

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

Form C-122

OK
File

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 12/31/1992	
Company Yates Petroleum Corp			Connection Transwestern Pipeline		
Pool Abo			Formation Pecos Slope		
Completion Date 12/19/1992		Total Depth 4250		Plug Back TD 4200	
Csg. Size 4.500		Wt. 10.500		Elevation 3985	
Tbg. Size 2.375		Wt. 4.700		Perforations: From 3694 To 3843	
Type Well Single			Packer Set At 3657		
Producing Thru Tubing		Resv. Temp. °F 104 @ 3768		Mean Temp. °F 62	
Baro. Press. - Pa 13.2		Farm or Lease Name ARTESIA, OFFICE			
L 3657		H 3657		Gg 0.650	
%CO ₂ 0.026		%N ₂ 6.879		%H ₂ S 0.000	
Prover 0.000		Meter Run 2.000		Taps Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
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
Sl.	0.000	x	0.000	0	0.0	0	835	0		
1.	2.067	x	1.375	173	1.8	42	800	62		
2.	2.067	x	1.375	195	25.0	39	598	62		
3.	2.067	x	1.375	176	46.1	37	397	62		
4.	2.067	x	1.375	195	69.0	33	195	62		
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	18.2	186.2	1.0178	1.240	1.018	238
2.	10.200	72.1	208.2	1.0208	1.240	1.020	951
3.	10.200	93.4	189.3	1.0229	1.240	1.019	1231
4.	10.200	119.9	208.2	1.0270	1.240	1.021	1590
5.							

NO.	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature	Mcf/bbl. Deg.
1.	0.28	502	1.42	0.965	0	0.000	0.650	XXXXXXXXXX	659	353	0.650
2.	0.32	499	1.41	0.961			XXXXXXXXXX	659	353		
3.	0.29	497	1.41	0.964			XXXXXXXXXX	659	353		
4.	0.32	493	1.39	0.959			XXXXXXXXXX	659	353		
5.											

NO.	Pt	Pw	Pw'	Pc' - Pw'
1.	661.3	813.6	662.0	57.4
2.	373.6	620.6	385.1	334.3
3.	168.3	433.8	188.2	531.2
4.	43.3	278.6	77.6	641.8
5.				

(1) $\frac{Pc^2}{Pc^2 - Pw^2} = 2.152$ (2) $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.826$

AOF = Q $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1736$

Absolute Open Flow 1736 Mcfd @ 15.025 Angle of Slope () 38 Slope, n 0.786

Remarks:

Approved By Commission:	Conducted By: David Weaver	Calculated By: Andrea Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 12/31/1992

COMPANY Yates Petroleum Corp LEASE Sparrow SP State WELL NO. 4

LOCATION: Unit E Section 5 Township 7S Range 25E

L 3657 H 3657 L/H 1.000 G 0.650 %CO₂ 0.026 %N₂ 6.879 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2377.1 Pcr 658.9 Tcr 353.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.238	0.951	1.231	1.590	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	564	564	564	564	
4 T = (Tw+Ts) / 2	542.7	542.7	542.7	542.7	
5 Z (Est.)	0.886	0.912	0.939	0.964	
6 TZ	481.0	494.9	509.3	523.1	
7 GH / TZ	4.942	4.803	4.667	4.544	
8 e ^{As} (Table XIV)	1.204	1.197	1.191	1.186	
9 1-e ^{As} (Table XIV)	0.169	0.165	0.161	0.157	
10 Pt	813.2	611.2	410.2	208.2	
11 Pt ² / 1000	661.3	373.6	168.3	43.3	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	8.550	8.798	9.054	9.299	
14 FcQm	2.04	8.36	11.15	14.79	
15 L / H(FcQm) ²	4.2	70.0	124.3	218.7	
16 Fw = L / H(FcQm) ² (1-e ^{As})	0.70	11.53	19.95	34.27	
17 Pw ² = Pt ² +Fw	662.0	385.1	188.2	77.6	
18 Ps ² = e ^{As} Pw ²	796.8	461.1	224.2	92.0	
19 Ps	892.6	679.0	473.5	303.4	
20 P = (Pt+Ps) / 2	852.9	645.1	441.9	255.8	
21 Pr = (P / Pcr)	1.29	0.98	0.67	0.39	
22 Tr = (T / Tcr)	1.54	1.54	1.54	1.54	
23 Z (Table XI)	0.886	0.912	0.939	0.964	

Company Yates Petroleum Corp
Well Sparrow SP State #4
Location E 5-7S-25E

County Chaves
Date 12-31-1992

