NEW MEXICO OIL CONSERVATION COMMISSION — Form C-122

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

C/SF File

Type Test			Test Date	
[X] Initial	[ ] Annual	[ ] Special	01/04/1994	

Company	Connection	
Yates Petroleum Corp	Transwestern Pipeline Co	

Pool	Formation	Unit
Abo	Pecos Slope	

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
12/23/1993	4250	4151	4057	Hobbs Federal

Csg. Size	Wt.	d	Set At	Perforations:		Well No.
4.500	10.500	4.052	4200	From 3735	To 3744	3

Tbg. Size	Wt.	d	Set At	Perforations:		Unit	Sec.	Twp.	Rge
2.375	4.700	1.995	3634	From 3735	To 3744	H	8	6S	25E

Type Well	Packer Set At	County
Single	3634	Chaves

Producing Thru	Resv. Temp. °F	Mean Temp. °F	Baro. Press. - Pa	State
Tubing	103 @ 3744	62	24.0	New Mexico

L	H	Gg	%CO_2	%N_2	%H_2S	Prover	Meter Run	Taps
3634	3634	0.645	0.022	5.890	0.000	0.000	2.000	Flange

	FLOW DATA					TUBING DATA		CASING 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	0.000	x	0.000	0	0.0	0	140	0			0
1.	2.067	x	1.000	80	2.0	53	125	62			24
2.	2.067	x	1.000	80	4.0	55	110	62			24
3.	2.067	x	1.000	80	8.0	57	95	62			24
4.	2.067	x	1.000	80	11.0	56	80	62			24
5.		x									

RATE OF FLOW CALCULATIONS

NO	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	4.946	14.4	104.0	1.0068	1.246	1.009	90
2.	4.946	20.4	104.0	1.0048	1.246	1.009	127
3.	4.946	28.8	104.0	1.0029	1.246	1.009	180
4.	4.946	33.8	104.0	1.0039	1.246	1.009	211
5							

NO.	Pr	Temp °R	Tr	Z
1.	0.16	513	1.45	0.982
2.	0.16	515	1.45	0.982
3.	0.16	517	1.46	0.982
4.	0.16	516	1.46	0.982
5.				

Gas Liquid Hydrocarbon Ratio	0 Mcf/bbl.	
A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.	
Specific Gravity Separator Gas	0.645	xxxxxxxxxx
Specific Gravity Flowing Fluid	xxxxxxxxxx	0.645
Critical Pressure	661 P.S.I.A.	661 P.S.I.A.
Critical Temperature	354 °R	354 °R

Pc 164.0 Pc^2 26.9

NO	Pt^2	Pw	Pw^2	$Pc^2 - Pw^2$
1.	22.2	149.4	22.3	4.6
2	18.0	134.8	18.2	8.7
3	14.2	120.8	14.6	12.3
4.	10.8	106.9	11.4	15.5
5				

(1) $\frac{Pc^2}{Pc^2 - Pw^2}$ = 2.188 (2) $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n$ = 1.727

AOF = Q $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n$ = 311

Absolute Open Flow	Angle of Slope θ	Slope, n
311 Mcfd @ 15.025	35	0.698

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Dyke Dodson	Andrea Carpenter	

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 01/04/1994

COMPANY Yates Petroleum Corp LEASE Hobbs Federal WELL NO. 3

LOCATION: Unit H Section 8 Township 6S Range 25E

L 3634 H 3634 L / H 1.000 G 0.645 %CO_2 0.022 %N_2 5.890 %H_2S 0.000

d 1.995 Fr 0.017777 GH 2342.5 Pcr 660.7 Tcr 354.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.090	0.127	0.180	0.211	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	563	563	563	563	
4 T = (Tw+Ts) / 2	542.2	542.2	542.2	542.2	
5 Z (Est.)	0.978	0.980	0.982	0.984	
6 TZ	530.1	531.3	532.4	533.6	
7 GH / TZ	4.419	4.409	4.400	4.390	
8 e^s(Table XIV)	1.180	1.180	1.179	1.179	
9 1-e^-s(Table XIV)	0.153	0.152	0.152	0.152	
10 Pt	149.0	134.0	119.0	104.0	
11 Pt^2 / 1000	22.2	18.0	14.2	10.8	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.423	9.444	9.465	9.486	
14 FcQm	0.85	1.20	1.70	2.00	
15 L / H$(FcQm)^2$	0.7	1.4	2.9	4.0	
16 Fw = L / H$(FcQm)^2(1-e^{-s})$	0.11	0.22	0.44	0.61	
17 $Pw^2 = Pt^2+Fw$	22.3	18.2	14.6	11.4	
18 $Ps^2 = e^sPw^2$	26.3	21.4	17.2	13.5	
19 Ps	162.3	146.4	131.2	116.1	
20 P = (Pt+Ps) / 2	155.6	140.2	125.1	110.0	
21 Pr = (P / Pcr)	0.24	0.21	0.19	0.17	
22 Tr = (T / Tcr)	1.53	1.53	1.53	1.53	
23 Z (Table XI)	0.978	0.980	0.982	0.984	

Company: Yates Petroleum Corp
Well: Hobbs Federal #3
Location: H 8-6S-25E

County: Chaves
Date: 01-04-1994