

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

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Form C-122

NOV 13 1984

O. C. D.

ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 8/26/84	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool Pecos Slope <i>ABO</i>				Formation Abo	
Completion Date 12/13/83		Total Depth 4235.0'		Elevation 3651.4'	
Csg Size 4.500"		Wt. 9.500#		Set At 4235.0'	
Tbg Size 2.375"		Wt. 4.700#		Set At 3632.0'	
Perforations: From 3684.0' To 3863.0'		Perforations: From 0.0' To 0.0'		Farm or Lease Name Sorenson "IB" Fed ✓	
Well No. 4		Unit Sec J 6		Twp Rge 7S 26E	
Type Well Single				Packer Set At 3632.0'	
Producing Thru Tubing		Resv. Temp. °F 103 @ 3630'		Mean Temp. °F 62.0	
Baro. Press. - Pa 13.2 psia.		State New Mexico		County Chaves	
L 3632.0'	H 3632.0'	Gg .638	%CO2 .01	%N2 4.77	%H2S 0.00
Prover 0.000"	Meter Run 2.000"	Taps Flange			

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow	
NO	Prover Size	Orifice 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	70	988	0	0	0	0 hrs.
1.	2.067	X 1.125	165	16.8	70	934	62	0	0	24 hrs.
2.	2.067	X 1.125	175	21.1	70	917	62	0	0	24 hrs.
3.	2.067	X 1.125	190	47.6	70	867	62	0	0	24 hrs.
4.	2.067	X 1.125	195	63.0	70	835	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.	6.397	54.72	178.20	.991	1.252	1.013	440
2.	6.397	63.02	188.20	.991	1.252	1.014	507
3.	6.397	98.35	203.20	.991	1.252	1.015	792
4.	6.397	114.53	208.20	.991	1.252	1.015	922
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.	.27	530	1.49	.975	A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.
2.	.28	530	1.49	.973	Specific Gravity Separator Gas	.638
3.	.31	530	1.49	.971	Specific Gravity Flowing Fluid	.638
4.	.31	530	1.49	.970	Critical Pressure	662.7 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	355.2°R

NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	Pc2	Pc2-Pw2 (2)	Pc2	Pc2-Pw2	n
1.	897.2	948.4	899.5	102.9	3.6984	2.7165	3.6984	2.7165	
2.	865.3	931.8	868.3	134.1					
3.	774.8	884.4	782.2	220.2					
4.	719.4	854.2	729.7	272.7					
5.	0.0	0.0	0.0	0.0					

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 2506 \text{ Mcfd}$$

Absolute Open Flow 2506 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .764

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 11/6/84

COMPANY Yates Petroleum Corporation LEASE Sorenson "IB" Fed WELL NO. 4

LOCATION: Unit J Section 2 Township 7S Range 26E

L 3632.0 H 3632.0 L/H 1.000 G .638 %CO₂ .01 %N₂ 4.77 %H₂S 0.00

d 1.995 Fr .017777 GH 2317.2 Pcr 662.7 Tcr 355.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.440	.507	.792	.922	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.)	.869	.871	.877	.881	0.000
6 TZ	471.3	472.4	475.7	477.8	0.0
7 GH/TZ	4.917	4.905	4.871	4.849	0.000
8 e ^s (Table XIV)	1.202	1.202	1.200	1.199	0.000
9 1-e ^{-s} (Table XIV)	.168	.168	.167	.166	0.000
10 Pt	947.2	930.2	880.2	848.2	0.0
11 Pt ² /1000	897.2	865.3	774.8	719.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.385	8.405	8.462	8.500	0.000
14 FcQm	3.686	4.258	6.700	7.840	0.000
15 L/H(FcQm) ²	13.584	18.134	44.889	61.464	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.286	3.045	7.490	10.214	0.000
17 Pw ² =Pt ² +Fw	899.5	868.3	782.2	729.7	0.0
18 Ps ² =e ^s Pw ²	1081.4	1043.5	938.9	875.1	0.0
19 Ps	1039.9	1021.5	969.0	935.5	0.0
20 P=(Pt+Ps)/2	993.6	975.9	924.6	891.8	0.0
21 Pr=(P/Pcr)	1.50	1.47	1.40	1.35	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.869	.871	.877	.881	0.000

Company	Yates Petroleum Corporation
Well	Sorenson "IB" Fed No. 4
Location	J, 2-7S-26E
County	Chaves
Date	11/6/84

