

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MAIN OFFICE OCC

1957 SEP 9

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial Annual Special X Date of Test 8-26/8-30 1957

Company El Paso Natural Gas Company Lease Shell State Well No. 12

Unit 0 Sec. 36 Twp. 21 Rge. 36 Purchaser

Casing 5 1/2 Wt. 15.5# I.D. Set at 3564 Perf. 3358 To 3439

Tubing 2 1/2 Wt. 6.5# I.D. Set at 3458 Perf. 3443 To 3458

Gas Pay: From 3443 To 3458 L 3443 xG .690 -GL 2376 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Date of Completion: 11-18-55 Packer None Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp.

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						1113		1113		72
1.	4	1.750	564	11.56	73	1063		1063		24
2.	4	1.750	577	17.64	71	1047		1048		24
3.	4	1.750	583	26.01	68	1026		1028		24
4.	4	1.750	584	40.96	67	991		994		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.	19.27	81.67		.9877	.9325	1.064	1,542
2.	19.27	102.01		.9896	.9325	1.064	1,930
3.	19.27	124.50		.9924	.9325	1.070	2,375
4.	19.27	156.40		.9933	.9325	1.070	2,986
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c Measured (1-e^{-s})

Specific Gravity Separator Gas 690

Specific Gravity Flowing Fluid

P_c 1126.2 P_c² 1268.3

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.	1076.2					1158.2	110.1		.955
2.	1061.2	Measured				1126.1	142.2		.94
3.	1041.2					1084.1	184.2		.92
4.	1007.2					1014.5	253.8		.89
5.									

Absolute Potential: 12,250 MCFPD; n .850

COMPANY El Paso Natural Gas Company

ADDRESS P. O. Box 1384 Jai, New Mexico

AGENT and TITLE R. T. Wright, Petroleum Engineer

WITNESSED R. A. Mims

COMPANY El Paso Natural Gas 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} = 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 .