

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☐ Initial ☐ Annual ☒ Special		Test Date 6-16-89	
Company Phillips Petroleum Company		Connection Phillips	
Pool Lusk		Formation Morrow-Atoka	
Completion Date 5-18-89		Total Depth 12560	Plug Back TD 12413
		Elevation 3550 GL	Form or Lease Name Lusk Deep Unit A
Csg. Size 5 1/2	Wt. 17# & 20#	Set At 4.892" 12554	Perforations From 12203 To 12412
Tbg. Size 2 7/8	Wt. 6.5	Set At 2.441 11300	Perforations From open To end
Type Well - Single - Greenhead - G.C. or G.O. Multiple Single Comingled		Packer Set At 11300	County Lea
Producing Thru Tbg	Reservoir Temp. °F 191 @ 11660	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
L 11660	H 11660	G _g .682	% CO ₂ .13
		% N ₂ 2.05	% H ₂ S 0
		Prover	Meter Run 4.026
			Taps Flg.

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hg	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
1.	4 X 2.000			615	30.00	73	3929.2		Pkr.	choke	
2.							2149	65	Pkr.	18/64	72
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{P_e}$	Pressure P _e	Flow Temp. Factor FL	Gravity Factor F _g	Super. Compress. Factor, F _{sp}	Rate of Flow Q, Mscf
1	19.81	137.28	628.2	.9877	1.211	1.065	3464
2.							
3.							
4.							
5.							

NO.	P _e	Temp. °R	T _e	Z	Gas Liquid Hydrocarbon Ratio	A.P.L. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	94	533	1.40	.882	15.96	55.7 @ 60°	.682	XXXXXX	**666	**379
2.										
3.										
4.										
5.										

$P_e \cdot 3929.2$ $P_e^2 \cdot 15438.6$					(1) $\frac{P_e^2}{P_e^2 - R_e^2} = 1.456$		(2) $\left[\frac{P_e^2}{P_e^2 - R_e^2} \right]^n = 1.397$	
NO.	P _e ²	P _w	P _w ²	P _e ² - P _w ²				
1		2198.9	4835.2	10603.4				
2								
3								
4								
5								

AOF = Q $\left[\frac{P_e^2}{P_e^2 - R_e^2} \right]^n = 4.839$				
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Absolute Open Flow <u>4.839</u> Mscf @ 15.025		Angle of Slope ϕ <u>48.3</u>		Slope, n *** <u>.890</u>	
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Remarks: * = P_c calculated from know BNP. ** = corrected to 2.05% N₂
*** = slope N. taken from orig. 4 pt. test.

Well made 21211 bbls of 55.7 condensate 24 hrs.

Approved By Division	Conducted By W.S.	Calculated By B.M.	Checked By B.M.
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