

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool umont Formation usen County lea
Initial x Annual _____ Special _____ Date of Test 7-7 to 7-11-56
Company Gulf Oil Corp. Lease Leaves, A. B. Well No. 2
Unit 4 Sec. 29 Twp. 20N Rge. 37 Purchaser Montana Gas & Pipe Line Co.
Casing 7" Wt. 22 I.D. 6.39 Set at 3690 Perf. 3400 To 3520
Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 3607 Perf. _____ To _____
Gas Pay: From 3450 To 3520 L 31.2 xG .070 -GL 2417 Bar.Press. 13.2
Producing Thru: Casing x Tubing _____ Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 10-26-54 Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (~~POWER~~ ~~ORORE~~) (Meter)Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								307.9		72
1.	4	1.75	435.9	5.6	73			795.0		24
2.	4	1.75	471.6	10.1	68			745.2		24
3.	4	1.75	461.2	24.2	69			597.7		24
4.	4	1.75	463.1	20.4	73			515.2		25
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	56.24	477.1	.9931	.9463	1.11	1185
2.	21.69	69.97	484.3	.9924	.9463	1.019	1495
3.	21.69	107.48	477.1	.9915	.9463	1.018	2292
4.	21.69	115.93	473.3	.9977	.9463	1.016	2459
5.							

PRESSURE CALCULATIONS

Co2 2.27"
H2 1.43"

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 0.725 (1-e^{-s}) 0.143

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
F_c 921.1 p_c 848.4

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.	802.2	643.5	.860	.74	.11	643.6	204.9	802.3	57.1
2.	750.4	563.2	1.088	1.18	.18	575.3	273.1	750.1	82.3
3.	612.9	375.6	1.609	2.59	.43	376.0	472.4	613.1	60.5
4.	559.4	312.9	1.790	3.20	.49	313.4	535.0	560.0	60.7
5.									

Absolute Potential: 3620 MCFPD; n 0.73
COMPANY Gulf Oil Corporation
ADDRESS Box 2167, Hobbs, N.M.
AGENT and TITLE A. L. Smith
WITNESSED _____
COMPANY _____

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 .