DUPLICATE

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS Revised 12-1-55

Pool Sawyer San Andres Formation San Andres County Lea

Initial X Annual Special Date of Test 8-16-60

Company Sinclair Oil & Gas Company Lease State Lea 514 Well No. 1

Unit K Sec. 32 Twp. 9-S Rge. 38-E Purchaser None

Casing 7 5/8" Wt. I.D. Set at 330' Perf. To

Tubing 2 1/2" Wt. 6.5 I.D. 2.441 Set at 5000' Perf. 4916 To 4938

Gas Pay: From 4916 To 4938 L 4916 xG .800 -GL 3932 Bar.Press. 13.2

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

Date of Completion: 8-14-60 Packer None Reservoir Temp. 104

OBSERVED DATA

Tested Through (Prover) (~~Choke~~) ~~(Orifice)~~ Type Taps None

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1369	80			72
1.	2" C.F.P.	1 1/4"	8#		63	1295	79			4
2.	"	"	16#		53	1201	79			4
3.	"	"	28#		46	1083	78			4
4.	"	"	36#		42	988	73			4
5.	"	"	42#		40	919	82			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.	35.6738		21.2	0.9971	0.8660	1.000	653
2.	"		29.2	1.0068	"	"	908
3.	"		41.2	1.0137	"	"	1290
4.	"		49.2	1.0178	"	"	1547
5.	"		55.2	1.0117	"	"	1785

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 0 cf/bbl. Specific Gravity Separator Gas .800

Gravity of Liquid Hydrocarbons 0 deg. Specific Gravity Flowing Fluid ---

P_c 5.866 $(1-e^{-s})$ .237 P_c 1388.2 P_c^2 1910.5

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	1308.2	1711.4	3.830	14.668	3.4766	1711.8	195.7	1309.5	94.4
2.	1214.2	1474.3	5.336	28.476	6.7527	1474.0	436.5	1217.6	88.0
3.	1096.2	1201.6	7.567	57.259	13.5704	1215.2	696.3	1102.9	79.9 .797
4.	1001.2	1002.4	9.075	82.356	19.5184	1021.9	888.6	1010.9	73.1
5.	932.2	869.0	10.119	102.394	24.2674	893.3	1017.2	945.1	68.4

Absolute Potential: 2.763 MCFPD; n .747

COMPANY SINCLAIR OIL & GAS COMPANY

ADDRESS Gas & Gas Products Dept. Box 1470 Midland, Texas

AGENT and TITLE John D. Lucas Gas Analyst - Box 724 - Sweetwater, Texas

WITNESSED

COMPANY

REMARKS

Fpv of 1.000 used due to W.P. on critical
Flow Prover was less than 100#
No Fluid produced during Set

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.