

45F
Fik

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 10/30/86	
Company Marathon Oil Company				Connection None		RECEIVED BY NOV 13 1986 O. C. D.	
Pool <i>Wildcat Wolfcamp</i>				Formation Atoka Penn			
Completion Date 6/19/86		Total Depth 9015		Plug Back TD 6420		Elevation	
Csg. Size 7		Wt. 26		Set At 6.276		9015	
Perforations: From 6349 To 6399		ARTESIA, OFFICE		Well No. 1		Farm or Lease Name Ralph Nix	
Thq. Size 2 3/8		Wt. 4.6		Set At 1.995		6285	
Perforations: From Open To End		Unit 29		Sec. 18S		Twp. 26E	
Type Well - Single - Drivenhead - G.G. or G.O. Multiple Single						Packer Set At 6285	
Producing Thru Tbg.		Reservoir Temp. °F 137		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2	
L 6285		H 6285		G _g .695		% CO ₂ .025	
				% N ₂ 1.688		% H ₂ S -0-	
				Prover -0-		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. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							1445				72 hrs.
1.	4 X 1.00			205	6	66	1390				1 hr.
2.	4 X 1.00			215	23	75	1360				1 hr.
3.	4 X 1.00			216	45	74	1298				1 hr.
4.	4 X 1.250			210	35	71	1235				1 hr.
5.	4 X 1.250			205	56	75	1122				1 hr.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	4.753	36.18	218.2	.9943	1.200	1.023	210
2.	4.753	72.45	228.2	.9859	1.200	1.022	416
3.	4.753	101.56	229.2	.9868	1.200	1.022	584
4.	7.469	88.39	223.2	.9896	1.200	1.022	801
5.	7.469	110.54	218.2	.9859	1.200	1.022	998

NO.	R ₁	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.33	526	1.38	.956	Dry		.695	XXXXXX	666	382
2.	.34	535	1.40	.957						
3.	.34	534	1.40	.957						
4.	.34	531	1.39	.957						
5.	.33	535	1.40	.957						

NO.	P _c	P _c ²	P _w	P _w ²	P _c ² - P _w ²
1	1458.2	2126.3	1403.5	1969.9	156.4
2			1374.5	1889.3	237.0
3			1313.9	1726.4	399.9
4			1253.7	1571.7	554.6
5			1144.6	1310.2	816.1

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.605$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.940$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.944$

Absolute Open Flow 1,940	Mcfd @ 15.025	Angle of Slope 55 1/2	Slope, n .694
Remarks:			
Approved By Division			
Conducted By: Duke Services, Inc.		Calculated By: R. Reston	
Checked By: <i>Thomas F. Zappala</i>			