

NEW MEXICO OIL CONSERVATION COMMISSION

L. J. A. UTZ
GAS ENGINEER

Form C-122

Revised 12-1-55

HOBBS OFFICE OCC

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 OCT 10 PM 3:06

Pool Summit Formation Queen County LeeInitial 2 Annual _____ Special _____ Date of Test 7-25 to 8-1-56Company Gulf Oil Corporation Lease Graham State #2 Well No. 2Unit RR Sec. 6 Twp. 24 Rge. 34E Purchaser Permian Basin PL Co.Casing 5.5 Wt. 17 I.D. 4.892 Set at 3740 Perf. 3405 To 3975Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 3874 Perf. _____ To _____Gas Pay: From 3405 To 3975 L 3405 xG .680 -GL 2315 Bar.Press. 13.2Producing Thru: Casing 2 Tubing _____ Type Well SingleDate of Completion: 5-27-55 Packer 3420 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.	
SI								
1.	1	2.50	472.4	8.2	73		870.3	72
2.	1	2.50	482.7	14.3	69		865.3	25
3.	1	2.50	486.5	24.7	64		868.3	25
4.	1	2.50	505.0	22.6	64		795.0	25
5.							709.1	25

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	2.44	49.10		.9877	.9993	1.007	1343
2.	2.44	91.95		.9973	.9993	1.004	1500
3.	2.44	115.80		.9962	.9993	1.004	6218
4.	2.44	118.30		.9962	.9993	1.005	7970
5.							

002 2.29%
W2 1.25%

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.012 (1-e^{-s}) 0.167Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 945.5 P_c 814.3

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	P _w P _c
1.	882.7	779.1	6.058	36.70	1.32	784.5	73.6	849.9	79
2.	881.7	775.3	8.915	79.48	11.36	782.5	129.1	821.3	92
3.	778.2	605.4	11.270	127.00	18.47	604.3	192.0	770.1	87
4.	782.3	582.7	11.160	124.50	30.45	592.1	240.9	743.2	82
5.									

Absolute Potential 15,700 MCFPD; n 0.66COMPANY Gulf Oil CorporationADDRESS Box 2147, Hobbs, N.M.AGENT and TITLE W. L. Smith

WITNESSED _____

COMPANY _____

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 .

Gulf Oil Corporation
 Graham State "E" No. 2
 J-6-21S-36E, Lea Co.
 8-1-56

LOGARITHMIC 359-110
 KEUFFEL & ESSER CO. MADE IN U.S.A.
 2 X 2 CYCLES

