

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Astec Formation Isotured Cliffs County San JuanInitial I Annual _____ Special _____ Date of Test 10/11/59Company Astec Oil and Gas Company Lease Field Well No. 13Unit 1 Sec. 18 Twp. 2N Rge. 9W Purchaser _____Casing 4 1/2 Wt. 9 1/2 I.D. 4.090 Set at 2039 Perf. 1970 To 2018Tubing 1 Wt. 1.7 I.D. 1.319 Set at 2008 Perf. 1983 To 1993Gas Pay: From 1970 To 2018 L _____ xG _____ -GL _____ Bar.Press. _____Producing Thru: Casing 1 Tubing _____ Type Well Single-Bradenhead-G. G. or G.O. DualDate of Completion: 10/11/59 Packer _____ Reservoir Temp. _____T.T. - 2010P.E. - 2025

OBSERVED DATA

Tested Through (Pressure) (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 _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						657		557		11.44
1.		.750				365		110	60	1 hr.
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.365		352	1.000	.9608	1.036	1.112
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

P_c _____ (1-e^{-s})

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 569 P_c 147,561

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.	377					14229	377.32		
2.									
3.									
4.									
5.									

Absolute Potential: 5595 MCFPD; n .85COMPANY Astec Oil and Gas CompanyADDRESS Box 786, Farmington, New MexicoAGENT and TITLE ORIGINAL SIGNED BY D. K. BRYANT D. K. Bryant, President of Astec Oil and Gas Company

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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