

NEW MEXICO OIL CONSERVATION COMMISSION

NOBPS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Bancroft Formation Queen County 53 Lea

Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 9-12-56

Company Gulf Oil Corporation Lease Anderson Well No. 1

Unit 0 Sec. 8 Twp. 20S Rge. 37E Purchaser Permian Basin PL Co.

Casing 5 1/2" Wt. 17.0# I.D. 4.892" Set at 3810' Perf. 3185' To 3395'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3570' Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From 3185' To 3395' L 3185 xG 0.670 -GL 213# Bar.Press. 13.2

Producing Thru: Casing X Tubing \_\_\_\_\_ Type Well Gas-Oil Dual

Date of Completion: 3-25-55 Packer 3600' Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. \_\_\_\_\_

OBSERVED DATA

Tested Through (Pressure Transducer) (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 <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								971.5		71-3/4
1.	1	2.75	459.0	7.4	66			925.2		2h
2.	1	2.75	458.9	12.9	68			877.9		2h
3.	1	2.75	472.4	21.0	68			825.7		2h
4.	1	2.75	483.0	34.8	65			740.4		2h
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	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.	73.11	99.11	472.2	0.9943	0.9463	1.046	1273
2.	73.11	78.04	477.2	0.9971	0.9463	1.040	942
3.	73.11	102.9	485.6	0.9971	0.9463	1.030	743
4.	73.11	137.7	496.2	0.9992	0.9463	1.049	994.5
5.							

PRESSURE CALCULATIONS

602 - 2.10%  
 112 - 1.31%

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.

Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.

F<sub>c</sub> 1.812 (1-e<sup>-s</sup>) 0.137

Specific Gravity Separator Gas \_\_\_\_\_

Specific Gravity Flowing Fluid \_\_\_\_\_

P<sub>c</sub> 984.7 P<sub>c</sub> 989.6

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.	842.4	842.2	7.706	59.38	5.135	870.0	99.6	812.7	.95
2.	841.1	794.1	10.02	100.4	24.30	804.4	161.2	809.1	.96
3.	838.9	703.8	13.90	192.3	24.98	728.8	260.8	803.7	.85
4.	753.6	567.9	18.02	324.7	44.48	612.4	357.2	782.6	.77
5.									

Absolute Potential: 20,640 MCFPD; n .70

COMPANY Gulf Oil Corporation

ADDRESS Box 247, Hobbs, N.M.

AGENT and TITLE H. L. Smith

WITNESSED \_\_\_\_\_

COMPANY \_\_\_\_\_

## 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  $P_t$ .

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