

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

Form C-122

RECEIVED

Type Test [x] Initial [] Annual [] Special				Test Date 12/19/88	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool Pecos Slope <u>ABO</u>				Formation Abo	
Completion Date 5/3/83		Total Depth 5100.0'		Plug Back TD 5057.0'	
Csg Size 4.500" 9.500#		d 4.090"		Elevation 3790.0'	
Tbg Size 2.375" 4.700#		d 1.995"		Perforations: From 4454.0' To 4810.0'	
Type Well Single		Packer Set At 4416.0'		Unit @ C.C.D. ANTHESIA, OFFICE	
Producing Thru Tubing		Resv. Temp. °F 102 @ 4632'		Baro. Press. - Pa 13.2 psia.	
L 4416.0'		H 4416.0'		Gg .652	
XCO2 .04		XN2 8.97		XH2S 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	55	980	0	0	0	0 hrs.
1.	2.067 X 1.000	300	20.7	49	608	62	0	0	24 hrs.
2.	2.067 X 1.000	300	26.1	52	529	62	0	0	24 hrs.
3.	2.067 X 1.000	280	31.2	55	402	62	0	0	24 hrs.
4.	2.067 X 1.000	270	43.0	54	270	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)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	4.947	80.52	313.20	1.011	1.238	1.026	512
2.	4.947	90.41	313.20	1.008	1.238	1.026	573
3.	4.947	95.64	293.20	1.005	1.238	1.023	603
4.	4.947	110.35	283.20	1.006	1.238	1.023	695
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.
1.	.48	509	1.46	.950	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.48	512	1.47	.951	Specific Gravity Separator Gas	.652	xxxxxxxxxxxxxx
3.	.45	515	1.48	.955	Specific Gravity Flowing Fluid	xxxxxx	.652
4.	.43	514	1.48	.956	Critical Pressure	655.3 PSIA	655.3 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	348.0°R	348.0°R

Pc 993.2 Pc2 986.4

NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)	$\frac{Pc2}{Pc2-Pw2} = 1.0999$	(2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.0737$
1.	385.9	624.4	389.9	596.6		
2.	294.0	546.8	299.0	687.4		
3.	172.4	422.0	178.1	808.3		
4.	80.2	296.6	88.0	898.5		
5.	0.0	0.0	0.0	0.0		

$$ROF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 747 \text{ Mcfd}$$

Absolute Open Flow 747 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .746

Approved By:	Conducted By: David Weaver	Calculated By: Andrea Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELL-HEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 7/7/89

