

NEW MEXICO OIL CONSERVATION COMMISSION

FORM NO. 122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

JAN 27 AM 10-06

Pool Eumont Formation Yates - 7 R - Queen County Lea
Initial _____ Annual _____ Special X Date of Test 11-12 to 11-16-58
Company Continental Oil Company Lease Lockhart A-18 Well No. 1
Unit P Sec. 18 Twp. 21S Rge. 36E Purchaser E. P. N. G.
Casing 7 Wt. 24 I.D. 6.336 Set at 3825 Perf. _____ To _____
Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 3949 Perf. _____ To _____
Gas Pay: From 2983 To 3525 L 2983 xG .665 -GL 1984 Bar. Press. 13.2
Producing Thru: Casing X 9 5/8 Tubing _____ Type Well Bradenhead
Date of Completion: 2-4-31 Packer None Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 90°

OBSERVED DATA

Tested Through (~~Packer~~) (~~Choke~~) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Packer) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								<u>1014</u>		<u>72</u>
1.	<u>4</u>	<u>1.500</u>	<u>588</u>	<u>6.25</u>	<u>59</u>			<u>979</u>		<u>24</u>
2.	<u>4</u>	<u>1.500</u>	<u>605</u>	<u>15.21</u>	<u>69</u>			<u>950</u>		<u>24</u>
3.	<u>4</u>	<u>1.500</u>	<u>616</u>	<u>19.36</u>	<u>58</u>			<u>934</u>		<u>24</u>
4.	<u>4</u>	<u>1.500</u>	<u>632</u>	<u>20.25</u>	<u>60</u>			<u>932 *</u>		<u>24</u>
5.										

FLOW CALCULATIONS

No.	Coefficient (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>13.99</u>	<u>61.29</u>		<u>1.0010</u>	<u>.9498</u>	<u>1.064</u>	<u>867</u>
2.	<u>13.99</u>	<u>95.72</u>		<u>.9915</u>	<u>.9498</u>	<u>1.062</u>	<u>1,353</u>
3.	<u>13.99</u>	<u>110.35</u>		<u>1.0019</u>	<u>.9498</u>	<u>1.068</u>	<u>1,569</u>
4.	<u>13.99</u>	<u>114.29</u>		<u>1.0000</u>	<u>.9498</u>	<u>1.069</u>	<u>1,624</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.0633 (1-e^{-s}) .128
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1027.2 P_c² 1055.1

No.	P _t 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>992.2</u>	<u>984.5</u>	<u>.92</u>	<u>.85</u>	<u>.11</u>	<u>984.6</u>	<u>42.6</u>	<u>992.3</u>	<u>.97</u>
2.	<u>963.2</u>	<u>927.8</u>	<u>1.44</u>	<u>2.07</u>	<u>.26</u>	<u>928.1</u>	<u>99.1</u>	<u>963.4</u>	<u>.94</u>
3.	<u>947.2</u>	<u>897.2</u>	<u>1.67</u>	<u>2.79</u>	<u>.36</u>	<u>897.6</u>	<u>129.6</u>	<u>947.4</u>	<u>.92</u>
4.	<u>945.2</u>	<u>893.4</u>	<u>1.73</u>	<u>2.99</u>	<u>.38</u>	<u>893.9</u>	<u>133.3</u>	<u>945.5</u>	<u>.92 *</u>
5.									

Absolute Potential: 4,800 MCFPD; n .54COMPANY Continental Oil CompanyADDRESS Box 427, Hobbs, New MexicoAGENT and TITLE W. D. Howard, Gas Tester

WITNESSED _____

COMPANY _____

REMARKS

* Insufficient drawdown due to high gathering system pressure.

NMOCC-3 EWN HLJ RLA FTE EVD WDH
Attach.

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.

