

Barber No. 12 - Material Balance

Assumptions:

Initial SITP = 2113 psia
Initial BHP = 2570 psia
Initial Z Factor = 0.7911
Initial P/Z = 3249 psi
8-3-00 24 hr SITP = 1020 psig
8-4-00 48 hr SITP = 1320 psig
Assumed Reservoir SITP 8/1/00 = 1820 psi
Corresponding 8/1/00 BHP = 2212 psi
Z Factor 8/1/00 = 0.79
BHP/Z 8/1/00 = 2800 psi
Cum Production as of 8/1/00 = 352 MMCF
Original Recoverable Gas In Place = 0.7478^{MM}MCF/Acre-Ft
Thickness = 30'
Abandonment BHP = 300 psi

Calculations:

Slope = $352 / (3249 - 2800) = 0.784$ ^{MM}MCF/psi
Est Ultimate Recovery = $(3249\text{psi} - 300\text{psi}) \times 0.784$ ^{MM}MCF/psi
= 2312 MMCF
Drainage Area = 2312 ^{MM}MCF / 30 Ft / 0.7478 ^{MM}MCF/Acre-Ft
= 103 Acres

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 12587 Exhibit No. 18
Submitted By:
Sapient Energy Corp.
Hearing Date: March 1, 2001