NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1957 FEB 14 AM 10:00

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Eumont** Formation **Seven Rivers** County **Lea**

Initial ____ Annual **X** Special ____ Date of Test **8-6 to 8-10-56**

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

Unit **N** Sec. **1** Twp. **21S** Rge. **35E** Purchaser **El Paso Natural Gas Company**

Casing **7.0"** Wt. **23.0#** I.D. **6.366** Set at **4150'** Perf. **3338'** To **3560'**

Tubing **3½"** Wt. **9.3#** I.D. **2.992** Set at **3786'** Perf. ____ To ____

Gas Pay: From **3338'** To **3560'** L **3338'** xG **0.675** -GL **2253** Bar.Press. **13.2**

Producing Thru: Casing **X** ✓ Tubing ____ Type Well **G.O. Dual** ✓

Date of Completion: **5-21-54** Packer **3628** Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. **80°**

OBSERVED DATA

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

No.	Flow Data ~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI								875		72
1.	4"	1.25"	561	8.41	62			828		24
2.	4"	1.25"	564	18.49	65			774		24
3.	4"	1.25"	563	25.00	68			737		24
4.	4"	1.25"	5?6	34.81	70			726*		24
5.										

*Unable to get 30% draw down because of small choke size.

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.	9.643	69.48		0.9981	0.9427	1.064	671
2.	9.643	103.29		0.9952	0.9427	1.062	992
3.	9.643	120.00		0.9924	0.9427	1.062	1150
4.	9.643	145.60		0.9905	0.9427	1.064	1395
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **Dry** cf/bbl. Specific Gravity Separator Gas **-**

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

F_c **1.324** $(1-e^{-s})$ **0.144** P_c **888.2** P_c^2 **788.9**

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.	841.2	707.6	0.89	0.79	0.11	707.7	81.2	841.2	0.95
2.	787.2	619.7	1.31	1.72	0.25	620.0	168.9	787.3	0.89
3.	750.2	567.8	1.52	2.31	0.33	563.1	225.8	750.0	0.84
4.	739.2	546.4	1.85	3.42	0.49	546.9	242.0	739.1	0.83
5.									

Absolute Potential: **2150** MCFPD; n **0.52**

COMPANY **Amerada Petroleum Corporation**

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

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

WITNESSED ____

COMPANY **El Paso Natural Gas 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.