

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Dakota County San Juan
Initial XX Annual _____ Special _____ Date of Test 3/21/60
Company Astec Oil & Gas Company Lease Hagood Well No. 3
Unit F Sec. 34 Twp. 29N Rge. 13E Purchaser _____
Casing 4 1/2 Wt. 9.50 I.D. 4.090 Set at 6412 Perf. 6274 To 6380
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 6255 Perf. Pin collared To _____
Gas Pay: From 6274 To 6380 L 6255 xG 0.850 -GL 4056 Bar.Press. 12
Producing Thru: Casing _____ Tubing " Type Well Single
Date of Completion: 3/14/60 Packer No Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 131° F

OBSERVED DATA

Tested Through ~~XXXXXXX~~ (Prover) (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.	
1.		<u>0.750</u>				<u>2043</u>	<u>60</u>	<u>2043</u>		<u>7 days</u>
2.						<u>2049</u>		<u>2057</u>		<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>12.3570</u>		<u>257</u>	<u>1.000</u>	<u>0.9608</u>	<u>1.031</u>	<u>3105</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 2055 P_c 4.223.025

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>869</u>					<u>799.161</u>	<u>3.467.864</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 3050 MCFPD; n 0.75

COMPANY Astec Oil & Gas Company

ADDRESS Box 3706, 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} = 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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