

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

JUL 6 1982

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 6/28/82		O. C. D. ARTESIA, OFFICE	
Company Harvey E. Yates Company		Connection None		Unit	
Pool <u>Wildcat morrow</u> Undesignated		Formation Morrow		Unit	
Completion Date 6/19/82		Total Length 12574'		Plug Back TD 11912'	
Elevation 3767.2 GR		Farm or Lease Name Mesquite 34 Federal		Well No.	
Cas. Size 4 1/2"	Wt. 11.6	d 3.920	Set At 12574'	Perforations: From 11821 To 11893 (OA)	
Tbg. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 11779'	Perforations: From Open To Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single			Packer Set At 11779'		County Eddy
Producing Thru Tbg		Reservoir Temp. *F 170 @ 12574		Mean Annual Temp. *F 60	
Baro. Press. - P _a 13.2		State New Mexico		Prover Meter Run 2.900	
L 11857	H -	G _g 0.6719	% CO ₂ 0.349	% N ₂ 1.516	% H ₂ S -
FLOW DATA			TUBING DATA		CASING DATA
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w
NO.	Temp. *F	Press. p.s.i.g. DWT	Temp. *F	Press. p.s.i.g.	Temp. *F
1	2.900	5/64	0.750	500	3
2	2.900	65/64	0.750	500	7
3	2.900	7.5/64	0.750	500	5
4	2.900	10.5/64	0.750	510	27
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
NO.	Super Compress. Factor, F _{sp}	Rate of Flow Q, M. D.			
1	2.675	39.24	513.2	0.9777	1.220
2	2.675	59.94	513.2	0.9777	1.220
3	2.675	50.66	513.2	0.9750	1.220
4	2.675	118.85	523.2	0.9804	1.220
5					
NO.	R	Temp. *R	T _r	Z	Gas Liquid Hydrocarbon Ratio
NO.	A.P.G. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas		Specific Gravity Flowing Fluid	
1	0.77	544	1.45	0.914	7.483 Mcf/bbl.
2	0.77	544	1.45	0.914	57.0 Deg.
3	0.77	547	1.46	0.916	0.6719 XXXXXX
4	0.78	541	1.44	0.910	XXX XX
5					
P _c 5324.2		P _c ² 28347.1		Critical Pressure 670 P.S.I.A.	
Critical Temperature 375				R	
NO.	P _i ²	P _w *	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.72$
1		4727.2	22346.4	6000.7	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.816$
2		4306.2	18543.4	9803.7	
3		3488.2	12167.5	16179.6	
4		2618.2	6855.0	21492.1	
5					
Absolute Open Flow 500		Mcf/d @ 15.025		Angle of Slope @ 49° 12'	
Slope, n 0.863					
* BOTTOM HOLE PRESSURE @ (-8095)11857' USED FOR PRESSURE CALCULATIONS					
WELL PRODUCED 5.0 BBL/DIST. IN 4.0 HOURS = 30.0 BD/D					
Approved By Division		Conducted By:		Calculated By:	
Joe A. Coleman		Joe A. Coleman		Checked By: PE #2208	
Joe A. Coleman		Joe A. Coleman		Joe A. Coleman	

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