

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

Form C-122

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 11/21/82		FEB 3 1983	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company		O. C. D.	
Pool Pecos Slope - Abo Pool					Formation Abo		Unit ARTESIA, OFFICE	
Completion Date 4/15/82		Total Depth 4380.0'		Plug Back TD 4169.0'		Elevation 3687.0'		Farm or Lease Name Federal "HJ"
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set Rt 4258.0'	Perforations: From 3799.0' To 3911.0'		Well No. 4		
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set Rt 3689.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge K 31 6S 26E		
Type Well Single					Packer Set Rt 3689.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 100 @ 1112'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 3689.0'	H 3689.0'	Gg .644	%CO2 .97	%N2 4.66	%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	1005	0	0	0	0 hrs.
1.	2.067 X .875	320	18.2	72	865	62	0	0	24 hrs.
2.	2.067 X .875	330	25.9	72	818	62	0	0	24 hrs.
3.	2.067 X .875	345	45.0	72	680	62	0	0	24 hrs.
4.	2.067 X .875	350	68.0	72	573	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	77.87	333.20	.989	1.246	1.025	367
2.	3.729	94.28	343.20	.989	1.246	1.026	444
3.	3.729	126.96	358.20	.989	1.246	1.027	599
4.	3.729	157.15	363.20	.989	1.246	1.028	742
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pn	Temp. °R	Tn	Z	Gas Liquid Hydrocarbon Ratio _____ Dry _____ Mcf/bbl.	A.P.I. Gravity of Liquid Hydrocarbons _____ 0.000 Deg.	Specific Gravity Separator Gas .644 xxxxxxxxxxxxxxxx	Specific Gravity Flowing Fluid xxxxxx .644	Critical Pressure _____ 666.9 PSIA	Critical Temperature _____ 355.9°R
1.	.50	532	1.50	.951						
2.	.51	532	1.50	.950						
3.	.54	532	1.50	.947						
4.	.54	532	1.50	.947						
5.	0.00	0	0.00	0.000						

Pc 1018.2 Pc² 1036.7					$\frac{Pc^2}{Pc^2 - Pw^2} = \frac{1.5103}{(2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n} = 1.3556$	
NO	Pt²	√Pw	Pw²	Pc² - Pw² (1)		
1.	771.2	879.1	772.9	263.9		
2.	690.9	832.7	693.3	343.4		
3.	480.5	696.4	485.0	551.7		
4.	343.6	592.2	350.7	686.1		
5.	0.0	0.0	0.0	0.0		

Absolute Open Flow 1006 Mcfd @ 15.025 Angle of Slope, 0 36 Slope, n .738
Remarks: _____

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

Adopted 9-1-65

DATE 2/1/83

COMPANY Yates Petroleum Corporation LEASE Federal "HJ" WELL NO. 4

LOCATION: Unit K Section 31 Township 6S Range 26E

L 3689.0 H 3689.0 L/H 1.000 G .644 %CO₂ .97 %N₂ 4.66 %H₂S 0.00

d 1.995 Fr .017777 GH 2375.7 Pcr 566.9 Tcr 355.9

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.367	.444	.599	.742	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	560.0	560.0	560.0	560.0	0.0
4 T=(Tw+Ts)/2	541.0	541.0	541.0	541.0	0.0
5 Z(Est.)	.876	.882	.900	.915	0.000
6 TZ	473.8	477.0	486.9	494.9	0.0
7 GH/TZ	5.015	4.980	4.879	4.801	0.000
8 e ^s (Table XIV)	1.207	1.205	1.201	1.197	0.000
9 1-e ^{-s} (Table XIV)	.171	.170	.167	.165	0.000
10 Pt	878.2	831.2	693.2	536.2	0.0
11 Pt ² /1000	771.2	690.9	480.5	343.6	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.428	8.486	8.656	8.800	0.000
14 FcQm	3.092	3.772	5.188	6.530	0.000
15 L/H(FcQm) ²	9.559	14.227	26.911	42.645	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.638	2.422	4.499	7.024	0.000
17 Pw ² =Pt ² +Fw	772.9	693.3	485.0	350.7	0.0
18 Ps ² =e ^s Pw ²	932.6	835.6	582.4	419.8	0.0
19 Ps	965.7	914.1	763.2	647.9	0.0
20 P=(Pt+Ps)/2	922.0	872.6	728.2	617.1	0.0
21 Pr=(P/Pcr)	1.38	1.31	1.09	.93	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.876	.882	.900	.915	0.000

Company	Yates Petroleum Corporation
Well	Federal "HJ" No. 4
Location	K, 31-6S-26E
County	Chaves
Date	2/1/83

