

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Queen County Lea
Initial I Annual _____ Special _____ Date of Test 4-20-59
Company Continental Oil Company Lease Lockhart A-17 Well No. 2
Unit I Sec. 17 Twp. 21 Rge. 37 Purchaser _____
Casing 5 1/2 Wt. 17# I.D. 4.892 Set at 6629 Perf. 3525 To 3565
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 6563 Perf. _____ To _____
Gas Pay: From 3525 To 3565 L 3525 xG .660 -GL 2326 Bar.Press. 13.2
Producing Thru: Casing I Tubing _____ Type Well G. O. Dual
Date of Completion: _____ Packer 6479' Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 90°

OBSERVED DATA

Tested Through (Pressure) (Struck) (Meter) Type Taps Flange

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Pressure) (Line) Struck	(Struck) (Orifice) Struck	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								520		72
1.	4" 4	1.750 1	232 2	5.6 5	56 5			497 4		3 3
2.	4" 4	1.750 1	240 2	14.0 1	58 5			453 4		2 2
3.	4" 4	1.750 1	245 2	23.0 2	60 6			400 4		2 2
4.	4" 4	1.750 1	252 2	31.0 3	61 6			362 3		2 2
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>19.27</u>	<u>37.05</u>	<u>245.2</u>	<u>1.0039</u>	<u>.9535</u>	<u>1.056</u>	<u>782</u>
2.	<u>19.27</u>	<u>59.55</u>	<u>253.2</u>	<u>1.0019</u>	<u>.9535</u>	<u>1.052</u>	<u>1126</u>
3.	<u>19.27</u>	<u>77.06</u>	<u>258.2</u>	<u>1.000</u>	<u>.9535</u>	<u>1.044</u>	<u>1458</u>
4.	<u>19.27</u>	<u>90.67</u>	<u>265.2</u>	<u>.9990</u>	<u>.9535</u>	<u>1.039</u>	<u>1729</u>
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c 1.812 (1-e^{-s}) .148
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 533.2 P_c 284.3

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.	<u>510.2</u>	<u>260.3</u>	<u>1.308</u>	<u>1.711</u>	<u>.2524</u>	<u>260.5</u>	<u>23.8</u>	<u>510.4</u>	<u>95.72</u>
2.	<u>466.2</u>	<u>217.3</u>	<u>2.091</u>	<u>4.372</u>	<u>.6562</u>	<u>217.9</u>	<u>66.4</u>	<u>466.8</u>	<u>87.54</u>
3.	<u>413.2</u>	<u>170.7</u>	<u>2.678</u>	<u>7.172</u>	<u>1.0610</u>	<u>171.8</u>	<u>112.5</u>	<u>414.5</u>	<u>77.73</u>
4.	<u>375.2</u>	<u>140.8</u>	<u>3.133</u>	<u>9.816</u>	<u>1.4514</u>	<u>142.2</u>	<u>142.1</u>	<u>377.0</u>	<u>70.70</u>
5.									

Absolute Potential: 2,460 MCFPD; n .501, 470 see equation
COMPANY Continental Oil Company
ADDRESS Box 68, Eunice, New Mexico
AGENT and TITLE [Signature] Dist. Supt.
WITNESSED _____
COMPANY _____

REMARKS

NMOCC-3 WEG HLJ RLA File-2

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 .

Pc2-Pw2 (Thsnds)

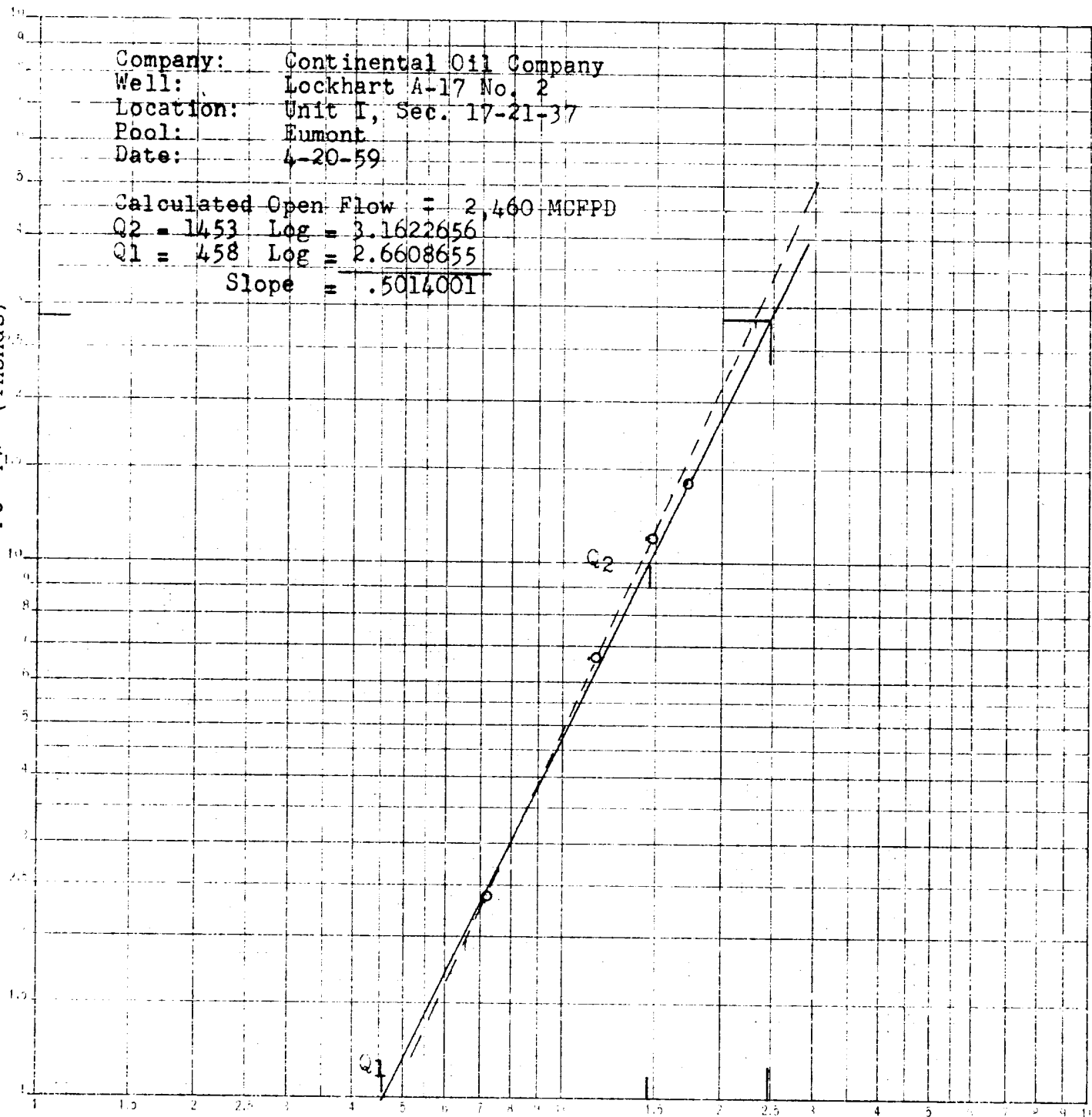
Company: Continental Oil Company
Well: Lockhart A-17 No. 2
Location: Unit I, Sec. 17-21-37
Pool: Eumont
Date: 4-20-59

Calculated Open Flow = 2,460 MCFPD

Q2 = 1453 Log = 3.1622656

Q1 = 458 Log = 2.6608655

Slope = .5014001



Q = MCFPD

Q. 1453 - 025
Q. 458 - 014
2.919
21.75

