

W MEXICO OIL CONSERVATION COM SION
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 2/28/74		Date MAR 1 1974	
Company El Paso Natural Gas Company				Connection None					
Pool Wolfcamp				Formation Wolfcamp				Unit ARTESIA, OFFICE	
Completion Date 2/28/74		Total Depth 9258		Plug Back TD 6820		Elevation		Farm or Lease Name Rocky Arroyo E	
Csq. Size 7	Wt. 26#	d	Set At 9258	Perforations: From 6227 To 6320		Well No. B-1			
Tqg. Size 2 3/8	Wt. 4.7	d	Set At 6330'	Perforations: From open To end		Unit 7		Sec. Twp. Rge. 22 22	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At None		County Eddy	
Producing Thru Tbg.		Reservoir Temp. °F 137 @ 6320		Mean Annual Temp. °F		Baro. Press. - P _a 13.2		State New Mexico	
L .6320	H 6320	G _g .650 (Assumed)	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps Positive Chokes	

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							1059		1481		24 hr.
1.			1/8	812	812	50	812		1477		1 hr.
2.			3/16	1318	1318	48	1318		1459		1 hr.
3.			7/32	1357	1357	35	1357		1415		1 hr.
4.			5/16	1329	1329	17	1329		1396		1 hr.
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	.2618		825.2	1.010	1.240	1.098	297
2	.6101		1331.2	1.012	1.240	1.168	1,190
3	.8419		1370.2	1.025	1.240	1.197	1,755
4	1.771		1342.2	1.044	1.240	1.251	3,850
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.				
	1	1.23	510	1.36	.829	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.			
	2	1.99	508	1.35	.733	Specific Gravity Separator Gas _____ X X X X X X X X			
	3	2.05	495	1.32	.698	Specific Gravity Flowing Fluid _____ X X X X X			
	4	2.00	473	1.26	.639	Critical Pressure _____ 670 _____ P.S.I.A. _____ P.S.I.A.			
5					Critical Temperature _____ 375 _____ R _____ R				

P _c 1494.2	P _c ² 2232.6		
NO.	P _t ²	P _w	P _c ² - P _w ²
1		1490.2	2220.7
2		1472.2	2167.4
3		1428.2	2034.8
4		1409.2	1985.8
5			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 34.24$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 17.50$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 20.825$$

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U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Absolute Open Flow	20,825	Mcf/d @ 15.025	Angle of Slope	51°	Slope, n	.810
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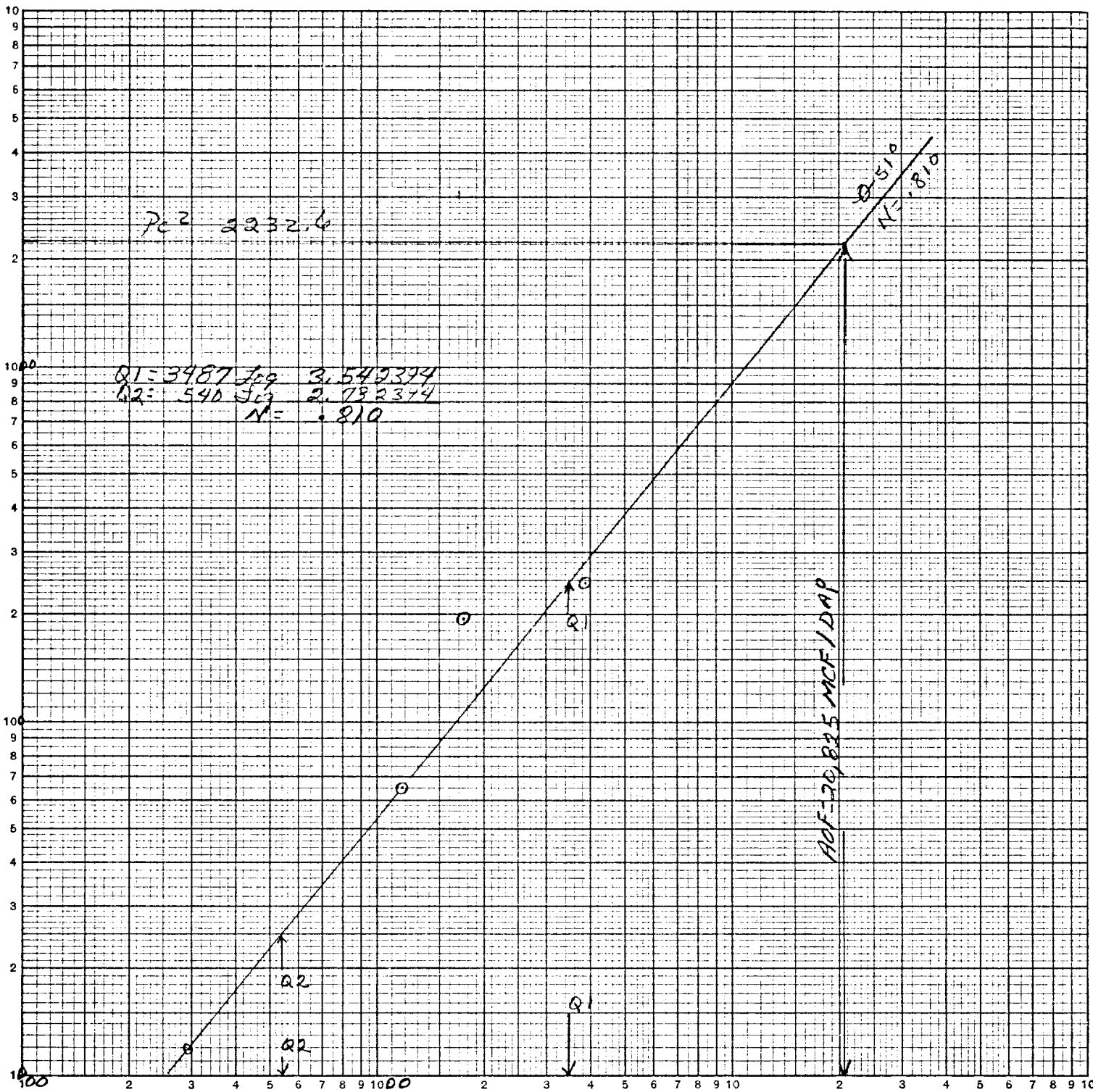
Remarks: Well made large amounts of water and condensate on the last three rates.
Well was freezing off during first, third, and fourth rates.

