

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

Form C-122

RECEIVED

JUL 18 1983

Type Test [x] Initial [] Annual [] Special				Test Date 5/21/83		O. C. D. ARTESIA, OFFICE	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			
Pool Pecos Slope				Formation Abo		Unit	
Completion Date 6/26/82		Total Depth 4250.0'		Plug Back TD 4141.0'		Elevation 3864.3'	
Farm or Lease Name Hahn "NH" Federal				Well No. 4			
Csg Size 4.500"	Wt. 3.500#	d 4.090"	Set At 4209.0'	Perforations: From 3752.0' To 3910.0'		Unit Sec Top Rge K 9 7S 25E	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3707.0'	Perforations: From 0.0' To 0.0'			
Type Well Single				Packer Set At 3708.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 102 @ 3708'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
State New Mexico							
L 3707.0'	4 3707.0'	Gg .652	%CO2 .04	%H2 6.56	%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 Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
SI	0.000	< 0.000	0	0.0	0	1003	0	0	0	0 hrs.
1.	2.067	< .750	125	18.0	70	920	62	0	0	24 hrs.
2.	2.067	< .750	135	36.0	68	840	62	0	0	24 hrs.
3.	2.067	< .750	130	68.0	68	820	62	0	0	24 hrs.
4.	2.067	< .750	120	77.0	70	780	62	0	0	24 hrs.
5.	0.000	< 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.	2.709	49.88	138.20	.991	1.238	1.011	168
2.	2.709	73.04	148.20	.992	1.238	1.010	246
3.	2.709	98.68	143.20	.992	1.238	1.010	332
4.	2.709	101.27	133.20	.991	1.238	1.010	340
5.	0.300	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.	.21	530	1.49	.979	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.22	528	1.49	.980	Specific Gravity Separator Gas	.652	xxxxxxxxxxxxxx
3.	.22	528	1.49	.980	Specific Gravity Flowing Fluid	xxxxxx	.652
4.	.20	530	1.49	.980	Critical Pressure	659.4	PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	354.7°R	354.7°R

Pc	1016.2	Pc2	1032.7	
NO	Pt2	Pw	Pw2	Pc2-Pw2
1.	870.9	933.4	871.2	161.5
2.	728.0	853.6	728.7	304.0
3.	694.2	834.0	695.6	337.1
4.	629.2	794.1	630.6	402.0
5.	0.0	0.0	0.0	0.0

$$(1) \frac{Pc^2}{Pc^2 - Pw^2} = 2.4104 \quad (2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.9292$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 656 \text{ Mcfd}$$

Absolute Open Flow 656 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .747
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 7/15/83

COMPANY Yates Petroleum Corporation LEASE Hahn "NH" Federal WELL NO. 4

LOCATION: Unit K Section 9 Township 7S Range 25E

L 3707.0 H 3707.0 L/H 1.000 G .652 %CO2 .04 %N2 6.56 %H2S 0.00

d 1.995 Fr .017777 GH 2417.0 Pcr 659.4 Tcr 354.7

LINE		1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1	Qm	.168	.246	.332	.340	0.000
2	Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3	Ts(B.H.°R)	562.0	562.0	562.0	562.0	0.0
4	T=(Tw+Ts)/2	542.0	542.0	542.0	542.0	0.0
5	Z(Est.)	.870	.880	.882	.888	0.000
6	TZ	471.5	476.9	478.3	481.1	0.0
7	GH/TZ	5.127	5.068	5.053	5.024	0.000
8	e ^s (Table XIV)	1.212	1.209	1.209	1.207	0.000
9	1-e ^{-s} (Table XIV)	.175	.173	.173	.172	0.000
10	Pt	933.2	853.2	833.2	793.2	0.0
11	Pt ² /1030	870.9	728.0	694.2	629.2	0.0
12	Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13	Fc=FrTZ	8.381	8.478	8.502	8.558	0.000
14	FcQm	1.404	2.083	2.821	2.910	0.000
15	L/H(FcQm) ²	1.971	4.340	7.960	8.467	0.000
16	Fw=L/H(FcQm) ² (1-e ^{-s})	.345	.751	1.374	1.453	0.000
17	Pw ² =Pt ² +Fw	871.2	728.7	695.6	630.6	0.0
18	Ps ² =e ^s Pw ²	1055.9	881.2	840.7	761.3	0.0
19	Ps	1027.6	938.7	916.9	872.5	0.0
20	P=(Pt+Ps)/2	980.4	896.0	875.1	832.9	0.0
21	Pr=(P/Pcr)	1.49	1.36	1.33	1.26	0.00
22	Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23	Z(Table XI)	.870	.880	.882	.888	0.000

Company	Yates Petroleum Corporation
Well	Hahn "NH" Federal No. 4
Location	K, 9-7S-25E
County	Chaves
Date	7/15/83

