

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

NOV 24 1956

MULTI-POINT BACK PRESSURE TEST HOBBS GAS WELLS

Revised 12-1-55

Pool Bumont Formation Seven Rivers Queen County Lea

Initial _____ Annual _____ Special _____ Date of Test 6-26-56

Company Amerada Petroleum Corporation Lease State "T" Well No. 3

Unit F Sec. 25 Twp. 19-S Rge. 36-E Purchaser Northern Natural Gas Co.

Casing 6-5/8" Wt. 20.0# I.D. 6.049" Set at 3819' Perf. 3413' To 3675'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3579' Perf. 3576' To 3579'

Gas Pay: From 3413' To 3675' L 3576' xG 0.670 -GL 2396' Bar.Press. 13.2

Producing Thru: Casing _____ Tubing XI Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 1-10-52 Packer _____ Reservoir Temp. 91°

OBSERVED DATA

Tested Through (~~Pressure~~) (Orifice) (Meter)

Type Taps _____

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.	
SI								
1.	4	2.25	458.3	8.6	106	913.1		72-3/4 S.I.
2.	4	2.25	457.1	12.3	70	691.4		23-3/4 hr.
3.	4	2.25	456.9	11.8	70	563.3		23-1/2 hr.
4.						560.7		24-1/4 hr.
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.	40.53	64.41	471.5	0.9585	0.9463	1.035	2450.7
2.	40.53	76.06	470.3	0.9703	0.9463	1.045	3019.4
3.	40.53	74.18	470.1	0.9703	0.9463	1.045	2956.7
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

ρ_c 9.936 (1-e^{-s}) 0.152

Specific Gravity Separator Gas 0.655

Specific Gravity Flowing Fluid _____

P_c 926.3 P_c 858.0

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.	704.6	496.5	24.35	592.9	99.1	506.6	271.4	745.9	82.60
2.	576.5	332.4	30.00	900.0	136.8	469.2	308.8	685.0	73.95
3.	573.9	329.4	29.38	863.2	131.2	460.6	397.4	678.7	73.27
4.									
5.									

Absolute Potential: 4700 MCFPD; n .5634COMPANY Amerada Petroleum Corporation

ADDRESS _____

AGENT and TITLE W. B. Abbott

WITNESSED _____

COMPANY Permian Basin PL

REMARKS _____

ELVIS A. UTZ
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} = 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 .