

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Permian Formation Permian NOV 10 County 57 Lea

Initial I Annual _____ Special _____ Date of Test 9-21-56

Company Gulf Oil Corp. Lease Dell, R. R. "G" Well No. 1

Unit P Sec. 13 Twp. 20S Rge. 30E Purchaser Permian Basin PL Co.

Casing 5.5 Wt. 170 I.D. 4.092 Set at 3772 Perf. 3350 To 3516

Tubing 2.375 Wt. 4.70 I.D. 1.995 Set at 3807 Perf. _____ To _____

Gas Pay: From 3350 To 3516 L 3350 xG .670 -GL 2245 Bar.Press. 11.3

Producing Thru: Casing X Tubing _____ Type Well GO Dual

Date of Completion: 4-28-56 Packer 3740 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>916.2</u>		<u>72</u>
1.	<u>1</u>	<u>1.90</u>	<u>157.1</u>	<u>1.8</u>	<u>89</u>			<u>896.7</u>		<u>25</u>
2.	<u>1</u>	<u>1.90</u>	<u>162.9</u>	<u>6.4</u>	<u>99</u>			<u>896.6</u>		<u>25</u>
3.	<u>1</u>	<u>1.90</u>	<u>166.0</u>	<u>11.7</u>	<u>99</u>			<u>893.8</u>		<u>25</u>
4.	<u>1</u>	<u>1.90</u>	<u>171.4</u>	<u>19.4</u>	<u>88</u>			<u>777.2</u>		<u>25</u>
5.										

FLOW CALCULATIONS

No.	Coefficient (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>91.44</u>	<u>96.29</u>	<u>170.3</u>	<u>.9925</u>	<u>.940</u>	<u>1.043</u>	<u>1913</u>
2.	<u>91.44</u>	<u>95.20</u>	<u>176.1</u>	<u>1.0020</u>	<u>.940</u>	<u>1.048</u>	<u>1903</u>
3.	<u>91.44</u>	<u>74.88</u>	<u>179.2</u>	<u>1.0020</u>	<u>.940</u>	<u>1.048</u>	<u>1407</u>
4.	<u>91.44</u>	<u>96.96</u>	<u>184.6</u>	<u>1.0000</u>	<u>.940</u>	<u>1.047</u>	<u>1830</u>
5.							

CO₂ - 1.055
H₂ - 1.051

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.012 (1-e^{-s}) 0.113

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 929.4 P_c 849.3

No.	P _w 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>897.9</u>	<u>806.2</u>	<u>2.502</u>	<u>12.37</u>	<u>1.725</u>	<u>806.0</u>	<u>75.8</u>	<u>897.9</u>	<u>.77</u>
2.	<u>869.6</u>	<u>756.6</u>	<u>5.105</u>	<u>29.01</u>	<u>6.177</u>	<u>756.0</u>	<u>109.0</u>	<u>878.2</u>	<u>.94</u>
3.	<u>837.0</u>	<u>700.6</u>	<u>7.333</u>	<u>39.77</u>	<u>7.409</u>	<u>700.3</u>	<u>136.5</u>	<u>842.6</u>	<u>.98</u>
4.	<u>790.4</u>	<u>624.7</u>	<u>9.477</u>	<u>89.82</u>	<u>18.84</u>	<u>627.5</u>	<u>226.3</u>	<u>790.4</u>	<u>.86</u>
5.									

Absolute Potential 13,700 MCFPD; n 0.72
COMPANY Gulf Oil Corporation
ADDRESS Box 2147, 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} = Supercompressibility 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 .