

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 3-20-76		APR - 5 1976	
Company: Cities Service Oil, Company				Connection: TO Air		O. C. C. ARTESIA, OFFICE	
Pool: Undiz.				Formation: Morrow		Unit:	
Completion Date: 3-20-76		Total Depth: 11,690'		Plug Back TO: 11,651' 11,380' Temp.		Elevation: 3141.1'gr.	
Casing Size: 5 1/2"		Wt.: 17.0#		Set At: 11,690'		Perforations: From 11,320' To 11,338'	
Tubg. Size: 2 7/8"		Wt.: 6.5#		Set At: 11,375'		Perforations: From Open To Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At: 11 175' Temp. 11,350'		County: Eddy	
Producing Thru: Tubing		Reservoir Temp. °F: 209° @ 11,350'		Mean Annual Temp. °F: 60°		Baro. Press. - P _a : 13.2	
State: New Mexico		Well No.: 1		Unit: D		Sec. 29 Twp. 21S Rge. 27E	
L: 11,350'		H: 11,350'		G _g : 0.5905		% CO ₂ : 0.788	
% N ₂ : 0.788		% H ₂ S: --0--		Prover: ----		Meter Run: 4"	
Tags: 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							3770.0		Packer	Choke	
1.	4" X 1.50"			610.0	44.0	88	2055.0	69		14/64"	90 Min.
2.	4" X 1.50"			625.0	30.0	98	2350.0	71		12/64"	60 Min.
3.	4" X 1.50"			620.0	19.0	96	2755.0	72		10/64"	60 Min.
4.	4" X 1.50"			610.0	9.0	94	3150.0	74		8/64"	60 Min.
5.											

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, F _{pv}	Rate of Flow Q, Mcfd
1	10.84	165.59	623.2	.9741	1.301	1.041	2368
2	10.84	138.37	638.2	.9653	1.301	1.040	1959
3	10.84	109.69	633.2	.9671	1.301	1.039	1554
4	10.84	74.89	623.2	.9688	1.301	1.040	1064
5							

NO.	P _f	Temp. °R	T _f	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	548	1.57	.923	-0-	-0-	0.5905	X X X X X X X X	675	350
2	0.95	558	1.59	.925						
3	0.94	556	1.59	.926						
4	0.92	554	1.58	.925						
5										

NO.	F _f	P _f	F _s	P _s	F _f ² - P _s ²
1	4277	2603.2	6777	14708	
2	5585	2876.2	8273	13212	
3	7663	3382.5	11439	10046	
4	10006	3856.2	14870	6615	
5					

$$(1) \frac{P_f^2}{P_f^2 - P_s^2} = 1.626$$

$$ACF = Q \left[\frac{F_f^2}{P_f^2 - P_s^2} \right]^n = 3013$$

$$(2) \left[\frac{F_f^2}{P_f^2 - P_s^2} \right]^n = 1.538$$

Absolute Open Flow: 3013 Mcfd @ 15.025	Angle of Slope θ : 48.0°	Slope, n: 0.885
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Remarks: **Bottom hole pressures measured with Kuster gauge @ 11,350 feet**
Good Point alignment, Good Test.

Approved by Commission:	Conducted By: Don Tyson	Calculated By: R. West	Checked By: J.W.W.
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