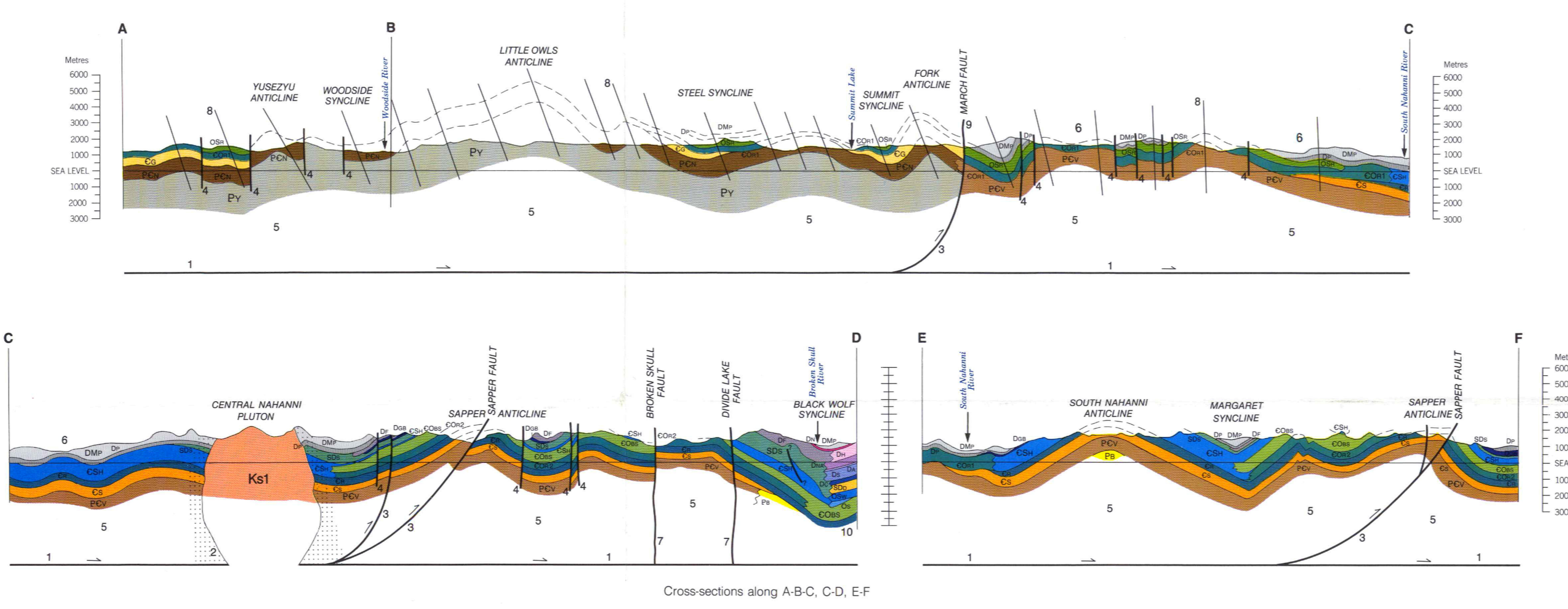


CROSS-SECTION NOTES

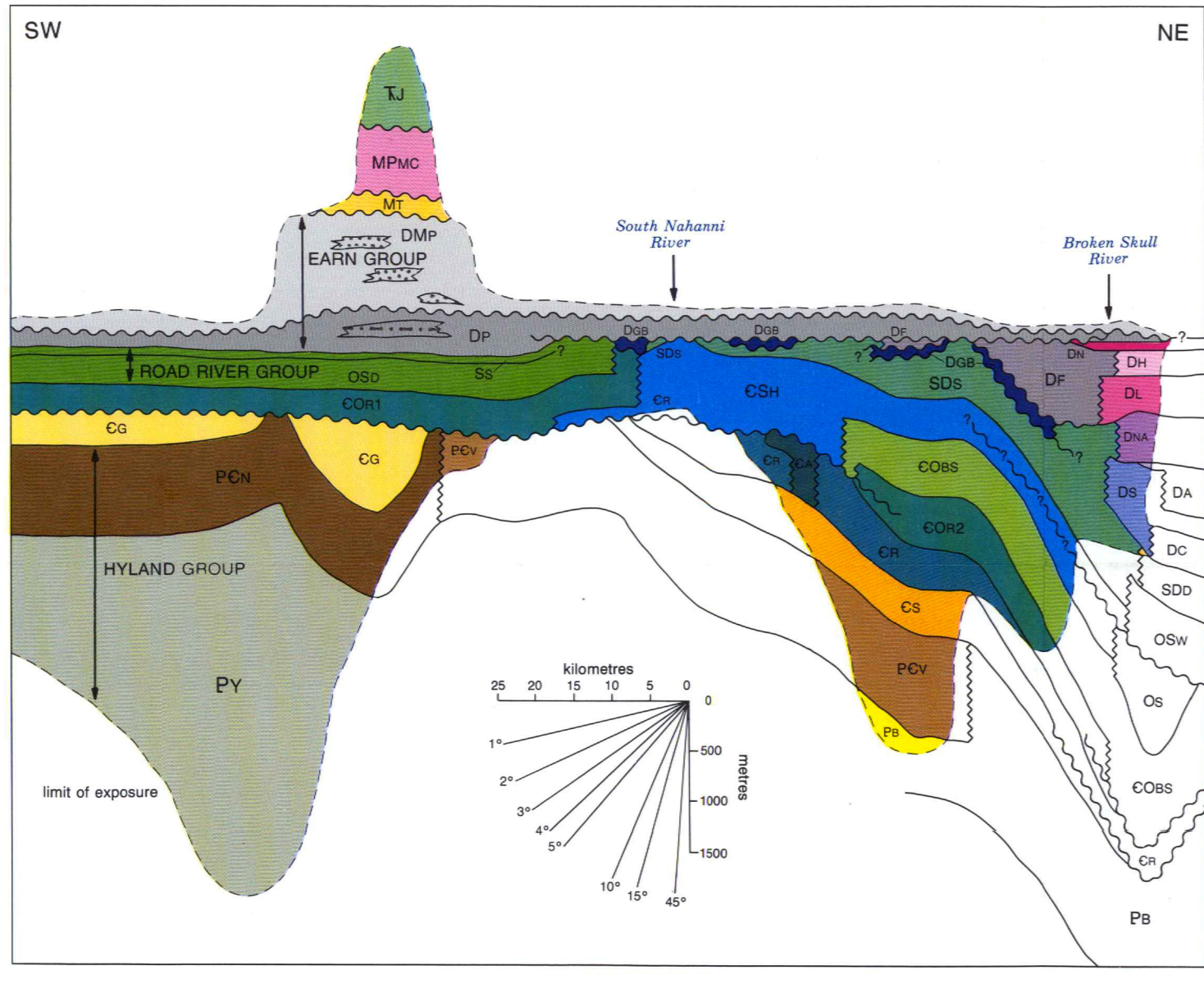
- Inferred basal detachment for folds and thrust faults in overlying strata. The depth to the detachment is uncertain. The thickness of sediment beneath detachment and above crystalline basement is unknown.
- Pluton is post-orogenic and therefore is shown schematically to cut the basal detachment.
- Thrust fault shown diagrammatically to root in detachment.
- Steep fault whose kinematic relationship to folds, thrust faults and basal detachment is uncertain.
- Geometry of structures at depth is unknown. Anticlinal holes are likely filled by flow of weak rock into anticlinal cores, flow that was accommodated by complicated faulting and folding. Strata that may exist beneath detachment are presumably undeformed.
- Bedding dips portrayed on parts of cross-section are shallower than that indicated on geological map. Average regional bedding attitudes are contained in cross-section by known stratigraphic thicknesses. Steep attitudes, dominantly in areas where slaty cleavage is indicated, may result from minor folds that cannot be portrayed at scale of cross-section.
- Deistral strike slip fault possibly rooting in detachment.
- Orientation of slaty cleavage.
- Gull Lake Formation is absent in footwall of March Fault. The March Fault may, in part, follow a pre-Fraser Formation block fault that accommodated pre-Lake Cambrian erosion of Gull Lake strata on its northeast side.
- Backbone Ranges (Pb), Rockslide (Dh), Broken Skull (Cob), Whittaker (Dhw), Delorme (Sd), and Sunbood (Os) formations projected into cross-section from Geological Map area to the east (see Gabrielse et al., 1973, GSC Memoir 366).



