

Submit in duplicate to
appropriate district office
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 Mewbourne Oil Company				Lease or Unit Name Northeast Avalon Hills 36 St. Com			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10/01/99		Well No. 1	
Completion Date 09/16/99		Total Depth 11400		Plug Back TD 10825		Elevation 3250' KB	
Csg. Size 5 1/2		Wt. d 17# 4.892		Set At 11400		Perforations: From: 10012 To: 10021	
Tbg. Size 2 7/8		Wt. d 6.5# 2.441		Set At 9915		Perforations: From: Open To: Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 9915		Unit Ltr. - Sec. - TWP - Rge. 0 36 20s 27e	
Producing Thru Tbg		Reservoir Temp. °F 166 @ 10013		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2	
L 9915		H 9915		G _g .710		% CO ₂ 1.201	
				% N ₂ 1.239		% H ₂ S	
				Prover		Meter Run 3.068	
						Taps FLG	

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						2160		PACKER		24 Hrs
1.	3.068 x 1.750		395	2.00	76	2035				1 Hr
2.	3.068 x 1.750		410	7.00	78	1909				1 Hr
3.	3.068 x 1.750		410	15.00	77	1719				1 Hr
4.	3.068 x 1.750		415	26.00	74	1466				1 Hr
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$h_w P_m$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	15.61	28.57	408.2	.9850	1.187	1.045	545
2.	15.61	54.43	423.2	.9831	1.187	1.048	1,039
3.	15.61	79.67	423.2	.9840	1.187	1.048	1,522
4.	15.61	105.51	428.2	.9868	1.187	1.049	2,024
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	20.553	Mcf/bbl.
1.	.60	536	1.37	.916	A.P. I Gravity of Liquid Hydrocarbons	63.8 @ 60°	Deg.
2.	.63	538	1.37	.910	Specific Gravity Separator Gas	.710	XXXXXXXXXX
3.	.63	537	1.37	.910	Specific Gravity Flowing Fluid	XXXXXX	GMIX = .837
4.	.63	534	1.36	.909	Critical Pressure	* 671	P.S.I.A. 665
5.					Critical Temperature	* 391	R 434

