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

DEC - 9 2004

Form C-122
Revised October, 1999

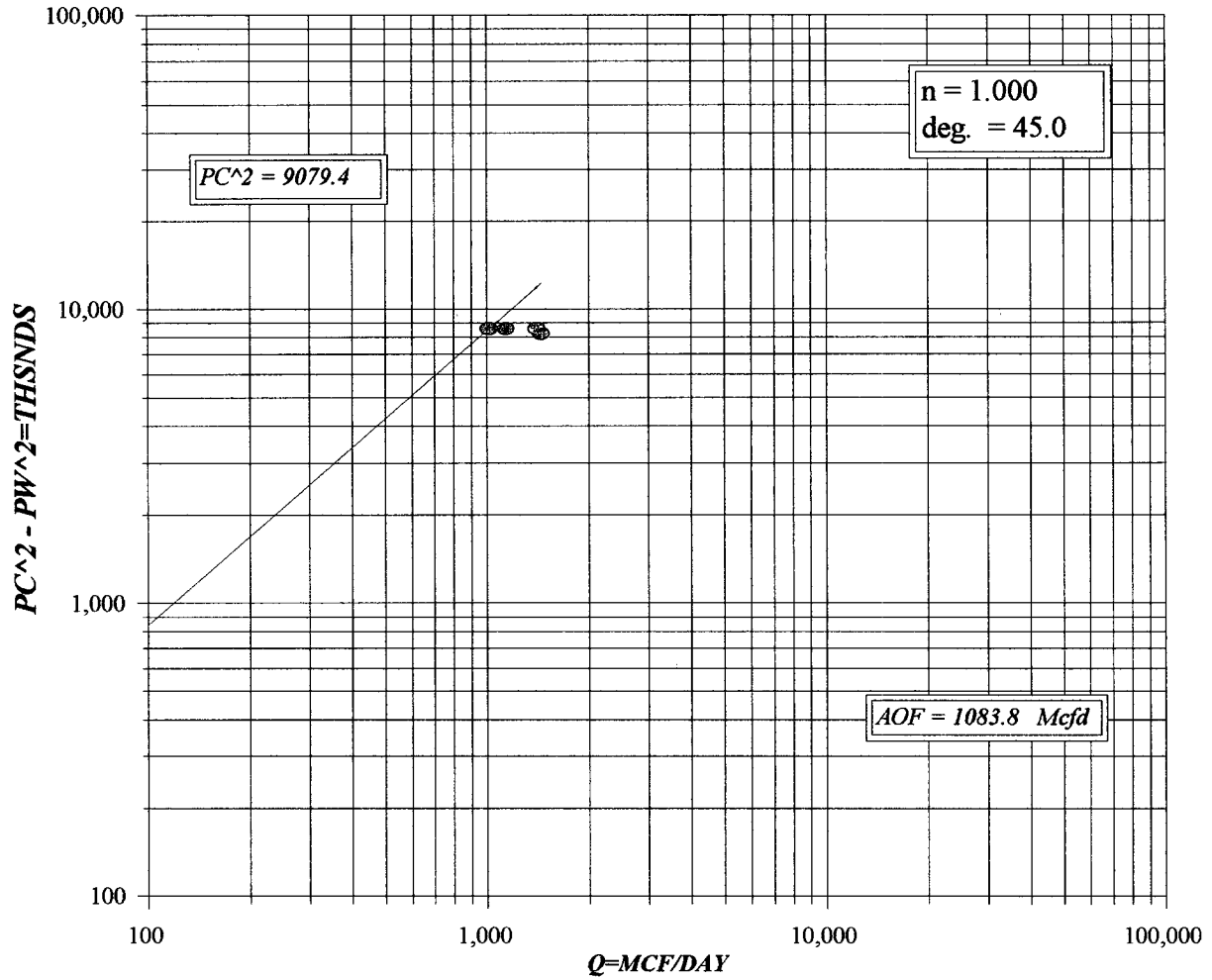
30-015-32985

OCD-ARTESIA

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MEWBOURNE OIL				Lease or Unit Name ESEPERNZA 1 FED COM			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date		Well No. 2	
Completion Date 6/1/04		Total Depth 11830		Plug Back TD 11767		Elevation 3203 GL	
Unit Ltr - Sec - TWP - Rge N 1 21S 27E		Csg. Size 5 1/2		Wt. 17		d 4.892	
Set At 11830		Perforations: From: 11490 To: 11500		County EDDY			
Tbg. Size 2 7/8		Wt. 6.5		d 2.441		Set At 11252	
Perforations: From: To:		Pool BURTON FLAT		Formation MORROW			
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At 11233		Connection SALES	
Producing Thru TUBING		Reservoir Temp. 181		Mean Annual Temp. 60		Baro. Press.-P _a 13.2	
L 11048		H 11048		Gg 0.7		%CO ₂ 7.562	
				%N ₂ 1.902		%H ₂ S	
				Prover		Meter Run 3.067	
						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.	Press p.s.i.g.	Temp.
SI						3013.2	
1	3.067 X 1.250		554	79.67	80	1213.2	1 HR
2	3.067 X 1.250		567	82.7	82	913.2	1 HR
3	3.067 X 1.250		577	83.78	83	713.2	1 HR
4	3.067 X 1.250		616	89.94	89	738.2	1 HR
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							1150
2	TOTAL	FLOW	METER				1406
3							1455
4							1017
5							
No.	P _r	Temp. R	T _r	Z	Gas Liquid Hydrocarbon Ratio 41.9 Mcf bbl.		
1					A.P. I. Gravity of Liquid Hydrocarbons 55.5 Deg.		
2					Specific Gravity Separator Gas 0.596 XXXXXXXX		
3	TOTAL	FLOW	METER		Specific Gravity Flowing Fluid XXXXXX GMIX = .667		
4					Critical Pressure 675 P.S.I.A. P.S.I.A.		
5					Critical Temperature 350 R. R.		
P _c 3013.2 P _{c2} 9079.4							
No.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.066$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.066$		
1		1220.5	1489.7	7589.7			
2		928.1	861.4	8218			
3		734	538.8	8540.6			
4		748.1	559.6	8519.8			
5					AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1083.8$		
Absolute Open Flow 1083.8				Mcf @ 15.025		Angle of Slope (°) 45	
						Slope n: 1	
