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appropriate district office.
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

457

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator NEARBURG PRODUCING COMPANY					Lease or Unit Name PATHFINDER 19 ST. COM.				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 10/24/01		Well No. 1		
Completion Date 9/19/01		Total Depth 10801		Plug Back TD 10750		Elevation 3598 GL		Unit Ltr - Sec - TWP - Rge A 19 18 28	
Csg. Size 5 1/2	Wt. 17	d 4.892	Set At 10801	Perforations: From: 10540 To: 10610			County EDDY		
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 10442	Perforations: From: OPEN To: ENDED			Pool I. C. MORROW N. GAS		
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 10442			Formation LOWER MORROW "C"		
Producing Thru Tbg. Size		Reservoir Temp. °F 178.4 @ 10442		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		Connection DUKE ENERGY	
L 10442	H 10442	Gg 0.632	%CO ₂ 0.515	%N ₂ 0.365	%H ₂ S N/A	Prover N/A	Meter Run 3.068	Taps FLG	
FLOW DATA					TUBING DATA			CASING 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	Press p.s.i.g.	Temp. °F
SI						1849		PKR	
1	3 X	2.000	85	2.5	74	1787		"	1 HR
2	3 X	2.000	85	12.1	78	1717		"	1 HR
3	3 X	2.000	85	27.22	78	1639		"	1 HR
4	3 X	2.000	85	48.4	74	1566		"	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 F _g	Super Compress Factor F _{pv}	Rate of Flow Q, Mcfd	
1	21.32		15.67	98.2	0.9868	1.279	1.006	424	
2	21.32		34.47	98.2	0.9831	1.279	1.006	930	
3	21.32		51.7	98.2	0.9831	1.279	1.006	1394	
4	21.32		68.94	98.2	0.9868	1.279	1.006	1866	
5									
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio DRY Mcf bbl.				
1	0.17	534	1.45	0.988	A.P. I. Gravity of Liquid Hydrocarbons DRY GAS Deg.				
2	0.17	538	1.46	0.988	Specific Gravity Separator Gas 0.632 XXXXXXXX				
3	0.17	538	1.46	0.988	Specific Gravity Flowing Fluid XXXXXX				
4	0.17	534	1.45	0.988	Critical Pressure 670 P.S.I.A. P.S.I.A.				
5					Critical Temperature 368 R. R. R				
P _c 1862.2 P _{c2} 3467.8									
No.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{3.995}{\quad}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{3.995}{\quad}$				
1		1801.7	3246.1	221.7					
2		1737.7	3019.7	448.1					
3		1669.9	2788.6	679.2					
4		1612.4	2599.8	868					
5									
Absolute Open Flow 7,455 Mcfd @ 15.025					Angle of Slope (°): 45 Slope n: 1				
Remarks: NO FLUID PRODUCED									
Approved By Division:			Conducted By: JARREL SERVICES, INC.		Calculated By: BM		Checked By: BM		

COMPANY : NEARBURG PROD. CO.	LEASE	9 ST. CO.	WELL NO. :	1	Pc = 1862.2	Pc2 = 3467.8
UNIT : A	SECTION :	19	TOWNSHIP :	18		*
L : 10442	H : 10442	L/H : 1	G/GMIX :	0.632	Pt2 = 3240.7	Pw = 1801.7
%CO2 : 0.515	%N2 : 0.362	H2S :	DATE : 10-24-01		2993.6	1737.7
d : 1.995	Fr : 0.018231	GH : 6599.3	RANGE :	28	2729.8	1669.9
					2493.9	1612.4

VOL 1 : 424	PSIA 1 : 1800.2	RESV.TEMP 178.4	Pc2-Pw2= 221.7	Pw2 = 3246.1
VOL 2 : 930	PSIA 2 : 1730.2		448.1	3019.7
VOL 3 : 1394	PSIA 3 : 1652.2	SHUT-IN PR= 1862.2	679.2	2788.6
VOL 4 : 1866	PSIA 4 : 1579.2		868.0	2599.8
	PCR : 670		n = 1.000	
	TCR : 368			

LINE	RATE 1		RATE 2		RATE 3		RATE 4		
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND	
1 QM	0.424	0.424	0.930	0.930	1.394	1.394	1.866	1.866	
2 TW	534	534	534	534	534	534	534	534	[Pc2/Pc2-Pw2]n = 15.645
3 Ts	638.4	638.4	638.4	638.4	638.4	638.4	638.4	638.4	7.739
4 T	586.2	586.2	586.2	586.2	586.2	586.2	586.2	586.2	5.106
PR (est)	2.69		2.58		2.47		2.36		3.995
5 Z(est)	0.811	0.803	0.814	0.804	0.818	0.807	0.822	0.810	
6 TZ	475.3	470.5	477.1	471.5	479.4	473.0	481.7	474.6	AOF= Q 6.633
7 GH/TZ	13.884	14.027	13.832	13.995	13.767	13.952	13.700	13.906	7.197
8 eS	1.683	1.692	1.680	1.690	1.676	1.687	1.672	1.685	7.118
9 l-e-S	0.406	0.409	0.405	0.408	0.403	0.407	0.402	0.406	7.455
10 Pt	1800.2	1800.2	1730.2	1730.2	1652.2	1652.2	1579.2	1579.2	
11 Pt2 /1000	3240.7	3240.7	2993.6	2993.6	2729.8	2729.8	2493.9	2493.9	
12 Fr	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	
13 Pc=FrTZ	8.666	8.577	8.698	8.597	8.739	8.623	8.782	8.652	
14 FcQm	3.67	3.64	8.09	8.00	12.18	12.02	16.39	16.14	
15 L/H(FcQm)	13.5	13.2	65.4	63.9	148.4	144.5	268.5	260.6	
16 Fw	5.479142	5.410146	26.48306	26.10119	59.84890	58.86844	107.8883	105.91487	
17 Pw2	3246.2	3246.1	3020.1	3019.7	2789.6	2788.6	2601.8	2599.8	
18 Ps2	5463.8	5493.0	5073.2	5103.7	4674.7	4705.6	4349.0	4379.4	
19 Ps	2337.5	2343.7	2252.4	2259.1	2162.1	2169.2	2085.4	2092.7	
20 P	2068.8	2072.0	1991.3	1994.7	1907.2	1910.7	1832.3	1835.9	
21 Pr	3.09	3.09	2.97	2.98	2.85	2.85	2.73	2.74	
22 Tr	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59	
23 Z	0.803	0.803	0.804	0.804	0.807	0.807	0.810	0.809	FORM C122-D

NEARBURG PRODUCING COMPANY
PATHFINDER 19 STATE COM. # 1

