SWP-99

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 __X__ Annual _____ Special _____ Date of Test __4/5/62__

Company __Southwest Production Co.__ Lease __Esther BAndy__ Well No. __1__

Unit __N__ Sec. __3__ Twp. __30 N__ Rge. __11 W__ Purchaser __El Paso Natural Gas Company__

Casing __5 1/2__ Wt. __17__ I.D. __4,892__ Set at __6859__ Perf. __6662__ To __6785__

Tubing __1 1/2__ Wt. __2.75__ I.D. __1.610__ Set at __6563__ Perf. _____ To __6563__

Gas Pay: From __6662__ To __6785__ L __6563__ xG __.67__ GL _____ Bar.Press. __12.0__

Producing Thru: Casing _____ Tubing __X__ Type Well __Single Gas__
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: __3/16/62__ Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)   Type Taps _____

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.
						Tubing Data		Casing Data		
SI						1840		1860		7 days
1.		3/4"	150		79	150	79	965		3 hr.
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		162	.9822	.9463	1.016	1,890
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 __1872__ P_c^2 __3504.3__
    P_w __977__ P_w^2 __954.5__

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	$\frac{P_w}{P_c}$
1.						954.5	2549.8		.522
2.									
3.									
4.									
5.									

Absolute Potential: __2,398__ MCFPD; n __.75__

COMPANY __Southwest Production Company__
ADDRESS __207 Petr. Club Plaza, Farmington, New Mexico__
AGENT and TITLE __George L. Hoffman__
WITNESSED _____
COMPANY _____

REMARKS

RECEIVED
APR 12 1962
OIL CON. COM.
DIST. 3
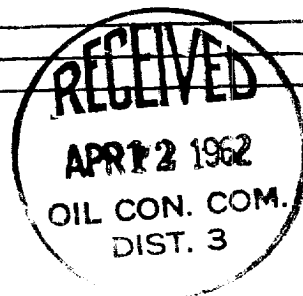
INSTRUCTIONS

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.