

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blinebry Gas Formation Blinebry County Lea
Initial x Annual _____ Special _____ Date of Test 10-25 to 11-1-63
Company Shell Oil Company Lease Livingston Well No. 11
Unit M Sec. 3 Twp. 21-S Rge. 37-E Purchaser El Paso Natural Gas Company
Casing 2 7/8" Wt. 6.5 I.D. 2.441 Set at 6724 Perf. 5758 To 5839
*Tubing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 5758 To 5839 L. 5758 xG Mix .765 -GL 4405 Bar.Press. 13.2
Producing Thru: Casing x Tubing _____ Type Well G.O.O. Triple
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2-1-63 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Pressure) (Glycer) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Glycer) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1246		72
1.	4	1.250	553	7.29	78			1013		24
2.	4	1.250	573	13.69	86			937		24
3.	4	1.250	581	18.06	77			899		24
4.	4	1.250	596	26.01	69			824		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	64.25	566.2	.9831	.9285	1.060	599.4
2.	9.643	89.58	586.2	.9759	.9285	1.057	827.3
3.	9.643	103.60	594.2	.9840	.9285	1.064	971.1
4.	9.643	125.88	609.2	.9915	.9285	1.070	1,196
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 39.933 cf/bbl.
Gravity of Liquid Hydrocarbons 48.0 deg.
F_c 5.866 (1-e^{-s}) .261
Specific Gravity Separator Gas .696
Specific Gravity Flowing Fluid .7883
P_c 1259.2 P_c² 1585.6

No.	P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /P _c
1.	1028.2	1057.2	3.516	12.362	3.226	1060.4	525.2	1029.7	81.8
2.	950.2	902.9	4.853	23.552	6.147	909.0	676.6	953.4	75.7
3.	912.2	832.1	5.696	32.444	8.468	840.6	743.0	916.8	72.8
4.	837.2	700.9	7.016	49.224	12.847	713.7	871.9	844.8	67.1
5.									

Absolute Potential: 2,150 MCFPD; n 1.000

COMPANY Shell Oil Company
ADDRESS P. O. Box 1858, Roswell, New Mexico
AGENT and TITLE A. L. Ellerd - Gas Tester
WITNESSED L. D. Southern
COMPANY El Paso Natural Gas Company

REMARKS

*Tubingless Completion

Slope greater than 1.000, a slope of 1.000 drawn through 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 .

NOV 20 10 32 AM '63
HOBBBS OFFICE O.C.C.

GAS WELL BACK PRESSURE CURVE

County 1 Field BLINEBRY GAS
Operator SHELL OIL COMPANY
Lease LIVINGSTON Well No. 11
Volume 2,150 MCF/24 hr.
Date NOVEMBER 1, 1963

