

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

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COPY 567

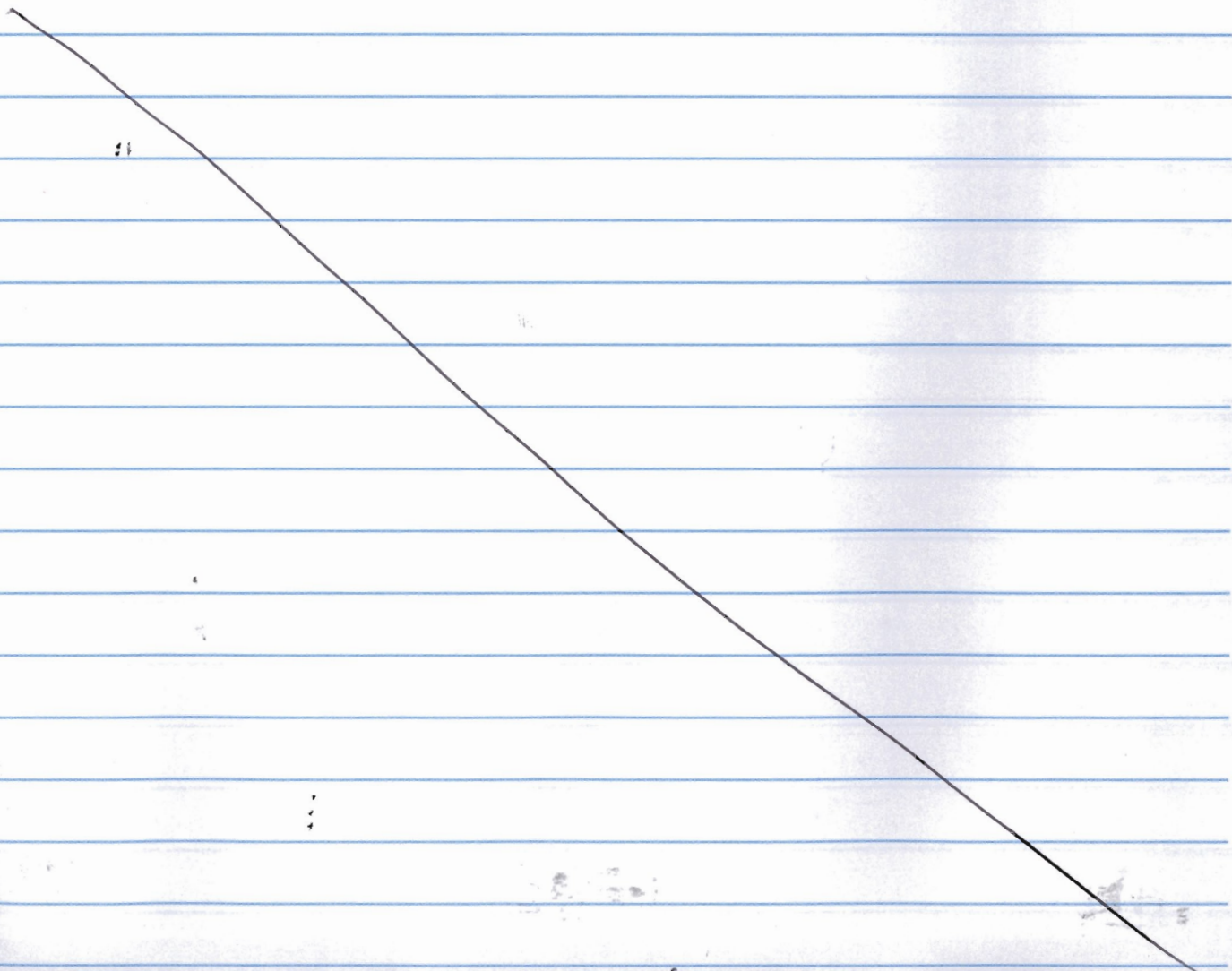
This is a continuation of the CNRWRA controlled scientific notebook # 564, titled:

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

Participating individuals: Cynthia L. Dinwiddie (522-5825)⁶⁰⁸⁵
Ronald N. McGinnis (522-5825)

Contract No. Project: 06002.01.131

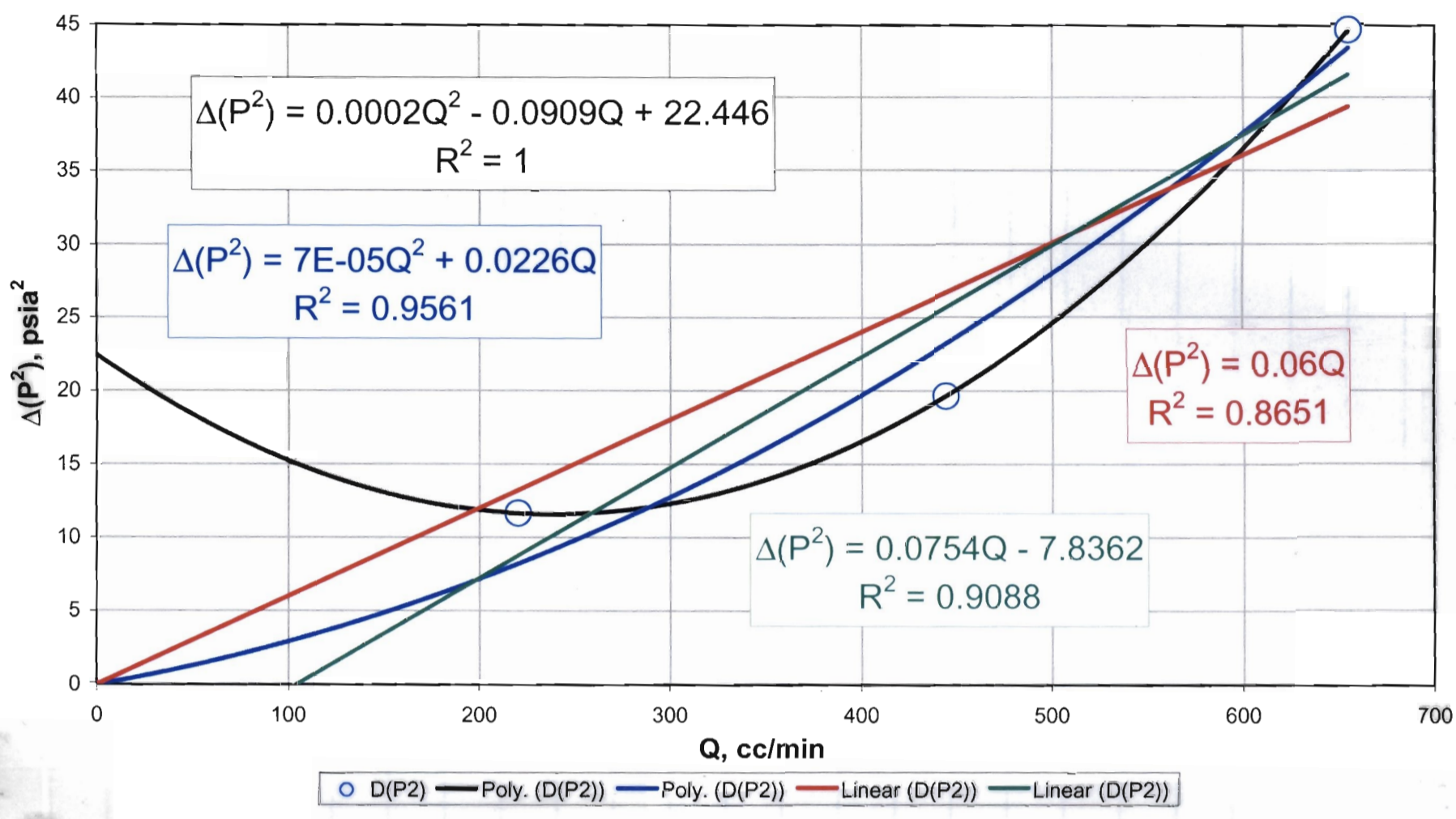
Task Objective may be found in SN 537+545.



RNM, 01/13/03

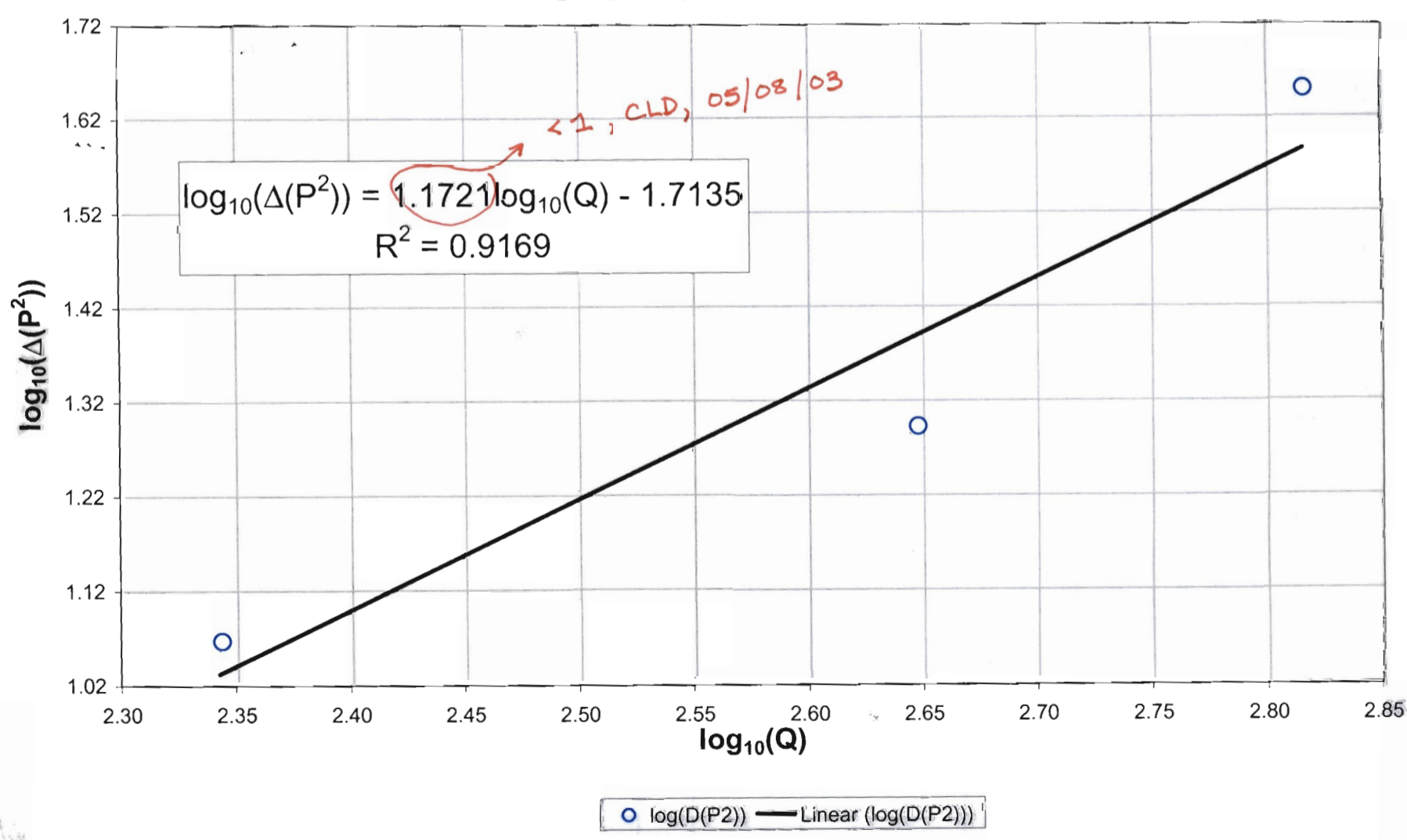
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 37

RWN, 01/13/03

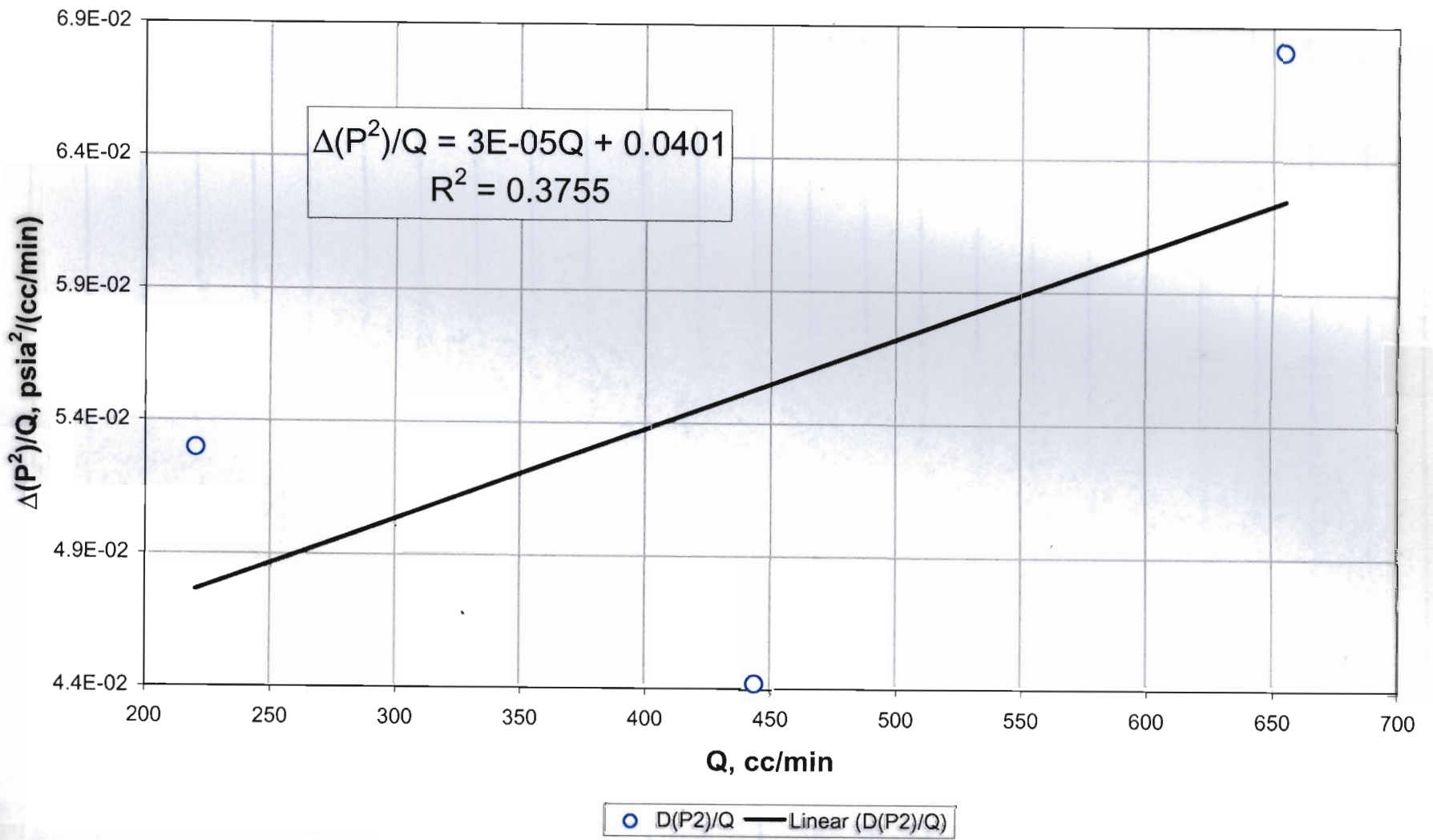


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
 D Transect: Drillhole 37

RWN, 01/13/03

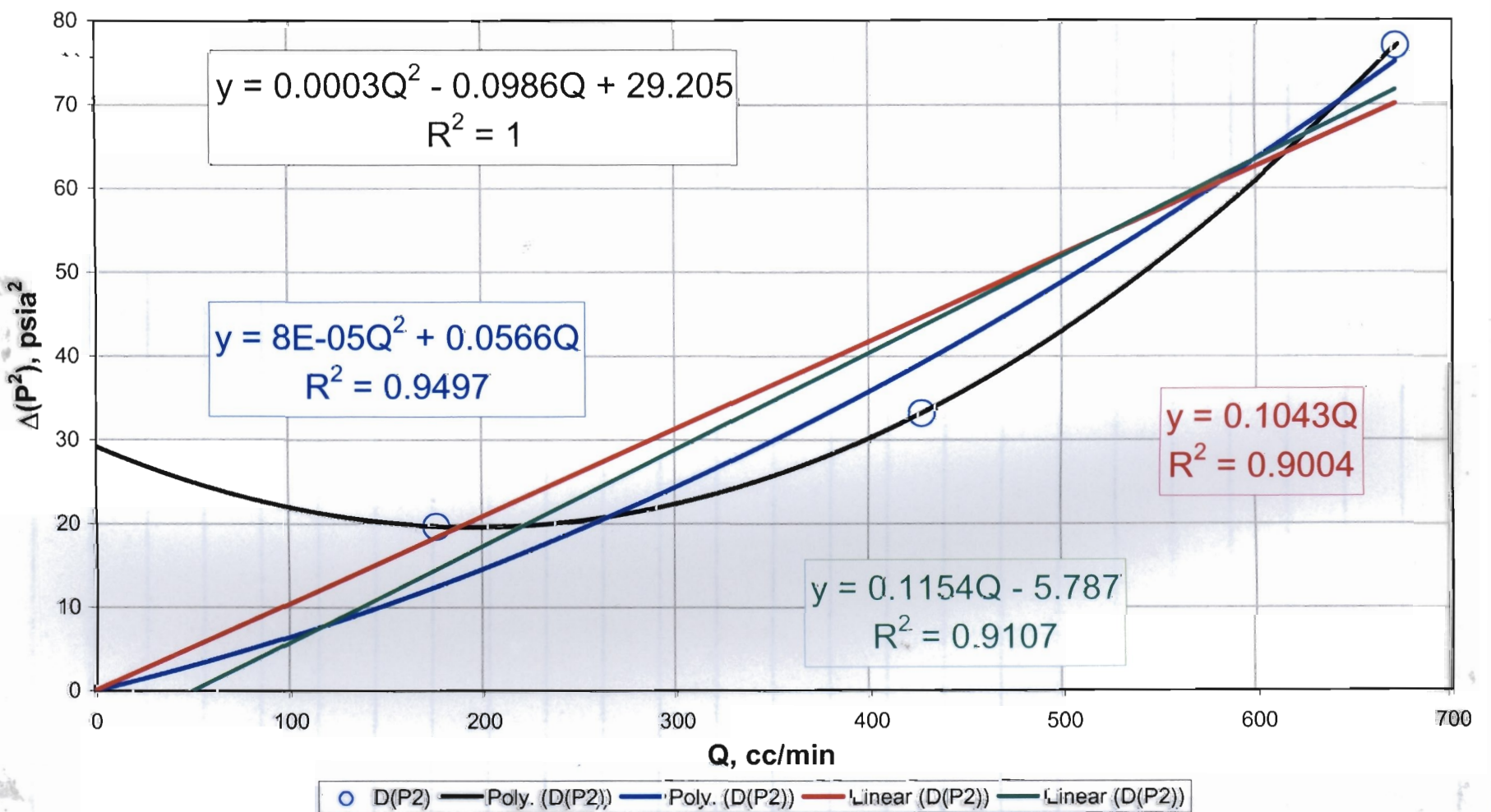


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 37



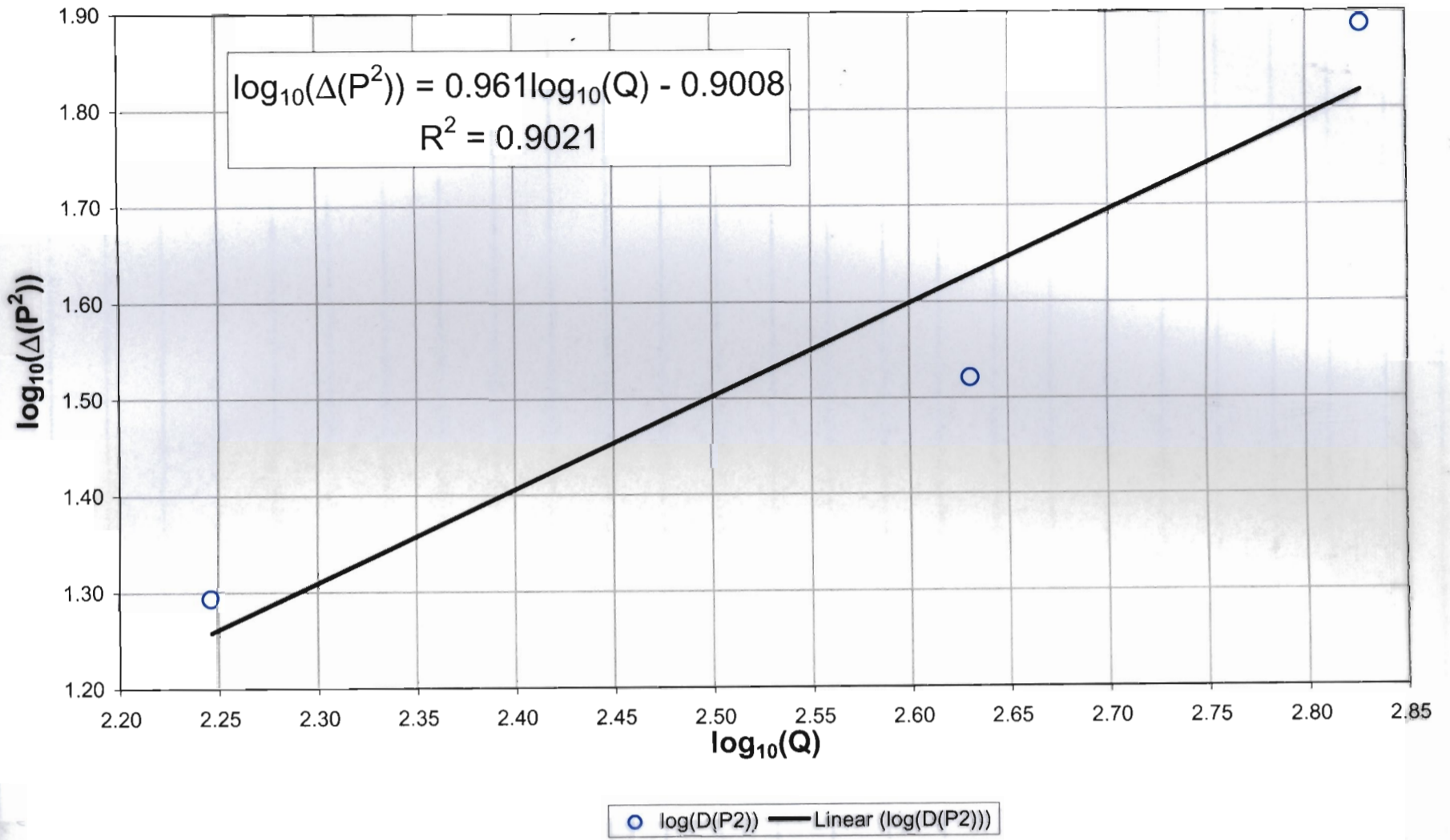
RMM, 01/13/03

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.
 D Transect: Drillhole 38

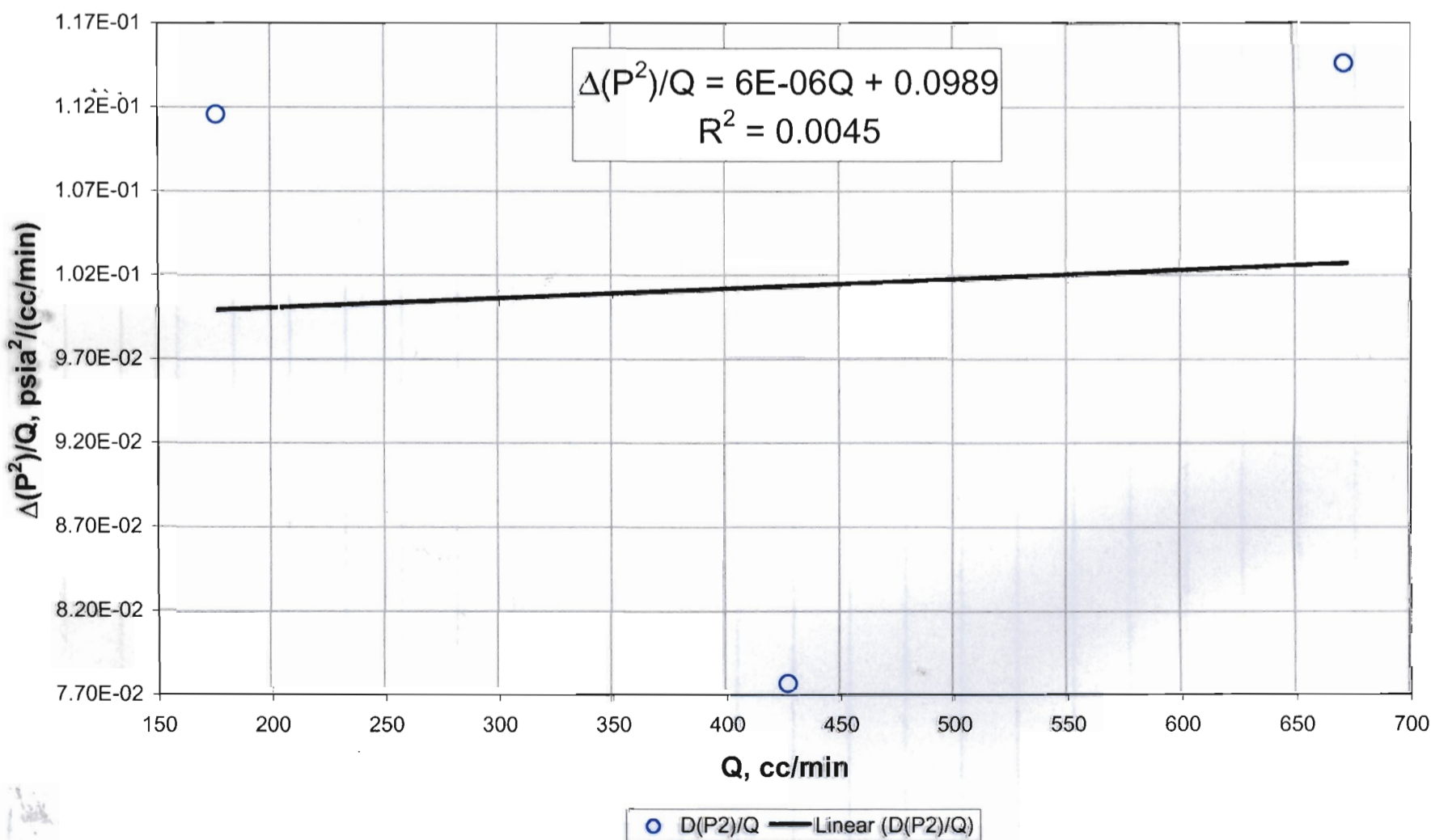


RMM, 01/13/03

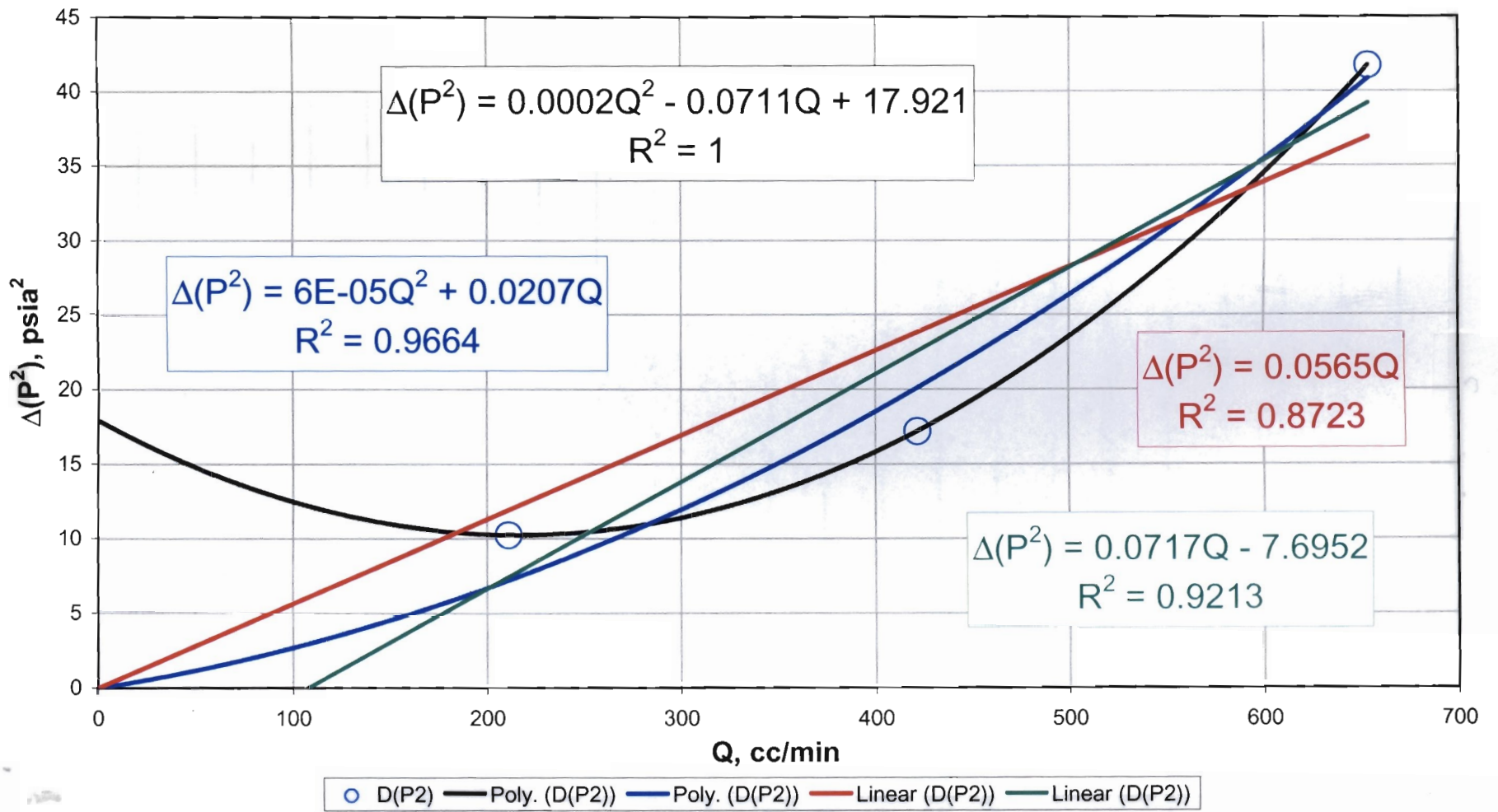
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
D Transect: Drillhole 38



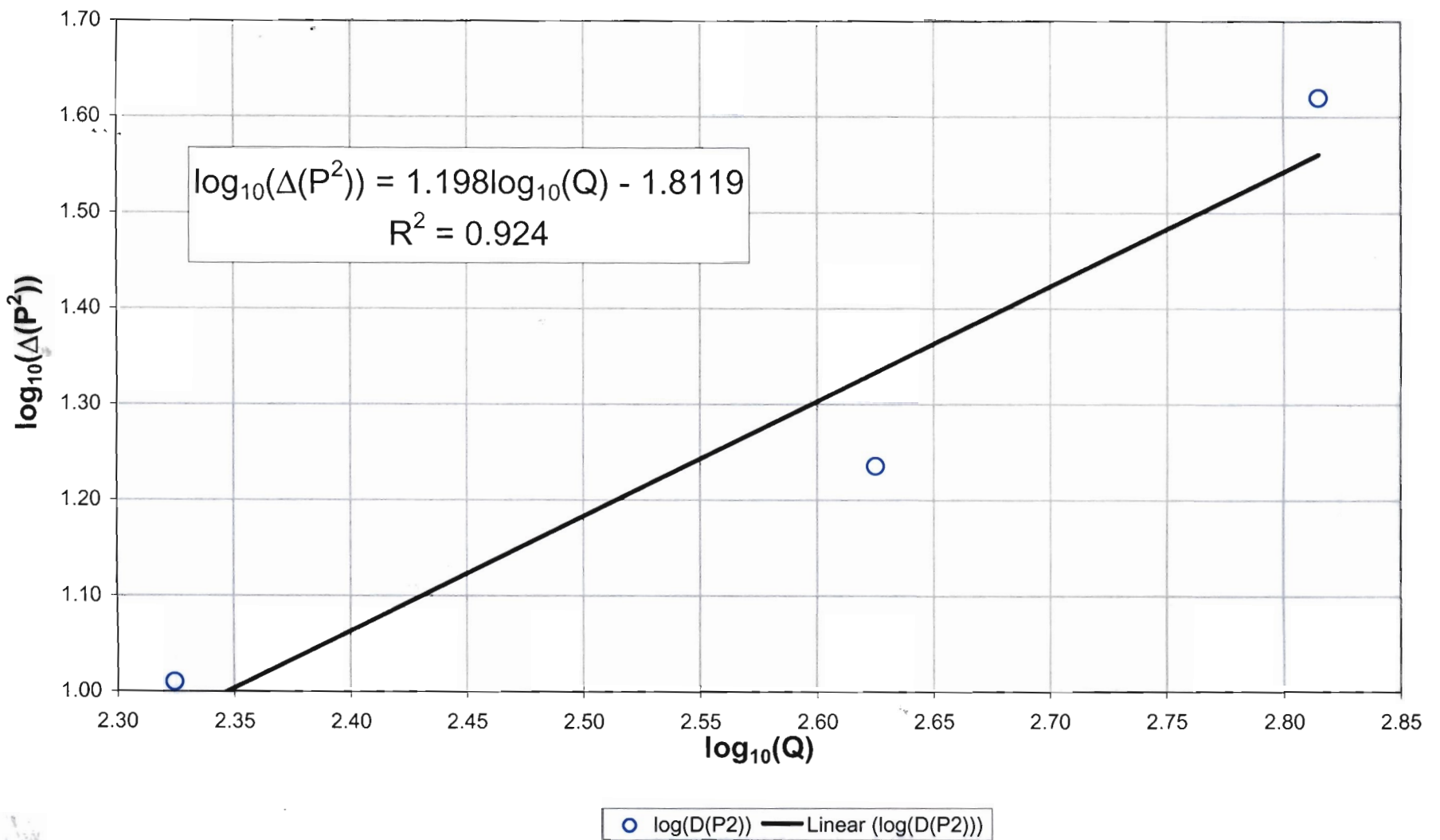
Final check for high-velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 38



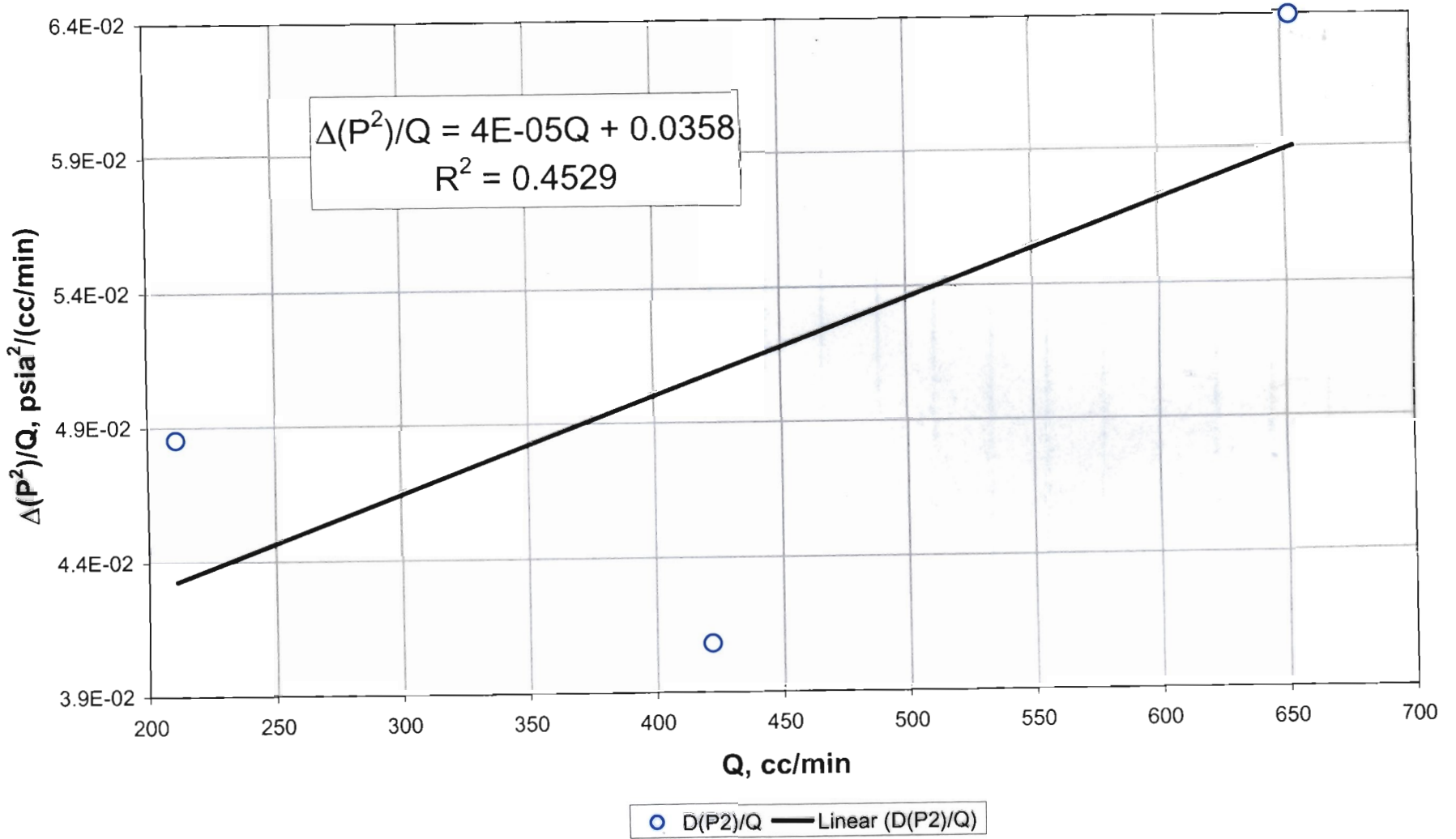
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 39



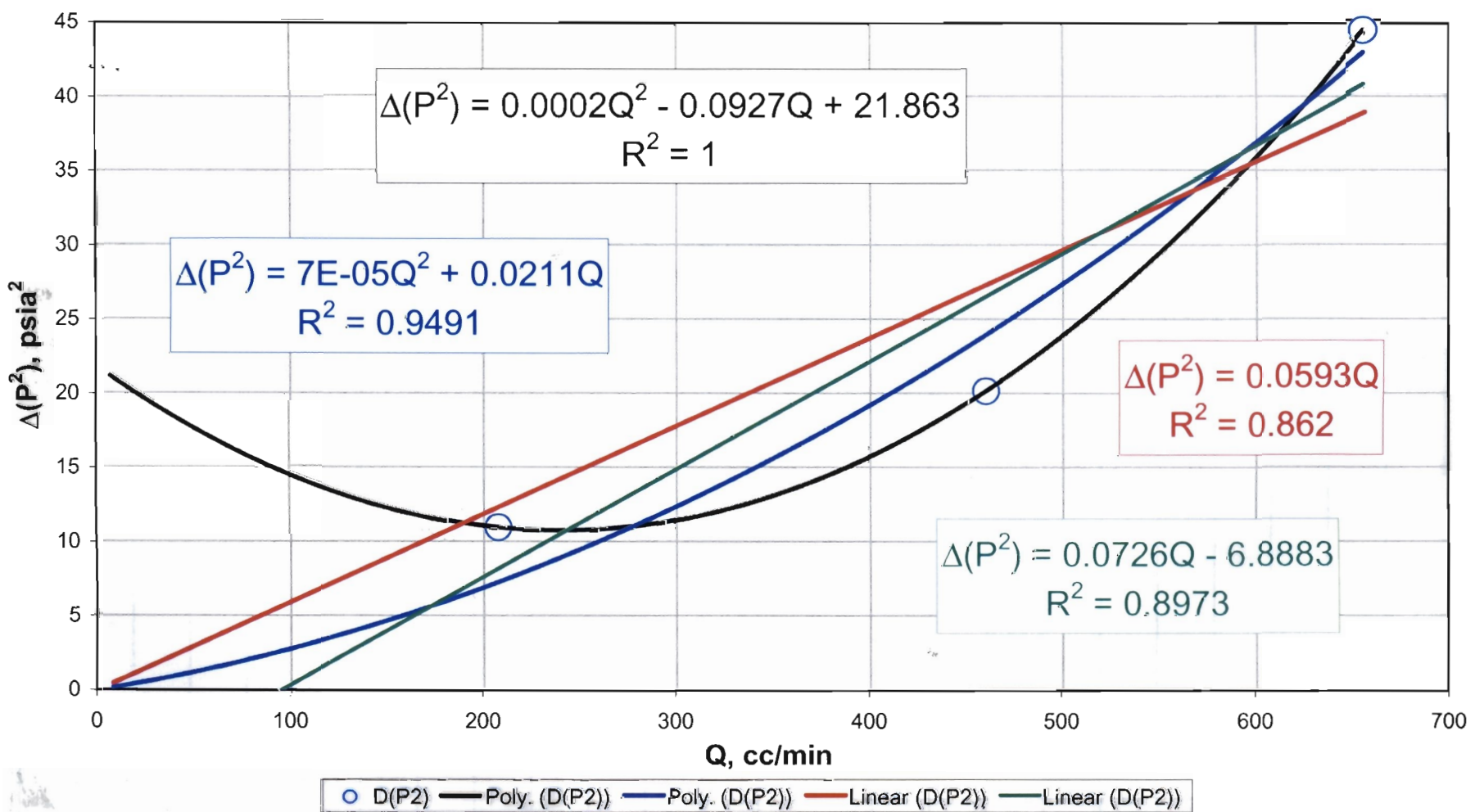
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 D Transect: Drillhole 39



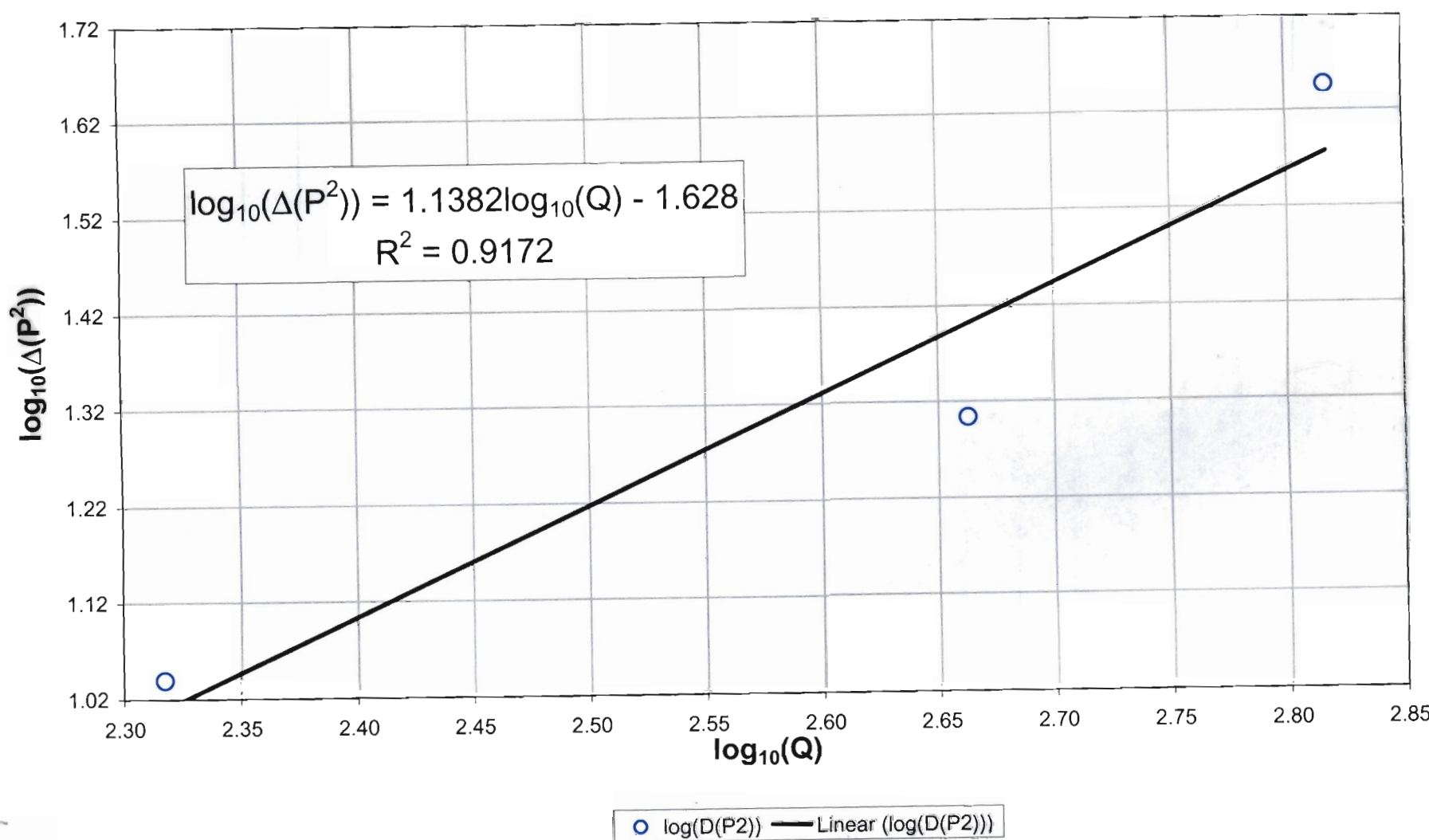
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 39



