

MEXICO OIL CONSERVATION COMM ON
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11/21/67					
Company Sinclair Oil & Gas Company						Connection None					
Pool Tubb						Formation Tubb					
Completion Date 11/1/67			Total Depth 6663		Plug Back TD 6230		Elevation 3380 GL		Farm or Lease Name J. R. Cone "B"		
Csg. Size 7"	Wt. 20	d 6.456	Set At 6663	Perforations: From 6063 To 6161				Well No. 1			
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 5910	Perforations: From Open Ended To				Unit N	Sec. 26	Twp. 21S	Rge. 37E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple GO Dual						Packer Set At 5910		County Lea			
Producing Thru Tbg		Reservoir Temp. °F 92 @ 6112		Mean Annual Temp. °F 60°		Baro. Press. - P 13.2		State New Mexico			
L 5910	H 5910	Gg .694	% CO ₂ --	% N ₂ --	% H ₂ S --	Prover X	Meter Run	Taps			

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							1338		Choke		78 1/4
1.	2	x	1.000	35		11	1217	63	17/64		1
2.	2	x	1.000	52		9	1122	63	16/64		1
3.	2	x	1.125	52		22	1007	63	19/64		1
4.	2	x	1.125	71		32	885	63	22/64		1
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	17.09		48.2	1.051	1.200	1.000	1039
2	17.09		65.2	1.053	1.200	1.000	1408
3	21.89		65.2	1.039	1.200	1.000	1779
4	21.89		84.2	1.028	1.200	1.000	2274
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
					55.27 Mcf/bbl.	46.5 Deg.	.694	X X X X X X X X	669 P.S.I.A.	388 R
1	.072	471	1.21	*				.751	667 P.S.I.A.	408 R
2	.097	469	1.21	*						
3	.097	482	1.24	*						
4	.126	492	1.27	*						
5.										

NO.	P _r ²	P _w	P _w ²	P _c ² - P _w ²
1	1513.4		1530.4	295.3
2	1284.1		1316.3	509.4
3	1040.8		1094.2	731.5
4	806.8		897.7	928.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ _____

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ _____

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ **Read from graph**

P_c 1351.2 P_c² 1825.7

Absolute Open Flow 3750 Mcfd @ 15.025		Angle of Slope θ _____		Slope, n .788	
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Remarks: ***Pr below limits of tables**

Approved By Commission:	Conducted By: <i>H. L. Smith</i>	Calculated By: <i>Donna Hales</i>	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

Form C-122D
Adopted 9-1-65

COMPANY Sinclair Oil & Gas Co. LEASE J. R. Cone #B WELL NO. 1 DATE 11/21/67

LOCATION: Unit N Section 26 Township 21 S Range 37 E

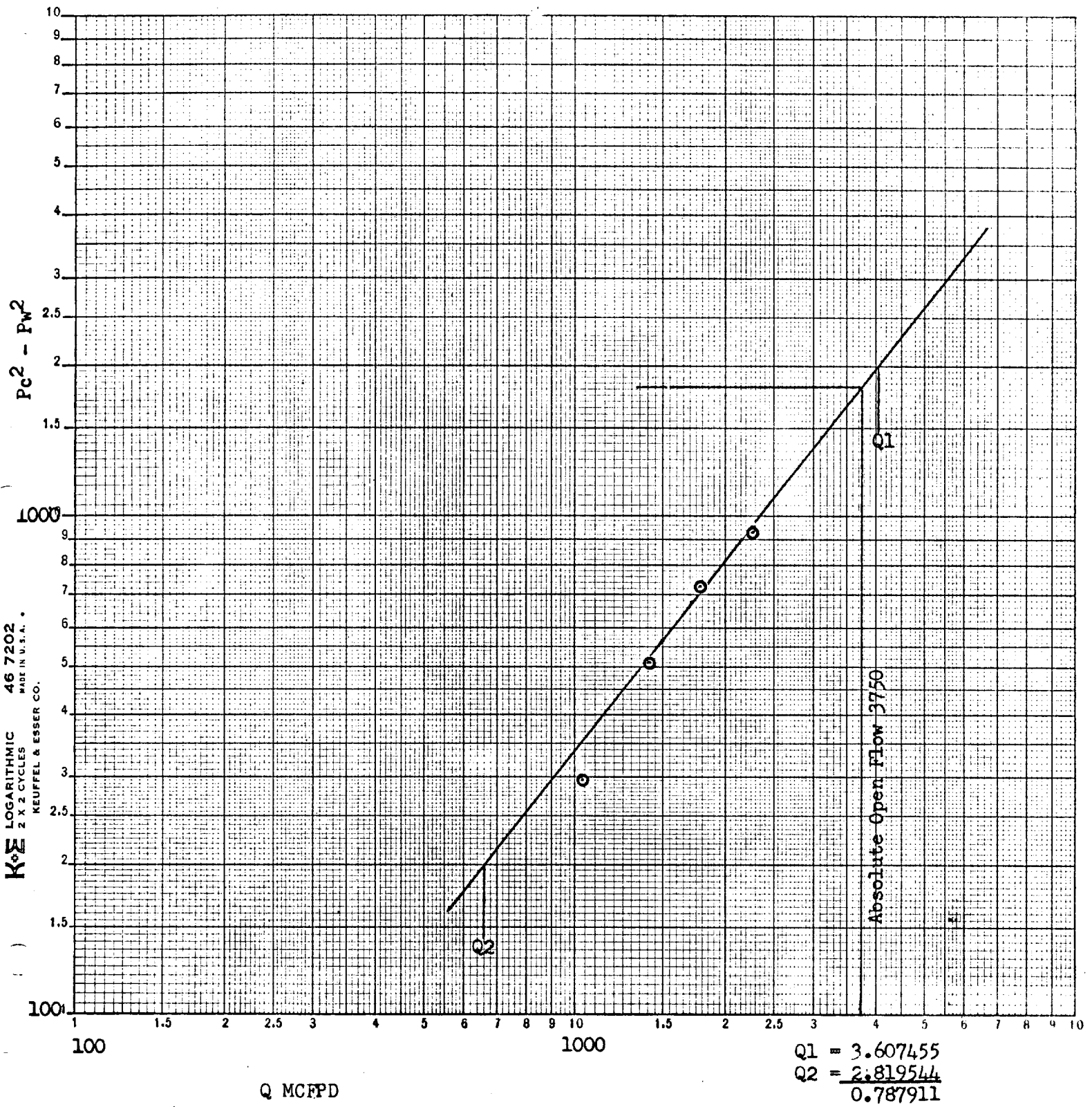
L 5910 H 5910 L/H 1.000 G .694 % CO₂ -- % N₂ -- % H₂S --

