

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 11/14/83		JAN 20 1983	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company			
Pool Pecos Slope - Abo Gas					Formation Abo		Unit O. C. D. ARTESIA, OFFICE	
Completion Date 4/24/82		Total Depth 4175.0'		Plug Back TD 4136.0'		Elevation 3987.6'		Farm or Lease Name Langley "RJ" Fed
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4150.0'	Perforations: From 3742.0' To 3987.0'		Well No. 3		
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3700.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge P 9 6S 25E		
Type Well Single					Packer Set At 3700.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 94 @ 3699'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 3700.0'	H 3700.0'	Gg .635	%CO2 .05	%N2 4.61	%H2S 0.00	Proven 0.000"	Meter Run 2.000"	Taps Flange

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Proven 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	0	994	0	0	0	0 hrs.
1.	2.067 X 1.000	160	31.6	75	871	62	0	0	24 hrs.
2.	2.067 X 1.000	150	58.9	72	817	62	0	0	24 hrs.
3.	2.067 X 1.000	145	77.4	72	785	62	0	0	24 hrs.
4.	2.067 X 1.000	140	84.0	72	765	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)	1/hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	4.947	73.98	173.20	.986	1.255	1.012	458
2.	4.947	98.04	163.20	.989	1.255	1.012	609
3.	4.947	110.66	158.20	.989	1.255	1.011	687
4.	4.947	113.44	153.20	.989	1.255	1.011	704
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.	.26	535	1.49	.976	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.
2.	.25	532	1.49	.977	Specific Gravity Separator Gas .635 xxxxxxxxxxxxxxxx
3.	.24	532	1.49	.978	Specific Gravity Flowing Fluid xxxxxx .635
4.	.23	532	1.49	.979	Critical Pressure 661.0 PSIA 661.0 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature 358.0°R 358.0°R

Pc 1007.2 Pc² 1014.5

NO	Pt²	-Pw	Pw²	Pc²-Pw² (1)	$\frac{Pc^2}{Pc^2-Pw^2} = 2.7347$	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 2.3418$
1.	781.8	885.6	784.3	230.2		
2.	689.2	832.9	693.7	320.8		
3.	637.1	801.7	642.8	371.7		
4.	605.6	782.0	611.6	402.9		
5.	0.0	0.0	0.0	0.0		

AOF = Q $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = 1609$ Mcfd

Absolute Open Flow 1609 Mcfd @ 15.025 Angle of Slope, θ 40 Slope, n .846
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 1/18/83

COMPANY Yates Petroleum Corporation LEASE Langley "RJ" Fed WELL NO. 3

LOCATION: Unit P Section 9 Township 6S Range 25E

L 3700.0 H 3700.0 L/H 1.000 G .635 %CO₂ .05 %N₂ 4.61 %H₂S 0.00

d 1.995 Fr .017777 GH 2349.5 Pcr 661.0 Tcr 358.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.458	.609	.687	.704	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	554.0	554.0	554.0	554.0	0.0
4 T=(Tw+Ts)/2	538.0	538.0	538.0	538.0	0.0
5 Z(Est.)	.868	.876	.880	.883	0.000
6 TZ	467.1	471.1	473.4	474.9	0.0
7 GH/TZ	5.030	4.988	4.963	4.947	0.000
8 e ^s (Table XIV)	1.208	1.206	1.205	1.204	0.000
9 1-e ^{-s} (Table XIV)	.172	.170	.170	.169	0.000
10 Pt	884.2	830.2	798.2	778.2	0.0
11 Pt ² /1000	781.8	689.2	637.1	605.6	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.304	8.380	8.416	8.448	0.000
14 FcQm	3.806	5.102	5.781	5.946	0.000
15 L/H(FcQm) ²	14.489	26.032	33.414	35.355	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.491	4.438	5.674	5.983	0.000
17 Pw ² =Pt ² +Fw	784.3	693.7	642.8	611.6	0.0
18 Ps ² =e ^s Pw ²	947.1	836.2	774.3	736.2	0.0
19 Ps	973.2	914.5	879.9	858.0	0.0
20 P=(Pt+Ps)/2	928.7	872.3	839.1	818.1	0.0
21 Pr=(P/Pcr)	1.40	1.32	1.27	1.24	0.00
22 Tr=(T/Tcr)	1.50	1.50	1.50	1.50	0.00
23 Z(Table XI)	.868	.876	.880	.883	0.000

Company	Yates Petroleum Corporation
Well	Langley "RJ" Fed No. 3
Location	P, 9-6S-25E
County	Chaves
Date	1/18/83