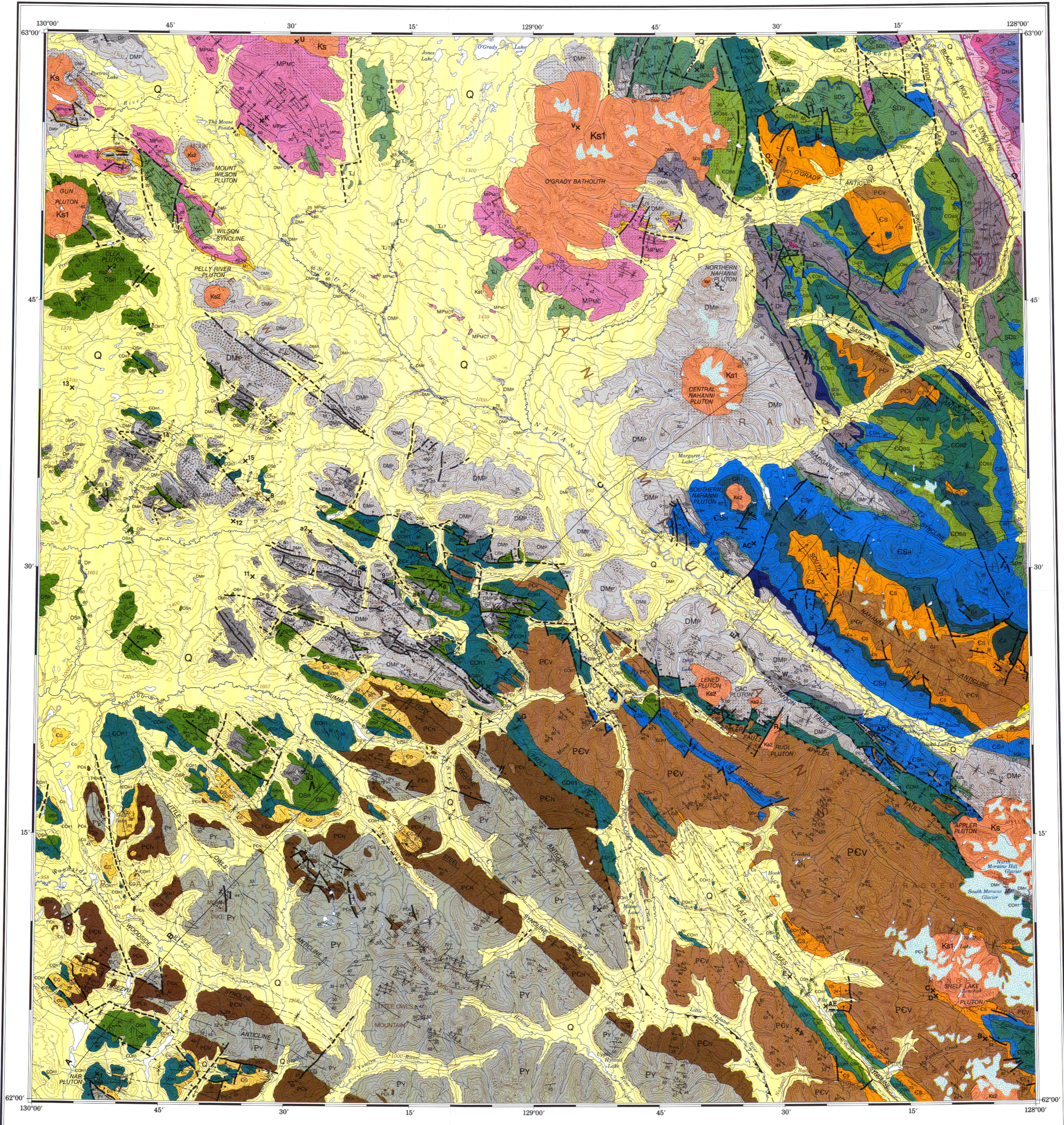
Cross-sections along A-B-C, C-D, E-F

LEGEND

PLEISTOCENE AND RECENT	Q UNCONSOLIDATED GLACIAL AND ALLUVIAL DEPOSITS
CRETACEOUS	Ks SEUYU PLUTONIC SUITE: undivided Ks1, hornblende-biotite granite and granodiorite; Ks2, biotite granite and granodiorite; patterning of country rock adjacent to pluton shows extent of hornblende
TRIASSIC	Lj JONES LAKE FORMATION: shale, ripple cross-laminated siltstone and sandstone
MISSISSIPPIAN TO PERMIAN	MPAC MOUNT CHRISTIE FORMATION: pale green shale, siltstone, and chert; minor quartz sandstone
MISSISSIPPIAN	MT TSOHU FORMATION: resistant, thick-bedded quartz arenite; minor brown to black shale
DEVONIAN AND MISSISSIPPIAN (Dp - Dmp)	SARU GROUP DMP PREVOST FORMATION: chert-quartz sandstone, chert-pebble conglomerate, and minor shale (patterned); brown weathering shale and minor chert-quartz sandstone (unpatterned)
LOWER TO UPPER DEVONIAN	DP PORTRAIT LAKE FORMATION: chert-quartz wacke, and massive pebbly mudstone (patterned); black siliceous shale and chert (unpatterned)
