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**Impact of Outcrop Analog-Guided Modeling in the Brent Group, Brent Field, United Kingdom North Sea:
A 'Reoriented' Delta System**

The Brent Group succession has been modeled, using GEOCAP, Shell's proprietary well-log correlation-based modeling system. Outcrop analog data have been crucial and have;

(1) provided a solid basis for the characterization and recognition of genetic sediment bodies and chronostratigraphic surfaces from core and well-log data. (2) substantiated the correlation methods used and ties that were made. (3) supported the architectural descriptions presented in the models. (4) enabled the development of a sequence stratigraphic model for the succession.

The Cretaceous sediments in the Book Cliffs, Utah, were used as an analog for the fluvial-tidal valley-fill and shoreface sediments comprising the Broom, Rannoch and Etive formations, in the lower Brent Group, while, the Carboniferous deposits of eastern Kentucky were used as an analog for the fluvial and coastal plain sediments of the Ness Formation, in the upper Brent Group.

Contrary to existing models of northward progradation, this study shows that the Brent Group succession was deposited in a series of westerly prograding depositional systems. The strongest indications of this are a general westerly decline in reservoir quality in the Rannoch shorefaces and the predominance of east-west oriented valley-fills in the Etive and Ness. This finding is of key importance and provides a solution to a number of the reservoir's problematic dynamic characteristics, such as water over-running in the Rannoch and poor pressure support from the west in several other reservoir layers.