

NEW MEXICO OIL CONSERVATION COMMISSION

MODUS OFFICE 000

MAY 20 AM 9:59 Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bumont Formation Queen County Lea
Initial X Annual _____ Special _____ Date of Test 5-13, 14, 1957
Company Gulf Oil Corporation Lease H. T. Mattern "B" Well No. 5
Unit 0 Sec. 30 Twp. 218 Rge. 37E Purchaser Permian Basin PL Co.
Casing 5.5 Wt. 14 I.D. 5.012 Set at 3673 Perf. 3408 To 3618
Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 3791 Perf. _____ To _____
Gas Pay: From 3408 To 3618 L 3408 xG .495 -GL 2369 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Date of Completion: 5-29-56 Packer 3655 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Orifice)
2" Critical Flow Prover

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Choke) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>900.8</u>		<u>69</u>
1.	<u>1/16</u>		<u>816.1</u>					<u>816.1</u>		<u>3</u>
2.	<u>3/32</u>		<u>729.9</u>					<u>729.9</u>		<u>3</u>
3.	<u>1/8</u>		<u>639.7</u>					<u>639.7</u>		<u>3</u>
4.	<u>3/16</u>		<u>489.1</u>					<u>489.1</u>		<u>3</u>
5.	<u>1/2</u>		<u>319.5</u>					<u>319.5</u>		<u>21 1/2</u>

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.	<u>.0427</u>		<u>629.3</u>	<u>.9804</u>	<u>.9292</u>	<u>1.072</u>	<u>67</u>
2.	<u>.1880</u>		<u>743.1</u>	<u>.9732</u>	<u>.9292</u>	<u>1.061</u>	<u>130</u>
3.	<u>.3418</u>		<u>639.9</u>	<u>.9741</u>	<u>.9292</u>	<u>1.053</u>	<u>207</u>
4.	<u>.7831</u>		<u>489.3</u>	<u>.9831</u>	<u>.9292</u>	<u>1.038</u>	<u>314</u>
5.	<u>.7831</u>		<u>319.7</u>	<u>.9804</u>	<u>.9292</u>	<u>1.028</u>	<u>245</u>

GOR - 4.56%
R2 - 0.99%

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.712 (1-e^{-s}) .190

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 914.0 P_c² 835.4

Friction loss less than 1 psi.

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.	<u>629.3</u>				<u>687.7</u>		<u>147.7</u>		<u>.91</u>
2.	<u>743.1</u>				<u>552.2</u>		<u>283.2</u>		<u>.81</u>
3.	<u>639.9</u>				<u>401.8</u>		<u>433.6</u>		<u>.69</u>
4.	<u>489.3</u>				<u>178.3</u>		<u>657.1</u>		<u>.46</u>
5.	<u>319.7</u>				<u>11.07</u>		<u>724.7</u>		<u>.36</u>

Absolute Potential: 399 MCFPD; n 1.00 (limited)COMPANY Gulf Oil CorporationADDRESS Box 2167, Hobbs, N.M.AGENT and TITLE H. L. SmithWITNESSED H. L. WestCOMPANY Permian Basin PL Co.

REMARKS

This is a retest. Slope in excess of 1.00. Slope of 1.00 plotted on highest rate
flow - 21 1/2 hr potential is 202 MCF on same slope.

ELVIS R. LUTZ
GAS ENGINEER

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.

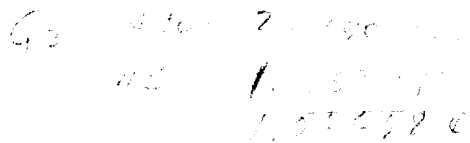
The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

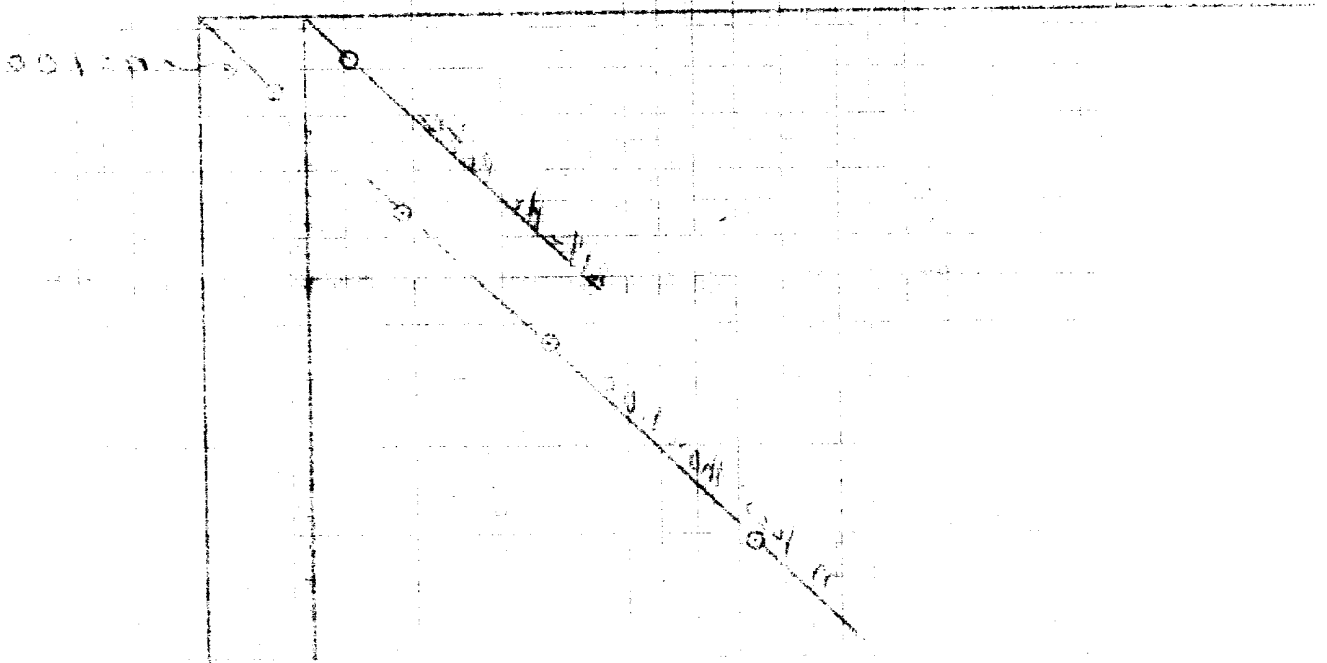
- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing 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 .

REC'D - CIVIL RIGHTS DIVISION
FBI
JUN 10 1964



Hall Oil Corporation
 H. J. Mattson, Mgr. No. 2
 O-282, 30-212-372, Jan. 60.
 Diamond Pool
 May 13-14, 1957
 282 282 12.5, Slope 12.5 (limited)
 212 in Pot = 282 MCF



MCF Per Day