DEVONIAN (Dc - Dh)	MIDDLE DEVONIAN Dh NAHANNI FORMATION: light grey weathering, resistant limestone
DEVONIAN (Dba - Dp)	MIDDLE DEVONIAN DH HEADLESS FORMATION: orange-brown weathering limestone
DEVONIAN (Dl)	DEVONIAN DL LANDRY FORMATION: light grey to brown-grey weathering, resistant limestone
LOWER DEVONIAN	DNA HATLA FORMATION: dark grey weathering, recessive limestone, in part crystalline
DA	ARNICA FORMATION: dark grey weathering, cherty dolostone
DS	SOMBRE FORMATION: light grey dolostone (lower Sombre); dark grey dolostone, in part conoidal (middle Sombre); alternating light and dark grey dolostone (upper Sombre)
DC	CAMELL FORMATION: grey, black, and white weathering dolostone
UPPER SILURIAN AND LOWER DEVONIAN (cross-section only)	SDb DELORME FORMATION: orange-buff weathering dolostone
UPPER ORDOVICIAN AND SILURIAN (cross-section only)	OSw WHITTAKER FORMATION: dark grey weathering dolostone and minor limestone
MIDDLE ORDOVICIAN (cross-section only)	OS SUNBOOD FORMATION: dark and light grey dolomite; pink, mottled limestone; orange-brown sandstone



