415F File

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 9-1-65

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
NOV 1 1982
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 10/3/82	
Company: Yates Petroleum Corporation			Connection: Transwestern Pipeline		Unit
Pool: Pecos Slope - Abo Gas			Formation: Abo		
Completion Date: 6/3/82	Total Depth: 4175'		Plug Back TD: 4123'	Elevation: 3768' GL	Farm or Lease Name: George "QJ" Federal
Csg. Size: 4 1/2" / Wt.: 9.5# / d: 4.090 / Set At: 4175'			Perforations: From 3668 To 3838		Well No.: 6
Tbg. Size: 2 3/8" / Wt.: 4.7# / d: 1.995 / Set At: 3620'			Perforations: From To		Unit: D / Sec.: 26 / Twp.: 6S / Rge.: 25E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Single			Packer Set At: 3620'		County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 101° 3620		Mean Annual Temp. °F: 62	Baro. Press. - P_a: 13.2 psi	State: New Mexico
L: 3620' / H: 3620' / Gg: .635	% CO_2: 0.06	% N_2: 4.83	% H_2S: 0	Prover: --	Meter Run: 2" / Taps: Flanged

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					1018				
1.	2.067 x 1.125	190	64.1	72	918	62			24 hr.
2.	2.067 x 1.125	210	77.0	72	895	62			24 hr.
3.	2.067 x 1.125	215	87.9	72	873	62			24 hr.
4.	2.067 x 1.125	275	96.0	72	840	62			24 hr.
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	6.393	114.2	203.2	.9887	1.255	1.017	921
2	6.393	131.1	223.2	.9887	1.255	1.019	1060
3	6.393	141.7	228.2	.9887	1.255	1.019	1145
4	6.393	166.3	288.2	.9887	1.255	1.023	1350
5							

NO.	P_t	Temp. °R	T_r	Z
1	.31	532	1.49	.967
2	.34	532	1.49	.964
3	.34	532	1.49	.964
4	.43	532	1.49	.955
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: -- Deg.
Specific Gravity Separator Gas: .635 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .635
Critical Pressure: 665 P.S.I.A. 665 P.S.I.A.
Critical Temperature: 357 R 357 R

P_c 1031.2 P_c^2 1063.4

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	867.1		877.5	185.9
2	824.8		838.7	224.7
3	785.4		801.6	261.8
4	728.0		750.6	312.8
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.40$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.419$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3266$

Absolute Open Flow: 3266 Mcfd @ 15.025 Angle of Slope θ: Slope, n: .722

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	David Weaver	Andie Alderson	

COMPANY [illegible] LEASE [illegible] WELL NO. 6 DATE [illegible]

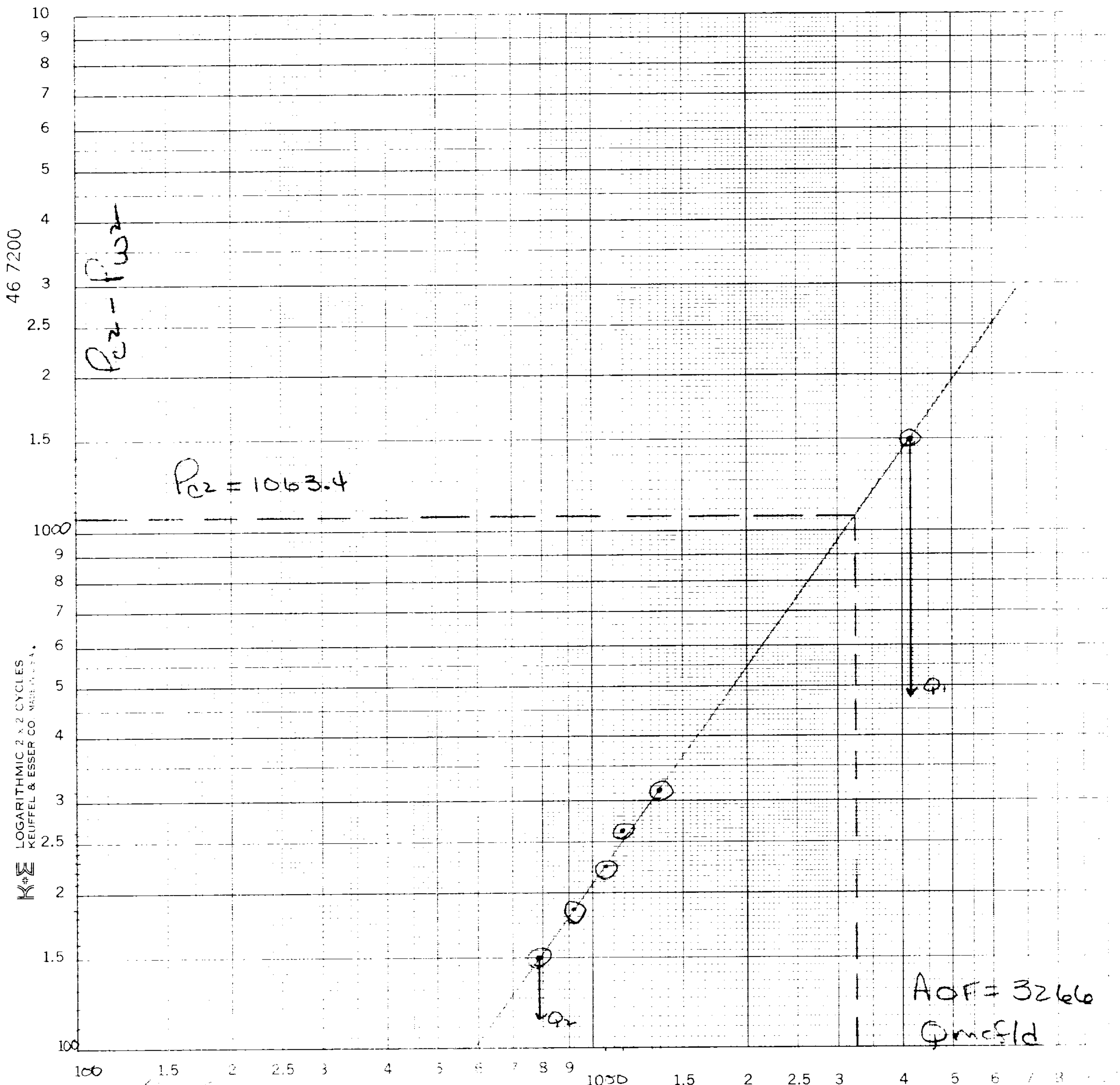
LOCATION: Unit 1 Section [illegible] Township [illegible] Range [illegible]

