

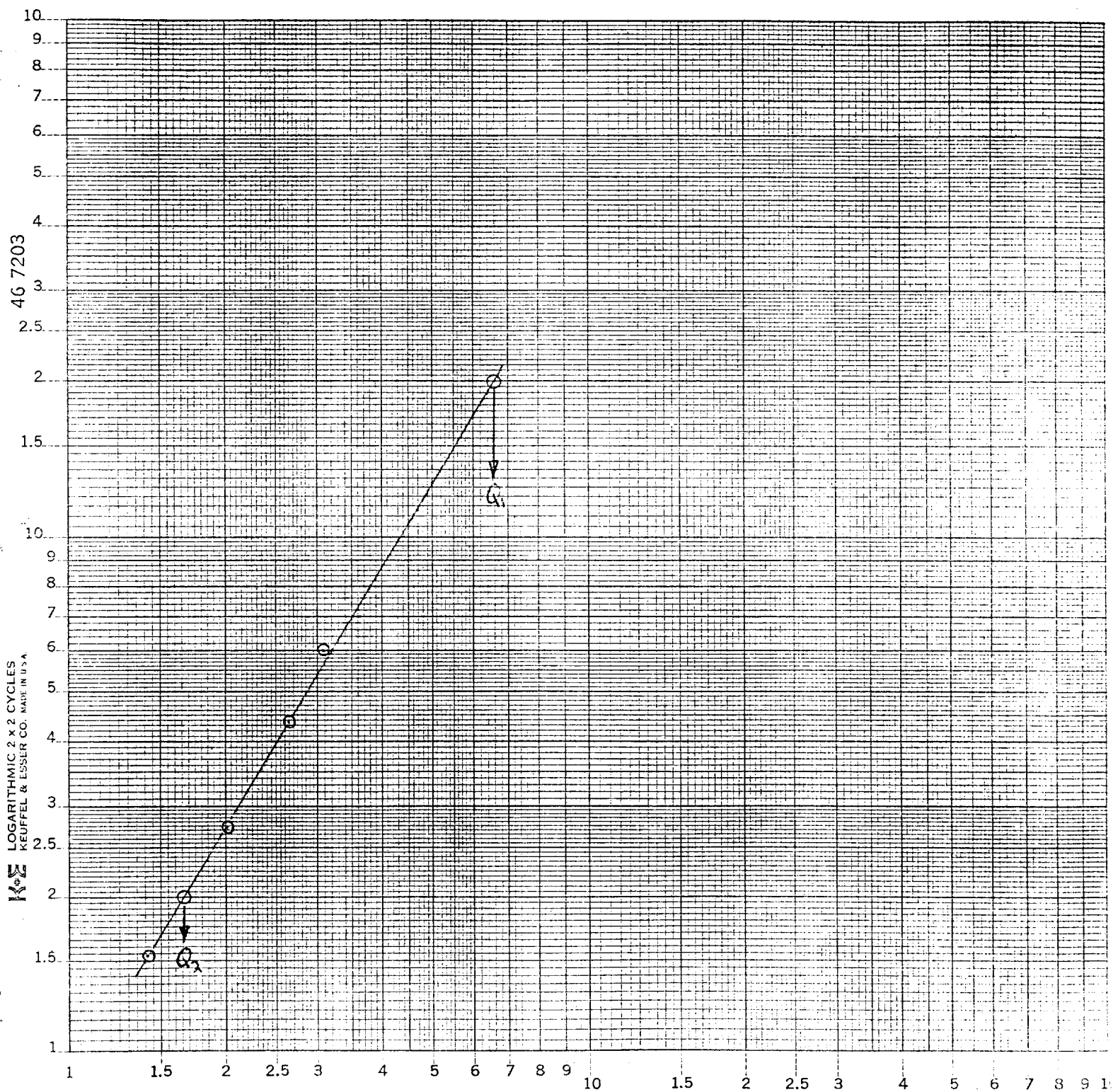
NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 7-26-77		SEP 26 1977	
Company Yates Petroleum Corporation				Connection El Paso Natural Gas Co.			
Pool Undesignated				Formation Atoka		Unit O.C.E. ARTESIA, OFFICE	
Completion Date 6-16-77		Total Depth 8679' KB		Plug Back TD 8198' KB		Elevation 4329' KB	
Csg. Size 5 1/2"		Wt. 17#		Set At 4.892		Perforations: From 7967 To 8090' KB	
Tbg. Size 2-3/8"		Wt. 4.7#		Set At 1.995		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 7923' KB		Farm or Lease Name Federal "HO"	
Producing Thru Tubing		Reservoir Temp. °F 134 @ 8000'		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2	
L 7992		H 7992		Gg .688		% CO ₂ 4.18	
				% N ₂ 1.30		% H ₂ S Nil	
				Prover		Meter Run 4"	
						Taps Flange	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Duration of Flow
SI							1 month
1.	4.026 x 0.750			449	4	72	1 hour
2.				450	8	76	1 hour
3.				450	14	80	1 hour
4.				451	19	80	1 hour
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	2.661	43.0	462.2	.9887	1.206	1.0443	142
2		60.9	463.2	.9850	1.206	1.0434	201
3		80.5	463.2	.9813	1.206	1.0423	264
4		93.9	464.2	.9813	1.206	1.0426	308
5							
NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio ----- Mcf/bbl.		
1	.675	532	1.415	.917	A.P.I. Gravity of Liquid Hydrocarbons ----- Deg.		
2	.676	536	1.425	.9185	Specific Gravity Separator Gas .688 XXXXXXXXX		
3	.676	540	1.436	.9205	Specific Gravity Flowing Fluid XXXXX .688		
4	.677	540	1.436	.920	Critical Pressure 685 P.S.I.A. 685 P.S.I.A.		
5					Critical Temperature 376 R 376 R		
P _c 3218 P _c ² 10356					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.3911$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.6863$		
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 445$		
1			8822	1534			
2			7621	2735			
3			6025	4331			
4			4356	6000			
5							
Absolute Open Flow 445 Mcfd @ 15.025					Angle of Slope @ 59 degree Slope, n .5994		
Remarks: Static pressures by Bennett Wireline; Flowing pressures by DWT. Calculations worksheet C 122D attached.							
Approved By Commission:		Conducted By: Don Weaver		Calculated By: Eddie Mahfood		Checked By:	

Federal HQ No. 1 N-5-215-22E
Undesignated Atolca, Eddy Co.



$$Q_1 = 660 \text{ mcfpd} \quad \log Q_1 = 2.8195$$

$$Q_2 = 166 \text{ mcfpd} \quad \log Q_2 = 2.2201$$

$$n = 0.5994$$