

OIL CONSERVATION DIVISION

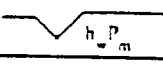
P.O. Box 2088

Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator <u>Reliance Operating Co.</u>					Lease or Unit Name <u>Fed 10</u>				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date <u>8/27/98</u>		Well No. <u>3</u>		
Completion Date <u>8/20/98</u>		Total Depth <u>12,018'</u>		Plug Back TD <u>11296'</u>		Elevation <u>4059' GR</u>		Unit Loc. - Sec. - TWP - Rge. <u>0 31 9S 36E</u>	
Log. Size <u>5 1/2</u>	WL <u>20</u>	d <u>4.778</u>	Set At <u>12,003'</u>	Perforations: From <u>11,133</u> To <u>11160</u>			County <u>Lea</u>		
Log. Size <u>2 7/8</u>	WL <u>6.5</u>	d <u>2.441</u>	Set At <u>11,051'</u>	Perforations: From <u> </u> To <u> </u>			Pool <u>Crossroads West</u>		
Type Well - Single - Bradenhead - G.G. or G.Q. Multiple <u>Single</u>					Packer Set At <u>11,050</u>		Formation <u>Atoka</u>		
Producing Thru <u>TBG</u>		Reservoir Temp. °F <u>60</u>		Mean Annual Temp. °F <u>60</u>		Baro. Press. - P _a <u>13.2</u>		Connection <u>Air</u>	
L <u>11,050</u>	IL <u>11,050</u>	G _g <u>.836</u>	% CO ₂ <u>.820</u>	% N ₂ <u>2.632</u>	% H ₂ S <u>0</u>	Prover <u>2"</u>	Meter Run <u>None</u>	Taps <u>N/A</u>	

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.	
Si										
1.	2" X .500			15		95 ⁰	1500	84 ⁰	phr	12 hrs.
2.	2" X 1.000			12		83 ⁰	1390	84 ⁰	phr	1 hr
3.	2" X 1.000			26		58 ⁰	840	84 ⁰	phr	1 hr
4.	2" X 1.250			16		60 ⁰	730	84 ⁰	phr	1 hr
5.							485	84 ⁰	phr	1 hr

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1.	4.279		28.2	.9680	1.094	1.078	137
2.	17.09		25.2	.9786	1.094	1.084	499
3.	17.09		39.2	1.002	1.094	1.092	801
4.	27.63		29.2	1.000	1.094	1.092	963
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P. I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	.83	555	1.29	.861	12.500	59.3	.836	N/A	666	427
2.	.81	543	1.27	.851						
3.	.77	518	1.21	.838						
4.	.78	520	1.21	.838						
5.										

P ₁ <u>1888.2</u>		P ₂ <u>3565.3</u>	
NO.	P ₁ ²	P _w	P _w ²
1.	1969.0	1403.3	1969.2
2.	728.0	855.1	731.2
3.	552.3	749.0	561.0
4.	248.2	511.7	261.8
5.			

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.079$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.079$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.039$

Method

Deg.

XXXXXXX

XXXXX

P.S.I.A. 657

R 497

Absolute Open Flow <u>1.039</u>	Mcfd @ 15.025	Angle of Slope θ <u>45⁰</u>	Slope, n <u>1.000</u>
---------------------------------	---------------	---	-----------------------

Remarks: *Calculated from known shut in bottom hole pressure

*Well made 8 BBLS of 59.3 API Gravity Condensate

Approved By Division	Conducted By: <u>Pro Well Testing</u>	Calculated By: <u>M.B.</u>	Checked By: <u>B.M.</u>
----------------------	---------------------------------------	----------------------------	-------------------------