

NEW MEXICO OIL CONSERVATION COMMISSION

ELVIS A. UTZ  
GAS ENGINEER

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK-PRESSURE TEST FOR GAS WELLS

1955 OCT 15 PM 3:08

Pool Present Formation Osage County Lea

Initial I Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 8-10-55

Company Gulf Oil Corporation Lease Matter, F. W. "B" Well No. 1

Unit I Sec. 9 Twp. 19S Rge. 37E Purchaser Permian Basin PL Co.

Casing 5.5 Wt. 1.16 I.D. 5.082 Set at 3720 Perf. 3718 To 3714

Tubing 2.375 Wt. 4.71 I.D. 1.995 Set at 3727 Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From 3718 To 3900 L 3718 xG .675 -GL 250 Bar.Press. 13.2

Producing Thru: Casing \_\_\_\_\_ Tubing I Type Well Single

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

Date of Completion: 12-27-55 Packer None Reservoir Temp. \_\_\_\_\_

OBSERVED DATA

Tested Through (meter) (Meter) Type Taps Flap

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	
1.	1.50	1.50	135.0	2.2	68	791.3	791.2	72
2.	1.50	1.50	145.1	2.3	67	676.1	785.9	75
3.	1.50	1.50	157.3	1.7	70	685.0	686.7	76
4.	1.50	1.50	168.3	1.5	71	683.2	688.3	78
5.	1.50	1.50	158.0	1.5	71	900.0	809.9	78

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wp} P_c}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	15.26	33.86	139.0	.9924	.9827	1.002	124
2.	15.26	47.34	157.3	.9933	.9827	1.002	76
3.	15.26	59.53	168.3	.9905	.9827	1.000	82
4.	15.26	77.18	158.2	.9907	.9827	1.000	112
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
 Gravity of Liquid Hydrocarbons 0.89 deg.  
 F<sub>c</sub> 9.936 (1-e<sup>-s</sup>) 0.29

Specific Gravity Separator Gas \_\_\_\_\_  
 Specific Gravity Flowing Fluid \_\_\_\_\_  
 P<sub>c</sub> 884.5 P<sub>c</sub> 887.2

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> /P <sub>c</sub>
1.	791.3				626.1	626.1	100.9	887.2	88
2.	785.9				676.1	676.1	116.1	887.2	88
3.	686.7				470.2	470.2	198.0	887.2	88
4.	688.3				469.8	469.8	198.9	887.2	77
5.									

Absolute Potential 2,160 MCFPD; n 0.86

COMPANY Gulf Oil Corporation

ADDRESS Box 2167, Hobbs, New Mexico

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  $P_t$ .