

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

Form C-122

455
file

OCT 24 '90

Type Test [x] Initial [] Annual [] Special					Test Date 8/9/88 D	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company			
Pool Morrow			Formation Cemetary			
Completion Date 3/21/89		Total Depth 9470.0'		Plug Back TD 9404.0'		
				Elevation 3640.1'		
Csg Size 7.000"		Wt. 23.000#	d 6.366"	Set At 9470.0'	Perforations: From 9128.0' To 9183.0'	
Tbg Size 2.875"		Wt. 6.500#	d 2.441"	Set At 9037.0'	Perforations: From 0.0' To 0.0'	
Type Well Single					Packer Set At 9037.0'	
Producing Thru Tubing		Resv. Temp. °F 159 @ 9128'	Mean Temp. °F 62.0	Baro. Press. - Pa 13.2 psia.	State New Mexico	
L 9037.0'	H 9037.0'	Gg .604	%CO2 1.63	%N2 .25	%H2S 0.00	
		Prover 0.000"	Meter Run 2.000"	Taps Flange		

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Prover 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	92	2750	0	0	0	0 hrs.
1.	2.067 X .875	185	32.5	95	2472	62	0	0	24 hrs.
2.	2.067 X .875	195	44.9	89	2382	62	0	0	24 hrs.
3.	2.067 X .875	200	82.7	92	2254	62	0	0	24 hrs.
4.	2.067 X .875	200	90.0	94	2135	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. Fpv	Rate of Flow Q, Mcfd
1.	3.729	80.26	198.20	.968	1.287	1.013	377
2.	3.729	96.69	208.20	.973	1.287	1.014	458
3.	3.729	132.78	213.20	.971	1.287	1.014	627
4.	3.729	138.52	213.20	.969	1.287	1.014	653
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.	.29	555	1.57	.975	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.
2.	.31	549	1.55	.973	Specific Gravity Separator Gas .604
3.	.31	552	1.56	.973	Specific Gravity Flowing Fluid xxxxxx .604
4.	.31	554	1.57	.973	Critical Pressure 678.5 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature 353.9°R

Pc 2763.2	Pc ² 7635.3		
NO	Pt ²	Pw	Pw ²
1.	6176.2	2485.5	6177.5
2.	5737.0	2395.6	5738.8
3.	5140.2	2268.0	5143.6
4.	4614.8	2149.1	4618.5
5.	0.0	0.0	0.0

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.5267 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0123$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1314 \text{ Mcfd}$$

Absolute Open Flow 1314 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .754
Remarks:

Approved By:	Conducted By: Ed Perry	Calculated By: Andrea Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 10/23/90

