N MEXICO OIL CONSERVATION COMMIS.

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Morrow County Lea

Initial X Annual Special Date of Test 1-18-62

Company El Paso Natural Gas Company Lease Mescalero Ridge Unit Well No. 2

Unit B Sec. 28 Twp. 19 Rge. 34 Purchaser

Casing 5 1/2 Wt. 17.0 I.D. Set at 13,587 Perf. 13,132 To 13,148

Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 13,129 Perf. To

Gas Pay: From 13,325 To 13,415 L 13,129 xG .685 (Assumed) -GL 11,356 Bar.Press. 13.2

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

Date of Completion: 1-7-62 Packer 13,114 Reservoir Temp.

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) Type Taps Flange

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						4615				72
1.	4	1.500	600	3.0	88	2582				3
2.	4	1.500	600	7.0	89	1745				3
3.	4	1.500	600	10.0	92	1162				3
4.	4	1.500	600	11.0	93	760				3
5.	4	1.500	599	11.0	94	1032				13 *

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.	14.36	42.89		.9741	.9359	1.061	595.6
2.	14.36	65.52		.9732	.9359	1.061	909.3 ~~409.5~~
3.	14.36	78.31		.9706	.9359	1.057	1,079
4.	14.36	82.13		.9653	.9359	1.056	1,125
5.	14.36	82.06		.9688	.9359	1.057	1,129

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 13,817 cf/bbl.
Gravity of Liquid Hydrocarbons 56.1 @ 60 deg.
F_c 9.936 $(1-e^{-s})$ .542

Specific Gravity Separator Gas .685 (Assumed)
Specific Gravity Flowing Fluid .7543
P_c 4628.2 P_c^2 21420.2

No.	~~Pw~~ Pt (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	2595.2	6735.1	5.918	35.02	19.0	6754.1	14666.1	2598.9	.56
2.	1758.2	3091.3	9.035	81.63	44.2	3135.5	18284.7	1770.7	.38
3.	1175.2	1381.1	10.72	114.92	62.3	1443.4	19976.8	1201.4	.26
4.	773.2	597.8	11.18	124.99	67.7	665.5	20754.7	815.8	.18
5.	1045.2	1092.4	11.22	125.89	68.2	1160.6	20259.6	1077.5	.23

Absolute Potential: 1,185 MCFPD; n 1.000

COMPANY El Paso Natural Gas Company
ADDRESS P. O. Box 1384 - Jal, New Mexico
AGENT and TITLE John A. Disch - Petroleum Engineer
WITNESSED L. D. Southern and Bobby G. Boaz
COMPANY El Paso Natural Gas Company

REMARKS

* Well was considered stabilized in 6 hours to avoid waste of gas. It was shut-in after flowing 13 hours of the 24 hour flow point.
Slope greater than 1.000. Slope of 1.000 drawn through point corresponding to highest rate of flow.

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.