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appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

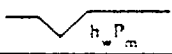
Form C-122
Revised 4-1-91

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>Penwell</u>						Lease or Unit Name <u>Southern Cross 16 St</u>					
Type Test ☐ Initial ☐ Annual ☐ Special						Test Date <u>6-16-98</u>		Well No. <u>7</u>			
Completion Date <u>2-5-98</u>		Total Depth <u>8580</u>		Plug Back TD <u>8580</u>		Elevation		Unit Lf. - Sec. - TWP. - Rge. <u>T6 - 18 - 24</u>			
Log. Size <u>4 1/2</u>	Wt. <u>11.6</u>	d	Set At <u>8532</u>	Perforations: From: <u>7721</u> To: <u>7728</u>				County <u>Eddy</u>			
Log. Size <u>2 3/8</u>	Wt. <u>4.7</u>	d <u>1.995</u>	Set At <u>6094</u>	Perforations: From: To:				Pool <u>Atoka Sink</u>			
Type Well - Single - Bradenhead - G.G. ☒ Multiple <u>Single</u>						Packer Set At <u>6095</u>		Formation <u>Atoka Sands</u>			
Producing Thru <u>tbq</u>		Reservoir Temp. °F <u>600</u>		Mean Annual Temp. °F		Baro. Press. - P _a <u>13.2</u>		Connection <u>Sales Line</u>			
L <u>7721</u>	II <u>7721</u>	Gg <u>.627</u>	% CO ₂ <u>.112</u>	% N ₂ <u>.749</u>	% H ₂ S	Prover		Meter Run <u>3.068</u>		Taps <u>6lg</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.		Temp. °F
1.	3 x .500			180	20.00	90 ⁰	1752		pkh		48 hrs
2.							180		pkh		24 hrs
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1.	1.183	62.161	193.2	.9723	1.263	1.015	78
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mo/bbl
1.	.28	550	1.51	.971	19.5	
2.					A.P. I. Gravity of Liquid Hydrocarbons <u>61.8 @ 60⁰</u>	Deg
3.					Specific Gravity Separator Gas <u>.627</u>	XXXXXXXXXX
4.					Specific Gravity Flowing Fluid <u>XXXXXX</u>	GMLX = .767
5.					Critical Pressure <u>671</u>	PSIA
					Critical Temperature <u>362</u>	R

NO.	P _i ²	P _w	P _w ²	P _e ² - P _w ²
1.		193.7	37.5	3078.4
2.				
3.				
4.				
5.				

1) $\frac{P_e^2}{P_e^2 - P_w^2} = 1.012$

2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.012$

AOF = Q $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 79$

P_i^2 1765.2 P_e^2 3115.9

Absolute Open Flow <u>79</u> Mcfd @ 15.025	Angle of Slope θ <u>45</u>	Slope, n <u>1.000</u>
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Remarks: well produced 4.00 bbls of 61.8 api gr. condensate

Approved By Division	Conducted By: <u>Prowell testing and Wl</u>	Calculated By: <u>BM</u>	Checked By: <u>BM</u>
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