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Name: \_\_\_\_\_

Section: \_\_\_\_\_

Date: \_\_\_\_\_

Petroleum Engineering 324 — Well Performance

Exercise Problem 04 — Data Models

Assigned: 04 February 2009 — Due: 06 February 2009 [to be submitted in class]

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### Assignment Coversheet

(This sheet must be included with your work submission)

Required Academic Integrity Statement: (Texas A&M University Policy Statement)

**Academic Integrity Statement**

All syllabi shall contain a section that states the Aggie Honor Code and refers the student to the Honor Council Rules and Procedures on the web.

**Aggie Honor Code**

**"An Aggie does not lie, cheat, or steal or tolerate those who do."**

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit: [www.tamu.edu/aggiehonor/](http://www.tamu.edu/aggiehonor/)

On all course work, assignments, and examinations at Texas A&M University, the following Honor Pledge shall be preprinted and signed by the student:

**"On my honor, as an Aggie,  
I have neither given nor received unauthorized aid on this academic work."**

<p><u>Aggie Code of Honor:</u></p> <p>An Aggie does not lie, cheat, or steal or tolerate those who do.</p> <p><u>Required Academic Integrity Statement:</u></p> <p><i>"On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work."</i></p> <p>_____ (Print your name)</p> <p>_____ (Your signature)</p>
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Coursework Copyright Statement: (Texas A&M University Policy Statement)

The handouts used in this course are copyrighted. By "handouts," this means all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy them, unless you are expressly granted permission.

As commonly defined, plagiarism consists of passing off as one's own the ideas, words, writings, etc., that belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.

If you have any questions about plagiarism and/or copying, please consult the latest issue of the *Texas A&M University Student Rules*, under the section "Scholastic Dishonesty."

Zero Tolerance Policy:

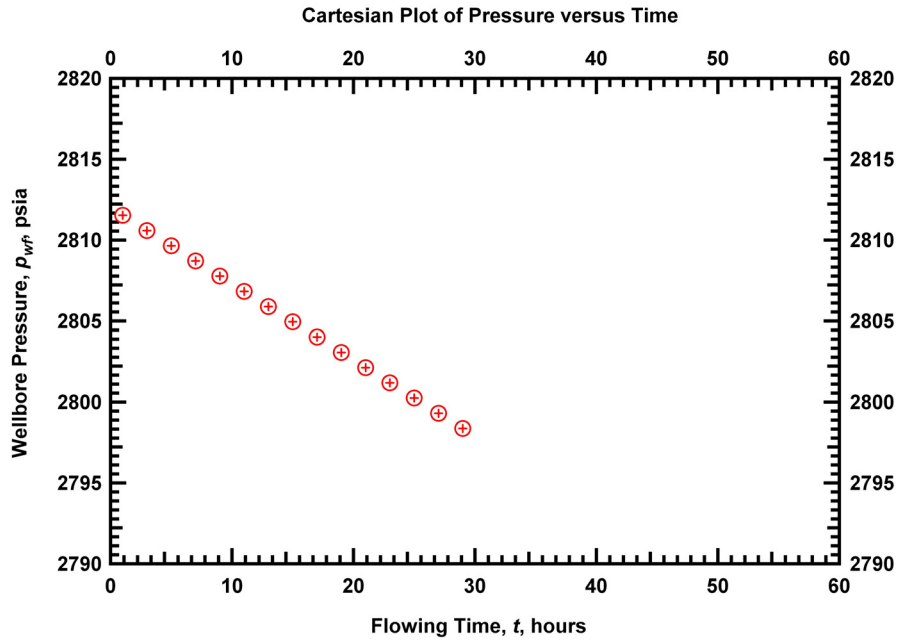
*You MUST submit this assignment in class ONLY.*

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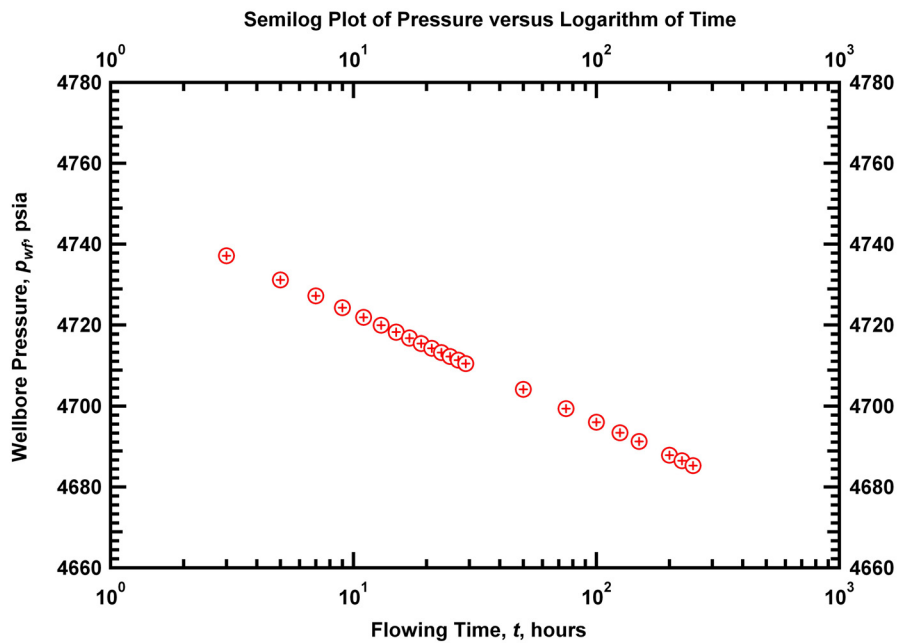
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1. Cartesian (Linear) Coordinates:  $p_{wf} = p_i - m_{car}t$



