

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBBS OFFICE 000

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Jalmat Formation Yates County Lea

Initial _____ Annual _____ Special X Date of Test 1-14 to 1-18-57

Company Cities Service Oil Co. Lease Thomas Well No. 2

Unit G Sec. 19 Twp. 24S Rge. 37E Purchaser EPNG

Casing 5½ Wt. 14 I.D. _____ Set at 2870 Perf. _____ To _____

Tubing 2 Wt. 4.7 I.D. _____ Set at 3464 Perf. _____ To _____

Gas Pay: From 2870 To 3480 L 2870 xG .660 -GL 1894 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well single

Date of Completion: 9-26-51 Packer none Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps 17g

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						<u>783</u>		<u>784</u>		<u>72</u>
1.	<u>4</u>	<u>1.250</u>	<u>512</u>	<u>23.0</u>	<u>72</u>	<u>684</u>		<u>699</u>		<u>24</u>
2.	<u>4</u>	<u>1.250</u>	<u>515</u>	<u>30.25</u>	<u>71</u>	<u>654</u>		<u>678</u>		<u>24</u>
3.	<u>4</u>	<u>1.250</u>	<u>540</u>	<u>38.4</u>	<u>80</u>	<u>622</u>		<u>656</u>		<u>24</u>
4.	<u>4</u>	<u>1.250</u>	<u>563</u>	<u>44.9</u>	<u>83</u>	<u>589</u>		<u>630</u>		<u>24</u>
5.										

FLOW CALCULATIONS

No.	Coefficient <u>Flg</u> (24-Hour)	$\sqrt{h_w P_f}$	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>10.24</u>	<u>109.98</u>	<u>525.2</u>	<u>.9887</u>	<u>.9535</u>	<u>1.050</u>	<u>1,115</u>
2.	<u>10.24</u>	<u>126.37</u>	<u>528.2</u>	<u>.9896</u>	<u>.9535</u>	<u>1.050</u>	<u>1,282</u>
3.	<u>10.24</u>	<u>145.79</u>	<u>553.2</u>	<u>.9831</u>	<u>.9535</u>	<u>1.050</u>	<u>1,469</u>
4.	<u>10.24</u>	<u>160.80</u>	<u>576.2</u>	<u>.9786</u>	<u>.9535</u>	<u>1.053</u>	<u>1,618</u>
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 797.2 P_c 635.5

No.	P _t Pt (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>697.2</u>	<u>486.1</u>				<u>507.2</u>	<u>128.5</u>	<u>715</u>	<u>.884</u>
2.	<u>667.2</u>	<u>445.2</u>				<u>477.8</u>	<u>157.7</u>	<u>692</u>	<u>.867</u>
3.	<u>635.2</u>	<u>403.5</u>				<u>447.8</u>	<u>187.7</u>	<u>670</u>	<u>.841</u>
4.	<u>602.2</u>	<u>362.6</u>				<u>413.7</u>	<u>221.8</u>	<u>643</u>	<u>.806</u>
5.									

Absolute Potential: 3,250 MCFD MCFPD; n .664COMPANY Cities Service Oil CompanyADDRESS Box 97, Hobbs, New MexicoAGENT and TITLE E. H. Farrey, Jr., Petroleum EngineerWITNESSED H. H. KerbyCOMPANY El Paso Natural Gas Company

REMARKS

S. A. UTZ
ENGINEER

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.

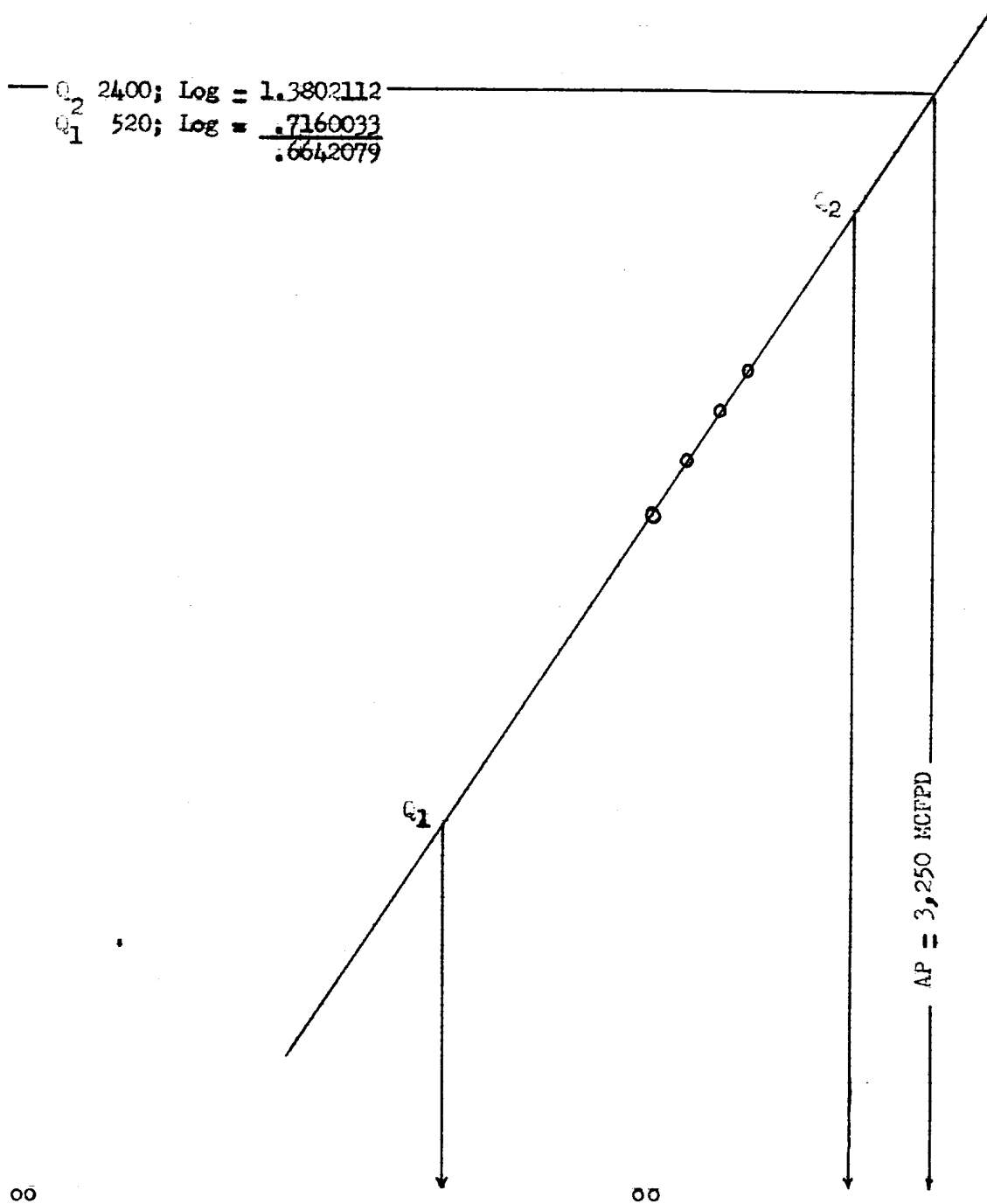
F_{pv} = Supercompressability factor.

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 .

CITISE SERVICE OIL COMPANY
 THOMAS NO. 2
 UNIT "G", SEC. 19, T-24-S,
 R-37-E
 1-18-57

Pc² - Pw² (thsnds)



Q = MCFPD