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See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

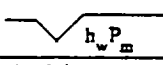
OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Penwell Energy					Lease or Unit Name Bilbrey North 22 fed				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7/3/97		Well No. 1		
Completion Date 5/9/97		Total Depth 15019		Plug Back TD 14896		Elevation 3768		Unit Ltr. - Sec. - TWP - Rge. L 22 21-8 32-E	
Csg. Size 5 1/2	Wt. 23 #	d 4.892	Set At 15019	Perforations: From: 14324 To: 14394				County Lea	
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 14248	Perforations: From: To:				Pool Bilbrey	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 14248		Formation Morrow		
Producing Thru Tba		Reservoir Temp. °F 216.5		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection Sales	
L 14248	H 14248	G _g .615	% CO ₂ 1.45	% N ₂ .26	% H ₂ S 0	Prover 0	Meter Run 3.068	Taps F/G	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	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						2050		PKR		
1.	3.068 X 1.000		448.9	2.25	64°	2030	74°			60 min
2.	3.068 X 1.000		448.9	9.0	64°	2010	74°			60 min
3.	3.068 X 1.000		448.9	21.5	64°	1970	74°			60 min
4.	3.068 X 1.000		448.9	86.5	64°	1700	74°			60 min
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.789	32.24	462.1	.9962	1.275	1.045	204
2.	4.789	64.48	462.1	.9962	1.275	1.045	409
3.	4.789	98.74	462.1	.9962	1.275	1.045	627
4.	4.789	199.92	462.1	.9962	1.275	1.045	1270
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.77	524	1.46	.916	N/A	N/A
2.	.77	524	1.46	.916	N/A	N/A
3.	.77	524	1.46	.916	N/A	N/A
4.	.77	524	1.46	.916	N/A	N/A
5.						

P _c 2063.2 P _c ² 4256.8		1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.38$ 2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.18$	
NO.	P _i ²	P _w	P _w ²
1.	4174.7	2043.6	4176.4
2.	4093.3	2024.9	4100.2
3.	3933.1	1987.2	3949.1
4.	2935.1	1732.4	3001.1
5.			

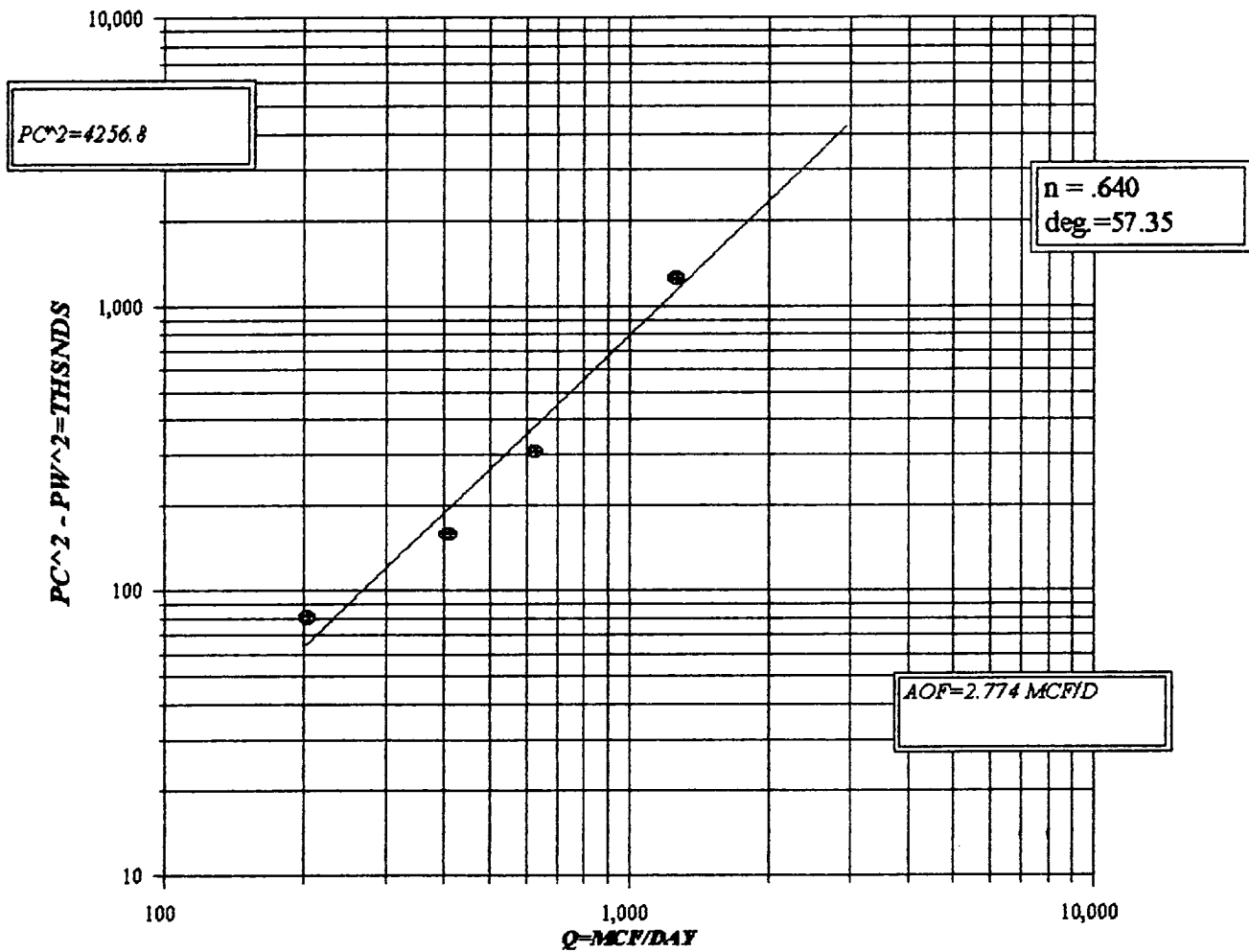
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.774$		Absolute Open Flow 2.774 Mcfd @ 15.025		Angle of Slope Θ 57.35		Slope, n .640	
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Remarks:

Approved By Division	Conducted By: Pro Well Testers	Calculated By: MB	Checked By: BM
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PENWELL ENERGY
BILBRY NORTH 22 FED #1



FORM C122-D

**Laboratory Services, Inc.**

1331 Tasker Drive
Hobbs, New Mexico 88240
Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
Attention: Mr. Leonard Abney
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE IDENTIFICATION: Bilbrey North 22 Fed #1
COMPANY: Penwell Energy
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 7/3/97 1:30 PM
ANALYSIS DATE: 7/7/97
PRESSURE - PSIG 480
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Pro Well
ANALYSIS BY: Vickie Walker

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	0.26	
Carbon Dioxide (CO2)	1.45	
Methane (C1)	91.90	
Ethane (C2)	4.39	1.172
Propane (C3)	1.29	0.354
I-Butane (IC4)	0.21	0.070
N-Butane (NC4)	0.27	0.085
I-Pentane (IC5)	0.10	0.036
N-Pentane (NC5)	0.08	0.030
Hexane Plus (C6+)	0.05	0.021
	100.00	1.768

BTU/CU.FT. - DRY 1064
AT 14.650 DRY 1060
AT 14.650 WET 1042
AT 14.73 DRY 1066
AT 14.73 WET 1048

MOLECULAR WT. 17.7951

SPECIFIC GRAVITY -
CALCULATED 0.615
MEASURED

RECEIVED
JUL 16 1937

RECEIVED