STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

SF file
Form C-122
Revised 10-1-78
RECEIVED
JUL 7 1982
O. C. D.
ARTESIA, OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 5-25-82	
Company: Yates Petroleum Corp.			Connection: Transwestern Pipeline Company		
Pool: Pecos Slope Abo			Formation: Abo		Unit: ------
Completion Date: 3-19-82	Total Depth: 4225'		Plug Back TD: 4153'	Elevation: 3783' GR	Farm or Lease Name: King TF
Csg. Size: 4-½ / Wt.: 9.5# / d: 4.090 / Set At: 4220'			Perforations: From 3749' To 4022'		Well No.: 1
Tbg. Size: 2-3/8 / Wt.: 4.7# / d: 1.995 / Set At: 3770'			Perforations: From To		Unit: E / Sec.: 25 / Twp.: 6S / Rge.: 25E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: ----		County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 94° @ 4000	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2		State: New Mexico
L: 3770' / H: 3770'	Gg: .763	% CO_2: 13.34	% N_2: 4.62	% H_2S: 0	Prover: .067 / Meter Run: 4" / Taps: Flanged

FLOW DATA / TUBING DATA / CASING DATA

NO.	Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI					998				
1.	4.026 x 1.375	300	73.6	62°	650	63°	----	----	1 day
2.	4.026 x 1.375	210	62.6	62°	986	61°	-----	----	24 hrs.
3.	4.026 x 1.375	220	46.2	62°	819	63°	-----	----	24 hrs.
4.	4.026 x 1.375	210	40.1	62°	857	62°	-----	-----	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, Fpv	Rate of Flow Q, Mcfd
1	9.071	151.9	313.2	.9981	1.145	1.029	1620
2	9.071	118.2	223.2	.9981	1.145	1.020	1250
3	9.071	103.8	233.2	.9981	1.145	1.022	1100
4	9.071	94.6	223.2	.9981	1.145	1.020	1000
5							

NO.	P_t	Temp. °R	T_r	Z
1	.44	522	1.40	.944
2	.31	522	1.40	.961
3	.33	522	1.40	.958
4	.31	522	1.40	.961
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas .763 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 716 P.S.I.A. _____ P.S.I.A.
Critical Temperature 374 R _____ R

P_c 1011.2 P_c^2 1022.5

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	439.8	692.9	480.1	542.4
2	998.2		652.5	370
3	693.7		712.5	310
4	756.9		772.5	250
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.89$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.53$

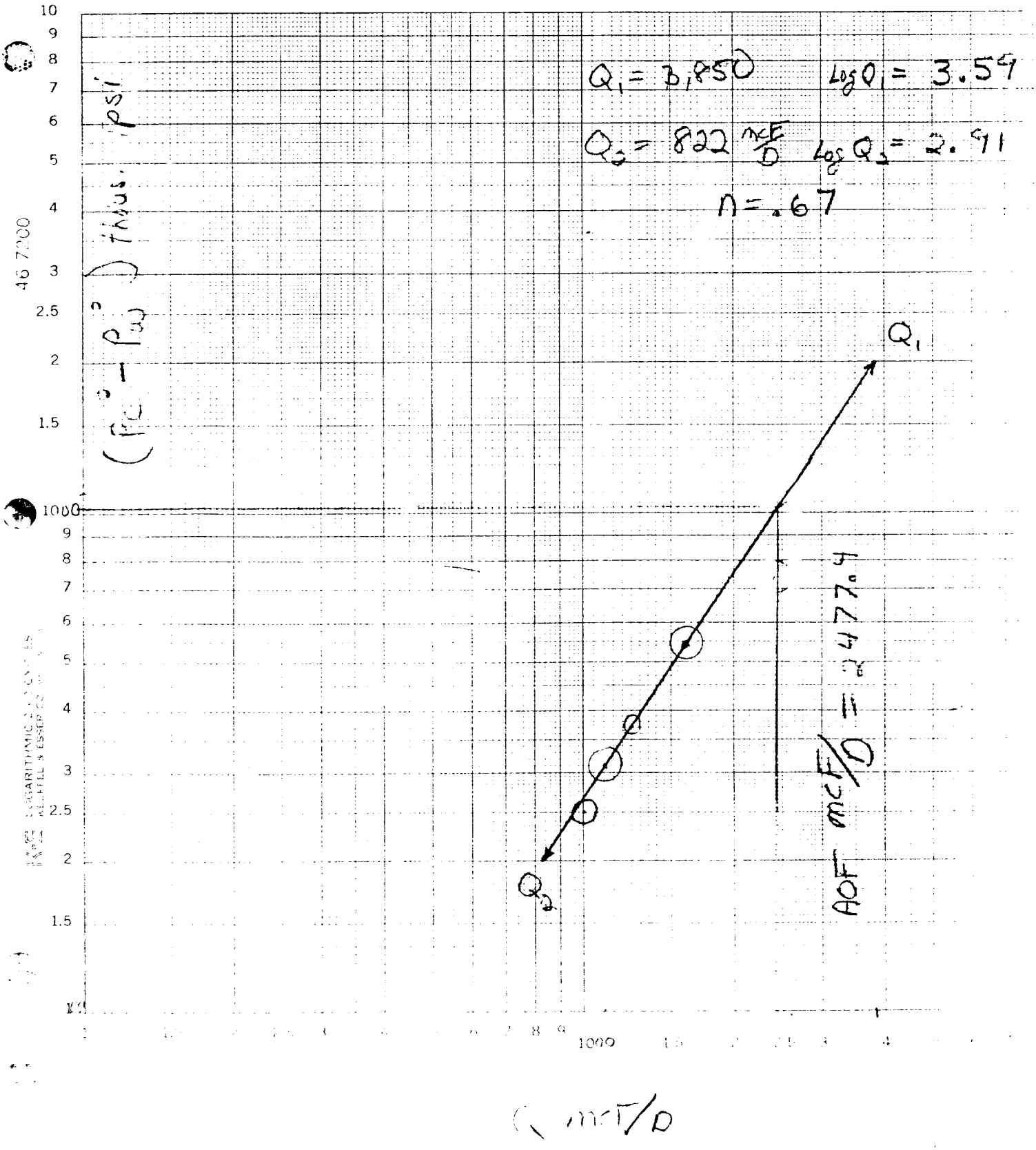
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2477.4$

