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## GEOLOGICAL EXPLANATION OF THE PROPOSED MORTON UNIT, LEA COUNTY, NEW MEXICO

The proposed Morton Unit is comprised of the following lands: T-14-S, R-35-E, Section 32-all; Section 33-SW/4; T-15-S, R-35-E, Section 4-W/2, W/2 SE/4; Section 5-all; Section 6-SE/4, S/2 NE/4 Lea County, New Mexico. The initial test well will be drilled to a projected total depth of 12,000 feet to test the hydrocarbon potential of the Pennsylvanian Strawn formation. The important well is labeled as "Key Well" on the Structure Map and the Key Well Display.

The Structure Map, with the top of the Strawn as the datum, shows north dip with several closures. The closure underlying the proposed Morton Unit is inferred from subsurface well control and several 2D seismic lines shown on the map as purple lines. The Structure Map also indicates the estimated oil-water contact for Strawn formation.

The Strawn formation produces oil in this area of the basin from algal banks or mounds. The Lovington West field, located approximately four miles south of the proposed unit, produces oil from a Strawn algal mound. A structure map on the top of the Strawn at Lovington West shows a closure. This closure is controlled in part by the buildup of the algal mound. It is interpreted that the indicated closure at the proposed Morton Unit indicates a buildup in the Strawn.

The key well to the Morton Unit is the Gecko Inc. Crescent "3" #1, located in the SW NW Section 3, T-15-S, R-35-E, Lea County. This well encountered 43' of algal mound from 11,861 to 11,904' and was completed in this zone. The well produced a total of 1,602 BO, 869 MCFG, and 1,092 BW. It is felt that this well is on a small structure and mound buildup, but near a larger mound.

The Wolfcamp, Cisco and Canyon formations are also prospective in the area. Yates Petroleum Corporation intends to fully evaluate all hydrocarbon shows in order to establish economic production from the Morton Unit.

BEFORE THE  
OIL CONSERVATION DIVISION  
Santa Fe, New Mexico

Case No. 11444 Exhibit No. 5

Submitted by: Yates Petroleum Corporation

Hearing Date: January 25, 1996