VOLUMETRIC RESERVE ESTIMATE

Atoka "AC" Sand Isopach - Area above 2800 psi pressure lin

Apache Area

Eddy County, New Mexico

Contour Interval	**5 ft**	**10 ft**	**15 ft**
Area (acres)	1190	600	151

Estimated Reservoir Volume= 12,227 AcreFt

Current Gas In Place (3100 psi) = 940 MCF/AcreFt
Recoverable Gas In Place (85% RE) = 800 MCF/AcreFt

Estimated Recoverable Reserve (as of 12/93) = 9,800,000 MCF

Cumulative Production from Apache 13 Fed #1 (as of 7/11/94) = 967,000 MCF

Sample Calculation:

Vb1 = 5 (1190) = 5,950 AcreFt
Vb2 = 5/2 (1190+600) = 4475 AcreFt
Vb3 = 5/3 [600+151+ sqrt(600x151)] = 1,802 AcreFt

Estimated Reservoir Volume = Vb1+Vb2+Vb3 = 12,227 AcreFt
Estimated Current Recoverable Reserve = 800 MCF/AcreFt X 12,227 AcreFt = 9,800,000 MCF

CDR 07/19/94

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11019 Exhibit No. 15
Submitted By:
MITCHELL ENERGY CORPORATION
Hearing Date: July 21, 1994

ESTIMATED RESERVOIR VOLUME & RECOVERABLE RESERVES

Atoka "AC" Sand

Apache Area

Eddy County, New Mexico

E/2 Section 13, T22S,R30E

Contour Interval	E/2	5 ft	10 ft
Area (acres)	320	263	95

Estimated Reservoir Volume= 2,317 AcreFt
Current Recoverable Gas In Place (3100psi) = 800 Mcf/Acre/Ft
Current Recoverable Reserve Estimate = 1,854,000 Mcf

S/2 Section 7, T22S,R31E

Contour Interval	S/2	5 ft	10 ft
Area (acres)	320	252	106

Estimated Reservoir Volume= 2,300 AcreFt
Current Recoverable Gas In Place (3100psi) = 800 Mcf/Acre/Ft
Current Recoverable Reserve Estimate = 1,840,000 Mcf

Sample Calculation:

Vb1 = 5/2 (320+263) = 1,457 AcreFt

Vb2 = 5/3 [263+95+ sqrt(263x95)] = 860AcreFt

Estimated Reservoir Volume = Vb1+Vb2 =2,317 AcreFt

Estimated Recoverable Reserve = 2,317 Acre/Ft X 800 Mcf/AcreFt = 1,854,000 Mcf

CDR 07/19/94

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11019 Exhibit No. 16
Submitted By:
MITCHELL ENERGY CORPORATION
Hearing Date: July 21, 1994

ECONOMIC ANALYSIS

Vertical Morrow Test vs. Directional Morrow Test w/1000' Displacement

Yates Petroleum Corporation

Llama "ALL" Fed. Well No. 1

S/2 Sec. 7, T22S, R31E, NMPM

Eddy County, New Mexico

	Vertical Well			Directional Well		
Reserves (BCF)	3.0	4.0	5.0	3.0	4.0	5.0
P. V. Profit (BFIT@10%) ($)	2,477,500	3,958,800	5,442,000	2,187,400	3,668,700	5,152,000
Rate of Return (%)	77	>100	>100	59	97	>100
Payout (Mos)	17	13	11	20	15	13
Discounted Profitability Index	1.38	2.20	3.00	1.05	1.76	2.47

Assumptions: Drill and completion costs of $1,791,000 (DHC=$1,291M+CC=$500M)for a vertical well.
Drill and completion costs of $2,080,000 (DHC=$1,580M+CC=$500M)for a directional well.
Gas price of $2.00/mcf escalated at 5%/yr. for life

Conclusion: Assuming a conservative reserve of 3.0 BCF, economics to drill directionally to a standard location are profitable.

CDR 07/19/94

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11019 Exhibit No. 17
Submitted By:
MITCHELL ENERGY CORPORATION
Hearing Date: July 21, 1994