

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea 15
Initial _____ Annual _____ Special X Date of Test 3-18-60
Company El Paso Natural Gas Company Lease Whitten Well No. 1
Unit A Sec. 33 Twp. 23 Rge. 36 Purchaser El Paso Natural Gas Company
Casing 5 1/2 Wt. 14.0 I.D. _____ Set at 3588 Perf. 3477 To 3481
Tubing 2 1/2 Wt. 6.5 I.D. _____ Set at 3481 Perf. _____ To _____
Gas Pay: From 3471 To 3481 3481 xG .692 -GL 2409 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Gradient-G. G. or G.O. Dual
Date of Completion: _____ Packer None Reservoir Temp. _____

OBSERVED DATA

Tested Through (XXXXX) (XXXXX) (Meter) - 50'-100 Lbs. Type Taps Flange

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Flow) (Line) Size	(Flow) (Orifice) Size	Press. psig	Diff. h _w	Temp °F.	Press. psig	Temp °F.	
SI						<u>464</u>	<u>464</u>	<u>72</u>
1.	<u>4</u>	<u>1.500</u>	<u>9</u>	<u>2.00</u>		<u>280</u>	<u>395</u>	<u>24</u>
2.	<u>4</u>	<u>1.500</u>	<u>11</u>	<u>5.78</u>		<u>236</u>	<u>331</u>	<u>24</u>
3.	<u>4</u>	<u>1.500</u>	<u>12</u>	<u>8.00</u>		<u>195</u>	<u>272</u>	<u>24</u>
4.								
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.	<u>13.99</u>	<u>6.66</u>			<u>.9312</u>		<u>86.76</u>
2.	<u>13.99</u>	<u>11.83</u>			<u>.9312</u>		<u>154.1</u>
3.	<u>13.99</u>	<u>14.20</u>			<u>.9312</u>		<u>184.9</u>
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/boil.
Gravity of Liquid Hydrocarbons _____ deg.
F_c Measured (1-e^{-S})

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 477.2 P_c 227.7

No.	P _w (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-S})	P _t ²	P _c ² -P _w ²	Cal. P _w	P _w / P _c
1.	<u>408.2</u>					<u>166.6</u>	<u>61.1</u>		<u>.85</u>
2.	<u>344.2</u>					<u>118.5</u>	<u>109.2</u>		<u>.72</u>
3.	<u>285.2</u>					<u>81.3</u>	<u>146.4</u>		<u>.60</u>
4.									
5.									

Absolute Potential: 280 MCFPD; n .858

COMPANY El Paso Natural Gas Company

ADDRESS P. O. Box 1384 - Jal, New Mexico

AGENT and TITLE R. T. Wright - Petroleum Engineer

WITNESSED L. D. Southern

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 .