

DIAMOND MOUND/BUFFALO VALLEY

PLANIMETERED GAS-IN-PLACE and RECOVERIES FOR CONTESTED AREA
10/28/96

Sections #26 and #35

Area 1304 Acres
Gas-in-Place 22.08 BCF

Calculated using a computer model of mapped area and the following reservoir properties.

Equations and Reservoir Properties

$$\text{GIP} = 43560(\text{Phi-H})(\text{Area})(1-\text{Sw})(\text{Bg}) = 22.08 \text{ BCF}$$

Phi-h, and Area calculated by Computer map

$$\text{Sw} = .25$$

$$\text{Bg} = 35.35(\text{Pi})/(\text{Temp})(\text{Z}) = 230 \text{ SCF/CF}$$

$$\text{Pi} = 3300 \text{ psia}$$

$$\text{Temp} = 600 \text{ deg Rankine}$$

$$\text{Z} = .845$$

UMC Predicted Recoveries:

	Estimated Ultimate Recoveries	
Harris Fed. 8	9.6 BCF	
Harris Fed. 4	0.6 BCF	
White State 2	8.4 BCF	
White State 1	5.1 BCF	
	<u>23.70 BCF</u>	107.34% of GIP

Current Cumulative Production:

	Current Cumulative	
Harris Fed. 8	5.576 BCF	
Harris Fed. 4	0.585 BCF	
White State 2	5.573 BCF	
White State 1	3.672 BCF	
	<u>15.41 BCF</u>	69.77% of GIP

Results

Estimated recoveries exceed calculated Gas-in-Place. This means either the existing wells are recovering gas beyond the boundaries of the two sections, or that the calculated recoveries are too optimistic. Either cause points to the same conclusion, **another well is not required to adequately drain the reserves.**

NEW MEXICO
OIL CONSERVATION DIVISION

UMC EXHIBIT 2
CASE NO. 11514 (de novo)