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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

30-025-37823

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator PATTERSON PETROLEUM				Lease or Unit Name GENERAL MONT COM 25 ST.			
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11/8/06	Well No. 1
Completion Date 11/01/06		Total Depth 13,737'		Plug Back TD 13,720'		Elevation 4088'	Unit Ltr - Sec - TWP - Rge H 25 17S 33E
Csg. Size 5"	Wt. 18	d 4.276	Set At 12,154' - 13,731'	Perforations: From: 13,686' To: 13704		County LEA	
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 13,680'	Perforations: From: To:		Pool VACUUM	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 13588		Formation MORROW	
Producing Thru TBG		Reservoir Temp. °F 189.8 @ 13688	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2		Connection	
L 13588	H 13588	Gg 0.715	%CO ₂ 0.456	%N ₂ 0.496	%H ₂ S	Prover N/A	Meter Run 4.026
						Taps FLG	

FLOW DATA				TUBING DATA				CASING DATA				Duration of Flow
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					74	1060		PKR		48 HRS		
1	4	X 1.250	362	31.4	74	840		"		1HR		
2	4	X 1.250	377	57.8	72	800		"		1HR		
3	4	X 1.750	377	23	71	685		"		1HR		
4	4	X 1.750	377	36	68	520		"		1HR		
5												

No.	COEFFICIENT (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor	Compress Factor F _{cp}	Rate of Flow Q, Mcfd
1	7.469	108.54	375.2	0.9868	1.183	1.044	988
2	7.469	150.18	390.2	0.9887	1.183	1.045	1,371
3	14.93	94.73	390.2	0.9896	1.183	1.046	1,732
4	14.93	118.52	390.2	0.9924	1.183	1.047	2,175
5							

No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P. I. Gravity of Liquid Hydrocarbon	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.56	534	1.35	0.918	65.24	58.7 @ 60	0.715	XXXXXX	668	395
2	0.58	532	1.35	0.915				XXXXXX	P.S.I.A. 667	R. 408
3	0.58	531	1.34	0.914						
4	0.58	528	1.33	0.913						
5										

No.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		877	769.1	382.7
2		860.9	741.1	410.6
3		786.3	618.3	533.4
4		705.5	497.8	654
5				

(1) $P_c^2 = \frac{79825}{P_c^2 - P_w^2} = 1.761$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.831$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.761$

Absolute Open Flow	3,831	Mcf/d @ 15.025	Angle of Slope Q:	45	Slope n:	1
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Remarks: **Well produced 4 bbl's 58.7 API Gr condensate during test**

Approved By Division:	Conducted By: Metering & Testing Services, Inc.	Calculated By: BM	Checked By: BM
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COMPANY : PATTERSON PETROLEUM LEASE : GEN M. COM 25 ST. WELL NO. : 1
 UNIT : SECTION : TOWNSHIP :
 L : 13588 H : 13588 L/H : 1 G/GMIX : 0.758
 %CO2 : 0.456 %N2 : 0.496 H2S : DATE : 11-08-06
 d : 1.995 Fr : 0.0182312 GH : 10299.7 RANGE :

Pc = 1073.2 Pc2 = 1151.8 *
 Pt2 = 728.0 Pw = 877.0 *
 661.3 860.9 *
 487.5 786.3 *
 284.3 705.5 *

VOL 1 : 988 PSIA 1 : 853.2 RESV. TEMP 189.8
 VOL 2 : 1371 PSIA 2 : 813.2
 VOL 3 : 1732 PSIA 3 : 698.2 SHUT-IN PRE = 1073.2
 VOL 4 : 2175 PSIA 4 : 533.2

Pc2-Pw2 = 382.7 Pw2 = 769.1 *
 410.6 741.1 *
 533.4 618.3 *
 654.0 497.8 *

PCR : 667
 TCR : 408

n = 1.000 *
 Pc2/(Pc2-Pw2) = 3.010 *
 2.805 *
 2.159 *
 1.761 *

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.988	0.988	1.371	1.371	1.732	1.732	2.175	2.175
2 TW	534	534	534	534	534	534	534	534
3 Ts	649.8	649.8	649.8	649.8	649.8	649.8	649.8	649.8
4 T	591.9	591.9	591.9	591.9	591.9	591.9	591.9	591.9
PR (est)	1.28		1.22		1.05		0.80	
5 Z(est)	0.840	0.808	0.846	0.813	0.863	0.829	0.889	0.851
6 TZ	497.2	478.5	500.7	481.1	511.1	490.8	526.4	503.5
7 GH/TZ	20.717	21.526	20.571	21.408	20.152	20.985	19.565	20.458
8 eS	2.175	2.242	2.163	2.232	2.129	2.197	2.083	2.154
9 l-e-S	0.540	0.554	0.538	0.552	0.530	0.545	0.520	0.536
10 Pt	853.2	853.2	813.2	813.2	698.2	698.2	533.2	533.2
11 Pt2 /1000	728.0	728.0	661.3	661.3	487.5	487.5	284.3	284.3
12 Fr	0.0182312	0.0182312	0.0182312	0.0182312	0.0182312	0.0182312	0.0182312	0.0182312
13 Fc=FrTZ	9.064	8.723	9.128	8.771	9.318	8.948	9.597	9.179
14 FcQm	8.95	8.62	12.51	12.03	16.14	15.50	20.87	19.96
15 L/H(FcQm):	80.2	74.3	156.6	144.6	260.5	240.2	435.7	398.5
16 Fv	43.316495	41.142644	84.205809	79.815723	138.12457	130.84288	226.52913	213.490146
17 Pw2	771.3	769.1	745.5	741.1	625.6	618.3	510.8	497.8
18 Ps2	1677.3	1724.1	1612.4	1654.0	1332.0	1358.3	1063.9	1072.1
19 Ps	1295.1	1313.0	1269.8	1286.1	1154.1	1165.5	1031.5	1035.4
20 P	1074.2	1083.1	1041.5	1049.6	926.2	931.8	782.3	784.3
21 Pr	1.61	1.62	1.56	1.57	1.39	1.40	1.17	1.18
22 Tr	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
23 Z	0.808	0.807	0.813	0.812	0.829	0.828	0.851	0.850

