

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

CNWRA
CONTROLLED
COPY 562

This is a continuation of the CNWRA controlled scientific notebook #560, titled:

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

Participating individuals ^{RRM} Cynthia L. Dinwiddie (502-6085)
Ronald N. McGinnis (502-5825)

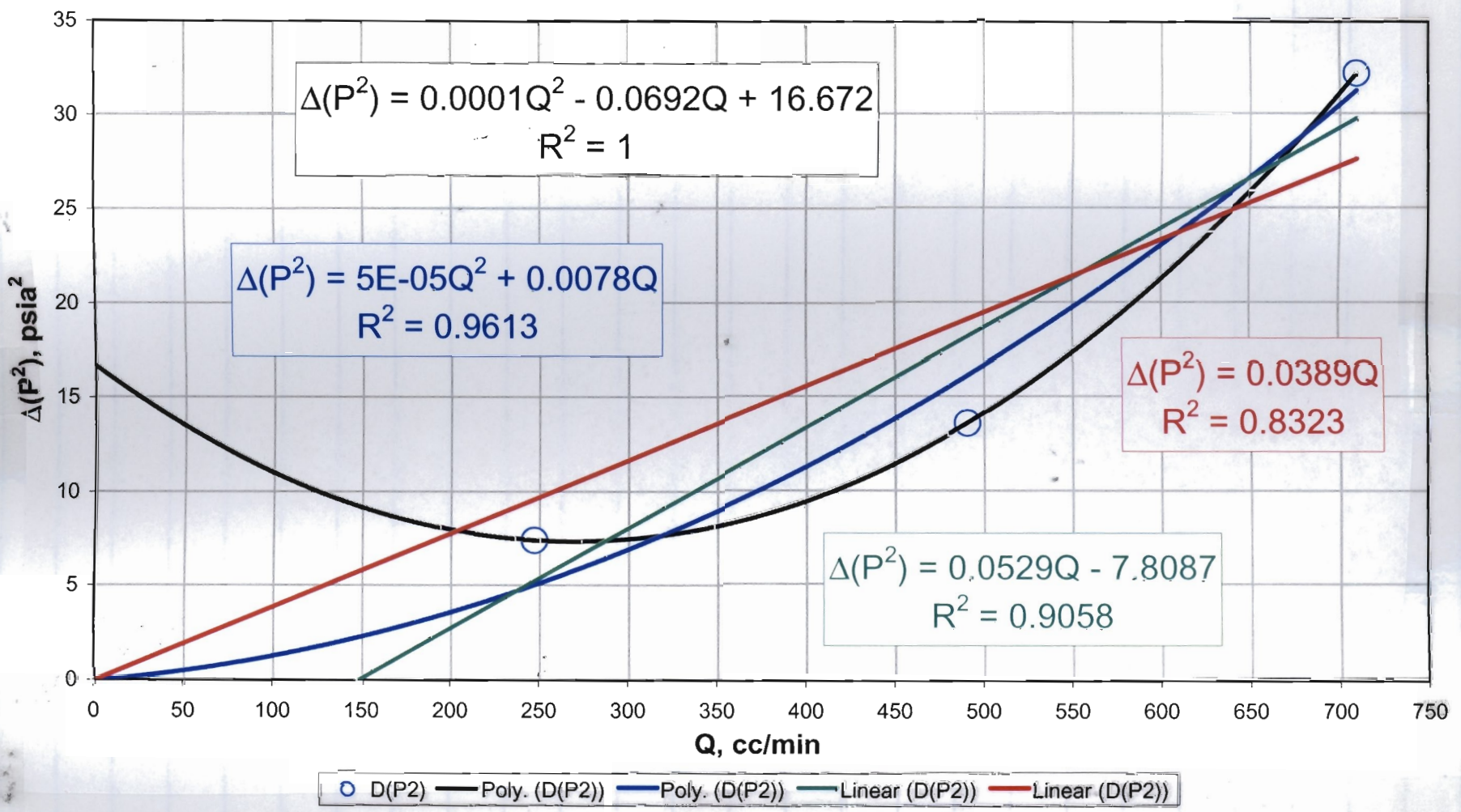
Contract No. Project: 06002.01.131

Task objective may be found in SN 537 + 545.

RRM, 12/30/02

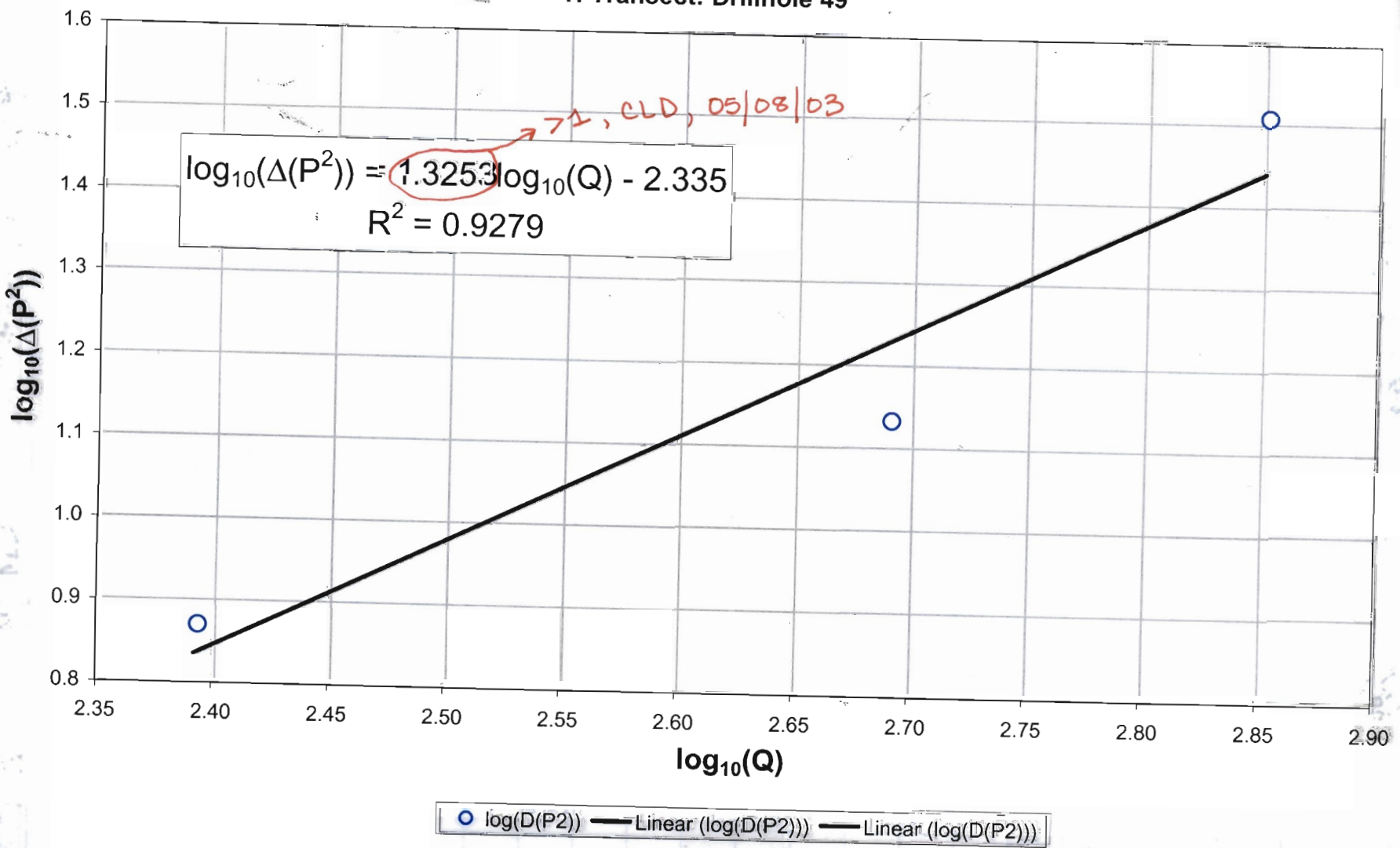
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 49

Rm, 05/08/03

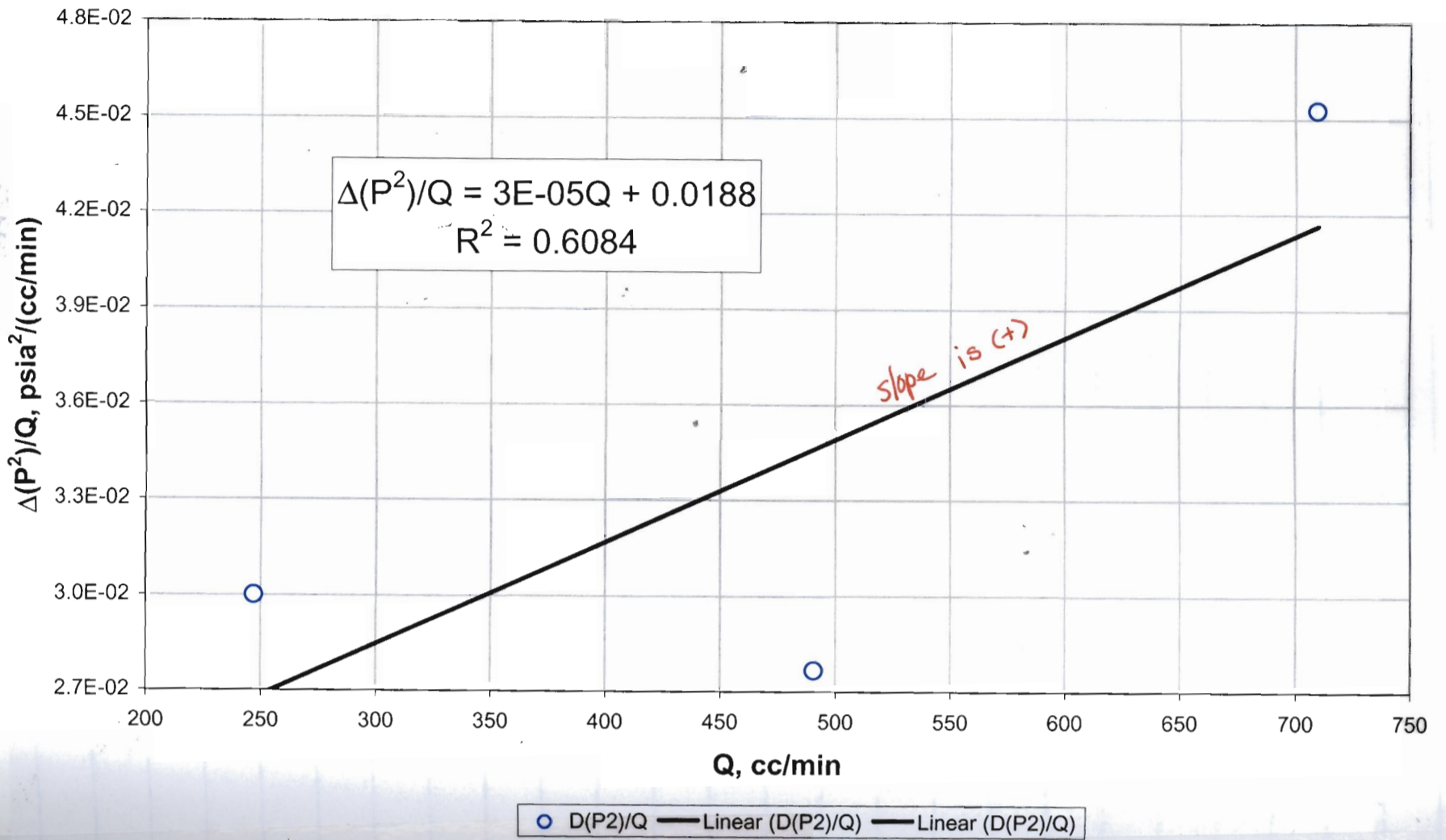


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 49

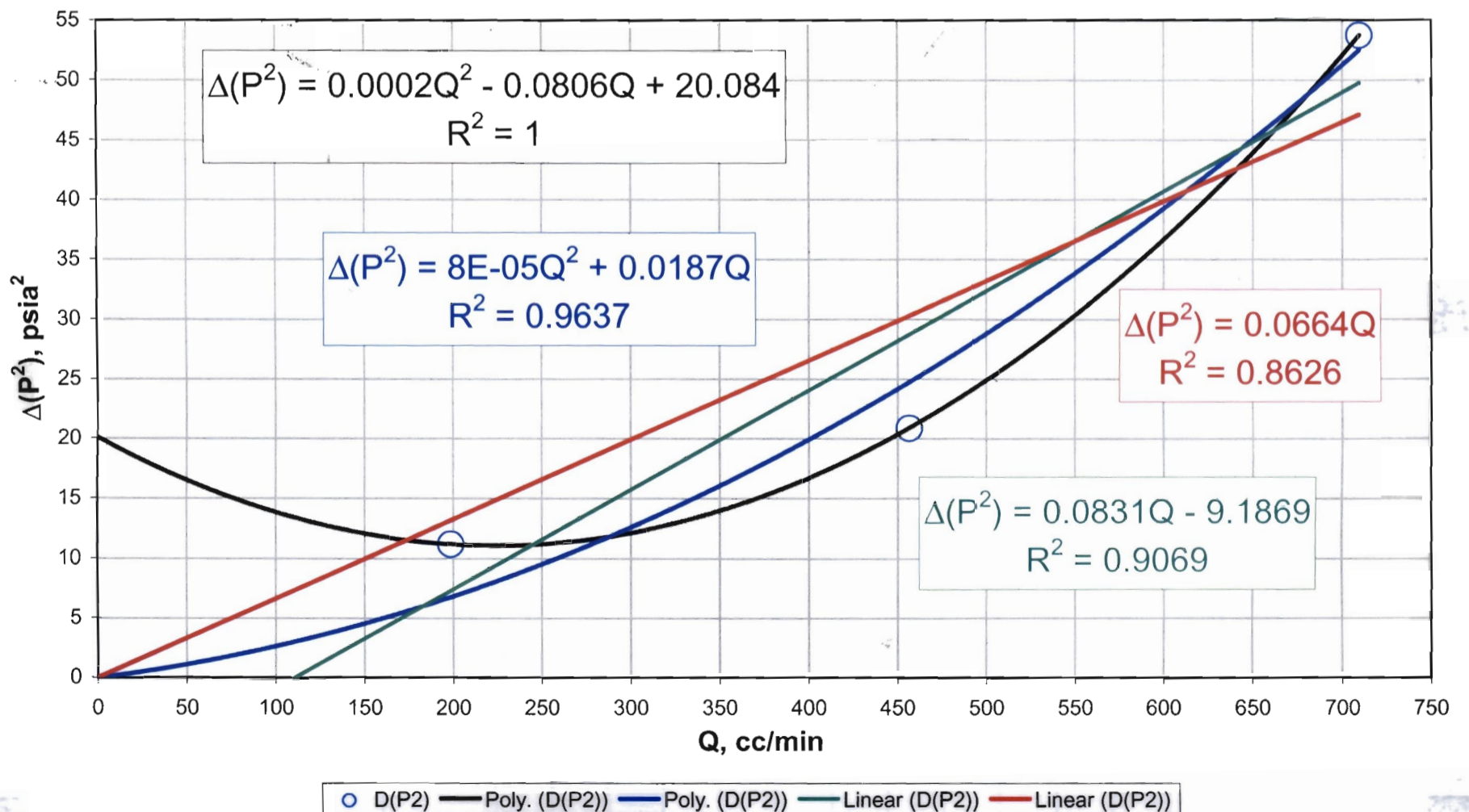
Rm, 05/08/03



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

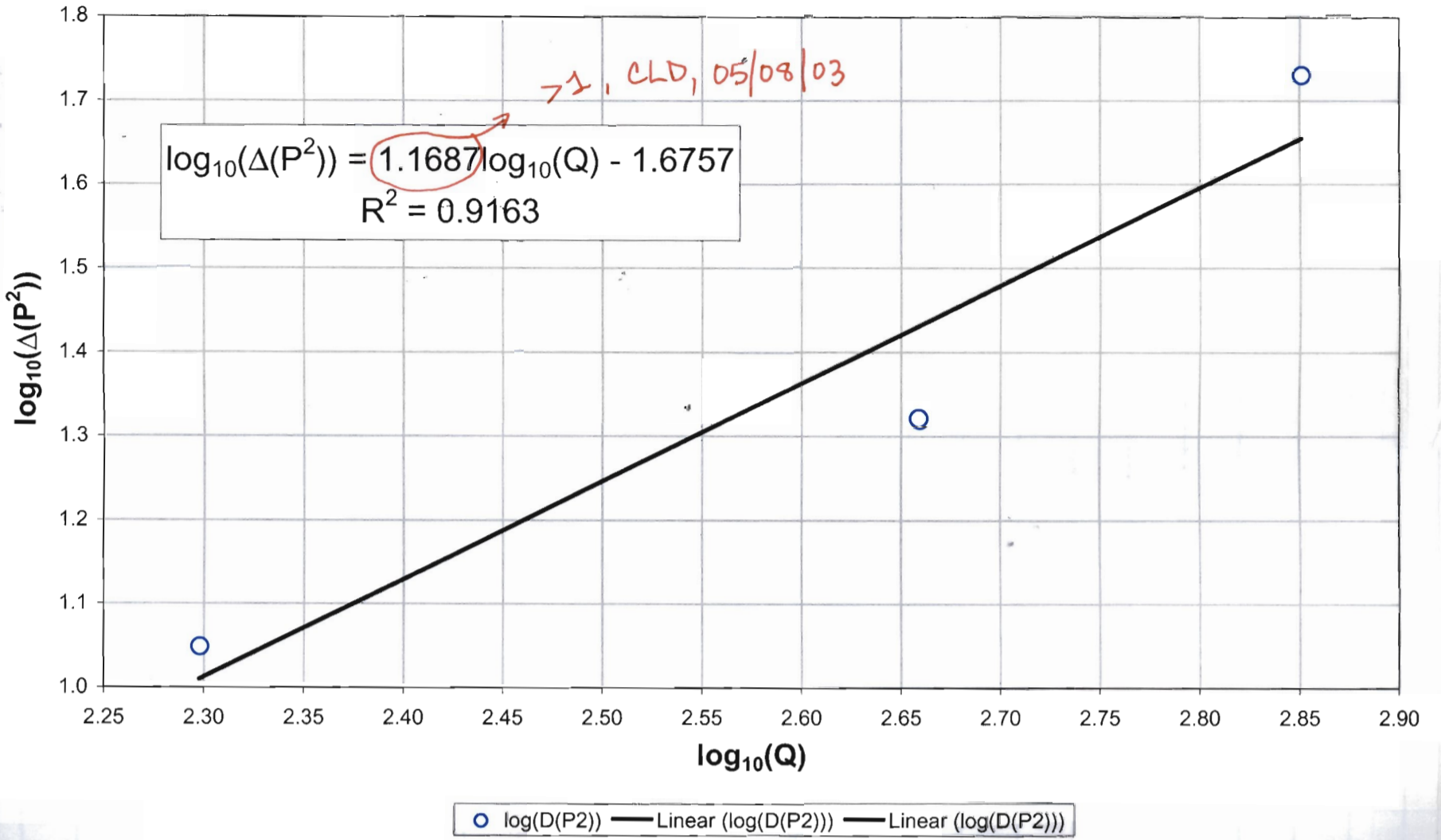


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 50



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)

