

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

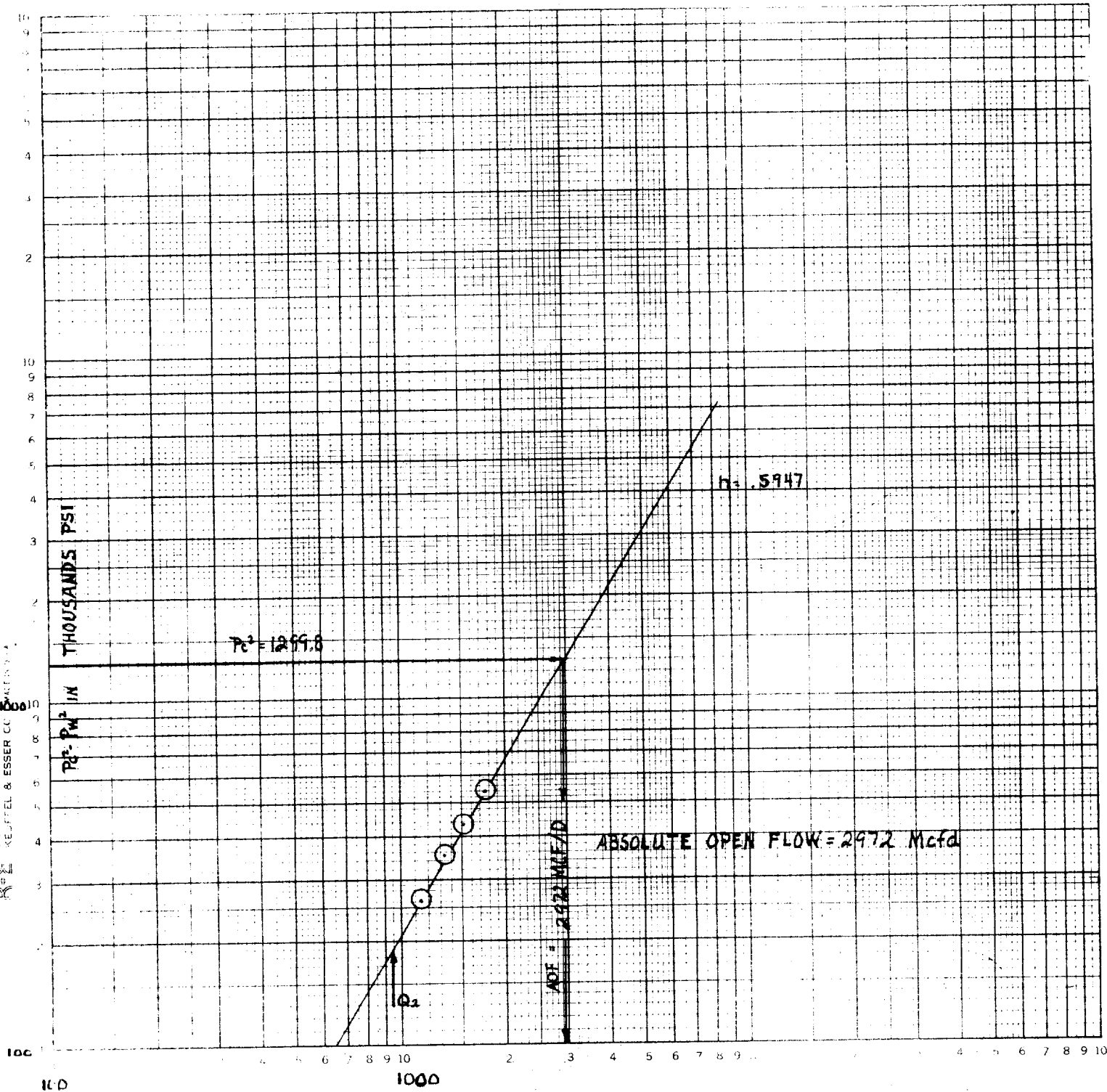
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Type Test ☒ Initial FOUR POINT ☐ Annual ☐ Special		Test Date 11-11-81									
Company YATES PETROLEUM CORP. ✓		Connection TRANSWESTERN PIPELINE COMPANY									
Pool Pecos Slope - Abo Gas UNDESIGNATED ABO		Formation ABO									
Completion Date 4-7-81		Total Length 4424									
Plug Back TD 4406		Elevation 3907KB									
Csg. Size 4.500		Well No. 4									
Wt. 9.5		Perforations: From 3747 To 3923									
d 4.090		Set At 3850									
Thq. Size 2.375		Perforations: From OPEN To ENDED									
Wt. 4.7		Set At 3850									
d 1.995		From OPEN To ENDED									
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE		Packer Set At NONE									
Producing Thru TUBING		Baro. Press. - P _g 13.2									
Reservoir Temp. °F 95 # 4424		Mean Annual Temp. °F 60°									
County CHAVES		State NEW MEXICO									
L 3835		H 3835									
G _g .737		% CO ₂ 10.23									
% N ₂ 4.57		% H ₂ S Prover									
Meter Run 4"		Taps FLANGE									
FLOW DATA											
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							1002				
1.	4.026	X	1.250	360	42	70	886	71			24HRS.
2.	4.026	X	1.250	380	54	71	840	73			24
3.	4.026	X	1.250	400	64	64	800	74			24
4.	4.026	X	1.250	420	84	66	739	76			24
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 _{sp}	Rate of Flow Q, Mscf/d				
1	7.6610	125.20	373.2	.9905	1.1648	1.0336	1144				
2	7.6610	145.71	393.2	.9896	1.1648	1.0353	1332				
3	7.6610	162.62	413.2	.9962	1.1648	1.0392	1502				
