

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

NOV 24 1955

1957 FEB 11 AM 10:07

Pool Monument Formation Queens County Lea

Initial Annual Special Date of Test 6-26-56

Company Amerada Petroleum Corporation Lease Weir "B" Well No. 1

Unit G Sec. 26 Twp. 19-S Rge. 36-E Purchaser Northern Natural Gas Company

Casing 6-5/8" Wt. 20.0# I.D. 6.049" Set at 3785' Perf. 3565' To 3775'

Tubing 2-7/8" Wt. 6.5# I.D. 2.441" Set at 3939' Perf. 3935' To 3939'

Gas Pay: From 3565' To 3775' L 3565' xG 0.675 -GL 2406' Bar. Press. 13.2

Producing Thru: Casing Tubing Type Well G.O. Dual

Date of Completion: 2-19-54 Packer Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 90°F

OBSERVED DATA

Tested Through (Monument) (Queens) (Meter) Type Taps Pipe

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.		
	(Pressure) (Line) Size	(Close) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.		Press. psig	Temp. °F.
1.	4"	2.25"	457.5	10.9	76			911.4		73 SI
2.	4"	2.25"	456.8	19.9	72			895.6		23-3/4 hr.
3.	4"	2.25"	454.9	31.0	73			786.9		25-1/2 hr.
4.	4"	2.25"	459.5	41.7	73			718.7		24-1/4 hr.
5.	4"	2.25"	459.5	41.7	73			664.9		23-3/4 hr.

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.	40.53	71.63	470.7	0.9868	0.9427	1.044	2819.5
2.	40.53	96.71	470.0	0.9887	0.9427	1.044	3013.9
3.	40.53	120.46	468.1	0.9877	0.9427	1.044	4745.8
4.	40.53	140.40	472.7	0.9859	0.9427	1.044	5521.4

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
 Gravity of Liquid Hydrocarbons deg.
 Specific Gravity Separator Gas 0.655
 Specific Gravity Flowing Fluid
 ρ_c 924.6 ρ_c 854.9

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.	819.0	720.8	2.9	8.4	1.3	722.1	132.8	849.8	91.91
2.	800.1	640.2	3.97	15.76	2.4	642.6	212.3	801.6	86.70
3.	731.9	535.7	4.9	24.40	3.7	539.4	315.5	734.4	79.43
4.	678.1	459.8	5.75	33.06	5.1	464.9	390.0	681.8	73.74

Absolute Potential: 8750 MCFPD; n .6125

COMPANY Amerada Petroleum Corporation

ADDRESS Drawer D, Monument, New Mexico

AGENT and TITLE William G. Abbott, District Engineer *W. G. Abbott*

WITNESSED

COMPANY Permian Basin PL

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} = 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 .