NEW MEXICO OIL CONSERVATION COMMISSION

ELVIS A. [illegible] GAS ENGINEER

MAIN OFFICE OCC HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

[illegible] 8:00 1956 OCT 10 PM 3:06

Pool Eumont Formation Queen County Lea

Initial ____ Annual ____ Special X Date of Test 8-20 to 8-24-56

Company El Paso Natural Gas Company Lease Shell State Well No. 5

Unit L Sec. 2 Twp. 21 S Rge. 36 E Purchaser El Paso Natural Gas Company

Casing 5½ Wt. 15.5 I.D. 4.076 Set at 3420 Perf. ____ To ____

Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3478 Perf. ____ To ____

Gas Pay: From 3420 To 3585 L 3478 xG .670 -GL ____ Bar.Press. 13.2

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

Date of Completion: 7-26-56 Packer None Reservoir Temp. ____

OBSERVED DATA

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

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						864		864		72
1.	4"	1.250	571	8.2"	68	714		745		24
2.	4"	1.250	566	6.9"	68	737		759		24
3.	4"	1.250	571	5.0"	69	778		790		24
4.	4"	1.250	570	3.5"	77	808		814		24
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.	9.643	198.16		.9884	.9463	1.062	1,905
2.	9.643	167.23		.9884	.9463	1.062	1,609
3.	9.643	120.83		.9895	.9463	1.062	1,161
4.	9.643	84.51		.9840	.9463	1.057	808
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
F_c Measured $(1-e^{-s})$ ____ P_c 877.2 P_c^2 769.5

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.	758.2					574.9	194.6		.83
2.	772.2					596.3	173.2		.85
3.	803.2					645.1	124.4		.90
4.	827.2					684.3	85.2		.94
5.									

Absolute Potential: 7,000 MCFPD; n .96

COMPANY El Paso Natural Gas Company

ADDRESS P. O. Box 1364; Jal, New Mexico

AGENT and TITLE R. T. Wright R. T. Wright; Petroleum Engineer

WITNESSED Earl G. Smith

COMPANY El Paso Natural Gas Company

REMARKS

Decreasing sequence used because of fluid.
Not enough draw down because of choke size.

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.