

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

Form O-122

RECEIVED

clsf
File

Type Test [X] Initial [] Annual [] Special		Test Date 11/08/82	JAN 11 1983
Company Yates Petroleum Corporation		Connection Transwestern Pipeline Company	
Pool Pecos Slope - Rbo Gas		Formation Rbo	Unit ARTESIA, OFFICE

Completion Date 09/15/82	Total Depth 4100.0'	Plug Back TD 4042.0'	Elevation 3554.3'	Farm or Lease Name Federal "HY"
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4095.0'	Perforations: From 3668.0' To 3862.0'
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3610.0'	Perforations: From 0.0' To 0.0'

Type Well Single	Packer Set At 3590.0'	County Chaves
Producing Thru Tubing	Resv. Temp. °F 101 @ 3600'	Mean Temp. °F 62.0
	Baro. Press. - Pa 13.2 psia.	State New Mexico
L 3610.0'	H 3610.0'	Gg .646
	%CO2 .06	%N2 5.40
	%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	890	0	0	0	0 hrs.
1.	2.067	X 1.000	140	43.2	72	853	62	0	0	24 hrs.
2.	2.067	X 1.000	135	57.7	72	846	62	0	0	24 hrs.
3.	2.067	X 1.000	130	72.3	70	839	62	0	0	24 hrs.
4.	2.067	X 1.000	125	87.0	70	830	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)	$\sqrt{hwP_m}$	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpu	Rate of Flow Q, Mcfd
1.	4.947	81.35	153.20	.989	1.244	1.011	501
2.	4.947	92.47	148.20	.989	1.244	1.011	569
3.	4.947	101.75	143.20	.991	1.244	1.011	627
4.	4.947	109.65	138.20	.991	1.244	1.010	675
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	Specific Gravity Flowing Fluid	Critical Pressure PSIA	Critical Temperature °R
1.	.23	532	1.47	.978	0.000	0.000	.646	.646	661.0	361.0
2.	.22	532	1.47	.979	0.000	0.000	.646	.646	661.0	361.0
3.	.22	530	1.47	.979	0.000	0.000	.646	.646	661.0	361.0
4.	.21	530	1.47	.980	0.000	0.000	.646	.646	661.0	361.0
5.	0.00	0	0.00	0.000	0.000	0.000	.646	.646	661.0	361.0

NO	Pt ²	Pw	Pw ²	Pc ² -Pw ² (1)	Pc ² Pc ² -Pw ²	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n$
1.	750.3	867.9	753.3	62.5	9.6452	5.3105
2.	738.2	861.4	742.1	73.7		
3.	726.2	854.9	730.9	84.8		
4.	711.0	846.4	716.4	99.3		
5.	0.0	0.0	0.0	0.0		

$$ROF = Q \left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 3329 \text{ Mcfd}$$

Absolute Open Flow 3329 Mcfd @ 15.025 Angle of Slope, 0 36 Slope, n .737
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 11-08-82

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

LOCATION: Unit N Section 34 Township 7S Range 25E

L 3610.0 H 3610.0 L/H 1.000 G .646 %CO₂ .06 %N₂ 5.40 %H₂S 0.00

d 1.995 Fr .017777 GH 2332.1 Pcr 661.0 Tcr 361.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.501	.569	.627	.675	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	561.0	561.0	561.0	561.0	0.0
4 T=(Tw+Ts)/2	541.5	541.5	541.5	541.5	0.0
5 Z(Est.)	.870	.871	.872	.873	0.000
6 TZ	471.0	471.5	472.0	472.7	0.0
7 GH/TZ	4.951	4.946	4.940	4.934	0.000
8 e ² (Table XIV)	1.204	1.204	1.203	1.203	0.000
9 1-e ⁻² (Table XIV)	.169	.169	.169	.169	0.000
10 Pt	866.2	859.2	852.2	843.2	0.0
11 Pt ² /1000	750.3	738.2	726.2	711.0	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.373	8.389	8.398	8.403	0.000
14 FcQm	4.192	4.772	5.265	5.674	0.000
15 L/H(FcQm) ²	17.574	22.771	27.718	32.199	0.000
16 Fw=L/H(FcQm) ² (1-e ⁻²)	2.978	3.852	4.684	5.439	0.000
17 Pw ² =Pt ² +Fw	753.3	742.1	730.9	716.4	0.0
18 Ps ² =e ² Pw ²	907.0	893.2	879.6	862.0	0.0
19 Ps	952.3	945.1	937.9	928.5	0.0
20 P=(Pt+Ps)/2	909.3	902.1	895.0	885.8	0.0
21 Pr=(P/Pcr)	1.38	1.36	1.35	1.34	0.00
22 Tr=(T/Tcr)	1.50	1.50	1.50	1.50	0.00
23 Z(Table XI)	.870	.871	.872	.873	0.000

Company	Yates Petroleum Corporation
Well	Federal "HY" No. 4
Location	N, 34-7S-25E
County	Chaves
Date	11/08/82

$f_{12} = 3103$

