

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
OCD - ARTESIA

Operator PHILLIPS PETROLEUM COMPANY					Lease or Unit Name LEATHERSTOCKING 18 STATE				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7/25/02				
Completion Date 06/11/02		Total Depth 10,450'		Plug Back TD 13394		Elevation 3601.5		Unit Ltr. - Sec. - TWP - Rge. D,18,18-S,28-E	
Csg. Size 5.5	Wt. 17	d 4.892	Set At 10444	Perforations: From: 10201 To: 10210				County EDDY	
Thg. Size 2.375	Wt. 4.7	d 1.995	Set At 10152	Perforations: From: To:				Pool Illinois Camp; Morrow, North (Gas)	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE					Packer Set At 10106			Formation LOWER MORROW	
Producing Thru TUBING		Reservoir Temp. °F 160		Mean Annual Temp. °F 70		Baro. Press - P _i 13.2		Connection	
I. 10206	H 10206	Gg 0.656	%CO ₂	%N ₂	%H ₂ S	Prover		Meter Run 2.067	Taps FLANGE

FLOW DATA						TUBING DATA		CASING DATA		Duration Of Flow
No.	Prover Line Size	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	
SI										
1.	2.067	1.375	427	34.2	68	2702.8	72			60
2.	2.067	1.375	436	45.9	71	2609.8	72			60
3.	2.067	1.375	444	64.3	68	2500.8	72			60
4.	2.067	1.375	450	102.2	60	2313.8	72			60
5.										

RATE OF FLOW CALCULATIONS							
No.	COEFFICIENT (24 HOUR)	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.	10.2	122.63	439.7	0.9924	1.2347	1.0443	1602
2.	10.2	143.65	449.6	0.9894	1.2347	1.0443	1870
3.	10.2	171.44	457.1	0.9925	1.2347	1.0462	2244
4.	10.2	217.60	463.3	1.0004	1.2347	1.0497	2881
5.							

No.	P _i	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf bbl
1.	0.66	528	1.40	0.917	247.728	
2.	0.67	531	1.41	0.917	A. P. I. Gravity of Liquid Hydrocarbons 56.6	Deg.
3.	0.68	528	1.40	0.914	Specific Gravity Separator Gas 0.656	XXXXXXXXXX
4.	0.69	520	1.38	0.908	Specific Gravity Flowing Fluid	XXXXXX
5.					Critical Pressure 670	P.S.I.A. 669
					Critical Temperature 376	R. 379

P. 2953.3 P _c 8722				
No.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		2742	7519	1204
2.		2654	7041	1681
3.		2549	6495	2227
4.		2376	5647	3076
5.				

(1) $P_2 = 2.8360$

$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$

AOF = Q

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.9263$

$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5550$

Absolute Open Flow 5550	Mcf/d @ 15.025	Angle of Slope θ: 57.8	Slope, n: 0.629
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Remarks: Recorded bottomhole pressures using gauge AMR-10022.

Approved By Division	Conducted By: ARC PRESSURE DATA, INC.	Calculated By: ROD DODSON	Checked By:
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