Remarks: * WELL MADE 5 BBLs OF 55.5 API GRAVITY CONDENSATE DURING TEST.							
Approved By Division:		Conducted By: PRO WELL TESTING		Calculated By: MERV BUECKER		Checked By: BM	

MEWBOURNE OIL CO.
ESPERENZA "1" FED COM #2



COMPANY : MEWBOURNE OIL CO.				LEASE : ESPERENZA 1 FED CONWELL NO. 2				Pc = 3013.2				Pc2 = 9079.4			
UNIT : N				SECTION : 1				TOWNSHIP : 21S				Pw = 1220.5			
L : 11252				H : 11252				L/H : 1				G/GMIX : 596			
%CO2 : 1.066				%N2 : 0.216				H2S : 833.9				DATE : 508.7			
d : 2.441				Fr : 0.010763				GH : 8197.0				RANGE : 27E			
VOL 1 : 1150				PSIA 1 : 1213.2				RESV.TEMP : 181.0				Pc2-Pw2 = 7589.7			
VOL 2 : 1406				PSIA 2 : 913.2								Pw = 1489.7			
VOL 3 : 1455				PSIA 3 : 713.2				SHUT-IN PRE : 3013.2				8218.0			
VOL 4 : 1017				PSIA 4 : 738.2								8540.6			
												8519.8			
				PCR : 675								n = 1.000			
				TCR : 350											
LINE				RATE 1		RATE 2		RATE 3		RATE 4		Pc2/(Pc2-Pw2) =			
				1ST		2ND		1ST		2ND		1.196			
												1.105			
												1.063			
												1.066			
1 QM				1.150		1.150		1.406		1.406					
2 TW				534		534		534		534		[Pc2/(Pc2-Pw2)]n = 1.196			
3 Ts				641.0		641.0		641.0		641.0		1.105			
4 T				587.5		587.5		587.5		587.5		1.063			
PR (est)				1.80		1.35		1.06		1.09		1.066			
5 Z(est)				0.872		0.859		0.893		0.898					
6 TZ				512.2		504.7		517.5		534.1		AOQ = Q 1.376			
7 GH/TZ				16.005		16.242		15.625		15.841		1.553			
8 eS				1.822		1.839		1.797		1.811		1.547			
9 I-e-S				0.451		0.456		0.443		0.448		1.084			
10 Pt				1213.2		1213.2		913.2		913.2					
11 Pt2 /1000				1471.9		1471.9		833.9		833.9					
12 Fr				0.010763		0.010763		0.010763		0.010763					
13 Fc=FrTZ				5.512		5.432		5.646		5.569					
14 FcQm				6.34		6.25		7.94		7.83					
15 L/H(FcQm)2				40.2		39.0		63.0		61.3					
16 Fw				18.135561		17.799323		27.946613		27.464765					
17 Pw2				1490.0		1489.7		861.9		861.4					
18 Ps2				2715.4		2739.1		1548.5		1560.2					
19 Ps				1647.8		1655.0		1244.4		1249.1					
20 P				1430.5		1434.1		1078.8		1081.1					
21 Pr				2.12		2.12		1.60		1.60					
22 Tr				1.68		1.68		1.68		1.68					
23 Z				0.859		0.859		0.881		0.881		FORM C122-D			