

MAR 29 1983

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3/21/83						O. C. D. ARTESIA, OFFICE							
Company Harvey E. Yates Company						Connection Trans Western Pipeline Co.													
Pool Four Ranch Pool - Permian Undesignated						Formation Atoka						Unit							
Completion Date 6/11/82				Total Depth 6385'				Plug Back TD -6307'6064				Elevation 3812'GL				Farm or Lease Name Seymour State <i>com</i>			
Casing Size 5 1/2"		Wt. 15.5		d 4.950		Set At 6385'		Perforations: From 5826' To 6048'				Well No. 1							
Tub. Size 2 1/16"		Wt. 3.25		d 1.751		Set At 5864		Perforations: From Open To End				Unit Sec. Twp. Page E 18 9s 27e							
Type Well - Single - Bradenhead - G.G. or G.O. Multiple G.G. Dual								Packer Set At 5864'				County Chaves							
Producing Thru Tubing				Reservoir Temp. °F 133 @ 5864'				Mean Annual Temp. °F 60°				Baro. Press. - P _a 13.2				State New Mexico			
L 5864'		H 5864'		G _g .636		% CO ₂ .710		% N ₂ 3.62		% H ₂ S -		Prover -		Meter Run 2.068		Taps F			

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							1067		PACKER		72.0 hrs
1.	2.068	4/64	625	500	2	60	974	62			1.0 hr
2.	2.068	5.5/64	625	460	3	56	887	62			1.0 hr
3.	2.068	6.5/64	625	450	6	56	665	62			1.0 hr
4.	2.068	9/64	625	430	9	56	475	62			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	1.866	32.04	513.2	1.00	1.254	1.040	78
2	1.866	37.68	473.2	1.004	1.254	1.038	92
3	1.866	52.72	463.2	1.004	1.254	1.038	129
4	1.866	63.16	443.2	1.004	1.254	1.038	154
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/bbl.
1	.77	520	1.46	.925	A.P.I. Gravity of Liquid Hydrocarbons	-	Deg.
2	.71	516	1.45	.929	Specific Gravity Separator Gas	.636	XXXXXX
3	.70	516	1.45	.929	Specific Gravity Flowing Fluid	XXXXX	
4	.67	516	1.45	.929	Critical Pressure	663	P.S.I.A.
5					Critical Temperature	357	°R

P _c 1080.2 P _c ² 1166.8				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.258$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.130$	
NO.	P _r ²	P _w	P _w ²	P _c ² - P _w ²			
1		987.3	974.8	192.0			
2		900.4	810.7	356.1			
3		678.7	460.7	706.1			
4		489.3	239.4	927.4			
5							

Absolute Open Flow 174				Mcf/d @ 15.025		Angle of Slope @ 62° 2'		Slope, n .531	
Remarks:									

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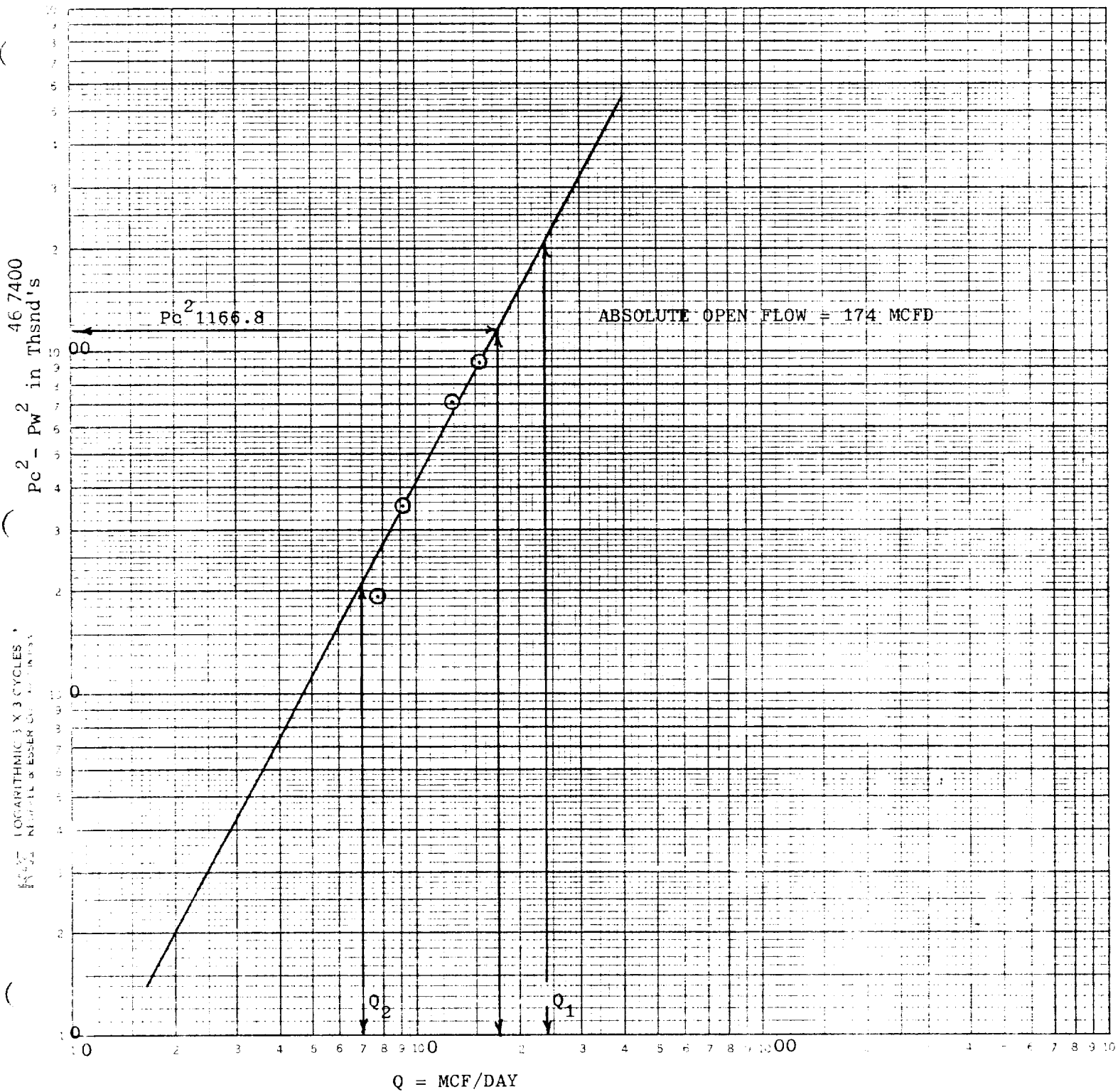
COMPANY: Harvey E. Yates Company

WELL: Seymour State, No. 1

LOCATION: E 18 9s 27e

DATE: March 21, 1983

Atoka



$$Q_1 = 238 \text{ MCFD}; \quad \text{Log } Q_1 = 2.376577$$

$$Q_2 = 70 \text{ MCFD}; \quad \text{Log } Q_2 = 1.845098$$

$$N = 0.531479 = 0.531$$