

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

Form O-122

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 11/14/82		JAN 20 1983	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company		O. C. D.	
Pool Pecos Slope - Abo Gas				Formation Abo		Unit ARTESIA, OFFICE	
Completion Date 05/12/82		Total Depth 4531.0'		Plug Back ID 4491.0'		Elevation 3752.8'	
Farm or Lease Name Catterson "88" Fed							
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set Rt 4513.0'	Perforations: From 4265.0' To 4414.0'		Well No. 1	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set Rt 4235.0'	Perforations: From 0.0' To 0.0'		Unit Sec Top Rge I 21 7S 26E	
Type Well Single				Packer Set Rt 4235.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 105 @ 4209'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
L 4235.0'		H 4235.0'		Gg .636		XCO2 .04	
				XN2 4.40		XH2S 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	1011	0	0	0	0 hrs.
1.	2.067 X 1.375	250	31.0	72	930	62	0	0	24 hrs.
2.	2.067 X 1.375	235	48.3	72	913	62	0	0	24 hrs.
3.	2.067 X 1.375	245	80.9	72	863	62	0	0	24 hrs.
4.	2.067 X 1.375	240	97.1	72	844	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)	$\sqrt{h/P_m}$	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpu	Rate of Flow Q, Mcfd
1.	10.204	90.33	263.20	.989	1.254	1.020	1166
2.	10.204	109.49	248.20	.989	1.254	1.019	1411
3.	10.204	144.53	258.20	.989	1.254	1.020	1865
4.	10.204	156.80	253.20	.989	1.254	1.019	2022
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Fr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio _____ Dry _____ Mcf/bbl.
1.	.40	532	1.49	.961	A.P.I. Gravity of Liquid Hydrocarbons _____ 0.000 Deg.
2.	.38	532	1.49	.963	Specific Gravity Separator Gas .636 xxxxxxxxxxxxxx
3.	.39	532	1.49	.961	Specific Gravity Flowing Fluid xxxxxx .636
4.	.38	532	1.49	.962	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 1024.2 Pc2 1049.0

NO	Pt2	Pw	Pw2	Pc2-Pw2(1)	$\frac{Pc2}{Pc2-Pw2} = 4.0555$	(2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 3.0302$
1.	889.6	952.9	908.0	141.0		
2.	857.8	940.6	884.8	164.2		
3.	767.7	902.8	815.1	233.9		
4.	734.8	889.2	790.7	258.3		
5.	0.0	0.0	0.0	0.0		

