

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalmat Formation Yates County Lea
Initial Annual Special X Date of Test 3-24/4-1-60
Company E. G. Rodman Lease Hadfield Well No. 1
Unit 0 Sec. 21 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Co.
Casing 7 Wt. 24 I.D. 6.375 Set at 2650 Perf. 2997 To 3000
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3000 Perf. 2997 To 3000
Gas Pay: From 3100 To 3145 L 2997 xG .664 -GL 1990 Bar.Press. 13.2
Producing Thru: Casing Tubing X Type Well Single
Date of Completion: 2-23-47 Packer Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps

No.	Flow 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						296				72
1.	4	1.250	147	9.00	68	292				24
2.	4	1.250	182	10.89	66	268				24
3.	4	1.250	158	22.09	74	229				24
4.	4	1.250	166	29.16	64	205				24
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (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.	9.643	37.97		.9924	.9506	1.015	350.5
2.	9.643	46.11		.9943	.9506	1.018	427.9
3.	9.643	61.50		.9868	.9506	1.015	564.6
4.	9.643	72.29		.9862	.9506	1.017	671.3
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c 9.936 (1-e^{-s}) 0.128

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 309.2 P_c² 95.6

No.	P _{xxx} 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.	305.2	93.1	3.482	12.12	1.55	94.6	1.0		
2.	281.2	79.1	4.262	18.08	2.31	81.4	14.2		
3.	248.2	61.7	5.610	31.47	4.03	62.7	32.9		
4.	218.2	47.6	6.670	44.49	5.69	53.3	42.3		
5.									

Absolute Potential: 1,140 MCFPD; n .500

COMPANY E. G. Rodman
ADDRESS Box 3826 Odessa, Texas
AGENT and TITLE J. B. Murray Well Tester, El Paso Natural Gas Co.
WITNESSED
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 .