

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT, ID ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-85

RECEIVED

JUL 28 1982

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6-6-82		RECEIVED JUL 28 1982 O. C. D. ARTESIA, OFFICE Rook RK State	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			
Pool Und. Abo				Formation Abo		Unit O. C. D.	
Completion Date 3-25-82		Total Depth 4300'		Plug Back TD 4066'		Elevation 3621' GR	
Csg. Size 4-1/2"	Wt. 9.5#	d 4.090	Set At 4197	Perforations: From 3764 To 3917		Well No. 3	
Tub. Size 2-7/8"	Wt. 6.5#	d 2.441	Set At 3738	Perforations: From - To -		Unit Sec. Twp. Rge. L 2 8S 25E	
Type Well - Single - Prodenhead - G.G. or G.O. Multiple Single				Packer Set At -		County Chaves	
Producing Thru tubing		Reservoir Temp. °F 104 @ 3.841		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2	
State New Mexico							
L 3738	H 3738	G _g .678	% CO ₂ 3.14	% N ₂ 6.68	% H ₂ S -	Prover -	Meter Run 2"
						Taps Flanged	

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							980				days
1.	2.067	x	1.000	230	13.4	60	854	72			24 hrs
2.	2.067	x	1.000	220	19.7	60	836	77			24 hrs
3.	2.067	x	1.000	210	31.0	60	734	77			24 hrs
4.	2.067	x	1.000	210	52.6	60	560	78			24 hrs
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 _{pv}	Rate of Flow Q, Mcfd
1	4.946	57.1	243.2	1.000	1.214	1.020	350
2	4.946	67.8	233.2	1.000	1.214	1.020	475
3	4.946	83.2	223.2	1.000	1.214	1.021	510
4	4.946	108.4	223.2	1.000	1.214	1.022	665
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	.33	520	1.45	.961	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	.33	520	1.45	.961	Specific Gravity Separator Gas .678 X X X X X X X X
3.	.35	520	1.45	.959	Specific Gravity Flowing Fluid X X X X X
4.	.36	520	1.45	.958	Critical Pressure 669 P.S.I.A. 669 P.S.I.A.
5.					Critical Temperature 357 °R 357 °R

$P_c = 980$ $P_c^2 = 960.4$					$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.525$	$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.286$
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²		
1	751.9		752.5	207.9		
2	722.1		723.1	237.3		
3	559.2		560.4	400.0		
4	328.6		330.7	629.7		
5						

