

EAST LOVING DELAWARE FIELD  
MATERIAL BALANCE CALCULATIONS

PURPOSE: DETERMINE RECOVERY FACTOR AS A FUNCTION OF CUMULATIVE GOR ( $R_p$ )

- ASSUMPTIONS
- 1) No initial gas cap
  - 2) Negligible water influx
  - 3) Significant free gas saturation develops

DATA:	Abandonment Pressure	P	350 PSIA
	Abandonment Oil FVF	$B_o$	1.171 RB/STB
	Initial Oil FVF	$B_{oi}$	1.543 RB/STB
	Abandonment Gas FVF	$B_g$	.04131 CF/SCF
	Abandonment Solution GOR	$R_s$	281 CF/BBL
	Initial Solution GOR	$R_{si}$	1108 CF/BBL

$$\text{RECOVERY FACTOR} = \frac{(B_o - B_{oi}) + (R_{si} - R_s)B_g}{B_o + (R_p - R_s)B_g}$$

$$\text{RECOVERY FACTOR} = \frac{(1.171 - 1.543) + (1108 - 281).04131}{1.171 + (R_p - 281).04131}$$

$$\text{RECOVERY FACTOR} = \frac{818}{R_p - 252}$$

C. J. CATANACH	
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ORYX	EXHIBIT NO. 4
10226	



ORYX

Oryx Energy Company

NMOCD CASE NO. 10226  
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EXHIBIT NO. \_\_\_\_\_