

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5-27-82		JUL 21 1982 O. C. D. ARTESIA, OFFICE	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			
Pool Pecos Slope Abo				Formation Abo		Unit L-6997	
Completion Date 12-9-81		Total Length 4685'		Plug Back TD 4629		Elevation 3675	
Casing Size 4-1/2"		WT. 9.5#		ID 4.090		Set At 4685'	
Perforations: From 3878' To 4051'						Well No. 1	
Perforations: From - To -						Unit Sec. Twp. Rge. J 32 7S 26E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At -		County Chaves	
Producing thru Tubing		Reservoir Temp. °F 93° @ 3965		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2	
State New Mexico							
L 4685		H 4685		G _g .663		% CO ₂ 1.87	
						% N ₂ 5.99	
						% 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							1010				days
1.	2.067	x	.625	730	21.5	62	932	88			24 hrs
2.	2.067	x	.625	720	26.2	62	905	88			24 hrs
3.	2.067	x	.625	710	33.3	62	872	88			24 hrs
4.	2.067	x	.625	710	50.2	62	865	88			24 hrs
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mscf
1	1.866	126.5	743.2	.9981	1.228	1.054	305
2	1.866	138.7	733.2	.9981	1.228	1.055	335
3	1.866	155.3	723.2	.9981	1.228	1.056	375
4	1.866	190.5	723.2	.9981	1.228	1.056	460
5							

NO.	G	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/Lbl.
1	.89	522	1.45	.900	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.91	522	1.45	.898	Specific Gravity Separator Gas .663 _____
3	.92	522	1.45	.897	Specific Gravity Flowing Fluid _____
4	.92	522	1.45	.897	Critical Pressure 667 _____ P.S.I.A.
5					Critical Temperature 358 _____ R

P _c 1010 P _c ² 1020.1				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.155$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.377$	
NO.	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1093 \text{ mcf}$			
1	894.7	896.2	123.7				
2	843.3	845.1	175.0				
3	783.2	785.4	234.7				
4	771.2	774.6	245.5				
5							

Absolute Open Flow 1093 mcf		Mcf @ 15.025		Angle of Slope @ _____		Slope, n .608	
Remarks: _____							
Approved By Division		Conducted By: David Weaver		Calculated By: Brent Mulliniks		Checked By:	

