

NEW MEXICO OIL CONSERVATION COMMISSION  
HOBBS OFFICE OCC

Form C-122  
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

*Rex C. Cabanis*  
1957 OCT 11 AM 10:01

Pool Shallow Formation Furnace County Lin

Initial 2 Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 9-30-57

Company Shell Oil Company Lease Factor Well No. 2

Unit 0 Sec. 34 Twp. 19 Rge. 36 Purchaser El Paso Natural Gas Co.

Casing 2 1/8" Wt. 14.00 I.D. \_\_\_\_\_ Set at 3700 Perf. 3800 To \_\_\_\_\_

Tubing 2 1/8" Wt. 6.50 I.D. \_\_\_\_\_ Set at 3800 Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From 3800 To 3900 L 3800 xG 0.690 -GL 2976 Bar. Press. 13.8

Producing Thru: Casing \_\_\_\_\_ Tubing 2 Type Well Single  
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Nov 21, 1957 Packer 3800 Reservoir Temp. \_\_\_\_\_

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) \_\_\_\_\_ Type Taps \_\_\_\_\_

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.	
SI								78
1.	2 1/8"		380	14.00	78	380		24
2.	2 1/8"		380	14.00	78	380		24
3.	2 1/8"		380	14.00	78	380		24
4.	2 1/8"		380	14.00	78	380		24
5.								

FLOW CALCULATIONS

No.	Coefficient C <sub>20</sub> (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.	13.30	75.70		1.000	1.000	1.000	1.000
2.	13.30	75.70		1.000	1.000	1.000	1.000
3.	13.30	75.70		1.000	1.000	1.000	1.000
4.	13.30	75.70		1.000	1.000	1.000	1.000
5.							

PRESSURE CALCULATIONS

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

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

F<sub>c</sub> 3.066 (1-e<sup>-S</sup>) 0.107

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

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

P<sub>c</sub> 200.0 P<sub>w</sub> 105.0

No.	P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	(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.	200.0	40000	11.5	10.5	105.0	11000	105.0	
2.	200.0	40000	11.5	10.5	105.0	11000	105.0	
3.	200.0	40000	11.5	10.5	105.0	11000	105.0	
4.	200.0	40000	11.5	10.5	105.0	11000	105.0	
5.								

Absolute Potential: 2.700 MCFPD; n 0.900

COMPANY Shell Oil Company

ADDRESS P. O. Box 1071, Hobbs, New Mexico

AGENT and TITLE R. C. Cabanis, District Exploration Engineer Original Signed By Rex C. Cabanis

WITNESSED A. L. Island

COMPANY Shell Oil 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  $P_t$ .