

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Langlie Mattix Formation 7 Rivers, Quaternary County Lea
Initial X Annual _____ Special _____ Date of Test 4-17-63
Company Amerada Petroleum Corporation Lease Ida Wimberley Well No. 16
Unit K Sec. 25 Twp. 25 Rge. 37 Purchaser None
Casing 2-7/8" Wt. 6.54 I.D. 2.441" Set at 5494' Perf. 3015' To 3220'
Tubing _____ Wt. _____ I.D. _____ Set at _____ Perf. _____ To _____
Gas Pay: From 3015' To 3220' L 3015' xG 0.65 -GL 1960 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G.O. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 4-16-63 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) XXXXXXXXXXXX Type Taps _____

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						344				72
1.	2	.730	23		64	340				3
2.	2	.875	17		65	353				3
3.	2	.875	11		65	345				3
4.	2	1.125	22		66	341				7
5.	2	.730	23		64	340				24

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.	12.2223		36.2	.9742	.9408		422.8
2.	16.7816		30.2	.9732	"		484.6
3.	16.7816		44.2	.9722	"		707.3
4.	22.2549		41.2	.9722	"		1110.0
5.	12.2223		36.2	.9742	"		422.8

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons Dry deg.
P_c 5.046 (1-e^{-s}) .126
Specific Gravity Separator Gas 0.65
Specific Gravity Flowing Fluid Dry
P_c 377.2 P_c 142.2

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.	377.2	142.3	2.422	6.100	.774	140.1	2.2	374.3	99.2
2.	344.2	118.5	2.843	8.083	1.018	135.1	7.2	347.6	97.5
3.	332.2	110.3	4.149	17.214	2.169	130.5	11.2	341.3	95.2
4.	344.2	118.5	6.511	42.393	4.342	130.2	11.5	341.6	95.9
5.	377.2	142.3	2.422	6.100	.774	140.1	2.2	374.3	99.2

Absolute Potential: 3400 MCFPD; n 0.922COMPANY Amerada Petroleum CorporationADDRESS Box 706, Roswell, New MexicoAGENT and TITLE J. Whiting, Gas Engr., El Paso Natural Gas Co.

WITNESSED _____

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} = 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 .