NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Seven Rivers - Queen County Lea

Initial Annual Special Date of Test 6-26-56

Company Amerada Petroleum Corporation Lease E.S. Adkins Well No. 3

Unit M Sec. 5 Twp. 20S Rge. 37E Purchaser Permian Basin Pipe Line Company

Casing 7" Wt. 23.0# I.D. 6.366" Set at 3690' Perf. To

Casing 9-5/8" Wt. 36.0# I.D. 8.921" Set at 2490' Perf. To

Gas Pay: From 2490' To 3690' L 2490 xG 0.670 =GL 1668 Bar.Press. 13.2

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

Date of Completion: 5-1-54 Packer 5111 Reservoir Temp. 92°

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (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	4"	2.75"						980.8		71-3/4
1.	4"	2.75"	459.3	6.6	75			919.5		24-1/4
2.	4"	2.75"	462.7	13.4	71			886.3		23-3/4
3.	4"	2.75"	475.9	26.0	67			834.2		24
4.	4"	2.75"	482.0	45.8	66			792.0		24
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.	73.11	55.69	472.5	0.9859	0.9463	1.052	4018.59
2.	73.11	80.80	475.9	0.9896	0.9463	1.053	5830.59
3.	73.11	112.84	489.1	0.9933	0.9463	1.052	8142.53
4.	73.11	161.39	500.2	0.9943	0.9463	1.052	11645.98
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 1.340 $(1-e^{-s})$ 1108

Specific Gravity Separator Gas 0.670
Specific Gravity Flowing Fluid
P_c 994.0 P_c^2 988.0

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	932.7	869.9	5.39	27.44	2.42	872.3	115.7	934.4	94.0
2.	899.5	809.1	7.81	60.99	6.59	815.6	172.4	902.3	90.7
3.	844.4	713.0	10.91	118.92	12.84	725.8	262.2	851.4	85.6
4.	805.2	648.3	15.60	243.36	26.28	674.6	313.4	820.0	82.4
5.									

Absolute Potential: 26100 MCFPD; n 0.86

COMPANY
ADDRESS Drawer D - Monument, New Mexico
AGENT and TITLE W. T. Abbott
WITNESSED
COMPANY Permian Basin Pipe Line Company 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.