

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

45F file
 Form C-122
 Revised 9-1-65

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MAY 17 1984

**O. C. D.
 ARTESIA, OFFICE**

Type Test 4 POINT ☒ Initial ☐ Annual ☐ Special				Test Date 2-14-84	
Company SANTA FE ENERGY ✓				Connection TO AIR	
Pool <i>San Gabriel Strawn</i>				Formation STRAWN	
Completion Date 2-11-84		Total Depth <i>12,014</i> 11,997		Plug Back <i>11,380</i> 11,380	
Casing Size 5.500		ID 17.0		Elevation <i>2116.7</i>	
Well Size 2.875		ID 6.5		Perforations: From 0 To 0	
Type Well - Single - Brasshead - G.G. or G.O. Multiple SINGLE				Factor Set At 10,472.	
Producing thru TUBING		Reservoir Temp. °F 182 @ 10,521		Mean Annual Temp. °F 60.0	
L 10,521.		H 10,521.		County EDDY	
Cg 0.649		% CO ₂ 0.32		State NEW MEXICO	
% N ₂ 0.76		% H ₂ S 0		Motor Run 4.0	
Prover 0		Taps FLANGE			

FLOW DATA						TUBING DATA		B.H.P. DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
1	4.03 X 2.000			645.	4.0	60.	4300.	0.	5530.	6/64
2	4.03 X 2.000			650.	15.0	75.	4210.	0.	5453.	14/64
3	4.03 X 2.000			660.	50.0	64.	4140.	0.	5264.	21/64
4	4.03 X 2.500			760	29.5	50.	3725.	0.	4978.	25/64
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 _{sp}	Rate of Flow Q, Mcfd
1	19.81	51.31	658.2	1.0000	1.2413	1.0676	1347.
2	19.81	99.74	663.2	0.9859	1.2413	1.0614	2567.
3	19.81	183.47	673.2	0.9962	1.2413	1.0674	4798.
4	32.64	152.00	773.2	1.0098	1.2413	1.0883	6717.
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NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.98	520.	1.40	0.877	28.6	60.0	0.649	XXXXXX	670.	371.
2	0.99	535.	1.44	0.888				XXXXXX		
3	1.00	524.	1.41	0.878						
4	1.17	510.	1.37	0.846						
5										

NO.	P ₁ ²	P _w ²	P _w ²	P _c ² - P _w ²
1	30727.	4231.	17903.	365.
2	29879.	4162.	17326.	941.
3	27849.	3995.	15958.	2309.
4	24912.	3744.	14017.	4251.
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.2974$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.5933$	
AOI = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 17419.$			

Absolute Open Flow	17419.	Mcf @ 15.025	Angle of Slope °	56.8	Slope, n	0.654
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Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA PRESSURE ELEMENTS.

Approved by Commission	Conducted by RICHARD TOWNLEY	Calculated by BENNETT & CATHEY	Checked by
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