

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR OIL WELLS

Form C-122

File

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 04/10/1993	
Company Yates Petroleum Corp		Connection Transwestern Pipeline Co	
Pool Abo		Formation Pecos Slope West	
Completion Date 11/14/1992	Total Depth 3750	Plug Back TD 3205	Elevation 4128
Farm or Lease Name Salt Creek Unit		Well No. 5	
Csg. Size 4.500	Wt. 9.500	d 4.090	Set At 3748
Perforations From 2604 To 3520		Well No. 5	
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 2599
Perforations From 2604 To 3520		Unit Sec. Twp. Rge D 21 8S 22E	
Type Well Single		Packer Set At 2599	
Producing Thru		County Chaves	
Resv. Temp. °F 97		Mean Temp. °F 62	
Baro. Press. - Pa 13.2		State New Mexico	
Tubing L 2599	H 2599	Gg 0.588	%CO ₂ 0.000
%N ₂ 4.216	%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	380	0			0
1.	2.067	x	1.250	250	13.0	68	350	62			24
2.	2.067	x	1.250	232	34.4	69	317	62			24
3.	2.067	x	1.250	250	66.0	70	283	62			24
4.	2.067	x	1.250	250	95.0	70	250	62			24
5.		x									

NO.	Coefficient (24 Hour)	$\sqrt{hwP_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	8.120	58.5	263.2	0.9924	1.304	1.018	626
2	8.120	91.8	245.4	0.9915	1.304	1.017	980
3	8.120	131.8	263.2	0.9905	1.304	1.018	1407
4	8.120	158.1	263.2	0.9905	1.304	1.018	1688
5							

NO.	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.40	528	1.55	0.964	0	
2	0.37	529	1.55	0.967	0.000	
3	0.40	530	1.56	0.965	0.588	XXXXXXXXXX
4	0.40	530	1.56	0.965	0.588	XXXXXXXXXX
5						

NO.	P _c	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1	131.9	367.9	135.4	19.2	3.137	2.703
2	109.0	342.8	117.5	37.1		
3	87.7	324.5	105.3	49.3		
4	69.3	307.7	94.7	59.9		
5						

AOF = Q	$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$	3804
---------	--	------

Absolute Open Flow	3804	Mcf/d @ 15.025	Angle of Slope	0 41	Slope, n	0.870
--------------------	------	----------------	----------------	------	----------	-------

Remarks	
---------	--

Approved By Commission:	Conducted By: Dyke Dodson	Calculated By: Andrea Carpenter	Checked By:
-------------------------	------------------------------	------------------------------------	-------------

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

DATE 04/10/1993

COMPANY Yates Petroleum Corp LEASE Salt Creek Unit WELL NO. 5

LOCATION: Unit D Section 21 Township 8S Range 22E

L 2599 H 2599 L / H 1.000 G 0.588 %CO₂ 0.000 %N₂ 4.216 %H₂S 0.000
 d 1.995 Fr 0.017777 GH 1528.2 Pcr 665.4 Tcr 340.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.626	0.980	1.407	1.688	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	557	557	557	557	
4 T = (Tw+Ts) / 2	539.2	539.2	539.2	539.2	
5 Z (Est.)	0.953	0.957	0.960	0.963	
6 TZ	514.1	516.0	517.8	519.4	
7 GH / TZ	2.973	2.962	2.952	2.942	
8 e ^s (Table XIV)	1.118	1.117	1.117	1.117	
9 1-e ^{-s} (Table XIV)	0.105	0.105	0.105	0.104	
10 Pt	363.2	330.2	296.2	263.2	
11 Pt ² / 1000	131.9	109.0	87.7	69.3	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	9.139	9.173	9.204	9.234	
14 FcQm	5.72	8.99	12.95	15.59	
15 L / H(FcQm) ²	32.7	80.9	167.8	243.1	
16 Fw = L / H(FcQm) ² (1-e ^{-s})	3.45	8.50	17.58	25.39	
17 Pw ² = Pt ² +Fw	135.4	117.5	105.3	94.7	
18 Ps ² = e ^s Pw ²	151.3	131.3	117.6	105.7	
19 Ps	389.0	362.4	343.0	325.1	
20 P = (Pt+Ps) / 2	376.1	346.3	319.6	294.2	
21 Pr = (P / Pcr)	0.57	0.52	0.48	0.44	
22 Tr = (T / Tcr)	1.58	1.58	1.58	1.58	
23 Z (Table XI)	0.953	0.957	0.960	0.963	

Company
Well
Location

Yates Petroleum Corp
Salt Creek Unit #5
D 21.8S 22E

County
Date

Chaves
04-10-1993

Q, Mc/d

