CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

This is a continuation of the CNWRA controlled scientific notebook #569, titled;

"Analyses of Escalante, Utah Permeability Data for High Velocity Flow Effects"

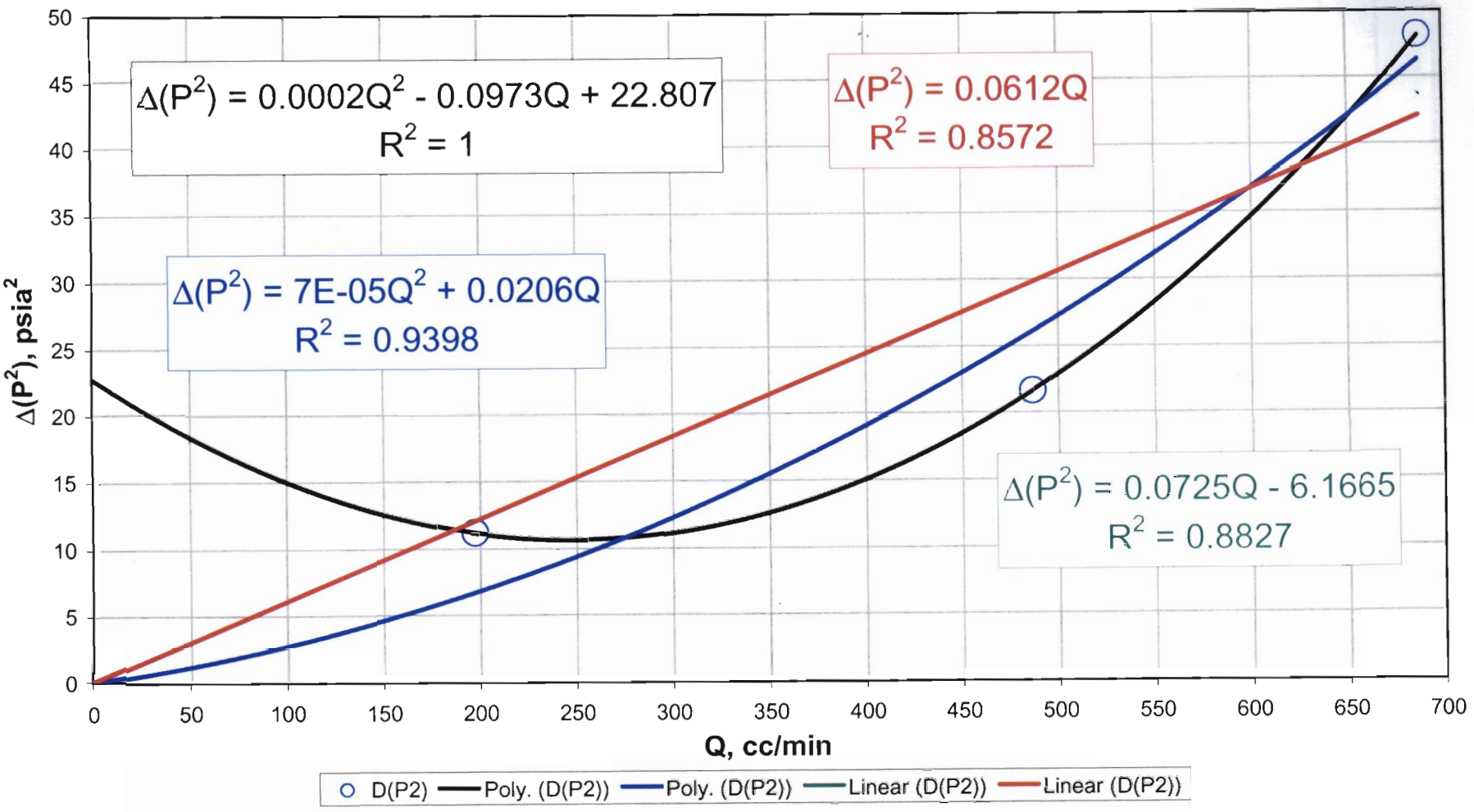
Participating individuals: Cynthia L. Dinwiddie (5dd-6085)
Ronald N. McGinnis (5dd-5825)

Contract No.: Project: 06002.01.131

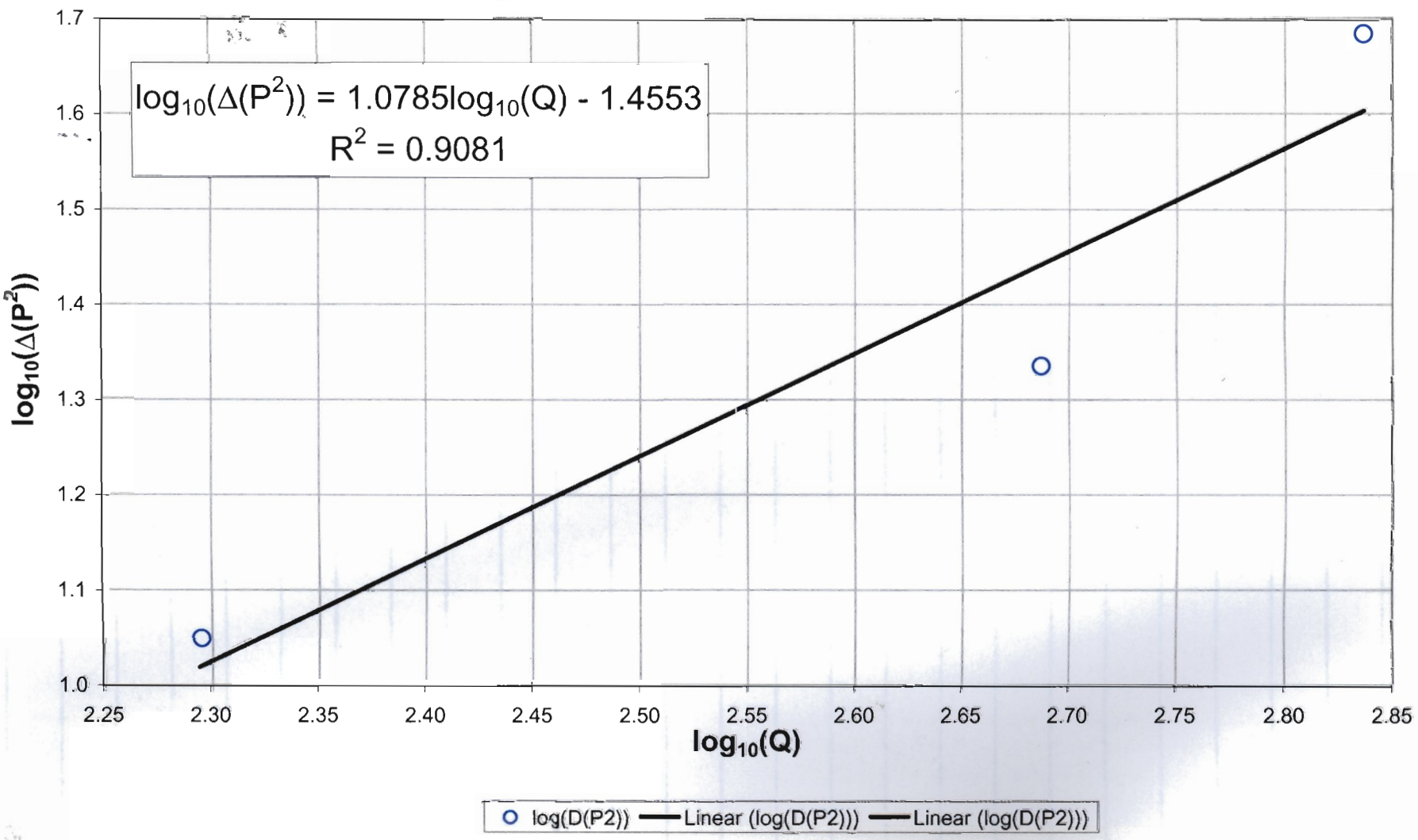
Task Objective may be found in SN 537-545

BNM, 01/30/03

Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole -4



Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole -4



Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
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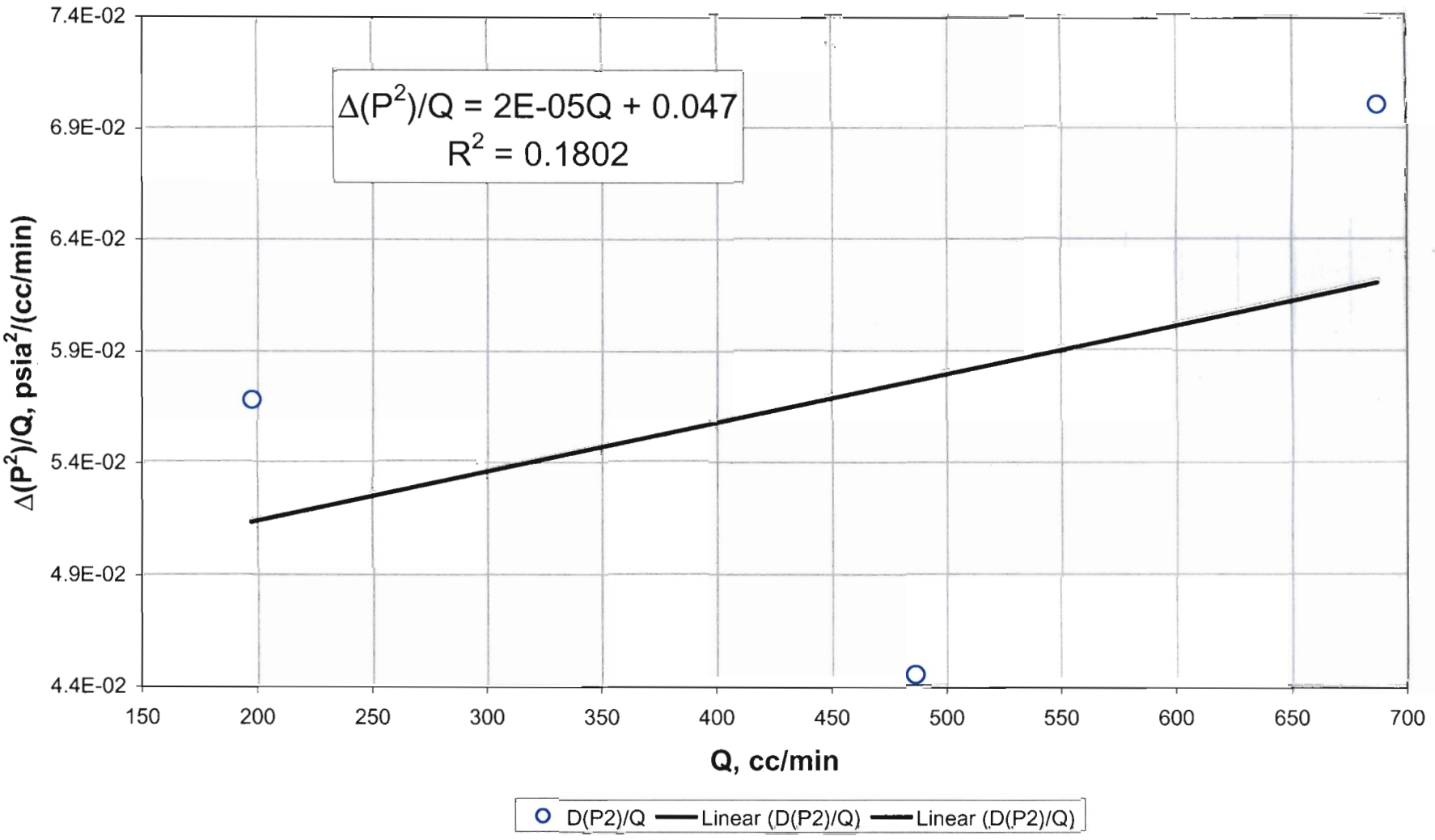

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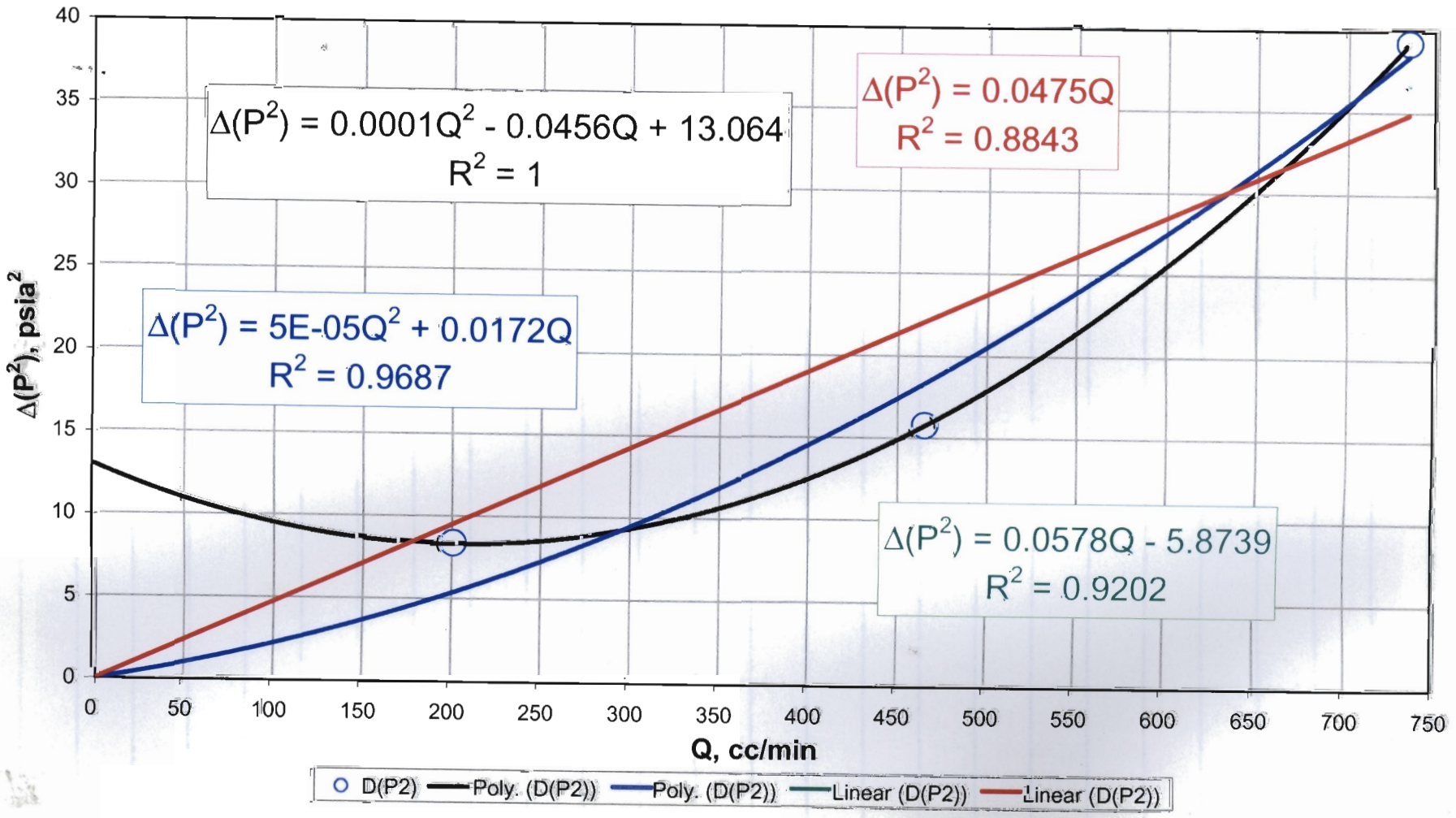

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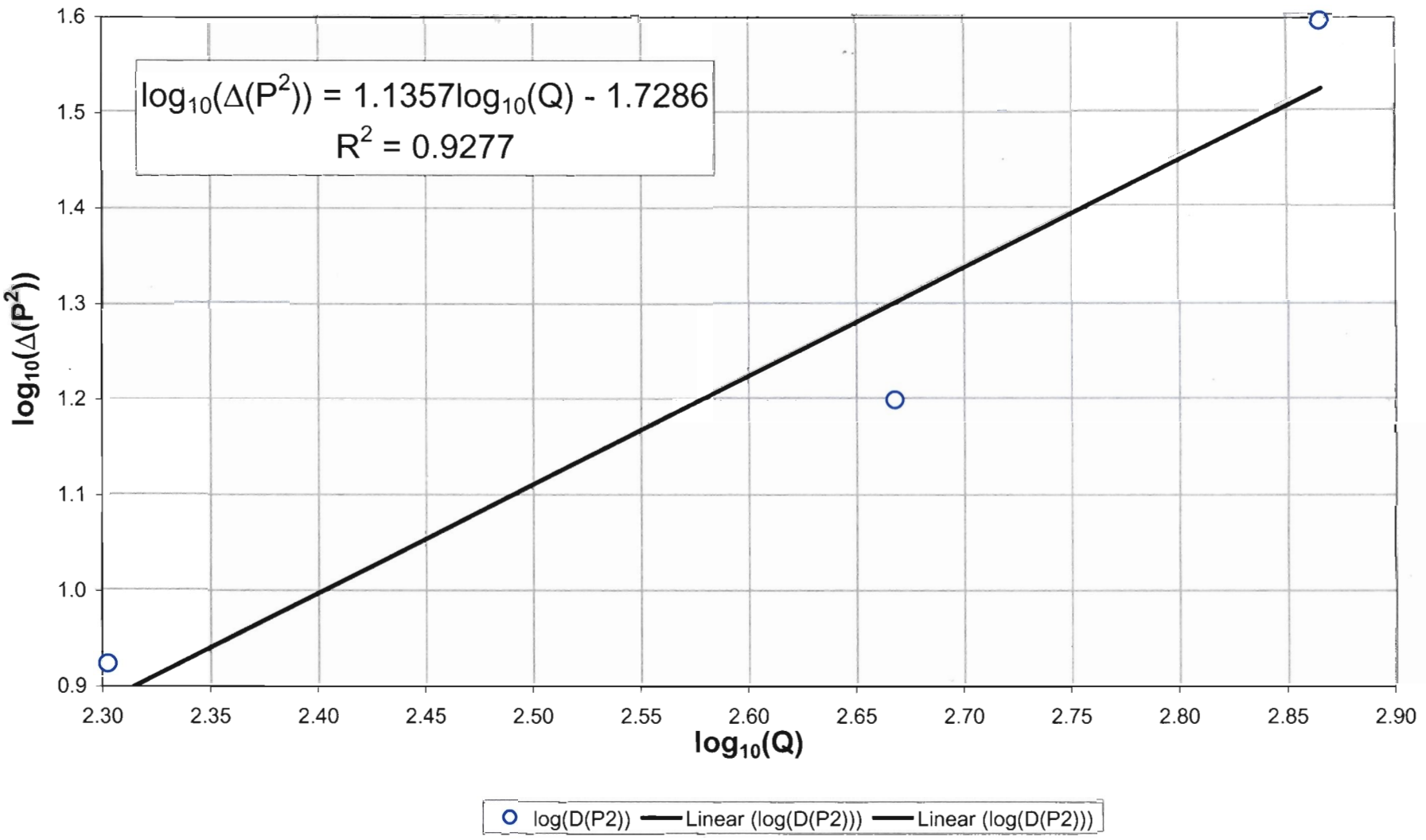

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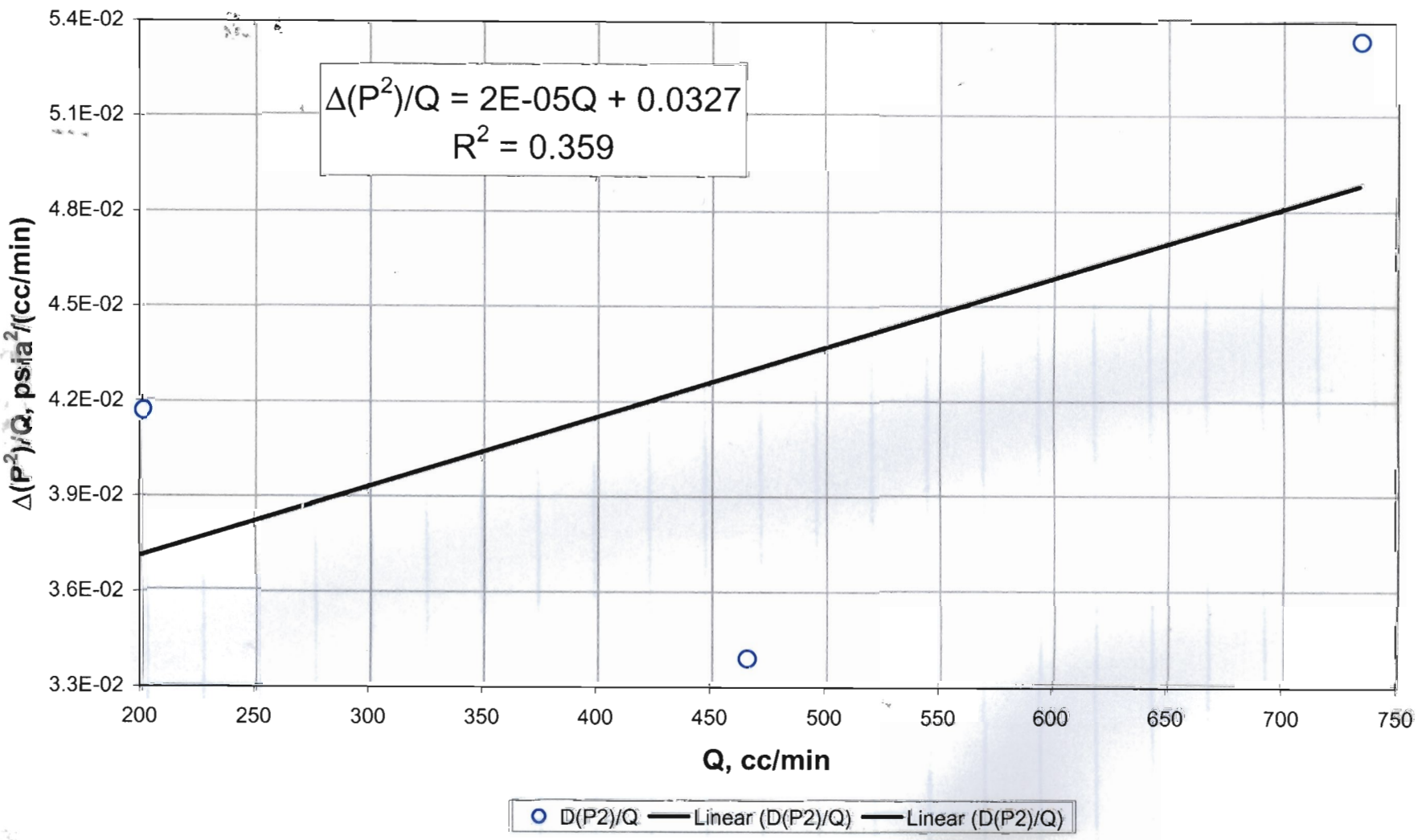

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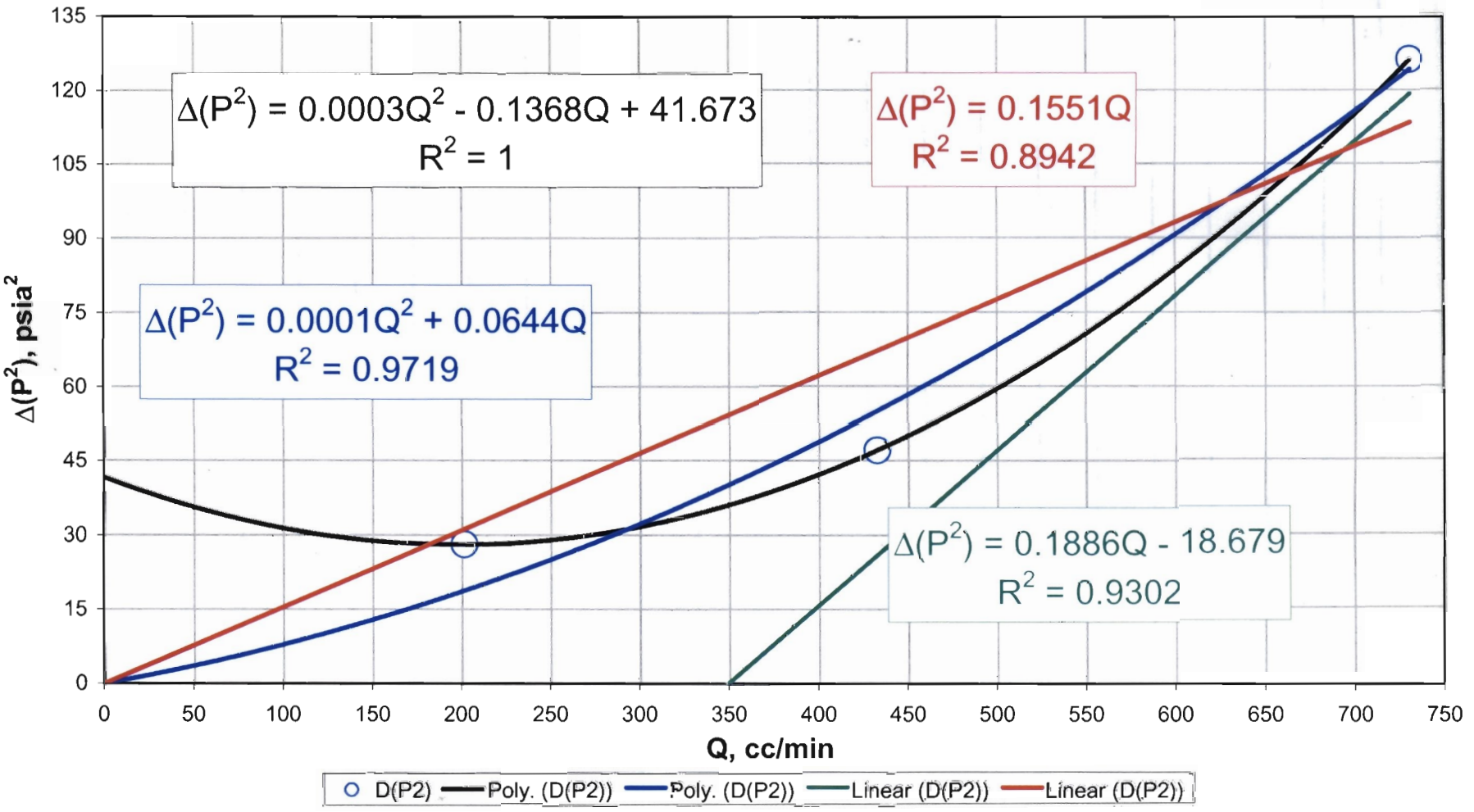
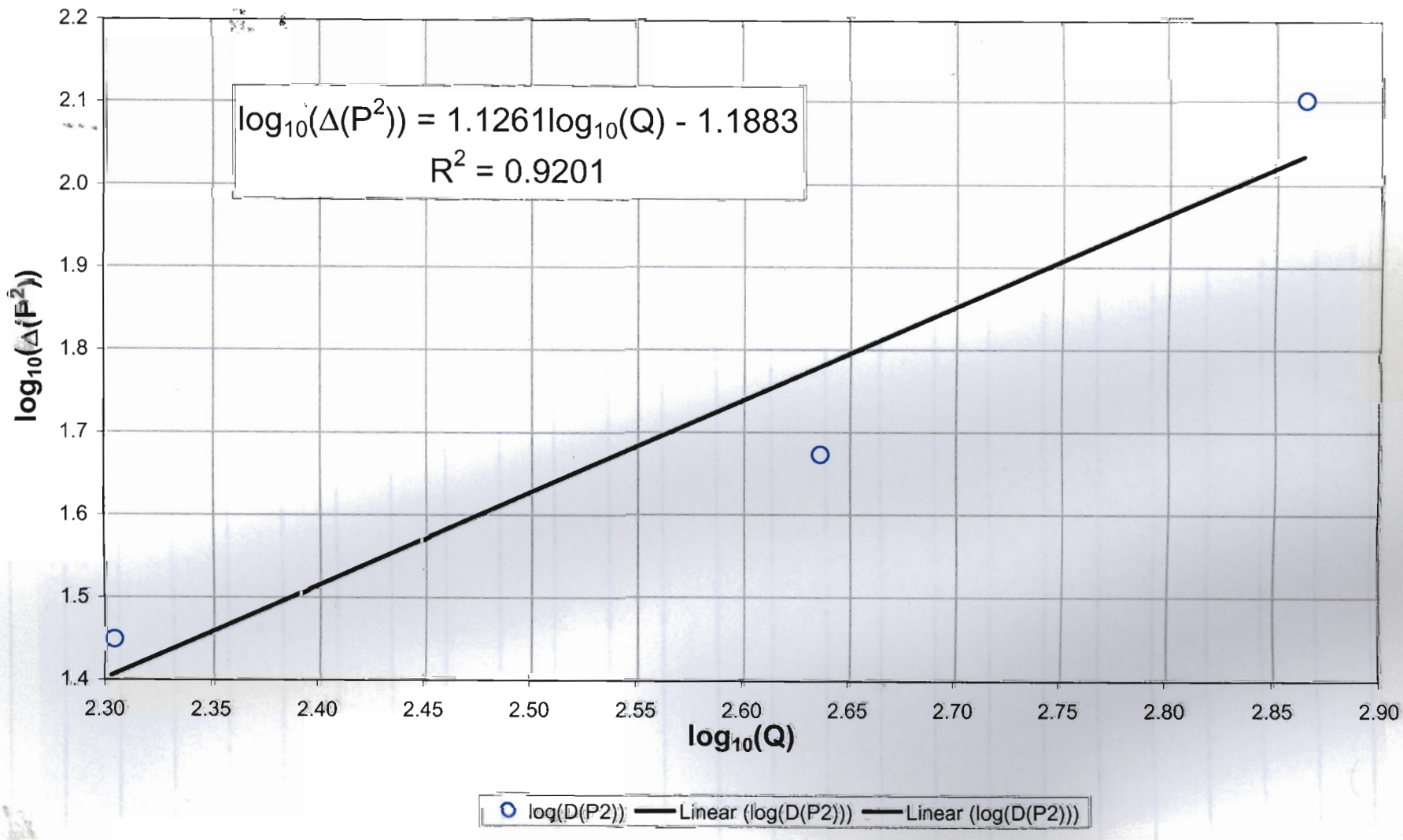
V4 Transect: Drillhole -2



Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole -2



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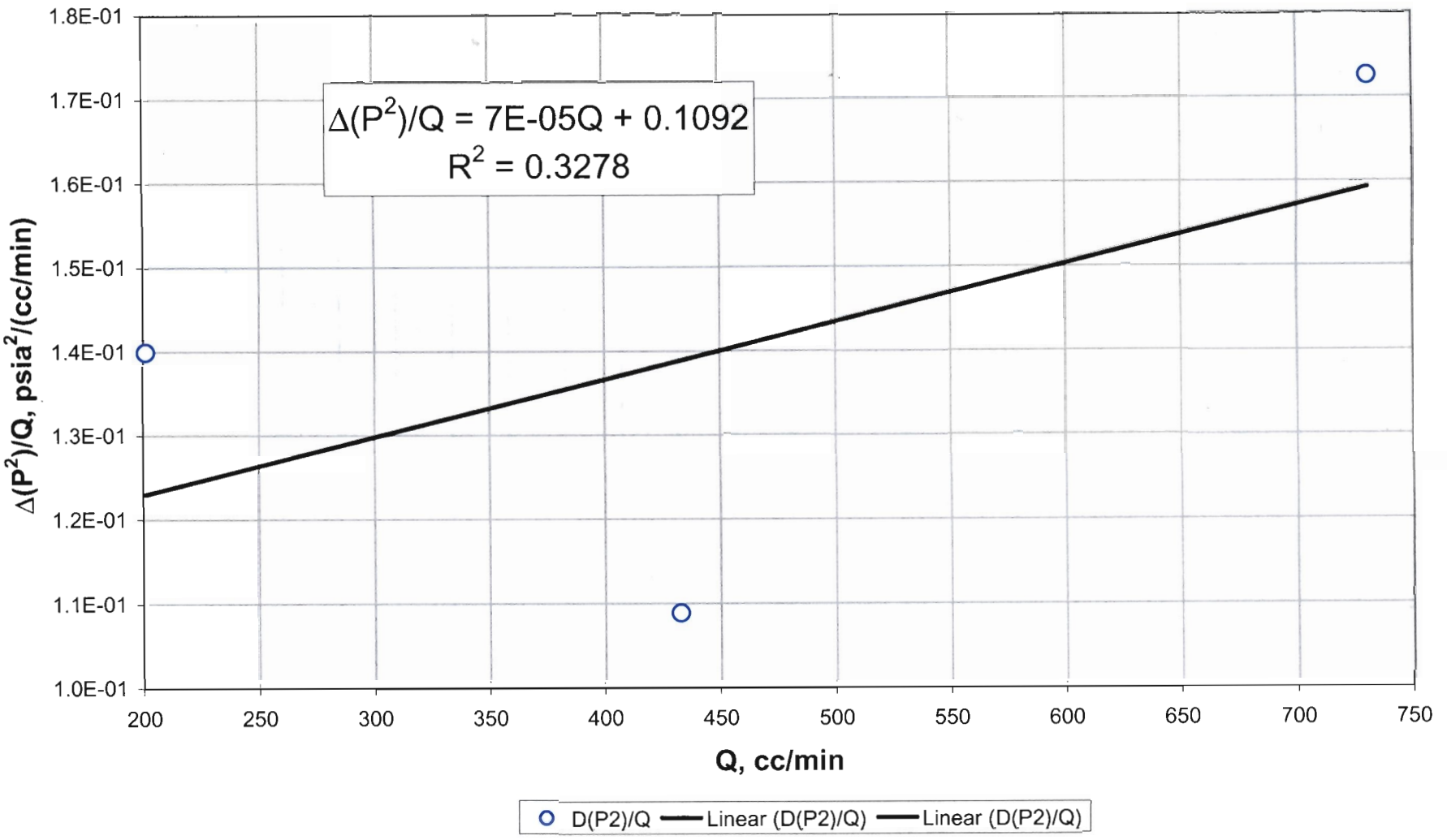

