

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form 9177
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6-23-77	
Company Morris R. Antweil				Connection Pending	
Pool Wildcat				Formation Morrow	
Completion Date 6-23-77		Total Depth 8830		Plug Back TD 8725	
Csg. Size 5.5		Wt. 17#		Elevation 3573 GR.	
Perforations: From 8634 To 8662		Well No. /		Farm or Lease Name PENASCO	
Tub. Size 2-3/8		Wt. 4.70		Unit 0	
Perforations: From To		Sec. 20-		Twp. 185-25-E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 8573	
Producing Thru Tubing				State New Mexico	
Reservoir Temp. °F 160 @ 8573		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2	
L 8573		H 8573		G _g .614	
% CO ₂ .547		% N ₂ .761		% H ₂ S 0.0	
Prover 3.068		Meter Run 3.068		Taps Flange	

FLOW DATA						TUBING DATA		CASING DATA		Range	
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	Duration of Flow
SI							2703		Packer		Days
1.	3.068"x1.250"			300	36	94	2639	74			1 hr.
2.	3.068"x1.250"			382	53	71	2609	74			1 hr.
3.	3.068"x 1.250"			604	67	60	2558	74			1 hr.
4.	3.068"x 1.500"			610	52	43	2489	74			1 hr.
5.											

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.	7.577	106.185	313.2	.9688	1.2762	1.054	1049
2.	7.577	144.726	395.2	.9896	1.2762	1.083	1500
3.	7.577	203.353	617.2	1.0000	1.2762	1.167	2295
4.	11.13	180.018	623.2	1.0168	1.2762	1.209	3143
5.							

NO.	P _t	Temp. °R	T _t	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.	.47	554	1.20	.091	382	52.6	.614	X X X X X	672	359
2.	.59	531	1.15	.852				X X X X X		
3.	.92	520	1.13	.734						
4.	.93	503	1.09	.684						
5.										

P _c	2716.2	P _c ²	7377.7		
NO	P _t ²	P _w	P _w ²	P _c ² - P _w ²	
1	7034.2	2657.5	7062.3	315.4	
2	6875.9	2633.3	6934.3	443.4	
3	6611.1	2597.8	6748.6	629.1	
4	6261.0	2554.1	6523.4	854.3	
5					

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 8.636$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 27,143$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 8.636$

POSTED 460

ID-2

7-8-77

Absolute Open Flow	27,143	Mcfd @ 15.025	Angle of Slope @	45.0	Slope, n	1.000
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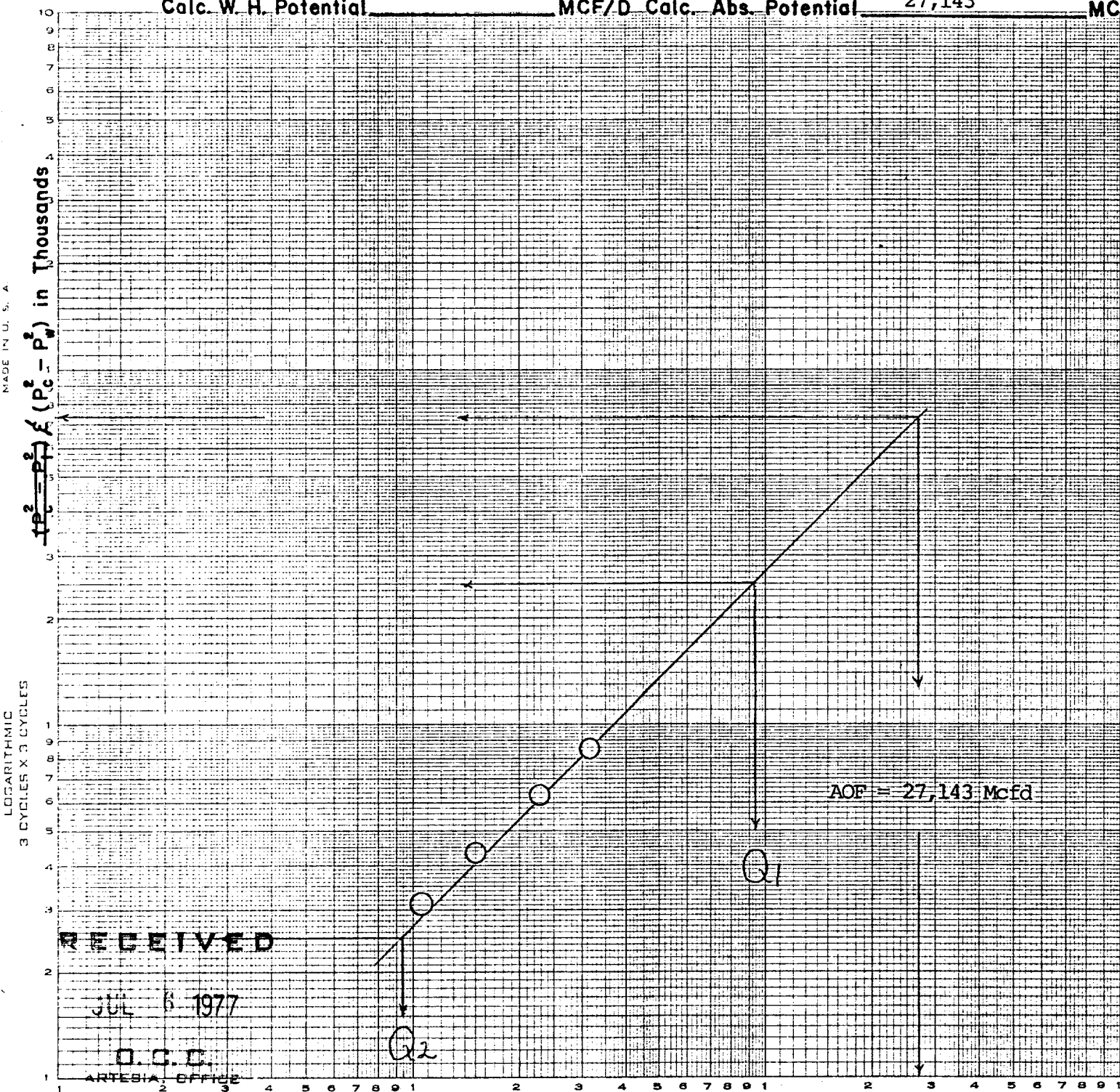
Remarks:

Approved By Commission:	Conducted By: Cone & Kerley, Inc.	Calculated By: Bill Kerley	Checked By:
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POSTED BOOK
ID-2400K
7-8-77

BACK PRESSURE CURVE

Operator MORRIS R. ANTWELL Lease PENASCO Well No. 1
 County EDDY Field Wildcat Location Unit D, Sec. 20, TWP. 18-S
 Date of Test 6-23-77 Slope "n" 1.000 W.H. Abs. Rge. 25-E
 Calc. W.H. Potential MCF/D Calc. Abs. Potential 27,143 MCF/D



Q in MCF/Day

Q₁ = 9400 Mcfd

Q₂ = 940 Mcfd

Log Q₁ = 3.97313

Log Q₂ = 2.97313

n = 1.00000