COMPANY

PLEASE

卷一百一十五

DATE 7-19-57

LOCATION: Unit

Section

Township

Range 26

47

II

L/HU

9

465

% CO₂

%N

% H₂S

2

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工

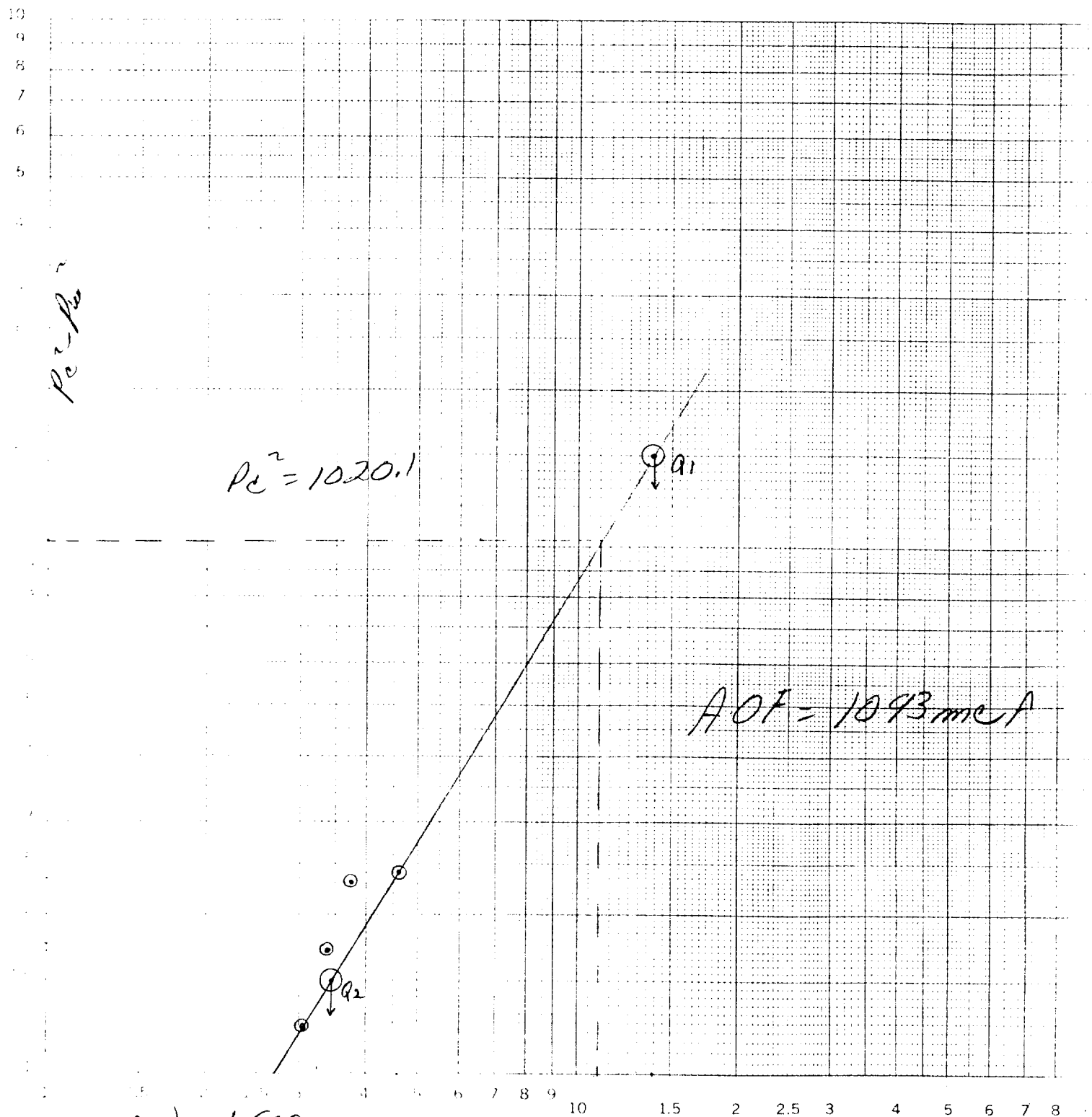
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cr -

TABLE IX
10

LINE	note 1	note 2	note 3	note 4
1 Q_m	.305	.335	.325	.460
2 T_w (W.H. °R)	522	522	522	522
3 T_s (B.H. °R)	548	548	548	548
4 $T = (\frac{1}{W} + \frac{1}{S})$	535	535	535	535
5 Z (Est.)	.853	.858	.862	.864
6 T_z	456.35	459.03	461.17	462.29
7 CH/TZ	6.800	6.766	6.735	6.719
8 e^S (Table XIV)	1.291	1.289	1.287	1.287
9 $1-e^S$ (Table XIV)	.225	.224	.223	.223
10 P_1	945.2	918.2	915.2	878.2
11 $P_1^2/1000$	894.7	993.3	973.2	771.2
12 F_1 (Table XV)	.01823	.01823	.01823	.01823
13 $F_0 = F_1 T_2$	8.317	8.368	8.407	9.427
14 Q_m	2.537	2.803	3.153	3.716
15 $L/H (F_0 Q_m)^2$	6.438	7.459	9.939	15.025
16 $F_w = L/H (F_0 Q_m)^2 (1-e^S)$	1.949	1.760	2.216	2.946
17 $P_w^2 = P_1^2 + F_w$	896.1	845.1	785.4	774.6
18 $P_s^2 = e^S P_w^2$	1157.0	1089.3	1010.8	986.8
19 F_s	1075.6	1043.7	1008.4	973.4
20 $F = (F_1 + P_s)$	1010.4	991.0	945.2	930.4
21 $F_1 = (F/P_s)$	1.52	1.47	1.42	1.40
22 $T_r = (T/T_c)$	1.49	1.49	1.49	1.49
23 Z (Table XI)	.953	.958	.862	.864

Notes for
Pennzoil #1



$$(P_e^2 - P_w^2)_1 = 1,500$$

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

$$Q_1 = 1399$$

$$Q_2 = 395$$

$$\log Q_1 = .319582$$

$$\log Q_2 = 2.53782$$

$$N = .60800 \quad N = .608$$