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C-122

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

Form C-122
Revised 9-1-65

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Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5/1/74		MAY 13 1974	
Company El Paso Natural Gas Company						Connection None		O. C. C. ARTESIA, OFFICE	
Pool Undesignated						Formation Canyon Sand		Unit L	
Completion Date 5/1/74		Total Depth 9325		Plug Back TD 7914		Elevation 4375.9		Farm or Lease Name Rocky Arroyo D COM	
Csg. Size 5 1/2	Wt. 17.0	d 	Set At 9083	Perforations: From 7342 To 7348		Well No. 2			
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 7250	Perforations: From To		Unit L	Sec. 22	Twp. 22	Rye. 22
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At		County Eddy	
Producing Thru Tbg.		Reservoir Temp. °F 130 @ 7274		Mean Annual Temp. °F 		Baro. Press. - P _a 13.2		State New Mexico	
L 7250	H 7250	G _g .697	% CO ₂ 0	% N ₂ 	% H ₂ S 0	Prover 	Meter Run 3	Taps Flg.	

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						S.I.P. 2085					288 Hrs.
1.	3	x	1.000	470	8.50	76	1156	67			1 hr.
2.	3	x	1.000	480	16.50	75	1145	68			1 hr.
3.	3	x	1.000	500	30.00	72	1139	71			1 hr.
4.	3	x	1.750	510	29.00	63	1005	71			1 hr.
5.	3	x	1.750	660	48.00	67	1012	70			2 hrs.

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	4.789	64.09	483.2	.9850	1.198	1.049	380
2	4.789	90.21	493.2	.9859	1.198	1.051	536
3	4.789	124.08	513.2	.9887	1.198	1.052	740
4	15.61	123.18	523.2	.9971	1.198	1.062	2,439
5	15.61	179.76	673.2	.9933	1.198	1.081	3,610

NO.	R _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 38.0 Mcf/bbl.	A.P.I. Gravity of Liquid Hydrocarbons 53.0 @ 60° Deg.	Specific Gravity Separator Gas .697	Specific Gravity Flowing Fluid XXXXX	Critical Pressure 669 P.S.I.A.	Critical Temperature 388 R
1.	.72	536	1.38	.909					666 P.S.I.A.	415 R
2.	.74	535	1.38	.906						
3.	.77	532	1.37	.903						
4.	.78	523	1.35	.887						
5.	1.01	527	1.36	.855						

P_c 2098.2 P_c² 4402.4

NO	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1			1370.3	3032.1
2			1347.9	3054.5
3			1340.0	3062.4
4			1176.1	3226.3
5			1351.3	3051.1

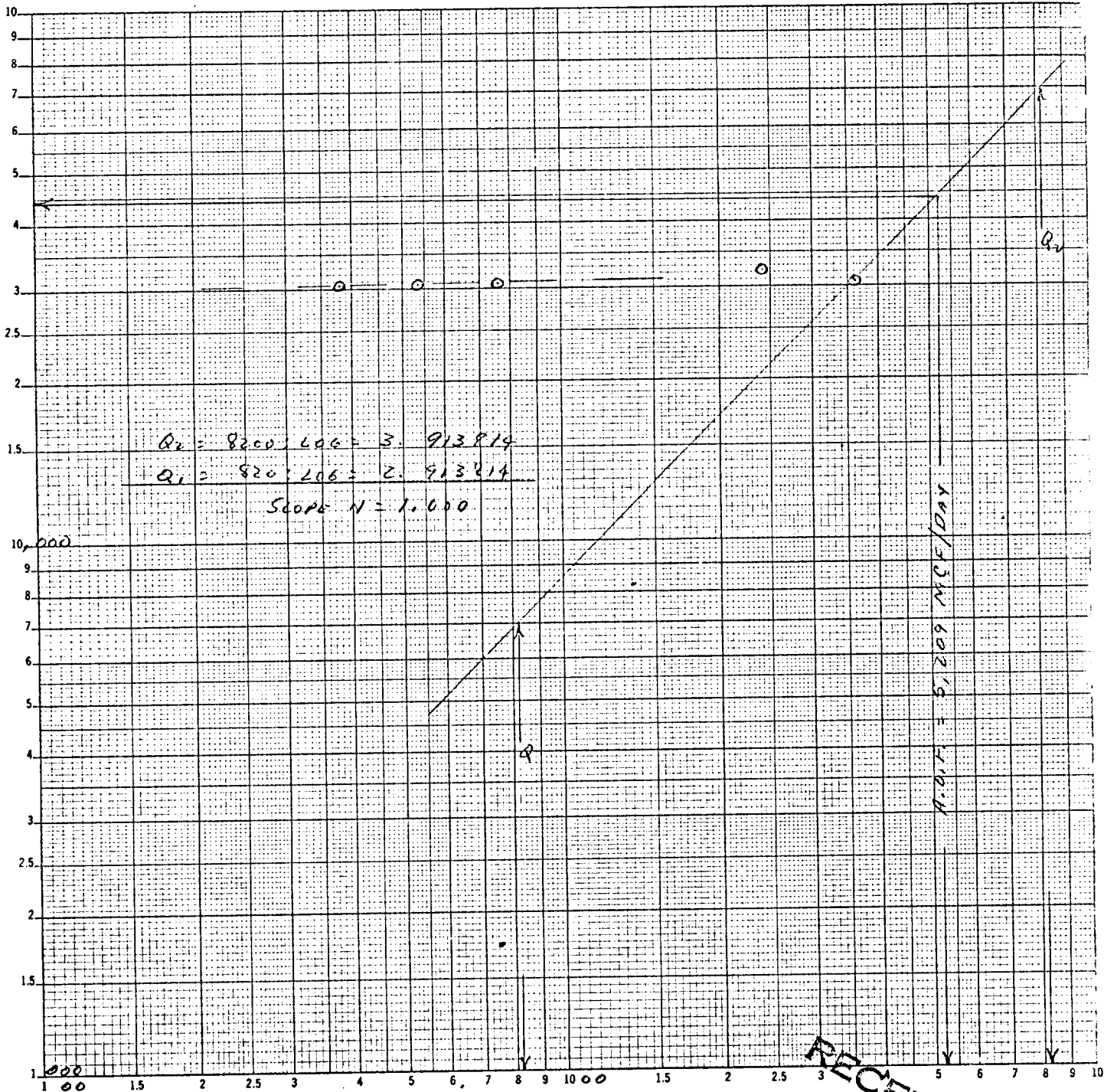
(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.443$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.443$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.209$