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.
 D Transect: Drillhole 40

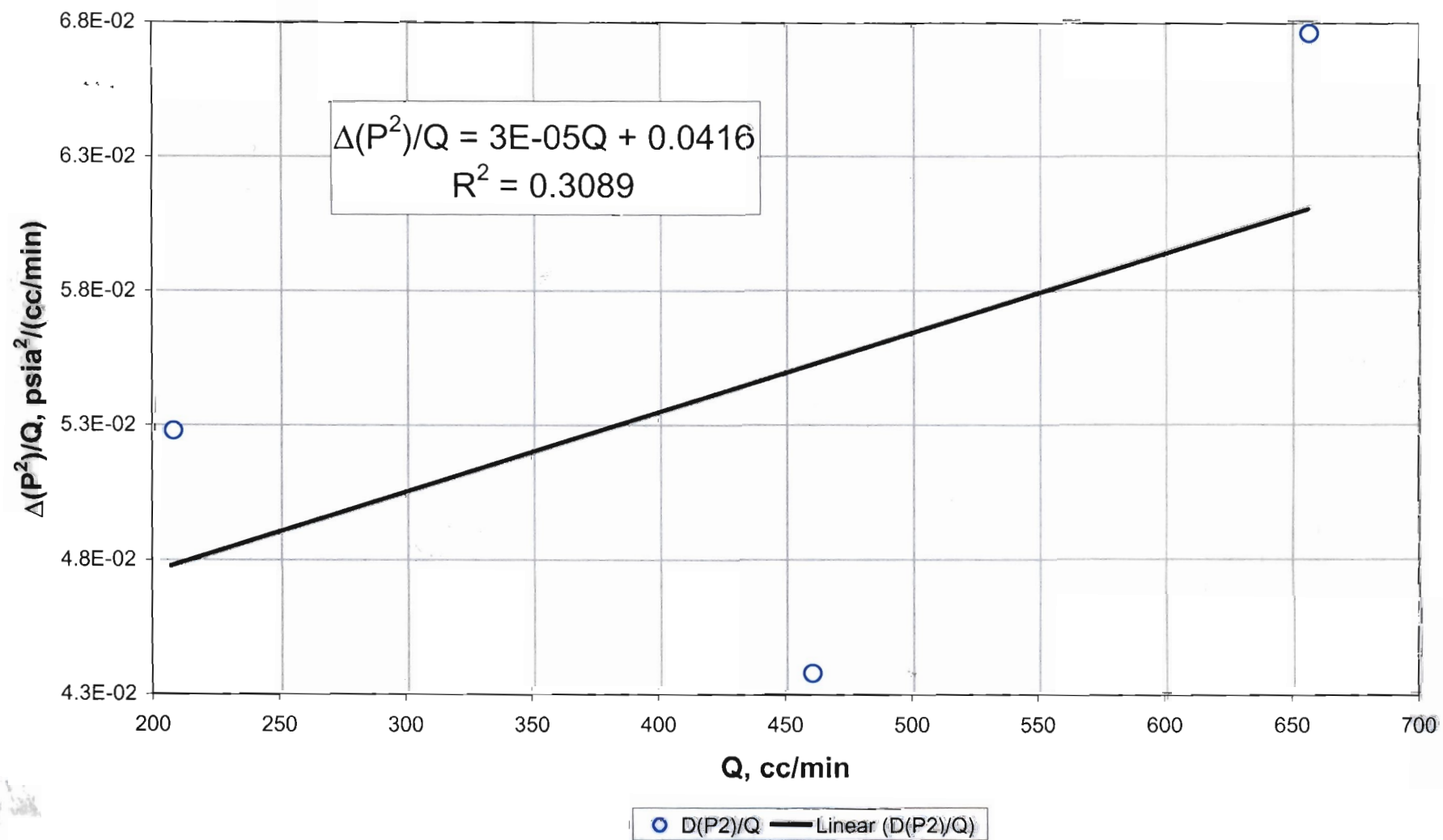


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
D Transect: Drillhole 40



RMM, 01/13/03

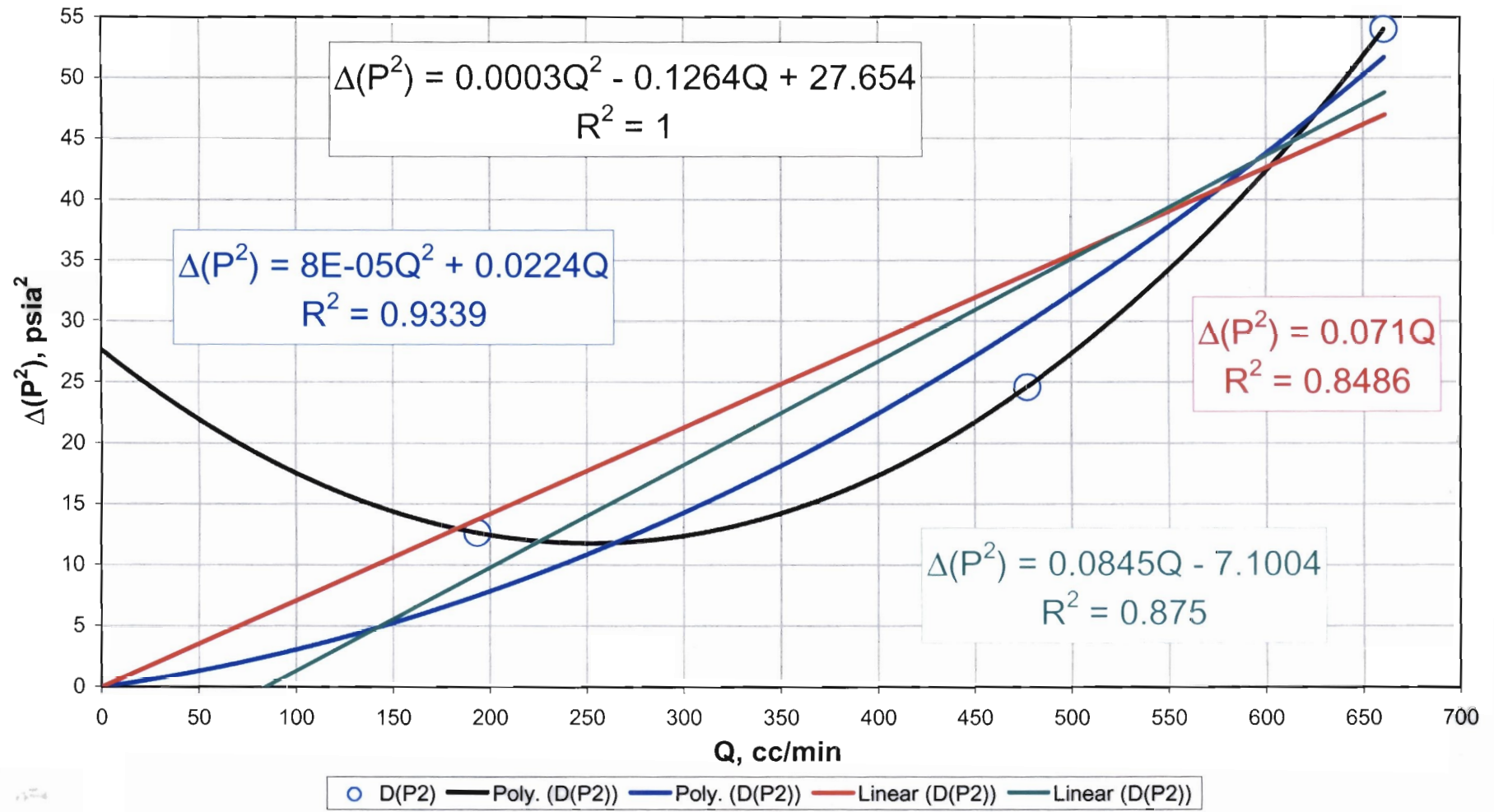
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 40



RMM, 01/13/03

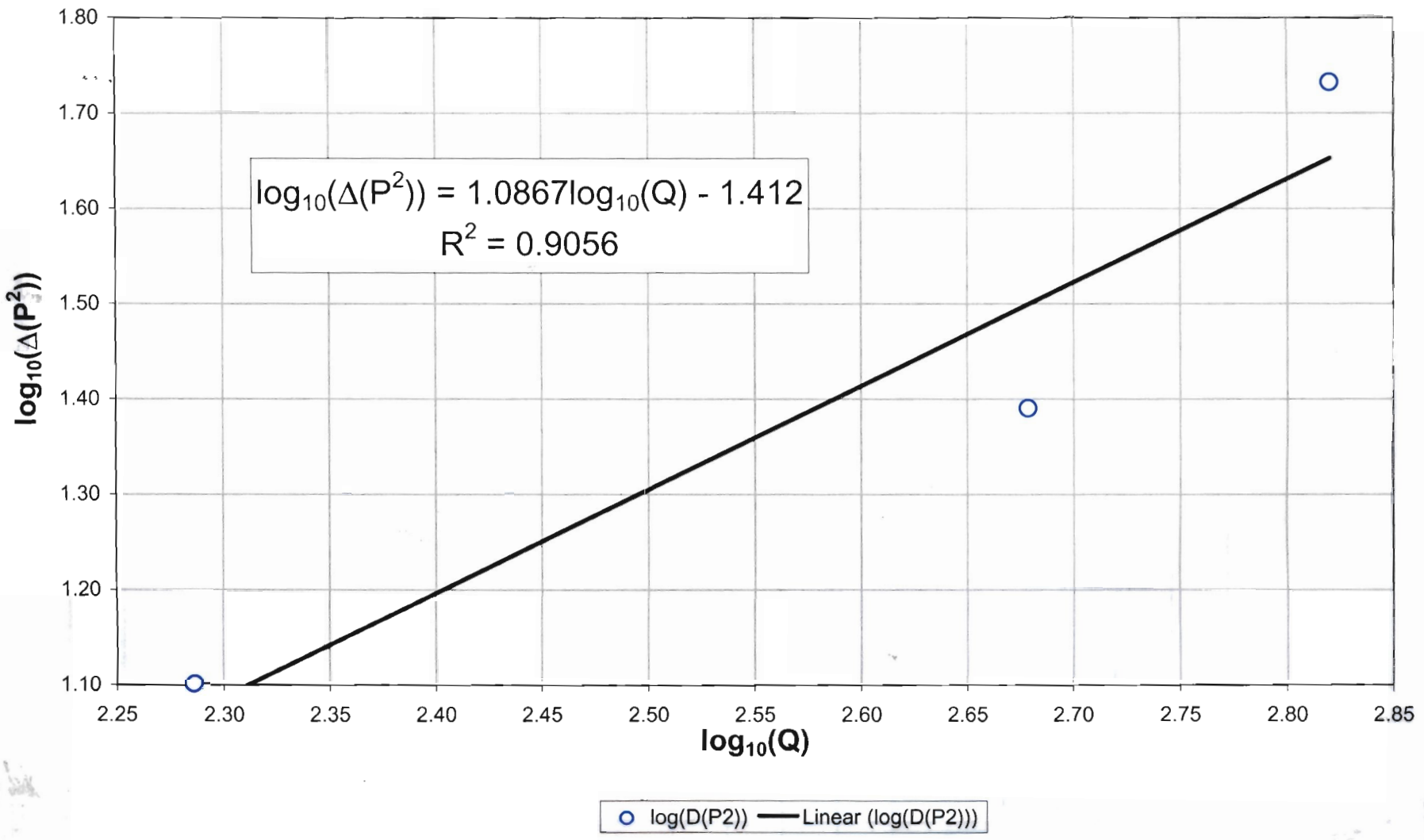
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 41

RMM, 01/13/03

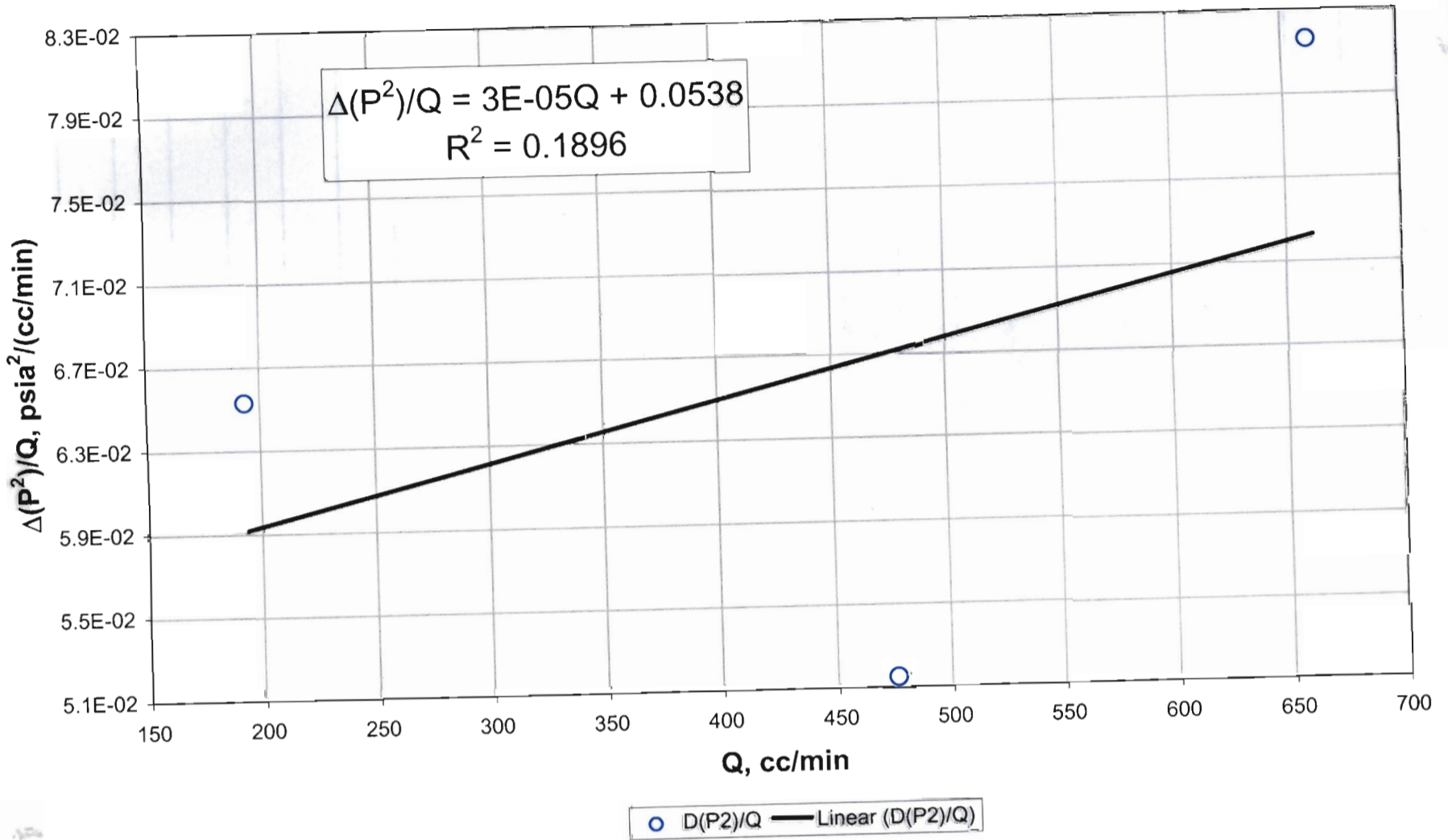


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 D Transect: Drillhole 41

RMM, 01/13/03

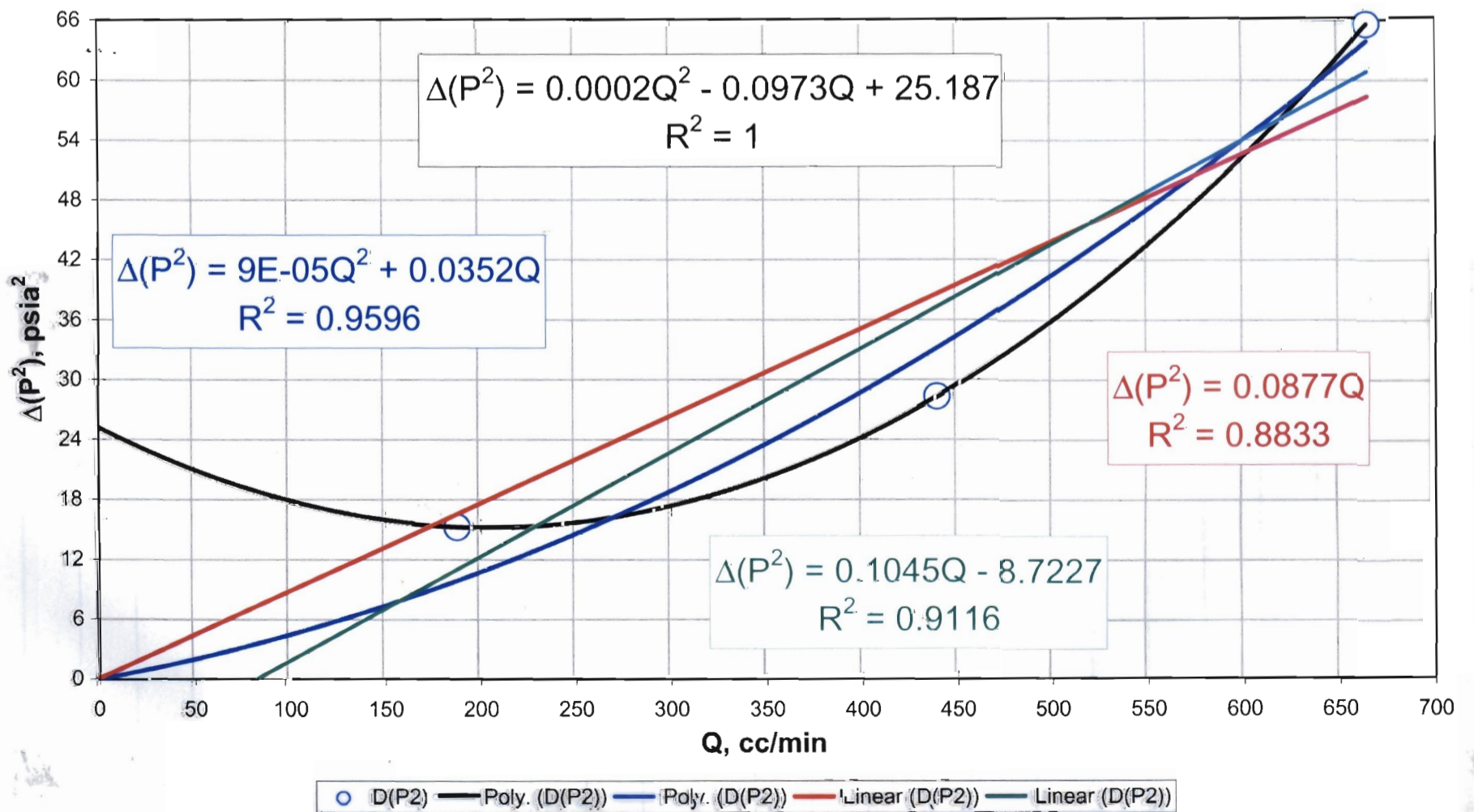


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 41



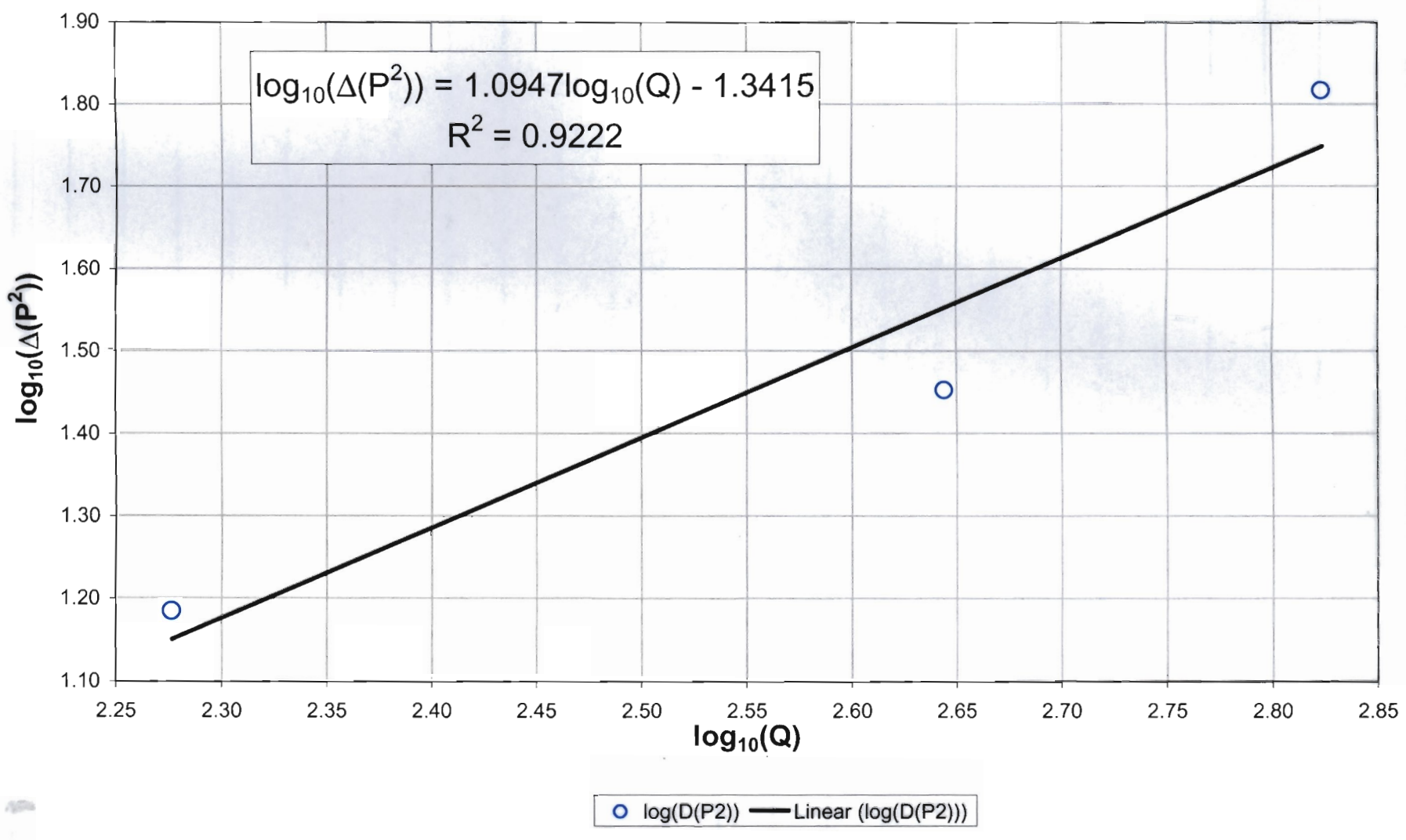
RNM, 01/13/03

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.
 D Transect: Drillhole 42



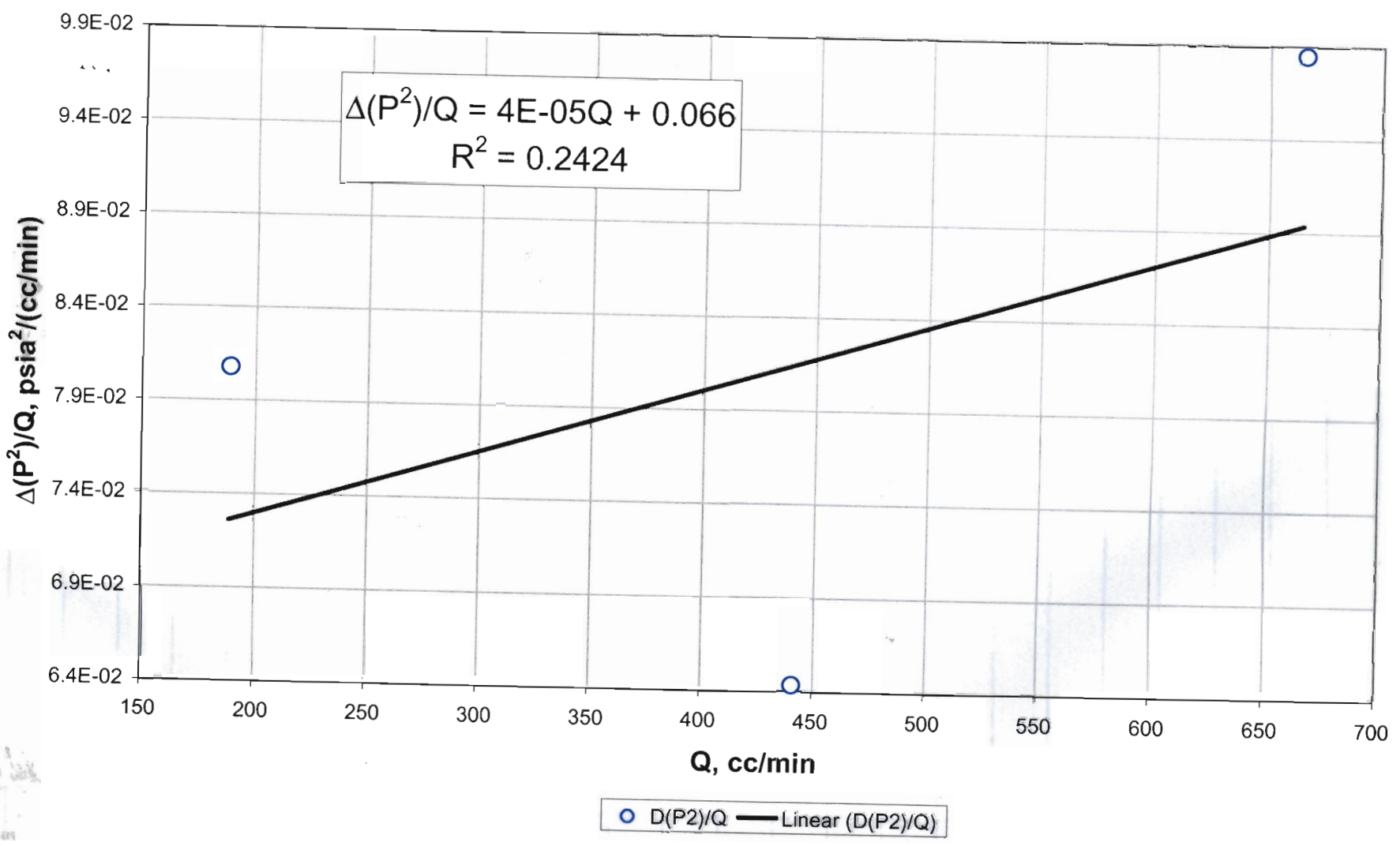
RNM, 01/13/03

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)
D Transect: Drillhole 42



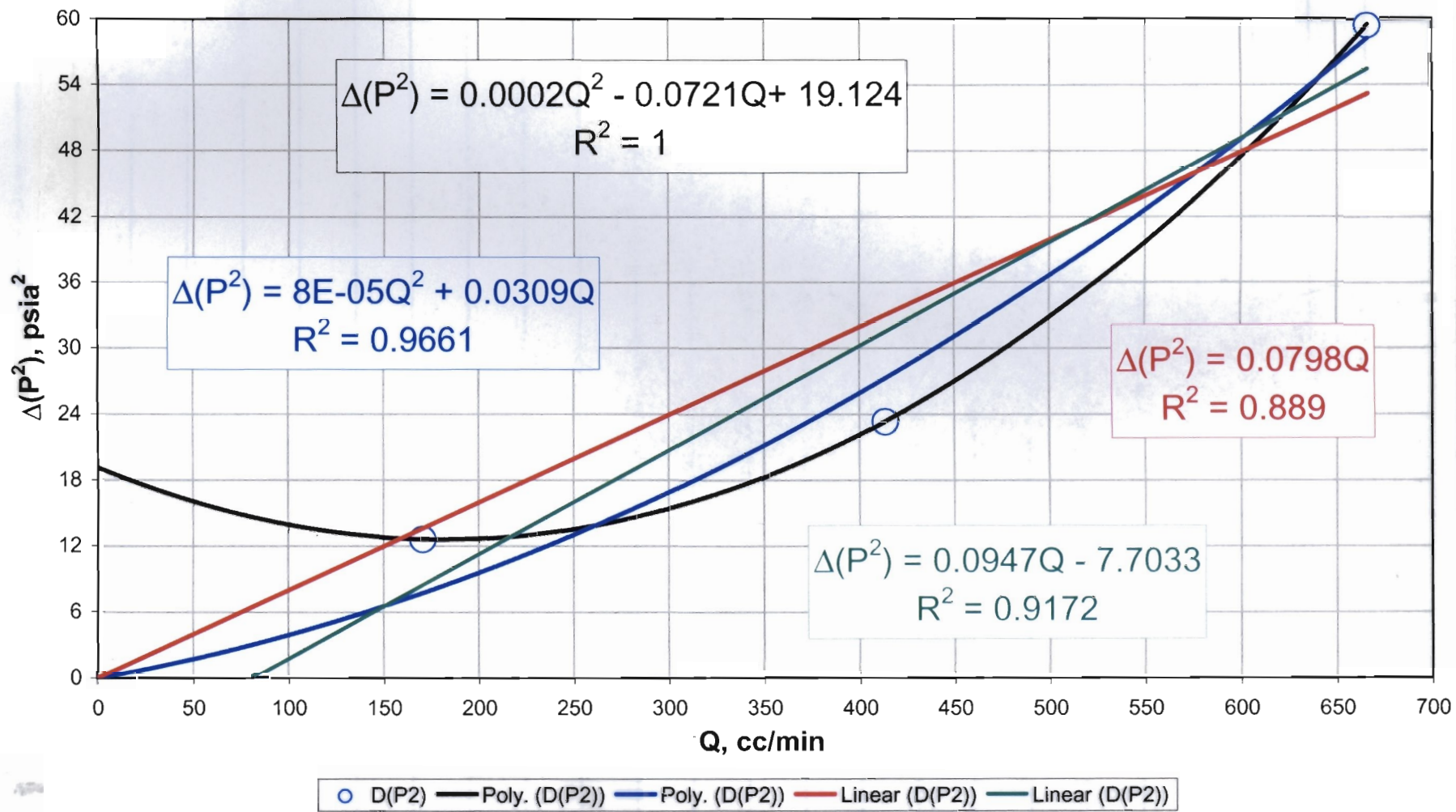
RNM, 01/13/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 42



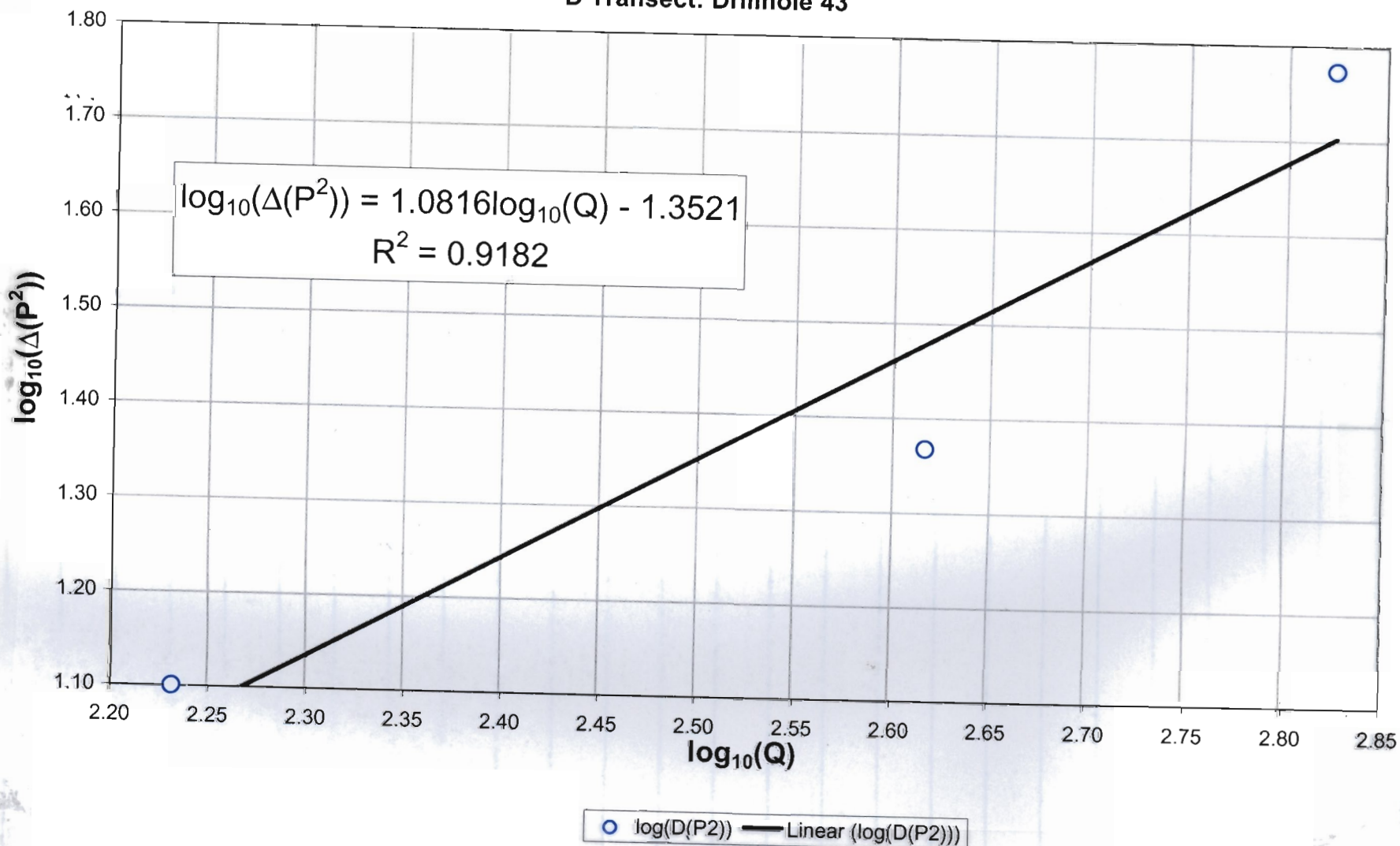
RNM, 01/13/03

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.
 D Transect: Drillhole 43



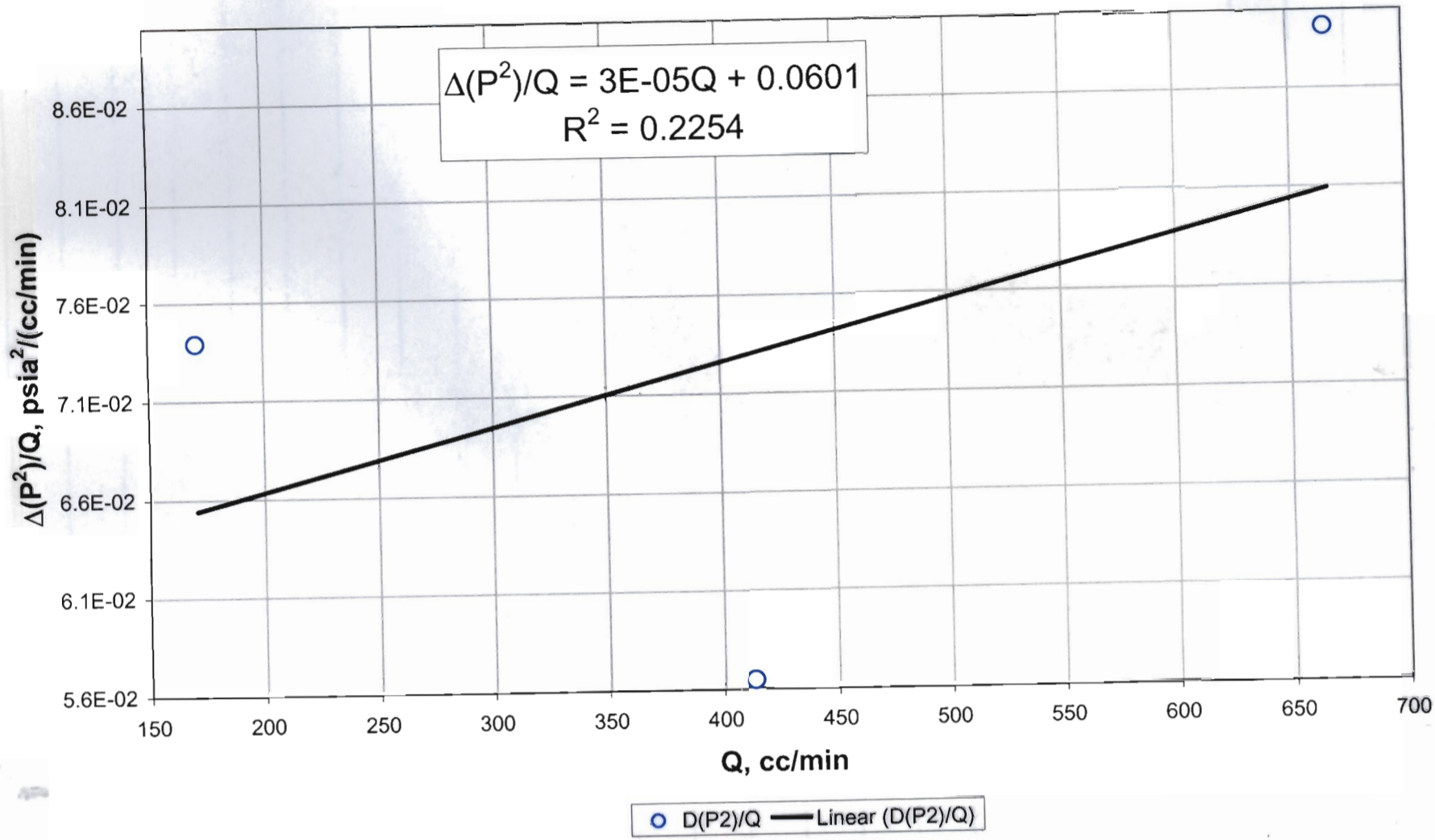
RMM, 01/13/03

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)
 D Transect: Drillhole 43

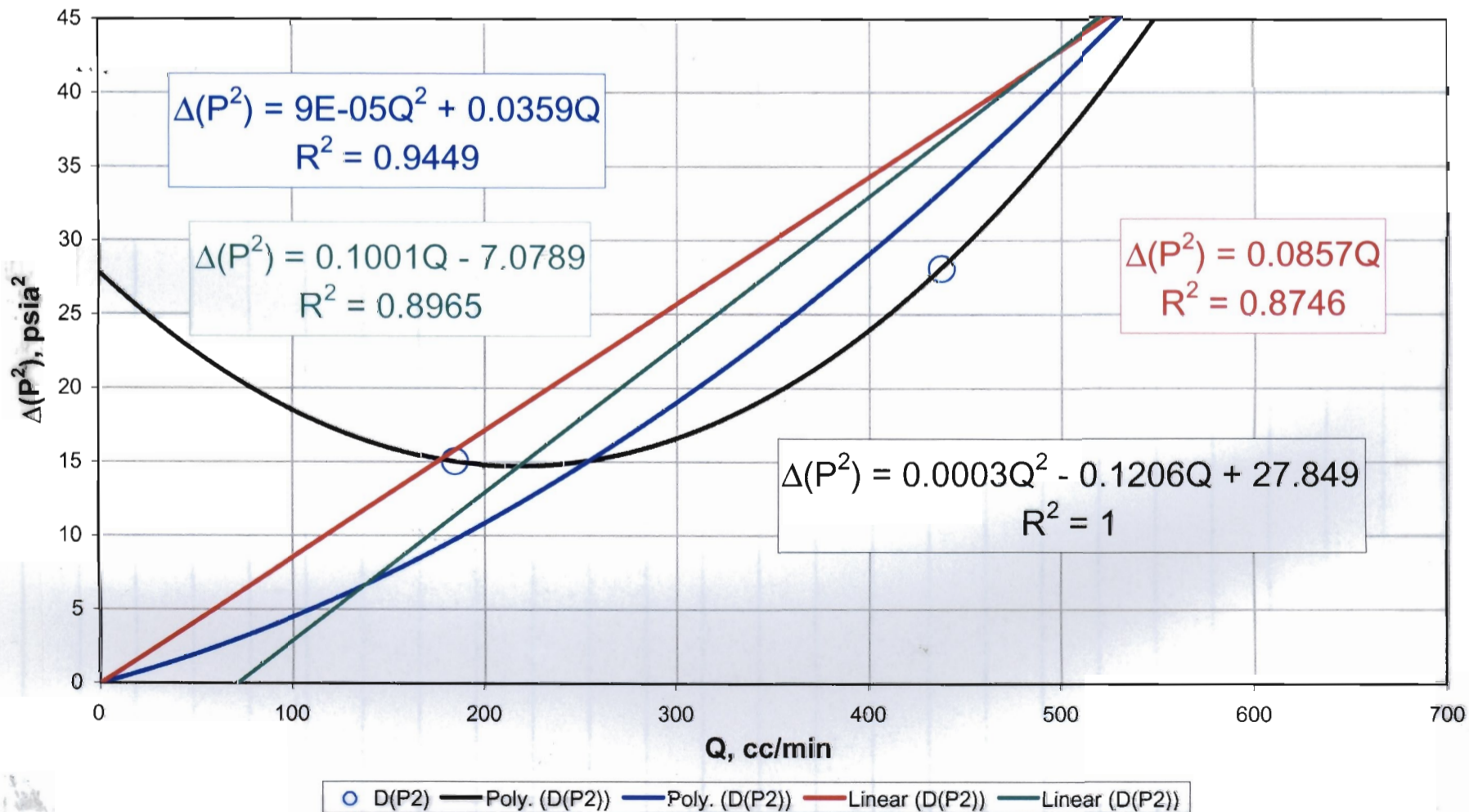


RMM, 01/13/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 43

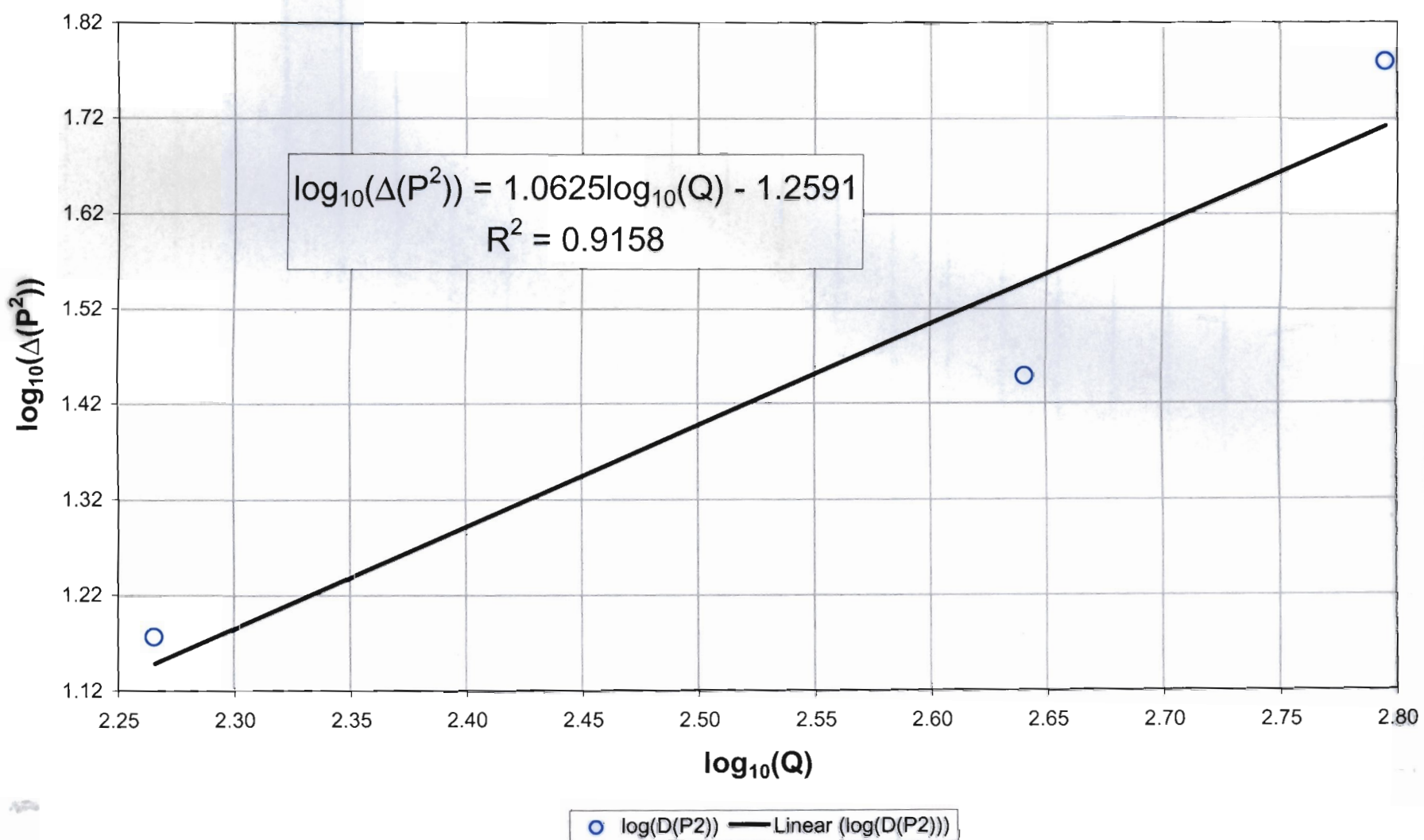


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 44



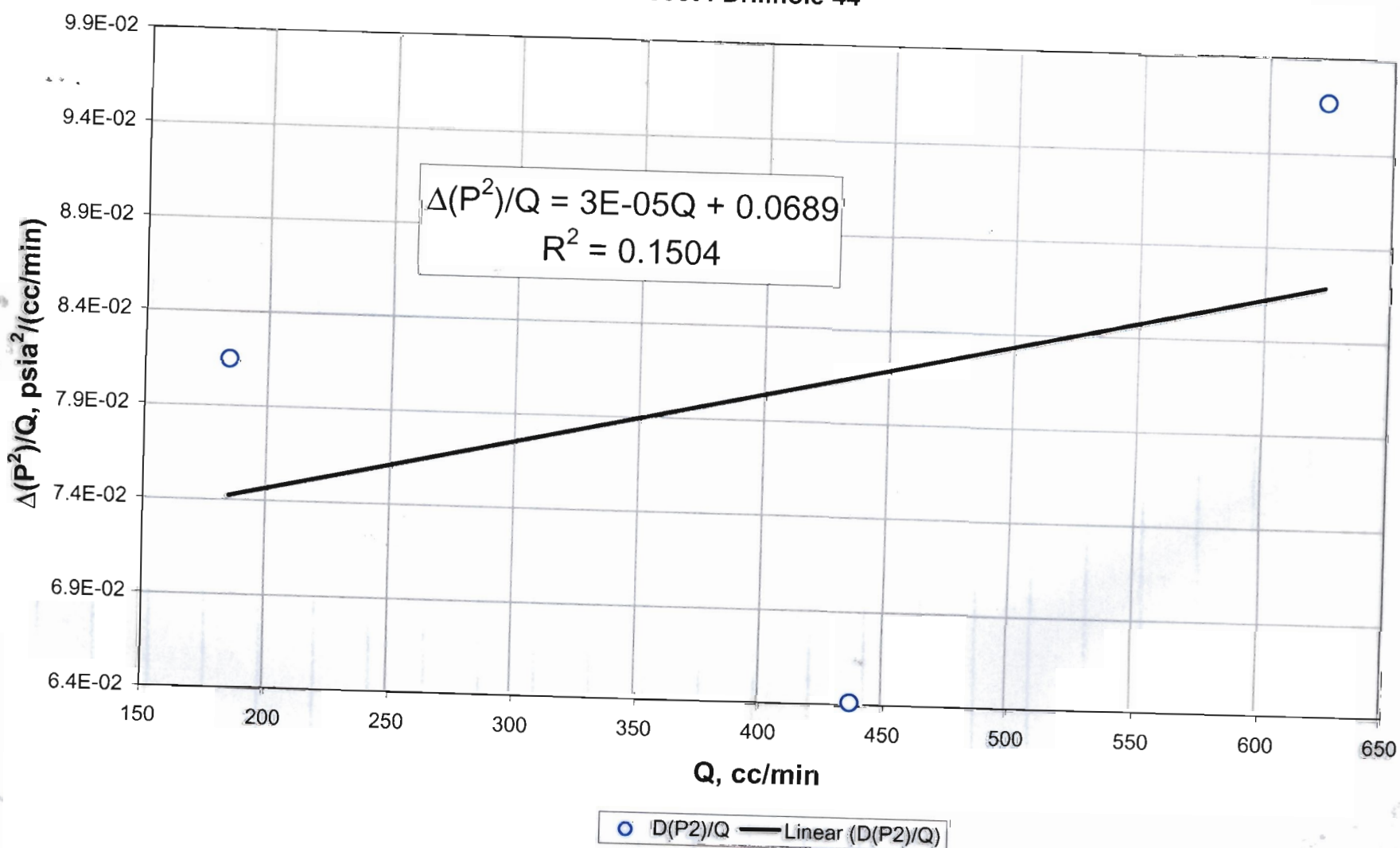
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
D Transect: Drillhole 44

