

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Tubb Formation Tubb County Lee
Initial _____ Annual _____ Special X Date of Test 7-11 to 19, 1963
Company Shell Oil Company Lease Mineral Well No. 2
Unit C Sec. 4 Twp. 22S Rge. 37E Purchaser El Paso Natural Gas Co.
Casing 5" Wt. 15.0 I.D. 4.403 Set at 6538 Perf. 6129 To 6287
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 6470 Perf. _____ To _____
Gas Pay: From 6129 To 6287 L 6129 xG mix .767 GL 4701 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: January 10, 1963 Backer 6460 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Pressure) (Choke) (Meter) Type Taps Flgs.

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1575		72
1.	4	0.500	513	6.25	91			1530		24
2.	4	0.500	553	12.96	83			1342		24
3.	4	0.500	564	19.36	90			850		24
4.	4	0.500	574	27.04	85			635		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	1.525	57.35	526.2	.9715	.9421	1.050	84.05
2.	1.525	55.66	566.2	.9716	.9421	1.056	127.1
3.	1.525	105.71	577.2	.9723	.9421	1.053	155.4
4.	1.525	126.01	587.2	.9763	.9421	1.055	186.5
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 29,320 cf/bbl.
Gravity of Liquid Hydrocarbons 52.8 deg.
F_c 2.934 (1-e^{-s}) .276
Specific Gravity Separator Gas .676
Specific Gravity Flowing Fluid .7678
P_c 15.8.2 P_c² 2522.4

No.	P _{WX} 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.	1543.2	2381.5				2381.5	140.9	1543.2	97.2
2.	1355.2	1836.6				1336.6	635.4	1355.2	5.3
3.	63.2	745.1				745.1	1777.3	63.2	54.3
4.	64.2	430.2				420.2	2102.2	64.2	40.3
5.									

Absolute Potential: 225 MCFPD; n 1.000
COMPANY Shell Oil Company
ADDRESS P. O. Box 1858, Roswell, New Mexico
AGENT and TITLE A.L. Ellard - Gas Tester
WITNESSED Jack T. Littlefield
COMPANY El Paso Natural Gas Company

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.

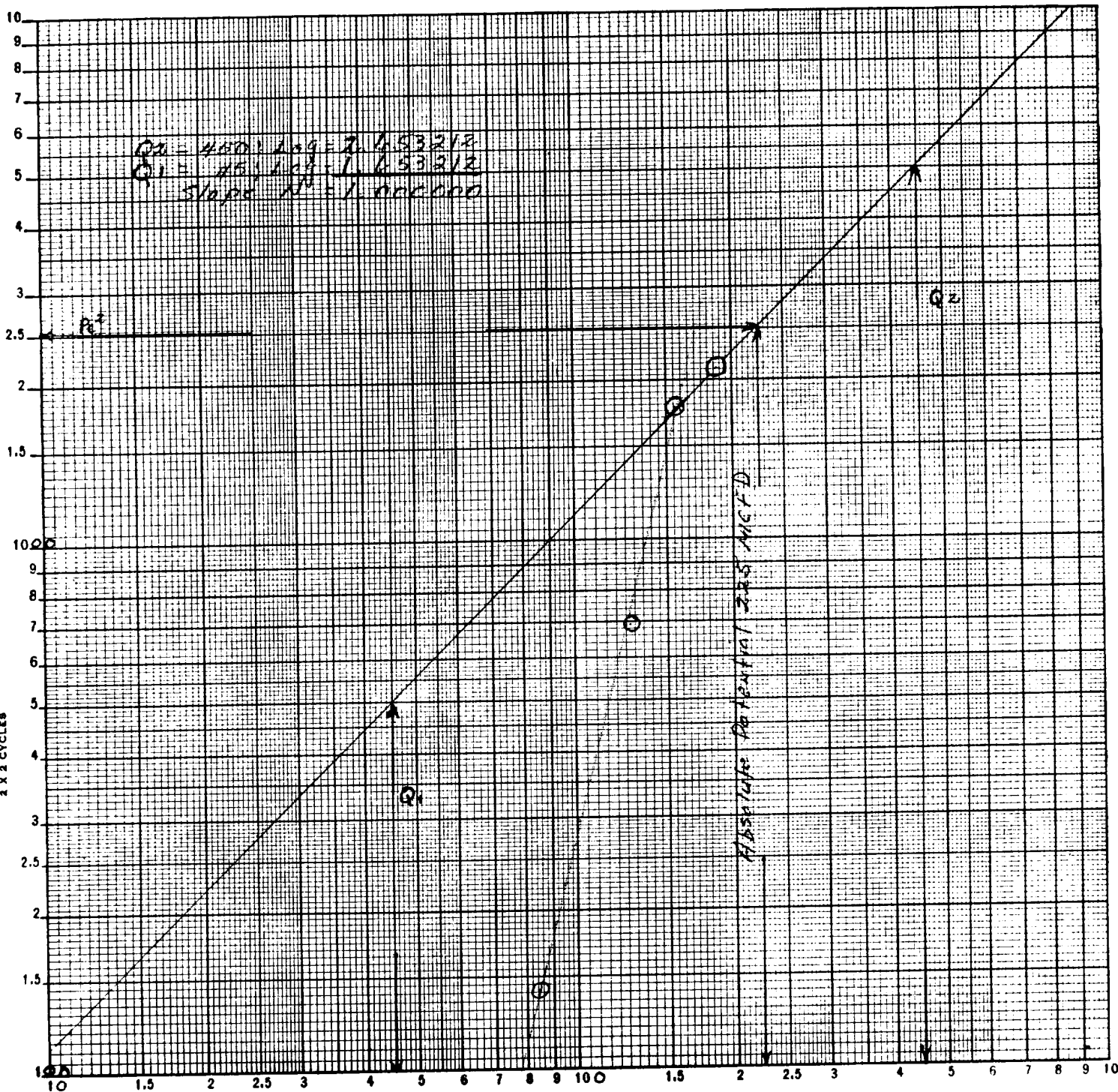
Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

GAS WELL BACK PRESSURE CURVE

County LEW Field TUBB GAS
Operator SHELL OIL COMPANY
Lease RINEWALT Well No. 2
Volume 225 MCF/24hr.
Date JULY 19, 1963

$P_e^2 - P_w^2$ (14.735)

K-E LOGARITHMIC 359-110
KEUPPEL & EUBER CO. MADE IN U.S.A.
2 X 2 CYCLES



$Q - MCFD - 15.025$ psi