

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota County San Juan  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 9/7/60  
Company Astec Oil & Gas Company Lease Hanks Well No. 13-B  
Unit A Sec. 12 Twp. 27N Rge. 10W Purchaser \_\_\_\_\_  
Casing 4 1/2 Wt. 9.90 I.D. 4.090 Set at 6898 Perf. 6668 To 6792  
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 6499 Perf. Pin collar To \_\_\_\_\_  
Gas Pay: From 6668 To 6792 L 6499 xG 0.65 (E) -GL 4224 Bar.Press. 12  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single (see remarks)  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 8/31/60 Packer 64870 Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps \_\_\_\_\_

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						<u>1923</u>				<u>7 days</u>
1.						<u>385</u>	<u>60(X)</u>			
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.	<u>12.365</u>		<u>337</u>	<u>1.0000</u>	<u>0.9608</u>	<u>1.042</u>	<u>4172</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> 1935 P<sub>c</sub><sup>2</sup> 3.744.025

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.	<u>337</u>	<u>113569</u>	<u>36.225</u>	<u>1312.25</u>	<u>1312.25</u>	<u>113569</u>	<u>1312.25</u>	<u>670</u>	
2.									
3.									
4.									
5.									

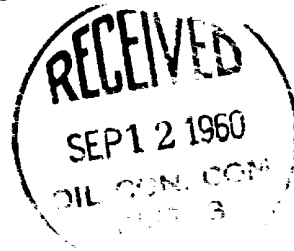
Absolute Potential: 4603 MCFPD; n 0.75COMPANY Astec Oil & Gas CompanyADDRESS Boxer & T/O, Farmington, New MexicoAGENT and TITLE ORIGINAL SIGNED BY L. M. STEVENSL. M. Stevens, Dist. Engineer

WITNESSED \_\_\_\_\_

COMPANY \_\_\_\_\_

## REMARKS

\* Two strings casing set in commo n hole. Communication between strings.



## 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  $P_t$ .