NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Eumont** Formation **7-Rivers** County **Lea**

Initial _____ Annual _____ Special **x** Date of Test **1-31-57**

Company **Amerada Petroleum Corporation** Lease **State WE"B"** Well No. **3**

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

Casing **7"** Wt. **23#** I.D. **6.366** Set at **3890'** Perf. **3220'** To **3285'**

Tubing **3.5"** Wt. **9.3#** I.D. _____ Set at **3859'** Perf. **3333'** To **3410'**

Gas Pay: From **3220'** To **3410'** L **3315'** xG **.655** -GL **2171** 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: **8-21-54** Packer **3483** Reservoir Temp. **88°F**

OBSERVED DATA

Tested Through (Prover) [illegible] (Meter) Type Taps **Flange**

No.	Flow Data (Prover) [illegible] Size	Flow Data (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								715		24
1.	2"	.125	617		70			617		3
2.	2"	.187	529		68			529		3
3.	2"	.218	465		60			465		3
4.	2"	.250	405		57			405		3
5.	2"	.250	355		67			355		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.	.3418		630.2	.9905	.9571	1.061	217
2.	.7851		542.2	.9924	"	1.055	427
3.	1.0834		478.2	1.0000	"	1.049	820
4.	1.4030		418.2	1.0029	"	1.044	588
5.	1.4030		368.2	.9933	"	1.036	509

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c **1.540** $(1-e^{-s})$ **.139**

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c **728.2** P_c^2 **530.2**

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.	630.2	397.1	.3	.09	.01	397.1	133.1	630.2	.87
2.	542.2	294.0	.7	.49	.06	294.1	236.1	542.2	.75
3.	478.2	228.6	.8	.64	.08	228.7	301.5	478.2	.66
4.	418.2	174.8	.9	.81	.11	174.9	355.3	418.3	.58
5.	368.2	135.6	.8	.64	.08	135.7	394.5	368.2	.51

Absolute Potential: **880** MCFPD; n **.98**

COMPANY **Amerada Petroleum Corporation**

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

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

WITNESSED **J.R. Prew**

COMPANY **El Paso Natural Gas Co.**

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.

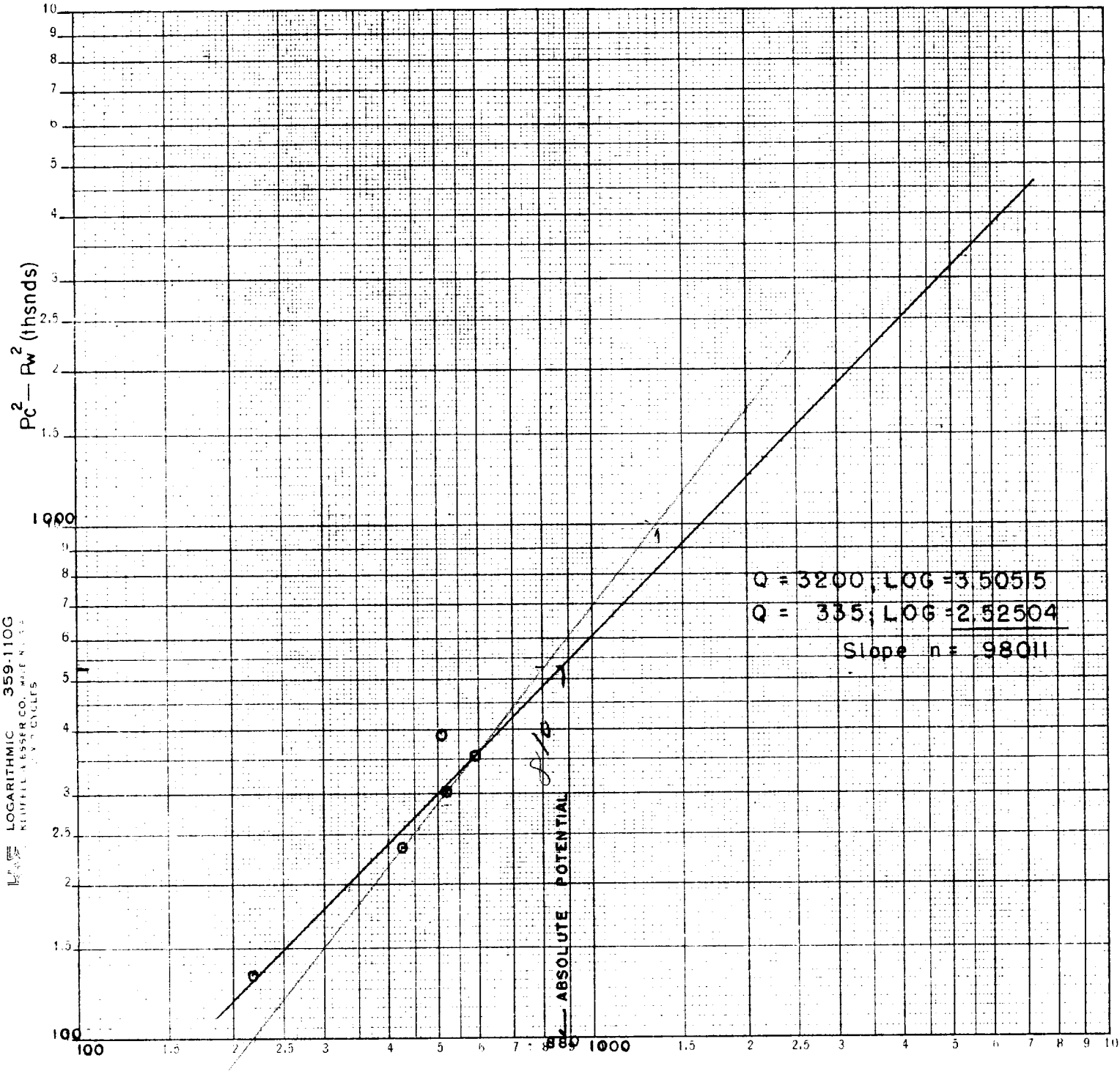
F_t = Flowing temperature correction factor.

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.

COMPA. Amerada Petroleum Corporation
LEASE State WE"B" No. 3
LOCATION F-1-21S-35E
COUNTY Lea
DATE 1-31-57



$G_2 = 1440 = 3.158\ 362$
$G_1 = 217 = 2.336\ 460$
$,821\ 902$