

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 7 5 90			
Company AMOCO PRODUCTION CO				Connection AIR				JUL 20 90	
Pool EMPIRE SOUTH MORROW GAS				Formation ATOKA GAS				Unit C. C. D.	
Completion Date 3 29 90		Total Depth 11165		Plug Back TD 10389		Elevation		Form of Lease Name EMPIRE SOUTH DEEP	
Coq. Size 5.500	Wt. 17.0	d 4.892	Set At 11165	Perforations: From 10191 To 10212		Well No. 12			
Thq. Size 2.375	Wt. 4.7	d 1.995	Set At 10007	Perforations: From To		Unit Sec. Twp. Rge. S5 T18S R29E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At 10007		County EDDY	
Producing Thru TBG GAS		Reservoir Temp. °F 160 @ 10202		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 13.2		State NM	
L 10202	H 10202	Gg .708	% CO ₂ .22	% N ₂ 1.16	% H ₂ S	Prover	Meter Run 3.0	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.		Temp. °F
SI							923	60			72.0
1.	3.00X.750			145	4.0	90	659	60	0	0	1.0
2.	3.00X.750			155	10.0	80	629	60	0	0	1.0
3.	3.00X.750			150	31.0	76	588	60	0	0	1.0
4.	3.00X.750			150	61.0	72	562	60	0	0	1.0
5.											

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							
2	2.67	25.16	158.2	.9723	1.1885	1.0150	79.
3	2.67	41.01	168.2	.9813	1.1885	1.0170	130.
4	2.67	71.13	163.2	.9850	1.1885	1.0169	226.
5	2.67	99.78	163.2	.9887	1.1885	1.0174	319.

NO.	P _r	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	.24	550	1.41	.971	2.8	49.0	.708	X X X X X X X X	666.	389.
2	.25	540	1.39	.967				X X X X X	P.S.I.A. 631.	R 610.
3	.25	536	1.38	.967						
4	.25	532	1.37	.966						
5										

NO.	P _c	P _w	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1	936.2	876.		1.6087	1.6087
2	452	673	423		
3	412	554	570		
4	361	602	514		
5	331	576	545		

Absolute Open Flow 513 Mcfd @ 15.025				Angle of Slope 45.0		Slope, n 1.000	
Remarks: CHOKE SIZE 1ST RATE 5/64 2ND RATE 6/64 3RD RATE 8/64 4TH RATE 10/64							
Approved By Division		Conducted By: BENNETT CATHEY		Calculated By: JIM SMITH		Checked By: MONTY RANDOLPH	