

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Furness Formation Queen NOV 12 AM County Lea
Initial ☒ Annual _____ Special _____ Date of Test 9-12-56
Company Gulf Oil Corporation Lease Anderson Well No. 4
Unit B Sec. 17 Twp. 20S Rge. 37E Purchaser Permian Basin PL Co.
Casing 5 1/2" Wt. 17# I.D. 4.892" Set at 3800' Perf. 3290' To 3402'
Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3752' Perf. _____ To _____
Gas Pay: From 3290 To 3402 L 3290 xG 0.670 -GL 220h Bar.Press. 13.2
Producing Thru: Casing ☒ Tubing _____ Type Well Gas Oil Dual
Date of Completion: 6-27-55 Packer 361h' 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								982.0		71-3/4
1.	4	2.00	459.0	6.7	75			829.7		2h
2.	4	2.00	463.4	14.4	64			738.4		2h
3.	4	2.00	472.0	21.3	65			683.7		2h
4.	4	2.00	481.1	31.8	66			618.0		2h
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wp}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	29.92	56.85	472.2	0.9859	0.9463	1.039	1431
2.	29.92	82.84	476.6	0.9962	0.9463	1.046	2444
3.	29.92	101.7	485.2	0.9952	0.9463	1.045	2995
4.	29.92	122.8	474.3	0.9943	0.9463	1.044	3609
5.							

CO₂ = 3.17%H₂ = 1.72%

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons 1.012 deg.
F_c _____ (1-e^{-s}) 0.141
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 995.2 P_c 990.4

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.		710.5	2.955	8.732	1.231	711.7	278.7	843.6	.85
2.		584.9	4.439	19.48	8.766	567.7	422.7	753.5	.76
3.		485.7	5.427	29.45	4.152	489.9	500.5	699.9	.70
4.		398.4	6.540	42.77	6.031	404.4	586.0	635.9	.64
5.									

6099

1.00

Absolute Potential _____ MCFPD; n _____
COMPANY Gulf Oil Corporation
ADDRESS Box 2167, Hobbs, N.M.
AGENT and TITLE L.S. Gierke
WITNESSED _____
COMPANY _____

Retest. If greater than 1.00, AP calculated from highest rate of flow and slope of 1.00

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 .

Gulf Oil Corporation
 Anderson No. 4
 B-17-20S-37h, Lea Co.
 September 12, 1956
 Dumont Pool