L 3620 H 3620 L/H 1 G .625 % CO_2 .06 % N_2 1.85 % H_2S 0

d 1.995 F_r .01823 GH [illegible] P_{cr} 665 TABLE IX & X T_{cr} 357 TABLE IX & X

	LINE	1st		2nd		3rd		4th			
	1 Q_m	[illegible]		[illegible]		[illegible]		1.350			
	2 T_w (W.H. °R)	[illegible]		[illegible]		[illegible]		522			
	3 T_s (B.H. °R)	561		561		561		561			
61	4 $\bar{T} = \frac{(T_w + T_s)}{2}$	[illegible]		[illegible]		[illegible]		541.5			
	5 Z (Est.)	[illegible]		[illegible]		[illegible]		[illegible]			
9	6 TZ	[illegible]		[illegible]		[illegible]		474.9			
	7 GH/TZ	[illegible]		[illegible]		[illegible]		11.741			
	8 e^s (Table XIV)	[illegible]		[illegible]		[illegible]		1.197			
	9 $1-e^{-s}$ (Table XIV)	[illegible]		[illegible]		[illegible]		.166			
19	10 P_t	[illegible]		[illegible]		[illegible]		[illegible]			
24	11 $P_t^2/1000$	[illegible]		[illegible]		[illegible]		736.0			
	12 F_r (Table XV)	.01823		[illegible]		[illegible]		[illegible]			
32	13 $F_c = F_r TZ$	[illegible]		[illegible]		[illegible]		[illegible]			
34	14 $F_c Q_m$	[illegible]		[illegible]		[illegible]		11.687			
35	15 $L/H (F_c Q_m)^2$	[illegible]		[illegible]		[illegible]		[illegible]			
37	16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$	[illegible]		[illegible]		[illegible]		[illegible]			
40	17 $P_w^2 = P_t^2 + F_w$	[illegible]		[illegible]		[illegible]		[illegible]			
42	18 $P_s^2 = e^s P_w^2$	[illegible]		[illegible]		[illegible]		[illegible]			
45	19 P_s	[illegible]		[illegible]		[illegible]		[illegible]			
49	20 $P = \frac{(P_t + P_s)}{2}$	[illegible]		[illegible]		[illegible]		[illegible]			
	21 $P_r = (P/P_{cr})$	[illegible]		[illegible]		[illegible]		[illegible]			
	22 $T_r = (T/T_{cr})$	[illegible]		[illegible]		[illegible]		[illegible]			
	23 Z (Table XI)	[illegible]		[illegible]		[illegible]		[illegible]			

Yates Petroleum Corp.
George OG #6
Unit [illegible] 26-[illegible]
Chaves County



$(P_{c^2} - P_{w^2})_1 = 1500$
$(P_{c^2} - P_{w^2})_2 = 150$
$Q_1 = 4150$
$Q_2 = 788$

$\log Q_1 = 3.61805$
$\log Q_2 = 2.89653$
$n = .72152 = .722$