

N. MEXICO OIL CONSERVATION COMM. 4
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS

Form C-122
Revised 9-1-65

OCT 30 1974

Type Test ☐ Initial ☒ Annual ☐ Special				Test Date 10-18-74			
Company Phillips Petroleum Company				Connection El Paso Natural Gas Company		O. B. C. ARTESIA, OFFICE	
Pool Carlsbad, South (Morrow)				Formation Morrow		Unit --	
Completion Date 5-21-72		Total Depth 11,875'		Plug Back TD 11,806'		Elevation 3238'	
Well No. 5-1/2"		Set At 17#, 20#		Perforations: From 11,406 To 11,414'		Farm or Lease Name Drag-A	
Well No. 2-7/8"		Set At 6.7		Perforations: From -- To --		Well No. 1	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Dual				Packer Set At 11,356'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 176 @ 11,800'		Mean Annual Temp. °F 60		State New Mexico	
H 11357		Gg .578		% CO ₂ .0102		% H ₂ S --	
Prover 11357		Meter Run 4		Taps F			

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							1823				
1.	4.00		2.75	396.9	.25	84	1805	50			
2.	4.00		2.75	409.6	.81	93	1805	50			
3.	4.00		2.75	422.5	1.44	90	1790	50			
4.	4.00		2.75	435.5	9.00	62	1655	50			
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	41.10	10.13	410.1	.9777	1.315	1.029	551
2	41.10	18.50	422.8	.9697	1.315	1.027	994
3	41.10	25.05	435.7	.9723	1.315	1.033	1,360
4	41.10	63.54	448.7	.9931	1.315	1.036	3,533
5							

NO.	P _t	Temp. °R	T _t	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	.61	544	1.55	.944			.578		672	350
2	.63	553	1.58	.948						
3	.65	550	1.57	.937						
4	.67	522	1.49	.931						
5										

NO.	P _t	P _w	P _w ²	P _c ² - P _w ²
1	3305.8	1819.0	3308.7	62.9
2	3305.8	1821.0	3316.0	55.6
3	3251.5	1808.4	3270.3	101.3
4	2782.9	1708.7	2919.6	452.0
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{3371.6}{452.0} \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.40$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 12012$$

Absolute Open Flow 12012 Mcfd @ 15.0% Angle of Slope 58.6 Slope, n .61

Remarks:	
Approved By Commission:	Conducted By:
Calculated By: <u>D. E. Simpson</u>	Checked By: <u>W. J. Mueller</u>