

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Blinebry (Gas) Formation Blinebry County Lea
Initial X Annual _____ Special _____ Date of Test 12-14-57
Company N. B. Hunt Lease Weatherly Well No. 1-E
Unit C Sec. 21 Twp. 21-S Rge. 37-E Purchaser None
Casing 5 1/2 Wt. 15.5 I.D. 4.976 Set at 6190 Perf. 5568 To 5608
O. D. 2.375
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 5790 Perf. Tubb Pay To _____
Gas Pay: From 5568 To 5608 L 5588 xG .854 -GL 4772 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. G. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: _____ Packer 5790 Reservoir Temp. 100

OBSERVED DATA

Tested Through (XXXXXXXXXXXXXX) (Tester) Type Taps _____

No.	Flow Data				Tubing Data		Casing Data		Duration of Flow Hr.
	(XXXXXX) (Line) Size	(XXXXXX) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.
SI								1780	
1.	3.000	2.000	5.0		68			1310	3
2.	"	"	8.0		77			925	3
3.	"	"	11.0		81			363	3
4.	"	"	12.0		81			108	3
5.									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure Inches Mercury XXXX	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	1299		10	.9924	.8381	1.000	1080
2.	1692		16	.9840	"	"	1395
3.	2040		22	.9804	"	"	1676
4.	2149		24	.9804	"	"	1766
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons None Prod. deg.
P_c 1.758 (1-e^{-S}) .280
Specific Gravity Separator Gas .854
Specific Gravity Flowing Fluid _____
P_c 1793.2 P_c² XXXXXX 3215.6

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-S})	F _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	1323.2	1750.9	1.899	3.606	1.010	1751.9	1463.7	1323.6	73.8
2.	938.2	880.2	2.452	6.012	1.683	881.9	2333.7	939.1	52.3
3.	376.2	141.5	2.946	8.679	2.430	143.9	3071.7	379.3	21.1
4.	121.2	14.7	3.105	9.641	2.699	17.4	3198.2	131.9	7.3
5.									

Absolute Potential: 1,775 MCFPD; n .61
COMPANY West Texas Engineering Service, Inc.
ADDRESS P. O. Box 2464 - Midland, Texas
AGENT and TITLE R. W. Harrington - Field Petroleum Engineer
WITNESSED _____
COMPANY _____

REMARKS

Tested with a Portable Test Tank and Low Pressure Separator.
A 24 Hr. Rate was not obtained because the gas was being vented.
Proof of Stabilization: Rate #4 - End of 2 Hrs. Well Head Press. 108#
End of 2 1/2 Hrs " " " 108#
End of 3 Hrs. " " " 108#

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 .

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