NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 NOV 13 AM 8:00

Pool Eumont Formation Queen County Lea

Initial ____ Annual ____ Special X Date of Test 7-23 to 7-27-56

Company Shell Oil Company Lease State Well No. 1

Unit E Sec. 7 Twp. 19-S Rge. 37-E Purchaser El Paso Natural Gas Company

Casing 5½ Wt. 15.5 I.D. 4.976 Set at 3669 Perf. ____ To ____

Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3878 Perf. 3870 To 3876

Gas Pay: From 3669 To 3880 L 3870 xG .685 -GL 2651 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single

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

Date of Completion: 9-20-53 Packer 3654 Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data (~~Prover~~) (Line) Size	(~~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						898				72
1.	4	1.500	609	2.05^2	97	837				24
2.	4	1.500	626	3.4^2	91	777				24
3.	4	1.500	657	4.0^2	93	725				24
4.	4	1.500	697	4.1^2	79	701				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.	13.99	51.13		.9662	.9359	1.059	685
2.	13.99	85.95		.9715	.9359	1.061	1,160
3.	13.99	103.54		.9697	.9359	1.064	1398
4.	13.99	109.25		.9662	.9359	1.073	1,508
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

F_c 9.936 $(1-e^{-s})$ .167 P_c 911.2 P_c^2 830.3

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.	850.2	722.8	6.80	46.2	7.7	730.5	99.8	854.5	.9378
2.	790.2	624.4	11.53	132.9	22.2	646.6	183.7	804.5	.8829
3.	738.2	544.9	13.89	192.9	32.2	577.1	253.2	759.5	.8335
4.	714.2	510.0	14.98	224.4	37.5	547.5	282.8	739.5	.8116
5.									

Absolute Potential: 3,450 MCFPD; n 0.758

COMPANY ~~Shell Oil Company~~

ADDRESS ~~Box 1957, Hobbs, New Mexico~~

AGENT and TITLE ~~W. M. Whitaple~~

WITNESSED ~~Edward Mabe~~

COMPANY ~~El Paso Natural Gas Company~~

REMARKS

SILVIS A. UTZ GAS 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.