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See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-122
Revised October, 1999

955

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator NEARBURG PRODUCING COMPANY				Lease or Unit Name WHITE TIP 12 FED. COM.			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10/17/01		Well No. 1	
Completion Date 7/18/01		Total Depth 11600		Plug Back TD 11506		Elevation 3757 GL	
Csg. Size 5 1/2	Wt 17 & 20	d 4.892	Set At 11600	Perforations: From: 11172 To: 11270		County EDDY	
Tbg. Size 2 3/8	Wt 4.7	d 1.995	Set At 11077	Perforations: From: OPEN To: ENDED		Pool REV. MORROW GAS	
Type Well-Single-Bradenhead-G G. or G.O. Multiple SINGLE				Packer Set At 11077		Formation MORROW	
Producing Thru Tbg. Size		Reservoir Temp °F 184.8 @ 11077		Mean Annual Temp °F 60		Baro. Press. - P _a 13.2	
Connection EL PASO NG							
1.	11077	H	11077	Gg	0.5958	%CO ₂	2.3044
				%N ₂	0.6142	%H ₂ S	N/A
				Prover	N/A	Meter Run	3.068
				Taps	FLG		
FLOW DATA				TUBING DATA			
No	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff h _w	Temp. °F	Press p.s.i.g.	Temp. °F
SI						2331	
1	3 X	1.250	449	3.61	74	2237	
2	3 X	1.250	463	16	71	2123	
3	3 X	1.250	492	30.3	69	2009	
4	3 X	1.250	505	49	69	1885	
5							
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}
1	7.577		40.85	462.2	0.9868	1.295	1.035
2	7.577		87.29	476.2	0.9896	1.295	1.036
3	7.577		123.72	505.2	0.9915	1.295	1.039
4	7.577		159.35	518.2	0.9915	1.295	1.04
5							
No	P _r	Temp °R	T _r	Z	Gas Liquid Hydrocarbon Ratio DRY GAS		
1	0.67	534	1.52	0.934	A.P. 1. Gravity of Liquid Hydrocarbons DRY		
2	0.7	531	1.51	0.931	Specific Gravity Separator Gas 0.5958		
3	0.74	529	1.5	0.926	Specific Gravity Flowing Fluid XXXXXX		
4	0.76	529	1.5	0.924	Critical Pressure *.680 P.S.I.A.		
5					Critical Temperature *.351 R.		
P _c	2344.2		P _{c2}	5495.3			
No	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(1) P _c ² = 3.037 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.862$		
1		2251.4	5068.7	426.5			
2		2141.9	4587.9	907.4			
3		2034.5	4139.1	1356.2			
4		1919.9	3685.9	1809.4			
5							
Absolute Open Flow				4.614	Mcf/d @ 15.025	Angle of Slope (°)	46.58
Slope n:				0.9464			
Remarks NO FLUID PRODUCED * CORRECTED TO 2.3044 % CO2							
Approved By Division		Conducted By: JARREL SERVICES		Calculated By: BM		Checked By: BM	

COMPANY : NEARBURG PROD CO LEASE : 12 FED COM WELL NO. : 1
 UNIT : P SECTION : 12 TOWNSHIP : 22
 L : 11077 H : 11077 L/H : 1 G/GMIX : 0.596
 %CO2 : 2.3044 %N2 : 0.6142 H2S : DATE : 10-17-01
 d : 1.995 Fr : 0.018231 CH : 6599.7 RANGE : 25

Pc = 2344.2 Pc2 = 5495.3
 Pt2 = 5063.4 Pw = 2251.4
 4563.4 2141.9
 4089.3 2034.5
 3603.2 1919.9

VOL 1 : 409 PSIA 1 : 2250.2 RESV.TEMP 184.8
 VOL 2 : 878 PSIA 2 : 2136.2
 VOL 3 : 1251 PSIA 3 : 2022.2 SHUT-IN PR= 2344.2
 VOL 4 : 1612 PSIA 4 : 1898.2

PCR : 680
 TCR : 351

Pc2-Pw2= 426.5 Pw2 = 5068.7
 907.4 4587.9
 1356.2 4139.1
 1809.4 3685.9

n = 0.946

Pc2/(Pc2-Pw2) = 12.883

LINE		RATE 1		RATE 2		RATE 3		RATE 4	
		1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1	QM	0.409	0.409	0.878	0.878	1.251	1.251	1.612	1.612
2	Tw	534	534	534	534	534	534	534	534
3	Ts	644.8	644.8	644.8	644.8	644.8	644.8	644.8	644.8
4	T	589.4	589.4	589.4	589.4	589.4	589.4	589.4	589.4
	PR (est)	3.31		3.14		2.97		2.79	
5	Z(est)	0.835	0.835	0.836	0.835	0.838	0.835	0.841	0.836
6	TZ	492.1	492.4	492.8	491.9	493.9	491.9	495.6	492.5
7	GH/TZ	13.411	13.403	13.393	13.417	13.362	13.417	13.316	13.401
8	eS	1.654	1.653	1.652	1.654	1.651	1.654	1.648	1.653
9	l-e-S	0.395	0.395	0.395	0.395	0.394	0.395	0.393	0.395
10	Pt	2250.2	2250.2	2136.2	2136.2	2022.2	2022.2	1898.2	1898.2
11	Pt2 /1000	5063.4	5063.4	4563.4	4563.4	4089.3	4089.3	3603.2	3603.2
12	Fr	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231
13	Fc=FrTZ	8.972	8.977	8.984	8.968	9.005	8.968	9.036	8.978
14	FcQm	3.67	3.67	7.89	7.87	11.26	11.22	14.57	14.47
15	L/H(FcQm)	13.5	13.5	62.2	62.0	126.9	125.9	212.2	209.5
16	Pw	5.321618	5.325726	24.56578	24.51150	50.01134	49.76084	83.39440	82.741029
17	Pw2	5068.7	5068.7	4587.9	4587.9	4139.3	4139.1	3686.6	3685.9
18	Ps2	8381.3	8378.7	7581.0	7587.8	6831.9	6845.5	6074.1	6092.5
19	Ps	2895.1	2894.6	2753.4	2754.6	2613.8	2616.4	2464.6	2468.3
20	P	2572.6	2572.4	2444.8	2445.4	2318.0	2319.3	2181.4	2183.3
21	Pr	3.78	3.78	3.60	3.60	3.41	3.41	3.21	3.21
22	Tr	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68
23	Z	0.835	0.835	0.835	0.835	0.835	0.835	0.836	0.836

[Pc2/Pc2-Pw2]n = 11.234

AOF= Q 4.595

4.828

4.703

4.614

FORM C122-D

NEARBURG PRODUCING CO.
WHITE TIP 12 FED. COM. # 1

