

30-015-33179

RECEIVED

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

JUN 04 2004

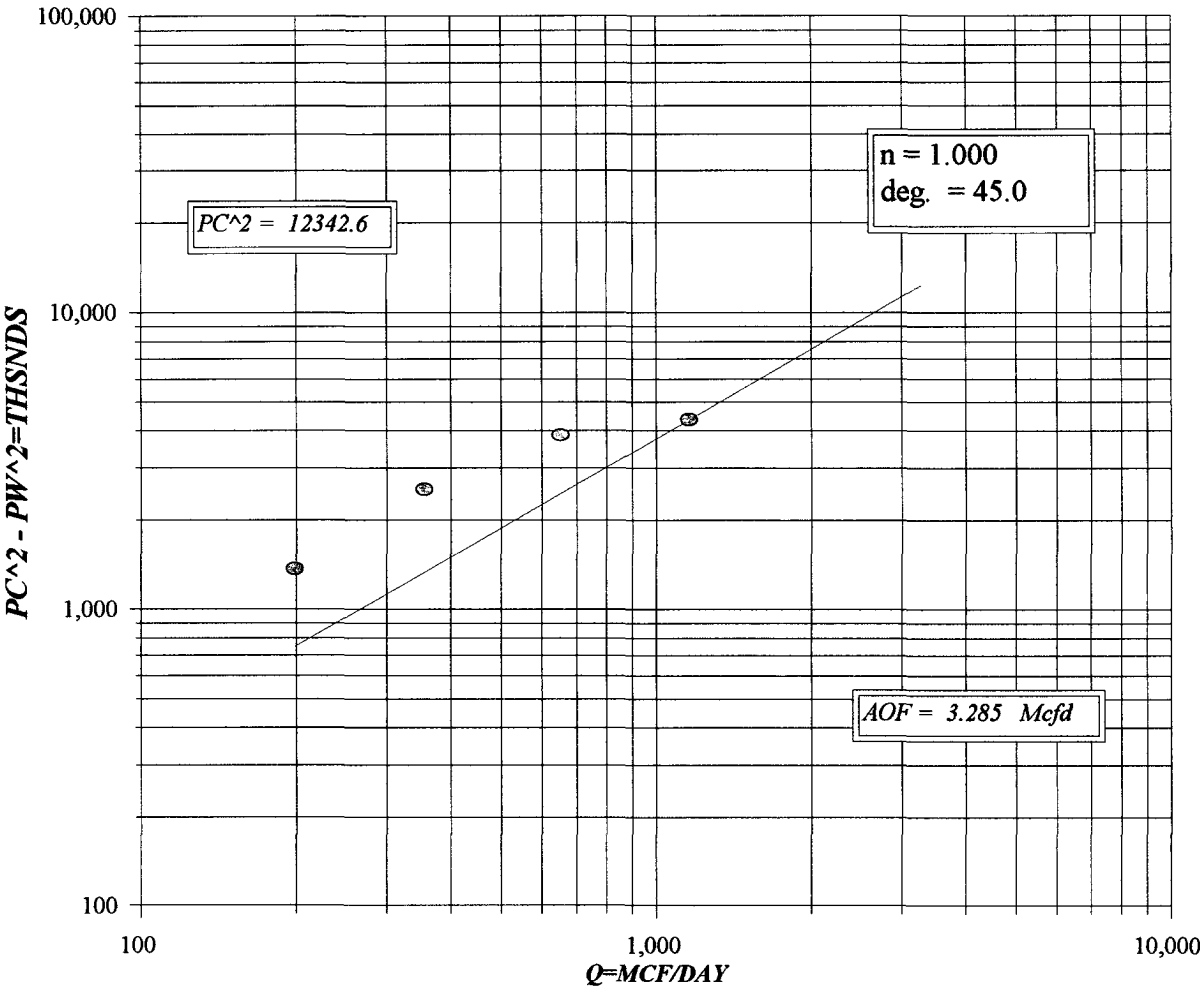
Form C-122
Revised October, 1999

GGB-ARTESIA

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MEWBOURNE OIL				Lease or Unit Name AVALON LAKE 31 FED			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 4/21/04		Well No. 1	
Completion Date 3/21/04		Total Depth 11475		Plug Back TD 11351		Elevation 3279	
Unit Ltr - Sec - TWP - Rge L 31 20S 28E							
Csg. Size 5 1/2	Wt. 17	d 4.892	Set At 11475	Perforations: From: 11310 To: 11336		County EDDY	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 10948	Perforations: From: To:		Pool	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 10914		Formation MORROW	
Producing Thru TUBING		Reservoir Temp. 173		Mean Annual Temp. 60		Baro. Press.-P _a 13.2	
Connection SALES							
L 10948	H 10948	Gg 0.589	%CO ₂ 0.885	%N ₂ 0.287	%H ₂ S	Prover 3.067	Meter Run 3.067
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	3.067 X 1.625		140	1	96	3300	
2	3.067 X 1.625		145	3	98	3120	
3	3.067 X 1.625		150	10	103	2900	
4	3.067 X 1.625		166	29	110	2810	
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							199
2	TOTAL	FLOW	METER				355
3							653
4							1159
5							
No.	P _r	Temp. R	T _r	Z	Gas Liquid Hydrocarbon Ratio N/A Mcf bbl.		
1					A.P. I. Gravity of Liquid Hydrocarbons N/A Deg.		
2					Specific Gravity Separator Gas 0.589 XXXXXXXX		
3	TOTAL	FLOW	METER		Specific Gravity Flowing Fluid XXXXXX		
4					Critical Pressure 675 P.S.I.A. P.S.I.A.		
5					Critical Temperature 346 R. R.		
P _c 3513.2 P _w 12342.6							
No.	P _t ²	P _w	P _w ²	P _c ² -P _w ²	(1) $P_c^2 = \frac{2.835}{P_c^2 - P_w^2}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.835$		
1		3313.2	10977.8	1364.8			
2		3133.5	9818.7	2523.9			
3		2914.2	8492.4	3850.2			
4		2826.4	7988.3	4354.3			
5							
Absolute Open Flow 3.285				Mcf/d @ 15.025		Angle of Slope (°): 45	
						Slope n: 1	
Remarks: * NO LIQUID MADE DURING TEST.							
Approved By Division:		Conducted By: PRO WELL TESTING		Calculated By: MERV BUECKER		Checked By: BM	

MEWBOURNE OIL CO.
AVALON LAKE "31" FED #1



COMPANY : MEWBOURNE OIL		LEASE : AVALON LAKE 31 FED WELL NO.		1		Pc = 3513.2		Pc2 = 12342.6		*	
