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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 SANTA FE ENERGY						Lease or Unit Name SINAGUA 18 FED. COMM.					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3-10-94		Well No. 1			
Completion Date 3-5-94		Total Depth 13760		Plug Back TD 13659		Elevation		Unit Ltr. 18 Sec. 20S TWP. 34E			
Csg. Size 5 1/2	Wt. 17#	d 4.892	Set At 13750	Perforations: From: 13479 To: 13497				County LEA			
Tbg. Size 2 3/8	Wt. 4.7#	d 1.995	Set At 13077	Perforations: From: 13479 To: 13497				Pool Excelsior Ridge Lynch North			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single						Packer Set At 13,000'		Formation MORROW			
Producing Thru TBG.		Reservoir Temp. °F 181		Mean Annual Temp. °F 60°		Baro. Press - P. 13.2		Connection AIR			
L 13488	II 13488	Gg .698	% CO ₂ .66	% N ₂ .38	% H ₂ S	Prover		Meter Run 4.026		Taps FLANGE	

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						2305	71	PKR.		
1.	4.026 X 2.500		120	9	94	2160	71			1 hr.
2.	4.026 X 2.500		180	13	80	2100	71			1 hr.
3.	4.026 X 2.500		280	24	78	1890	72			1 hr.
4.										
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg.	Super Compress. Factor, F _{pv} .	Rate of Flow Q, Mcfd
1.	32.64	34.62	133.2	.9688	1.197	1.014	1329
2.	32.64	50.12	193.2	.9813	1.197	1.019	1958
3.	32.64	83.89	293.2	.9831	1.197	1.029	3316
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.20	554	1.43	.973	A.P. I. Gravity of Liquid Hydrocarbons	60° Deg.
2.	.29	540	1.39	.963	Specific Gravity Separator Gas	
3.	.44	538	1.39	.944	Specific Gravity Flowing Fluid	XXXXXXXXXX
4.					Critical Pressure	669 P.S.I.A.
5.					Critical Temperature	388 R

P_c **2318.2** P_c² **5374.1**

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.978$	2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.627$
1.		2188.1	4787.9	586.1		
2.		2146.3	4606.5	767.5		
3.		2005.8	4023.2	1350.8		
4.						
5.						

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 12.026$

Absolute Open Flow	12,026 Mcfd @ 15.025	Angle of Slope θ	47°	Slope, n	.933
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Remarks: **3.75 BBLs 58.3 API GRAVITY @60° CONDENSATE MADE DURING TEST**

Approved By Division	Conducted By: M.B. PRO WELL TESTERS R.G.	Calculated By: K.S.	Checked By: B.M.
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