

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin West Kutz Dakota Formation Dakota County San Juan

Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special x Date of Test 12-20-60

Company Tennessee Gas Transmission Co. Lease Bernard R. Gerard Unit "A Well No. 1

Unit E Sec. 21 Twp. 29N Rge. 13W Purchaser \_\_\_\_\_

Casing 4 1/2" Wt. 9.5 I.D. \_\_\_\_\_ Set at 5826 Perf. 5604 To 5720

Tubing 2 3/8 Wt. 4.7 I.D. \_\_\_\_\_ Set at 5560 Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From \_\_\_\_\_ To \_\_\_\_\_ L xG 0.65 Est. -GL \_\_\_\_\_ Bar.Press. 12.0

Producing Thru: Casing \_\_\_\_\_ Tubing x Type Well Single Gas

Date of Completion: \_\_\_\_\_ Packer \_\_\_\_\_ Reservoir Temp. 172

## OBSERVED DATA

Tested Through (Prover) (Choke) (Valve)~~XXXXXXXX~~

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1898		1916		
1.		0.750				171	76	466		3 hours
2.										
3.										
4.										
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	12.365		183	0.9850	0.9608	1.016	2,176
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.

Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.

P<sub>c</sub> \_\_\_\_\_ (1-e<sup>-s</sup>)

Specific Gravity Separator Gas \_\_\_\_\_

Specific Gravity Flowing Fluid \_\_\_\_\_

P<sub>c</sub> 1928 P<sub>c</sub> 3,717,184

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> / P <sub>c</sub>
1.	478					228,484	3,488,700		
2.									
3.									
4.									
5.									

Absolute Potential: 2,281 MCFPD; n 0.75 (1.0483)COMPANY Tennessee Gas Transmission CompanyADDRESS P. O. Box 1714, Durango, ColoradoAGENT and TITLE J. J. Lacey, District Petroleum 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  $P_t$ .

STATE OF NEW MEXICO		
OIL CONSERVATION COMMISSION		
ALBUQUERQUE DISTRICT OFFICE		
NUMBER OF COPIES RECEIVED		3
DISTRIBUTION		
SANTA FE	1	/
FILE	1	/
U.S.G.S.		
LAND OFFICE		
TRANSPORTER		
PROMOTION OFFICE		
OPERATOR	1	/