

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS Revised 12-1-55

Pool Jalmat Formation Yates County Lea
 Initial X Annual - Special - Date of Test 9-15-58
 Company Magnolia Petroleum Company Lease State "C" Well No. 2
 Unit 0 Sec. 16 Twp. 23S Rge. 34E Purchaser one
 Casing 5 1/2" Wt. 17# I.D. 4.392 Set at 3391 Perf. 3064 To 3172
 Tubing 2 Wt. 4.70 I.D. 1.795 Set at 3165 Perf. 3165 To 3172
 Gas Pay: From 3064 To 3172 L 3064 xG .795 -GL 2100 Bar.Press. 13.2
 Producing Thru: Casing - Tubing X Type Well Single
 Single-Bradenhead-G. G. or G.O. Dual
 Date of Completion: 9-21-58 Packer 7923 Reservoir Temp. 91° F

OBSERVED DATA

Tested Through (Pressure) (Choke) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	<u>Line & Orifice</u>					<u>391</u>	<u>75</u>	<u>-</u>	<u>-</u>	<u>66 hr. S.I.</u>
1.	<u>4 x 1.750</u>	<u>13/64</u>	<u>43.4</u>	<u>3.60</u>	<u>75</u>	<u>317</u>	<u>75</u>	<u>-</u>	<u>-</u>	<u>3</u>
2.	<u>" "</u>	<u>1/4</u>	<u>42.0</u>	<u>4.75</u>	<u>78</u>	<u>247</u>	<u>78</u>	<u>-</u>	<u>-</u>	<u>3</u>
3.	<u>" "</u>	<u>5/16</u>	<u>42.0</u>	<u>6.50</u>	<u>73</u>	<u>181</u>	<u>73</u>	<u>-</u>	<u>-</u>	<u>3</u>
4.	<u>" "</u>	<u>3/8</u>	<u>42.4</u>	<u>9.50</u>	<u>72</u>	<u>157</u>	<u>72</u>	<u>-</u>	<u>-</u>	<u>3</u>
5.	<u>" "</u>	<u>"</u>	<u>41.9</u>	<u>9.50</u>	<u>74</u>	<u>151</u>	<u>74</u>	<u>-</u>	<u>-</u>	<u>20.5</u>

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>19.27</u>	<u>14.275</u>	<u>56.6</u>	<u>.9859</u>	<u>.9225</u>	<u>1.003</u>	<u>250.95</u>
2.	<u>19.27</u>	<u>16.19</u>	<u>55.2</u>	<u>.9831</u>	<u>.9225</u>	<u>1.003</u>	<u>283.81</u>
3.	<u>19.27</u>	<u>18.94</u>	<u>55.2</u>	<u>.9877</u>	<u>.9225</u>	<u>1.003</u>	<u>333.53</u>
4.	<u>19.27</u>	<u>22.98</u>	<u>55.6</u>	<u>.9837</u>	<u>.9225</u>	<u>1.003</u>	<u>405.14</u>
5.	<u>19.27</u>	<u>22.88</u>	<u>55.1</u>	<u>.9868</u>	<u>.9225</u>	<u>1.003</u>	<u>402.46</u>

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio - cf/bbl.
 Gravity of Liquid Hydrocarbons - deg.
 γ_c 9.936 $(1-e^{-s})$ 0.138

Specific Gravity Separator Gas -
 Specific Gravity Flowing Fluid .705
 P_c 404.2 P_c^2 163.278

No.	P_{ex} P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.	<u>330.2</u>	<u>109.032</u>	<u>2.493</u>	<u>6.217</u>	<u>.853</u>	<u>109.830</u>	<u>53.421</u>	<u>331.5</u>	<u>.820</u>
2.	<u>260.2</u>	<u>67.704</u>	<u>2.820</u>	<u>7.952</u>	<u>1.097</u>	<u>68.301</u>	<u>94.577</u>	<u>262.3</u>	<u>.649</u>
3.	<u>194.2</u>	<u>37.714</u>	<u>3.314</u>	<u>10.983</u>	<u>1.516</u>	<u>39.230</u>	<u>124.148</u>	<u>198.1</u>	<u>.490</u>
4.	<u>170.2</u>	<u>28.968</u>	<u>4.025</u>	<u>16.201</u>	<u>2.236</u>	<u>31.334</u>	<u>132.174</u>	<u>176.6</u>	<u>.437</u>
5.	<u>164.2</u>	<u>26.962</u>	<u>3.999</u>	<u>15.992</u>	<u>2.207</u>	<u>29.169</u>	<u>134.209</u>	<u>170.8</u>	<u>.423</u>

Absolute Potential: 194 MCFPD; n 1.33COMPANY Magnolia Petroleum CompanyADDRESS Box 2406, Hobbs, New MexicoAGENT and TITLE George J. Fowler, Gas Engineer

WITNESSED

COMPANY

REMARKS

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia

P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .