

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

1957 FEB 11 AM 9:49

Pool Bumont Formation Queen County Lea

Initial Annual Special Date of Test 6-4-56

Company Amerada Petroleum Corporation Lease State "Q" Well No. 1

Unit M Sec. 18 Twp. 19-8 Rge. 37-E Purchaser Permian Basin Pipe Line

Casing 7" Wt. 26.0# I.D. 6.171 Set at 4.016 Perf. 3510 To 3655

Tubing Wt. 6.5# I.D. 2.441 Set at 4028 Perf. 3994 To 4018

Gas Pay: From 3510 To 3655 L 3510 xG .686 -GL Bar. Press. 13.2

Producing Thru: Casing X Tubing Type Well Gas-oil Dual

Single-Bradhead-G. G. or G.O. Dual

Date of Completion: 11-6-53 Packer 3680 Reservoir Temp. 92°

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	4"	2-9/4		7.3	72			1040.4		72
2.	"	2-3/4		24.7	69			971.8		24
3.	"	2-3/4		21.6	70			917.2		24
4.	"	2-3/4		33.4	70			871.2		24
5.								807.2		24

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.	73.11	59.93	460.7	0.9387	.9350	1.050	4255.63
2.	"	84.28	465.0	0.9915	"	"	5984.72
3.	"	102.74	473.2	0.9905	"	"	7295.97
4.	"	128.41	480.0	0.9905	"	"	9318.39
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
 Gravity of Liquid Hydrocarbons deg.
 F_c .865 (1-e^{-s}) .353
 Specific Gravity Separator Gas
 Specific Gravity Flowing Fluid
 P_c 1053.6 P_c 1110.1

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.	985.0	970.2	3.68	13.54	2.87	972.3	137.8	989.1	89.10
2.	930.4	865.6	5.18	26.83	4.10	869.7	200.4	931.8	83.94
3.	884.4	782.2	6.31	39.82	6.09	788.3	321.8	889.2	80.10
4.	820.4	673.1	7.89	62.25	9.52	682.6	427.3	827.1	74.51
5.									

Absolute Potential: 17200 MCFPD; n 0.67
 COMPANY Amerada Petroleum Corporation
 ADDRESS Drawer D - Monument, New Mexico
 AGENT and TITLE W.G. Abbott - Dist. Engineer
 WITNESSED
 COMPANY Permian Basin Pipe Line Company

REMARKS

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 .