NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 NOV 13 AM 7:59

Revised 12-1-55

Pool Eumont Formation Queen County Lea

Initial X Annual Special Date of Test 9-3-56

Company Gulf Oil Corporation Lease Whitmire Well No. 2

Unit B Sec. 8 Twp. 20S Rge. 37E Purchaser Permian Basin Pl. Co.

Casing 7" Wt. 23# I.D. 6.366" Set at 3822' Perf. 3215' To 3365'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3776' Perf. To

Gas Pay: From 3215' To 3365' L 3215 xG 0.665 -GL 2138 Bar.Press. 13.2

Producing Thru: Casing X Tubing Type Well Gas-Oil Dual

Date of Completion: 1-16-56 Packer 3715' Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI										
1.	4	2.75	460.0	7.8	66			976.7		72
2.	4	2.75	468.3	22.1	58			911.3		23-3/4
3.	4	2.75	478.5	20.5	59			882.7		23-3/4
4.	4	2.75	499.5	32.5	61			827.1		24
5.								761.8		24

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.	73.11	60.32	474.2	0.9963	0.9598	1.082	4376
2.	73.11	76.33	481.5	1.0019	0.9598	1.086	5555
3.	73.11	100.30	491.7	1.0080	0.9598	1.087	7307
4.	73.11	129.10	512.7	0.9990	0.9598	1.087	9377
5.							

PRESSURE CALCULATIONS

CO2 - 2.69%
N2 - 2.23%

Gas Liquid Hydrocarbon Ratio cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c 0.740 $(1-e^{-s})$ 0.237

Specific Gravity Separator Gas

Specific Gravity Flowing Fluid

P_c 989.9 P_c^2 979.9

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.	926.5	858.7	3.238	10.48	1.436	856.2	123.8	925.3	.93
2.	875.9	767.2	4.111	16.90	2.315	769.5	210.4	877.2	.89
3.	860.3	706.1	5.407	29.25	4.008	718.1	260.8	842.7	.85
4.	774.2	599.4	6.959	48.15	6.597	606.0	373.9	778.5	.79
5.									

Absolute Potential: 19,700 MCFPD; n .78

COMPANY Gulf Oil Corporation

ADDRESS Box 2167, Hobbs, N.M.

AGENT and TITLE E. L. Sumrall

WITNESSED

COMPANY

REMARKS

U. S. GEOL. SURV. 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.