

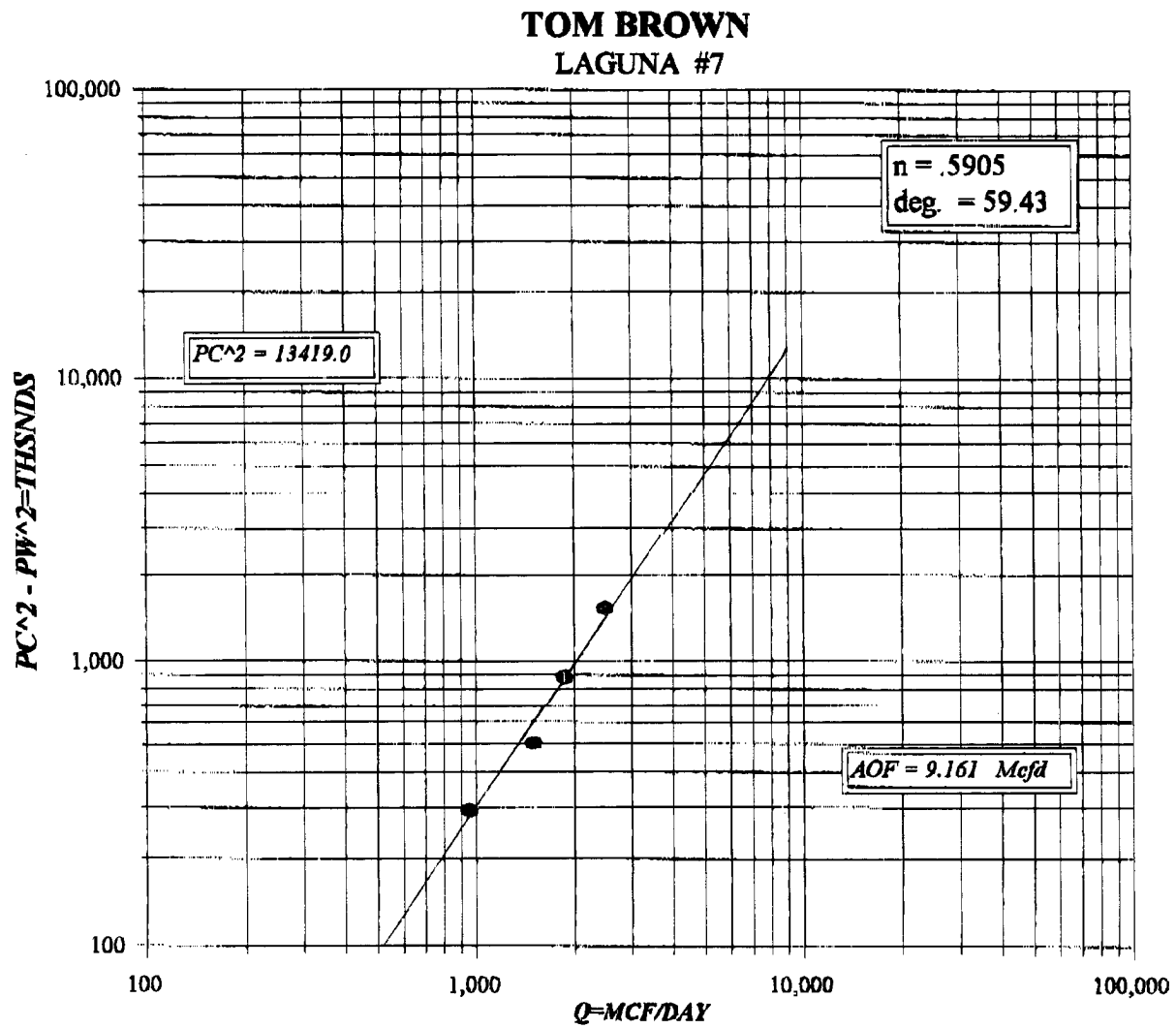
Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator TOM BROWN				Lease or Unit Name LAGUNA			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 12/22/03		Well No. 7	
Completion Date 10/10/03		Total Depth 13617		Plug Back TD 13125		Elevation	
Unit Ltr - Sec - TWP - Rge E 36 19S 33E							
Csg. Size 5 1/2	Wt. 20	d 4.778	Set At 13617	Perforations: From: 12602 To: 12620		County LEA	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 12382	Perforations: From: To:		Pool	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 12375		Formation	
Producing Thru TUBING		Reservoir Temp. 197		Mean Annual Temp. 60		Baro. Press.-P _a 13.2	
Connection SALES							
L 12375	H 12375	Gg 0.749	%CO ₂ 0.345	%N ₂ 2.958	%H ₂ S	Prover	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.	Press p.s.i.g.	Temp.
SI							
1	3.068 X 2.125		65	105	68	3423	
2	3.068 X 2.125		55	70	73	3521	
3	3.068 X 2.125		49	47	73	3576	
4	3.068 X 2.125		43	33	70	3608	
5							
Duration of Flow							
							24 HRS
							1 HR.
							1 HR.
							1 HR.
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							2488
2	TOTAL	FLOW	METER				1877
3							
4							
5							
No.	P _r	Temp. R	T _r	Z	Gas Liquid Hydrocarbon Ratio		
1					27.364		
2					A.P. I. Gravity of Liquid Hydrocarbons		
3	TOTAL	FLOW	METER		0.749		
4					Specific Gravity Separator Gas		
5					Specific Gravity Flowing Fluid		
					Critical Pressure		
					Critical Temperature		
	P _o 3663.2	P _{o2} 13419.0					
No.	P _i ²	P _w	P _w ²	P _c ² -P _w ²	(1) $\frac{P_o^2}{P_o^2 - P_w^2} = \frac{45.774}{\quad}$		
1		3448.4	11981.3	1527.7	(2) $\left[\frac{P_c^2}{P_o^2 - P_w^2} \right]^n = \frac{9.563}{\quad}$		
2		3541	12538.9	880.1			
3		3596.3	12913.8	505.2	AOF = Q $\left[\frac{P_c^2}{P_o^2 - P_w^2} \right]^n = \frac{9.161}{\quad}$		
4		3623	13125.8	293.2			
5							
Absolute Open Flow				9.161	Mcf/d @ 15.025	Angle of Slope (°)	59.43
Slope n:				0.5905			
Remarks: * WELL MADE 10.4 BBLS OF 53.0 API GRAVITY CONDENSATE DURING TEST.							
Approved By Division:		Conducted By:		Calculated By:		Checked By:	
<i>[Signature]</i>		PRO WELL TESTING		MERV BUECKER		BM	



