

N MEXICO OIL CONSERVATION COMM. ON
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL
HARRIS, TEXAS, D. C. C.

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 2/15/66				
Company Sinclair Oil & Gas Company				Connection Not Connected					
Pool Jalmat				Formation Yates-Seven Rivers				Unit	
Completion Date Recomplete 2/13/66		Total Depth 3568		Plug Back TD 3440		Elevation 3325 GL		Farm or Lease Name E. L. Stealer	
Csg. Size 5 1/2	Wt. 15.5	d 1.995	Set At 3558	Perforations: From 2874 To 3186				Well No. 3	
Tbg. Size 2 3/8	Wt. 4.70	d 1.995	Set At 2830	Perforations: From Open End To				Unit L	Sec. 19
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 2830				County Lea	
Producing Thru Tubing		Reservoir Temp. °F 90 @ 2830		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State New Mexico	
L 2830	H 2830	G _g .660	% CO ₂ Unknown	% N ₂ Unknown	% H ₂ S Unknown	Prover 2"	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							525		Packer		17.5
1.	2"		5/8	54		40	512	70			1
2.	2"		5/8	96		44	498	70			1
3.	2"		5/8	166		52	464	70			1
4.	2"		5/8	241		60	405	70			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	6.473		67.2	1.020	1.231	1.000	546
2	6.473		109.2	1.016	1.231	1.000	884
3	6.473		179.2	1.008	1.231	1.020	1468
4	6.473		254.2	1.000	1.231	1.027	2080
5							

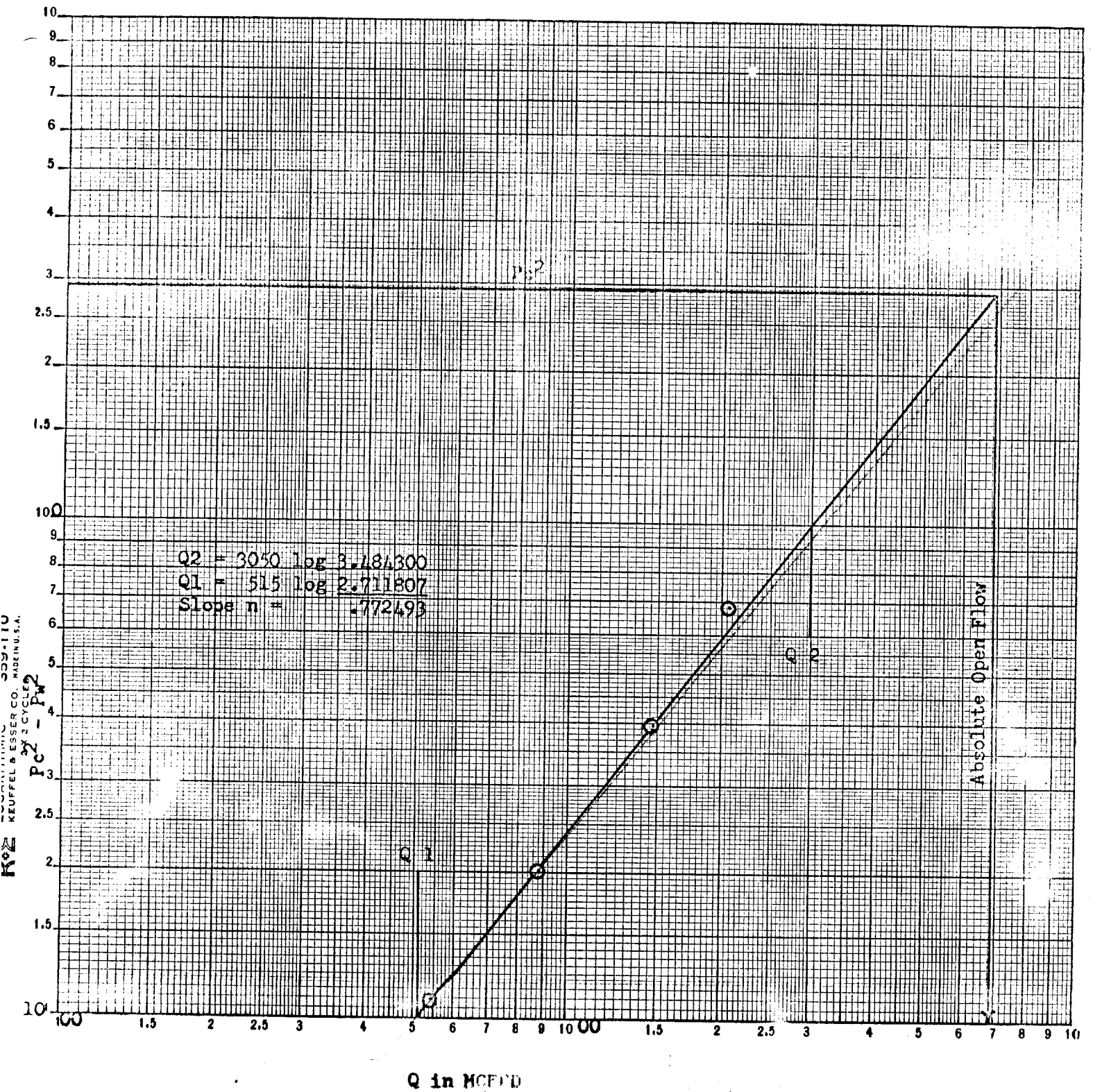
NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio Dry Gas Mcf/bbl.	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
1.	0.10	500	1.32	.904		
2.	0.16	504	1.33	.906		
3.	0.27	512	1.35	.911		
4.	0.38	520	1.38	.918		
5.						

