

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

SA
FILE
C-122
file

Type Test ☒ Initial ☐ Annual ☐ Special				Date: 03-07-80	
Company GULF OIL & PETROLEUM				Location AIR	
Field UPPER PENN				County EDDY IL STATE	
Completion Date 03-01-80		Total Depth 11,359		Elevation 3323 GL	
Log Size 5 1/2		Set At 11,359		Perforations From 9736 To 9770	
Log Size 2 3/8		Set At 9680		Perforations From To	
Type Well - Single - Brodenhead - G.G. or G.O. Multiple SINGLE - GAS				Packer Set At 9680	
Producing thru TBG.		Reservoir Temp. °F 60		Baro. Press. - P _a 13.2	
L 9753		H 9753		G _g .703	
G _g .703		% CO ₂ .17		% N ₂ 1.18	
% H ₂ S .12		Prover 4"		Meter Run 4"	
Flow Data		TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w
1.	4 X 1.250			450	8.
2.	4 X 1.250			450	26.
3.	4 X 1.250			460	50.
4.	4 X 1.250			600	53.
5.					
RATE OF FLOW CALCULATIONS					
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Grav. Factor F _g
1.	7.469	60.87	463.2	.9671	1.193
2.	7.469	109.74	463.2	.9741	1.193
3.	7.469	153.82	473.2	.9868	1.193
4.	7.469	180.28	613.2	.9943	1.193
5.					
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio
1.	.70	556	1.47	.925	1.578
2.	.70	548	1.45	.921	A.P.I. Gravity of Liquid Hydrocarbons 45.8 @ 60
3.	.72	534	1.41	.911	Specific Gravity Separator Gas .703
4.	.93	526	1.39	.880	Specific Gravity Flowing Fluid .8017
5.					Critical Pressure 659
					Critical Temperature 378
$P_r = 1853.2$ $P_w^2 = 3434.4$					
NO.	P _r	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 2.449$
1.		1735.8	3013.0	421.4	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2.449$
2.		1702.1	2897.0	537.4	
3.		1592.7	2536.8	897.6	
4.		1425.4	2031.9	1402.5	
5.					
$ACF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 4.171$					
Absolute Open Flow 4,171 Molds 15.025 Angle of Slope 45.0 Slope n 1.000					
Remarks: MADE 123 BBLS CONDENSATE - NO H2O DURING TEST. G-MIX FIGURED 2.113, USED GAS GRAVITY TO CALCULATE P _w 's					
Approved By Commission:		Conducted By: RICK PAGAN		Calculated By: LARRY DAVIS	
				Checked By:	