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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 "22" State				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7-31-01		Well No. 1		
Completion Date 3-6-01		Total Depth 4010		Plug Back TD 3988		Elevation 3799 GR		Unit Ltr. - Sec. - TWP - Rge. J 22 4S 25E	
Csg. Size 5-1/2	Wt. 15.5	d 	Set At 4010	Perforations: From: 3760 To: 3958			County Chaves		
Thg. Size 2-3/8	Wt. 4.7	d 	Set At 3834	Perforations: From: To: 			Pool Pecos Slope Abo		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 3694		Formation Abo Sd		
Producing Thru Tbg		Reservoir Temp. °F 100°		Mean Annual Temp. °F 60°		Baro. Press - P. 		Connection Sales	
L 3793	H 3793	Cg .683	%CO ₂ 0	%N ₂ 12.80	%H ₂ S -	Prover -	Meter Run 2.1	Taps Pipe	

FLOW DATA					TUBING DATA		CASING DATA		Duration Of Flow
No.	Prover Line Size	Onifice X Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI						640	89		
1.	2.07 x .500		90	2.0	90.	100	89	-	-
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.	1.23	14.37	103.2	.9723	1.2101	1.0070	21
2.							
3.							
4.							
5.							

No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.16	550.	1.57	.986	A. P. I. Gravity of Liquid Hydrocarbons	Deg.
2.					Specific Gravity Separator Gas .683	XXXXXXXXXX
3.					Specific Gravity Flowing Fluid XXXXXX	
4.					Critical Pressure 646. P.S.I.A.	P.S.I.A.
5.					Critical Temperature 350 R.	R

No.	P _i	P _w	P _c	P _c ²	P _c ² - P _w ²
1.	653.2	427			
1.		113	13.	414	
2.					
3.					
4.					
5.					

(1) $P_c^2 = 1.0308$

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

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0261$

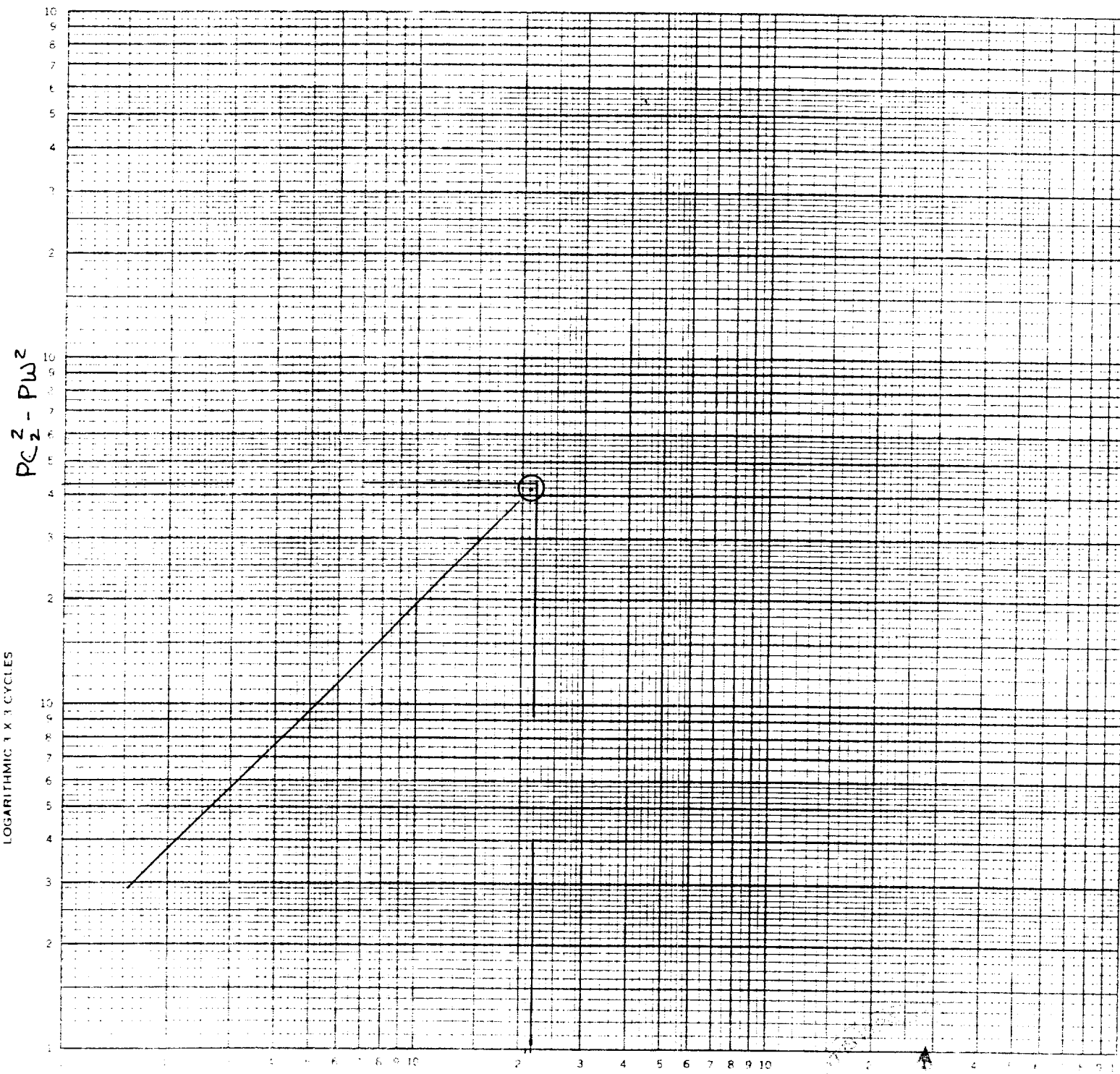
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$

Absolute Open Flow 22	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
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**GAS WELL
BACK PRESSURE CURVE**

COUNTY: Chaves FIELD: Pecos Slope Abo
 OPERATOR: Reliance Energy, Inc
 LEASE: Willow Spring "22" WELL NO. 1
 VOLUME: 22 MCF/24 HR
 DATE: 7-31-01



Q in MCF per DAY

$\theta = 45^\circ$

$n = 1$

Q = 22 MCF/D AOF

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