

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Burnet Formation Queen County Lea

Initial X Annual _____ Special _____ Date of Test 8-26/8-30-57

Company Gulf Oil Corporation Lease Mattern "C" Well No. 3

Unit L Sec. 18 Twp. 21S2 Rge. 37E Purchaser El Paso Natural GasCo.

Casing 5.5 Wt. 14 I.D. 5.012 Set at 3670 Perf. 3550 To 3645

Tubing 2.375 Wt. 4.7 I.D. _____ Set at 3602 Perf. _____ To _____

Gas Pay: From 3550 To 3645 L 3550 xG .690 -GL 2449 Bar.Press. 13.2

Producing Thru: Casing X Tubing _____ Type Well Single

Date of Completion: 7-2-56 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

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

Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Pressure) (Line) Size	(Flow) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.
SI								<u>676</u>	<u>72</u>
1.	<u>4</u>	<u>2.00</u>	<u>186</u>	<u>9.00</u>	<u>78</u>			<u>602</u>	<u>24</u>
2.	<u>4</u>	<u>2.00</u>	<u>185</u>	<u>12.25</u>	<u>73</u>			<u>562</u>	<u>24</u>
3.	<u>4</u>	<u>2.00</u>	<u>185</u>	<u>22.09</u>	<u>69</u>			<u>482</u>	<u>24</u>
4.	<u>4</u>	<u>2.00</u>	<u>187</u>	<u>29.16</u>	<u>70</u>			<u>412</u>	<u>24</u>
5.									

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>25.58</u>	<u>42.32</u>		<u>.9831</u>	<u>.9325</u>	<u>1.019</u>	<u>1012</u>
2.	<u>25.58</u>	<u>49.25</u>		<u>.9877</u>	<u>.9325</u>	<u>1.020</u>	<u>1184</u>
3.	<u>25.58</u>	<u>66.13</u>		<u>.9915</u>	<u>.9325</u>	<u>1.020</u>	<u>1596</u>
4.	<u>25.58</u>	<u>76.37</u>		<u>.9905</u>	<u>.9325</u>	<u>1.020</u>	<u>1840</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 1.712 (1-e^{-s}) .155

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 689.2 P_c 475.0

No.	P _w P _t (psia)	P _c 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>615.2</u>	<u>378.5</u>	<u>1.7</u>	<u>3.0</u>	<u>.47</u>	<u>379.0</u>	<u>96.0</u>	<u>615.6</u>	<u>.89</u>
2.	<u>575.2</u>	<u>330.9</u>	<u>2.0</u>	<u>4.0</u>	<u>.42</u>	<u>331.5</u>	<u>143.5</u>	<u>575.7</u>	<u>.83</u>
3.	<u>495.2</u>	<u>245.2</u>	<u>2.7</u>	<u>7.3</u>	<u>1.13</u>	<u>246.3</u>	<u>228.7</u>	<u>496.2</u>	<u>.71</u>
4.	<u>425.2</u>	<u>180.8</u>	<u>3.2</u>	<u>10.2</u>	<u>1.58</u>	<u>182.4</u>	<u>292.6</u>	<u>427.1</u>	<u>.62</u>
5.									

Absolute Potential: 2500 MCFPD; n 0.62

COMPANY Gulf Oil Corporation

ADDRESS Box 2167, Hobbs, N.M.

AGENT and TITLE J. L. Smith

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 .