ROF = $Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 6127 \text{ Mcfd}$

Absolute Open Flow 6127 Mcfd @ 15.025 Angle of Slope .0 38 Slope, n .192

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-112D

Adopted 9-1-65

DATE 1/18/83

COMPANY Yates Petroleum Corporation LEASE Catterson "SS" Fed WELL NO. 1

LOCATION: Unit I Section 21 Township 7S Range 26E

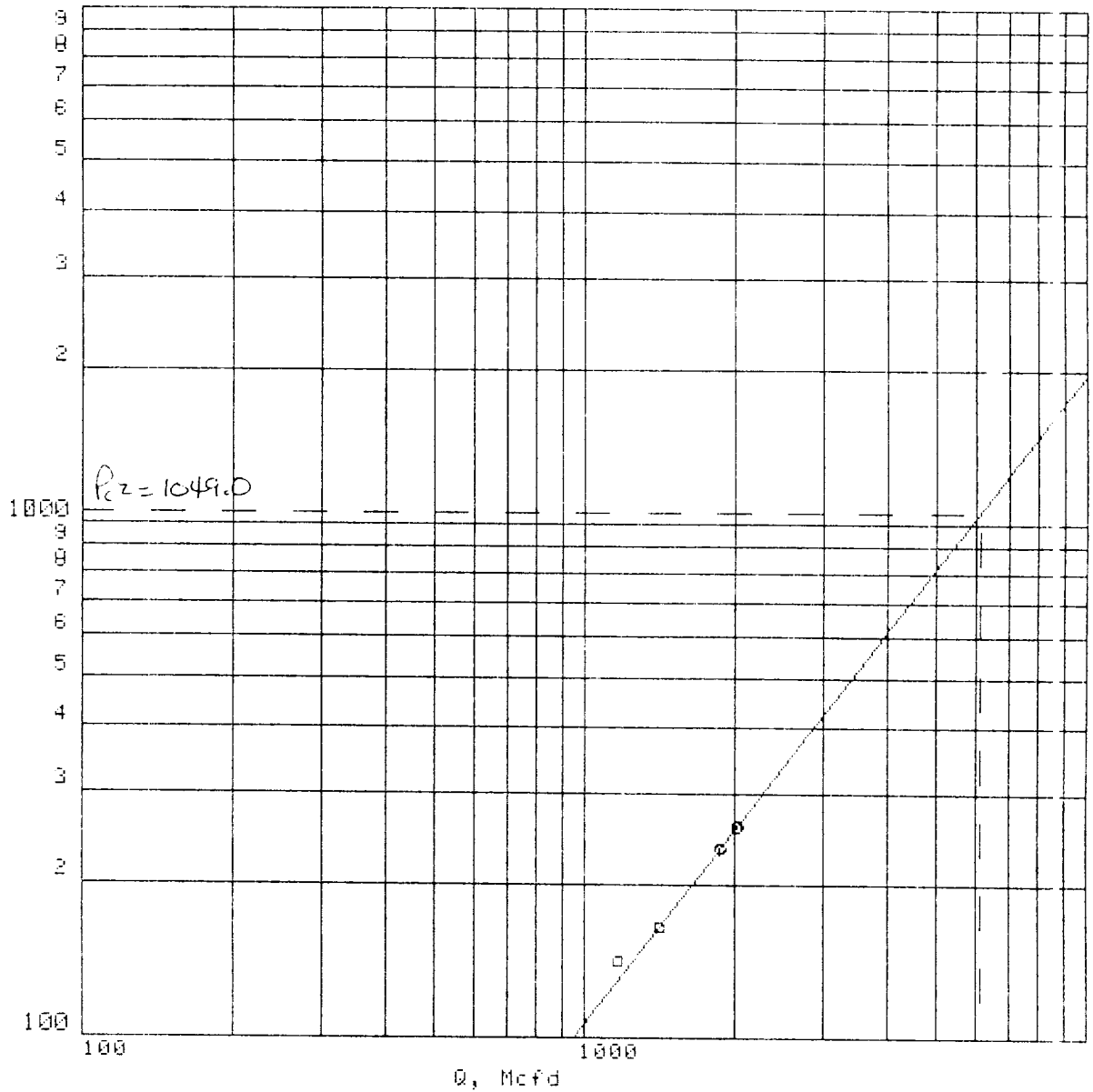
L 4235.0 H 4235.0 L/H 1.000 G .636 X002 .04 XN2 4.40 XH2S 0.00

d 1.995 Fr .017777 GH 2693.5 Pcr 661.0 Tcr 358.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Om	1.166	1.411	1.865	2.022	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	565.0	565.0	565.0	565.0	0.0
4 T=(Tw+Ts)/2	543.5	543.5	543.5	543.5	0.0
5 Z(Est.)	.864	.866	.872	.874	0.000
6 TZ	469.8	470.8	473.8	475.0	0.0
7 GH/TZ	5.733	5.721	5.685	5.671	0.000
8 e ^s (Table XIV)	1.240	1.239	1.237	1.237	0.000
9 1-e ^s (Table XIV)	.193	.193	.192	.191	0.000
10 Pt	943.2	926.2	876.2	857.2	0.0
11 Pt ² /1000	889.6	857.8	767.7	734.8	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.351	8.369	8.428	8.448	0.000
14 FcOm	9.736	11.811	15.715	17.082	0.000
15 L/H(FcOm) ²	94.785	139.510	246.954	291.784	0.000
16 Fw=L/H(FcOm) ² (1-e ^{-s})	18.337	26.939	47.384	55.869	0.000
17 Pw ² =Pt ² +Fw	908.0	884.8	815.1	790.7	0.0
18 Ps ² =e ^s Pw ²	1125.8	1096.5	1008.6	977.9	0.0
19 Ps	1061.0	1047.2	1004.3	988.9	0.0
20 P=(Pt+Ps)/2	1002.1	986.7	940.3	923.0	0.0
21 Pr=(P/Pcr)	1.52	1.49	1.42	1.40	0.00
22 Tr=(T/Tcr)	1.52	1.52	1.52	1.52	0.00
23 Z(Table XI)	.864	.866	.872	.874	0.000

Company	Yates Petroleum Corporation
Well	Catterson "SS" Fed No. 1
Location	I, 21-7S-26E
County	Chaves
Date	1/18/83

$P_c - P_w$, THOUSANDS



ROF= 6127