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 1-22-64

Company Southern Union Production Co. Lease STATE Well No. 2-16

Unit M Sec. 16 Twp. 28-N Rge. 9-W Purchaser El Paso Natural Gas Company

Casing 4-1/2 Wt. 10.50 I.D. 4.052 Set at 7148 Perf. 6886 To 7066

Tubing 1-1/2 Wt. 2.90 I.D. 1.610 Set at 6956 Perf. 6946 To 6956

Gas Pay: From 6886 To 7066 L 6946 xG .730 -GL 5071 Bar.Press. 12.0

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

Date of Completion: 1-11-64 Packer ____ Reservoir Temp. ____

OBSERVED DATA

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

	Flow Data					Tubing Data		Casing Data		
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						1846		1844		11 days
1.	2"	3/4	290		68°	290	68°	1121		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		302	.9924	.9066	1.038	3487
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 1858 P_c^2 3452.2

No.	P_w Pt (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	P_w
1.						1283.7	2168.5		1859
2.									
3.									
4.									
5.									

RECEIVED
JAN 28 1964
OIL CON. COM.
DIST. 3

Absolute Potential: 4941 MCFPD; n .75

COMPANY Southern Union Production Company
ADDRESS P. O. Box 808 - Farmington, New Mexico
AGENT and TITLE Verne Rockhold - Jr. Engineer
WITNESSED Herman McAnally
COMPANY El Paso Natural Gas Company

Original Signed By
VERNE ROCKHOLD

REMARKS

(3) New Mexico 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.