

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

Form O-122

RECEIVED

95F
File

Type Test [X] Initial [] Annual [] Special					Test Date 3/15/88		APR 22 '88	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company		O. C. D.	
Pool SOUTH PECOS SLOPE ABO					Formation ABO		Unit ARTESIA, OFFICE	
Completion Date 12-11-87		Total Depth 5100.0'		Plug Back TD 4901.0'		Elevation 3802.0'		Farm or Lease Name DESERT ROSE UNIT
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 5100.0'	Perforations: From 4531.0' To 4860.0'		Well No. 2		
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 4399.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge P 11 9S 26E		
Type Well Single					Packer Set At 4399.0'		County CHAVES	
Producing Thru Tubing		Resv. Temp. °F 118 @ 5100'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 4399.0'	H 4399.0'	Gg .643	%CO2 .27	%N2 4.72	%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	1804	0	0	0	0 hrs.
1.	2.067 X 1.125	150	7.3	70	1299	62	0	0	24 hrs.
2.	2.067 X 1.125	150	9.3	70	1112	62	0	0	24 hrs.
3.	2.067 X 1.125	140	18.2	70	704	62	0	0	24 hrs.
4.	2.067 X 1.125	140	22.0	70	430	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.	6.397	34.52	163.20	.991	1.247	1.012	276
2.	6.397	38.96	163.20	.991	1.247	1.012	311
3.	6.397	52.80	153.20	.991	1.247	1.011	422
4.	6.397	58.06	153.20	.991	1.247	1.011	464
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 .643	Specific Gravity Flowing Fluid xxxxxx	Critical Pressure 663.8 PSIA	Critical Temperature 356.5°R
1.	.25	530	1.49	.977						
2.	.25	530	1.49	.977						
3.	.23	530	1.49	.979						
4.	.23	530	1.49	.979						
5.	0.00	0	0.00	0.000						

Pc 1817.2 Pc2 3302.2				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	1721.9	1312.6	1722.9	1579.3
2.	1266.1	1125.8	1267.4	2034.8
3.	514.4	719.1	517.0	2785.2
4.	196.4	447.0	199.8	3102.4
5.	0.0	0.0	0.0	0.0

$\frac{Pc^2}{Pc^2 - Pw^2} = 1.0680 \quad (2) \quad \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.0644$	
$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 494 \text{ Mcfd}$	

Absolute Open Flow	494 Mcfd @ 15.025	Angle of Slope, θ	43	Slope, n	.949
Remarks:					

Approved By:	Conducted By: DAVID WEAVER	Calculated By: ANDREA CARPENTER	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 4/21/88

COMPANY Yates Petroleum Corporation LEASE DESERT ROSE UNIT WELL NO. 2

LOCATION: Unit P Section 11 Township 9S Range 26E

L 4399.0 H 4399.0 L/H 1.000 G .643 %CO₂ .27 %N₂ 4.72 %H₂S 0.00

d 1.995 Fr .017777 GH 2828.6 Pcr 663.8 Tcr 356.5

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.276	.311	.422	.464	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	578.0	578.0	578.0	578.0	0.0
4 T=(Tw+Ts)/2	550.0	550.0	550.0	550.0	0.0
5 Z(Est.)	.834	.853	.901	.938	0.000
6 TZ	458.9	469.1	495.6	515.8	0.0
7 GH/TZ	6.163	6.030	5.707	5.484	0.000
8 e ^s (Table XIV)	1.260	1.254	1.239	1.228	0.000
9 1-e ^{-s} (Table XIV)	.206	.202	.193	.186	0.000
10 Pt	1312.2	1125.2	717.2	443.2	0.0
11 Pt ² /1000	1721.9	1266.1	514.4	196.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.159	8.338	8.810	9.171	0.000
14 FcQm	2.251	2.597	3.716	4.252	0.000
15 L/H(FcQm) ²	5.067	6.743	13.806	18.083	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.046	1.365	2.660	3.360	0.000
17 Pw ² =Pt ² +Fw	1722.9	1267.4	517.0	199.8	0.0
18 Ps ² =e ^s Pw ²	2170.9	1589.1	640.4	245.4	0.0
19 Ps	1473.4	1260.6	800.3	495.4	0.0
20 P=(Pt+Ps)/2	1392.8	1192.9	758.7	469.3	0.0
21 Pr=(P/Pcr)	2.10	1.80	1.14	.71	0.00
22 Tr=(T/Tcr)	1.54	1.54	1.54	1.54	0.00
23 Z(Table XI)	.834	.853	.901	.938	0.000

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Company	Yates Petroleum Corporation
Well	DESERT ROSE UNIT No. 2
Location	P, 11-9S-26E
County	CHAVES
Date	4/21/88

$P_c^2 - P_w^2$, THOUSANDS

