SWP-84

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 __11-27-61__

Company __Southwest Production Company__ Lease __Man Federal__ Well No. __1__

Unit __J__ Sec. __5__ Twp. __26__ Rge. __11__ Purchaser __El Paso Natural Gas Co.__

Casing __4½"__ Wt. __10.50__ I.D. __4.040__ Set at __6357__ Perf. __6240-66__ To __6308-24__

Tubing __1½"__ Wt. __2.75__ I.D. __1.610__ Set at __6325__ Perf. __Open__ To __end__

Gas Pay: From __6240__ To __6324__ L __6325__ xG __.67__ ⁻GL __4237.7__ Bar.Press. __12.0__

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

Date of Completion:_____ Packer_____ Reservoir Temp._____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)   Type Taps_____

No.	Flow Data (Prover)(Line) Size	(Choke)(Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						1880		1880		7 day
1.		3/4	307		68	307	68	1613		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		319	.9924	.9463	1.033	3,826
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 __1892__ P_c^2 __3579.6__

P_w __1625__ P_{w2} __2640.6__

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.						2640.6	939.0		.858
2.									
3.									
4.									
5.									

Absolute Potential: __10,437__ MCFPD; n __.75__

COMPANY __Southwest Production Company__
ADDRESS __207 Petr. Club Plaza, Farmington, N.M.__
AGENT and TITLE __George L. Hoffman, Production Engineer__
WITNESSED_____
COMPANY_____ •

REMARKS
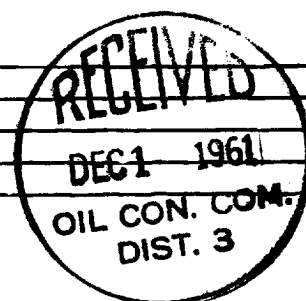
INSTRUCTIONS

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.