

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

Form C-122

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 11/02/1999				
Company Yates Petroleum Corp				Connection Agave Energy Company					
Pool Wildcat 2 Foot Ranch Wifap				Formation Wolfcamp				Unit	
Completion Date 9/17/1999		Total Depth 6357		Plug Back TD 5721		Elevation 3763		Farm or Lease Name SAMEDAN ATH STATE	
Csg. Size 5.500	Wt. 15.500	d 4.950	Set At 6337	Perforations: From 5248 To 5690			Well No. 1		
Tbg. Size 2.875	Wt. 6.500	d 2.441	Set At 5212	Perforations: From 5248 To 5690			Unit Sec. Twp. Rge. 1 35 10S 26E		
Type Well Single				Packer Set At 5217			County Chaves		
Producing Thru Tubing		Resv. Temp. °F 114 @ 5500		Mean Temp. °F 62		Baro. Press. - Pa 13.2		State New Mexico	
L 6337	H 6337	Gg 0.669	%CO ₂ 0.118	%N ₂ 1.716	%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	150	0			0
1.	2.067	x	0.375	60	179.0	60	65	60			24
2.	2.067	x	0.375	60	182.0	60	63	60			24
3.	2.067	x	0.375	60	186.0	60	62	60			24
4.	2.067	x	0.375	60	189.0	60	60	60			24
5.		x									

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	$\sqrt{hwP_m}$	Pressure Pm	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	0.669	114.5	73.2	1.0000	1.223	1.007	94
2.	0.669	115.4	73.2	1.0000	1.223	1.007	95
3.	0.669	116.7	73.2	1.0000	1.223	1.007	96
4.	0.669	117.6	73.2	1.0000	1.223	1.007	97
5.							

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
					0	
					A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
1.	0.11	520	1.39	0.986	Specific Gravity Separator Gas	0.669 xxxxxxxxxxxx
2.	0.11	520	1.39	0.986	Specific Gravity Flowing Fluid	xxxxxxxxxxxxx 0.669
3.	0.11	520	1.39	0.986	Critical Pressure	667 P.S.I.A. 667 P.S.I.A.
4.	0.11	520	1.39	0.986	Critical Temperature	374 °R 374 °R
5.						

Pc	163.2	Pc ²	26.6
NO	Pt ²	Pw	Pw ²
1.	6.1	78.7	6.2
2.	5.8	76.7	5.9
3.	5.7	75.7	5.7
4.	5.4	73.7	5.4
5.			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.274$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 116$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.205$$

Absolute Open Flow		116	Angle of Slope θ	38	Slope, n	0.770
Remarks:						
Approved By Commission:		Conducted By: Mike Allen		Calculated By: Katie Brunson		Checked By: Pinson McWhorter

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

DATE 11/02/1999

COMPANY Yates Petroleum Corp LEASE SAMEDAN ATH STATE WELL NO. 1

LOCATION: Unit I Section 35 Township 10S Range 26E

L 6337 H 6337 L/H 1.000 G 0.669 %CO₂ 0.118 %N₂ 1.716 %H₂S 0.000

d 2.441 Fr 0.010495 GH 4239.5 P_{cr} 667.2 T_{cr} 373.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.094	0.095	0.096	0.097	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	574	574	574	574	
4 T = (Tw+Ts) / 2	546.7	546.7	546.7	546.7	
5 Z (Est.)	0.986	0.986	0.986	0.987	
6 TZ	539.0	539.2	539.3	539.5	
7 GH / TZ	7.866	7.863	7.862	7.859	
8 e ^s (Table XIV)	1.343	1.343	1.343	1.343	
9 1-e ^s (Table XIV)	0.256	0.256	0.256	0.255	
10 Pt	78.2	76.2	75.2	73.2	
11 Pt ² / 1000	6.1	5.8	5.7	5.4	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	5.656	5.658	5.659	5.662	
14 FcQm	0.53	0.54	0.54	0.55	
15 L / H(FcQm) ²	0.3	0.3	0.3	0.3	
16 Fw = L / H(FcQm) ² (1-e ^s)	0.07	0.07	0.08	0.08	
17 Pw ² = Pt ² +Fw	6.2	5.9	5.7	5.4	
18 Ps ² = e ^s Pw ²	8.3	7.9	7.7	7.3	
19 Ps	91.2	88.9	87.7	85.4	
20 P = (Pt+Ps) / 2	84.7	82.5	81.5	79.3	
21 Pr = (P / P _{cr})	0.13	0.12	0.12	0.12	
22 Tr = (T / T _{cr})	1.46	1.46	1.46	1.46	
23 Z (Table XI)	0.986	0.986	0.986	0.987	

Company
Well
Location
10^3

Yates Petroleum Corp
SAMEDAN ATH STATE #1
I 35-10S-26E

County
Date

Chaves
11-02-1999

Q, Mcfd

10^2

10^1

10^1

10^2

AOF = 118

10^3

P_o-P_w

