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, Queen County Lea

Initial X Annual Special Date of Test 4-16-63

Company Amerada Petroleum Corporation Lease Ida Wimberley Well No. 14

Unit G Sec. 25 Twp. 25 Rge. 37 Purchaser None

Casing 2-7/8" Wt. 6.5# I.D. 2.441" Set at 5497' Perf. 3181' To 3247'

Tubing Wt. I.D. Set at Perf. To

Gas Pay: From 3069' To 3247' L 3181' xG 0.65 (Assumed) -GL 2068 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: 3-15-63 Packer None Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) [redacted] Type Taps

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						367				72
1.	2	.500	41		65	359				3
2.	2	.750	35		68	349				3
3.	2	.875	29		65	339				3
4.	2	.875	44		64	285				3
5.	2	.875	12		68	317				24

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.	5.5233		54.2	.9952	.9608		286.3
2.	12.2023		48.2	.9954	"		580.8
3.	16.7816		42.2	.9958	"		677.2
4.	16.7816		57.2	.9962	"		918.8
5.	16.7816		25.2	.9924	"		403.2

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons Dry deg.
P_c 5.866 $(1-e^{-s})$ .133

Specific Gravity Separator Gas 0.65
Specific Gravity Flowing Fluid Dry
P_c 380.2 P_c^2 144.6

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	P_w/P_c
1.	372.2	138.5	1.679	2.819	.375	138.9	5.7	378.7	98.0
2.	362.2	131.2	3.289	10.82	1.44	132.6	12.0	364.1	95.8
3.	342.2	117.1	3.972	15.78	2.10	119.2	25.4	345.2	90.8
4.	306.2	95.0	5.389	29.04	3.86	98.9	45.7	314.5	82.7
5.	330.2	109.0	2.365	5.593	.744	109.7	34.9	331.2	87.1

Absolute Potential: 1820 MCFPD; n 0.578 .562

COMPANY Amerada Petroleum Corporation

ADDRESS Box 706, Hobbs, New Mexico

AGENT and TITLE J. Whitling, 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} = 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.