

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 XX Annual _____ Special _____ Date of Test 10-29-63
Company Southern Union Production Co. Lease Federal Lea Well No. 1
Unit N Sec. 34 Twp. 31 North Rge. 13 West Purchaser El Paso Natural Gas Company
Casing 4-1/2 Wt. 10.50 I.D. 4.052 Set at 6680 Perf. 6422 To 6532
Tubing 1-1/2 Wt. 2.90 I.D. 1.610 Set at 6481 Perf. 6473 To 6481
Gas Pay: From 6422 To 6532 L 6473 xG .710 -GL 4596 Bar.Press. 12.0
Producing Thru: Casing _____ Tubing XX Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 10-22-63 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (PROVER) (Choke) (RECEIVER)

Type Taps _____

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1714		1713		7 days
1.	2	3/4	132		73°	132	73°	698		3 hrs.
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.	12.3650		144	.9877	.9193	1.015	1641
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c _____ (1-e^{-s})

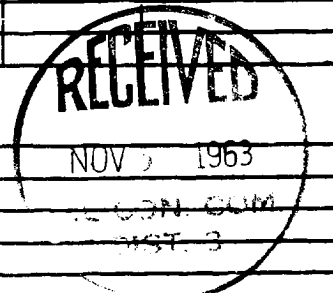
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1726 P_c 2979.1

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.						504.1	2475.0		1611
2.									
3.									
4.									
5.									

Absolute Potential: 1886 MCFPD; n .75
COMPANY Southern Union Production Company
ADDRESS P. O. Box 808 - Farmington, New Mexico
AGENT and TITLE Verne Rockhold - Jr. Engineer
WITNESSED Mr. C. Wagner
COMPANY El Paso Natural Gas Company

REMARKS

- cc: (3) N.M. O.C.G.
(1) Mr. Paul J. Clote
(1) El Paso Natural Gas Co., Proration Dept. Box 1492, El Paso, Texas
(2) Mr. H. L. Kindricks, P. O. Box 990, Farmington, New Mexico
(1) File



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 .