

Submit in duplicate to
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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Reliance Energy, Inc.					Lease or Unit Name Willow Spring "33" State				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7-31-01		Well No. 3		
Completion Date 6-14-01		Total Depth 4037		Plug Back TD 3930		Elevation 3845 GR		Unit Ltr. - Sec. - TWP - Rge. D 33 4S 25E	
Csg. Size 5-1/2"	Wt. 15.5	d	Set At 3945	Perforations: From: 3612 To: 3770		County Chaves			
Thg. Size 2-3/8"	Wt. 4.7	d	Set At 3546	Perforations: From: To:		Pool Pecos Slope Abo			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 3546		Formation Abo Sd		
Producing Thru Tbg		Reservoir Temp. °F 100		Mean Annual Temp. °F 60		Baro. Press - P _a		Connection Sales	
I. 3691	II. 3691	Gg 670	%CO ₂ 0	%N ₂ 11.19	%H ₂ S -	Prover -	Meter Run 2.067	Taps Pipe	

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.	
SI						510	89	Pkr	
1.	2.067 x 0.500		80	15	95	104	89	Pkr	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.	1.23	37.39	93.2	.9680	1.2218	1.0061	55
2.							
3.							
4.							
5.							

No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.14	555.	1.59	.988	A. P. I. Gravity of Liquid Hydrocarbons	Deg.
2.					Specific Gravity Separator Gas .670	XXXXXXXXXX
3.					Specific Gravity Flowing Fluid XXXXX	
4.					Critical Pressure 650 P.S.I.A.	P.S.I.A.
5.					Critical Temperature 350 R	R

P _c 513.2 P _c ² 263				
No.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²
1.		117.	14.	250.
2.				
3.				
4.				
5.				

(1) $P_{c2} = 1.0549$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0465$

Absolute Open Flow 57	Mcf/d @ 15.025	Angle of Slope θ: 45	Slope, n: 1
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Remarks:

Approved By Division	Conducted By: D. Shirley	Calculated By: Red Dog Testing	Checked By: G. Morgan
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