

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool North Blanco Formation Pictured Cliffs County Rio Arriba  
Initial XXXX Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 10/14/59  
Company Astec Oil & Gas Company Lease Arizona-Jicarilla Well No. 6  
Unit 2 Sec. 35 Twp. 25N Rge. 4W Purchaser Southern Union Gas Company  
Casing 4 1/2" Wt. 9.5 I.D. 4.020 Set at 3502 Perf. 3516 To 3546  
Tubing 2" Wt. 4.7 I.D. 1.975 Set at 3579 Perf. 3589 To 3599  
Gas Pay: From 3576 To 3546 L \_\_\_\_\_ xG \_\_\_\_\_ -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_  
Producing Thru: Casing \_\_\_\_\_ Tubing XXXX Type Well Single - Gas  
Date of Completion: 10/14/59 Packer \_\_\_\_\_ Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (XXXXXX) (Choke) (XXXXXX) Type Taps \_\_\_\_\_

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (XXXXXX) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						<u>1000</u>		<u>1050</u>		<u>7 days</u>
1.		<u>.750</u>	<u>410</u>			<u>410</u>	<u>60</u>	<u>635</u>		<u>3 hours</u>
2.										
3.										
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	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.	<u>12.35</u>		<u>422</u>	<u>1.000</u>	<u>.9688</u>	<u>1.043</u>	<u>3,819</u>
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> 1050 P<sub>c</sub> 1,102,500

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.	<u>647</u>					<u>418,609</u>	<u>601,021</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 7.549 MCFPD; n .85

COMPANY Astec Oil & Gas Company

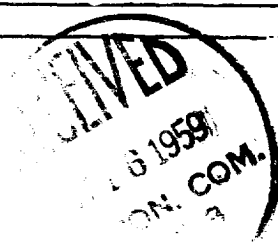
ADDRESS Box 706, Farmington, New Mexico

AGENT and TITLE ORIGINAL SIGNED BY D. K. BRYANT D. K. Bryant, 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.

$F_{pv}$  = 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  $P_t$ .

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