DUPLICATE

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates-Seven Rivers County Lea

Initial ____ Annual ____ Special X Date of Test 4-22/26-60

Company Amerada Petroleum Corporation Lease A. G. Falby Well No. 3

Unit K Sec. 19 Twp. 24-S Rge. 37-E Purchaser Permian Basin Pipeline Co.

Casing 5½" Wt. 15.5# I.D. 4.950" Set at 3341' Perf. 3182' To 3278'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3592' Perf. 3588' To 3592'

Gas Pay: From 3182' To 3278' L 3182' xG 0.670 -GL 2132 Bar.Press. 13.2

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

Date of Completion: 8-4-55 Packer 3295' Reservoir Temp. 87° Calculated

CO_2 = 1.78% N = 1.99%

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data ~~(Choke)~~ (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								547.0	-	69.50
1.	2	0.187	528.2		71			528.2	71	3.00
2.	2	0.216	519.4		75			519.5	75	3.00
3.	2	0.250	489.5		73			489.7	73	3.00
4.	2	0.312	403.4		71			403.8	71	3.00
5.	4	1.750	102.4	20.7	87			376.1	70	21.00

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.	0.7851		541.4	0.9896	0.9463	1.057	421
2.	1.0834		532.6	0.9859	0.9463	1.054	567
3.	1.4030		502.7	0.9877	0.9463	1.051	693
4.	2.1577		416.6	0.9896	0.9463	1.043	878
5.	21.69	48.92	115.6	0.9750	0.9463	1.010	989

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

F_c 1.793 $(1-e^{-s})$ 0.136 P_c 560.2 P_c^2 313.8

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.	541.4	293.1	0.755	0.570	.0775	293.2	20.6	541.5	0.967
2.	532.7	283.8	1.017	1.034	.1406	283.9	29.9	532.8	0.951
3.	502.9	252.9	1.243	1.545	.2101	253.1	60.7	503.1	0.898
4.	417.0	173.9	1.574	2.477	.3369	174.2	139.6	417.4	0.745
5.	389.3	151.5	1.773	3.144	.4276	151.9	161.9	389.7	0.696

Absolute Potential: 1377 MCFPD; n 0.500 Limited

COMPANY Amerada Petroleum Corporation

ADDRESS Drawer "D", Monument, New Mexico

AGENT and TITLE C. E. Snyder District Engineer

WITNESSED R. L. West

COMPANY Permian Basin Pipeline Company

REMARKS

Good point alignment on three data points; however, resulting slope in excess of 0.5; therefore a slope of 0.5 was drawn through the 21 hour point to calculate the potential.

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.