

WATER CONSERVATION DIVISION

P. O. BOX 2088

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

CONFIDENTIAL
HOLD 90 DAYS

MULTIPOINT AND ONE POINT BACK PRESSURE TEST

Type Test: ☒ Initial ☐ Annual ☐ Special						Test Date: 08-14-90	
Company: TXO Production Corp.				Connection:			
Pool: Quail Ridge				Formation: Morrow		Unit:	
Completion Date: 8/8/90		Total Depth: 13,700		Plug Back TD: 13,647		Elevation: 3610.5 GL	
Form or Lease Name: Hamon Federal Com							
Csg. Size: 5 1/2		Wt.: 17		d: 4.892		Set At: 13,700	
Perforations: From 13,222 To 13,229		Well No.: 1					
Thg. Size: 2 7/8		Wt.: 6.5		d: 2.441		Set At: 13,471	
Perforations: From 13,252 To 13,533		Unit: Sec. 7 Twp. 20S Rge. 34E					
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Single						Packer Set At: 13,471	
Producing Thru: Tubing & Casing						State: New Mexico	
Reservoir Temp. °F: 207 @ 13,252'		Mean Annual Temp. °F: 60		Baro. Press. - P _a : 13.2		Meter Run: 4.026	
L: 13,471		H: 13,471		G _g : .652		Prover: Flange	
% CO ₂ : .64		% N ₂ : .59		% H ₂ S:		Taps:	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							3195				48 hrs.
1.	4	X	2.500	611	1.69	72	3165				1 hr.
2.	4	X	2.500	627	13.32	75	2920				1 hr.
3.	4	X	2.500	643	46.24	58	2537				1 hr.
4.	4	X	2.500	659	75.69	57	2319				1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	32.64	32.48	624.2	.9887	1.238	1.064	1,381
2	32.64	92.34	640.2	.9859	1.238	1.065	3,918
3	32.64	174.19	656.2	1.002	1.238	1.078	7,603
4	32.64	225.56	672.2	1.003	1.238	1.081	9,882
5.							

NO. P _r Temp. °R T _r Z				Gas Liquid Hydrocarbon Ratio: 28.3 Mcf/bbl.			
1. .93 532 1.41 .883				A.P.I. Gravity of Liquid Hydrocarbons: 56.6 @ 60° Deg.			
2. .95 535 1.42 .881				Specific Gravity Separator Gas: .652			
3. .97 518 1.38 .860				Specific Gravity Flowing Fluid: X X X X X			
4. 1.00 517 1.37 .856				Critical Pressure: 670 P.S.I.A.			
5.				Critical Temperature: 375 R 408 H			

P _c 3208.2 P _c ² 10292.5				(1) $\frac{P_c^2}{P_r^2 - P_w^2} = 2.168$		(2) $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 1.988$	
NO.	P _r ²	P _w ²	P _r ² - P _w ²				
1	3178.6	10103.3	189.2				
2	2936.3	8622.1	1670.4				
3	2563.0	6568.8	3723.7				
4	2355.0	5546.0	4746.5				
5							

Absolute Open Flow: 19,646 Mcfd @ 15.025				Angle of Slope @: 48.5		Slope, n: .888	
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Remarks: Well made 33.5 BBLS of 56.6 API GR. during test							
Well made 8.0 BBLS N ₂ O during test							
Well was flowing through tubing and casing during test							
Approved By Division:		Conducted By:		Calculated By:		Checked By:	