RNM, 01/13/03

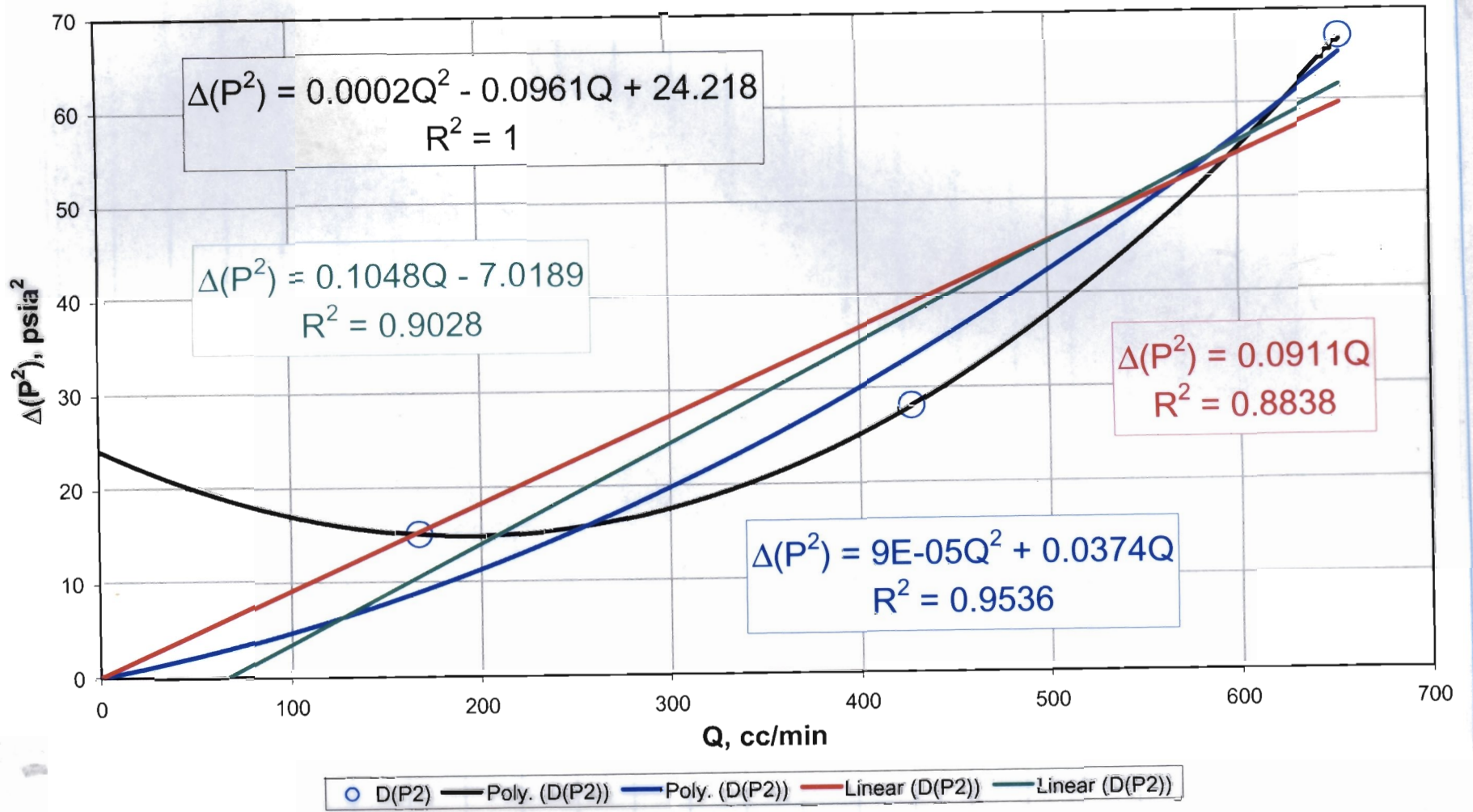


Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 44

RNM, 01/13/03

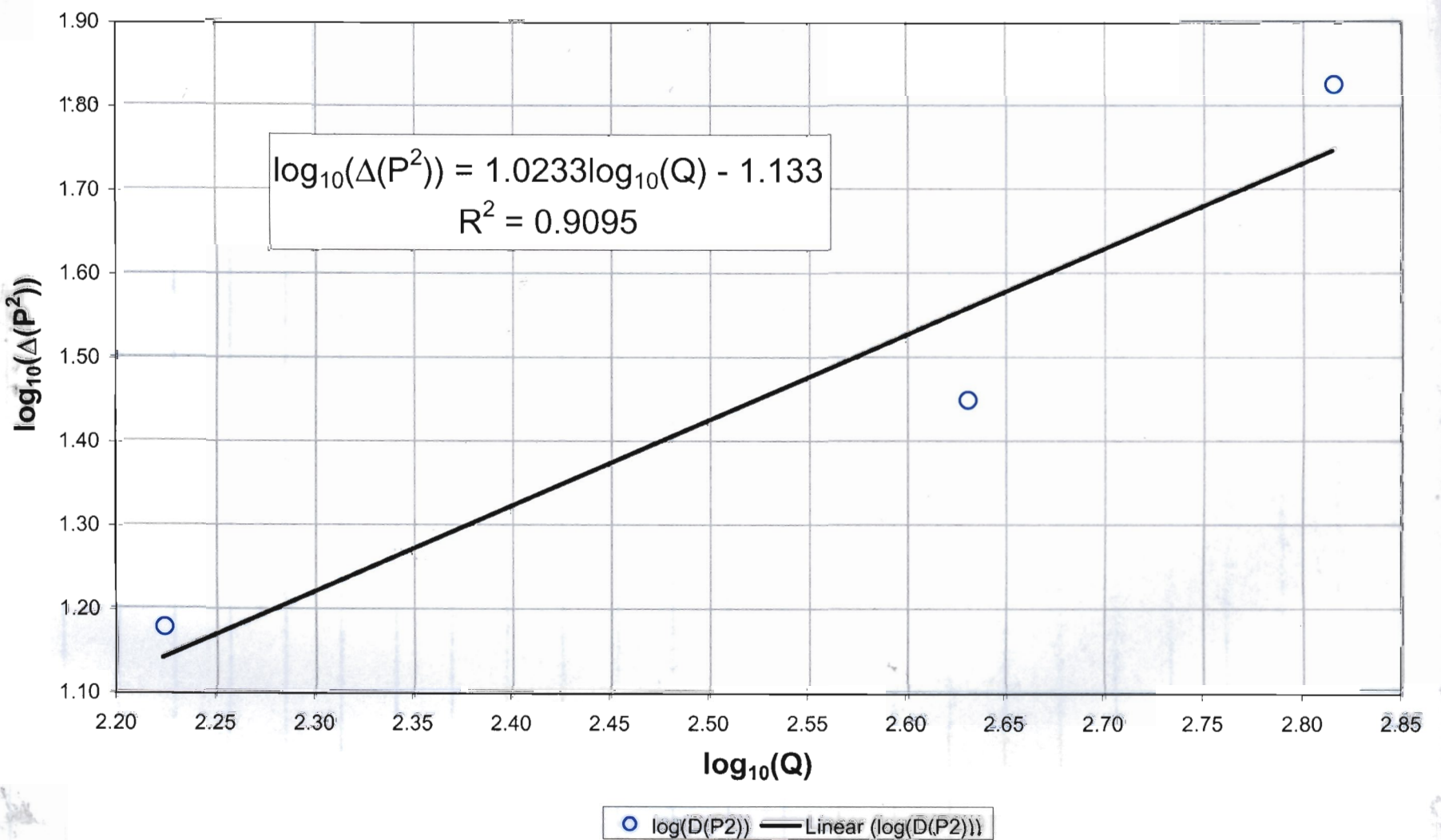


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 45



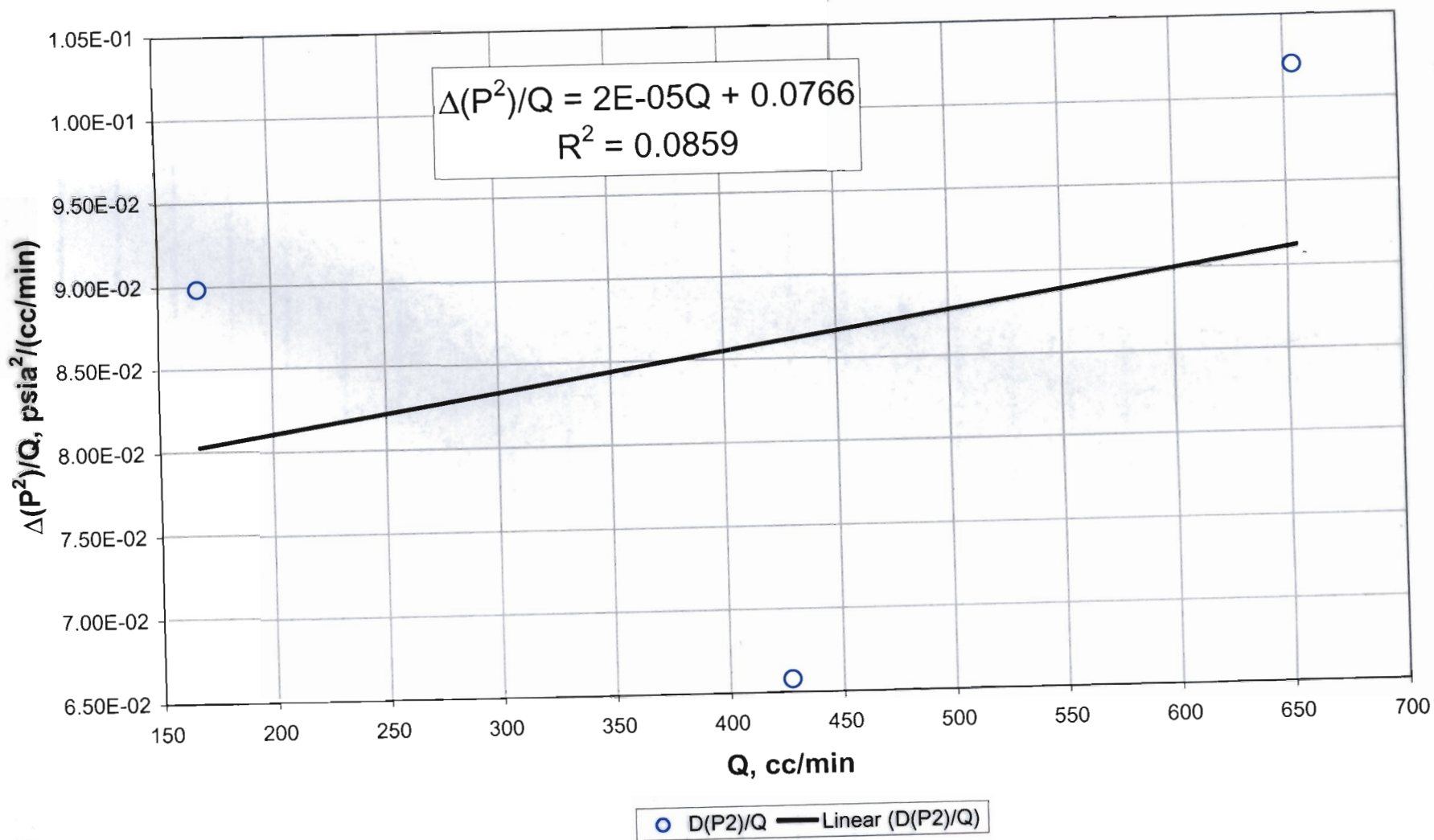
RMM, 01/13/03

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)
 D Transect: Drillhole 45



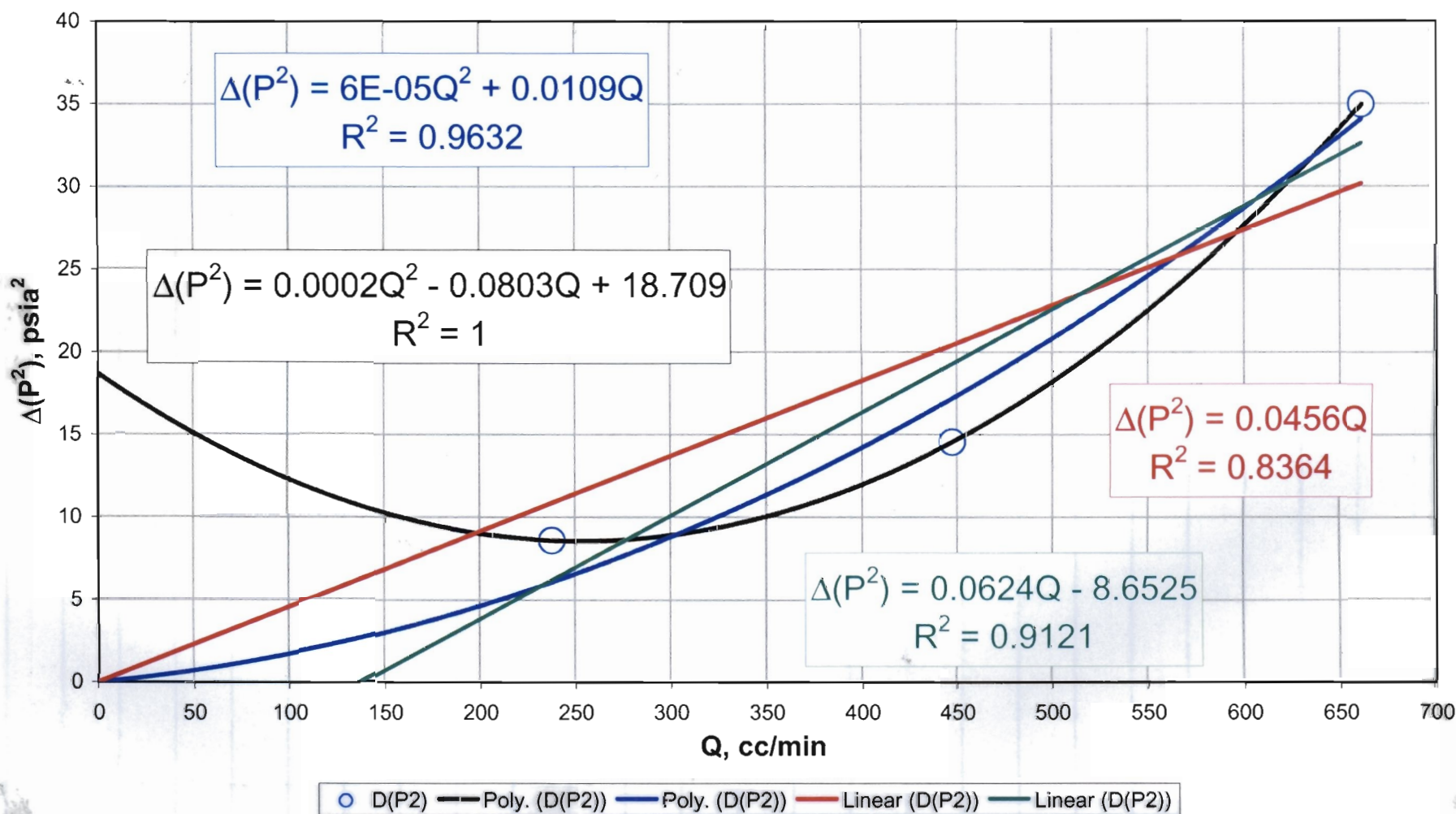
RMM, 01/13/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 45



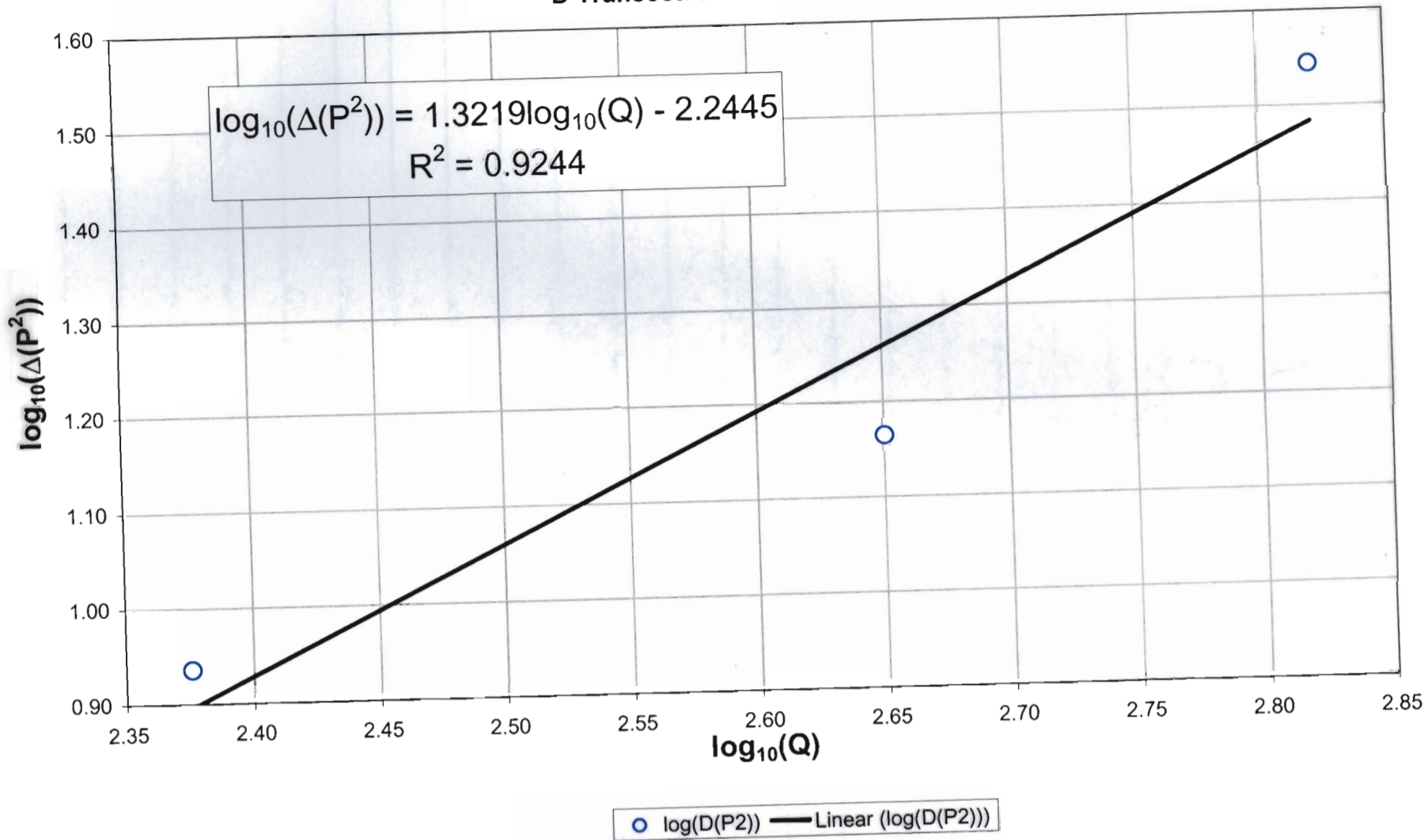
RNM, 01/13/03

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.
 D Transect: Drillhole 46



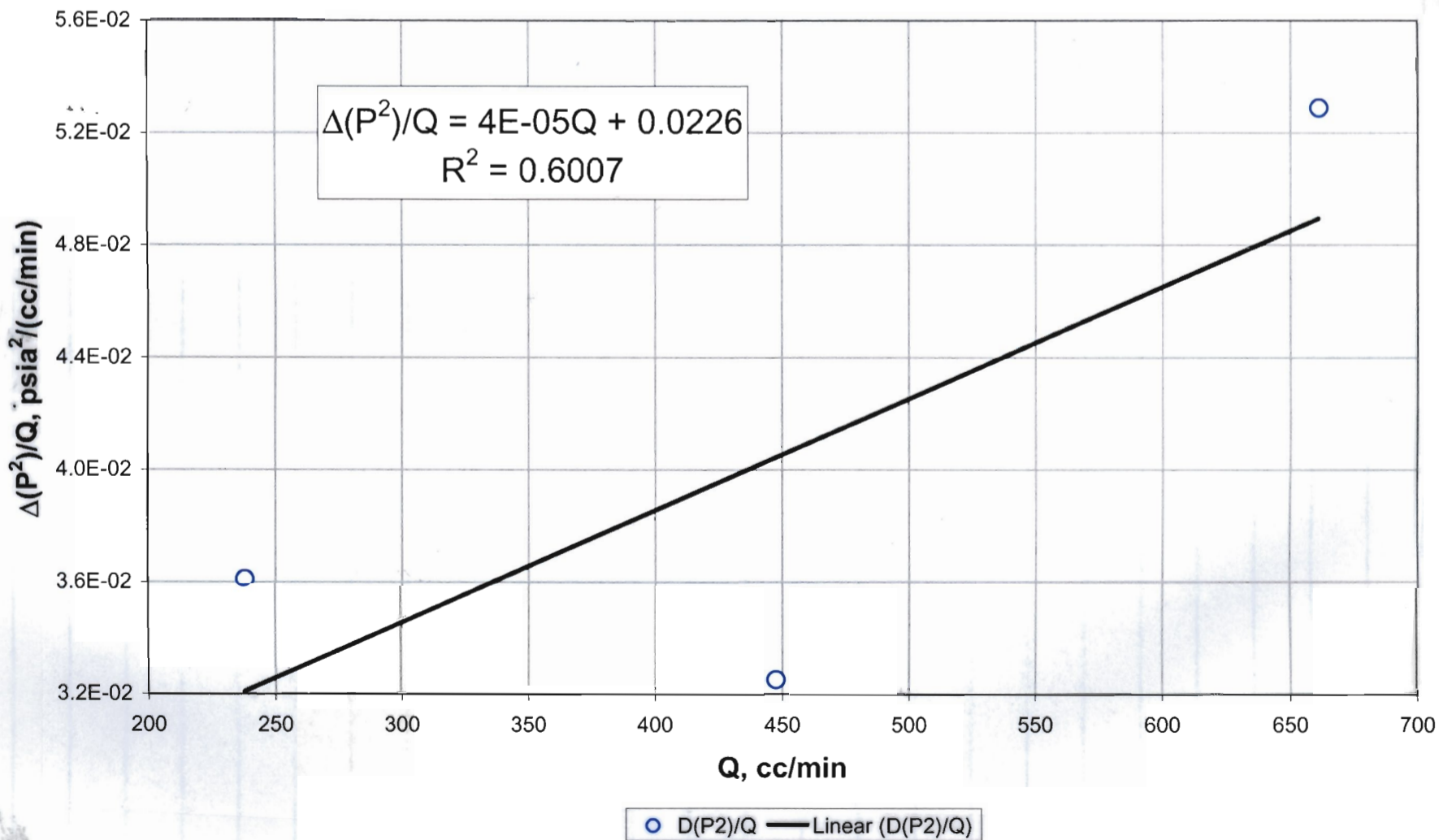
RNM, 01/13/03

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)
D Transect: Drillhole 46



RMM, 01/13/03

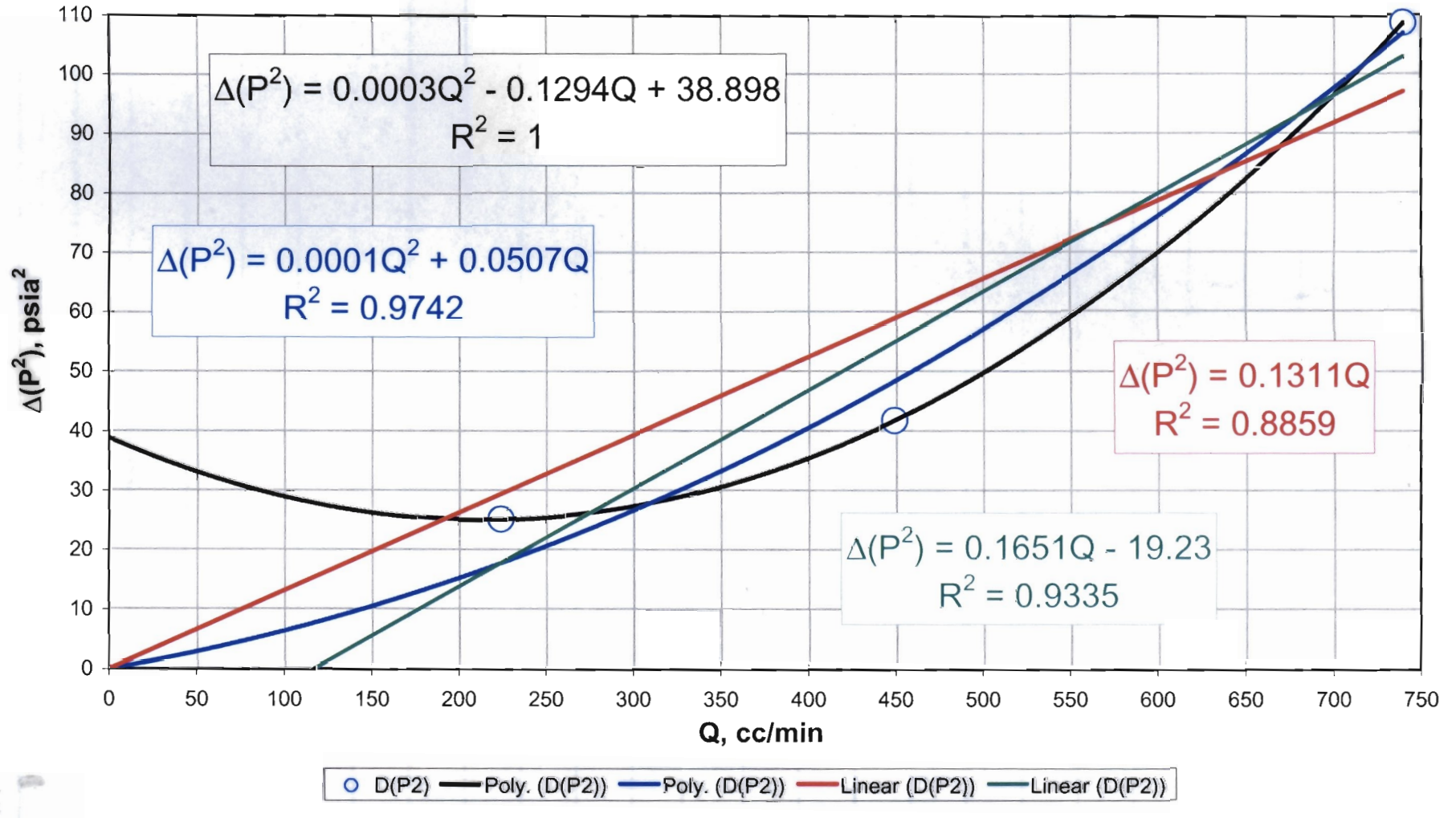
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 46



RMM, 01/13/03

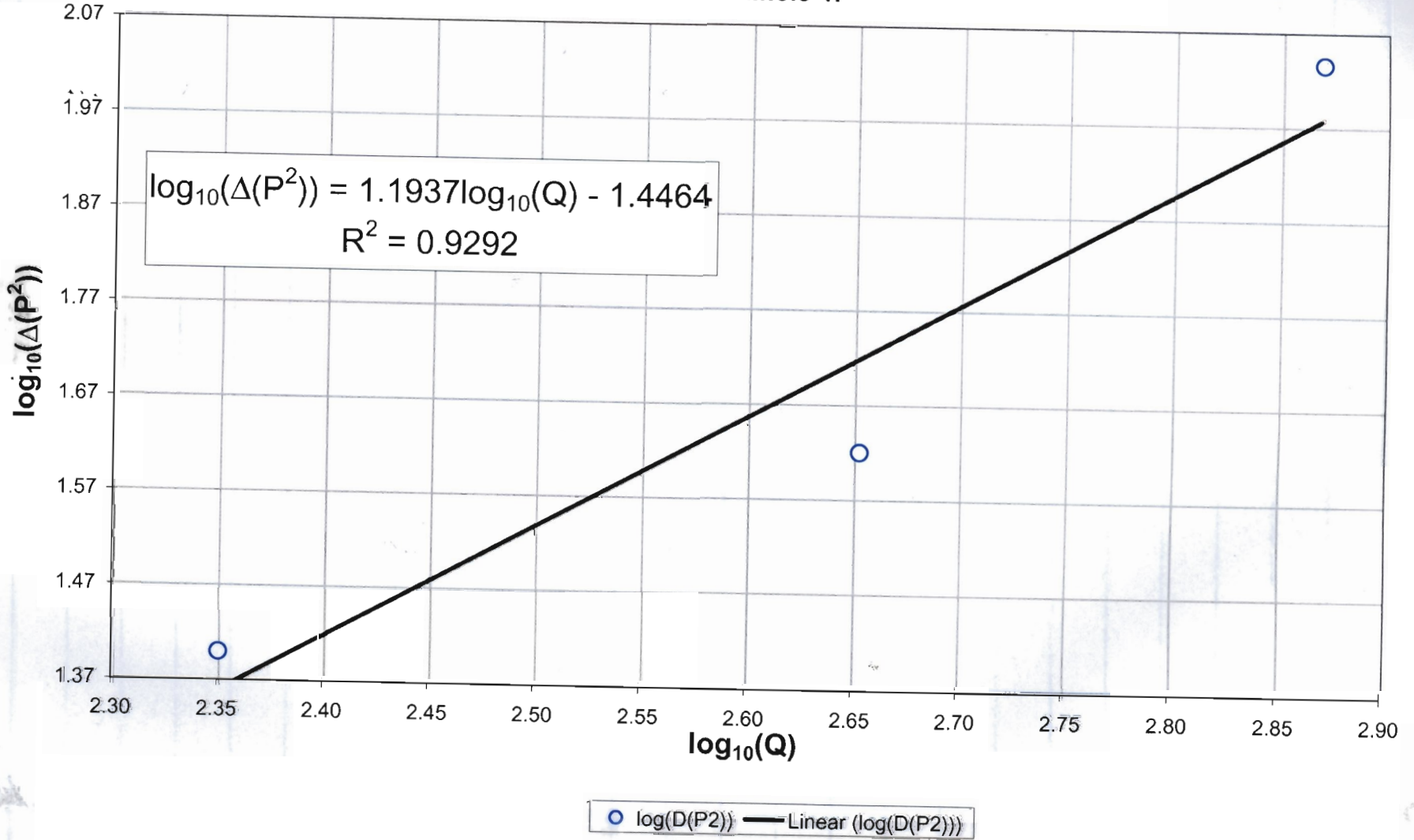
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 47

