

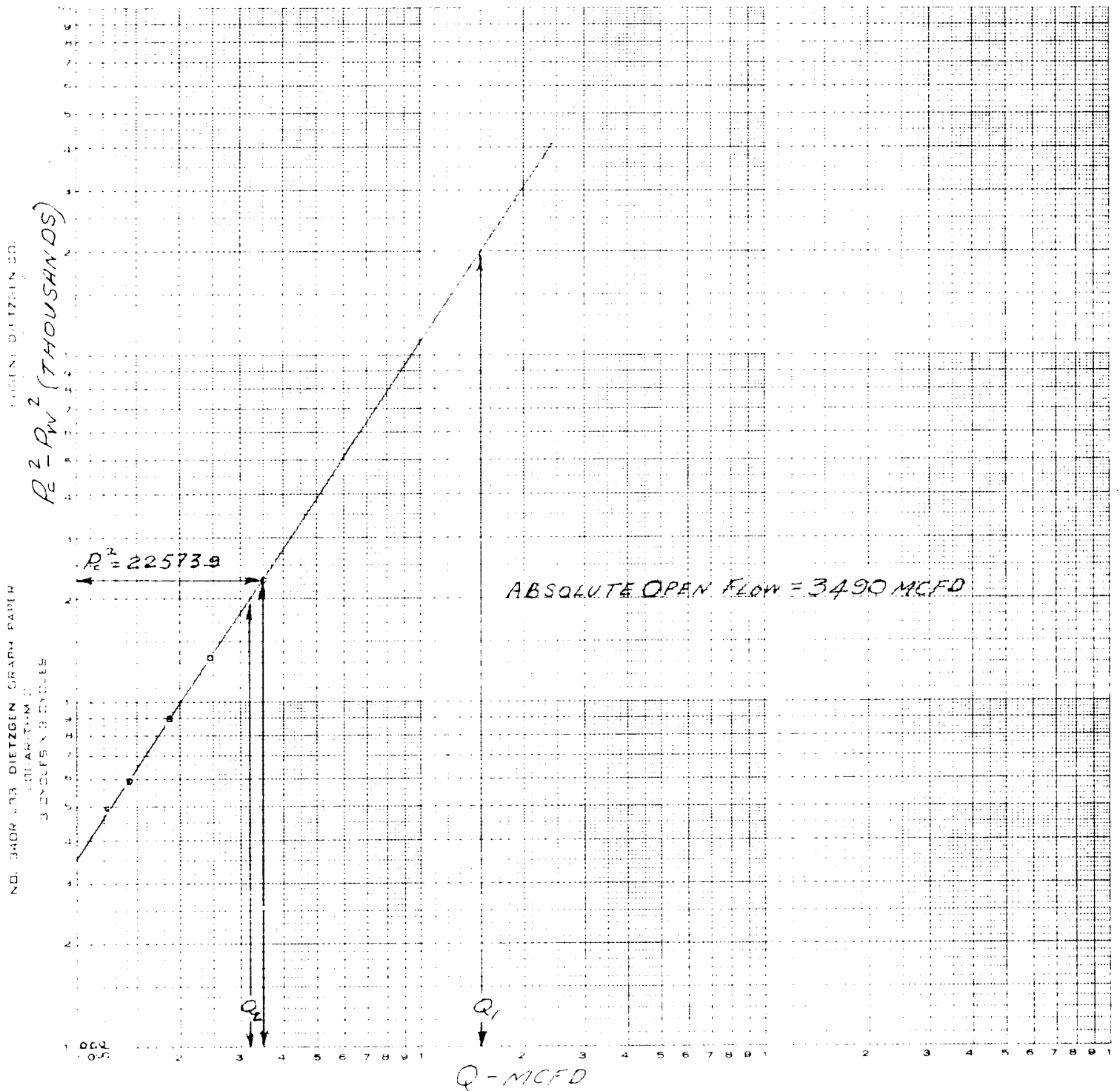
NE MEXICO OIL CONSERVATION COMMS
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☐ Initial ☒ Annual ☐ Special				Test Date 11-13-71			
Company Morris R. Antweil ✓				Connection Llano, Inc.		D.C.C. ARIZONA OFFICE	
Pool South Carlsbad <i>morrow</i>				Formation Morrow		Unit	
Completion Date 10-3-71		Total Depth 11825'		Plug Back TD 11614'		Elevation 3204' DF	
Farm or Lease Name Allen				Well No.			
Casing Size 5.5		WT. 12.23		Set At 11825'		Perforations: From 11440' To 11463'	
Tubg. Size 2 1/16		WT. 3.25		Set At 11385'		Perforations: From - To -	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple G.G. Multiple (Dual)				Packer Set At 11370'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 195 @ 11350'		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
State New Mexico		Prover 11452'		Meter Run X		Taps F	
H 0.577		% CO ₂ 0.93		% N ₂ 0.18		% H ₂ S 0.00	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.
SI							
1.	3 7/64	1.5	520	13	84	2896	72
2.	3 9/64	1.5	520	17	72	2720	72
3.	3 11/64	1.5	530	28	62	2670	72
4.	3 13/64	1.5	540	48	72	2357	72
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	83.27	533.2	0.9777	1.316	1.033	1231.9
2	11.13	95.25	533.2	0.9887	1.316	1.036	1429.0
3	11.13	123.34	543.2	0.9981	1.316	1.040	1876.4
4	11.13	162.95	553.2	0.9887	1.316	1.038	2449.4
5							
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>Dry Gas</u> Mcf/bbl.		
1	0.79	544	1.59	0.937	A.P.I. Gravity of Liquid Hydrocarbons <u>-</u> Deg.		
2	0.79	532	1.56	0.932	Specific Gravity Separator Gas <u>0.577</u> X X X X X X X X		
3	0.80	522	1.53	0.925	Specific Gravity Flowing Fluid <u>X X X X X</u>		
4	0.82	532	1.56	0.929	Critical Pressure <u>675</u> P.S.I.A. - P.S.I.A.		
5					Critical Temperature <u>342</u> R - R		
$P_c = 4751.2$ $P_w^2 = 22573.9$ P_w^2 $P_c^2 - P_w^2$ 1 200.2 17641.7 4932.2 2 4078.2 16631.7 5942.2 3 3689.2 13610.2 8963.7 4 3296.2 10864.9 11709.0 5					$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 3.799$ $(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.445$ $ACF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3494$		
Absolute Pressure <u>3490</u> Mcfd @ 15.025					Angle of Slope θ <u>56° 8'</u>		Slope, n <u>0.671</u>
Remarks: * BHP @ (-8248') 11452' used for pressure calculations							
Approved By Commission:		Conducted By:		Calculated By:		Checked By:	
		COLEMAN PET.ENG.		JOE A. COLEMAN		JOE A. COLEMAN	

COMPANY MORF R. ANTWEIL
 WELL ALLEN, NO. 1 LT
 LOCATION Sec. 31 22 s 27 e
 COUNTY EDDY NEW MEXICO
 DATE November 13, 1971



$$Q_1 = 15000 \text{ MCFD}; \log Q_1 = 4.17609$$

$$Q_2 = 3200 \text{ MCFD}; \log Q_2 = 3.50515$$

$$n = 0.61094 = 0.671$$