

NEW 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 1-27-76	
Company Continental Oil Co.			Connection None			
Pool Warren Unit			Formation Tuff			
Completion Date 2-6-76		Total Depth 7000'		Plug Back TD 6947'		
Elevation 3531 GL		Farm or Lease Name WARREN UNIT				
Csg. Size 2"	Wt. 23.8 26	d 26	Set At 7000'	Perforations: From 6341 To 6580		
Thg. Size 3 1/2"	Wt. 6.50	d 6256	Set At 6256	Perforations: From To		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 6256		
Producing Thru 7-5/8"		Reservoir Temp. °F @		Mean Annual Temp. °F		
Baro. Press. - P _a		State NEW MEXICO				
L	H	Gg	% CO ₂	% N ₂	% H ₂ S	
Prover				Meter Run X	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							1371		4500		3.600
1.	2"		1.750	302	20.0	65°					3.600
2.	4"		1.750	310	22.2	80°					2.450
3.	6"		1.750	314	20.8	50°					2.500
4.	8"		1.750	322	29.1	73°					3.600
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	14.05	28.378	315.2	.9752	1.212	1.036	1.452
2	14.93	102.515	322.2	.9775	1.212	1.032	1.265
3	14.93	123.975	327.2	.9803	1.213	1.032	2.366
4	14.93	162.875	333.2	.9884	1.213	1.034	3.015
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons 14.6 _____ Deg.
2.					Specific Gravity Separator Gas .680 _____ XXXXXXXXX
3.					Specific Gravity Flowing Fluid XXXXX _____
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

$P_c = 1822.1$ $P_c^2 = 3341.9$				
NO.	P_t^2	P_w	$R_w^2 M$	$P_c^2 - P_w^2$
1		1633.5	2754.4	485.5
2		1616.2	2812.1	729.5
3		1511.7	3235.5	1556.4
4		1388.0	1926.5	1415.4
5				

$(1) \frac{P_c^2}{P_c^2 - R_w^2} = \frac{3341.9}{3341.9 - 2286.5}$

$(2) \left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = \frac{2.0186}{}$

$AOF = Q \left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 4.776$

Absolute Open Flow	4,776 Mcfd @ 15.025	Angle of Slope θ	Slope, n 0.610
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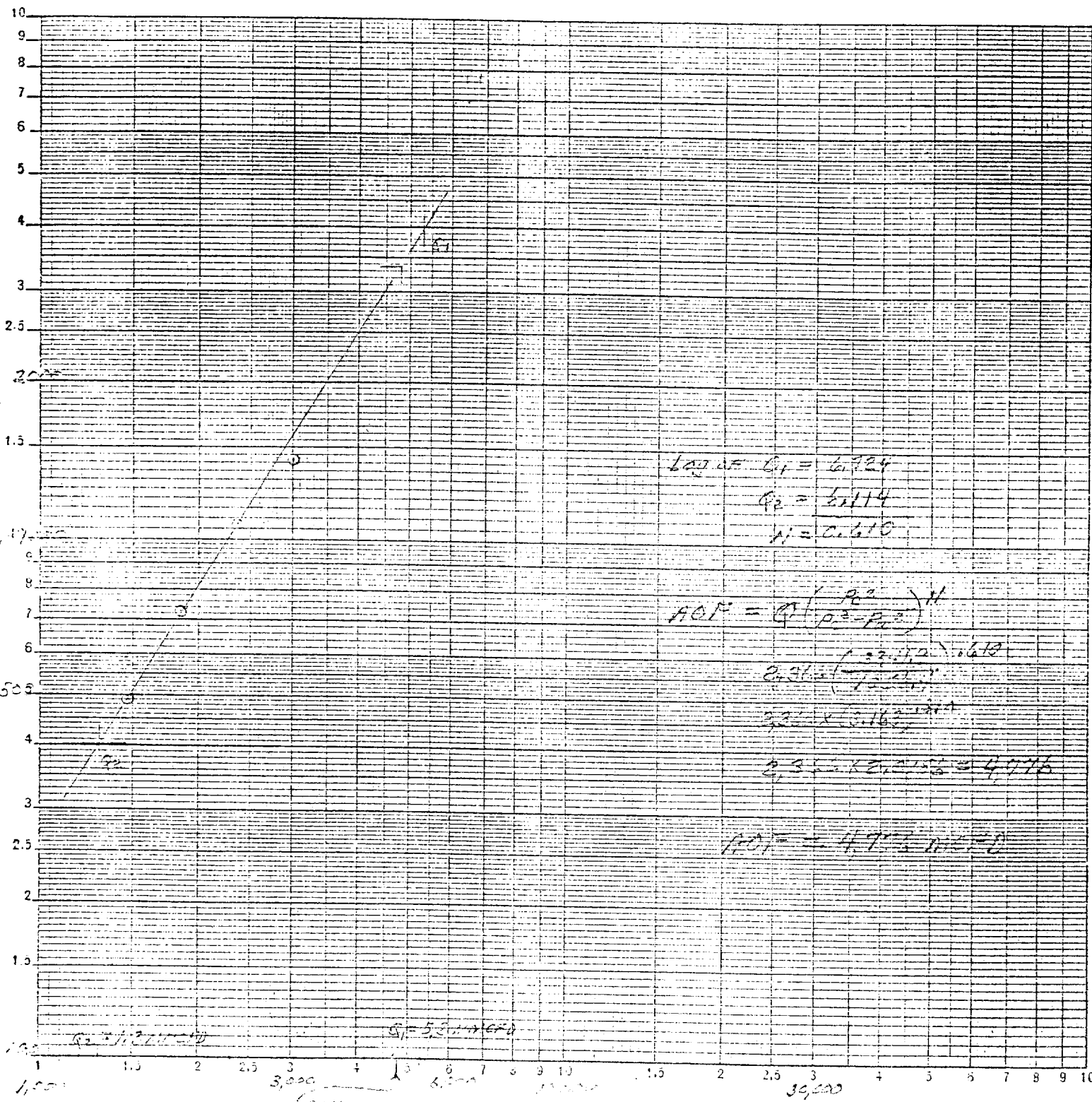
Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
J. L.	W. E. Tuck	Shaw	

Warren (3) FILE

$(P_2^2 - P_1^2) / (P_2 - P_1)$

IVE KEUFFEL & BRUNN CO. MADE IN U.S.A.
 2 X 2 CYCLES



$$\begin{aligned} \log \text{ of } G_1 &= 6.724 \\ G_2 &= 5.3114 \\ \mu &= 0.610 \end{aligned}$$

$$\begin{aligned} HOF &= G_1 \left(\frac{P_2^2}{P_2^2 - P_1^2} \right) \mu \\ &= 5.3114 \left(\frac{1.2^2}{1.2^2 - 1.8^2} \right) 0.610 \\ &= 5.3114 \times 0.163 \times 0.610 \\ &= 5.3114 \times 0.09943 = 4.776 \end{aligned}$$

$$HOF = 4.776 \text{ mcf/d}$$

Q-NICPD