

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

Form O-122

RECEIVED

455
File

FEB 18 1983

Type Test [x] Initial [] Annual [] Special				Test Date 12/19/82	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool Pecos Slope - Abo				Unit Abo	
Completion Date 4/19/82		Total Depth 4350.0'		Elevation 3854.0'	
Csg Size 4.500"		Wt. 9.500#		Well No. 1	
Tbg Size 2.875"		Wt. 6.500#		Unit Sec P 11	
Type Well Single		Packer Set At 3942.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 106 @ 3941'		State New Mexico	
L 3942.0'		H 3942.0'		Gg .637	
%		CO2 .02		%	
N2 5.16		%		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	50	850	0	0	0	0 hrs.
1.	2.067 X 1.125	330	6.4	50	739	62	0	0	24 hrs.
2.	2.067 X 1.125	330	8.3	52	699	62	0	0	24 hrs.
3.	2.067 X 1.125	310	13.9	55	673	62	0	0	24 hrs.
4.	2.067 X 1.125	310	20.0	54	615	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.	6.397	46.87	343.20	1.010	1.253	1.030	391
2.	6.397	53.37	343.20	1.008	1.253	1.030	444
3.	6.397	67.03	323.20	1.005	1.253	1.027	554
4.	6.397	80.40	323.20	1.006	1.253	1.027	666
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.	.52	510	1.44	.942	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.52	512	1.45	.943	Specific Gravity Separator Gas	.637	xxxxxxxxxxxxxx
3.	.49	515	1.46	.948	Specific Gravity Flowing Fluid	xxxxxx	.637
4.	.49	514	1.45	.947	Critical Pressure	662.2 PSIA	662.2 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	353.7°R	353.7°R

Pc	863.2	Pc ²	745.1																
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ²	(1)	$\frac{Pc^2}{Pc^2-Pw^2}$	=	$\frac{2.1520}{}$	(2)	$\left[\frac{Pc^2}{Pc^2-Pw^2}\right]^n$	=	$\frac{1.8478}{}$							
1.	565.8	752.7	566.5	178.6															
2.	507.2	712.8	508.1	237.0															
3.	470.9	687.2	472.3	272.8															
4.	394.6	629.9	396.7	348.4															
5.	0.0	0.0	0.0	0.0															

AOF = 0
 $\left[\frac{Pc^2}{Pc^2-Pw^2}\right]^n$
=
1230 Mcfd

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1230 \text{ Mcfd}$$

Absolute Open Flow 1230 Mcfd @ 15.025 Angle of Slope, 0 39 Slope, n .801
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 2/16/83