Approved By Commission:	Conducted By: Reston, Pagan	Calculated By: Reston, Pagan	Checked By:
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EL PASO NATURAL GAS COMPANY
 Rocky Arroyo E No. 1
 7-22-22 Eddy County, New Mexico
 February 28, 1974

$P_2 - P_w^2 / N$ (000's)

KE LOGARITHMIC
 3 X 3 CYCLES
 KEUFFEL & ESSER CO.



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 ARTESIA, NEW MEXICO

$Q = \text{MCF/DAY}$

FIELD DATA SHEET (Not Required To File)									
Type Test		☒ Initial ☐ Annual ☐ Special			Test Date 2/28/74		Lease No. or Serial No.		
Company		El Paso Natural Gas Company			Connection		None		
Field		Reservoir			Location		Unit		
Completion Date		Total Depth 9258		Plug Back TD 6820		Elevation		Farm or Lease Name Rocky Arroyo	
Csg. Size 7"		Wt. 26		Set At 9258		Perforations: From 6227 To 632.0		Well No. E-1	
Tbg. Size 2 3/8		Wt. 4.7		Set At 6330		Perforations: From open To end		Sec. 7 Twp. 22 Rge. 22	
Type Completion (Describe)		Single			Packer Set At		County or Parish Eddy		
Producing Thru Tbg.		Reservoir Temp. F		Mean Annual Temp. F		Baro. Press. - P _g		State New Mexico	
L		H		G _g		% CO ₂		% N ₂	
								% H ₂ S	
								Prover Meter Run	
								Positive Chokes	
DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS
Time of Reading	Hrs.	Tbg. Psig.	Csg. Psig.	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice	(Include liquid production data; Type-A.P.I. Gravity-Amount)
12:15		1059	1481						
12:30		Test Started							
12:45		995	1481		945		55	1/8	
1:00		940	1480		940		49	1/8	
1:15		880	1478		880		48	1/8	Freezing off
1:30		812	1477		812		50	1/8	First Rate
1:45		692	1473		692		50	3/16	Second Rate
2:00		840	1470		840		58	3/16	Well began to unload
2:15		1275	1464		1275		64	3/16	load water, made only
2:30		1318	1459		1318		48	3/16	water for approx. 20 min.
2:45		1312	1447		1312		41	7/32	Making large amount of wat
3:00		1353	1435		1353		41	7/32	and condensate
3:15		1350	1425		1350		36	7/32	Freezing off
3:30		1357	1415		1357		35	7/32	Third Rate
3:45		1357	1410		1357		20	5/16	
4:00		1350	1405		1350		20	5/16	well freezing off
4:15		1340	1400		1340		18	5/16	making small amount
4:30		1329	1396		1329		17	5/16	of condensate. Fourth rate