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Low Net:Gross Canyon-Fill with Meandering Deep-Water Channel Elements, Baskil, Eastern Turkey -- Comparison with Offshore West Africa

The Aydinlar Road Channels are exposed near Baskil, 50 km west of Elazig in eastern Turkey. These were initially interpreted as a series of offset stacked deep-water channels. The use of lateral correlation panels, sedimentary logs and architectural element analysis revealed that all of these channel elements are found in within a much larger feature. The feature, called the Aydinlar Canyon, is a 5-6 km wide deep-water canyon incised into a mixed marl/mudstone deep-water slope environment. The incision is floored in a highly disturbed, slumped interval (some of which may also be within the lowest parts of the canyon). Underlying strata have very variable dips and deep-water foraminifera, with almost no terrigenous material. The canyon fill is overall very low net:gross, but the lower net section is characterised by shales and reworked shelfal bioclastic material. Sandwiched within this huge canyon are a number of impressive high aspect ratio, sand and conglomerate-filled deep-water channels, which are offset-stacked and characterised by multiphase fills of interbedded sandstones, mud chip breccias, clast and matrixsupported conglomerates and heterolithic intervals. The edge and base of the largest channel is characterised by conglomerate injections which feed huge intra-channel fill conglomerate sill. Conglomerate is also injected laterally into the enveloping heterolithics.

This is the only known exposure of a mud-dominated canyon-fill, with focused intervals of high quality reservoir facies. The similarity with deep-water canyons offshore west Africa is striking. This presentation compares the distribution, connectivity and quality of reservoir facies from the Turkish outcrops with 3D seismic data from selected prospective and producing intervals in west Africa.