

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalnet Formation Yates County Lea
Initial _____ Annual _____ Special X Date of Test 3-25/3-29-57
Company Sinclair Oil & Gas Company Lease State 157 "F" Well No. 1
Unit A Sec. 17 Twp. 23 Rge. 36 Purchaser El Paso Natural Gas Company
Casing 7" Wt. 24.04 I.D. _____ Set at 3770 Perf. _____ To _____
Tubing 2" Wt. 4.74 I.D. _____ Set at 3430 Perf. _____ To _____
Gas Pay: From 3430 To 3470 L 3430 xG 0.670 -GL 2298 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 9-23-51 Packer _____ Reservoir Temp. 118

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

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						450				72
1.	4"	1.000	238	6.76	56	417				24
2.	4"	1.000	265	16.81	56	382				24
3.	4"	1.000	284	22.56	62	360				24
4.	4"	1.000	307	24.01	62	347				24
5.										

FLOW CALCULATIONS

No.	Coefficient (F _{lg}) (24-Hour)	$\sqrt{h_{w,pf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	6.135	41.19	251.2	1.0039	.9463	1.027	246
2.	6.135	68.36	278.2	1.0039	.9463	1.030	410
3.	6.135	81.86	297.2	.9981	.9463	1.031	489
4.	6.135	87.66	320.2	.9981	.9463	1.034	525
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.146

Specific Gravity Separator Gas 0.670
Specific Gravity Flowing Fluid _____
P_c 463.2 P_c 214.6

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.	430.2	185.1	2.44	5.95	0.87	186.0	28.6	431.3	93.1
2.	395.2	156.2	4.07	16.56	2.42	158.6	56.0	398.3	86.0
3.	373.2	139.3	4.86	23.62	3.45	142.8	71.8	377.9	81.6
4.	360.2	129.7	5.22	27.25	3.98	133.7	80.9	365.7	78.9
5.									

Absolute Potential: 1,100 MCFPD; n .740

COMPANY Sinclair Oil & Gas Company
ADDRESS 520 East Broadway, Hobbs, New Mexico
AGENT and TITLE R. L. Harned, Gas Analyst
WITNESSED Earl G. Smith
COMPANY El Paso Natural Gas Company

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except where 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 in plotting the back pressure curve shall be of at least three inch cycles.

ABBREVIATURE

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 casing, 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 determined because of manner of completion or condition of well, then P_w must be determined by adding the pressure drop due to friction within the well to P_t .