

MAXIMUM POTENTIAL CROSS FLOW EXPOSURE

Exposure can be Quantified by the Quotient of Reserves "Lost" to Reserves Produced.

$$\text{Quotient} = \frac{\text{Reserves "Lost"}}{\text{Reserves Produced}} = \frac{(\% \text{ Time Shut In})}{(1 - \% \text{ Time Shut In})} \times \frac{\text{Cross Flow Rate}}{\text{Producing Rate}} \times \frac{\% \text{ of Cross Flow "Lost"}}{(100)}$$

*Quotient Table

	% of Cross Flow "Lost" (Not Produced Back)		
	0%	30%	100%
% Time Shut In			
5%	0	.0063	.0211
10%	0	.0133	.0444
15%	0	.0212	.0706
20%	0	<u>.0300</u>	.1000
25%	0	.0400	.1333

* For $\frac{(\text{Cross Flow Rate})}{(\text{Producing Rate})} = 0.4$

EXAMPLE CALCULATION

Using 20% shut in time and 30% Cross Flow "Lost" from above Quotient Table:

$$\text{Quotient} = \frac{\text{Reserves Lost}}{\text{Reserves Produced}} = .0300$$

From Exhibit # 15, summary of all 4 wells:

Continued Operations Reserves = 149,772 Bbls
 Proposed Commingled Reserves = 208,602 Bbls (Assumes no Cross Flow)

The reserves for proposed commingling, adjusted for Potential Cross Flow, are:

$$\text{Produced Reserves} = \frac{208,602 \text{ Bbls}}{(1 + .0300)} = 202,526 \text{ Bbls}$$

- Recovery under proposed operations significantly exceeds recovery under continued operations, even when adjusted for potential cross flow.

EXXON CORP.
Exhibit No. 20
Case No. 9398 & 9399
June 8, 1988 Docket