4	7.6610	190.76	433.2	.9943	1.1648	1.0403	1761				
5											
NO.	R _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.						
1	.53	530	1.43	.936	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.						
2	.56	531	1.43	.933	Specific Gravity Separator Gas .07370 XXXXXXXXXX						
3	.59	524	1.41	.926	Specific Gravity Flowing Fluid XXXXX .07370						
4	.62	525	1.42	.924	Critical Pressure 704 P.S.I.A. P.S.I.A.						
5					Critical Temperature 371 R R						
NO.	P _t ²	P _w ²	P _w ²	P _t ² - P _w ²	(1) $\frac{P_t^2}{P_t^2 - P_w^2} = 2.4116$ (2) $\left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 1.6879$						
1		1018.9	1038.2	262	AOF = Q $\left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 2972.4$						
2		970.9	942.6	357							
3		931.1	866.9	433							
4		872.5	761.3	539							
5											
Absolute Open Flow 2972.4				Mscf @ 15.025	Angle of Slope 59.3	Slope, n .5947					
Remarks: STATIC PRESSURE BY BENNETT WIRELINE, FLOWING PRESSURE BY DWI CALCULATIONS WOHLFORD & JENKINS COMPUTER PROGRAM CALCULATIONS ATTACHED IN LIEU OF WORKSHEET C 122 D											
Approved By Division		Conducted By: DAVID WEAVER		Calculated By: BENNETT-CATHEY		Checked By: RAY STALL					

YATES PERMEABILITY
 EVERETTE CO FEDERAL #4
 K 25 - 55 - 24E
 CHAVES COUNTY
 NEW MEXICO
 11-11-81

46 7400

LOGARITHMIC 3 X 3 CYCLES
 REUTEL & ESSER CO. PATENTED



$$\overline{\Delta P}_1^2 \quad P_e^2 - P_w^2 = 1900$$

$Q_1 \text{ Mcfd}$

$$\text{LOG } Q_1 = 3.57240$$

$$\overline{\Delta P}_2^2 \quad P_e^2 - P_w^2 = 190$$

$$\text{LOG } Q_2 = 2.47772$$

$$Q_1 = 3736 \text{ Mcfd}$$

$$n = .59468 = .5947$$

$$Q_2 = 950 \text{ Mcfd}$$