

NEW MEXICO OIL CONSERVATION COMMISSION

HOODS OF THE N.M.C.C. Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

SEP 23 31 PM '64 Revised 12-1-55

Pool Tubb Gas Formation Tubb County Lea
Initial X Annual _____ Special _____ Date of Test August 15 to 23, 1964
Company Shell Oil Company Lease Turner Well No. 5
Unit I Sec. 22 Twp. 21-S Rge. 37-E Purchaser El Paso Natural Gas Company
Casing 5 1/2" Wt. 15.5 I.D. 4.976 Set at 6450' Perf. 6024' To 6339'
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 5915' Perf. _____ To _____
Gas Pay: From 6024' To 6339' L 6024' xGMix. 724 -GL 4361 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well Gas-Oil Dual
Date of Completion: 8-23-64 Packer 5915 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~4000000~~ ~~4000000~~ (Meter)Type Taps Flge.

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(4000000) (Line) Size	(4000000) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI								
1.	4	2.000	542	4.00	79		1607	72
2.	4	2.000	542	10.24	64		1398	24
3.	4	2.000	551	23.04	56		1368	24
4.	4	2.000	551	23.04	56		1325	24
5.	4	2.000	582	44.89	62		1238	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.	25.58	47.13	555.2	.9822	.9380	1.057	1,173
2.	25.58	75.40	555.2	.9962	.9380	1.064	1,918
3.	25.58	114.01	564.2	1.0039	.9380	1.070	2,937
4.	25.58	163.46	595.2	.9981	.9380	1.072	4,196
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 65,538 cf/bbl.
Gravity of Liquid Hydrocarbons 50.5 API deg.
F_c 1.758 (1-e^{-s}) .259

Specific Gravity Separator Gas .682
Specific Gravity Flowing Fluid .7775
P_c 1620.2 P_c 2625.0

No.	R_x 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.	1411.2	1991.5	2.062	4.252	1.101	1992.6	632.4	1411.6	87.1
2.	1381.2	1907.7	3.372	11.370	2.945	1910.6	714.4	1382.2	85.3
3.	1338.2	1790.3	5.163	26.656	6.904	1797.7	827.3	1340.8	82.7
4.	1251.2	1565.5	7.376	54.405	14.091	1579.6	1045.4	1256.3	77.6
5.									

Absolute Potential: 10,600 MCFPD; n 1.000COMPANY Shell Oil CompanyADDRESS P. O. Box 1858, Roswell, New MexicoAGENT and TITLE A. L. Ellerd, Gas TesterWITNESSED L. D. SouthernCOMPANY El Paso Natural Gas Company

REMARKS

Slope greater than 1,000, a slope of 1.000 drawn through highest rate of flow.

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} = Supercompressibility 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

County LE. Field TURB. GAS.

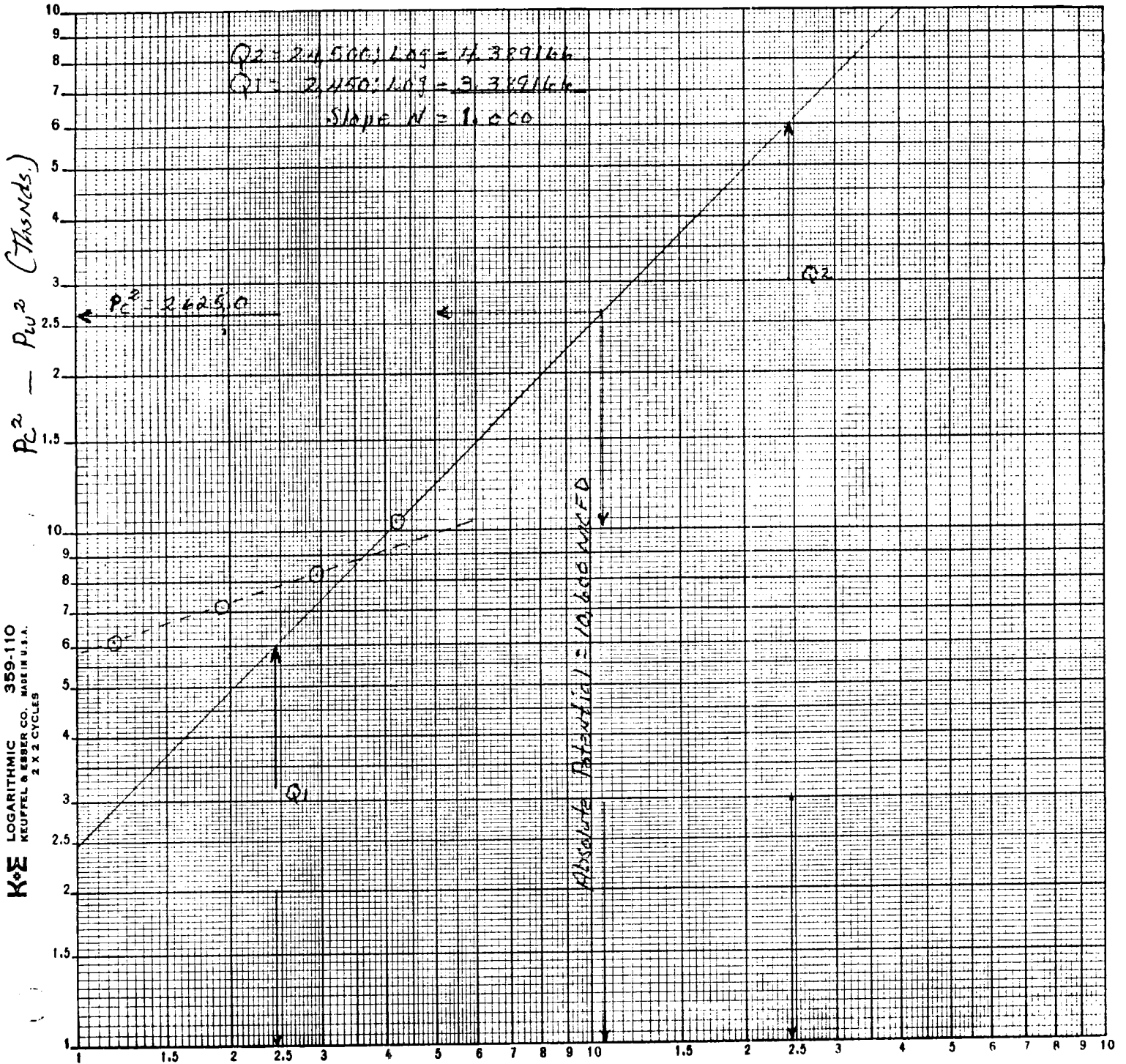
Operator SHELL OIL COMPANY

BACK PRESSURE CURVE

Lease TURNER Well No. 5

Volume 10,600 MCF/24 hr.

Date AUGUST 24, 1964



Q - MCFD - 15.025 psia