

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

c/SF File
Form C-122

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 4/19/83		JUN 15 1983	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company		O. C. D.	
Pool Pecos Slope				Formation Abo		Unit ARTESIA, OFFICE	
Completion Date 5/25/82		Total Depth 4100.0'		Plug Back TD 4013.0'		Elevation 3640.0'	
Farm or Lease Name Bozarth "UC"							
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4080.0'	Perforations: From 3598.0' To 3857.0'		Well No. 1	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3574.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge E 22 7S 25E	
Type Well Single				Packer Set At 3574.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 110 @ 3550'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
L 3574.0'		H 3574.0'		Gg .643		%CO2 .03	
				%N2 6.00		%H2S 0.00	
				Proven 0.000"		Meter Run 2.000"	
				Taps Flange			

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Proven 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	960	0	0	0	0 hrs.
1.	2.067 X 1.000	170	11.0	60	900	62	0	0	24 hrs.
2.	2.067 X 1.000	175	21.0	60	800	62	0	0	24 hrs.
3.	2.067 X 1.000	180	28.0	60	690	62	0	0	24 hrs.
4.	2.067 X 1.000	210	40.0	60	585	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)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpu	Rate of Flow Q, Mcfd
1.	4.947	44.89	183.20	1.000	1.247	1.014	281
2.	4.947	62.87	188.20	1.000	1.247	1.014	393
3.	4.947	73.55	193.20	1.000	1.247	1.015	461
4.	4.947	94.49	223.20	1.000	1.247	1.018	593
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	Mcfd/bbl.
1.	.28	520	1.47	.973	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.28	520	1.47	.972	Specific Gravity Separator Gas	.643	xxxxxxxxxxxx
3.	.29	520	1.47	.971	Specific Gravity Flowing Fluid	xxxxxx	.643
4.	.34	520	1.47	.966	Critical Pressure	660.6 PSIA	660.6 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	353.3°R	353.3°R

Pc	973.2	Pc2	947.1
NO	Pt2	Pw	Pw2
1.	833.9	913.7	834.9
2.	661.3	814.4	663.2
3.	494.5	705.1	497.1
4.	357.8	601.9	362.3
5.	0.0	0.0	0.0

$$\frac{Pc^2}{Pc^2 - Pw^2} = \frac{8.4382}{(2)} \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = \frac{2.9049}{AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 816 \text{ Mcfd}}$$

Absolute Open Flow 816 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 6/15/83

COMPANY Yates Petroleum Corporation LEASE Bozarth "UC" WELL NO. 1

LOCATION: Unit F Section 22 Township 7S Range 25E

L 3574.0 H 3574.0 L/H 1.000 G .643 %O₂ .03 %N₂ 6.00 %H₂S 0.00

d 1.995 Fr .017777 GH 2298.1 Pcr 660.6 Tcr 353.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.281	.393	.461	.593	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	570.0	570.0	570.0	570.0	0.0
4 T=(Tw+Ts)/2	546.0	546.0	546.0	546.0	0.0
5 Z(Est.)	.878	.890	.904	.918	0.000
6 TZ	479.5	486.1	493.6	501.0	0.0
7 GH/TZ	4.793	4.728	4.656	4.587	0.000
8 e ^s (Table XIV)	1.197	1.194	1.191	1.188	0.000
9 1-e ^{-s} (Table XIV)	.165	.162	.160	.158	0.000
10 Pt	913.2	813.2	703.2	598.2	0.0
11 Pt ² /1000	833.9	661.3	494.5	357.8	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.524	8.641	8.778	8.909	0.000
14 FcQm	2.394	3.400	4.043	5.284	0.000
15 L/H(FcQm) ²	5.731	11.559	16.343	27.925	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.943	1.878	2.617	4.412	0.000
17 Pw ² =Pt ² +Fw	834.9	663.2	497.1	362.3	0.0
18 Ps ² =e ^s Pw ²	999.3	791.8	591.9	430.2	0.0
19 Ps	999.6	889.8	769.3	655.9	0.0
20 P=(Pt+Ps)/2	956.4	851.5	736.3	627.1	0.0
21 Pr=(P/Pcr)	1.45	1.29	1.11	.95	0.00
22 Tr=(T/Tcr)	1.55	1.55	1.55	1.55	0.00
23 Z(Table XI)	.878	.890	.904	.918	0.000

Company	Yates Petroleum Corporation
Well	Bozarth "UC" No. 1
Location	F, 22-7S-25E
County	Chaves
Date	6/15/83