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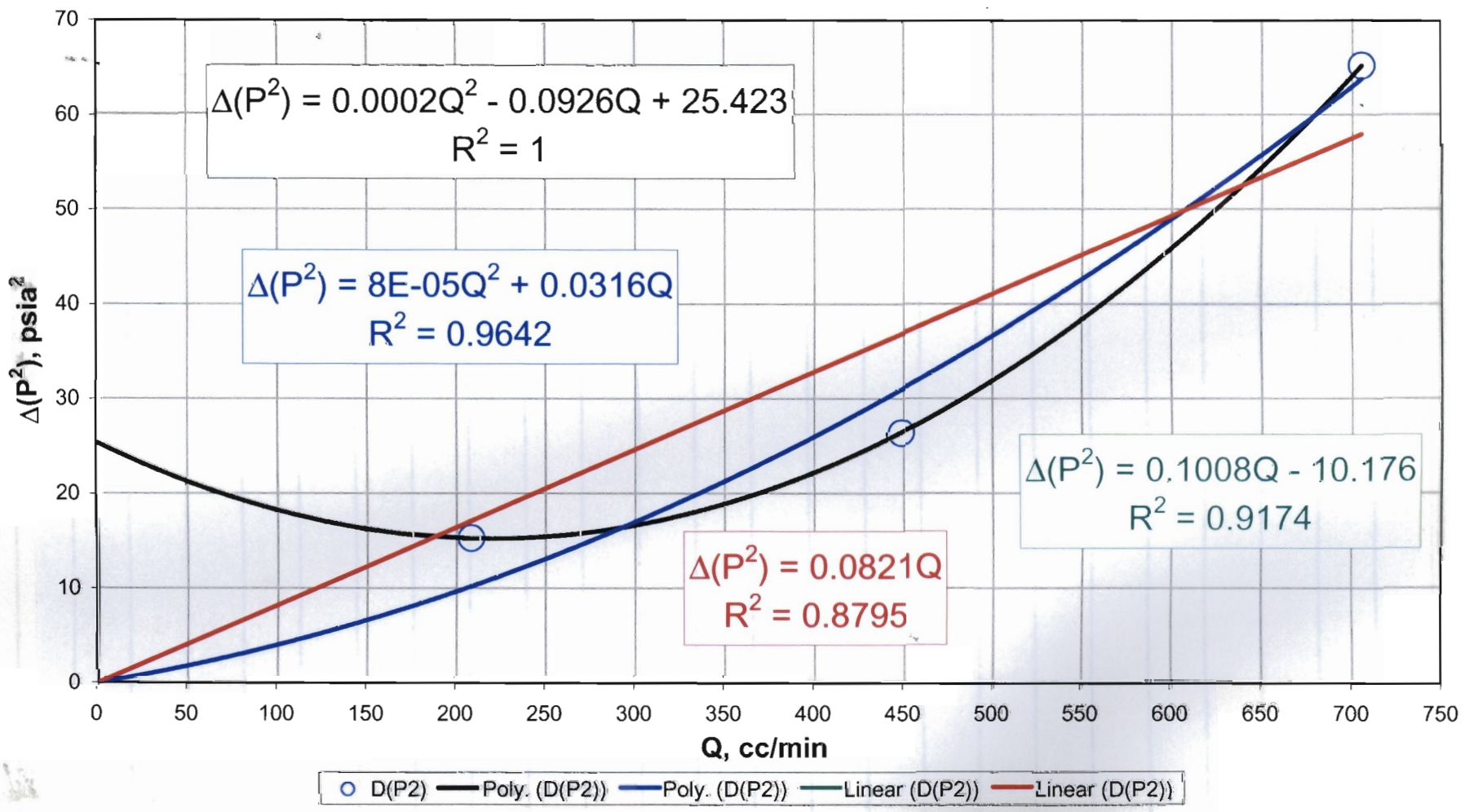

Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
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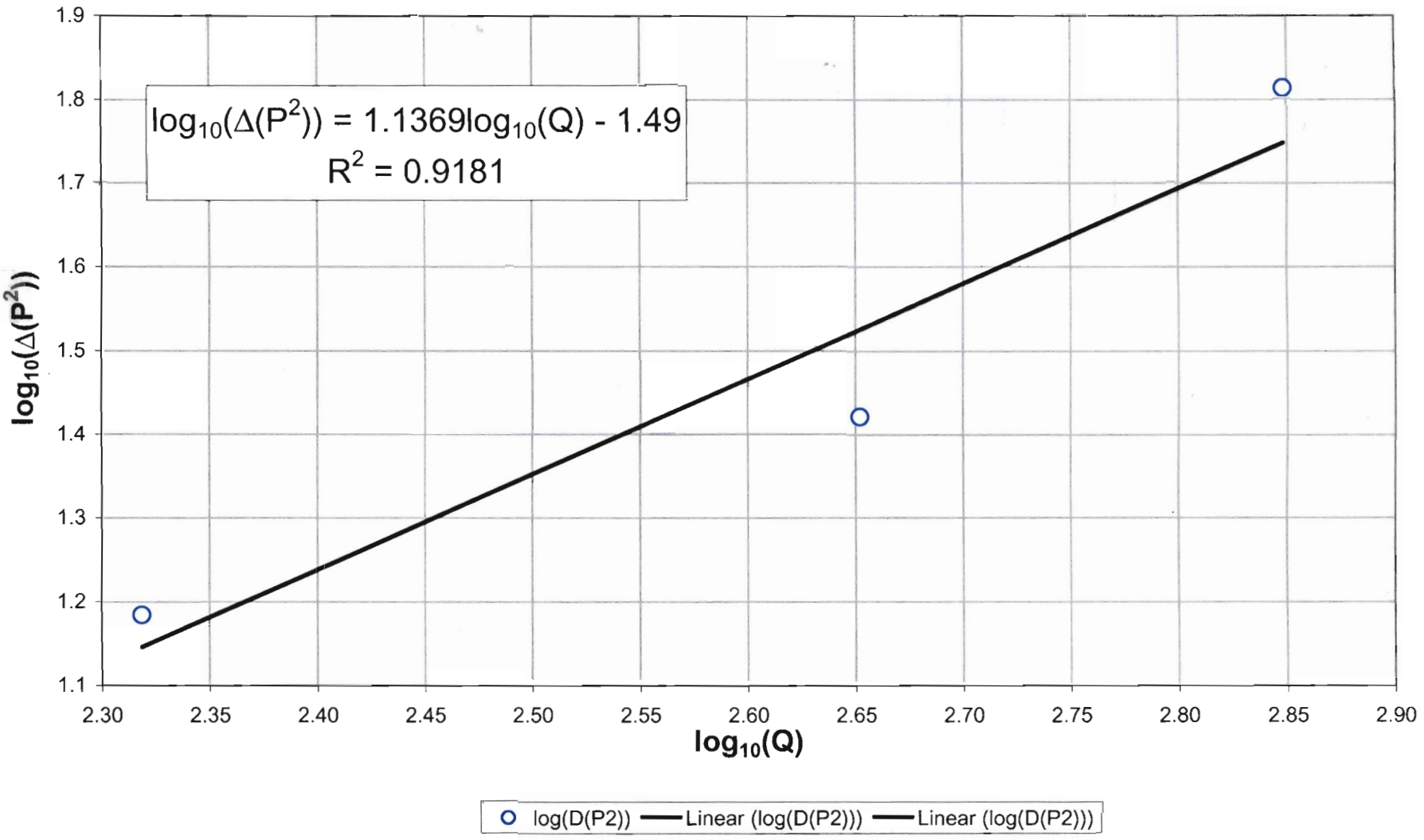

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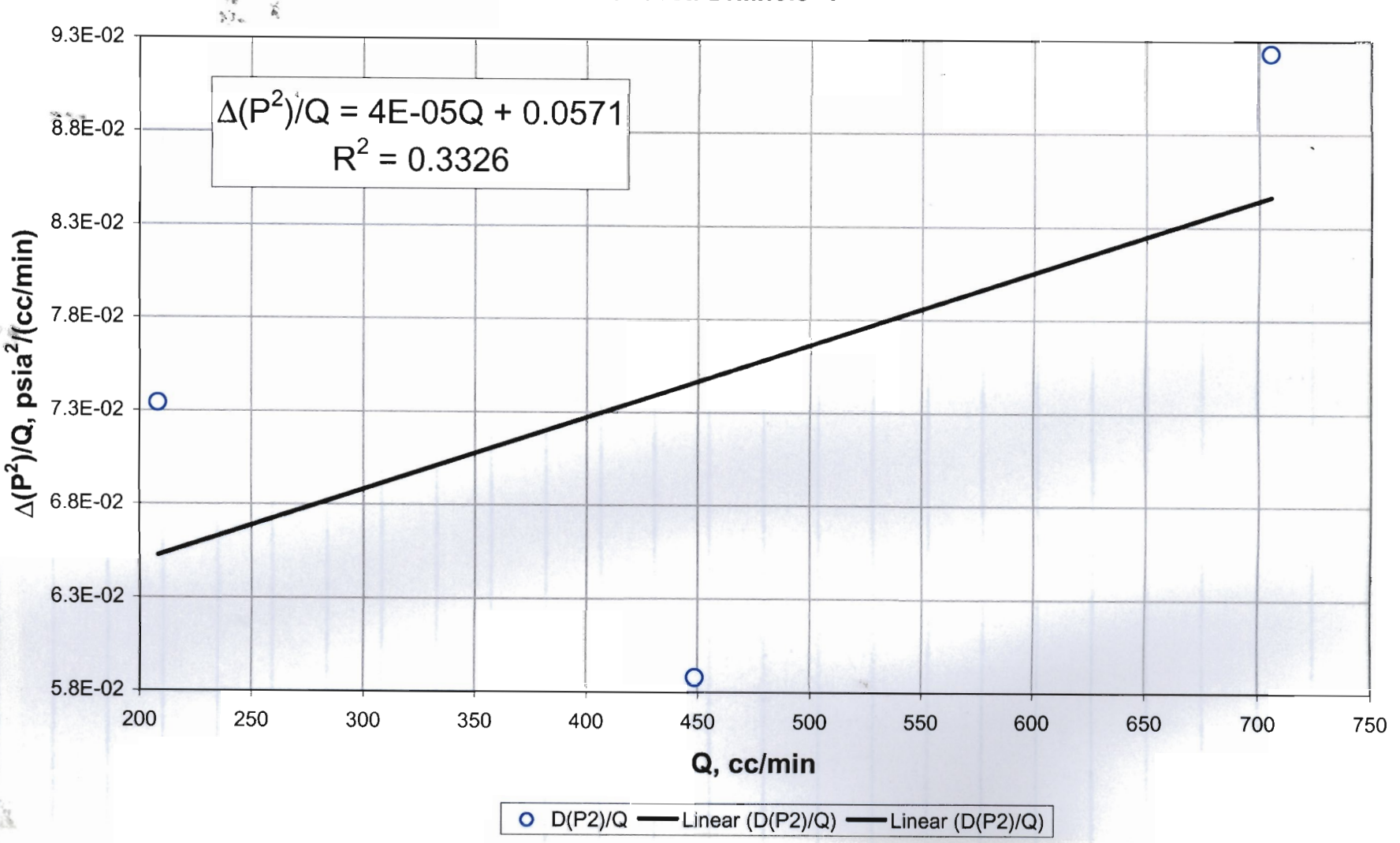

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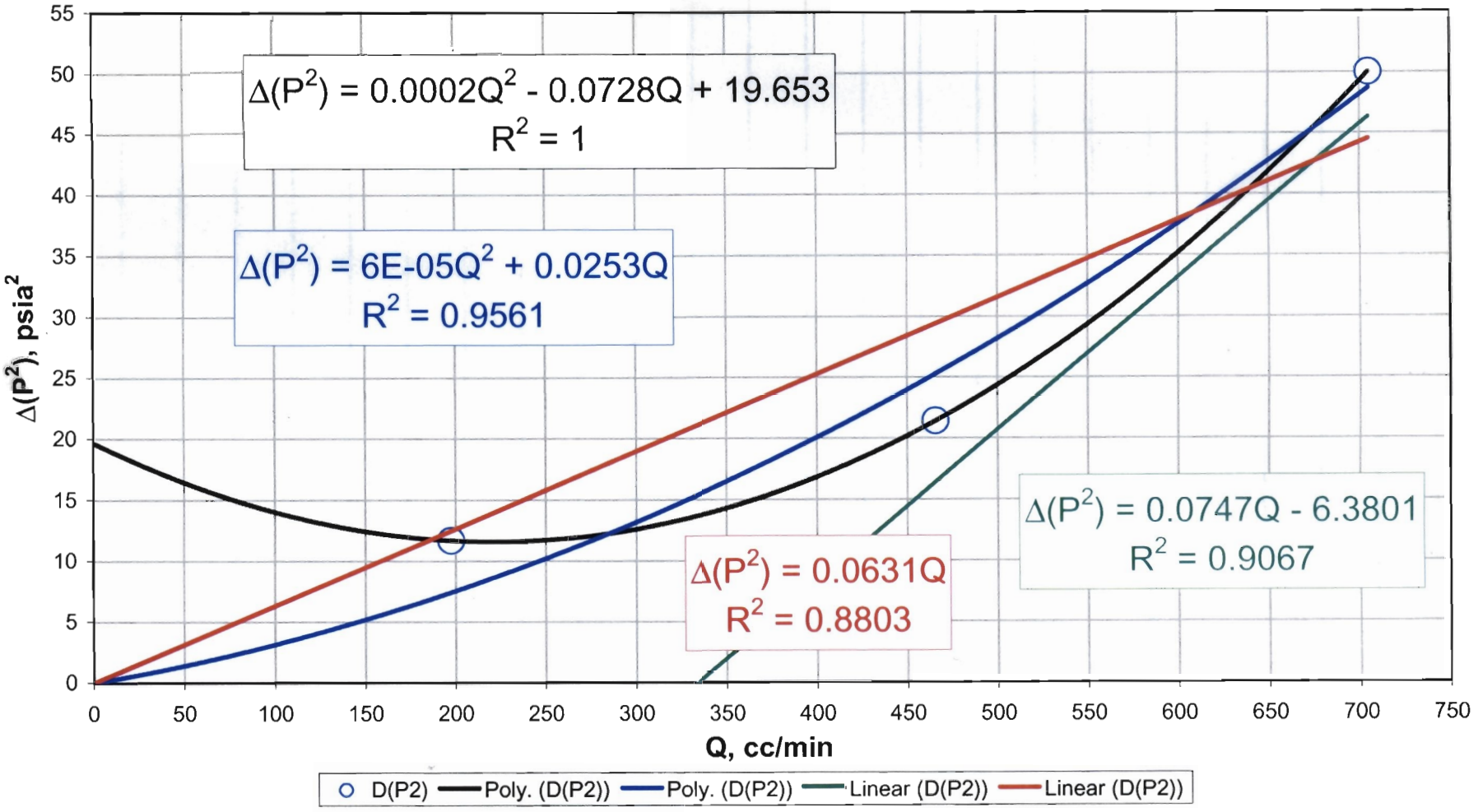

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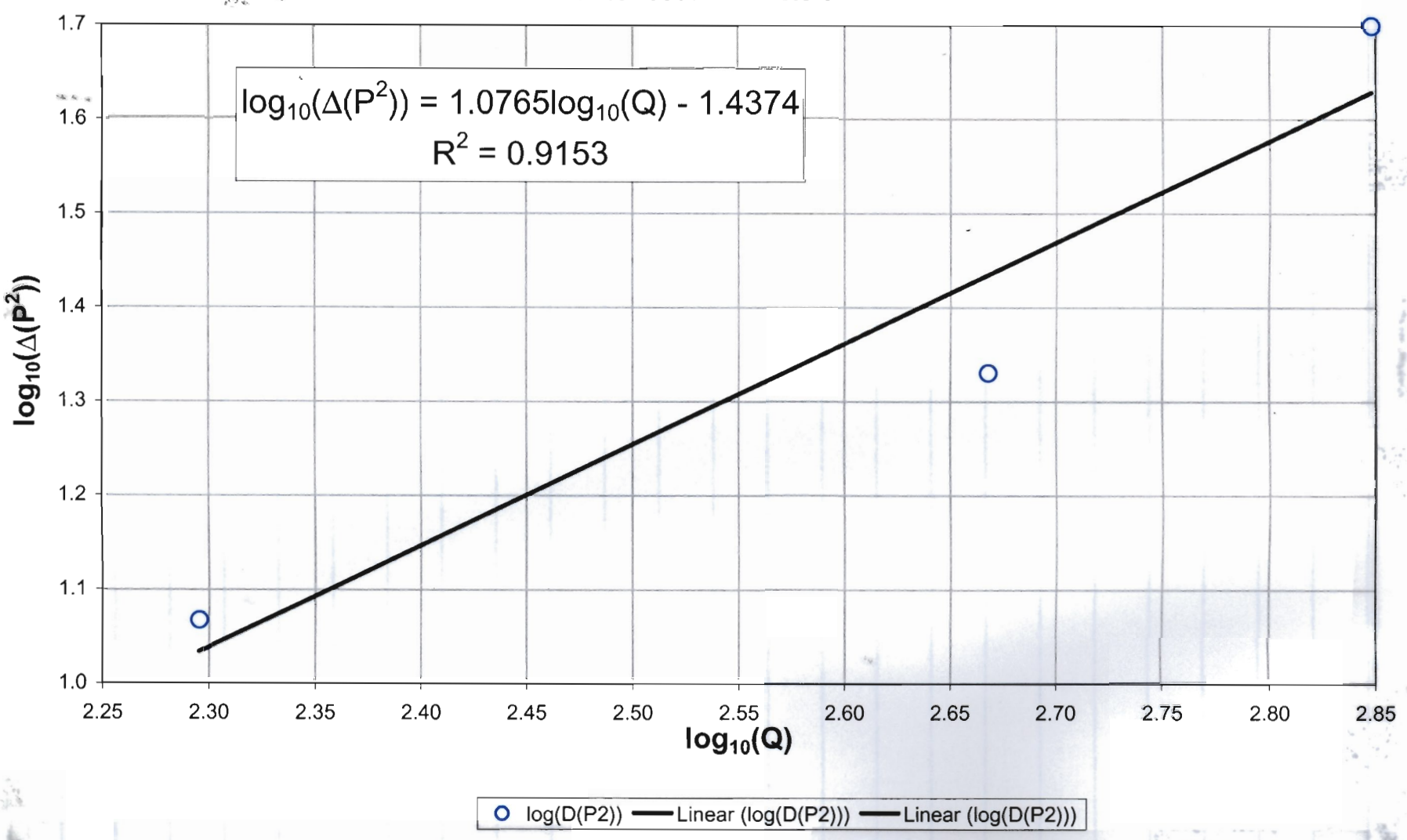

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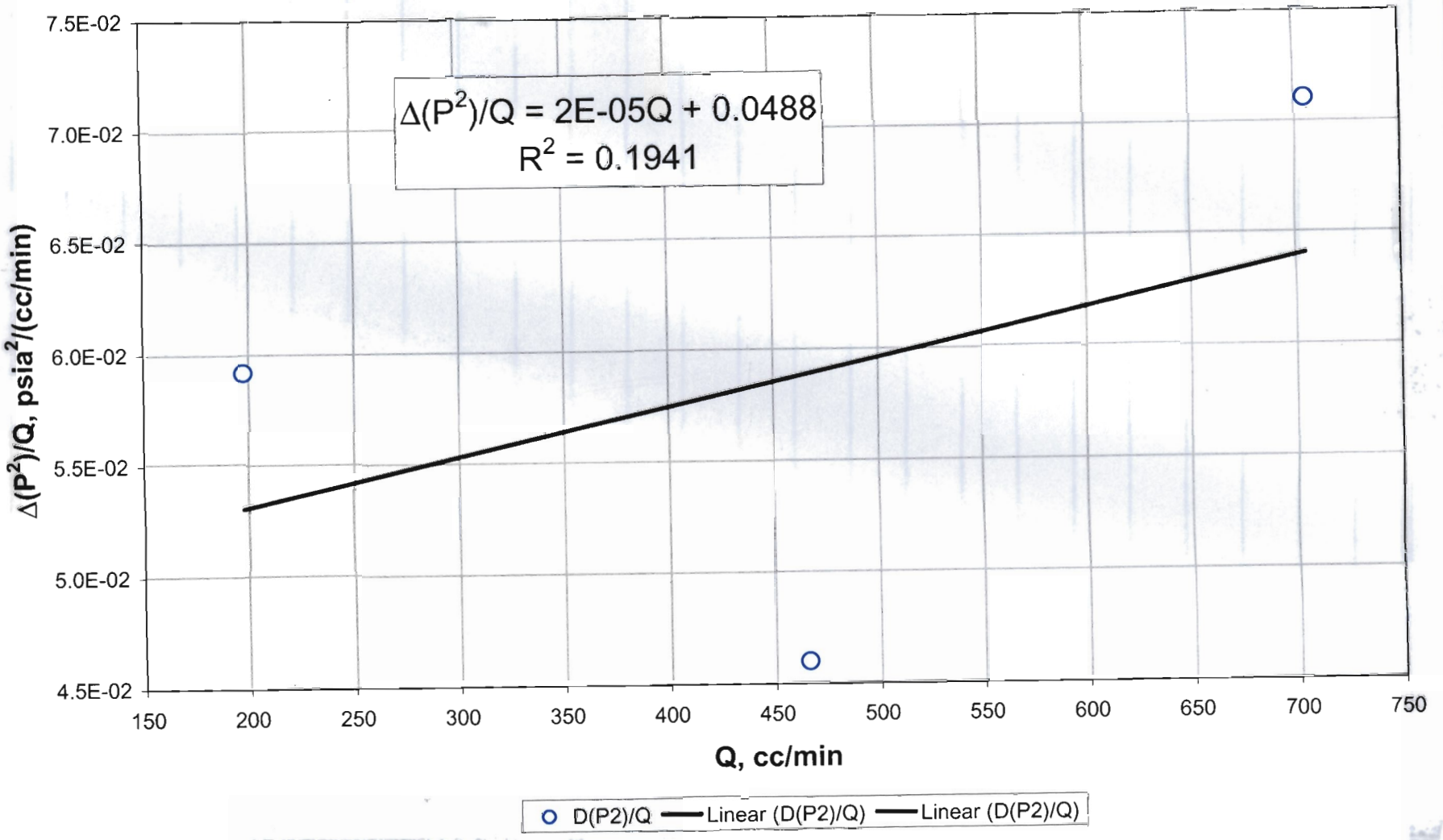

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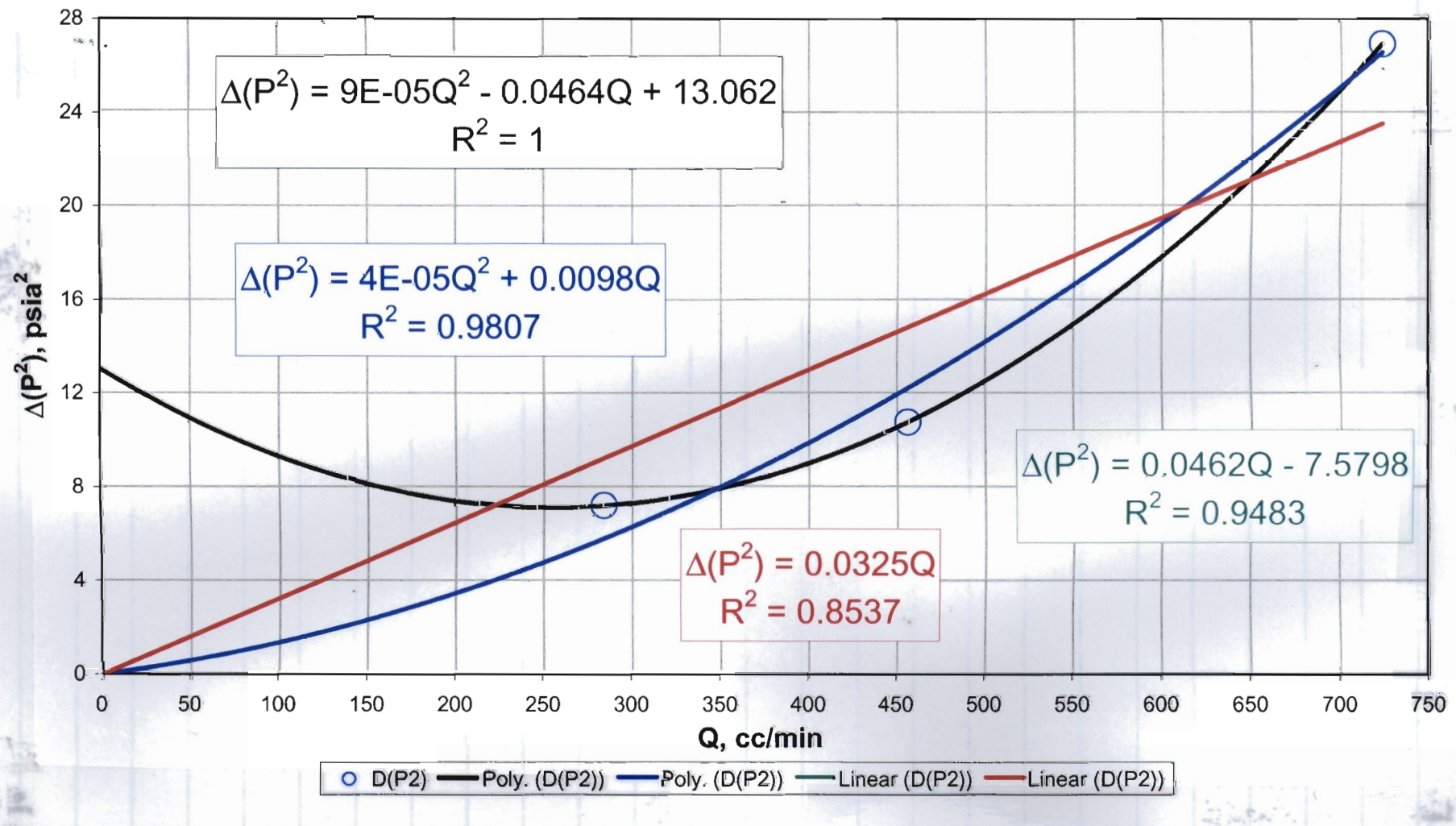

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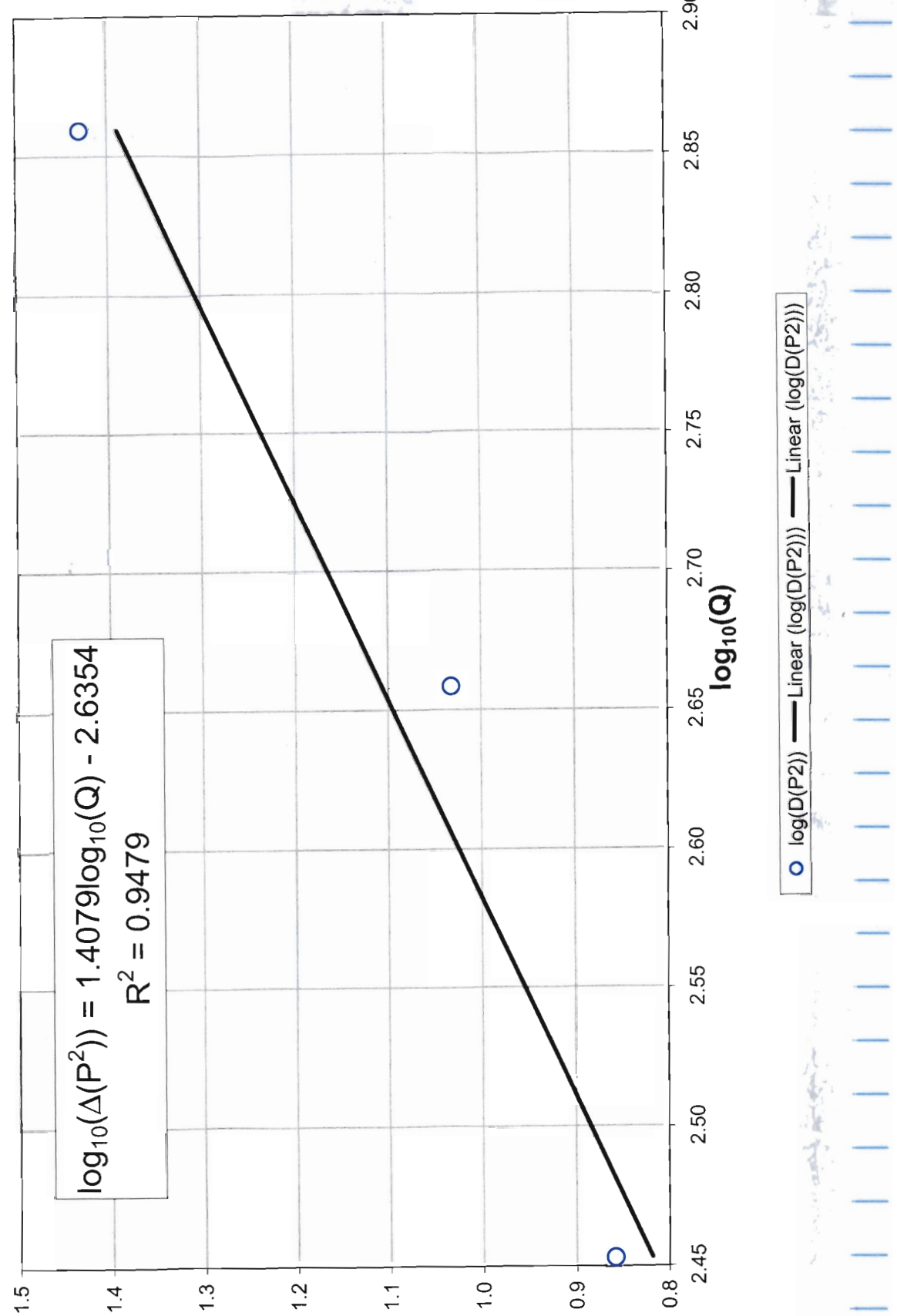

RNM, 01/30/03

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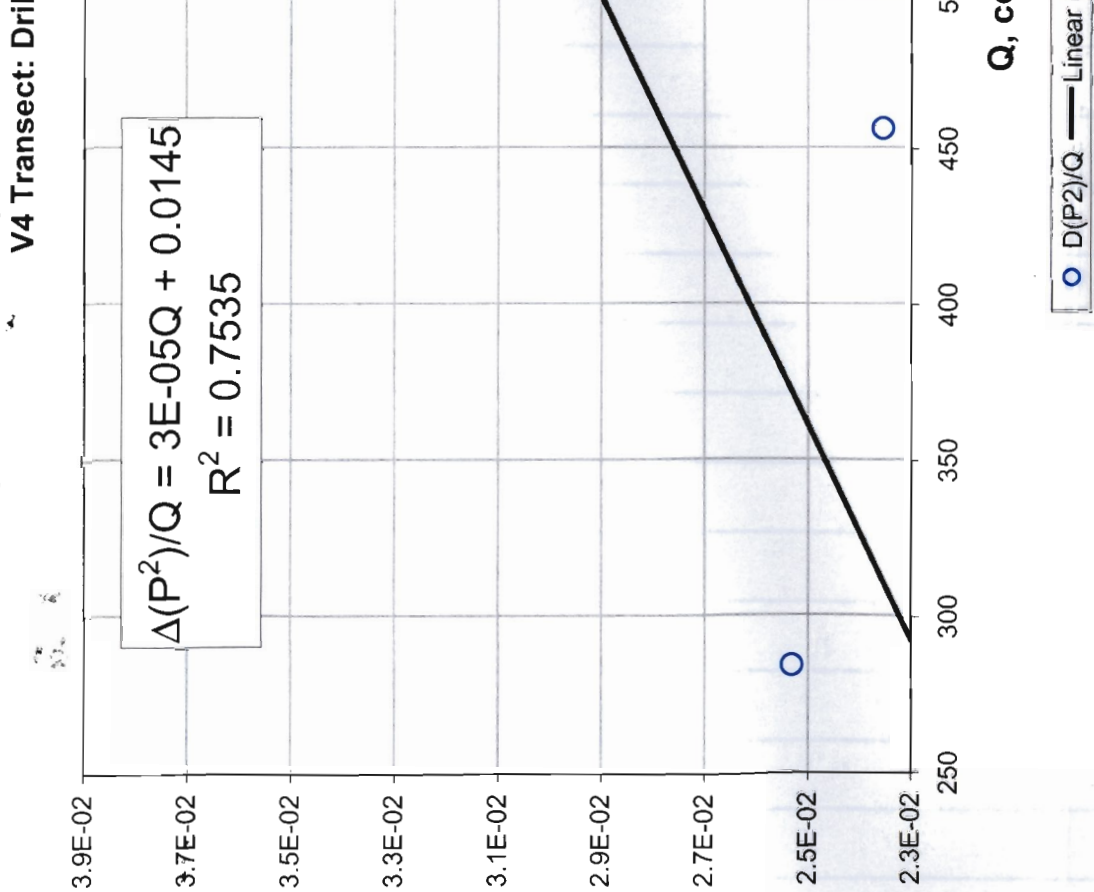

RNM, 01/30/03

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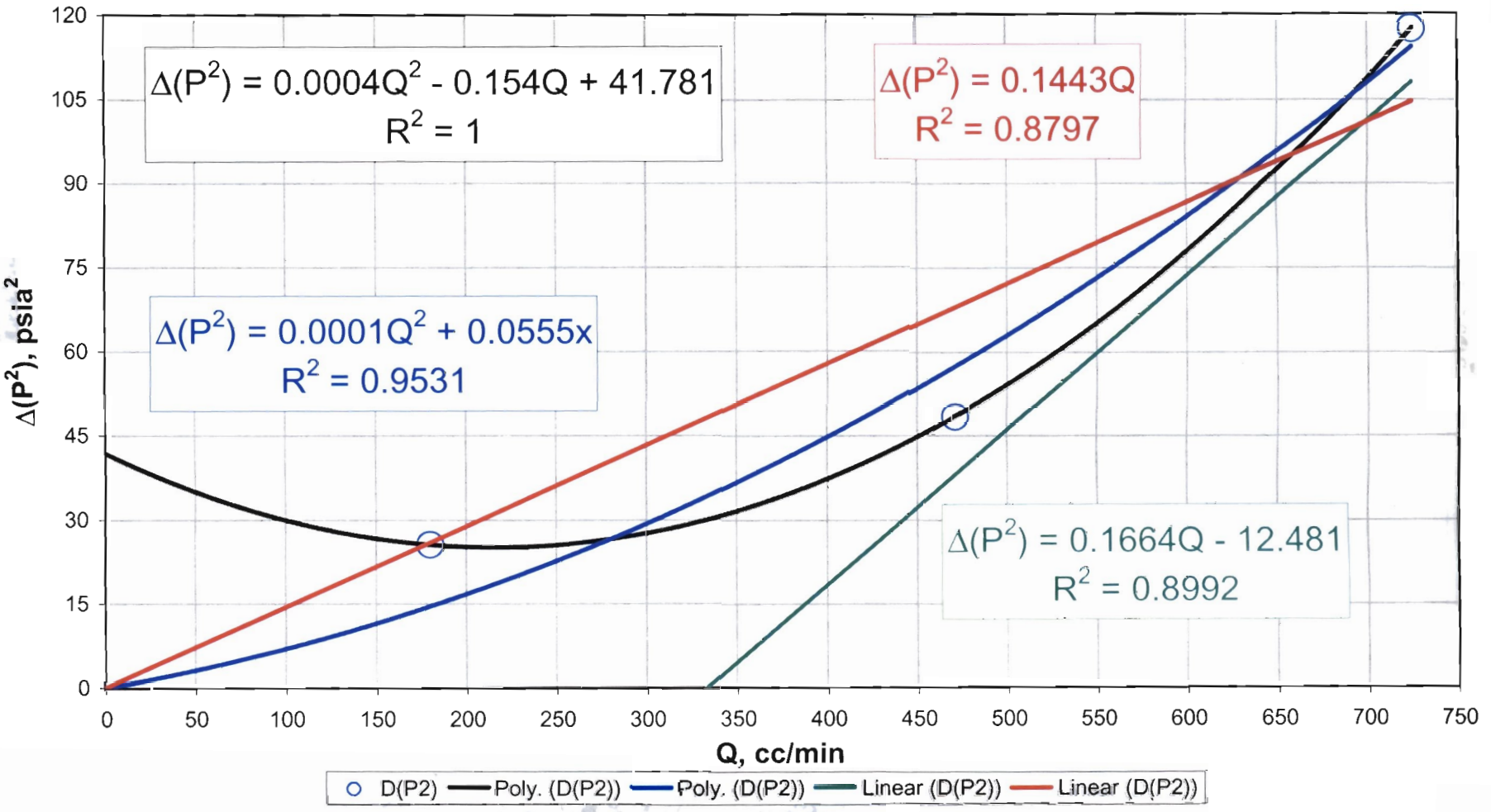

Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
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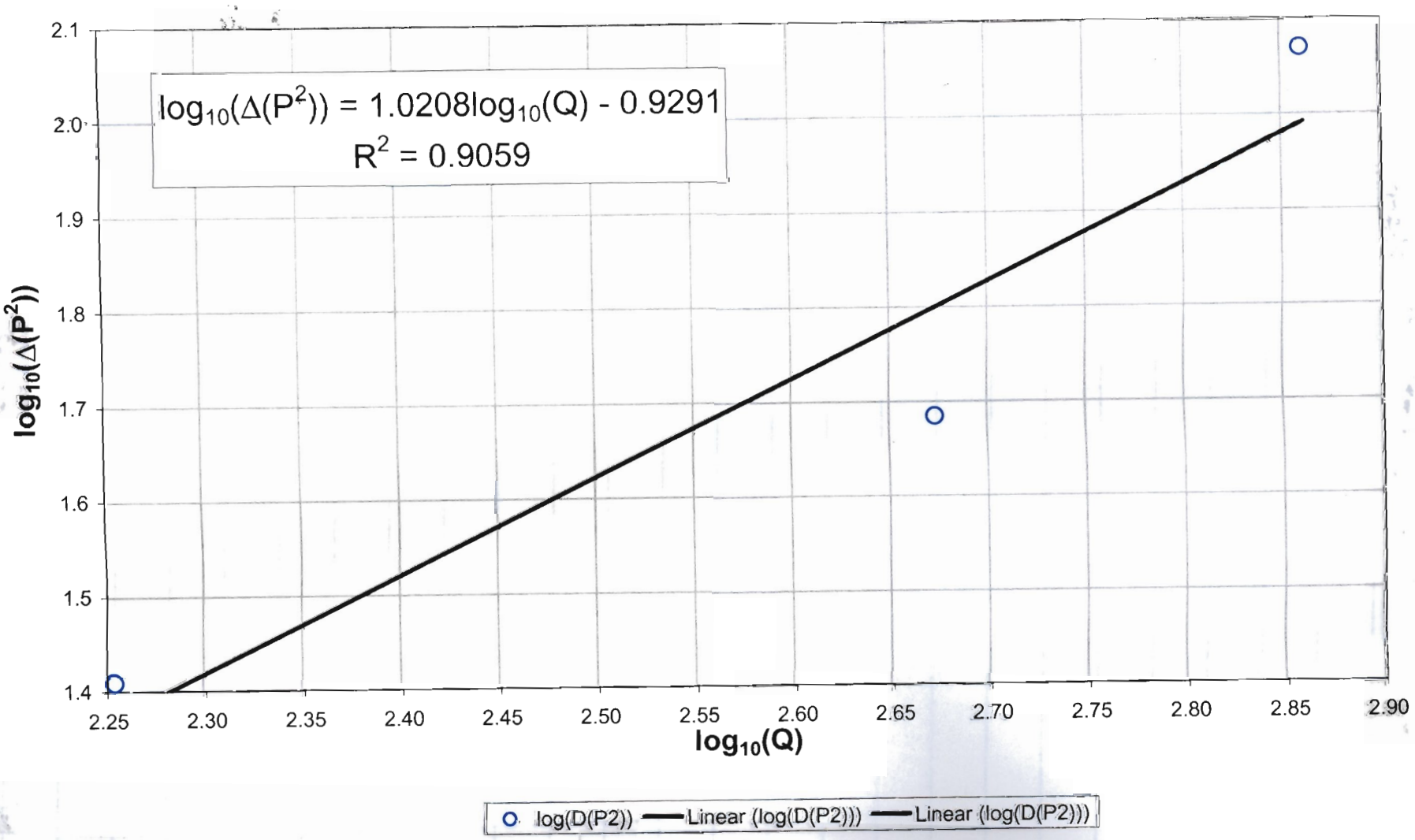

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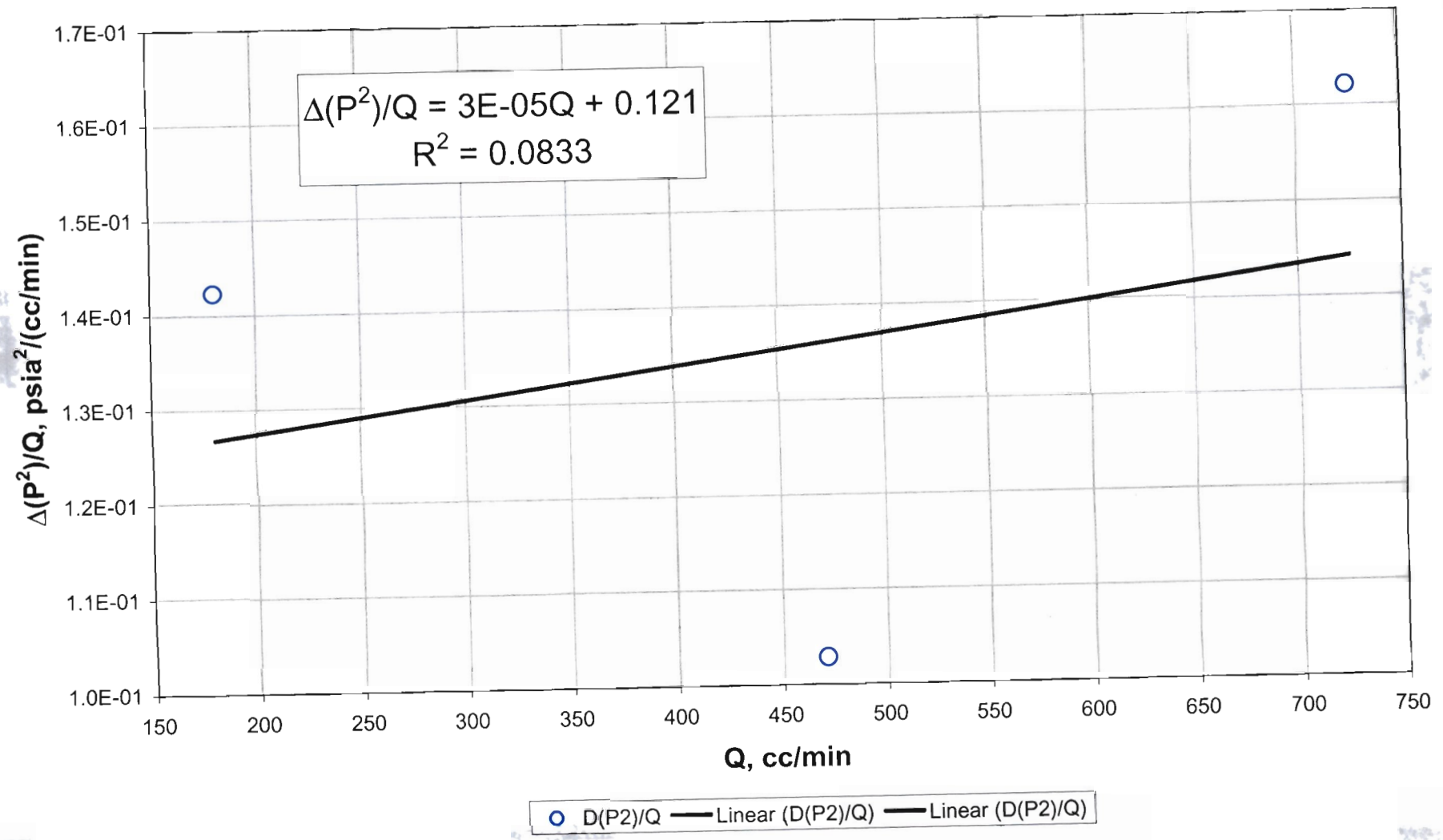

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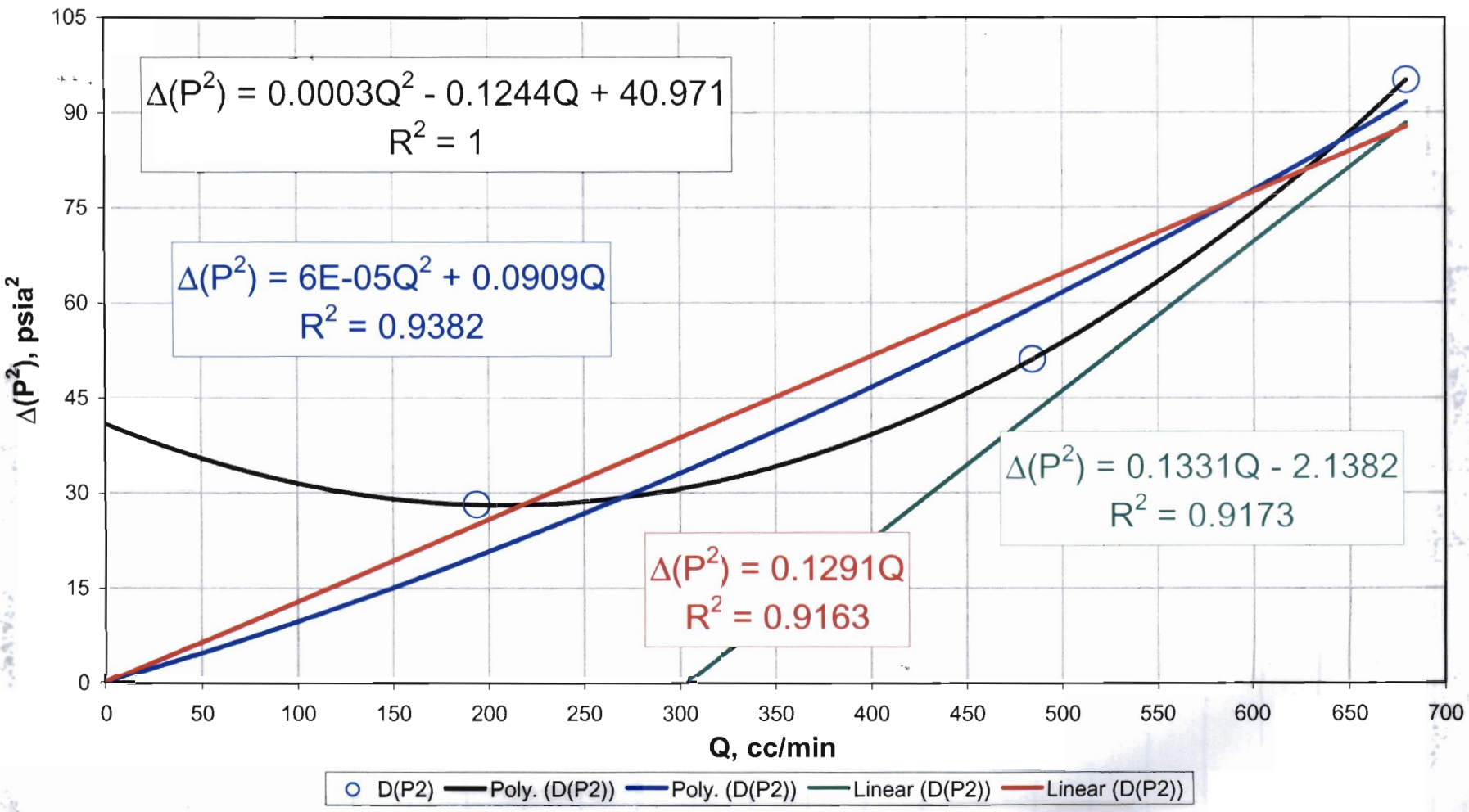

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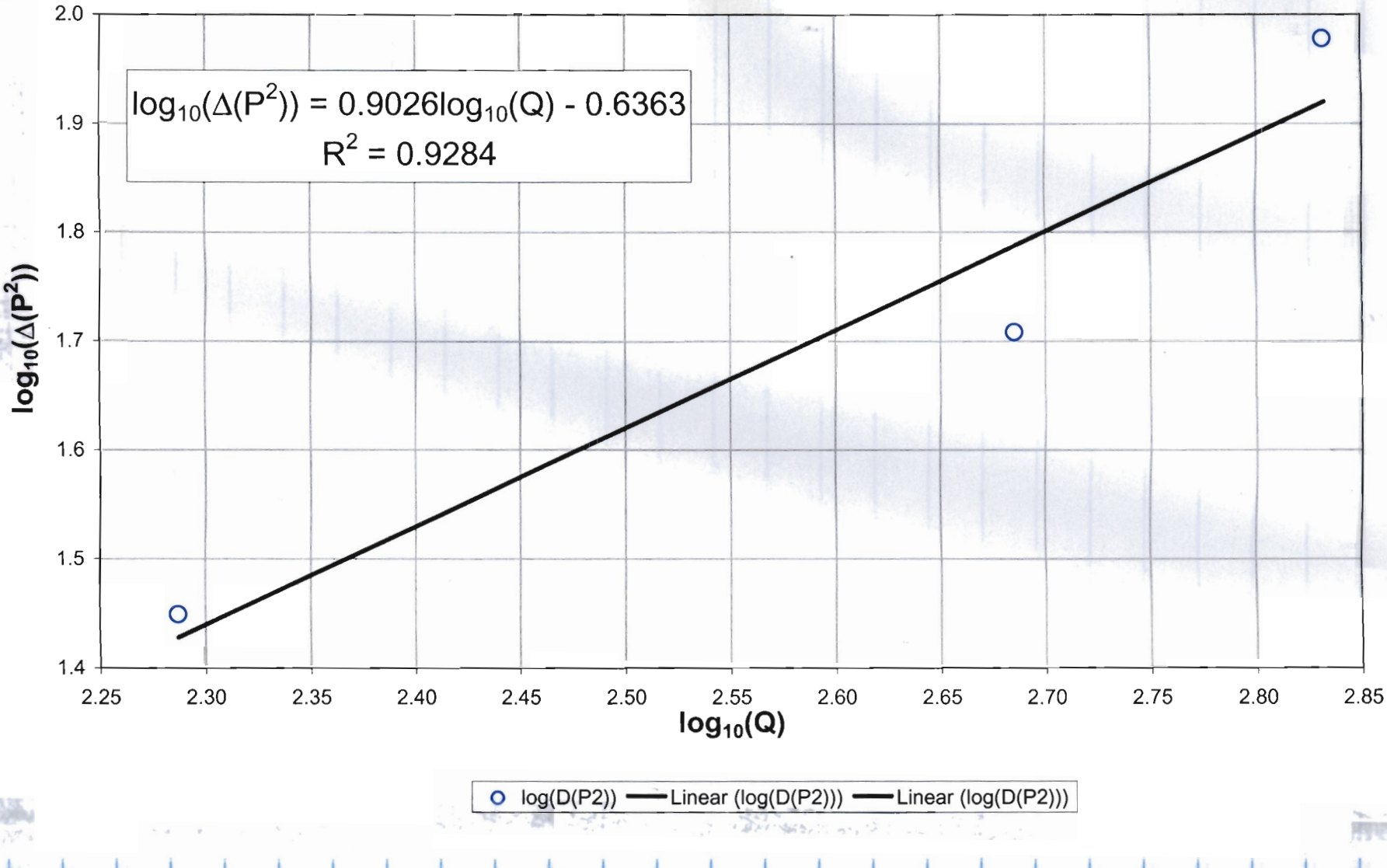

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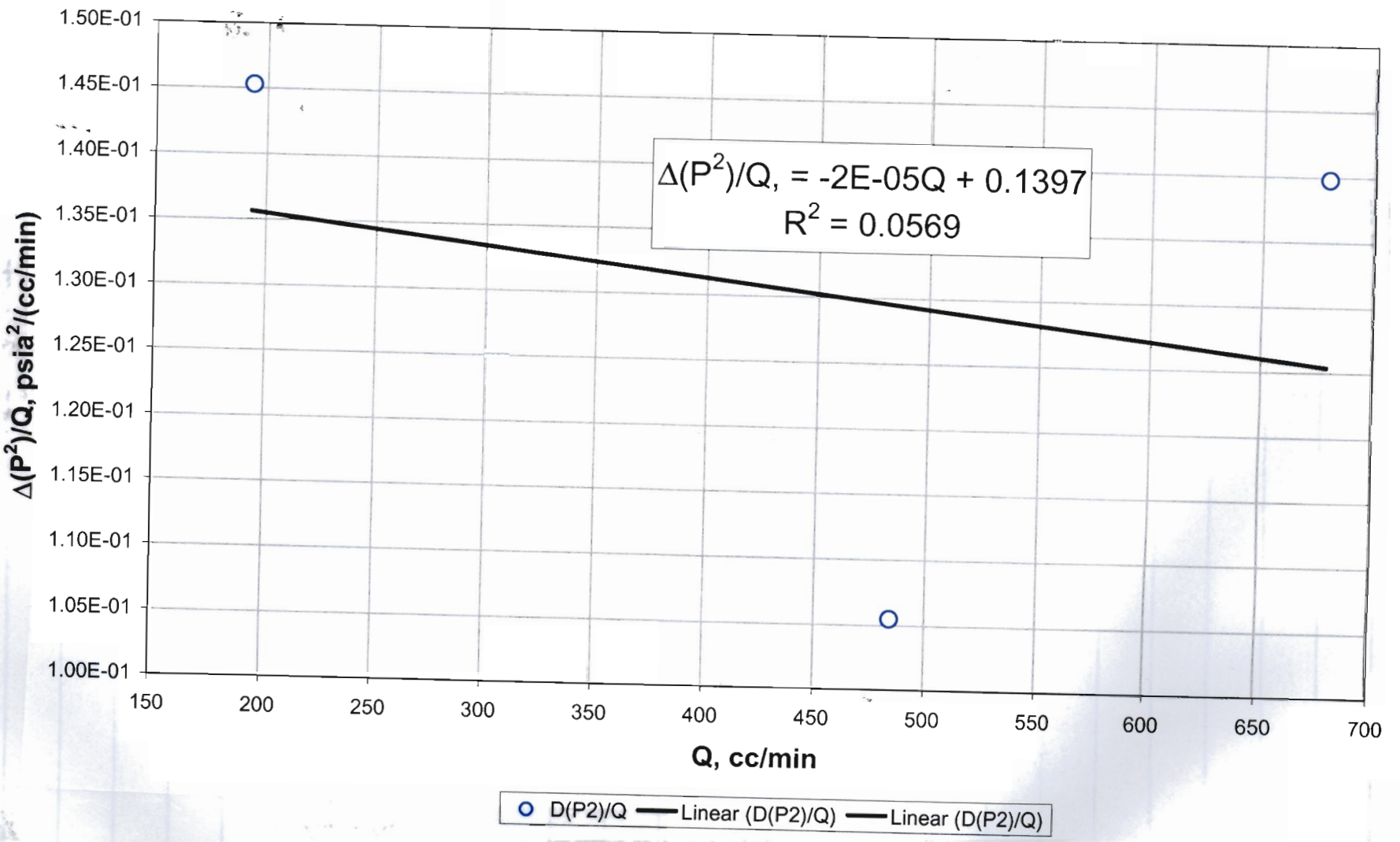

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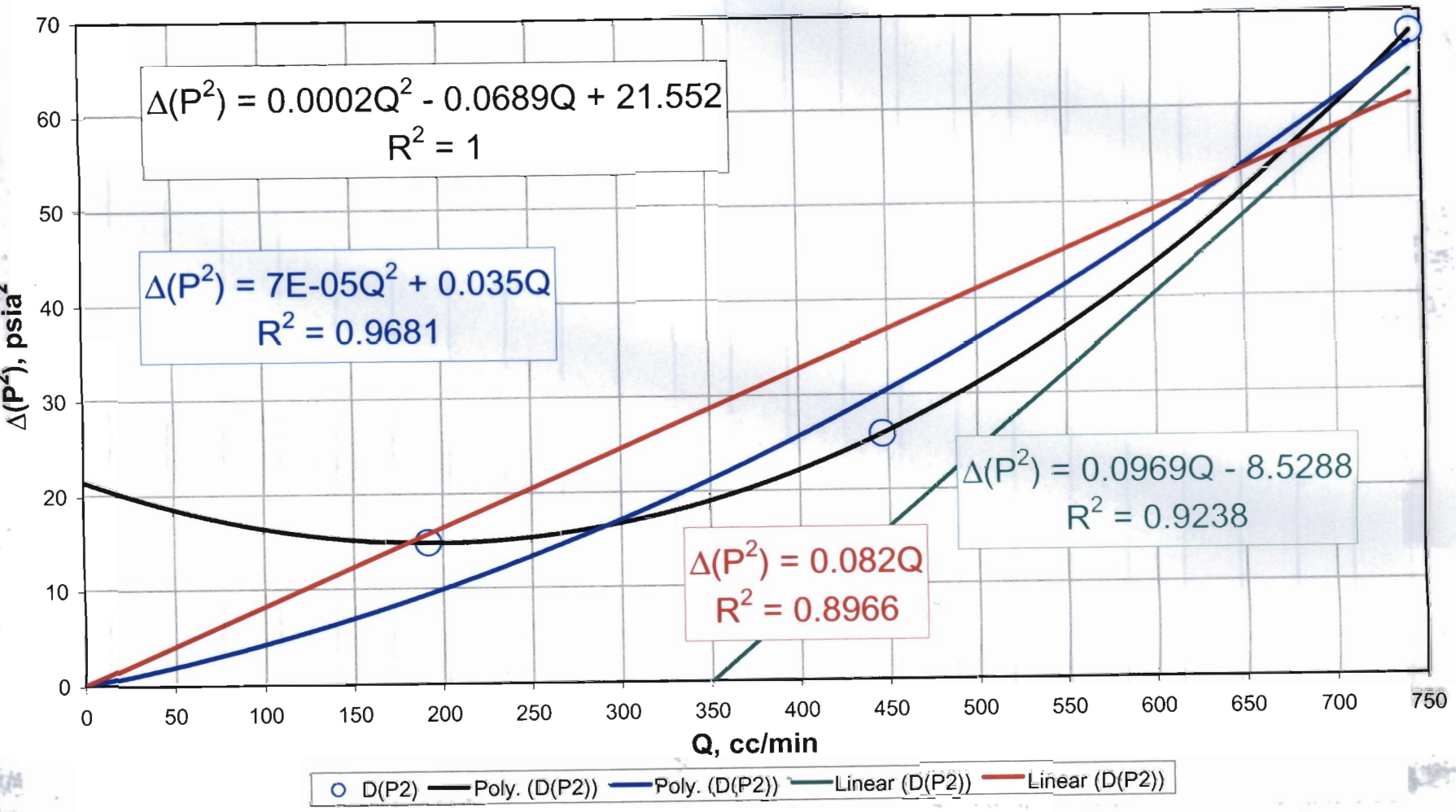

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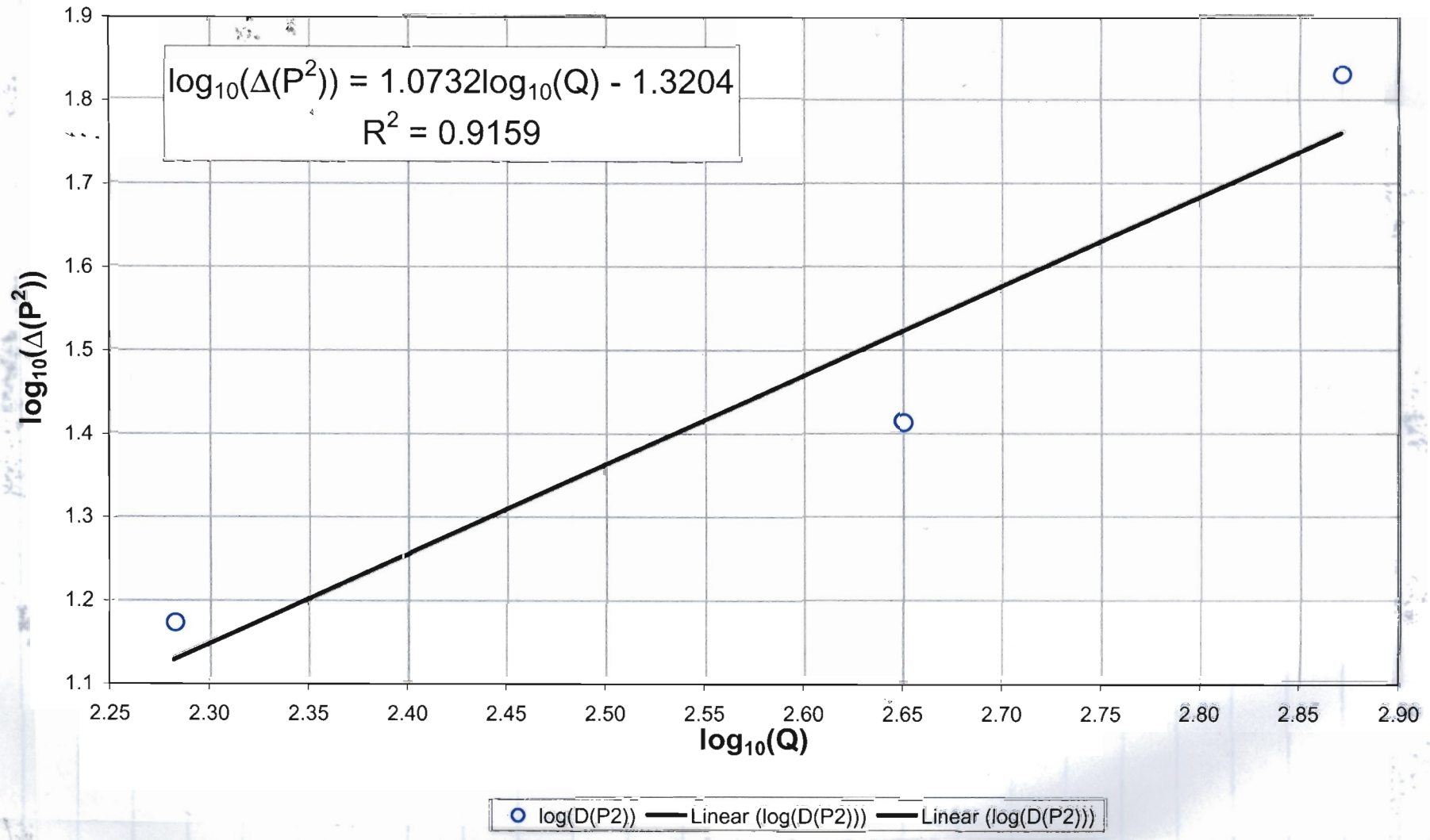

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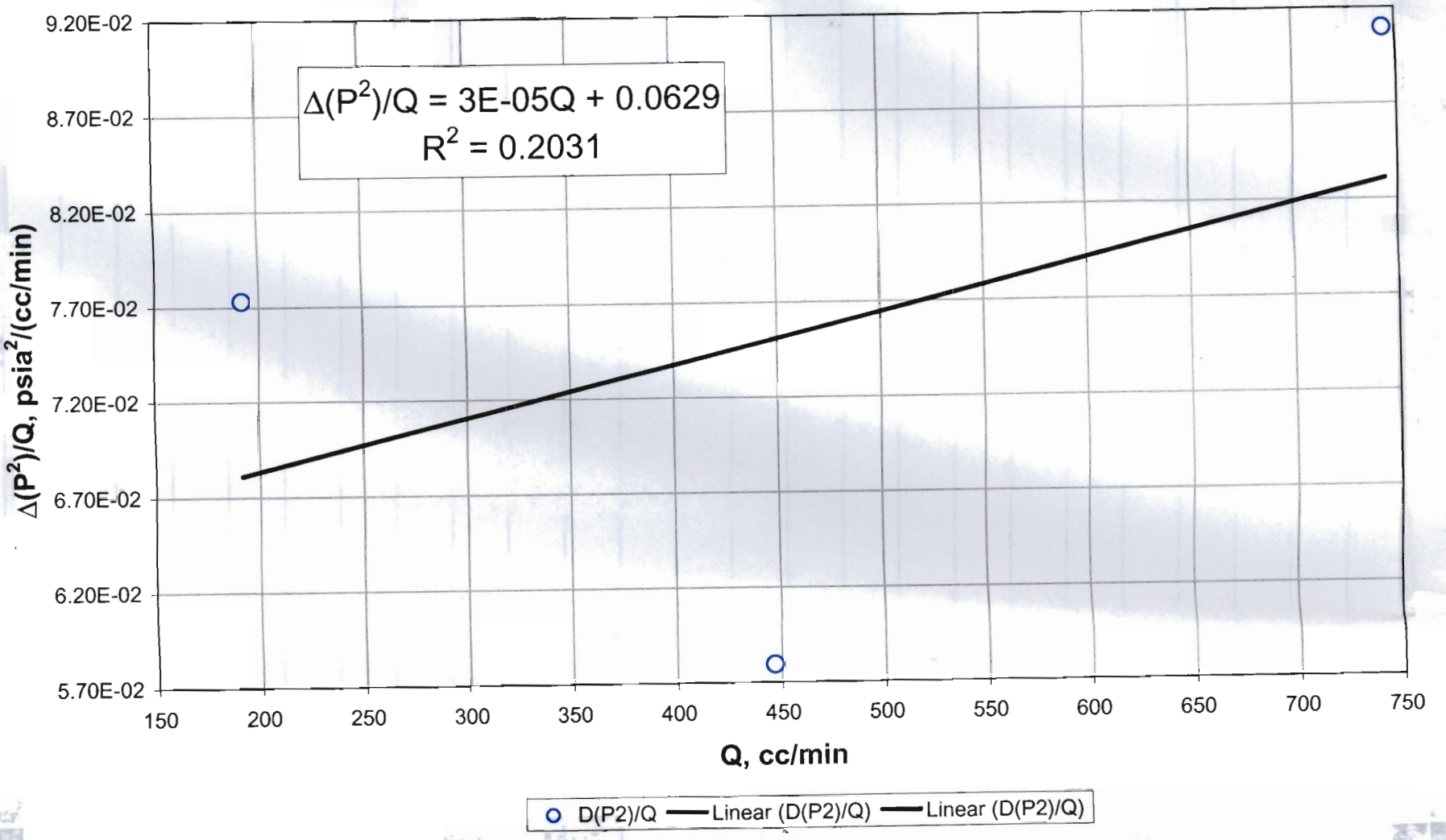

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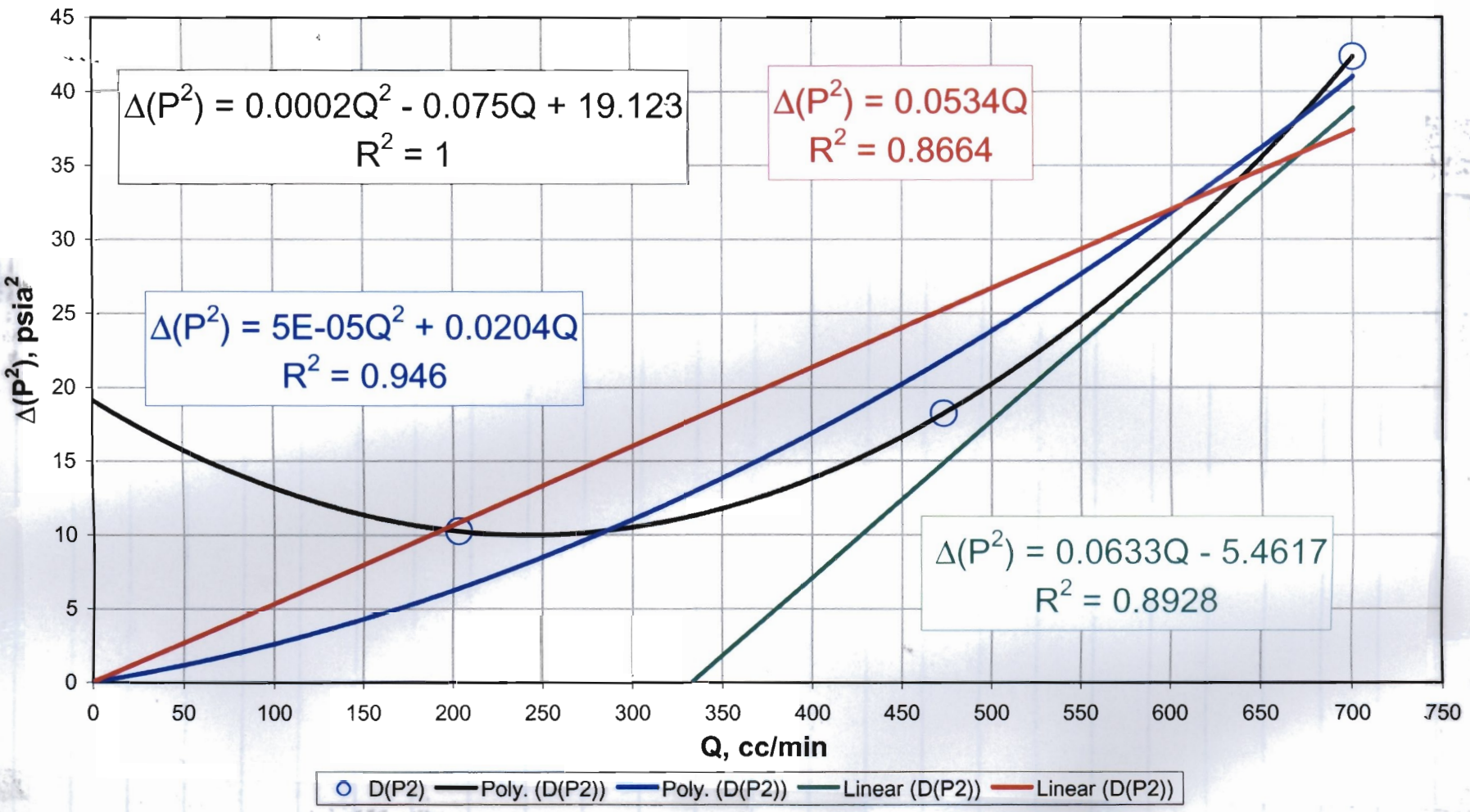

