

NECESSITY FOR UNORTHODOX LOCATION OF
YATES LUCKY COYOTE "ATD" STATE #1

N/2 Section 5 T17S-R27E
660 FNL & 660 FEL of Section

The necessity for this non-standard location is based on geologic conditions prevailing in the primary objective Lower Morrow Clastics interval.

The map exhibit is an isopach map of the Lower Morrow Clastics. Double circled well spots are Morrow penetrations. The contour interval is 20 feet. The spacing unit is outlined in red and the proposed location is pointed out.

The isopach map exhibit depicts the varying thickness of the Lower Morrow to Mississippian unconformity interval in the environs of the subject proration unit. Contouring of the available well control shows that the proposed location is on the West flank of the main "thick" in the area. Experience in this area has shown that wells in or near "thicks" have a much better chance of encountering Lower Morrow alluvial channel sand reservoirs capable of producing very good economic volumes of gas. Note trace of crossection NW-SE shown on map.

The crossection exhibit shows the pertinent correlations. Note that the well with the thickest Lower Morrow Clastics interval in Unit (O) of Section 4 has 2 channel sand bodies: one of which is 33 feet thick (the productive reservoir) and a 10 foot sand sitting on the eroded Chester Lime.

An exhibit showing a table of production is included

The proposed location should encounter sufficient Lower Morrow interval to accommodate an alluvial sand channel capable of producing economic volumes of gas.

BEFORE THE
OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Case No. 12185 Exhibit No. 4
Submitted by: Yates Petroleum Corporation
Hearing Date: June 10, 1999