

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

RECEIVED

AUG 26 1976

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8-19-76		AUG 26 1976	
Company Monsanto Company ✓			Connection None		D. C. C. ARTESIA, OFFICE
Well Cemetery <i>Morrow</i>			Formation Morrow		Unit N
Completion Date 8-19-76		Total Depth 9420		Plug Back TD 9376	Elevation 3575 D. F.
Farm or Lease Name Foster Federal			Well No. 1		
Case Size 5.50"	Wt. 23.00#	Set At 5.240"	9420	Perforations: From 9188 To 9200	
Reg. Size 2.875EUE	Wt. 6.50#	Set At 2.441"	8999	Perforations: From To	Unit Sec. Twp. Rye. N 31 195 25E
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single Completion				Packer Set At 8999	County Eddy
Producing Thru Tubing		Reservoir Temp. °F 152 @ 9194	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2	State New Mexico
L 9194	H 9194	G _g 0.588	% CO ₂ 0.00	% N ₂ 0.00	% H ₂ S 0.00
Prover		Meter Run X		Taps	

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.	
1	20.5 Hours						2985	80		
2	4.00	1.00	500	13.00"	89	2935	79			1.00 Hr.
3	4.00	1.00	500	32.00"	72	2910	79			1.00 Hr.
4	4.00	1.00	500	40.00"	67	2895	80			1.00 Hr.
5	4.00	1.00	500	47.00"	68	2887	80			1.00 Hr.

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, Fpv	Rate of Flow Q, Mscf
1	4.79	81.680	513.20	0.9732	1.3041	1.0350	514
2	4.79	128.150	513.20	0.9887	1.3041	1.0400	823
3	4.79	143.276	513.20	0.9933	1.3041	1.0410	925
4	4.79	155.307	513.20	0.9924	1.3041	1.0410	1002

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	0.76	549	1.55	0.924	None Produced	0.588	0.588	672	354	
2	0.76	532	1.50	0.924						
3	0.76	527	1.49	0.915						
4	0.76	528	1.49	0.915						

NO.	P _r ²	P _w	P _w ²	P _r ² - P _w ²
1	2998.2	2948.0	8691	298
2		2924.3	8552	438
3		2906.3	8447	543
4		2901.7	8420	569

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 15.798$

(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 15.798$

AOF = $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 15830$

Posted ID 2 9-3-76

Annular Open Flow	15830	Mscf @ 15.025	Angle of Slope @	45°	Slope, n	1.00
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Approved By Commission:	Conducted By: West Texas Consulting Service, Inc.	Calculated By:	Checked By:
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