

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

Form O-122

RECEIVED

457
F.12

Type Test [x] Initial [] Annual [] Special					Test Date 3/2/88		APR 22 '88	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company		G. C. O. ARTESIAL OFFICE	
Pool Pecos Slope A2					Formation Abo		Unit	
Completion Date 12/8/82		Total Depth 4400.0'		Plug Back TD 4395.0'		Elevation 3639.3'		Farm or Lease Name Beard OO Federal
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set Rt 4395.0'	Perforations: From 3819.0' To 3853.0'		Well No. 2		
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set Rt 3766.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge C 18 7S 26E		
Type Well Single					Packer Set Rt 3766.0'		County CHAVES	
Producing Thru Tubing		Resv. Temp. °F 122 @ 3765'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 3766.0'	H 3766.0'	Gg .645	%CO2 .11	%N2 5.81	%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	40	1010	0	0	0	0 hrs.
1.	2.067 X 1.250	120	12.8	40	691	62	0	0	24 hrs.
2.	2.067 X 1.250	120	15.6	40	592	62	0	0	24 hrs.
3.	2.067 X 1.250	120	18.0	40	574	62	0	0	24 hrs.
4.	2.067 X 1.250	120	20.0	40	540	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)	hw/Pm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	8.134	41.29	133.20	1.020	1.245	1.012	431
2.	8.134	45.58	133.20	1.020	1.245	1.012	476
3.	8.134	48.97	133.20	1.020	1.245	1.012	512
4.	8.134	51.61	133.20	1.020	1.245	1.012	539
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.
1.	.20	500	1.41	.977	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.20	500	1.41	.977	Specific Gravity Separator Gas	.645	xxxxxxxxxxxxxx
3.	.20	500	1.41	.977	Specific Gravity Flowing Fluid	xxxxxx	.645
4.	.20	500	1.41	.977	Critical Pressure	661.2 PSIA	661.2 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	354.4°R	354.4°R

Pc	1023.2	Pc ²	1046.9	
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ² (1)
1.	495.9	704.8	496.8	550.2
2.	366.3	606.1	367.3	679.6
3.	344.8	588.2	346.0	700.9
4.	306.0	554.4	307.4	739.5
5.	0.0	0.0	0.0	0.0

$$\frac{Pc^2}{Pc^2 - Pw^2} = \frac{1.4045}{(2)} \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.2853$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 693 \text{ Mcfd}$$

Absolute Open Flow 693 Mcfd @ 15.025 Angle of Slope, 0 36 Slope, n .739
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 9-1-85

DATE 4/22/88

COMPANY Yates Petroleum Corporation LEASE Beard 00 Federal WELL NO. 2

LOCATION: Unit C Section 18 Township 7S Range 26E

L 3766.0 H 3766.0 L/H 1.000 G .645 %CO₂ .11 %N₂ 5.81 %H₂S 0.00

d 2.441 Fr .010495 GH 2429.1 Pcr 661.2 Tcr 354.4

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.431	.476	.512	.539	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	582.0	582.0	582.0	582.0	0.0
4 T=(Tw+Ts)/2	552.0	552.0	552.0	552.0	0.0
5 Z(Est.)	.907	.919	.921	.926	0.000
6 TZ	500.5	507.3	508.6	511.0	0.0
7 GH/TZ	4.854	4.788	4.776	4.753	0.000
8 e ^s (Table XIV)	1.200	1.197	1.196	1.195	0.000
9 1-e ^{-s} (Table XIV)	.166	.164	.164	.163	0.000
10 Pt	704.2	605.2	587.2	553.2	0.0
11 Pt ² /1000	495.9	366.3	344.8	306.0	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.254	5.326	5.338	5.365	0.000
14 FcQm	2.267	2.537	2.731	2.893	0.000
15 L/H(FcQm) ²	5.140	6.437	7.460	8.372	0.000
16 Fv=L/H(FcQm) ² (1-e ^{-s})	.855	1.058	1.223	1.367	0.000
17 Pv ² =Pt ² +Fv	496.8	367.3	346.0	307.4	0.0
18 Ps ² =e ^s Pv ²	595.9	439.5	413.9	367.4	0.0
19 Ps	771.9	663.0	643.3	606.1	0.0
20 P=(Pt+Ps)/2	738.1	634.1	615.3	579.7	0.0
21 Pr=(P/Pcr)	1.12	.96	.93	.88	0.00
22 Tr=(T/Tcr)	1.56	1.56	1.56	1.56	0.00
23 Z(Table XI)	.907	.919	.921	.926	0.000

Company	Yates Petroleum Corporation
Well	Beard 00 Federal No. 2
Location	C, 18-7S-26E
County	
Date	4/22/88

