NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

JAN 06 '95

OIL CON. DIV.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special						Test Date: 03/03/1993					
Company: Yates Petroleum Corp				Connection: Yates Petroleum Corp							
Pool: Abo				Formation: Pecos Slope						Unit: O	
Completion Date: 01/24/1993		Total Depth: 4250		Plug Back TD: 4192		Elevation: 3649		Farm or Lease Name: Verbena UV Federal			
Csg. Size: 4.500	Wt.: 10.500	d: 4.052	Set At: 4236	Perforations: From 3632	To 3791			Well No: 2			
Tbg. Size: 2.375	Wt.: 4.700	d: 1.995	Set At: 3509	Perforations: From 3632	To 3791			Unit: D	Sec.: 26	Twp.: 7S	Rge.: 25E
Type Well: Single				Packer Set At: 3509				County: Chaves			
Producing Thru: Tubing	Resv. Temp. °F: 101 @ 3712		Mean Temp. °F: 62	Baro. Press. - Pa: 13.2				State: New Mexico			
L: 3509	H: 3509	Gg: 0.645	%CO_2: 0.022	%N_2: 5.890	%H_2S: 0.000	Prover: 0.000	Meter Run: 2.000	Taps: 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	240	0			0
1	2.067	x	1.375	150	1.0	47	220	62			24
2	2.067	x	1.375	150	4.0	49	197	62			24
3	2.067	x	1.375	150	6.0	48	173	62			24
4	2.067	x	1.375	150	9.0	46	150	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.	10.200	12.8	163.2	1.0127	1.246	1.015	167
2.	10.200	25.5	163.2	1.0108	1.246	1.015	333
3.	10.200	31.3	163.2	1.0117	1.246	1.015	408
4.	10.200	38.3	163.2	1.0137	1.246	1.015	501
5.							

NO	Pr	Temp °R	Tr	Z
1.	0.25	507	1.43	0.971
2.	0.25	509	1.44	0.971
3.	0.25	508	1.43	0.971
4.	0.25	506	1.43	0.970
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 253.2 Pc^2 64.1

NO.	Pt^2	Pw^2	Pw^2	$Pc^2 - Pw^2$
1.	54.4	234.0	54.7	9.4
2.	44.2	213.6	45.6	18.5
3.	34.7	191.9	36.8	27.3
4.	26.6	173.0	29.9	34.2
5.				

(1) $\frac{Pc^2}{Pc^2 - Pw^2}$ = 2.351 (2) $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n$ = 2.061

AOF = Q $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n$ = 841

Absolute Open Flow 841 Mcfd @ 15.025 Angle of Slope θ 40 Slope, n 0.846

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By
	David Weaver	Andrea Carpenter	

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

DATE 03/03/1993

COMPANY Yates Petroleum Corp LEASE Verbena UV Federal WELL NO. 2

LOCATION: Unit D Section 26 Township 7S Range 25E

L 3509 H 3509 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 2261.9 Pcr 660.7 Tcr 354.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.167	0.333	0.408	0.501	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	561	561	561	561	
4 T = (Tw+Ts) / 2	541.2	541.2	541.2	541.2	
5 Z (Est.)	0.965	0.968	0.972	0.975	
6 TZ	522.3	524.0	525.8	527.5	
7 GH / TZ	4.331	4.317	4.302	4.288	
8 e^s(Table XIV)	1.176	1.176	1.175	1.174	
9 1-e^-s(Table XIV)	0.150	0.149	0.149	0.149	
10 Pt	233.2	210.2	186.2	163.2	
11 Pt^2 / 1000	54.4	44.2	34.7	26.6	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.284	9.315	9.347	9.377	
14 FcQm	1.55	3.10	3.82	4.70	
15 L / H(FcQm)²	2.4	9.6	14.6	22.1	
16 Fw = L / H(FcQm)²(1-e^-s)	0.36	1.44	2.17	3.28	
17 $Pw^2 = Pt^2+Fw$	54.7	45.6	36.8	29.9	
18 $Ps^2 = e^sPw^2$	64.4	53.6	43.3	35.1	
19 Ps	253.8	231.6	208.1	187.4	
20 P = (Pt+Ps) / 2	243.5	220.9	197.1	175.3	
21 Pr = (P / Pcr)	0.37	0.33	0.30	0.27	
22 Tr = (T / Tcr)	1.53	1.53	1.53	1.53	
23 Z (Table XI)	0.965	0.968	0.972	0.975	

Company: Yates Petroleum Corp
Well: Verbena UV Federal #2
Location: D 26-7S-25E

County: Chaves
Date: 03-03-1993