[Pc2/Pc2-Pw2]n = 3.010 *
 2.805 *
 2.159 *
 1.761 *
 AOF= Q 2.974 *
 3.845 *
 3.740 *
 3.831 *

FORM C122-D

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NEW MEXICO G.O.R./G. MIX

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NO. OF BBLS PRODUCED = 4.0

API GRAVITY @ 60 DEG. = 58.7

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SPECIFIC GRAVITY OF GAS = 0.7150

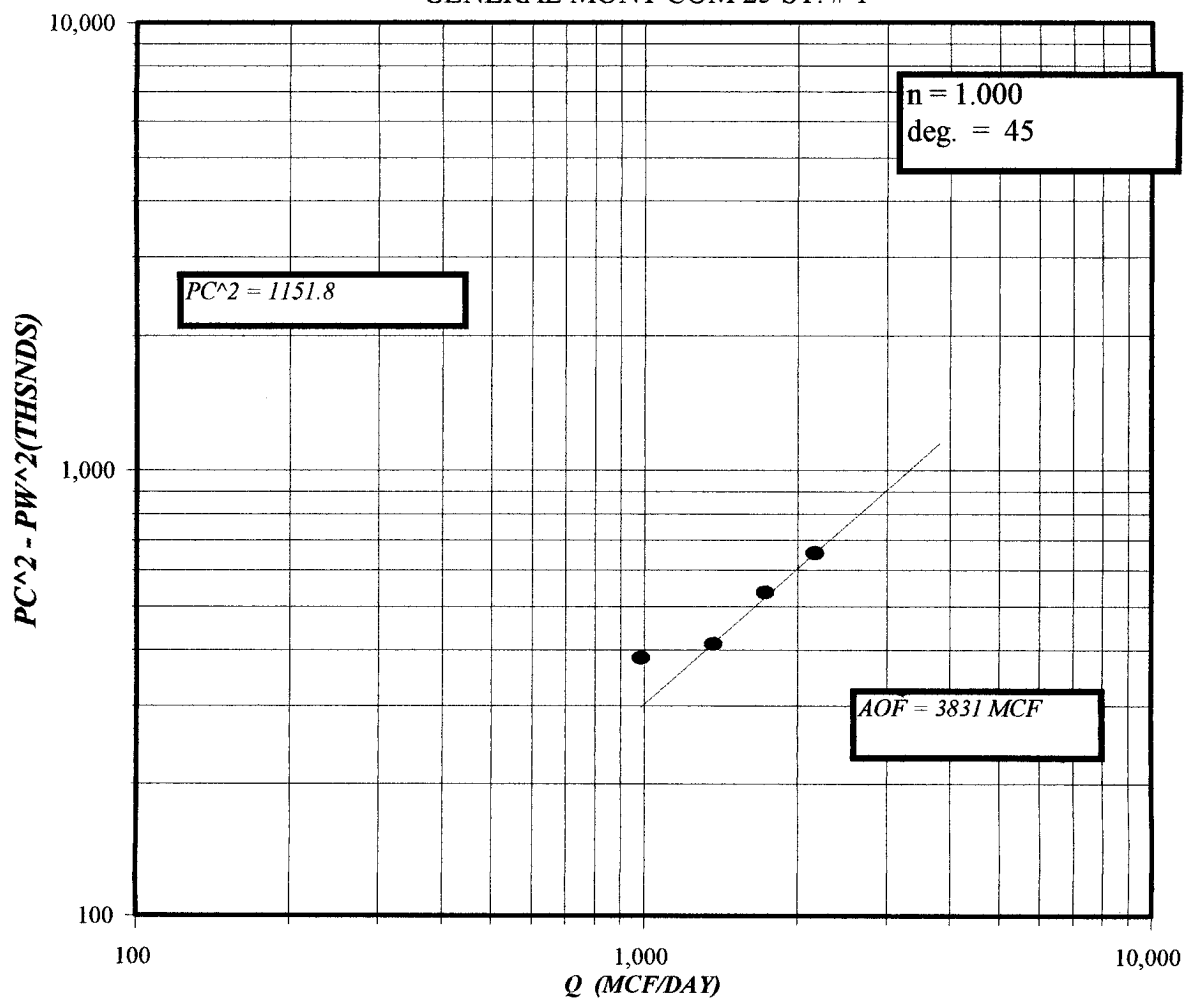
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TOTAL GAS PRODUCED = 261

G.O.R. = 65.271

G.MIX = 0.758

PATTERSON PETROLEUM
GENERAL MONT COM 25 ST. # 1



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