

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR NON-SOLUBLE WELL

RECEIVED BY

O. C. D.
ARTESIA, OFFICE

Form C-122

Type Test [x] Initial [] Annual [] Special				Test Date 6/5/84	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company		
Pool Pecos Slope <i>Also</i>			Formation Abo		Unit
Completion Date 11/8/82		Total Depth 4025.0'		Plug Back TD 3888.0'	Elevation 3984.6'
Farm or Lease Name Mike Harvey "TR" Fed					
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4025.0'	Perforations: From 3546.0' To 3715.0'	
Well No. 2					
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3496.0'	Perforations: From 0.0' To 0.0'	
Unit Sec Twp Rge B 3 5S 24E					
Type Well Single				Packer Set At 3496.0'	
County Chaves					
Producing Thru Tubing		Resv. Temp. °F 102 @ 3493'		Mean Temp. °F 62.0	
				Baro. Press. - Pa 13.2 psia.	
State New Mexico					
L 3496.0'	H 3496.0'	Gg .655	%CO2 .01	%N2 6.07	%H2S 0.00
Prover 0.000"		Meter Run 2.000"		Taps Flange	

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Prover Orifice Size 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	66	1011	0	0	0	0 hrs.
1.	2.067 X .750	130	7.0	66	743	62	0	0	24 hrs.
2.	2.067 X .750	140	12.2	66	551	62	0	0	24 hrs.
3.	2.067 X .750	150	15.8	66	442	62	0	0	24 hrs.
4.	2.067 X .750	155	21.0	69	140	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. Fpu	Rate of Flow Q, Mcfd
1.	2.709	31.66	143.20	.994	1.236	1.010	106
2.	2.709	43.23	153.20	.994	1.236	1.011	146
3.	2.709	50.78	163.20	.994	1.236	1.012	171
4.	2.709	59.43	168.20	.991	1.236	1.012	200
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.
1.	.22	526	1.47	.979	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.23	526	1.47	.978	Specific Gravity Separator Gas	.655	xxxxxxxxxxxxxx
3.	.25	526	1.47	.976	Specific Gravity Flowing Fluid	xxxxxx	.655
4.	.25	529	1.48	.976	Critical Pressure	660.0	PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	357.1	°R

Pc 1024.2	Pc ² 1049.0		
NO	Pt ²	Pw	Pw ²
1.	571.8	756.3	572.0
2.	319.3	564.4	318.6
3.	207.2	455.6	207.6
4.	23.5	154.9	24.0
5.	0.0	0.0	0.0

$$Pc^2 - Pw^2(1) = \frac{Pc^2}{Pc^2 - Pw^2} = 1.0278 \quad (2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.0228$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 204 \text{ Mcfd}$$

Absolute Open Flow 204 Mcfd @ 15.025 Angle of Slope, 0 40 Slope, n .825
Remarks:

Approved By: Conducted By: David Weaver Calculated By: Andie Carpenter Checked By:

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

Adopted 9-1-65

DATE 11/6/84

COMPANY Yates Petroleum Corporation LEASE Mike Harvey "TR" Fed WELL NO. 2

LOCATION: Unit B Section 3 Township 5S Range 24E

L 3496.0 H 3496.0 L/H 1.000 G .655 %CO₂ .01 %N₂ 6.07 %H₂S 0.00

d 1.995 Fr .017777 GH 2289.9 Pcr 660.0 Tcr 357.1

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.106	.146	.171	.200	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	562.0	562.0	562.0	562.0	0.0
4 T=(Tw+Ts)/2	542.0	542.0	542.0	542.0	0.0
5 Z(Est.)	.890	.917	.933	.977	0.000
6 TZ	482.5	497.0	505.6	529.5	0.0
7 GH/TZ	4.746	4.607	4.529	4.325	0.000
8 e ^s (Table XIV)	1.195	1.189	1.185	1.176	0.000
9 1-e ^{-s} (Table XIV)	.163	.159	.156	.150	0.000
10 Pt	756.2	564.2	455.2	153.2	0.0
11 Pt ² /1000	571.8	318.3	207.2	23.5	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.577	8.839	8.990	9.413	0.000
14 FcQm	.913	1.286	1.538	1.880	0.000
15 L/H(FcQm) ²	.834	1.654	2.365	3.533	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.136	.262	.369	.529	0.000
17 Pw ² =Pt ² +Fw	572.0	318.6	207.6	24.0	0.0
18 Ps ² =e ^s Pw ²	683.4	378.6	246.0	28.2	0.0
19 Ps	826.7	615.3	496.0	168.0	0.0
20 P=(Pt+Ps)/2	791.4	589.8	475.6	160.6	0.0
21 Pr=(P/Pcr)	1.20	.89	.72	.24	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.890	.917	.933	.977	0.000

Company	Yates Petroleum Corporation
Well	Mike Harvey "TR" Fed No. 2
Location	B, 3-5S-24E
County	Chaves
Date	11/6/84