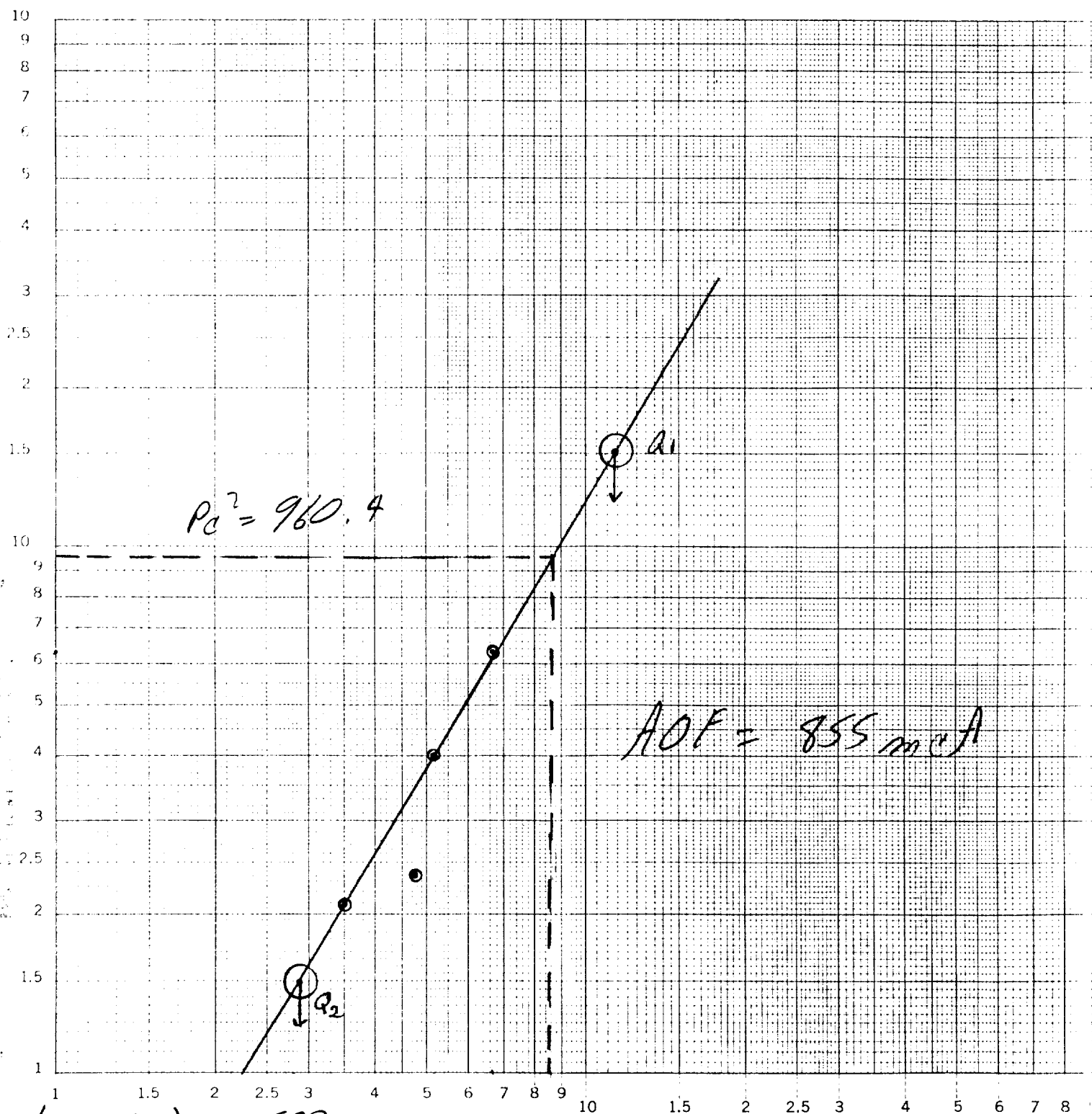
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 855 \text{ mcf}$

Absolute Open Flow 855 Mcfd @ 15.025 Angle of Slope θ _____ Slope, n .596

Remarks: _____

Approved By Commission:	Conducted By: David Weaver	Calculated By: Brent Mulliniks	Checked By:
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YATES 101
ROCK #3



$$(P_c^2 - P_w^2)_1 = 1500$$

$$(P_c^2 - P_w^2)_2 = 150$$

$$Q_1 = 1140$$

$$Q_2 = 289$$

$$\log Q_1 = 3.05690$$

$$\log Q_2 = 2.46090$$

$$N = .59601 \quad N = .596$$

WORKSHEET FOR CALCULATION OF STEAM COLUMN WELLHEAD PRESSURE (P_w)

Form C-1220
Revised 9-1-65

COMPANY

4405 P-1

LEASE

Root

WELL NO.

3

DATE

7-26-62

LOCATION: Unit

1

Section

2

Temperature

8

Range

25

3738

3738

LR

1,000

6,678

% CO₂

3.15

% H₂S

6.68

2,491

0.010763

OR *2534*

P_{cr} *669*

T_{cr}

357

TABLE 1 & 2

LINE	Rate 1	Rate 2	Rate 3	Rate 4				
1	.350	.475	.510	.665				
2	520	520	520	520				
3	532	537	537	538				
4	526	528.5	528.5	529.				
5	.863	.867	.880	.911				
6	453.94	458.21	465.08	481.34				
7	5.576	5.530	5.449	5.264				
8	1.233	1.230	1.229	1.218				
9	1.89	1.87	1.85	1.79				
10	867.2	849.2	747.2	573.2				
11	751.9	722.1	559.2	328.6				
12	.010835	.01083	.01083	.01083				
13	4.886	4.932	5.006	5.141				
14	1.710	2.383	2.553	3.145				
15	2.924	5.044	6.519	11.421				
16	.553	1.026	1.206	2.125				
17	752.5	723.1	560.4	330.7				
18	427.8	889.4	682.6	402.1				
19	463.2	443.1	829.2	634.6				
20	415.2	846.4	288.5	603.9				
21	1.37	1.34	1.18	.90				
22	1.47	1.49	1.48	1.44				
23	.012	.012						