

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

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Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 OCT 22 AM 10:22

Pool Summit Formation Queen County LeaInitial _____ Annual X Special _____ Date of Test 9/3/56Company Tennessee Gas Transmission Co. Lease Killen Fair Well No. 1Unit L Sec. 3 Twp. 205 Rge. 37E Purchaser Permian Basin PL Co.Casing 5 1/2" Wt. 17.0# I.D. 4.892 Set at 3650 Perf. 3510 To 3610Tubing 2 3/8" Wt. 11.7# I.D. 1.995 Set at 3620 Perf. _____ To _____Gas Pay: From 3510 To 3610 L 3510 xG 0.675 -GL 2369 Bar.Press. 13.2Producing Thru: Casing X Tubing _____ Type Well Single Completion

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 11/30/54 Packer _____ Reservoir Temp. _____

CO 0.93% N 1.78%

OBSERVED DATA

Tested Through 2 (Prover) (Choke) (Meter) Type Taps Pipe

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						779.5		867.6		71 3/4 Hrs. SI
1.	1	1.50	451.7	15.0	55	744.0		770.7		23 3/4 Hrs.
2.	1	1.50	457.3	26.5	61	711.5		659.4		23 3/4 Hrs.
3.	1	1.50	456.8	11.2	65	632.5		589.0		24 Hrs.
4.	1	1.50	457.0	13.8	64	591.2		548.7		23 3/4 Hrs.
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.	15.26	83.51		1.0048	0.9427	1.049	1266
2.	15.26	111.70		0.9990	0.9427	1.047	1681
3.	15.26	139.10		0.9952	0.9427	1.045	2081
4.	15.26	143.50		0.9962	0.9427	1.047	2153
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.812 (1-e^{-s}) 0.150Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 880.8 P_c 775.8

No.	$\frac{P_c}{P_t}$ P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.	783.9	614.5	2.294	5.262	0.7893	615.3	160.5	784.4	0.89
2.	672.6	452.4	3.046	9.278	1.392	453.8	322.0	673.6	0.76
3.	602.2	362.6	3.771	14.220	2.133	364.7	411.1	603.9	0.69
4.	561.9	315.7	3.901	15.220	2.283	318.0	457.8	563.9	0.64
5.									

Absolute Potential: 2873 MCFPD; n 0.52COMPANY Permian Basin Pipe Line CompanyADDRESS Hobbs, New MexicoAGENT and TITLE R. L. West, Gas Engineer

WITNESSED _____

COMPANY _____

REMARKS

This is a retest. Well was blown 8/26/56

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 .

COMPANY	<u>Tennessee Gas Transmission Co.</u>
WELL	<u>Ellen Weir No. 1</u>
LOCATION	<u>L 3, T-20-S, R-37-E</u>
COUNTY	<u>LEA</u>
DATE	<u>9-3-56</u>

