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GEOLOGICAL EXPLANATION OF THE PROPOSED SEDGE UNIT, EDDY COUNTY, NEW MEXICO

The proposed Sedge Federal Unit is comprised of the following lands: Sections 18 and 19 of Township 22 South - Range 23 East. The unit is located southwest of the Indian Basin Upper Penn Pool. A proposed initial test well, located 1980 FNL & 660 FEL of Section 18 of Township 22 South - Range 23 East, will be drilled to a projected depth of 9700 feet to test the hydrocarbon potential of the Morrow Formation.

The primary objective of the initial well is to test the sands of the Morrow Clastics section. These sands, as seen in the highlighted areas on the stratigraphic cross-section A-A', are thought to represent fluviodeltaic deposits generally trending in a northwest - southeast direction.

The structure map, with the top of the Lower Morrow as a datum, shows a structural high to the east of the proposed unit. The proposed unit is located on the west flank of the structural high, with the initial test well positioned structurally higher than any other possible location within the proposed unit. If structurally too low, there is the possibility of encountering water in both the Morrow Clastics and Lower Morrow sections (the location of the gas/water contact is unknown).

The isolith map represents sands of the Morrow Clastics and shows the limits of sand deposition. The isolith map is a "clean sand" map with a gamma ray cutoff of 50 API units or less. This map shows a sand thick trending through the area of the proposed unit. A cutoff of 30 feet was used in determining the limits of the potential reservoir (highlighted area). The cutoff value was based on the amount of net sand in the surrounding wells and the quality of reservoir encountered. These wells encountered 26 net feet of sand or less and were unproductive due to poor porosity and permeability. The thicker sand section should allow for better porosity and permeability, since this represents the area of highest energy within the channel sand.

Other potential pay zones include the Lower Morrow, upper Morrow, Atoka, Cisco/Canyon, Wolfcamp, and Yeso. Yates intends to fully evaluate all hydrocarbon shows in order to establish economic production from the Sedge Federal Unit.

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