

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special	Test Date 12/19/85										
Company Exxon Co. U.S.A.	Connection None										
Pool <i>Sheep Draw Strawn</i>	Formation Strawn										
Completion Date 11/19/85	Total Depth 10377	Plug Back TD 10354	Elevation 3849	Form or Lease Name Mary Federal							
Csg. Size 7	Wt. 26	d 6.276	Set At 10377	Perforations: From 9916 To 10349	Well No. 5						
Thg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 9870	Perforations: From Open To End	Unit N 11 23S 25						
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Single				Packer Set At 9870	County Eddy						
Producing Thru TBG	Reservoir Temp. °F 173 @ 9870	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2	State New Mexico							
L 9870	H 9870	Cg .6789	% CO ₂ 1.961	% N ₂ 1.673	% H ₂ S Prover						
Meter Run 3.826			Taps Flg								
FLOW DATA											
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	Duration of Flow
SI							2990				
1.	3.826 X 1.00			300	11	86	2930				1 hr.
2.	3.826 X 1.00			300	20	90	2860				1 hr.
3.	3.826 X 1.00			300	40	92	2784				1 hr.
4.	3.826 X 1.00			300	80	92	2665				1 hr.
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, Fpv	Rate of Flow O. Mcd				
1	4.758	58.70	313.2	.9759	1.214	1.029	340				
2	4.758	79.14	313.2	.9723	1.214	1.029	457				
3	4.758	111.93	131.2	.9706	1.214	1.029	646				
4	4.758	158.29	313.2	.9706	1.214	1.029	913				
5											
Gas Liquid Hydrocarbon Ratio _____ Mcl/bb											
A.P.I. Gravity of Liquid Hydrocarbons _____ De.											
NO.	R	Temp. °R	T _r	Z	Specific Gravity Separator Gas .679 X X X X X X X X						
1	.47	546	1.43	.944	Specific Gravity Flowing Fluid X X X X X						
2	.47	550	1.44	.945	Critical Pressure 669 P.S.I.A. _____ P.S.I.						
3	.47	552	1.44	.945	Critical Temperature 382 R						
4	.47	552	1.44	.945							
5											
$P_c = 3003.2 P_c^2 9019.2$											
NO.	P ₁ ²	P _w	P ₂ ²	P ₂ ² - P _w ²	(1) $\frac{P_c^2}{P_2^2 - P_w^2} = 4.906$ (2) $\left[\frac{P_c^2}{P_2^2 - P_w^2} \right]^n = 4.086$						
1		2943.4	8663.6	355.6	AOF = O $\left[\frac{P_c^2}{P_2^2 - P_w^2} \right]^n = 3.730$						
2		2860.1	8180.2	839.0							
3		2797.9	7828.2	1191.0							
4		2679.7	7180.8	1838.4							
5											
Absolute Open Flow 3.730 Mcd @ 15.025 Angle of Slope 48.5 Slope n .885											
Remarks: Well made no fluid during test.											
EXHIBIT NO. 11											
Checked By: 8858, 884.											
DOCKET NO. 379-86											
WEARING DATE 3-19-86											