

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Atasc Formation Pictured Cliffs County San Juan  
 Initial MI Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 10/19/59  
 Company Atasc Oil and Gas Company Lease Hare Well No. 11  
 Unit H Sec. 23 Twp. 29N Rge. 10W Purchaser Southern Union Gas Company  
 Casing 1 1/2 Wt. 9.5 I.D. 1.010 Set at 2131 Perf. 2106 To 2153  
 Tubing 1 Wt. 1.7 I.D. 1 Set at 2150 Perf. 2133 To 2143  
 Gas Pay: From 2106 To 2153 L \_\_\_\_\_ xG \_\_\_\_\_ -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_  
 Producing Thru: Casing I Tubing \_\_\_\_\_ Type Well Single-rod  
 Date of Completion: 10/19/59 Packer \_\_\_\_\_ Reservoir Temp. \_\_\_\_\_  
 Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

Tested Through (Provers) (Choke) (Restrictor) Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Restrictor) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						650		650		9 days
1.		.750	173			173		173	60	3 hours
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.	12.365		185	1.000	.9606	1.017	2.235
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
 Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 P<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>)  
 Specific Gravity Separator Gas \_\_\_\_\_  
 Specific Gravity Flowing Fluid \_\_\_\_\_  
 P<sub>c</sub> 662 P<sub>c</sub> 133,214

No.	P <sub>w</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.	186					34,526	399,320		
2.									
3.									
4.									
5.									

Absolute Potential: 2,416 MCFPD; n .35  
 COMPANY Atasc Oil and Gas Company  
 ADDRESS Box # 756, Farmington, New Mexico  
 AGENT and TITLE ORIGINAL SIGNED BY D. K. BRYANT, D. K. Bryant, Production Engineer  
 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  $P_t$ .

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