

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Permian Formation Permian Date of Test 9-21-56

Initial X Annual Special

Company Gulf Oil Corporation Lease Bell-Ramsay "A" Well No. 8

Unit L Sec. 4 Twp. 21S Rge. 36E Purchaser Permian Basin PL Co.

Casing 5.5" Wt. 17.0# I.D. 4.892" Set at 3680' Perf. 3355' To 3520'

Tubing 2.375" Wt. 4.7# I.D. 1.995" Set at 3370' Perf. 3366' To 3370'

Gas Pay: From 3355' To 3520' L 3355' xG .670 -GL 2248 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Date of Completion: 3-16-56 Packer None Reservoir Temp.

OBSERVED DATA

Tested Through (Pressure) (Orifice) (Meter) Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Packer) (Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						959.2		979.2		72
1.	1	1.50	472.0	7.1	69	930.0		979.3		24
2.	1	1.50	469.6	10.0	68	890.0		975.0		24
3.	1	1.50	470.1	35.1	58	845.9		976.7		24
4.	1	1.50	475.0	47.7	56	809.4		981.0		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.	15.26	50.69	485.7	.9913	.9463	1.045	878
2.	15.26	96.26	482.8	1.0029	.9463	1.046	1190
3.	15.26	130.7	483.3	1.0029	.9463	1.049	1976
4.	15.26	152.6	488.2	1.0039	.9463	1.049	2321
5.							

CO₂ - 3.113
N₂ - 1.601

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c (1-e^{-s})

Specific Gravity Separator Gas

Specific Gravity Flowing Fluid

P_c 972.4 P_c 945.6

No.	P _w B _g (psia)	P _t	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.	958.7					907.6	38		.96
2.	928.2					861.6	81		.95
3.	909.9					827.9	117.7		.94
4.	894.2					799.6	145.0		.92
5.									

Absolute Potential: 9,100 MCFPD; n 0.73

COMPANY Gulf Oil Corporation

ADDRESS Box 2167, Hobbs, N.M.

AGENT and TITLE J. S. 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 .