d 1.995 F_r .018231 GH 4102 P_{cr} 667 T_{cr} 408

1st Rate 2nd Rate 3rd Rate 4th Rate

LINE	1st Trial	2nd Trial	3rd Trial	1st Trial	2nd Trial	3rd Trial	1st Trial	2nd Trial	1st Trial	2nd Trial
1 Q _m	1.039	1.039	1.039	1.408	1.408	1.408	1.779	1.779	2.274	2.274
2 T _w (W.H. °R)	523	523	523	523	523	523	523	523	523	523
3 T _s (B.H. °R)	552	552	552	552	552	552	552	552	552	552
4 T = ($\frac{T_w + T_s}{2}$)	537.5	537.5	537.5	537.5	537.5	537.5	537.5	537.5	537.5	537.5
5 Z (Est.)	.950	.706	.698	.700	.716	.717	.735	.741	.765	.767
6 TZ	565.8	379.5	375.2	376.3	384.9	385.4	395.1	398.3	411.2	412.3
7 GH/TZ	7.250	10.809	10.933	10.901	10.657	10.643	10.382	10.299	9.976	9.949
8 e ^s (Table XIV)	1.312	1.500	1.507	1.505	1.491	1.490	1.476	1.471	1.454	1.452
9 1 - e ^s (Table XIV)	0.238	0.333	0.336	0.336	0.329	0.329	0.322	0.320	0.312	0.311
10 P _t	1230.2	1230.2	1230.2	1133.2	1133.2	1133.2	1020.2	1020.2	898.2	898.2
11 P _t 2/1000	1513.4	1513.4	1513.4	1284.1	1284.1	1284.1	1040.8	1040.8	806.8	806.8
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231
13 F _c = F _r TZ	10.315	6.919	6.840	6.860	7.017	7.026	7.203	7.261	7.497	7.517
14 F _c Q _m	10.717	7.189	7.107	9.659	9.880	9.893	12.814	12.917	17.048	17.094
15 L/H (F _c Q _m) ²	114.85	51.68	50.51	93.30	97.61	97.87	164.20	166.85	290.63	292.20
16 F _w = L/H (F _c Q _m) ² (1 - e ^{-s})	27.33	17.21	16.97	31.35	32.11	32.20	52.87	53.39	90.68	90.87
17 P _w ² = P _t ² + F _w	1540.7	1530.6	1530.4	1315.5	1316.2	1316.3	1093.7	1094.2	897.5	897.7
18 P _s ² = e ^s P _w ²	2021.4	2295.9	2306.3	1979.8	1962.5	1961.3	1614.3	1609.6	1305.0	1303.5
19 P _s	1421.8	1515.2	1518.7	1407.1	1400.9	1400.5	1270.6	1268.7	1142.4	1141.7
20 P = ($\frac{P_t + P_s}{2}$)	1326.0	1372.7	1374.5	1270.2	1267.1	1266.9	1145.4	1144.5	1020.3	1020.0
21 P _r = (P/P _{cr})	1.99	2.06	2.06	1.91	1.90	1.90	1.72	1.72	1.53	1.53
22 T _r = (T/T _{cr})	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
23 Z (Table XI)	.706	.698	.698	.716	.717	.717	.741	.741	.767	.767

Sinclair Oil & Gas Company
 J. R. Cone "B" No. 1
 Unit N, Sec. 26, T21S, R37E
 Lea County, New Mexico
 November 27, 1967



K&E LOGARITHMIC 46 7202
 2 X 2 CYCLES
 MADE IN U.S.A.
 KEUFFEL & ESSER CO.