

Sapient's Bertha Barber #12
Unit A, 330 FNL, 660 FEL, Section 7, T20S, R37E

Volumetrics

Porosity =	8.7% BV
Swi =	23.0% PV
Net H =	26.5 ft
Area =	160 acres
dP =	0.385 psi/ft
Perf Depth =	6394 ft
T =	105 °F = 565 °R
Pi =	2462 psia
Zi =	0.7896
Bgi =	195.19 SCF/ft ³

Initial Gas In Place

IGIP =	$43560 * \phi * \text{NetH} * \text{Area} * (1 - \text{Sw}) * \text{Bgi}$
=	0.5696 MMCF/ Acre-ft
=	2,415.02 MMSCF

Estimated Ultimate Recovery

P[lab] =	300 psia
Z[lab] =	0.9586
Bglab] =	19.59 SCF/ft ³
Rec Factor =	$(\text{Bgi} - \text{Bglab}) / \text{Bgi}$
=	90.0%
Est Ult Rec =	$90.0\% * 0.5696 \text{ MMCF/ Acre-ft}$
=	0.5124 MMCF/ Acre-ft
=	2,172.64 MMSCF

Decline Calculations

Const Percent Decl (Dl) = 22.27%
 Nominal Decline (a) = 25.2%

Proj Oct Rate = 972 MCFPD
 Final Rate = 50 MCFPD

Rem Reserves = 1336.0 MMSCF
 Cum Recovery = 818.2 MMSCF
 Est Ult Recovery = 2154.2 MMSCF

As of 9/30/01

Est Ult Recovery = **0.5124 MMCF/ Acre-ft**

Drainage Area = $\frac{2154.2 \text{ MMCF}}{26.5\text{ft} * 0.5124 \text{ MMCF/Acre-ft}}$

= 159 acres

Drain Radius (re) = 1485 feet

BEFORE THE OIL CONSERVATION

COMMISSION

Santa Fe, New Mexico

Case Nos. 12605/12587 de novo

Conoco/Chevron Exhibit No. 8

Hearing Date: November 6, 2001