

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Forest Formation Queens 1957 FEB 11 AM 12:00 County Lea

Initial _____ Annual _____ Special X Date of Test 8-10-56

Company Amerada Petroleum Corporation Lease State "J" Gas Unit Well No. 3

Unit K Sec. 2 Twp. 20-S Rge. 36-E Purchaser Permian Basin Pipeline

Casing 6-5/8" Wt. 20.0# I.D. 6.049" Set at 3810 Perf. 3400' To 3500'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3504' Perf. - To -

Gas Pay: From 3338' To 3434' L 3338' xG .665 -GL 2220' Bar.Press. 13.2

Producing Thru: Casing X / Tubing _____ Type Well G.O. Dual

Date of Completion: 5-1-56 Packer 3500' Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 91°F

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Orifice) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								859.8		72
1.	4"	2.5"	454.5	6.4	76			827.6		23.25
2.	4"	2.5"	454.1	17.4	62			789.8		24
3.	4"	2.5"	456.0	27.6	62			770.7		25
4.	4"	2.5"	451.7	37.8	64			729.7		23.25
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.	54.44	54.71	467.7	0.9850	0.9498	1.041	2900
2.	54.44	90.16	467.3	0.9981	"	1.044	4858
3.	54.44	102.95	469.2	0.9981	"	1.044	5547
4.	54.44	135.38	484.9	0.9962	"	1.048	7308
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c .875 (1-e^{-S}) .142

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid .665
P_c 873 P_c 762.1

CO₂ 3.25%N₂ 1.43%

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.	840.8	706.9	2.54	6.44	.91	707.81	54.29	841.3	.96
2.	803.0	644.8	4.25	18.06	2.56	647.36	114.74	804.5	.92
3.	783.9	614.5	4.85	23.52	3.34	617.84	144.26	786.0	.90
4.	742.9	551.9	6.39	40.83	5.79	557.69	204.41	746.1	.85
5.									

Absolute Potential: 19000 MCFPD; n .72COMPANY Amerada Petroleum CorporationADDRESS Drawer D - Mesquite, New MexicoAGENT and TITLE W. S. Zittel

WITNESSED _____

COMPANY Permian Basin P.L.

REMARKS _____

EWS
3/7/57

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 .