

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea
Initial _____ Annual _____ Special _____ Date of Test 7-27-56
Company Sinclair Oil & Gas Co. Lease J.R. Phillips "B" Well No. 5
Unit E Sec. 31 Twp. 19S Rge. 37E Purchaser El Paso Natural Gas Co.
Casing 5 1/2 Wt. 15# I.D. 4.976 Set at 3550 Perf. 3322 To 3497
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3498 Perf. Open To _____
Gas Pay: From 3322 To 3497 L 3498 xG .665 -GL 2326 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6-29-54 Packer None Reservoir Temp. 98

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						962	75	965	75	72
1.	4	1.250	583	11.6	62	872	75	881	75	74
2.	"	"	588	24.0	63	817	75	832	75	24
3.	"	"	602	34.8	67	775	75	797	75	24
4.	"	"	649	54.8	73	694	75	732	75	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.	9.643	83.27	596.2	.9981	.9498	1.062	809
2.	9.643	120.12	601.2	.9971	.9498	1.062	1165
3.	9.643	146.44	615.2	.9933	.9498	1.062	1415
4.	9.643	190.68	662.2	.9877	.9498	1.064	1836
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 978.2 P_c² 956.9

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.	894.2					799.6	157.3		91.4
2.	845.2					714.4	242.5		86.4
3.	810.2					656.4	300.5		82.8
4.	745.2					555.3	401.6		76.2
5.									

Absolute Potential: 3 975 MCFPD; n .900COMPANY Sinclair Oil & Gas CompanyADDRESS 520 E. Broadway Hobbs, New MexicoAGENT and TITLE R.L. Harned Gas AnalystWITNESSED Ed MabeCOMPANY El Paso Natural Gas Company

REMARKS

Orig & 2cc: NMCC

cc: SJF, WJR, PCR, CCS, File

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 .