RMM, 01/13/03

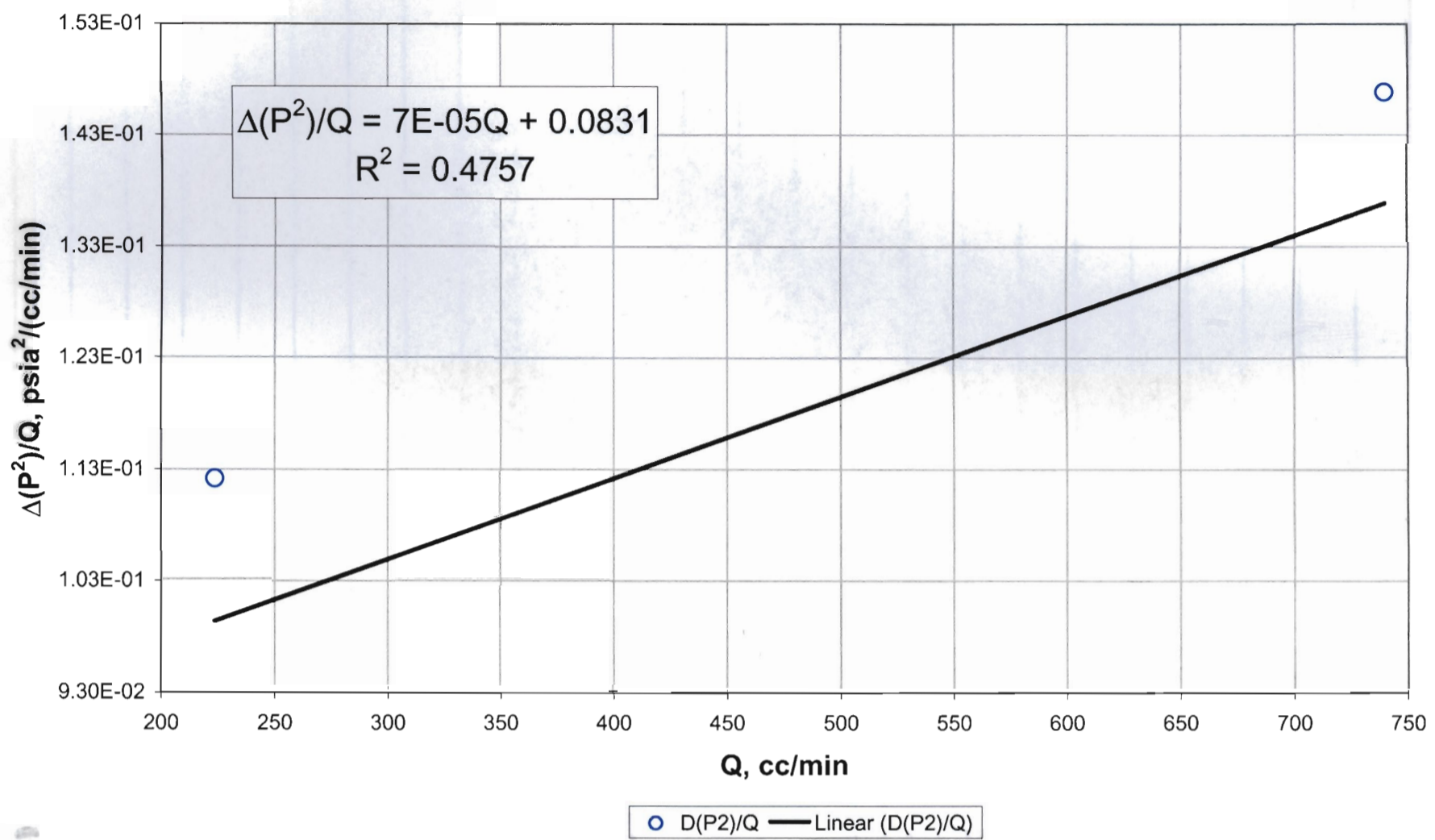


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 D Transect: Drillhole 47

RMM, 01/13/03

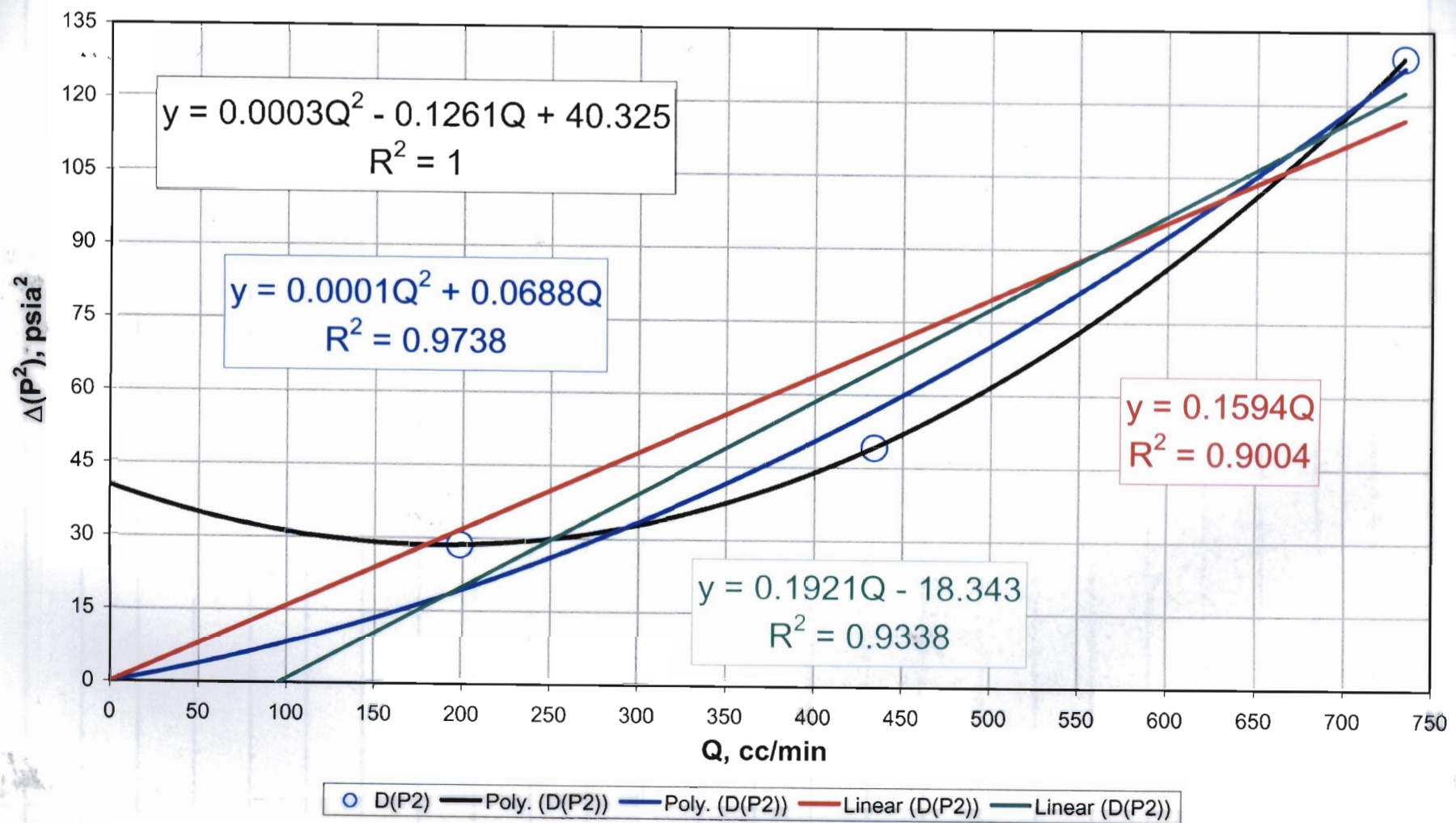


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 47



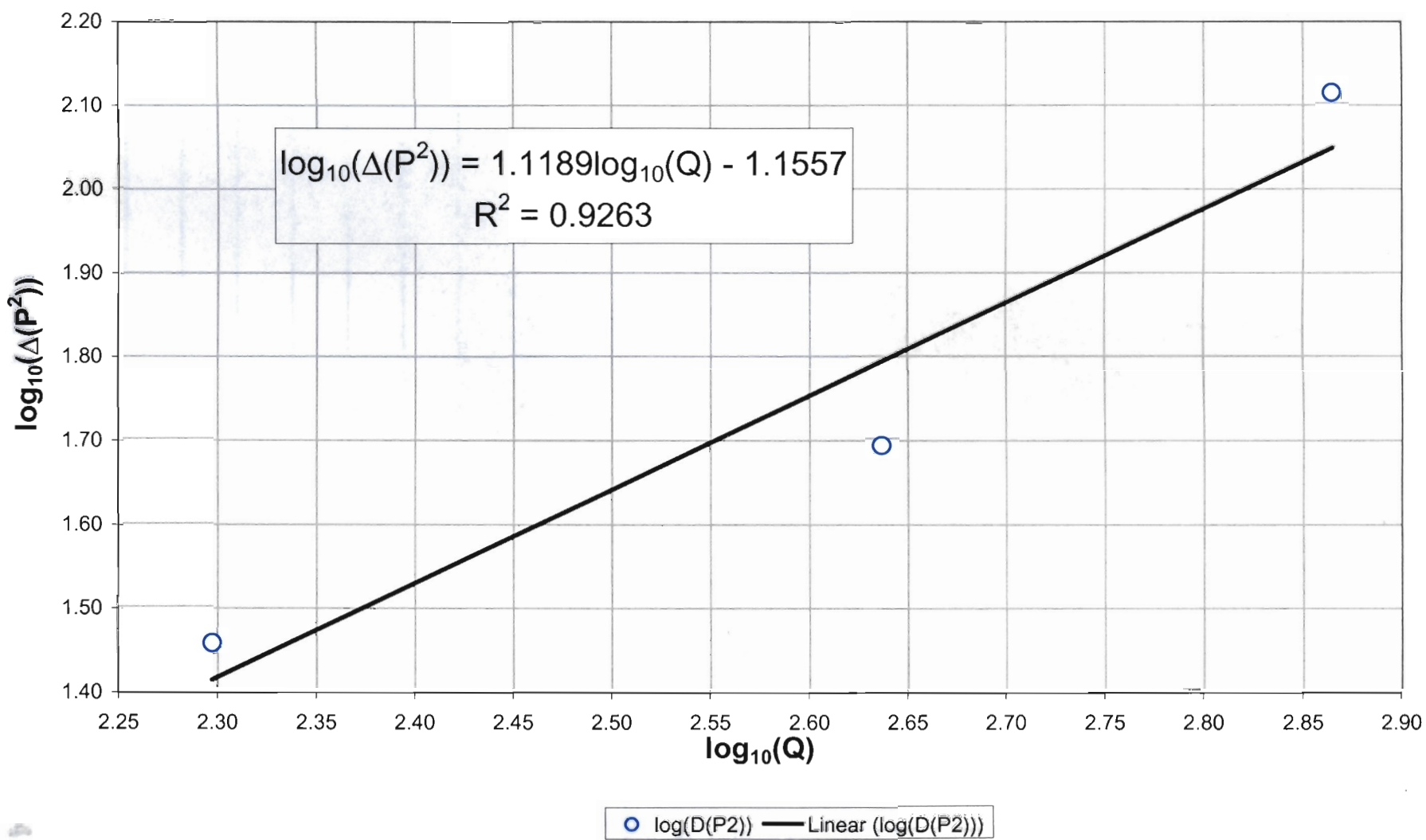
RMN, 01/13/03

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.
 D Transect: Drillhole 48



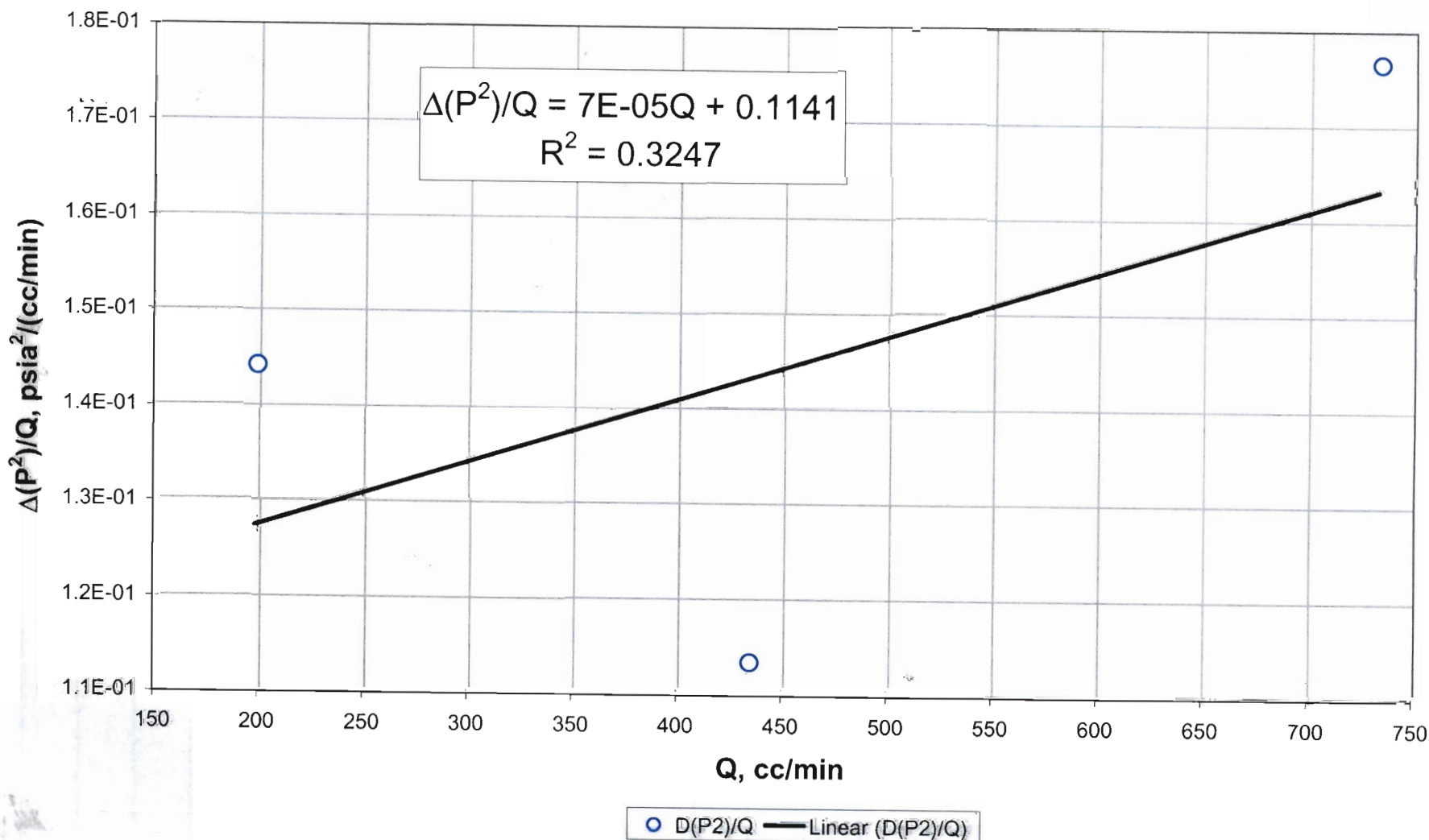
RMN, 01/13/03

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)
D Transect: Drillhole 48



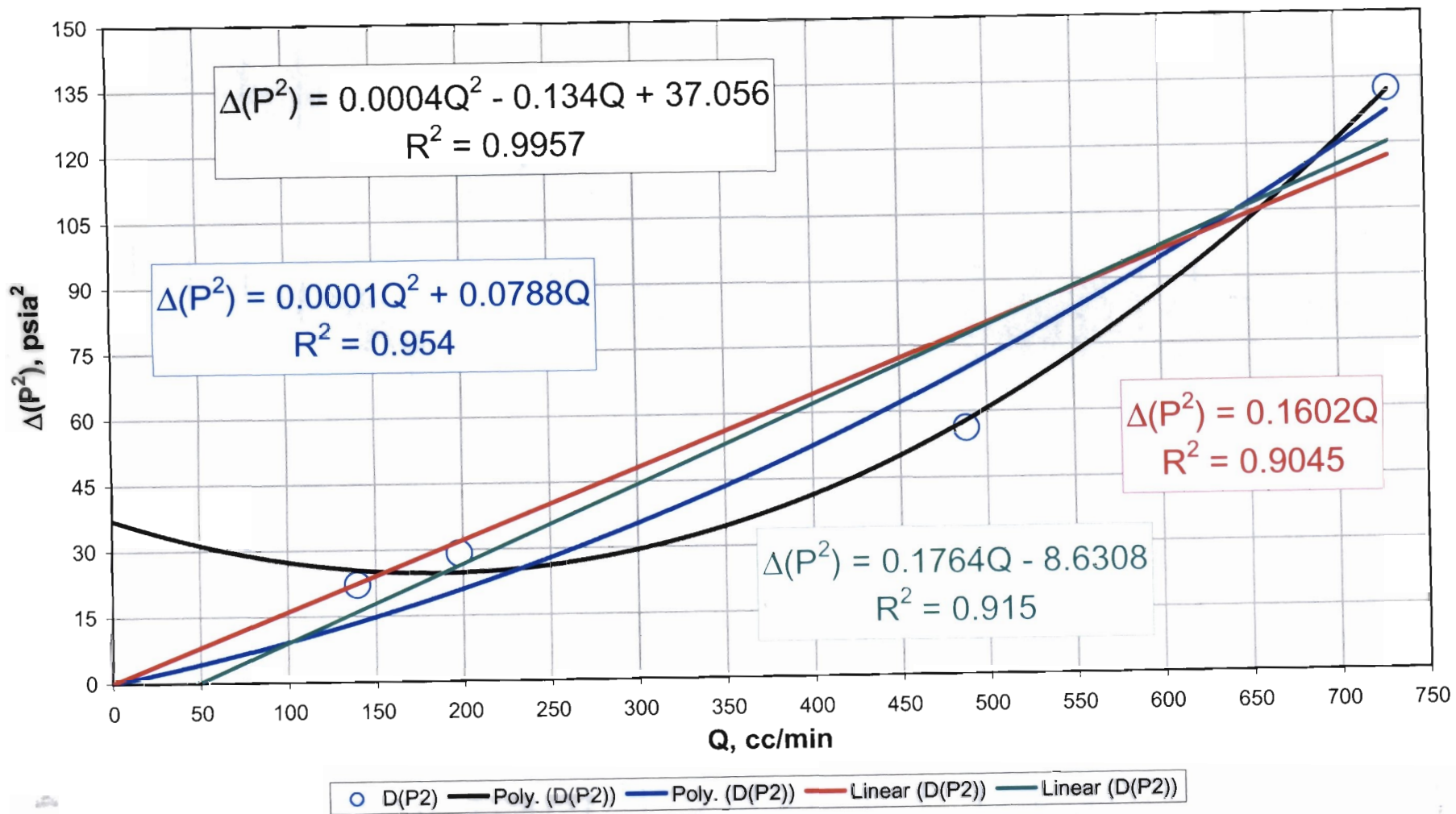
RNM, 01/13/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 48



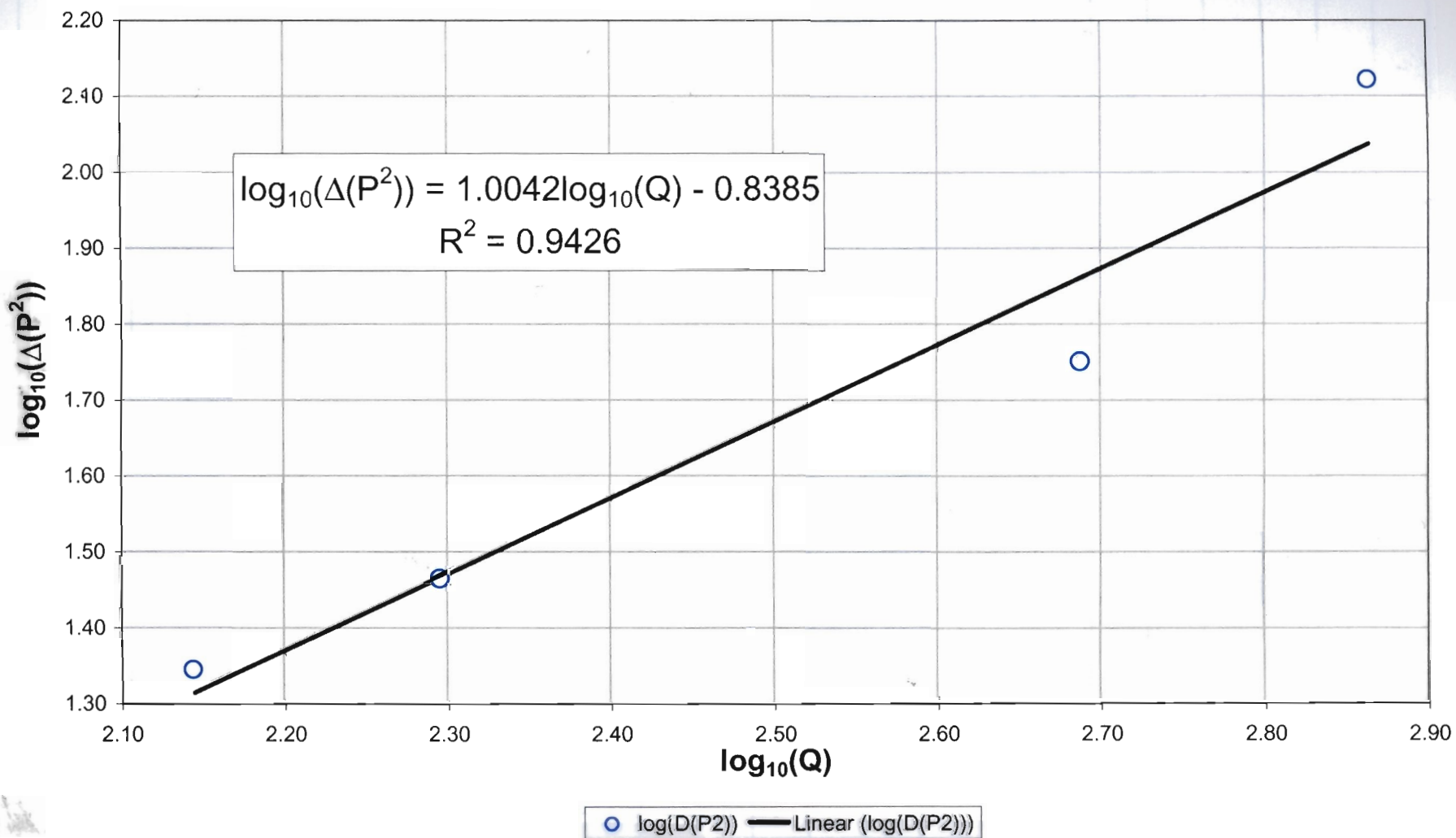
RNM, 01/13/03

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.
 D Transect: Drillhole 49



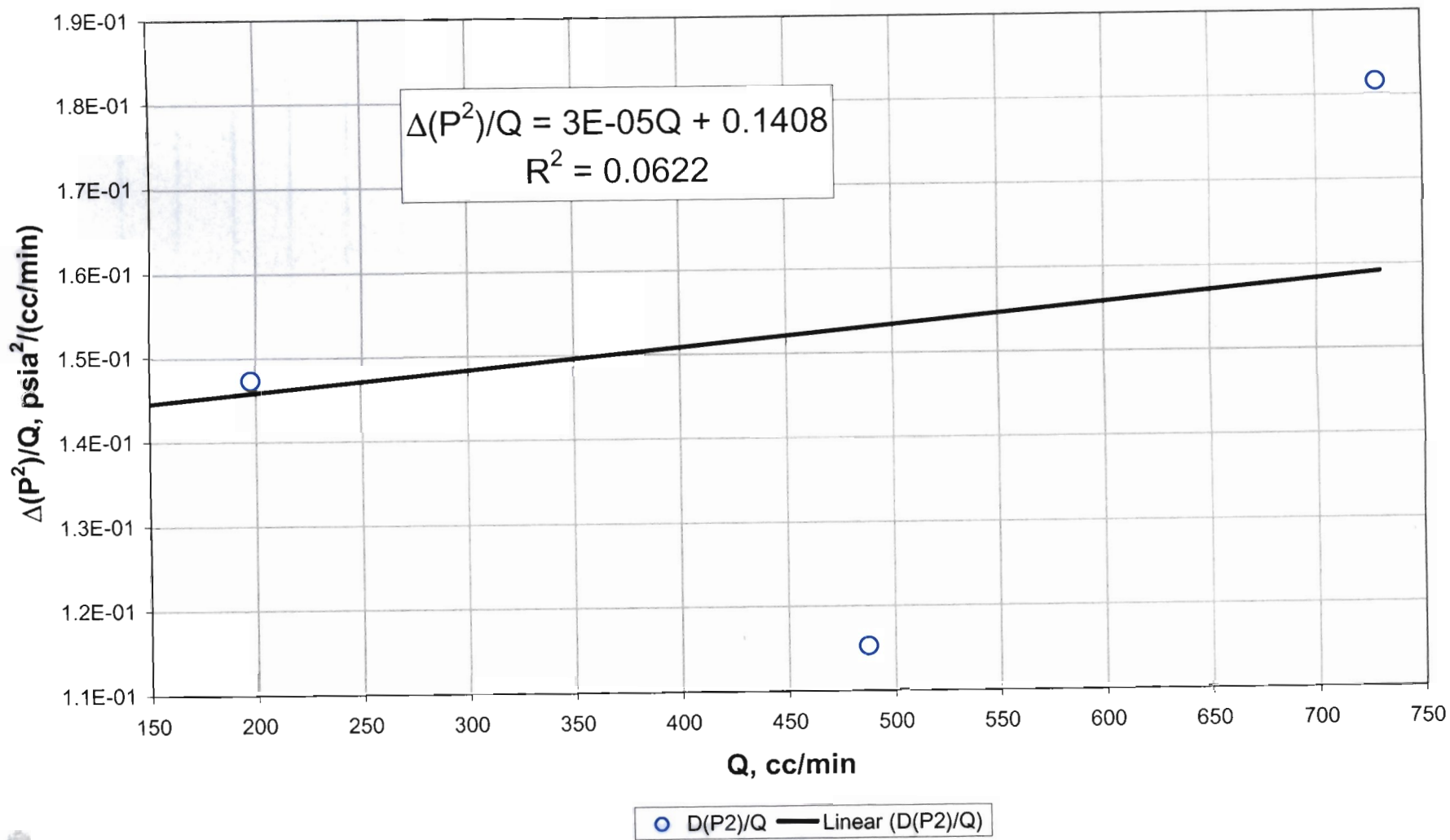
RNM, 01/14/03

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)
 D Transect: Drillhole 49



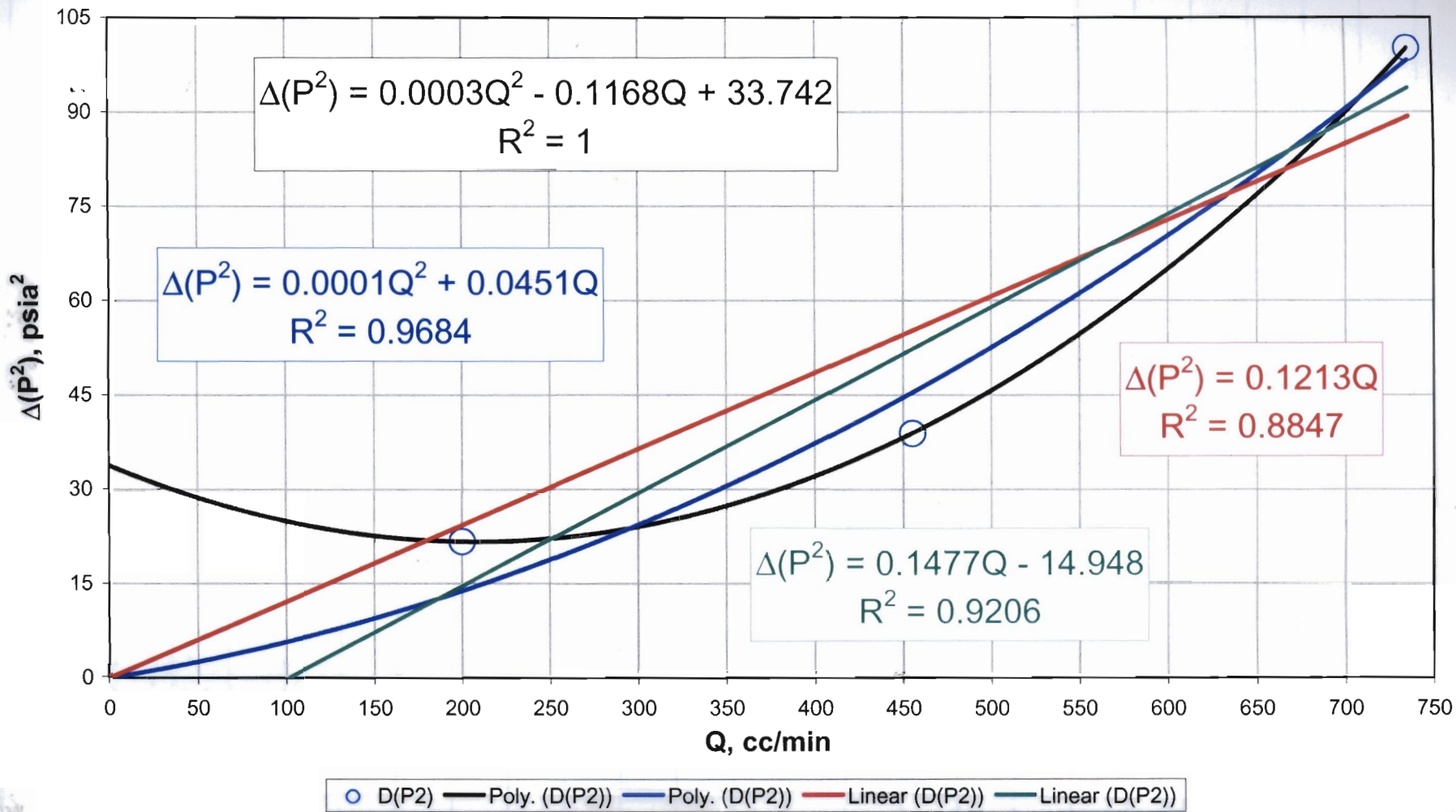
RNM, 01/14/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 49



RVM, 01/14/03

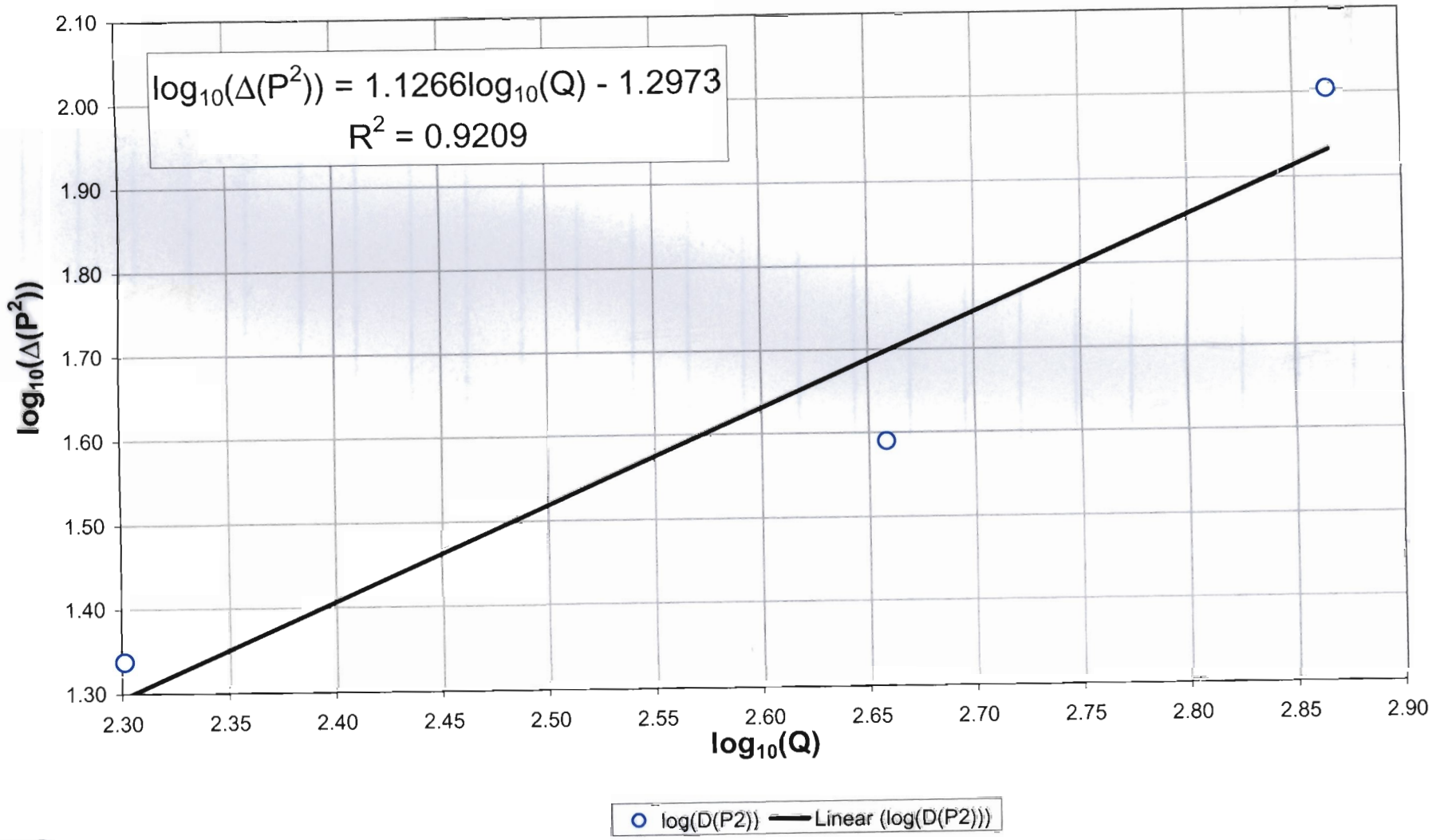
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 50



RVM, 01/14/03

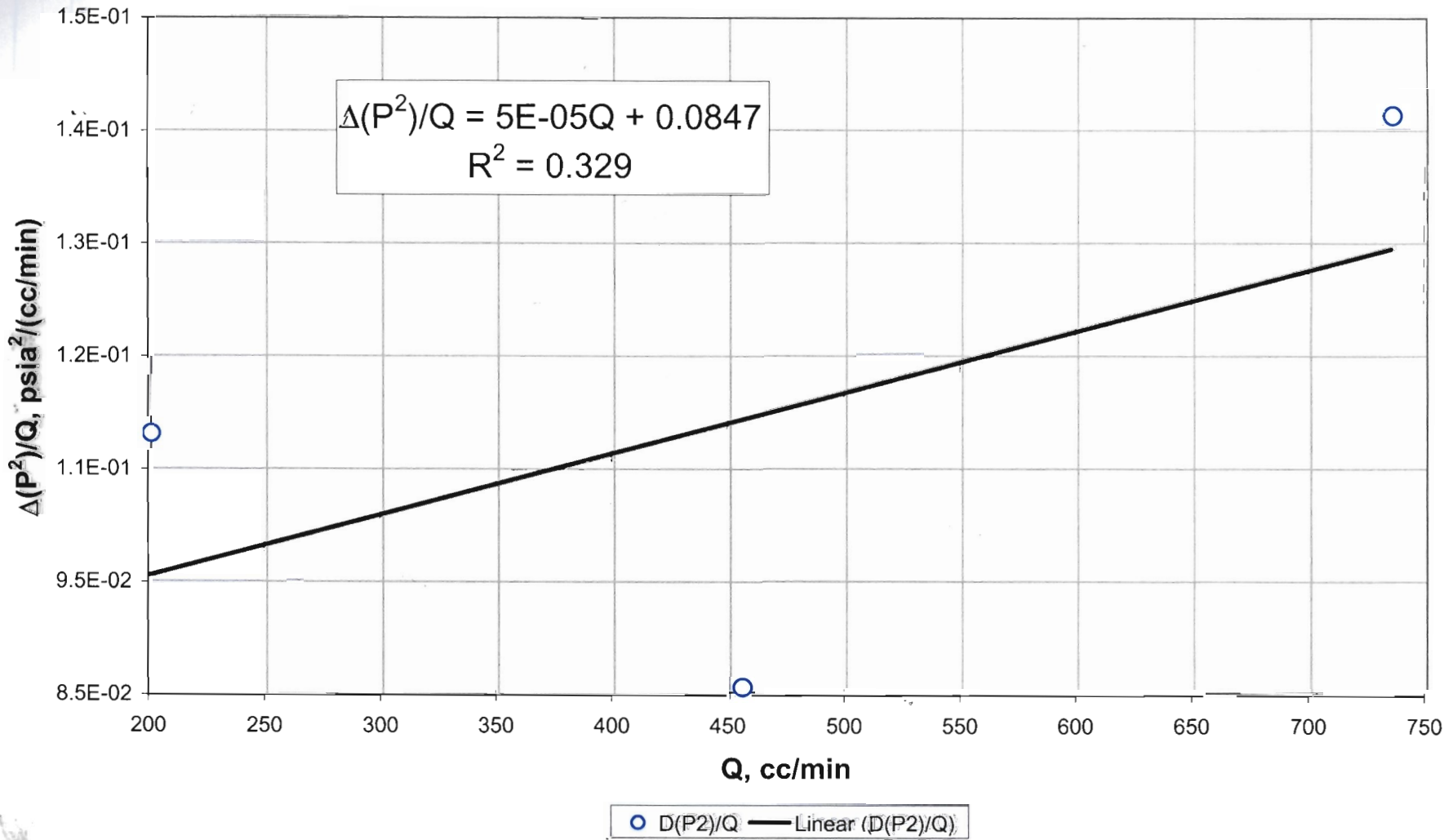
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)

D Transect: Drillhole 50



RWN, 01/14/03

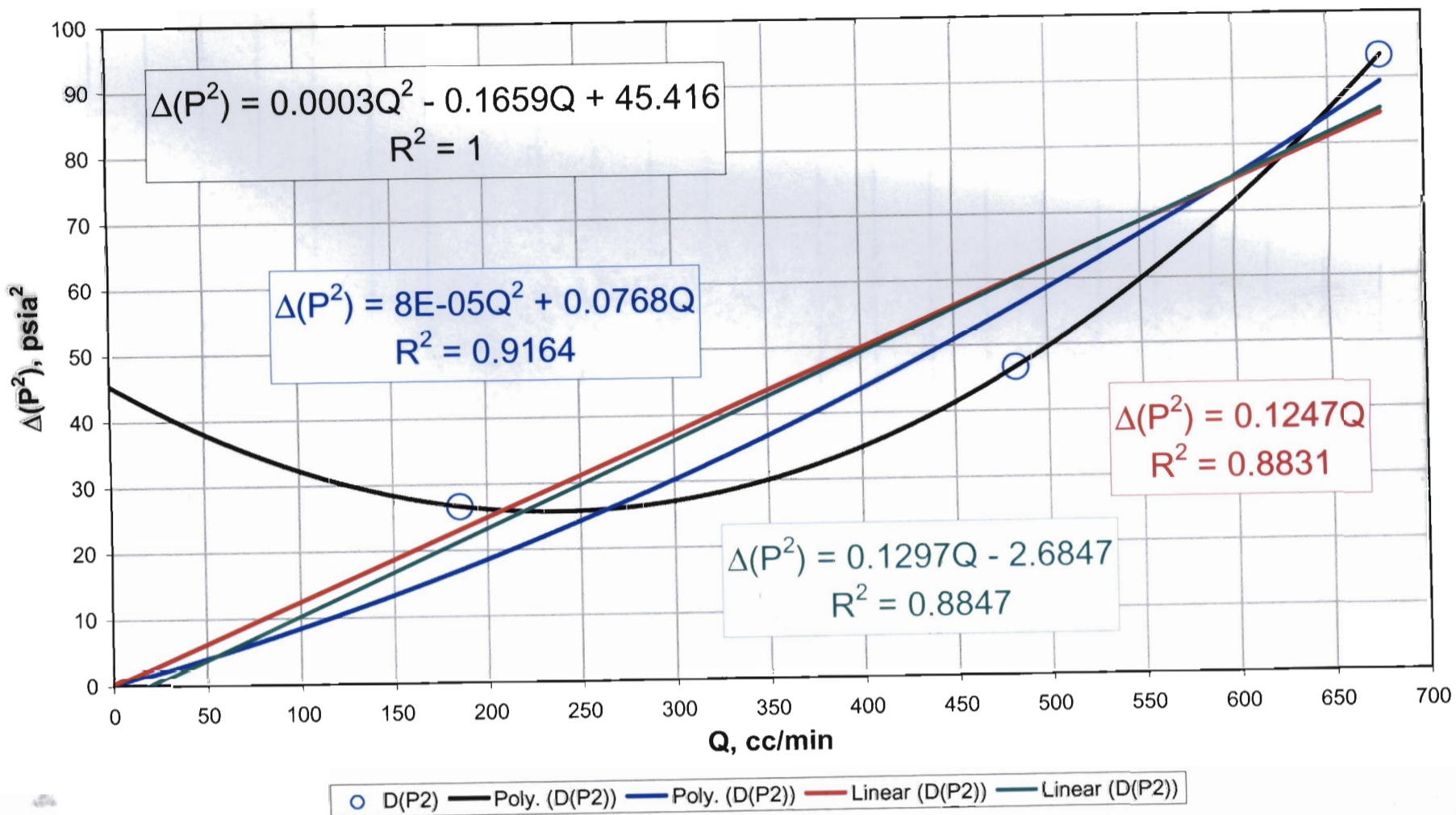
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 50



RWN, 01/14/03

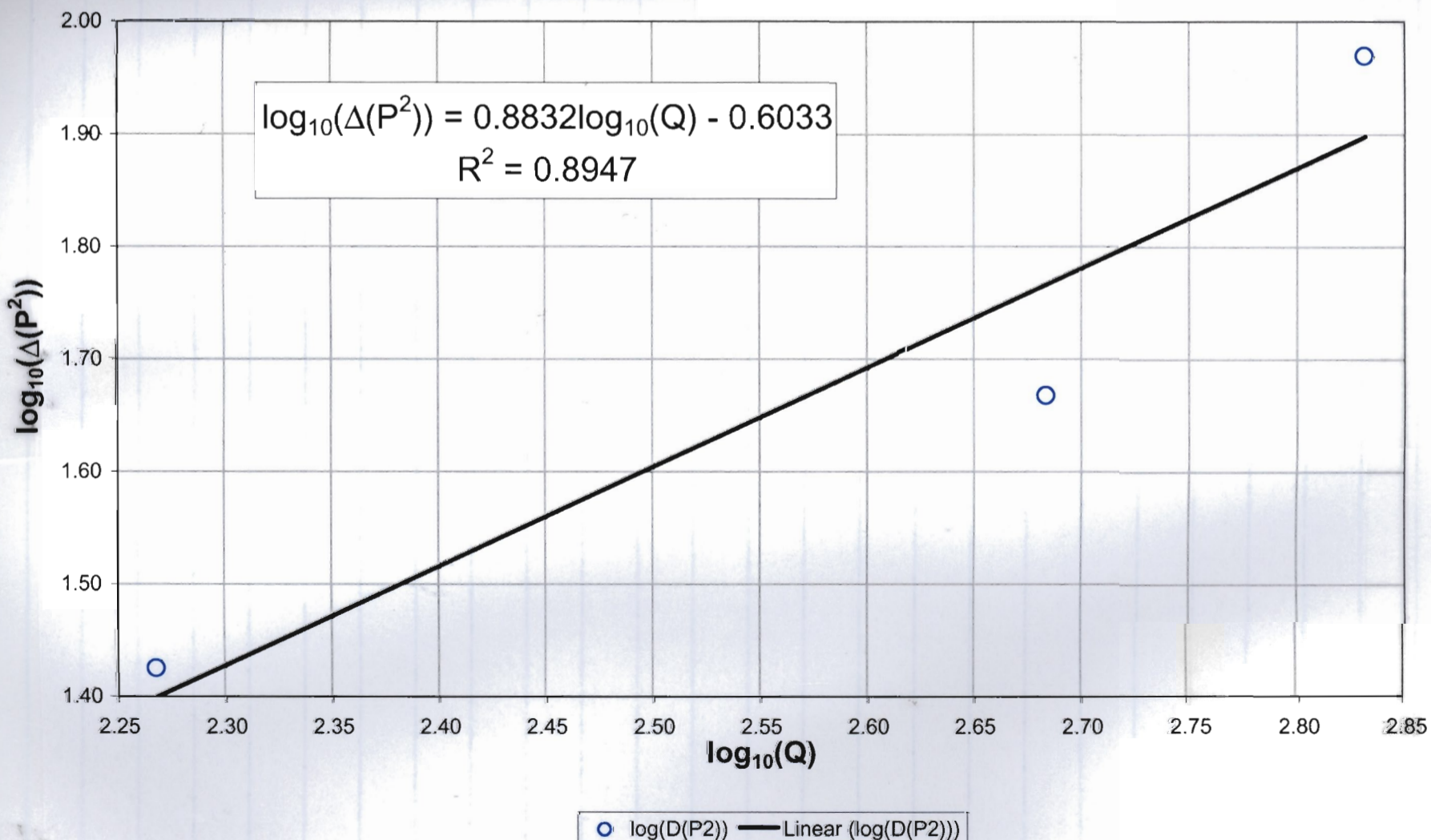
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 51

