

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

Form C-122

CISF
File

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 07/08/1993			
Company Yates Petroleum Corp				Connection Transwestern Pipeline Co					
Pool Abo				Formation Pecos Slope				Unit	
Completion Date 01/18/1993		Total Depth 4250		Plug Back TD 4195		Elevation 3654		Farm or Lease Name Tamarack QF State Com	
Csg. Size 4.500	Wt. 10.500	d 4.052	Set At 4250	Perforations: From 3829 To 3960				Well No. 3	
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 3706	Perforations: From 3829 To 3960				Unit E	Sec. 32
Type Well Single				Packer Set At 3706				County Chaves	
Producing Thru Tubing		Resv. Temp. °F 105 @ 3895		Mean Temp. °F 62		Baro. Press. - Pa 13.2		State New Mexico	
L 3706	H 3706	Gg 0.645	%CO ₂ 0.022	%N ₂ 5.890	%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	450	0			0
1.	2.067	x	1.375	290	17.0	99	370	62			24
2.	2.067	x	1.375	275	23.7	98	343	62			24
3.	2.067	x	1.375	290	33.0	100	317	62			24
4.	2.067	x	1.375	290	41.0	99	290	62			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.	10.200	71.8	303.2	0.9645	1.246	1.020	897
2.	10.200	82.6	287.9	0.9653	1.246	1.019	1032
3.	10.200	100.0	303.2	0.9636	1.246	1.020	1249
4.	10.200	111.5	303.2	0.9645	1.246	1.020	1393
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.	0.46	559	1.58	0.961	Specific Gravity Separator Gas	0.645	XXXXXXXXXX
2.	0.44	558	1.57	0.963	Specific Gravity Flowing Fluid	XXXXXXXXXX	0.645
3.	0.46	560	1.58	0.962	Critical Pressure	661	P.S.I.A
4.	0.46	559	1.58	0.961	Critical Temperature	354	°R
5.							

Pc	463.2	Pc'	214.6
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NO.	Pt'	Pw	Pw'	Pc' - Pw'	(1) $\frac{Pc'}{Pc' - Pw'} = 2.535$	(2) $\left[\frac{Pc'}{Pc' - Pw'} \right]^n = 2.176$
1.	146.8	396.9	157.5	57.0		
2.	126.9	375.6	141.1	73.5		
3.	109.0	360.5	129.9	84.6		
4.	91.9	343.6	118.0	96.5		
5.						

AOF = Q $\left[\frac{Pc'}{Pc' - Pw'} \right]^n = 2718$			
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Absolute Open Flow	2718	Mcf @ 15.025	Angle of Slope	0 40	Slope, n	0.836
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Remarks:			
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Approved By Commission:	Conducted By: Jim Krogman	Calculated By: Andrea Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 07/08/1993

COMPANY Yates Petroleum Corp LEASE Tamarack QF State Com WELL NO. 3

LOCATION: Unit E Section 32 Township 6S Range 26E

L 3706 H 3706 L/H 1.000 G 0.645 %CO₂ 0.022 %N₂ 5.890 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2388.9 Pcr 660.7 Tcr 354.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.897	1.032	1.249	1.393	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	565	565	565	565	
4 T = (Tw+Ts) / 2	543.2	543.2	543.2	543.2	
5 Z (Est.)	0.943	0.946	0.949	0.952	
6 TZ	512.1	514.0	515.6	517.3	
7 GH / TZ	4.665	4.648	4.633	4.618	
8 e ^s (Table XIV)	1.191	1.190	1.190	1.189	
9 1-e ^s (Table XIV)	0.160	0.160	0.159	0.159	
10 Pt	383.2	356.2	330.2	303.2	
11 Pt ² / 1000	146.8	126.9	109.0	91.9	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.104	9.137	9.165	9.195	
14 FcQm	8.17	9.43	11.45	12.81	
15 L / H(FcQm) ²	66.7	88.9	131.0	164.2	
16 Fw = L / H(FcQm) ² (1-e ^s)	10.71	14.21	20.89	26.10	
17 Pw ² = Pt ² +Fw	157.5	141.1	129.9	118.0	
18 Ps ² = e ^s Pw ²	187.7	168.0	154.6	140.4	
19 Ps	433.2	409.8	393.2	374.6	
20 P = (Pt+Ps) / 2	408.2	383.0	361.7	338.9	
21 Pr = (P / Pcr)	0.62	0.58	0.55	0.51	
22 Tr = (T / Tcr)	1.53	1.53	1.53	1.53	
23 Z (Table XI)	0.943	0.946	0.949	0.952	

Company Yates Petroleum Corp
Well Tamarack QF State Com #3
Location E 32-6S-26E

County Chaves
Date 07-08-1993

