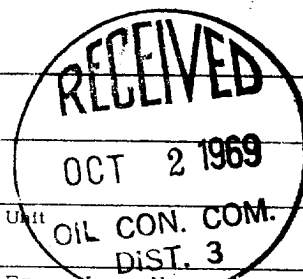


NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65



Type Test ☒ Initial ☐ Annual ☐ Special						Test Date July 2, 1969	
Company Tesoro Petroleum Corporation				Connection Lease and Field Use			
Pool Undesignated Dakota				Formation Dakota		Unit OIL CON. COM. DIST. 3	
Completion Date August 28, 1969		Total Depth 2794' Schlum.		Plug Back TD (Float) 2754' KB		Elevation 6989' KB	
Csg. Size 5-1/2	Wt. 15.5	d 4.950	Set At 2787'	Perforations: From 2645 To 2662 2673 To 2676		Well No. 17	
Tbg. Size 2-7/8	Wt. 6.5	d 2.441	Set At 2742'	Perforations: From - To -		Unit Sec. Twp. Rge. F 7 17N 8W	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At None		County McKinley	
Producing Thru Tubing		Reservoir Temp. °F @ 112°		Mean Annual Temp. °F 11.3		State New Mexico	
L	H	Gg 0.65 est	% CO ₂	% N ₂	% H ₂ S	Prover	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. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
1.	3"	x	1.500	660	2.9	90	660	92	873	92	
2.	3"	x	1.500	580	5.5	89	580	92	810	92	
3.	3"	x	1.500	475	9.7	89	475	92	737	92	
4.	3"	x	1.500	380	17.4	89	380	92	638	92	
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	44.12	671.3	.9723	1.24	1.058	626.4
2.	11.13	57.03	591.3	.9723	1.24	1.051	804.3
3.	11.13	68.68	486.3	.9723	1.24	1.043	961.2
4.	11.13	82.51	391.3	.9723	1.24	1.034	1145.0
5.							

NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	1.00	550	1.47	.894	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	0.88	549	1.46	.906	Specific Gravity Separator Gas 0.65 x x x x x x x x
3.	0.73	549	1.46	.920	Specific Gravity Flowing Fluid x x x x x Dry gas
4.	0.58	549	1.46	.935	Critical Pressure 669 P.S.I.A. P.S.I.A.
5.					Critical Temperature 375 R R

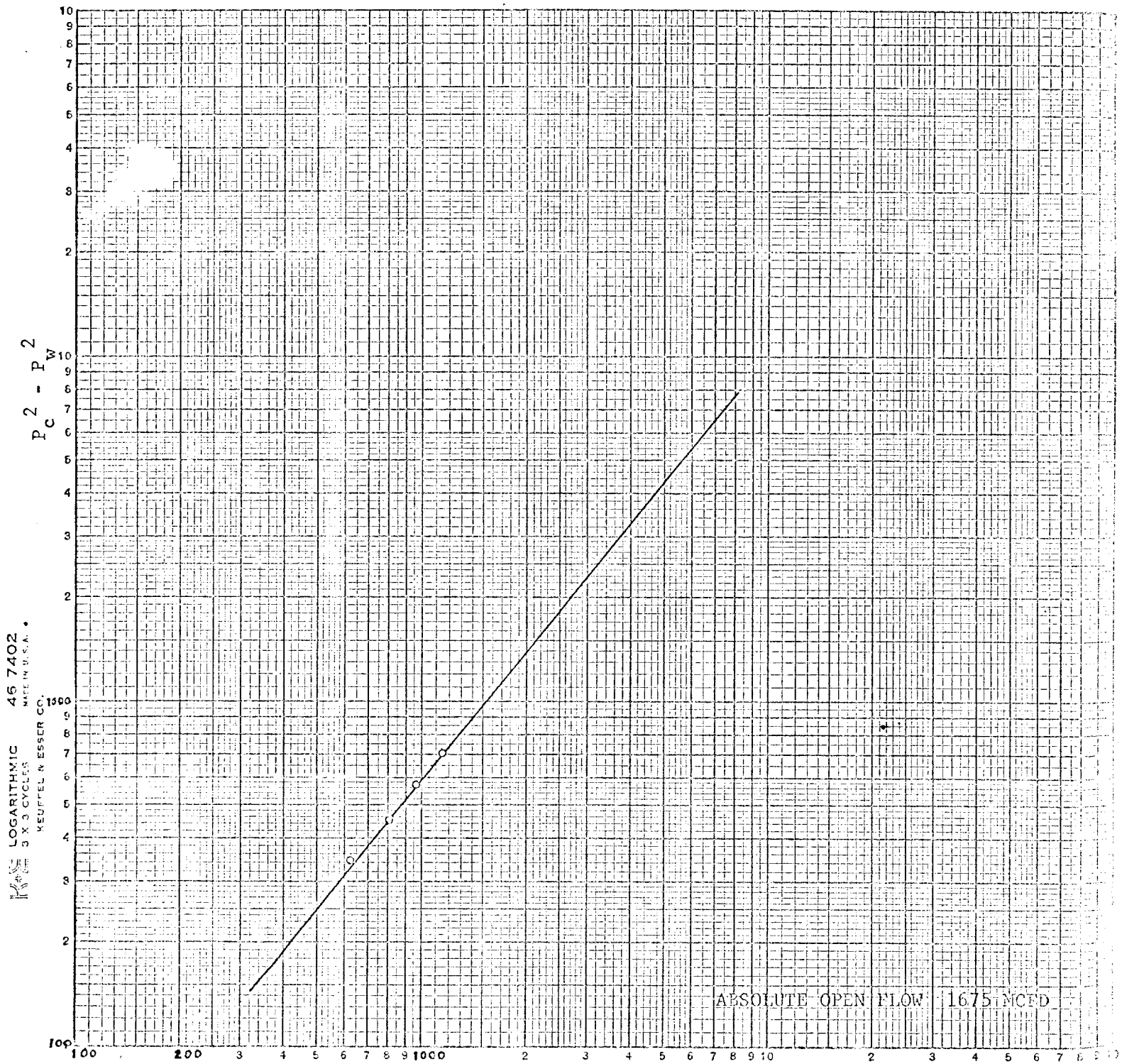
P _c 1061.3 P _c ² 1126				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.		884.3	782.0	344.0
2.		821.3	674.5	451.5
3.		748.3	560.0	566.0
4.		649.3	421.6	704.4
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.599$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.463$

AOF = Q₁ $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1675$

Absolute Open Flow 1675 Mcfd @ 15.025	Angle of Slope 51°	Slope, n .811
Remarks:		
Approved By Commission:	Conducted By:	Checked By:
	R. H. Denman September 26, 1969	

COMPANY	<u>Tesoro Petroleum Corporation</u>
WELL	<u>Santa Fe No. 17</u>
LOCATION	<u>F, Sec. 7-17N-8W</u>
COUNTY	<u>McKinley County, New Mexico</u>
DATE	<u>September 26, 1969</u>



$$Q_1 = 5200 \quad \text{Log } Q_1 = 3.716003$$

$$Q_2 = 804.3 \quad \text{Log } Q_2 = 2.905418$$

$$n = .810587 = .811$$