RNM: 01/14/03

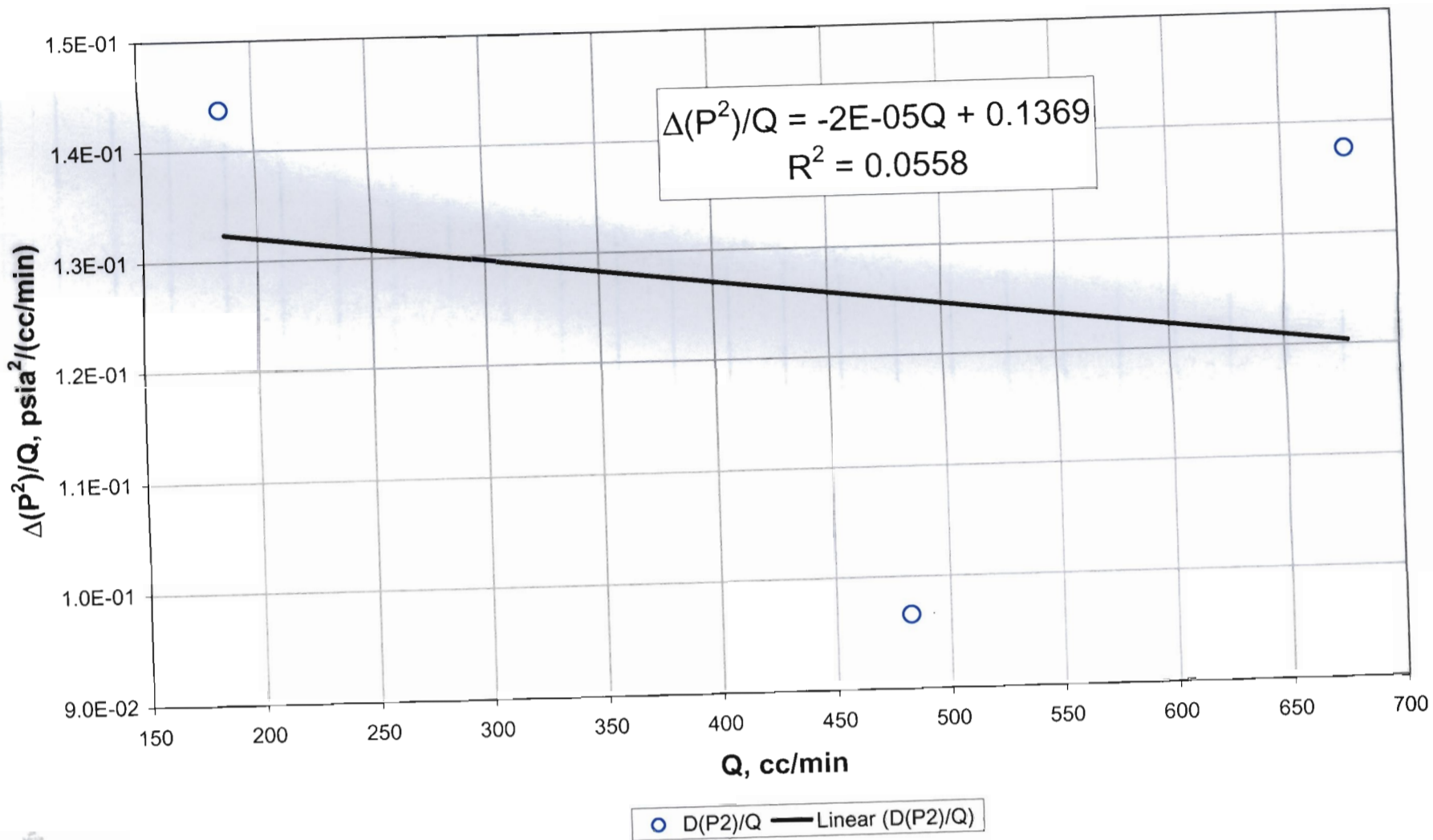


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
 D Transect: Drillhole 51

RNM: 01/14/03

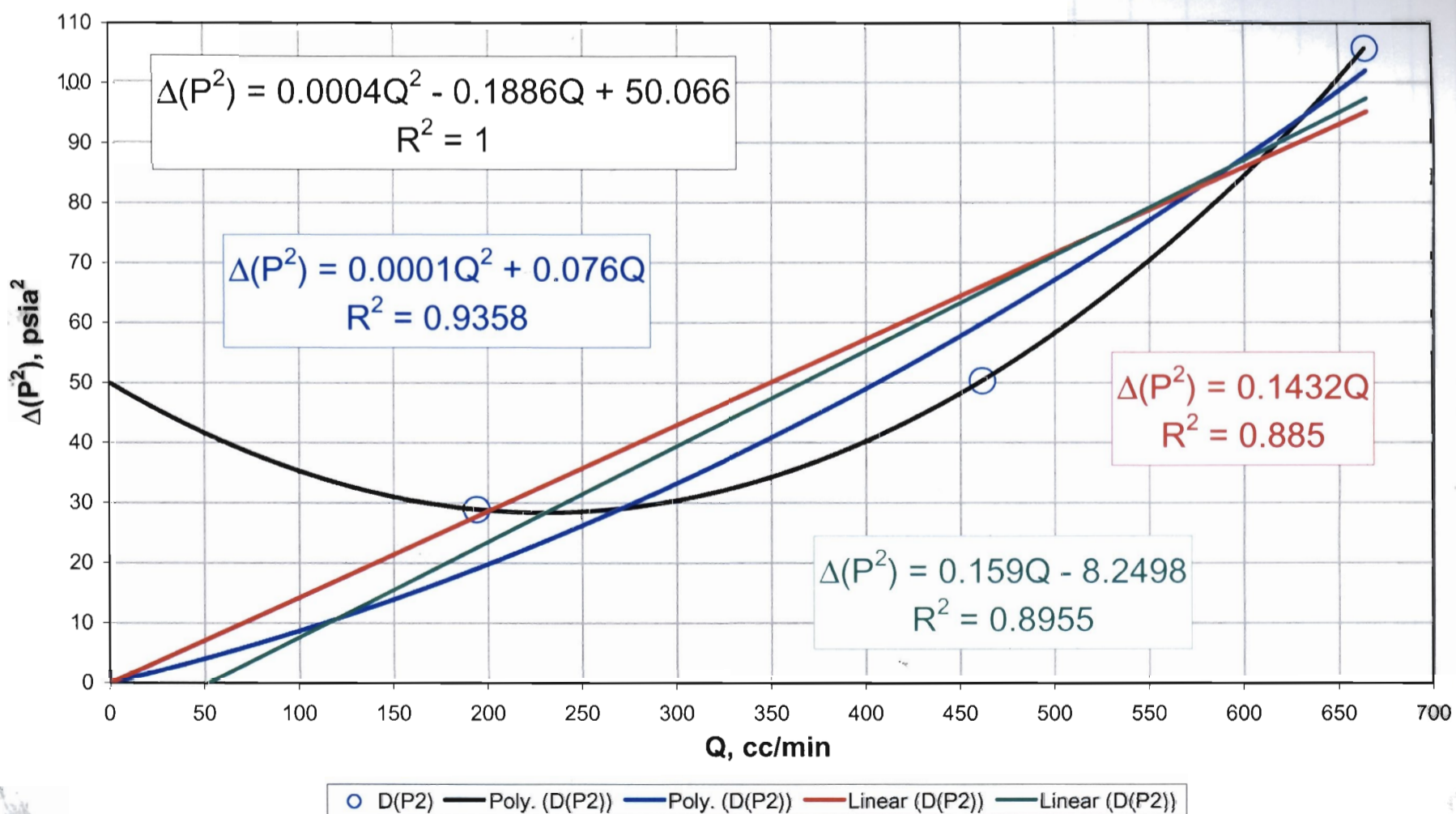


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 51



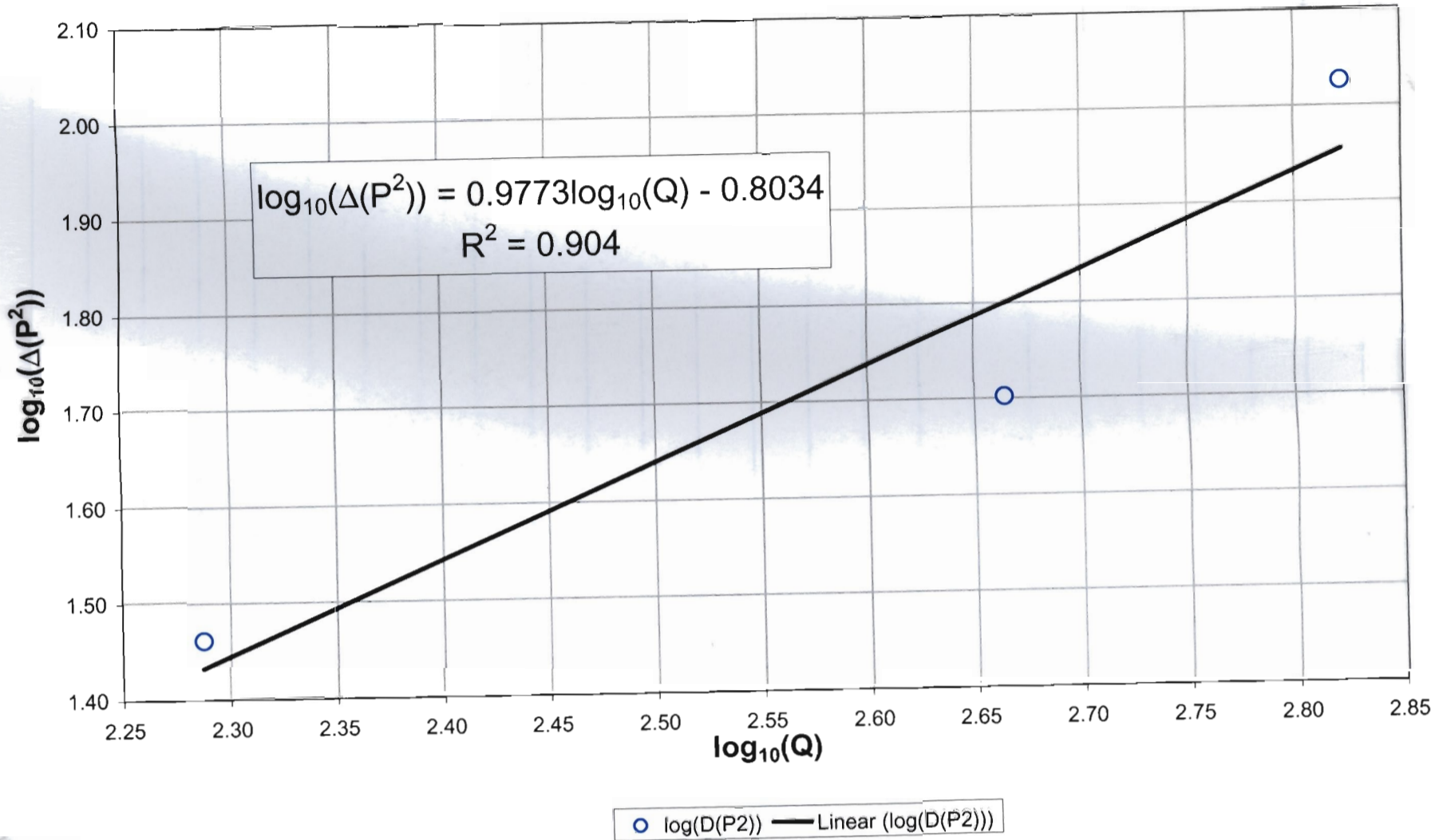
Run, 01/14/03

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.
 D Transect: Drillhole 52



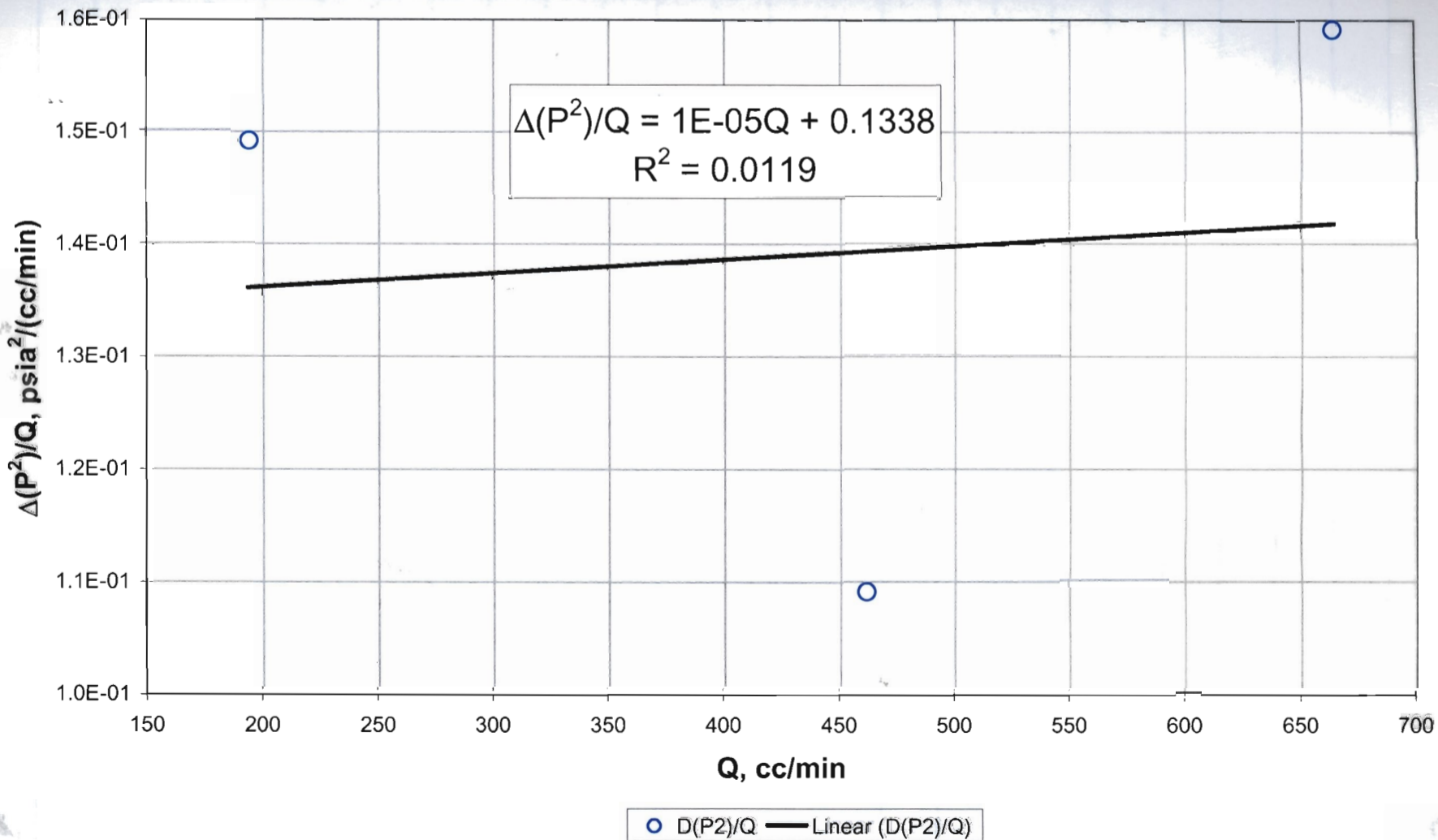
Run, 01/14/03

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)
D Transect: Drillhole 52



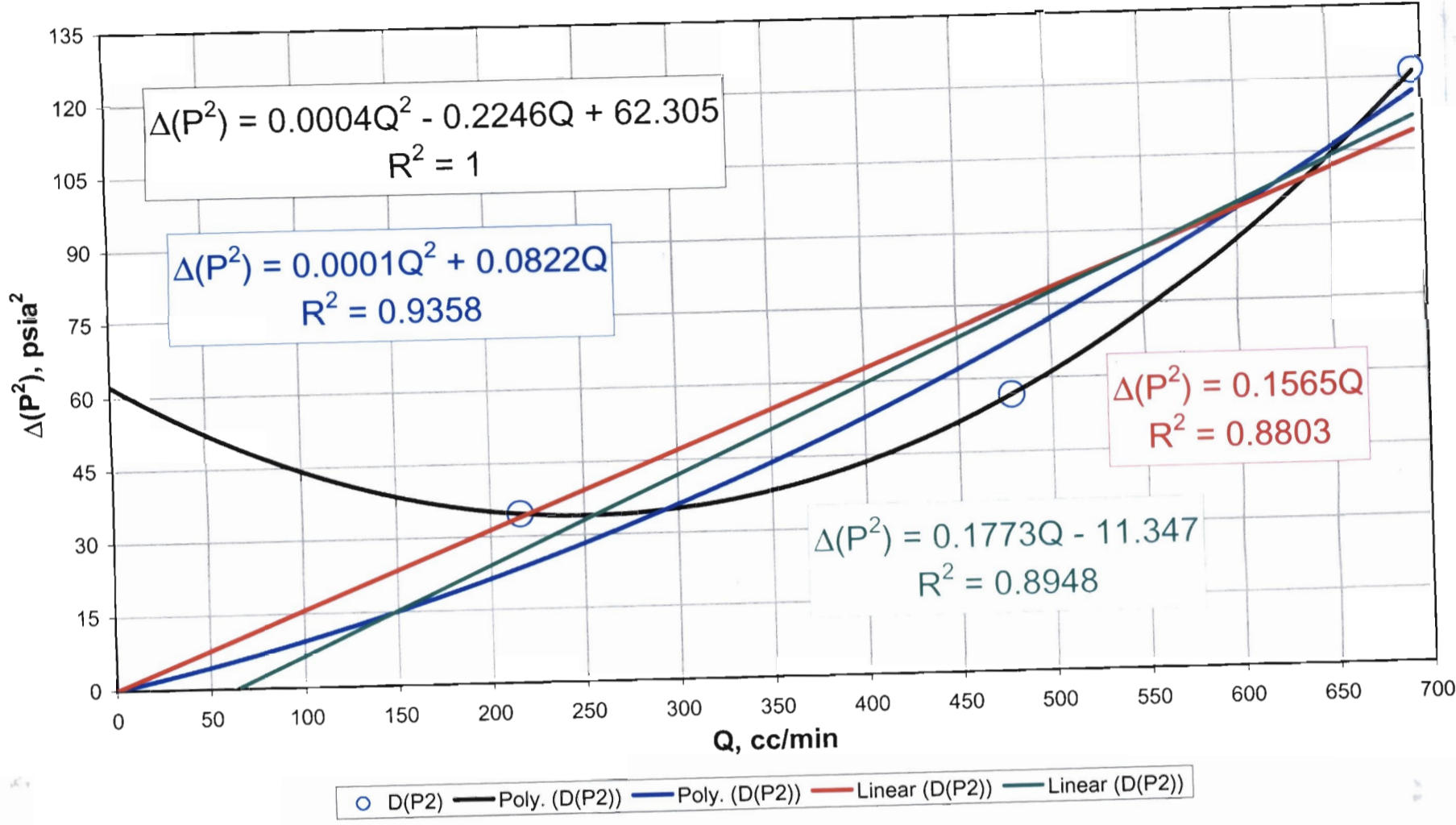
RMM, 01/14/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 52

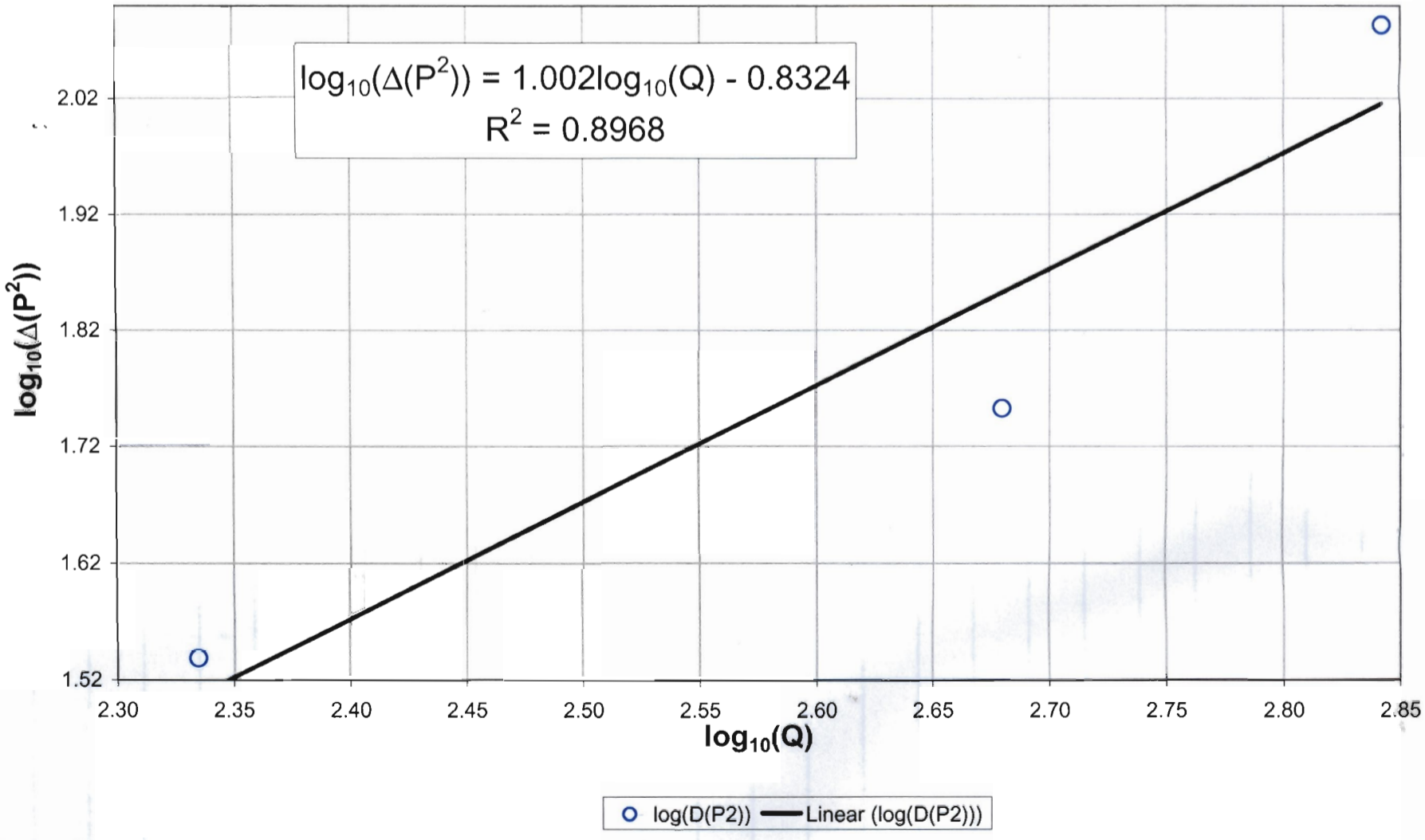


RMM, 01/14/03

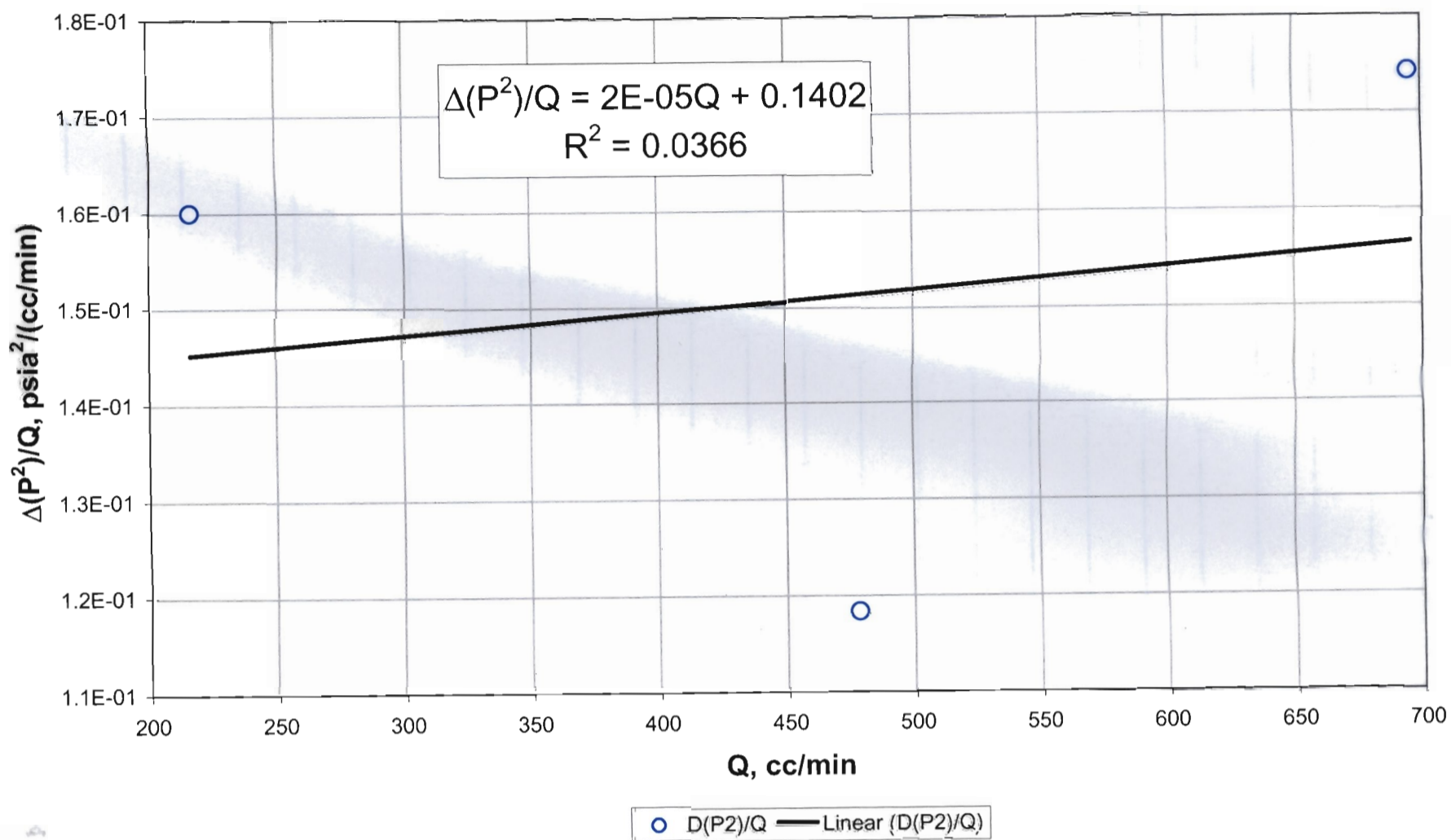
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 53



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)
 D Transect: Drillhole 53

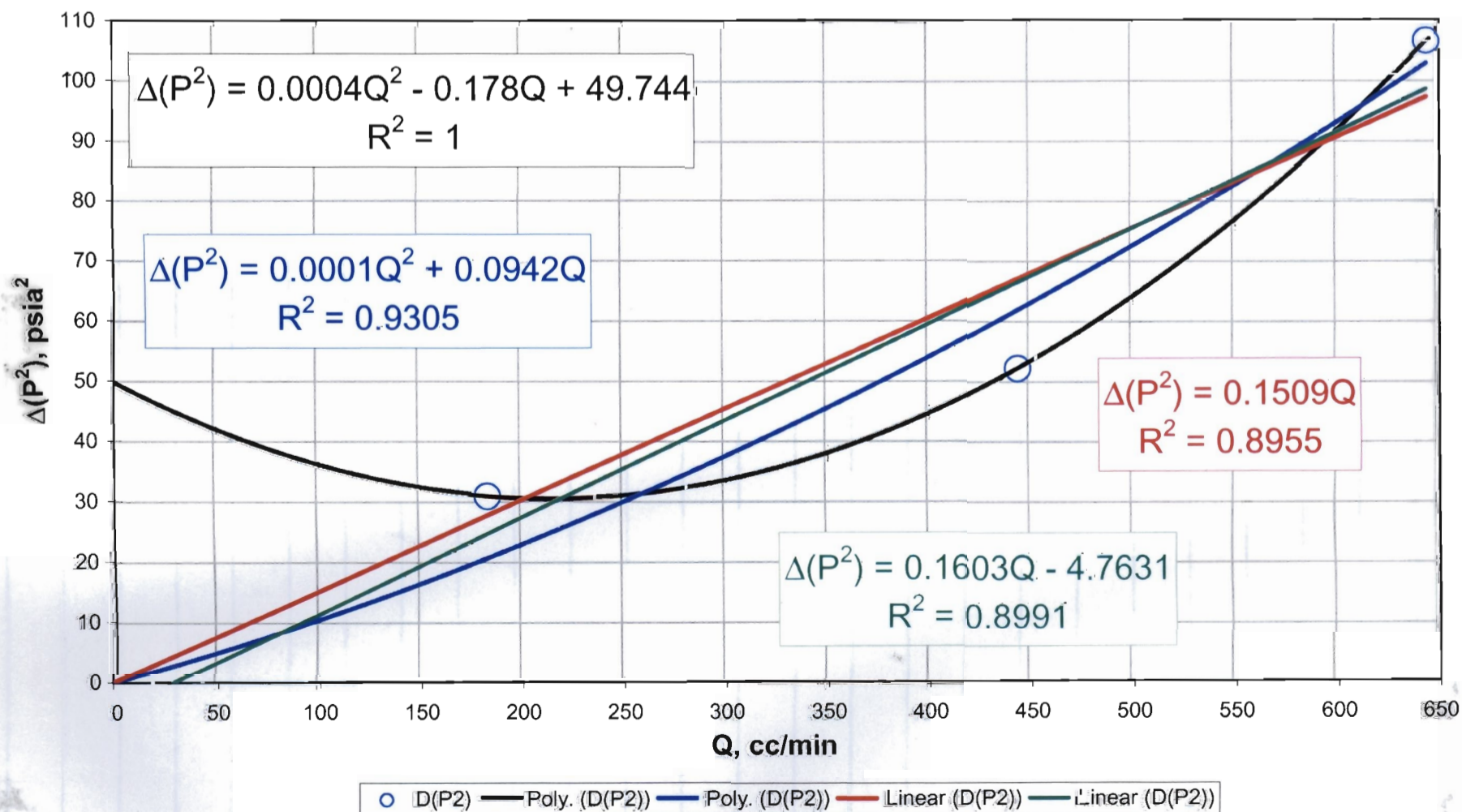


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 53



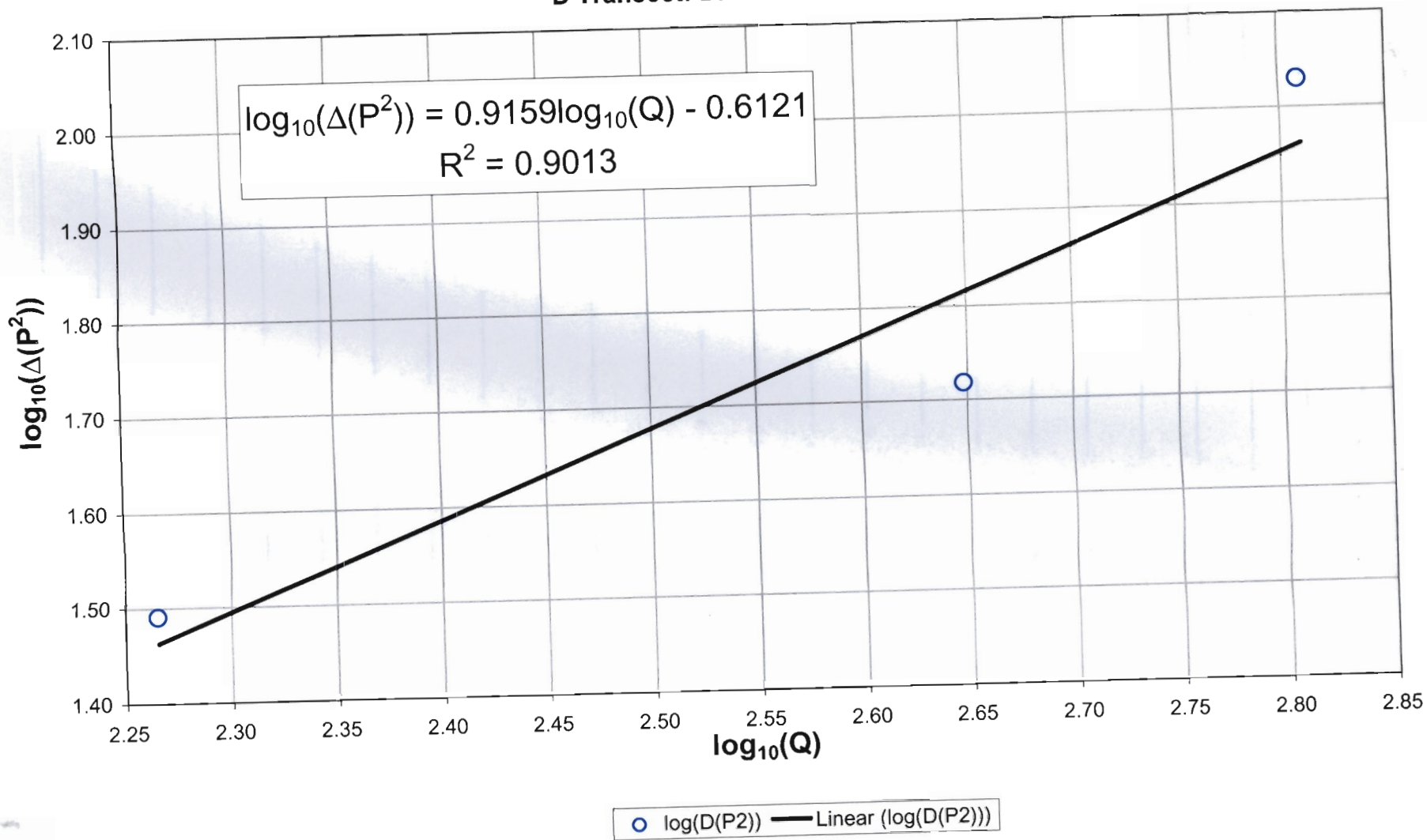
RPM, 01/14/03

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.
 D Transect: Drillhole 54



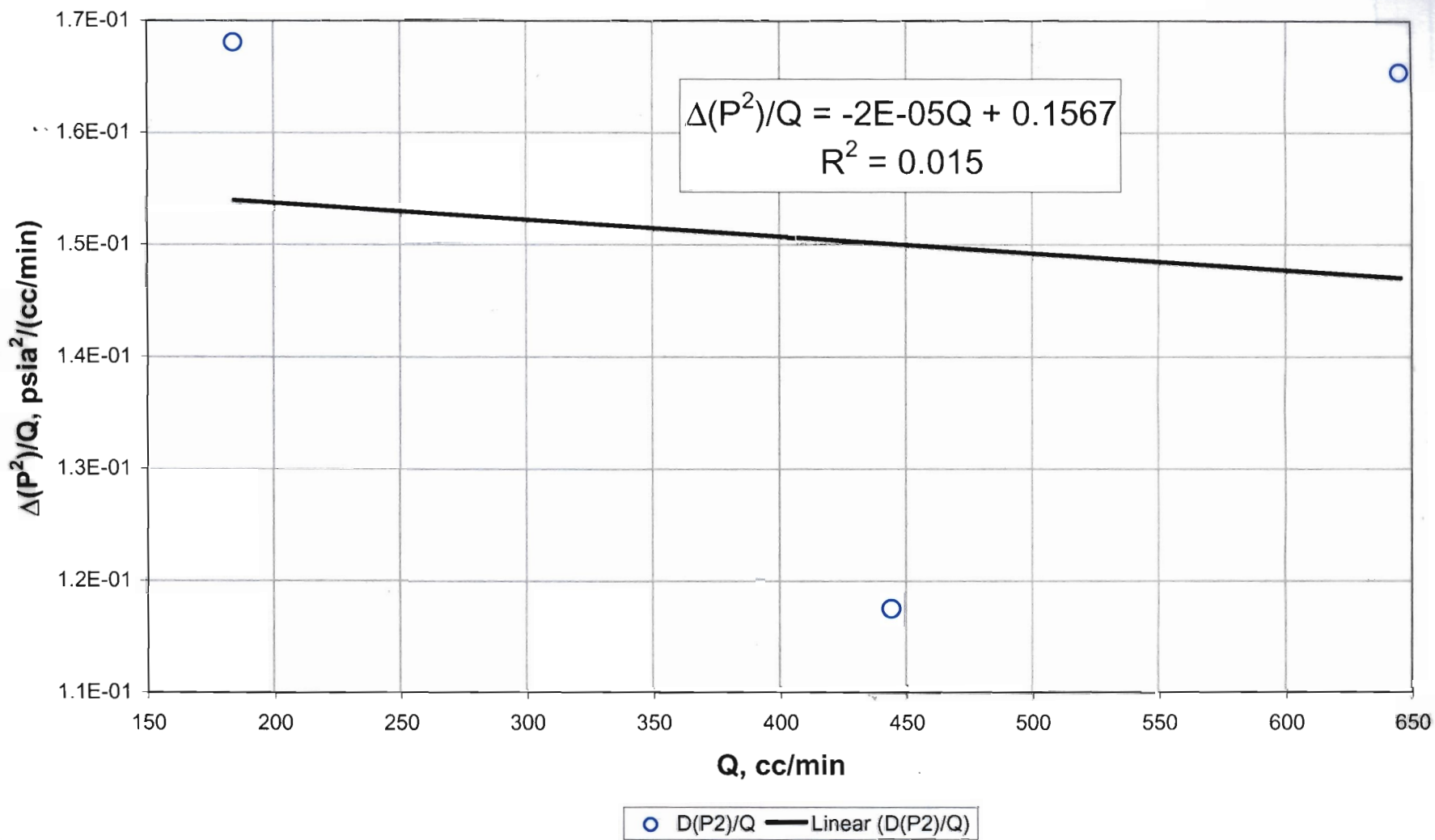
RPM, 01/14/03

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)
D Transect: Drillhole 54



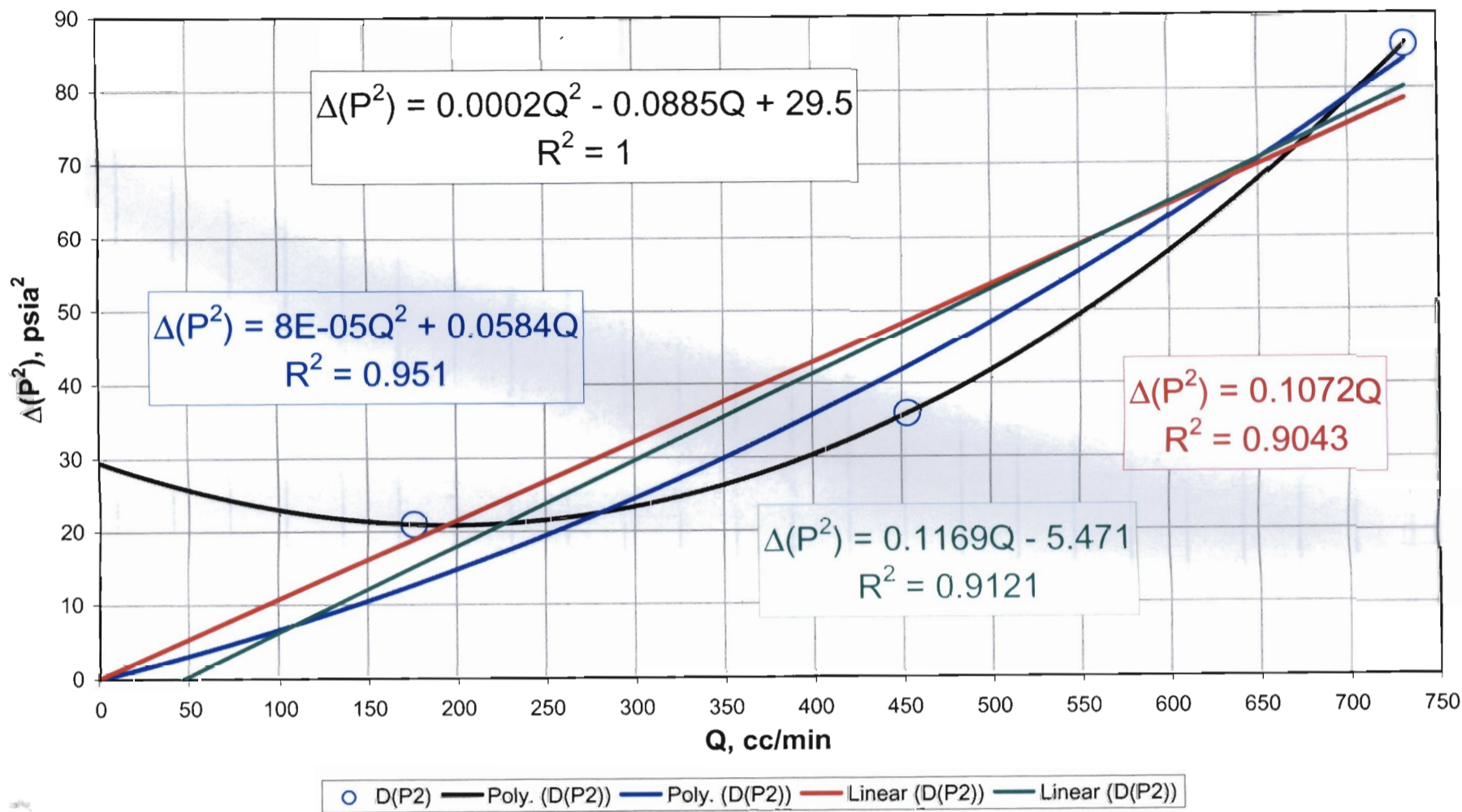
RMM, 01/14/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 54



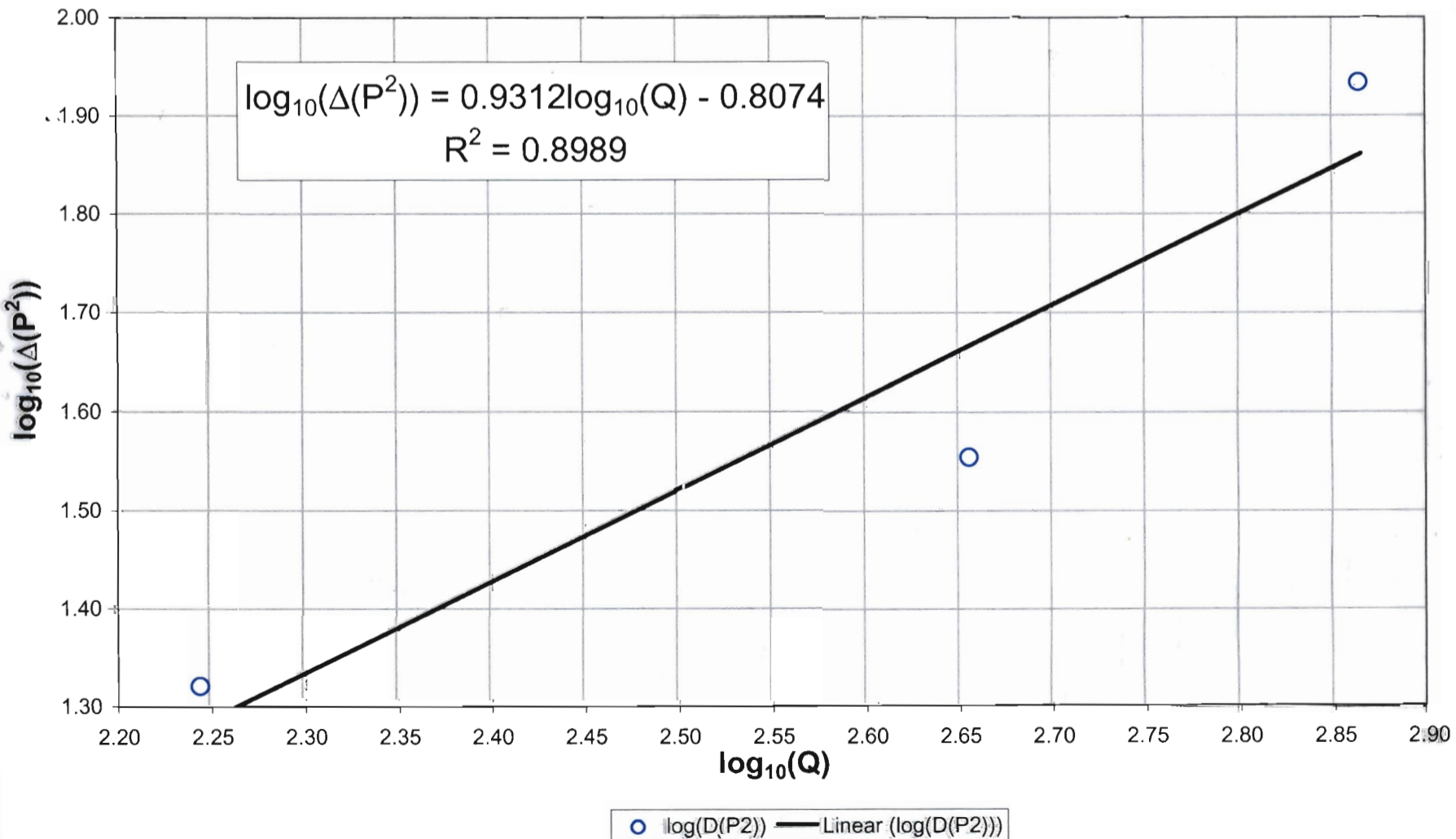
RMM, 01/14/03

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.
 D Transect: Drillhole 55



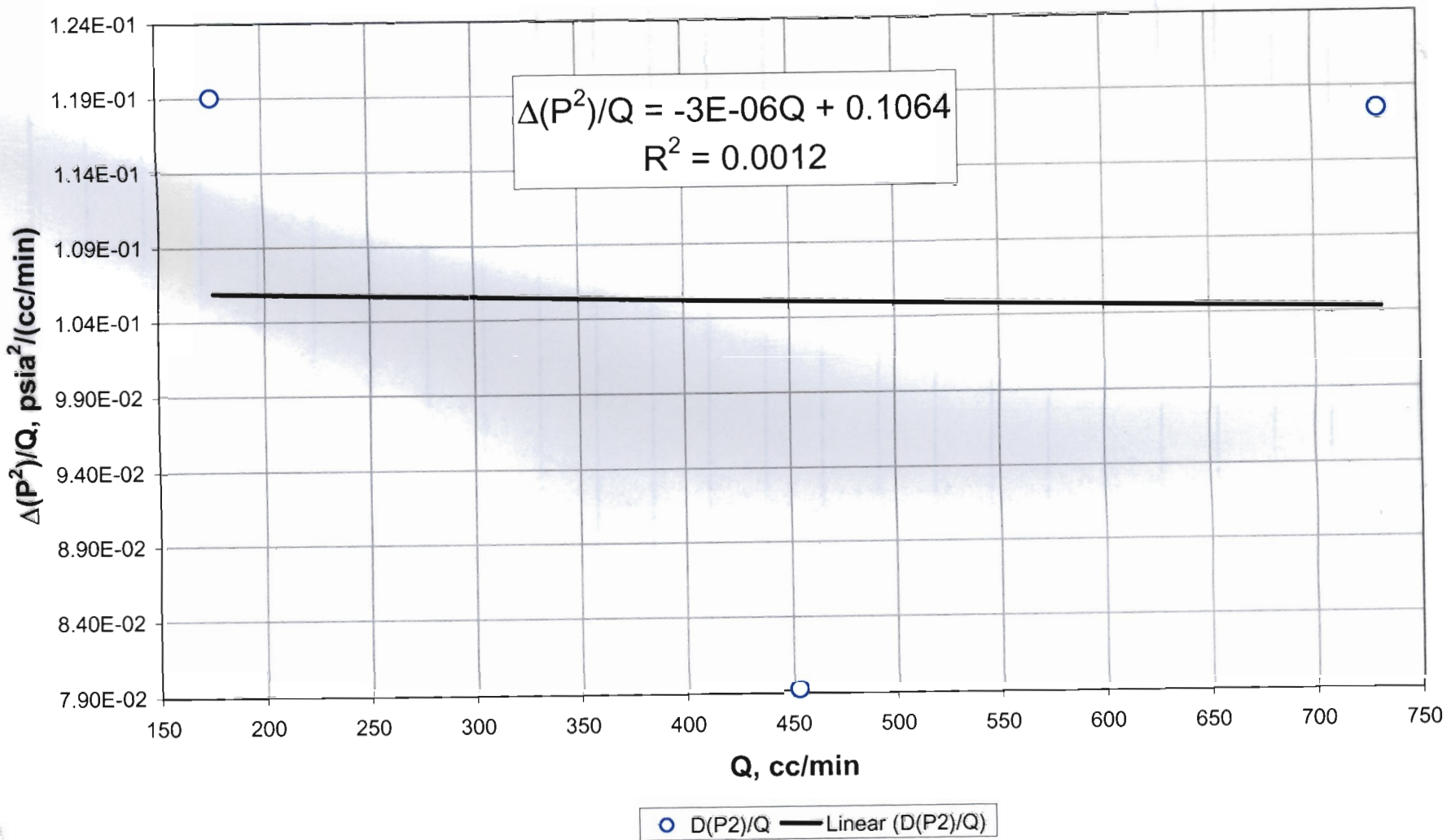
RNM, 01/14/03

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)
 D Transect: Drillhole 55



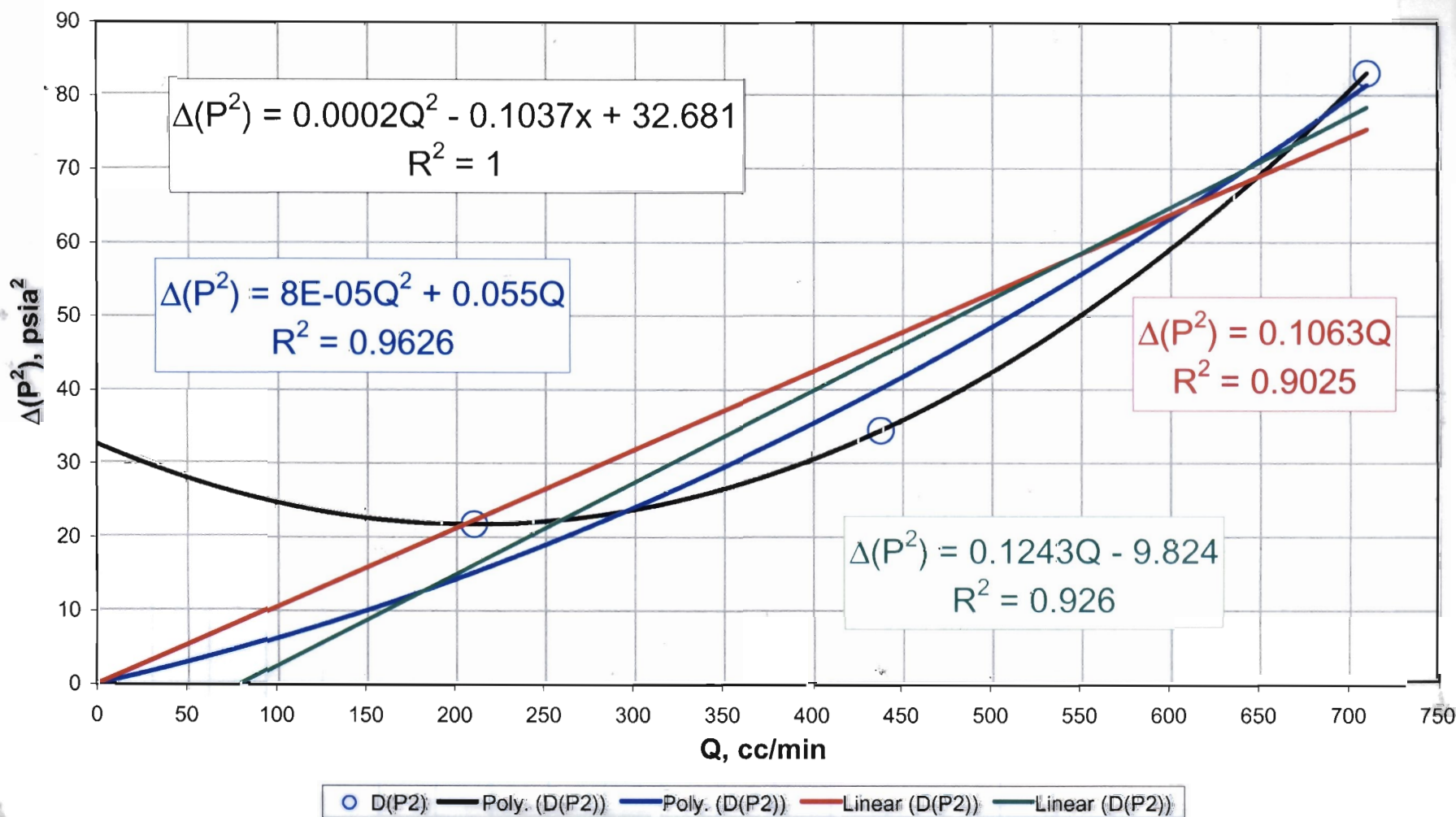
RNM, 01/14/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 55



GNM, 01/14/03

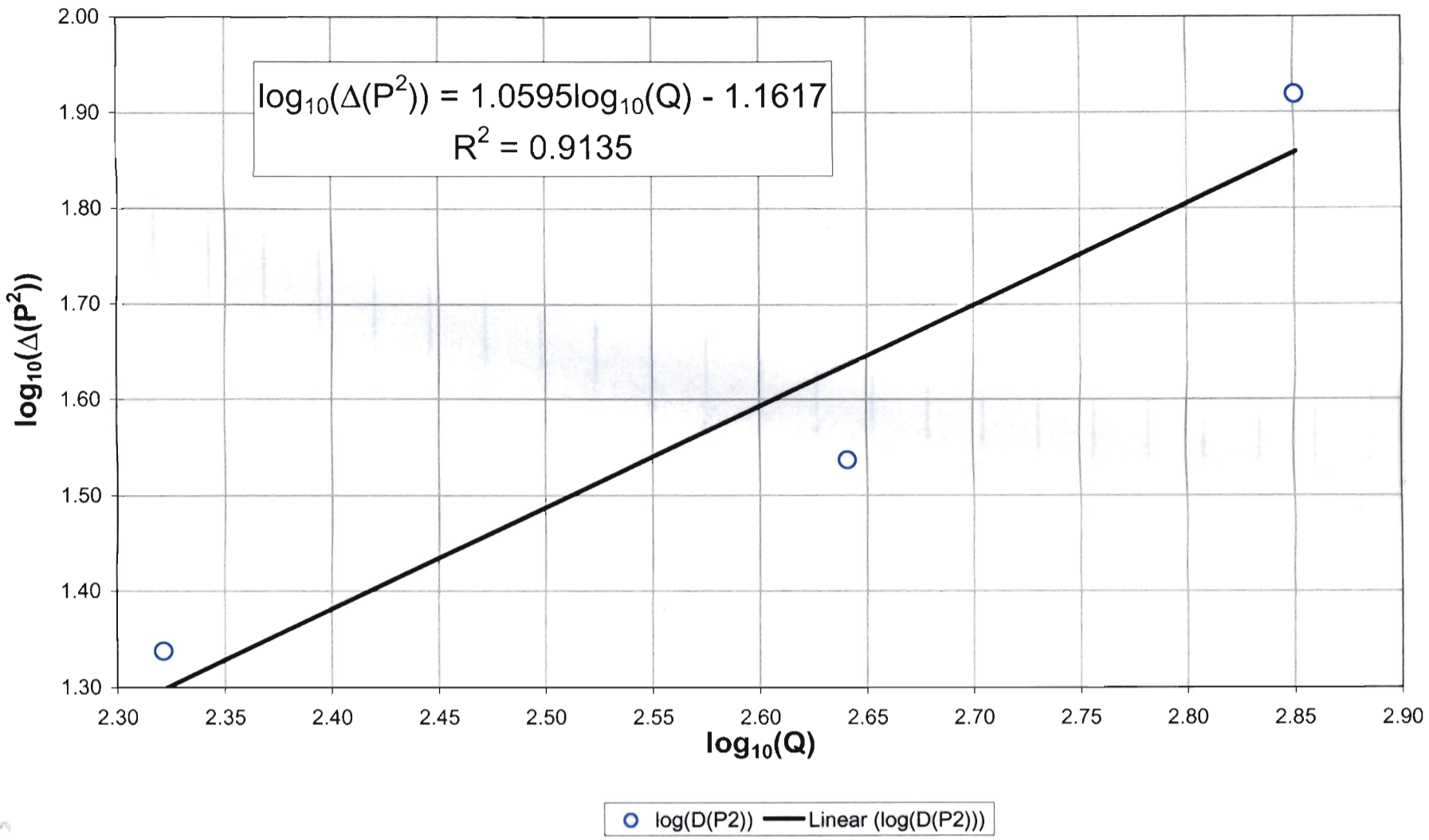
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 56



GNM, 01/14/03

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)

D Transect: Drillhole 56

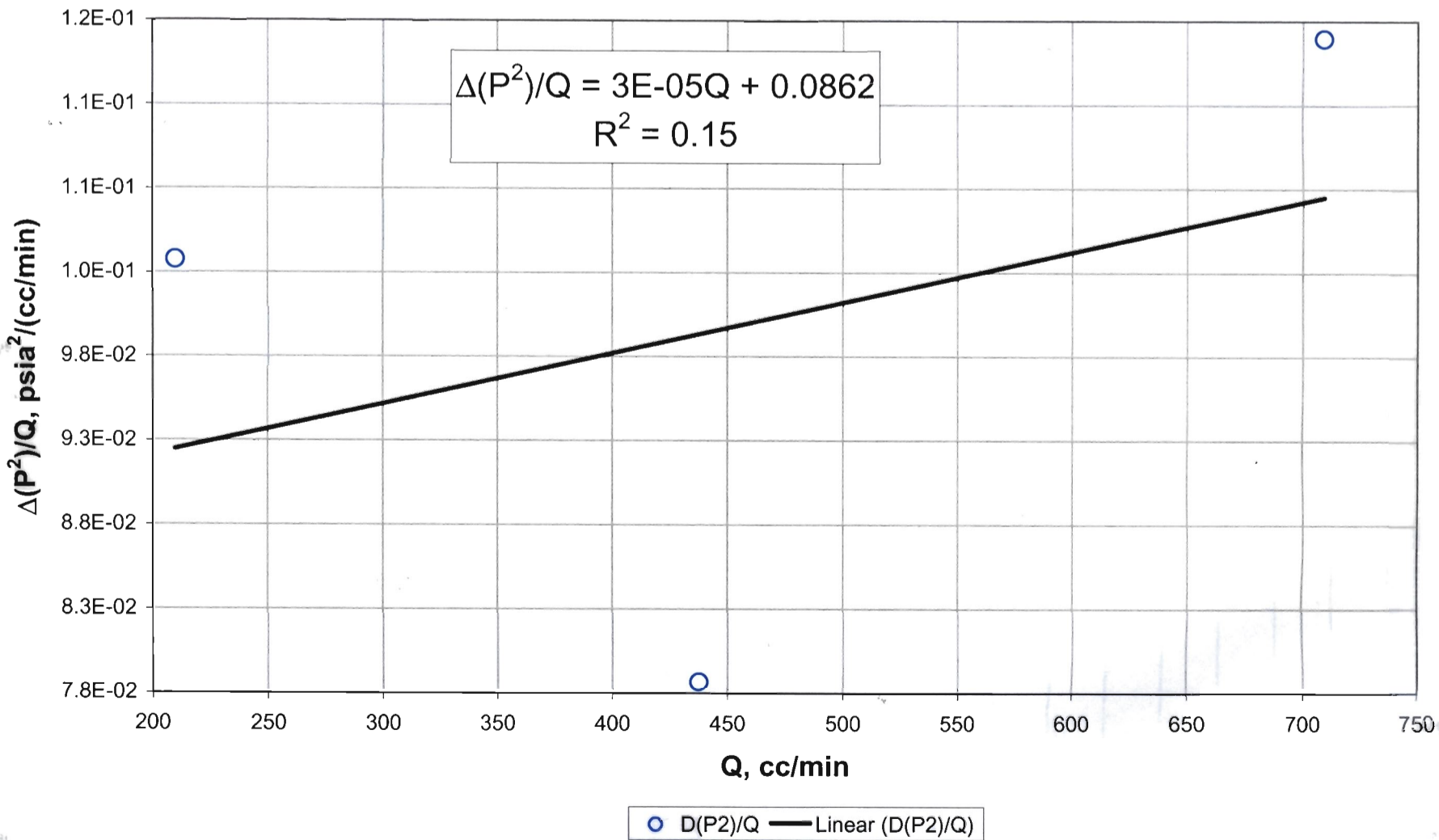


RMM, 01/14/03

Final check for high velocity flow effects:

High velocity flow effects are present when the slope is non-zero and positive.

