

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

RECEIVED
HOBBS DIVISION
 Form C-122
 Revised 9-1-65
 APR 29 1970

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 4-22-70																																																																																									
Company Continental Oil Company		Connection None																																																																																									
Pool New Mexico Federal Unit		Formation Eumont																																																																																									
Completion Date 4-1-70	Total Depth	Plug Back TD	Elevation 3531 DF																																																																																								
Csg. Size 9 5/8	Wt. 36	Set At	Perforations: From 3221 To 3650																																																																																								
Tbg. Size 2 3/8	Wt. 4.7	Set At 3593	Perforations: From OPEN To END																																																																																								
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At	County Lea																																																																																								
Producing Thru Thg.	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. - P _g New Mexico																																																																																								
L	H	(Assumed) % CO ₂	% N ₂ % H ₂ S Prover Meter Run Taps																																																																																								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th align="center" colspan="6">FLOW DATA</th> <th align="center" colspan="2">TUBING DATA</th> <th align="center" colspan="2">CASING DATA</th> <th align="center" 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>Sl.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>505</td> <td>60</td> <td>505</td> <td></td> </tr> <tr> <td>1.</td> <td>2</td> <td>x</td> <td>3/32</td> <td></td> <td></td> <td>68</td> <td>498</td> <td>68</td> <td>499</td> <td></td> </tr> <tr> <td>2.</td> <td>2</td> <td>x</td> <td>3/16</td> <td></td> <td></td> <td>69</td> <td>472</td> <td>69</td> <td>484</td> <td></td> </tr> <tr> <td>3.</td> <td>2</td> <td>x</td> <td>7/32</td> <td></td> <td></td> <td>69</td> <td>456</td> <td>69</td> <td>477</td> <td></td> </tr> <tr> <td>4.</td> <td>2</td> <td>x</td> <td>1/4</td> <td></td> <td></td> <td>68</td> <td>436</td> <td>68</td> <td>469</td> <td></td> </tr> <tr> <td>5.</td> <td>2</td> <td>x</td> <td>5/16</td> <td></td> <td></td> <td>68</td> <td>385</td> <td>68</td> <td>455</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	Sl.							505	60	505		1.	2	x	3/32			68	498	68	499		2.	2	x	3/16			69	472	69	484		3.	2	x	7/32			69	456	69	477		4.	2	x	1/4			68	436	68	469		5.	2	x	5/16			68	385	68	455	
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																																																																																
Sl.							505	60	505																																																																																		
1.	2	x	3/32			68	498	68	499																																																																																		
2.	2	x	3/16			69	472	69	484																																																																																		
3.	2	x	7/32			69	456	69	477																																																																																		
4.	2	x	1/4			68	436	68	469																																																																																		
5.	2	x	5/16			68	385	68	455																																																																																		
RATE OF FLOW CALCULATIONS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>Coefficient (24 Hour)</th> <th>$\sqrt{h_w P_m}$</th> <th>Pressure P_m</th> <th>Flow Temp. Factor F_t</th> <th>Gravity Factor F_g</th> <th>Super Compress. Factor, F_{pv}</th> <th>Rate of Flow Q, Mcfd</th> </tr> <tr> <td>1.</td> <td>.1410</td> <td></td> <td>511.2</td> <td>.9924</td> <td>1.206</td> <td>1.057</td> <td>91.19</td> </tr> <tr> <td>2.</td> <td>.6082</td> <td></td> <td>485.2</td> <td>.9915</td> <td>1.206</td> <td>1.055</td> <td>372.3</td> </tr> <tr> <td>3.</td> <td>.8393</td> <td></td> <td>469.2</td> <td>.9915</td> <td>1.206</td> <td>1.052</td> <td>495.3</td> </tr> <tr> <td>4.</td> <td>1.087</td> <td></td> <td>449.2</td> <td>.9924</td> <td>1.206</td> <td>1.050</td> <td>613.6</td> </tr> <tr> <td>5.</td> <td>1.672</td> <td></td> <td>398.2</td> <td>.9924</td> <td>1.206</td> <td>1.045</td> <td>832.7</td> </tr> </table>											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, Mcfd	1.	.1410		511.2	.9924	1.206	1.057	91.19	2.	.6082		485.2	.9915	1.206	1.055	372.3	3.	.8393		469.2	.9915	1.206	1.052	495.3	4.	1.087		449.2	.9924	1.206	1.050	613.6	5.	1.672		398.2	.9924	1.206	1.045	832.7																																	
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, Mcfd																																																																																				
1.	.1410		511.2	.9924	1.206	1.057	91.19																																																																																				
