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 11-8-63

Company W. H. Hudson Lease Fairfield Well No. 3

Unit F Sec. 14 Twp. 27N Rge. 13W Purchaser El Paso Natural Gas Co.

Casing 4-1/2" Wt. 10.5 I.D. ____ Set at 6150 Perf. 5902 To 5983

Tubing 2-3/8" Wt. 4.7 I.D. ____ Set at 5920 Perf. ____ To ____

Gas Pay: From 5900 To 5990 L ____ xG ____ -GL ____ Bar.Press. ____

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

Date of Completion: 11-1-63 Packer No Reservoir Temp. ____

OBSERVED DATA

Tested Through (Prover) (X 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	2"	0.750				2069		2083		
1.						374		631		1
2.						143		528		2
3.						123		460		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.	12.365		135	0.9813	0.9608	1.025	1,613
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 0.650
Specific Gravity Flowing Fluid ____
P_c 2095 P_c^2 4,389,025

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.	472					222,784	4,166,241		
2.									
3.									
4.									
5.									

Absolute Potential: ____ MCFPD; n ____

COMPANY W. H. Hudson
ADDRESS 1126 Mercantile Securities Bldg. Dallas 1, Texas
AGENT and TITLE George Naron
WITNESSED ____
COMPANY ____

REMARKS

1613 $\sqrt{\frac{4,389,025}{4,166,241}}$ · 75 = 1.0531 · 75 = 1,0375 = 1,077 MCF

RECEIVED
NOV 14 1963
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.