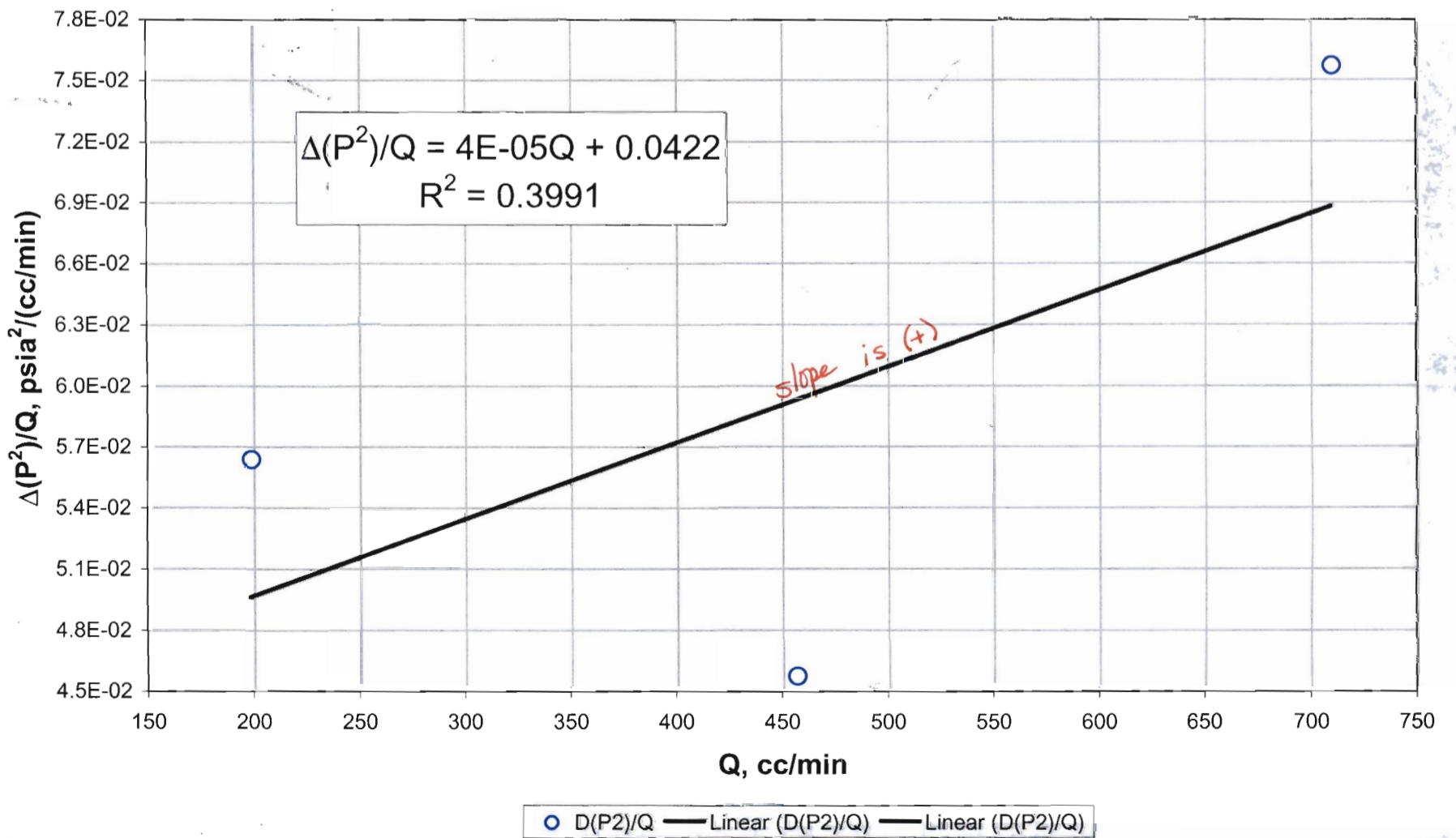
H Transect: Drillhole 50



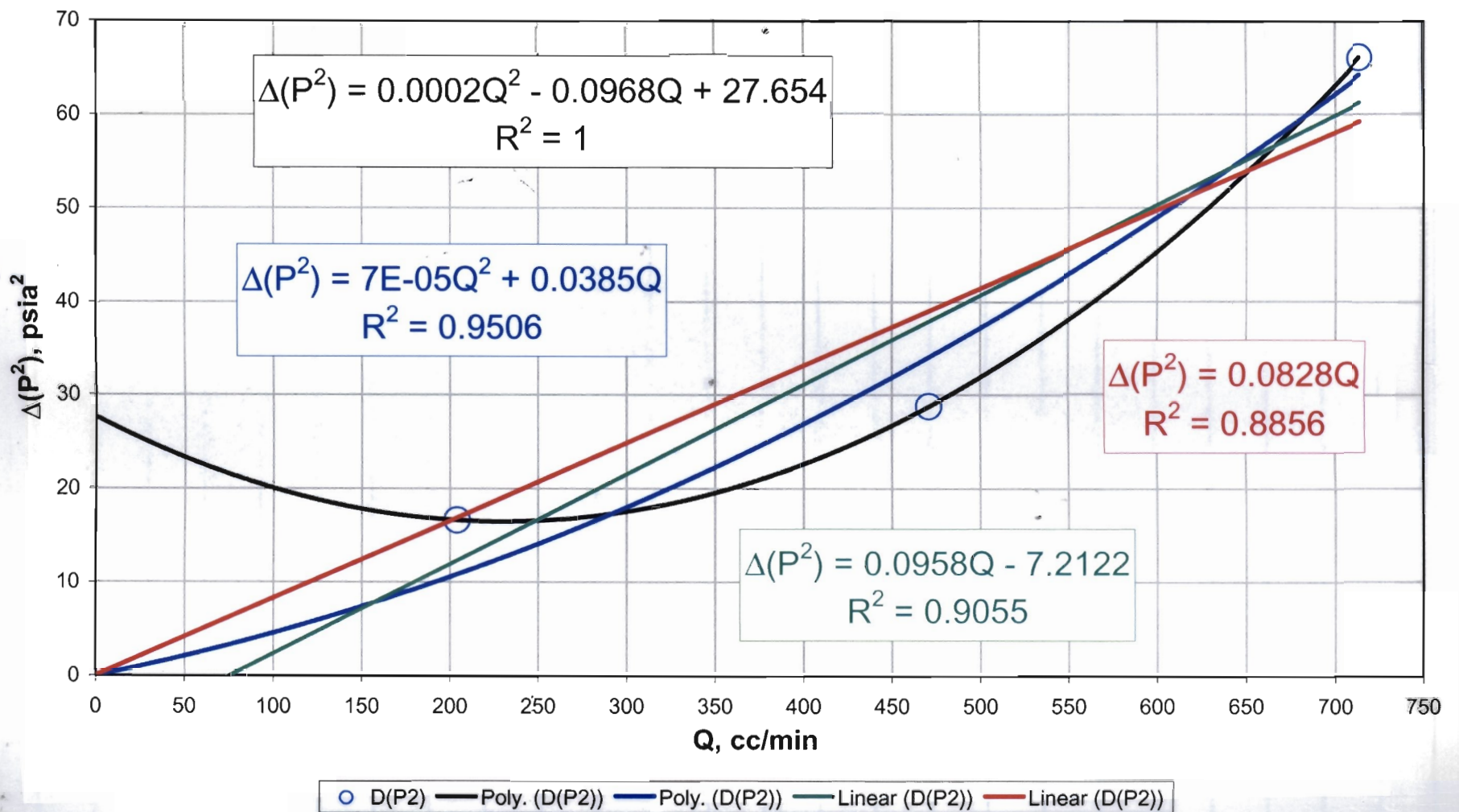
Final check for high velocity flow effects:

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

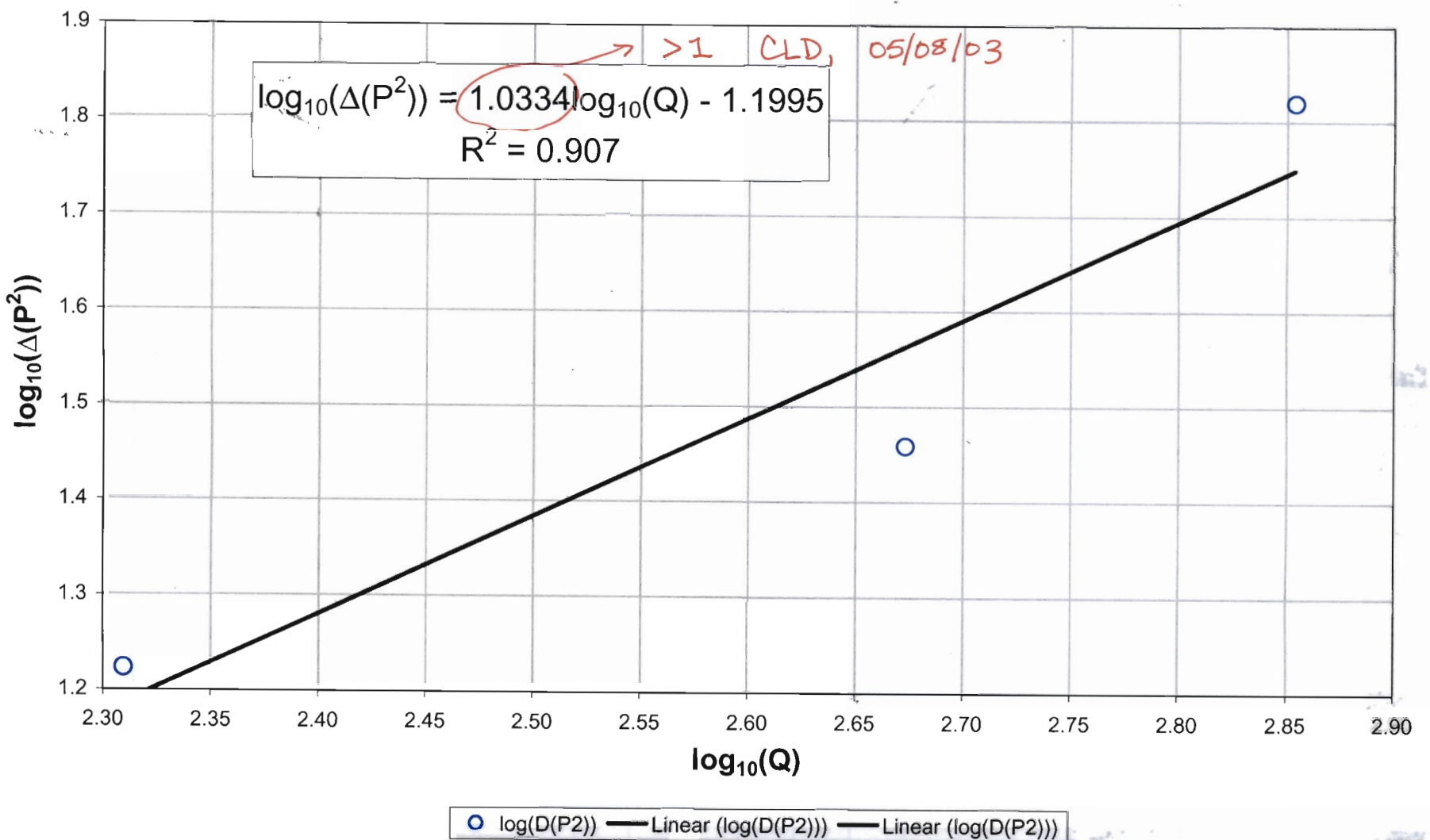
H Transect : Drillhole 50.



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.
 H Transect: Drillhole 51

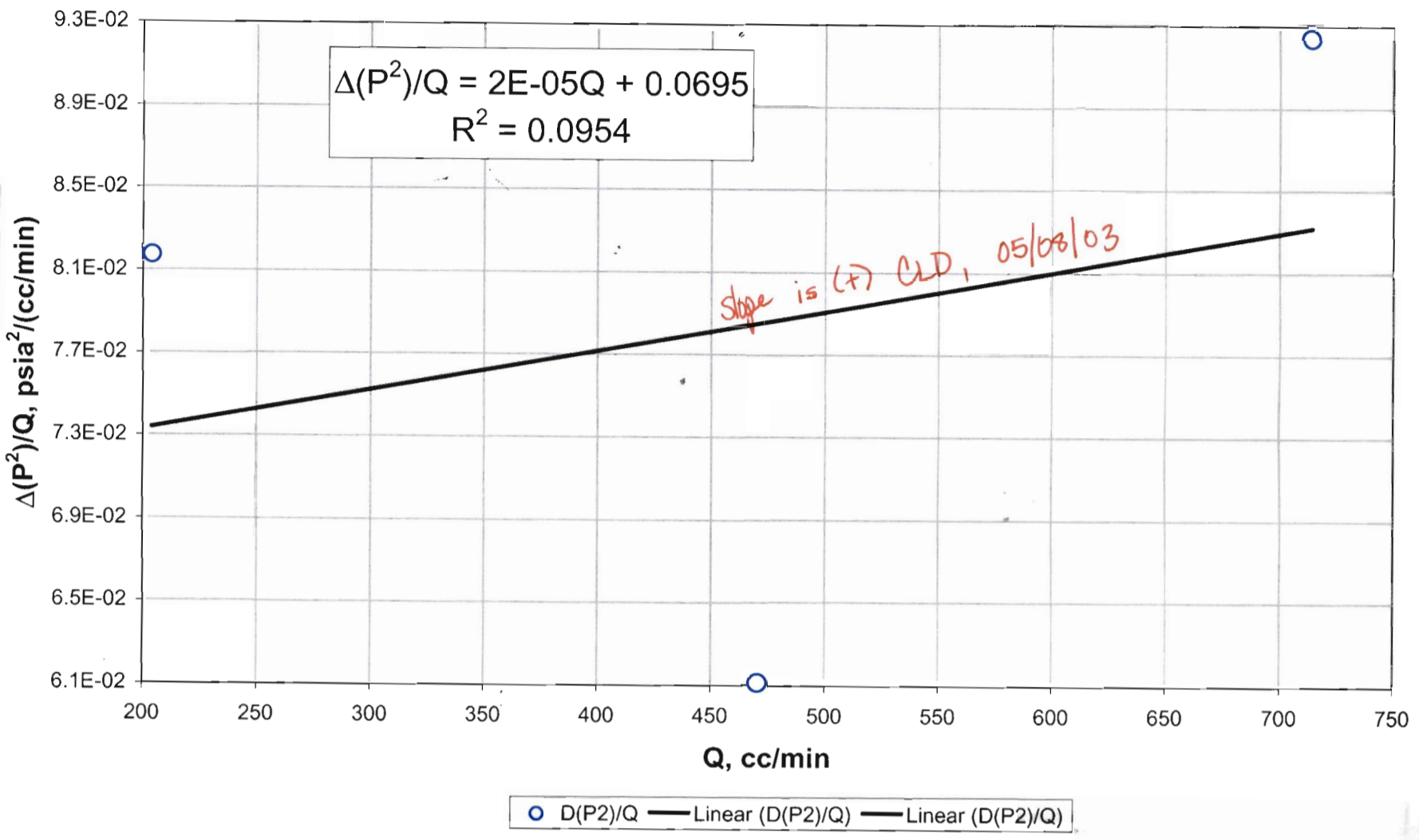


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 51



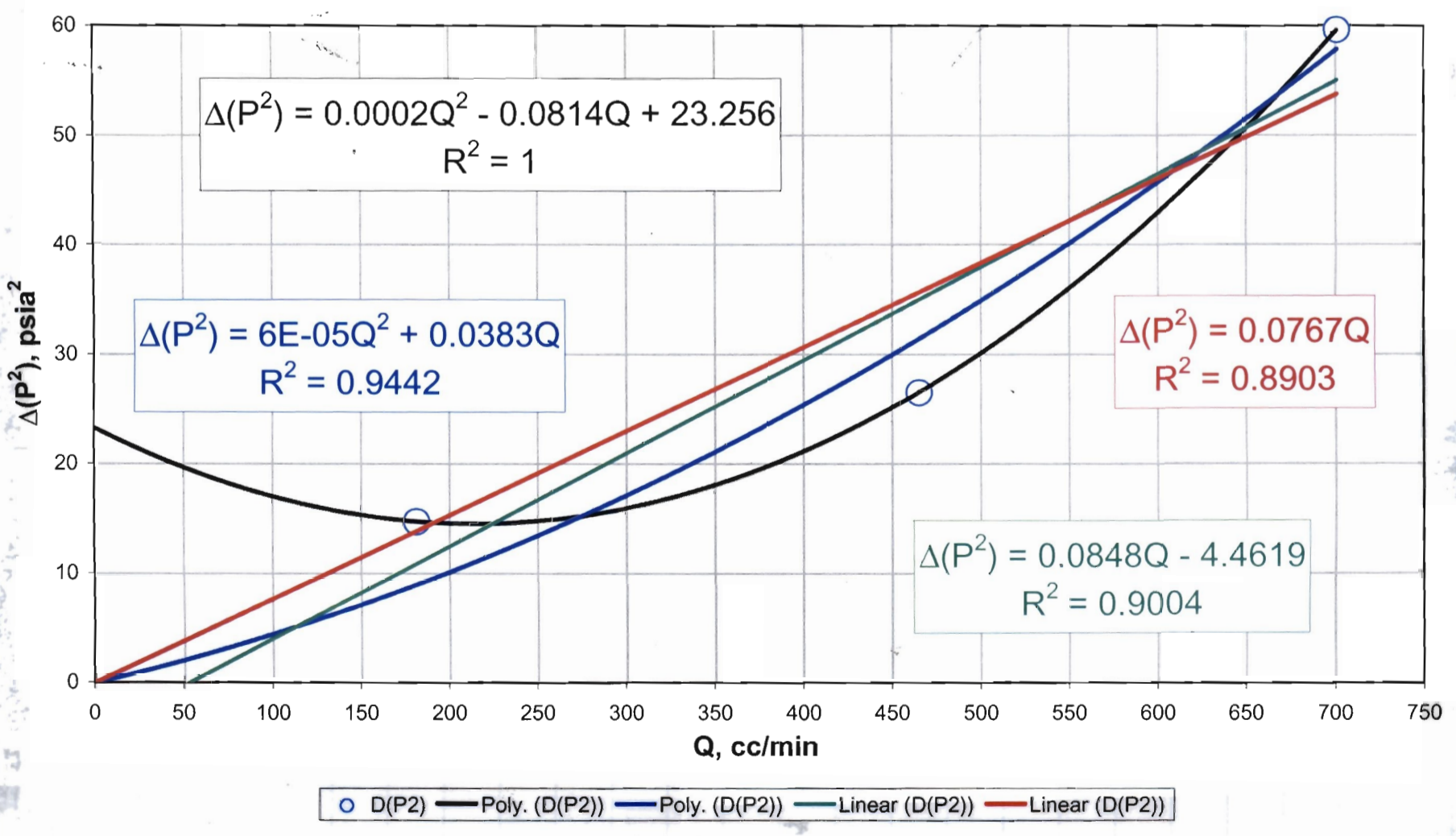
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 51

