

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS
MAR 29 1983

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3/22/83		O. C. D.	
Company Harvey E. Yates Company				Connection None		ARTESIA, OFFICE	
Well Undesignated <i>Abo</i>				Formation <i>Abo</i>		Unit	
Completion Date 6/11/82		Total Depth 6385'		Plug Back TD 6307 6064		Elevation 3812' GL	
Casing Size 5 1/2"		Wt. 15.5		Set At 4.950		6385'	
Perforations: From 4912' To 4929'		Well No. 1		Part or Lease Name Seymour State <i>Corn</i>			
Trp. Size 2 1/16"		Wt. 3.25		Set At 1.751		4818'	
Perforations: From Open To Ended		Unit E		Sec. 18		Twp. 9s	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple G.G. Dual		Packer Set At None		County Chaves		State New Mexico	
Producing Thru Tubing		Reservoir Temp. °F 122 @ 4818'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 4818'		H 4818		G _g .644		% CO ₂ 2.25	
				% N ₂ 4.67		% H ₂ S -	
				Prover 2"		Meter Run 1	
						Taps -	

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. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							665		392		72.0 hrs
1.	2	X	0.0625	655	-	72	655	63	390		1.0 hr
2.	2	X	0.0937	642	-	64	642	62	388		1.0 hr
3.	2	X	0.1250	610	-	61	610	61	386		1.0 hr
4.	2	X	0.1875	525	-	58	525	60	383		1.0 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, Mscf/d
1	.06405	-	668.2	.9887	1.246	1.054	56
2	.1410	-	655.2	.9962	1.246	1.055	121
3	.2648	-	623.2	.9990	1.246	1.054	217
4	.6082	-	538.2	1.002	1.246	1.047	428
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.
1	.96	532	1.48	.901	A.P.I. Gravity of Liquid Hydrocarbons	-	Deg.
2	.94	524	1.46	.898	Specific Gravity Separator Gas	.644	X X X X X X X X
3	.89	521	1.45	.900	Specific Gravity Flowing Fluid	X X X X X	
4	.77	518	1.44	.912	Critical Pressure	699	P.S.I.A. - P.S.I.A.
5					Critical Temperature	360	R - R

NO.	P _r	P _w	P _r ²	P _w ²	P _r ² - P _w ²
1	668.3	446.6	446.6	13.4	
2	655.6	429.8	429.8	30.2	
3	624.5	390.0	390.0	70.0	
4	544.2	296.1	296.1	163.9	
5					

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 2.807$

AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 980.12$

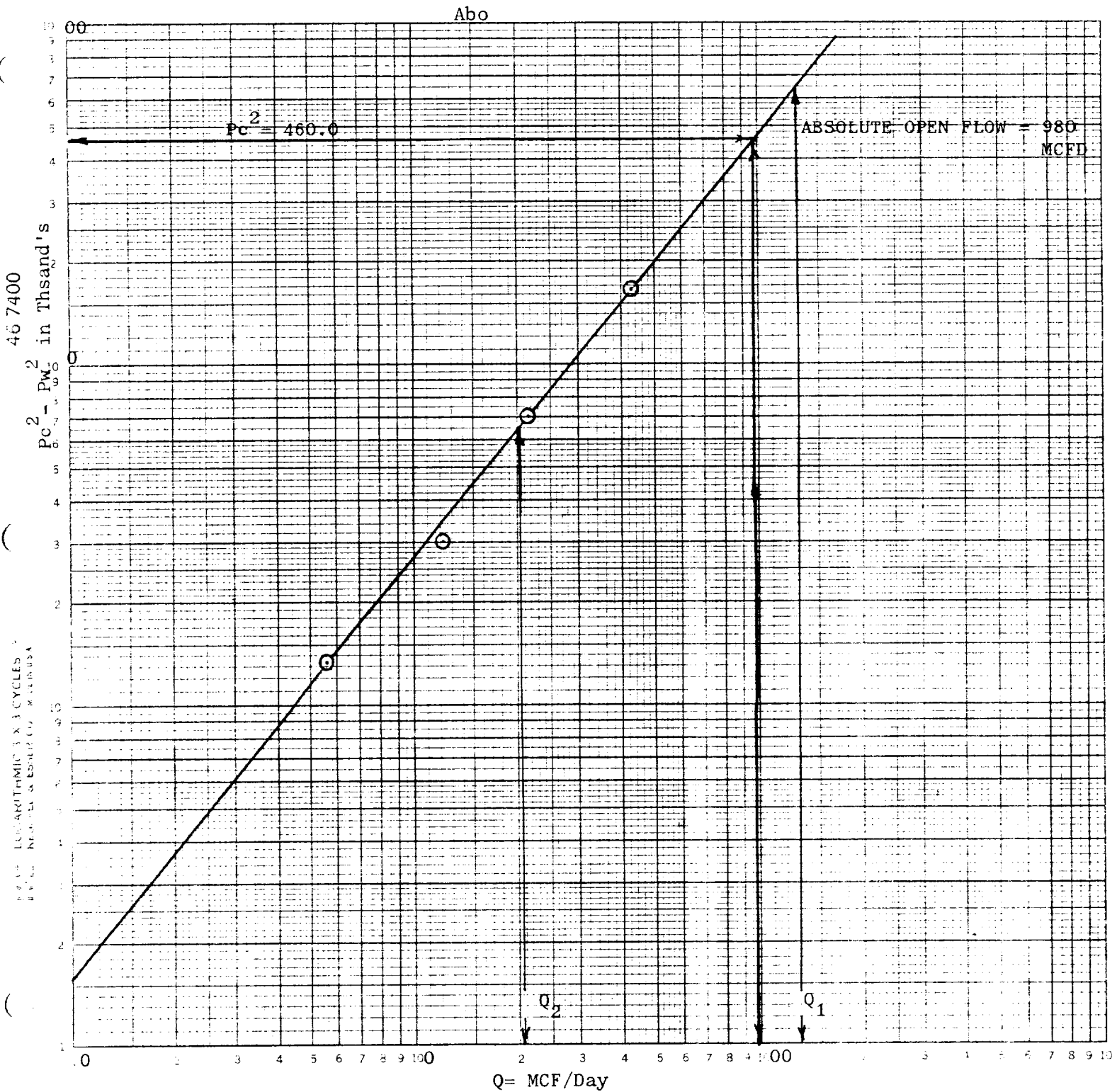
(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2.290$

Absolute Open Flow	980	Mcf/d @ 15.025	Angle of Slope @	51° 16'	Slope, n	802
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Remarks:

Approved By Division	Conducted By:	Calculated By:	Checked By: PE # 2208
JARREL WELL TESTING	R.E. Reston	Joe A. Coleman	

COMPANY: Harvey E. Yates Company
 WELL: Seymour State, No. 1
 LOCATION: E 18 9s 27e
 COUNTY: Chaves
 DATE: March 22, 1983



$$Q_1 = 1300 \text{ MCFD}; \quad \text{Log } Q_1 = 3.113943$$

$$Q_2 = 205 \text{ MCFD}; \quad \text{Log } Q_2 = 2.311754$$

$$N = 0.802189 = 0.802$$