



LEGEND

QUATERNARY

Qg Gypsum talus consisting of generally unsorted sand to boulder sized clasts of chert, shale, carbonate and gypsum, floating in a gypsum matrix and showing a crude horizontal to moderately westward dipping stratification.

JURASSIC AND CRETACEOUS

JK Undivided sandstone, siltstone and shale; see Norris, 1981, for detail.

DEVONIAN

UPPER DEVONIAN

Di IMPERIAL FORMATION and upper Devonian shale: undivided shale and sandstone; see Norris, 1981, for detail; also includes Tuttle Fm. and Fort Lake shale in southwestern most map area.

Dc CANOL FORMATION: whitish-grey weathering, jarositic, siliceous shale; chert, which, in the western map area, contains units of calcareous shale; contains lensoidal to ovoid metre-scale limestone nodules; measured thicknesses 410 m (Sec. 2) and 253 m (Sec. 5).

SILURIAN AND DEVONIAN

UPPER SILURIAN AND LOWER MIDDLE DEVONIAN

Sdv **†** graptolitic, black shale and shaly limestone; minor limestone, intraclast conglomerates and breccia. The upper 0-50 m is a white weathering, siliceous shale and chert; measured thicknesses 295 m (Sec. 2) and 490 m (Sec. 4); equivalent to unit CDr4 of Norris, 1981. SdvC member - limestone and bioclastic conglomerate; equivalent to unit Do of Norris, 1981.

ORDOVICIAN AND SILURIAN

MIDDLE AND UPPER SILURIAN

Sd **†** interstratified, yellowish to orange weathering argillite and yellowish to grey weathering shaly limestone; minor black, calcareous shale, intraclast conglomerate and breccia; orange weathering dolomite gradually replaces limestones from north to south in the western map area; fossil trails are abundant in the argillite; measured thicknesses 136 m (Sec. 1), 100 m (Sec. 2) and 144 m (Sec. 4); equivalent to unit CDr3 of Norris, 1981.

LOWER ORDOVICIAN TO LOWER SILURIAN

OS1 **†** black chert, graptolitic shale and units of silicified limestone containing chert beds and nodules; minor intraclast conglomerate and breccia; in the west there are three distinct limestone/chert units forming resistant ridges; limestone is partially dolomitized, including zebra dolomite, in the south part of the map area; measured thicknesses are 442 m (Sec. 2) and 466 m (Sec. 4); equivalent to the upper part of unit CDr1 of Norris, 1981.

CAMBRIAN AND ORDOVICIAN

UPPER CAMBRIAN AND LOWER ORDOVICIAN

EOr **†** pale yellow to grey weathering, thin- to medium-bedded, shaly, pyritic limestone; minor very calcareous shale as interbeds within the limestone; minor chert nodules and thin beds in the upper part; minor intraclast breccias and conglomerates common in the eastern part of the map area, rare in the western part; measured and estimated thickness 2000 m at Sec. 3; equivalent to lower CDr1 of Norris, 1981. EOrd member - grey to pale yellow, thin- to thick-bedded dolomite, commonly with numerous crystalline dolomite veins.

CAMBRIAN

MIDDLE(?) CAMBRIAN

Csh Rusty brown weathering siltstone, shale; minor sandstone; turbiditic; gradational into Slats Creek Formation; equivalent to CDr0 of Norris, 1981.

LOWER(?) AND/OR MIDDLE(?) CAMBRIAN

Esc SLATS CREEK FORMATION: rusty brown weathering, lithic, quartz sandstone; minor shale and siltstone; turbiditic; Escu (upper member) consists of 50% sandstone and 50% shale and siltstone.

*weathering colour on ridges; not well developed in most river cuts

- Geological contact (defined, approximate, assumed)
- Bedding
- Fault, symbol on downthrown side
- Fault, reverse fault, teeth on upthrown side
- Syncline
- Anticline
- Member contact
- Fossil locality
- Measured section
- Shales react to "zinc zap" over small intervals unless thickness shown
- Barite in veins
- Minor malachite staining

Acknowledgments

Map based on ground traverses by M.P. Cecile, I.E. Hutcheon and D. Gardner, assisted by B. Edwardh, K. Hugo and B. Cutler, 1982, and published compilation of Norris, 1981. Structure within units Di and JK from Norris, 1981.

References

- D.K. Norris, 1981; Geological Survey of Canada, Maps 1523A and 1524A.
- D.K. Norris, 1974; in Wren, A.E. and Cruz, R.B. (eds); Proceedings of the 1973 National Convention, Canadian Society of Exploration Geophysicists.

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GEOLOGY OF THE NORTHERN RICHARDSON ANTICLINORIUM¹
M.P. Cecile, I.E. Hutcheon, and D. Gardner, 1982.

1 - as defined by Norris, 1974