NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1957 FEB 11 AM 10:01

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial ____ Annual X Special ____ Date of Test 8-24-56

Company Amerada Pet. Corp. Lease State "P" Well No. 2

Unit M Sec. 29 Twp. 19S Rge. 37E Purchaser Permian Basin Pipeline Co.

Casing 6-5/8" Wt. 20.0# I.D. 6.049" Set at 3805' Perf. 3330' To 3600'

Tubing 3-1/2" Wt. 9.3# I.D. 2.992" Set at 3917' Perf. 3913' To 3917'

Gas Pay: From 3330' To 3600' L 3330' xG 0.680 -GL 2264 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: 11-19-53 Packer 3727' Reservoir Temp. 80°F

OBSERVED DATA

Tested Through [redacted] (Meter) Type Taps Pipe

No.	Flow Data: (Prover) (Line) Size	(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								940.9		71-3/4 hrs.
1.	4.00"	2.25"	454.0	7.9	81			847.5		24 hrs.
2.	4.00"	2.25"	452.5	11.5	54			788.2		23-3/4 hrs.
3.	4.00"	2.25"	451.1	23.1	59			711.4		23-3/4 hrs.
4.	4.00"	2.25"	459.2	37.1	65			680.0		23-3/4 hrs.
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.	40.53	60.75	467.2	0.9804	0.9393	1.040	2358
2.	40.53	73.18	465.7	1.0056	0.9393	1.052	2948
3.	40.53	103.60	464.3	1.0010	0.9393	1.050	4145
4.	40.53	132.40	472.4	0.9952	0.9393	1.046	5247
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons ____ deg.

F_c 1.399 $(1-e^{-s})$ 0.144

Specific Gravity Separator Gas ____

Specific Gravity Flowing Fluid ____

P_c 954.1 P_c^2 910.3

CO_2 2.05% N_2 1.77%

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.		740.8	3.299	10.88	1.567	742.4	167.9	861.6	0.90
2.		642.2	4.124	17.01	2.449	644.6	265.7	802.9	0.84
3.		525.0	5.799	33.63	4.843	529.8	380.5	727.9	0.76
4.		480.5	7.341	53.89	7.760	488.3	422.0	698.8	0.73
5.									

Absolute Potential: 10,262 MCFPD; n 0.87

COMPANY Amerada Petroleum Corporation

ADDRESS Drawer D - Monument, New Mexico

AGENT and TITLE W.G. Abbott - Dist. Engineer W G Abbott

WITNESSED R.L. West

COMPANY Permian Basin Pipe Line Company

REMARKS

Poor point alignment but due to this being a retest, the test is submitted in accordance with instructions contained in the gas manual.

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.

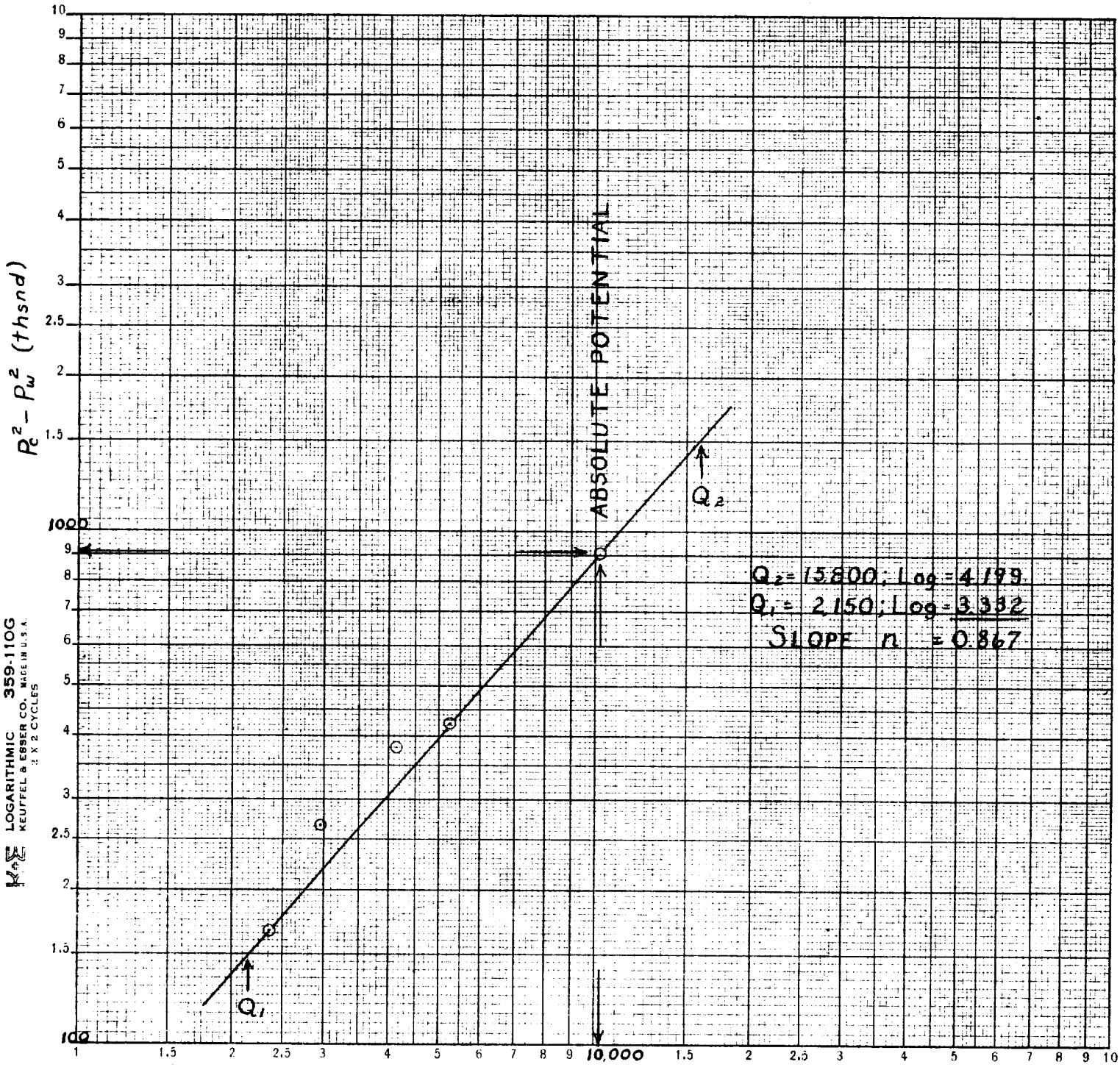
n = Slope of back pressure curve.

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.

LTR

Job separation sheet

COMPANY	Amerada Petroleum Corporation
WELL	State "P" No. 2
LOCATION	M-29-19S-37E
COUNTY	Lea
DATE	8-24-56



Q-MCFD-15.025 psia