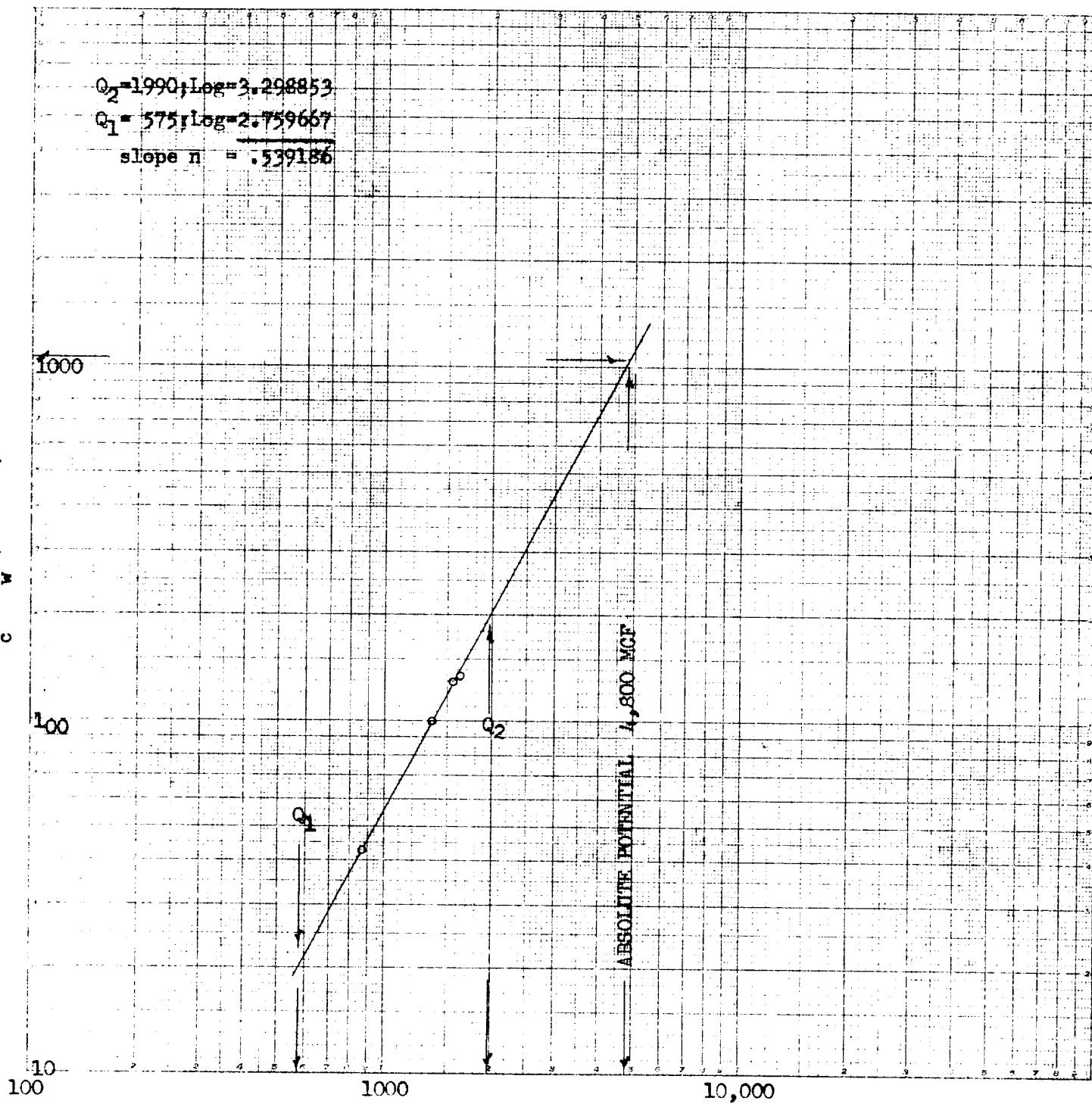
n = Slope of back pressure curve.

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 .

COMPANY	Continental Oil Co.
WELL	Lockhart A-18 No.1
LOCATION	P 18-21S-36E
COUNTY	Lea
DATE	11-16-56

$Q_2 = 1990$; $\log = 3.298853$
 $Q_1 = 575$; $\log = 2.759667$
 slope $n = .539186$

$p_c^2 - p_w^2$ (thsnds.)



Q - MCFD - 15.025 psia.