

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

RECEIVED

Form C-122

JUN 13 1983

O. C. D.

Type Test [X] Initial [] Annual [] Special				Test Date 4/12/83		ARTESIA, OFFICE	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			
Pool Pecos Slope <i>260</i>				Formation Abo		Unit	
Completion Date 3/30/82		Total Depth 4175.0'		Plug Back TD 4123.0'		Elevation 3825.0'	
Farm or Lease Name Papalote "01" State				Well No. 4			
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4175.0'	Perforations: From 3692.0' To 4023.0'		Unit Sec Twp Rge I 16 7S 25E	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3676.0'	Perforations: From 0.0' To 0.0'		County Chaves	
Type Well Single				Packer Set At 0.0'		State New Mexico	
Producing Thru Tubing		Resv. Temp. °F 102 @ 3676'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
L 3676.0'	H 3676.0'	Gg .659	%CO2 1.22	%N2 6.14	%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	0	999	0	0	0	0 hrs.
1.	2.067 X 1.250	115	36.0	60	950	62	0	0	24 hrs.
2.	2.067 X 1.250	145	57.0	57	930	62	0	0	24 hrs.
3.	2.067 X 1.250	200	55.0	60	900	62	0	0	24 hrs.
4.	2.067 X 1.250	140	73.0	57	875	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)	$\sqrt{hwP_m}$	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	8.134	67.94	128.20	1.000	1.232	1.009	687
2.	8.134	94.96	158.20	1.003	1.232	1.012	966
3.	8.134	108.29	213.20	1.000	1.232	1.017	1104
4.	8.134	105.75	153.20	1.003	1.232	1.012	1075
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	Deg.
1.	.19	520	1.46	.981	Specific Gravity Separator Gas .659	xxxxxxx	
2.	.24	517	1.45	.976	Specific Gravity Flowing Fluid xxxxxx	.659	
3.	.32	520	1.46	.967	Critical Pressure 664.9 PSIA	664.9 PSIA	
4.	.23	517	1.45	.976	Critical Temperature 356.2°R	356.2°R	
5.	0.00	0	0.00	0.000			

Pc 1012.2 Pc² 1024.5

NO	Pt²	Pw	Pw²	Pc²-Pw² (1)	$\frac{Pc²}{Pc²-Pw²} = 11.2563$	(2) $\left[\frac{Pc²}{Pc²-Pw²} \right]^n = 3.3550$
1.	927.8	966.2	933.5	91.0		
2.	889.6	949.3	901.1	123.5		
3.	833.9	921.4	849.0	175.6		
4.	788.9	896.2	803.2	221.3		
5.	0.0	0.0	0.0	0.0		

$$AOF = Q \left[\frac{Pc²}{Pc²-Pw²} \right]^n = 2305 \text{ Mcfd}$$

Absolute Open Flow 2305 Mcfd @ 15.025 Angle of Slope, 0 27 Slope, n .500
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 6/10/83

COMPANY Yates Petroleum Corporation LEASE Papalote "01" State WELL NO. 4

LOCATION: Unit I Section 16 Township 7S Range 25E

L 3676.0 H 3676.0 L/H 1.000 G .659 %CO₂ 1.22 %N₂ 6.14 %H₂S 0.00

d 1.995 Fr .017777 GH 2422.5 Pcr 664.9 Tcr 356.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.687	.966	1.104	1.075	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.)	.865	.867	.871	.874	0.000
6 TZ	468.7	470.0	471.9	473.6	0.0
7 GH/TZ	5.168	5.155	5.133	5.115	0.000
8 e ^s (Table XIV)	1.214	1.213	1.212	1.211	0.000
9 1-e ^{-s} (Table XIV)	.176	.176	.175	.174	0.000
10 Pt	963.2	943.2	913.2	888.2	0.0
11 Pt ² /1000	927.8	889.6	833.9	788.9	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.332	8.354	8.395	8.426	0.000
14 FcQm	5.725	8.071	9.265	9.062	0.000
15 L/H(FcQm) ²	32.777	65.147	85.836	82.112	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	5.775	11.451	15.020	14.321	0.000
17 Pw ² =Pt ² +Fw	933.5	901.1	849.0	803.2	0.0
18 Ps ² =e ^s Pw ²	1133.2	1093.2	1029.0	972.9	0.0
19 Ps	1064.5	1045.6	1014.4	986.4	0.0
20 P=(Pt+Ps)/2	1013.9	994.4	963.8	937.3	0.0
21 Pr=(P/Pcr)	1.52	1.50	1.45	1.41	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.865	.867	.871	.874	0.000

Company	Yates Petroleum Corporation
Well	Papalote "01" State No. 4
Location	I, 16-7S-25E
County	Chaves
Date	6/10/83

