

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Queen County Lea

Initial X Annual _____ Special _____ Date of Test March 22, 1961

Company Santiago Oil and Gas Company Lease Texaco Federal Well No. 1

Unit A Sec. 34 Twp. 188 Rge. 32E Purchaser not connected

Casing 5 1/2" Wt. 14 I.D. 5.012" Set at 4166' Perf. 4036 To 3961

Tubing 2" Wt. 4.7 I.D. 1.995" Set at 4030' Perf. 3975 To 3976

Gas Pay: From 3940 To 4063 L 4000 xG 0.831 -GL 3324 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well Gas

Date of Completion: March 9, 1961 Packer 3976 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) XXXXXX (Choke) XXXXXX (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										
1.	2"	1/8"	990	-	57	990	50	1195	50	3
2.	2"	1/4"	365	-	56	365	56	940	56	3
3.	2"	3/8"	300	-	55	300	54	785	54	3
4.	2"	1/2"	210	-	55	210	52	690	52	3
5.										

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.	0.3610	-	1003.2	1.0029	0.8302	1.057	309.0
2.	1.4030	-	378.2	1.0039	0.8302	1.036	717.3
3.	5.0697	-	313.2	1.0048	0.8302	1.020	837.8
4.	5.5233	-	225.2	1.0068	0.8302	1.014	1070.0
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 150,000 cf/bbl.

Gravity of Liquid Hydrocarbons 24 deg.

P_c 9.936 (1-e^{-s}) 0.204

Specific Gravity Separator Gas 0.831

Specific Gravity Flowing Fluid 0.97

P_c 1298.2 P_c^2 1685.3

No.	P_w (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.	1204.1					1450.7	225.6	0.9306	
2.	953.2					908.6	776.7	0.7342	
3.	798.2					637.1	1048.2	0.6148	
4.	703.2					494.3	1190.8	0.5416	
5.									

Absolute Potential: 1,300 MCFPD; n 0.73413

COMPANY SANTIAGO OIL AND GAS COMPANY

ADDRESS P. O. Box 1663, Midland, Texas

AGENT and TITLE J. L. Fiume, Petroleum Engineer

WITNESSED _____

COMPANY _____

REMARKS

11/2 - 44.89

11/4 - 46.12

11/8 - 3.95

11/16 - 2.80

11/32 - 1.11

Part 1 - 0.20

Part 2 - 2.00

Part 3 - 1.50

Part 4 - 1.00

Part 5 - 0.50

682. 074/cff

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 .

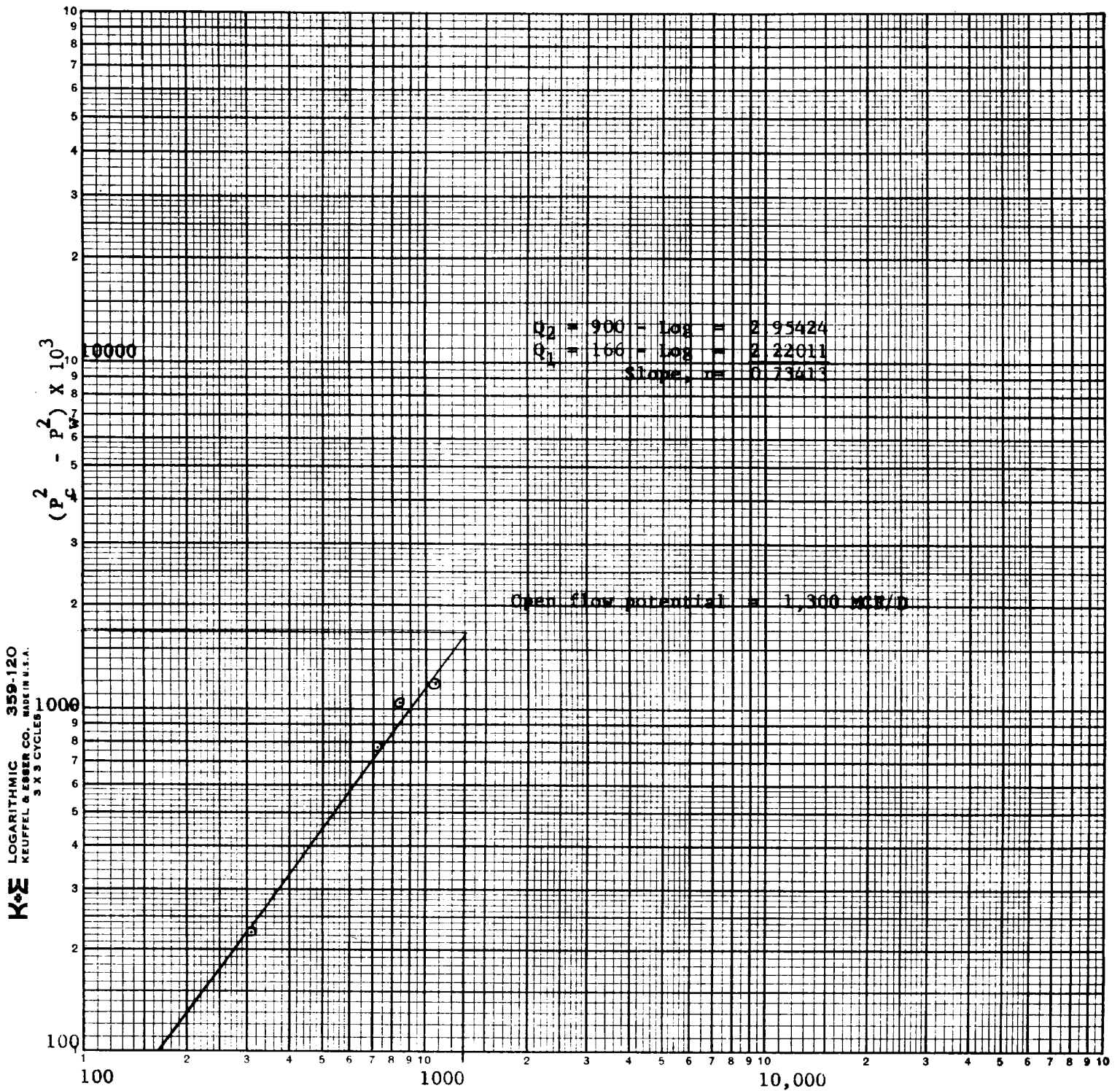
SANTIAGO OIL AND GAS COMPANY

Texaco Well #1

A-34-18S-32E

Lea County, New Mexico

March 22, 1961



Q - MCF/D @ 15.025 psia