NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Sawyer Formation San Andres County Lea

Initial X Annual ____ Special ____ Date of Test April 10, 1961

Company Alamo Corp. Lease Bell Federal Well No. 3

Unit N Sec. 20 Twp. 9S Rge. 38E Purchaser None - shut-in

Casing 5½ Wt. 14# I.D. 5.012 Set at 5019' Perf. 4917'-28', 4950'-94' To ____

Tubing 2 Wt. 4.70# I.D. 1.995 Set at 4883' Perf. None To ____

Gas Pay: From 4917' To 4994' L 4955½' xG .773 -GL 3831 Bar.Press. 13.2 psia

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

Date of Completion: 4-10-61 Packer None 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	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI	2"					1199	60	1199	60°	72 hr.
1.	2"	0.0625				1188	53	1186		1 hr. 15 min
2.	2"	0.0125				1128	68	1133		3 hr.
3.	2"	0.187				1010	77	1028		3 hr.
4.	2"	0.218				852	71	921		3 hr.
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.	.0827		1201.2	1.0068	.8809	1.127	99.3
2.	.3418		1141.2	.9924	.8809	1.102	376.7
3.	.7851		1023.2	.9840	.8809	1.087	756.9
4.	1.0834		865.2	.9896	.8809	1.077	880.0
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio -0- cf/bbl.
Gravity of Liquid Hydrocarbons -0- deg.
P_c ____ $(1-e^{-s})$ ____

Specific Gravity Separator Gas *0.773
Specific Gravity Flowing Fluid -0-
P_c 1212.2 P_c^2 1469.4

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.	1169.2					1438.1	31.3		98.9
2.	1146.2					1313.8	155.6		94.6
3.	1041.2					1084.1	385.3		85.9
4.	934.2					872.7	596.7		77.1
5.									

Absolute Potential: 2226 MCFPD; n 0.80550

COMPANY ____
ADDRESS Denton Oil Company
AGENT and TITLE 5238 34th Street, Lubbock, Texas
WITNESSED C. J. Jordan, Jr., Gas Engineer
COMPANY ____

REMARKS

*CO_2 & N Composition of Gas 9.90% & 9.68%

Note: The fourth flow stabilized at 3 hrs and was therefore not continued beyond that time.

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.

JENTON OIL COMPANY

Company: Alamo Corporation
Well: Bell Federal No. 3
Location: SE/4 SW/4, Sec. 20, T-9S, R-38E
County: Lea
Date: April 10, 1961