NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 FEB 11 AM 10:00

Pool **Eumont** Formation **Queen** County **Lea**

Initial ____ Annual **X** Special ____ Date of Test **6-26-56**

Company **Amerada Petroleum Corporation** Lease **State "F"** Well No. **1**

Unit **M** Sec. **36** Twp. **19-S** Rge. **36-E** Purchaser **Permian Basin Pipe Line Company**

Casing **7"** Wt. **26.0#** I.D. **6.276"** Set at **3798'** Perf. **3274'** To **3352'**

Tubing **3½"** Wt. **9.3#** I.D. **2.992** Set at **3722** Perf. ____ To ____

Gas Pay: From **3274** To **3352** L **3274** xG **0.670** -GL **2194'** 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: **3-14-55** Packer **3677** Reservoir Temp. **91°F**

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										
1.	4"	2.75"	461.3	5.2	82			989.5		72-3/4
2.	4"	2.75"	463.9	7.3	77			838.6		24
3.	4"	2.75"	469.2	16.3	74			816.0		23-1/2
4.	4"	2.75"	484.6	26.8	75			726.6		24-1/2
5.								698.4		23-1/2

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	49.67	474.5	0.9795	0.9463	1.050	3534
2.	73.11	59.01	477.1	0.9840	0.9463	1.050	4219
3.	73.11	88.68	482.4	0.9868	0.9463	1.052	6349
4.	73.11	115.5	497.8	0.9859	0.9463	1.056	8319
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **Dry Gas** cf/bbl.
Gravity of Liquid Hydrocarbons **-** deg.
F_c **1.612** $(1-e^{-s})$ **0.140**

Specific Gravity Separator Gas **.67**
Specific Gravity Flowing Fluid **-**
P_c **902.7** P_c^2 **814.867**

No.	P_w Pt (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	$\frac{P_w}{P_c}$
1.	851.8	725.563	5.697	32.455	4.544	725.568	89.299	851.8	94.36
2.	829.2	687.573	6.801	46.254	6.476	687.579	127.288	829.2	91.86
3.	775.8	601.864	10.267	105.411	14.758	601.881	212.986	775.81	85.94
4.	711.6	506.375	13.410	179.983	25.198	506.400	308.467	711.62	78.83
5.									

Absolute Potential: **16,500** MCFPD; n **0.69**

COMPANY **Amerada Petroleum Corporation**

ADDRESS **Drawer D - Monument, New Mexico**

AGENT and TITLE **W.G. Abbott, District Engineer** W.G. Abbott

WITNESSED

COMPANY **Permian Basin Pipe Line Company**

REMARKS

ELVIS A. UTT
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.