

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Monument Formation Grayburg County Lea
Initial X Annual _____ Special _____ Date of Test 12/8-9/58
Company Amerada Petroleum Corporation Lease L.M. Lambert Well No. 2
Unit G Sec. 6 Twp. 20-S Rge. 37-E Purchaser _____
Casing 6-5/8 Wt. 24 I.D. 5.921 Set at 3816 Perf. 3703 To 3713
Tubing 2-7/8 Wt. 6.5 I.D. 2.441 Set at 3709 Perf. 3706 To 3709
Gas Pay: From 3703 To 3713 L 3706 xG 0.654 -GL 2425 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 12/1/58 Packer 3664 Reservoir Temp. _____
Single-Bradenhead-G. G. or G.O. Dual

OBSERVED DATA

Tested Through (Prever) (Shole) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	4"	2"				941	73			
1.	4"	2"	871	1.0	72	873	72			3
2.	4"	2"	733	4.3	70	735	70			3
3.	4"	2"	668	6.5	59	670	59			3
4.	4"	2"	605	8.6	57	607	57			3
5.	2"	0.625 In.	104		58	812	58			20

Prever

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	25.58	29.73		0.9887	0.9571	1.092	785.13
2.	"	56.65		0.9905	0.9571	1.079	1482.29
3.	"	66.54		1.0010	0.9571	1.078	1757.90
4.	"	72.91		1.0029	0.9571	1.069	1963.53
5.	8.3535		117.2	1.0019	0.9571	1.092	1027.30

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons None deg.
F_c 5.866 (1-e^{-s}) 0.154

Specific Gravity Separator Gas 0.654
Specific Gravity Flowing Fluid _____
P_c 954.2 P_c² 910.50

No.	P _w 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.	886.2	785.35	4.686	21.215	3.27	788.62	121.88	888.1	94.0
2.	748.2	559.80	8.695	75.603	11.64	571.44	339.06	755.9	79.2
3.	683.2	466.76	10.312	106.337	16.38	483.14	427.36	695.1	72.8
4.	620.2	384.65	11.518	132.664	20.43	405.08	505.42	636.4	66.7
5.	825.2	680.96	6.026	36.313	5.59	686.55	223.95	828.5	86.8

Absolute Potential: 2,360 MCFPD; n 0.64970COMPANY Amerada Petroleum CorporationADDRESS Drawer D - Monument, New MexicoAGENT and TITLE D. E. Brubaker District EngineerWITNESSED WestCOMPANY Permian Basin Pipe Line Company

REMARKS

In order to prevent waste and protect correlative rights, a 4-point, 3 hr flow rate test was taken to determine the slope; a 20-hr. one-point test was taken to determine the absolute potential. On this 20-hr. test the gas was measured with a critical flow prever. No pipeline available for gas, therefore it was necessary to vent the gas to the atmosphere.

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 .

	$F_c G$	$(F_c G)^2$	$F_c G$			
	4.601					Cole Pw
1	4.601	21.169	3.26	727.61	2.174	588.0
2	8.162	75.020	11.55	133.25	33.150	1151.9
3	10.292	105.925	16.31	263.04	10.920	115.6
4	11.214	125.754	17.37	301.02	10.440	655.6
5	35.563	36.947	4.77	65.730	2.174	823.1