NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Northwest Monument** Formation **Queen** County **Lea, New Mexico**

Initial **X** Annual_____ Special_____ Date of Test **10-28 to 11-2-1960**

Company **Shell Oil Company** Lease **State IBIA** Well No. **1**

Unit **A** Sec. **14** Twp. **18S** Rge. **36E** Purchaser **None**

Casing **5 1/2"** Wt. **15.5#** I.D. **4.976** Set at **4705** Perf. **4434** To **4440**

Tubing **2"** Wt. **4.7#** I.D. **1.995** Set at **4415** Perf. **O.E.** To_____

Gas Pay: From **4434** To **4440** L **4415** xG **.710** GL **3135** Bar.Press. **13.2**

Producing Thru: Casing_____ Tubing **X** Type Well **Single**

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

Date of Completion: **11-2-60** Packer **None** Reservoir Temp._____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)   Type Taps **Flge.**

No.	(Line) Size	(Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Press. psig	Tubing Temp. °F.	Casing Press. psig	Casing Temp. °F.	Duration of Flow Hr.
SI						1570		1601		72 hrs.
1.	4	1.750	303	8.0	79	1523		1577		3 hrs.
2.	4	1.750	311	40.0	80	1456		1535		3 hrs.
3.	4	1.750	416	52.0	73	1393		1492		3 hrs.
4.	4	1.750	549	72.0	74	1267		1431		3 hrs.
5.	4	1.750	310	22.0	80	1445		1505		24 hrs.

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.	19.27	50.29	316.2	.9822	.9193	1.035	905.6
2.	19.27	113.89	324.2	.9813	.9193	1.034	2047
3.	19.27	149.40	429.2	.9877	.9193	1.051	2746
4.	19.27	201.19	562.2	.9868	.9193	1.066	3749
5.	19.27	84.32	323.2	.9813	.9193	1.034	1516

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio_____ cf/bbl.   Specific Gravity Separator Gas **.710**

Gravity of Liquid Hydrocarbons_____ deg.   Specific Gravity Flowing Fluid_____

F_c_____ $(1-e^{-s})$_____ P_c **1614.2** P_c^2 **2605.6**

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.	1590.2					2528.7	76.9		98.5
2.	1548.2					2396.9	208.7		95.9
3.	1505.2					2265.6	340.0		93.2
4.	1444.2					2085.7	519.9		89.5
5.	1518.2					2304.9	300.7		94.0

Absolute Potential: **12,500** MCFPD; n **.748** ~~728~~

COMPANY **Shell Oil Company**

ADDRESS **P. O. Box 845, Roswell, New Mexico**

AGENT and TITLE **A. L. Ellard - Gas Tester**

WITNESSED **Joe B. Murray**

COMPANY **El Paso Natural Gas Company**

REMARKS

26.72 Barrels of Load Oil recovered during test.

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.