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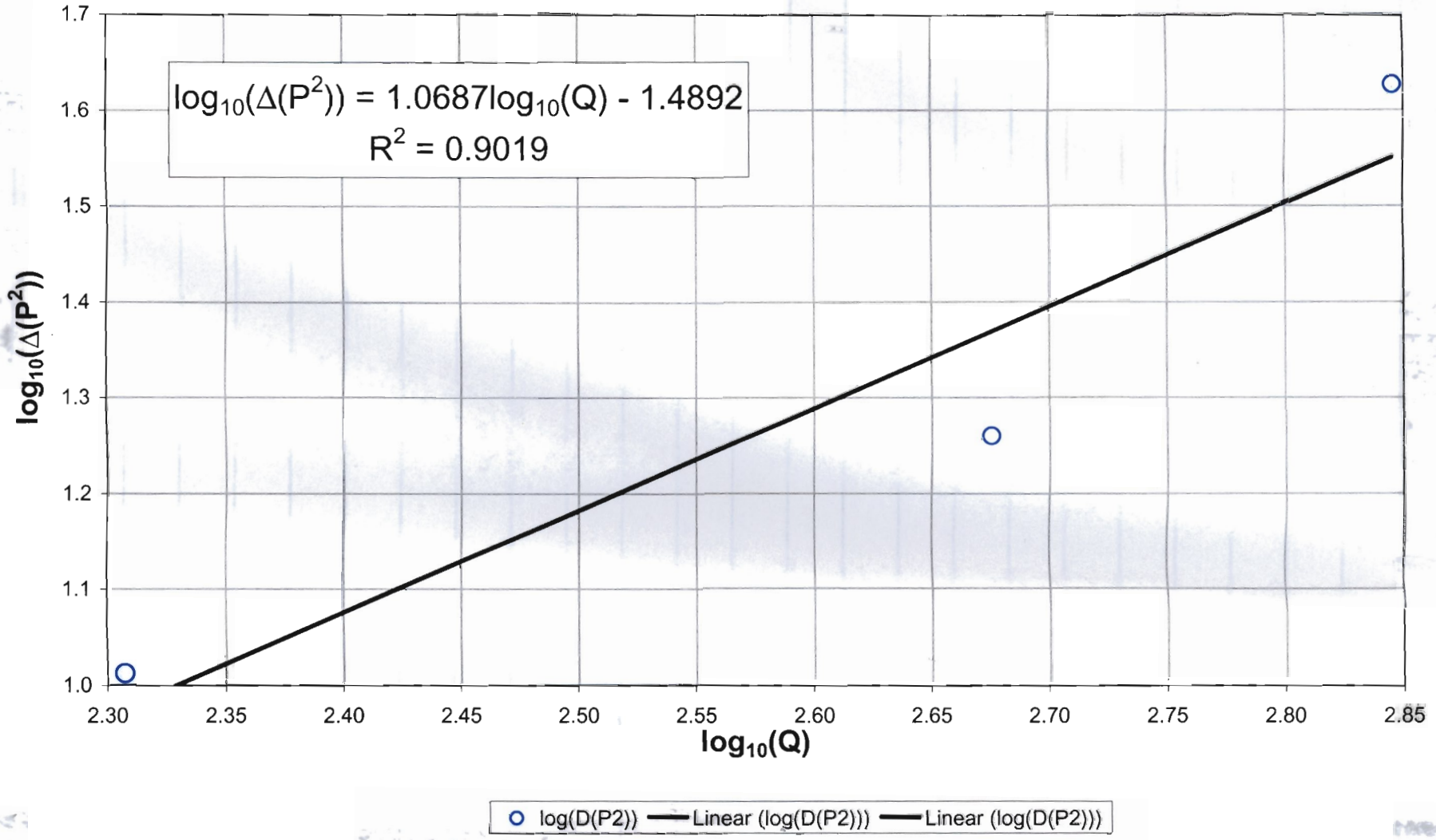

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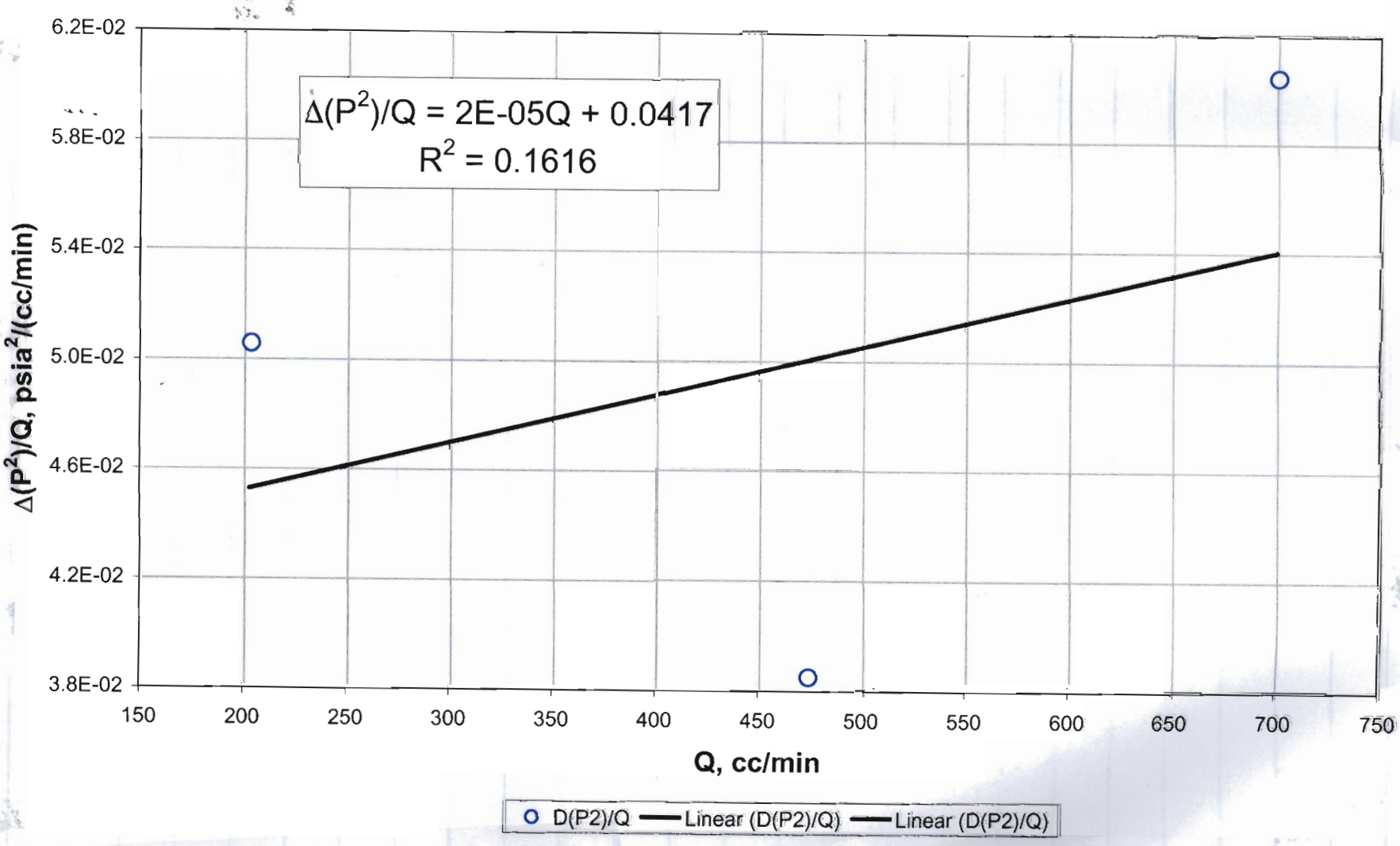

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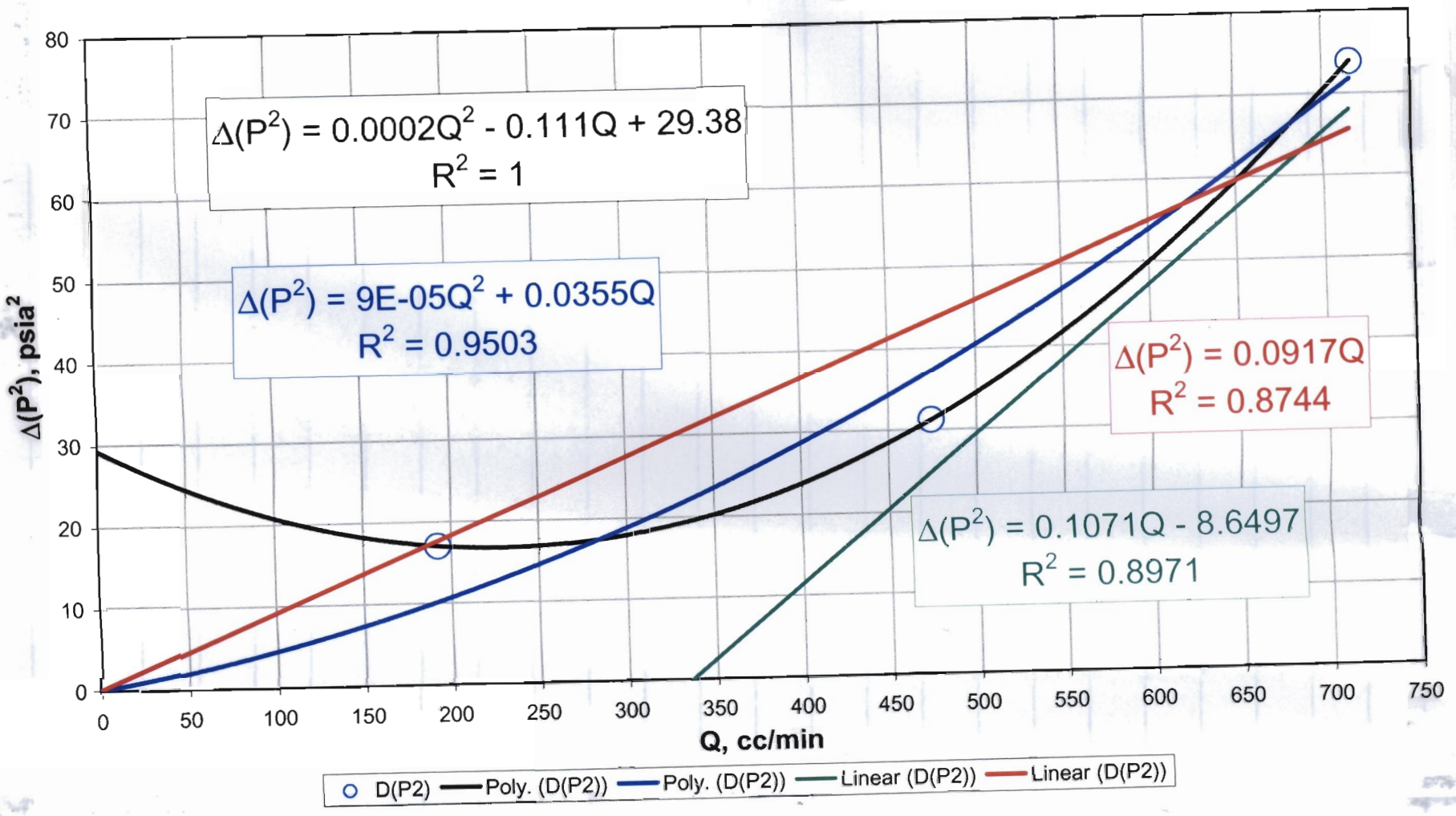

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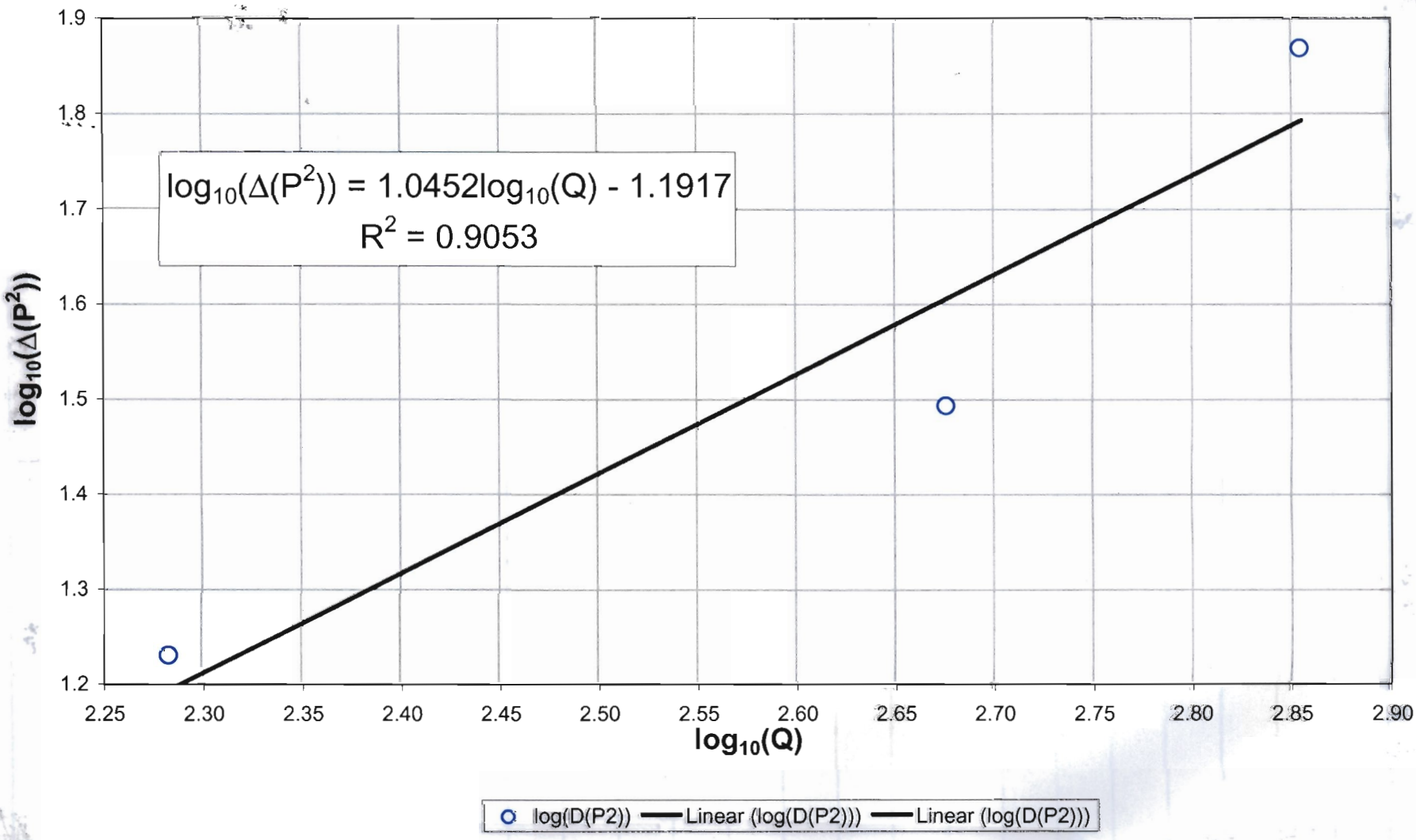

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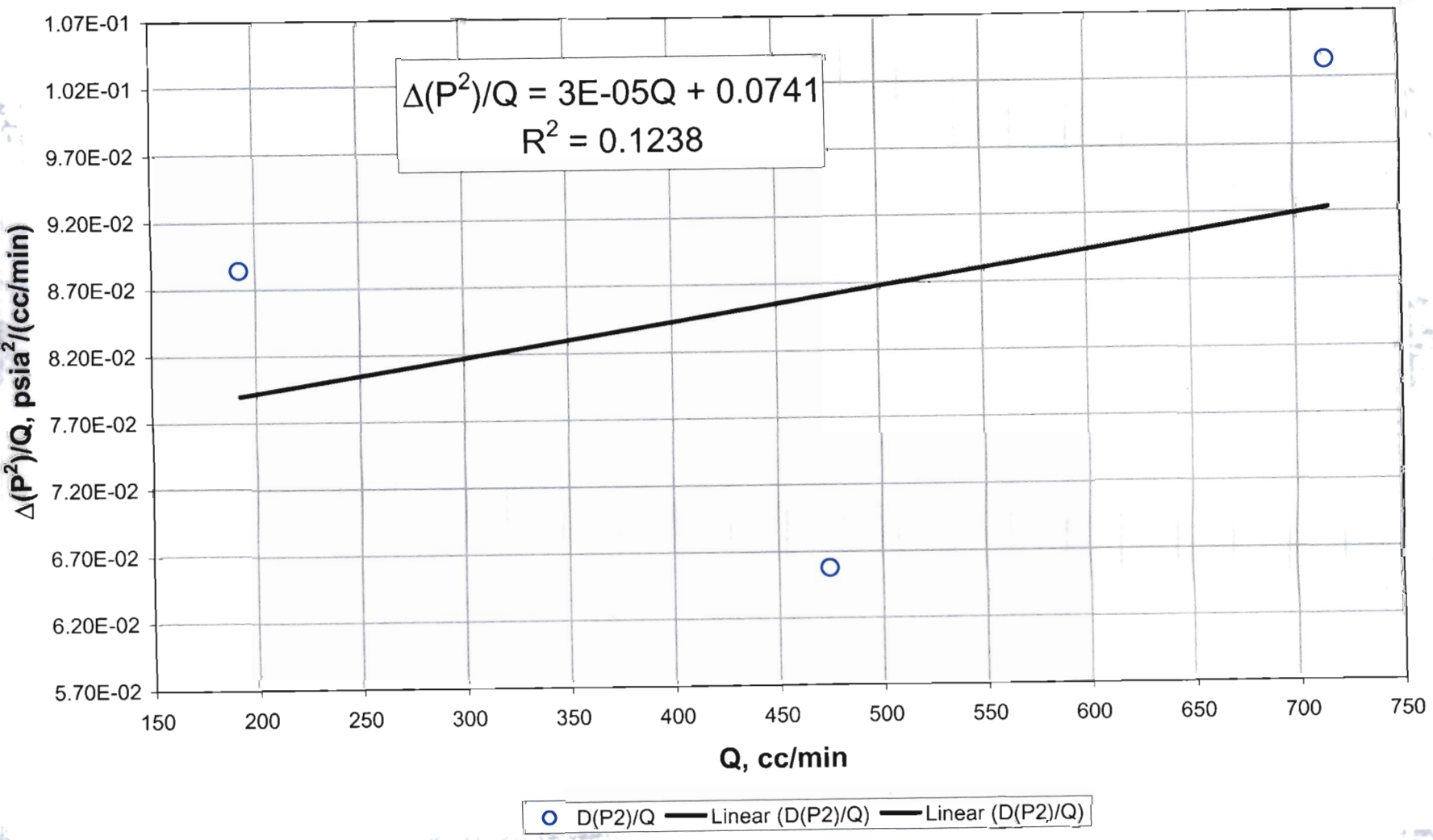

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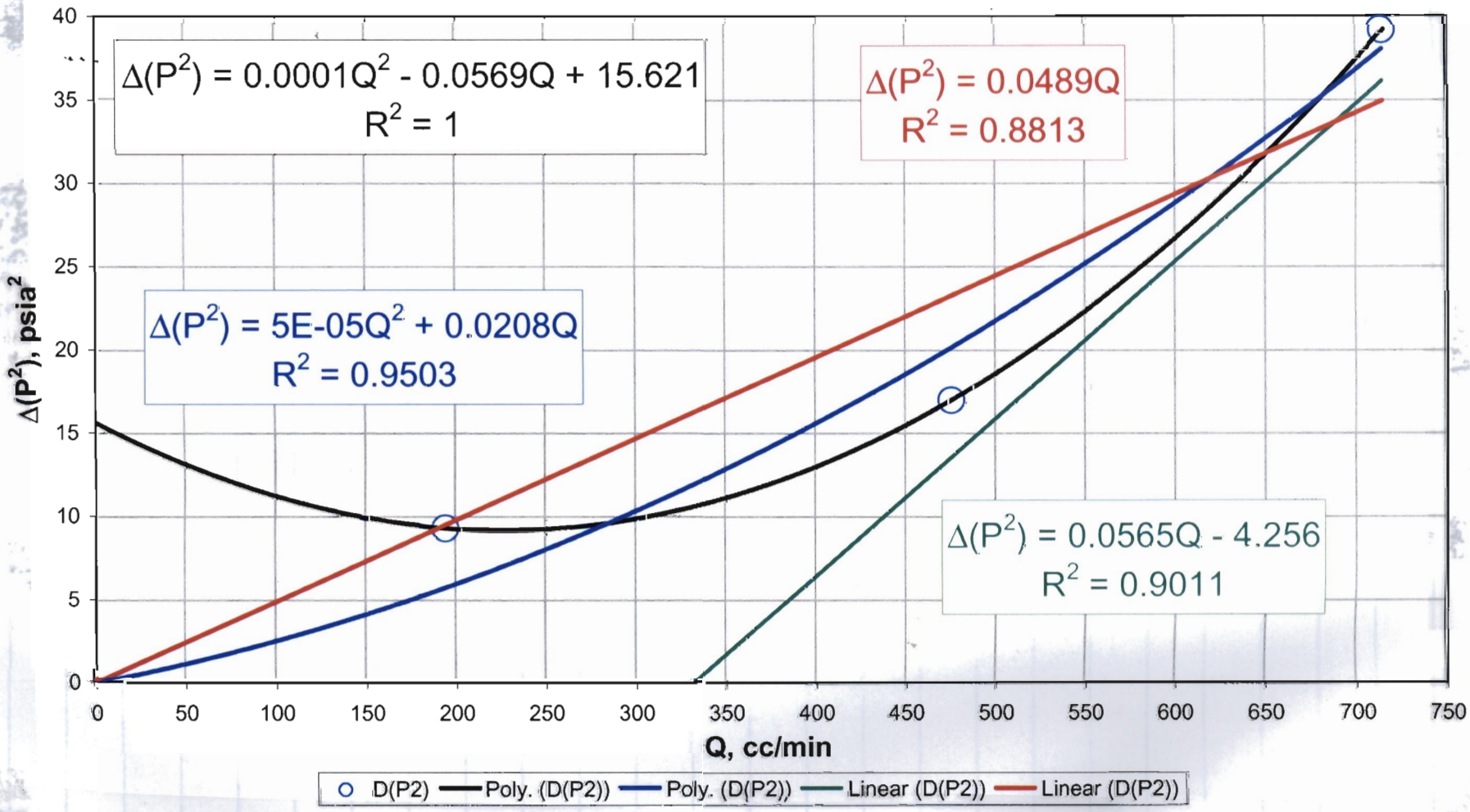

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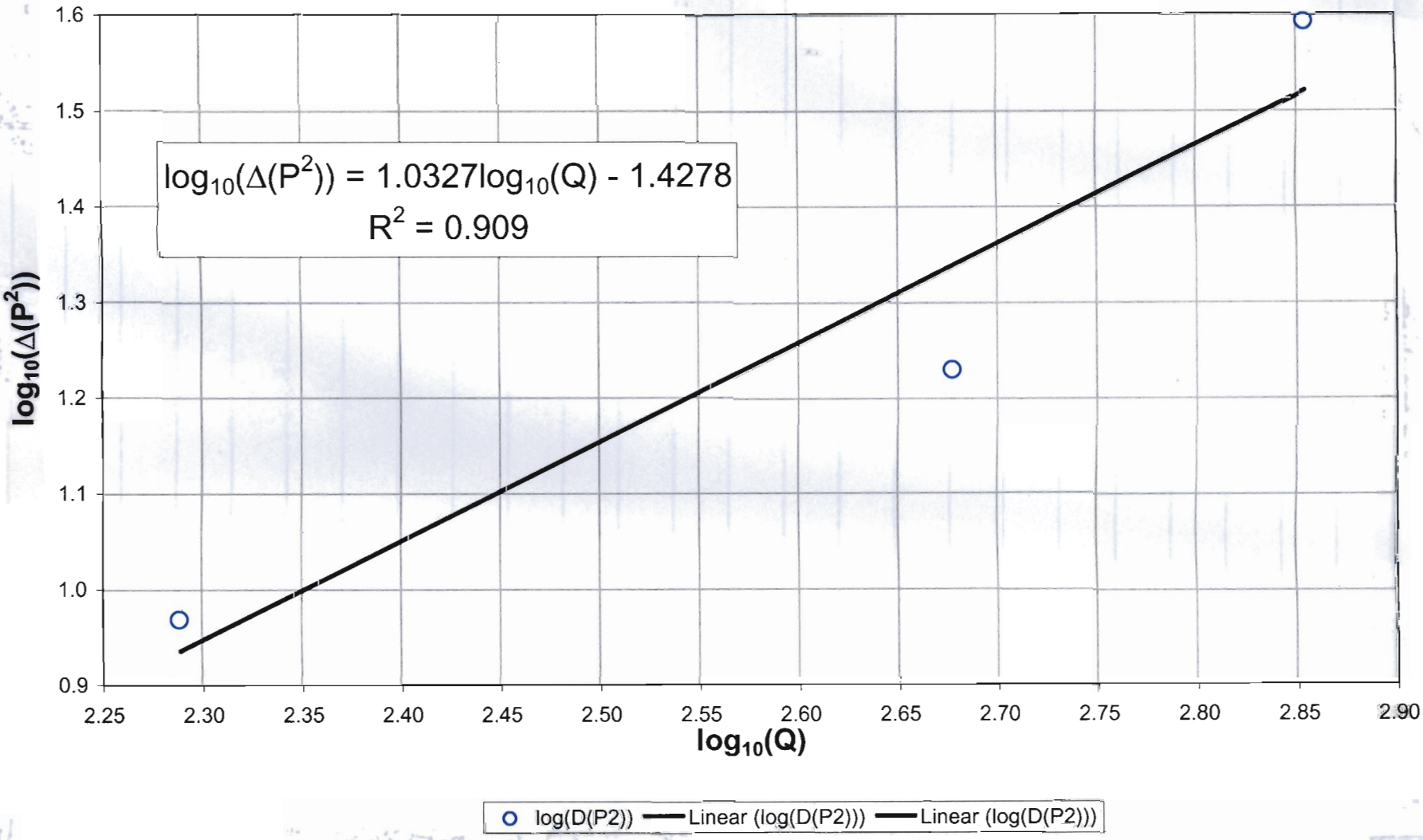

Rhum, oil | 3o|o3

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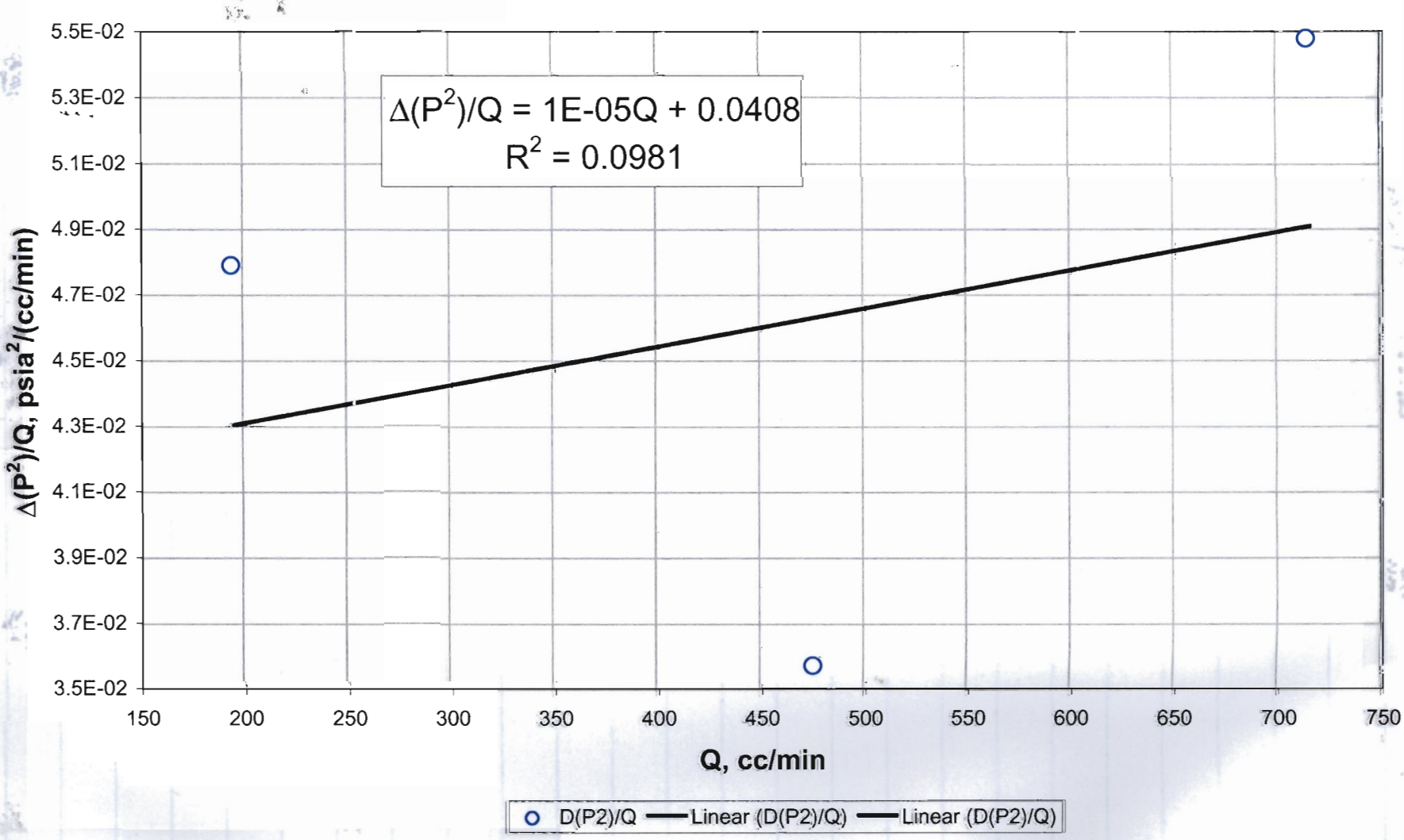

Rhum, oil | 3o|o3

**Relationship between steady-state differential pressures squared and flowrate:
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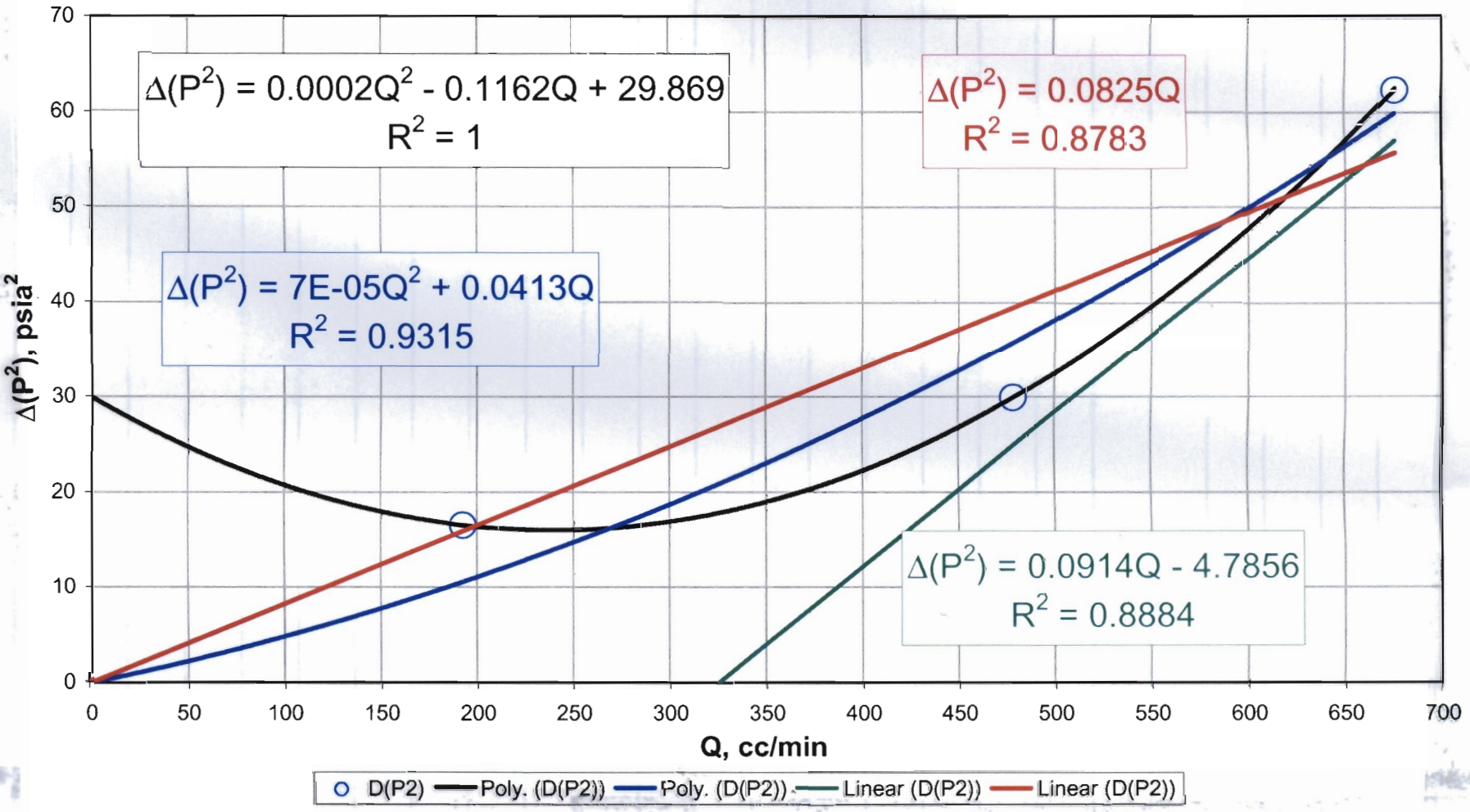

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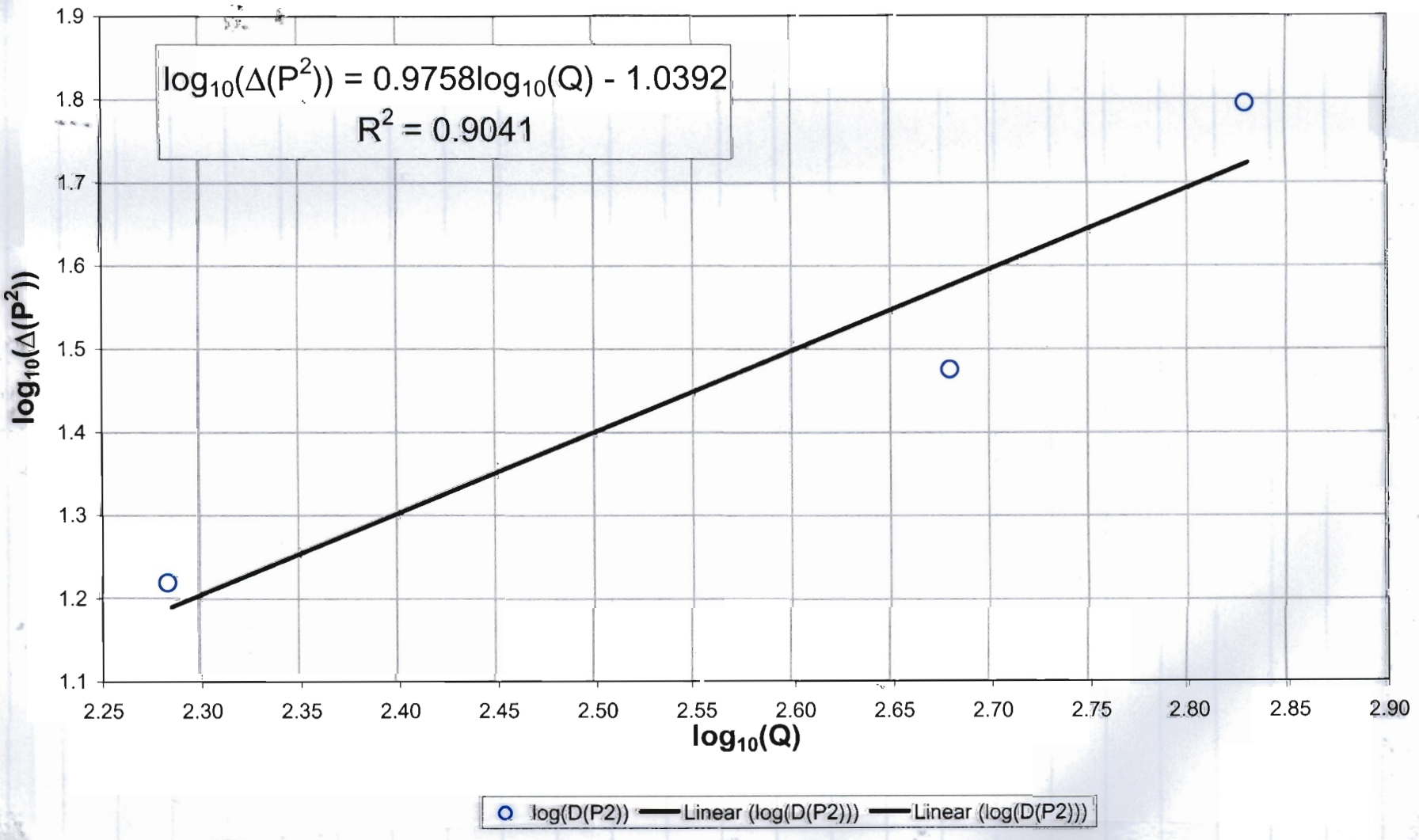

