

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

RECEIVED

APR 20 1973

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 4-16-73		O.C.C.	
Company Monsanto Company				Connection None			SIA, OFFICE	
Pool Burton Flat - Morrow				Formation Morrow			Unit Burton Flat Deep Unit	
Completion Date 3-25-73		Total Depth 11,546'		Plug Back TD 11,472'		Elevation 3223 DF		Farm or Lease Name Burton Flat Unit
Csg. Size 7"	Wt. 26#	d 6.276	Set At 11,546	Perforations: From 11,244 To 11,438			Well No. 3 - LT	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 10,810	Perforations: From To			Unit Sec. Twp. Rge. V 3 21-S 27-E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Dual				Packer Set At 10,800			County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 164 @ 11,546		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico
L 11,341	H 11,341	Gg .582	% CO ₂ .81	% N ₂ .47	% H ₂ S Neg	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.	
SI							3784	64		
1.	4"		1.5"	515	10	67	3612	58		
2.	4		1.5	540	62	70	3150	64		
3.	4		1.5	665	88	67	2898	66		
4.	4		1.5	935	95	75	2575	68		
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							
2	10.84	72.67	528.2	.9933	1.311	1.041	1068
3	10.84	185.19	553.2	.9905	1.311	1.043	2719
4	10.84	244.29	678.2	.9933	1.311	1.054	3635
5	10.84	300.13	948.2	.9859	1.311	1.069	4495

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	No Liquids Produced	Mcf/bbl.
1	.78	527	1.50	.922	A.P.I. Gravity of Liquid Hydrocarbons		
2	.82	530	1.51	.919	Specific Gravity Separator Gas	.582	X X X X X X X X
3	1.00	527	1.50	.901	Specific Gravity Flowing Fluid	X X X X X	
4	1.41	535	1.53	.875	Critical Pressure	672	P.S.I.A.
5					Critical Temperature	350	R

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		3627.3	13157	1261
2		3179.9	10111	4307
3		2937.5	8628	5790
4		2633.1	6933	7485
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{14418}{7485}$

ACF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 8125$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.8075$

Absolute Open Flow	8125	Mcf/d @ 15.025	Angle of Slope	47° 55'	Slope, n	.903
Remarks:						
Approved By Commission:		Conducted By: D. Forrest Jones		Calculated By: H. L. Hagler		Checked By:

West Texas Engineering Service, Inc.