

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

Form C-122  
 Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special						Test Date 4/8/68			
Company TEXACO Inc.				Connection -----					
Pool Todd-Upper San Andres				Formation San Andres				Unit	
Completion Date 4/4/68		Total Depth 4335		Plug Back TD 4216		Elevation 4189		Farm or Lease Name N. M. "CT" State	
Csg. Size 1.5	Wt. 9.5	d 4.090	Set At 4335	Perforations: From 4125 To 4196				Well No. 4	
Tbg. Size 2.375	Wt. 4.70	d 1.995	Set At 4022	Perforations: From ----- To -----				Unit C	Sec. Twp. Rge. 35 7-S 35E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 4022		County Roosevelt	
Producing Thru Tubing		Reservoir Temp. °F 556 @ 4022		Mean Annual Temp. °F 60		Baro. Press. - P <sub>g</sub> 13.2		State New Mexico	
L 4022	H 4022	Gg 0.680	% CO <sub>2</sub>	% N <sub>2</sub>	% H <sub>2</sub> S	Prover 2"	Meter Run	Taps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	of Flow
SI				484.0			484.0		Packer		72
1.	2 x 1/16			480.5			480.5	60			1
2.	2 x 3/32			474.2			474.2	60			1
3.	2 x 1/8			463.2			463.2	60			1
4.	2 x 3/16			437.7			437.7	60			1
5.	2 x 1/4			387.1			387.1	60			1

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	.06405		493.7	1.000	1.213	1.059	41
2	.1410		487.4	1.000	1.213	1.058	88
3	.2648		476.4	1.000	1.213	1.056	162
4	.6082		450.9	1.000	1.213	1.053	350
5	1.087		400.3	1.000	1.213	1.047	553

NO.	P <sub>r</sub>	Temp. °R	T <sub>r</sub>	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.74	520	1.35	.892	Dry	
2.	.73	520	1.35	.893	A.P.I. Gravity of Liquid Hydrocarbons	Deg.
3.	.71	520	1.35	.896	Specific Gravity Separator Gas	0.680
4.	.67	520	1.35	.902	Specific Gravity Flowing Fluid	X X X X X X X X
5.	.60	520	1.35	.912	Critical Pressure	669 P.S.I.A.
					Critical Temperature	385 R
						247.2

NO.	P <sub>c</sub>	P <sub>w</sub>	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1	497.2	247.2	243.7	3.5	3.004	2.550
2			237.6	9.5		
3			227.0	19.8		
4			203.3	42.1		
5			160.2	82.3		

Absolute Open Flow	1,410 Mcfd @ 15.025	Angle of Slope $\theta$	49.5	Slope, n	.351
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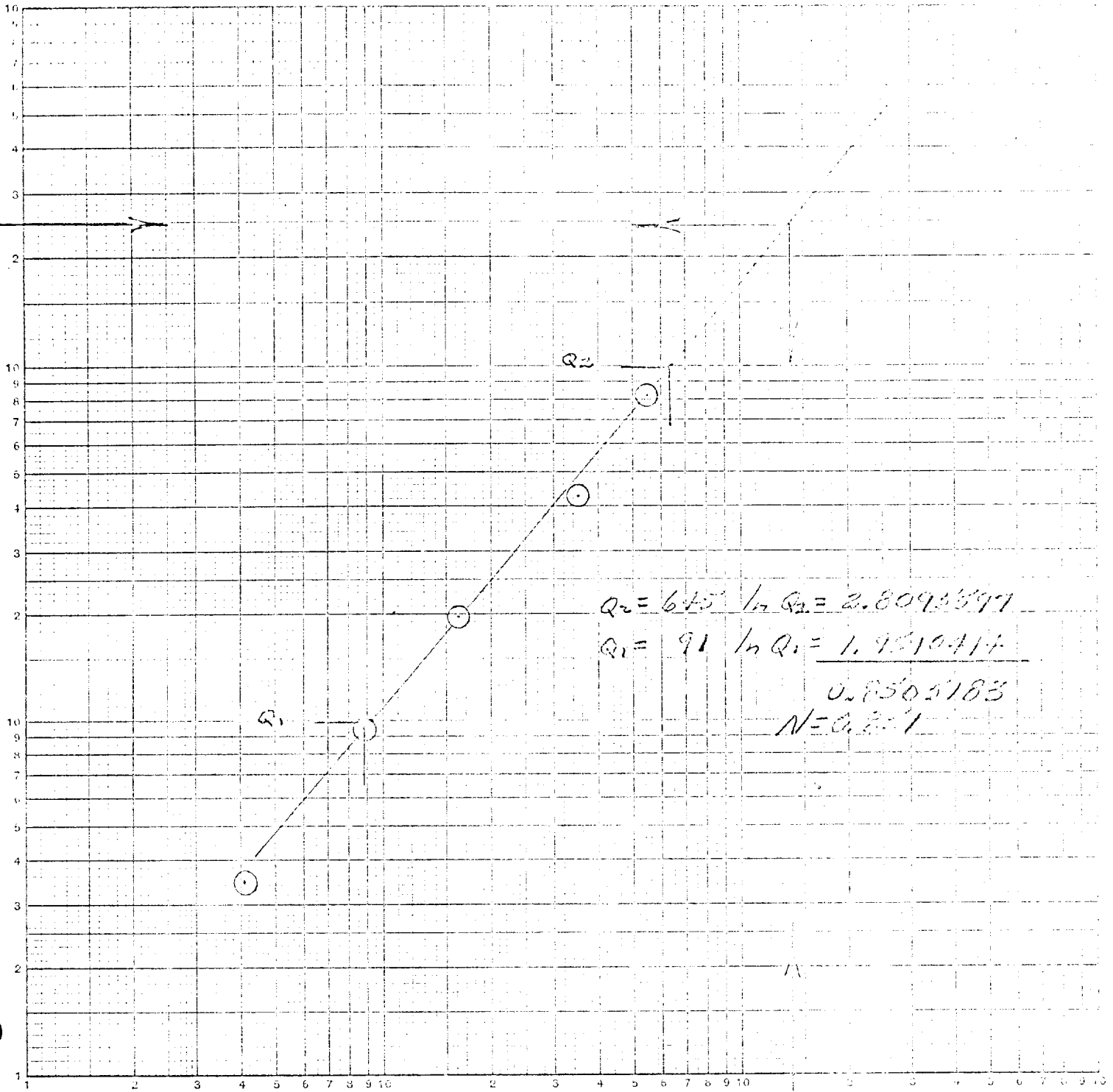
Remarks: \_\_\_\_\_

