NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubbs (Gas) Formation Tubb County Lea

Initial X Annual ____ Special ____ Date of Test 6-13-58

Company Tidewater Oil Company Lease Percy Hardy Well No. 2

Unit O Sec. 17 Twp. 21S Rge. 37E Purchaser El Paso Natural Gas Co.

Casing 5-1/2" Wt. 15.5 I.D. 4.950 Set at 6650 Perf. 6200 To 6300

Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at ____ Perf. ____ To ____

Gas Pay: From 6200 To 6300 L 6240 xG .695 -GL 4336.8 Bar.Press. 13.2

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

Date of Completion: 12-18-57 Packer 6540 Reservoir Temp. Unknown

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								1131		
1.	4	.750	4.65	2.3	66			1030		3
2.	4	.750	5.0	3.6	65			891		3
3.	4	.750	4.85	6.0	64			621		3
4.	4	.750	4.6	7.4	71			335		3
5.	4	.750	4.5	6.0	70			225		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.	10.8615	10.695	216.2	0.9943	.9292	1.022	109.68
2.	10.8615	18.000	250	0.9952	.9292	1.029	186.03
3.	10.8615	29.10	235.2	0.9962	.9292	1.027	300.48
4.	10.8615	34.04	211.6	0.9896	.9292	1.023	347.78
5.	10.8615	27.00	202.5	0.9850	.9292	1.022	274.32

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c .9274 $(1-e^{-s})$ .258

Specific Gravity Separator Gas .695
Specific Gravity Flowing Fluid No Liquid
P_c 1131 P_c^2 1,279,161

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.	1030	1,060,900	.101717	.01035	.00267	1060.903	218.258	1030.1	.9108
2.	891	793.881	.172524	.02976	.00768	793.889	485.272	891.1	.7879
3.	621	385.641	.278665	.07765	.02003	385. 661	893.500	621.1	.5492
4.	335	112.225	.322531	.10403	.02684	112.252	1,166,910	335.1	.2963
5.	225	50.625	.2544	.06472	.01670	50.792	1,228,369	225.1	.19903

Absolute Potential: 300 MCFPD; n .672
COMPANY Tidewater Oil Company
ADDRESS Box 547 Hobbs, New Mexico
AGENT and TITLE Grady Odom, Gas Tester
WITNESSED John Springer
COMPANY Tidewater Oil 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.