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appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources

Form C-122
Revised October, 1999

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator CONOCOPHILLIPS Company (#217817)						Lease or Unit Name BUMP PO 36 STATE					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4/15/03					
Completion Date 03/10/03		Total Depth 13,775'		Plug Back TD 13700		Elevation 4101		Well No. 1			
Csg. Size 5.5		Wt. 17		d 4.892		Set At 13774		Perforations: From: 13350 To: 13397		Unit Ltr. - Sec. - TWP - Rge. I. 36.17-2.33-E	
Thg. Size 2.875		Wt. 6.5		d 2.441		Set At 13326		Perforations: From: To:		County LEA	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At 13322		Formation MORROW			
Producing Thru TUBING		Reservoir Temp. °F 178		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection			
L 13377		H 13377		G _g 0.647		%CO ₂ 0.494		%N ₂ 0.558		%H ₂ S 0.0	
				Prover		Meter Run 4.026		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.	
SI							3602	70		
1.	4.026		3.0	479.7	1.4	73	1446	70		60
2.	4.026		3.0	480.3	0.5	85	560	70		60
3.	4.026		3.0	479.7	1.0	86	720	70		60
4.										
5.										

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, Mcf/d
1.	51.64	26.27	492.9	0.9881	1.2432	1.0457	1744
2.	51.64	15.71	493.5	0.9770	1.2432	1.0420	1027
3.	51.64	22.20	492.9	0.9763	1.2432	1.0417	1451
4.							
5.							

No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl
1.	0.73	533	1.44	0.914	N/A	
2.	0.74	545	1.47	0.921	A. P. I. Gravity of Liquid Hydrocarbons N/A	Deg.
3.	0.73	546	1.47	0.922	Specific Gravity Separator Gas 0.647	XXXXXXX
4.					Specific Gravity Flowing Fluid XXXXX	0.647
5.					Critical Pressure 671 P.S.I.A.	671 P.S.I.A.
					Critical Temperature 371 R	371 R

P _c 3602		P _c ² 12973	
No.	P _r ²	P _w	P _w ²
1.		1462	2137
2.		583	340
3.		748	559
4.			
5.			

(1) $P_{c2} = 1.1972$

$\frac{P_{c2}^2 - P_w^2}{P_{c2}^2 - P_w^2}$

AOF = Q

$\left[\frac{P_{c2}^2}{P_{c2}^2 - P_w^2} \right]^n = 1908$

(2) $\left[\frac{P_{c2}^2}{P_{c2}^2 - P_w^2} \right]^n = 1.0942$

Absolute Open Flow 1908		Mcf/d @ 15.025	Angle of Slope θ: 63.4	Slope n: 0.5
Remarks: Only three rates were attempted during the test.				
Approved By Division	Conducted By:	Calculated By:	Checked By:	
		Rod Dodson		

MAY 09 2003

GAS WELL BACK-PRESSURE CURVE

CONOCOPHILLIPS
BUMP PO 36 STATE #1
LEA COUNTY, NM
4/15/03

$n = 0.5$

$\theta = 63.4^\circ$

AOF = 1908 Mcf/day

