

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 10-20-80	
Company Caulkins Oil Company				Connection			
Pool Otero Chacra Blanco Mesa Verde				Formation Chacra Mesa Verde		Commingle	
Completion Date 10-13-80		Total Depth 7400		Plug Back TD 7400		Elevation 6482	
Csg. Size 4 1/2 & 7"		WI. 11.6 23.0		Set At 6490- 7400, 6620		Perforations: From 3776 To 5286	
Tbg. Size 1 1/4"		WI. 2.3		Set At 5340		Perforations: From 5340 To	
Type Well - Single - Blindhead - G.C. or G.O. Multiple Gas - Gas Multiple						Packer Set At 5389	
Producing Thru Tubing		Reservoir Temp. °F #		Mean Annual Temp. °F		Baro. Press. - P _a	
L		H		G _g		Prover	
				% CO ₂		% H ₂ S	
						Meter Run	
						Taps	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Duration of Flow
51							7 Days
1.	3/4" Choke						3 Hours
2.							
3.							
4.							
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 _{sp}	Rate of Flow Q, Mcfd
1	14.1605		109	1.000	1.000	1.000	1,543
2.							
3.							
4.							
5.							
NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.		
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.		
2.					Specific Gravity Separator Gas _____ XXXXXXXXXX		
3.					Specific Gravity Flowing Fluid _____ XXXXX		
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.		
5.					Critical Temperature _____ R _____ R		
P_c 1483 P_c^2 2,199,289 NO. P_t^2 P_w^2 $P_c^2 - P_w^2$ (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.628$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.44115$							
1		921	848,241	1,351,048			
2							
3							
4							
5							
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,224$							
Absolute Open Flow 2,224				Mcf @ 15.025		Angle of Slope 75	
Slope, n _____							
Remarks: _____							

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-177
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 10-20-80	
Company Caulkins Oil Company				Connection			
Pool Basin Dakota				Formation Dakota		Unit	
Completion Date 10-13-80		Total Depth 7400		Plug Back TD 7400		Elevation 6482	
Farm or Lease Name Breach A						Well No.	
Csg. Size 4 1/2" & 7"		Wt. 11.6 23.0		d 4.000 6.366		Set At 6490- 7400, 6620	
Perforations: From 7130 To 7356		Perforations: From 7322 To		Well No. 175E		Unit Sec. Twp. Rge. B 8 26N 6W	
Type Well - Single - Blindhead - G.C. or G.O. Multiple Gas - Gas Multiple				Packer Set At 5389		County Rio Arriba	
Producing Thru Tubing		Reservoir Temp. °F		Mean Annual Temp. °F		Baro. Press. - P _a	
State New Mexico		Prover		Meter Run		Taps	
L		H		Gg		% CO ₂	
						% N ₂	
						% H ₂ S	
						Prover	
						Meter Run	
						Taps	

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							1603		PKR		7 Days
1.	3/4" Choke						193		PKR		3 Hours
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super. Compres. Factor F _{sp}	Rate of Flow Q, Mcfd
1	14.1605		205	1.000	1.000	1.000	2,903
2.							
3.							
4.							
5.							

NO.	P _t	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							XXXXXXX	XXXXX	P.S.I.A.	P.S.I.A.
2.									R	H
3.										
4.										
5.										

NO.	P _t	P _w	P _c	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	42,025	512	262,534	2,345,691	1.112	1.0828
2.						
3.						
4.						
5.						

NO.	P _t	P _w	P _c	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1					3,143
2.					
3.					
4.					
5.					

Absolute Open Flow	3,143	Mcfd @ 15.025	Angle of Slope @	75	Slope, n
Remarks:					