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\textbf{New Reserves for a Mature Asset: Triassic Main - Deep Gas Condensate of the Alwyn Field, Northern North Sea}

The Triassic Main trap is a deep continuation of the Alwyn field westerly dipping fault block, in UK Block 3/9a on the west flank of the Viking Graben. Alwyn, discovered in 1975, has produced oil and gas from the overlying Middle Jurassic Brent and Lower Jurassic Statfjord reservoirs, since start up in 1987. Erosion of the east facing scarp slope by the Base Cretaceous Unconformity (BCU,) truncated the Jurassic section through to the Upper Triassic. Top seal for the Triassic Main accumulation comprises uppermost Triassic shales (dip slope) and onlapping Cretaceous mudrocks (BCU scarp slope). The Carnian to Rhaetian Upper Lunde is a low net to gross succession of continental deposits up to 800m thick, above the Middle Lunde shale. The sediments were deposited in a semi-arid environment, with ephemeral fluvial channels and terminal fans (reservoir sandstones) in a dominantly mudrock section. These are offset, along the eastern bounding fault, against mature Late Jurassic Kimmeridge Clay source rocks.

Alwyn Triassic gas was known from a deepened Statfjord producer (3/9a-N21, 1988) and a downscarp exploration well (3/10b-2, 1992), prior to the first commercial well 3/9a-N33 (1995). This deviated platform well penetrated 765m of Upper Lunde and tested 1.3 x 106m\textsuperscript{3}/d gas plus 3300 stb/d condensate. Three appraisal wells were drilled and completed as producers, prior to full production consent in 1998. Four further crestal production wells were added by mid 2001, as the Triassic play continues to extend Alwyn reserves and production life.