

NEW MEXICO OIL CONSERVATION COMMISSION

ELVIS A. WILZ
GAS ENGINEER

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Yates County Lea
Initial X Annual Special X Date of Test 8-10-56
Company Sinclair Oil & Gas Company Lease State Iwa 407 Well No. 2
Unit F Sec. 2 Twp. 21S Rge. 35E Purchaser El Paso Natural Gas Co.
Casing 7 Wt. 17# I.D. Set at 3899 Perf. 3676 To 3768
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3738 Perf. To
Gas Pay: From 3676 To 3788 L 3738 xG .675 -GL 2523 Bar.Press. 13.2
Producing Thru: Casing Tubing X Type Well Single
Date of Completion: 11-4-55 Packer Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 118°

OBSERVED DATA

Tested Through (Prover) (Choke) (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	1.250	551	5.29	76	849	80	842	80	72
2.	"	"	547	10.89	73	833	80	848	80	24
3.	"	"	540	27.04	70	823	80	858	80	24
4.	"	"	540	27.04	70	804	80	862	80	24
5.	"	"	564	47.61	69	773	80	858	80	24

CASING PRESSURE NO GOOD BECAUSE OF FLUID

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.	9.643	54.62	564.2	.9850	.9427	1.057	517
2.	9.643	78.09	560.2	.9877	.9427	1.057	741
3.	9.643	123.39	553.2	.9905	.9427	1.057	1174
4.	9.643	165.75	577.2	.9915	.9427	1.062	1586
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 9.936 (1-e^{-s}) .159

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 862.2 P_c 743.4

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.	846.2	716.2	5.14	26.42	4.2	720.3	23.1	848.7	98.4
2.	836.2	699.2	7.36	54.17	8.6	707.8	35.6	841.4	97.5
3.	817.2	667.8	11.66	135.96	21.6	689.4	54.0	830.3	96.3
4.	786.2	618.1	15.76	248.37	39.5	657.6	85.8	810.9	94.1
5.									

Absolute Potential: 10,000 MCFPD; n .852COMPANY Sinclair Oil & Gas CompanyADDRESS 520 E. Broadway Hobbs, New MexicoAGENT and TITLE R.L. Harner Gas AnalystWITNESSED Ed MabeCOMPANY El Paso Natural Gas Co.

REMARKS

WELL COULD NOT BE PULLED DOWN DUE TO CHOKE SIZE IN WELL

Orig & 2cc: NMCC

cc: SJF, WJR, FCR, CCS, File

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 .

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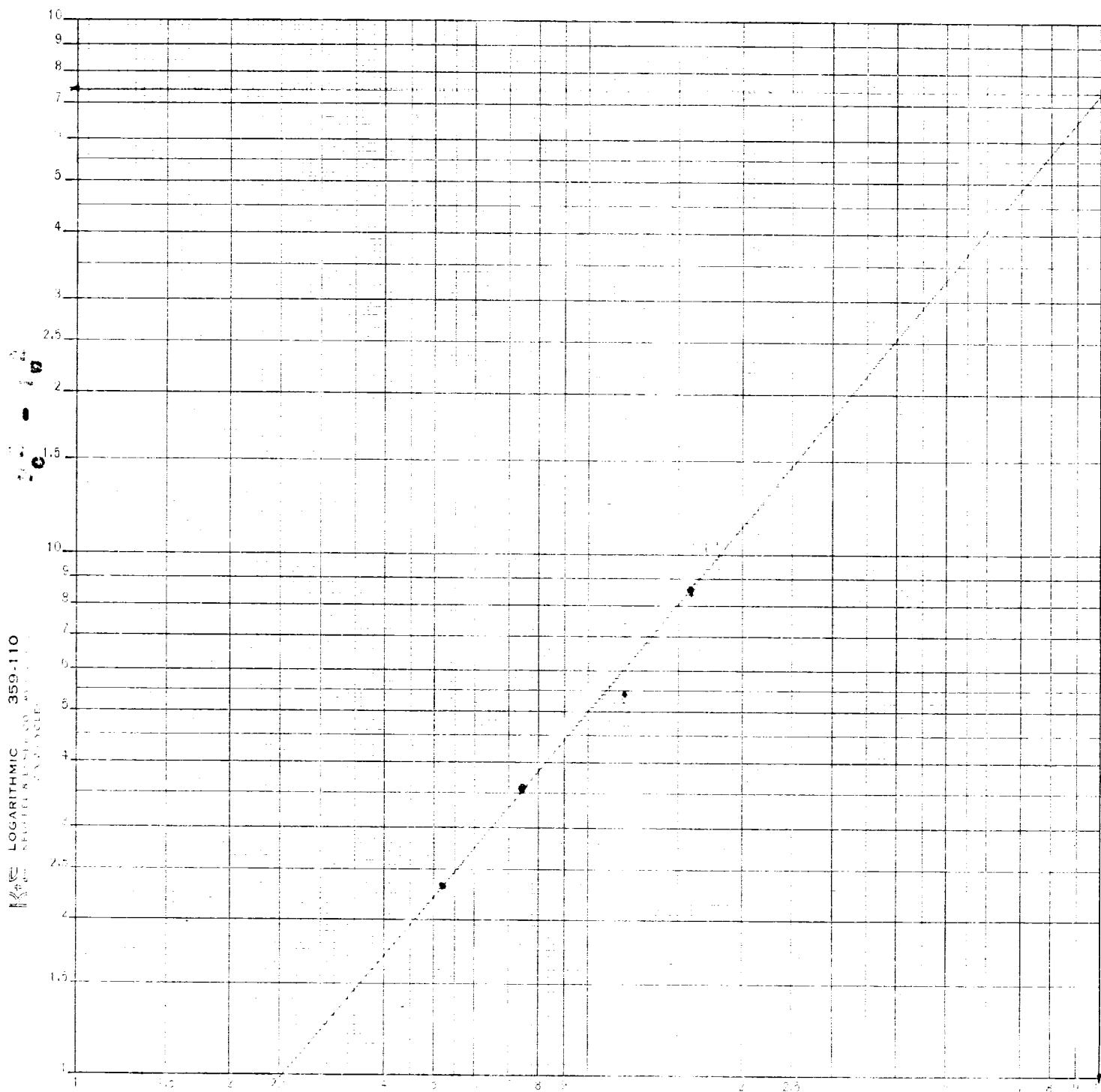
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