

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blaine Formation Blaine County Lea
Initial _____ Annual _____ Special X Date of Test 7-13/7-19-63
Company Tidewater Oil Co. Lease _____ State "Q" Well No. 1(Casing)
Unit N Sec. 36 Twp. 21 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 5 1/2" Wt. 15.5 I.D. _____ Set at 6530 Perf. 5520 To 5560
Tubing 2 3/8" Wt. 4.7 I.D. _____ Set at 6187 Perf. _____ To _____
Gas Pay: From 5520 To 5560 L 5520 xG Mix .694 -GL 3831 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. G. Dual
Date of Completion: Nov. 15, 1958 Packer 6010 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps _____

No.	Prover Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	4	.500	515	2.25	92			912		72
2.	4	.500	574	31.34	90			742		24
3.	4	.500	572	30.25	89			577		24
4.	4	.500	559	43.54	90			576		24
5.								569		24

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	1.525	34.47		.9706	.9387	1.051	30.33
2.	1.525	135.70		.9723	.9387	1.055	199.3
3.	1.525	133.05		.9732	.9387	1.037	196.6
4.	1.525	157.82		.9723	.9387	1.055	231.8
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 211.322* cf/bbl.
Gravity of Liquid Hydrocarbons 56.2 deg.
F_c 1.793 (1-e^{-s}) 0.232
Specific Gravity Separator Gas .681
Specific Gravity Flowing Fluid .7539
P_c 925.2 P_c 836.0
*G. O. R. data obtained from operator.

No.	P _w P _t (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	P _w P _c
1.	575.2	570.3		Negligible		570.3	285.7		8162
2.	590.2	342.3				342.3	507.7		6276
3.	589.2	347.1				347.1	308.9		6368
4.	582.2	332.9				332.9	317.1		6225
5.	No point alignment. Slope of 1.000 drawn through highest rate of flow.								

Absolute Potential: 385 MCFPD; n 1.000
COMPANY Tidewater Oil Co.
ADDRESS Box 349, Hobbs, N. Mex.
AGENT and TITLE G. L. Wade, Area Supt.
WITNESSED J. B. Murray
COMPANY El Paso Natural Gas Co.

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} = Supercompressibility 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 .

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 DATE 5/1
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 1.10.10.3

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