

CALCULATION OF RECOVERABLE GAS
WILDCAT QUEEN ZONE
GERALDINE DOUGHTY NO. 1
LEA COUNTY, NEW MEXICO

| INTERVAL | h | | | |
|--------------|----|----------------|-----------------|----------------------|
| 3988 - 3995' | 7' | $\phi_n = 3\%$ | $\phi_d = 12\%$ | $\phi_{cp} = 8\%$ |
| 3995 - 4002' | 7' | $\phi_n = 3\%$ | $\phi_d = 18\%$ | $\phi_{cp} = 11.8\%$ |

Sw Calculations

| | | Rt | Sw |
|--------------|----|---------------------------|-------|
| 3988 - 3995' | 7' | 47 μ | 34.7% |
| 3995 - 4002' | 7' | 60 μ | 20.2% |
| | | $\overline{Sw} = 27.45\%$ | |

Volumetric Gas-In-Place

Initial Bottom-hole Pressure: 2094 psi
Initial Producing Temperature: 95.8° F
Gas Gravity: .6
Estimated Abandonment Pressure: 400 psi

Bgi = .00615 = 162.7 SCF/FT³
Bgab = .03804 = 26.3 SCF/FT³

Recovery Factor = 83.8%

| | |
|-------------|----------|
| DATE OF THE | |
| COMPLETION | |
| Core No. | 8631 |
| Serial | 10-17-85 |
| Notes | |

Recoverable Gas-In-Place $\frac{43,560 (A) (h) (\phi) (1-Sw) (RF)}{Bgi}$

Recoverable Gas-In-Place $\frac{43,560 (160) (14) (.099) (1-.2745) (.838)}{(160 \text{ Acre Unit}) .00615}$

Recoverable Gas-In-Place 954,943 MCF