RNM, 11/30/03



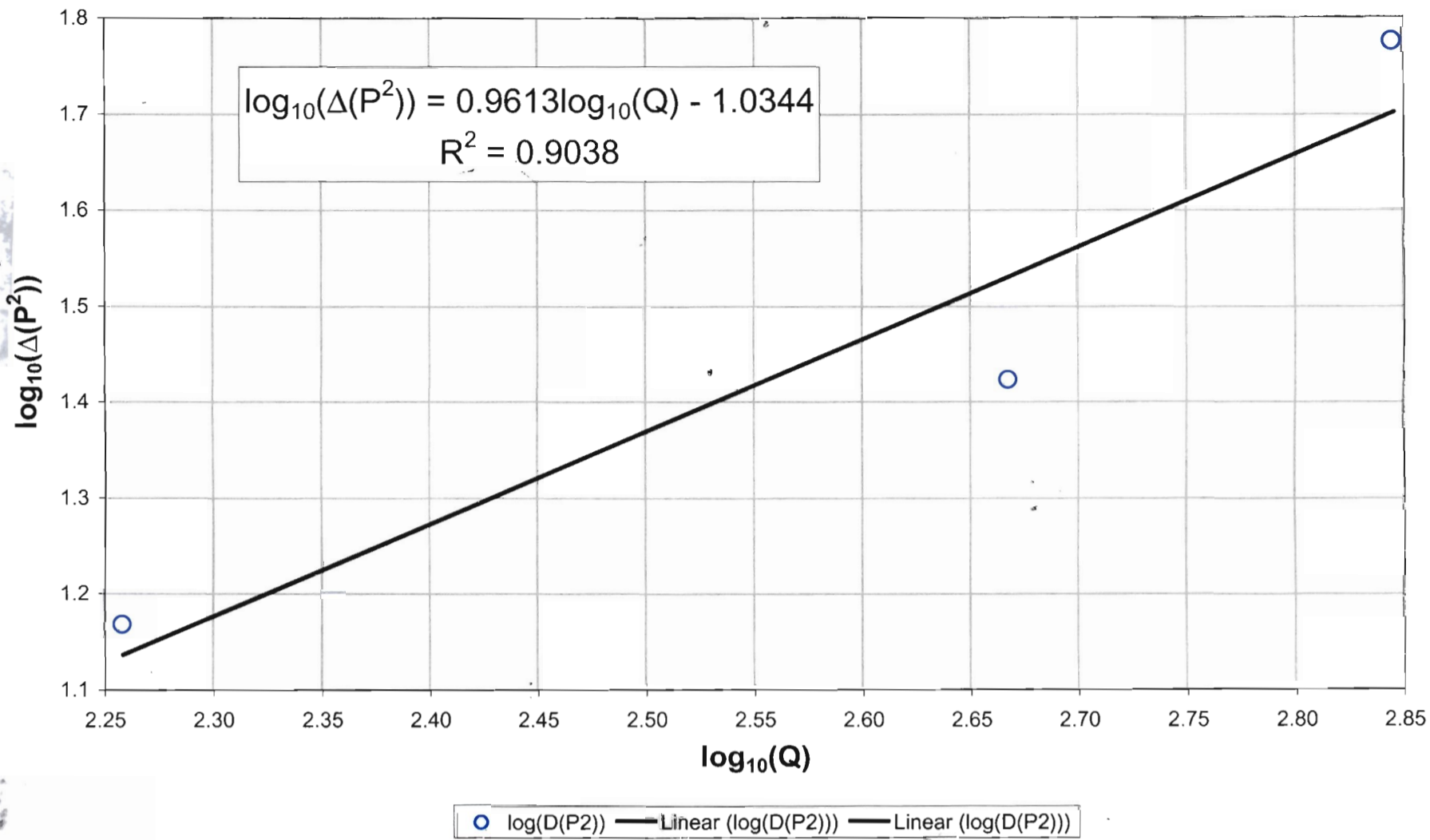
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 52

RNM, 11/30/03



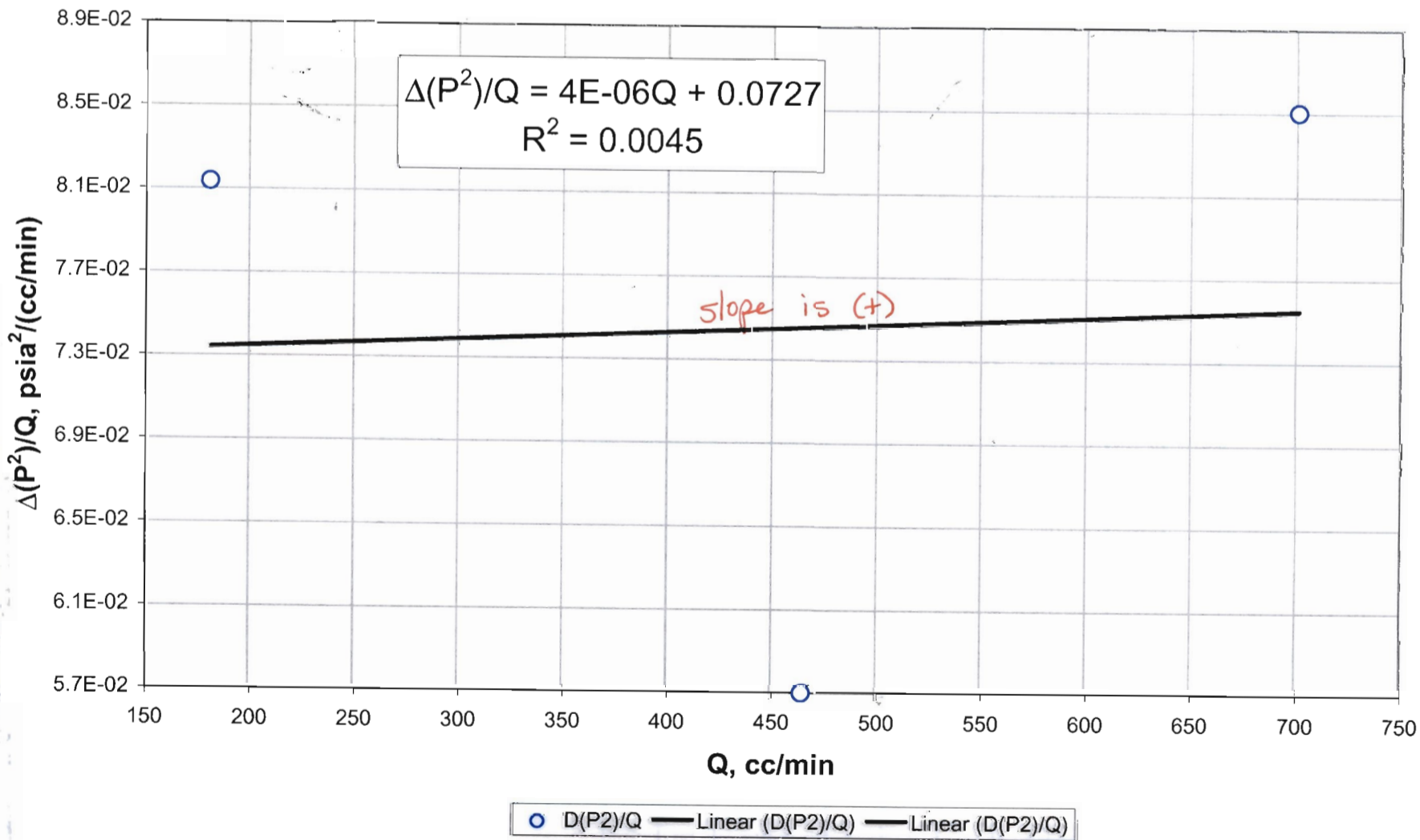
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)

H Transect: Drillhole 52



Run 10/30/02

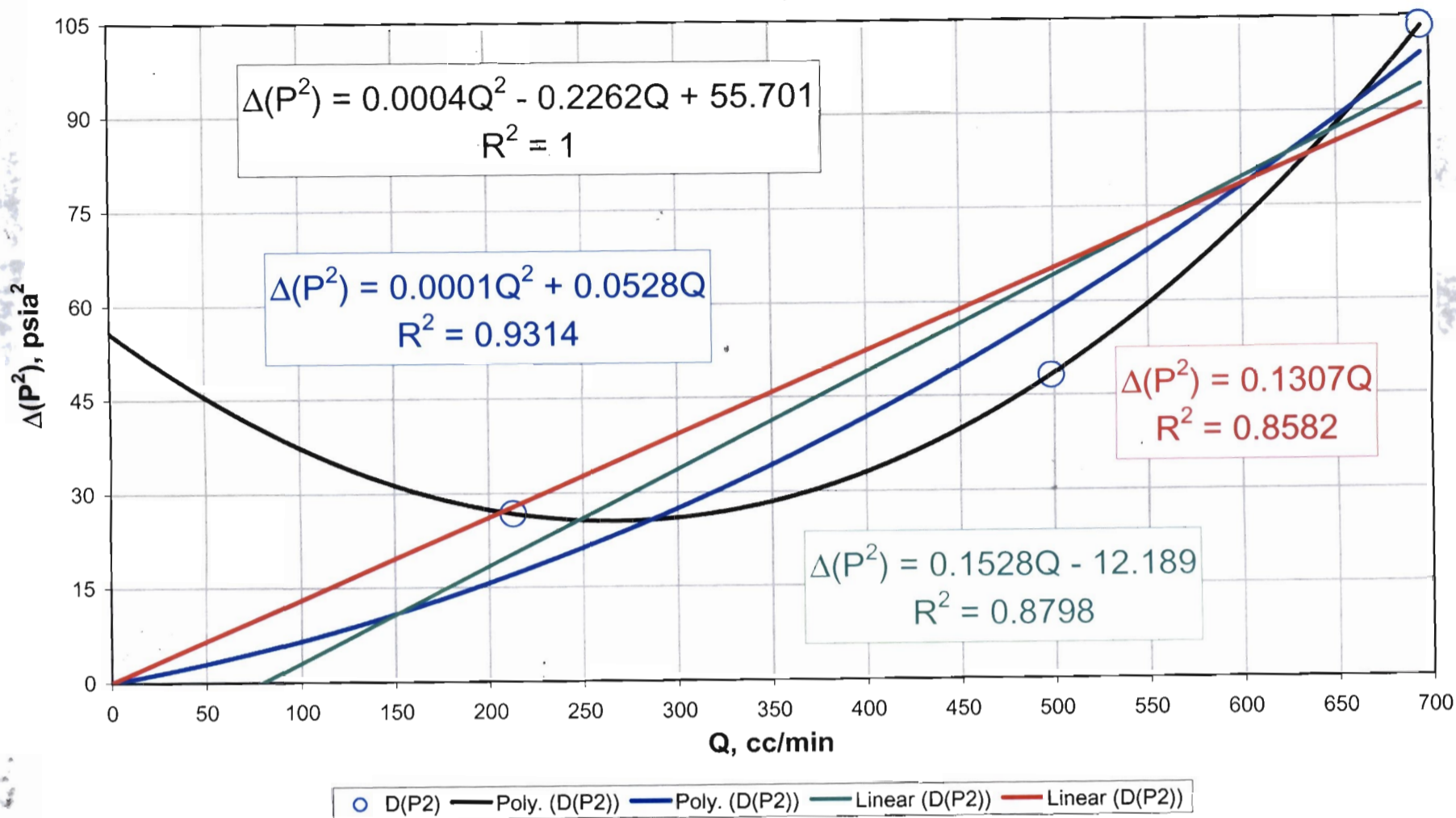
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 52



Run 10/30/02

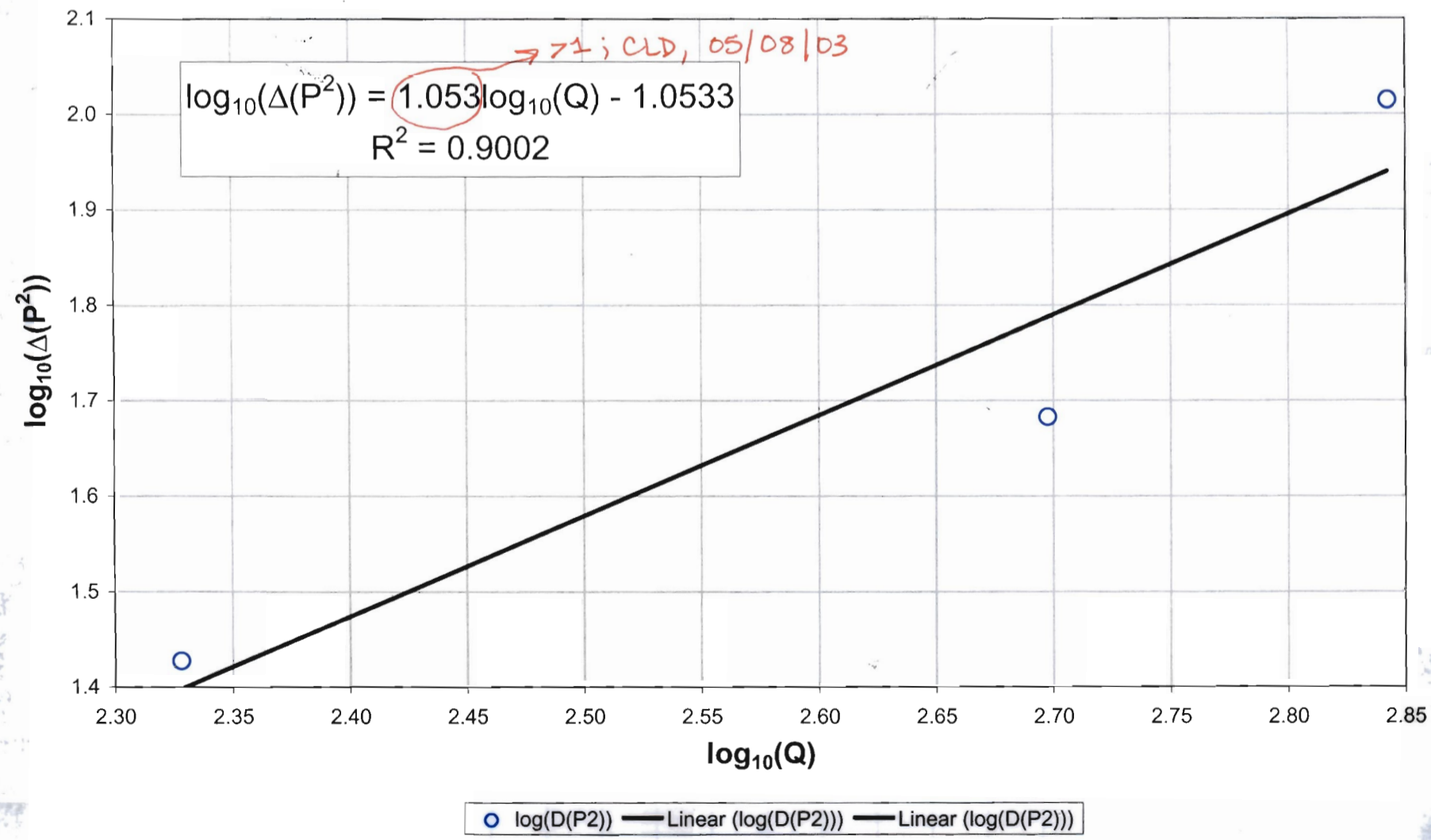
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 53

Run, 4/30/02



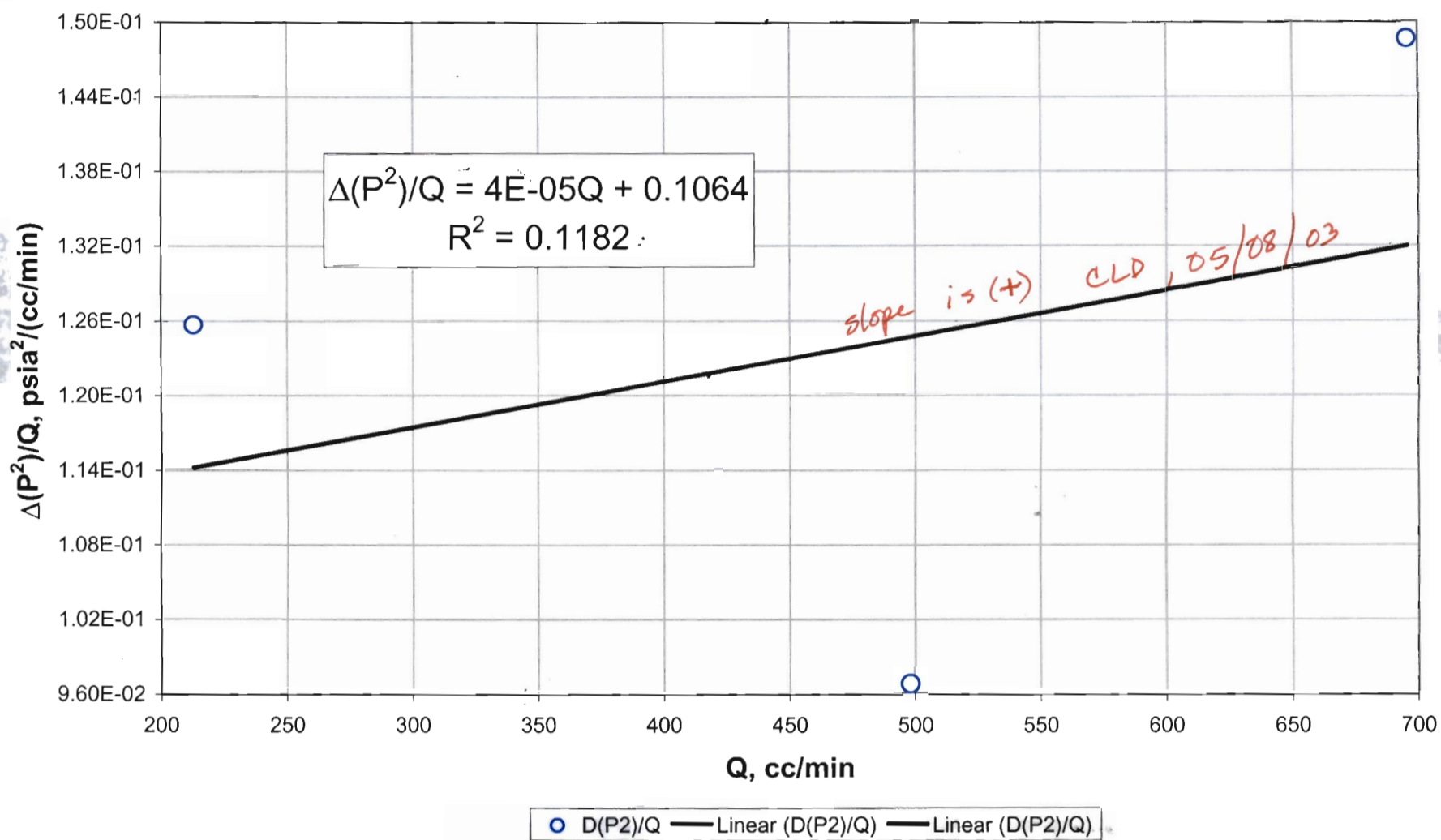
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 53

