

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

Form C-122
Revised 9-1-65

O. C. D.
ARTESIA OFFICE

Type Test 4-POINT ☒ Initial ☐ Annual ☐ Special						Test Date 7-22-86	
Company SANTA FE ENERGY				Connection TO AIR			
Pool H.D. MORROW				Formation MORROW		Unit E	
Completion Date 7-26-86		Total Depth 12,250		Plug Back To 12058'		Elevation 3100	
Farm or Lease Name JOHNSON		Well No. 1					
Case Size 5.5	Wt. 20.0	d 4.778	Set At 12243	Perforations: From 11653 To 12028			
Thg. Size 2.375	Wt. 4.7	d 1.995	Set At 11520	Perforations: From OPEN To ENDED			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 11520		County EDDY	
Producing Thru TUBING		Reservoir Temp. °F 197 @ 11840		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State NEW MEXICO							
L 11840	H 11840	G _g 0.579	% CO ₂ 1.03	% N ₂ 0.247	% H ₂ S 0	Prover 0	Motor Run 4.026
Taps FLANGE							

FLOW DATA						TUBING DATA		CASING 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.	Temp. °F	
SI							4176	74	5272	197	27.75 HOUR
1.	4.026	X	1.500	610	3.0	98	3801	74	4755	197	60 MIN
2.	4.026	X	1.500	615	5.5	95	3562	74	4634	197	60 MIN
3.	4.026	X	1.500	615	10.0	85	3260	74	4390	197	60 MIN
4.	4.026	X	1.500	615	16.0	80	2832	74	3895	197	60 MIN
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super. Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	10.84	43.24	623.2	0.9653	1.3142	1.0375	617
2	10.84	58.78	628.2	0.9680	1.3142	1.0388	842
3	10.84	79.26	628.2	0.9768	1.3142	1.0420	1149
4	10.84	100.26	628.2	0.9813	1.3142	1.0437	1463
5							

NO.	P _r	Temp. °R	T _r	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	0.92	558	1.60	0.929	0	0	0.579	XXXXXXX	678	350
2	0.93	555	1.59	0.927				XXXXX		
3	0.93	545	1.56	0.921						
4	0.93	540	1.54	0.918						
5										

NO.	P _r ²	P _w ²	P _w ²	P _r ² - P _w ²
1	22733	3779	14282	3555
2	21594	3677	13519	4318
3	19386	3407	12043	5794
4	15272	3059	9360	8477
5				

(1) $\frac{P_r^2}{P_w^2 - P_w^2} = 2.1042$

AOIF = Q $\left[\frac{P_r^2}{P_w^2 - P_w^2} \right]^n = 3078.4$

(2) $\left[\frac{P_r^2}{P_w^2 - P_w^2} \right]^n = 2.1042$

Post ID 2
9-12-86
Temp & PR

Absolute Open Flow	3078	Mcfd @ 15.025	Angle of Slope @	45	Slope, n	1.000
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Remarks:			
Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	BENNETT & CATHEY	RICHARD TOWNELY	