

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

Form C-122

File

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 02/05/1993	
Company Yates Petroleum Corp				Connection Transwestern Pipeline Co			
Pool Abo				Formation Pecos Slope			
Completion Date 01/29/1993		Total Depth 4250		Plug Back TD 4174		Elevation 3678	
Csg. Size 4.500		Wt. 10.500		Set At 4227		Perforations: From 3750 To 3851	
Tbg. Size 2.375		Wt. 4.700		Set At 3651		Perforations: From 3750 To 3851	
Type Well Single				Packer Set At 3651		Farm or Lease Name Johnson IL	
Producing Thru Tubing		Resv. Temp. °F 102 @ 3801		Mean Temp. °F 62		Baro. Press. - Pa 13.2	
L 3651		H 3651		Gg 0.645		%CO ₂ 0.022	
				%N ₂ 5.891		%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
SI	0.000	x	0.000	0	0.0	0	1000	0			0
1.	2.067	x	1.375	330	22.0	59	700	62			24
2.	2.067	x	1.375	301	29.2	58	577	62			24
3.	2.067	x	1.375	330	42.0	60	453	62			24
4.	2.067	x	1.375	330	50.0	61	330	62			24
5.		x									

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	hwPm	Pressure Pm	Flow Temp. Factor Ft.	Gravity Factor Fg	Super. Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	10.200	86.9	343.2	1.0010	1.246	1.030	1138
2.	10.200	95.9	314.7	1.0019	1.246	1.027	1254
3.	10.200	120.1	343.2	1.0000	1.246	1.029	1570
4.	10.200	131.0	343.2	0.9990	1.246	1.029	1711
5.							

NO.	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	0	Mcf/bbl.
					A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
1.	0.52	519	1.46	0.943	Specific Gravity Separator Gas	0.645	XXXXXXXXXX
2.	0.48	518	1.46	0.947	Specific Gravity Flowing Fluid	XXXXXXXXXX	0.645
3.	0.52	520	1.47	0.944	Critical Pressure	661	P.S.I.A.
4.	0.52	521	1.47	0.944	Critical Temperature	354	°R
5.							

Pc	1013.2	Pc²	1026.6
NO.	Pt²	Pw	Pw²
1.	508.7	724.4	524.7
2.	348.3	606.8	368.2
3.	217.3	499.1	249.1
4.	117.8	395.2	156.2
5.			

(1) $\frac{Pc^2}{Pc^2 - Pw^2} = 1.320$

AOF = Q $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1929$

(2) $\left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.228$

Absolute Open Flow	1929	Mcf/d @ 15.025	Angle of Slope	37	Slope, n	0.740
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Remarks:	
Approved By Commission:	Conducted By: Jim Krogman
Calculated By: Andrea Carpenter	Checked By:

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

DATE 02/05/1993

COMPANY Yates Petroleum Corp LEASE Johnson IL WELL NO. 3

LOCATION: Unit I Section 30 Township 6S Range 26E

L 3651 H 3651 L/H 1.000 G 0.645 %CO₂ 0.022 %N₂ 5.891 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2353.4 P_{cr} 660.7 T_{cr} 354.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	1.138	1.254	1.570	1.711	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	562	562	562	562	
4 T = (Tw+Ts) / 2	541.7	541.7	541.7	541.7	
5 Z (Est.)	0.897	0.913	0.929	0.945	
6 TZ	485.8	494.6	503.3	512.0	
7 GH / TZ	4.844	4.759	4.676	4.597	
8 e ^s (Table XIV)	1.199	1.195	1.192	1.188	
9 1-e ^s (Table XIV)	0.166	0.163	0.161	0.158	
10 Pt	713.2	590.2	466.2	343.2	
11 Pt ² / 1000	508.7	348.3	217.3	117.8	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	8.636	8.792	8.946	9.102	
14 FcQm	9.83	11.03	14.05	15.58	
15 L / H(FcQm) ²	96.6	121.6	197.4	242.6	
16 Fw = L / H(FcQm) ² (1-e ^s)	16.04	19.88	31.74	38.41	
17 Pw ² = Pt ² +Fw	524.7	368.2	249.1	156.2	
18 Ps ² = e ^s Pw ²	629.2	440.1	296.8	185.6	
19 Ps	793.2	663.4	544.8	430.8	
20 P = (Pt+Ps) / 2	753.2	626.8	505.5	387.0	
21 Pr = (P / Pcr)	1.14	0.95	0.77	0.59	
22 Tr = (T / Tcr)	1.53	1.53	1.53	1.53	
23 Z (Table XI)	0.897	0.913	0.929	0.945	

Company
Well
Location

Yates Petroleum Corp
Johnson IL #3
130-6S-26E

County
Date

Chaves
02-05-1993

