

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1959 FEB 10 AM 10:44

Pool Jalmat Formation Yates County LeaInitial _____ Annual X Special _____ Date of Test 3-18/3-22-57Company Continental Oil Company Lease Meyer A-29 Well No. 5Unit A Sec. 29 Twp. 22 Rge. 36 Purchaser El Paso Nat. Gas CompanyCasing 5 1/2 Wt. 14 I.D. 5.012 Set at 3089 Perf. 3089 To 3340 Open holeTubing 2" Wt. 4.7 I.D. 1.995 Set at 3012 Perf. _____ To _____Gas Pay: From 3195 To 3340 L 3012 xG .655 -GL 1973 Bar.Press. 13.2Producing Thru: Casing _____ Tubing X Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 9-27-56 Packer None Reservoir Temp. 90°

OBSERVED DATA

Tested Through (~~Block~~) (~~Block~~) (Meter) Type Taps Flange

| No. | Flow Data | | | | | Tubing Data | | Casing Data | | Duration of Flow Hr. |
|-----|-------------|----------------|-------------|----------------------|-----------|-------------|-----------|-------------|-----------|----------------------|
| | (Line) Size | (Orifice) Size | Press. psig | Diff. h _w | Temp. °F. | Press. psig | Temp. °F. | Press. psig | Temp. °F. | |
| SI | | | | | | <u>578</u> | | | | <u>72</u> |
| 1. | <u>4"</u> | <u>.750</u> | <u>356</u> | <u>30.25</u> | <u>59</u> | <u>498</u> | | | | <u>24</u> |
| 2. | <u>4"</u> | <u>.750</u> | <u>405</u> | <u>26.01</u> | <u>57</u> | <u>488</u> | | | | <u>24</u> |
| 3. | <u>4"</u> | <u>.750</u> | <u>456</u> | <u>19.36</u> | <u>63</u> | <u>497</u> | | | | <u>24</u> |
| 4. | <u>4"</u> | <u>.750</u> | <u>472</u> | <u>15.21</u> | <u>62</u> | <u>500</u> | | | | <u>24</u> |
| 5. | | | | | | | | | | |

FLOW CALCULATIONS

| No. | Coefficient Flange (24-Hour) | $\sqrt{h_w p_f}$ | 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>3.435</u> | <u>105.65</u> | | <u>1.0010</u> | <u>.9571</u> | <u>1.038</u> | <u>360</u> |
| 2. | <u>3.435</u> | <u>104.27</u> | | <u>1.0029</u> | <u>.9571</u> | <u>1.044</u> | <u>359</u> |
| 3. | <u>3.435</u> | <u>95.29</u> | | <u>.9971</u> | <u>.9571</u> | <u>1.048</u> | <u>327</u> |
| 4. | <u>3.435</u> | <u>85.89</u> | | <u>.9981</u> | <u>.9571</u> | <u>1.050</u> | <u>295</u> |
| 5. | | | | | | | |

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

P_c 9.936 (1-e^{-s}) .127Specific Gravity Separator Gas .655

Specific Gravity Flowing Fluid _____

P_c 591.2 P_c 349.5

| No. | 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 | P _w /P _c |
|-----|-----------------------|-----------------------------|------------------|---------------------------------|--|-----------------------------|--|---------------------|--------------------------------|
| 1. | <u>511.2</u> | <u>261.3</u> | <u>3.58</u> | <u>12.82</u> | <u>1.63</u> | <u>262.9</u> | <u>86.6</u> | <u>512.7</u> | <u>86.72</u> |
| 2. | <u>501.2</u> | <u>251.2</u> | <u>3.57</u> | <u>12.74</u> | <u>1.62</u> | <u>252.8</u> | <u>96.7</u> | <u>502.8</u> | <u>85.04</u> |
| 3. | <u>500.2</u> | <u>260.3</u> | <u>3.25</u> | <u>10.56</u> | <u>1.34</u> | <u>261.6</u> | <u>87.9</u> | <u>511.5</u> | <u>86.51</u> |
| 4. | <u>513.2</u> | <u>263.4</u> | <u>2.93</u> | <u>8.58</u> | <u>1.09</u> | <u>264.5</u> | <u>85.0</u> | <u>514.3</u> | <u>86.99</u> |
| 5. | | | | | | | | | |

Absolute Potential: 1.060 MCFPD; n .771COMPANY Continental Oil CompanyADDRESS Box 68, Eunice, New MexicoAGENT and TITLE J. B. Rankin

WITNESSED _____

COMPANY _____

REMARKS

2nd attempt to test. Average slope of .771 drawn thru highest rate of flow.

NMOCC-3 EWW HLJ RLA File-2

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 .