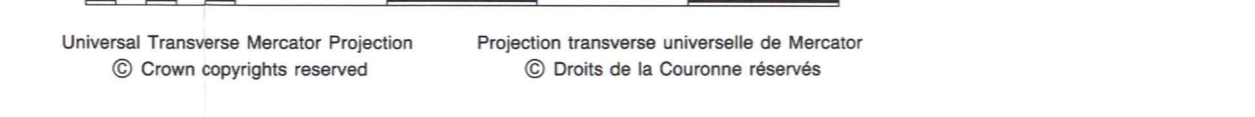
Rock stratigraphic cross-section



MAP 1762A GEOLOGY

LITTLE NAHANNI RIVER NORTHWEST TERRITORIES-YUKON TERRITORY

Scale 1:250 000 - Échelle 1/250 000



ORDOVICIAN AND SILURIAN (OSd - OSr)	OSd Undivided Steel Formation and Duo Lake Formation (time and rock-stratigraphic figures only)
UPPER SILURIAN (time and rock-stratigraphic figures only)	Ss STEEL FORMATION: orange weathering and dolomite bioturbated silty mudstone
LOWER ORDOVICIAN TO MIDDLE SILURIAN (time and rock-stratigraphic figures only)	OSd DUO LAKE FORMATION: black, gun-blast, or silvery white weathering shale; black, thin- to medium-bedded black chert
CAMBRIAN AND ORDOVICIAN (Cs - COh1)	UPPER CAMBRIAN AND LOWER ORDOVICIAN COh1 RABBITKITTLE FORMATION: COh1 (southwest of South Nahanni River) white to buff weathering limestone, locally nodular; local volcanic buff
LOWER AND MIDDLE CAMBRIAN	Cg GULL LAKE FORMATION: orange-brown weathering, recessive shale and siltstone with minor sandstone; tan weathering, resistant dolobedded siltstone and mudstone; local basal member of limestone conglomerate and limestone
PROTEROZOIC AND CAMBRIAN	UPPER PROTEROZOIC AND LOWER CAMBRIAN PCv MARCHILLA FORMATION: maroon, dark blue-grey, and green weathering shale; minor sandstone
UPPER PROTEROZOIC	Py YUSEZYU FORMATION: grey to brown weathering, coarse quartz sandstone and quartz-pebble conglomerate; brown to pale green shale; local limestone member at top of formation

CAMBRIAN (Cs - Ch)	MIDDLE CAMBRIAN Ch ROCKSIDE FORMATION: tan to brown weathering, recessive grey limestone
LOWER CAMBRIAN	Cs AVALANCHE FORMATION: light grey weathering dolostone
LOWER CAMBRIAN	Cs SEKWU FORMATION: limestone, locally very bedded and nodular; massive grey dolostone, medium- to thick-bedded quartz sandstone; purple siltstone and dolomite siltstone; bright orange weathering, fine crystalline dolostone
PROTEROZOIC AND CAMBRIAN (Pb - Pvc)	UPPER PROTEROZOIC AND LOWER CAMBRIAN PCv UMPIRE FORMATION: greenish-grey siltstone, very fine grained quartz sandstone and shale
UPPER PROTEROZOIC	Pb BACKBONE RANGES FORMATION: buff weathering dolostone

Geological boundary (defined, approximate, assumed or extrapolated beneath overburden) ...
 Faces boundary (schematic and approximate) ...
 Bedding, top known (horizontal, inclined, vertical, overturned) ...
 Bedding top unknown (inclined) ...
 Slaty cleavage (inclined, vertical) ...
 Lineation, intersection of slaty cleavage and bedding (inclined) ...
 Lineation, axis of minor fold (inclined) ...
 Fault, steeply dipping (defined, approximate, assumed or extrapolated beneath overburden, solid circle indicates downthrow side) ...
 Thrust fault (defined, approximate, assumed or extrapolated beneath overburden, both 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) ...
 Anticline, syncline (overturned) ...
 Monocline (defined, approximate, extrapolated beneath overburden) ...
 Focal locality (Readings vary from 30°15' N in the SW corner to 31°15' E in the NE corner of the map) ...
 Location of measured section ...
 Mineral occurrence ...
 Hornfels ...