2.	.6082		485.2	.9915	1.206	1.055	372.3																																																																																				
3.	.8393		469.2	.9915	1.206	1.052	495.3																																																																																				
4.	1.087		449.2	.9924	1.206	1.050	613.6																																																																																				
5.	1.672		398.2	.9924	1.206	1.045	832.7																																																																																				
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>P_r</th> <th>Temp. °R</th> <th>T_r</th> <th>Z</th> <th>Gas Liquid Hydrocarbon Ratio</th> <th>Dry</th> <th>Mcf/bbl.</th> </tr> <tr> <td>1.</td> <td>.76</td> <td>528</td> <td>1.37</td> <td>.895</td> <td>A.P.I. Gravity of Liquid Hydrocarbons</td> <td>Dry</td> <td>Deq.</td> </tr> <tr> <td>2.</td> <td>.73</td> <td>529</td> <td>1.37</td> <td>.899</td> <td>Specific Gravity Separator Gas</td> <td>.680 (Assumed)</td> <td>XXXXXXX</td> </tr> <tr> <td>3.</td> <td>.70</td> <td>529</td> <td>1.37</td> <td>.903</td> <td>Specific Gravity Flowing Fluid</td> <td>XXXXX</td> <td></td> </tr> <tr> <td>4.</td> <td>.67</td> <td>528</td> <td>1.37</td> <td>.907</td> <td>Critical Pressure</td> <td>669</td> <td>P.S.I.A. --- P.S.I.A. ---</td> </tr> <tr> <td>5.</td> <td>.60</td> <td>528</td> <td>1.37</td> <td>.916</td> <td>Critical Temperature</td> <td>385</td> <td>R --- R ---</td> </tr> </table>								NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.	1.	.76	528	1.37	.895	A.P.I. Gravity of Liquid Hydrocarbons	Dry	Deq.	2.	.73	529	1.37	.899	Specific Gravity Separator Gas	.680 (Assumed)	XXXXXXX	3.	.70	529	1.37	.903	Specific Gravity Flowing Fluid	XXXXX		4.	.67	528	1.37	.907	Critical Pressure	669	P.S.I.A. --- P.S.I.A. ---	5.	.60	528	1.37	.916	Critical Temperature	385	R --- R ---																																				
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.																																																																																				
1.	.76	528	1.37	.895	A.P.I. Gravity of Liquid Hydrocarbons	Dry	Deq.																																																																																				
2.	.73	529	1.37	.899	Specific Gravity Separator Gas	.680 (Assumed)	XXXXXXX																																																																																				
3.	.70	529	1.37	.903	Specific Gravity Flowing Fluid	XXXXX																																																																																					
4.	.67	528	1.37	.907	Critical Pressure	669	P.S.I.A. --- P.S.I.A. ---																																																																																				
5.	.60	528	1.37	.916	Critical Temperature	385	R --- R ---																																																																																				
P_c 518.2 P_c² 268.5 <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>P_i²</th> <th>P_w</th> <th>P_i²</th> <th>P_i² - P_w²</th> </tr> <tr> <td>1.</td> <td>261.3</td> <td></td> <td>262.3</td> <td>6.2</td> </tr> <tr> <td>2.</td> <td>235.4</td> <td></td> <td>247.2</td> <td>21.3</td> </tr> <tr> <td>3.</td> <td>220.1</td> <td></td> <td>240.3</td> <td>28.2</td> </tr> <tr> <td>4.</td> <td>201.8</td> <td></td> <td>232.5</td> <td>36.0</td> </tr> <tr> <td>5.</td> <td>158.6</td> <td></td> <td>219.2</td> <td>49.3</td> </tr> </table>								NO.	P _i ²	P _w	P _i ²	P _i ² - P _w ²	1.	261.3		262.3	6.2	2.	235.4		247.2	21.3	3.	220.1		240.3	28.2	4.	201.8		232.5	36.0	5.	158.6		219.2	49.3																																																						
NO.	P _i ²	P _w	P _i ²	P _i ² - P _w ²																																																																																							
1.	261.3		262.3	6.2																																																																																							
2.	235.4		247.2	21.3																																																																																							
3.	220.1		240.3	28.2																																																																																							
4.	201.8		232.5	36.0																																																																																							
5.	158.6		219.2	49.3																																																																																							
(1) $\frac{P_c^2}{P_i^2 - P_w^2} = 5.446$ (2) $\left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^n = 4.723$ AOF = Q $\left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^n = 3,934$																																																																																											
Absolute Open Flow 3,934 Mcfd @ 15.025				Angle of Slope θ 47.5		Slope, n .916																																																																																					
Remarks: Wellhead potential = 1.700 with an nt of .740																																																																																											
Approved By Commission: <i>[Signature]</i> Conducted By: J. B. Murray Calculated By: J. B. Murray Checked By:																																																																																											

RECEIVED

MAY 7 1970

**OIL CONSERVATION COMM.
HOBBES, H. H.**