black chert nodules, locally coarsely crinoidal; local coarse sedimentary breccia*

SILURIAN AND DEVONIAN

SILURIAN AND LOWER DEVONIAN

SDc / SDc1 — *CADILLAC FORMATION: dolostone, silty, thin bedded, laminated, orange weathering, with scattered thin to thick beds of crinoid wackestone turbidites (orange siltstone member), shaly and pink weathering at top (pink shale member); SDc1: basal thin bedded sandstone*

TRANSITION UNITS

lmDsd — *SOMBRE FORMATION (detrital member): dolostone, medium to thick bedded, light grey; dolomitized intraclast wackestone, commonly in planar medium beds (turbidite deposits)*

SILURIAN AND DEVONIAN

SILURIAN AND LOWER DEVONIAN

SDcm — *CADILLAC FORMATION (megabreccia member): dolostone, silty, thin bedded to laminated, orange weathering, with interbeds and lenses of coarsely crystalline dolostone and limestone breccia*

PLATFORM UNITS

mDL — *LANDRY FORMATION: limestone (brown pelletal lime wackestone), medium bedded, light bluish-grey weathering; pervasively dolomitized to Manetoe facies*

lmDA — *ARNICA FORMATION: dolostone, dark brownish-grey, finely to medium crystalline, thick bedded, locally crinoidal, locally alternating dark and medium brownish-grey weathering; locally dolomitized to Manetoe facies*

SOMBRE FORMATION (lmDs1 - lmDs3)

lmDs3 — *Upper part: dolostone, light and medium grey, light grey weathering, medium to very thick bedded, finely crystalline*

lmDs2 — *Middle part: dolostone, medium to dark grey, dark grey weathering, thick bedded coralline, finely to medium crystalline*

lmDs1 — *Lower part: dolostone finely crystalline, light and medium grey, light grey weathering, medium to thick bedded with many laminated intervals; some silty, greyish-yellow interbeds*

lmDs — *SOMBRE FORMATION: undivided*

LOWER DEVONIAN

lDc — *CAMSELL FORMATION: dolostone, strongly colour banded with alternating medium- and light grey beds and many yellow silty dolostone beds scattered throughout, thick bedded, lighter coloured beds tend to be laminated*

lDv — *VERA FORMATION: limestone, a rhythmite with individual thin beds of grey, slightly crinoidal and bioclastic calcilutite interbedded with bright yellow and pink argillaceous siltstone and calcareous shale in a distinctive striped pattern, brown weathering overall; some intervals of brown calcareous siltstone; scattered small coralline bioherms in the upper part*

SILURIAN

SRT — *ROOT RIVER FORMATION: dolostone light grey, finely crystalline, medium bedded, generally featureless, locally fossiliferous; silty and orange weathering at base (not completely exposed)*

PRE-EMBAYMENT UNITS

SILURIAN AND DEVONIAN

SDR — *ROAD RIVER FORMATION: shale, black, calcareous, graptolitic; limestone, dark grey, laminated, argillaceous, mainly calcilutite*

ORDOVICIAN AND SILURIAN

OSw — *WHITTAKER FORMATION: undivided*

ORDOVICIAN AND SILURIAN

UPPER ORDOVICIAN AND LOWER SILURIAN

WHITTAKER FORMATION (muOw1-OSw3)

OSw3 — *Upper part: dolostone, very finely crystalline, medium grey, thin bedded; thin, discontinuous chert beds and nodules; minor rhythmite with thin chert-calcilutite couplets*

