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appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources

Form C-122
Revised October, 1999

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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OCD ARTESIA

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Reliance Energy, Inc.					Lease or Unit Name Willow Spring "28" State				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7-31-01		Well No. 1		
Completion Date 4-18-01		Total Depth 4022		Plug Back TD 3975		Elevation 3817		Unit Ltr. - Sec. - TWP - Rge. P 28 4S 25E	
Csg. Size 5-1/2	Wt. 15.5	d 4.892	Set At 4018	Perforations: From: 3638 To: 3648				County Chaves	
Thg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 3600	Perforations: From: To:				Pool Pecos Slope Abo	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At NA		Formation Abo Sd		
Producing Thru Tbg		Reservoir Temp. °F 90°		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection Sales	
L 3643	H 3643	G _g .665	%CO ₂ 0	%N ₂ 5.97	%H ₂ S	Prover	Meter Run 2.1	Taps Pipe	

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							990	89			72 hrs
1.	2.07	x	.750	95	10	90	104	89	-	-	72 hrs
2.											
3.											
4.											
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.	2.94	32.89	108.2	.9723	1.2263	1.0081	116
2.							
3.							
4.							
5.							

No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.16	550	1.52	.984	A. P. I. Gravity of Liquid Hydrocarbons	Deg.
2.					Specific Gravity Separator Gas	.670
3.					Specific Gravity Flowing Fluid	XXXXXX
4.					Critical Pressure	659 P.S.I.A.
5.					Critical Temperature	363 R

No.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		118.	14.	993.
2.				
3.				
4.				
5.				

(1) $P_2 = 1.0140$

$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$

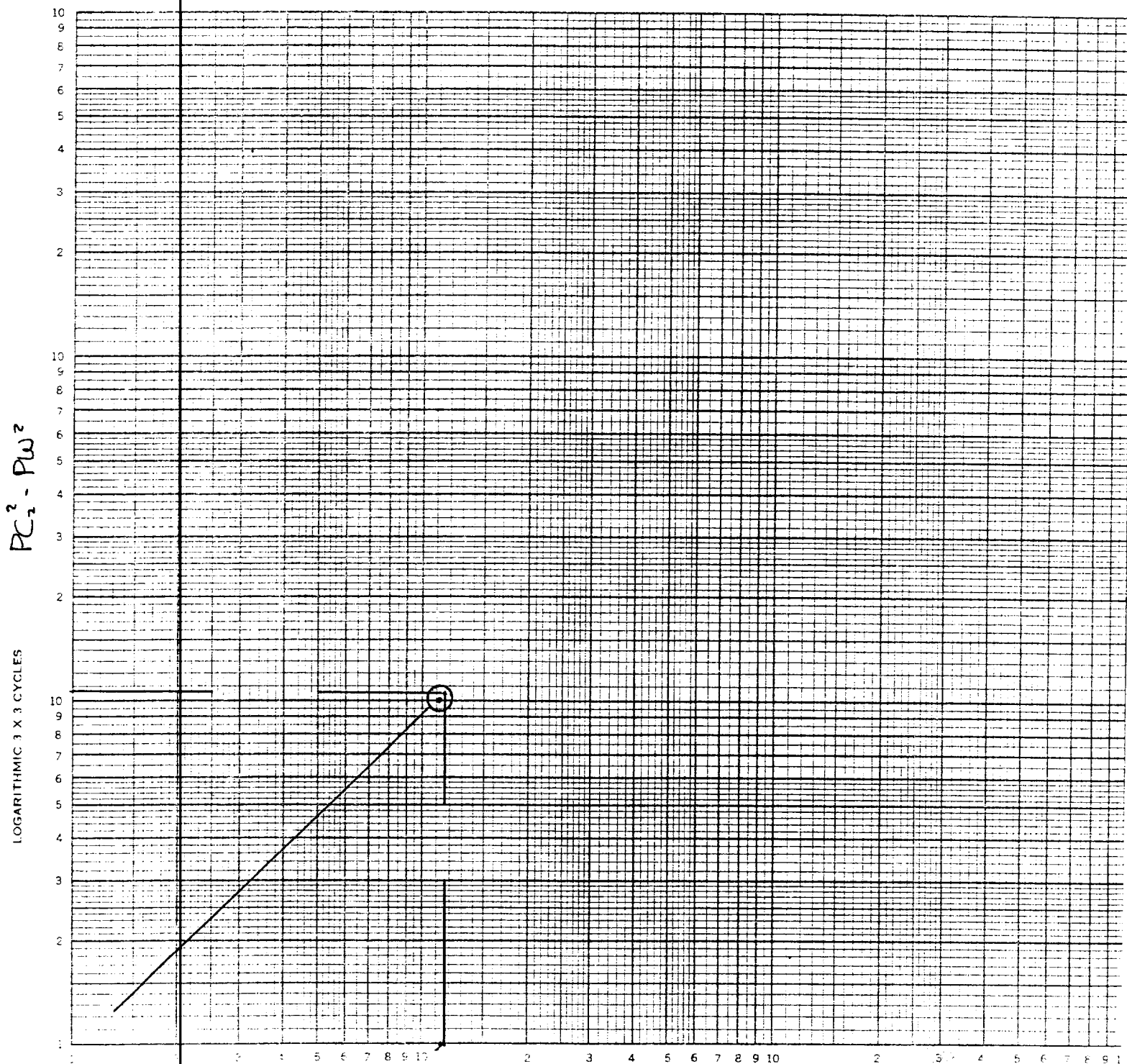
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0118$

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

Absolute Open Flow	118	Mcf/d @ 15.025	Angle of Slope θ: 45	Slope, n: 1
Remarks:				
Approved By Division				
Conducted By: D. Shirley		Calculated By: Red Dog Testing		Checked By: G. Morgan

**GAS WELL
BACK PRESSURE CURVE**

COUNTY: Chaves FIELD: Fecos Slope Abo
 OPERATOR: Reliance Energy, Inc.
 LEASE: Willow Spring "28" WELL NO. 1
 VOLUME: 118 MCF/24 HR
 DATE: 7-31-01



Q in MCF per DAY

$\theta = 45^\circ$

$n = 1$

Q = 118 MCF/D AOF

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