Run, 4/30/02



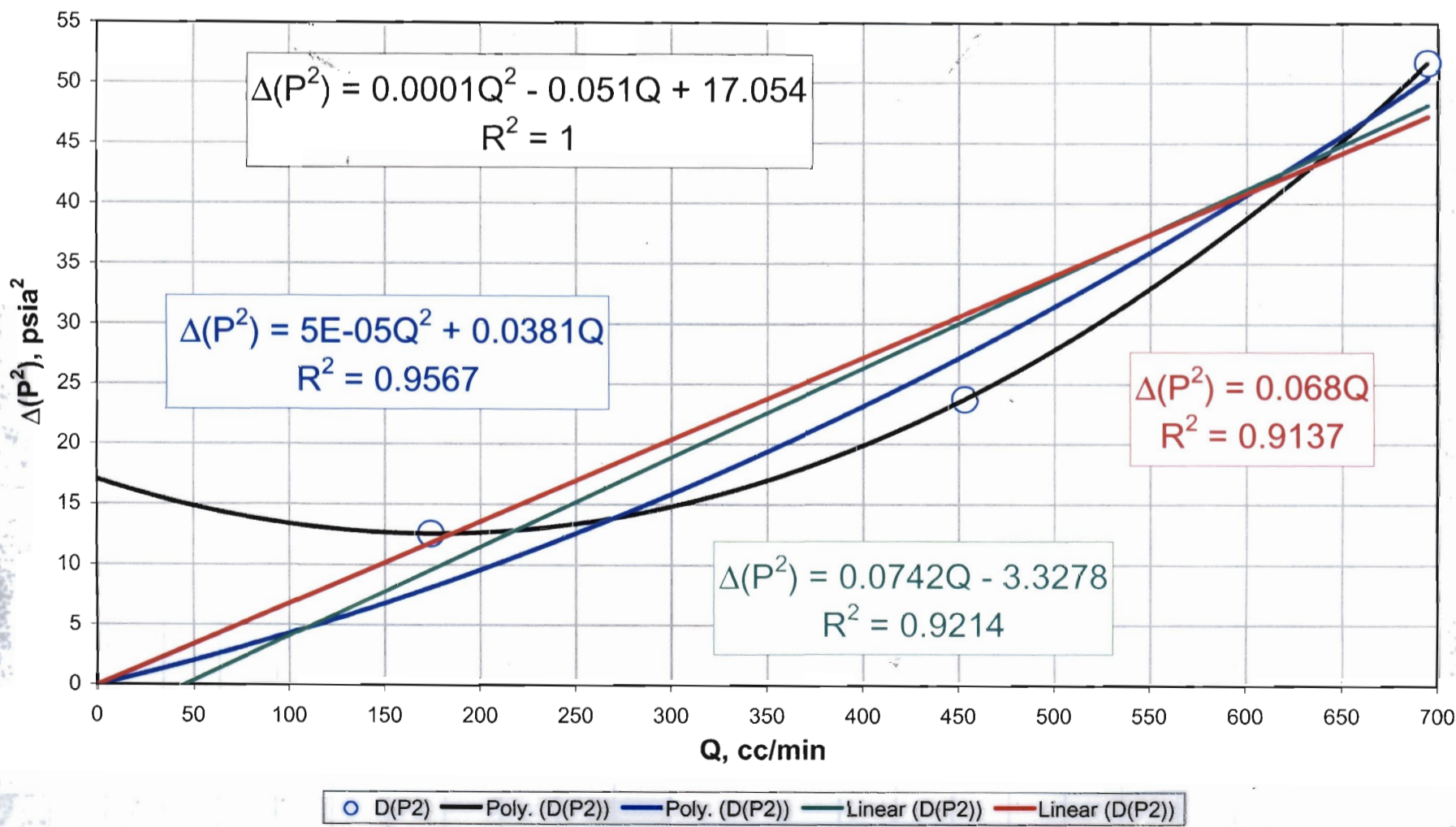
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 53

Run, also for

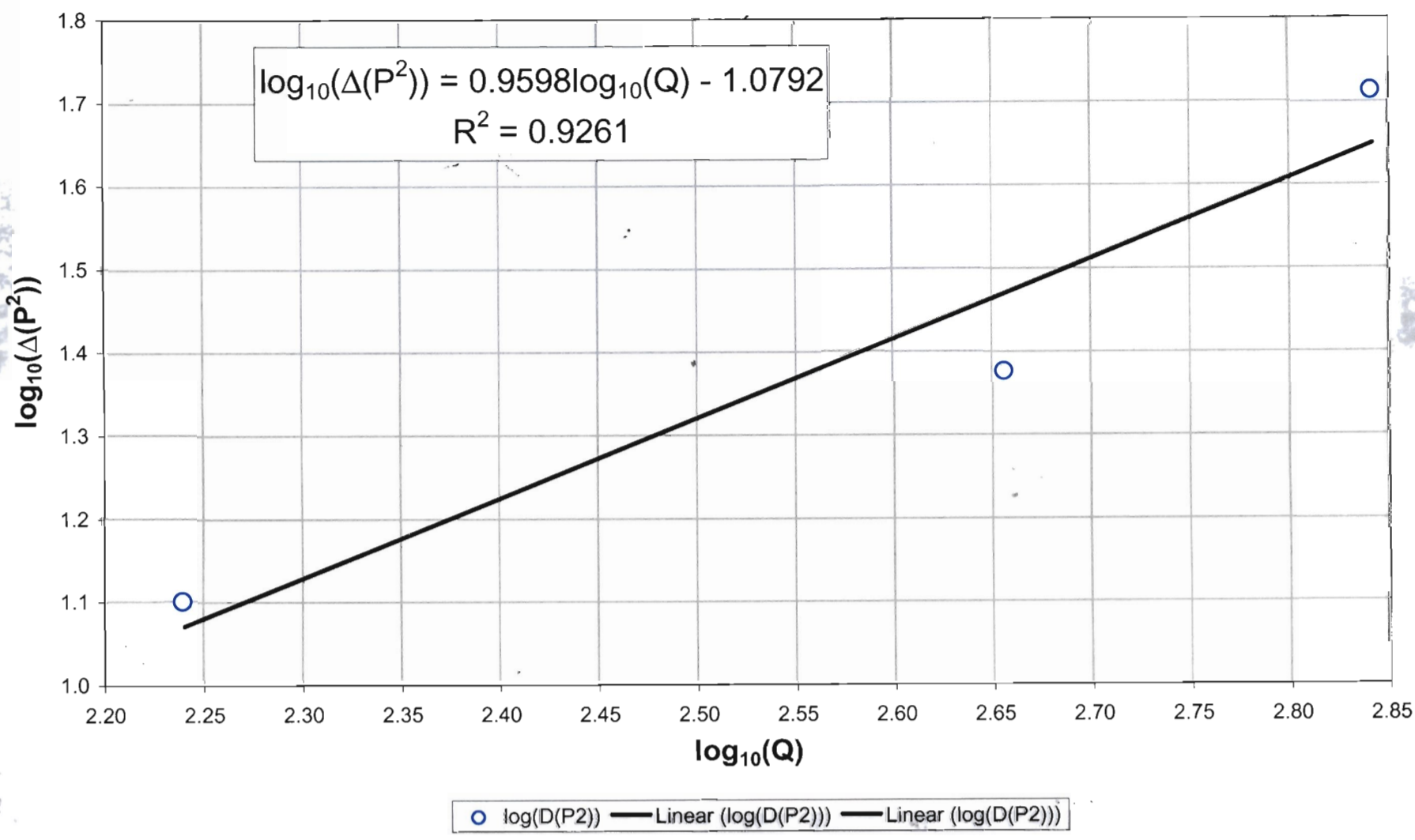


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 54

Run, also for

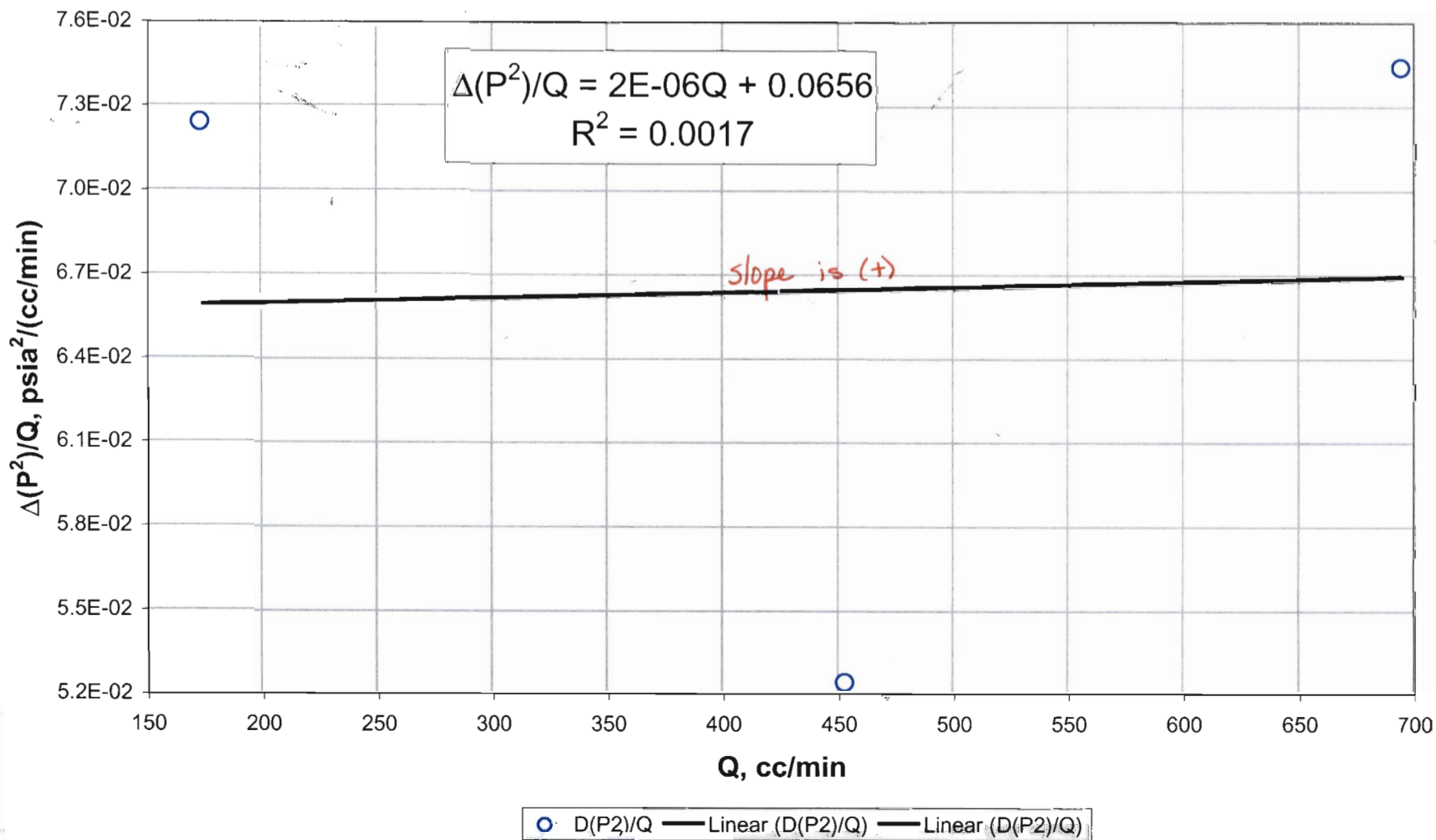


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 54



Run, 12/30/02

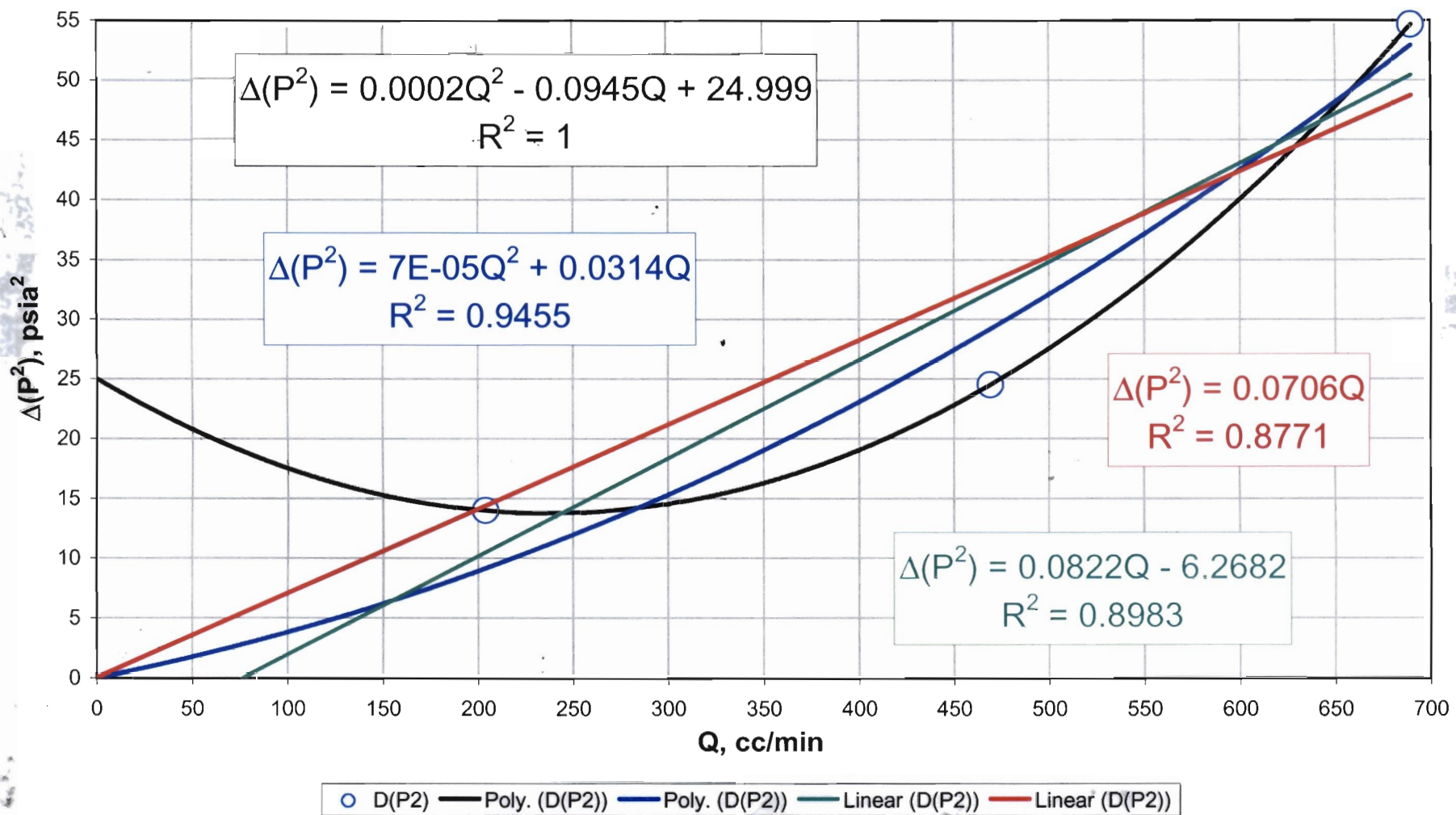
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 54



Run, 12/30/02

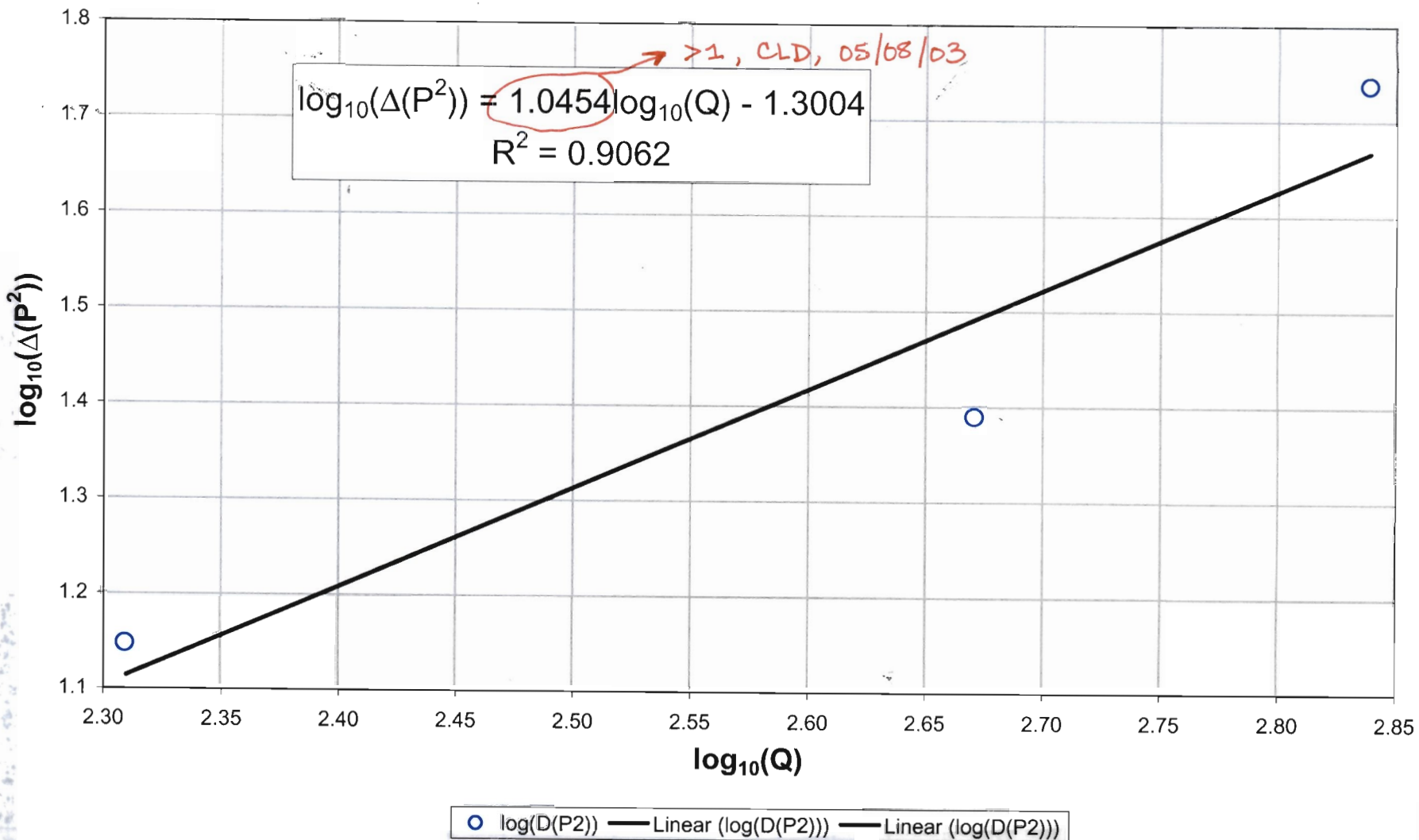
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 55

