

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Tubbs Formation Tubbs 1959 MAR 10 AM 11 26 County Lea

Initial _____ Annual _____ Special X Date of Test Feb. 2-5, 7-59

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

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

Casing 5" Wt. 15# I.D. 4.408 Set at 6,296 Perf. 6,149 To 6,190
6,196 To 6,232

Tubing 2" 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 .794 -GL 4,299 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Oct. 1, 1957 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (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						1654		1655		73
1.	2"	1"	36		49	102	60	194		20
2.	2"	5/8"	110		60	139	65	197		3
3.	2"	3/8"	287		64	304	66	199		3
4.	2"	1/4"	539		59	542	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	1	1.014	963
3.	3.0691		300.2	0.9962	"	1.034	875
4.	1.4030		552.2	1.0010	"	1.070	765
5.	.7851		775.2	1.0088	"	1.089	628

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 26,210 cf/bbl.
Gravity of Liquid Hydrocarbons 49.0 deg.
F_c 9.936 (1-e^{-s}) 0.256

Specific Gravity Separator Gas .794
Specific Gravity Flowing Fluid _____
P_c 1668.2 P_c 2782.9

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	25.88	3911	2743.8	197.8	11.8
2.	152.2	23	9.568	91.55	23.44	46.6	2736.3	215.9	12.9
3.	317.2	101	8.694	75.59	19.95	119.9	2663.0	346.3	20.7
4.	555.2	300	7.601	57.78	14.79	323.0	2459.9	568.4	34.0
5.	775.2	601	6.919	39.93	10.22	611.1	2171.8	781.8	46.8

Absolute Potential: 1,016 MCFPD; n 1.000COMPANY Sinclair Oil & Gas Co.ADDRESS Box 1470 Midland TexasAGENT and TITLE W.R. Lord Gas Analyst

WITNESSED

COMPANY _____

REMARKS

Points would not line up though test was run in reverse order therefore 45 degree line drawn through 20 hr. point. also friction was used due to csg. pressure would not come up during test. possible restriction.

WRL

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 SINCLAIR OIL&GAS CO.
 WELL ALEXANDER ROGERS
 LOCATION A 12-22S-37E
 COUNTY LEA
 DATE FEB. 5,7-1959

HOBBS OFFICE OCC

1959 MAR 10 AM 11 25

