

ILLEGIBLE

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota County San JuanInitial I Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 4/8/60Company Astec Oil & Gas Company Lease Astec Well No. 7Unit I Sec. 14 Twp. 30N Rge. 11W Purchaser \_\_\_\_\_Casing 4 1/2 Wt. 9.90 I.D. 4.090 Set at 6395 Perf. 6172-6186 To 6197-6297Tubing 2" Wt. 4.7 I.D. 1.995 Set at 6172 Perf. 7in collapsed To \_\_\_\_\_Gas Pay: From 6172 To 6297 L 6172 xG 0.690 -GL 3999 Bar.Press. 12Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well SingleDate of Completion: 4/2/60 Packer No Single-Bradenhead-G. G. or G.O. Dual 131  
Reservoir Temp. \_\_\_\_\_6212-6397

## OBSERVED DATA

Tested Through 6172-6397 (Choke) 6397 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>6395</u>		<u>6395</u>		<u>7 days</u>
1.		<u>0.750</u>				<u>6395</u>	<u>60</u>	<u>6395</u>		<u>3 hours</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>12.3599</u>		<u>6395</u>	<u>1.0000</u>	<u>0.9600</u>	<u>1.097</u>	<u>10.947</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> 2197 P<sub>c</sub> 6.439.149

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>1701</u>					<u>2.893.401</u>	<u>1.346.048</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 24.145 MCFPD; n 0.75COMPANY Astec Oil & Gas CompanyADDRESS Box # 700, Farmington, New MexicoAGENT and TITLE ORIGINAL SIGNED BY L. M. STEVENSL. M. Stevens, Dist. 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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