

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

Form C-122
 Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6-10-85		O. C. D. ARTESIA, OFFICE	
Company ARCO Oil and Gas Company				Connection None			
Pool N. Illinois Camp Undesignated Morrow				Formation Morrow		Unit	
Completion Date 6-10-85		Total Depth 10400		Plug Back TD 10294		Elevation 3612.5GR	
Farm or Lease Name State BY		Well No. 1		Perforations: From 10116 To 10124		Well No. 1	
Csg. Size 5 1/2	Wt. 15.5	d 4.950	Set At 10400	Perforations: From - To -		Unit F	Sec. 7
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 10044	Perforations: From - To -		Twp. 18S	Rge. 28E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10044		County Eddy	
Producing Thru Tbg.		Reservoir Temp. °F 158.4 10120		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State New Mexico		Prover 10044		Meter Run 4"		Taps Flg.	
L 10044	H 10044	G _g .680	% CO ₂ .377	% N ₂ .382	% H ₂ S -0-		

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							2882		Pkr.		88 Hrs.
1.	4 x 1.00			500	5.5	100	2801	76	Pkr.		1 Hr.
2.	4 x 1.00			504	11.5	99	2754	77	Pkr.		1 Hr.
3.	4 x 1.00			511	26.5	93	2665	76	Pkr.		1 Hr.
4.	4 x 1.00			516	50.0	84	2548	76	Pkr.		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 _{pv}	Rate of Flow Q, Mcfd
1	4.753	53.13	513.2	.9636	1.213	1.046	309
2	4.753	77.12	517.2	.9645	1.213	1.046	449
3	4.753	117.86	524.2	.9697	1.213	1.052	693
4	4.753	162.67	529.2	.9777	1.213	1.053	966
5							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio	36.62 Mcf/bbl.
1	.77	560	1.45	.914	A.P.I. Gravity of Liquid Hydrocarbons	59.2 Deg.
2	.77	559	1.45	.914	Specific Gravity Separator Gas	.680
3	.78	553	1.44	.903	Specific Gravity Flowing Fluid	X X X X X
4	.79	544	1.41	.902	Critical Pressure	669 P.S.I.A.
5					Critical Temperature	385 °R

*P _c	4395.2	P _c ²	19317.8
NO.	P _t ²	* P _w	P _w ²
1		4295.2	18448.7
2		4231.2	17903.1
3		4112.2	16910.2
4		3952.2	15619.9
5			

(1) $\frac{P_c^2}{P_t^2 - P_w^2} = 8.02$

AOF = Q $\left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 3613.3$

(2) $\left[\frac{P_c^2}{P_t^2 - P_w^2} \right]^n = 5.214$

Post FD-2
7-12-85
Comp. Y RK

Absolute Open Flow	3613.3 Mcfd @ 15.025	Angle of Slope @	Slope, n .793
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Remarks: *BHP @ 10120 (mid perms via bomb)
 Fluid produced during test 2.75 bbls. cond. and .25 bbls. water.

Approved By Commission:	Conducted By: Lon Briley	Calculated By: J. Cogburn	Checked By: L. Sutton
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