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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

Operator <i>Mewbourne Oil Co.</i>					Lease or Unit Name <i>Avalon Hills '20' Com</i>				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date <i>4-21-98</i>		Well No. <i>1</i>		
Completion Date <i>3-29-98</i>		Total Depth <i>11,020</i>		Plug Back TD <i>10,150</i>		Elevation <i>3302</i>		Unit Ltr. - Sec. - TWP - Rge. <i>H 20 21-S 26-E</i>	
Crg. Size <i>5 1/2</i>		Wt. <i>17</i>	d <i>4.892</i>	Set At <i>10150</i>	Perforations: From: <i>9765</i> To: <i>9966</i>			County <i>Eddy</i>	
Tbg. Size <i>2 7/8</i>		Wt. <i>6.5</i>	d <i>2.441</i>	Set At <i>9701</i>	Perforations: From: To:			Pool <i>Avalon Strawn</i>	
Type Well - Single - Bradenhead - G.G. or G.C. Multiple <i>Single</i>					Packer Set At <i>9701</i>		Formation <i>Strawn</i>		
Producing Thru <i>Tbg</i>		Reservoir Temp. °F <i>162.4</i>		Mean Annual Temp. °F <i>60</i>		Baro. Press - P _a <i>13.2</i>		Connection <i>Sales</i>	
L <i>9701</i>	II <i>9701</i>	Gg <i>.675</i>	% CO ₂ <i>.476</i>	% N ₂ <i>1.049</i>	% H ₂ S <i>0</i>	Prover <i>0</i>	Meter Run <i>3.068</i>	Taps <i>Flg</i>	

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						2000		pk	
1.	3.068 X 1.750		520	7	96 ⁰	1960		pk	60 min
2.	3.068 X 1.750		540	24	72 ⁰	1880		pk	60 min
3.	3.068 X 1.750		560	50	72 ⁰	1770		pk	60 min
4.	3.068 X 1.750		600	81	60 ⁰	1640		pk	60 min
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 _{pv}	Rate of Flow Q, Mcfd
1.	<i>15.61</i>	<i>61.09</i>	<i>533.2</i>	<i>.9671</i>	<i>1.217</i>	<i>1.047</i>	<i>1175</i>
2.	<i>15.61</i>	<i>115.22</i>	<i>533.2</i>	<i>.9887</i>	<i>1.217</i>	<i>1.048</i>	<i>2268</i>
3.	<i>15.61</i>	<i>169.29</i>	<i>573.2</i>	<i>.9887</i>	<i>1.217</i>	<i>1.048</i>	<i>3332</i>
4.	<i>15.61</i>	<i>222.86</i>	<i>613.2</i>	<i>1.000</i>	<i>1.217</i>	<i>1.061</i>	<i>4492</i>
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcft/bbl
1.	<i>.82</i>	<i>556</i>	<i>1.47</i>	<i>.912</i>	<i>52.162</i>	
2.	<i>.79</i>	<i>532</i>	<i>1.40</i>	<i>.911</i>	<i>63.3</i>	
3.	<i>.79</i>	<i>532</i>	<i>1.40</i>	<i>.911</i>	<i>.675</i>	<i>XXXXXXXXXX</i>
4.	<i>.77</i>	<i>520</i>	<i>1.37</i>	<i>.889</i>	<i>XXXXX</i>	
5.					<i>672</i>	<i>PSIA. 671 PSIA.</i>
					<i>378</i>	<i>R 394 R</i>

P _e <i>2124.5</i>		P _w <i>5152.9</i>	
NO.	P _e ²	P _w ²	P _e ² - P _w ²
1.	<i>2075.2</i>	<i>4306.4</i>	<i>846.5</i>
2.	<i>1999.2</i>	<i>3996.8</i>	<i>1156.1</i>
3.	<i>1902.9</i>	<i>3621.0</i>	<i>1531.9</i>
4.	<i>1789.0</i>	<i>3200.5</i>	<i>1952.4</i>
5.			

$$1) \frac{P_e^2}{P_e^2 - P_w^2} = \frac{2.63}{2.63 - 2.63} = 2.63$$

$$(2) \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 2.63$$

$$AOF = Q \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 11,813.9$$

Absolute Open Flow <i>11,813.9</i>	Mcfd @ 15.025	Angle of Slope Θ <i>45⁰</i>	Slope, n <i>1.000</i>
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Remarks: * Well made 9BBLs of 63.3 Api Gravity condensate
* Calculated from known bottom hole pressures

Approved By Division	Conducted By: <i>Pro well Testing</i>	Calculated By: <i>MB</i>	Checked By: <i>BM</i>
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