

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Bument Formation Queen County Lea
Initial x Annual _____ Special _____ Date of Test 4-3 - 4-12-57
Company Gulf Oil Corporation Lease Mattern "D" Well No. 7
Unit B-D Sec. 6 Twp. 22S Rge. 87E Purchaser Permian Basin P. L. Co.
Casing 5.5 Wt. 14 I.D. 4.887 Set at 3790 Perf. 3426 To 3525
Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 3759 Perf. _____ To _____
Gas Pay: From 3426 To 3525 L 3426 xG .710 -GL 2432 Bar.Press. 13.2
Producing Thru: Casing x Tubing _____ Type Well G. O. Dual
Date of Completion: 7-13-56 Packer 3680 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Secured) (Orifice) (Meter)

Type Taps _____ Pipe _____

Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Secured) (Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.
SI									
1.	4	2.25	437.3	6.5	74			1021.9	72
2.	4	2.25	432.3	13.3	71			966.1	23
3.	4	2.25	439.1	22.7	68			915.6	24
4.	4	2.25	441.4	28.9	69			850.4	25
5.								793.0	24

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	40.53	54.11	450.5	.9868	.9193	1.047	2083
2.	40.53	76.97	445.5	.9896	.9193	1.049	2977
3.	40.53	101.3	452.3	.9924	.9193	1.049	3929
4.	40.53	114.6	454.6	.9915	.9193	1.052	4454
5.							

PRESSURE CALCULATIONS

CO₂ - 4.77%N₂ - 0.26%

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.883 (1-e^{-s}) .154

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1035.1 P_c 1071.4

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.	978.3	957.0	3.922	15.38	2.369	961.4	110.0	980.5	.95
2.	928.8	862.7	5.606	31.43	4.840	867.5	203.9	931.4	.90
3.	863.6	745.8	7.398	54.73	8.428	754.2	317.2	868.4	.84
4.	806.2	650.0	8.387	70.34	10.83	660.8	410.6	812.9	.79
5.									

Absolute Potential: 7700 MCFPD; n 0.57COMPANY Gulf Oil CorporationADDRESS Hobbs, New MexicoAGENT and TITLE R. L. WestWITNESSED R. L. WestCOMPANY Permian Basin P. L. Co.

REMARKS

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 .