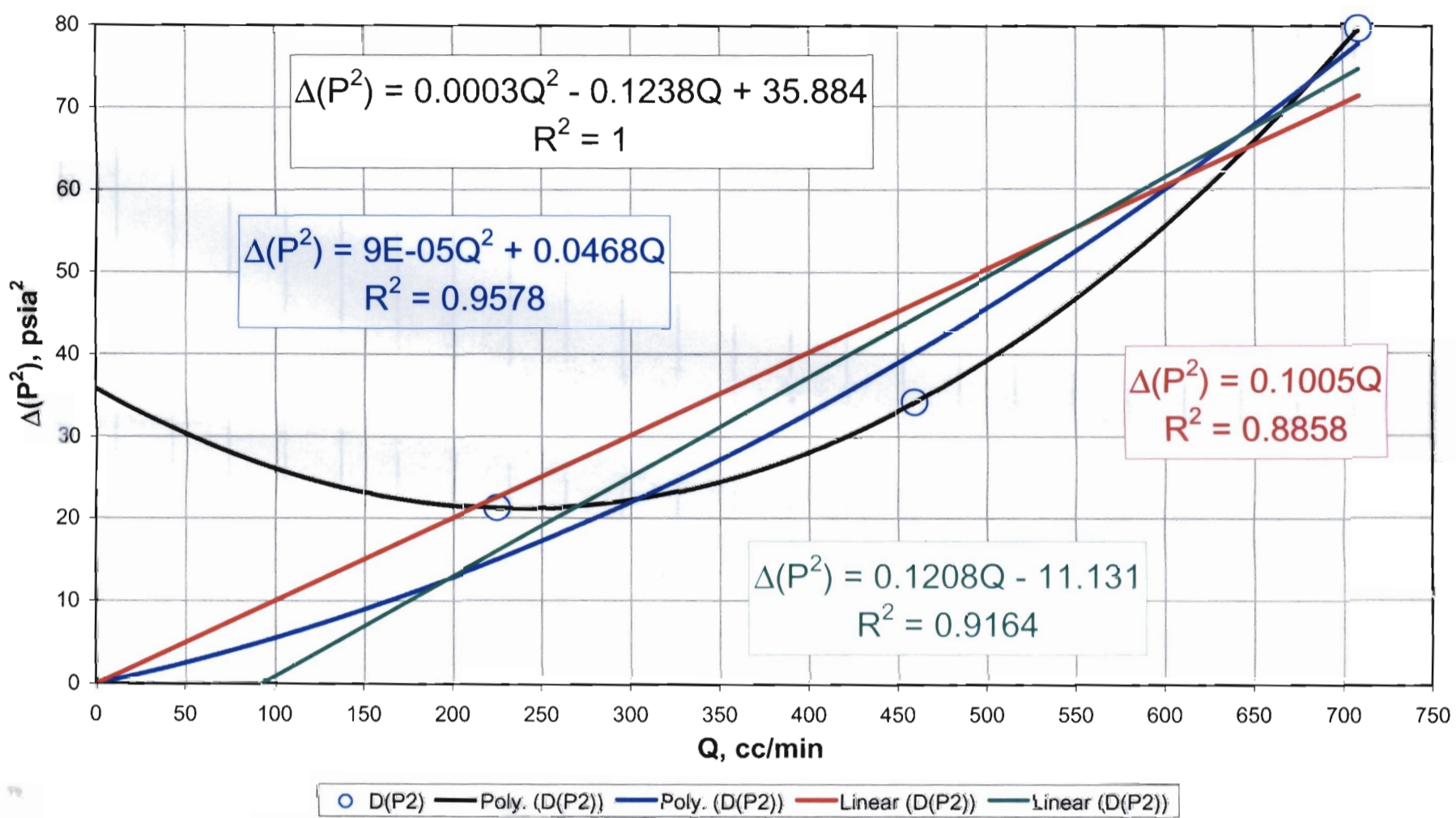
D Transect : Drillhole 56



RMM, 01/14/03

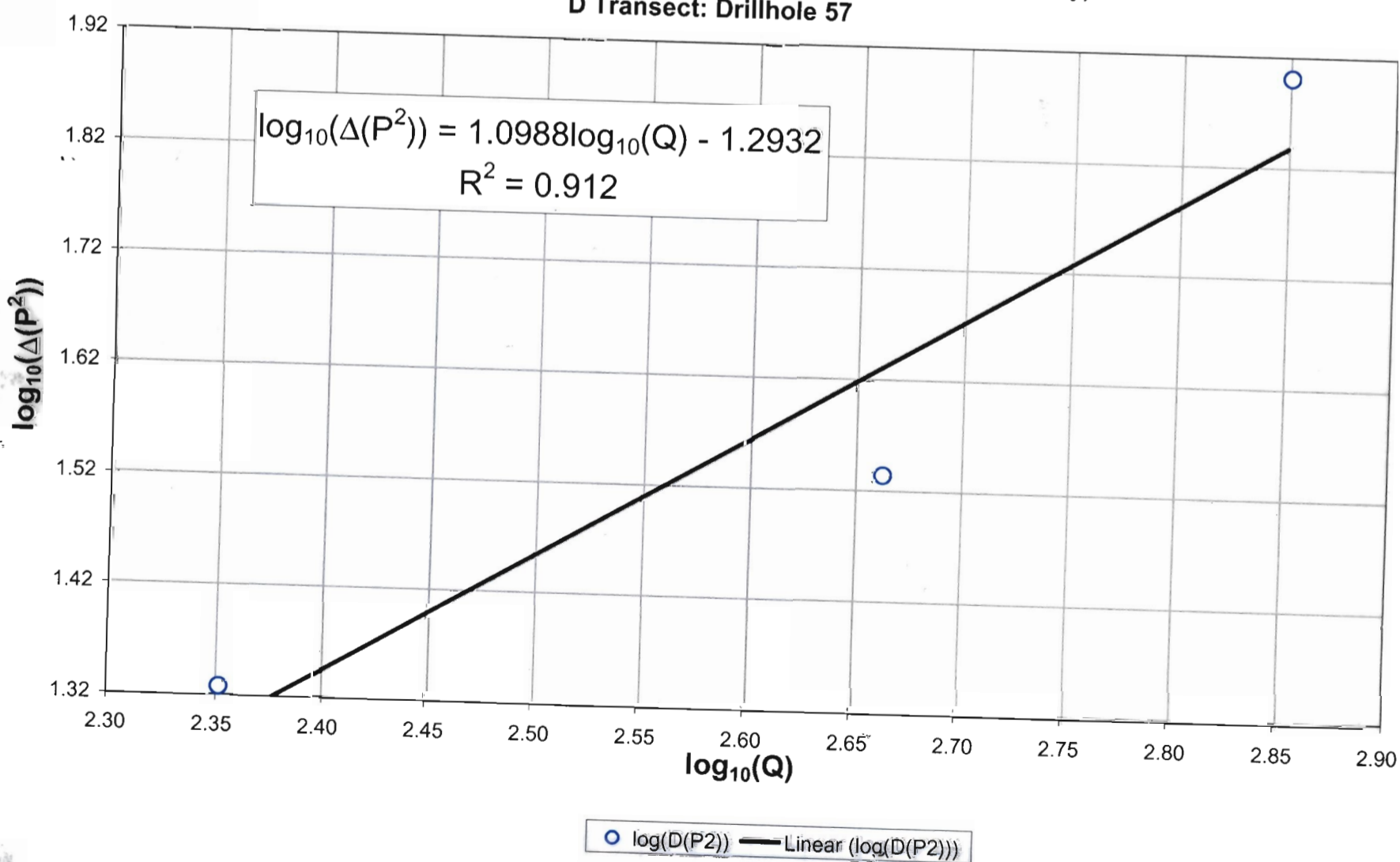
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 57

RMM, 01/14/03

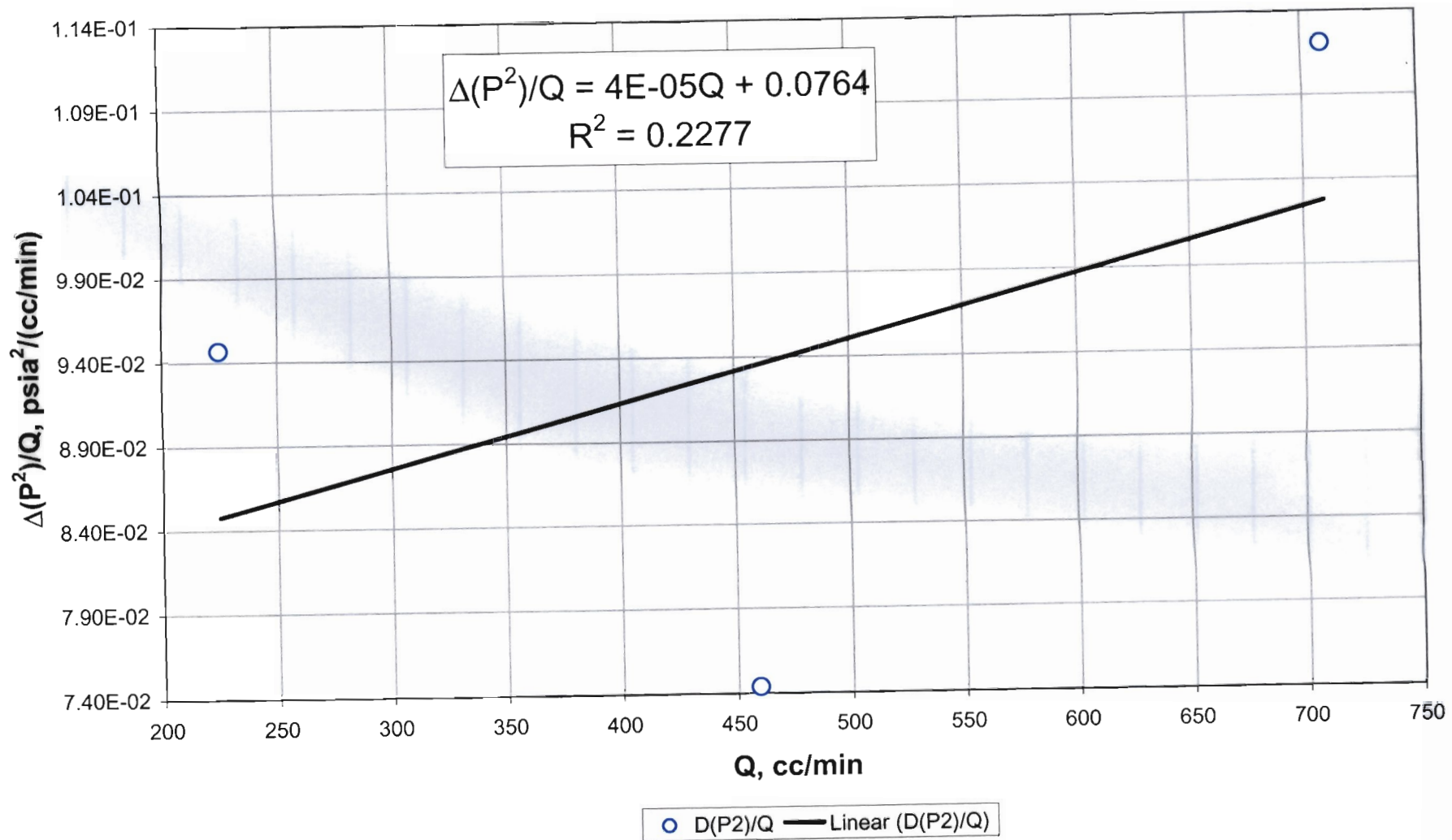


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 D Transect: Drillhole 57

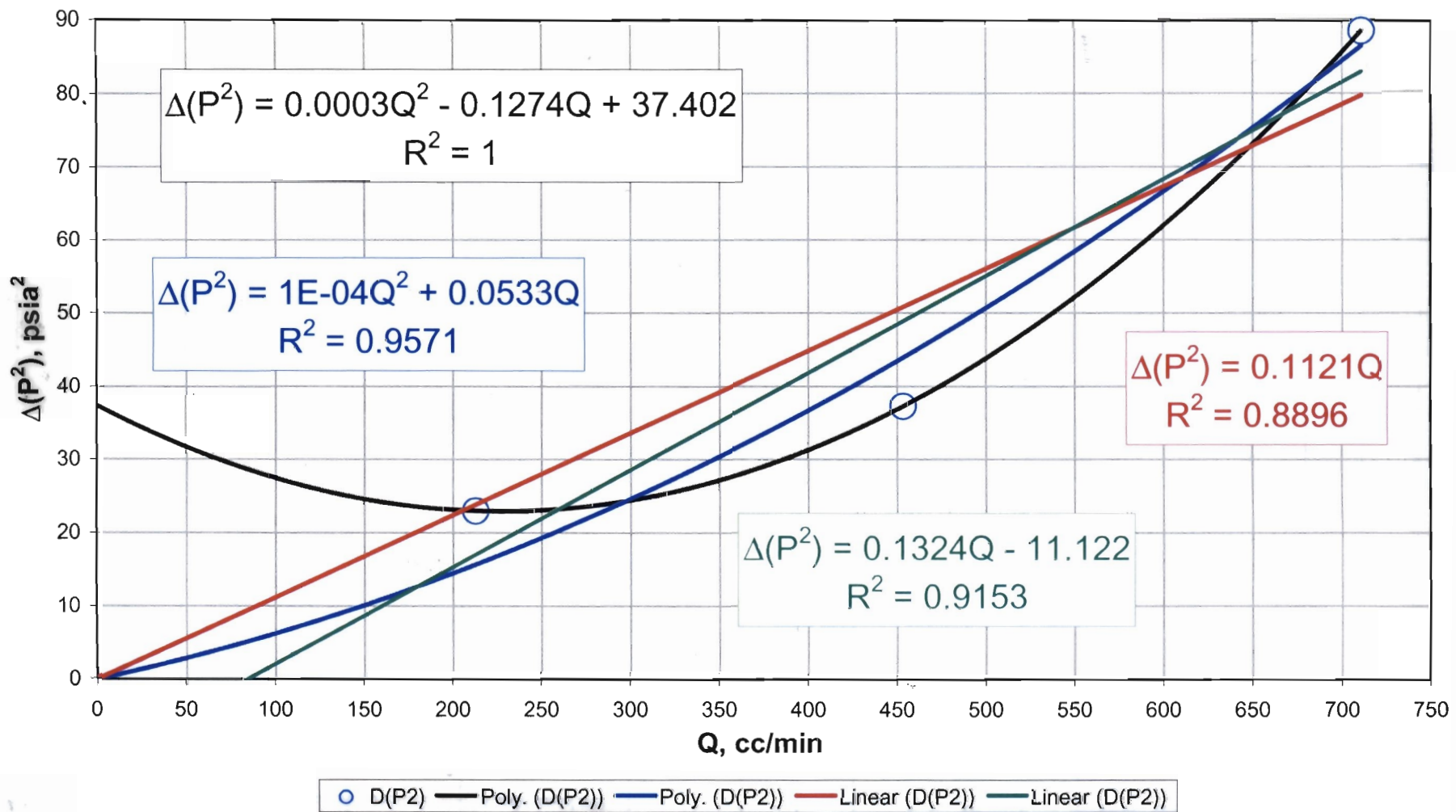
RMM, 01/14/03



Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 57

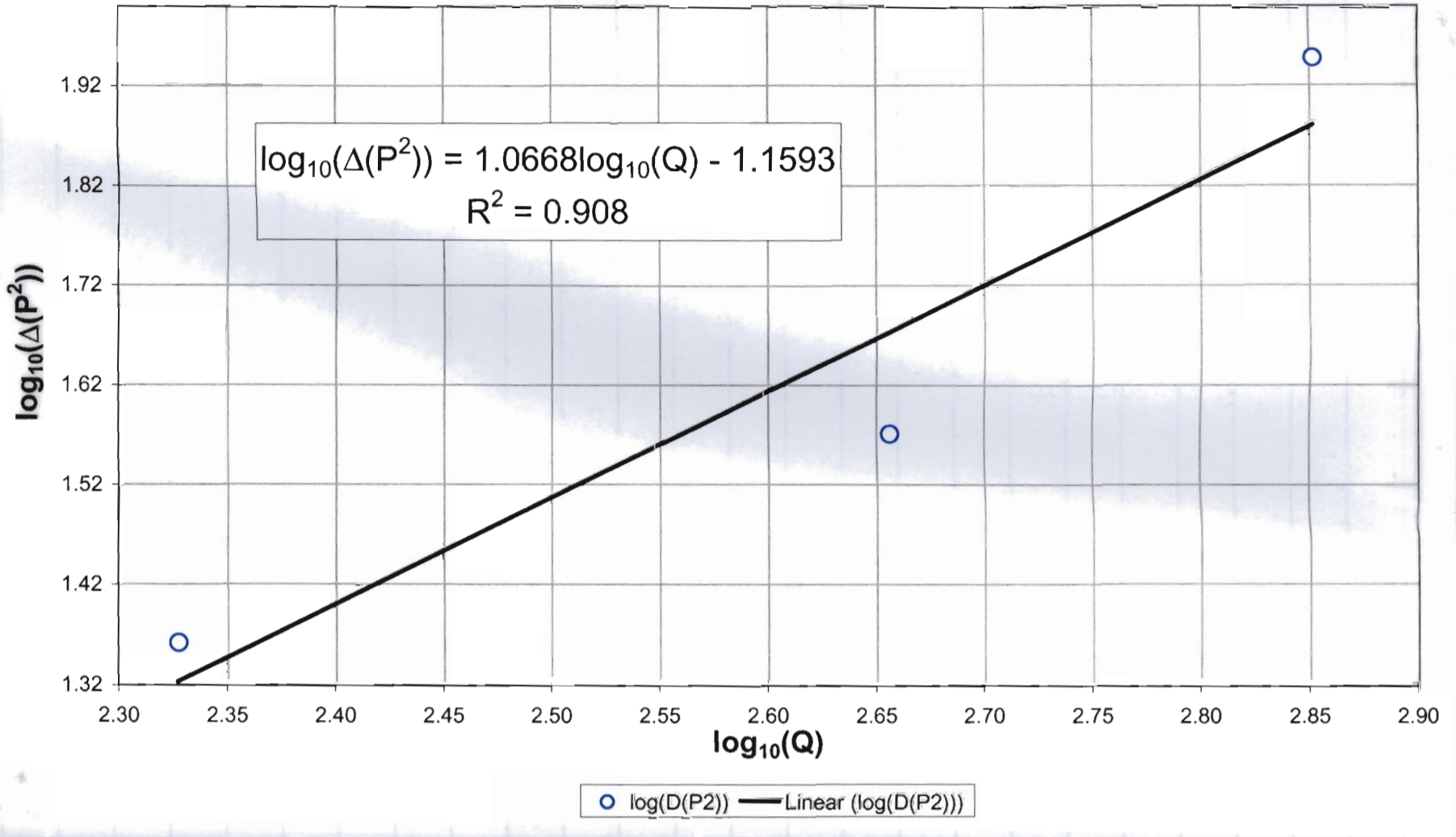


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 58



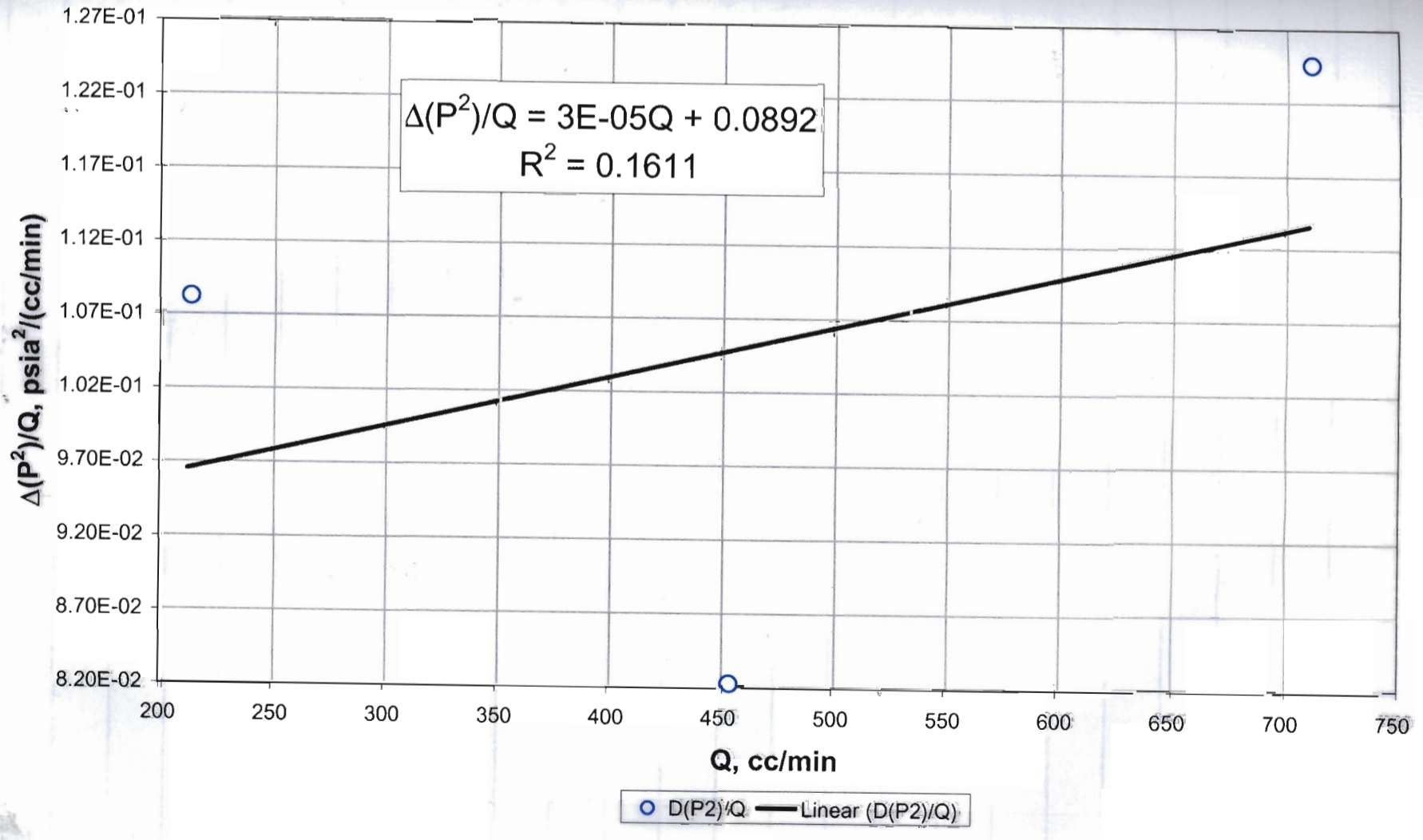
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
D Transect: Drillhole 58

RMN, 01/14/03



Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 58

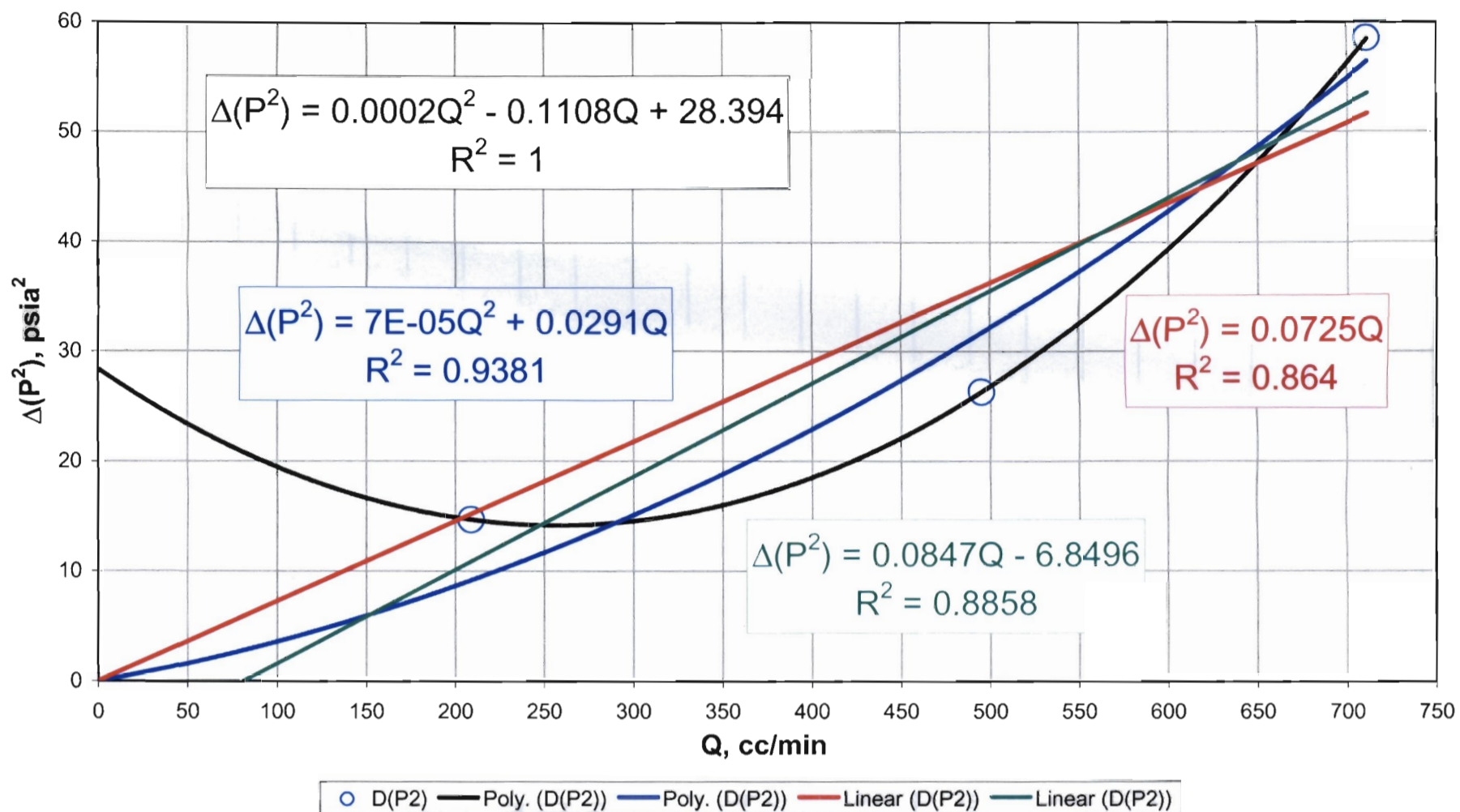
RMN, 01/14/03



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.

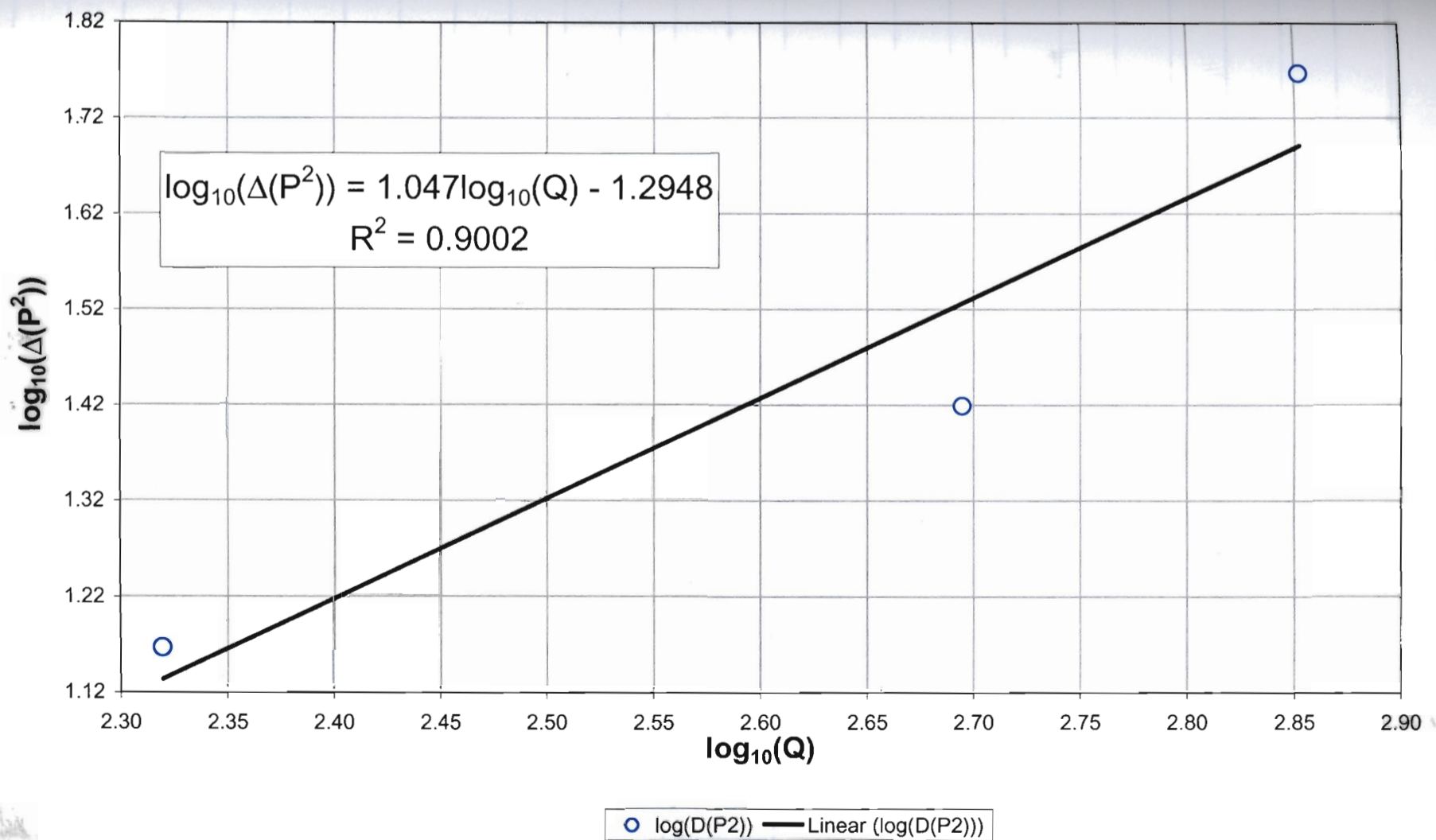
D Transect: Drillhole 59



RMN, 01/14/03

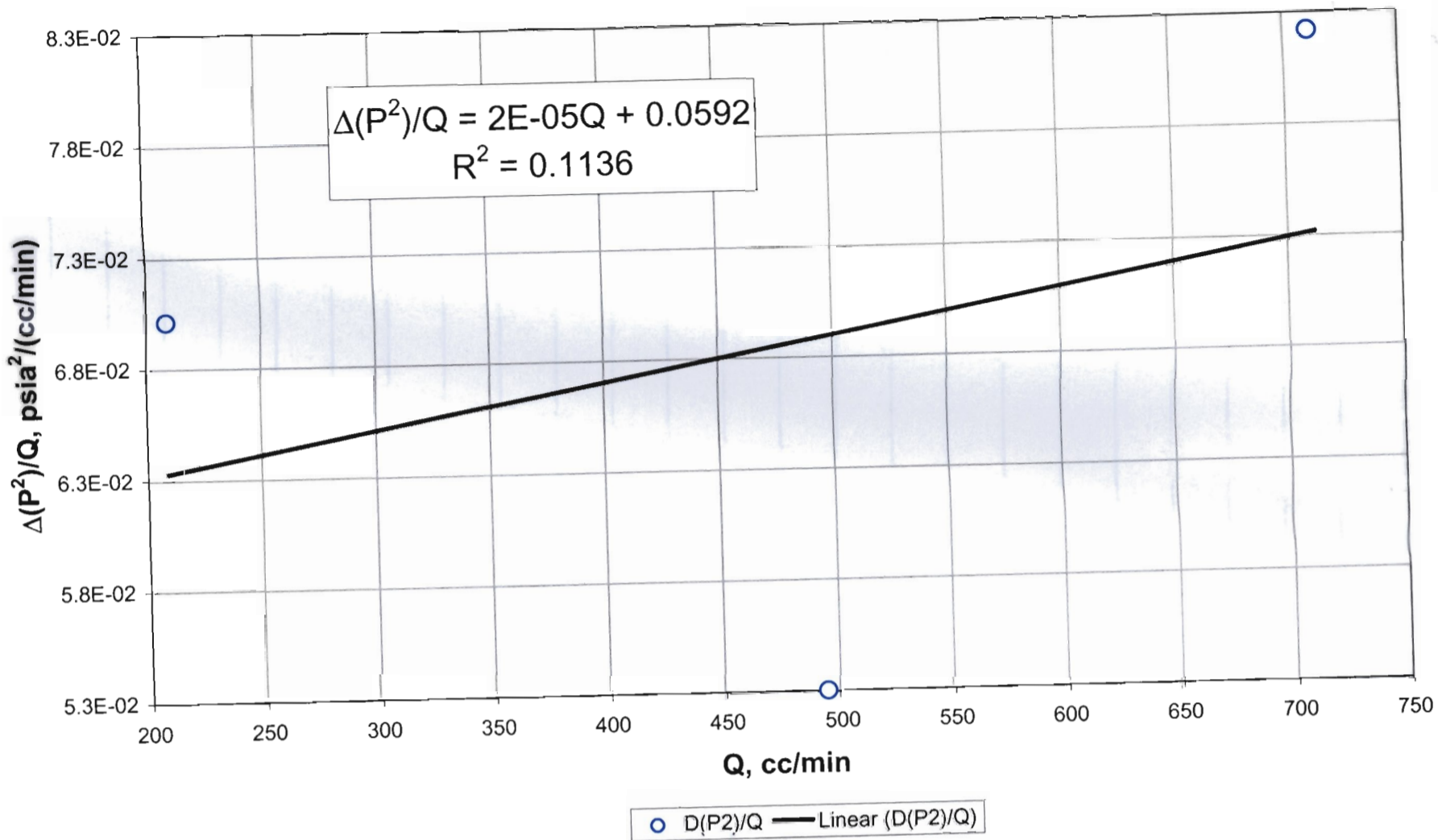
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)

D Transect: Drillhole 59



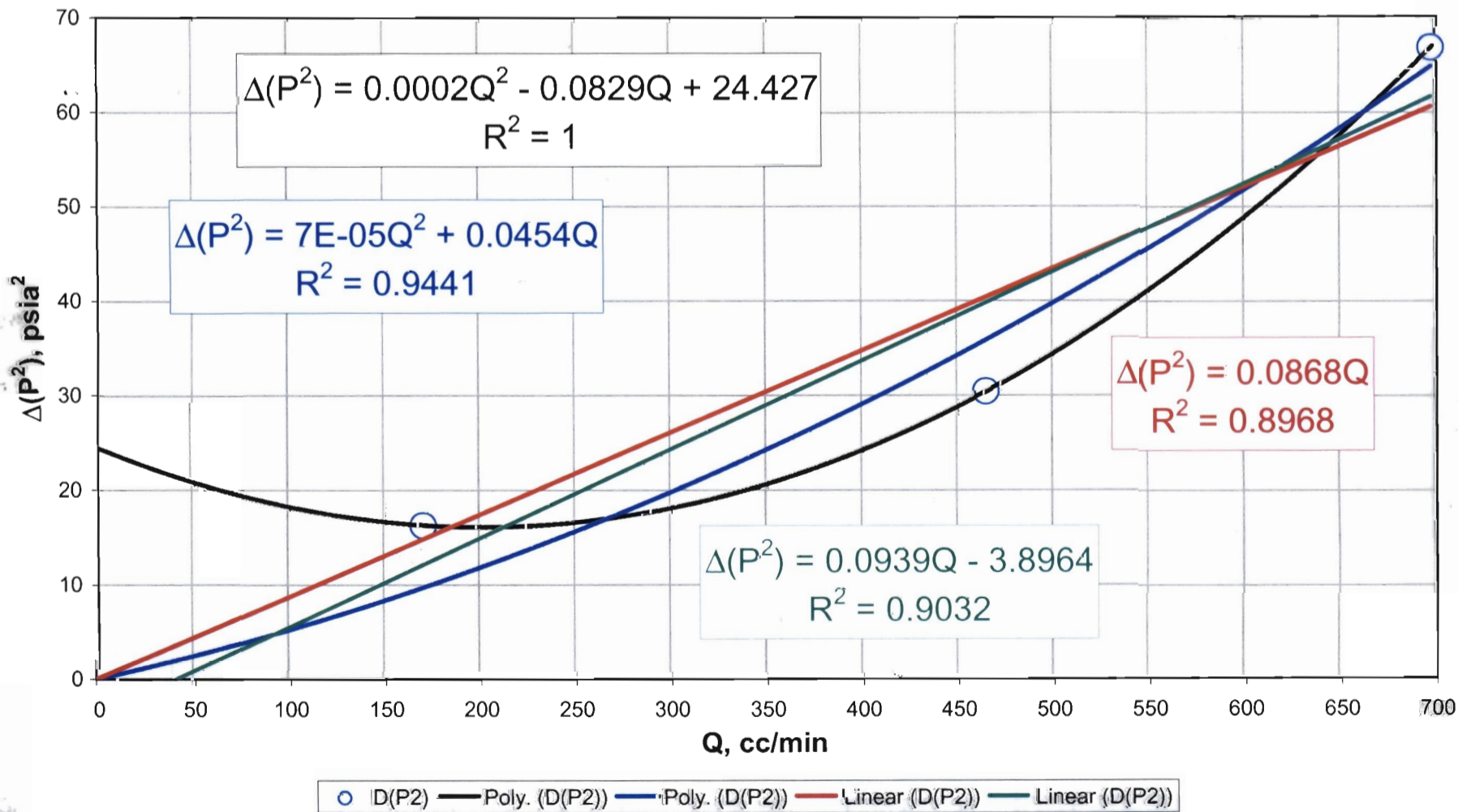
RMN, 01/14/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 59



