

Proximal and Distal Expression and Sequences of the Sikanni Formation in the Liard Basin

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Stratigraphic and foraminiferal analysis of the uppermost Buckingham and Sikanni formations at Steamboat Mountain, NE British Columbia and the Sikanni Formation 120 km to the northwest, allow bio- and sequence stratigraphic as well as paleoecological comparisons to be made between the two localities. The Sikanni Formation documents the localized influx of coarser-grained sediments that punctuated the otherwise fine-grained deposition in the northern foothills and the majority of the WCSB during the early part of the continent-wide Greenhorn Marine Cycle in the Late Albian (Early Cretaceous). The beginning of this cycle is documented biostratigraphically by the appearance of the *Miliammina manitobensis* foraminiferal fauna, which lies above the Viking sandstone and its equivalents and below the Fish Scale Marker Bed in Western Canada.

The exposures at Steamboat Mountain and Liard River preserve markedly different facies, the former preserving shelf mudstones to floodplain deposits and the latter limited to shelf strata. Surfaces of transgressive ravinement are present at both locations. At least two pebble lag deposits overlie middle shoreface and floodplain deposits within the Sikanni Formation at Steamboat Mountain, and a single pebble bed overlies the Sikanni Formation at the base of the Sully Formation at the Liard River section. The interpretation of these surfaces as sequence boundaries is enhanced by micropaleontological analysis, as significant foraminiferal faunal changes are associated with these boundaries. Foraminifera also make it possible to attempt correlation of these high-frequency regional relative sea-level cycles and differentiate between paleoenvironments within the Sikanni Formation of the Liard Basin.