Property	Mineralization	Host
Northwest Territories		
A HAT	vein Cu, Pb, Zn	Rabbitkittle Fm.
B unnamed	vein Pb	Vampire Fm.
C HAY	vein Pb, Zn, Au, Ag	Vampire Fm.
D unnamed	skarn W	Sekwi Fm.
E HUG	geochrom (Zn) anomaly	Duo Lake Fm.
F unnamed	pegmatite Li	Yusezyu Fm.
G FERN	skarn Pb, Zn	Duo Lake or Portrait Lake Fm.
H unnamed	stratiform Zn, Pb, Cu	Rabbitkittle Fm.
I CAC	skarn W	Rabbitkittle Fm.
J MANCY	vein Pb, Zn	Yusezyu Fm.
K CAM	vein Pb, Zn	Mount Christie Fm.
L PIT	replacement Cu	Prevost Fm.
M CAN	skarn Cu, Pb, Zn	Prevost Fm.
N RA	vein Sb, Cu, Pb	Sapper Fm.
O SAND GUN	replacement Zn	Broken Skull Fm.
P VULCAN	stratiform Pb, Zn	Sapper Fm.
Q LENEZ	skarn W	Rabbitkittle Fm.
R RUDJ	skarn W	Rabbitkittle Fm.
S SILVE	skarn W	Rabbitkittle Fm.
T BIG RED	vein Pb, Zn	Rockslide Fm.
U unnamed	vein Pb, Zn	City of Bear Fm., Hayate Fm.
V unnamed	vein Pb, Zn	City of Bear Fm., Hayate Fm.
W GHMS	vein Pb	Portait Lake Fm.
X GRAND	stratiform Pb, Zn	Duo Lake Fm.?
Y CMC	stratiform Ba, Pb, Zn	Portrait Lake Fm., Hayate?, Sapper?, or Broken Skull Fm.
Z JOLI GREEN	vein Zn	Portrait Lake Fm.
Yukon Territory		
1 NAR	skarn W, Cu, Pb, Zn, Ag	Rabbitkittle Fm.
2 CLEA	skarn W, Cu, Pb, Zn, Ag	Duo Lake Fm.
3 BPR	skarn Cu, Fe	Mount Christie Fm.
4 NOM	vein Au	Portrait Lake Fm.
5 HOWARDS PASS	stratiform Pb, Zn	Duo Lake Fm.
6 SHIELD	stratiform Pb, Zn	Duo Lake Fm.
7 ORH	stratiform Ba	Portrait Lake Fm.
8 ANNV	stratiform Pb, Zn	Duo Lake Fm.
9 WINKIE	vein Cu	Portrait Lake Fm.
10 NISS	stratiform Ba, Zn	Prevost Fm.
11 DIANNE	stratiform Pb, Zn	Portrait Lake Fm.
12 RTZ	geochrom (Pb-Zn) anomaly	Prevost Fm.
13 ABBY	stratiform Pb, Zn	Duo Lake Fm.
14 NOM	stratiform Ba	Portrait Lake Fm.
15 CHNO	geophysical anomaly	Duo Lake Fm.
16 ROCK	geochrom (Zn-Ba) anomaly	Duo Lake Fm.
17 FAST	geochrom (Zn-Ba) anomaly	Earn Group
18 CH	stratiform Pb, Zn	Duo Lake Fm.
19 THOS	stratiform Ba, Zn-rich breccia	Portrait Lake Fm.
20 unnamed	stratiform Ba	Portrait Lake Fm.
21 unnamed	stratiform Ba	Portrait Lake Fm.

Geology by S.P. Gordy 1977-1981, with contributions by S.L. Blusson, J.H. Green and J.A. Roddick.
 Geological cartography by J.L. Froese, Geological Survey of Canada
 Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada
 Colour separations were produced using digital methods
 Base map at the same scale published by the Surveys and Mapping Branch in 1987
 Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario, K1A 0E9
 Mean magnetic declination 1992, 30°46' East, decreasing 12.9' annually. Readings vary from 30°15' N in the SW corner to 31°15' E in the NE corner of the map
 Elevations in metres above mean sea level

MINERALS	
Antimony	Sb
Barium	Ba
Copper	Cu
Gold	Au
Iron	Fe
Lead	Pb
Lithium	Li
Phosphorus	P
Silver	Ag
Tungsten	W
Uranium	U
Vanadium	V
Zinc	Zn

Green, L.H., Roddick, J.A., and Blusson, S.L. 1966. Geology, Nahanni District of Mackenzie and Yukon Territory. Geological Survey of Canada, Map 1762A, scale 1:250 000

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