Rm, 12/30/02

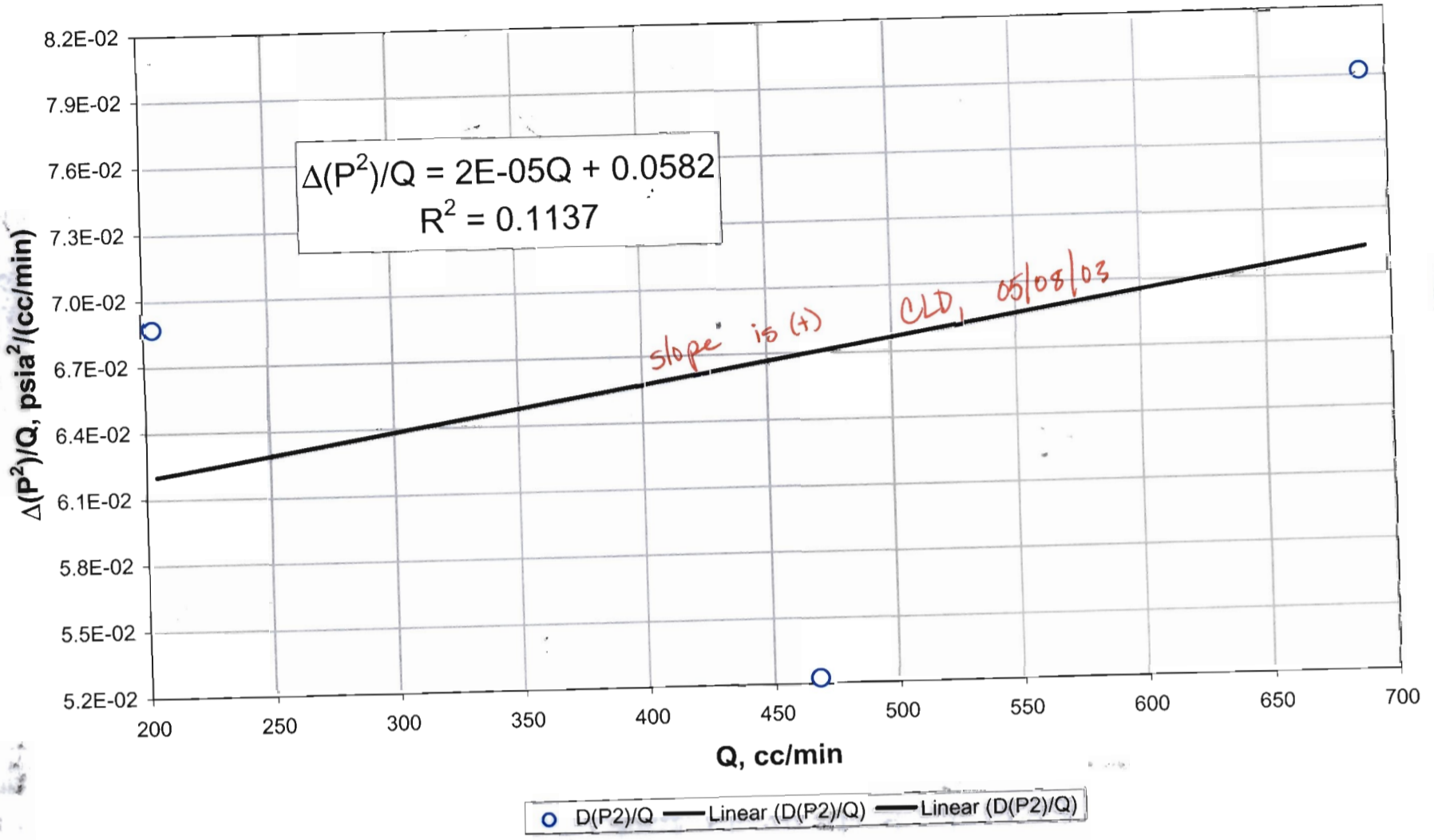


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 55

Rm, 12/30/02

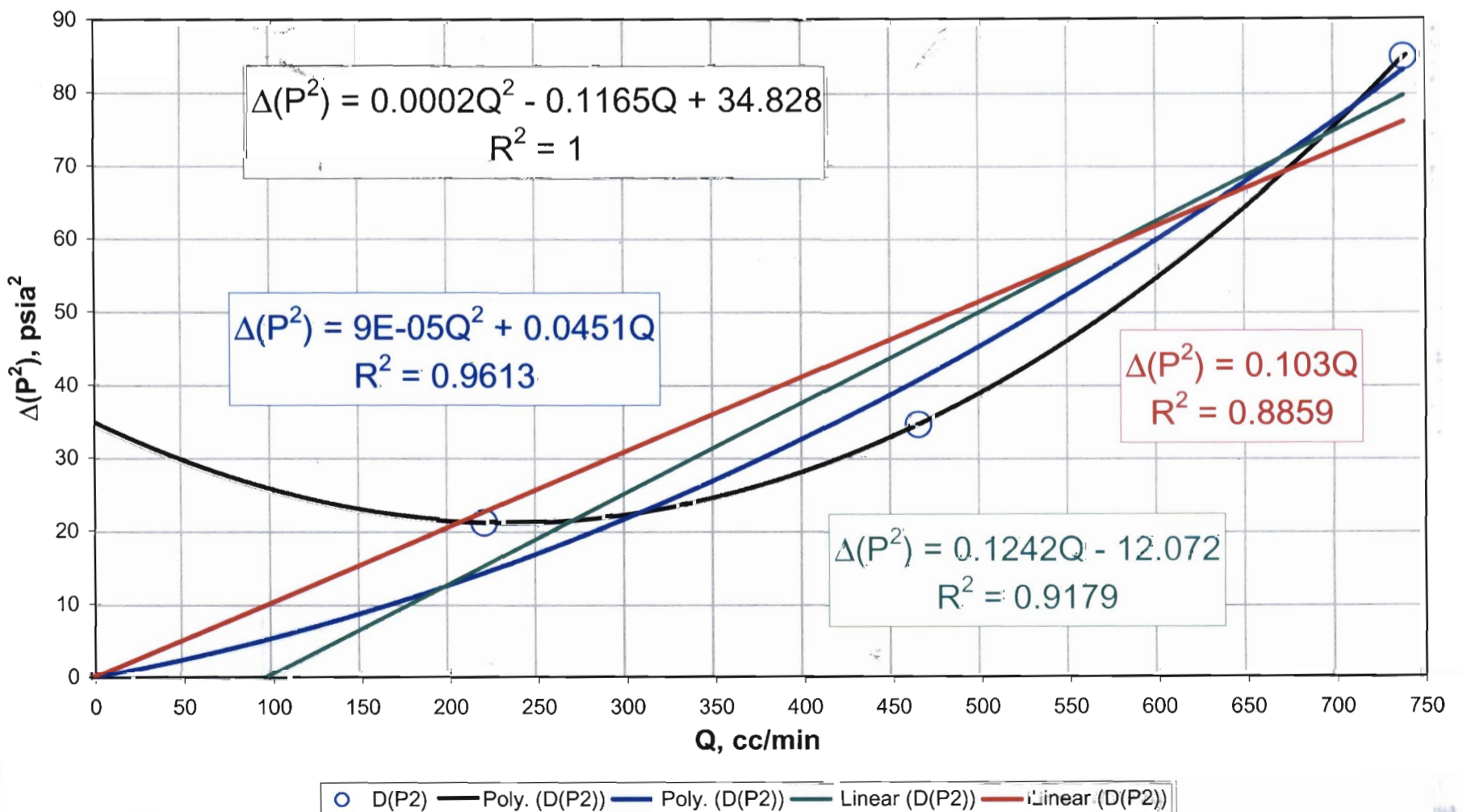


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 55



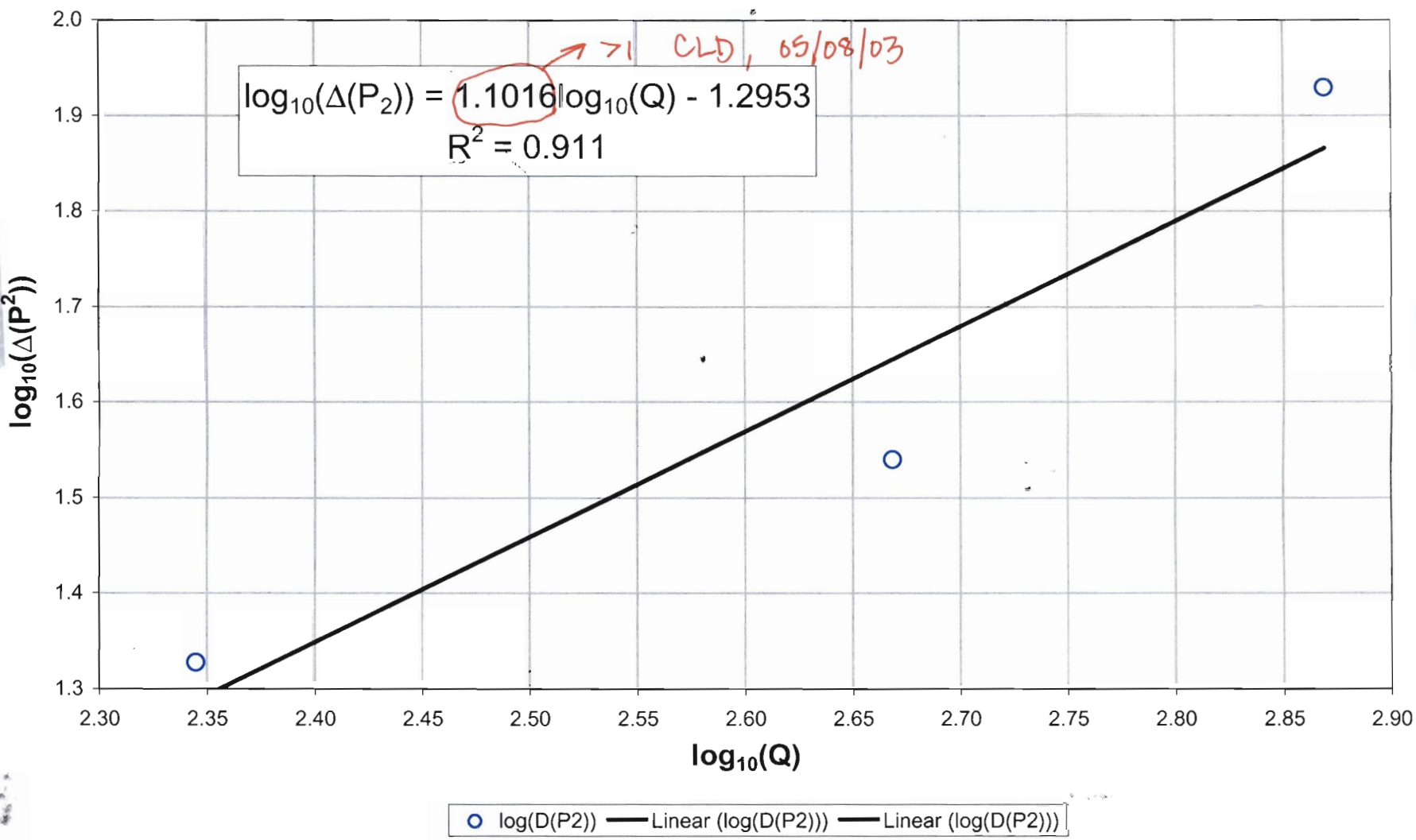
Rmn, 11/30/02

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.
 H Transect: Drillhole 56



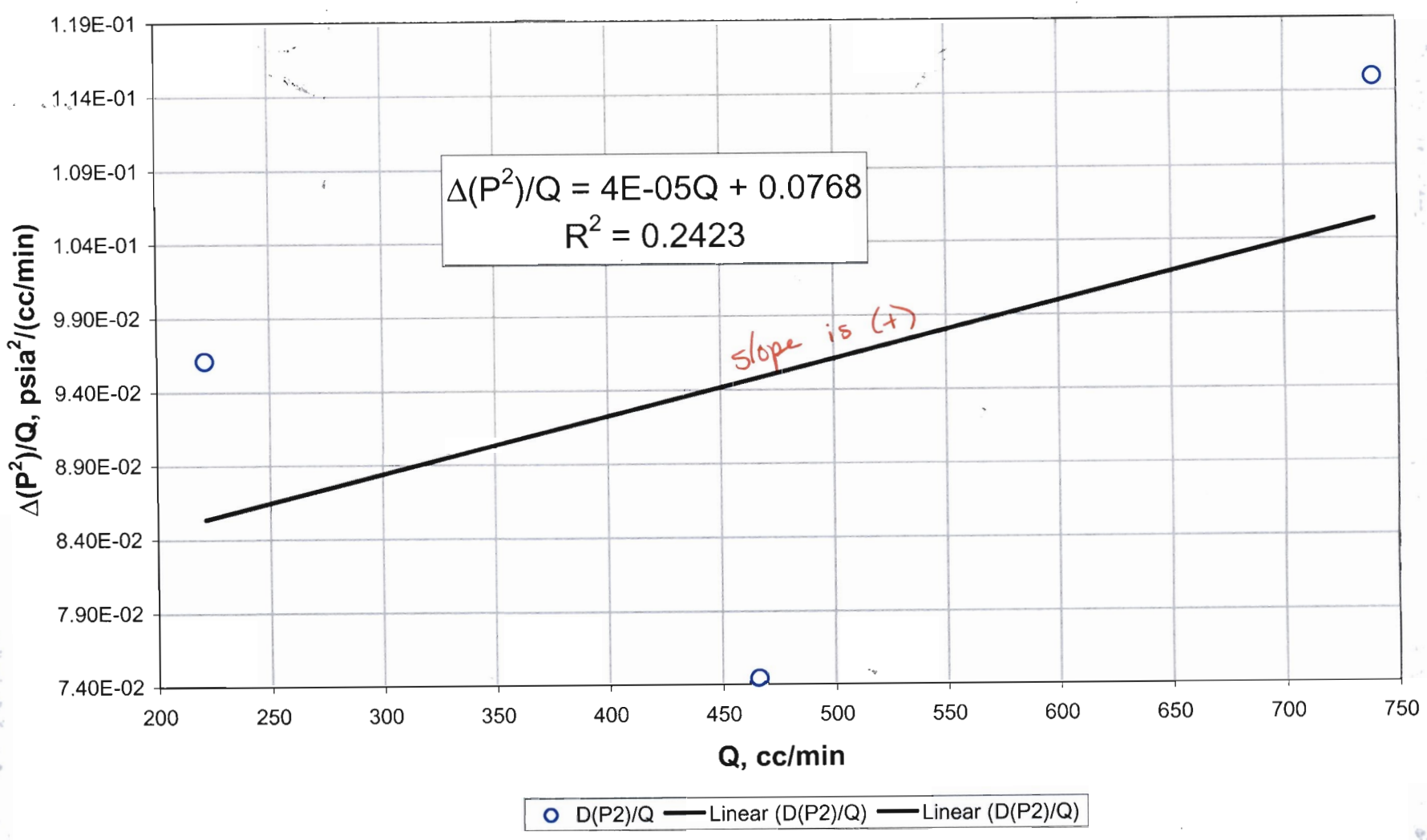
Rmn, 11/30/02

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)
H Transect: Drillhole 56



Run, after

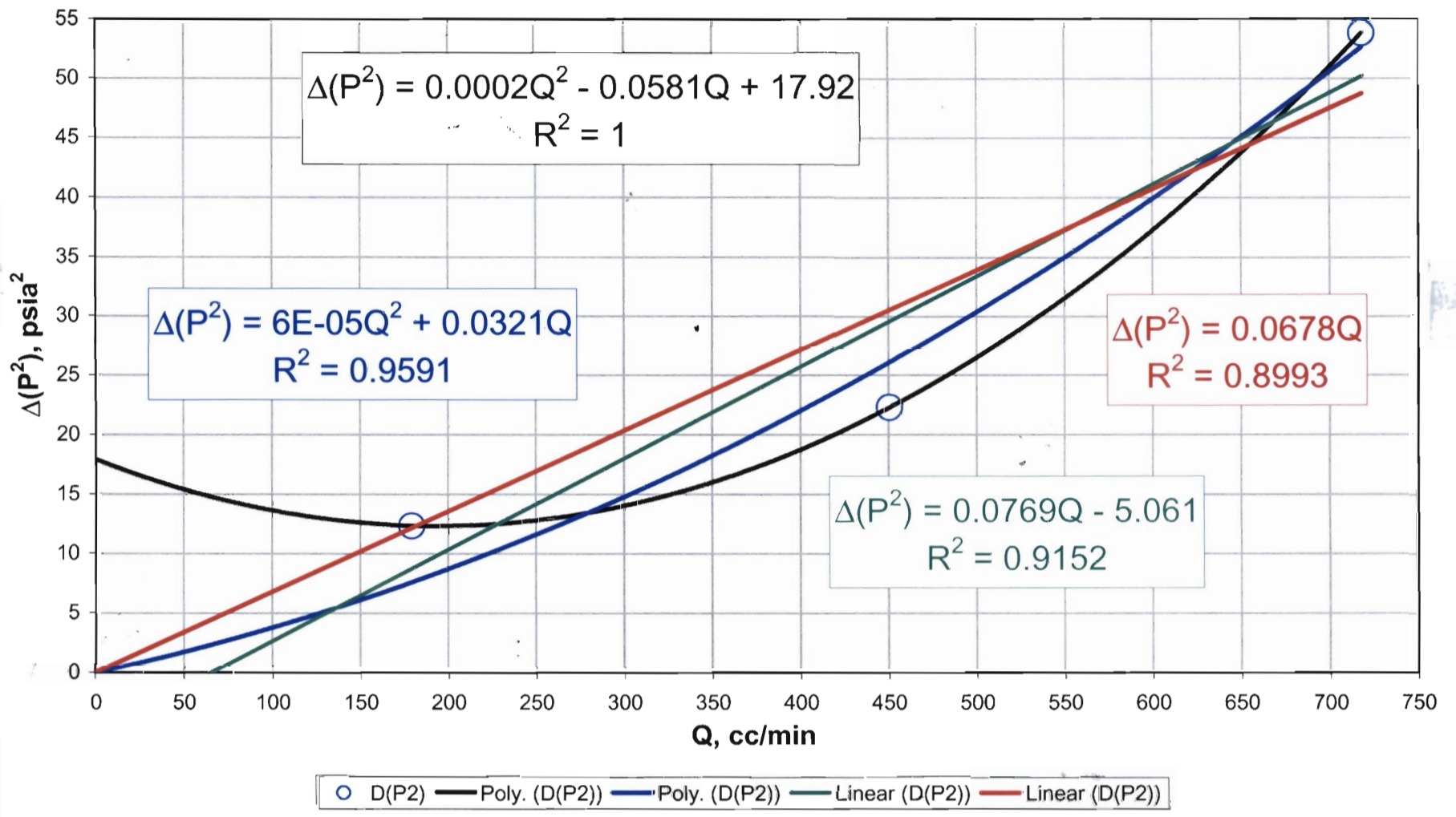
Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 56



