

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 6-19-68																																																																																														
Company Phillips Petroleum Co.				Connection none																																																																																															
Pool Wildcat				Formation Morrow		Unit Lat Mesa Unit																																																																																													
Completion Date 12-7-67		Total Depth 15,721		Packer TD 15,110		Elevation 3834																																																																																													
Perforations: From 13,656 To 14,138		Well No. 1		Unit Sec. Twp. Rge. G 11 21/8 NE																																																																																															
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 13,600		County Lea																																																																																															
Producing Thru Tubing		Reservoir Temp. °F 145 • 12,590		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2																																																																																													
State New Mexico																																																																																																			
L 13,897	H 13,897	Gg .612	% CO ₂ .60	% N ₂ .56	% H ₂ S 0	Prover 2"																																																																																													
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="5">FLOW DATA</th> <th colspan="2">TUBING DATA</th> <th colspan="2">CASING DATA</th> <th rowspan="2">Duration of Flow</th> </tr> <tr> <th>NO.</th> <th>Prover Line Size</th> <th>X</th> <th>Orifice Size</th> <th>Press. p.s.i.g.</th> <th>Diff. h_w</th> <th>Temp. °F</th> <th>Press. p.s.i.g.</th> <th>Temp. °F</th> <th>Press. p.s.i.g.</th> <th>Temp. °F</th> </tr> <tr> <td>SI</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4160</td> <td></td> <td></td> <td></td> <td>15 days</td> </tr> <tr> <td>1.</td> <td>2.00 x 3/32</td> <td></td> <td></td> <td>4017</td> <td></td> <td>74</td> <td>4017</td> <td>74</td> <td>Packer</td> <td></td> <td>1 hour</td> </tr> <tr> <td>2.</td> <td>2.00 x 3/16</td> <td></td> <td></td> <td>3465</td> <td></td> <td>79</td> <td>3465</td> <td>79</td> <td>"</td> <td></td> <td>"</td> </tr> <tr> <td>3.</td> <td>2.00 x 1/4</td> <td></td> <td></td> <td>2865</td> <td></td> <td>80</td> <td>2865</td> <td>80</td> <td>"</td> <td></td> <td>"</td> </tr> <tr> <td>4.</td> <td>2.00 x 5/16</td> <td></td> <td></td> <td>2255</td> <td></td> <td>78</td> <td>2255</td> <td>78</td> <td>"</td> <td></td> <td>"</td> </tr> <tr> <td>5.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							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							4160				15 days	1.	2.00 x 3/32			4017		74	4017	74	Packer		1 hour	2.	2.00 x 3/16			3465		79	3465	79	"		"	3.	2.00 x 1/4			2865		80	2865	80	"		"	4.	2.00 x 5/16			2255		78	2255	78	"		"	5.											
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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. Factor, F _{spv}	Rate of Flow q, Mcf/d																																																																																												
1	0.1410		4030.2	.9868	1.278	1.080	774																																																																																												
2	0.6082		3478.2	.9822	1.278	1.10	4.72																																																																																												
3	1.087		2878.2	.9813	1.278	1.12	4.66																																																																																												
4	1.672		2268.2	.9831	1.278	1.13	2.44																																																																																												
5																																																																																																			
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ 350 _____ M ³ /bbl. A.P.I. Gravity of Liquid Hydrocarbons _____ 52 _____ Specific Gravity Separator Gas _____ .612 _____ Specific Gravity Flowing Fluid _____ XXXXX _____ Critical Pressure _____ 574 _____ P.S.I.A. Critical Temperature _____ 77 _____ °F																																																																																														
1	5.98	534	1.49	.858																																																																																															
2	5.16	539	1.51	.821																																																																																															
3	4.47	540	1.51	.787																																																																																															
4	3.57	538	1.50	.772																																																																																															
5																																																																																																			
$(1) \frac{P_r^2}{P_r^2 - P_w^2} = \frac{17,440.2}{11,326.9} = 1.538 \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.538$																																																																																																			
$AFR = \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 7,514$																																																																																																			
NO.	P _r	P _w	P _w ²	P _r ² - P _w ²																																																																																															
1	16,242.5	4033.6	16,269.9	1,147.4																																																																																															
2	12,097.9	3526.1	12,433.7	4983.6																																																																																															
3	8,284.0	2995.6	8,973.7	8,443.6																																																																																															
4	5,114.7	2467.9	6,090.4	11,326.9																																																																																															
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Absolute Open Flow _____ 7,514 _____ Mcfd @ 15.025					Angle of Slope θ _____ 52 _____		Slope, n _____ .754 _____																																																																																												
Remarks: * P _w 's were calculated by Phillips computer program #4137 which is based on IOGC Manual with adjustment to conform to New Mexico specifications.																																																																																																			
Approved By Commission:		Conducted By: W. D. Adcock		Calculated By: D. B. Simpson		Checked By:																																																																																													