

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

1957 FEB 11 AM 9:57

Pool Emmont Formation Queens County Lea

Initial _____ Annual _____ Special _____ Date of Test 6-25-56

Company Amerada Petroleum Corporation Lease State WE"A" Well No. 2

Unit C Sec. 12 Twp. 21S Rge. 36E Purchaser El Paso Natural Gas Company

Casing 7" Wt. 24# I.D. 6.336 Set at 3908' Perf. 3416 To 3600

Tubing 2" Wt. 4.7# I.D. 1.995 Set at 3716' Perf. _____ To _____

Gas Pay: From 3416' To 3600' L 3416 xG .670 -GL 2289' Bar.Press. 13.2

Producing Thru: Casing X ✓ Tubing _____ Type Well Gas-Oil Dual ✓

Date of Completion: 2-12-54 Packer 3657 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 91°

OBSERVED DATA

Tested Through (~~Prover~~) (~~Orifice~~) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	4"	1.500"	595	18.06	78			894		72
2.	4"	1.500"	602	29.70	78			833		24
3.	4"	1.500"	607	39.06	78			792		24
4.	4"	1.500"	618	44.00	78			754		24
5.								714		24
								7		

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.	13.99	106.09	608.2	0.9831	0.9963	1.060	1436.5
2.	13.99	135.16	615.2	0.9831	0.9963	1.060	1853.0
3.	13.99	156.87	620.2	0.9831	0.9963	1.060	2150.7
4.	13.99	201.12	631.2	0.9831	0.9963	1.060	2757.4
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.

Gravity of Liquid Hydrocarbons - deg.

F_c 0.740 (1-e^{-s}) 0.146

Specific Gravity Separator Gas .670

Specific Gravity Flowing Fluid _____

P_c 907.2 P_c 823.0

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	845.2	716.1	1.08	1.17	.171	716.2	106.7	846.1	93.2
2.	803.2	645.3	1.37	1.88	.774	698.6	174.4	805.0	88.4
3.	764.2	584.0	1.59	2.53	.369	584.4	238.6	765.6	84.4
4.	727.2	528.8	2.04	4.16	.607	529.4	293.6	726.1	80.0
5.									

Absolute Potential: 4450 MCFPD; n 0.58

COMPANY Amerada Petroleum Corporation

ADDRESS Drawer D - Monument, New Mexico

AGENT and TITLE W.D. Abbott

WITNESSED _____

COMPANY El Paso Natural Gas Company

REMARKS

EL PASO
NATURAL GAS
COMPANY

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.

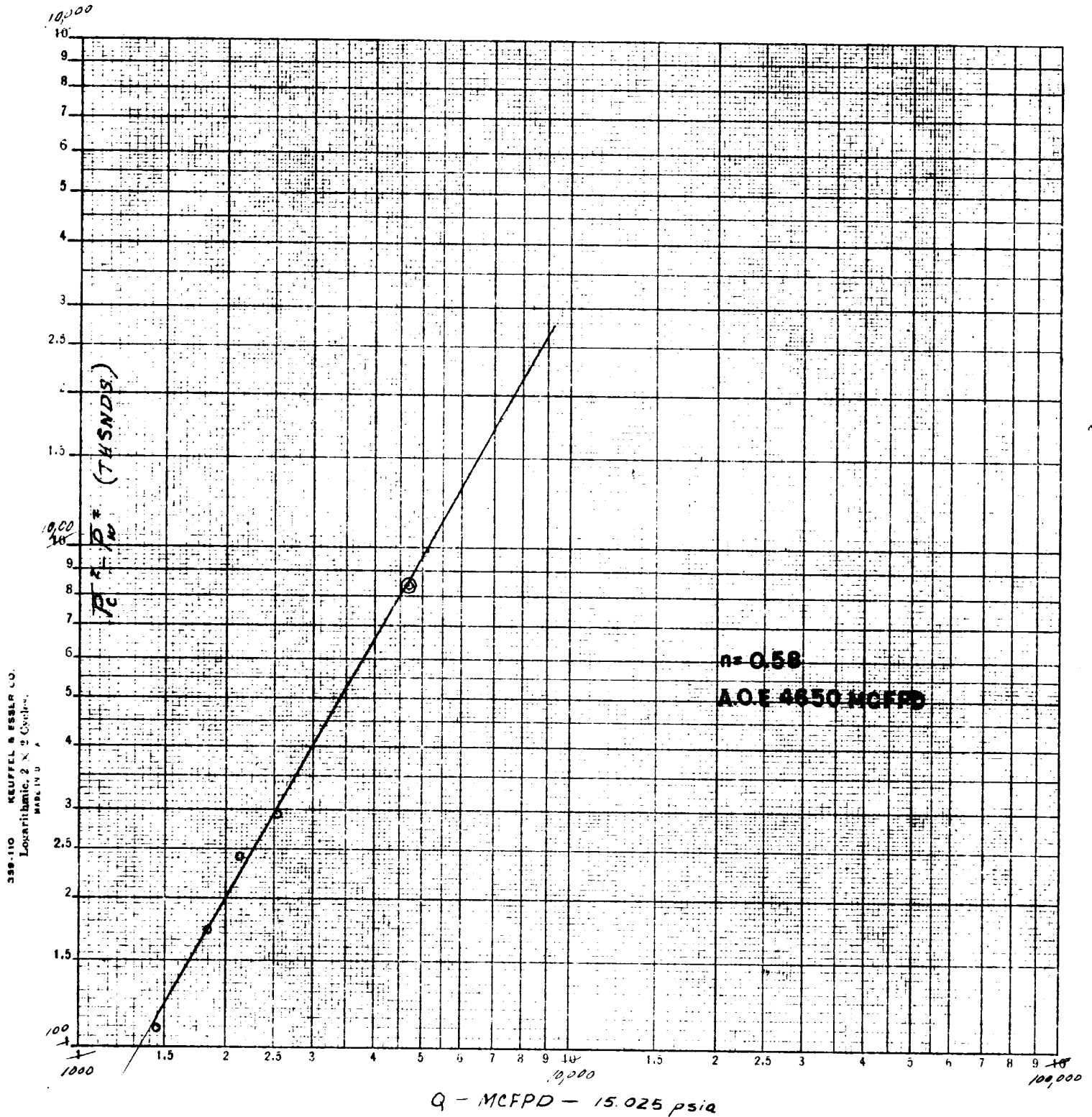
F_t = Flowing temperature correction factor.

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 .

CO ANY Amerada Petroleum Corporat a
 WELL State WE"A" No. 2
 LOCATION 12-21S-36E
 COUNTY Lea
 DATE 6-25-56



$Q_2 = 5120 = 3.709 \text{ STD}$
 $Q_1 = 1350 = 3.120 \text{ STD}$
 $\frac{5120}{1350} = 3.788$