COMPANY Yates Petroleum Corporation LEASE Cacti AGB State WELL NO. 1

LOCATION: Unit J Section 2 Township 20S Range 24E

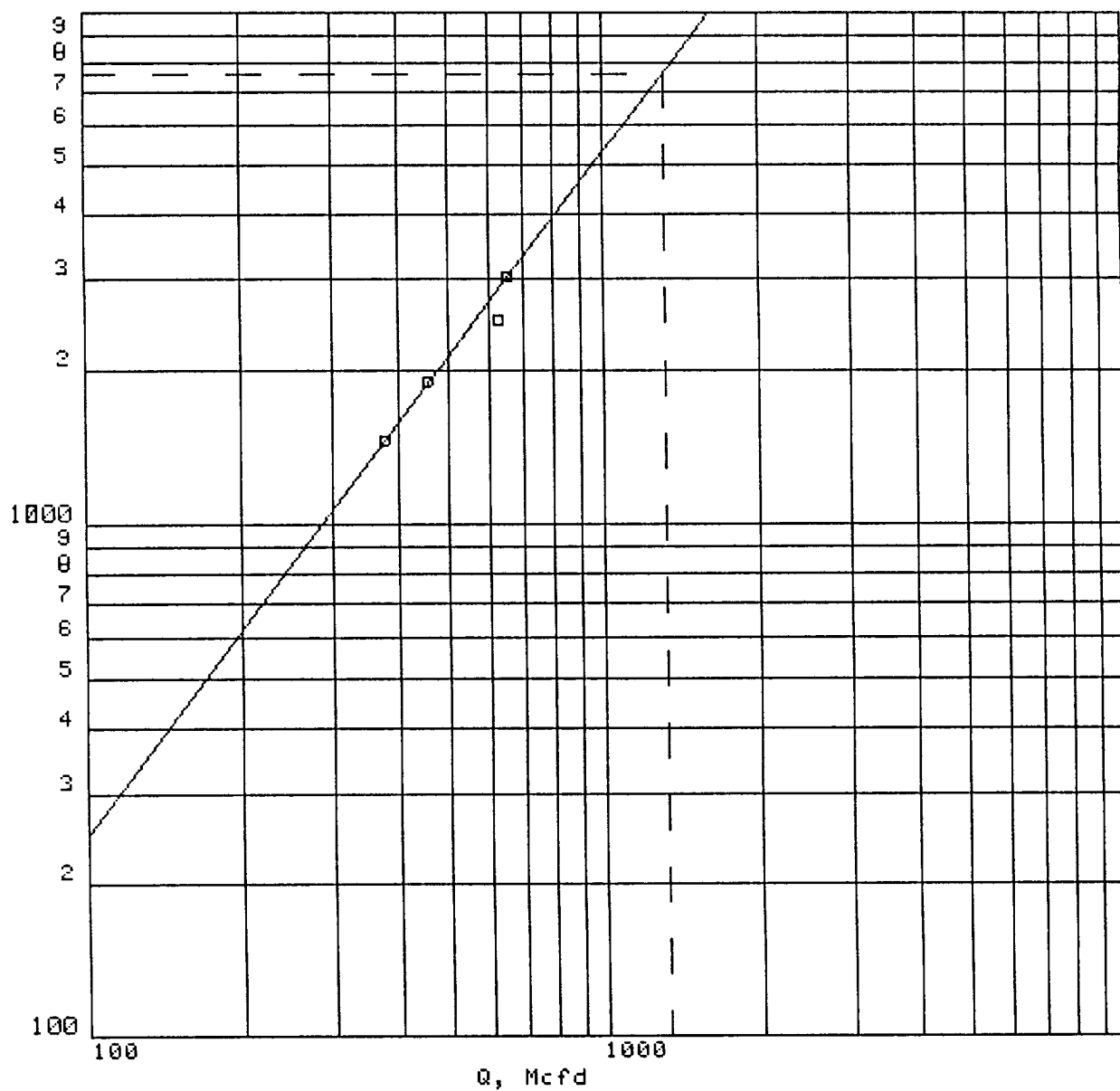
L 9037.0 H 9037.0 L/H 1.000 G .604 %CO2 1.63 %N2 .25 %H2S 0.00

d 2.441 Fr .010495 GH 5458.3 Pcr 678.5 Tcr 353.9

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.377	.458	.627	.653	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	619.0	619.0	619.0	619.0	0.0
4 T=(Tw+Ts)/2	570.5	570.5	570.5	570.5	0.0
5 Z(Est.)	.831	.830	.828	.827	0.000
6 TZ	474.3	473.2	472.2	471.9	0.0
7 GH/TZ	11.507	11.534	11.559	11.566	0.000
8 e ^s (Table XIV)	1.540	1.541	1.543	1.543	0.000
9 1-e ^{-s} (Table XIV)	.350	.351	.352	.352	0.000
10 Pt	2485.2	2395.2	2267.2	2148.2	0.0
11 Pt ² /1000	6176.2	5737.0	5140.2	4614.8	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	4.978	4.966	4.956	4.953	0.000
14 FcQm	1.879	2.273	3.107	3.234	0.000
15 L/H(FcQm) ²	3.531	5.169	9.656	10.456	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.238	1.815	3.396	3.679	0.000
17 Pw ² =Pt ² +Fw	6177.5	5738.8	5143.6	4618.5	0.0
18 Ps ² =e ^s Pw ²	9510.8	8844.4	7934.4	7125.9	0.0
19 Ps	3084.0	2974.0	2816.8	2669.4	0.0
20 P=(Pt+Ps)/2	2784.6	2684.6	2542.0	2408.8	0.0
21 Pr=(P/Pcr)	4.10	3.96	3.75	3.55	0.00
22 Tr=(T/Tcr)	1.61	1.61	1.61	1.61	0.00
23 Z(Table XI)	.831	.830	.828	.827	0.000

Company	Yates Petroleum Corporation
Well	Cacti RGB State No. 1
Location	J, 2-20S-24E
County	Eddy
Date	10/23/90

$P_c^2 - P_w^2$, THOUSANDS



ROF= 1314