

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

9th File
Form C-122

RECEIVED

MAY 20 1983

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 3/17/83		O. C. D. ARTESIA, OFFICE	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company			
Pool Pecos Slope <i>Alto</i>					Formation Abo Gas		Unit	
Completion Date 4/4/82		Total Depth 4282.0'		Plug Back TD 4221.0'		Elevation <i>6</i> 3860.0'		Farm or Lease Name Thomas "LN" Federal
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4282.0'	Perforations: From 3723.0' To 3890.0'		Well No. 3		
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3720.0'	Perforations: From 0.0' To 0.0'		Unit Sec Top Rge F 14 68 25E		
Type Well Single					Packer Set At 3720.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 94 @ 3720'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico
L 3720.0'	H 3720.0'	Gg .639	%CO2 .19	%N2 5.18	%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	0	986	0	0	0	0 hrs.
1.	2.067	X 1.250	620	4.0	69	910	62	0	0	24 hrs.
2.	2.067	X 1.250	540	9.0	69	905	62	0	0	24 hrs.
3.	2.067	X 1.250	540	13.0	66	890	62	0	0	24 hrs.
4.	2.067	X 1.250	520	17.0	66	875	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.	8.134	50.33	633.20	.991	1.251	1.050	533
2.	8.134	70.56	553.20	.991	1.251	1.044	743
3.	8.134	84.80	553.20	.994	1.251	1.045	896
4.	8.134	95.21	533.20	.994	1.251	1.043	1005
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	Mcfd/bbl.
					A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.		
1.	.96	529	1.49	.906	Specific Gravity Separator Gas .639	xxxxxxxxxxxxxx	
2.	.83	529	1.49	.918	Specific Gravity Flowing Fluid xxxxxx	.639	
3.	.83	526	1.49	.916	Critical Pressure 662.8 PSIA	662.8 PSIA	
4.	.80	526	1.49	.919	Critical Temperature 354.1°R	354.1°R	
5.	0.00	0	0.00	0.000			

Pc 999.2 Pc2 998.4

NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	$\frac{Pc2}{Pc2-Pw2} = 5.0593$	(2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 5.0593$
1.	852.3	925.0	855.7	142.7		
2.	843.1	921.8	849.7	148.7		
3.	815.8	908.5	825.4	173.0		
4.	788.9	895.0	801.1	197.3		
5.	0.0	0.0	0.0	0.0		

$ROF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 5083 \text{ Mcfd}$

Absolute Open Flow 5083 Mcfd @ 15.025 Angle of Slope, 0 45 Slope, n1.000
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 5/19/83

