NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool __Hobbs__ Formation __Dyers-Queen__ County __Lea, New Mexico__

Initial_____ Annual_____ Special __X__ Date of Test __April 24, 1959__

Company __Shell Oil Company__ Lease __State "A"__ Well No. __1__

Unit __G__ Sec. __32__ Twp. __10S__ Rge. __38E__ Purchaser_____

Casing __7"__ Wt. __24.0__ I.D. __6.336__ Set at __3050__ Perf. __3621__ To __3635__

Tubing __3"__ Wt. __9.3__ I.D. __2.992__ Set at __3593__ Perf. __3535__ To __3593__

Gas Pay: From __3535__ To __3593__ L __3535__ xG __.721__ =GL __2585__ Bar. Press. __13.2__

Producing Thru: Casing_____ Tubing __X__ Type Well __Single__
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: __Sept. 17, 1941__ Packer __None__ Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (xxxxxxxxxxx)   Type Taps _____

No.	Flow Data (Prover) Size	Flow Data (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						442		442		72
1.	2"	0.1250				407		407	81	3
2.	2"	0.1875				364		364	81	3
3.	2"	0.2188				332		332	77	3
4.	2"	0.2500				313		313	70	3
5.	2"	0.2500				309		317	79	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.	.3418		420.2	0.9904	0.9123	1.048	134.6
2.	.7051		377.2	0.9904	0.9123	1.042	275.9
3.	1.0034		345.2	0.9940	0.9123	1.039	348.8
4.	1.4030		326.2	0.9905	0.9123	1.038	429.1
5.	1.4030		322.2	0.9922	0.9123	1.036	419.6

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio __Dry Gas__ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c __Measured__ $(1-e^{-s})$ _____

Specific Gravity Separator Gas __.721__

Specific Gravity Flowing Fluid _____

P_c __455.2__ P_c^2 __207.2__

No.	P_w (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2 (1-e^{-s})$	P_w^2	$P_c^2 - P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	420.2					176.6	30.6		92.3
2.	377.2					142.3	64.9		82.9
3.	345.2					119.2	88.0		75.8
4.	326.2					106.4	100.8		71.7
5.	330.2					109.0	98.2		72.5

Absolute Potential: __850__ MCFPD; n __.96__

COMPANY __Shell Oil Company__

ADDRESS __Box 849, Roswell, New Mexico__

AGENT and TITLE __A. L. Ellerd - Gas Tester__

WITNESSED __L. D. Southern__

COMPANY __El Paso Natural Gas 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.