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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

NGPA Permits
DEC 05 1995

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator <u>EXXON CO. U.S.A.</u>						Lease or Unit Name <u>J.D. KNOX</u>					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date <u>11-28-95</u>		Well No. <u>12</u>			
Completion Date		Total Depth <u>6020'</u>		Plug Back TD <u>5840</u>		Elevation <u>3583</u>		Unit Ltr. Sec. TWP Rge. <u>0-10-21S-36E</u>			
Csg. Size <u>4 1/2"</u>	Wt. <u>9.5</u>	d <u>4.000</u>	Set At <u>6020</u>	Perforations: From: <u>2778</u> To: <u>3306</u>				County <u>LEA</u>			
Tbg. Size <u>2-3/8</u>	Wt. <u>4.7</u>	d <u>1.995</u>	Set At <u>3131</u>	Perforations: From: To:				Pool <u>Eldmont</u>			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple <u>single</u>						Packer Set At <u>none</u>		Formation <u>YATES 7 RIVERS</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>SALES LINE</u>			
L <u>3131</u>	H <u>3131</u>	Gg <u>.737</u>	% CO ₂ <u>.99</u>	% N ₂ <u>19.93</u>	% H ₂ S	Prover <u>-0-</u>	Meter Run <u>4.026</u>	Taps <u>FLG.</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	
SI	<u>244</u>									<u>24 hr</u>
1.	<u>4.026 X 1.500</u>	<u>23</u>	<u>4"</u>	<u>63°</u>	<u>232</u>					<u>.45min</u>
2.	<u>4.026 X 1.500</u>	<u>23</u>	<u>9"</u>	<u>66°</u>	<u>218</u>					<u>1 hr</u>
3.	<u>4.026 X 1.500</u>	<u>25</u>	<u>19.4"</u>	<u>73°</u>	<u>194</u>					<u>1 hr</u>
4.	<u>4.026 X 1.500</u>	<u>26</u>	<u>29.2"</u>	<u>74°</u>	<u>172</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 Fg.	Super Compress. Factor, F _{pv} .	Rate of Flow Q, Mcfd
1.	<u>10.84</u>	<u>12.03</u>	<u>36.2</u>	<u>.9977</u>	<u>1.165</u>	<u>1.030</u>	<u>156</u>
2.	<u>10.84</u>	<u>18.04</u>	<u>36.2</u>	<u>.9943</u>	<u>1.165</u>	<u>1.030</u>	<u>233</u>
3.	<u>10.84</u>	<u>27.22</u>	<u>38.2</u>	<u>.9877</u>	<u>1.165</u>	<u>1.029</u>	<u>349</u>
4.	<u>10.84</u>	<u>33.83</u>	<u>39.2</u>	<u>.9868</u>	<u>1.165</u>	<u>1.031</u>	<u>435</u>
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	<u>.56</u>	<u>523</u>	<u>1.50</u>	<u>.943</u>	<u>DRY GAS</u>	
2.	<u>.56</u>	<u>526</u>	<u>1.50</u>	<u>.943</u>	<u>DRY</u>	
3.	<u>.59</u>	<u>533</u>	<u>1.53</u>	<u>.944</u>	<u>.737</u>	<u>XXXXXXXXXX</u>
4.	<u>.61</u>	<u>534</u>	<u>1.53</u>	<u>.942</u>	<u>DRY</u>	<u>XXXXXX</u>
5.						

P _c <u>257.2</u> P _c ² <u>66.2</u>				
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.	<u>60.1</u>	<u>245.9</u>	<u>60.5</u>	<u>6.0</u>
2.	<u>53.5</u>	<u>232.8</u>	<u>54.2</u>	<u>12.7</u>
3.	<u>42.9</u>	<u>211.2</u>	<u>44.6</u>	<u>23.2</u>
4.	<u>34.3</u>	<u>192.1</u>	<u>36.9</u>	<u>31.9</u>
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{2.263}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{1.734}$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{.754}$

Absolute Open Flow <u>754</u> Mcfd @ 15.025	Angle of Slope Θ <u>55</u>	Slope, n <u>.6739</u>
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Remarks: NO FLUID MADE DURING TEST

Approved By Division	Conducted By: <u>PRO WELL TESTERS</u>	Calculated By: <u>MB</u>	Checked By: <u>BM</u>
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