ORDOVICIAN

MIDDLE AND UPPER ORDOVICIAN

muOw2 — *Middle part: quartzite, fine grained, white, thick bedded*

muOw1 — *Lower part: limestone, finely crystalline, grey, medium bedded*

MIDDLE ORDOVICIAN

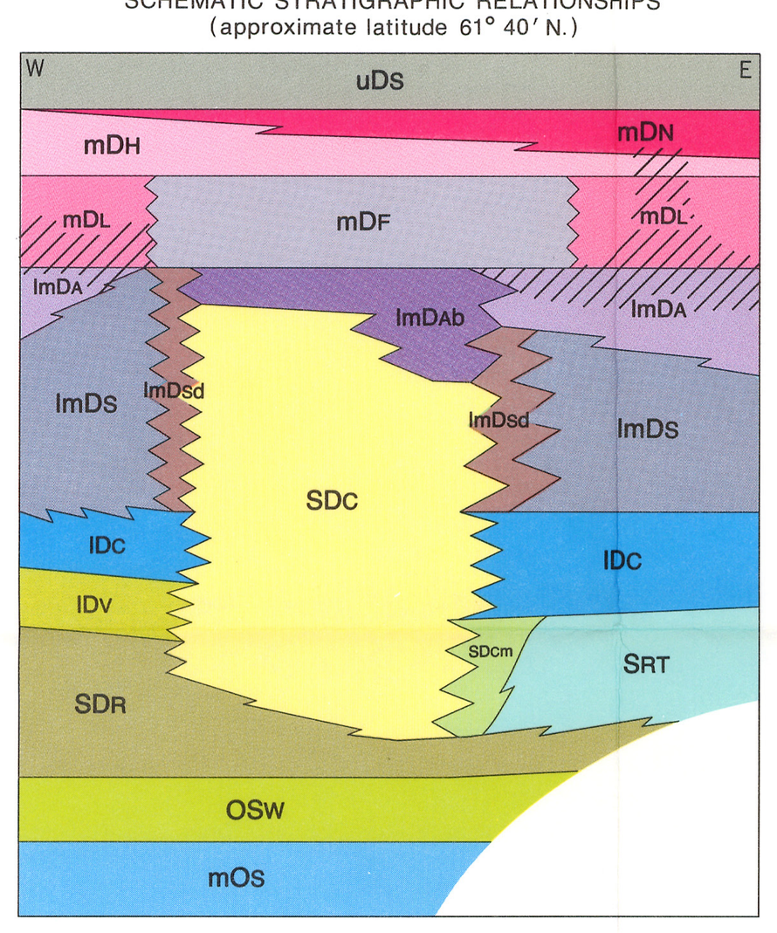
mOs — *SUNBLOOD FORMATION: dolostone, grey, finely crystalline, medium bedded, orange weathering; quartzite, fine grained, white, medium bedded*

Geological boundary (defined, approximate, assumed)
Bedding (measured strike and dip)
Cleavage (measured strike and dip)
Ground observation
Thrust fault (defined or approximate, assumed)
Reverse fault (defined or approximate, assumed)
Fault, sense of displacement unknown (defined or approximate, assumed)
Anticline (trace of axial plane, arrow indicates plunge)
Syncline (trace of axial plane, arrow indicates plunge)
Monoclinal bend, anticlinal, trace of hinge plane (arrow on steeper limb)
Stratigraphic sections numbered as in text (measured by D.W. Morrow, reported in other sources, estimated from ground traverse by D.G. Cook)
Cadillac Mine

MINERALS

Lead .... Pb
Silver .... Ag
Zinc .... Zn

SCHEMATIC STRATIGRAPHIC RELATIONSHIPS
(approximate latitude 61° 40′ N.)



Manetoe facies

Geological compilation by D.G. Cook based on studies of vertical aerial photographs; ground and aerial observations by D.G. Cook, D.W. Morrow, A.W. Norris and R. Ludvigsen; and published sources, chiefly G.S.C. Map 1378A (R.J.W. Douglas and D.K. Norris, 1976)

To accompany Memoir 412 by D.W. Morrow and D.G. Cook

Geological cartography by J.H. Waddell, Institute of Sedimentary and Petroleum Geology, Geological Survey of Canada

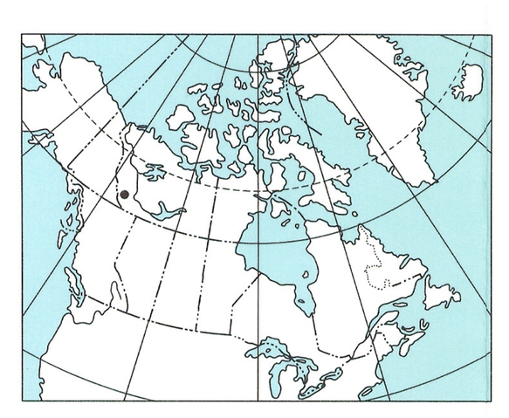
Any revision or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base map from part of 95F Virginia Falls, 1:250,000 published by the Surveys and Mapping Branch, 1972

Copies of the topographical edition of this map at a scale of 1:250,000 may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Canada K1A 0E9

Magnetic declination 1986 varies from 31°09′ easterly at centre of west edge, to 31°04′ easterly at centre of east edge. Mean annual change 20.5′ westerly.