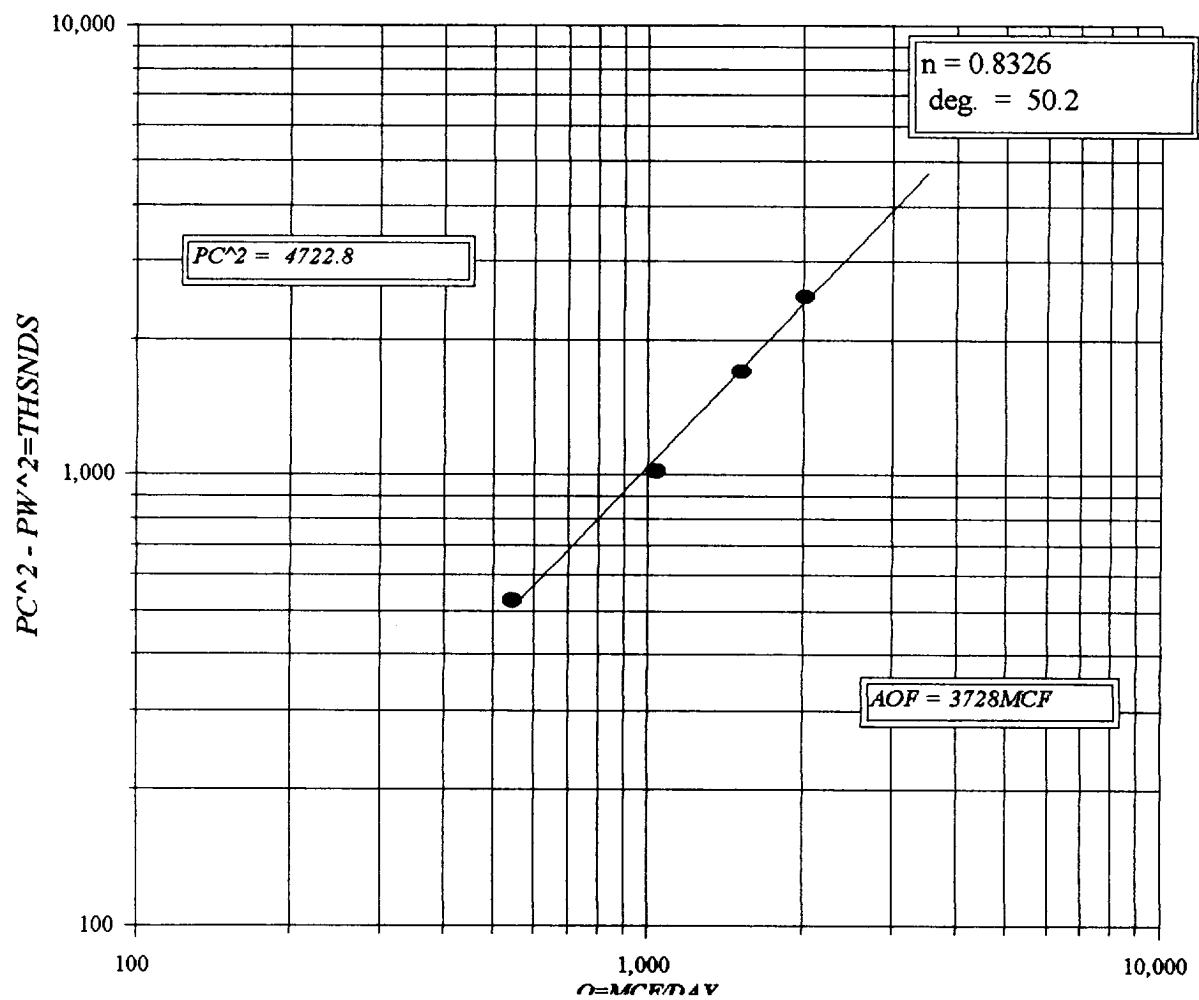
P _c 2173.2	P _c ² 4722.8						
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.639$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.588$	
1.		2048.9	4197.9	524.9			
2.		1924.8	3704.8	1018.0			
3.		1738.2	3021.4	1701.4			
4.		1491.7	2225.2	2497.6			
5.							

Absolute Open Flow	3.728	Mcf @ 15.025	Angle of Slope θ	50.2	Slope, n	.8326
--------------------	-------	--------------	------------------	------	----------	-------

Remarks: Well produced 10.4 bbls condensate during test API GR. = 63.8 @ 60°
* = corrected 1.201% CO₂ & 1.239 N₂

Approved By Division	Conducted By: Jarrel Services, Inc.	Calculated By: Bob Murray	Checked By: Bob Murray
----------------------	--	------------------------------	---------------------------

MEWBOURNE OIL COMPANY
NORTHEAST AVALON HILLS 36 ST COM # 1



UNIT : 0	SECT : 36	TOWNSHIP : 20	PC - 2173.2	PC2 - 2172.0
L : 9915	H : 9	L/H : 1	G/GHIX : 0.837	Pt2 = 4195.1
%CO2 : 1.201	%N2 : 1.239	H2S :	DATE : 10 1 99	Pw = 2048.9
d : 2.441	Pr : 0.010763	GH : 8298.9	RANGE : 27	3694.9
				1924.8
				3000.5
				1738.2
				2188.0
				1491.7

VOL 1 : 545	PSIA 1 : 2048.2	RESV.TEMP 163.0	Pc2-Pw2= 524.9	Pw2 = 4197.9
VOL 2 : 1039	PSIA 2 : 1922.2		1018.0	3704.8
VOL 3 : 1522	PSIA 3 : 1732.2	SHUT-IN PR= 2173.2	1701.4	3021.4
VOL 4 : 2024	PSIA 4 : 1479.2		2497.6	2225.2
	PCR : 665		n = 0.833	
	TCR : 434			