COMPANY Yates Petroleum Corporation LEASE Thomas "LN" Federal WELL NO. 3

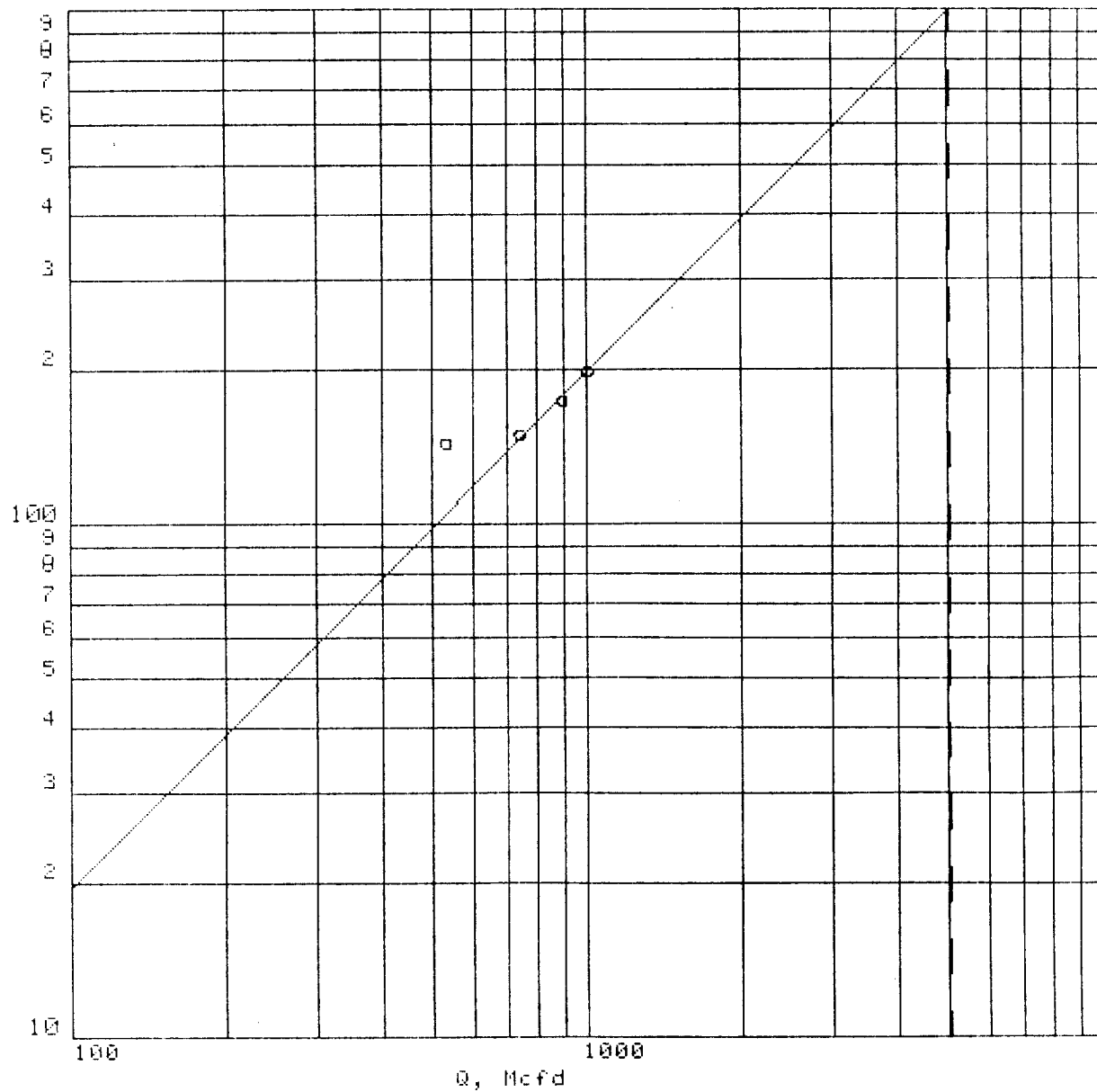
LOCATION: Unit F Section 14 Township 6S Range 25E

L 3720.0 H 3720.0 L/H 1.000 G .639 %CO2 .19 %N2 5.18 %H2S 0.00

d 1.995 Fr .017777 GH 2377.1 Pcr 662.8 Tcr 354.1

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.533	.743	.896	1.005	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.)	.869	.869	.871	.873	0.000
6 TZ	467.5	467.8	468.7	469.7	0.0
7 GH/TZ	5.085	5.082	5.071	5.061	0.000
8 e ⁻² (Table XIV)	1.210	1.210	1.209	1.209	0.000
9 1-e ⁻² (Table XIV)	.174	.174	.173	.173	0.000
10 Pt	923.2	918.2	903.2	888.2	0.0
11 Pt ² /1000	852.3	843.1	815.8	788.9	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.310	8.315	8.332	8.350	0.000
14 FcQm	4.432	6.178	7.468	8.388	0.000
15 L/H(FcQm) ²	19.641	38.168	55.776	70.365	0.000
16 Fw=L/H(FcQm) ² (1-e ⁻²)	3.410	6.623	9.660	12.163	0.000
17 Pw ² =Pt ² +Fw	855.7	849.7	825.4	801.1	0.0
18 Ps ² =e ² Pw ²	1035.5	1028.1	998.3	968.5	0.0
19 Ps	1017.6	1014.0	999.2	984.1	0.0
20 P=(Pt+Ps)/2	970.4	966.1	951.2	936.2	0.0
21 Pr=(P/Pcr)	1.46	1.46	1.44	1.41	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.869	.869	.871	.873	0.000

Company	Yates Petroleum Corporation
Well	Thomas "LN" Federal No. 3
Location	F, 14-6S-25E
County	Chaves
Date	5/19/83



ROP = 5083