Run, after

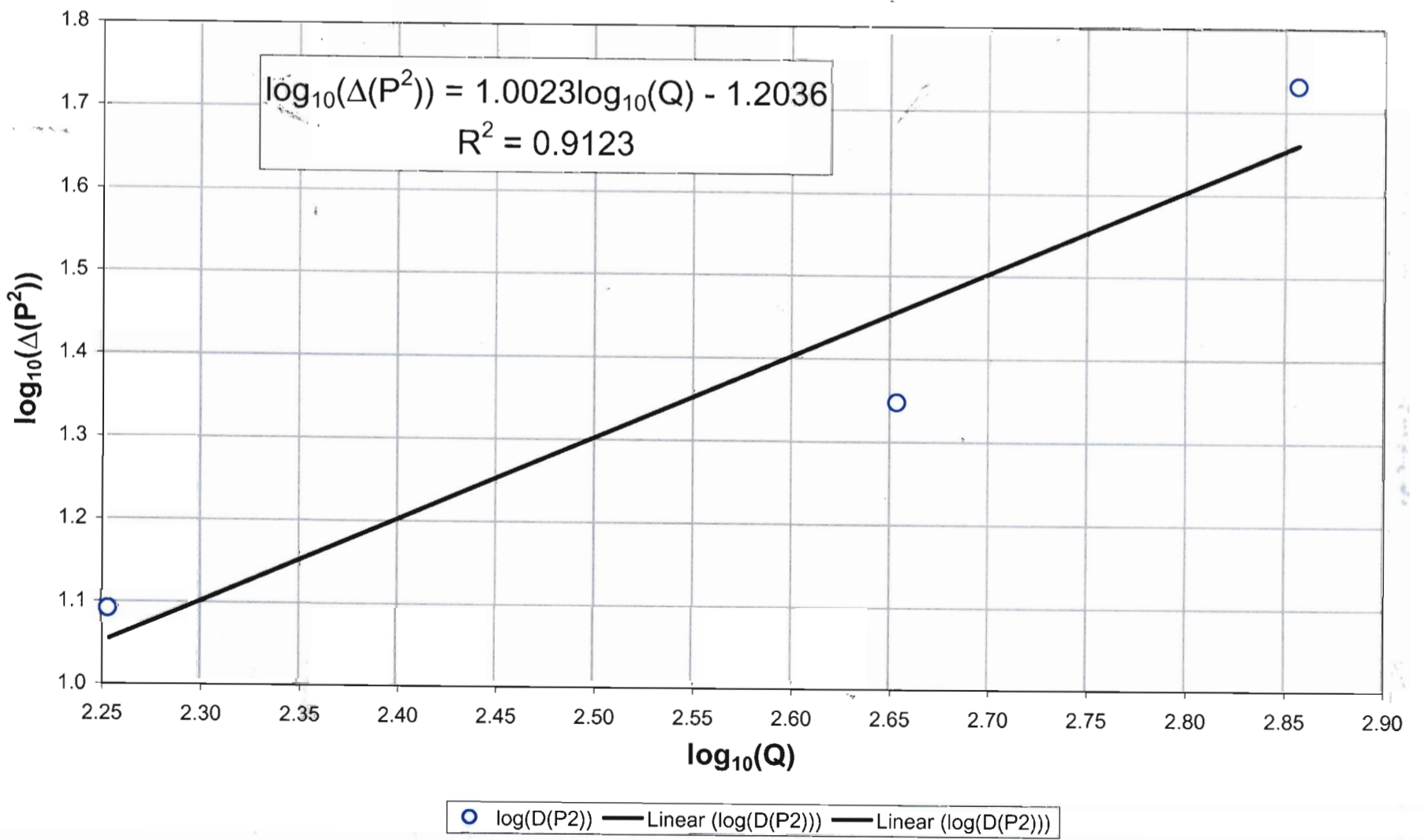
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 57

