NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Crosby-Devonian Formation Devonian County Lea

Initial X Annual ____ Special ____ Date of Test Mar. 1-8, 1957

Company Gulf Oil Corporation Lease Arnett-Ramsey "B" Well No. 3

Unit A Sec. 32 Twp. 25S Rge. 37E Purchaser El Paso Natural Gas Company

Casing 5.5 Wt. 14, 15.5 & 17# I.D. ____ Set at 8796 Perf. 8644 To 8767

Tubing 2.375 Wt. 4.7# I.D. 1.995 Set at 8783 Perf. ____ To ____

Gas Pay: From 8644 To 8767 L 8783 xG .640 -GL 5621 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 2-12-57 Packer None Reservoir Temp. ____

PB TD 8793'

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (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						2520		2572		72
1.	6	2.75	575	9.0	78	2152		2243		3
2.	6	2.75	569	13.69	82	1970		2138		24
3.	6	2.75	564	19.36	78	1880		2002		24
4.	6	2.75	549	27.56	79	1598		1871		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.	47.75	72.76	588.2	.9723	.9682	1.046	3428
2.	47.75	89.28	582.2	.9735	.9682	1.051	4249
3.	47.75	105.71	577.2	.9751	.9682	1.053	5060
4.	47.75	124.47	562.2	.9802	.9682	1.050	5934
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 93,824 cf/bbl.
Gravity of Liquid Hydrocarbons 58.9 deg.
F_c 9.936 Measured $(1-e^{-s})$ 0.321

Specific Gravity Separator Gas .640
Specific Gravity Flowing Fluid ____
P_c 2585.2 P_c^2 6683.3

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	2252					5085.9	1597.4		.87
2.	2141.2					4584.7	2098.6		.83
3.	2035.2					4061.0	2622.3		.78
4.	1884.2					3550.2	3133.1		.73
5.									

Absolute Potential: 10,700 MCFPD; n 0.79

COMPANY Gulf Oil Corporation

ADDRESS Box 2167, Hobbs, N.M.

AGENT and TITLE W. L. Smith

WITNESSED H. Kerby

COMPANY El Paso Natural Gas Company

REMARKS

BHP 3225 psig @ 8204'

THOMAS A. UTZ
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.