UNIT : L		SECTION : 31		TOWNSHIP : 20S		P12 = 10977.3		Pw = 3313.3		*	
L : 10948		H : 10948		L/H : 1		G/GMIX : 589		9816.9		3133.5	
%CO2 : 0.885		%N2 : 0.287		H2S : 0.287		DATE : 4/21/04		8486.7		2914.2	
d : 2.441		Fr : 0.010763		GH : 8197.0		RANGE : 28E		7970.5		2826.4	
=====											
VOL 1 : 199		PSIA 1 : 3313.2		RESV. TEMP : 169.0		Pc2-Pw2 = 1364.8		Pw2 = 10977.8		*	
VOL 2 : 355		PSIA 2 : 3133.2		SHUT-IN PRESS = 3513.2		2523.9		9818.7		*	
VOL 3 : 653		PSIA 3 : 2913.2				3850.2		8492.4		*	
VOL 4 : 1159		PSIA 4 : 2823.2				4354.3		7988.3		*	
		PCR : 675				n = 1.000				*	
		TCR : 346				Pc2/(Pc2-Pw2) =		9.044		*	
								4.890		*	
								3.206		*	
								2.835		*	
=====											
LINE	RATE 1		RATE 2		RATE 3		RATE 4				
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND			
1 QM	0.199	0.199	0.355	0.355	0.653	0.653	1.159	1.159			
2 TW	534	534	534	534	534	534	534	534			
3 Ts	629.0	629.0	629.0	629.0	629.0	629.0	629.0	629.0			
4 T	581.5	581.5	581.5	581.5	581.5	581.5	581.5	581.5			
PR (est)	4.91	4.64	4.64	4.32	4.32	4.18					
5 Z(est)	0.856	0.886	0.850	0.875	0.843	0.862	0.840	0.858			
6 TZ	498.0	515.5	494.0	508.8	490.0	501.5	488.7	498.8			
7 GH/TZ	16.459	15.901	16.594	16.110	16.728	16.345	16.772	16.432			
8 eS	1.854	1.815	1.863	1.830	1.873	1.846	1.876	1.852			
9 I-e-S	0.461	0.449	0.463	0.453	0.466	0.458	0.467	0.460			
10 Pt	3313.2	3313.2	3133.2	3133.2	2913.2	2913.2	2823.2	2823.2			
11 Pt2 /1000	10977.3	10977.3	9816.9	9816.9	8486.7	8486.7	7970.5	7970.5			
12 Fr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763			
13 Fc=FrTZ	5.360	5.548	5.317	5.477	5.274	5.398	5.260	5.369			
14 FcQm	1.07	1.10	1.89	1.94	3.44	3.52	6.10	6.22			
15 L/H(FcQm)2	1.1	1.2	3.6	3.8	11.9	12.4	37.2	38.7			
16 Fw	0.5240117	0.5475449	1.6503907	1.7138955	5.5267604	5.6928811	17.351681	17.8123304			
17 Pw2	10977.8	10977.8	9818.6	9818.7	8492.3	8492.4	7987.8	7988.3			
18 Ps2	20350.5	19928.9	18293.3	17964.4	15902.2	15675.7	14982.4	14793.4			
19 Ps	4511.2	4464.2	4277.1	4238.4	3987.8	3959.2	3870.7	3846.2			
20 P	3912.2	3888.7	3705.1	3685.8	3450.5	3436.2	3347.0	3334.7			
21 Pr	5.80	5.76	5.49	5.46	5.11	5.09	4.96	4.94			
22 Tr	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68			
23 Z	0.886	0.885	0.875	0.874	0.862	0.862	0.858	0.857			
=====											
										FORM C122-D	