RMN, 12/31/02

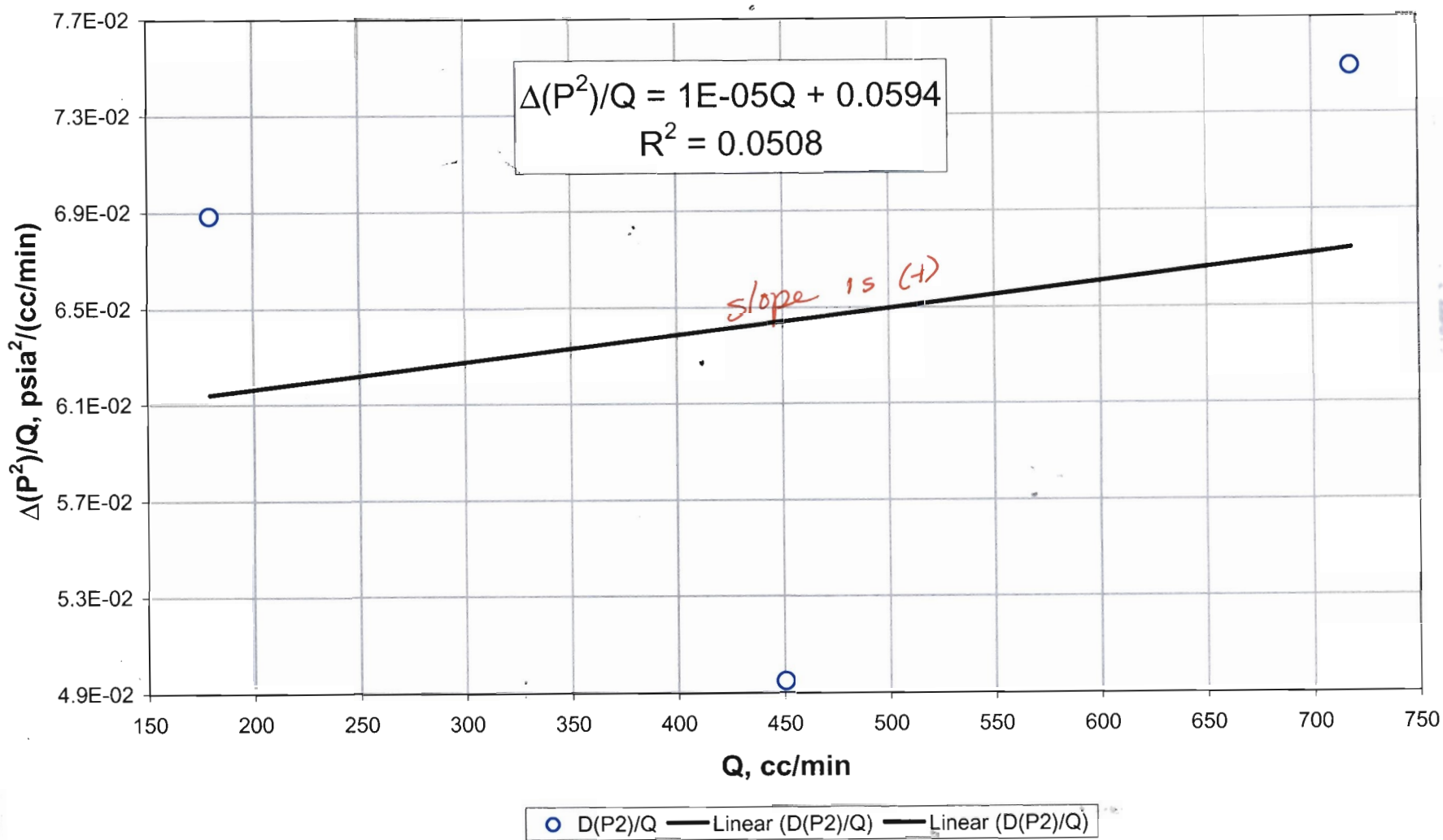


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 57

RMN, 12/31/02

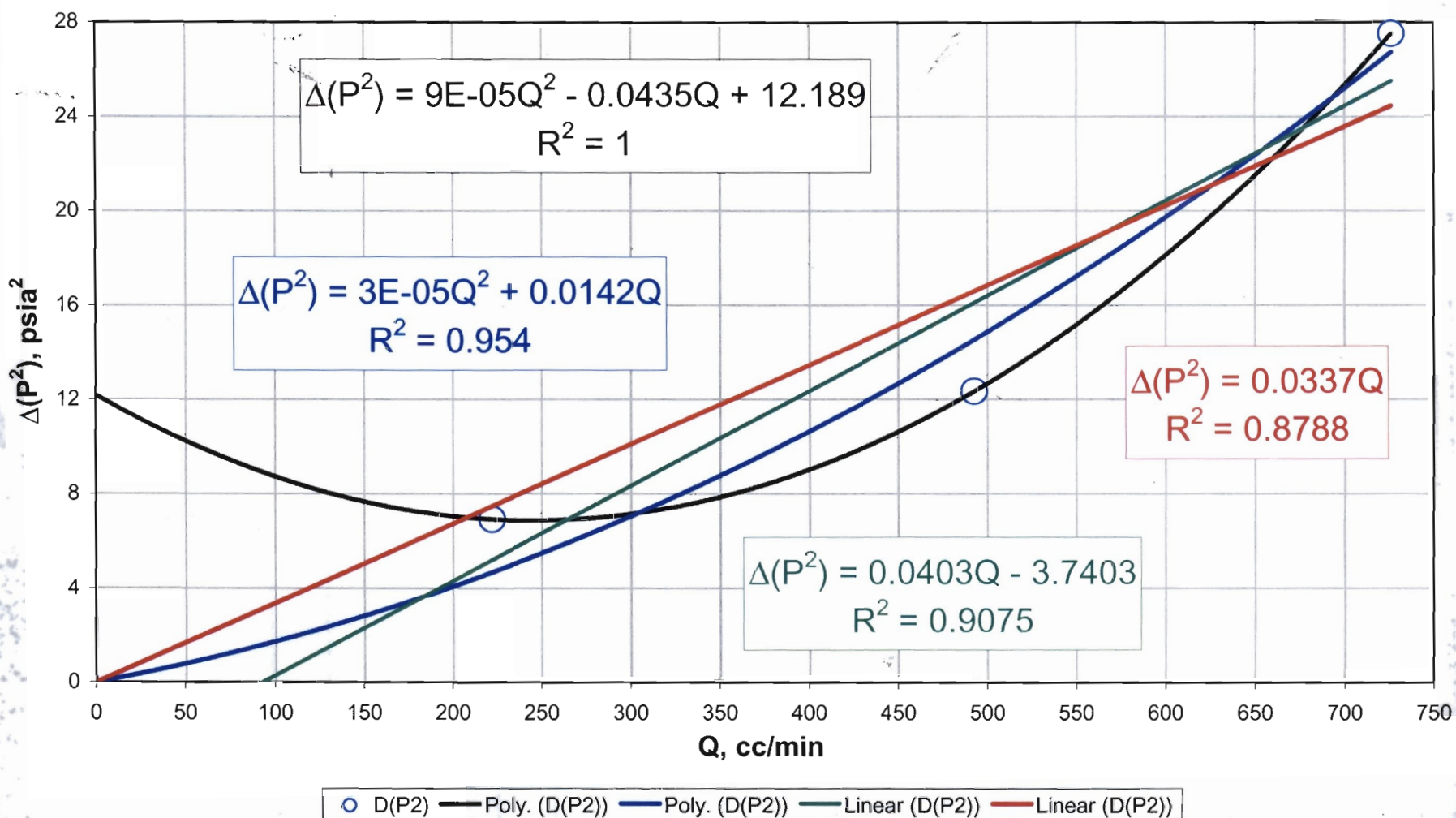


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 57



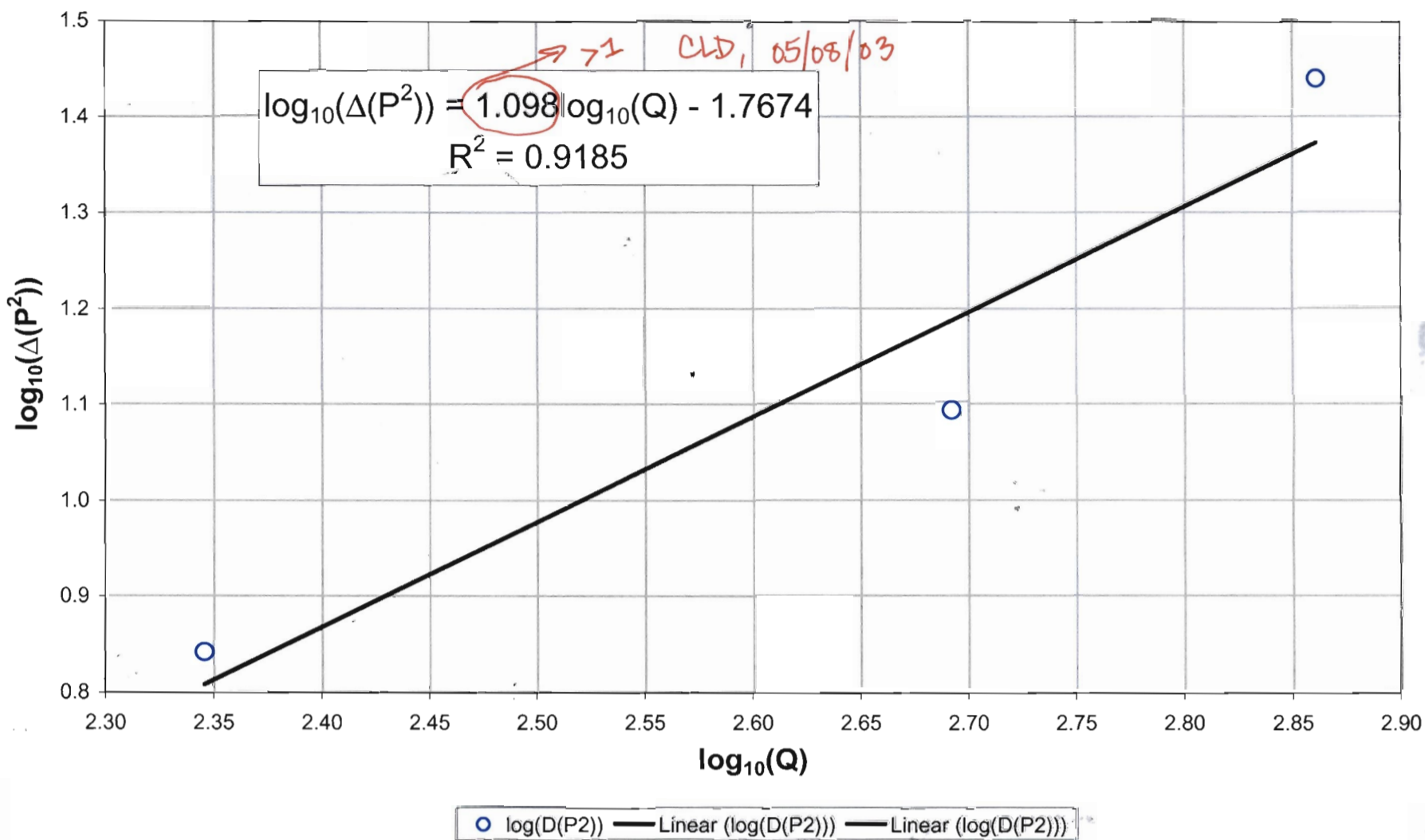
RNM, 12/31/02

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.
 H Transect: Drillhole 58



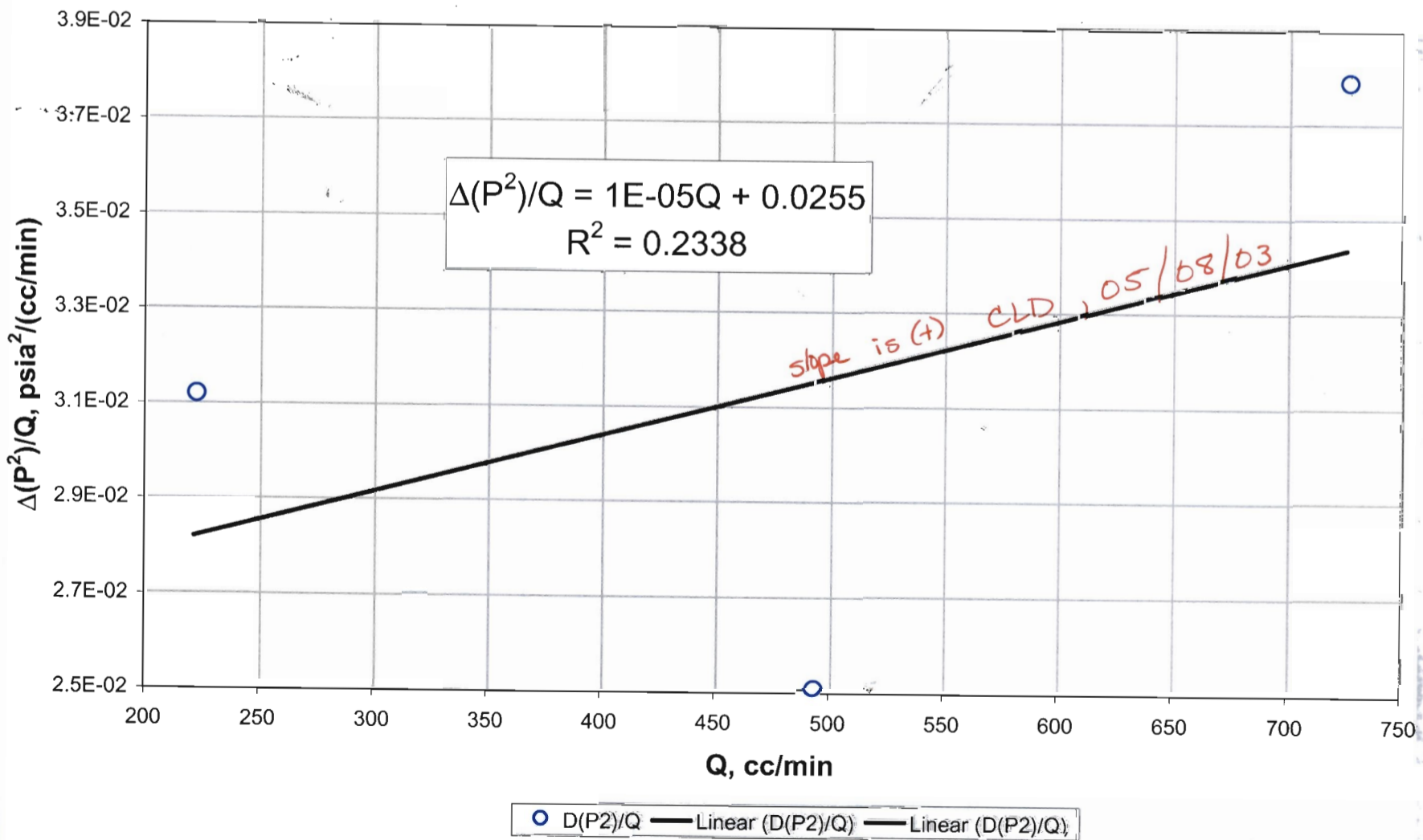
RNM, 12/31/02

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)
 H Transect: Drillhole 58



RNM, 12/31/02

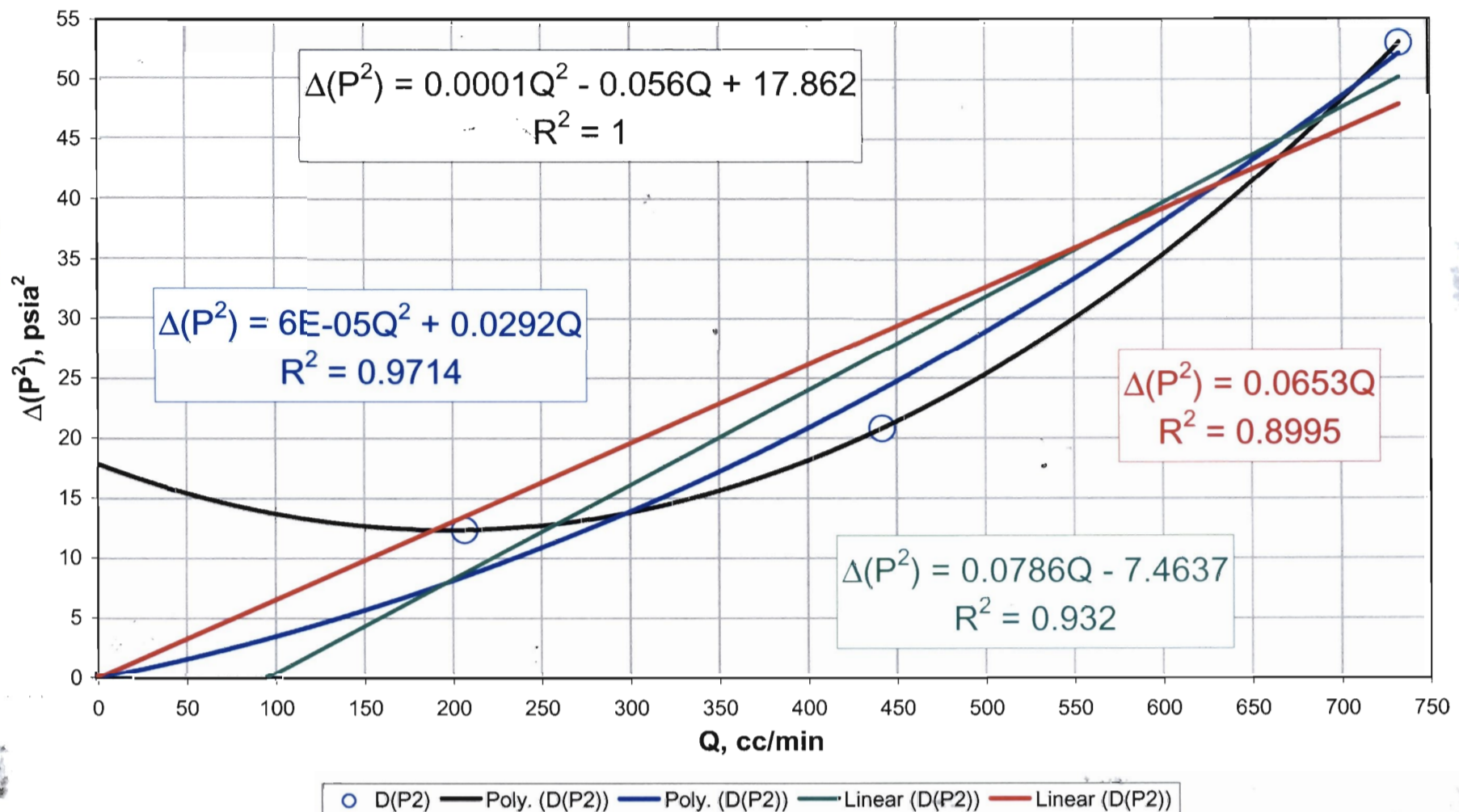
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 58.



RNM, 12/31/02

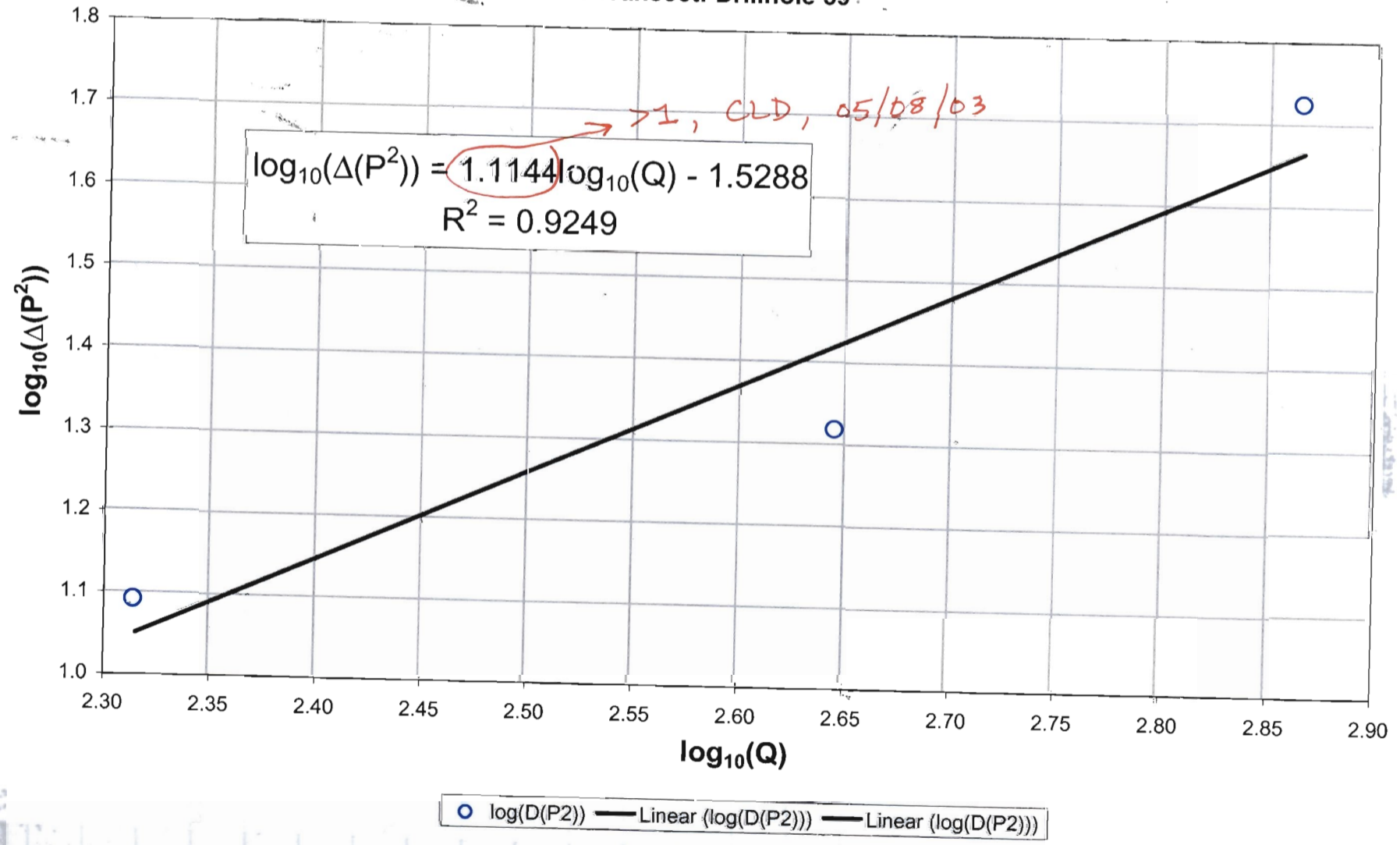
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 59

RNM, 11/11/02



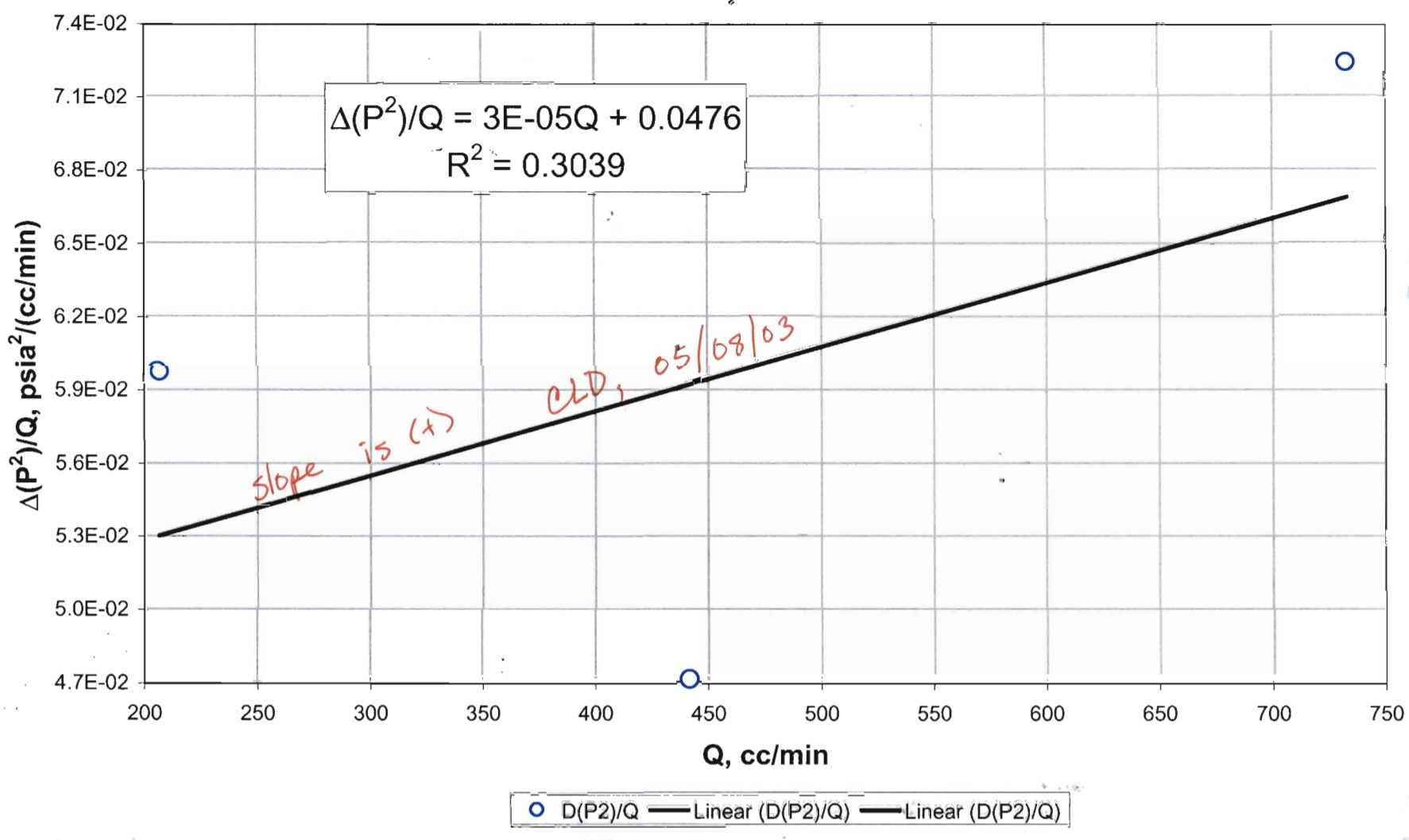
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 59

RNM, 11/11/02



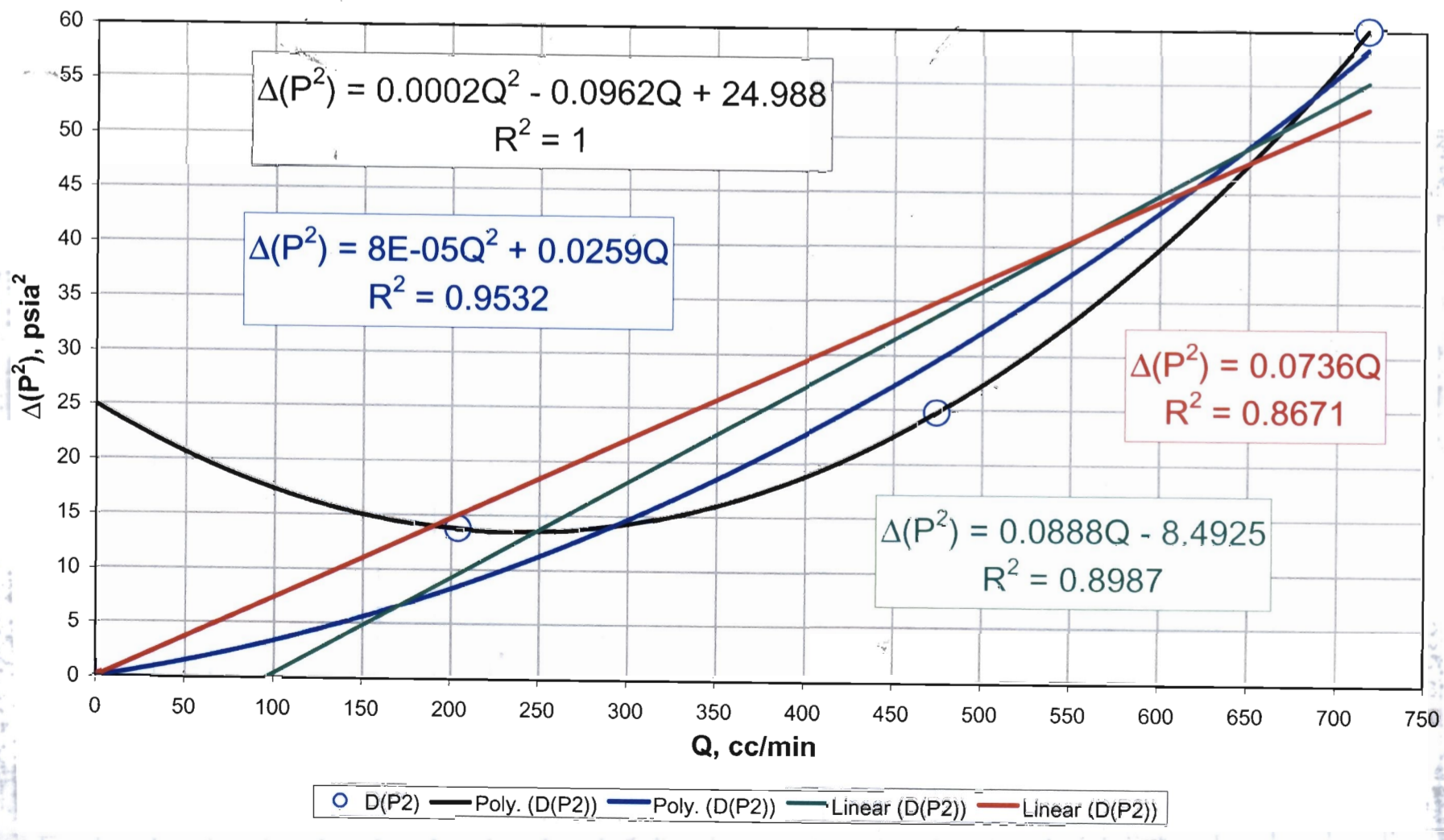
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 59

