

The Triassic of the La Biche River Map Area (NTS 95C), Southeastern Yukon Territory: Preliminary Sedimentology, Biostratigraphy, and Thermal Maturity

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The presence of Triassic strata in the southeastern Yukon Territory (La Biche River map area; NTS 95 C) has been recognised since the 1940s. This succession is up to 400 m thick, lies disconformably upon the Fantasque Formation (Permian), and is overlain disconformably by Cretaceous strata (Chinkeh and Garbutt formations).

As part of the Central Foreland NATMAP Project, stratigraphic sections were measured within the Triassic of Mount Martin (NTS 95 C/1) and Mount Merrill (NTS 95 C/2) map areas. The succession consists of interbedded shale, siltstone, and sandstone. Five facies associations are recognised and are interpreted to record deposition on a wave-dominated siliciclastic shelf in environments ranging from distal shelf to upper shoreface. The succession displays a rough, four-fold subdivision. A basal, recessive (shale-dominated?) unit is overlain in turn by a sandstone-rich unit, a shale-rich unit, and an upper unit of interbedded sandstone and shale.

Abundant, well-preserved Triassic pollen and spores indicate a Griesbachian age for the succession and show a Thermal Alteration Index within the oil window. Reworked Upper Devonian spores also occur, indicating exposure and erosion of Devonian strata during the Griesbachian transgression.

Regional comparison of stratigraphic position, lithology, and palynomorphs suggests that Triassic strata in the La Biche River map area be assigned to the Lower to Middle Triassic Toad Formation. The La Biche River Triassic is in many respects similar to Triassic gas-producing strata (Montney Formation; Griesbachian) in the Ring-Border Field (NE British Columbia), and may provide an outcrop analogue for that field.