

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Formation Dobson County San Juan
 Initial X Annual _____ Special _____ Date of Test 2/17/61
 Company Astec Oil and Gas Company Lease Hydas Well No. 2-3
 Unit C Sec. 23 Twp. 23N Rge. 11W Purchaser _____
 Casing 4 1/2 Wt. 9.70 I.D. 4.090 Set at 6399 Perf. 6194 To 6032
 Tubing 2 1/8 Wt. 4.70 I.D. 1.995 Set at 6110 Perf. Pin collar To _____
 Gas Pay: From 6194 To 6032 L 6110 xG 0.650 -GL 3972 Bar.Press. 12
 Producing Thru: Casing _____ Tubing X Type Well Single
 Date of Completion: 2/17/61 Packer _____ Reservoir Temp. 142
 Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

Tested Through ~~2 1/8~~ (Choke) ~~2 1/8~~ Type Taps _____

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.		
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.		Press. psig	Temp. °F.
1.		<u>0.730</u>				<u>2038</u>	<u>60</u>	<u>2038</u>	<u>1109</u>	<u>7 days</u>
2.										<u>3 hrs.</u>
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12.355</u>		<u>976</u>	<u>1.0000</u>	<u>0.9608</u>	<u>1.068</u>	<u>733</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

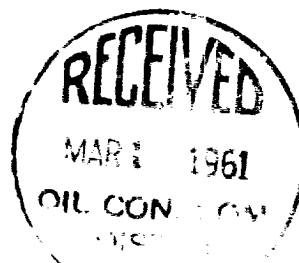
Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 F_c _____ (1-e^{-s})
 Specific Gravity Separator Gas _____
 Specific Gravity Flowing Fluid _____
 P_c 2070 P_c 4,302.500

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	<u>1161</u>					<u>1,346.51</u>	<u>2,945.879</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 9775 MCFPD; n 0.75

COMPANY Astec Oil and Gas Company
 ADDRESS Box # 970, Farmington, New Mexico
 AGENT and TITLE ORIGINAL SIGNED BY L. M. STEVENS L. 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 .