

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

c/sf
File

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NOV 02 1984
O. C. D.
ARTESIA, OFFICE

Form C-12
Revised 9-65

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10/5/83																																																																																															
Company Liberty Oil & Gas Corporation				Air																																																																																															
Pool Burton Flats <i>Morrow</i>				Morrow																																																																																															
Completion Date 10-16-83		Total Depth 11,650		Plug Back To 11400'																																																																																															
				Elevation 3263.5																																																																																															
Csg. Size 5 1/2"		Set At 11,650		Perforations: From 11163' To 11330'																																																																																															
Trq. Size 2 3/8"		Set At 10654'		Perforations: From Open To Ended																																																																																															
Type Well - Single - Prodenhead - G.G. or G.O. Multiple Single Gas				Packer Set At 10622'																																																																																															
Producing Thru Tubing		Reservoir Temp. °F 186 @ 11246'		Mean Annual Temp. °F 60																																																																																															
				Baro. Press. - P _a 13.2																																																																																															
L 11246'		H 11246'		Cg .6094																																																																																															
				% CO ₂ .883																																																																																															
				% N ₂ .358																																																																																															
				% H ₂ S																																																																																															
				Prover																																																																																															
				Meter Run 4.026																																																																																															
				Forn F																																																																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="6">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>51</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3320</td> <td>67</td> <td></td> <td></td> <td>24.0 hrs</td> </tr> <tr> <td>1.</td> <td>4</td> <td>X</td> <td>1.000</td> <td>500</td> <td>47.0</td> <td>89</td> <td>2475</td> <td>67</td> <td></td> <td></td> <td>1.0 hr</td> </tr> <tr> <td>2.</td> <td>4</td> <td>X</td> <td>1.000</td> <td>500</td> <td>32.0</td> <td>96</td> <td>2582</td> <td>67</td> <td></td> <td></td> <td>1.0 hr</td> </tr> <tr> <td>3.</td> <td>4</td> <td>X</td> <td>1.000</td> <td>490</td> <td>19.0</td> <td>102</td> <td>2840</td> <td>67</td> <td></td> <td></td> <td>1.0 hr</td> </tr> <tr> <td>4.</td> <td>4</td> <td>X</td> <td>1.000</td> <td>490</td> <td>8.0</td> <td>108</td> <td>3120</td> <td>67</td> <td></td> <td></td> <td>1.0 hr</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	51							3320	67			24.0 hrs	1.	4	X	1.000	500	47.0	89	2475	67			1.0 hr	2.	4	X	1.000	500	32.0	96	2582	67			1.0 hr	3.	4	X	1.000	490	19.0	102	2840	67			1.0 hr	4.	4	X	1.000	490	8.0	108	3120	67			1.0 hr	5.											
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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, Mgd																																																																																												
1	4.753	155.31	513.2	.9732	1.281	1.039	956																																																																																												
2	4.753	128.15	513.2	.9671	1.281	1.036	782																																																																																												
3	4.753	97.78	503.2	.9619	1.281	1.035	593																																																																																												
4	4.753	63.45	503.2	.9568	1.281	1.033	382																																																																																												
5																																																																																																			
NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Dry _____ Mol/Dbl.																																																																																														
1	.76	549	1.52	.927	A.P.L. Gravity of Liquid Hydrocarbons _____ Deg.																																																																																														
2	.76	556	1.54	.931	Specific Gravity Separator Gas .6094 XXXXXXXXX																																																																																														
3	.75	562	1.55	.934	Specific Gravity Flowing Fluid XXXXXX																																																																																														
4	.75	568	1.57	.937	Critical Pressure 671 P.S.I.A. P.S.I.A.																																																																																														
5					Critical Temperature 362 R R																																																																																														
$P_c = 3333.2$ $P_c^2 = 11110.2$																																																																																																			
NO.	* BHP	P _w	P _w ²	P _c ² - P _w ²	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.660$			$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.660$																																																																																											
1	3423.2	2633.2	6933.5	4176.7	$ACF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2543$																																																																																														
2	3547.2	2732.8	7468.3	3641.9																																																																																															
3	3827.2	2961.3	8769.0	2341.2																																																																																															
4	4143.2	3223.8	10392.9	717.3																																																																																															
5	4438.2	SIP																																																																																																	
Absolute Open Flow 2543 Mgd @ 15.025 Angle of Slope 45° Slope, n 1.000																																																																																																			
Remarks: * CALCULATED FROM BOTTOM HOLE PRESSURE TAKEN @ 11246'.																																																																																																			
Approved By Consultant:		Conducted By: JARREL WELL TESTING INC.		Calculated By: Rick Pagan		Checked By: Rick Pagan																																																																																													