Ans. Slope ( $m_{car}$ ): \_\_\_\_\_ psi/hr      Intercept ( $p_i$ ): \_\_\_\_\_ (psia)

2. Semilog ( $x$ -axis) Coordinates:  $p_{wf} = p_{1hr} - m_s \ln(t)$



Ans. Slope ( $m_s$ ): \_\_\_\_\_ psi/log cycle      Intercept ( $p_{1hr}$ ): \_\_\_\_\_ (psia)

Zero Tolerance Policy:

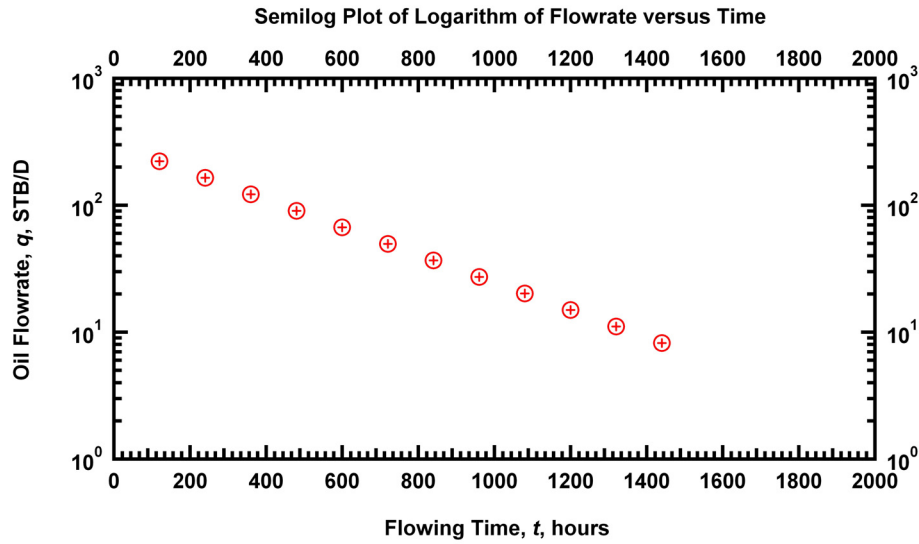
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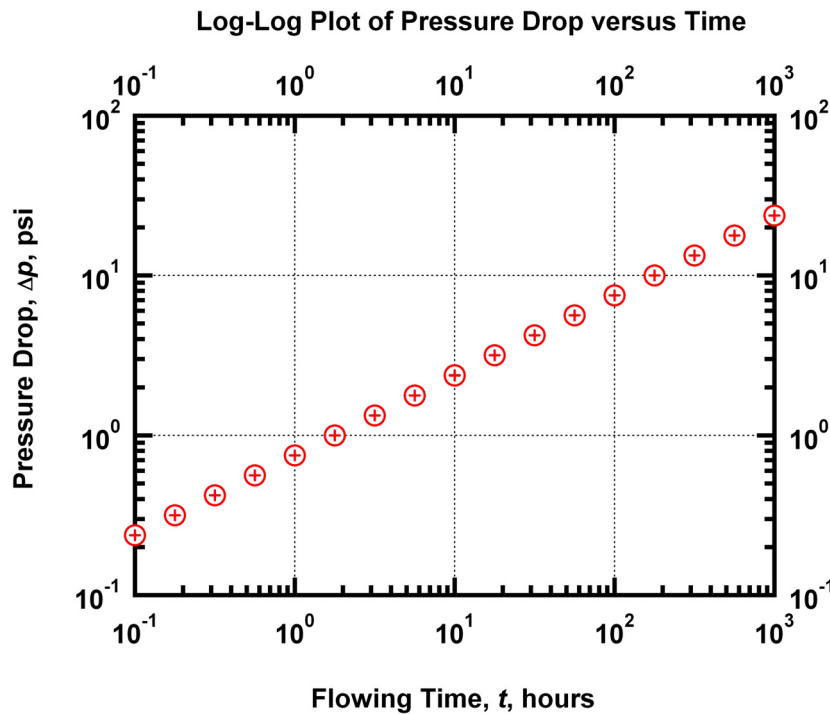
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3. Semilog ( $y$ -axis) Coordinates:  $q = q_i \exp(-D_i t)$



Ans. Slope ( $D_i$ ): \_\_\_\_\_ 1/D                      Intercept ( $q_i$ ): \_\_\_\_\_ (STB/D)

4. Log-Log Coordinates:  $\Delta p = \alpha t^\beta$



Ans. Slope ( $\beta$ ): \_\_\_\_\_ (no units)                      Intercept ( $\alpha$ ): \_\_\_\_\_ (psi)