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State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

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Form C-122
Revised October, 1999

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OCD-ARTESIA

30-015-35122

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MEWBOURNE OIL				Lease or Unit Name WEST MALAGA 12 ST.			
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 2-12-04	Well No. 1
Completion Date 1-24-04		Total Depth 12860		Plug Back TD 12800		Elevation 3047 GL	Unit Ltr - Sec - TWP - Rge A 12 24 27
Csg. Size 5 1/2	Wt. 17#	d 4.622	Set At 12860	Perforations: From: 12512 To: 12524		County EDDY	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 10588	Perforations: From: To:		Pool BLACK RIVER MORROW	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 12414		Formation MORROW	
Producing Thru TBG		Reservoir Temp. °F 178.3 @ 12414	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2		Connection SALES	
L 12414	H 12414	Gg 0.574	%CO ₂ 1.245	%N ₂ 0.288	%H ₂ S N/A	Prover N/A	Meter Run Taps FLG
FLOW DATA				TUBING DATA		CASING DATA	
No.	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff. h _w	Temp. °F	Press p.s.i.g.	Temp. °F
SI						2425	PKR
1			521.8	22	95.1	2175	"
2			528	35	89	2060	"
3			531	50	91.9	1950	"
4			535	67.2	93.1	1840	"
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							702
2							865
3	MEASURED	BY		TOTAL		FLOW	1,051
4							1,237
5							
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio DRY GAS Mcf bbl.		
1					A.P. I. Gravity of Liquid Hydrocarbons DRY Deg.		
2					Specific Gravity Separator Gas 0.574 XXXXXXXX		
3		N/A			Specific Gravity Flowing Fluid XXXXXX		
4					Critical Pressure 0.676 P.S.I.A. P.S.I.A.		
5					Critical Temperature 345 R R		
P _c 2138.2		P _{c2} 5944.8					
No.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(1) P _c ² = 2.386 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.105$		
1		2189.6	4794.2	1150.6			
2		2075.4	4307.3	1637.5			
3		1966.6	3867.6	2077.2	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.601$		
4		1858.2	3453	2491.8			
5					79825		
Absolute Open Flow		2.601		Mcf/d @ 15.025		Angle of Slope (°)	49.4
						Slope n:	0.856
Remarks: NO FLUID PRODUCED							
Approved By Division:		Conducted By: PROWELL TESTING & W.L.		Calculated By: BM		Checked By: BM	

COMPANY : NEWDOORNE OIL
 UNIT : A
 L : 12414
 %CO2 : 1.245
 2 : 2.141

DEASE : WEST MALAGA 12 ST. WELL NO. : 1
 SECTION : 12
 H : 12414
 %N2 : 0.288
 T : 0.010763

TOWNSHIP : 24
 L/H : 1
 G/GMIX : 0.574
 DATE : 2-12-04
 RANGE : 1

PC = 2438.2
 PC2 = 5944.8 *

Ft2 = 4788.2
 4298.2
 3434.4

Pw = 2189.6 *
 2075.4 *
 1858.2 *

VOL 1 : 702 PSIA 1 : 2188.2 RESV.TEMP 198.1
 VOL 2 : 865 PSIA 2 : 2073.2
 VOL 3 : 1051 PSIA 3 : 1963.2 SHUT-IN PR= 2438.2
 VOL 4 : 1237 PSIA 4 : 1853.2

Pc2-Pw2= 1150.6 Pw2 = 4794.2 *
 1637.5 4307.3 *
 2077.2 3867.6 *
 2491.8 3453.0 *

PCR : 672
 TCR : 346

n = 0.856 ✓

Pc2/(Pc2-Pw2) = 5.167
 3.630
 2.862
 2.386 ✓

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	1ST	2ND	1ST	2ND	1ST	2ND	1ST	2ND
1 QM	0.702	0.702	0.865	0.865	1.051	1.051	1.237	1.237
2 TW	534	534	534	534	534	534	534	534
3 Ts	658.1	658.1	658.1	658.1	658.1	658.1	658.1	658.1
4 T	596.1	596.1	596.1	596.1	596.1	596.1	596.1	596.1
PR (est)	3.26		3.09		2.92		2.76	
5 Z(est)	0.850	0.850	0.851	0.850	0.853	0.850	0.855	0.850
6 TZ	506.7	506.8	507.4	506.4	508.4	506.4	509.8	506.9
7 GH/TZ	14.064	14.059	14.045	14.071	14.015	14.070	13.976	14.056
8 eS	1.695	1.694	1.693	1.695	1.691	1.695	1.689	1.694
9 l-e-S	0.410	0.410	0.409	0.410	0.409	0.410	0.408	0.410
10 Pt	2188.2	2188.2	2073.2	2073.2	1963.2	1963.2	1853.2	1853.2
11 Pt2 /1000	4788.2	4788.2	4298.2	4298.2	3854.2	3854.2	3434.4	3434.4
12 Fr	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.010763	0.0107631
13 Fc=FrTZ	5.453	5.455	5.461	5.450	5.472	5.451	5.488	5.456
14 FcQm	3.83	3.83	4.72	4.71	5.75	5.73	6.79	6.75
15 L/H(FcQm)	14.7	14.7	22.3	22.2	33.1	32.8	46.1	45.6
16 Fw	6.006467	6.009281	9.135292	9.113637	13.52116	13.45555	18.79595	18.662990
17 Pw2	4794.2	4794.2	4307.3	4307.3	3867.7	3867.6	3453.1	3453.0
18 Ps2	8123.9	8122.3	7293.5	7300.8	6541.9	6555.3	5832.1	5849.5
19 Ps	2850.2	2850.0	2700.6	2702.0	2557.7	2560.3	2415.0	2418.6
20 P	2519.2	2519.1	2386.9	2387.6	2260.5	2261.8	2134.1	2135.9
21 Pr	3.75	3.75	3.55	3.55	3.36	3.37	3.18	3.18
22 Tr	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
23 Z	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850

[Pc2/Pc2-Pw2]n = 4.079
 3.015
 2.460
 2.105 ✓

AOF= Q 2.863
 2.608
 2.585
 2.601 ✓

FORM C122-D *

MEWBOURNE OIL
WEST MALAGA 12 ST.

