

OIL CONSERVATION DIVISION

Form C-122
Revised 10-1-78STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special			Test Date 2/9/87		
Company Enron Oil & Gas Company			Connection Transwestern		
Pool Pitchfork Ranch			Formation Atoka		
Completion Date 1/20/87		Total Depth 14100'		Plug Back TD 14,058'	
Elevation 3439'GL		Farm or Lease Name Madera 32 State			
Coq. Size 3 1/2"	Wt. 9.2	d 2.992	Set At 14100'	Perforations: From 13905' To 13910'	
Trq. Size 2 7/8"	Wt. 6.5	d 2.441	Set At 13023	Perforations: From Open To Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 13023	
Producing Thru Tbg		Reservoir Temp. °F 213° 13905'		Mean Annual Temp. °F 60	
Baro. Press. - P _a 13.2		State New Mexico			
L 10300'	H 10300'	Gg .651	% CO ₂ .426	% N ₂ .697	% H ₂ S -
Prover -		Meter Run 3"		Taps 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							4085		PACKER		120 Min
1.	3	X	1.500	1000	5	80	3875	60			75 Min
2.	3	X	1.500	990	10	74	3680	62			75 Min
3.	3	X	1.500	1000	20	78	3451	62			60 Min
4.	3	X	1.500	1000	38	78	3064	61			75 Min
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	11.13	71.18	1013.2	.9813	1.239	1.094	1054
2	11.13	100.16	1003.2	.9868	1.239	1.100	1499
3	11.13	142.35	1013.2	.9831	1.239	1.098	2119
4	11.13	196.22	1013.2	.9831	1.239	1.098	2921
5							

NO.	R _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	TSTM	Mcf/bbl.
1	1.51	540	1.44	.835	A.P.L. Gravity of Liquid Hydrocarbons	-	Deg.
2	1.50	534	1.42	.827	Specific Gravity Separator Gas	.651	X X X X X X X X
3	1.51	538	1.43	.830	Specific Gravity Flowing Fluid	X X X X X	
4	1.51	538	1.43	.830	Critical Pressure	670 P.S.I.A.	P.S.I.A.
5					Critical Temperature	375 °R	°R

P _c 4098.2 P _c ² 16795				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.330$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.984$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²			
1	15116	3891.8	15146	1649			
2	13640	3698.4	13678	3117			
3	12000	3473.1	12062	4733			
4	9469	3096.4	9588	7207			
5							

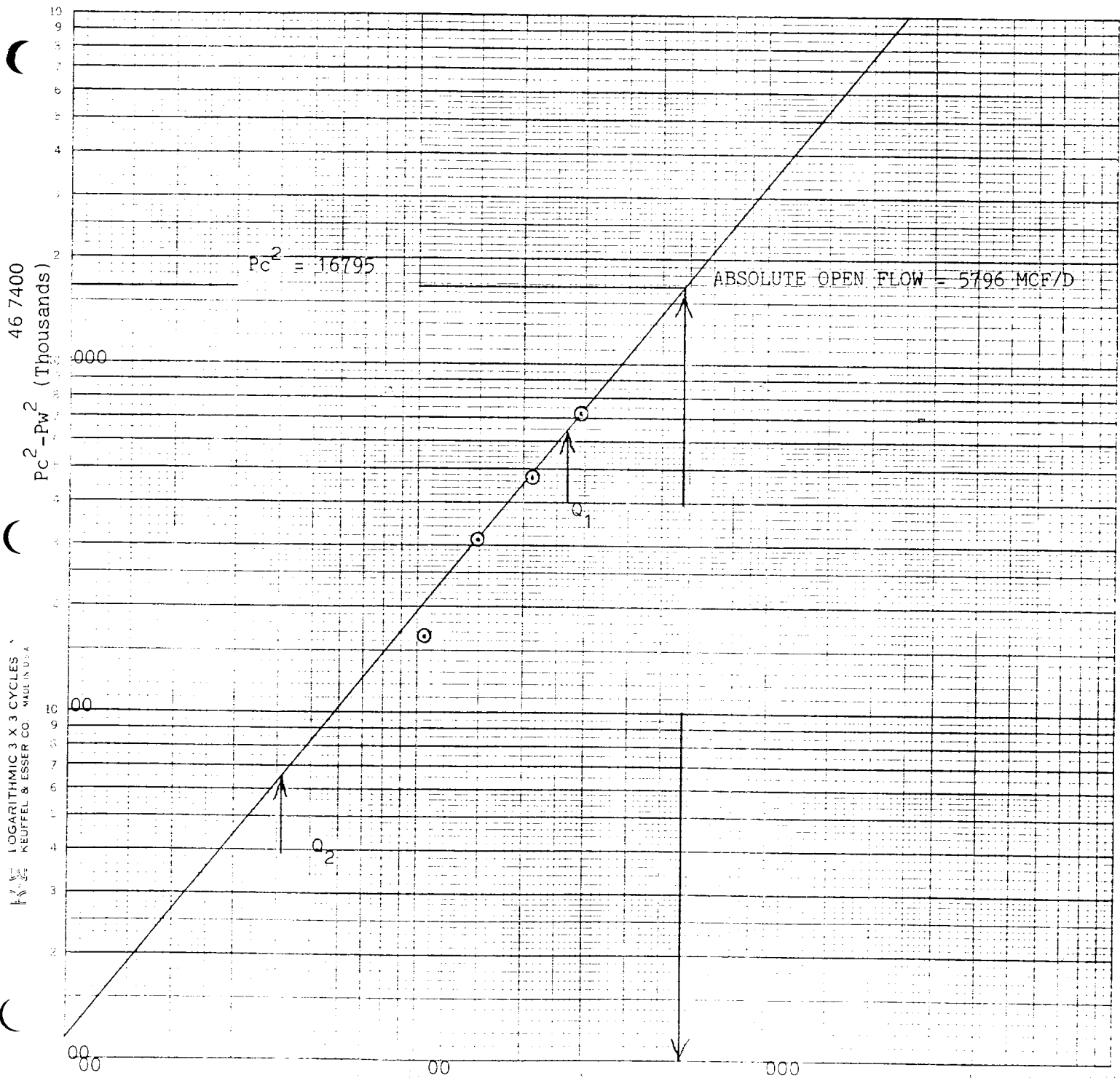
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.796$

Absolute Open Flow 5,796 Mcfd @ 15.025		Angle of Slope 51 °		Slope, n .810	
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Remarks: Equivalent length I.D. (Deff) Calculated.

ORIGINAL FILED BY JERRY SEXTON	Conducted By:	Calculated By:	Checked By:
DISTRICT I SUPERVISOR	Jarrel Services, Inc.	D. Dickerson	D. Dickerson

COMPANY: Enron Oil & Gas Company
 WELL: Madera 32 State, No. 3
 LOCATION: K 32 24s 34e
 COUNTY: Lea
 DATE: February 9, 1987



$Q = MCF/Day$
 $Q_1 = 2694 MCF/D; \log Q_1 = 3.430397$
 $Q_2 = 417 MCF/D; \log Q_2 = 2.620397$
 $N = 0.810000 = 0.810$