

MAY 20 1980 MULTIPOL. AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

NEW MEXICO OIL CONSERVATION COMMISSION

015F
Form C-122
Revised 9-1-65

O. C. D.

TESTER'S OFFICE ☒ Initial ☐ Annual ☐ Special				Test Date 5-9-80	
Company DORCHESTER EXPLORATION, INC.			Connection N.P.		
Pool CARLSBAD SOUTH <i>Manow</i>			Formation Manow <i>Manow</i>		Unit N
Completion Date 5-2-80		Total Depth 12,000 12007		Plug Back TD 11,350	
Elevation 3279 GL		Farm or Lease Name GRAHAM STATE			
Csg. Size 5 1/2	Wt. 20.00	d 4.778	Set At 12,000	Perforations: From 11,170 To 11,256	
Tbg. Size 2 3/8	Wt. 4.70	d 2.593	Set At 11,106	Perforations: From OPEN To END	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 11,101	
Producing Thru TUBING		Reservoir Temp. °F 186° @ 11,213		Mean Annual Temp. °F 60°	
Baro. Press. - P _a 13.2		State NEW MEXICO			
L 11,213	H 11,213	Gg .580	% CO ₂ .79	% N ₂ 1.286	% H ₂ S Prover
Meter Run 3"					Taps 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
1.	3 X 1.00			635	2.9	67	2190				
2.	3 X 1.00			635	4.5	68	2125	73			1 HR.
3.	3 X 1.00			635	7.6	68	2095	78			1 HR.
4.	3 X 1.00			635	15.1	70	2040	81			1 HR.
5.							1957	82			1 HR.

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 Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.789	43.36	648.2	.9933	1.313	1.049	284
2.	4.789	54.01	648.2	.9924	1.313	1.048	353
3.	4.789	70.19	648.2	.9924	1.313	1.048	459
4.	4.789	98.93	648.2	.9905	1.313	1.048	646

NO.	P _r	Temp. °R	T _r	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.	.96	527	1.52	.909			.580	X X X X X X X X	675	346
2.	.96	528	1.53	.911						
3.	.96	528	1.53	.911						
4.	.96	530	1.53	.911						
5.										

* P _c 2212.8 P _c ² 4896.5	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 5.227$	$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.480$																								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>P_w</th> <th>P_w²</th> <th>P_c² - P_w²</th> </tr> <tr> <td>1</td> <td>* 2153.0</td> <td>4635.4</td> <td>261.1</td> </tr> <tr> <td>2</td> <td>* 2118.2</td> <td>4486.8</td> <td>409.7</td> </tr> <tr> <td>3</td> <td>* 2073.4</td> <td>4299.0</td> <td>597.5</td> </tr> <tr> <td>4</td> <td>* 1989.9</td> <td>3959.7</td> <td>936.8</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> </tr> </table>	NO.	P _w	P _w ²	P _c ² - P _w ²	1	* 2153.0	4635.4	261.1	2	* 2118.2	4486.8	409.7	3	* 2073.4	4299.0	597.5	4	* 1989.9	3959.7	936.8	5				$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.248$	
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Absolute Open Flow 2,248 Mcfd @ 15.025	Angle of Slope θ 53	Slope, n .754
Remarks: BOTTOM HOLE PRESSURES MEASURES WITH KUSTER GAUGE *CALCULATED FROM KNOWN BOTTOM HOLE PRESSURES		
Approved By Commission:	Conducted By: M.B.	Calculated By: R.R.
Checked By: J.W.W.		