

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin Dakota Formation Dakota County San Juan

Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 11/21/64

Company E. L. Fundingsland Lease Sunical Well No. 10-SD

Unit L Sec. 3 Twp. 29 N Rge. 13 W Purchaser El Paso Natural Gas Company

Casing 4 1/2" Wt. 10 1/2# I.D. \_\_\_\_\_ Set at 6180 Perf. 5957 To 6090

Tubing 2" Wt. \_\_\_\_\_ I.D. \_\_\_\_\_ Set at 6080 Perf. \_\_\_\_\_ To \_\_\_\_\_

Gas Pay: From 5954 To 6090 L. \_\_\_\_\_ xG \_\_\_\_\_ -GL \_\_\_\_\_ Bar.Press. \_\_\_\_\_

Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single

Date of Completion: 11/21/64 Packer None Reservoir Temp. 147

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps \_\_\_\_\_

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

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	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.							
2.							
3.							
4.							
5.							

PRESSURE CALCUIATIONS

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

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

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

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

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

P<sub>c</sub> \_\_\_\_\_ P<sub>c</sub><sup>2</sup> \_\_\_\_\_

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.									
2.									
3.									
4.									
5.									

Absolute Potential: 4260 MCFPD; n \_\_\_\_\_

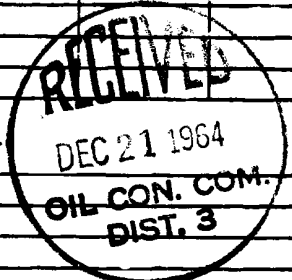
COMPANY E. L. Fundingsland

ADDRESS 2004 Security Life Bldg., Denver, Colorado

AGENT and TITLE E. L. Fundingsland

WITNESSED F. J. Ray

COMPANY Rayco Drilling Company



REMARKS

This potential was taken with the Pitot tube. Our standard method of shutting the well in for 2 weeks then taking the Potential by back pressure testing would require a considerable extra expense as the well had to be flowed into the frac tanks in order to dispose of the condensate. This was necessitated as this well is located within the city limits of Farmington.

# 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  $P_t$ .