

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Astec Formation Pictured Cliffs County San Juan
Initial X Annual _____ Special _____ Date of Test 3/30/61
Company Astec Oil and Gas Company Lease Cain Well No. 14
Unit M Sec. 16 Twp. 28N Rge. 10W Purchaser Southern Union Gas
Casing 2 7/8 Wt. 6.5 I.D. 2.441 Set at 8000 Perf. 1910 To 1950
Tubing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 1910 To 1950 L 1910 xG 0.65 -GL 1242 Bar.Press. 12
Producing Thru: Casing XX Tubing _____ Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 810 3/21/61 Packer _____ Reservoir Temp. 92

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								507		7 days
1.		0.75						63	60(X)	3 hrs.
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		75	1.0000	0.9608	1.009	899
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 519 P_c² 269.361

No.	$\frac{P_w}{P_t}$ (psia)	P _t ²	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.	75		4.990	24.900	2.141	7.756	261.595		
2.									
3.									
4.									
5.									

Absolute Potential: 922 MCFPD; n 0.85
COMPANY Astec Oil and Gas Company
ADDRESS P. O. Drawer 570, Farmington, New Mexico
AGENT and TITLE ORIGINAL SIGNED BY L. M. STEVENS, L. M. Stevens, 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} = 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 .