

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

Form C-122
Revised 9-1-65

RECEIVED

DEC 2 1981

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10-25-81		DEC 2 1981	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Co.		O. C. D. AD-51, 0000	
Pool <u>Pecos Slope - Abo Gas</u> Undesignated Abo				Formation Abo		Unit NM 13402	
Completion Date 5-14-81		Total Depth 4250'		Ring Buck. In. 4209'		36 1/2" KB 36 3/8" GR	
Casing Size 4-1/2"		Wt. 9.5#		Set At 4250'		Perforations: From 3719' To 4194'	
Tub. Size 2-3/8"		Wt. 4.7#		Set At 4150'		Perforations: From - To -	
Type Well - Single - Drdhead - G.G. or G.O. Multiple Single				Packer Set At None		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 115 @ 4246'		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2	
State New Mexico							
L 4150'		H 4150'		G _g .642		% CO ₂ 0.18	
				% N ₂ 6.32		% H ₂ S 0	
Prover ---		Meter Run 2"		Tape Flange			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							1000				days
1.	2.067 x 0.875			260	19	66	908	69			24 hrs
2.	2.067 x 0.875			280	38	68	854	70			24 hrs
3.	2.067 x 0.875			335	65	71	768	73			24 hrs
4.	2.067 x 0.875			425	95	72	656	74			24 hrs
5.											

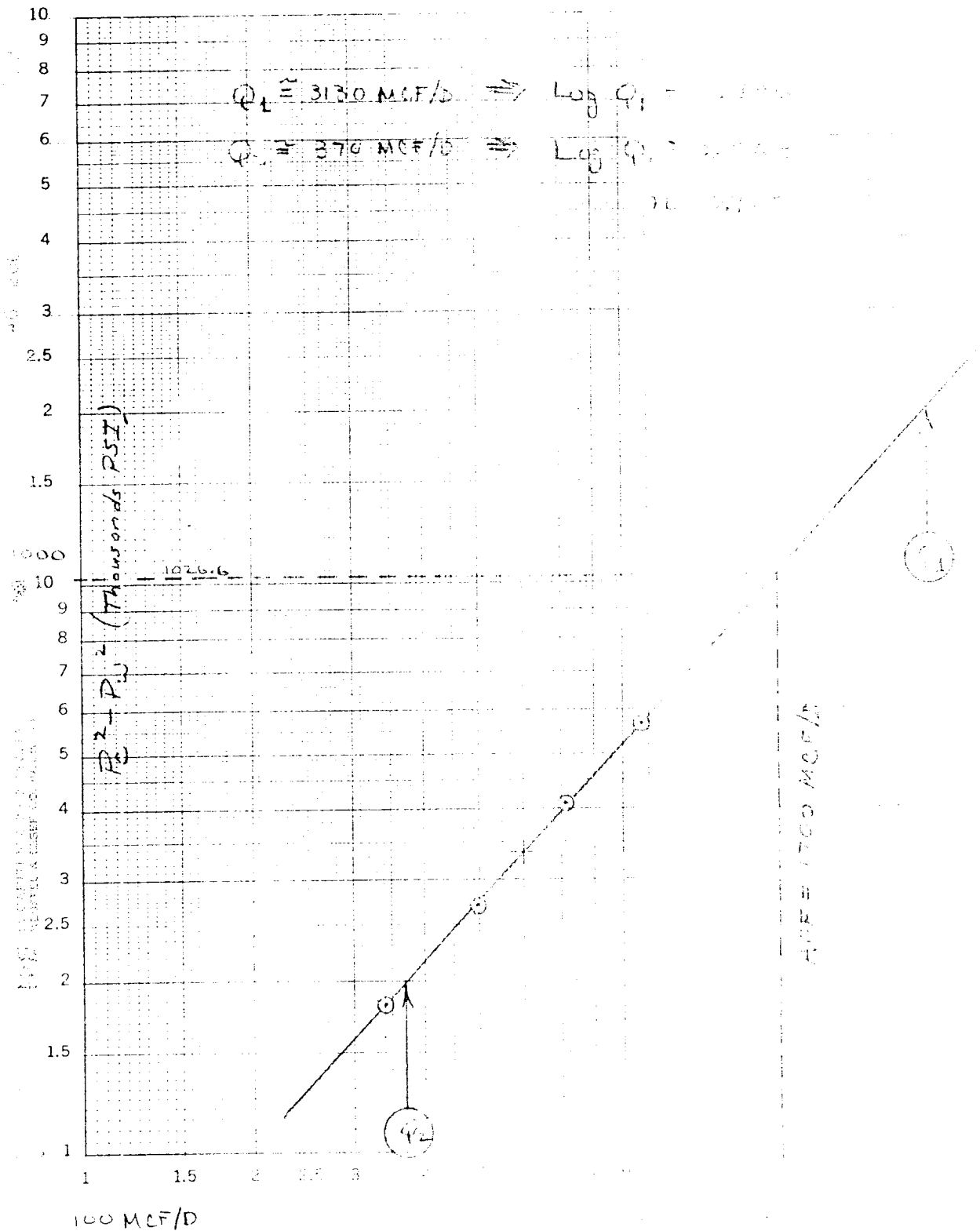
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor F _{pv}	Rate of Flow Q, Mcfd
1	3.729	72.05	273.2	0.9943	1.248	1.023	341
2	3.729	105.55	293.2	0.9924	1.248	1.024	499
3	3.729	150.44	348.2	0.9896	1.248	1.028	712
4	3.729	204.03	438.2	0.9887	1.248	1.035	972
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcft/bbl.
1	0.415	526	1.486	0.956	A.P.G. Gravity of Liquid Hydrocarbons	
2	0.445	528	1.492	0.953	Specific Gravity Separator Gas	0.642
3	0.528	531	1.500	0.946	Specific Gravity Flowing Fluid	XXXXXX
4	0.665	532	1.503	0.933	Critical Pressure	659
5					Critical Temperature	354

