

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

Form C-122

clsf
File

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 03/11/1993			
Company Yates Petroleum Corp				Connection Navajo				DEC 27 '94	
Pool Strawn				Formation Eagle Creek				Unit	
Completion Date 03/10/93		Total Depth 8220		Plug Back TD 8142		Elevation 3549		Farm or Lease Name Jackson Estate BY	
Csg. Size 4.500	Wt. 10.500	d 4.052	Set At 8220	Perforations: From 7632 To 7642		Well No. 17			
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 7535	Perforations: From 7632 To 7642		Unit H	Sec. 21	Twp. 17S	Rge. 25E
Type Well Single						Packer Set At 7726		County Eddy	
Producing Thru Tubing		Resv. Temp. °F 144 @ 7929		Mean Temp. °F 62		Baro. Press. - Pa 13.2		State New Mexico	
L 7725	H 7725	Gg 1.070	%CO ₂ 5.352	%N ₂ 1.300	%H ₂ S 3.140	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	1280	0			0
1.	2.067	x	0.875	250	10.0	51	1100	62			24
2.	2.067	x	0.875	232	33.5	47	817	62			24
3.	2.067	x	0.875	250	59.0	50	533	62			24
4.	2.067	x	0.875	250	75.0	49	250	62			24
5.		x									

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{hwP_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	3.729	51.3	263.2	1.0088	0.967	1.076	201
2.	3.729	90.7	245.6	1.0127	0.967	1.072	355
3.	3.729	124.6	263.2	1.0098	0.967	1.076	488
4.	3.729	140.5	263.2	1.0108	0.967	1.077	551
5.							

NO.	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	0	Mcft/bbl.
					A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg
1.	0.38	511	1.02	0.864	Specific Gravity Separator Gas	1.070	XXXXXXXXXX
2.	0.35	507	1.01	0.871	Specific Gravity Flowing Fluid	XXXXXXXXXX	1.070
3.	0.38	510	1.01	0.863	Critical Pressure	697	P.S.I.A. 697
4.	0.38	509	1.01	0.862	Critical Temperature	502	°R 502
5.							

Pc	1293.2	Pc²	1672.4
NO.	Pi²	Pw	Pw²
1.	1239.2	1113.4	1239.7
2.	689.2	831.4	691.2
3.	298.3	552.2	304.9
4.	69.3	283.1	80.1
5.			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.223$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.169$	
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 571$			

Absolute Open Flow 571	Mcfd @ 15.025	Angle of Slope 0 38	Slope, n 0.774
Remarks:			
Approved By Commission:			
Conducted By: Harvey Apple		Calculated By: Andrea Carpenter	
Checked By:			

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

DATE 03/11/1993

COMPANY Yates Petroleum Corp

LEASE Jackson Estate BY

WELL NO. 17

LOCATION: Unit H Section 21 Township 17S Range 25E

L 7725 H 7725 L/H 1.000 G 1.070 %CO₂ 5.352 %N₂ 1.300 %H₂S 3.140

d 1.995 Fr 0.017777 GH 8265.8 Pcr 696.8 Tcr 502.5

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.201	0.355	0.488	0.551	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	604	604	604	604	
4 $T = (Tw + Ts) / 2$	562.7	562.7	562.7	562.7	
5 Z (Est.)	0.421	0.473	0.714	0.874	
6 TZ	236.9	266.1	401.6	491.9	
7 GH / TZ	34.894	31.067	20.580	16.803	
8 e^s (Table XIV)	3.700	3.204	2.163	1.878	
9 $1 - e^{-s}$ (Table XIV)	0.730	0.688	0.538	0.468	
10 Pt	1113.2	830.2	546.2	263.2	
11 $Pt^2 / 1000$	1239.2	689.2	298.3	69.3	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 $Fc = FrTZ$	4.211	4.730	7.140	8.745	
14 FcQm	0.85	1.68	3.49	4.82	
15 $L / H(FcQm)^2$	0.7	2.8	12.2	23.2	
16 $Fw = L / H(FcQm)^2(1 - e^{-s})$	0.52	1.94	6.54	10.86	
17 $Pw^2 = Pt^2 + Fw$	1239.7	691.2	304.9	80.1	
18 $Ps^2 = e^s Pw^2$	4586.6	2214.6	659.5	150.5	
19 Ps	2141.6	1488.2	812.1	388.0	
20 $P = (Pt + Ps) / 2$	1627.4	1159.2	679.2	325.6	
21 $Pr = (P / Pcr)$	2.34	1.66	0.97	0.47	
22 $Tr = (T / Tcr)$	1.12	1.12	1.12	1.12	
23 Z (Table XI)	0.421	0.473	0.714	0.874	

Company - Yates Petroleum Corp
Well Jackson Estate BY #17
Location H 21-17S-25E

County Eddy
Date 03-11-1993

