

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Angel Peak Extension Formation Dakota County San Juan

Initial X Annual _____ Special _____ Date of Test 4/21/60

Company Aztec Oil & Gas Company Lease Cain "D" Well No. 9

Unit K Sec. 16 Twp. 26N Rge. 10W Purchaser _____

Casing 4 1/2 Wt. 9.50 I.D. 4.070 Set at 6453 Perf. 6348 To 6304

Tubing 2 3/8 Wt. 4.70 I.D. 1.905 Set at 6201 Perf. Pin collar To _____

Gas Pay: From 6348 To 6304 L 6201 xG 0.65 (E) -GL 4083 Bar.Press. 12

Producing Thru: Casing _____ Tubing X Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 4/14/60 Packer No Reservoir Temp. 131

T.D. - 6453 B-5004 GL

P.B.T.D. - 6413

OBSERVED DATA

Tested Through ~~(Pressure)~~ (Choke) (Mechanic) 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		0.750				2032		2036		7 days
1.						721	60	1412		3 hours
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor Ft	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.350		733	1.0000	0.9000	1.005	946
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 2018 P_c² 4,104,304

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.	1424					2,027,776	2,106,528		
2.									
3.									
4.									
5.									

Absolute Potential: 15,506 MCFPD; n 0.75

COMPANY Aztec Oil & Gas Company

ADDRESS Box # 786, 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 .