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State of New Mexico
Energy, Minerals and Natural Resources Department

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Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator <u>READ & STEVENS</u>						Lease or Unit Name <u>MARK FEDERAL</u>						
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date <u>12-27-94</u>			Well No. <u>7</u>			
Completion Date <u>12-23-94</u>			Total Depth <u>13678'</u>			Plug Back TD <u>13665</u>			Elevation			
Csg. Size		Wt.	d	Set At	Perforations:						County	
<u>5 1/2</u>		<u>17#</u>	<u>4.892</u>	<u>13678</u>	From: <u>13164</u> To: <u>13508</u>						<u>Lea</u>	
Tbg. Size		Wt.	d	Set At	Perforations:						Pool	
<u>2-3/8</u>		<u>4.7#</u>	<u>1.995</u>	<u>13095</u>	From: To:							
Type Well - Single - Bradenhead - G.G. or G.O. Multiple <u>single</u>						Packer Set At <u>13095</u>			Formation <u>MORROW</u>			
Producing Thru TBG.		Reservoir Temp. °F <u>192° @ 13164</u>		Mean Annual Temp. °F <u>60°</u>		Baro. Press - P _a <u>13.2</u>			Connection <u>AIR</u>			
L	H	Gg	% CO ₂	% N ₂	% H ₂ S	Prover		Meter Run		Taps		
<u>13164</u>	<u>13164</u>	<u>.720</u>	<u>5.55</u>	<u>.45</u>				<u>3.068</u>		<u>FLG.</u>		

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.	Temp. °F	
SI						<u>2370</u>				
1.	<u>3.068 X</u>	<u>1.500</u>	<u>320</u>	<u>2</u>	<u>44</u>	<u>1990</u>		<u>pkc.</u>		<u>1 hr.</u>
2.	<u>3.068 X</u>	<u>1.500</u>	<u>340</u>	<u>3</u>	<u>60</u>	<u>1700</u>		<u>"</u>		<u>1 hr.</u>
3.	<u>3.068 X</u>	<u>1.500</u>	<u>350</u>	<u>5</u>	<u>77</u>	<u>1230</u>		<u>"</u>		<u>1 hr.</u>
4.	<u>3.068 X</u>	<u>1.500</u>	<u>335</u>	<u>4</u>	<u>88</u>	<u>690</u>		<u>"</u>		<u>1 hr.</u>
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.	<u>11.13</u>	<u>25.81</u>	<u>333.2</u>	<u>1.016</u>	<u>1.179</u>	<u>1.042</u>	<u>359</u>
2.	<u>11.13</u>	<u>32.55</u>	<u>353.2</u>	<u>1.000</u>	<u>1.179</u>	<u>1.040</u>	<u>444</u>
3.	<u>11.13</u>	<u>42.62</u>	<u>363.2</u>	<u>.9896</u>	<u>1.179</u>	<u>1.041</u>	<u>576</u>
4.	<u>11.13</u>	<u>37.32</u>	<u>348.3</u>	<u>.9741</u>	<u>1.179</u>	<u>1.034</u>	<u>493</u>
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	DRY GAS	Mcf/bbl.
1.	<u>.48</u>	<u>504</u>	<u>1.30</u>	<u>.921</u>	A.P. I. Gravity of Liquid Hydrocarbons <u>DRY</u>		Deg.
2.	<u>.51</u>	<u>520</u>	<u>1.34</u>	<u>.925</u>	Specific Gravity Separator Gas <u>.720</u>		<u>XXXXXXXXXX</u>
3.	<u>.53</u>	<u>537</u>	<u>1.37</u>	<u>.922</u>	Specific Gravity Flowing Fluid <u>DRY</u>		<u>XXXXXX</u>
4.	<u>.51</u>	<u>548</u>	<u>1.41</u>	<u>.936</u>	Critical Pressure <u>*689</u> P.S.I.A.		P.S.I.A.
5.					Critical Temperature <u>389</u> R		R

P _c <u>2383.2</u> P _c ² <u>5679.6</u>				
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.	<u>4012.8</u>	<u>2004.4</u>	<u>4017.6</u>	<u>1662.1</u>
2.	<u>2935.1</u>	<u>1715.3</u>	<u>2942.4</u>	<u>2737.2</u>
3.	<u>1545.5</u>	<u>1248.4</u>	<u>1558.6</u>	<u>4121.1</u>
4.	<u>494.5</u>	<u>710.7</u>	<u>505.1</u>	<u>5174.6</u>
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{1.378}$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{1.215}$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{700}$

Absolute Open Flow <u>700</u> Mcfd @ 15.025	Angle of Slope θ <u>58.7</u>	Slope, n <u>.60720</u>
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Remarks: * CORRECTED TO 5 % Co²

Approved By Division <u>OLG</u>	Conducted By: <u>PRO WELL TESTER</u>	Calculated By: <u>KS</u>	Checked By: <u>BM</u>
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