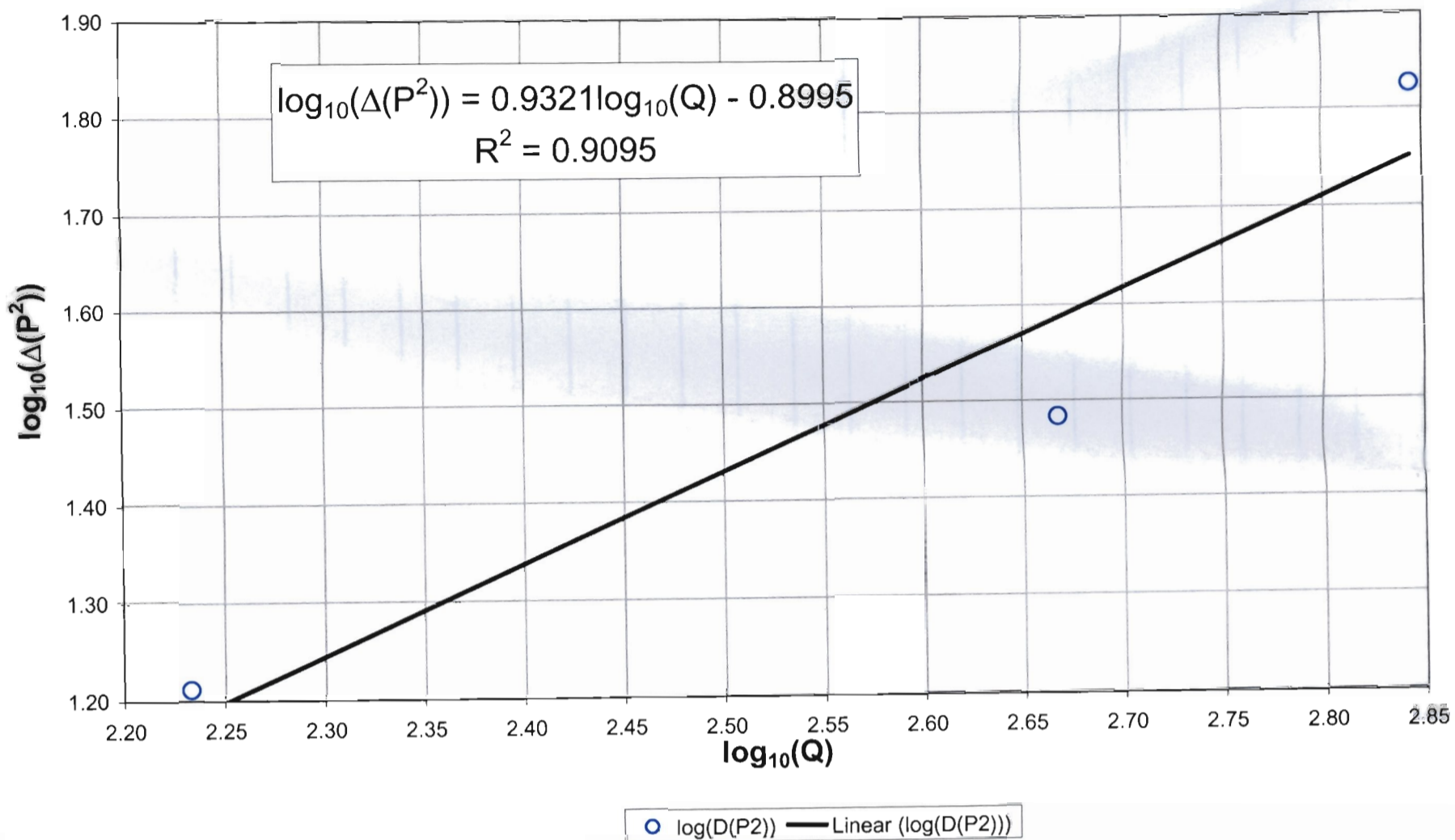
RNM, 01/14/03

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.
 D Transect: Drillhole 60



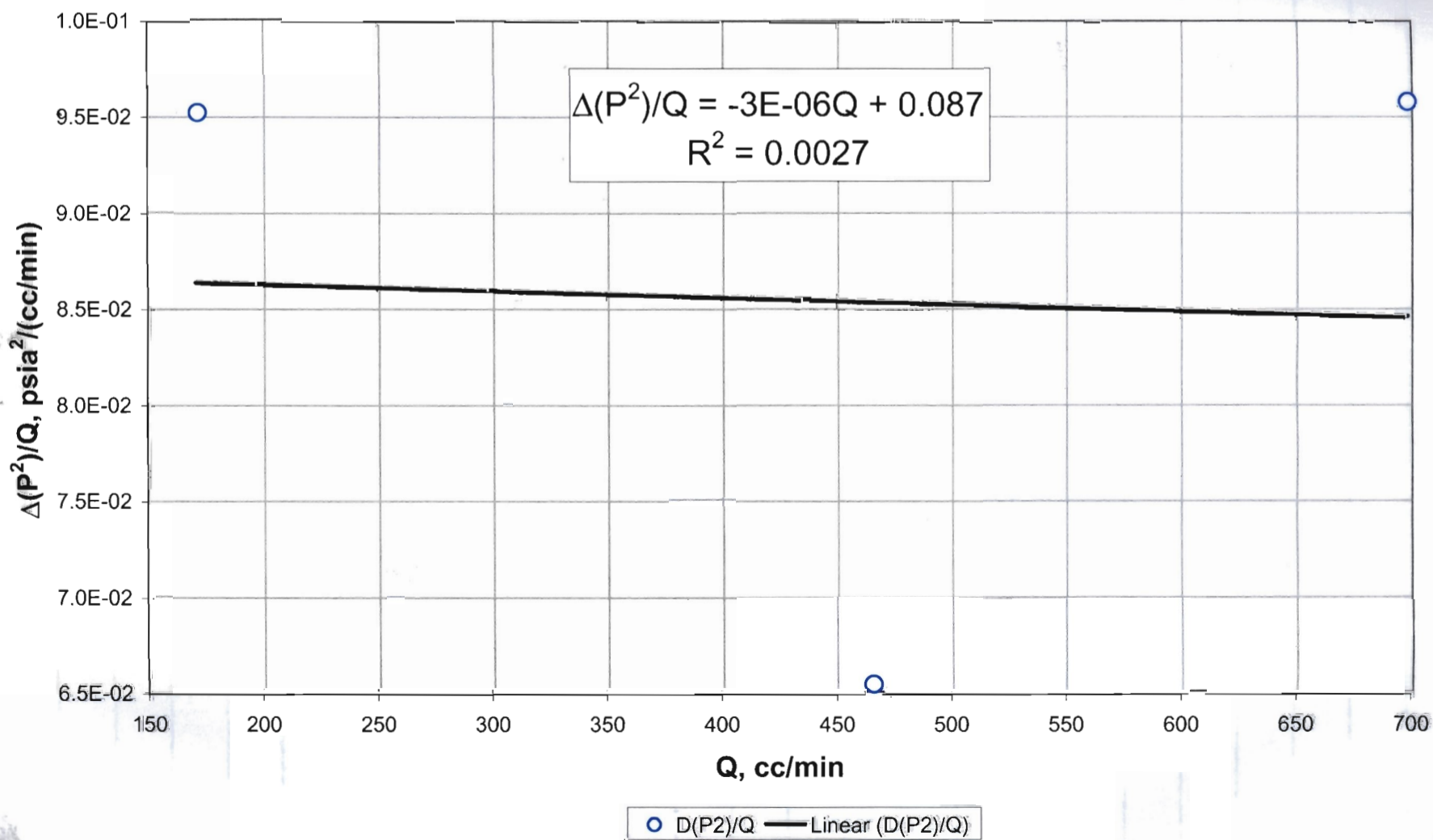
RNM, 01/14/03

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)
D Transect: Drillhole 60



RNM, 01/14/03

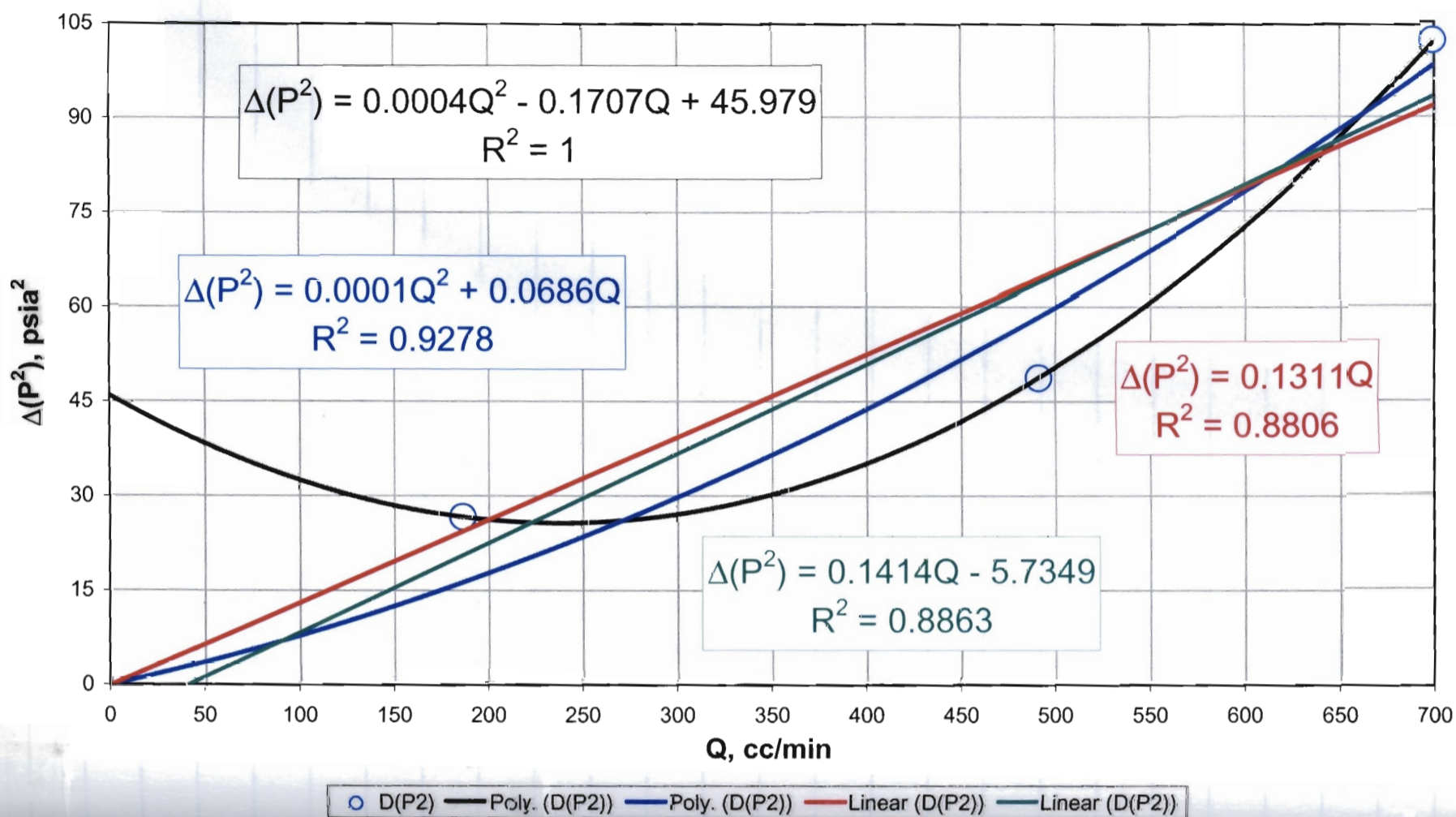
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 60



RNM, 01/14/03

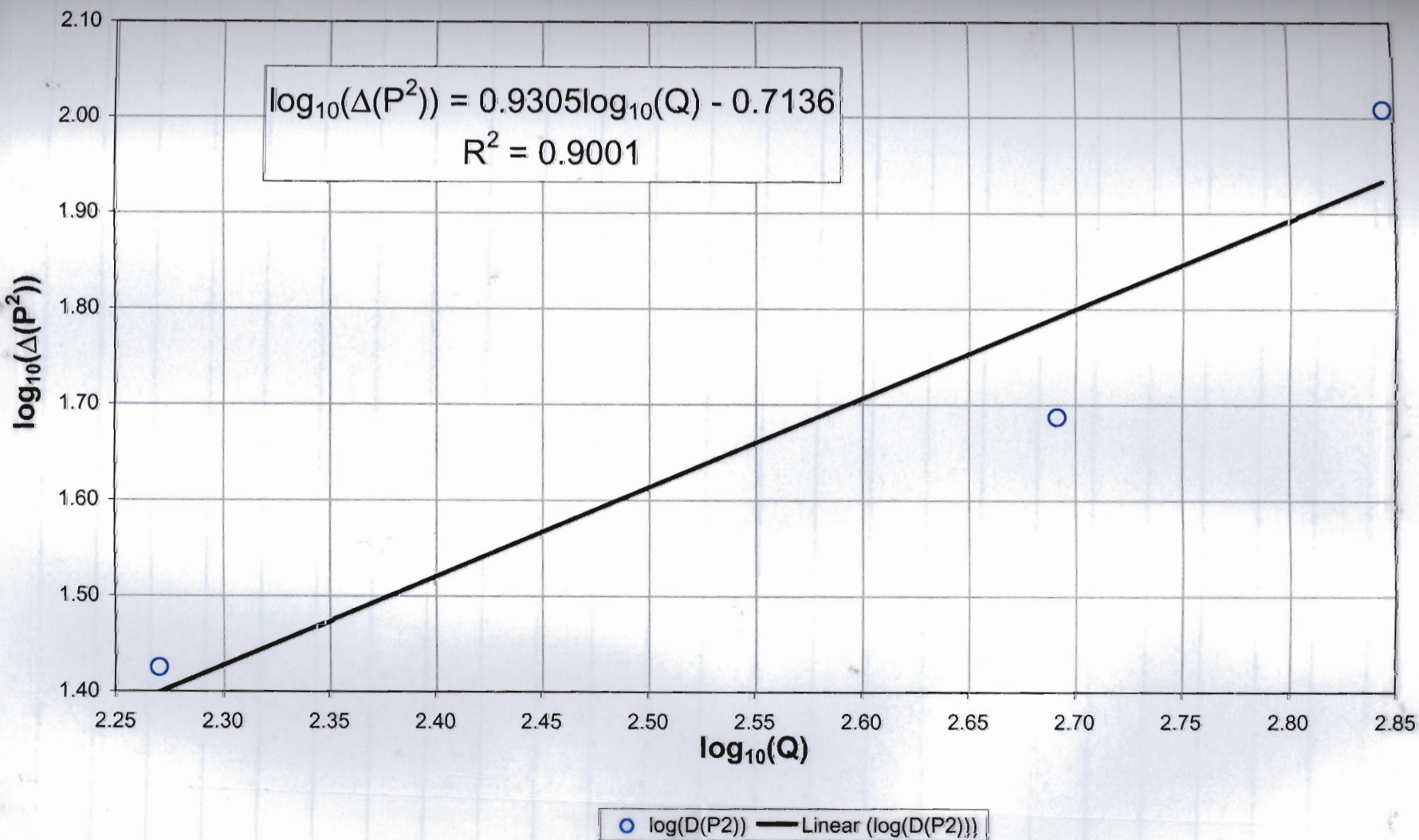
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 61

Run, 01/14/03

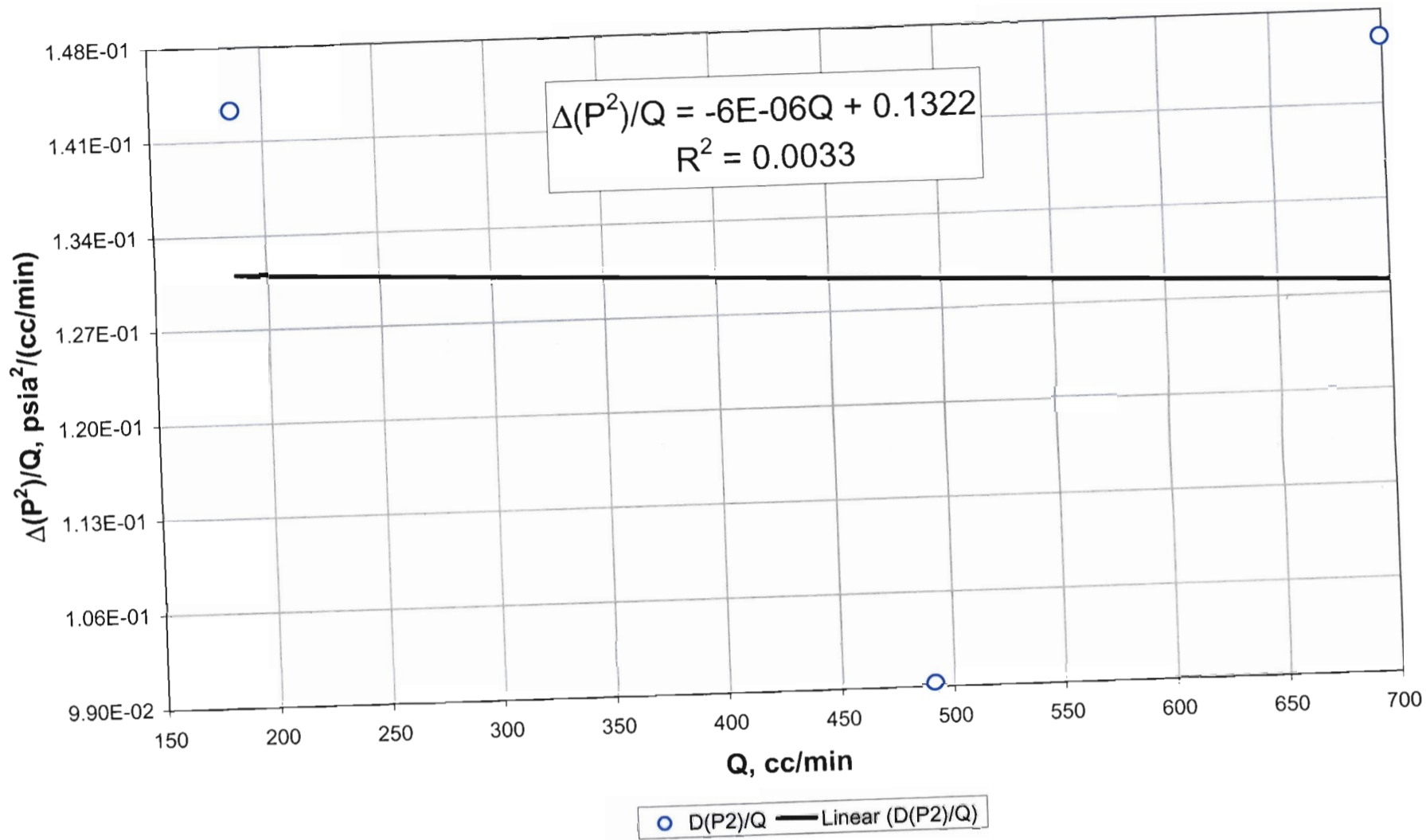


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 D Transect: Drillhole 61

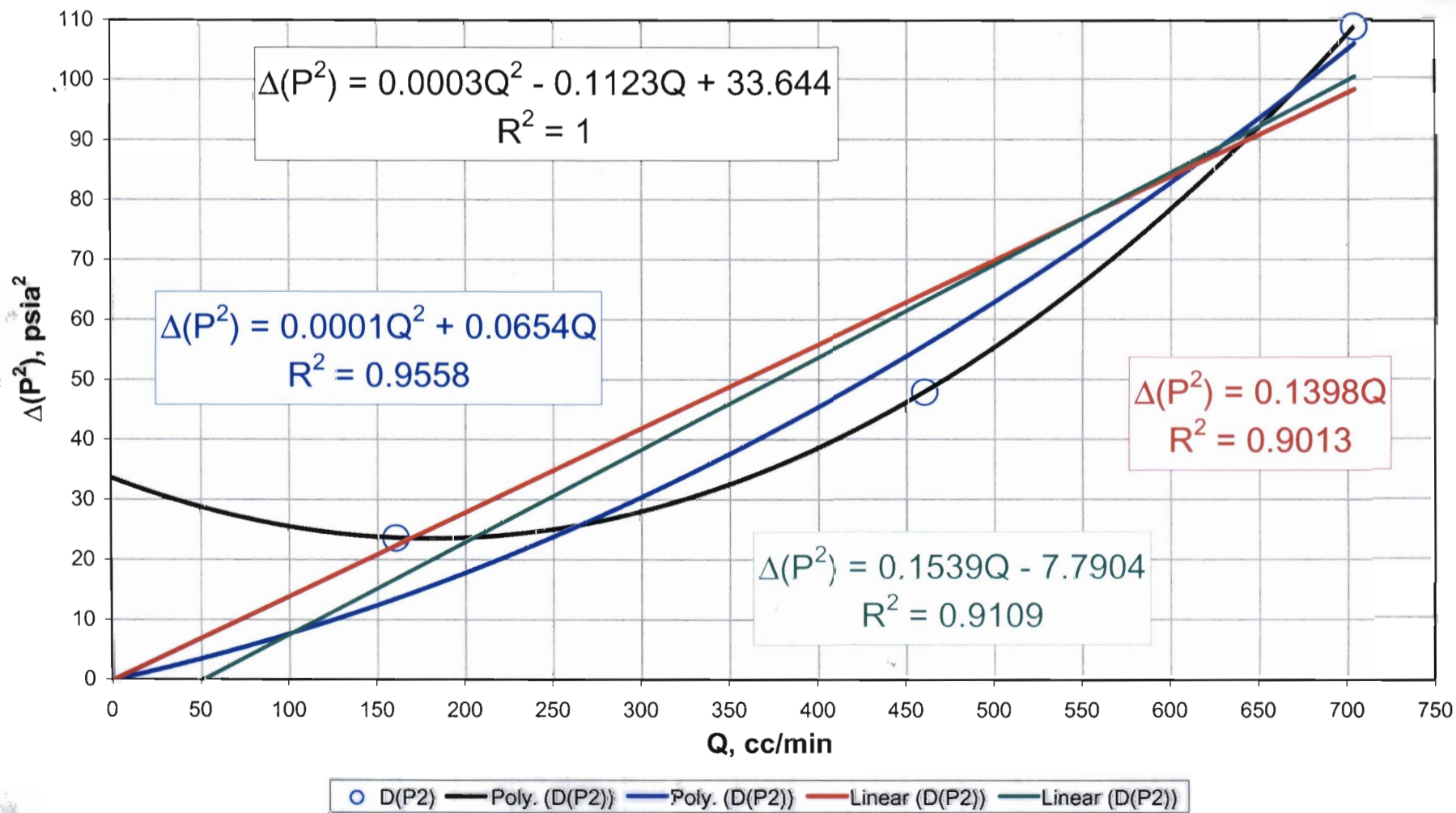
Run, 01/14/03



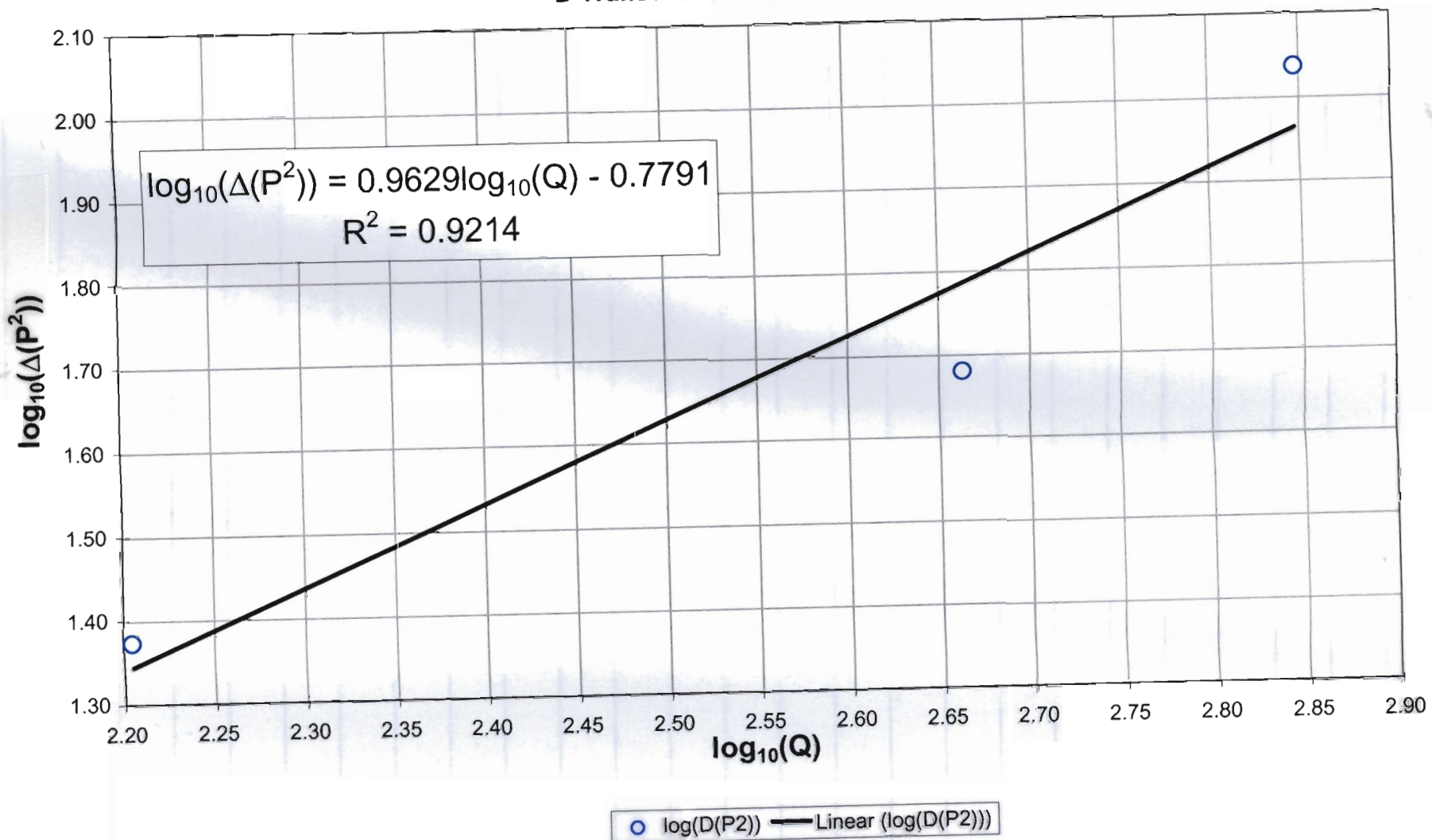
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 61



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.
 D Transect: Drillhole 62

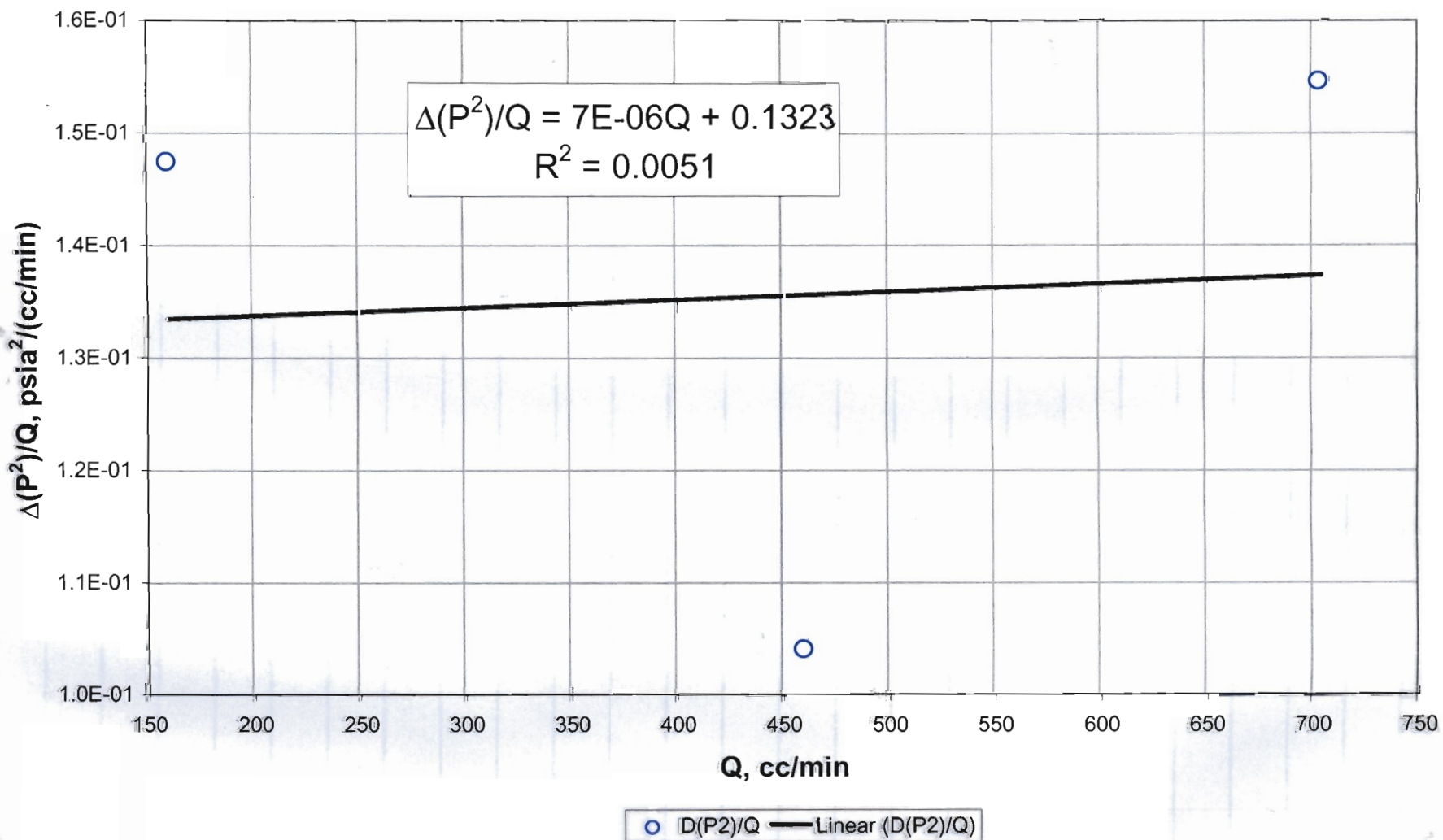


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
D Transect: Drillhole 62



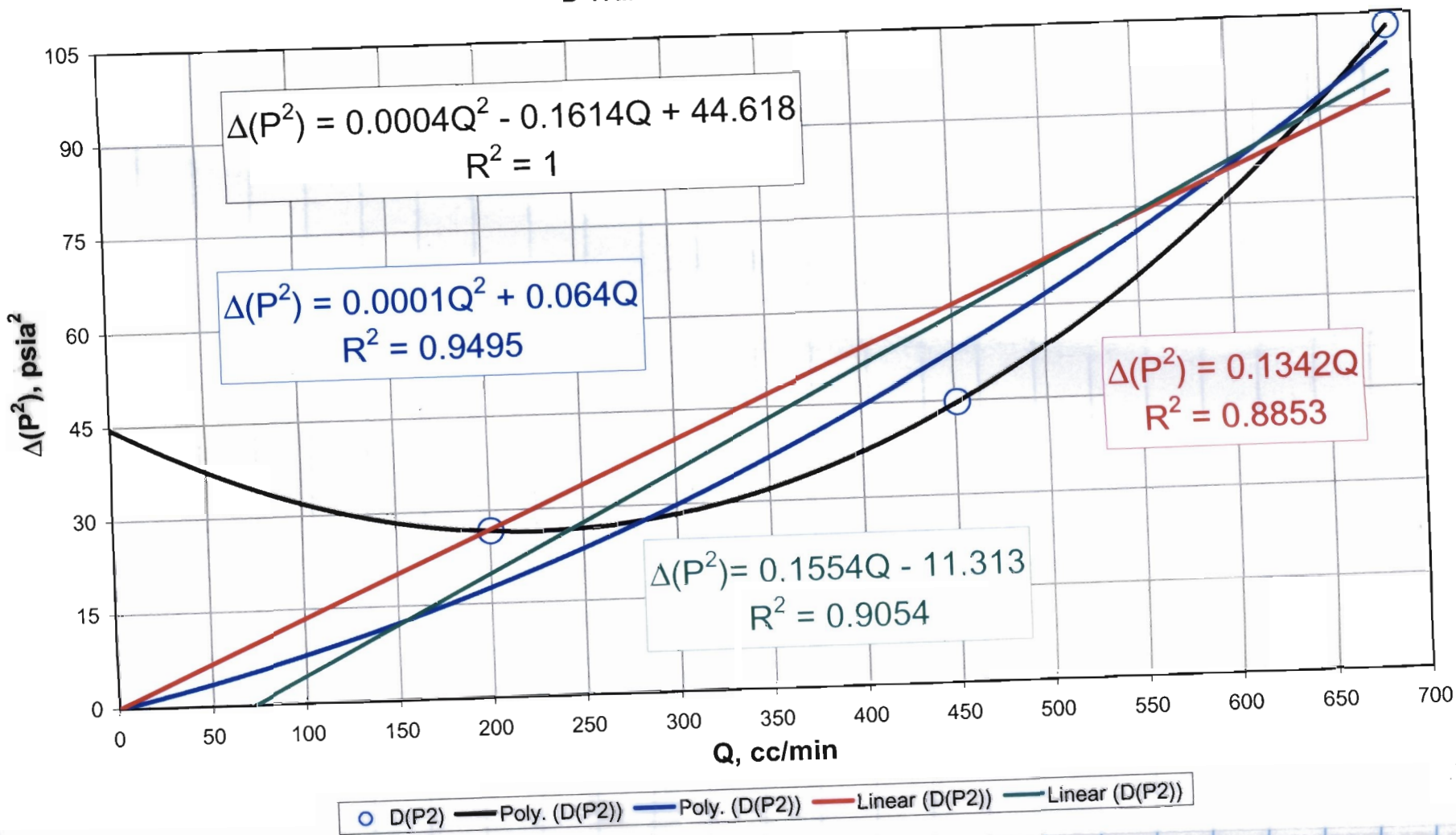
RNM, 01/14/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 62



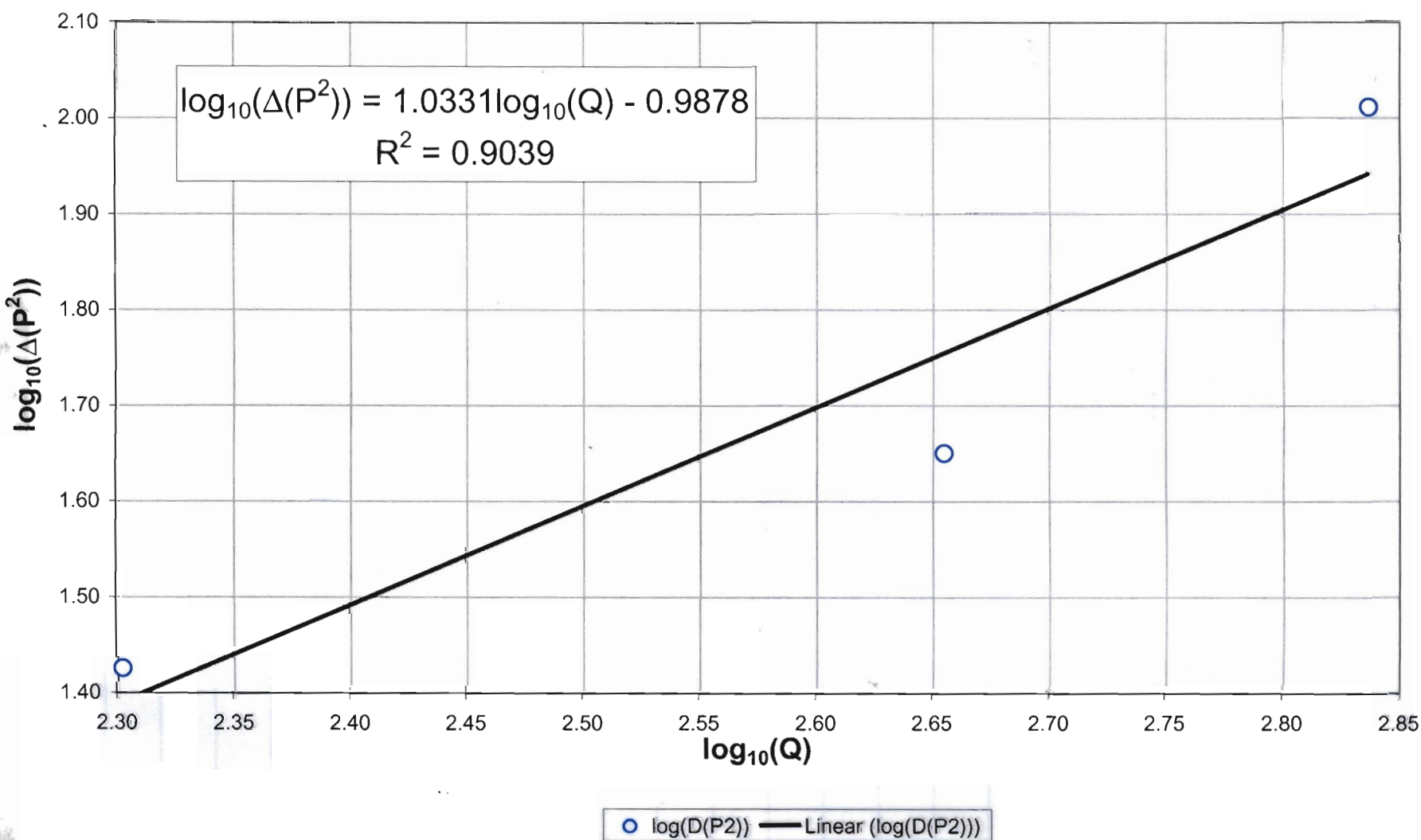
RNM, 01/14/03

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.
 D Transect: Drillhole 63



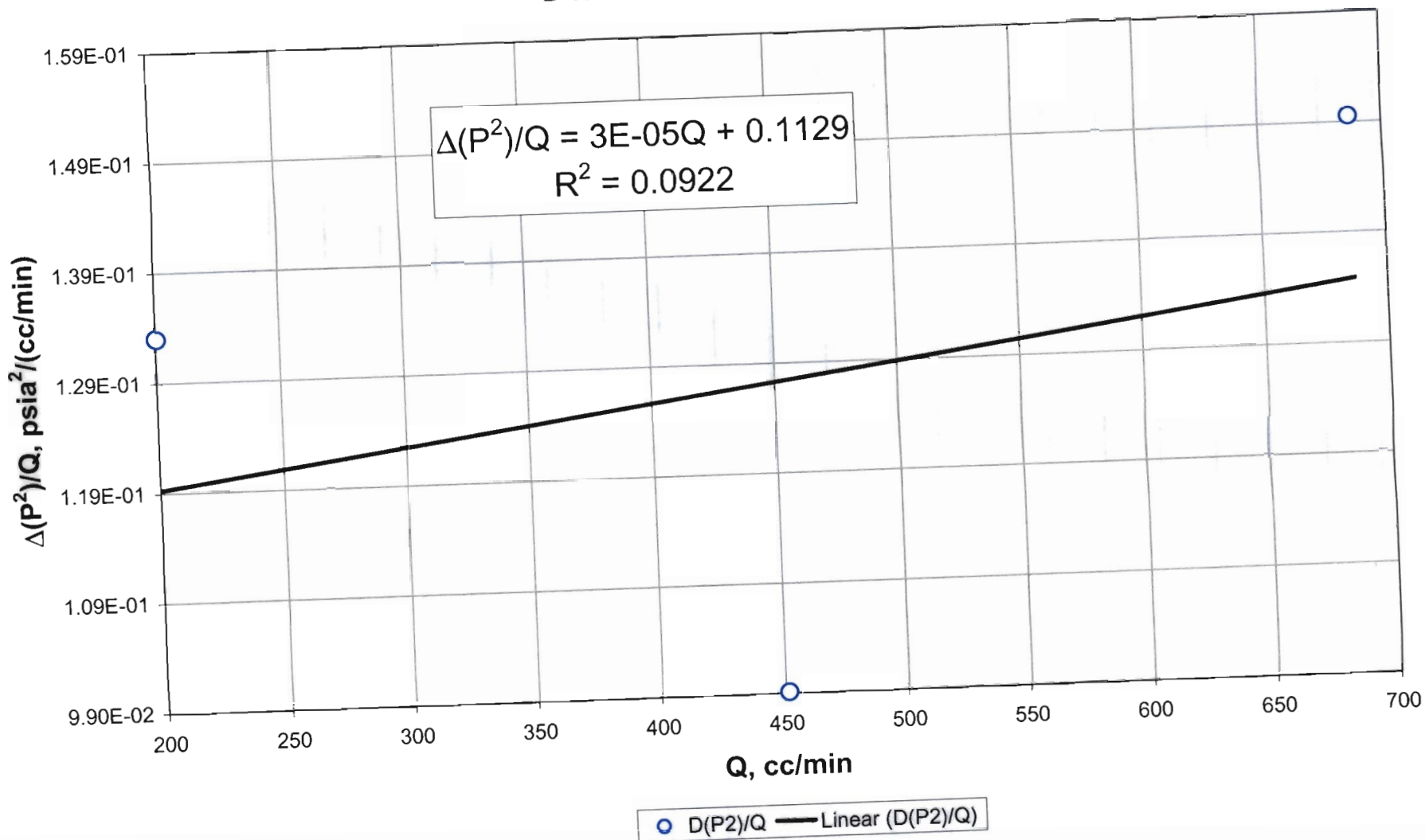
RMM, 01/14/03

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)
 D Transect: Drillhole 63



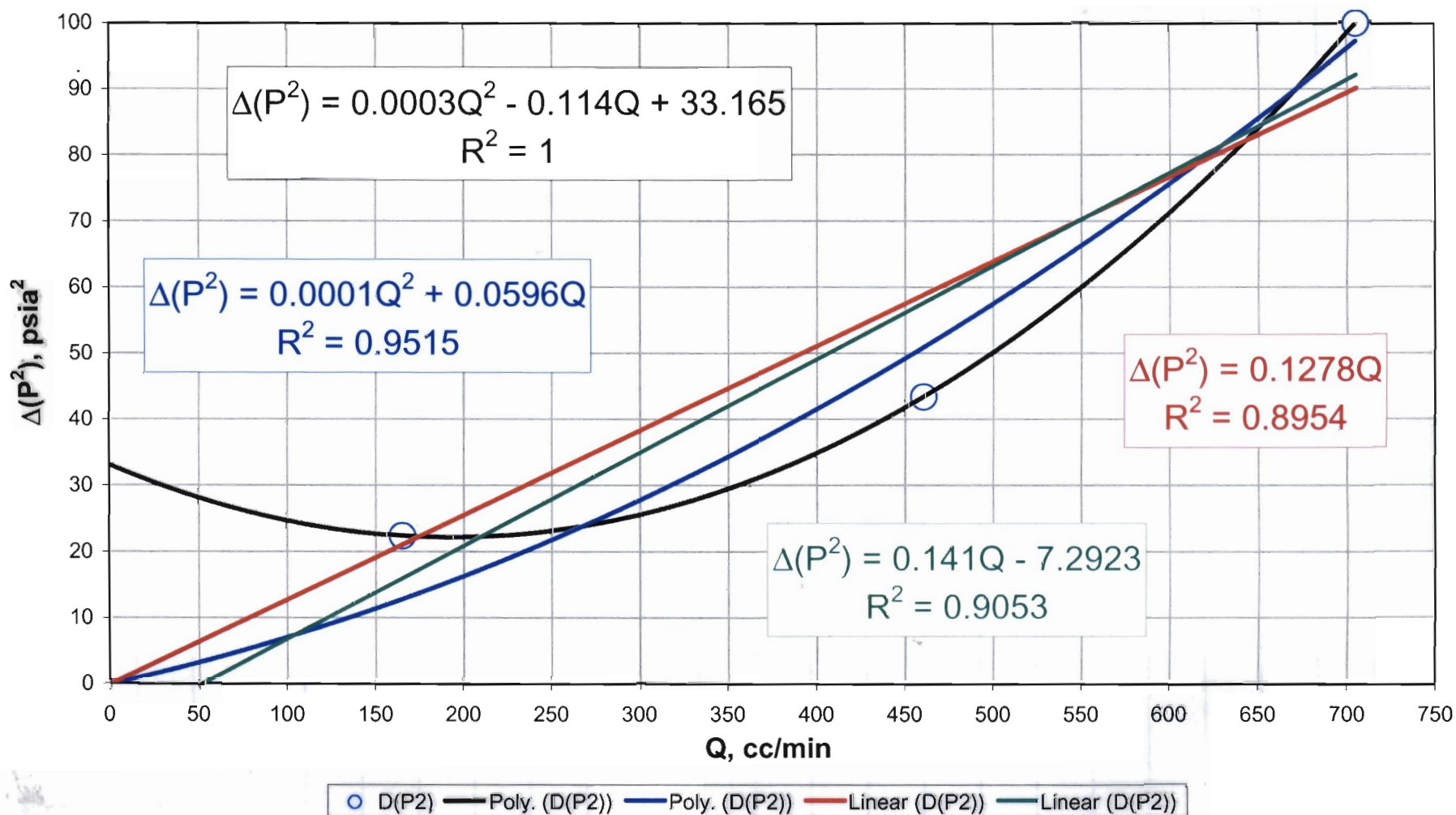
RMM, 01/14/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 63



