NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122 C/SF File

Type Test			Test Date
[X] Initial	[ ] Annual	[ ] Special	04/01/93

Company	Connection		
Yates Petroleum Corp	Yates Petroleum Corp		
Pool	**Formation**		**Unit**
Upper Penn	East Red Lake		
Completion Date	**Total Depth**	**Plug Back TD**	**Elevation**	**Farm or Lease Name**
3/19/93	10225	10181	3457	Chalk AKH Federal

Csg. Size	Wt.	d	Set At	Perforations:			Well No
5.500	17.000	4.892	10225	From 8028	To 8039		2

Tbg. Size	Wt.	d	Set At	Perforations:		Unit	Sec.	Twp	Rge
2.875	6.500	2.441	8068	From 8028	To 8039	B	27	18S	27E

Type Well	Packer Set At	County
Single	0	Eddy

Producing Thru	Resv. Temp. °F	Mean Temp. °F	Baro. Press. - Pa	State
Tubing	159 @ 10025	62	13.2	New Mexico

L	H	Gg	%CO_2	%N_2	%H_2S	Prover	Meter Run	Taps
8068	8068	0.688	0.585	0.661	1.000	0.000	3.000	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	1000	0			0
1.	3.068	x	2.250	630	9.0	67	850	62			24
2.	3.068	x	2.250	630	14.0	68	777	62			24
3.	3.068	x	2.250	574	17.3	72	703	62			24
4.	3.068	x	2.250	630	23.0	69	630	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.	28.780	76.1	643.2	0.9933	1.206	1.072	2810
2.	28.780	94.9	643.2	0.9924	1.206	1.071	3500
3.	28.780	100.8	587.0	0.9887	1.206	1.063	3674
4.	28.780	121.6	643.2	0.9915	1.206	1.071	4479
5.							

NO.	Pr	Temp °R	Tr	Z
1.	0.95	527	1.37	0.871
2.	0.95	528	1.38	0.872
3.	0.87	532	1.39	0.886
4.	0.95	529	1.38	0.873
5.				

Gas Liquid Hydrocarbon Ratio	40		Mcf/bbl
A.P.I. Gravity of Liquid Hydrocarbons	66.000		Deg.
Specific Gravity Separator Gas	0.688	xxxxxxxxx	
Specific Gravity Flowing Fluid	xxxxxxxxx	0.754	
Critical Pressure	677 P.S.I.A	674	P.S.I.A
Critical Temperature	383 °R	405	°R

Pc 1013.2 Pc^2 1026.6

NO	Pt^2	Pw	Pw^2	$Pc^2 - Pw^2$
1.	745.1	904.7	818.4	208.2
2.	624.4	860.3	740.0	286.5
3.	512.9	801.7	642.7	383.9
4.	413.7	780.3	608.9	417.7
5.				

(1) $\frac{Pc^2}{Pc^2 - Pw^2}$ = 3.583 (2) $\left(\frac{Pc^2}{Pc^2 - Pw^2}\right)^n$ = 2.348

AOF = Q $\left(\frac{Pc^2}{Pc^2 - Pw^2}\right)^n$ = 8219

Absolute Open Flow	8219 Mcfd @ 15.025	Angle of Slope θ	34	Slope, n	0.669

Remarks:

Approved By Commission	Conducted By:	Calculated By:	Checked By:
	Ed Perry	Andrea Carpenter	

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

DATE 04/01/93

COMPANY Yates Petroleum Corp LEASE Chalk AKH Federal WELL NO. 2

LOCATION: Unit B Section 27 Township 18S Range 27E

L 8068 H 8068 L / H 1.000 G 0.754 %CO_2 0.585 %N_2 0.661 %H_2S 1.000

d 2.441 Fr 0.010495 GH 6081.7 Pcr 674.5 Tcr 405.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	2.810	3.500	3.674	4.479	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	619	619	619	619	
4 T = (Tw+Ts) / 2	570.2	570.2	570.2	570.2	
5 Z (Est.)	0.819	0.830	0.843	0.851	
6 TZ	467.0	473.2	480.4	485.3	
7 GH / TZ	13.022	12.853	12.660	12.530	
8 e^s(Table XIV)	1.630	1.619	1.607	1.600	
9 1-e^-s(Table XIV)	0.386	0.382	0.378	0.375	
10 Pt	863.2	790.2	716.2	643.2	
11 Pt^2 / 1000	745.1	624.4	512.9	413.7	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	4.901	4.966	5.042	5.094	
14 FcQm	13.77	17.38	18.52	22.82	
15 L / H$(FcQm)^2$	189.7	302.0	343.0	520.6	
16 Fw = L / H$(FcQm)^2(1-e^{-s})$	73.30	115.62	129.74	195.20	
17 $Pw^2 = Pt^2+Fw$	818.4	740.0	642.7	608.9	
18 $Ps^2 = e^{s}Pw^2$	1333.7	1197.9	1032.9	974.1	
19 Ps	1154.8	1094.5	1016.3	987.0	
20 P = (Pt+Ps) / 2	1009.0	942.3	866.3	815.1	
21 Pr = (P / Pcr)	1.50	1.40	1.28	1.21	
22 Tr = (T / Tcr)	1.41	1.41	1.41	1.41	
23 Z (Table XI)	0.819	0.830	0.843	0.851	

Company: Yates Petroleum Corp
Well: Chalk AKH Federal #2
Location: B 27-18S-27E
County: Eddy
Date: 04-01-93