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See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION
2040 Pacheco St.
Santa Fe, NM 87505

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator BTA OIL PRODUCERS				003002				Lease or Unit Name 22253 Grama -C-, 8817 JV-P			
Type Test ☒ Initial ☐ Annual ☐ Special								Test Date 10/06/99		Well No. 1	
Completion Date 08/23/99		Total Depth 13,391		Plug Back TD 13,373		Elevation 3477' GR		Unit Ltr. - Sec. - TWP - Rge. M 16- 22S-34E			
Csg. Size 5.0	Wt. 18#	d 4.276	Set At 13,390	Perforations: From: 13,243 To: 13,264				County Lea			
Tbg. Size 2.875	Wt. 6.5#	d 2.441	Set At 13,243	Perforations: From: To:				Pool 77680 Grama Ridge			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 13,150'				Formation Morrow			
Producing Thru tubing		Reservoir Temp. °F 210	Mean Annual Temp. °F 60	Baro. Press - P _a 13.2				Connection El Paso Nat. Gas			
L 13,243	H 13,243	Gg .592	% CO ₂ 0.48	% N ₂ 0.28	% H ₂ S 0	Prover		Meter Run 4.026	Taps Flange		

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	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						5540	70°	Packer		24 hrs.
1.	4.026 x 1.875		720	2	96	4600	78°			1 hr
2.	4.026 x 1.875		725	4	110	4482	79°			1 hr
3.	4.026 x 1.875		772	8.2	110	3985	80°			1 hr
4.	4.026 x 1.875		780	22	90	3050	81°			1 hr
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	17.26	38.27	732.2	0.9671	1.300	1.075	892.7
2.	17.26	54.34	738.2	0.9551	1.300	1.044	1215.8
3.	17.26	80.24	785.2	0.9551	1.300	1.048	1802.1
4.	17.26	132.10	793.2	0.9723	1.300	1.032	2974.2
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.		
1.	1.090	556	1.571	.866	A.P. I Gravity of Liquid Hydrocarbons _____ Deg.		
2.	1.099	570	1.610	.917	Specific Gravity Separator Gas .592 XXXXXXXXXX		
3.	1.168	570	1.610	.911	Specific Gravity Flowing Fluid XXXXXX		
4.	1.180	550	1.553	.939	Critical Pressure 672 P.S.I.A. P.S.I.A.		
5.					Critical Temperature 354 R R		

P _c 7060.2 P _f 49846				
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		5984.2	35811	14035
2.		5857.3	34308	15538
3.		5278.1	27858	21988
4.		4175.3	17433	32413
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.208$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.208$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3900$

Absolute Open Flow 3900 Mcfd @ 15.025	Angle of Slope θ 45°	Slope, n 1.000
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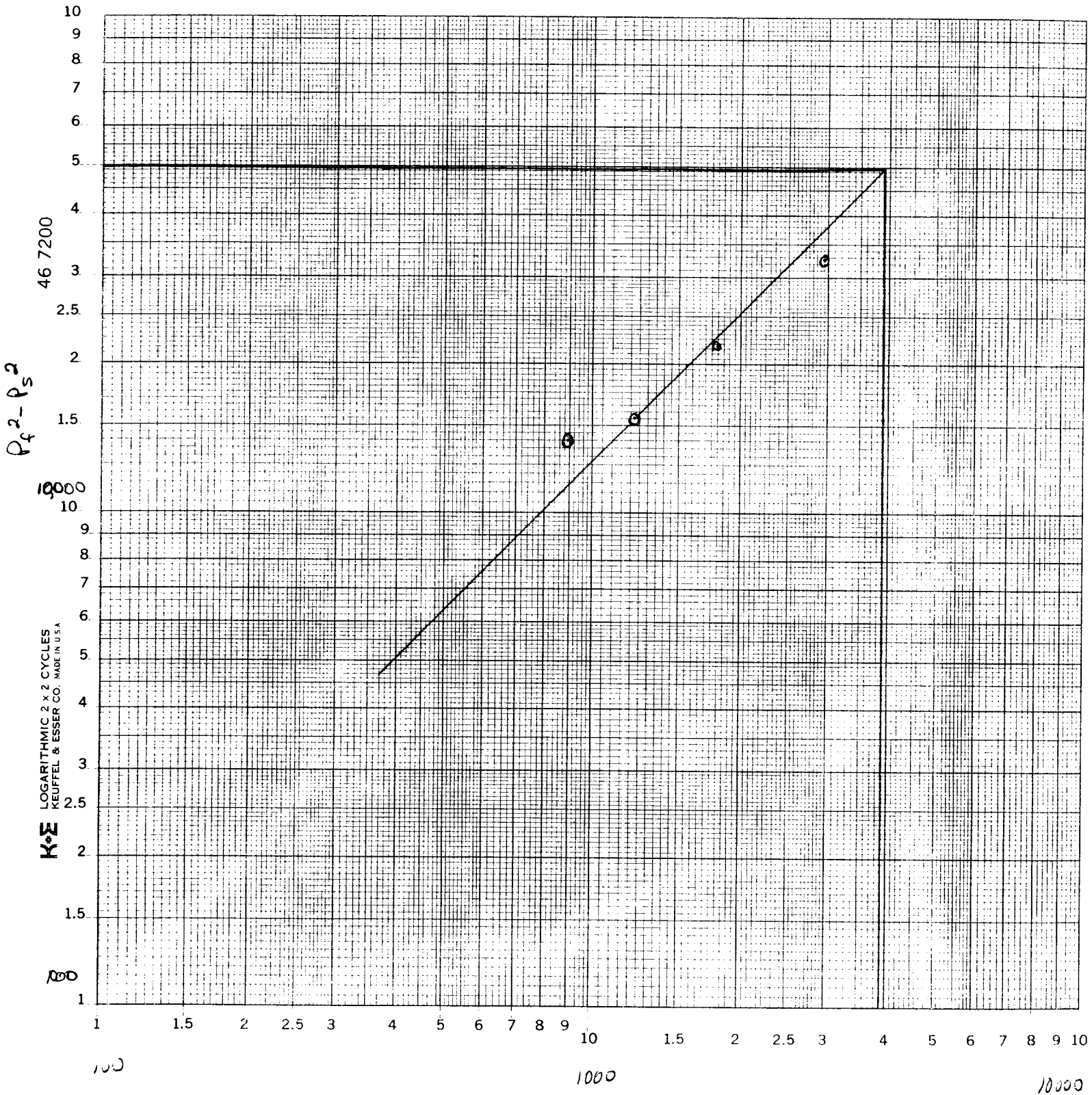
Remarks: **Dry flow, No fluid recovered during Test**

Test Run w/ BHP Bombs in well during test

Approved By Division	Conducted By: BTA OIL PRODUCERS	Calculated By: T. J. Williams	Checked By:
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BTA OIL PRODUCERS
003002

22253
8817 JV-P Grama 'C' #1
Sec. 16, T22S, R34E
Lea Co., NM



Q (MCFL)

$n = 1.000$

$\phi = 45^\circ$