

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. BOX 2045

HOBBS, NEW MEXICO

DATE June 5, 1959

TO:

RE: GAS WELLS

Sinclair Oil & Gas Co.

This is:

520 E. Broadway

A New Gas Well ()
An Oil Well Converted to Gas (X)
An Oil-Gas Dual ()
A Gas-Gas Dual ()

Hobbs, New Mexico

Gentlemen:

Form C-104 has been received on your Alexander Rogers #2-A 12-22-37

Lease Well No. Unit S-T-R

☐ But no allowable can be assigned this well until the following forms have been received:

Form C-104 _____

Form C-110 _____

Form C-128 _____

NSP Order _____

Notice of Connection _____

Deliverability Test _____

☒ And a 80 acre allowable will be assigned in the Tubb Pool under Order No. NSP-489.

Filed 2/18/59

Filed 2/18/59

Filed 4/15/59

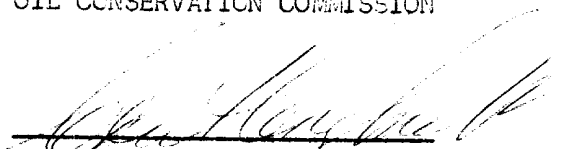
Approved 6/1/59

Date of Connection 5/29/59

Filed Not Required

Please file Form C-122, Multi-Point Back Pressure Test

OIL CONSERVATION COMMISSION


Engineer, District 1

Original-Operator
cc-File

Original-OCC, Santa Fe
cc-File, Operator &
Transporter---EP

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tabbs Formation Tabbs County Lea

Initial Annual Special I Date of Test 2-2,7-1959

Company Sinclair Oil & Gas Co. Lease Alexander Rogers Well No. 2

Unit A Sec. 12 Twp. 22S Rge. 37E Purchaser None

Casing 5" Wt. 13# I.D. 4.408 Set at 6,298 Perf. 6,149 To 6,190

Tubing 3" Wt. 4.7# I.D. 1.995 Set at 6,110 Perf. 6,107 To 6,110 48hrs/ft.

Gas Pay: From 6,149 To 6,232 L 6,107 xG .704 -GL 4,299 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Date of Completion: Oct. 1, 1957 Packer None Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) XXXXXXXXXXXX (Choke) (Meter) Type Taps --

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						1534		1655		72
1.	2"	1"	36		49	102	60	194		20
2.	2"	3/8"	110		60	139	65	197		3
3.	2"	3/8"	287		64	308	66	199		3
4.	2"	1/4"	339		59	342	65	210		3
5.	2"	3/16"	762		51	762	63	477		4

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.	22.0662		49.2	1.0107	.9225	1.000	1.012
2.	8.3555		123.2	1.0000	.9225	0.014	963
3.	3.0691		300.2	0.9962	.9225	1.034	875
4.	1.4030		532.2	1.0010	.9225	1.070	765
5.	.7051		775.2	1.0088	.9225	1.129	636

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 26,218 cf/bbl.

Gravity of Liquid Hydrocarbons 49.8 deg.

F_c 9.76 (1-e^{-S}) 0.296

Specific Gravity Separator Gas 704

Specific Gravity Flowing Fluid

P_c 1668.2 P_c 2762.9

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.	115.2	13	10.055	101.10	25.85	13.2	2769.6	115.3	6.91
2.	152.2	23	9.588	91.55	23.44	23.2	2759.7	152.3	9113
3.	317.2	101	8.894	75.99	19.35	100.6	2632.3	317.2	19.02
4.	555.2	308	7.601	57.78	14.79	308.3	2674.6	555.2	33.29
5.	775.2	601	6.319	39.93	10.22	600.9	2182.0	775.3	46.48

Absolute Potential 1,016 MCFPD; n 1.000

COMPANY Sinclair Oil & Gas Co.

ADDRESS Box 1470 Midland Texas

AGENT and TITLE W.R. Lord Gas Analyst Box 2431 Hobbs N.M. W.R. Lord

WITNESSED

COMPANY

REMARKS

Points would not line up therefore test was run in reverse order, and 45 degree line drawn through 20 h. point.

Orig & 2 New Mex. Con. Comm.
 Prod. Dept. 2
 G.P. Dept. 2
 File 1

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.

