

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blinbry Gas Formation Blinbry County Lee
 Initial _____ Annual _____ Special X Date of Test 10-11 to 18-63
 Company Shell Oil Company Lease Long Well No. 5
 Unit N Sec. 11 Twp. 22-S Rge. 37-E Purchaser El Paso Natural Gas Company
 Casing 5 1/2 Wt. 15.5 I.D. 4.976 Set at 6099 Perf. 5405 To 5590
 Tubing 2 Wt. 4.7 I.D. 1.995 Set at 5927 Perf. 5909 To 6070
 Gas Pay: From 5405 To 5590 L 5405 xG Mlx .718 GL 3881 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: 8-9-54 Packer 5680 Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~(Pressure)~~ ~~(Gauge)~~ (Meter) _____ Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Gauge) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1583		72
1.	4	1.500	558	14.44	68			1315		24
2.	4	1.500	547	25.00	68			1282		24
3.	4	1.500	560	42.25	68			1214		24
4.	4	1.500	591	75.69	64			1152		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	90.82	571.2	.9924	.9339	1.066	1.255
2.	13.99	118.34	560.2	.9924	.9339	1.062	1.628
3.	13.99	155.62	573.2	.9924	.9339	1.066	2.150
4.	13.99	213.85	604.2	.9962	.9339	1.072	2.984
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 90.967 cf/bbl. Specific Gravity Separator Gas .688
 Gravity of Liquid Hydrocarbons 52.5 deg. Specific Gravity Flowing Fluid .7690
 F_c 1.758 (1-e^{-s}) .234 P_c 1596.2 P_c² 2547.8

No.	P_t 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	$\frac{P_w}{P_c}$
1.	1328.2	1764.1	2.206	4.866	1.139	1765.2	782.6	1328.7	83.2
2.	1295.2	1677.5	2.862	8.191	1.917	1679.4	868.4	1295.9	81.2
3.	1227.2	1506.0	3.780	14.288	3.343	1509.3	1038.5	1228.5	77.0
4.	1165.2	1357.7	5.246	27.520	6.440	1364.1	1183.7	1167.9	73.2
5.									

Absolute Potential: 6.300 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 J. B. Murray
 COMPANY El Paso Natural Gas Company

REMARKS

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} = Supercompressibility 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 .