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Form O-112
Revised 9-1-65

Type Test ☒ Initial <i>after workover</i> ☐ Annual JUL 8 1976 ☐ Special		Test Date 6-21-76		JUL - 8 1976	
Company Hanagan Petroleum Corporation			Connection O.C.C. SUG		
Pool Catclaw Draw <i>monau</i>			Formation Morrow		
Completion Date 7/1/76		Total Depth 11050		Plug Back TD 10878	
Elevation 3361 KB		Farm or Lease Name Arco-Federal Comm.			
Csg. Size 5.5	Wt. 17	d 4.892	Set At 11050	Perforations: From 10703 To 10851	
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 10650	Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10644-50	
Producing Thru Tubing		Reservoir Temp. °F 180° 10574		Mean Annual Temp. °F 70	
Baro. Press. - P _a 13.2		State New Mexico			
L 10777	H 10777	G _g 0.600	% CO ₂	% N ₂	% H ₂ S
Prover Pos. CK.			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. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI	117 1/2 hrs			2923			2923		Pkr.		
1.	2 1/2	X	8/64	2263		85	2263	85			60 min.
2.	2 1/2	X	9/64	1690		83	1690	83			60 min.
3.	2 1/2	X	10/64	1149		80	1149	80			60 min.
4.	2 1/2	X	11/64	668		71	668	71			60 min.
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	0.2618		2276.2	0.9768	1.291	1.132	850.7
2	0.3364		1703.2	0.9786	1.291	1.116	807.8
3	0.4173		1162.2	0.9813	1.291	1.089	669.1
4	0.5090		681.2	0.9896	1.291	1.057	468.2
5							

NO.	P _t	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	3.39	545	1.52	0.780	Dry Gas		0.600	X X X X X X X X	671	358
2	2.54	543	1.52	0.803						
3	1.73	540	1.51	0.844						
4	1.02	531	1.48	0.895						
5										

P _f 3764.5 P _f ² 14171			
NO.	P _t ²	P _s	P _s ² P _f ² - P _s ²
1	2911.1	8475	5696
2	2174.5	4728	9443
3	1472.6	2169	12002
4	858.8	738	13433
5			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.4879$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2116.5$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.4879$$

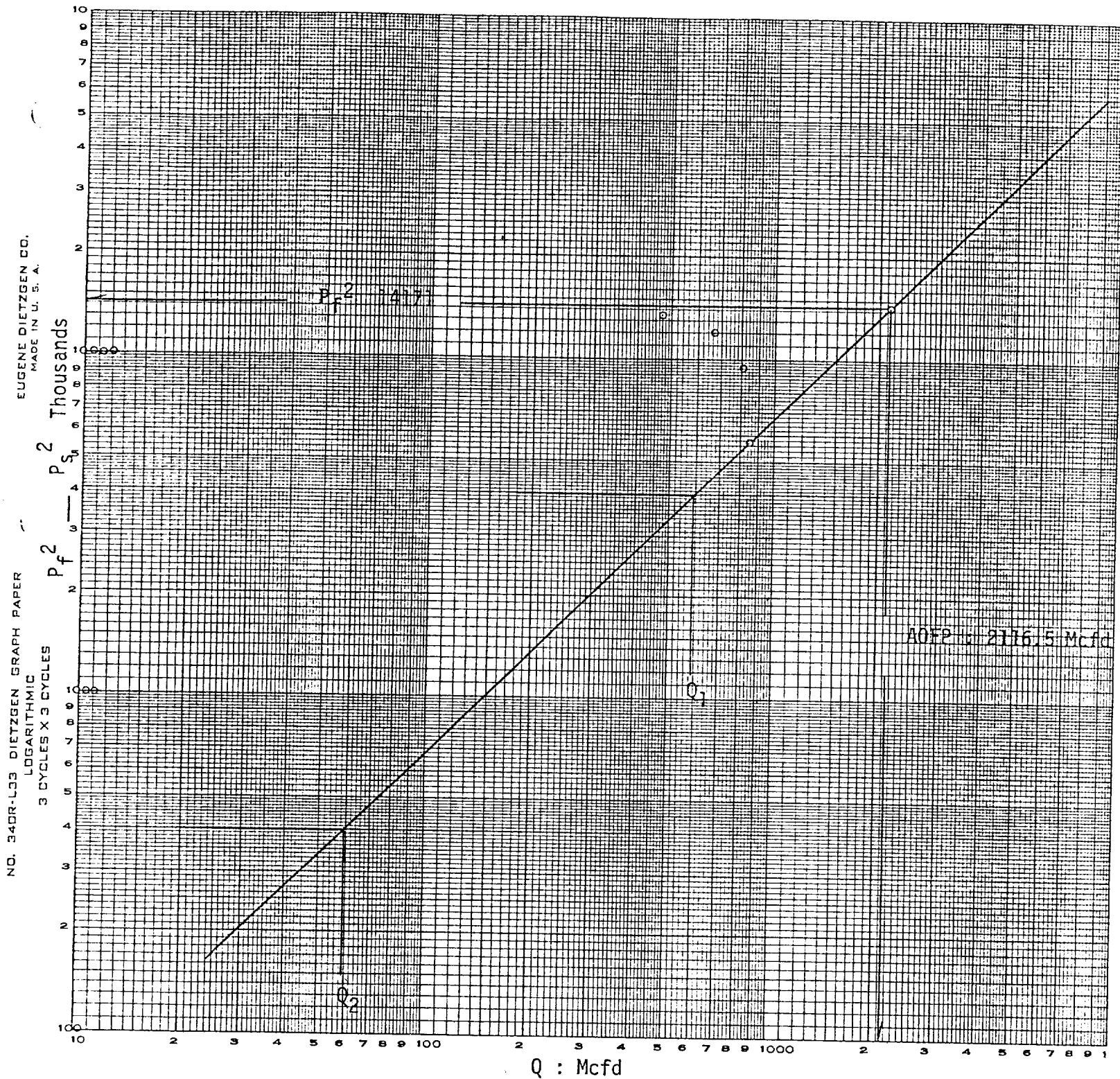
Absolute Open Flow 2116.5 Mcfd @ 15.025	Angle of Slope 45°	Slope, n 1.0000
Remarks:		
Approved By Commission: Conducted By: Tefteller, Inc. Calculated By: F. Tefteller Checked By:		

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JUL - 8 1976

U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Company : Hanagan Petroleum Corporation
 Field : Arco-Federal Comm. No. 1
 Well : Catclaw Draw
 County : Eddy
 State : New Mexico
 Date : June 21, 1976



$$\begin{aligned}
 Q_1 &= 590; \quad \text{Log } Q_1 = 2.770852 \\
 Q_2 &= 59; \quad \text{Log } Q_2 = 1.770852 \\
 n &= 1.000000 \\
 \theta &= 45^\circ
 \end{aligned}$$