NO.	P _r ²	P _w ²	R _w ²	P _r ² - R _w ²	(1) $\frac{P_r^2}{P_r^2 - R_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - R_w^2} \right]^n =$
1	921.2		850.3	176.3	3.064	2.827
2	867.2		755.7	270.9		
3	781.2		617.8	408.8		
4	669.2		462.2	564.4		
5						

Absolute Open Flow <u>1700</u> Mcfd @ 15 G25				Angle of Slope θ <u>0.928</u>	
Remarks: Static pressure by Bennett Wireline Service, Flowing pressure by DWT calculation. Worksheet C122D attached.					
Approved By Commission:		Conducted By: David Weaver		Calculated By: A. R. Stall	
				Checked By:	

$V_{KRO} = 7700 \text{ MCF/D}$
 $R_{KRO} = 1000 \text{ MCF/D}$
 $U = 0.15$
 $C_1 = 0.0001$



WORKSHEET FOR CALCULATION OF ST. C COLUMN WELLHEAD PRESSURE (P_w)

COMPANY Yates Petroleum Co. LEASE Bend QC WELL NO. 1 DATE 11-30-81

LOCATION: Unit M Section 18 Township 7S Range 26E

4170 H 1170 CH 1 G 0.0044 % CO₂ 0.18 % H₂S 0

1.1115' F₁ 0.18231 OH 266.4 F₂ 659 TABLE IX A X T_{cr} 354

LINE	1 ST TRIAL	2 ND TRIAL	1 ST TRIAL	2 ND TRIAL	3 RD RATE	4 TH RATE	
1	0.341	0.341	0.499	0.499	0.712	0.712	0.972
2	529	529	530	530	533	534	534
3	577	577	577	577	577	577	577
4	532	532	532	532	534	534	534.5
5	0.880	0.879	0.882	0.885	0.890	0.895	0.911
6	465.5	465.2	467.0	469.0	468.1	475.8	505.1
7	5.424	5.490	5.467	5.448	5.403	5.373	5.309
8	1.225	1.229	1.228	1.227	1.225	1.223	1.220
9	0.126	0.126	0.126	0.125	0.184	0.182	0.180
10	141.2	141.5	140.7	140.2	140.2	140.2	140.2
11	848.6	848.6	752.0	752.0	610.3	610.3	447.8
12	0.18231	0.18231	0.18231	0.18231	0.18231	0.18231	0.18231
13	8.827	8.846	8.884	8.915	8.990	9.037	9.148
14	3.020	3.016	4.433	4.447	6.401	6.436	8.212
15	7.121	7.091	19.652	19.790	40.769	41.418	79.071
16	1.617	1.692	3.655	3.661	7.558	7.538	14.233
17	850.30	850.30	755.66	755.66	617.84	617.84	462.0
18	1041.6	1045.0	927.9	927.2	756.9	775.6	563.7
19	1020.6	1023.3	963.3	962.9	876.6	869.3	756.8
20	970.9	971.7	915.2	915.1	825.6	825.2	710.0
21	1.4733	1.4746	1.3888	1.3886	1.2528	1.2522	1.0774
22	1.5373	1.5333	1.5607	1.5607	1.5650	1.5650	1.5664
23	0.877	0.879	0.885	0.885	0.895	0.895	0.911