

NEW MEXICO OIL CONSERVATION COMMISSION

WCDSS OFFICE 000

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Seven Rivers County Lea
 Initial Annual Special X Date of Test 10-27-1958
 Company AZTEC OIL & GAS COMPANY Lease State E-20A Well No. 1
 Unit G Sec. 20 Twp. 20S Rge. 36E Purchaser Southern Union Gas Company
 Casing 5 1/2" Wt. 14# I.D. 5.012 Set at 4062' Perf. 3954' To 3994'
 Tubing 2" EUE Wt. 4.7# I.D. 1.995 Set at 3920' Perf. - To -
 Gas Pay: From 3954' To 3994' L 3920 xG .675 -GL Bar.Press. 13.2
 Producing Thru: Casing Tubing X Type Well Single
 Date of Completion: Sept. 1958 Packer Reservoir Temp. 100° Est.

OBSERVED DATA

Tested Through (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
SI						863		864	S.I.
1.	2"	1/8	810		49	811		822	3 hrs.
2.	2"	3/16	718		57	719		731	3 1/2 "
3.	2"	1/4	582		57	582		612	3 1/2 "
4.	2"	3/8	356		58	382		448	24 "
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.	1/8 .3418		823.2	1.0107	.9427	1.107 / 1.10	296.8 <u>297.6</u>
2.	3/16 .7851		731.2	1.0029	.9427	1.090	591.6
3.	1/4 1.4030		595.2	1.0029	.9427	1.072	846.3
4.	3/8 3.0691		369.2	1.0019	.9427	1.041	1114.1
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
 Gravity of Liquid Hydrocarbons deg.
 F_c P_w Measured (1-e^{-s}) Specific Gravity Separator Gas
 P_c 877.2 P_c² 769.5 Specific Gravity Flowing Fluid

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.	835.2					697.6	71.9		95
2.	744.2					553.8	215.7		85
3.	625.2					390.9	378.6		71
4.	461.2					212.7	556.8		53
5.									

Absolute Potential: 1330 MCFPD; n .63
 COMPANY AZTEC OIL & GAS COMPANY
 ADDRESS P. O. Box 847, Hobbs, New Mexico
 AGENT and TITLE Original Signed By District Superintendent
 WITNESSED F. R. WATTS, JR.
 COMPANY

REMARKS

Assumed gas gravity of .675
 Well produced 6.99 barrels of oil during run No. 4. No fluid was produced at other rates of flow.

[Handwritten signature]

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 .