

NEW MEXICO OIL CONSERVATION COMMISSION

NOV 7 1957

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool anresc Kelly Formation Grayburg County Lea
Initial X Annual _____ Special _____ Date of Test 9-21-57
Company B.G. Rodman Lease Lea Well No. 4
Unit F Sec. 20 Twp. 21S Rge. 37E Purchaser None
Casing 5 Wt. 15.5 I.D. 4.976 Set at 3700 Perf. 3570 To 3590
Tubing 2 Wt. 4.7 I.D. 1.975 Set at 3796 Perf. None To _____
Gas Pay: From 3700 To 3715 L 3796 xG .670 -GL 2543 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single-Bradenhead
Date of Completion: 6-14-57 Packer 3575 Reservoir Temp. 60.0 G.O. Dual

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										
1.	2	1.875	445.2		93	344				24
2.	2	2.500	340		97	237				24
3.	2	3.750	253		76	202				3
4.	2	5.000	171		72	141				3
5.	2	5.000	156		74	166				3

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.	1.351		444.2	1.0007	0.9463	1.040	333
2.	1.410		440.2	1.0073	0.9463	1.034	538
3.	3.3691		271.2	1.0050	0.9463	1.025	795
4.	5.553		171.2	1.0077	0.9463	1.013	1006
5.	5.553		167.2	1.0077	0.9463	1.014	777

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.

Gravity of Liquid Hydrocarbons _____ deg.

F_c 1.936 (1-e^{-s}) 0.161

Specific Gravity Separator Gas _____

Specific Gravity Flowing Fluid _____

P_c 527.2 P_c 277.9

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.	445.2	198.2	3.33	11.1	11.1	200.0	277.9		
2.	440.2	193.8	5.35	28.62	4.3	193.8	109.1		
3.	271.2	73.6	7.90	62.43	10.0	74.6	193.3		
4.	171.2	29.3	10.06	101.2	16.1	53.1	224.1		
5.	167.2	27.9	7.77	60.4	12.2	44.3	233.6		

Absolute Potential: 1020 MCFPD; n 0.7623268COMPANY B.G. RodmanADDRESS Box 1020, Pecos, TexasAGENT and TITLE Earl Rodman _____WITNESSED Patton L. Lincoln _____COMPANY El Paso Natural Gasoline 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 .

E. G. ROODMAN

LEE No. 4 TUBING

LEE COUNTY, NEW MEXICO

SEPTEMBER 21, 1957