Absolute Open Flow 2477.4 Mcfd @ 15.025 | Angle of Slope θ _____ | Slope, n .67

Remarks: Static pressure by Bennett Wireline, flowing pressure by DWT calculations.
Worksheet C-1229 attached

Approved By Division	Conducted By:	Calculated By:	Checked By:
	David Weaver	Eric Hansen	

King 11


$Q_1 = 3,850$ $\log Q_1 = 3.59$
$Q_2 = 822 \frac{mcf}{D}$ $\log Q_2 = 2.91$
$n = .67$
$(P_c^2 - P_w^2)$ thous. psi
Q_1
Q_2
AOF mcf/D = 4774
46 7000
1000
Q, mcf/D

COMPANY Yates Petro. Corp. LEASE King TF WELL NO. #1 DATE June 29, 198?

LOCATION: Unit E Section 25 Township 6S Range 25E

L 3770' H 3770' L/H 1 G .763 % CO_2 13.34 % N_2 4.62 % H_2S 0

d 1.995 F_r .018231 GH 2876.51 P_{cr} 716 (TABLE IX & X) T_{cr} 374 (TABLE IX & X)

RATE 1

	LINE	1st trial		2nd trial		3rd trial		4th trial			
	1 Q_m	1.620		1.250		1100		1000			
	2 T_w (W.H. °R)	523		522		523		522			
	3 T_s (B.H. °R)	554		554		554		554			
6	4 $T = (\frac{T_w + T_s}{2})$	538.5		538.5		538.5		538.			
	5 Z (Est.)	.888		.837		.860		.855			
9	6 TZ	478.11		450.72		436.11		460.0			
	7 GH/TZ	6.015		5.935		6.211		6.253			
	8 e^s (Table XIV)	1.253		1.249		1.262		1.264			
	9 $1-e^{-s}$ (Table XIV	.202		.199		.208		.209			
19	10 P_t	663.2		999.2		832.2		870.2			
24	11 $P_t^2/1000$	439.8		998.2		693.7		756.9			
	12 F_r (Table XV)	.018231		.018231		.018231		.018231			
32	13 $F_c = F_r$ TZ	8.718		8.217		8.443		8.386			
34	14 $F_c Q_m$	14.123		10.271		9.287		8.386			
35	15 $L/H (F_c Q_m)^2$	199.457		105.50		86.253		70.336			
37	16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$	40.290		22.472		17.741		14.698			
40	17 $P_w^2 = P_t^2 + F_w$	480.1		1020.7		711.6		771.6			
42	18 $P_s^2 = e^s P_w^2$	601.6		1296.3		898.1		975.3			
45	19 P_s	775.6		1138.5		947.7		987.6			
49	20 $P = (\frac{P_t + P_s}{2})$	719.4		1068.8		890.3		928.8			
	21 $P_r = (P/P_{cr})$	1.00		1.49		1.24		1.30			
	22 $T_r = (T/T_{cr})$	1.44		1.44		1.44		1.44			
	23 Z (Table XI)	.888		.837		.860		.855			