NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Sr file + file

Form C-122
Revised 9-1-65

RECEIVED

JUN 11 1982

O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 4-16-82	
Company: Yates Petroleum Corporation ✓			Connection: Transwestern Pipeline Company		
Pool: Pecos Slope Abo			Formation: Abo		Unit: NM 28162
Completion Date: 2-9-82	Total Depth: 4225'		Plug Back TD: 4221'	Elevation: 3746.9' GR	Farm or Lease Name: Thorpe MI Federal
Csg. Size: 4-1/2" / Wt.: 9.5# / d: 4.090" / Set At: 4225'			Perforations: From 3874 To 3899		Well No.: 6
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.995" / Set At: 3858			Perforations: From - To -		Unit: C / Sec.: 14 / Twp.: 7S / Rge.: 25E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: None		County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 98° @ 3886		Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
3858	3858	0.666	4.24	5.96	0	---	2"	Flange

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					923				days
1.	2.067 x 0.625	220	48	60	210				24 hrs
2.									
3.									
4.									
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, Fpv	Rate of Flow Q, Mcfd
1	1.866	105.6	232.2	1.000	1.225	1.021	246
2.							
3.							
4.							
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.3435	520	1.4525	0.960
2.				
3.				
4.				
5.				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas 0.666 XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 676 P.S.I.A. _____ P.S.I.A.
Critical Temperature 358 R _____ R

P_c 936.2 P_c^2 876.5

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	49.8		50.7	825.8
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.736$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.736$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 260$

Absolute Open Flow 260 Mcfd @ 15.025 Angle of Slope θ _____ Slope, n 1

Remarks: Computed with only one flow rate because of well's low production capability. Static pressure by Bennett Wireline and flowing pressure.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	David Weaver	Albert R. Stall	

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Adopted 9-1-65

COMPANY Yates Petroleum Corp. LEASE Thorpe MI Fed WELL NO. 6 DATE 6-10-82

LOCATION: Unit C Section 14 Township 7S Range 25E

L 3858 H 3858 L/H 1 G 0.666 % CO_2 4.24 % N_2 5.96 % H_2S 0

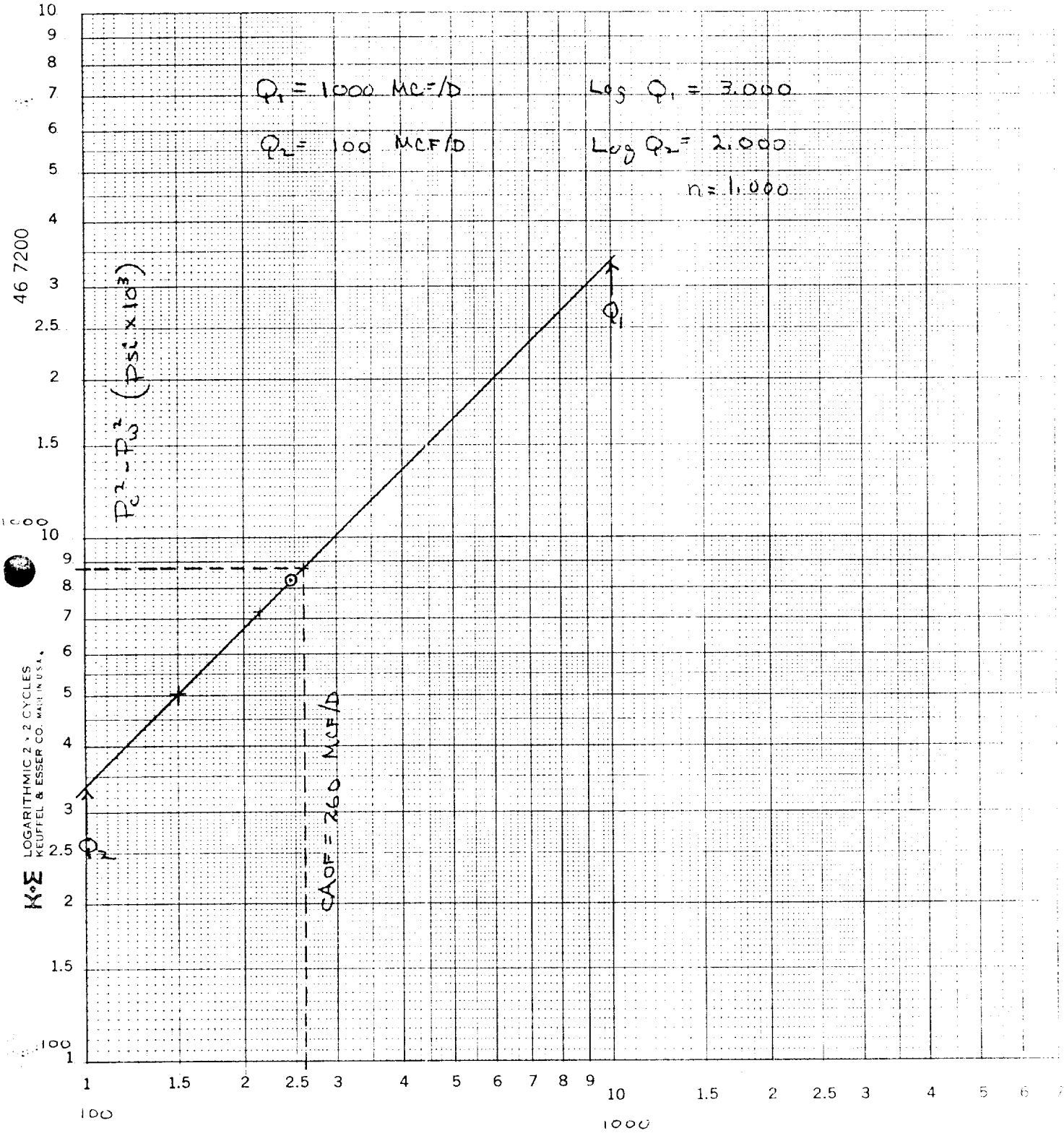
d 1.995 F_r 0.018231 GH 2569.4 P_{cr} 676 (TABLE IX & X) T_{cr} 358 (TABLE IX & X)

LINE	1ST TRIAL	2ND TRIAL								
1 Q_m	.246	.246								
2 T_w (W.H. °R)	520	520								
3 T_s (B.H. °R)	558	558								
4 $T = (\frac{T_w + T_s}{2})$	539	539								
5 T Est.)	0.875	0.965								
6 TZ	471.6	520.1								
7 GH/TZ	5.448	4.940								
8 e^s (Table XIV)	1.227	1.204								
9 $1-e^{-s}$ (Table XIV)	0.185	0.169								
10 P_t	223.2	223.2								
11 $P_t^2/1000$	49.8	49.8								
12 F_r (Table XV)	0.018231	0.018231								
13 $F_c = F_r$ TZ	8.598	9.482								
14 $F_c Q_m$	2.115	2.333								
15 L/H $(F_c Q_m)^2$	4.47	5.44								
16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$	0.828	0.919								
17 $P_w^2 = P_t^2 + F_w$	50.6	50.7								
18 $P_s^2 = e^s P_w^2$	62.1	61.1								
19 P_s	249.2	247.1								
20 $P = (\frac{P_t + P_s}{2})$	236.2	235.2								
21 $P_r = (P/P_{cr})$	0.349	0.348								
22 $T_r = (T/T_{cr})$	1.506	1.506								
23 Z (Table XI)	0.965	0.965								

YATES PETROLEUM CORPORATION

Thorpe MI Fed. No. 6

Unit C, Sec. 14, T 7S, R 25E



Q (MCF/D)