

Unconformity Trap in the Middle Triassic of the Spirit River-Rycroft Area, West-Central Alberta

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Oil and gas in the Spirit River-Rycroft field is produced principally from a porous coquinal sandstone sitting between Charlie Lake Formation above and Doig Formation below. Originally this coquinal sandstone was considered to be part of the Doig Formation and that the trapping mechanism was, "the updip edge of an isolated remnant of Doig coquinas and sandstones, created by erosion prior to Charlie Lake deposition" (Aukes and Webb, 1986). A re-evaluation of the correlations indicates that the coquinal sandstone correlates with the Halfway Formation and that it rests on a significant unconformity. Also, the revised correlations point to the trapping mechanism being up-dip pinchout of Doig, Halfway and lower Charlie Lake beds against the late Triassic Coplin unconformity. In addition, the overlying Jurassic strata progressively truncates the Triassic to the east, creating an opportunity for another up-dip unconformity trap.

Aukes, P.G. and Webb, T.K. 1986. Triassic Spirit River pool, northwest Alberta. Canadian Society of Petroleum Geologists, 1986 Core Conference, p.3-1 to 3-34.