NEW MEXICO OIL CONSERVATION COMMISSION

SWP-123

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 __1/2/63__

Company __Southwest Production Company__ Lease __Hanson Federal__ Well No. __1__

Unit __M__ Sec. __11__ Twp. __26 N__ Rge. __11 W__ Purchaser __El Paso Natural Gas Company__

Casing __4½"__ Wt. __10.50#__ I.D. __4.052__ Set at __6455'__ Perf. __6360'__ To __6432'__

Tubing __1½"__ Wt. __2.73#__ I.D. __1.610__ Set at __6430'__ Perf._____ To __6430'__

Gas Pay: From __6360'__ To __6432'__ L __6430__ 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: __12/20/62__ 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						1927		1945		7 days
1.		3/4"		149	79	149	79	645		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		161	.9822	.9463	1.015	1,878
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_____
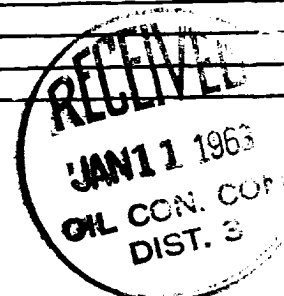P_c __1957__ P_c^2 __3829.8__

P_w __657__ P_w^2 __431.6__

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.						431.6	3398.2		.335
2.									
3.									
4.									
5.									

Absolute Potential: __2,047__ MCFPD; n __.75__

COMPANY __Southwest Production Company__

ADDRESS __234 Petr. Club Plaza, Farmington, New Mexico__

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.