

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Astec Formation Island County San Juan
Initial Y Annual _____ Special _____ Date of Test 11/15/59
Company Astec Oil and Gas Company Lease McMahon Well No. 12
Unit _____ Sec. 13 Twp. 23N Rge. 1E Purchaser Astec Oil and Gas Company
Casing 1 1/2 Wt. 21 I.D. 1.315 Set at 1935 Perf. 1562 To 1506
Tubing 1 Wt. 1.7 I.D. 1.062 Set at 1911 Perf. 1506 To 1506
Gas Pay: From 1562 To 1506 L _____ xG _____ -GL _____ Bar.Press. _____
Producing Thru: Casing Y Tubing _____ Type Well Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 12/10/59 Packer _____ Reservoir Temp. _____

1935

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (or Prover) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.		.750	260			622	50	622		1.2 hrs.
2.						259		260		3 hrs.
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.	2.35		272	1.00	.9910	1.127	1.313
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 234 P_c 101.556

No.	P _w (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.	231					74,961	122,095		
2.									
3.									
4.									
5.									

Absolute Potential: 3,996 MCFPD; n .35
COMPANY Astec Oil and Gas Company
ADDRESS Box 774, Farmington, New Mexico
AGENT and TITLE ORIGINAL SIGNED BY D. K. BRYANT
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 .

OIL CONSERVATION COMMISSION		
AZTEC DISTRICT OFFICE		
No. Copies Received <u>3</u>		
DISTRIBUTION		
	NO. FURNISHED	
Operator	<u>1</u>	
Santa Fe	<u>1</u>	
Production Office		
State Land Office		
U. S. G. S.		
Transporter		
File	<u>1</u>	<input checked="" type="checkbox"/>