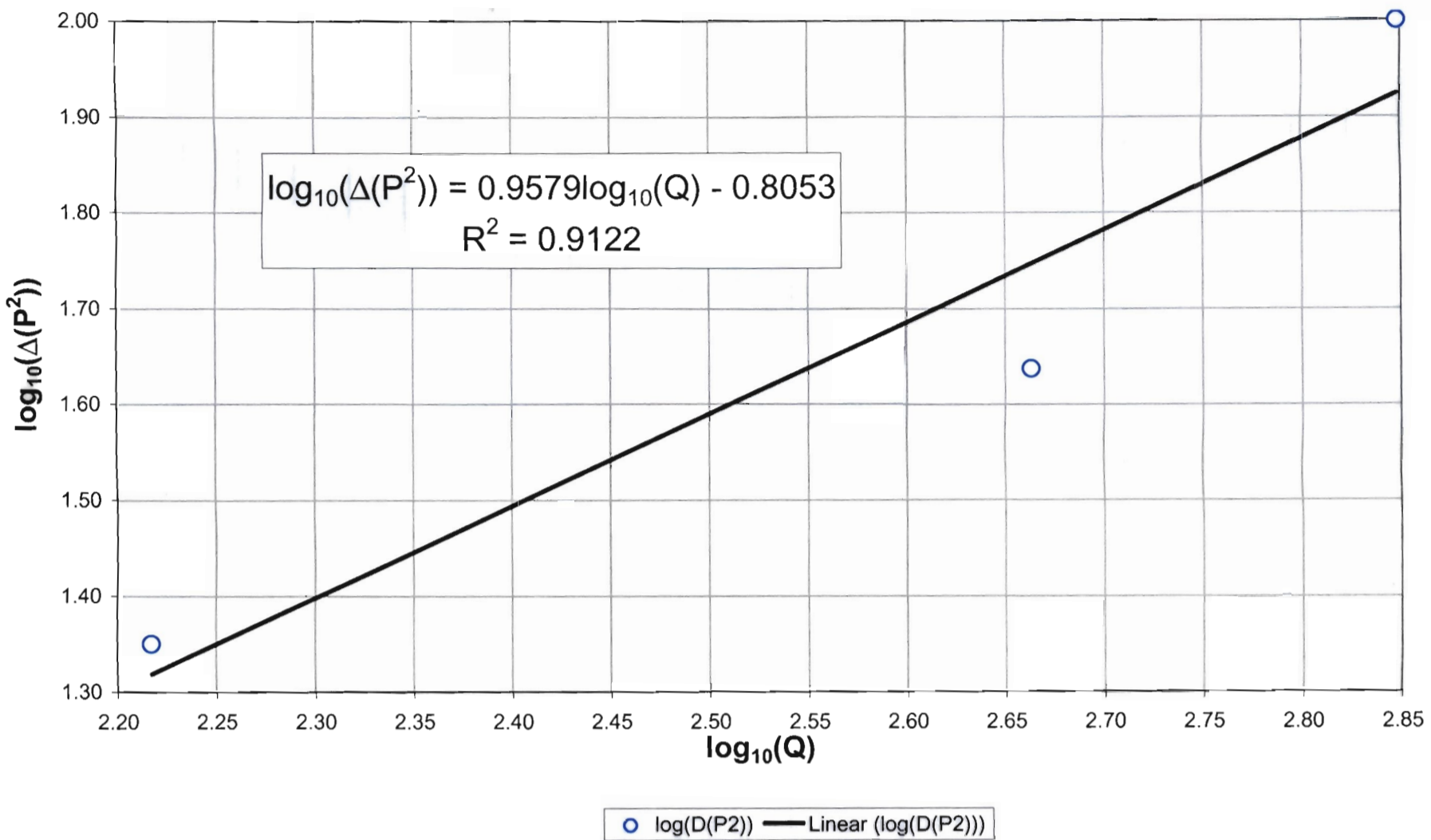
RNM 01/14/03

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.
 D Transect: Drillhole 64



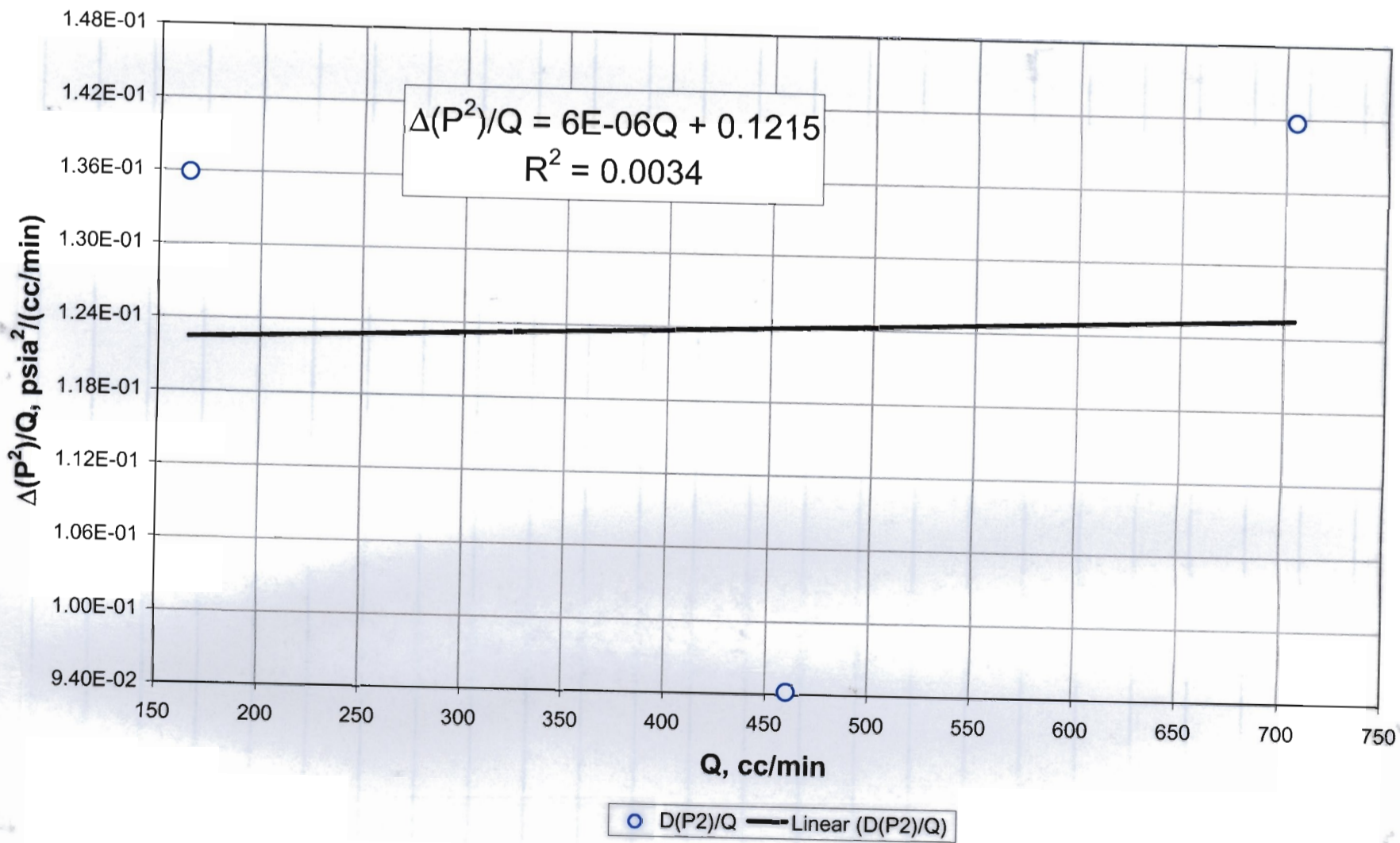
RNM 01/14/03

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)
D Transect: Drillhole 64



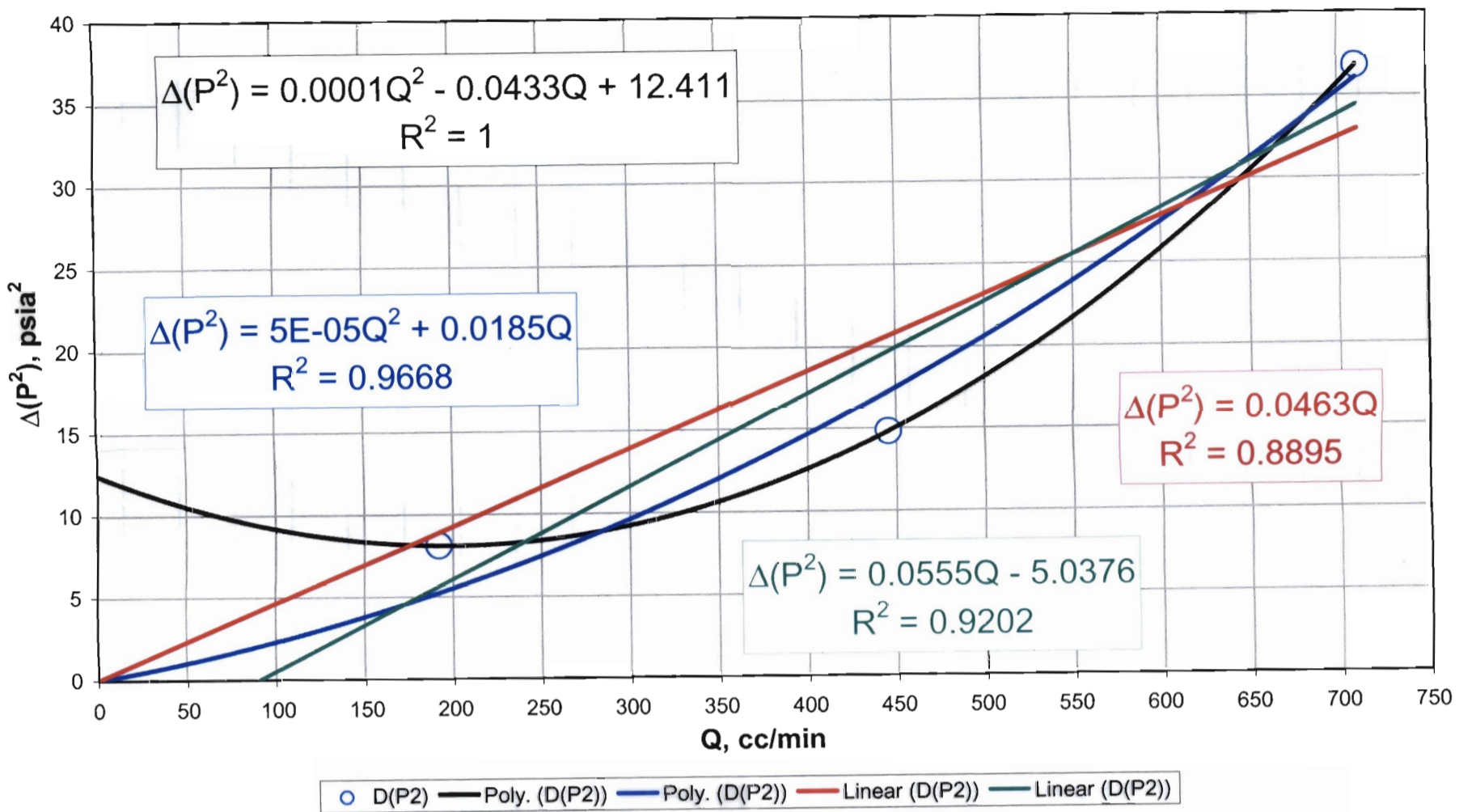
RNM, 01/14/03

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 64



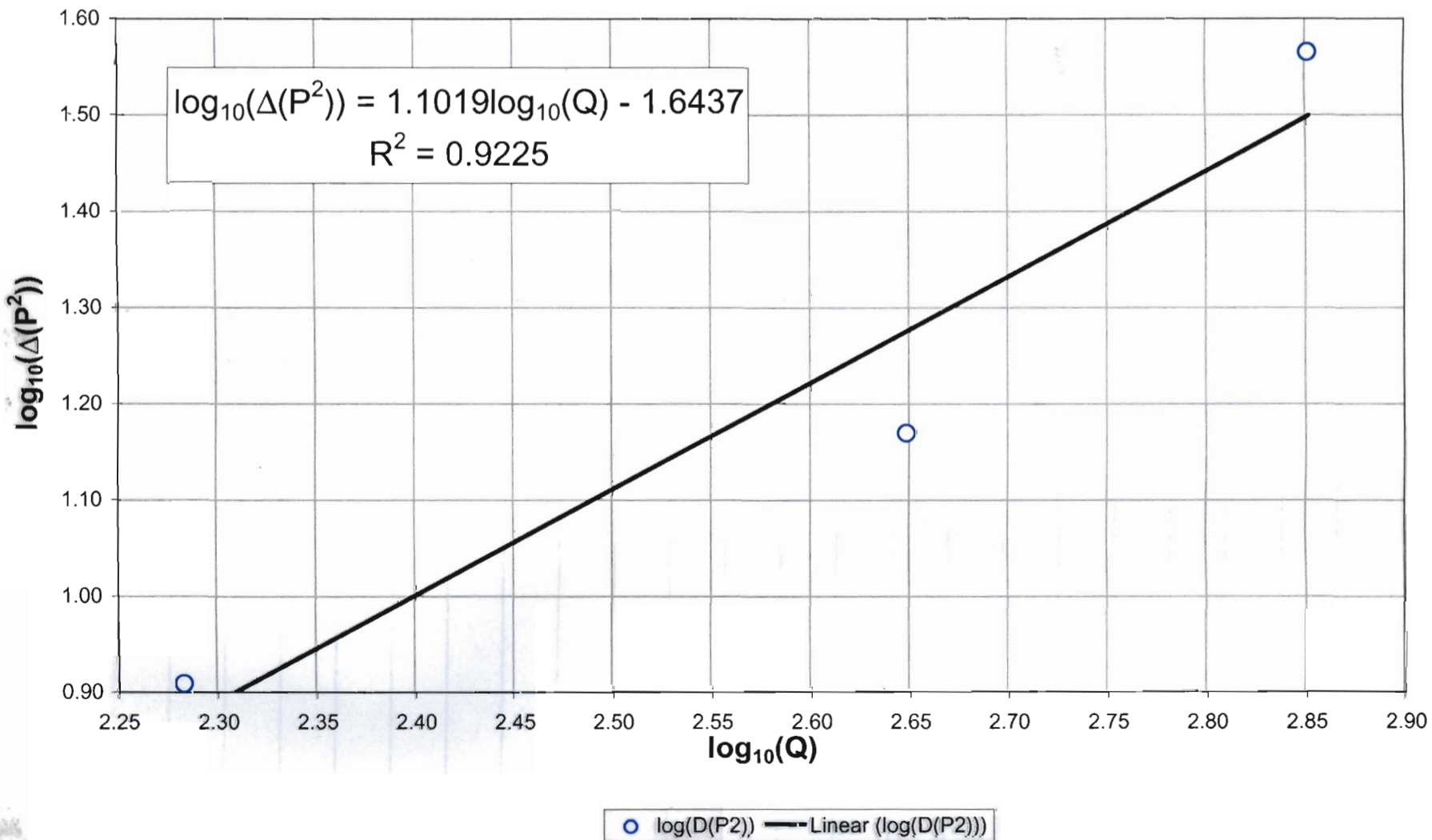
RNM, 01/14/03

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.
 D Transect: Drillhole 65



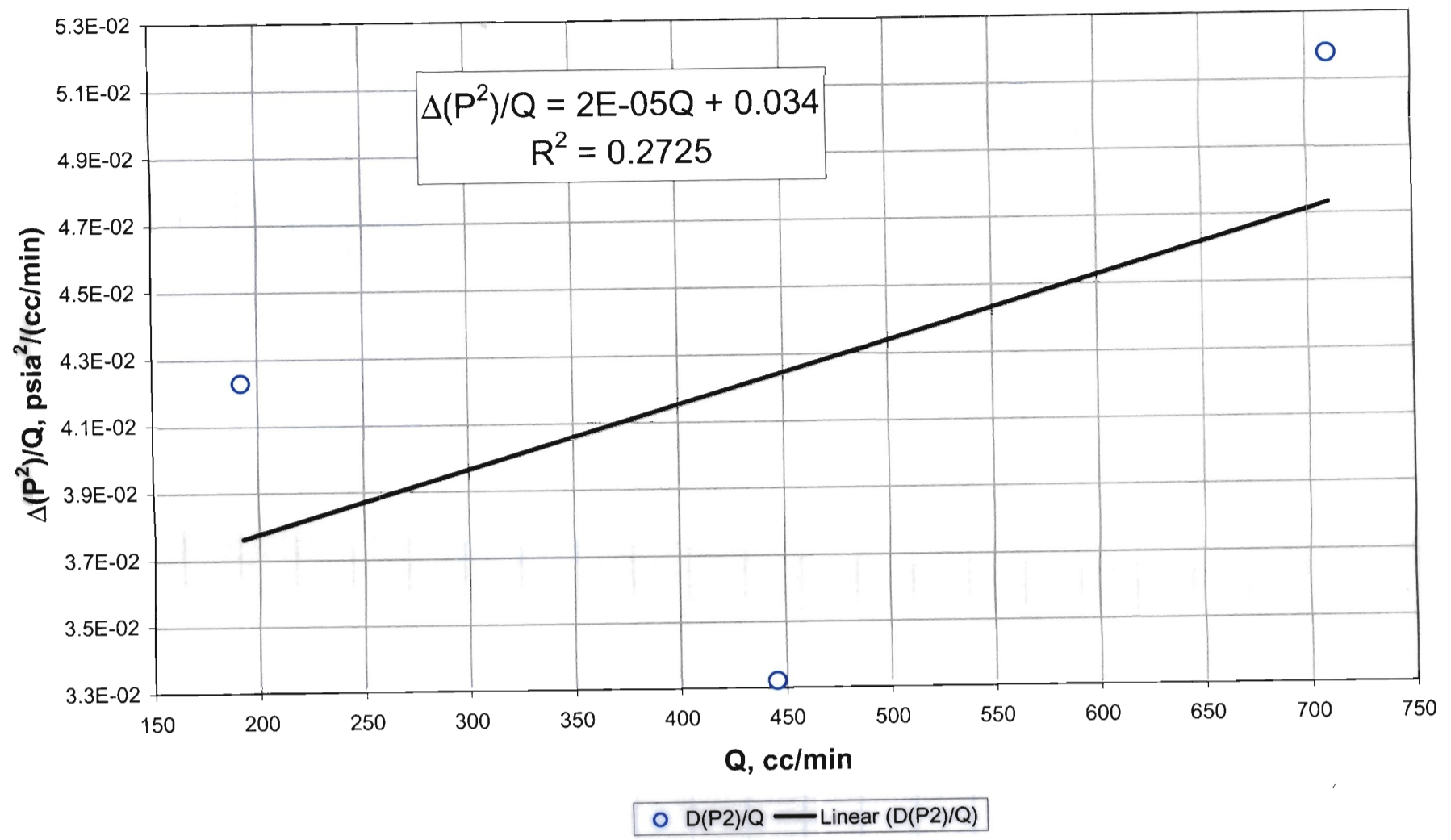
RMP, 01/14/03

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)
 D Transect: Drillhole 65



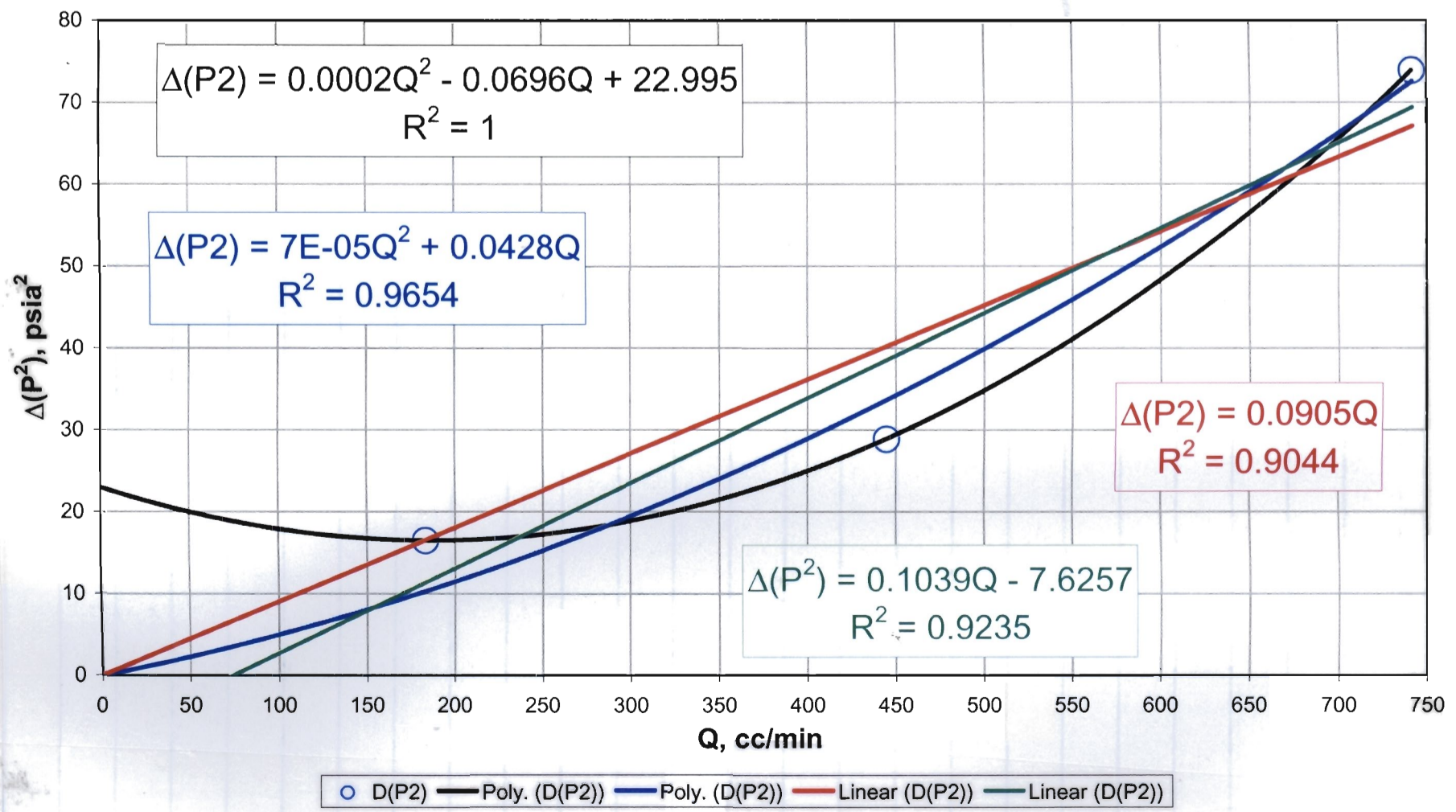
RMP, 01/14/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 65



RMN, 01/14/03

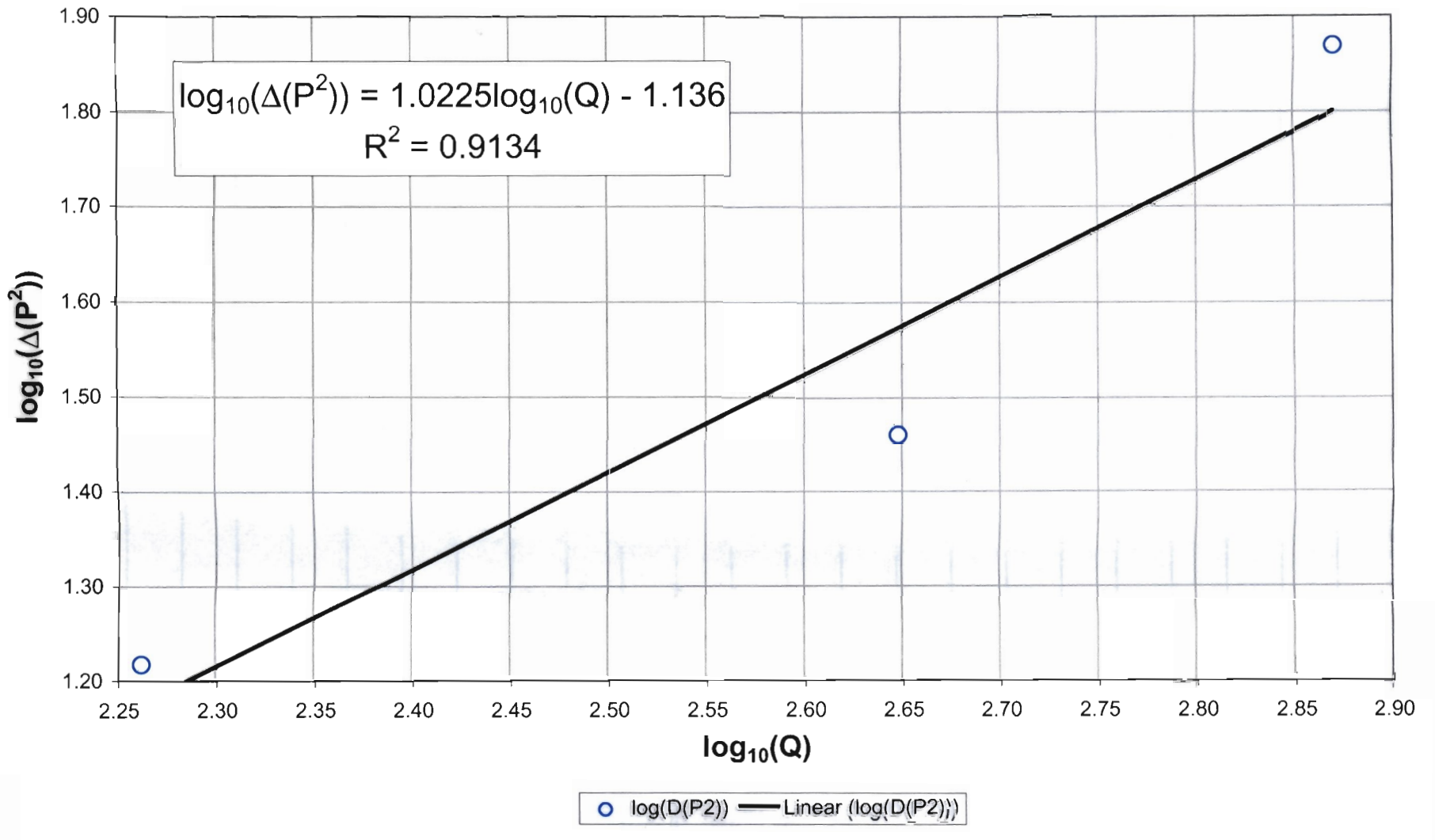
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 66



RMN, 01/14/03

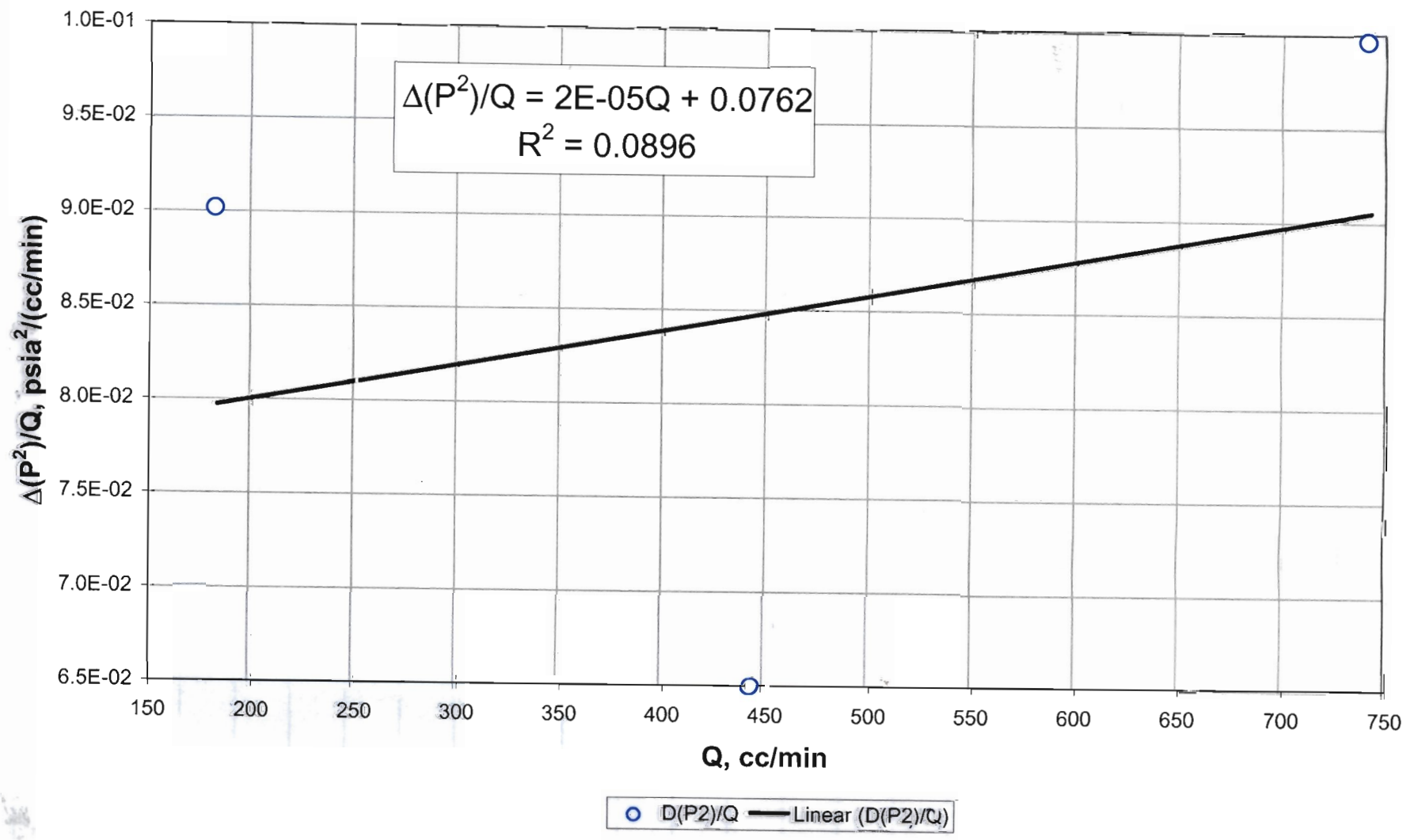
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
D Transect: Drillhole 66

RMN, 01/14/03

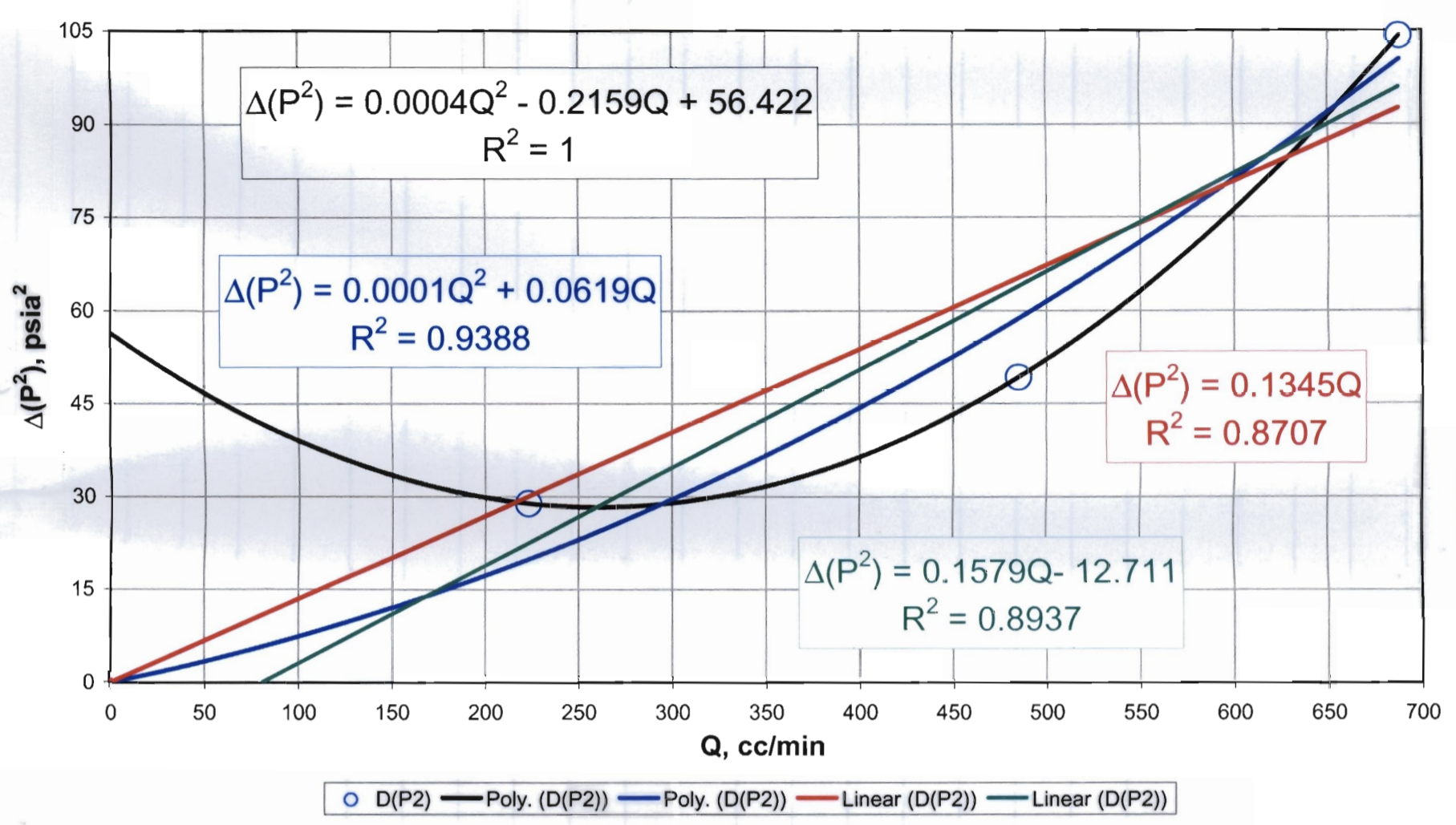


Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 66

RMN, 01/14/03

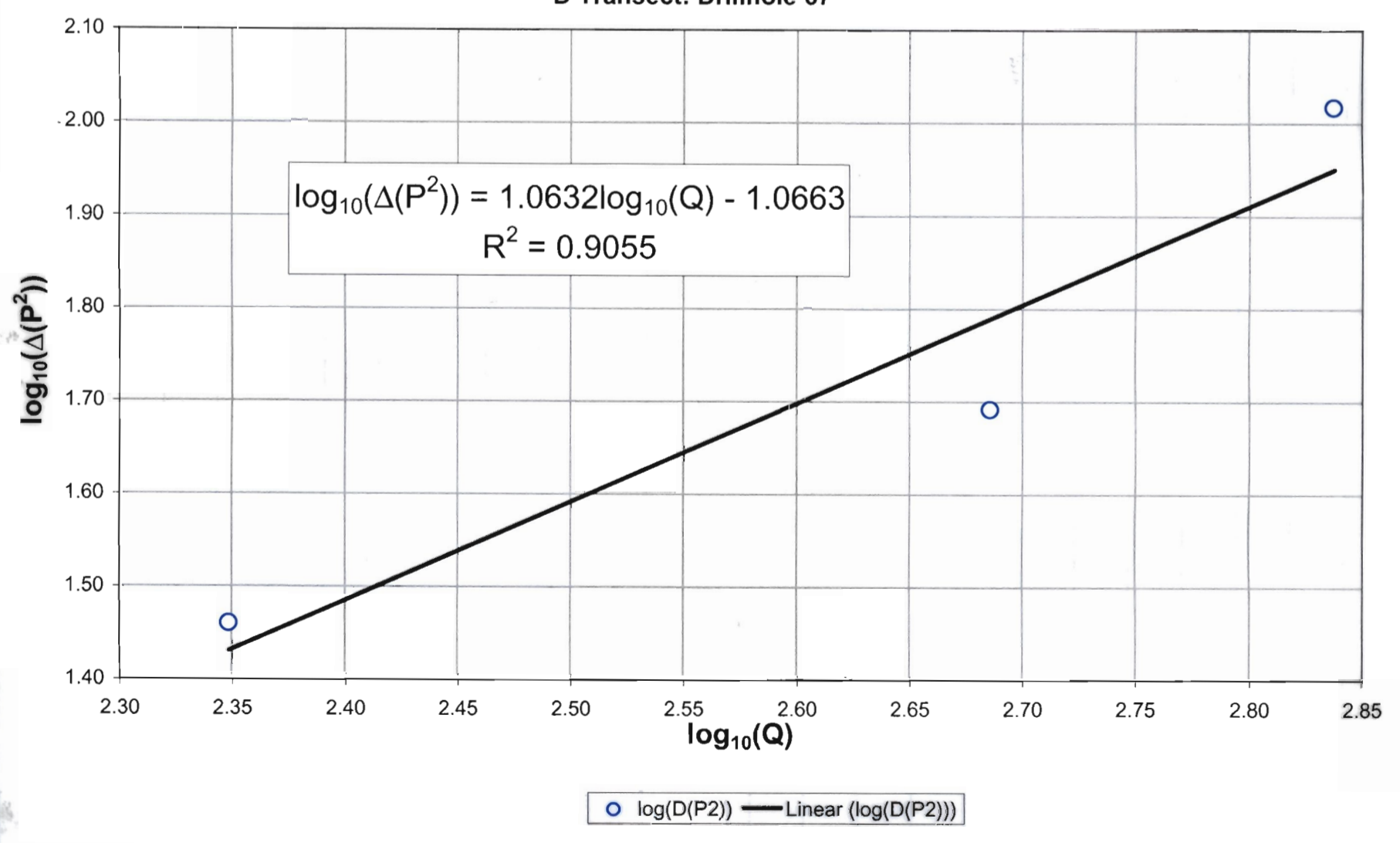


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 67



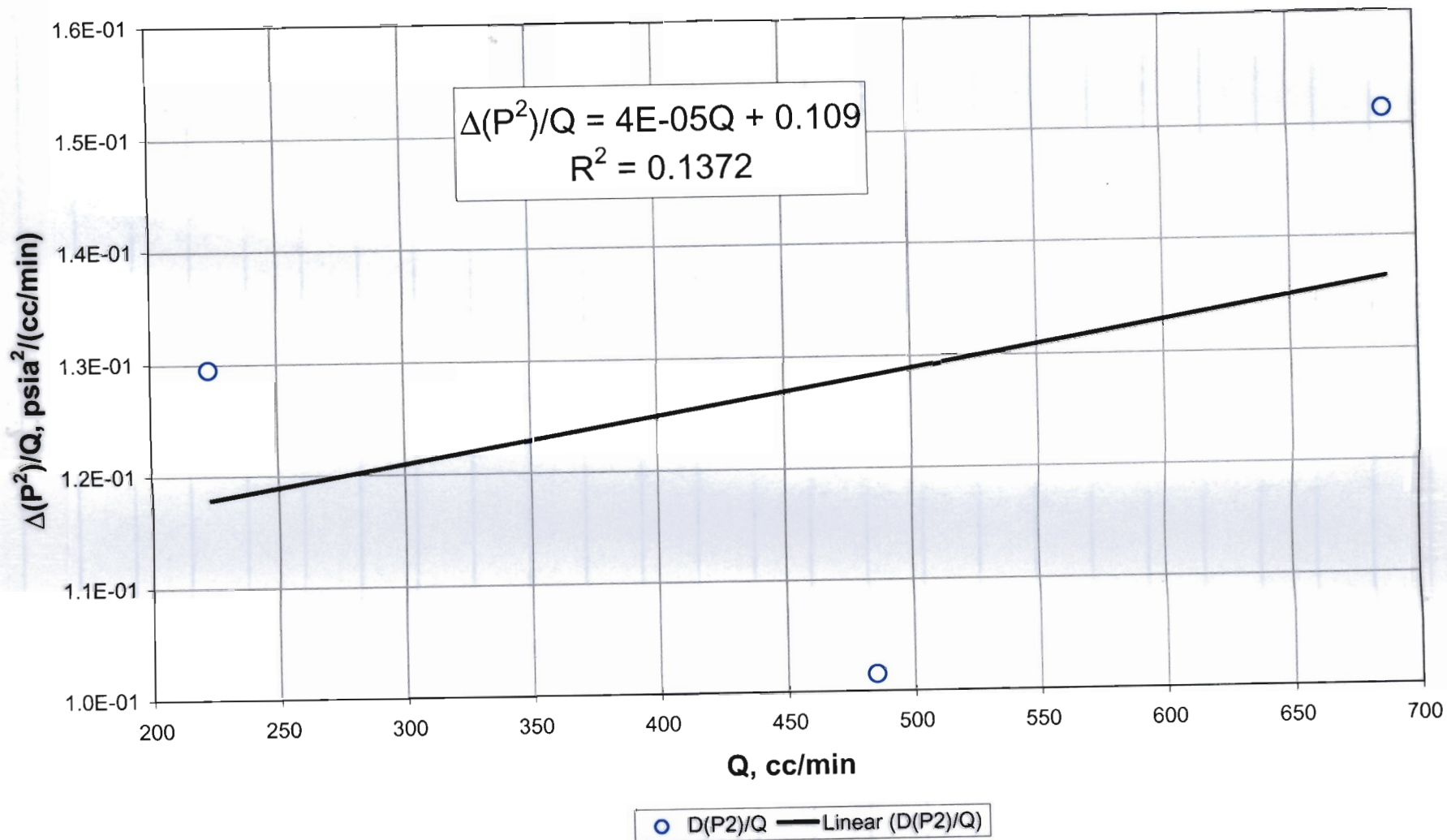
RNM, 01/14/03

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)
 D Transect: Drillhole 67



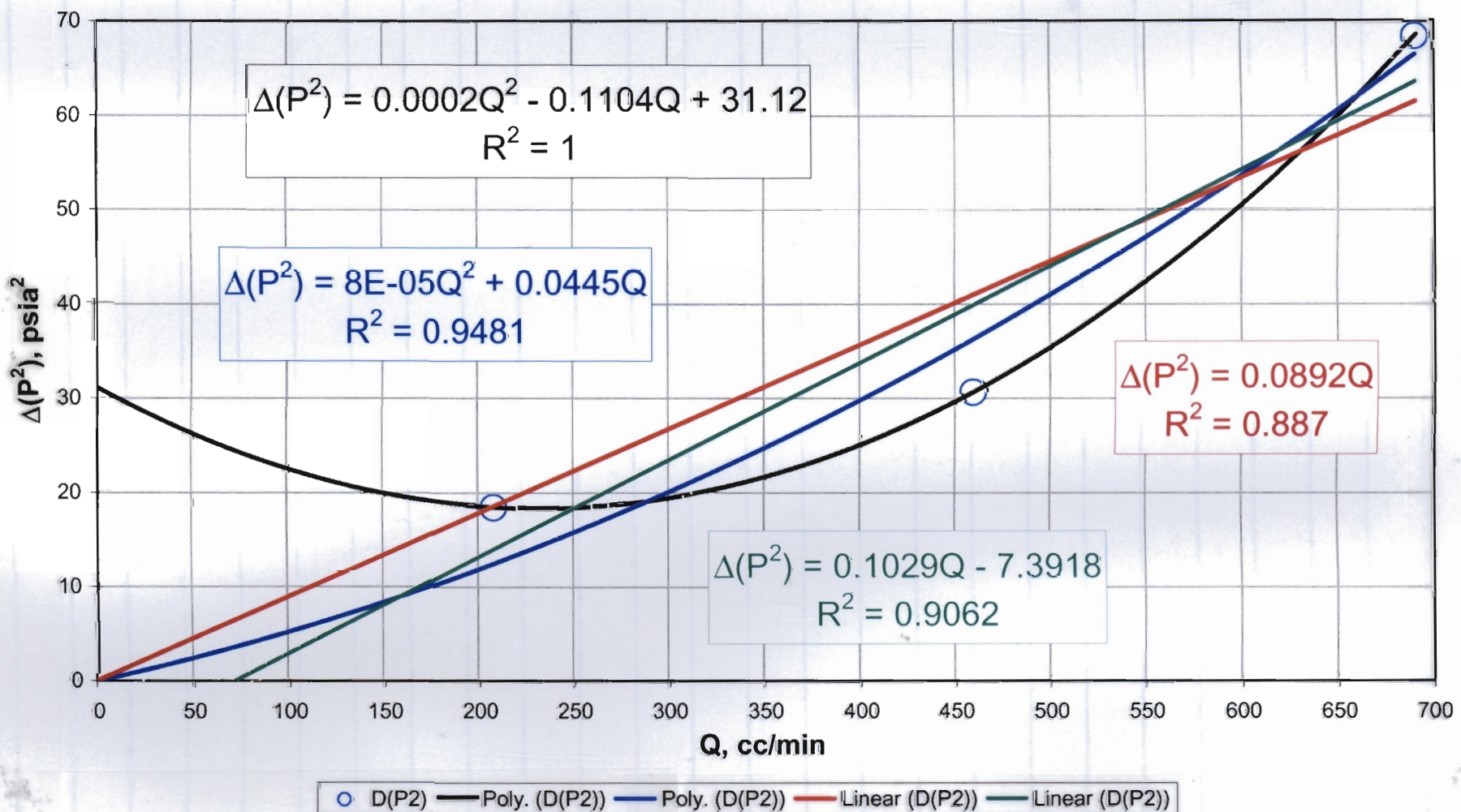
RNM, 01/14/03

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 D Transect : Drillhole 67



RMM, 01/14/03

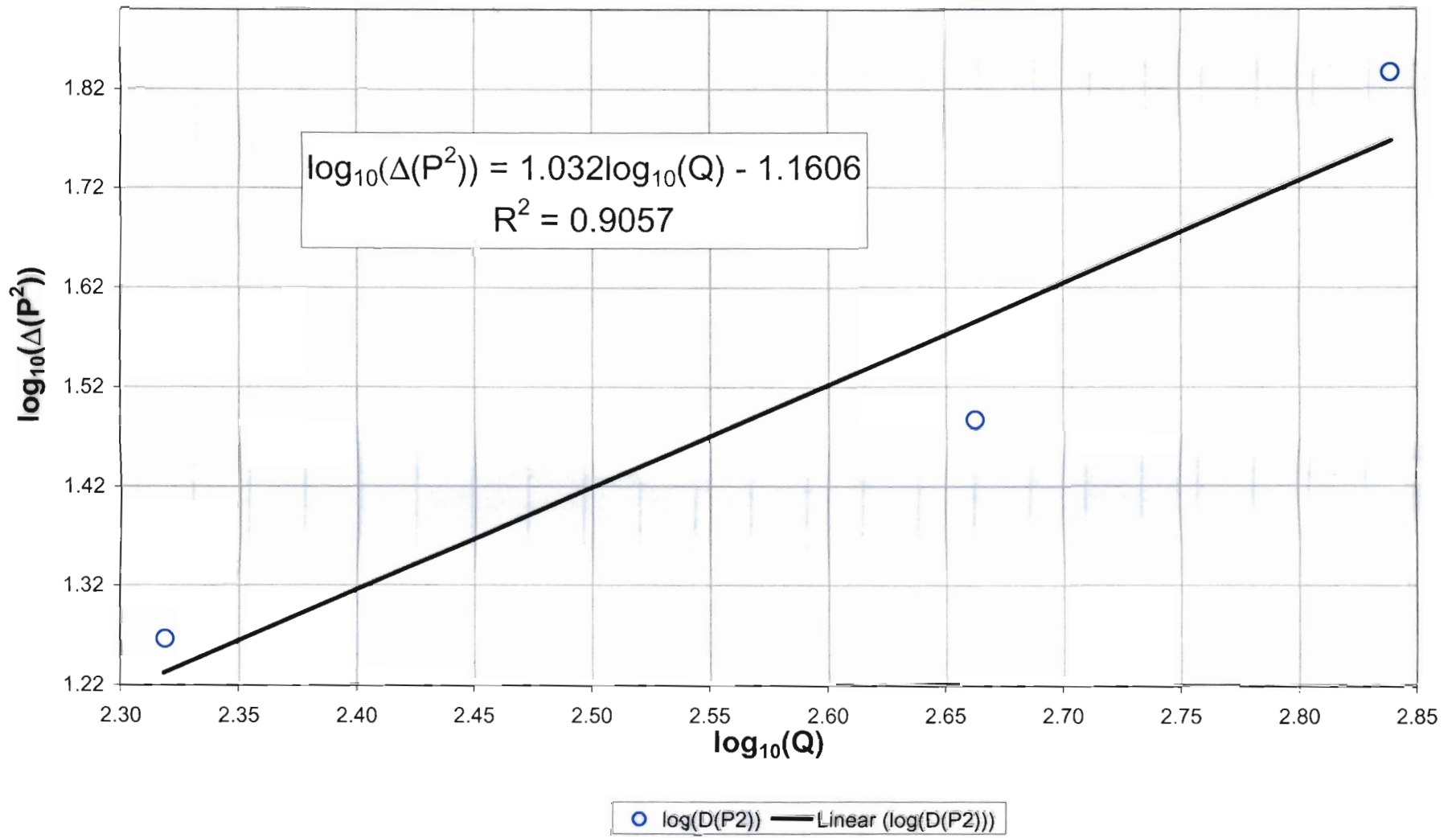
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 D Transect: Drillhole 68



RMM, 01/14/03

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)
D Transect: Drillhole 68

Rmn, 01/14/03



Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
D Transect : Drillhole 68

Rmn, 01/14/03

