NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

NOV 19 AM 7:50

Pool Eumont Formation Queen County Lea

Initial X Annual Special Date of Test 8-24-56

Company Gulf Oil Corporation Lease Kutter, F. W. "A" Well No. 3

Unit J Sec. 20 Twp. 19S Rge. 37E Purchaser Permian Basin PL Co.

Casing 5.5 Wt. 14 I.D. 5.012 Set at 3516 Perf. To

Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 3515 Perf. To

Gas Pay: From 3516 To 3700 L 3516 xG .675 -GL 2373 Bar.Press. 13.2

Producing Thru: Casing X Tubing Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 12-20-55 Packer None Reservoir Temp.

OBSERVED DATA

Tested Through (~~Prover~~) (~~Choke~~) (Meter) Type Taps

No.	Flow Data (~~Prover~~) (Line) Size	(~~Choke~~) (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								969.7		72
1.	4	2.25	453.7	8.2	69					24
2.	4	2.25	455.7	13.9	63					24
3.	4	2.25	457.5	29.5	63					24
4.	4	2.25	457.4	41.1	65					24
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.	10.53	43.88	466.9	.9915	.9427	1.015	2145
2.	10.53	80.73	468.9	.9912	.9427	1.015	3224
3.	10.53	117.90	470.7	.9912	.9427	1.015	4694
4.	10.53	139.10	470.6	.9912	.9427	1.013	5517
5.							

COR 2.115

MP 2.015

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c 1.712 $(1-e^{-s})$ 0.152

Specific Gravity Separator Gas

Specific Gravity Flowing Fluid

P_c 968.9 P_c^2 938.1

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.	807.3	859.7	4.186	17.52	2.666	862.3	103.8	928.6	96
2.	808.4	888.0	5.588	30.87	4.571	904.6	268.5	897.0	91
3.	804.4	696.8	8.096	64.98	9.752	706.0	260.1	860.2	85
4.	789.9	623.9	9.485	89.21	13.470	637.4	326.7	798.4	81
5.									

Absolute Potential: 11,900 MCFPD; n 0.71

COMPANY Gulf Oil Corporation

ADDRESS Box 2167, Hobbs, N.M.

AGENT and TITLE L. S. Gray

WITNESSED

COMPANY

REMARKS

ALVIS A. UTZ
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} = 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.