

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

1957 FEB 11 AM 10:02

Pool Jalnet Formation Yates, 7 R, Queen County 10:02
 Initial _____ Annual _____ Special X Date of Test 11-26 to 11-30-56
 Company El Paso Natural Gas Company Lease Shell State Well No. 3
 Unit P Sec. 22 Twp. 23 S Rge. 36 E Purchaser El Paso Natural Gas Company
 Casing 4 1/2 Wt. 15.5 I.D. _____ Set at 3425 Perf. 3090 To 3368
 Tubing 2 1/2 Wt. 6.5 I.D. _____ Set at 3285 Perf. _____ To _____
 Gas Pay: From 3090 To 3368 L 3285 xG .665 -GL 2185 Bar.Press. 13.2
 Producing Thru: Casing _____ Tubing X Type Well Single
 Date of Completion: 1-14-56 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.
	(<u>Prover</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI										
1.	<u>4"</u>	<u>2.000</u>	<u>253</u>	<u>9.6</u>	<u>60</u>	<u>577</u>		<u>577</u>		<u>72</u>
2.	<u>4"</u>	<u>2.000</u>	<u>270</u>	<u>15.2</u>	<u>60</u>	<u>537</u>		<u>542</u>		<u>24</u>
3.	<u>4"</u>	<u>2.000</u>	<u>276</u>	<u>23.0</u>	<u>62</u>	<u>513</u>		<u>521</u>		<u>24</u>
4.	<u>4"</u>	<u>2.000</u>	<u>276</u>	<u>51.8</u>	<u>69</u>	<u>480</u>		<u>498</u>		<u>24</u>
5.	<u>4"</u>	<u>2.000</u>	<u>304</u>			<u>352</u>		<u>419</u>		<u>24</u>

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>25.58</u>	<u>50.56</u>		<u>1.000</u>	<u>.9498</u>	<u>1.027</u>	<u>1.261</u>
2.	<u>25.58</u>	<u>65.61</u>		<u>1.000</u>	<u>.9498</u>	<u>1.029</u>	<u>1.640</u>
3.	<u>25.58</u>	<u>81.60</u>		<u>.9981</u>	<u>.9498</u>	<u>1.029</u>	<u>2.035</u>
4.	<u>25.58</u>	<u>128.19</u>		<u>.9915</u>	<u>.9498</u>	<u>1.031</u>	<u>3.184</u>

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas .665
 Specific Gravity Flowing Fluid _____
 P_c 590.2 P_c 348.3

No.	P _{max} 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.	<u>550.2</u>	<u>302.7</u>				<u>308.2</u>	<u>40.1</u>		<u>.93</u>
2.	<u>586.2</u>	<u>376.9</u>				<u>285.4</u>	<u>62.9</u>		<u>.89</u>
3.	<u>493.2</u>	<u>243.2</u>				<u>261.3</u>	<u>87.0</u>		<u>.83</u>
4.	<u>365.2</u>	<u>133.4</u>				<u>186.8</u>	<u>161.5</u>		<u>.61</u>

Absolute Potential: 5,350 MCFPD; n .70

COMPANY El Paso Natural Gas Company
 ADDRESS P. O. Box 1384, Jal, New Mexico
 AGENT and TITLE R. T. Wright
 WITNESSED Earl G. Smith
 COMPANY El Paso Natural Gas Company

R. T. Wright - Petroleum Engineer

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.

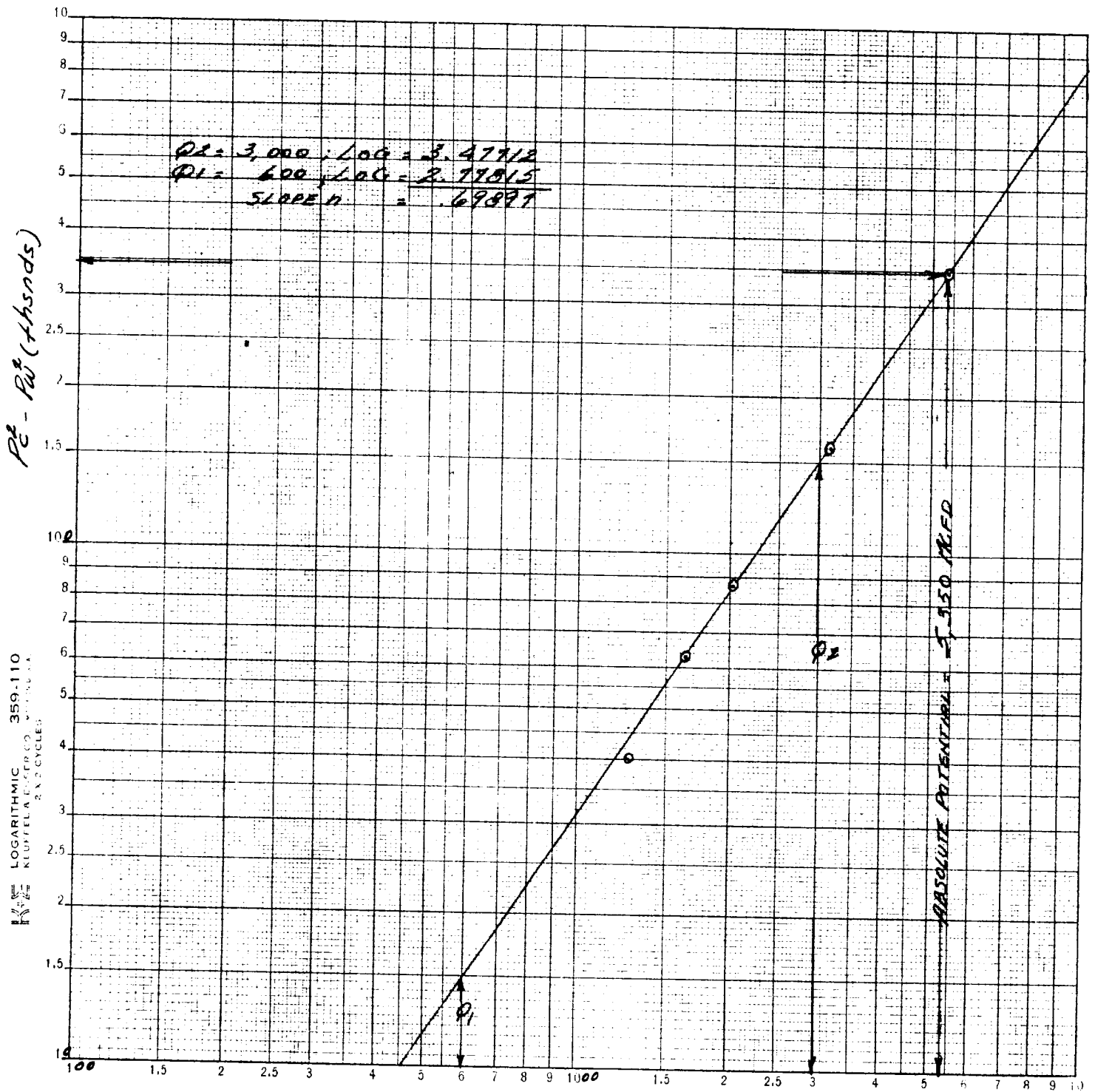
F_t = Flowing temperature correction factor.

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 .

EL PASO NATURAL GAS CO.
 SHELL STATE NO 3
 P-22-23-36 LEA N.M.
 11-30-1956



Q -MCFD - 15.025 PSIA 60°F