C122D FORM IMPORTED FROM SYMPHONY ON 9-9-01

COMPANY : TOM BROWN		LEASE : LAQUANA		WELL NO. : 7		TOWNSHIP : 33E		DATE : 12/22/03	
UNIT : E		SECTION : 36		TOWNSHIP : 33E		TOWNSHIP : 33E		DATE : 12/22/03	
L : 12378		H : 12378		L/H : 1		Q/GMIX : 0.749		DATE : 12/22/03	
%CO2 : 0.345		%N2 : 2.958		H2S : 0.010769		QH : 8197.0		RANGE : 39E	
d : 2.441		Fr : 0.010769		QH : 8197.0		RANGE : 39E		RANGE : 39E	
VOL 1 :	2488	PSIA 1 :	3436.2	RESV TEMP :	107.0	Pc2-Pw2=	1527.7	Pw2 =	1391.0
VOL 2 :	1507	PSIA 2 :	3089.2	SHUT-IN PRE: =	3863.2		880.1		12536.9
VOL 3 :	1507	PSIA 3 :	3089.2				505.2		12918.8
VOL 4 :	988	PSIA 4 :	3621.2				298.2		13129.8
PCR : 668		TCR : 398						n = 0.891	
Pc2/(Pc2-Pw2) =		8.784						18.248	
		26.560						48.774	
Pc2/(Pc2-Pw2)n =		3.608						4.997	
		6.934						9.563	
AQ# = Q		8.976						9.379	
		10.480						9.161	
		9.161							
FORM C122-D									



Laboratory Services, Inc.

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

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

SAMPLE:
IDENTIFICATION: Laguna Deep Unit #7
COMPANY: Tom Brown Inc.
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 12/22/08 11:00 am
ANALYSIS DATE: 12/22/08
PRESSURE - PSIG 47
SAMPLE TEMP. °F 70
ATMOS. TEMP. °F 61

GAS (XX) LIQUID ()
SAMPLED BY: Greg Myers
ANALYSIS BY: Vickie Biggs

REMARKS: Sample taken @ the meter run.
Atoka Formation
Condensate API Gravity @ 60° F = 55.0

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	2.958	
Carbon Dioxide (CO2)	0.345	
Methane (C1)	74.981	
Ethane (C2)	11.744	3.183
Propane (C3)	6.339	1.741
I-Butane (IC4)	1.071	0.350
N-Butane (NC4)	1.400	0.440
I-Pentane (IC5)	0.394	0.144
N-Pentane (NC5)	0.227	0.082
Hexane Plus (C6+)	0.547	0.237
	100.000	6.127

BTU/CU.FT. - DRY 1256
AT 14.650 DRY 1252
AT 14.650 WET 1230
AT 14.73 DRY 1258
AT 14.73 WET 1237

MOLECULAR WT. 21.7217

SPECIFIC GRAVITY -
CALCULATED 0.749
MEASURED