

**BEFORE EXAMINER STAMETS**  
**OIL CONSERVATION COMMISSION**  
EXHIBIT NO. 1  
CASE NO. 5432  
Submitted by Don Chasor  
Hearing Date 3-5-74

ROBINA DRAW FEDERAL UNIT

PROPOSED LOCATION

SECTION 7 - 23S - 24E

EDDY COUNTY NEW MEXICO

#### GEOLOGICAL REPORT

The Robina Draw Federal Unit outlines an area that is prospective for gas production in the Lower Morrow Sand.

Electric log correlations and sub - surface mapping indicate that the Lower Morrow Sand that produces in the Rock Tank Gas Field, Sections 6 & 7 - 23S - 25E, in a Structural Trap, should be trapped stratigraphically within the proposed unit boundaries.

Evidence for this stratigraphic trap is provided by these three key wells: the Cities Service #1 AZOTEA MESA UNIT, Section 8 - 23S - 24E; The Humble #1 Bandana Point, Section 13 - 23S - 23E; and The Humble #2 Bandana Point Section 2 - 23S - 23E.

The Cities Service #1 AZOTEA MESA, encountered the Lower Morrow Sand at 10,800 feet ( - 6464 ) . A D.S.T. of this sand flowed gas at the rate of 32 MCFPD and recovered 1,550 feet of gas cut saltwater.

This well has 38 feet of Lower Morrow Sand with 28 feet being porous.

The flow of gas from the Cities well indicates the presence of hydrocarbons on the east down - dip side of the proposed unit.

West, up - dip control for the prospect is provided by two wells.

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The Humble #1 Bandana Point encountered the Lower Morrow Sand at 10,240 feet ( - 6,218 ) . The sand is 8 feet thick and has no porosity. It provides a south and west barrier and up - dip trap for the prospect area.

The Humble #2 Bandana Point encountered Lower Morrow Sand at 10,038 feet ( - 5,720 ) . The sand is 13 feet thick and has 6 feet of porosity.

A D.S.T. of this sand yielded gas too small to measure and 450 feet of gas cut mud.

\_ This well also indicates hydrocarbon entrapment near the proposed unit, but due to the Sand's proximity to the porosity pinch - out, it is too tight to produce commercial amounts of gas.

The parameters for commercial entrapment of hydrocarbons in the Lower Morrow Sand in this area are to be up dip from the water level established in the Cities Service #1 Azotea Mesa at minus 6,470 and to have ten or more feet of porous sand.

The area included within the Robina Draw Unit meets the above requirements.

A test well drilled in Section 7 -23S - 24E could expect the following formations at these estimated depths.

Permian Carbonates Surface - 2300 feet

Bone Springs Limestone 3200 - 6900 feet

Third Bonesprings Sand 6900 - 7700 feet

Wolfcamp Limestone and Shale 7700 - 8350 feet

Slight potential for oil or gas production

Canyon Carbonates 8350-9000 feet

Fair potential for gas production

Strawn Limestone 9000 - 9600 feet

Poor potential for production

Atoka Limestone 9600 - 10,000 feet

Poor potential for production

Upper Morrow Sands and Shales 10,000 - 10,200 feet

Fair potential for gas production

Middle Morrow Sands and Shales 10,200 - 10,400 feet

Good potential for gas production

Lower Morrow Sand 10,450 - 10,500 feet

Excellent potential for gas production

Chester Shale 10,500 - 10,600 feet

No potential for production

Proposed Total Depth 10,600 feet.