COMPANY Yates Petroleum Corporation LEASE Bishop "RY" Com WELL NO. 1

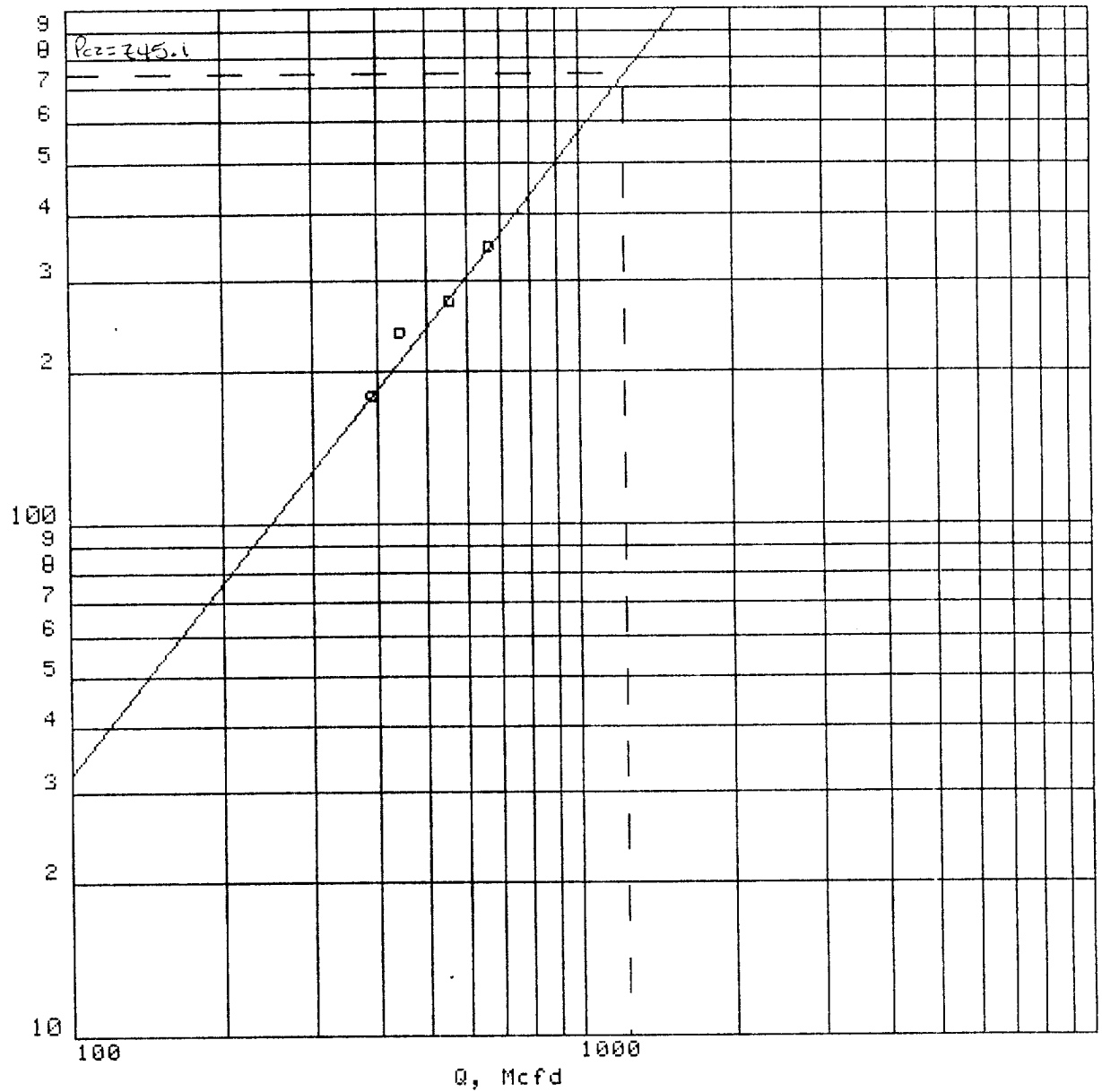
LOCATION: Unit P Section 11 Township 6S Range 25E

L 3942.0 H 3942.0 L/H 1.000 G .637 %CO₂ .02 %N₂ 5.16 %H₂S 0.00

d 2.441 Fr .010495 GH 2511.1 Pcr 662.2 Tcr 353.7

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.391	.444	.554	.666	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	566.0	566.0	566.0	566.0	0.0
4 T=(Tw+Ts)/2	544.0	544.0	544.0	544.0	0.0
5 Z(Est.)	.896	.901	.904	.912	0.000
6 TZ	487.3	490.2	492.0	496.2	0.0
7 GH/TZ	5.153	5.123	5.104	5.061	0.000
8 e ^s (Table XIV)	1.213	1.212	1.211	1.209	0.000
9 1-e ^{-s} (Table XIV)	.176	.175	.174	.173	0.000
10 Pt	752.2	712.2	686.2	628.2	0.0
11 Pt ² /1000	565.8	507.2	470.9	394.6	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.117	5.147	5.163	5.209	0.000
14 FcQm	1.999	2.284	2.863	3.469	0.000
15 L/H(FcQm) ²	3.997	5.219	8.197	12.032	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.702	.912	1.428	2.079	0.000
17 Pw ² =Pt ² +Fw	566.5	508.1	472.3	396.7	0.0
18 Ps ² =e ^s Pw ²	687.2	615.7	571.9	479.6	0.0
19 Ps	829.0	784.7	756.3	692.5	0.0
20 P=(Pt+Ps)/2	790.6	748.4	721.2	660.4	0.0
21 Pr=(P/Pcr)	1.19	1.13	1.09	1.00	0.00
22 Tr=(T/Tcr)	1.54	1.54	1.54	1.54	0.00
23 Z(Table XI)	.896	.901	.904	.912	0.000

Company	Yates Petroleum Corporation
Well	Bishop "RY" Com No. 1
Location	P, 11-6S-25E
County	Chaves
Date	2/16/83



ROF= 1230