

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool BRADEN Formation 603 County LEA
Initial 10:21 Annual 1 Special 1 Date of Test 9/30/56
Company SIMPLAR OIL & GAS CO. Lease STATE 176 Well No. 3
Unit 1 Sec. 19 Twp. 21S Rge. 34E Purchaser PERMIAN BASIN PIPE LINE
Casing 7" Wt. 24 I.D. 6.336 Set at 3400 Perf. To
Tubing 2 1/2" Wt. 6.5 I.D. 2.441 Set at 3700 Perf. To
Gas Pay: From 3400 To 3800 L 3700 xG 0.600 -GL 3400 Bar.Press. 19.2
Producing Thru: Casing Tubing 1 Type Well SINGLE
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 12/30/55 Packer Reservoir Temp. 110 Deg.

OBSERVED DATA

Tested Through (PERMIAN BASIN PIPE LINE) (Meter) Type Taps PIN

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						919.0	70			70
1.	1"	2.000	475.0	4.5	76	841.4	70			24
2.	1"	2.000	475.0	10.1	64	780.1	70			24
3.	1"	2.000	475.0	14.1	64	733.6	70			24
4.	1"	2.000	475.0	25.3	71	611.3	70			24
5.										

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.	20.92	44.67	489.2	.9930	.9993	1.042	1952
2.	20.92	70.25	489.6	.9943	.9993	1.046	2093
3.	20.92	87.47	475.2	.9943	.9993	1.045	2454
4.	20.92	111.30	489.2	.9974	.9993	1.044	3002
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 6 3.846 (1-e^{-s}) .140

Specific Gravity Separator Gas .600
Specific Gravity Flowing Fluid
P_c 932.2 P_c² 869.0

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.	841.4	707.9	7.931	62.90	20.25	707.6	130.4	850.6	.92
2.	780.1	608.4	12.05	145.0	21.64	607.7	211.3	811.0	.87
3.	733.6	538.2	14.90	222.0	24.30	541.8	296.2	781.5	.82
4.	611.3	373.6	14.95	223.5	24.60	442.6	420.4	649.8	.72
5.									

Absolute Potential: 5492 MCFPD; n .73
COMPANY SIMPLAR OIL & GAS CO.
ADDRESS 940 N. Broadway, Hobbs, New Mexico
AGENT and TITLE E. L. Karned- Gas Analyst
WITNESSED E. L. Karned
COMPANY Permian Basin Pipe Line Co.

REMARKS

ELVIS A. UTZ
GAS ENGINEER

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.

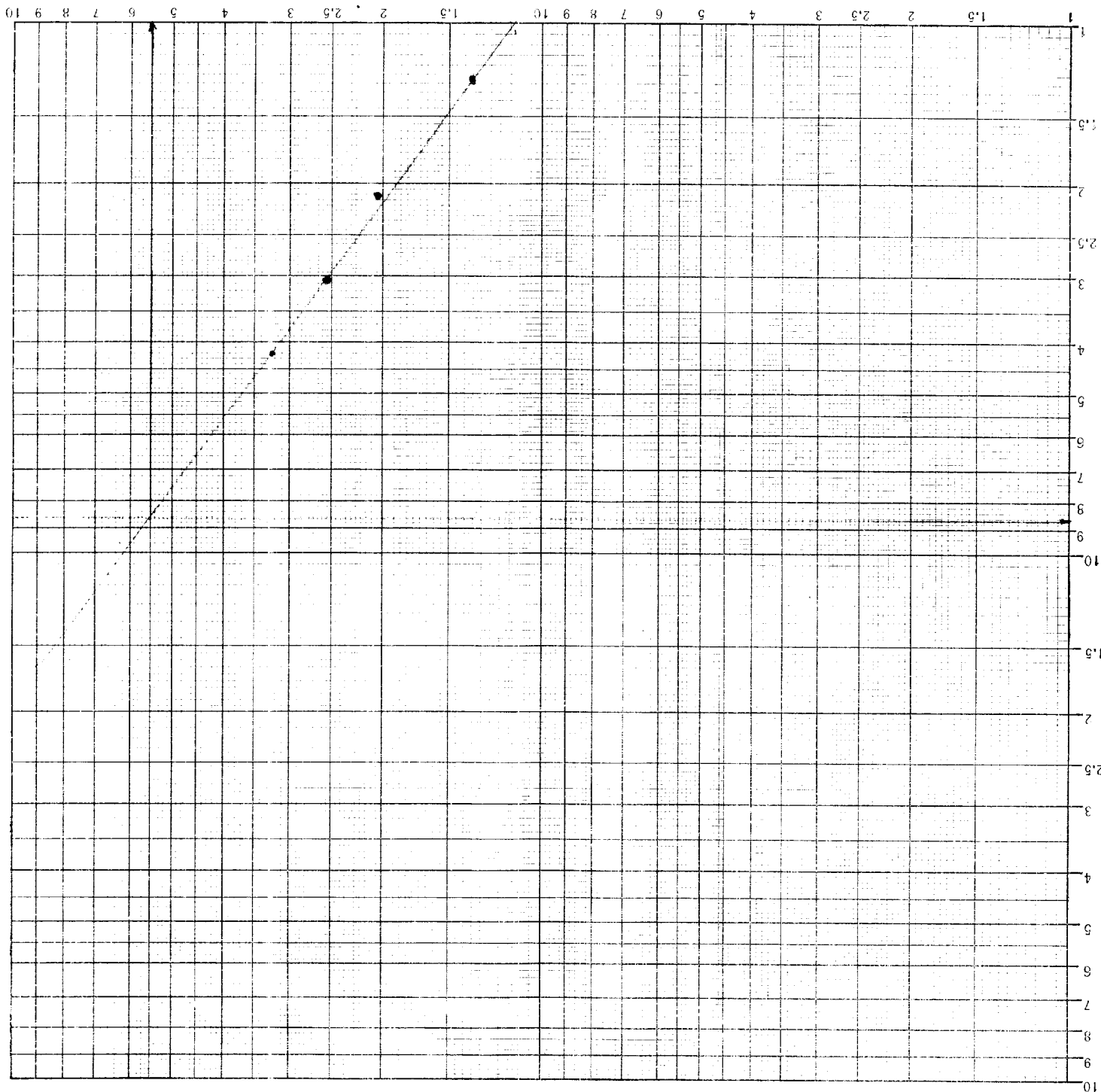
Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

Handwritten notes at the top of the page, likely bleed-through from the reverse side, including:
 $1000 = 3.019 \times 10^3$
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POTENTIAL OF WELL - 5,491 MORFO

$n = .73$

Q IN MORFO



SINGLAIR OIL & GAS COMPANY - STAGE 176 WELL # 3