COMPANY Yates Petroleum Corporation LEASE Marshall XG WELL NO. 1

LOCATION: Unit N Section 22 Township 8S Range 26E

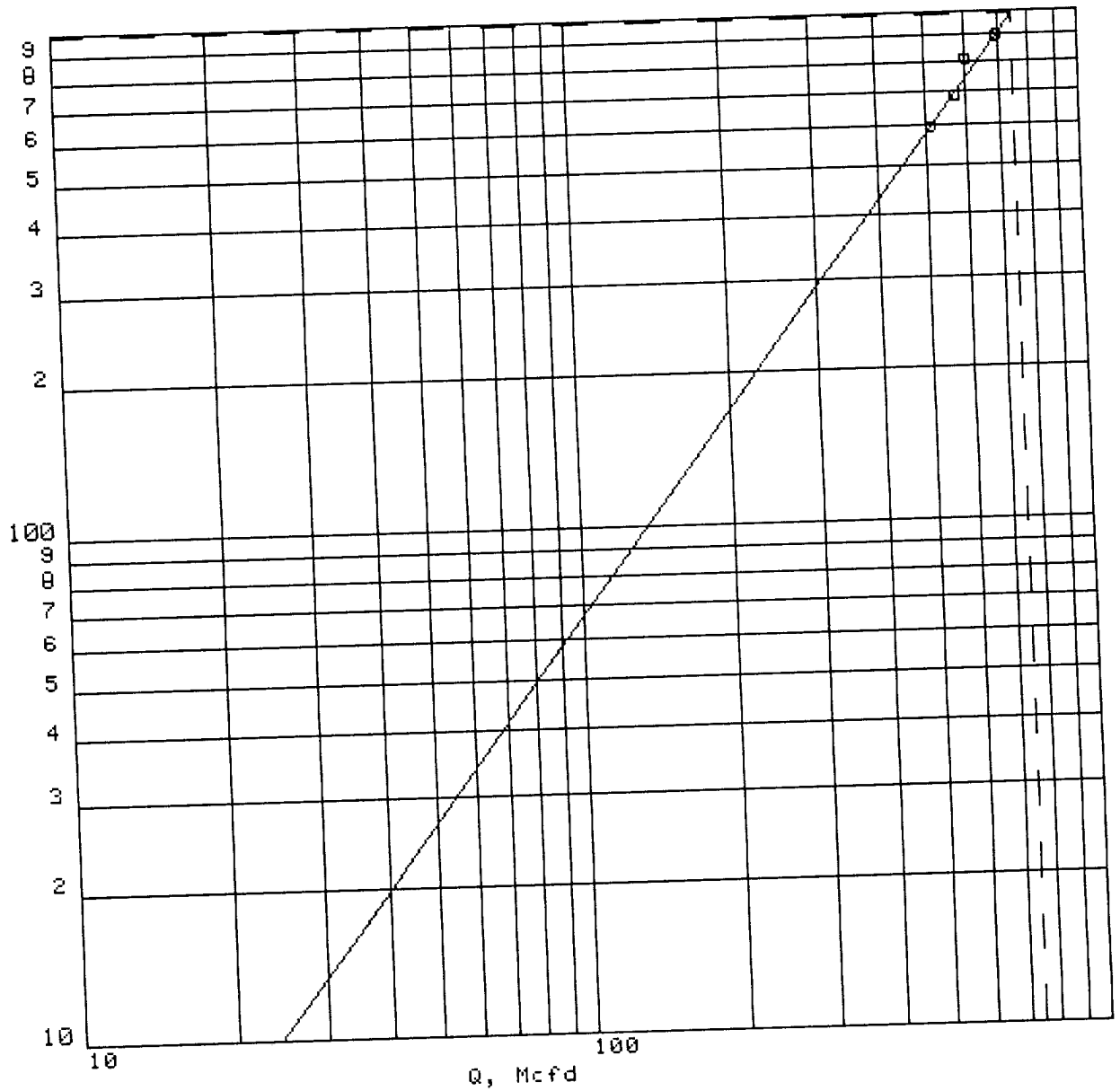
L 4416.0 H 4416.0 L/H 1.000 G .652 %CO₂ .04 %N₂ 8.97 %H₂S 0.00

d 1.995 Fr .017777 GH 2879.2 Pcr 655.3 Tcr 348.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.512	.573	.603	.695	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.)	.915	.926	.943	.961	0.000
6 TZ	496.2	501.7	510.9	520.7	0.0
7 GH/TZ	5.803	5.739	5.636	5.530	0.000
8 e ^s (Table XIV)	1.243	1.240	1.235	1.230	0.000
9 1-e ^s (Table XIV)	.196	.194	.190	.187	0.000
10 Pt	621.2	542.2	415.2	283.2	0.0
11 Pt ² /1000	385.9	294.0	172.4	80.2	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.820	8.921	9.084	9.256	0.000
14 FcQm	4.513	5.108	5.474	6.437	0.000
15 L/H(FcQm) ²	20.367	26.091	29.961	41.436	0.000
16 Fw=L/H(FcQm) ² (1-e ^s)	3.983	5.051	5.707	7.760	0.000
17 Pw ² =Pt ² +Fw	389.9	299.0	178.1	88.0	0.0
18 Ps ² =e ^s Pw ²	484.7	370.8	220.0	108.2	0.0
19 Ps	696.2	608.9	469.0	329.0	0.0
20 P=(Pt+Ps)/2	658.7	575.6	442.1	306.1	0.0
21 Pr=(P/Pcr)	1.01	.88	.67	.47	0.00
22 Tr=(T/Tcr)	1.56	1.56	1.56	1.56	0.00
23 Z(Table XI)	.915	.926	.943	.961	0.000

Company	Yates Petroleum Corporation
Well	Marshall XG No. 1
Location	N, 22-8S-26E
County	Chaves
Date	7/7/89

$P_c^2 - P_w^2$, THOUSANDS



ROF= 747