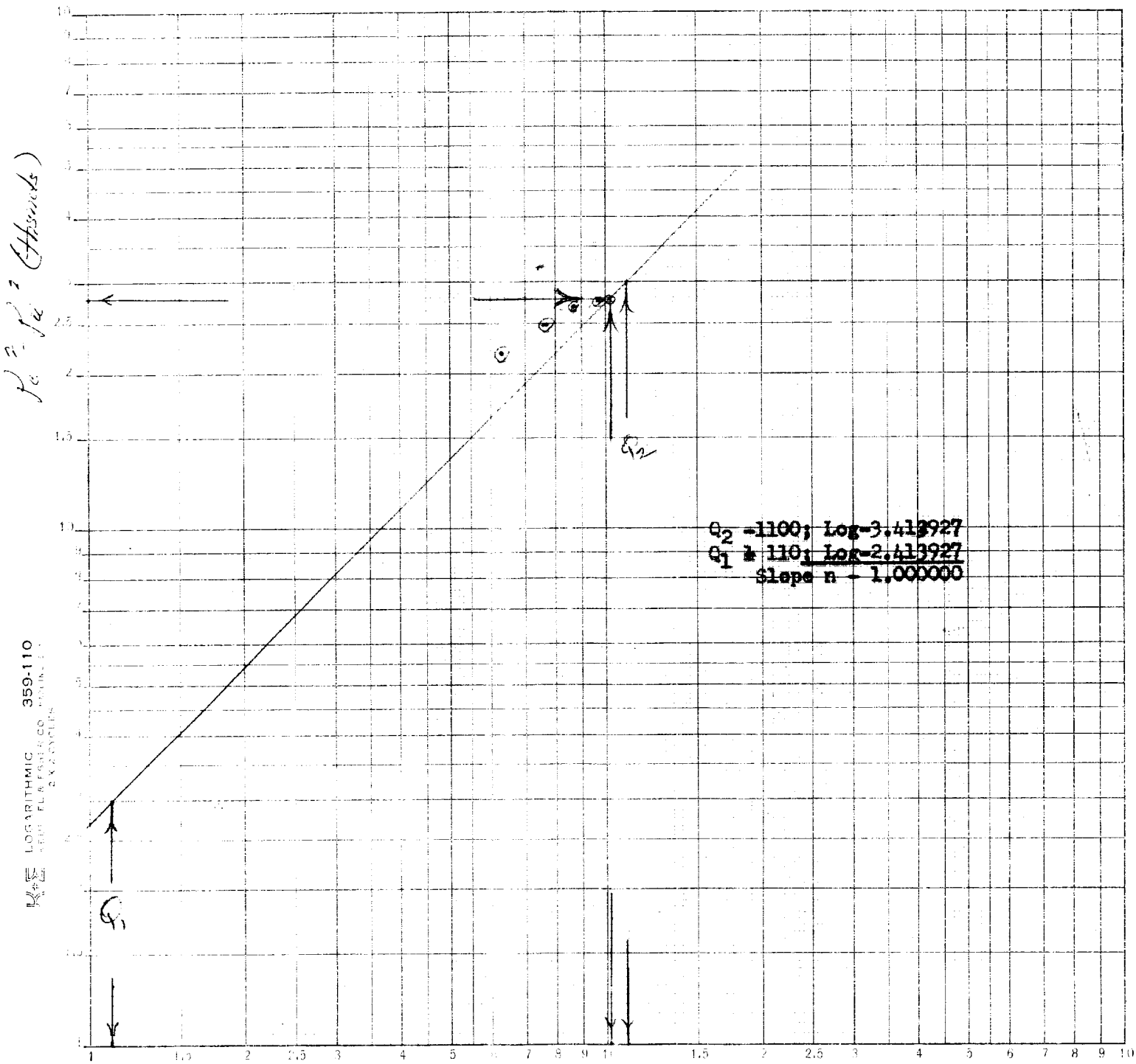
F_t = Flowing temperature correction factor.

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 .

COMPANY INCLAIR OIL & GAS CO.
 WELL ALEXANDER ROGERS #2
 LOCATION A -12-22S-37E
 COUNTY IEA
 DATE 2-5-7-1959



$Q = 110 \text{ (SD)} \cdot P_{sia}$