

NEW MEXICO OIL CONSERVATION COMMISSION

Oct 21 3 09 PM '63

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Tubb Formation Tubb County Lea
Initial _____ Annual _____ Special X Date of Test 7-22/26-63
Company Tidewater Oil Co. Lease Williamson Well No. 2
Unit B Sec. 23 Twp. 21 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 5 1/2 Wt. 15.5 I.D. _____ Set at 6520 Perf. _____ To _____
Tubing 2 1/2 Wt. 6.5 I.D. _____ Set at 6603 Perf. _____ To _____
Gas Pay: From 6082 To 6271 L 6082 xG Mix. 799 GL 4859 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well G. O. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 3-29-54 Packer 6390 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(P PP PP PP PP) (Line) Size	(Q Q Q Q Q) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1231		72
1.	4	.750	531	2.25	98			988		24
2.	4	.750	550	4.41	103			942		24
3.	4	.750	557	6.76	100			699		24
4.	4	.750	544	12.25	104			621		24
5.										

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.	3.435	34.99		.9653	.9258	1.053	113.1
2.	3.435	49.84		.9610	.9258	1.053	160.4
3.	3.435	62.08		.9636	.9258	1.053	200.2
4.	3.435	82.62		.9602	.9258	1.050	264.9
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 23.689 cf/bbl.Specific Gravity Separator Gas .700Gravity of Liquid Hydrocarbons 68.9 deg.Specific Gravity Flowing Fluid .7060F_c 2.401* (1-e^{-S}) .284P_c 1244.2 P_c² 1548.0

* - Cal. No point alignment. Slope of 1.000 drawn thru 4th rate.

No.	P P P P P 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.	1001.2	1002.4				1002.4	545.6		
2.	955.2	912.4				912.4	635.8		
3.	713.2	507.2				507.2	1040.8		
4.	634.2	402.2				402.2	1145.8		
5.									

Absolute Potential: 358 MCFPD; n 1000

COMPANY Tidewater Oil Co.
ADDRESS Box 249, Hobbs, N. Mex.
AGENT and TITLE Area Supt., C. L. Wade *C. L. Wade*
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} = 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 .

TIDEWATER OIL COMPANY
 WILLIAMSON #2
 6-23-21-37
 LEA COUNTY, NEW MEXICO
 7-26-63

