

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

Form C-122 *clsf*
File

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 01/01/1992				
Company Yates Petroleum Corp				Connection Yates Petroleum Corp					
Pool Atoka				Formation Burton Flat				Unit	
Completion Date 06/29/1991		Total Depth 12135		Plug Back TD 12040		Elevation 3269		Farm or Lease Name Trigg AIN Federal	
Csg Size 5.500	Wt 17.000	d 4.892	Set At 12135	Perforations From 11081 To 11090		Well No. 1			
Tbg Size 2.875	Wt 6.500	d 2.441	Set At 10999	Perforations From 11081 To 11090		Unit H	Sec. 28	Twp 20S	Rge. 29E
Type Well Single				Packer Set At 11005		County Eddy			
Producing Thru Tubing		Resv. Temp. °F 168 @ 11085		Mean Temp. °F 62		Baro. Press. - Pa 13.2		State New Mexico	
L 10999	H 10999	Gg 0.693	%CO ₂ 0.248	%N ₂ 0.928	%H ₂ S 0.000	Prover 0.000	Meter Run 4.000	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	
SI	0.000	x	0.000	0	0.0	0	620	0			0
1	4.026	x	1.750	420	1.1	35	590	62			24
2	4.026	x	1.750	376	5.8	39	523	62			24
3	4.026	x	1.750	390	12.0	44	457	62			24
4	4.026	x	1.750	390	18.0	48	390	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	14.930	21.6	433.2	1.0250	1.201	1.060	421
2	14.930	47.5	389.6	1.0208	1.201	1.052	915
3	14.930	69.6	403.2	1.0158	1.201	1.052	1333
4	14.930	85.2	403.2	1.0117	1.201	1.050	1624
5							

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	0	Mcft/bbl.
					API Gravity of Liquid Hydrocarbons	0.000	Deg
1	0.65	495	1.29	0.890	Specific Gravity Separator Gas	0.693	XXXXXXXXXX
2	0.58	499	1.30	0.904	Specific Gravity Flowing Fluid	XXXXXXXXXX	0.693
3	0.60	504	1.31	0.904	Critical Pressure	668	P.S.I.A.
4	0.60	508	1.32	0.906	Critical Temperature	384	°R
5							

Pc	633.2	Pc'	400.9
NO	Pt'	Pw	Pw'
1	363.9	605.0	366.1
2	287.5	546.0	298.1
3	221.1	493.8	243.8
4	162.6	443.6	196.8
5			

(1) $\frac{Pc'}{Pc' - Pw'} = 2.552$

AOF = Q $\left[\frac{Pc'}{Pc' - Pw'} \right]^n = 2730$

(2) $\left[\frac{Pc'}{Pc' - Pw'} \right]^n = 2.048$

Absolute Open Flow	2730	Mcfd @ 15.025	Angle of Slope	0 37	Slope, n	0.765
Remarks:						

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

DATE 01/01/1992

COMPANY Yates Petroleum Corp LEASE Trigg AIN Federal WELL NO. 1

LOCATION: Unit H Section 28 Township 20S Range 29E

L 10999 H 10999 L / H 1.000 G 0.693 %CO₂ 0.248 %N₂ 0.928 %H₂S 0.000

d 2.441 Fr 0.010495 GH 7622.3 Pcr 668.3 Tcr 383.7

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.421	0.915	1.333	1.624	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	628	628	628	628	
4 T = (Tw+Ts) / 2	574.7	574.7	574.7	574.7	
5 Z (Est.)	0.897	0.907	0.917	0.926	
6 TZ	515.4	521.2	526.8	532.3	
7 GH / TZ	14.790	14.624	14.470	14.319	
8 e ^Λ s(Table XIV)	1.741	1.731	1.721	1.711	
9 1-e ^Λ -s(Table XIV)	0.426	0.422	0.419	0.416	
10 Pt	603.2	536.2	470.2	403.2	
11 Pt ² / 1000	363.9	287.5	221.1	162.6	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	5.409	5.470	5.528	5.587	
14 FcQm	2.28	5.00	7.37	9.07	
15 L / H(FcQm) ²	5.2	25.0	54.3	82.3	
16 Fw = L / H(FcQm) ² (1-e ^Λ -s)	2.21	10.57	22.74	34.19	
17 Pw ² = Pt ² +Fw	366.1	298.1	243.8	196.8	
18 Ps ² = e ^Λ sPw ²	637.5	515.8	419.5	336.6	
19 Ps	798.4	718.2	647.7	580.2	
20 P = (Pt+Ps) / 2	700.8	627.2	559.0	491.7	
21 Pr = (P / Pcr)	1.05	0.94	0.84	0.74	
22 Tr = (T / Tcr)	1.50	1.50	1.50	1.50	
23 Z (Table XI)	0.897	0.907	0.917	0.926	

Company Yates Petroleum Corp
Well Trigg AIN Federal #1
Location H 28-20S-29E

County Eddy
Date 01-01-1992

Q, Mcfd