Absolute Open Flow 5,209 Mcfd @ 15.025		Angle of Slope @ 45		Slope, n 1.000	
Remarks: Made a total of 12.41 Bbls. condensate and 3.48 Bbls. water through out test.					
Approved By Commission:		Conducted By: R. Pagan & R. Reston		Calculated By: J. B. Murray	
				Checked By:	

EL PASO NATURAL GAS COMPANY
 Rocky Arroyo D COM No. 2
 L 21-22-22 Eddy County, New Mexico
 May 3, 1974



KE LOGARITHMIC 46 7200
 2 X 2 CYCLES
 KEUFFEL & ESSER CO.

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 U.S. GEOLOGICAL SURVEY
 ARTESIA, NEW MEXICO

FIELD DATA SHEET (Not Required To File)

Type Test ☐ Initial ☐ Annual ☒ Special Test Date <u>5/2/74</u>						Lease No. or Serial No.	
Company <u>El Paso Natural Gas Company</u>						Connection	
Field		Reservoir		Location		Unit	
Completion Date		Total Depth		Plug Back TD		Elevation	
Csg. Size	Wt.	d	Set At	Perforations: From		To	
Tbg. Size	Wt.	d	Set At	Perforations: From		To	
Type Completion (Describe) <u>Single</u>						Packer Set At	
Producing Thru Tbg.		Reservoir Temp. F		Mean Annual Temp. F		Baro. Press. - P _a	
L		H		C _g		% CO ₂	
						% N ₂	
						% H ₂ S	
						13.2	
						Prover	
						Meter Run	
						3"	
						State	
						New Mexico	

DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS
		Tbg. Psig.	Csg. Psig.	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice	
Time of Reading	Hrs.								(Include liquid production data: Type-A.P.I. Gravity-Amount)
1:15		1778		70	525	47	70		
1:30		1789		70	538	49	67		
1:45		1745		70	540	59	63		
2:00		1710		70	570	62	72		
2:15		1660		70	610	63	80		
2:30		1602		70	625	69	80		
3:00								1.750	First Rate
3:15		1402		70	635	74	69		
3:30		1330		70	635	64	75		
3:45		1244		70	660	66	80		Sample Caught
4:00		1200		70	645	72	78		
4:15		1140		70	645	65	69		
4:30		1099		70	660	57	68		
4:45		1050		70	680	49	68		
5:00		1012		70	660	48	67	1.750	Second Rate
5:15		1076		71	580	25	63		
5:20		1059		71	560	30	63		
5:45		1040		71	550	29	63		
6:00		1005		71	510	29	63	1.750	
6:15		1022		71	550	15	63		
6:30		Shut-in to change plate							
6:30		Start flow with 1" plate							
6:45		1114		71	510	32	93		
7:00		1113		71	510	32	78		
7:15		1128		71	510	29	73		
7:30		1139		71	500	30	72		
7:45		1148		71	480	16	78	1.000	Third Rate
8:00		1148		68	480	17	76		
8:15		1146		68	480	16.5	75		
8:30		1145		68	480	16.5	75	1.000	Fourth Rate
8:45		1154		68	465	8.5	75	1.000	
9:00		1154		67	465	8.5	75		
9:15		1156		67	470	8.5	75		
9:30		1156		67	470	8.5	76	-1.000	Fifth Rate

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O. C. C.
ARTESIA, OFFICE

Third Rate

Fourth Rate

Fifth Rate

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