

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 6/28/68	
Company Sinclair Oil & Gas Co.		Connection None	
Pool Wildcat		Formation Yates	
Completion Date 6/23/68	Total Depth 5000	Plug Back TD 3996	Elevation 3722 GR
Farm or Lease Name Mescalero Ridge Unit MA			Well No. 31
Csg. Size 4-1/2	Wt. 10.5	Set At 4064	Perforations: From 3952 To 3958
Tbg. Size 2-3/8	Wt. 4.70	Set At 3958	Perforations: From Open To Ended
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At None	County Lea
Producing Thru Tbg	Reservoir Temp. °F a	Mean Annual Temp. °F	Baro. Press. - P _g 13.2
State N.M.			
L 3958	H 3958	G _g .756	% CO ₂ % N ₂ % H ₂ S Prover Meter Run Taps X Flg.

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							1307		1321		72
1.	4 x 1.250			600	8.0	83	1206		1237		1
2.	"	"		660	18.0	83	1126		1165		1
3.	"	"		660	40.0	87	1027		1071		1
4.	"	"		670	81.0	91	847		926		1
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	7.469	70.04	613.2	.9786	1.150	1.078	635
2	"	110.08	673.2	.9786	"	1.087	1006
3	"	164.10	673.2	.9750	"	1.084	1490
4	"	235.24	683.2	.9715	"	1.083	2126
5.							

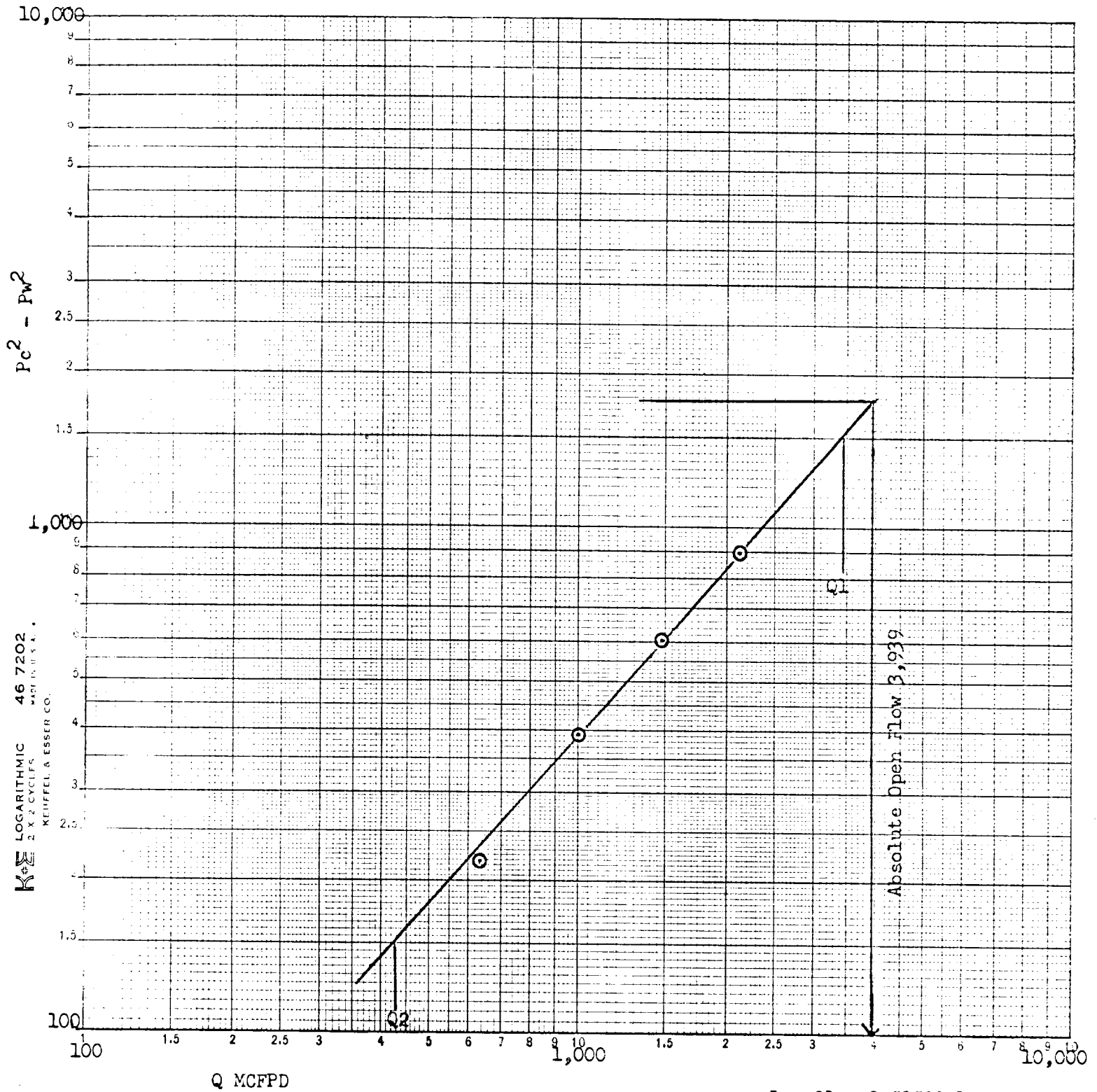
NO.	P _t	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio	109.6 Mcf/bbl.
1	.92	543	1.33	.860	A.P.I. Gravity of Liquid Hydrocarbons	27.0 Deg.
2.	1.01	543	1.33	.847	Specific Gravity Separator Gas	.756
3.	1.01	547	1.34	.851	Specific Gravity Flowing Fluid	X X X X X X X X
4.	1.02	551	1.35	.853	Critical Pressure	667 P.S.I.A.
5					Critical Temperature	408 R

P _c 1334.2 P _c ² 1780.1	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.982$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.853$			
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3939$
1		1250.2	1563.0	217.1	
2		1178.2	1388.2	391.9	
3		1084.2	1175.5	604.6	
4		939.2	882.1	898.0	
5					

Absolute Open Flow	3939 Mcfd @ 15.025	Angle of Slope θ	Slope, n .902
Remarks: PW Measured.			
Approved By Commission:	Conducted By: <i>H. L. Smith</i>	Calculated By: <i>H. L. Smith</i>	Checked By:

OIL REPORTS & GAS SERVICES
P. O. BOX 743 MORRIS, N. M.

Sinclair Oil & Gas Company
 Mescalero Ridge Unit MA No. 31
 Unit L, Sec. 21, T21S, R34E
 Lea County, New Mexico
 June 28, 1968



K&E LOGARITHMIC 46 7202
 2 X 2 CYCLES
 KEUFFEL & ESSER CO.

Log Q1 = 3.5352941
 Log Q2 = 2.6334685
 n = 0.9018256