

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Alamosa Formation Alamosa County San Juan
Initial XX Annual _____ Special _____ Date of Test 4/9/61
Company Artes Oil and Gas Company Lease East Well No. 5
Unit I Sec. 24 Twp. 31N Rge. 12W Purchaser Southern Union Gas Company
Casing 7 Wt. 80 I.D. 6.456 Set at 4893 Perf. 4893 To 4972
Tubing 1 1/2 Wt. 2.34 I.D. 1.380 Set at 4693 Perf. Fin Collar To _____
Gas Pay: From 4893 To 4972 L 4693 xG 0.65 -GL 2992 Bar.Press. 12
Producing Thru: Casing _____ Tubing I Type Well G.O. Dual
Date of Completion: 4/24/61 Packer 5993 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Bottom) (Choke) (Bottom) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Line) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.		<u>2.72</u>				<u>581</u>	<u>60</u>	<u>581</u>		<u>7 days</u>
2.								<u>173</u>		<u>3 hours</u>
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>12.363</u>		<u>80</u>	<u>1.000</u>	<u>0.960</u>	<u>1.000</u>	<u>203</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 993 P_c 993

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>105</u>					<u>11025</u>	<u>993²-11025</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 250 MCFPD; n 0.75
COMPANY Artes Oil and Gas Company
ADDRESS P. O. Box 714, 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} = 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 .



LTR



Job separation sheet

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Banta Formation Permian County San Juan
Initial IX Annual _____ Special _____ Date of Test 4/9/61
Company Artes Oil and Gas Company Lease East Well No. 9
Unit I Sec. 24 Twp. 32N Rge. 10W Purchaser Southern Union Gas Company
Casing 1 1/2" Wt. 9.5 I.D. 4.000 Set at 7150 Perf. 6980 To 7150
Tubing 2 3/8" Wt. 1.70 I.D. 1.993 Set at 7000 Perf. 6900 To 6900
Gas Pay: From 6980 To 7150 L 6000 xG 0.65 -GL 4.940 Bar.Press. 12
Producing Thru: Casing _____ Tubing IX Type Well G.O. Pool
Date of Completion: 3/24/61 Packer 3323 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Runner) (Choke) (Valve) 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										
1.		<u>0.750</u>				<u>207</u>	<u>85</u>			<u>7 days</u> <u>3 hours</u>
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.	<u>12.965</u>		<u>270</u>	<u>0.9811</u>	<u>0.966</u>	<u>1.021</u>	<u>3303</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 1920 P_c 1.926,001

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>270</u>	<u>72,900</u>	<u>21,235</u>	<u>450,935</u>	<u>270,000</u>	<u>270,000</u>	<u>1,652,000</u>	<u>270</u>	
2.									
3.									
4.									
5.									

Absolute Potential: 3306 MCFPD; n 0.75COMPANY Artes Oil and Gas CompanyADDRESS Box 974, Farmington, New Mexico

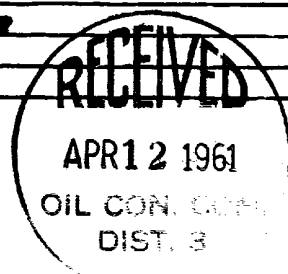
AGENT and TITLE ORIGINAL SIGNED BY L. M. STEVENS

L. M. Stevens, Engineer

WITNESSED _____

COMPANY _____

REMARKS _____



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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 .