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 12/2/63

Company Southern Union Production Co. Lease NICKSON Well No. 11

Unit L Sec. 11 Twp. 26-N Rge. 8-W Purchaser El Paso Natural Gas Company

Casing 4-1/2 Wt. 10.50 I.D. 4.052 Set at 6784 Perf. 6624 To 6736

Tubing 1-1/2 Wt. 2.90 I.D. 1.610 Set at 6678 Perf. 6668 To 6678

Gas Pay: From 6624 To 6736 L 6668 xG .735 -GL 4901 Bar.Press. 12

Producing Thru: Casing ____ Tubing XX Type Well Single Gas
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 11-25-63 Packer ____ Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(Prover)~~ (Choke) ~~(Meter)~~ Type Taps ____

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						2041		2132		7 days
1.	2"	3/4	185		72°	185	72°	684		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		197	.9887	.9035	1.022	2224
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
F_c ____ $(1-e^{-s})$ ____ P_c 2144 P_c^2 4596.7

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.						484.4	4112.3		.325
2.									
3.									
4.									
5.									

Absolute Potential: 2417 MCFPD; n .75
COMPANY Southern Union Production Company
ADDRESS P. O. Box 808 - Farmington, New Mexico
AGENT and TITLE Verne Rockhold - Jr. Engineer
WITNESSED J. Goodwin
COMPANY El Paso Natural Gas Company

RECEIVED
DEC 1963
OIL CON. COM.

REMARKS

(3) N.M.O.C.C.
(1) Mr. Paul Clote
(1) El Paso Natural Gas Co. Proration Dept. P. O. Box 1492, El Paso, Texas
(2) Mr. H. L. Kindricks, 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.