Approved By Commission:	Conducted By: C. J. Seals	Calculated By: C. J. Seals	Checked By:
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*C. J. Seals*

N.A. State "T" ...  
 April 9, 1958



ADF = 1,110,000  
 "N" = 0.371  
 Col. = 11.2°

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P<sub>w</sub>)

Form O-122D  
Adopted 9-1-65

COMPANY Western Oil Co. LEASE N. 1/4 Sec 7, T. 40N, R. 23W WELL NO. 4 DATE 4-25-68

LOCATION: Unit G Section 35 Township 7.5 Range 35N

L 4022 H 4022 L/H 1.000 G 6.600 % CO<sub>2</sub> \_\_\_\_\_ % N<sub>2</sub> \_\_\_\_\_ % H<sub>2</sub>S \_\_\_\_\_

1 1.995 F<sub>r</sub> .018331 GH 2135 P<sub>cl</sub> 369 T<sub>cl</sub> 385  
 1st Rate 2nd Rate 3rd Rate 4th Rate 5th Rate  
 TABLE IX B X

LINE	1st Term	2nd Term	3rd Term	4th Term	5th Term	1st Term	2nd Term	3rd Term	4th Term	5th Term
1 Q <sub>m</sub>	.041	.086	—	—	.162	.350	—	—	.553	—
2 T <sub>w</sub> (W.H. °R)	520	520	—	—	520	520	—	—	520	—
3 T <sub>s</sub> (B.H. °R)	536	556	—	—	556	556	—	—	556	—
4 T = (T <sub>w</sub> T <sub>s</sub> ) <sup>2</sup>	538	538	—	—	538	538	—	—	538	—
5 Z (Est.)	.970	.902	.903	.905	.905	.907	.910	.914	.914	.918
6 T <sub>Z</sub>	478.5	485.3	485.3	486.9	486.9	488.0	489.6	491.7	493.9	493.9
7 GH/T <sub>Z</sub>	5.712	5.636	5.630	5.617	5.617	5.605	5.596	5.582	5.562	5.538
8 e <sup>s</sup> (Table XIV)	1.237	1.235	1.235	1.234	1.234	1.234	1.234	1.233	1.231	1.231
9 1 - e <sup>s</sup> (Table XIV)	.193	.190	.190	.190	.190	.190	.189	.188	.188	.188
10 P <sub>t</sub>	492.7	487.4	—	476.4	—	450.9	—	400.3	—	—
11 P <sub>t</sub> 2/1000	243.7	237.6	—	227.0	—	203.3	—	160.2	—	—
12 F <sub>t</sub> (Table XV)	.015231	—	—	—	—	—	—	—	—	—
13 F <sub>c</sub> = F <sub>t</sub> T <sub>Z</sub>	8.757	8.848	8.857	8.877	8.877	8.897	8.926	8.964	9.004	9.004
14 F <sub>c</sub> Q <sub>m</sub>	.3573	.7786	.7794	1.438	—	3.114	3.124	4.957	4.979	4.979
15 L/H (F <sub>c</sub> Q <sub>m</sub> ) <sup>2</sup>	.1250	.6062	.6075	2.068	—	9.697	9.759	24.57	24.79	24.79
16 F <sub>w</sub> = L/H (F <sub>c</sub> Q <sub>m</sub> ) <sup>2</sup> (1 - e <sup>s</sup> )	.0557	.1151	.1154	.3929	—	1.842	1.844	4.619	4.661	4.661
17 P <sub>w</sub> <sup>2</sup> = P <sub>t</sub> <sup>2</sup> + F <sub>w</sub>	243.7	237.7	237.7	227.4	—	205.1	205.1	164.8	164.9	164.9
18 P <sub>s</sub> <sup>2</sup> = e <sup>s</sup> P <sub>w</sub> <sup>2</sup>	301.2	293.6	293.6	280.6	—	253.1	253.1	203.0	203.0	203.0
19 P <sub>s</sub>	542.5	542.2	—	530.1	—	503.0	—	450.6	—	—
20 P = (P <sub>t</sub> + P <sub>s</sub> )	521.6	514.8	—	503.3	—	477.0	—	425.5	—	—
21 P <sub>r</sub> = (P/P <sub>cl</sub> )	.78	.77	—	.75	—	.71	—	.64	—	—
22 T <sub>r</sub> = (T/T <sub>cl</sub> )	1.40	1.40	—	1.40	—	1.40	—	1.40	—	—
23 Z (Table XI)	.901	.903	.903	.905	—	.910	.910	.918	.918	.918

One copy to be filed in District Office (Work copy acceptable)