

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8/13/87	
Company Enron Oil & Gas Company		Connection Transwestern	
Pool Pitchfork Ranch		Formation Atoka	
Completion Date 7/16/87		Total Depth 14110'	Plug Back TD 14043'
		Elevation 3366' KB	Form or Lease Name Page 3 Com
Csg. Size 3 1/2"	Wt. 12.52#	d 2.750	Set At 14110'
Perforations: From 14006' To 14014.5		Well No. 2	
Tvg. Size 2 7/8"	Wt. 7.9#	d 2.323	Set At 13047'
Perforations: From Open To Ended		Unit Sec. Twp. Rge. C 3 25s 34e	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 13047'	County Lea
Producing Thru Tbg	Reservoir Temp. °F 206 14008'	Mean Annual Temp. °F 60°	Baro. Press. - P _a 13.2
State New Mexico			
L 13047	H 13047	Cg .643	% CO ₂ .372
% N ₂ .816		% H ₂ S -	Prover -
Meter Run 3"		Taps Flg	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Pressure 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							4088				3.5 hrs
1.	3	X	1.250	960	4	78	3720	61	PKR		1.0 hr
2.	3	X	1.250	960	9	77	3380	60			1.0 hr
3.	3	X	1.250	960	17	78	3000	60			1.0 hr
4.	3	X	1.250	970	28	78	2402	61			1.0 hr
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, Mscf/d
1	7.577	62.39	973.2	.9831	1.247	1.064	617
2	7.577	93.59	973.2	.9840	1.247	1.064	926
3	7.577	128.63	973.2	.9831	1.247	1.064	1271
4	7.577	165.92	983.2	.9831	1.247	1.065	1641
5							

NO.	R ₁	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
1	1.45	538	1.57	.884	Dry		.643	X X X X X X X X	670	342
2	1.45	537	1.57	.884				X X X X X		
3	1.45	538	1.57	.884						
4	1.47	538	1.57	.882						
5										

NO.	P ₁ ²	P _w ²	P _u ²	P _c ² - P _w ²	(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	13937	3735.6	13955	2865	1.539	1.392
2	11514	3399.9	11559	5261		
3	9079	3021.1	9127	7693		
4	5833	2427.5	5893	10927		
5						

AOFP = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,284$

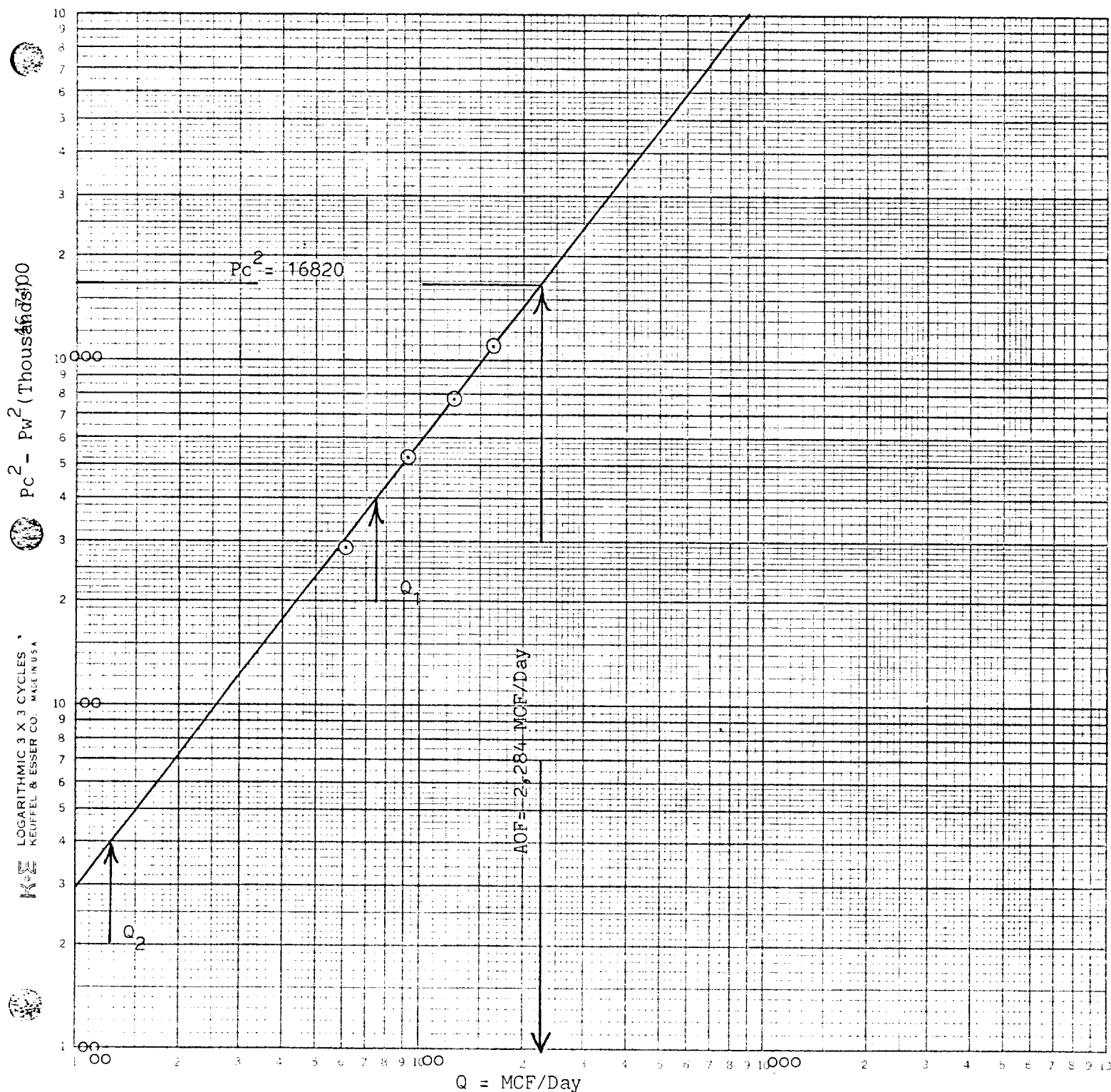
Absolute Open Flow	2,284	Mscf @ 15.025	Angle of Slope	52.2°	Slope, n	.767
--------------------	-------	---------------	----------------	-------	----------	------

Remarks: EQUIVALENT LENGTH I.D. (Deff) WAS CALCULATED 2.310.

AUG 20 1987 Paul Kartz Geologist	Conducted By: Jarrel Services, Inc.	Calculated By: D. Dickerson	Checked By: D. Dickerson
--	--	--------------------------------	-----------------------------

RECEIVED
AUG 19 1967
HOBBS OFFICE

COMPANY: Enron Oil & Gas Corp
 WELL: Page 3 Com, No. 2
 LOCATION: C 3 25s 34e
 COUNTY: Lea
 DATE: August 13, 1987



$$\begin{aligned}
 Q_1 &= 748.5 \text{ MCFD}; & \text{Log } Q_1 &= 2.874210 \\
 Q_2 &= 128 \text{ MCFD}; & \text{Log } Q_2 &= 2.107210 \\
 N &= \frac{0.767000}{0.767} = 0.767
 \end{aligned}$$