Elevations in feet above mean sea level



INDEX MAP

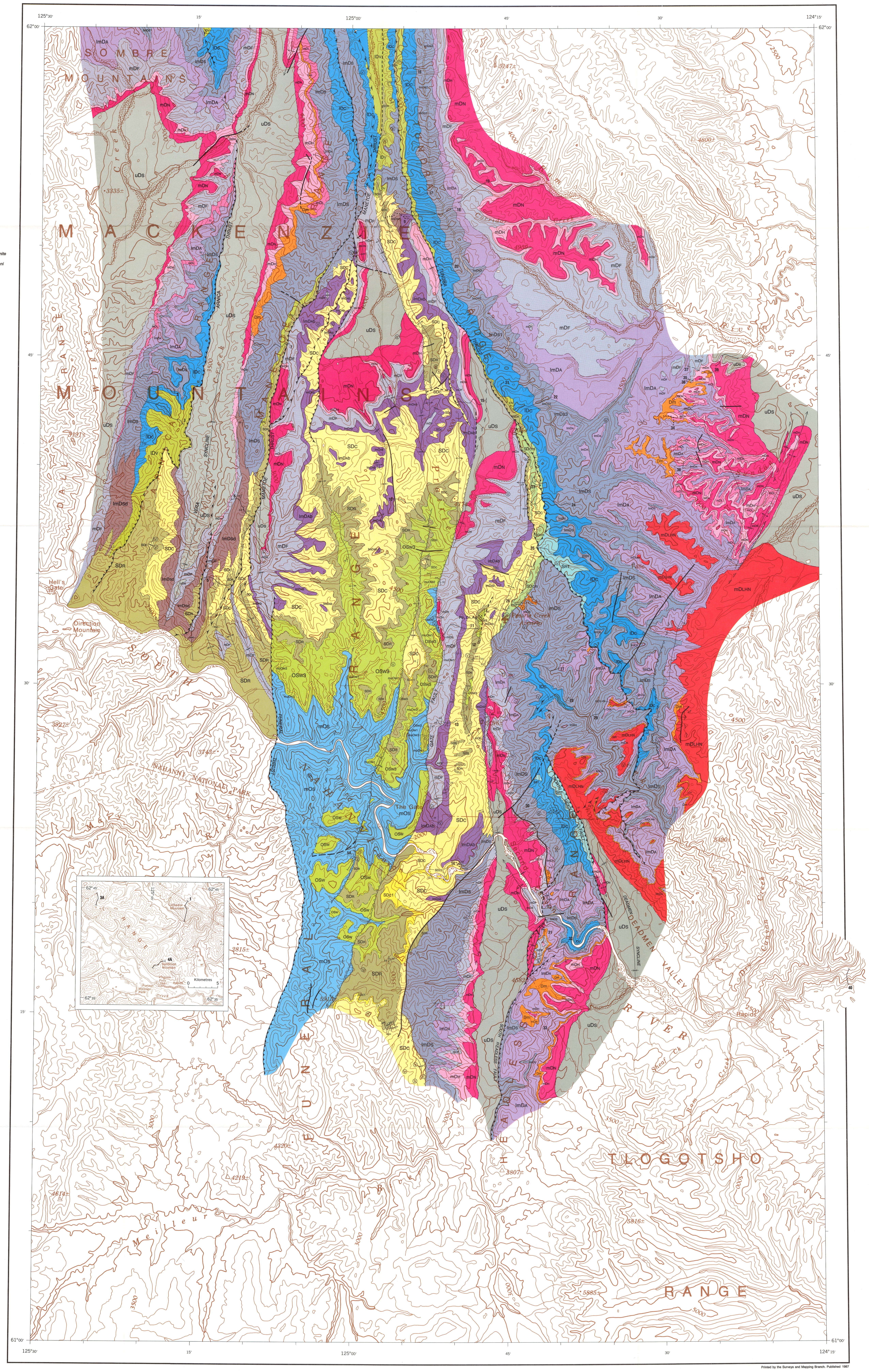


Figure 81. Geological map of Central Virginia Falls map area.

Scale 1:125 000

Kilometres 3 0 3 6 9 Kilometres

Universal Transverse Mercator Projection

Printed by the Surveys and Mapping Branch. Published 1987

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