

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Bumont Gas Formation Queen 1956 SEP 20 PM 2:48 County Lea
Initial _____ Annual _____ Special X (Retest) Date of Test Sept. 3, 1956
Company Schermerhorn Oil Corp. Lease Christmas Well No. 1
Unit D Sec. 11 Twp. 20 S Rge. 37 E Purchaser Permian Basin Pipeline Co.
Casing 8 1/2" Wt. 14.0# I.D. 5.012" Set at 3663' Perf. _____ To _____
Tubing 2 3/8" Wt. 4.7# I.D. 1.995" Set at 3745' Perf. _____ To _____
Gas Pay: From 3660' To 3775' L 3663' xG 0.665 -GL 2486' Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well Single Completion
Date of Completion: 12-1-53 Packer _____ Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)Type Taps Pipe

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.	4"	1.250"	450.6	9.0	61			910.4		72 Hr. S.I.
2.	4"	1.250"	456.5	12.9	61			747.5		24 Hr.
3.	4"	1.250"	455.7	20.3	64			698.7		24 Hr.
4.	4"	1.250"	455.0	27.1	65			618.1		24 Hr.
5.	4"	1.250"	455.0	27.1	65			551.4		24 Hr.

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.	10.24	64.61		0.9990	0.9498	1.050	659
2.	10.24	77.84		0.9990	0.9498	1.050	794
3.	10.24	97.82		0.9982	0.9498	1.050	990
4.	10.24	112.60		0.9982	0.9498	1.048	1142
5.	10.24						

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.712 (1-e^{-s}) 0.154

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 928.6 P_c² 853.0

No.	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.	760.7	578.7	1.128	1.272	0.1959	578.9	274.1	760.9	82.4
2.	708.0	498.5	1.350	1.847	0.2844	498.8	357.2	704.1	78.2
3.	691.3	398.5	1.895	2.873	0.4424	398.9	454.1	681.6	68.4
4.	564.6	318.8	1.955	3.822	0.5886	319.4	588.6	565.2	61.2
5.									

Absolute Potential: 1.785 MCFPD; n 0.89

COMPANY Schermerhorn Oil Corporation
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AGENT and TITLE J. H. Moore, Geologist
WITNESSED H. E. Barrett
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REMARKS

CO₂ and N₂ content of gas is negligible.

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 .