

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Revised 9-1-63

4/5F
File

Type Test: ☒ Initial 4 POINT ☐ Annual ☐ Special						Test Date: 3-3-83		RECEIVED	
Company: ROBERT ENFIELD ✓				Connection: AIR NEW WELL				MAR 16 1983	
Pool: EAST LAKE MORROW				Formation: MORROW				Unit: <u>O.C. D.</u>	
Completion Date: 2-25-83		Total Depth: 10070		Plug Hole: 9995		Elevation: 3288		Form of Lease Name: DOUGLAS	
Well Size: 5.700	Wt.: 17.0	d: 4.892	Set At: 10070	Perforations: From 9626 To 9771		Well No.: #1			
Trg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 9553	Perforations: From 0 To 0		Unit: 7		Sec. 195	
Type Well - Single - (Packerhead - G.O. or G.O. Multiple)				Packer Set At: 9547		County: EDDY			
Producing thru TUBING		Reservoir Temp. °F: 172 @ 9698		Mean Annual Temp. °F: 60.0		Baro. Press. - P _a : 13.2		State: NEW MEXICO	
L: 9698	H: 9698	Q _g : 0.780	% CO ₂ : 10.55	% N ₂ : 3.43	% H ₂ S: 0	Prover: 0	Meter Run: 2.1	Tape: FLANGE	

FLOW DATA						TUBING DATA		B.H.P. 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.	
SI							2615		3379	220.2
1.	2.07 X 0.750			400	8.0	98	2492	68	3252	4/64
2.	2.07 X 0.750			430	12.0	90	2325	65	3062	7/64
3.	2.07 X 0.750			445	34.0	73	1987	60	2700	8.5/64
4.	2.07 X 0.750			405	51.0	73	1602	60	2177	9.5/64
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, McM
1	2.71	57.49	413.2	0.9653	1.1323	1.0366	176
2	2.71	72.93	443.2	0.9723	1.1323	1.0409	226
3	2.71	124.82	458.2	0.9877	1.1323	1.0476	396
4	2.71	146.04	418.2	0.9877	1.1323	1.0433	462
5							

NO.	P ₁	Temp. °R	Q	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	0.59	558	1.44	0.931	0	0	0.780	XXXXXX	704	388
2	0.63	550	1.42	0.923						
3	0.65	553	1.38	0.911						
4	0.59	533	1.38	0.919						
5										

NO.	P ₁ ²	P _w ²	R _w ²	P ₁ ² - R _w ²
1	10662	2356	5552	462
2	9457	2215	4906	1108
3	7361	1954	3818	2159
4	4797	1590	2527	3487
5				

(1) $\frac{P_c^2}{R_w^2 - R_w^2} = 1.7247$

AOF = Q $\left[\frac{R_w^2}{R_c^2 - R_w^2} \right]^n = 607$

(2) $\left[\frac{R_c^2}{R_c^2 - R_w^2} \right]^n = 1.3151$

Absolute Open Flow: 607	Mcf @ 15.025	Angle of Slope: 63.3	Slope, n: 0.503
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Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENTS.

Approved By Commission:	Conducted By: RICHARD TOWNLEY	Calculated By: BENNETT & CATHEY	Checked By:
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