

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

Form C-122

RECEIVED

clsf
File

Type Test [x] Initial [] Annual [] Special				Test Date 05/15/87		SEP 08 '87	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company		O. C. D. ARTESIA, OFFICE	
Pool Pecos Slope				Formation Abo		Unit	
Completion Date 09/21/83		Total Depth 4300.0'		Plug Back TD 4243.0'		Elevation 3581.2'	
Farm or Lease Name Grooms XB Com				Well No. 1			
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4300.0'	Perforations: From 3655.0' To 3690.0'		Unit Sec Twp Rge M 8 7S 26E	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3627.0'	Perforations: From 3655.0' To 3690.0'			
Type Well Single				Packer Set At 3627.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 99 @ 952'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
State New Mexico							
L 3627.0'	H 3627.0'	Gg .643	%CO2 .08	%N2 6.17	%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	76	952	0	0	0	0 hrs.
1.	2.067 X .875	270	16.0	76	790	62	0	0	24 hrs.
2.	2.067 X .875	245	29.9	76	752	62	0	0	24 hrs.
3.	2.067 X .875	220	47.8	76	628	62	0	0	24 hrs.
4.	2.067 X .875	200	59.2	76	607	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	67.31	283.20	.985	1.247	1.020	315
2.	3.729	87.86	258.20	.985	1.247	1.018	410
3.	3.729	105.58	233.20	.985	1.247	1.016	492
4.	3.729	112.35	213.20	.985	1.247	1.016	523
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.	.43	536	1.52	.961	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.39	536	1.52	.964	Specific Gravity Separator Gas	.643	xxxxxx
3.	.35	536	1.52	.968	Specific Gravity Flowing Fluid	xxxxxx	.643
4.	.32	536	1.52	.970	Critical Pressure	660.5 PSIA	660.5 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	352.8°R	352.8°R

Pc	965.2	Pc ²	931.6	
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ²
1.	645.1	803.9	646.3	285.3
2.	585.5	766.5	587.6	344.0
3.	411.1	643.5	414.1	517.5
4.	384.6	622.9	388.1	543.6
5.	0.0	0.0	0.0	0.0

$$(1) \frac{Pc^2}{Pc^2 - Pw^2} = \frac{1.6891}{}$$

$$(2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = \frac{1.4984}{}$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = \frac{783 \text{ Mcfd}}{}$$

$$(1) \frac{Pc^2}{Pc^2 - Pw^2} = 1.6891 \quad (2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.4984$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 783 \text{ Mcfd}$$

Absolute Open Flow 783 Mcfd @ 15.025 Angle of Slope, 0 38 Slope, n .771

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 09/04/87

COMPANY Yates Petroleum Corporation LEASE Grooms XB Com WELL NO. 1

LOCATION: Unit M Section 8 Township 7S Range 26E

L 3627.0 H 3627.0 L/H 1.000 G .643 %CO₂ .08 %N₂ 6.17 %H₂S 0.00

d 1.995 Fr .017777 GH 2332.2 Pcr 660.5 Tcr 352.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.315	.410	.492	.523	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	559.0	559.0	559.0	559.0	0.0
4 T=(Tw+Ts)/2	540.5	540.5	540.5	540.5	0.0
5 Z(Est.)	.888	.893	.909	.912	0.000
6 TZ	479.9	482.5	491.4	492.9	0.0
7 GH/TZ	4.860	4.833	4.746	4.731	0.000
8 e ^S (Table XIV)	1.200	1.199	1.195	1.194	0.000
9 1-e ^{-S} (Table XIV)	.167	.166	.163	.163	0.000
10 Pt	803.2	765.2	641.2	620.2	0.0
11 Pt ² /1000	645.1	585.5	411.1	384.6	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.536	8.582	8.739	8.765	0.000
14 FcQm	2.685	3.517	4.295	4.581	0.000
15 L/H(FcQm) ²	7.211	12.372	18.449	20.988	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-S})	1.201	2.050	3.007	3.411	0.000
17 Pw ² =Pt ² +Fw	646.3	587.6	414.1	388.1	0.0
18 Ps ² =e ^S Pw ²	775.5	704.3	494.8	463.4	0.0
19 Ps	880.6	839.2	703.4	680.7	0.0
20 P=(Pt+Ps)/2	841.9	802.2	672.3	650.5	0.0
21 Pr=(P/Pcr)	1.27	1.21	1.02	.98	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.888	.893	.909	.912	0.000

Company	Yates Petroleum Corporation
Well	Grooms XB Com No. 1
Location	M, 8-7S-26E
County	Chaves
Date	09/04/87

$P_c^2 - P_w^2$, THOUSANDS

