NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates - 7 Rivers County Lea

Initial ____ Annual ____ Special X Date of Test 10-22 to 10-26-56

Company Tidewater Oil Company Lease A. L. Christmas Well No. 1

Unit P F Sec. 26 Twp. 22S Rge. 36E Purchaser EPNG

Casing 7 Wt. 20 I.D. 6.456 Set at 3107 Perf. OH To ____

Tubing 2-1/2 Wt. 6.5 I.D. 2.441 Set at 3598 Perf. ____ To ____

Gas Pay: From 3175 To 3600 L 3598 xG .670 -GL 2411 Bar.Press. 13.2

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

Date of Completion: 12-27-49 Packer None 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						852				72
1.	4	1.500	821	7.29	72	822				24
2.	4	1.500	800	12.96	73	801				24
3.	4	1.500	777	21.16	72	777				24
4.	4	1.500	680	85.56	70	683*				24
5.										

* Not enough drawn down because of orifice size.

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	77.87	834	0.9887	.9463	1.091	1114
2.	13.99	102.65	813	0.9877	.9463	1.088	1460
3.	13.99	129.29	790	0.9877	.9463	1.084	1833
4.	13.99	243.51	693	0.9905	.9463	1.075	3434
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c 5.866 $(1-e^{-s})$ .153 P_c 865.2 P_c^2 748.6

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.	835.2	697.6	6.58	42.64	6.5	704.1	44.5	26.6	0.031
2.	814.2	662.9	8.56	73.27	11.2	674.1	74.5	25.0	0.030
3.	790.2	624.4	10.75	115.56	17.7	642.1	106.5	23.4	0.029
4.	696.2	484.7	20.14	405.62	62.1	546.8	201.8	21.4	0.027
5.									

Absolute Potential: 4900 MCFPD; n 0.526

COMPANY Tidewater Oil Company
ADDRESS Box 547 Hobbs, New Mexico
AGENT and TITLE H. P. Shackelford, Area Supt.
WITNESSED Ed Mabe
COMPANY El Paso Natural Gas Co.

REMARKS

ELVIS A. UTZ GAS ENGINEER

ELVIS A. U GAS ENGINE

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.