

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 10-19-95	
Company Union Oil Co. of Calif.		Connection Sid Richardson	
Pool Red Hills Wolfcamp Gas		Formation Wolfcamp	
Completion Date 10-5-95		Total Depth 14,845'	Plug Back TD 14,750'
Elevation 3374' GR		Farm or Lease Name Red Hills "28" Federal Com.	
Csq. Size 5"	Wt. 18#	d 4.276	Set At 14,845'
Perforations: From 13,530' To 13,678'		Well No.	
Thg. Size 2 7/8"	Wt. 7.9#	d 2.323	Set At 13,521'
Perforations: From To		Unit Sec. Twp. Rge. E 28 25-S 33-E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 13,215'	County Lea
Producing Thru Tbg	Reservoir Temp. °F 186 @ 13,400	Mean Annual Temp. °F	Baro. Press. - P _a 13.2
State New Mexico			
L 13,521	H 13,521	G _g 0.696	% CO ₂ 0.17
		% N ₂ 1.90	% H ₂ S -
Prover		Meter Run 6"	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							7410				36 hrs
1.	6	x	2.75	28.8	7.5	72	6910	72	410		1 hr
2.		✓		34.8	17.0	76	6340	98	410		1 hr
3.		✓		44.8	33.0	80	5270	98	450		1 hr
4.		✓		50.8	54.0	82	3950	94	500		1 hr
5.							900	94	500		192 hr

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	36.99	17.8	42	0.9887	1.19866	1.005	782
2.	✓	28.6	48	0.985	✓	✓	1254
3.	✓	43.7	58	0.9813	✓	✓	1913
4.	✓	58.8	64	0.9795	✓	✓	2566
5.							1024

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.06	532	1.38	0.99	44.5	
2.	0.07	536	1.39	✓	54.8	
3.	0.09	540	1.40	✓	0.696	XXXXXXX
4.	0.10	542	1.40	✓	XXXXXX	0.761
5.					665	664 P.S.I.A.
					386	405 °R

NO.	P _i ²	P _w	P _w ²	P _e ² - P _w ²
1	47931		47951	7152
2	40363		40411	14693
3	27912		28023	27080
4	15707		15867	39237
5	834		853	54251

(1) $\frac{P_e^2}{P_e^2 - P_w^2} = 1.016$

AOF = Q $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1035$

(2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.010$

Absolute Open Flow	1035 Mcfd @ 15.025	Angle of Slope °	Slope, n .656
Remarks:			
Approved By Division			
Conducted By: Ted Paul		Calculated By: Ted Paul	
Checked By:			

