

457
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 03-28-90			
Company Oxy, U.S.A.				Connection		JUL 3 '90	
Pool Punten Flat Morrow				Formation Morrow		Unit O. C. 5	
Completion Date 3-14-90		Total Depth 11,400		Plug Back TD		Elevation	
Csg. Size 5 1/2		Wt. d		Set At		Perforations: From 11016 To 11259	
Tbg. Size 2 3/8		Wt. 4.7		Set At 1.995		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10956		County Eddy	
Producing Thru TGB		Reservoir Temp. °F 185 @ 11138'		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2	
L *11138		H 11138		G _g .629		% CO ₂ 1.60	
				% N ₂ .58		% H ₂ S ---	
				Prover		Meter Run 3.068	
						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							3185		PKR		48 hrs.
1.	3	X	1.500	370	5.00	68	2861		PKR		1 hr.
2.	3	X	1.500	440	12.00	74	2457		PKR		1 hr.
3.	3	X	1.500	410	23.00	58	2025		PKR		1 hr.
4.	3	X	1.500	380	28.00	55	1552		PKR		1 hr.
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, Mcfd
1	11.13	43.77	383.2	.9924	1.261	1.038	633
2	11.13	73.75	453.2	.9868	1.261	1.040	1,062
3	11.13	98.66	423.2	1.002	1.261	1.042	1,446
4	11.13	104.9	393.2	1.005	1.261	1.039	1,537
5							

					DRY GAS	
NO.	R ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	.56	528	1.41	.929	A.P.I. Gravity of Liquid Hydrocarbons	DRY
2	.67	534	1.46	.924	Specific Gravity Separator Gas	.629
3	.62	518	1.42	.921	Specific Gravity Flowing Fluid	X X X X X
4	.58	515	1.41	.926	Critical Pressure	**675
5					Critical Temperature	**364

P _c 3317.7 P _c ² 11007.1			
NO.	P ₁ ²	P _w	P _w ²
1		2893.1	8370.0
2		2503.0	6265.0
3		2061.0	4247.7
4		1677.0	2812.3
5			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.628$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,196$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.519$$

Absolute Open Flow	2,196	Mcf/d @ 15.025	Angle of Slope θ	49.5	Slope, n	.858
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Remarks: * = Mid perms. ** = corrected to 1.60% N₂
Test calculated from known BHP's both static & flowing

Approved By Division	Conducted By:	Calculated By:	Checked By:
		BM	BM