

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Undesignated Formation Pictured Cliffs County Santa Fe
Initial X Annual _____ Special _____ Date of Test 4/21/60
Company Astec Oil & Gas Company Lease Granier Well No. 9
Unit B Sec. 23 Twp. 31N Rge. 18W Purchaser _____
Casing 2 7/8 Wt. 6.50 I.D. 2.441 Set at 2864 Perf. 2880 To 2946
Tubing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 2880 To 2864 L 2880 xG 0.65 -GL 1433 Bar.Press. 12
Producing Thru: Casing X Tubing _____ Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 4/24/60 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through Prover (Choke) Prover 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										
1.		0.750						735		7 days
2.								65	60	3 hours
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.	<u>12.3590</u>		<u>60</u>	<u>1.000</u>	<u>0.9688</u>	<u>1.004</u>	<u>994</u>
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 767 P_c 288.289

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>60</u>	<u>6.400</u>	<u>5.296</u>	<u>28.048</u>	<u>3.386</u>	<u>9.906</u>	<u>978.331</u>	<u>100</u>	<u>0.132</u>
2.									
3.									
4.									
5.									

Absolute Potential: 968 MCFPD; n 0.85

COMPANY Astec Oil & Gas Company
ADDRESS Box # 706, 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 .

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