

Full file

Form C-122
Revised 9-1-65

ORIGINAL

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

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 5-1-73		MAY 8 1973									
Company Monsanto Company ✓		Connection None		O. C. C. ARTESIA OFFICE									
Pool Burton Flat (Atoka)		Formation Atoka		Unit G									
Completion Date 5-1-73		Total Depth 11,510		Plug Back TD 11,432									
Elevation 3199 DF		Farm or Lease Name Miller Federal		Well No. 1-2									
Csq. Size 5 1/2	Wt. 17	d 4.892	Set At 11,510	Perforations: From 10,658 To 10,668									
Thq. Size 2 7/8	Wt. 6.5	d 2.441	Set At 11,137	Perforations: From To									
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Dual				Packer Set At 11,126									
Producing Thru Casing		Reservoir Temp. °F 155° @ 10,663		Mean Annual Temp. °F Baro. Press. - P _g									
L 10,663		H 10,663		G _g .611									
% CO ₂		% N ₂		% H ₂ S									
Prover		Meter Run		Taps									
FLOW DATA				TUBING DATA									
CASING DATA				Duration of Flow									
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow		
SI									3872	68			
1.	4.026	1.5	300	24	92				3446	59	1 Hr		
2.	4.026	1.5	300	37	86				3242	60	1 Hr		
3.	4.026	1.5	400	50	76				2909	58	1 Hr		
4.	4.026	1.5	600	58	75				2515	58	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 _{spv}	Rate of Flow Q, Mc/d						
1	10.84	86.59	313.2	.9706	1.279	1.024	1193						
2	10.84	107.64	313.2	.9759	1.279	1.024	1491						
3	10.84	143.73	413.2	.9850	1.279	1.035	2029						
4	10.84	188.58	613.2	.9859	1.279	1.053	2714						
5													
NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 147 Mcf/bbl.								
1	.47	552	1.52	.954	A.P.I. Gravity of Liquid Hydrocarbons 50.8 @ 60° Deg.								
2	.47	546	1.51	.953	Specific Gravity Separator Gas .611 XXXXXXXXXX								
3	.62	536	1.48	.933	Specific Gravity Flowing Fluid XXXXX								
4	.91	535	1.47	.902	Critical Pressure 671 P.S.I.A. P.S.I.A.								
5					Critical Temperature 362 R R								
P _c 3885.2 P _c ² 15095					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{15095}{8695}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.6813$								
NO.	P _t ²	P _w	R _w ²	P _c ² - R _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 4563$								
1		3460.0	11971	3124									
2		3256.1	10602	4493									
3		2923.0	8544	6551									
4		2529.9	6400	8695									
5													
Absolute Open Flow 4563 Mc/d @ 15.025					Angle of Slope @ 46° 42'					Slope, n .942			
Remarks:													
Approved By Commission:				Conducted By: D. Forrest Jones				Calculated By: H. L. Hagler				Checked By:	

WEST TEXAS ENGINEERING SERVICE, INC.