

457
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

DEC 12 90

Type Test ☐ Initial ☐ Annual ☒ Special		Test Date 11-20-90	
Company Bettis, Boyle & Stovall		Connection Vented	
Pool RUSTLER BLUFF ATOKA/MORROW		Formation ATOKA & MORROW	
Completion Date 11-11-90		Total Depth 13879	
Plug Back TD 13650		Elevation 2934.4	
Farm or Lease Name Exxon 8 Fed		Well No. 1	
Csg. Size 7.625	Wt. 39	d 2.29	Set At 12372
Perforations: From To	Perforations: From 12394 To 13614		
Unit A	Sec. 8	Twp. 25S	Rge. 29E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple		Packer Set At 12340	
Producing Thru Tubing		Reservoir Temp. °F 196 @ 12399	
Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2	
State NEW MEXICO		County EDDY	
L 12399	H 12399	G _g .68	% CO ₂ .01
% N ₂ .51	% H ₂ S 0	Prover 4.026	Meter Run FLNG

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g. Surface	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI											
1.	4.026		.50	580	15	75	1800				72 hrs
2.	4.026		.50	580	25	78	1250	75			1 hr
3.	4.026		.50	590	38	80	940	79			1 hr
4.	4.026		.50	590	48	80	800	80			1 hr
5.							420	80			1 hr
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RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	1.205	94.33	593.2	.9859	1.2910	1.044	151
2	1.205	121.78	593.2	.9831	1.2910	1.047	195
3	1.205	151.3	603.2	.9813	1.2910	1.048	242
4	1.205	170.2	603.2	.9813	1.2910	1.048	272
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	.881	535	1.49	.917	A.P.I. Gravity of Liquid Hydrocarbons	Deq.
2	.881	539	1.50	.912	Specific Gravity Separator Gas	.60
3	.896	540	1.51	.910	Specific Gravity Flowing Fluid	X X X X X X X X
4	.896	540	1.51	.910	Critical Pressure	673 P.S.I.A.
5					Critical Temperature	358 R

(USED N=1)

NO.	P _t ²	P _w	P _w ²	P _t ² - P _w ²
1	1673	2681	2879	
2	1269	1610	3950	
3	1080	1166	4394	
4	580	336	5224	
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.265 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.265$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 306$$

Absolute Open Flow		306	Mcf/d @ 15.025	Angle of Slope θ	Slope, n
Remarks:					
Approved By Division		Conducted By: Carter Hughes		Calculated By: Steve Gray	
				Checked By:	