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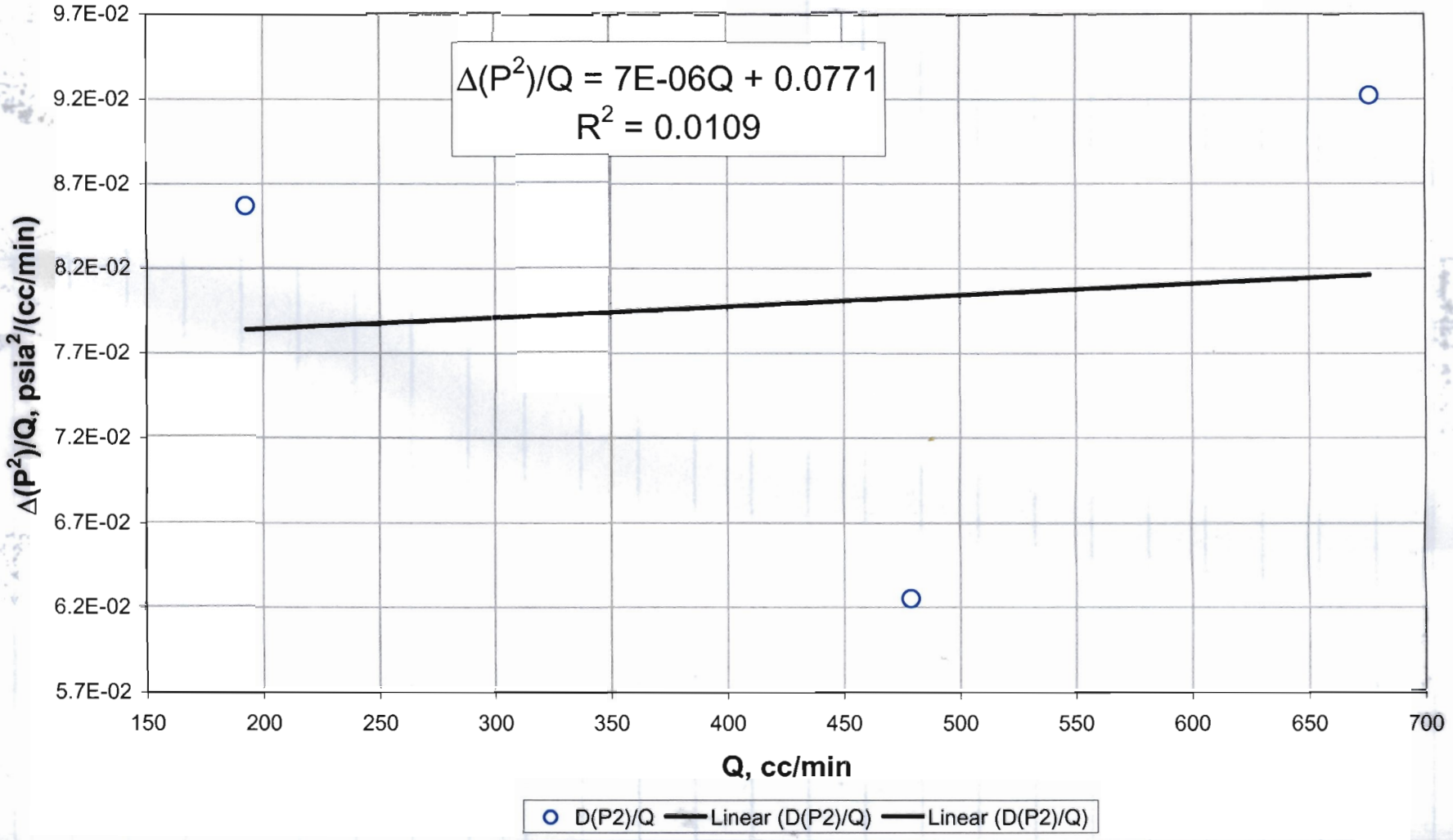

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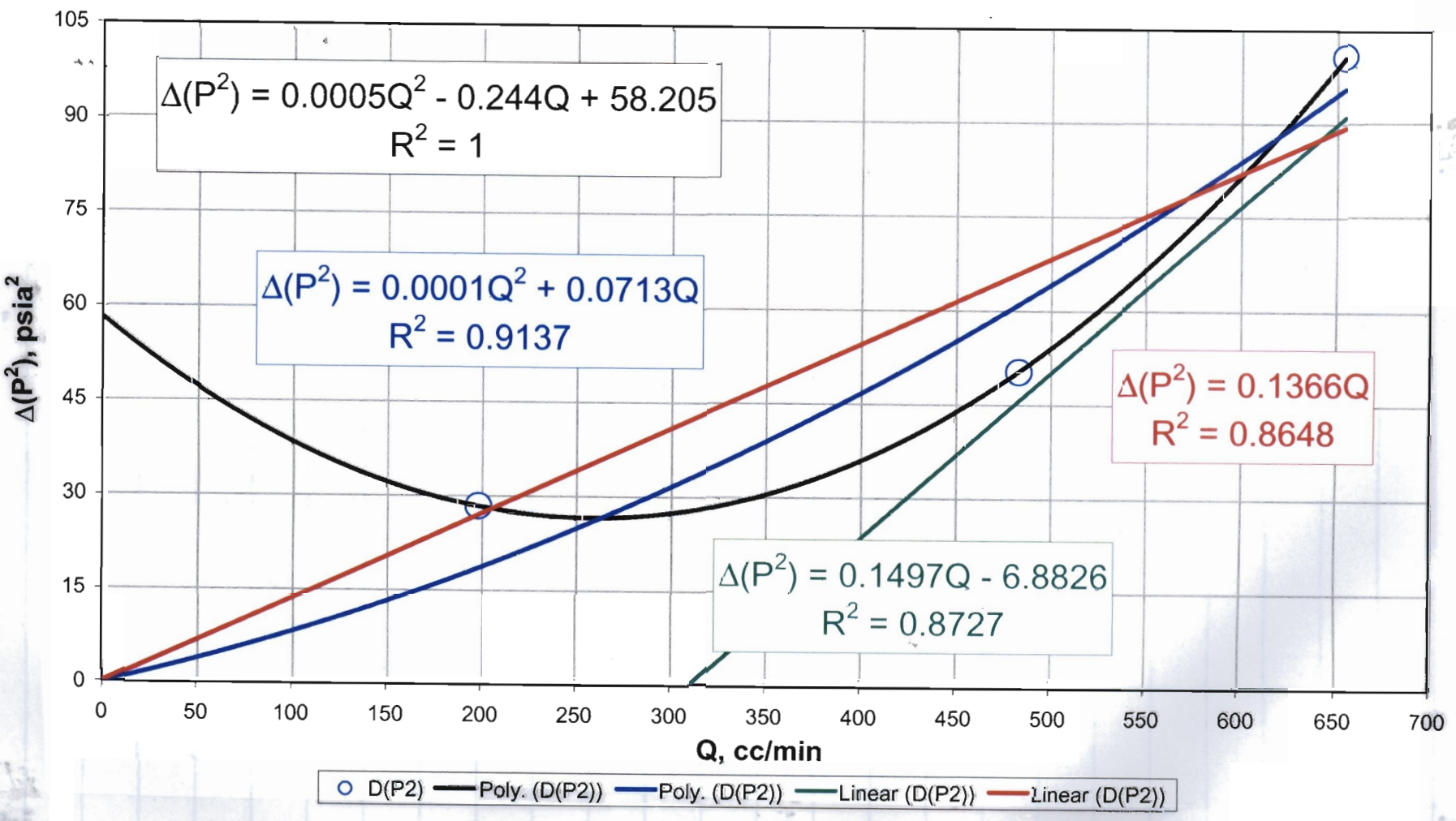

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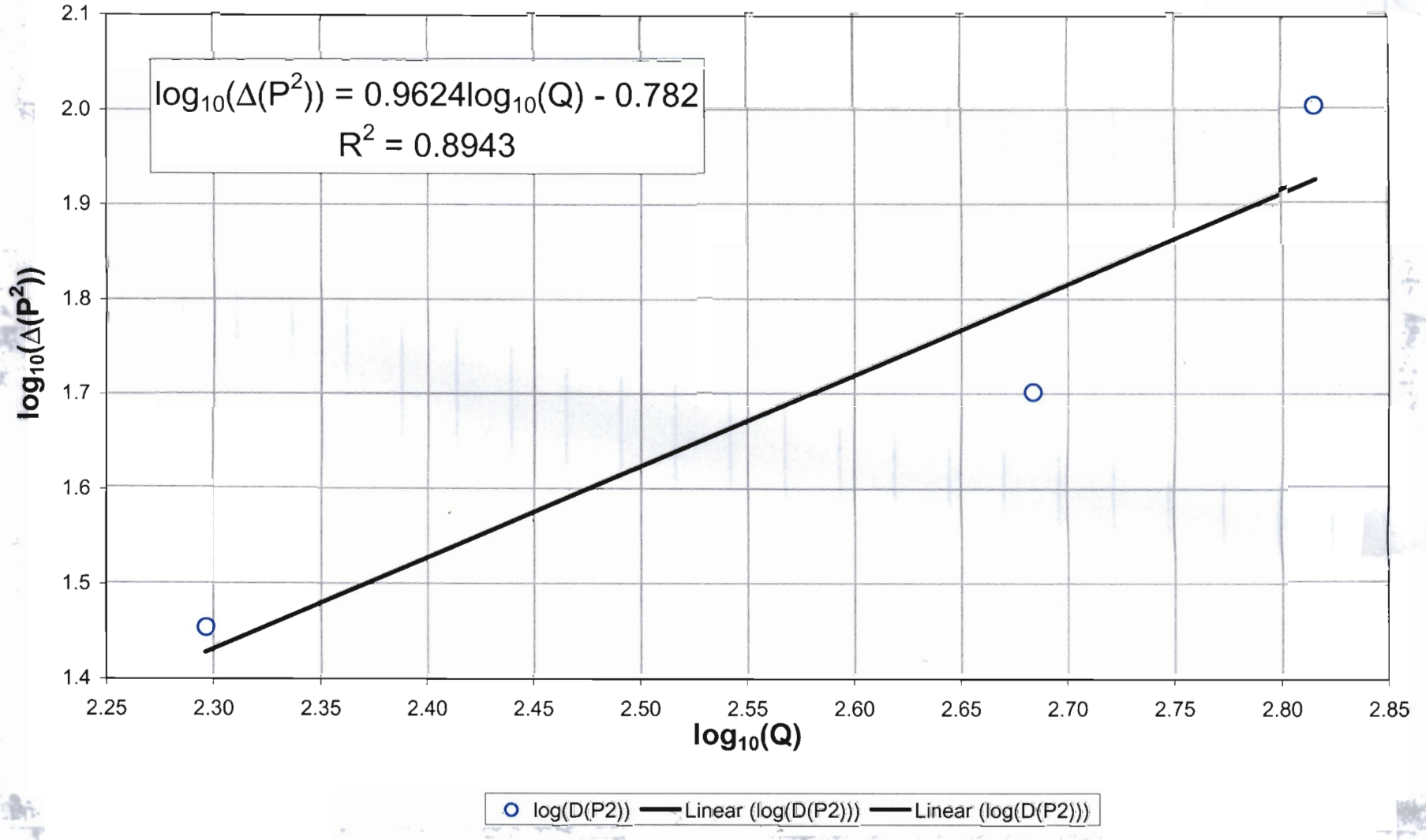

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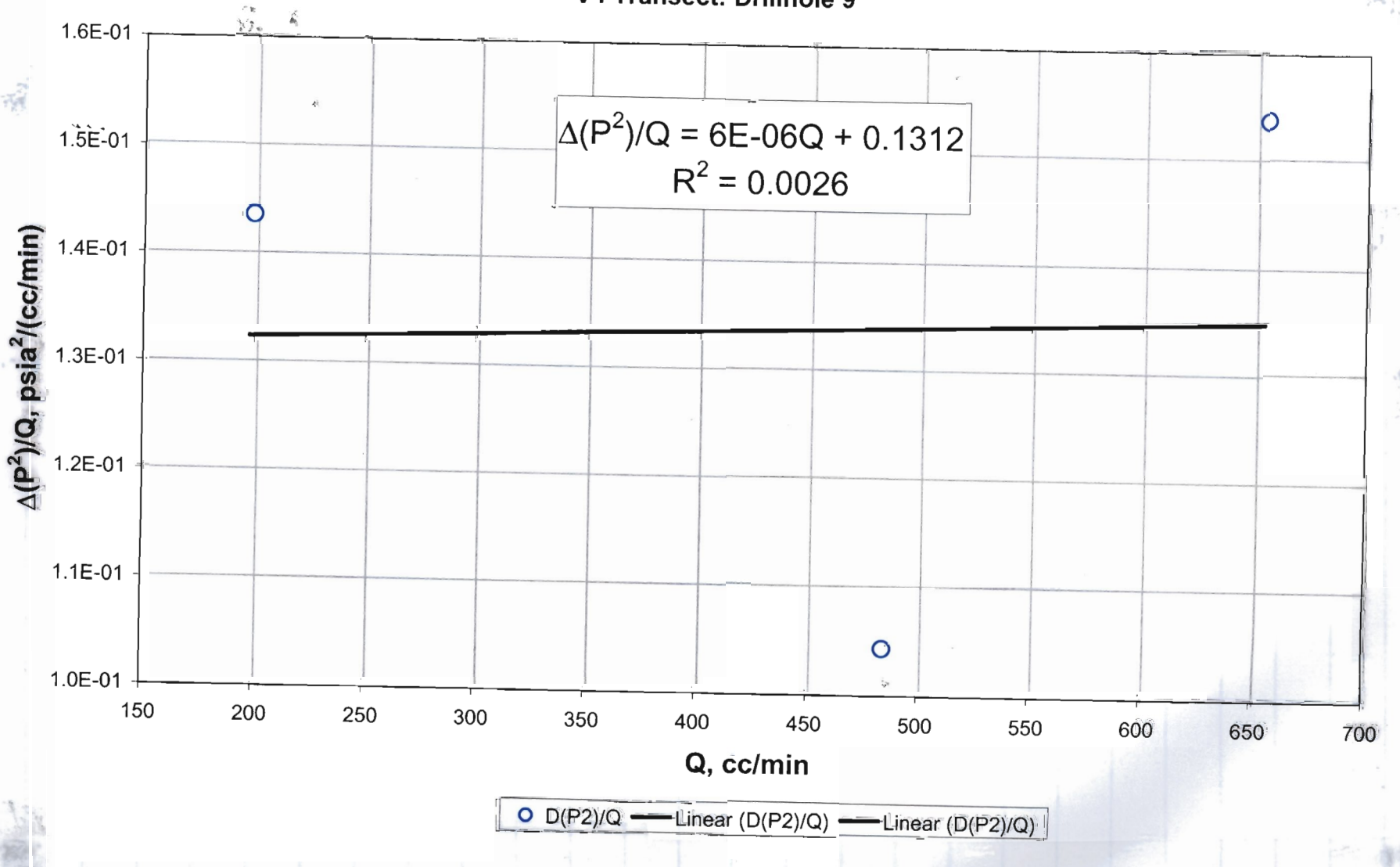

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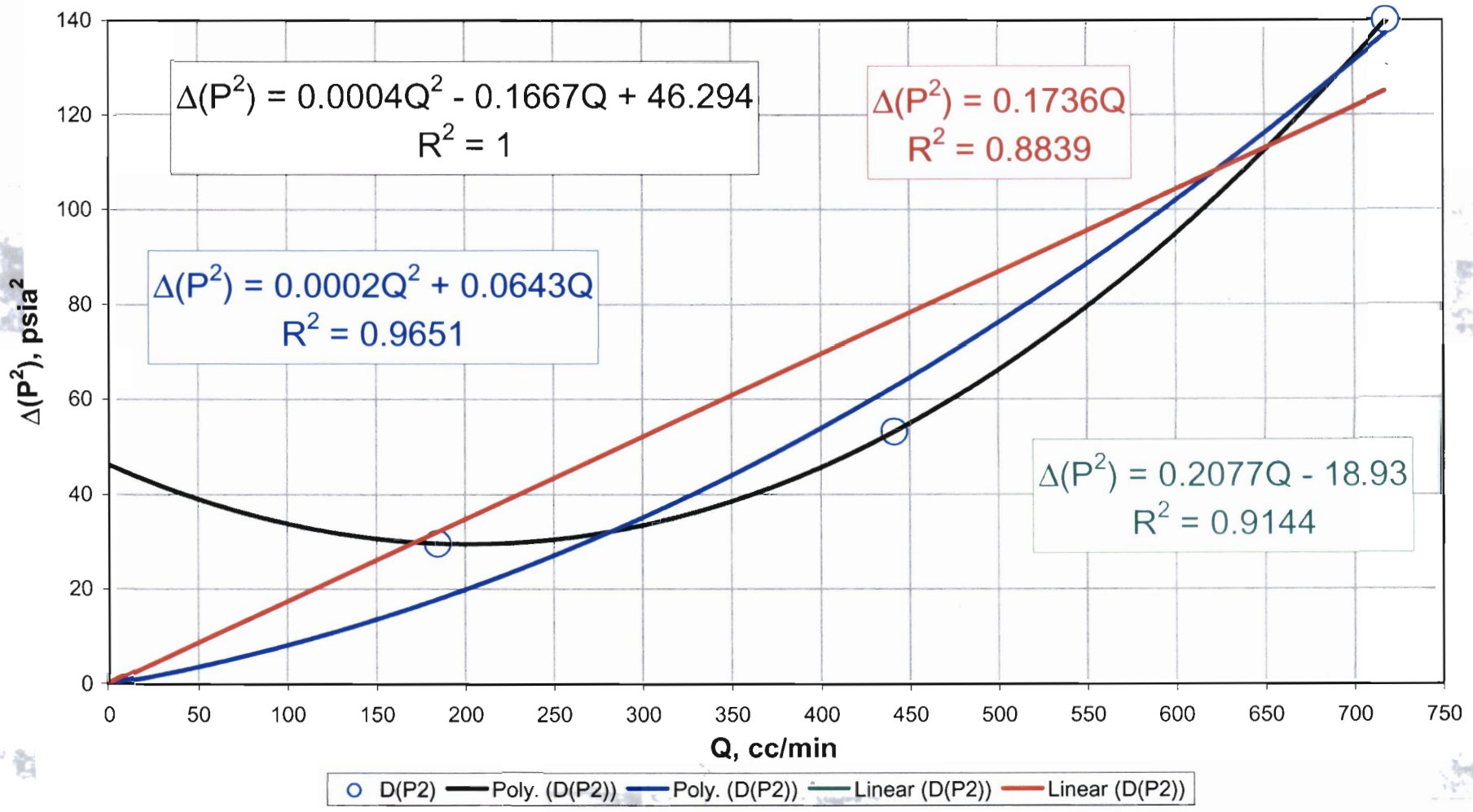

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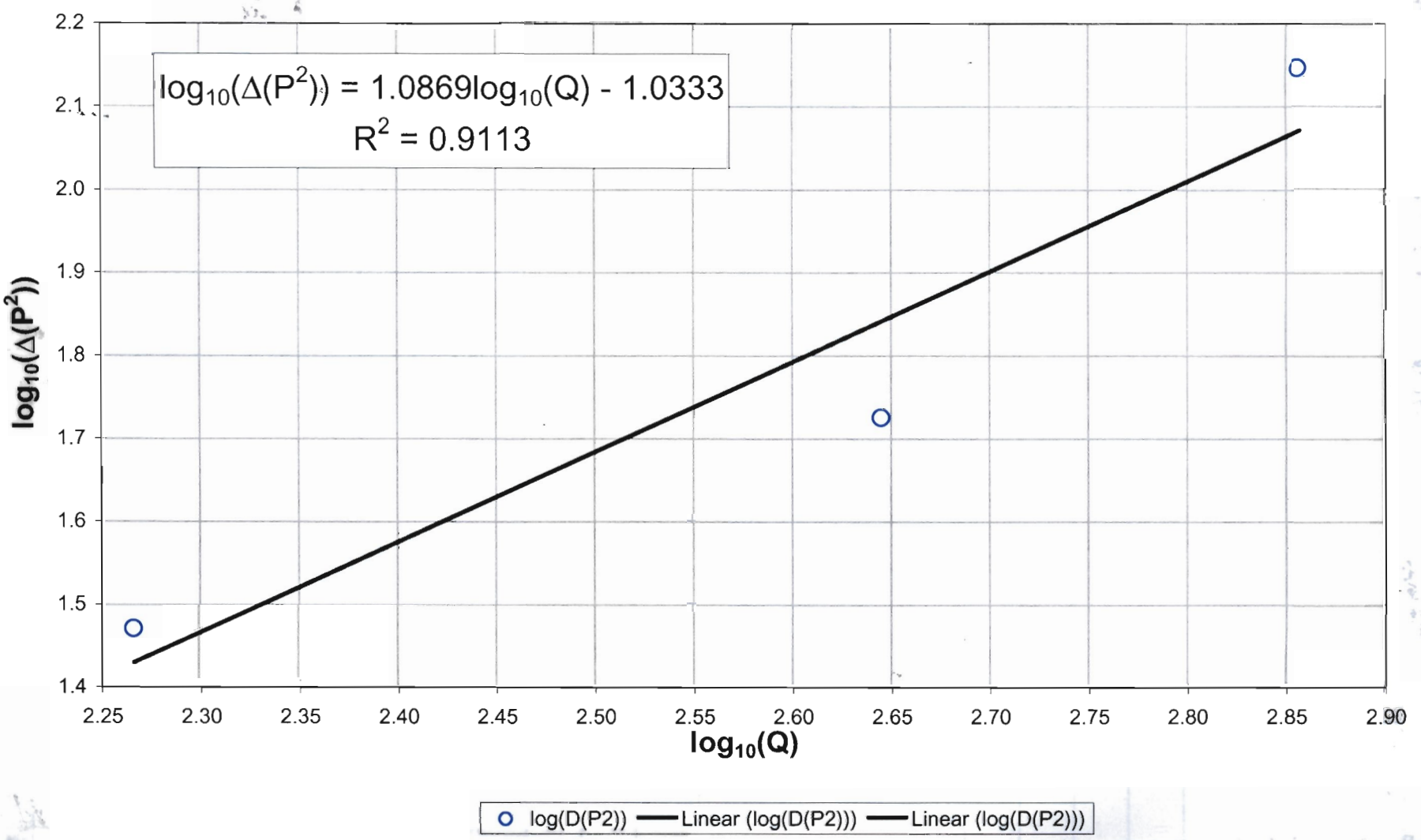

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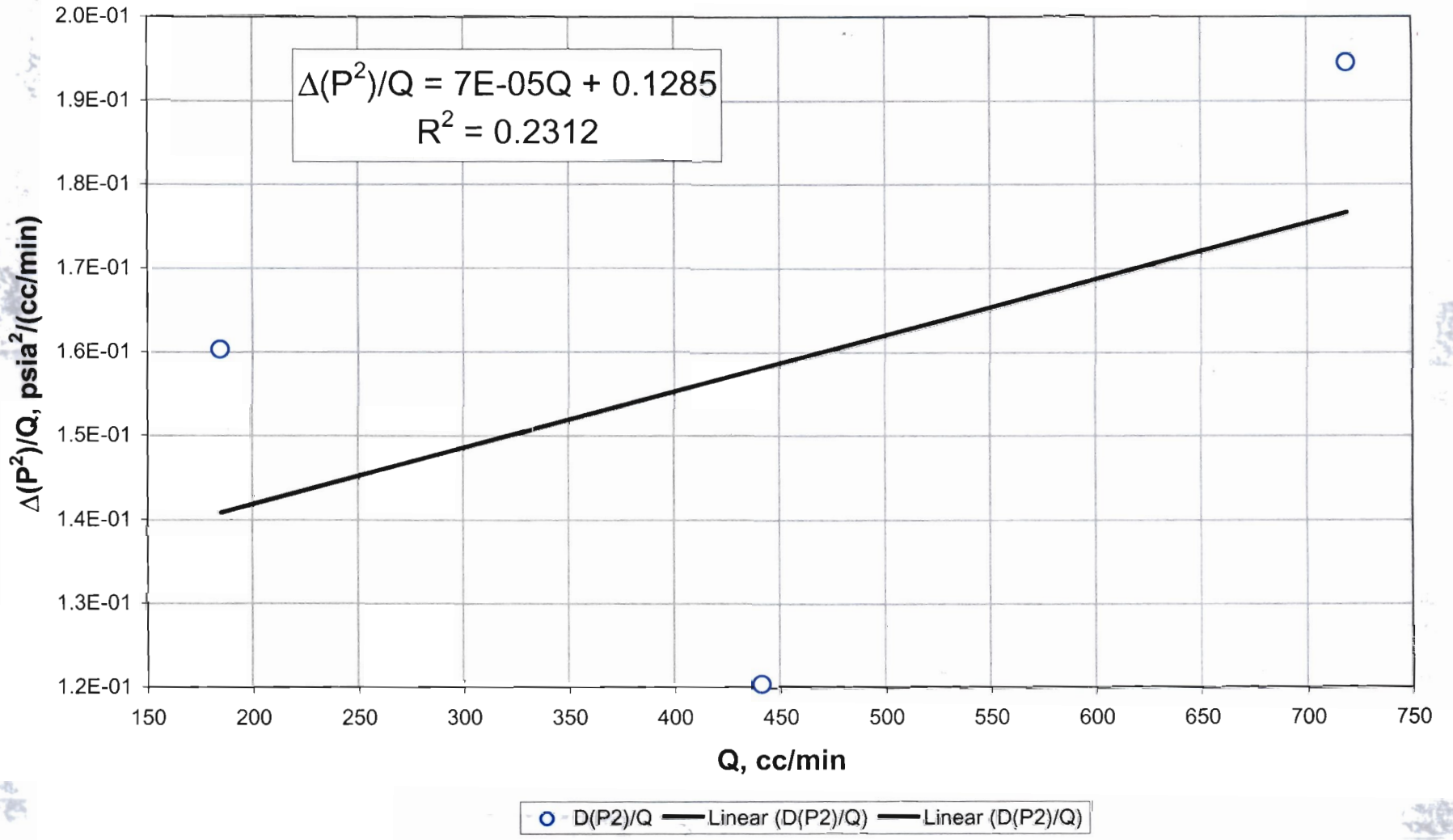

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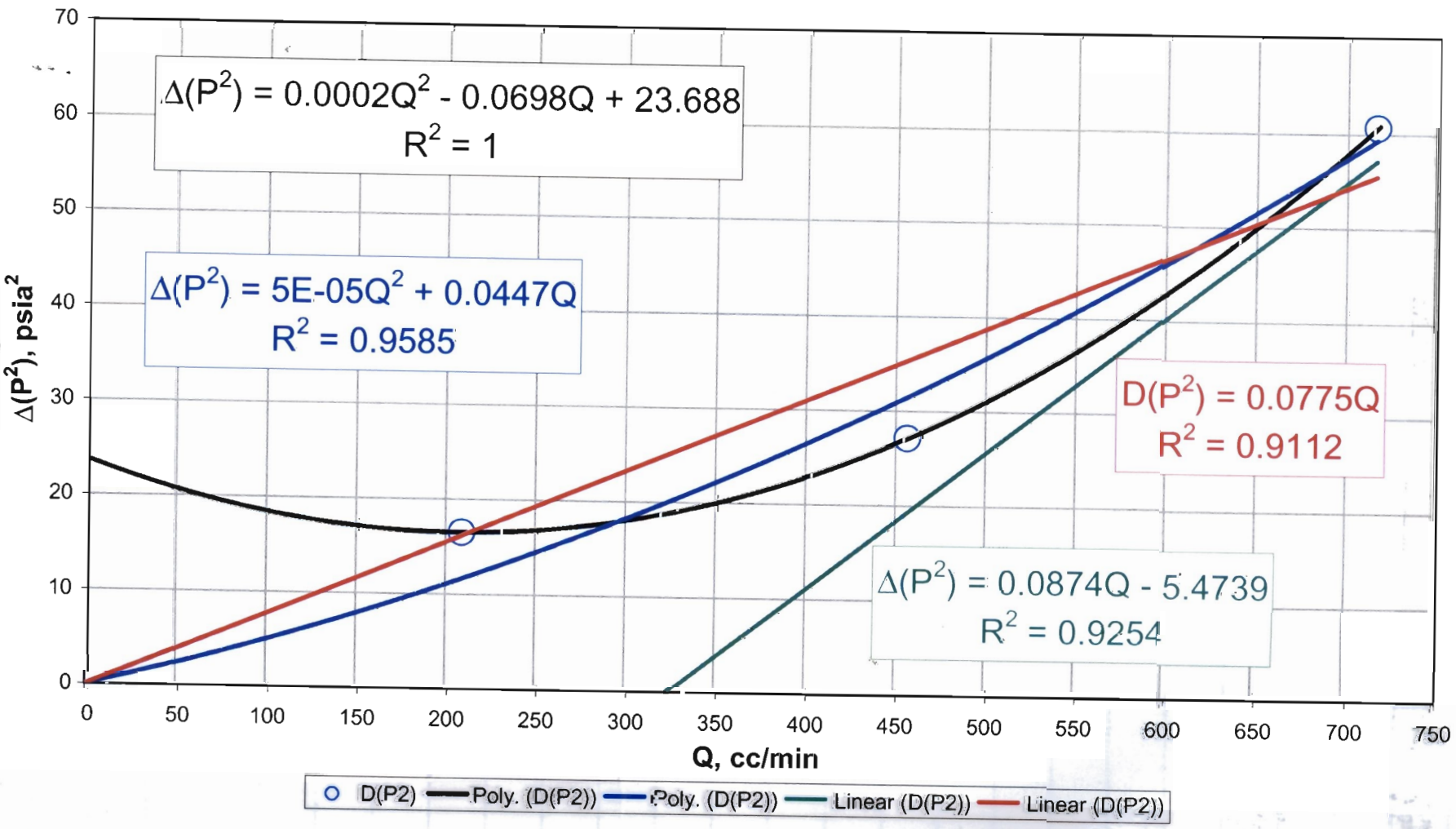
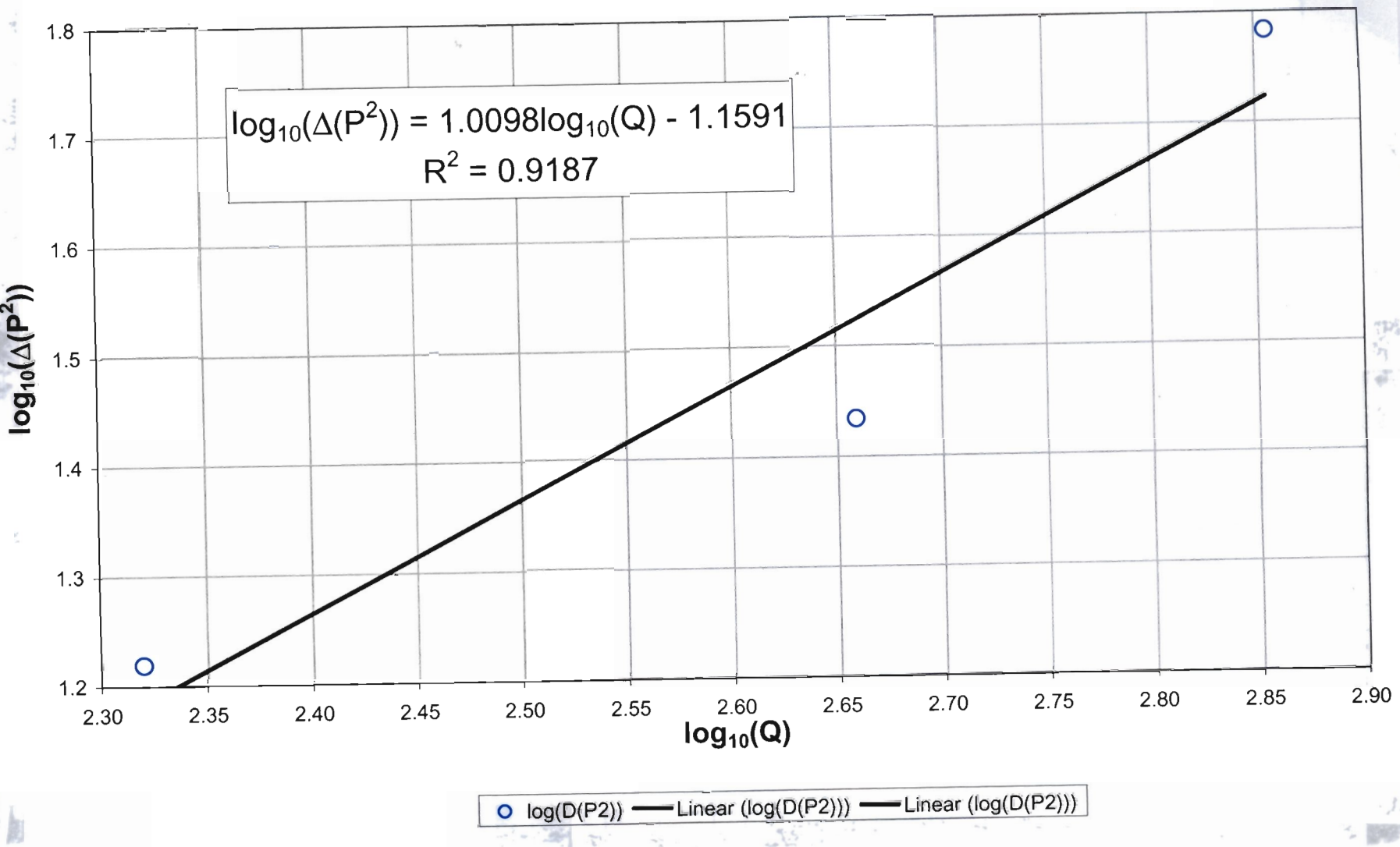
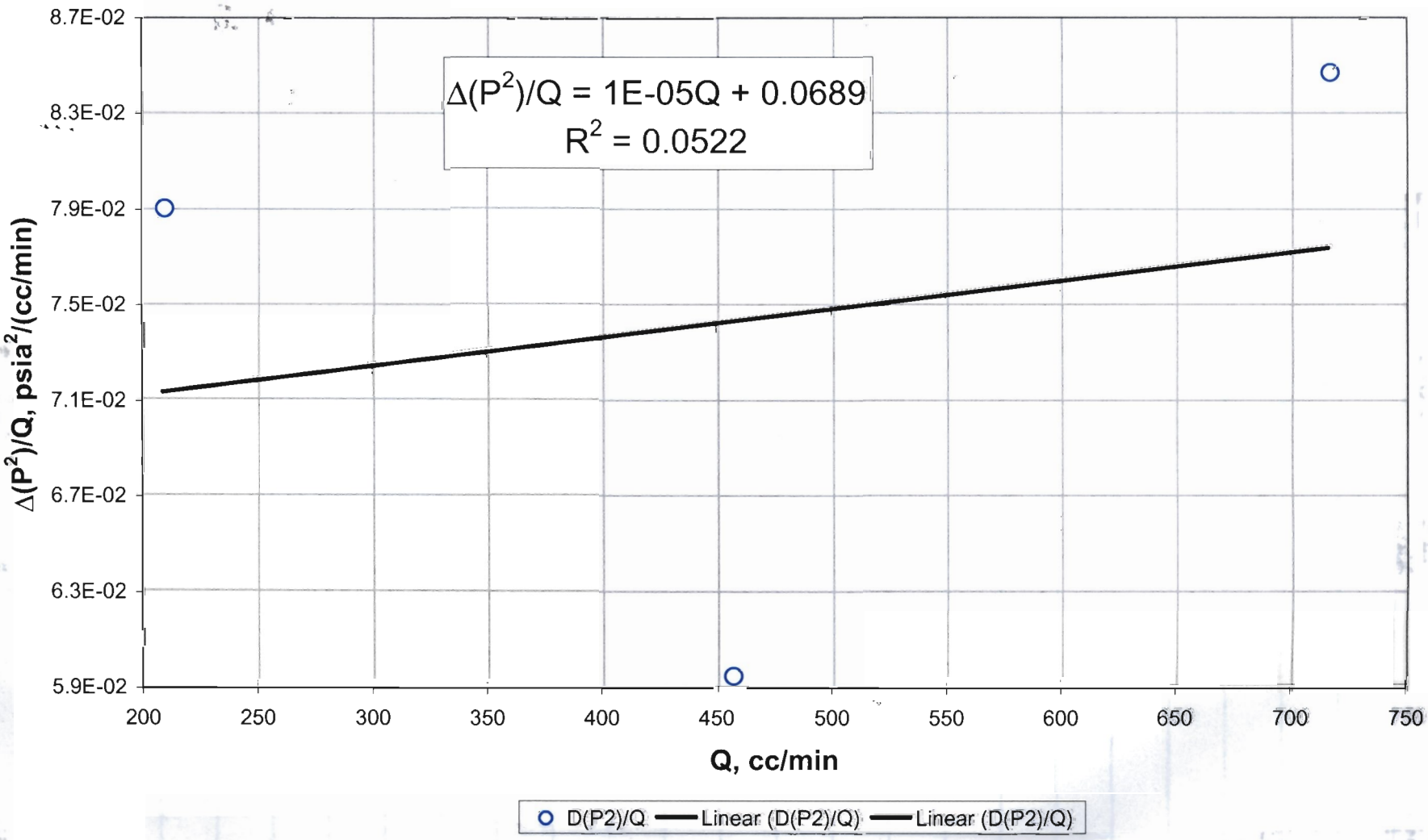
there is no high velocity flow effect.
V4 Transect: Drillhole 11