LINE	RATE 1		RATE 2		RATE 3		RATE 4		
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND	
1 QM	0.545	0.545	1.039	1.039	1.522	1.522	2.024	2.024	
2 TW	534	534	534	534	534	534	534	534	
3 Ts	623.0	623.0	623.0	623.0	623.0	623.0	623.0	623.0	[Pc2/Pc2-Pw2]n = 6.229
4 T	578.5	578.5	578.5	578.5	578.5	578.5	578.5	578.5	3.588
PR (est)	3.08		2.89		2.60		2.22		2.340
5 Z(est)	0.638	0.656	0.639	0.647	0.648	0.639	0.673	0.642	1.700
6 TZ	368.9	379.7	369.9	374.5	375.0	369.5	389.4	371.3	
7 GH/TZ	22.498	21.855	22.435	22.163	22.129	22.459	21.312	22.353	AOF= Q 3.395
8 eS	2.325	2.270	2.319	2.296	2.293	2.321	2.224	2.312	3.728
9 l-e-S	0.570	0.559	0.569	0.564	0.564	0.569	0.550	0.568	3.561
10 Pt	2048.2	2048.2	1922.2	1922.2	1732.2	1732.2	1479.2	1479.2	3.440
11 Pt2 /1000	4195.1	4195.1	3694.9	3694.9	3000.5	3000.5	2188.0	2188.0	
12 Pr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	
13 Fc=PrTZ	3.970	4.087	3.981	4.030	4.036	3.977	4.191	3.996	
14 FcQm	2.16	2.23	4.14	4.19	6.14	6.05	8.48	8.09	
15 L/H(FcQm)	4.7	5.0	17.1	17.5	37.7	36.6	72.0	65.4	
16 Fw	2.668084	2.775224	9.734178	9.897248	21.28191	20.85797	39.59897	37.123115	
17 Pw2	4197.8	4197.9	3704.6	3704.8	3021.8	3021.4	2227.6	2225.2	
18 Ps2	9759.4	9527.3	8592.4	8505.5	6928.8	7014.0	4953.8	5145.2	
19 Ps	3124.0	3086.6	2931.3	2916.4	2632.3	2648.4	2225.7	2268.3	
20 P	2586.1	2567.4	2426.7	2419.3	2182.2	2190.3	1852.5	1873.8	
21 Pr	3.89	3.86	3.65	3.64	3.28	3.29	2.79	2.82	
22 Tr	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
23 Z	0.656	0.655	0.647	0.647	0.639	0.639	0.642	0.641	

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

NO. OF BBLS PRODUCED = 10.4

API GRAVITY @ 60 DEG. = 63.8

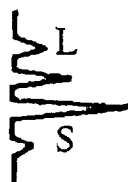
SPECIFIC GRAVITY OF GAS = 0.7100

XX

TOTAL GAS PRODUCED = 214

G.O.R. = 20.553

G.MIX = 0.837



Laboratory Services, Inc.

4016 Fiesta Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Jarrel Services Inc.
Attention: Mr. Donnie Dickerson
P. O. Box 1230
Hobbs, New Mexico 88240

SAMPLE: N.E. Avalon Hills 36
IDENTIFICATION: St. Com. #1
COMPANY: Mewbourne Oil Company
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 10/1/99
ANALYSIS DATE: 10/4/99
PRESSURE - PSIG
SAMPLE TEMP. °F
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Donnie Dickerson
ANALYSIS BY: Vickie Walker

REMARKS: Crude Oil API Gravity @ 60° F = 63.8

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	1.239	
Carbon Dioxide (CO2)	1.201	
Methane (C1)	79.938	
Ethane (C2)	10.685	2.851
Propane (C3)	4.214	1.158
I-Butane (IC4)	0.625	0.204
N-Butane (NC4)	1.088	0.342
I-Pentane (IC5)	0.281	0.103
N-Pentane (NC5)	0.249	0.090
Hexane Plus (C6+)	0.480	0.197
	100.000	4.945

BTU/CU.FT. - DRY 1202
AT 14.650 DRY 1199
AT 14.650 WET 1178
AT 14.73 DRY 1205
AT 14.73 WET 1184

MOLECULAR WT. 20.5607

SPECIFIC GRAVITY -
CALCULATED 0.710
MEASURED