

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

Form C-122

RECEIVED

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File

JUL 22 '88

Type Test [y] Initial [] Annual [] Special				Test Date 4/20/88			
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company		O. C. D. AMERICAN OFFICE	
Pool Pecos Slope A00				Formation Abo		Unit	
Completion Date 5/27/85		Total Depth 4300.0'		Plug Back TD 4202.0'		Elevation 3654.8'	
Farm or Lease Name Savage NI Fed Com				Well No. 4			
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4300.0'	Perforations: From 3821.0' To 3833.0'		Unit Sec Twp Rge C 29 6S 26E	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3796.0'	Perforations: From 0.0' To 0.0'			
Type Well Single				Packer Set At 3796.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 103 @ 3827'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
L 3796.0'		H 3796.0'		Gg .642	%CO2 .03	%N2 5.23	%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	72	849	0	0	0	0 hrs.
1.	2.067 X 1.375	120	1.1	72	783	62	0	0	24 hrs.
2.	2.067 X 1.375	110	3.1	72	729	62	0	0	24 hrs.
3.	2.067 X 1.375	100	4.2	72	701	62	0	0	24 hrs.
4.	2.067 X 1.375	90	19.7	72	339	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.	10.204	12.10	133.20	.989	1.248	1.010	154
2.	10.204	19.54	123.20	.989	1.248	1.009	248
3.	10.204	21.80	113.20	.989	1.248	1.009	277
4.	10.204	45.09	103.20	.989	1.248	1.008	572
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.	Specific Gravity Separator Gas xxxxxxx	Specific Gravity Flowing Fluid xxxxxxx	Critical Pressure 661.9 PSIA	Critical Temperature 355.2°R
1.	.20	532	1.50	.980						
2.	.19	532	1.50	.982						
3.	.17	532	1.50	.983						
4.	.16	532	1.50	.985						
5.	0.00	0	0.00	0.000						

Pc 862.2 Pc2 743.4			
NO	Pt2	Pw	Pw2
1.	633.9	796.4	634.2
2.	550.9	742.7	551.6
3.	510.1	714.9	511.1
4.	124.0	358.5	128.5
5.	0.0	0.0	0.0

$$(1) \frac{Pc^2}{Pc^2 - Pw^2} = \frac{1.2152}{1.1594} \quad (2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.1594$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 663 \text{ Mcfd}$$

Absolute Open Flow 663 Mcfd @ 15.025 Angle of Slope, θ 37 Slope, n .759
Remarks:

Approved By:	Conducted By: David Weaver	Calculated By: Theresa Sloan	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 7/18/88

COMPANY Yates Petroleum Corporation LEASE Savage NI Fed Com WELL NO. 4

LOCATION: Unit C Section 29 Township 6S Range 26E

L 3796.0 H 3796.0 L/H 1.000 G .642 %CO₂ .03 %N₂ 5.23 %H₂S 0.00

d 1.995 Fr .017777 GH 2437.0 Pcr 661.9 Tcr 355.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.154	.248	.277	.572	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	563.0	563.0	563.0	563.0	0.0
4 T=(Tw+Ts)/2	542.5	542.5	542.5	542.5	0.0
5 Z(Est.)	.888	.895	.898	.949	0.000
6 TZ	481.5	485.3	487.3	514.8	0.0
7 GH/TZ	5.062	5.021	5.001	4.734	0.000
8 e ^s (Table XIV)	1.209	1.207	1.206	1.194	0.000
9 1-e ^{-s} (Table XIV)	.173	.172	.171	.163	0.000
10 Pt	796.2	742.2	714.2	352.2	0.0
11 Pt ² /1000	633.9	550.9	510.1	124.0	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.565	8.632	8.663	9.152	0.000
14 FcQm	1.319	2.144	2.399	5.237	0.000
15 L/H(FcQm) ²	1.738	4.596	5.755	27.421	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.300	.789	.984	4.460	0.000
17 Pw ² =Pt ² +Fw	634.2	551.6	511.1	128.5	0.0
18 Ps ² =e ^s Pw ²	766.7	665.9	616.5	153.5	0.0
19 Ps	875.6	816.0	785.2	391.7	0.0
20 P=(Pt+Ps)/2	835.9	779.1	749.7	372.0	0.0
21 Pr=(P/Pcr)	1.26	1.18	1.13	.56	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.888	.895	.898	.949	0.000

Company	Yates Petroleum Corporation
Well	Savage NI Fed Com No. 4
Location	C, 29-6S-26E
County	Chaves
Date	7/18/88