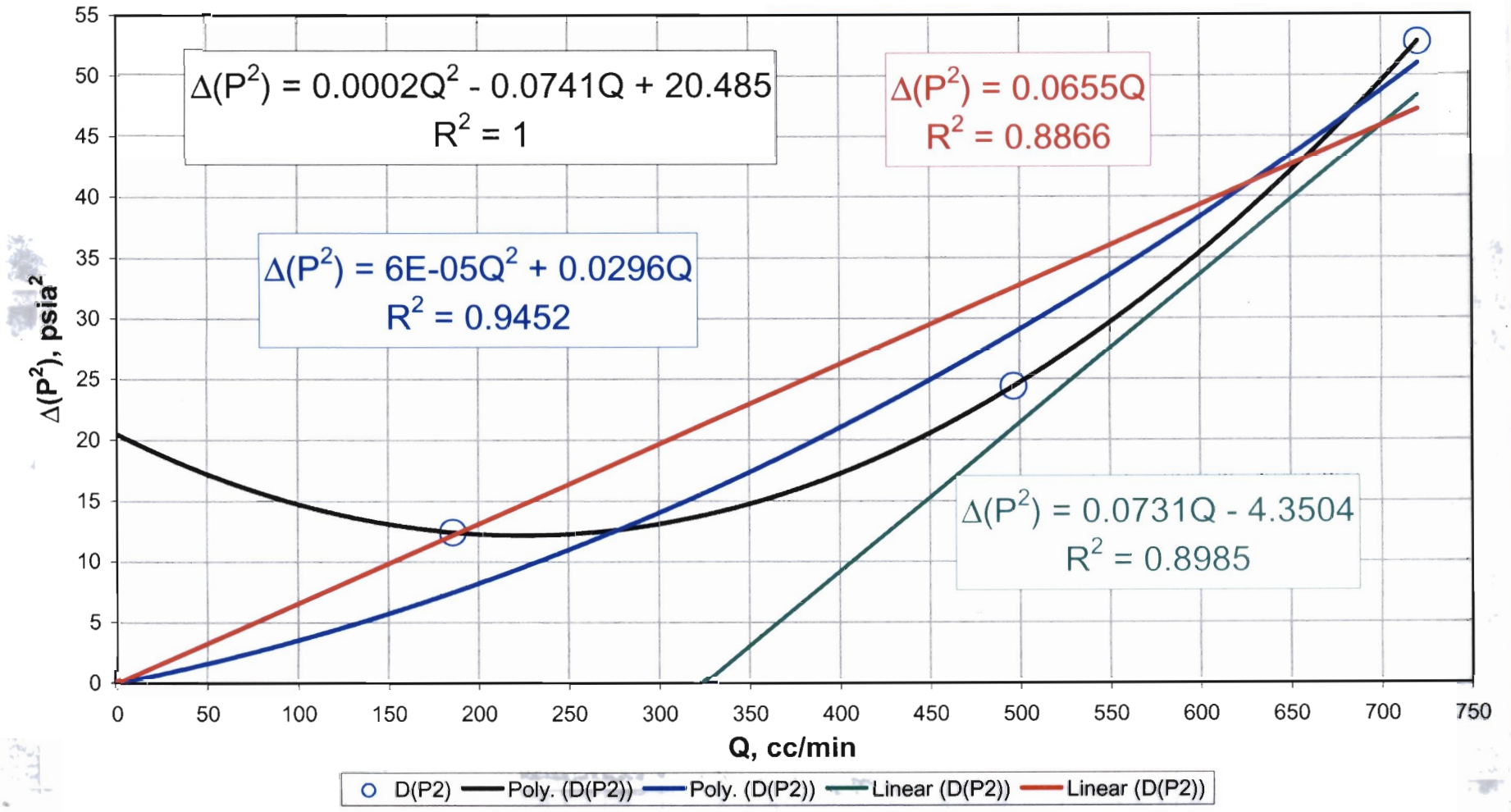
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 11



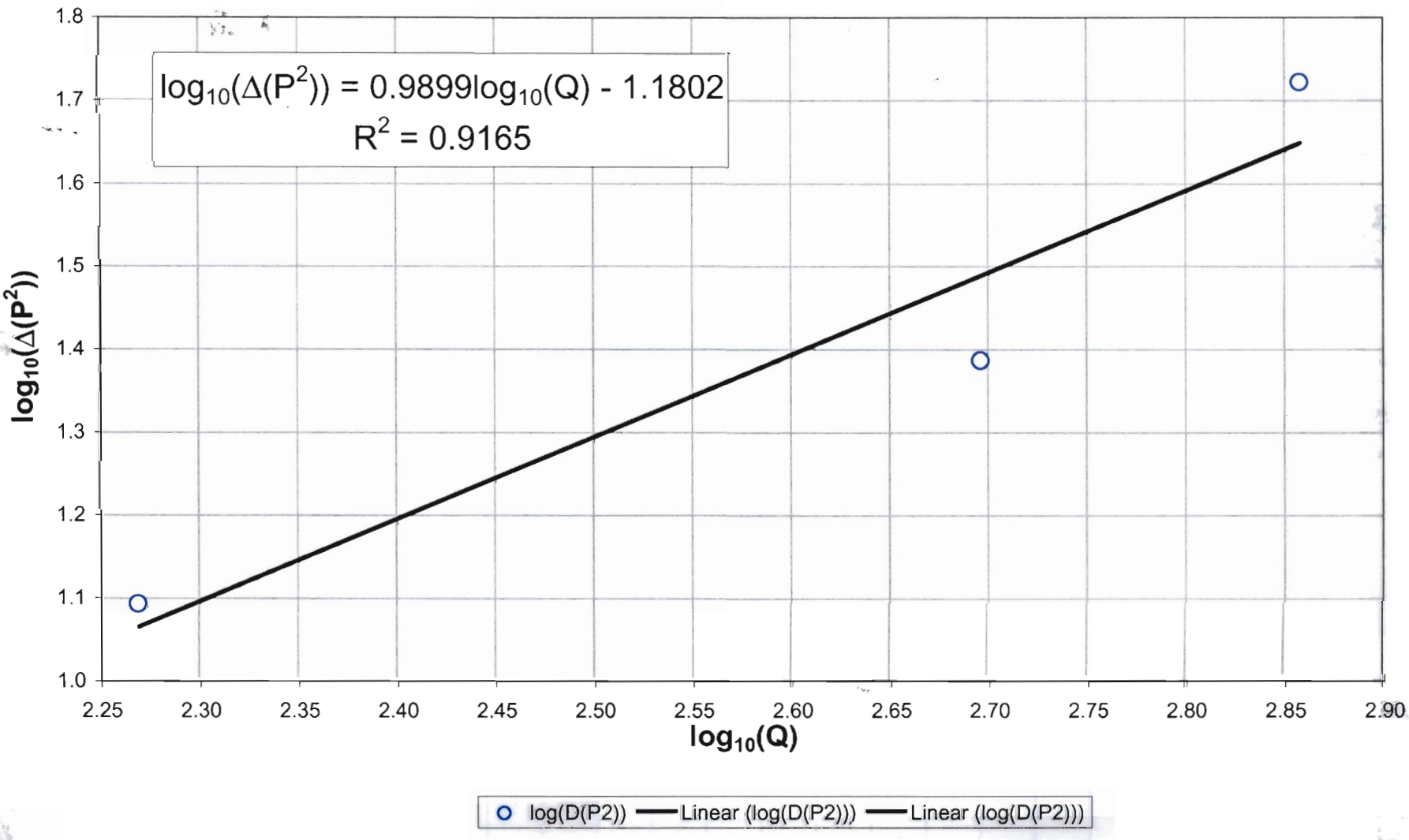
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 11



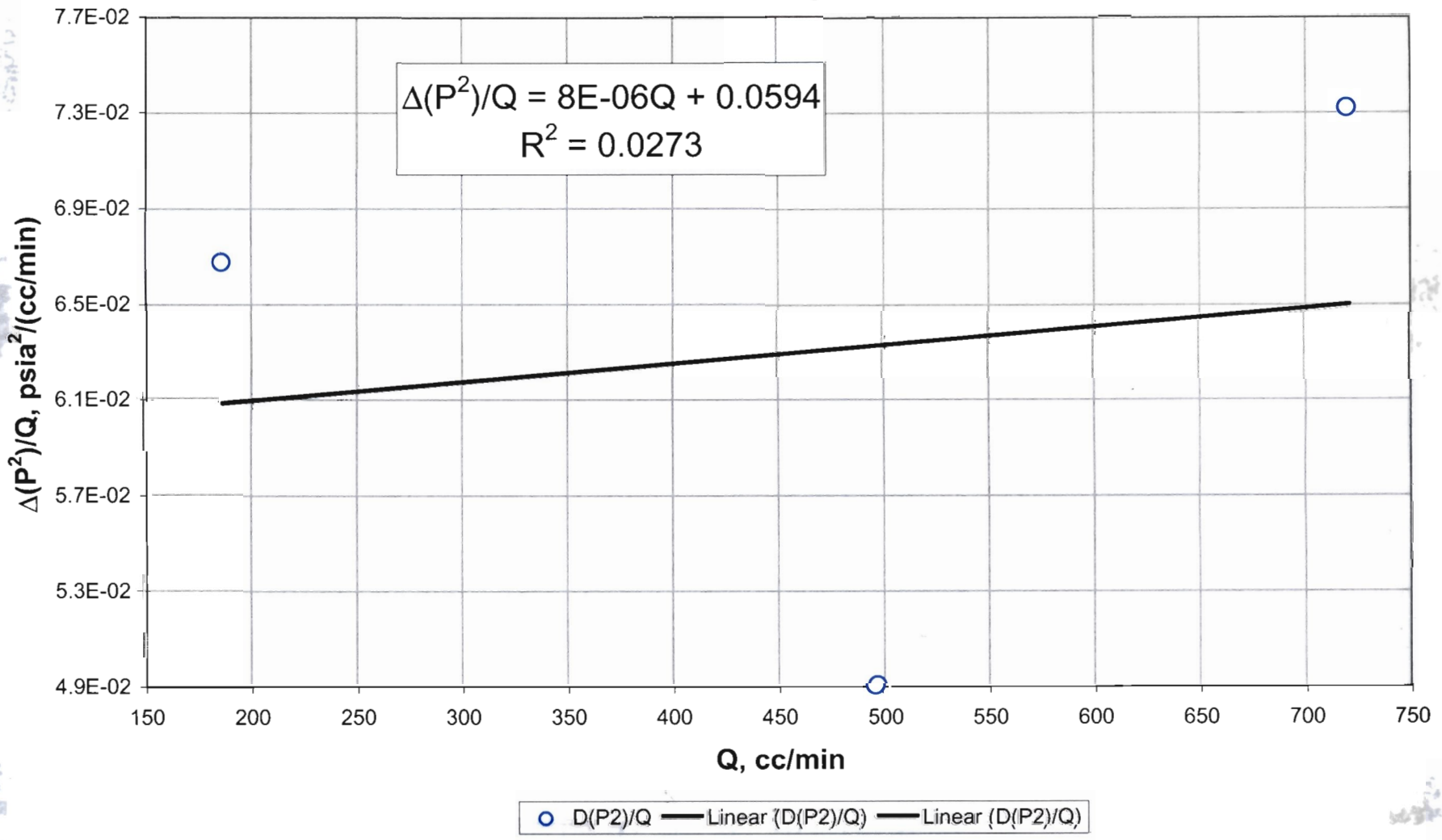
Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 12



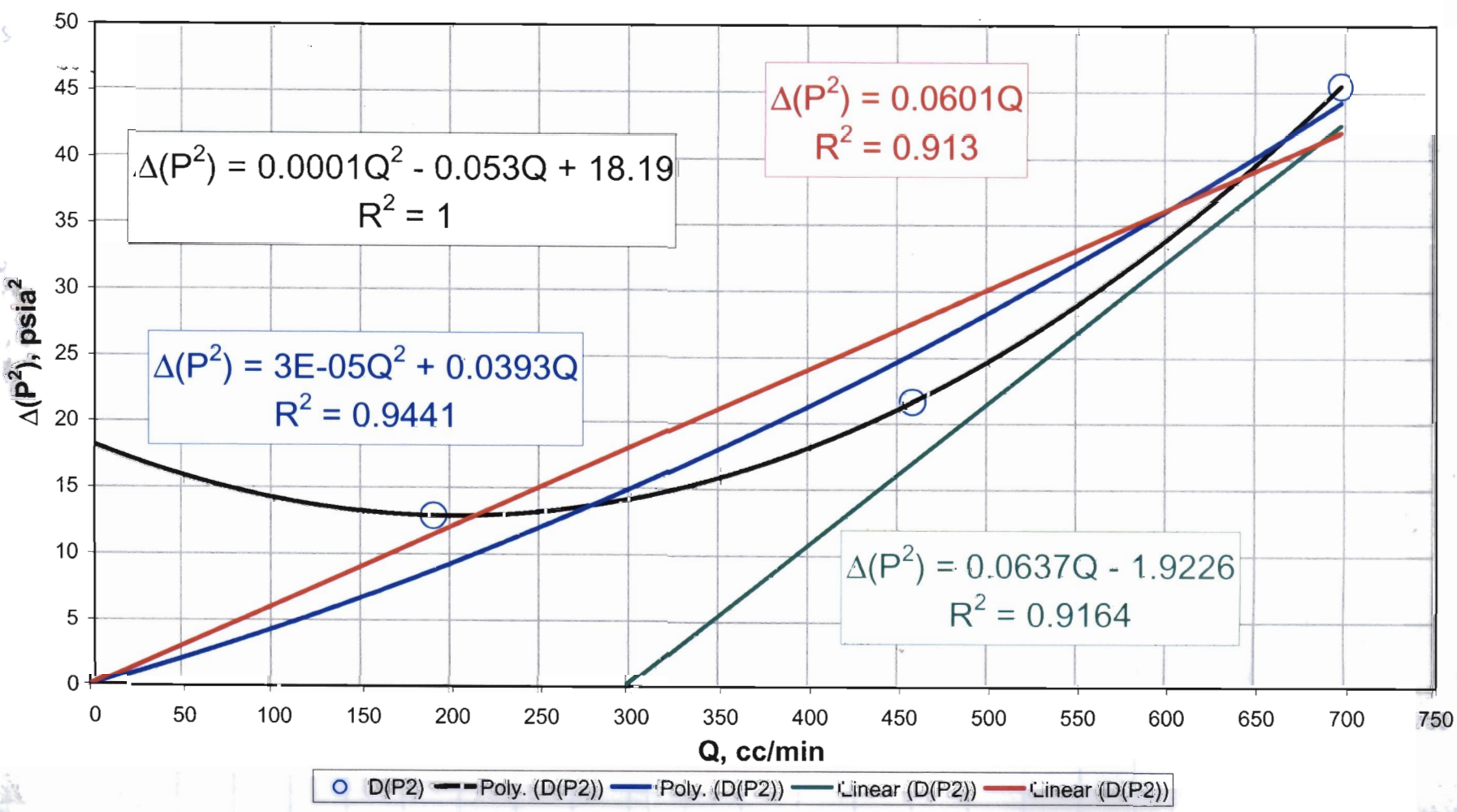
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 12



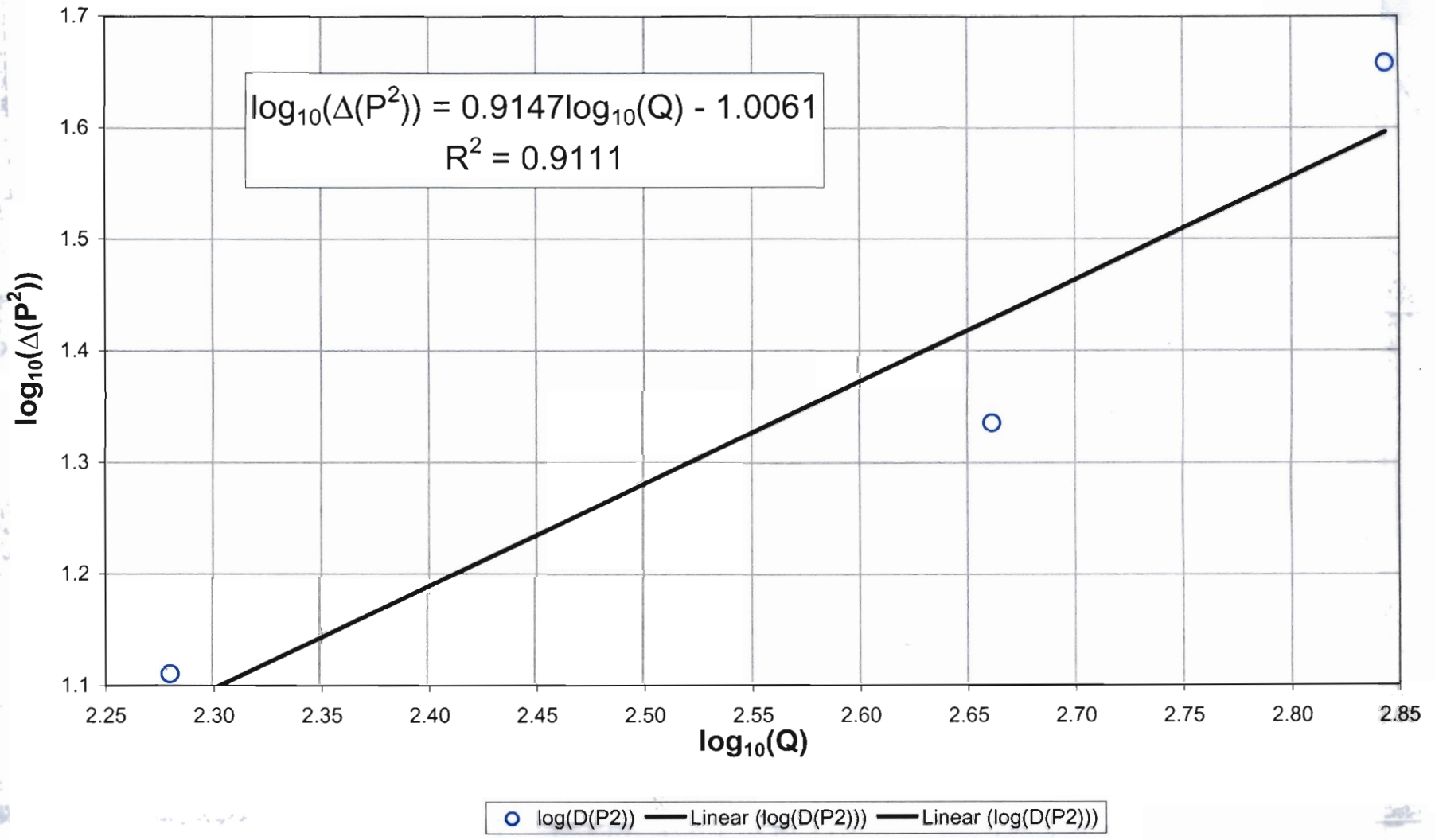
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 12



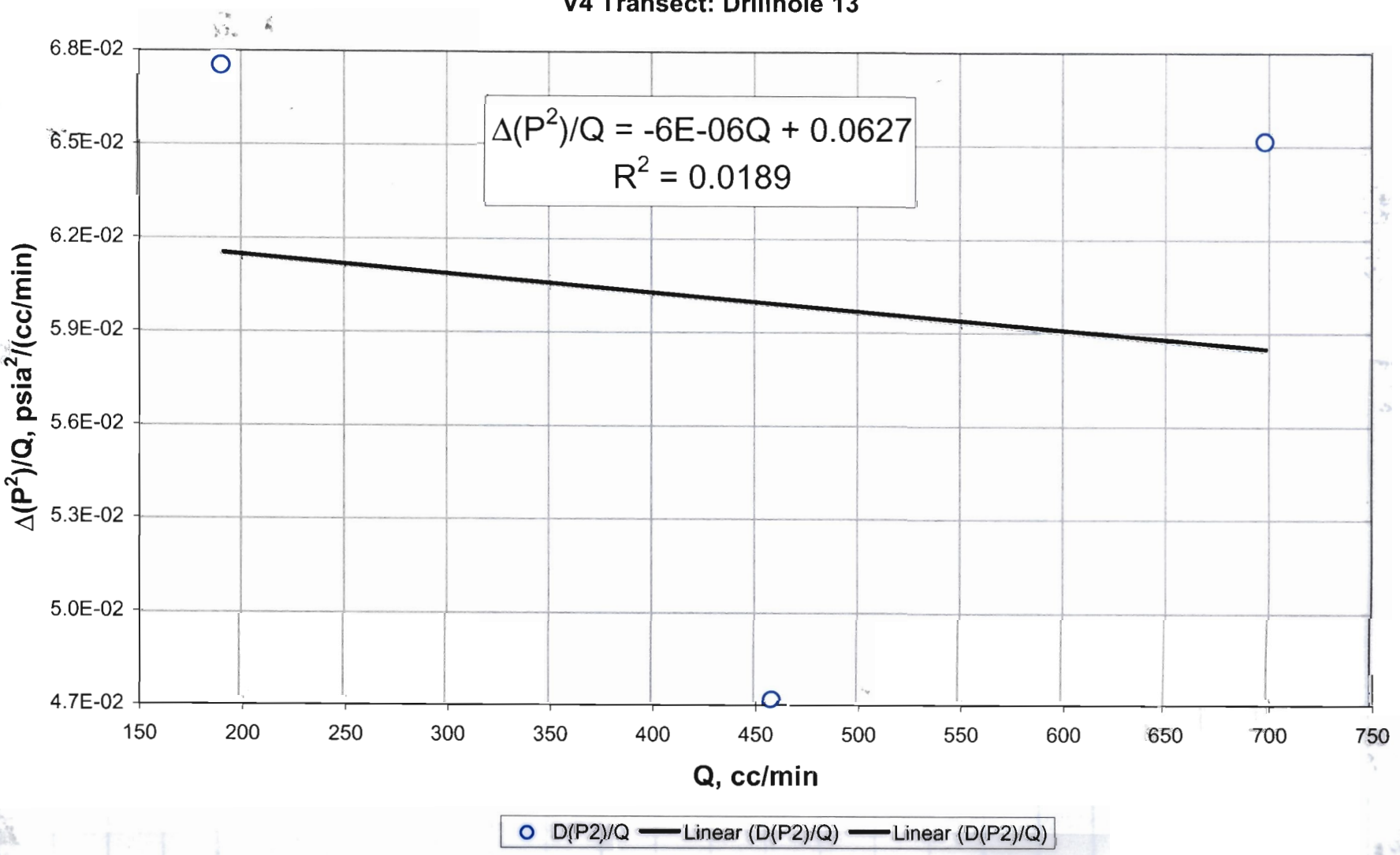
Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 13



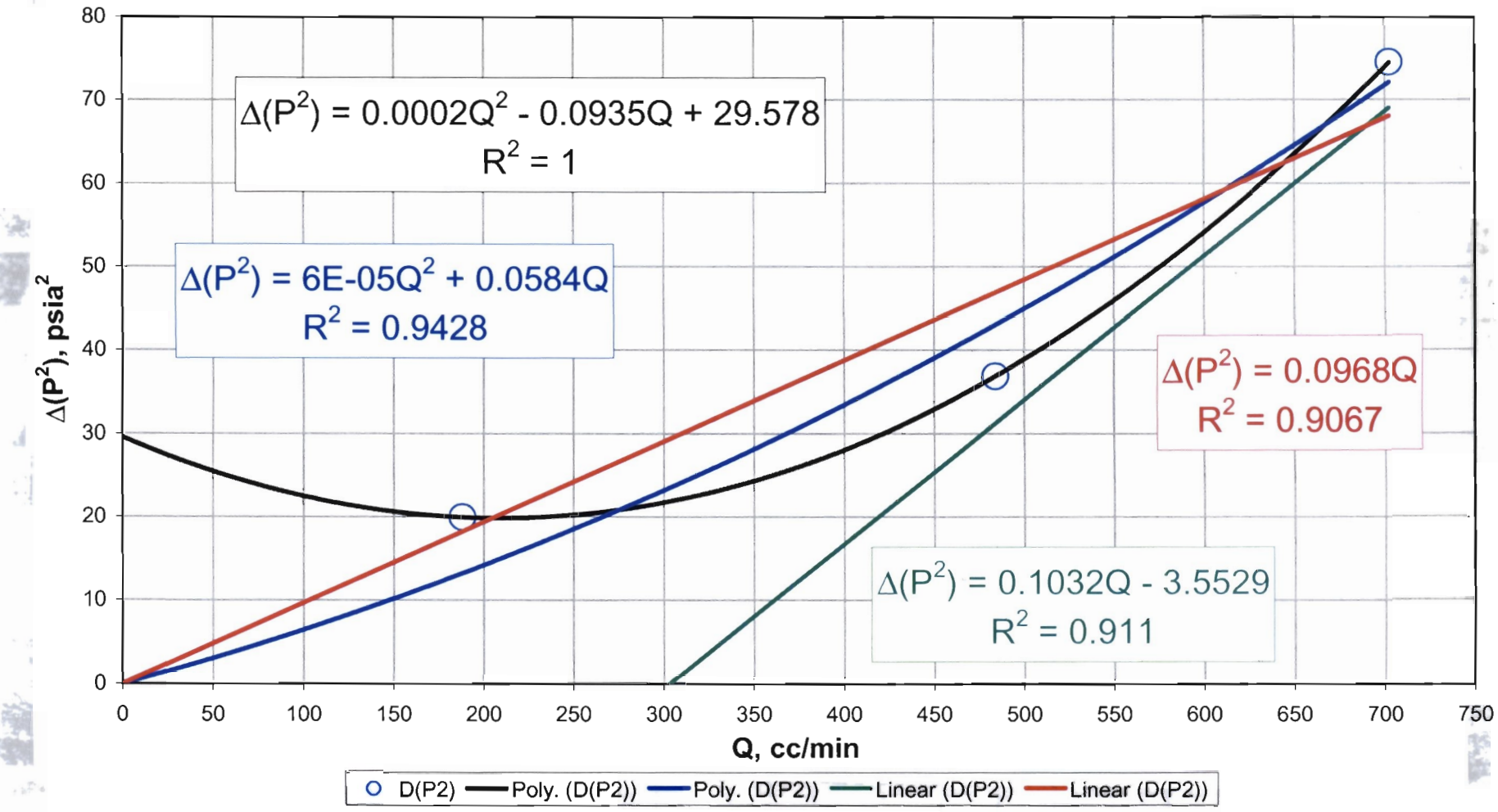
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 13



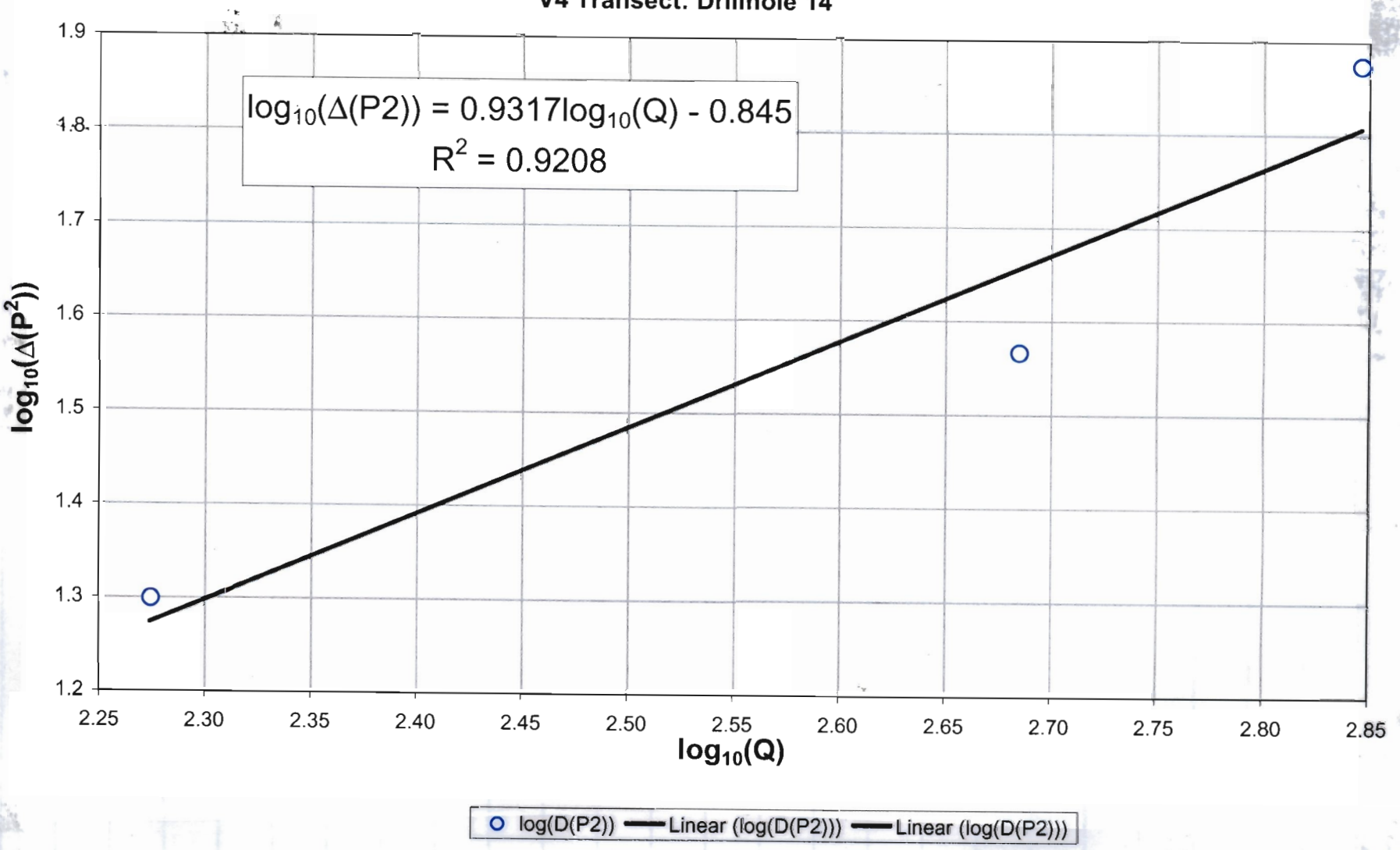
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 13



