NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool T-V Penn. Formation Penn (Morrow Sand) County Chaves

Initial X Annual Special Date of Test 4-8-60

Company Robinson Bros. Oil Producers Lease Manry-Elliott Well No. 1

Unit C Sec. 22 Twp. 11 S Rge. 31 E Purchaser El Paso Natural Gas Co.

Casing 5 1/2 Wt. 17# & 20# I.D. 4.76 Set at 11,000 Perf. 10,866 To 10,906

Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 10,724 Perf. To

Gas Pay: From 10,856 To 10,910 L 10,724 xG 0.792 -GL 6493 Bar.Press. 13.2

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

Date of Completion: Packer 10,719 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						3075				72
1.	3.0"	1.50	690	15	100	2766	85			2:45
2.	3.0"	1.50	700	49	86	2524	90			2:00
3.	3.0"	1.75	690	37	83	2366	92			2:15
4.	3.0"	1.75	800	57	82	2048	92			2:00
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.	14.36	102.70 102.5	703.2	0.9636	0.9499	1.055	1420 1421.9
2.	14.36	176.94 187	713.2	0.9759	0.9498	1.064	2642 2612.6
3.	20.15	161.80 161	703.2	0.9786	0.9498	1.066	3200 3236
4.	20.15	215.30 215	813.2	0.9795	0.9498	1.076	4330 4336.5
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 19976 cf/bbl. Specific Gravity Separator Gas 0.667
Gravity of Liquid Hydrocarbons 56.9 deg. Specific Gravity Flowing Fluid 0.751
P_c 9.936 $(1-e^{-s})$ 0.442 P_c 3089.2 P_c^2 9543.1

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.	2781.2	7735.0	14.11	199.1	88.0	7823.0	1720.1	2790	90.5
2.	2537.2	6437.4	26.25	689.1	304.6	6742.0	2801.1	2585	83.7
3.	2379.2	5660.6	31.89	1011.2	446.9	6107.5	3435.6	2461	79.6
4.	2061.2	4248.5	43.02	1850.7	818	5066.5	4476.6	2240	72.5
5.									

Absolute Potential: 9200 MCFPD; n 1.000

COMPANY Robinson Brothers Oil Producers
ADDRESS 142 Allen Building, Midland, Texas
AGENT and TITLE Agent - Oil Reports & Gas Services
WITNESSED Jim Holcomb
COMPANY National Tank 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.