P _c 538.2 P _c ² 289.7					(1) $\frac{P_c^2}{P_c^2 - R_w^2} = \underline{\underline{7.447}}$		(2) $\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = \underline{\underline{4.712}}$	
NO.	P _t ²	P _w	R _w ²	P _c ² - R _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = \underline{\underline{6917}}$			
1	275.8		278.9	10.8				
2	261.3		269.6	20.1				
3	227.7		250.8	38.9				
4	174.9		221.6	68.1				

Absolute Open Flow 6917 Mcfd @ 15.025		Angle of Slope @ _____		Slope, n .772	
Remarks: _____					

Approved By Commission: _____	Conducted By: H. L. Smith	Calculated By: H. L. Smith	Checked By: _____
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Sinclair Oil & Gas Company
 E. L. Steeler No. 3
 Unit L, Sec. 19, 23S, 37E
 Jalmat Pool
 February 15, 1966
 AP - 6917 MCF



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

C-122D
Revised 9-1-65

COMPANY Sinclair Oil & Gas Co. LEASE E. L. Steeler

WELL NO. 3

DATE February 12, 1966

LOCATION Unit L

Section 19

Township 23S

Range 37 E

2830

H 2830

L/H 1.000

G 0.660

% CO₂ Unknown

% N₂ Unknown

% H₂S Unknown

d 1.995

F₁ .018231

GH 1868

P_{cr} 670

T_{cr} 378

1st Rate

2nd Rate

3rd Rate

4th Rate

LINE	1st Trial	2nd Trial	1st Trial	2nd Trial	1st Trial	2nd Trial	1st Trial	2nd Trial
1 O_m	.546	.546	.884	.884	1.468	1.468	2.080	2.080
2 $T_w (W H^2 R)$	530	530	530	530	530	530	530	530
3 $T_g (B.H. ^2 H)$	550	550	550	550	550	550	550	550
4 $T = (\frac{L W^2}{2} + T_s)$	540	540	540	540	540	540	540	540
5 $Z (T_s)$	.900	.904	.904	.906	.906	.911	.915	.918
6 TZ	486	488	488	489	489	492	494	496
7 GH/TZ	3.844	3.828	3.828	3.820	3.820	3.797	3.781	3.766
8 e^e (Table XIV)	1.155	1.154	1.154	1.154	1.154	1.153	1.152	1.152
9 $1 - e^e$ (Table XIV)	0.134	0.133	0.133	0.133	0.133	0.132	0.132	0.132
10 T_1	525.2	525.2	511.2	511.2	477.2	477.2	418.2	418.2
11 $F_1 = 1000$	278.8	275.8	261.3	261.3	227.7	227.7	174.9	174.9
12 F_1 (Table XVI)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231
13 $F_1 = F_1 TZ$	8.860	8.897	8.897	8.915	8.915	8.970	9.006	9.043
14 $F_1 O_1$	4.84	4.86	7.86	7.88	13.09	13.17	18.73	18.81
15 $L/H (F_1 O_m)^2$	23.4	23.6	61.8	62.1	171.3	173.4	350.8	353.8
16 $F_w = L/H (F_1 O_m)^2 (1 - S)$	3.14	3.14	8.22	8.26	22.8	23.1	46.3	46.7
17 $D_w = 1.74 F_w$	278.9	278.9	269.5	269.6	250.5	250.8	221.2	221.6
18 $F_1 = e^e F_w^2$	322.1	321.9	311.0	311.1	289.1	289.2	254.8	255.3
19 P_s	567.6	567.4	557.7	557.8	537.7	537.8	504.8	505.3
20 $P_s = P_s F_1$	550.0	546.3	530.5	529.5	500.5	500.5	460.5	460.8
21 $P_s = P_s F_1$	.82	.82	.80	.80	.76	.76	.65	.65
22 $P_s = P_s F_1$	4.73	4.73	4.43	4.43	4.13	4.13	3.83	3.83
23 $P_s = P_s F_1$	4.73	4.73	4.43	4.43	4.13	4.13	3.83	3.83