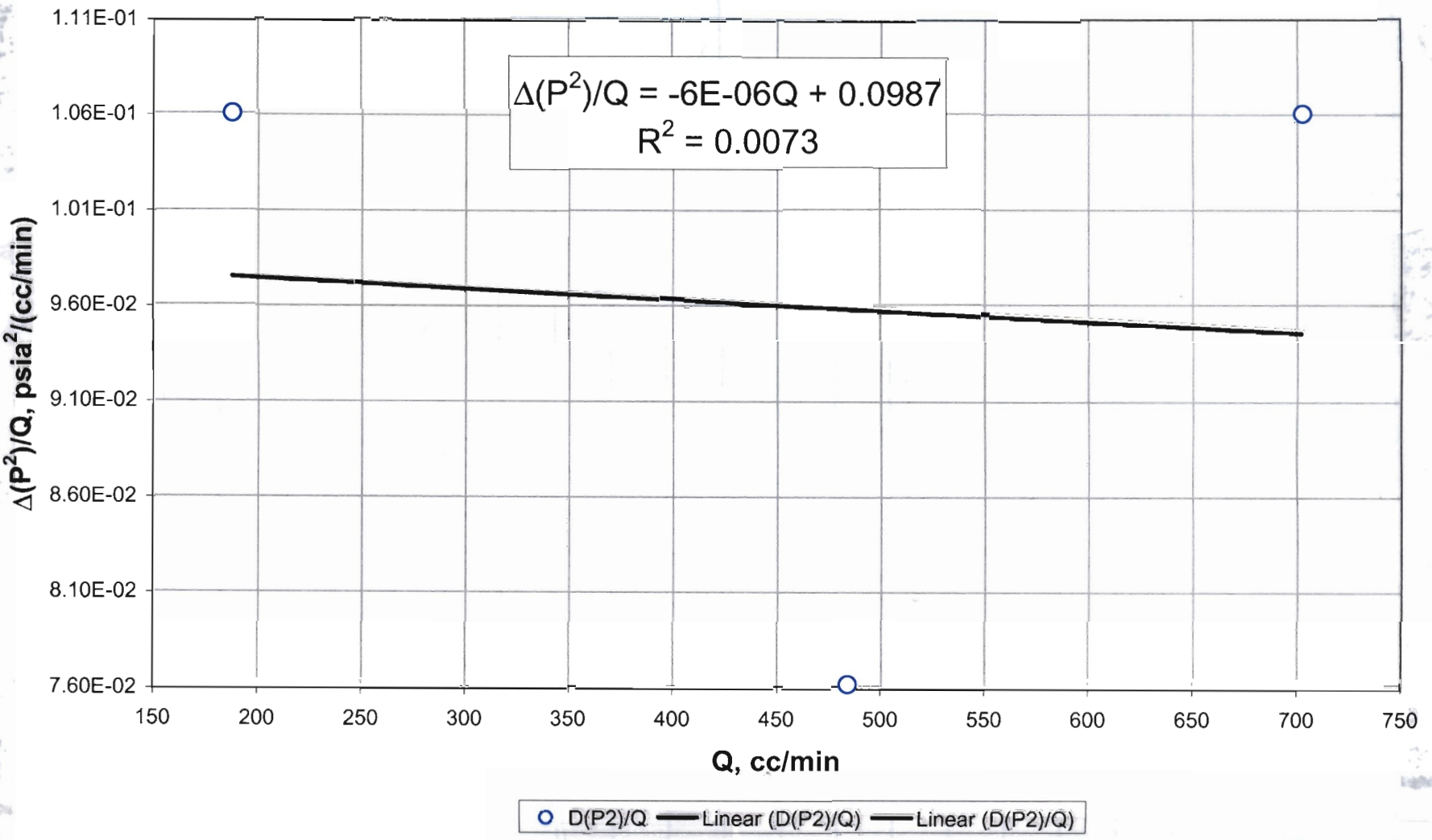
**Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 14**



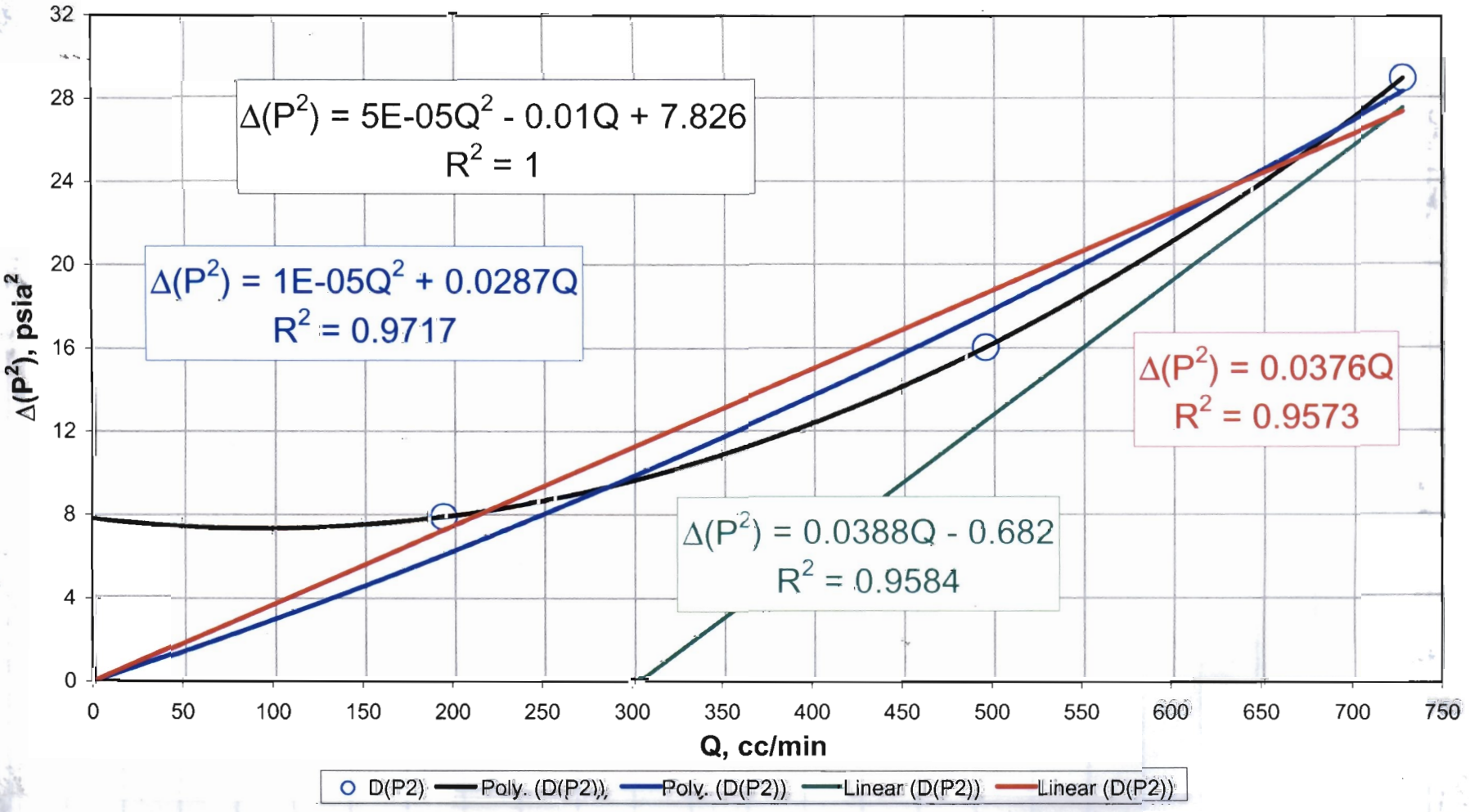
**Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 14**



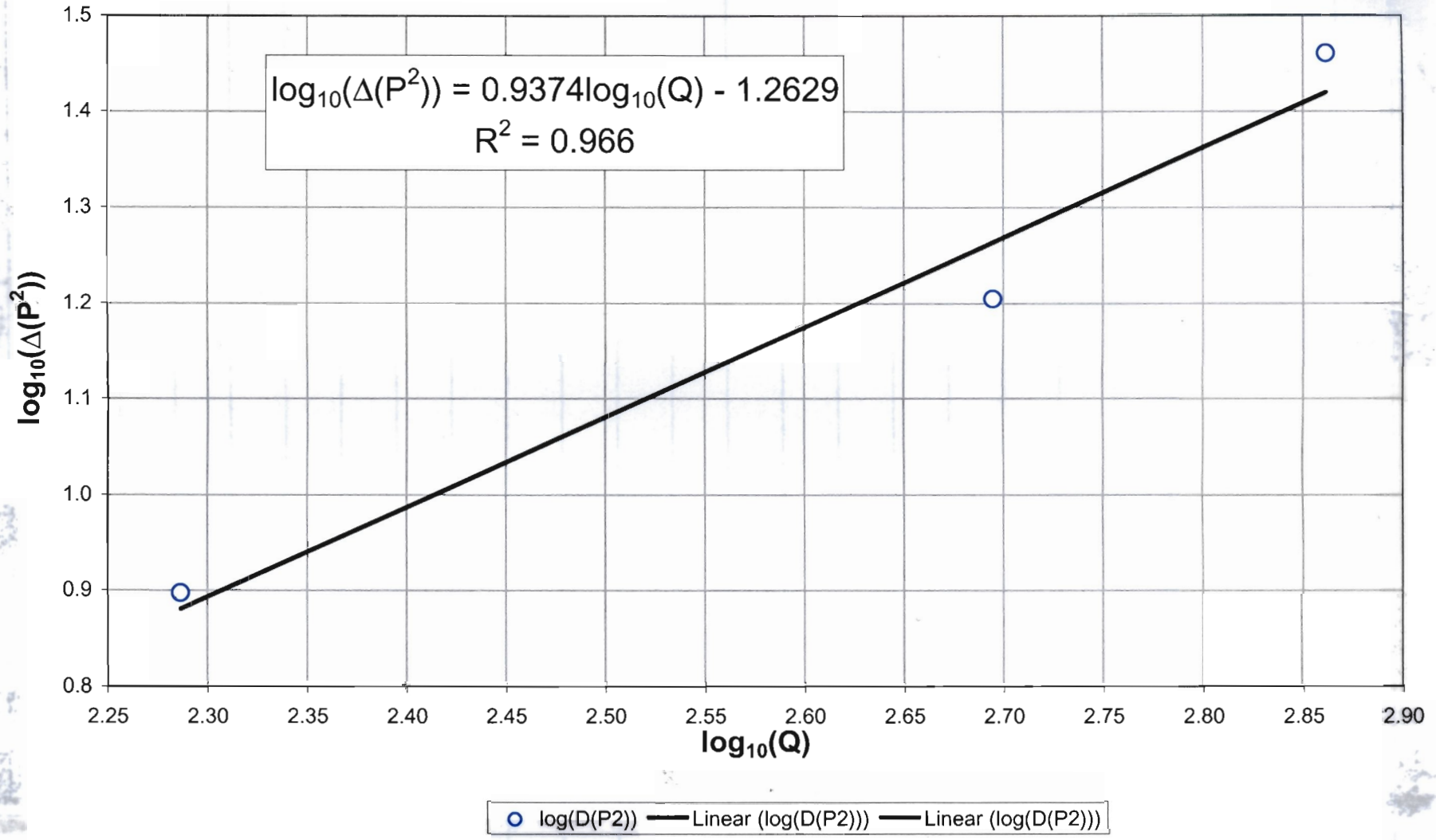
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 14



Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 15

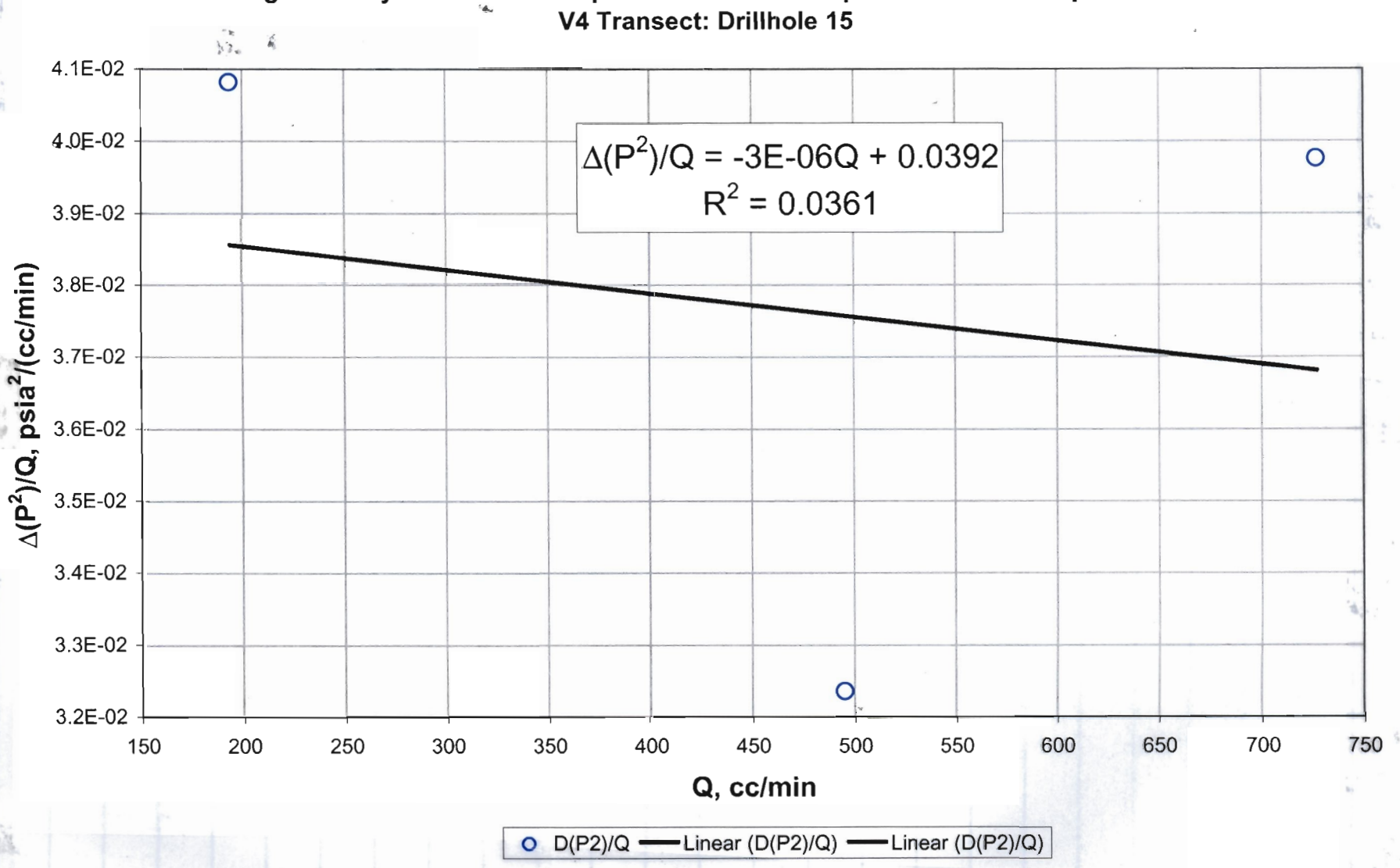


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 15



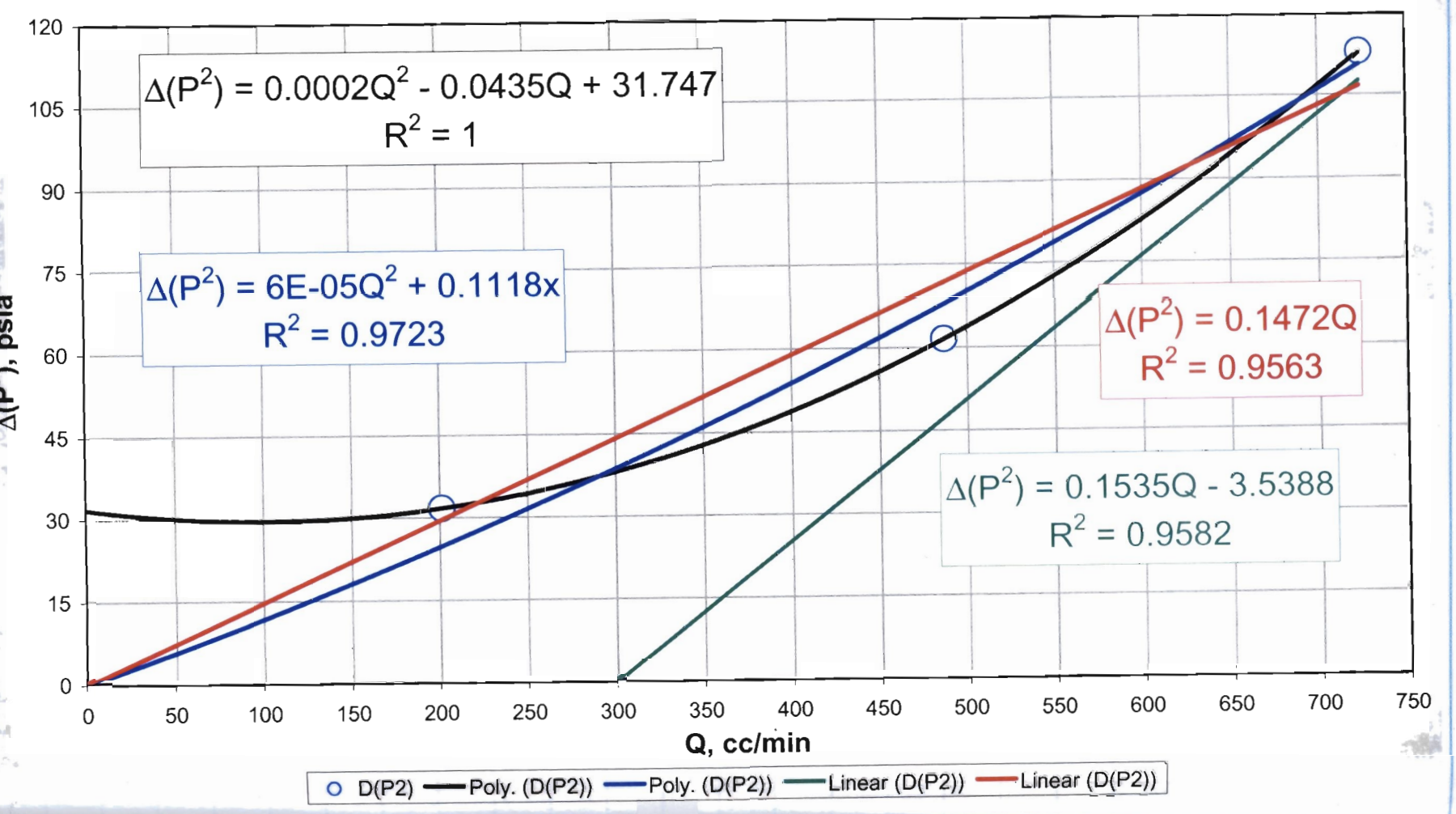
RWM, 01/30/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 15

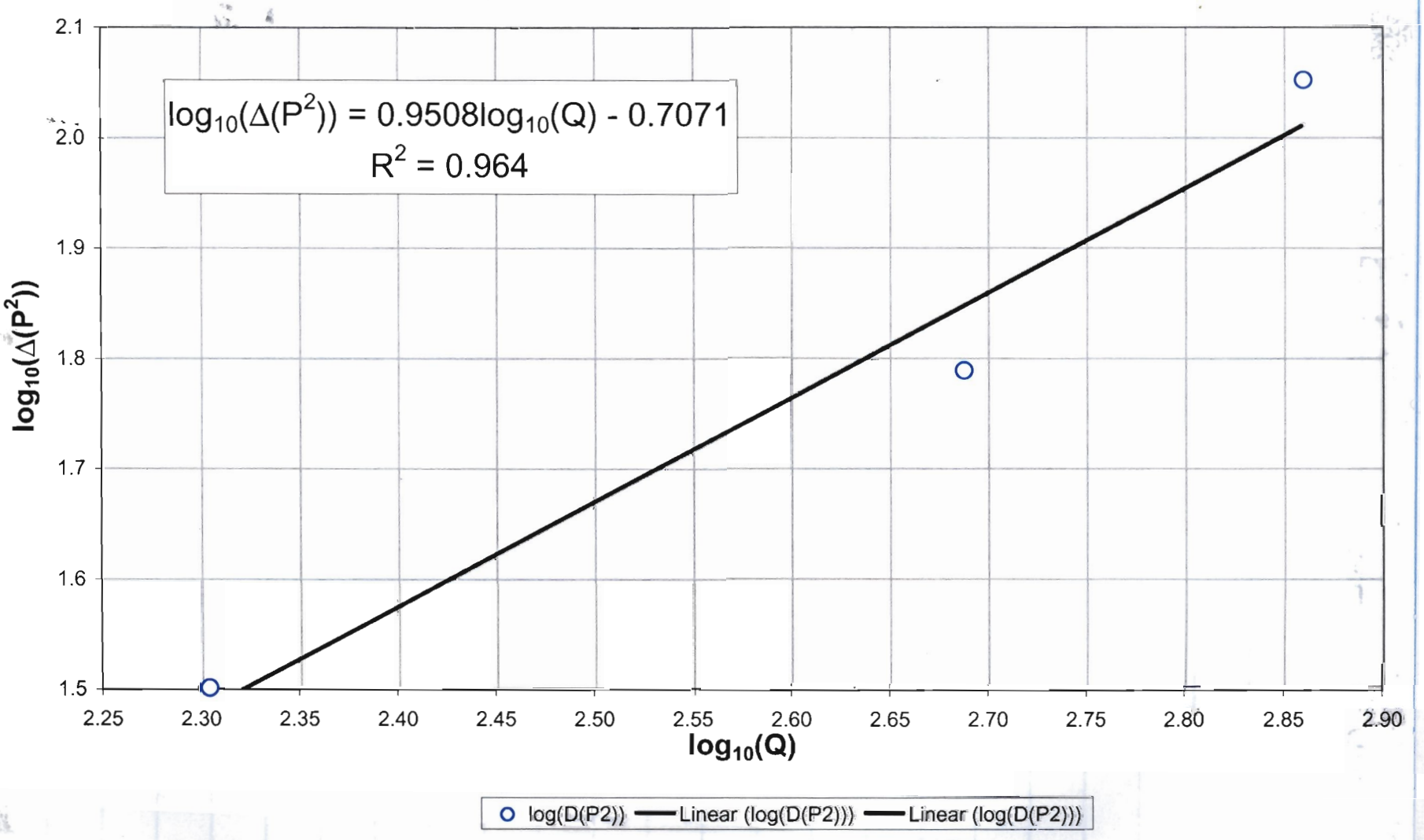


RWM, 01/30/03

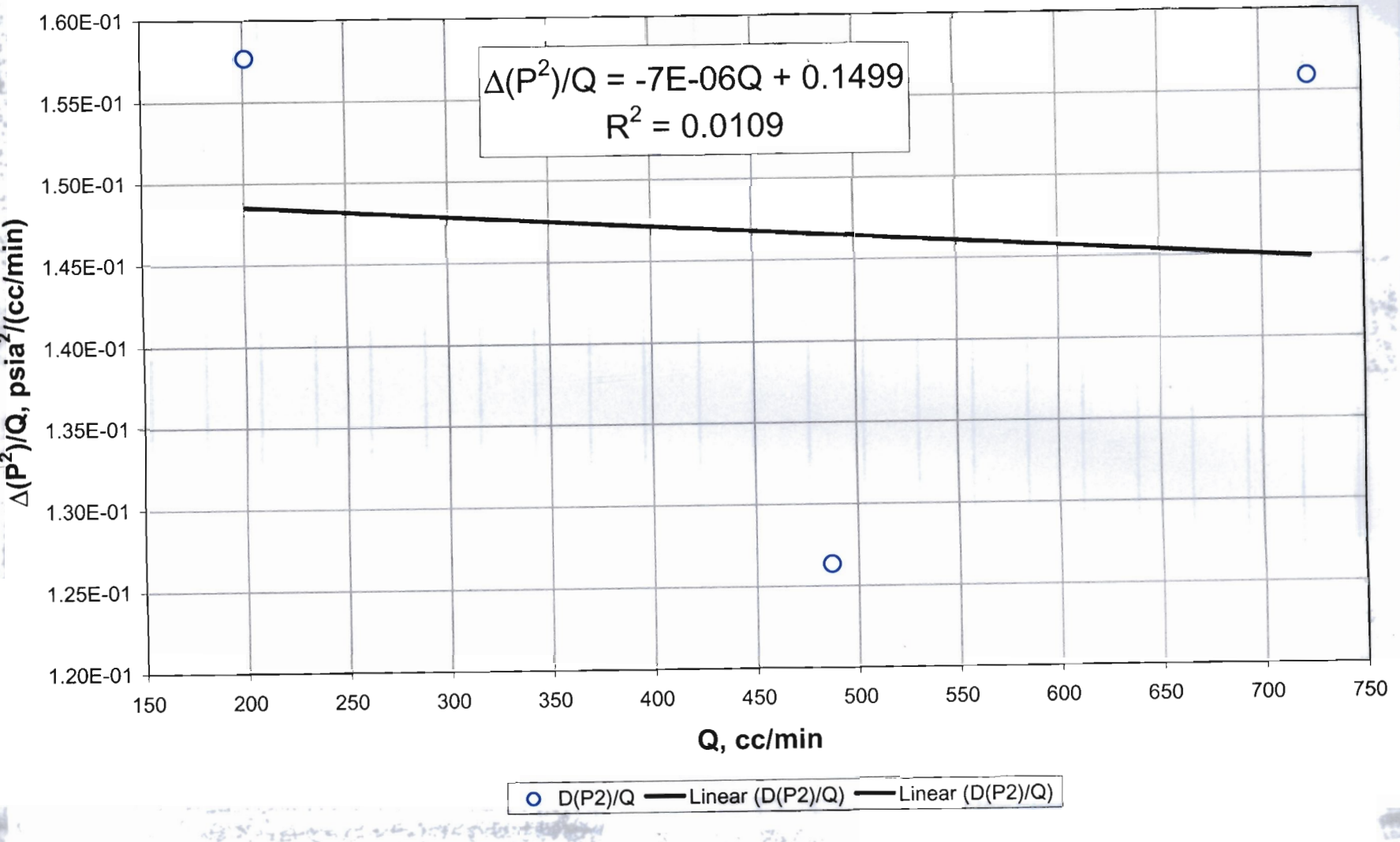
Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 16



Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 16

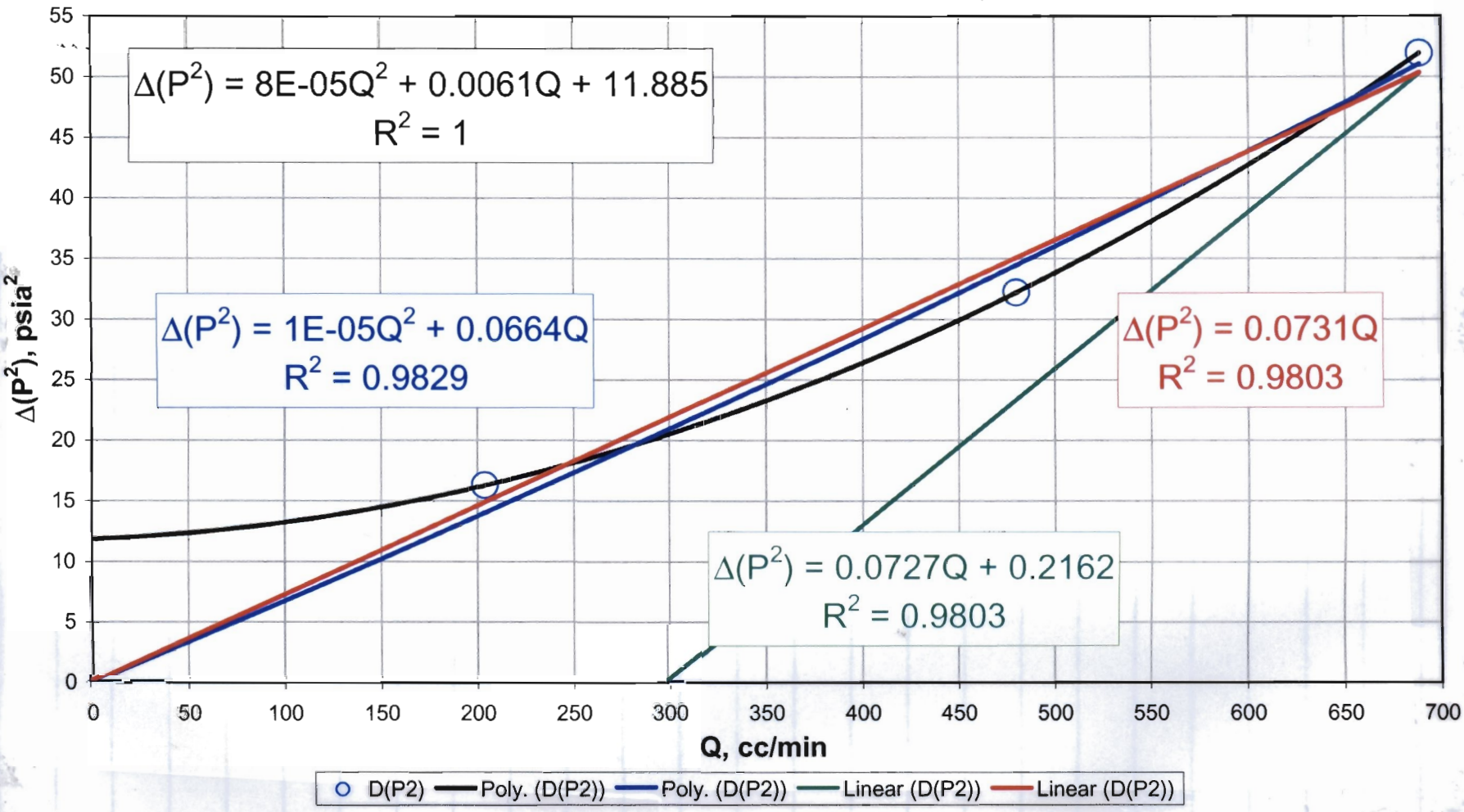


Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 16



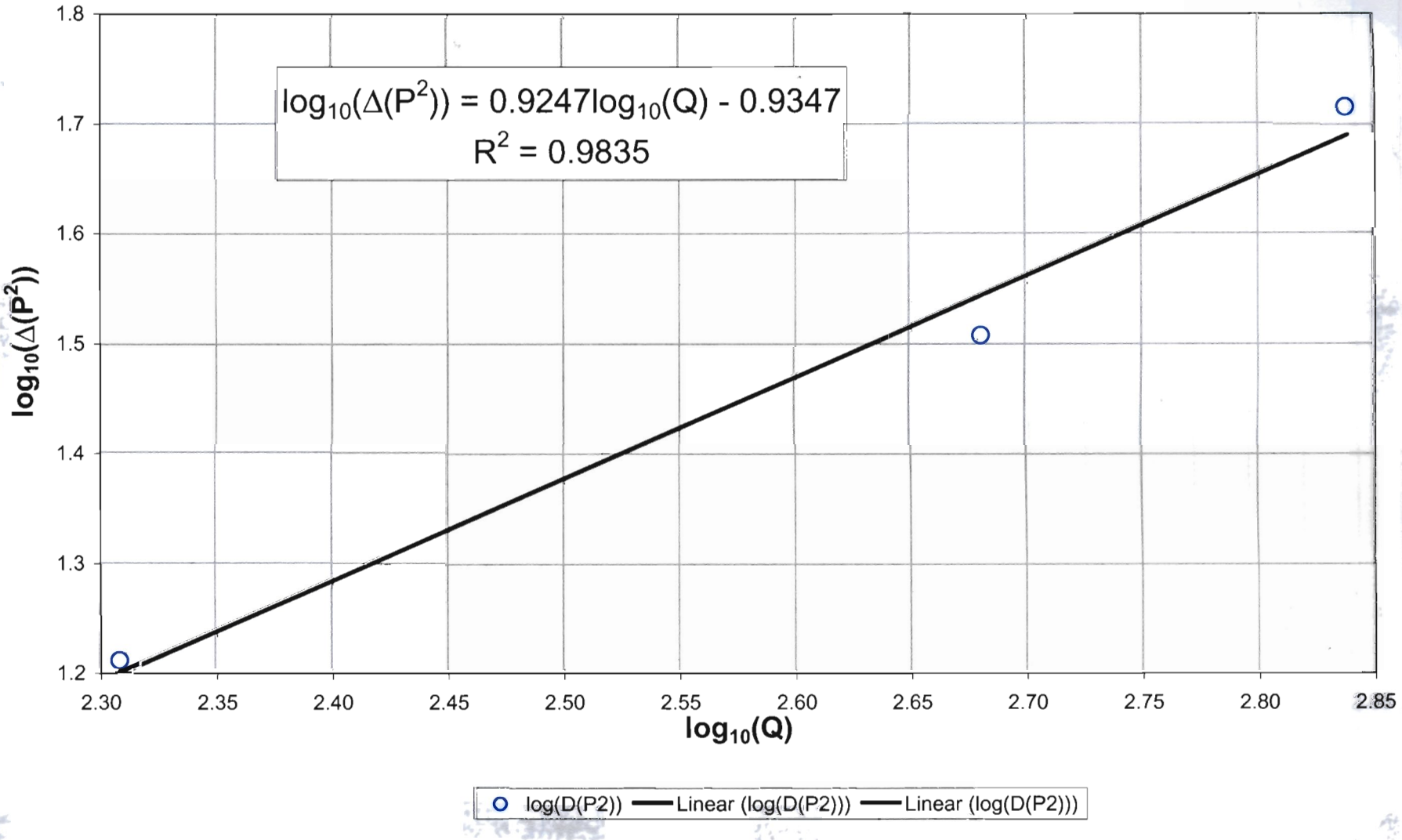
RWM, 01/30/03

Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 17



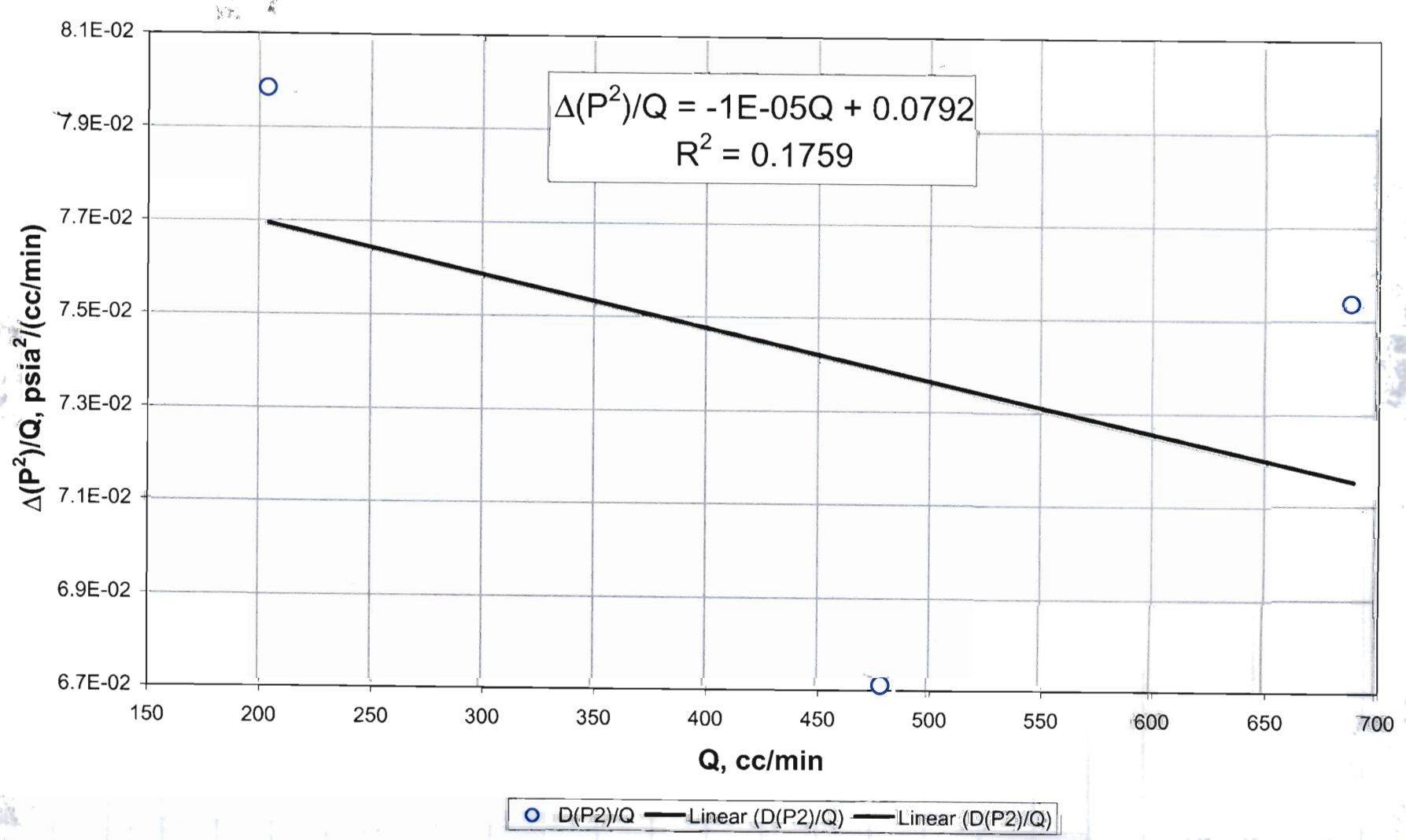
RWM, 01/30/03

Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 17



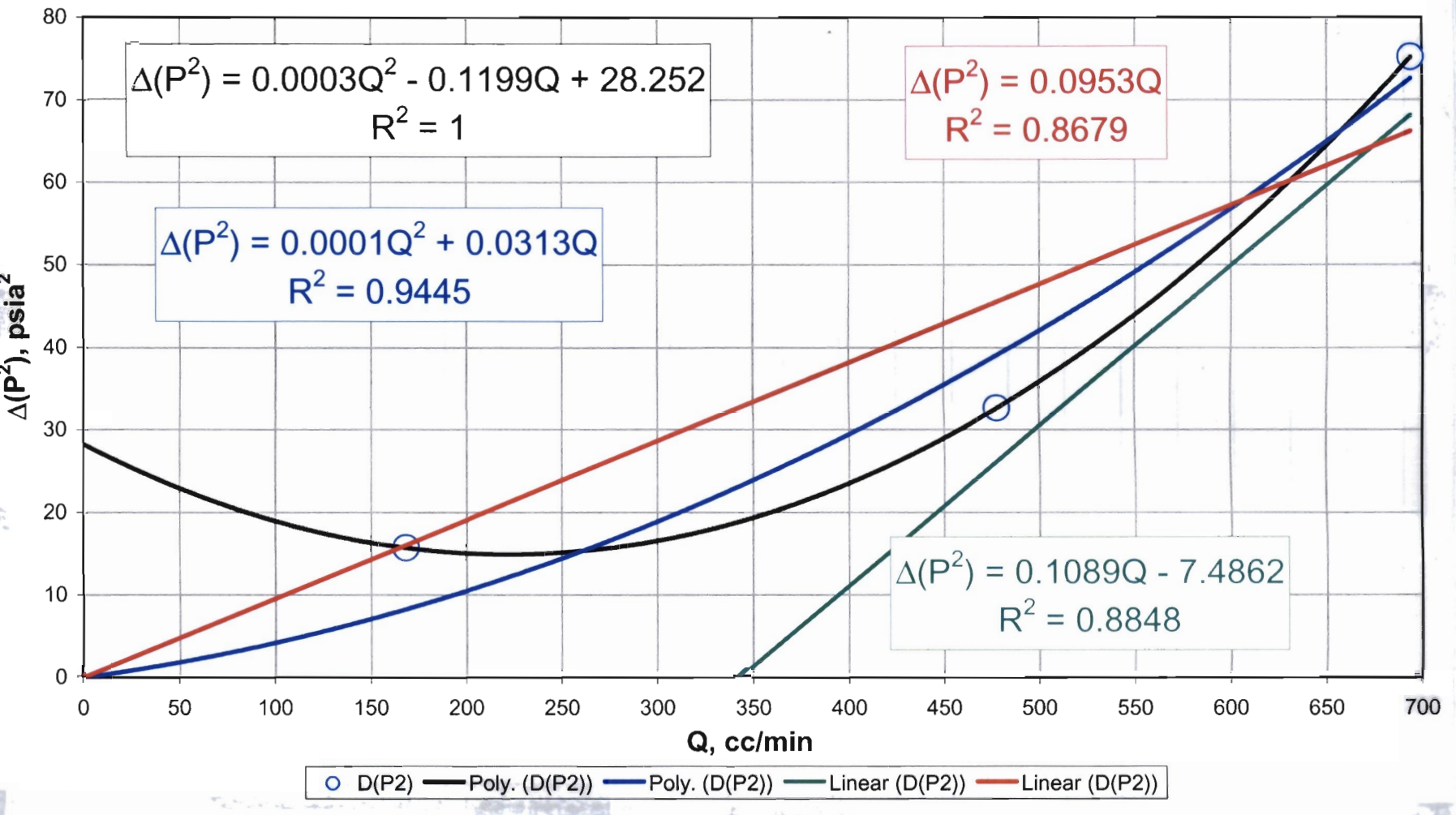
RNM, 01/30/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 17



