

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS Form C-122

RECEIVED

SEP 08 '87

O. C. D.
ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 05/05/87	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool Undesignated <i>Long Tank</i>				Formation Morrow <i>Grns</i>	
Completion Date 01/06/85		Total Depth 8393.0'		Plug Back TD 8327.0'	
Elevation 3905.0'		Farm or Lease Name Tanque Rojo AAT St			
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 8393.0'	Perforations: From 8131.0' To 8141.0'	
Well No. 1					
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 8088.0'	Perforations: From 8131.0' To 8141.0'	
Unit Sec I 11		Twp 19S		Rge 23E	
Type Well Single				Packer Set At 8088.0'	
Producing Thru Tubing		Resv. Temp. °F 165 @ 8136'		Mean Temp. °F 62.0	
Baro. Press. - Pa 13.2 psia.		State New Mexico			
L 8088.0'	H 8088.0'	Gg .611	%CO2 .49	%N2 .82	%H2S 0.00
Prover 0.000"	Meter Run 2.000"	Taps Flange			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO	Prover Size	Orifice X Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
SI	0.000	X 0.000	0	0.0	76	2415	0	0	0	0 hrs.
1.	2.067	X .750	200	48.0	76	2250	62	0	0	24 hrs.
2.	2.067	X .750	220	74.7	76	2222	62	0	0	24 hrs.
3.	2.067	X .750	255	84.0	76	2123	62	0	0	24 hrs.
4.	2.067	X .750	300	96.9	76	2055	62	0	0	24 hrs.
5.	0.000	X 0.000	0	0.0	0	0	0	0	0	0 hrs.

RATE OF FLOW CALCULATIONS

NO	Coefficient (24 HOUR)	1/hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	2.709	101.16	213.20	.985	1.279	1.015	351
2.	2.709	131.98	233.20	.985	1.279	1.017	458
3.	2.709	150.10	268.20	.985	1.279	1.019	522
4.	2.709	174.21	313.20	.985	1.279	1.023	608
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	356.000 Mcf/bbl.
1.	.32	536	1.50	.971	A.P.I. Gravity of Liquid Hydrocarbons	61.300 Deg.
2.	.35	536	1.50	.968	Specific Gravity Separator Gas	.611 xxxxxxxxxxxxxx
3.	.40	536	1.50	.962	Specific Gravity Flowing Fluid	xxxxxx .619
4.	.47	536	1.50	.956	Critical Pressure	672.4 PSIA 672.1 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	356.5°R 359.2°R

Pc 2428.2 Pc2 5896.2			
NO	Pt2	Pw	Pw2
1.	5122.1	2263.8	5124.9
2.	4996.1	2236.3	5000.9
3.	4563.4	2137.7	4569.6
4.	4277.5	2070.3	4286.0
5.	0.0	0.0	0.0

$$Pc^2 - Pw^2 = 3.6454 \quad (2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 2.6253$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1597 \text{ Mcfd}$$

Absolute Open Flow 1597 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .746
Remarks:

Approved By:	Conducted By: Tracy Richardson	Calculated By: Andrea Carpenter	Checked By:
--------------	-----------------------------------	------------------------------------	-------------

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

Adopted 9-1-65

DATE 09/04/87

COMPANY Yates Petroleum Corporation LEASE Tanque Rojo AAT St WELL NO. 1

LOCATION: Unit I Section 11 Township 19S Range 23E

L 8088.0 H 8088.0 L/H 1.000 G .619 %CO₂ .49 %N₂ .82 %H₂S 0.00

d 1.995 Fr .017777 GH 5006.8 Pcr 672.1 Tcr 359.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.351	.458	.522	.608	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	625.0	625.0	625.0	625.0	0.0
4 T=(Tw+Ts)/2	573.5	573.5	573.5	573.5	0.0
5 Z(Est.)	.821	.821	.820	.821	0.000
6 TZ	470.8	470.7	470.5	470.7	0.0
7 GH/TZ	10.635	10.638	10.641	10.638	0.000
8 e ^s (Table XIV)	1.490	1.490	1.490	1.490	0.000
9 1-e ^{-s} (Table XIV)	.329	.329	.329	.329	0.000
10 Pt	2263.2	2235.2	2136.2	2068.2	0.0
11 Pt ² /1000	5122.1	4996.1	4563.4	4277.5	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.366	8.367	8.364	8.370	0.000
14 FcQm	2.932	3.833	4.369	5.093	0.000
15 L/H(FcQm) ²	8.599	14.688	19.087	25.934	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.829	4.832	6.281	8.528	0.000
17 Pw ² =Pt ² +Fw	5124.9	5000.9	4569.6	4286.0	0.0
18 Ps ² =e ^s Pw ²	7637.5	7452.4	6810.6	6385.9	0.0
19 Ps	2763.6	2729.9	2609.7	2527.0	0.0
20 P=(Pt+Ps)/2	2513.4	2482.6	2373.0	2297.6	0.0
21 Pr=(P/Pcr)	3.74	3.69	3.53	3.42	0.00
22 Tr=(T/Tcr)	1.60	1.60	1.60	1.60	0.00
23 Z(Table XI)	.821	.821	.820	.821	0.000

Company	Yates Petroleum Corporation
Well	Tanque Rojo AAT St No. 1
Location	I, 11-19S-23E
County	Eddy
Date	09/04/87

