

NEW MEXICO OIL CONSERVATION COMMISSION
HOBBS OFFICE OCC

Form C-122

1957 OCT 25 PM 3:11
MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Elephant Formation Queen County Lea

Initial X Annual _____ Special _____ Date of Test 9-4/13-57

Company Gulf Oil Corporation Lease Christmas "C" Well No. 7

Unit H Sec. 18 Twp. 22S Rge. 37E Purchaser Permian Basin Pipe Line Co.

Casing 5 1/2" Wt. 14 I.D. 4.887 Set at 3624 Perf. 3436 To 3516

Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 3686 Perf. _____ To _____

Gas Pay: From 3436 To 3516 L 3436 xG .690 -GL 2371 Bar.Press. 13.2

Producing Thru: Casing X Tubing _____ Type Well OO Dual

Date of Completion: 10-22-56 Packer 3600 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (Pressure) (Flow) (Meter) Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	4	1.75	504.8	2.3	61			752.3		72
2.	4	1.75	500.0	2.3	67			715.7		24
3.	4	1.75	508.2	18.3	68			588.3		24
4.	4	1.75	495.2	20.5	70			588.3		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.	21.69	34.51	518.0	.9990	.9325	1.056	736
2.	21.69	59.97	513.2	.9993	.9325	1.054	1269
3.	21.69	88.14	521.4	.9984	.9325	1.054	1865
4.	21.69	102.1	508.4	.9905	.9325	1.050	2148
5.							

CO₂ = 5.17%
H₂ = .60%

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.883 (1-e^{-s}) .151

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 764.5 P_c 504.5

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.	728.9	531.3	1.388	1.927	.2910	531.6	52.9	729.1	.95
2.	621.5	386.3	2.390	5.712	.3625	387.2	197.3	622.3	.81
3.	581.5	338.1	1.512	12.33	1.842	340.0	244.5	583.1	.76
4.	539.5	291.1	4.045	16.36	2.470	293.6	290.9	541.8	.71
5.									

Absolute Potential: 3334 MCFPD; n 0.63

COMPANY Gulf Oil Corporation

ADDRESS Box 2167, Hobbs, N. M.

AGENT and TITLE J. L. Smith

WITNESSED _____

COMPANY _____

REMARKS

Second test.

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 .