

A Regional Unconformity Associated with the Middle Triassic Halfway Formation, Western Canada Sedimentary Basin

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Past studies have led to a variety of conclusions regarding the nature of the change between the siliciclastic Triassic Halfway Formation and the carbonate-evaporate-siliciclastic Charlie Lake Formation. Some authors conclude the contact is an unconformity; some interpret it as a purely facies contact, and others suggest it is a combination of both. In many recent publications the facies contact has held sway.

Young (1997) presented correlations from the Umbach-Wargen area of northeast British Columbia which showed that Halfway strata rest on, and onlap an unconformity. From this local study he concluded that a more regional perspective of the Halfway-Charlie Lake interval was needed in order to examine the magnitude of the unconformity.

Detailed correlations of the Doig, Halfway and lower Charlie Lake interval in the Trutch and Beatton River areas of northeast British Columbia, and the Spirit River area of west central Alberta led the present author to conclude that a major unconformity is associated with the Halfway Formation, similar to the conclusion of Young (1997). Regional cross-sections through the Western Canada Sedimentary Basin tend to confirm the conclusions of the detailed local studies. As a result of these studies it was noted that in the western areas the unconformity occurs within the upper part of the Halfway Formation and in the east the unconformity commonly lies at the base of a thin Halfway Formation. At the eastern limits of the Halfway Formation the overlying Charlie Lake Formation commonly overlaps the Halfway sandstone and rests directly on the unconformity.

Young, F.G. 1997. Iconoclastic view of mid-Triassic stratigraphy: Umbach-Wargen area, British Columbia. *Bulletin of Canadian Petroleum Geology*, v.45, p.577-594.