

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Santa Sabina Formation Sabana County San Juan  
 Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 7-27-64  
 Company THE AMERICAN FIDELITY CORP. Lease Black Gas Unit Well No. 1  
 Unit 6 Sec. 29 Twp. 29N Rge. 10W Purchaser \_\_\_\_\_  
 Casing 4-1/2 Wt. 19.5 I.D. 4.032 Set at 6161 Perf. 6164-6181 To 6231-6241  
 Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6174 Perf. 6135 To 6143  
 Gas Pay: From 6144 To 6241 L 6193 xG .700 -GL 4335 Bar.Press. 12  
 Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single  
 Date of Completion: 7-29-64 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_  
 Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

Tested Through (removed) (Choke) (removed) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	7 Sage					3004		3004		
1.	2 Inch	.730	433			433	80° sat.	433	80° sat.	3 hr.
2.										
3.										
4.										
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.	11.3930		433	1.000	.9230	1.000	5215
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
 Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 F<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>)  
 Specific Gravity Separator Gas \_\_\_\_\_  
 Specific Gravity Flowing Fluid \_\_\_\_\_  
 P<sub>c</sub> 3016 P<sub>c</sub> 4,004,336

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.						944,700	3,129,472		
2.									
3.									
4.									
5.									

Absolute Potential: 6371 MCFPD; n .73

COMPANY THE AMERICAN FIDELITY CORPORATION  
 ADDRESS Box 400, Farmington, New Mexico  
 AGENT and TITLE F. L. Sabana, District Engineer  
 WITNESSED Dvt  
 COMPANY \_\_\_\_\_

ORIGINAL SIGNED BY  
 F. W. Foell

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  $P_t$ .