

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

Form C-122

RECEIVED

Type Test [x] Initial [] Annual [] Special					Test Date 10/8/88		JAN 23 '90	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			O. C. D.	
Pool Wildcat				Formation Penn			Unit ARTESIA, OFFICE	
Completion Date 1/23/88		Total Depth 6560.0'		Plug Back TD 6479.0'		Elevation 3969.0'		Farm or Lease Name Cactus Flower State
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 6560.0'	Perforations: From 6257.0' To 6410.0'			Well No. 1	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 6186.0'	Perforations: From 0.0' To 0.0'			Unit Sec Twp Rge K 19 8S 27E	
Type Well Single				Packer Set At 6186.0'			County Chaves	
Producing Thru Tubing		Resv. Temp. °F 145 @ 6405'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 6186.0'	H 6186.0'	Gg .628	%CO2 .08	%N2 4.87	%H2S 0.00	Proven 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	60	2000	0	0	0	0 hrs.
1.	2.067 X .875	140	12.2	61	1719	62	0	0	24 hrs.
2.	2.067 X .875	145	18.5	62	1616	62	0	0	24 hrs.
3.	2.067 X .875	150	24.2	60	1428	62	0	0	24 hrs.
4.	2.067 X .875	190	34.0	58	1210	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.	3.729	43.23	153.20	.999	1.262	1.011	205
2.	3.729	54.10	158.20	.998	1.262	1.011	257
3.	3.729	62.84	163.20	1.000	1.262	1.012	299
4.	3.729	83.12	203.20	1.002	1.262	1.016	398
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	Mcft/bbl.
1.	.23	521	1.48	.978	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.24	522	1.49	.978	Specific Gravity Separator Gas	.628	xxxxxxxxxxxxxx
3.	.25	520	1.48	.977	Specific Gravity Flowing Fluid	xxxxxx	.628
4.	.31	518	1.47	.969	Critical Pressure	663.2 PSIA	663.2 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	351.5°R	351.5°R

Pc 2013.2 Pc2 4053.0

NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	$\frac{Pc2}{Pc2-Pw2} = 1.5923$	(2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.4123$
1.	3000.5	1732.4	3001.3	1051.7		
2.	2654.3	1629.6	2655.5	1397.4		
3.	2077.1	1441.8	2078.8	1974.2		
4.	1496.2	1224.5	1499.3	2553.7		
5.	0.0	0.0	0.0	0.0		

$$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 562 \text{ Mcfd}$$

Absolute Open Flow 562 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .742
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 1/22/90

COMPANY Yates Petroleum Corporation LEASE Cactus Flower State WELL NO. 1

LOCATION: Unit K Section 19 Township 8S Range 27E

L 6186.0 H 6186.0 L/H 1.000 G .628 %CO₂ .08 %N₂ 4.87 %H₂S 0.00

d 1.995 Fr .017777 GH 3884.8 Pcr 663.2 Tcr 351.5

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.205	.257	.299	.398	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	605.0	605.0	605.0	605.0	0.0
4 T=(Tw+Ts)/2	563.5	563.5	563.5	563.5	0.0
5 Z(Est.)	.832	.836	.847	.863	0.000
6 TZ	468.7	471.2	477.2	486.3	0.0
7 GH/TZ	8.289	8.244	8.140	7.989	0.000
8 e ^s (Table XIV)	1.365	1.362	1.357	1.349	0.000
9 1-e ^{-s} (Table XIV)	.267	.266	.263	.259	0.000
10 Pt	1732.2	1629.2	1441.2	1223.2	0.0
11 Pt ² /1000	3000.5	2654.3	2077.1	1496.2	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.332	8.377	8.484	8.645	0.000
14 FcQm	1.712	2.153	2.539	3.441	0.000
15 L/H(FcQm) ²	2.931	4.634	6.446	11.839	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.783	1.232	1.696	3.065	0.000
17 Pw ² =Pt ² +Fw	3001.3	2655.5	2078.8	1499.3	0.0
18 Ps ² =e ^s Pw ²	4095.4	3617.5	2820.8	2023.0	0.0
19 Ps	2023.7	1902.0	1679.5	1422.3	0.0
20 P=(Pt+Ps)/2	1878.0	1765.6	1560.4	1322.8	0.0
21 Pr=(P/Pcr)	2.83	2.66	2.35	1.99	0.00
22 Tr=(T/Tcr)	1.60	1.60	1.60	1.60	0.00
23 Z(Table XI)	.832	.836	.847	.863	0.000

Company	Yates Petroleum Corporation
Well	Cactus Flower State No. 1
Location	K, 19-8S-27E
County	Chaves
Date	1/22/90

