

# UNION STATE #3

SEC 30K, T20S, R36E  
 OSUDO MORROW NORTH FIELD  
 LEA COUNTY, NEW MEXICO

## DRAINAGE ESTIMATE SUMMARY

WELL NAME	LOCATION	PERFED INTERVAL	GAS PRODUCTION (MCF)	ESTIMATED GAS (MCF)	PETROPHYSICAL PARAMETERS			ESTIMATED DRAINED AREA (Acres)	ESTIMATED DRAINED RADIUS (ft)
					h (ft)	Ø (%)	Sw (%)		
1 HAMON, JAKE L. UNION STATE #1	30H-20S,36	11,224-11,426'	5,938,290	5,938,290	27	15.6	27.0	196	1649
2 MITCHELL ENERGY CORP UNION STATE #2	30A-20S,36E	11,338-11,350'	2,825,481	2,960,000	27	11.6	10.6	109	1228
3 MARATHON OIL COMPANY OSUDO STATE COM #1	29D-20S36E	11,324-11,340'	5,739,364	7,353,000	15	15.2	11.0	368	2259
4 LANEXCO INC. STATE JD COM #1	29K-20S36E	10,905-11,283'	341,436	388,000	39	11.7	17.0	11	384
5 MORAN EXPLORATION, INC. OSUDO STATE COM #1	19I-20S,36E	11,281-11,562'	2,615,495	2,615,495	20	15.9	17.0	100	1178
6 HAMON, JAKE L. STATE E #1	20D-20S,36	11,440-11,457'	8,940,475	8,940,475	17	15.4	17.0	418	2407
7 HAMON, JAKE L. STATE E #2	20K-20S,36E	11,336-11,346'	813,590	813,590	10	13.6	17.0	73	1007

Below line, average porosity & saturations values used.

### SAMPLE CALCULATIONS UNION STATE #1

Recoverable Gas In Place =  $43,560 \times (\Phi h) \times (1-S_w) \times (Bg) \times (RE)$   
 =  $43,560 \times (.156) \times (1-.27) \times (301.3) \times (.75)$   
 = **1,121 Mcf/AcFt**

Estimated Drainage Area =  $(CUM\ PRODUCTION / RECOVERABLE\ GAS\ IN\ PLACE) / NET\ FT$   
 =  $(5,938,290 / 1,121) / 27\ FT$   
 = **196 Acres**

Drainage Radius  
 Sqrt [(Area x 43,560) / PI]  
 = Sqrt [(196 x 43,560) / 3.1415]  
 = **1,649 Ft**

BEFORE EXAMINER CANTANUON  
 OIL CONSERVATION DIVISION  
 EXHIBIT NO. 5  
 CASE NO. 10897