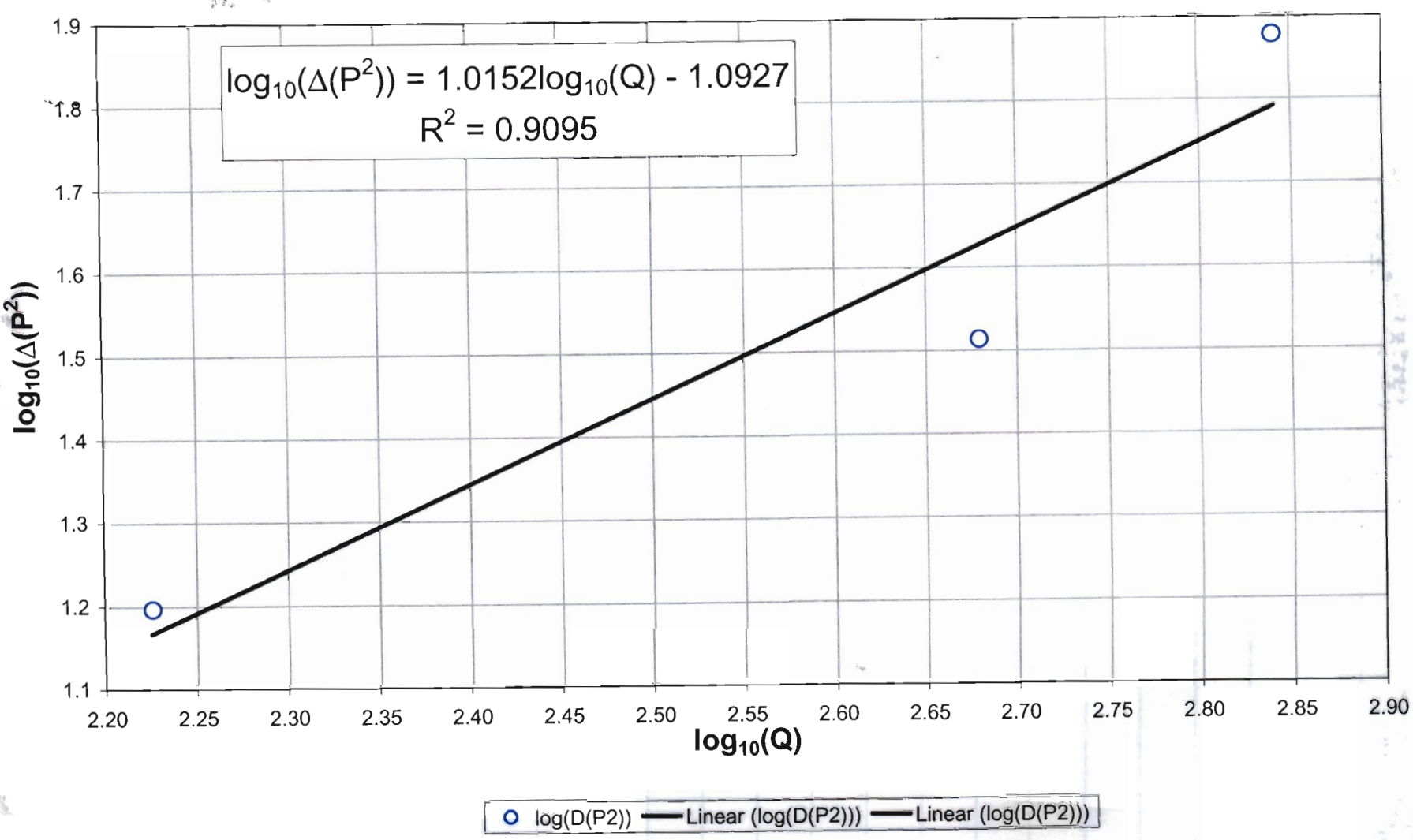
RNM, 01/30/03

**Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 18**



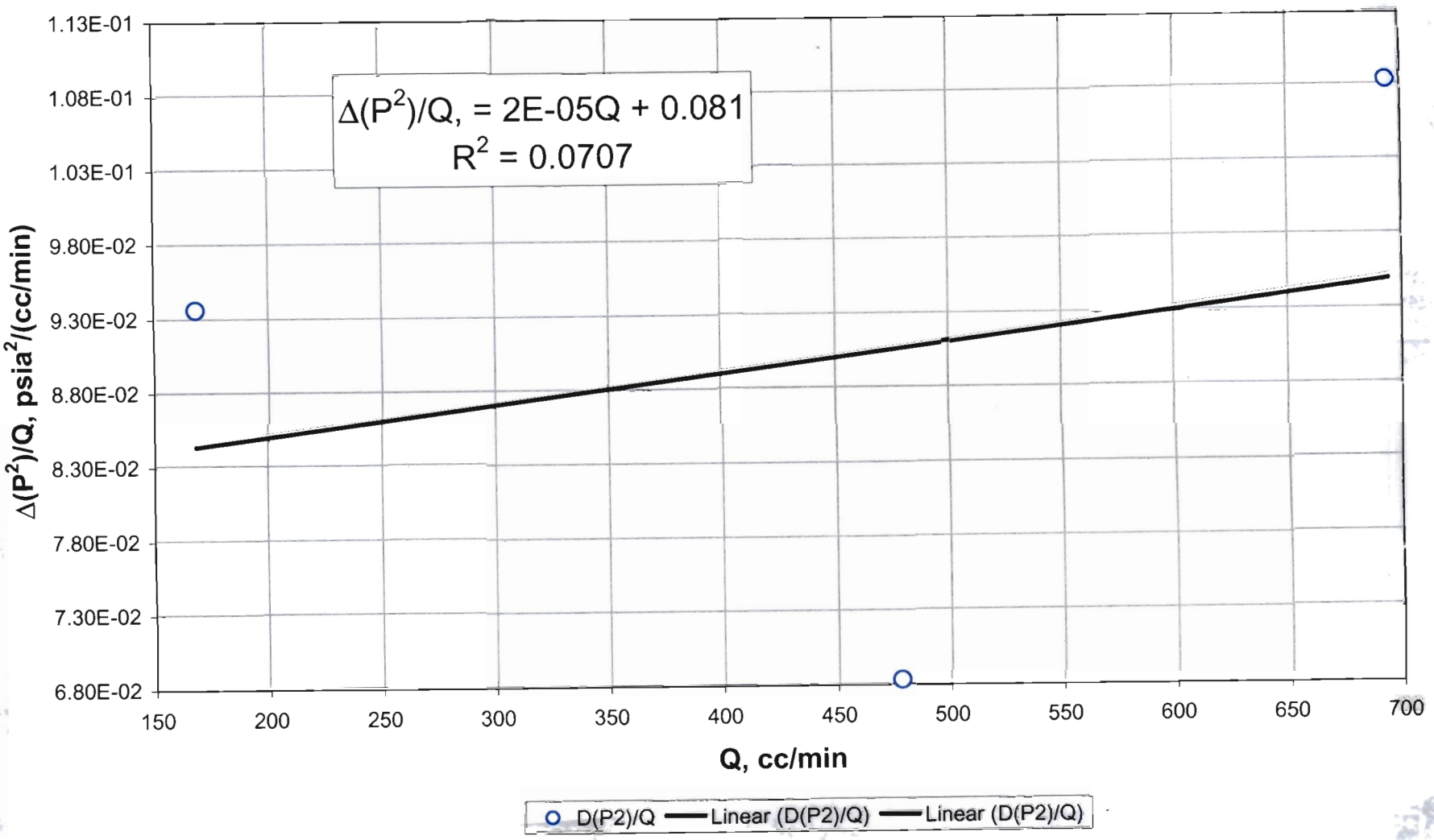
RNM, 01/30/03

**Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 18**

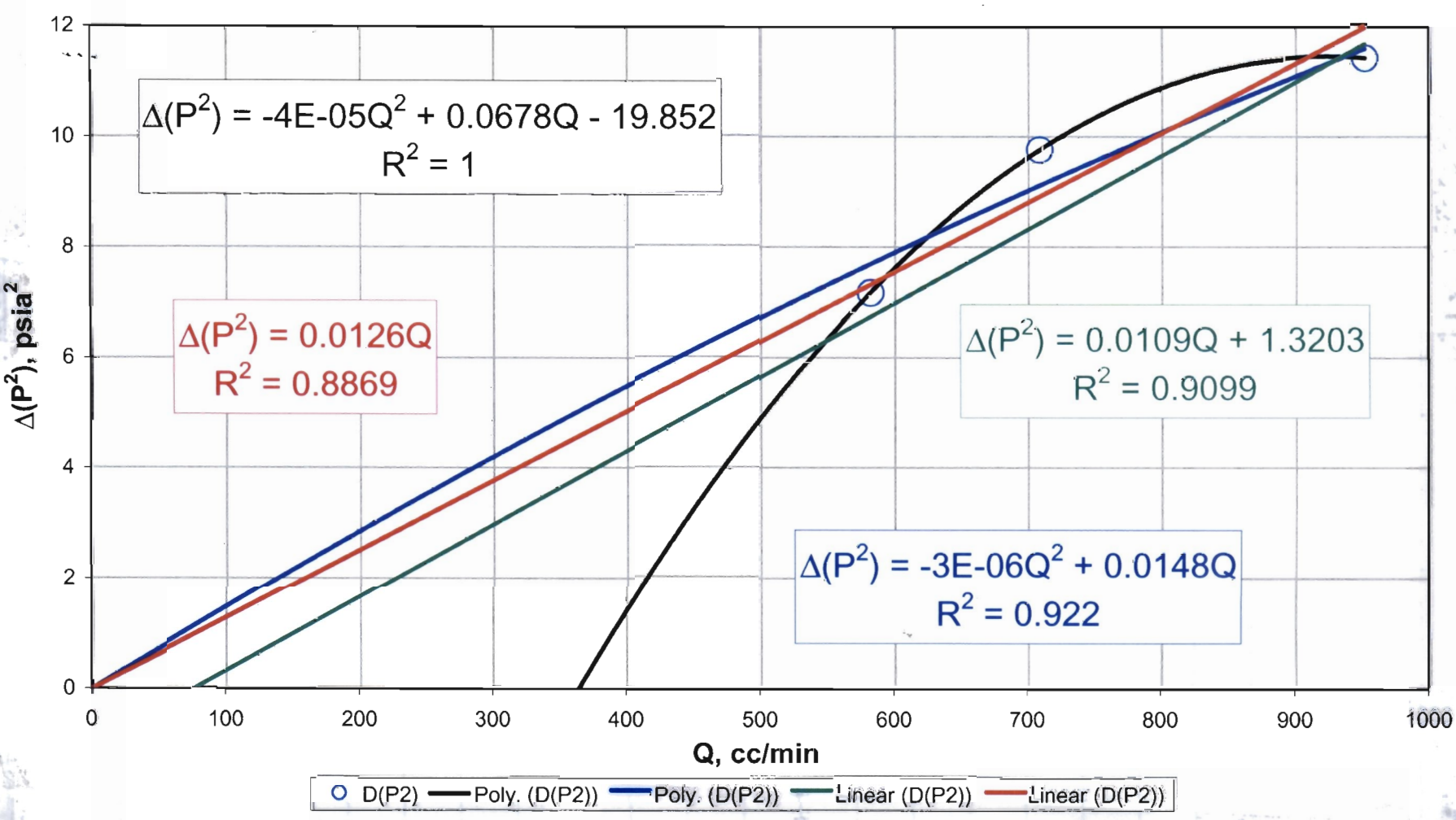


RNM, 01/30/03

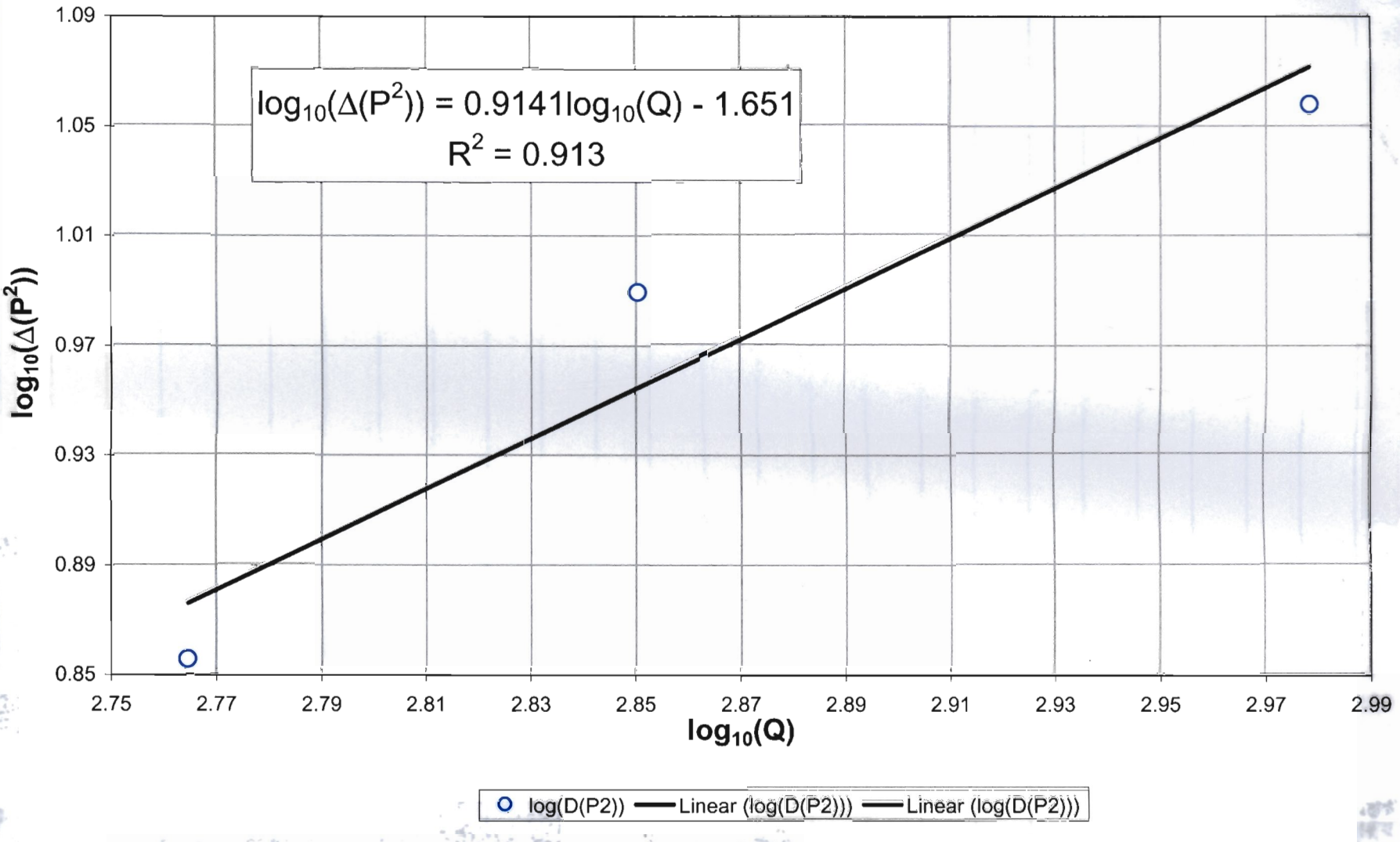
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 18



Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 19

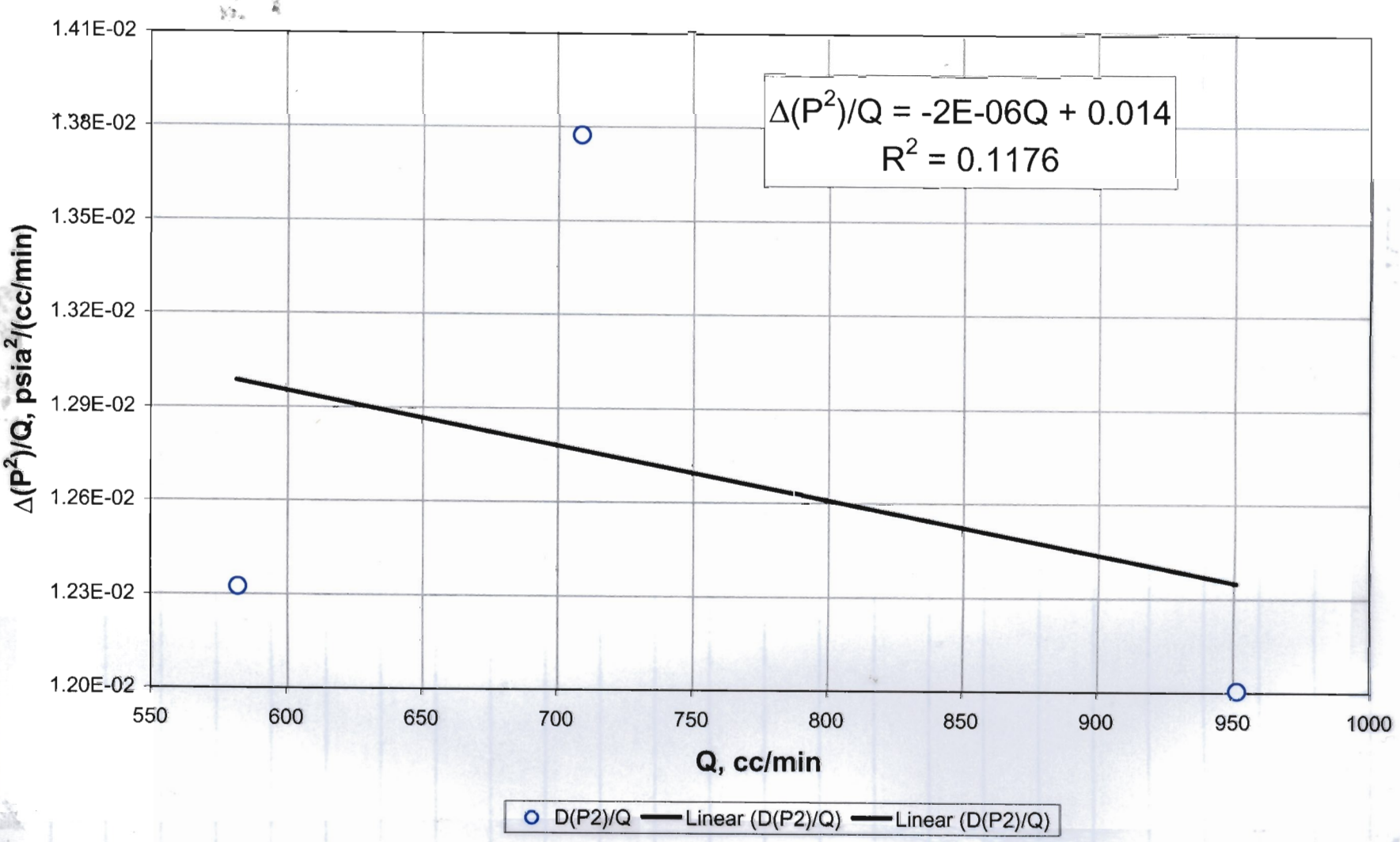


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 19



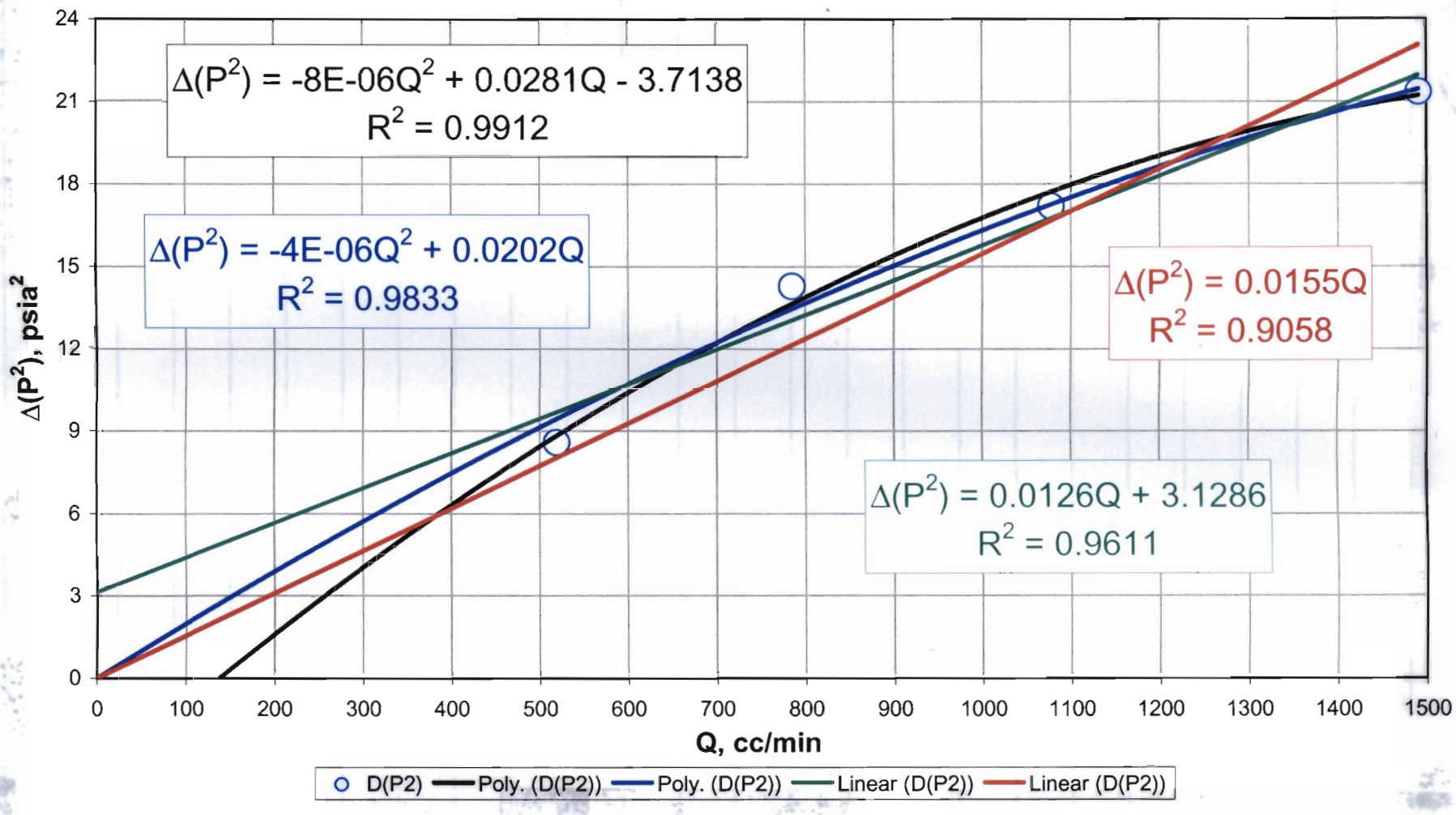
RWM, 01/30/07

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 19

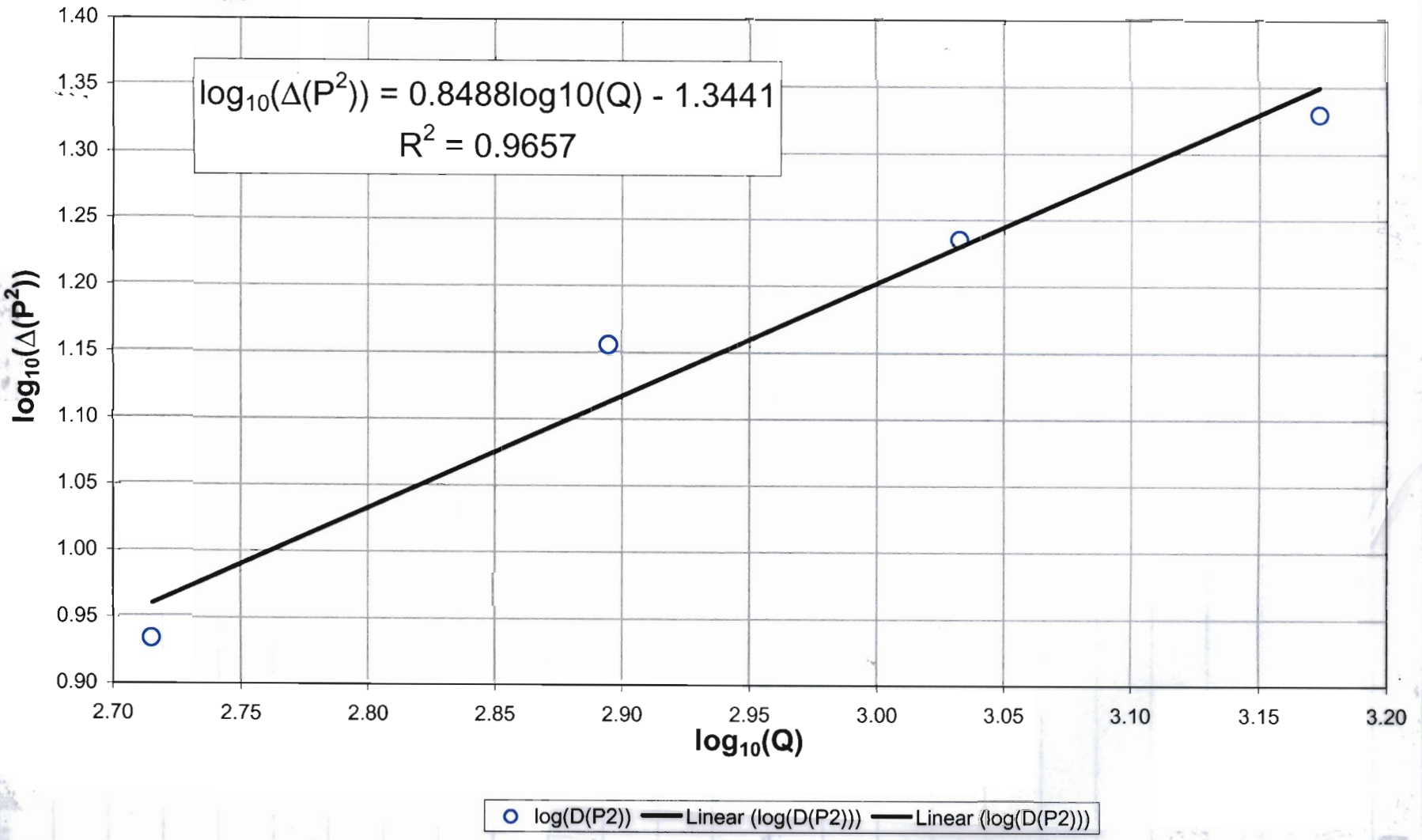


RWM, 01/30/07

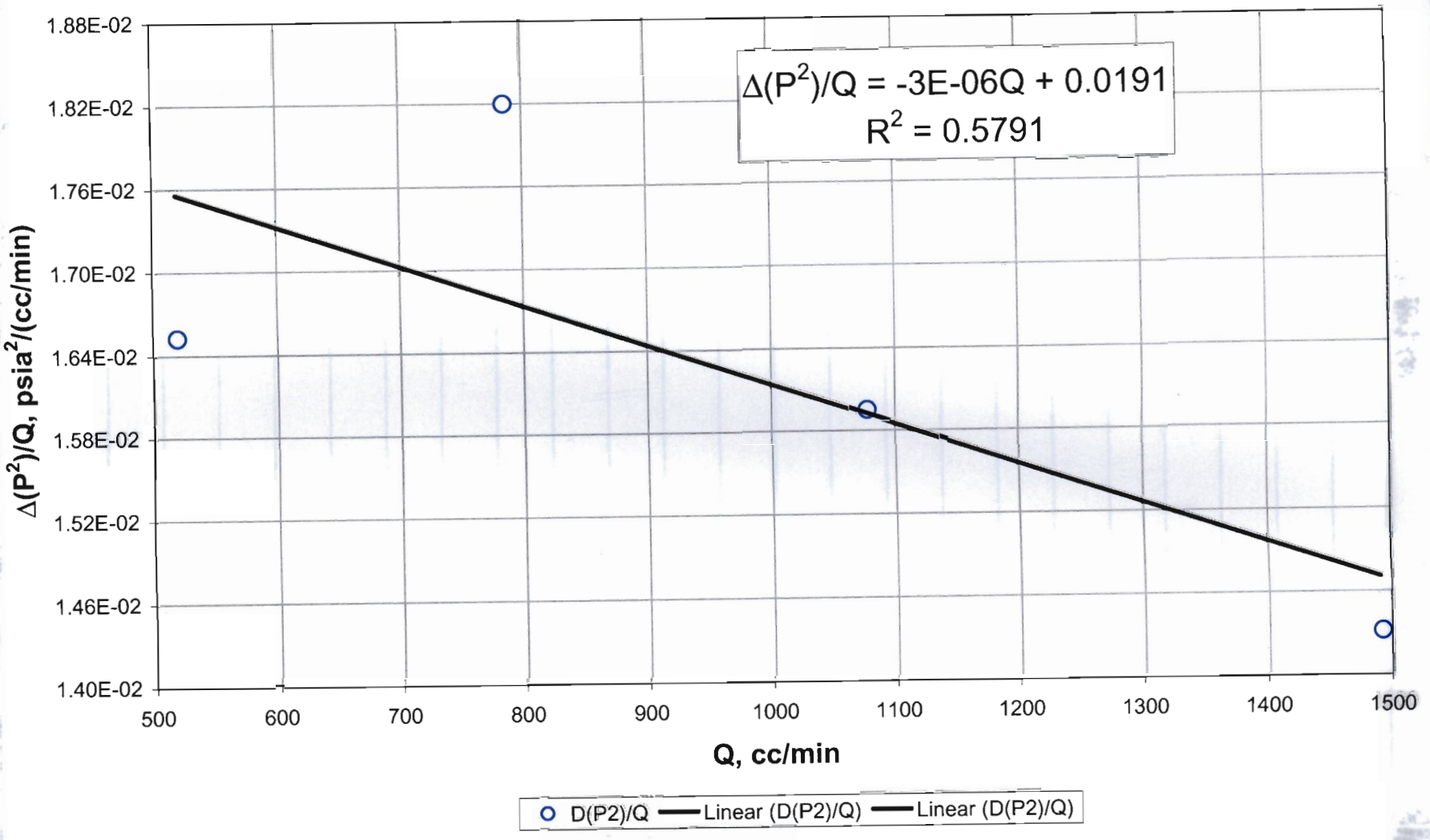
Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 20



Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
V4 Transect: Drillhole 20



Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
V4 Transect: Drillhole 20



Relationship between steady-state differential pressures squared and flowrate:
If relationship is linear, with the ordinate intercept nearly zero,
there is no high velocity flow effect.
V4 Transect: Drillhole 21