ELVIS A. UTZ
GAS ENGINEER

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1956 OCT 8 PM 2:18

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool [redacted] Formation Yates - Seven Rivers County Lea

Initial ____ Annual X Special ____ Date of Test 6-8 to 6-15-56

Company GULF OIL CORPORATION Lease Leonard, H "A" Well No. 3

Unit B Sec. 22 Twp. 21S Rge. 36E Purchaser Gulf Oil Corporation

Casing 5.5 Wt. 17.0 I.D. 4.892 Set at 3760 Perf. 3695 To 3695

Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 3697 Perf. - To ____

Gas Pay: From 3695 To 3695 L 3697 xG .680 -GL 2514 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single

Date of Completion: 9-30-51 Packer - Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. ____

OBSERVED DATA

Tested Through * ([redacted]) ([redacted]) (Meter) Type Taps Flange

No.	Flow Data ([redacted]) (Line) Size	([redacted]) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1103		1103		
1.	[redacted]	1.50	731	4.7	60	993		1003		70.5
2.	[redacted]	1.50	680	11.5	60	930		936		21.5
3.	[redacted]	1.50	740	12.3	60	880		910		24.0
4.	[redacted]	1.50	722	12.0	60	776		834		23.0
5.										25.0

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.	13.99	59.22	756.2	60	.9393	1.000	848
2.	13.99	87.27	693.2	60	.9393	1.000	1216
3.	13.99	96.85	753.2	60	.9393	1.000	1378
4.	13.99	127.27	735.2	60	.9393	1.000	1821
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas .680
Specific Gravity Flowing Fluid ____
P_c 1116.2 P_c^2 1245.9

No.	P_w / P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	1036.2					1072.7	173.2		92.0
2.	939.2					882.1	363.8		84.1
3.	983.2					858.3	392.6		82.7
4.	927.2					694.3	561.60		74.1
5.									

Absolute Potential: 3400 MCFPD; n 0.76
COMPANY Gulf Oil Corporation
ADDRESS Box 2167, Hobbs, New Mexico
AGENT and TITLE H. A. 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} = 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.