

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

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NOV 13 1984

Form 1-122

O. C. D.
ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 8/23/84	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company		
Pool Pecos Slope <i>Abo</i>			Formation Abo		Unit
Completion Date 3/22/83		Total Depth 4180.0'		Plug Back TD 4106.0'	Elevation 3609.0'
Farm or Lease Name Duncan "LH" Fed ✓					
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4174.0'	Perforations: From 3602.0' To 3966.0'	
Well No. 2					
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3536.0'	Perforations: From 0.0' To 0.0'	
Unit Sec Twp Rge J 3 8S 25E					
Type Well Single				Packer Set At 3536.0'	
County Chaves					
Producing Thru Tubing		Resv. Temp. °F 104 @ 3784'		Baro. Press. - Pa 13.2 psia.	
State New Mexico					
L 3536.0'	H 3536.0'	Gg .655	%CO2 .03	%N2 6.72	%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	70	931	0	0	0	0 hrs.
1.	2.067 X 1.375	220	10.9	70	887	62	0	0	24 hrs.
2.	2.067 X 1.375	220	15.0	70	875	62	0	0	24 hrs.
3.	2.067 X 1.375	320	26.9	70	812	62	0	0	24 hrs.
4.	2.067 X 1.375	340	34.0	70	790	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)	hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	10.204	50.42	233.20	.991	1.236	1.018	641
2.	10.204	59.14	233.20	.991	1.236	1.018	752
3.	10.204	94.67	333.20	.991	1.236	1.026	1213
4.	10.204	109.58	353.20	.991	1.236	1.028	1406
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.	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.	Specific Gravity Separator Gas .655	Specific Gravity Flowing Fluid .655	Critical Pressure 659.0 PSIA	Critical Temperature 355.3°R
1.	.35	530	1.49	.966						
2.	.35	530	1.49	.966						
3.	.51	530	1.49	.950						
4.	.54	530	1.49	.947						
5.	0.00	0	0.00	0.000						

Pc	944.2	Pc ²	891.5			
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ²	(1) $\frac{Pc^2}{Pc^2-Pw^2} = \frac{4.6251}{}$	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{2.8650}{}$
1.	810.4	902.9	815.2	76.3		
2.	788.9	892.0	795.6	95.9		
3.	681.0	835.9	698.7	192.8	ROF = Q $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{3475 \text{ Mcfd}}{}$	
4.	645.1	817.9	669.0	222.5		
5.	0.0	0.0	0.0	0.0		

$$ROF = Q \left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 3475 \text{ Mcfd}$$

Absolute Open Flow 3475 Mcfd @ 15.025 Angle of Slope, 0 35 Slope, n .687

Remarks:

Approved By:	Conducted By: David Weaver	Calculated By: Andie Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 11/6/84

COMPANY Yates Petroleum Corporation LEASE Duncan "LH" Fed WELL NO. 2

LOCATION: Unit J Section 3 Township 8S Range 25E

L 3536.0 H 3536.0 L/H 1.000 G .655 %CO₂ .03 %N₂ 6.72 %H₂S 0.00

d 1.995 Fr .017777 GH 2316.1 Pcr 659.0 Tcr 355.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.641	.752	1.213	1.406	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	564.0	564.0	564.0	564.0	0.0
4 T=(Tw+Ts)/2	543.0	543.0	543.0	543.0	0.0
5 Z(Est.)	.874	.876	.883	.886	0.000
6 TZ	474.6	475.4	479.5	480.9	0.0
7 GH/TZ	4.880	4.872	4.830	4.816	0.000
8 e ^{-S} (Table XIV)	1.201	1.200	1.199	1.198	0.000
9 1-e ^{-S} (Table XIV)	.167	.167	.166	.165	0.000
10 Pt	900.2	888.2	825.2	803.2	0.0
11 Pt ² /1000	810.4	788.9	681.0	645.1	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.438	8.457	8.524	8.553	0.000
14 FcQm	5.406	6.356	10.339	12.028	0.000
15 L/H(FcQm) ²	29.222	40.403	106.901	144.668	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-S})	4.887	6.742	17.710	23.893	0.000
17 Pw ² =Pt ² +Fw	815.2	795.6	698.7	669.0	0.0
18 Ps ² =e ^{-S} Pw ²	978.9	955.0	837.4	801.4	0.0
19 Ps	989.4	977.2	915.1	895.2	0.0
20 P=(Pt+Ps)/2	944.8	932.7	870.1	849.2	0.0
21 Pr=(P/Pcr)	1.43	1.42	1.32	1.29	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.874	.876	.883	.886	0.000

Company	Yates Petroleum Corporation
Well	Duncan "LH" Fed No. 2
Location	J, 3-8S-25E
County	Chaves
Date	11/6/84

