

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

NOV 24 1955
MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS
1957 FEB 11 AM 10:00

Pool Monmouth Gas Formation Seven Rivers - Queen County Lea

Initial _____ Annual _____ Special _____ Date of Test 6-13-56

Company Amerada Petroleum Corporation Lease J.R. Phillips "A" Gas Unit Well No. 1

Unit 0 Sec. 31 Twp. 19 Rge. 37 Purchaser Permian Basin Pipe Line

Casing 6-5/8" Wt. 20.0# I.D. 6.049" Set at 3794' Perf. 2916-2970' To 3190-3255'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3517 Perf. 3292-3350' To 3380-3420'

Gas Pay: From 2707' To 3500' L 3292' xG 0.677 -GL 2226.7 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing Type Well _____

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 12-12-52 Packer _____ Reservoir Temp. 80°

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						982.0				72-1/2
1.	4"	2.250"	452.6	6.3	68	870.2				24
2.	4"	2.250"	456.5	9.0	56	769.0				24
3.	4"	2.250"	454.5	16.0	60	648.4				23-3/4
4.	4"	2.250"	452.2	18.8	62	587.3				23-1/2
5.										

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	54.18	465.8	0.9984	0.9413	1.038	2129.2
2.	40.53	65.02	469.7	1.0099	0.9413	1.041	2392.4
3.	40.53	86.50	467.7	1.0080	0.9413	1.043	3441.9
4.	40.53	93.53	465.4	0.9981	0.9413	1.043	3714.6
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c EX 9.936 (1-e^{-S}) 0.142

Specific Gravity Separator Gas .655
Specific Gravity Flowing Fluid _____
P_c 995.2 P_c 990.4

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.	843.4	711.3	21.16	447.4	61.5	774.8	215.6	880.2	88.64
2.	782.2	611.8	25.76	663.6	94.2	706.0	284.4	840.2	84.43
3.	662.6	439.0	34.20	1169.6	166.1	605.1	385.3	777.9	78.17
4.	600.5	360.6	36.91	1362.3	193.4	524.0	436.4	744.3	74.79
5.									

Absolute Potential: 7200 MCFPD; n 0.8128

COMPANY Amerada Petroleum Corporation

ADDRESS Deer D - Monmouth, New Mexico

AGENT and TITLE W.G. Abbott - District Engineer *W.G. Abbott*

WITNESSED _____

COMPANY Permian Basin Pipe Line

REMARKS

ELVIS A. UTT
Gas Engineer

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 .