

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan

Initial Annual Special Date of Test 5-8-61

Company Tenneco Oil Company Lease H. O. Watson Well No. 1

Unit Sec. 12 Twp. 7 N Rge. 12 W Purchaser

Casing 5.5 Wt. 14 I.D. 5 Set at 6100 Perf. 6039 To 592

Tubing 2-3/8 Wt. 4.6 I.D. 2 Set at 9 Perf. To

Gas Pay: From To L xG 0.65 -GL Bar.Press.

Producing Thru: Casing Tubing Type Well Single Gas

Date of Completion: Packer Reservoir Temp.

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	Temp. °F.	
SI		<u>3/4</u>				<u>2014</u>		<u>2017</u>		<u>3 hours</u>
1.						<u>220</u>	<u>72</u>	<u>603</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>12.3650</u>		<u>232</u>	<u>0.9897</u>	<u>0.9608</u>	<u>1.07</u>	<u>2,705</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 P_c 4,116,841

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>635</u>					<u>403,445</u>	<u>3,723,626</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 3.86 MCFPD; n 0.75 (1.1799)

COMPANY ADDRESS AGENT and TITLE 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 .