RPM, 14/11/02

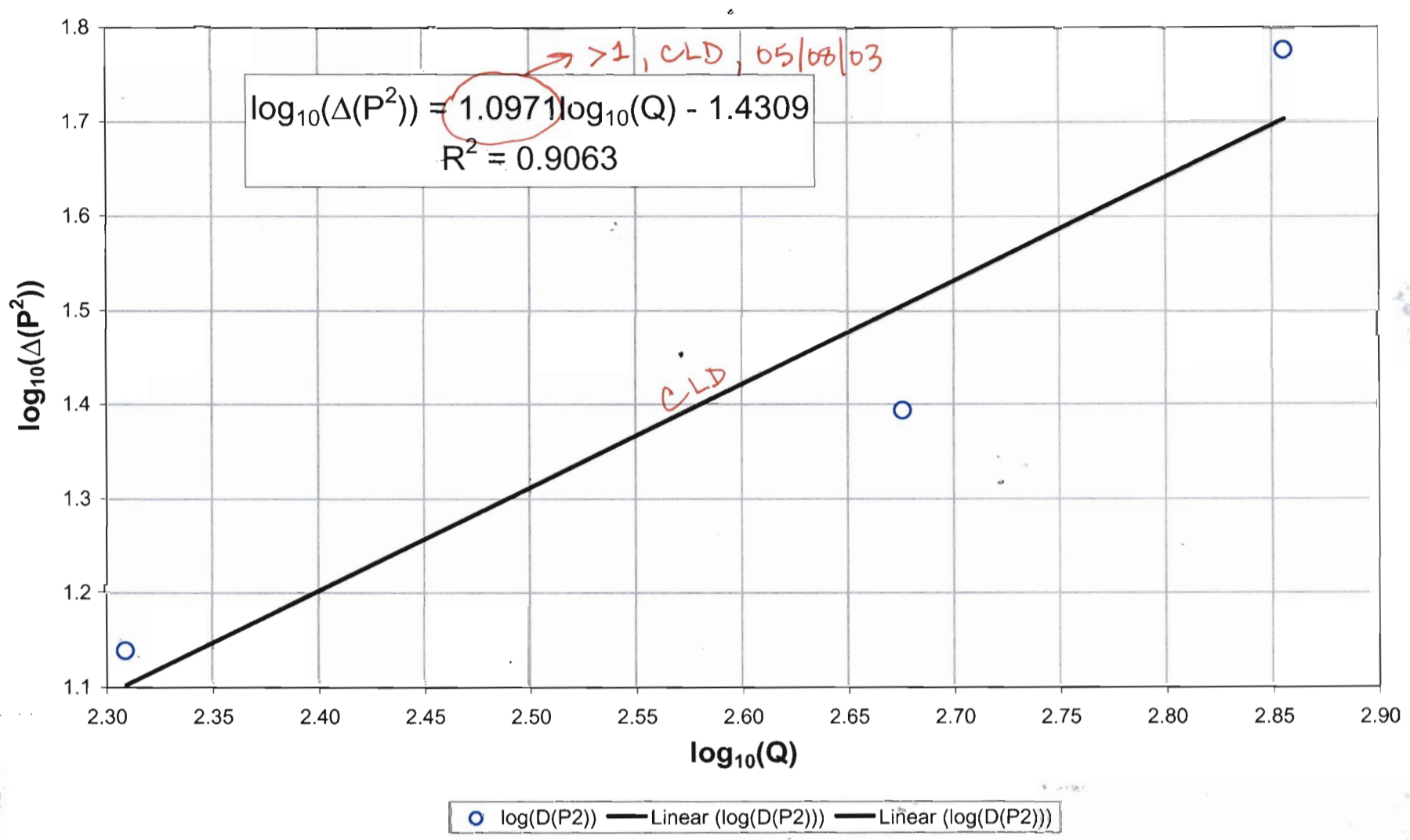


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 60

RPM, 14/11/02

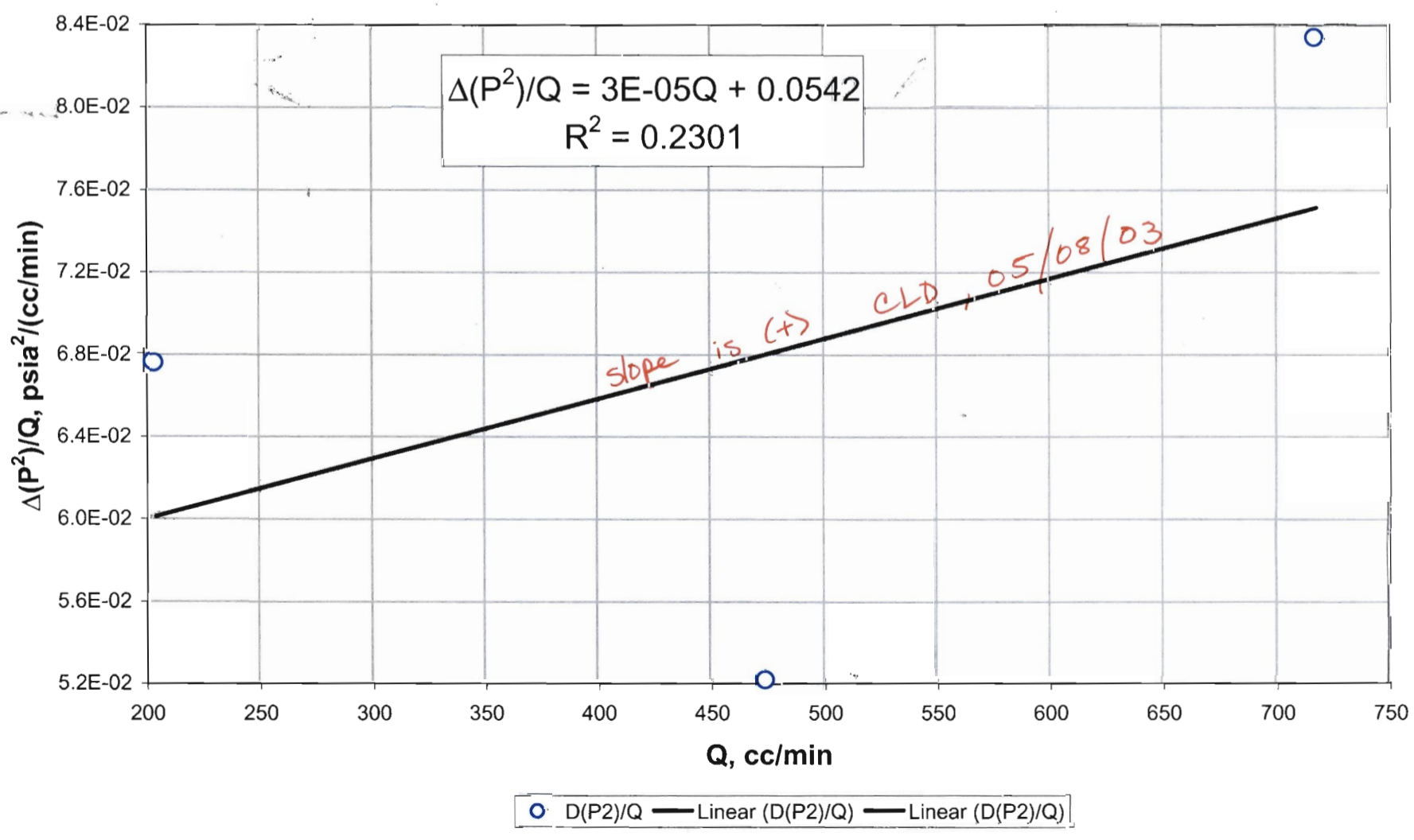


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 60



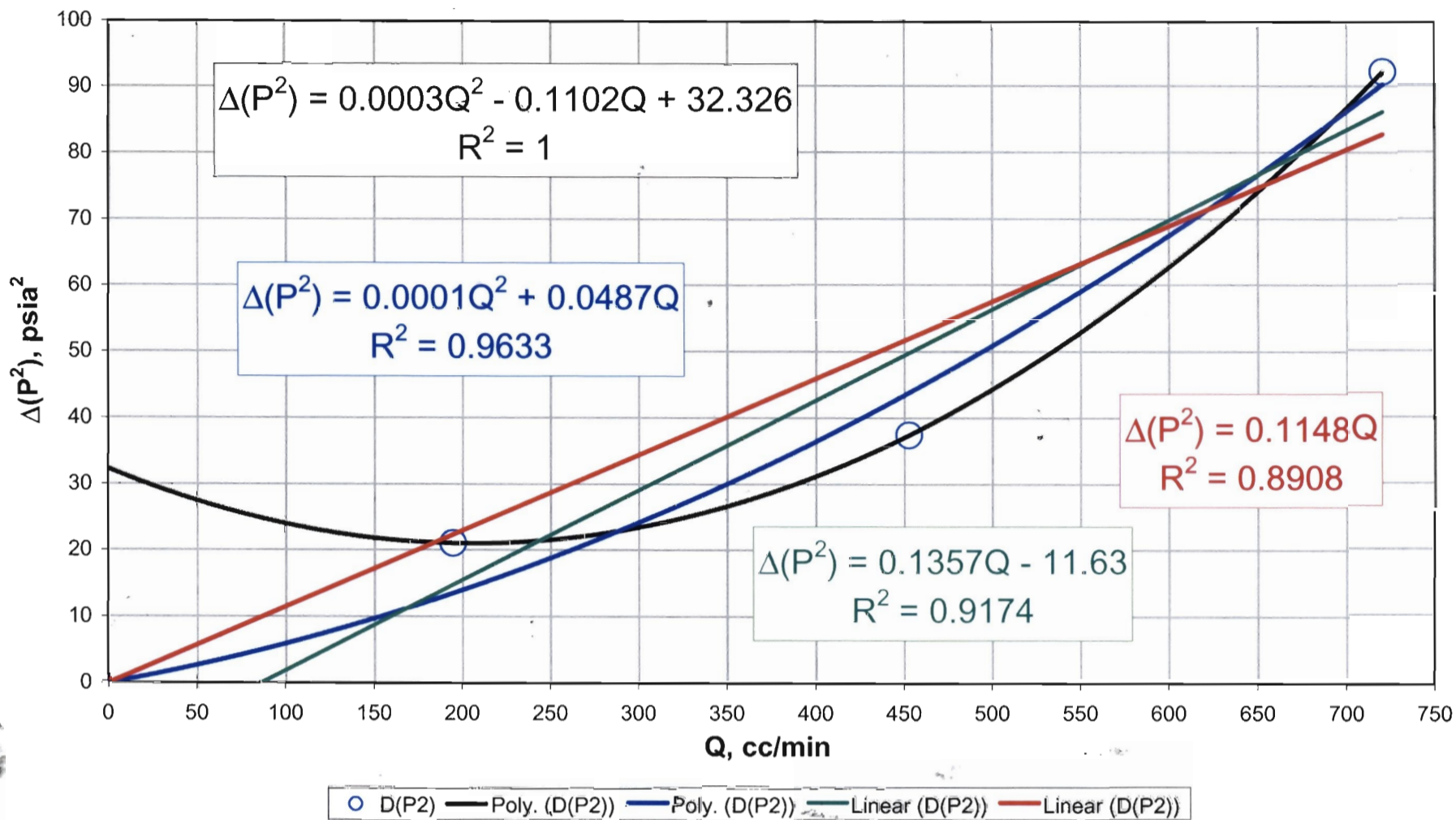
RMM, 05/11/03

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

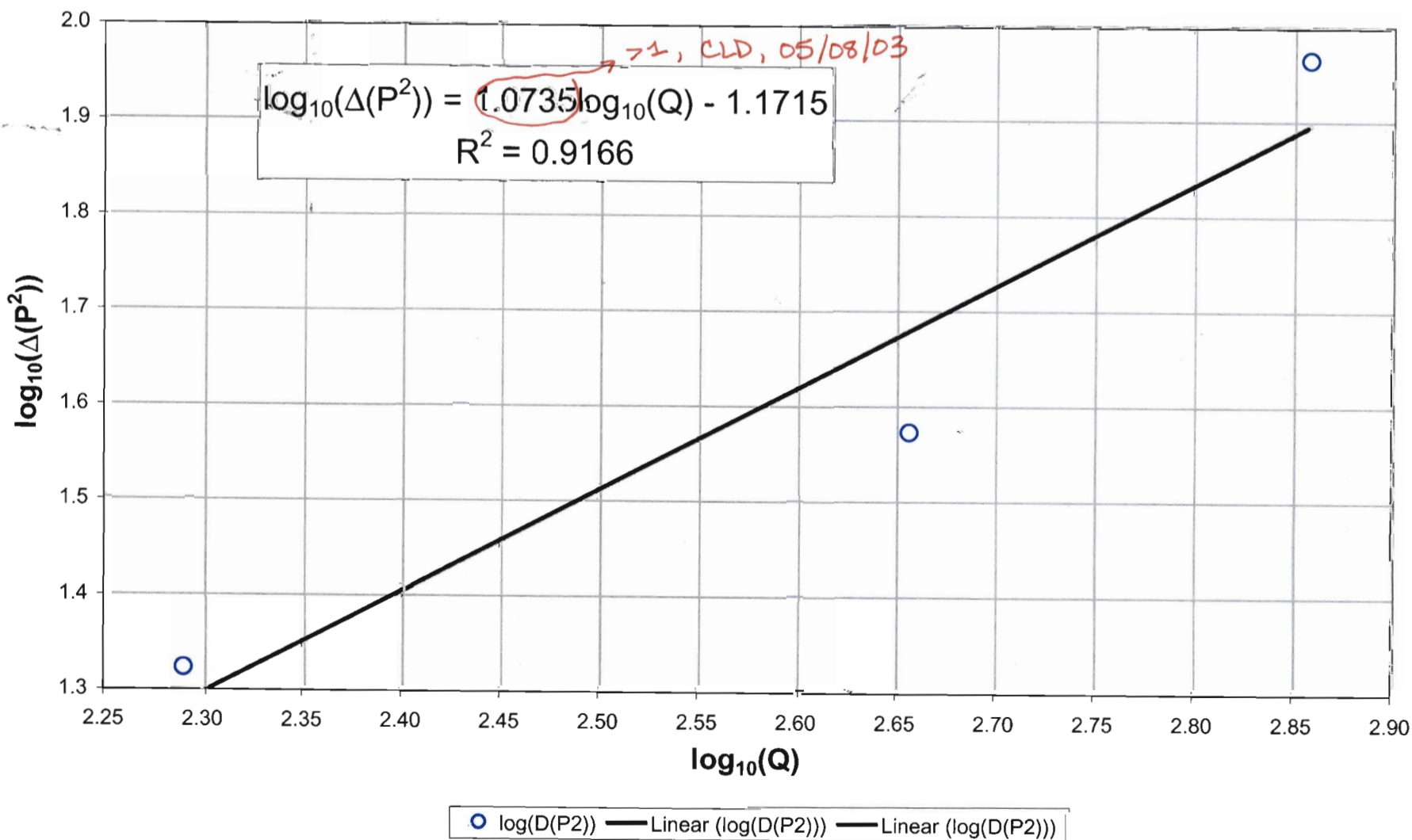


RMM, 05/11/03

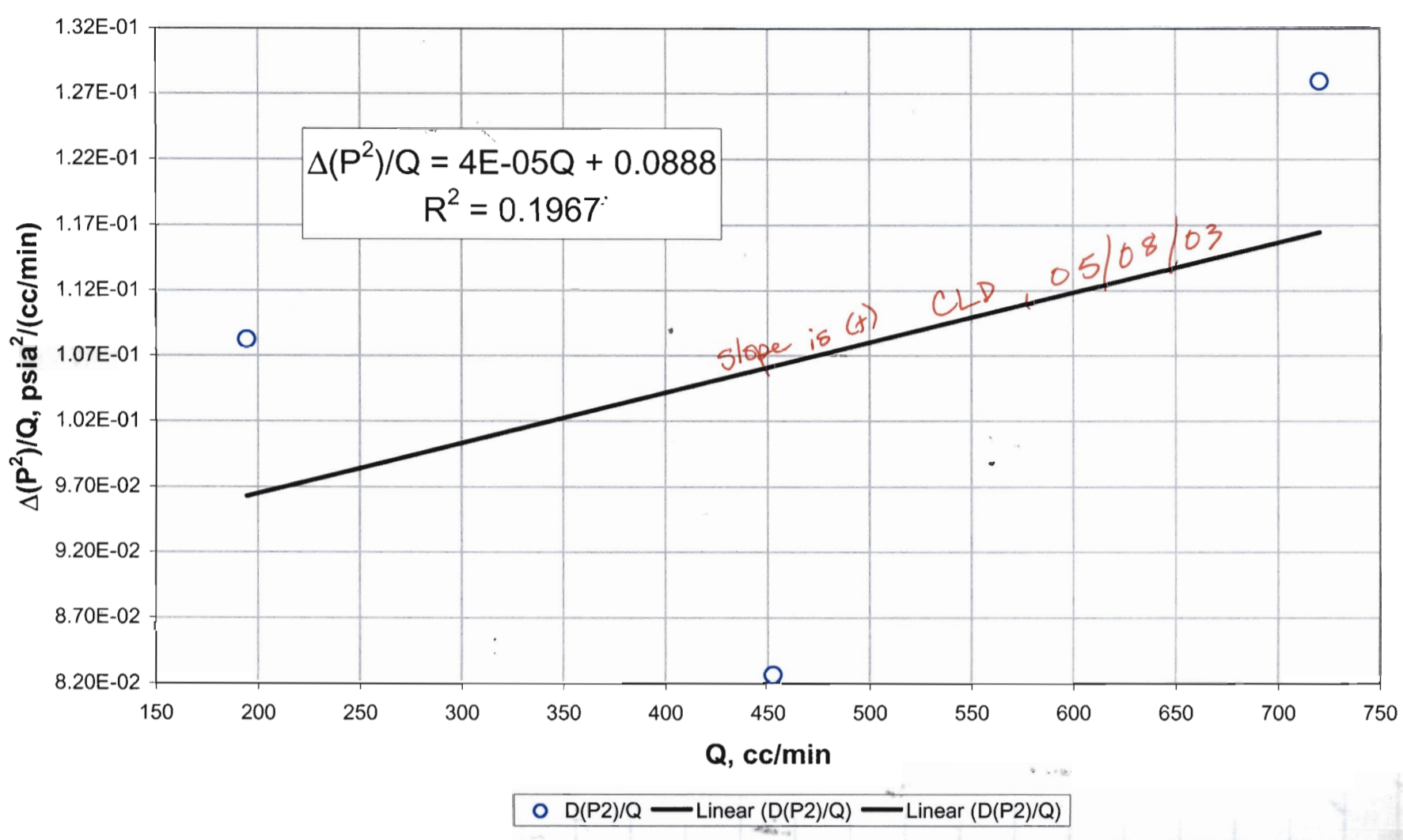
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 61



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)
 H Transect: Drillhole 61

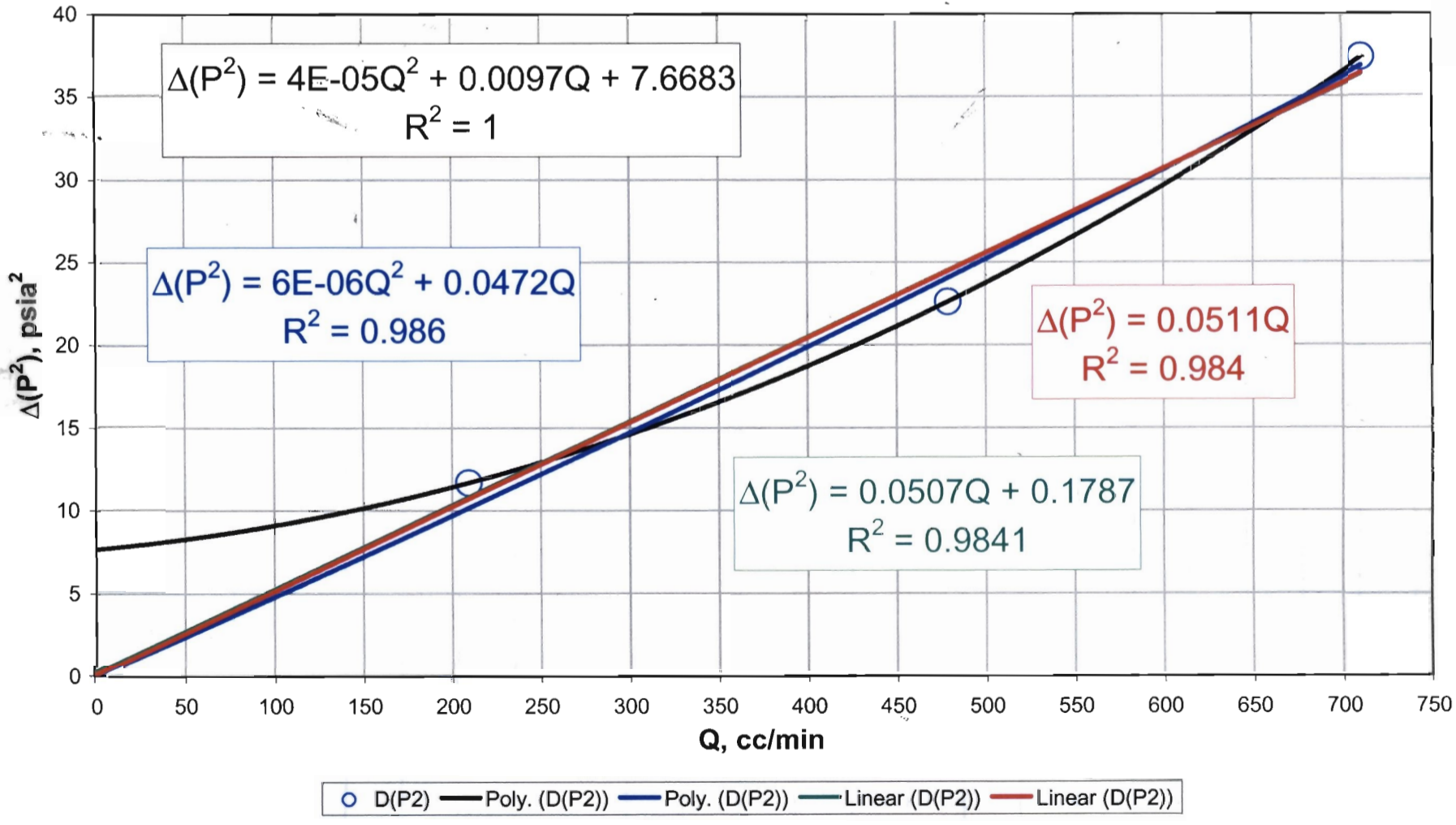


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 61



Rum, 12/11/05

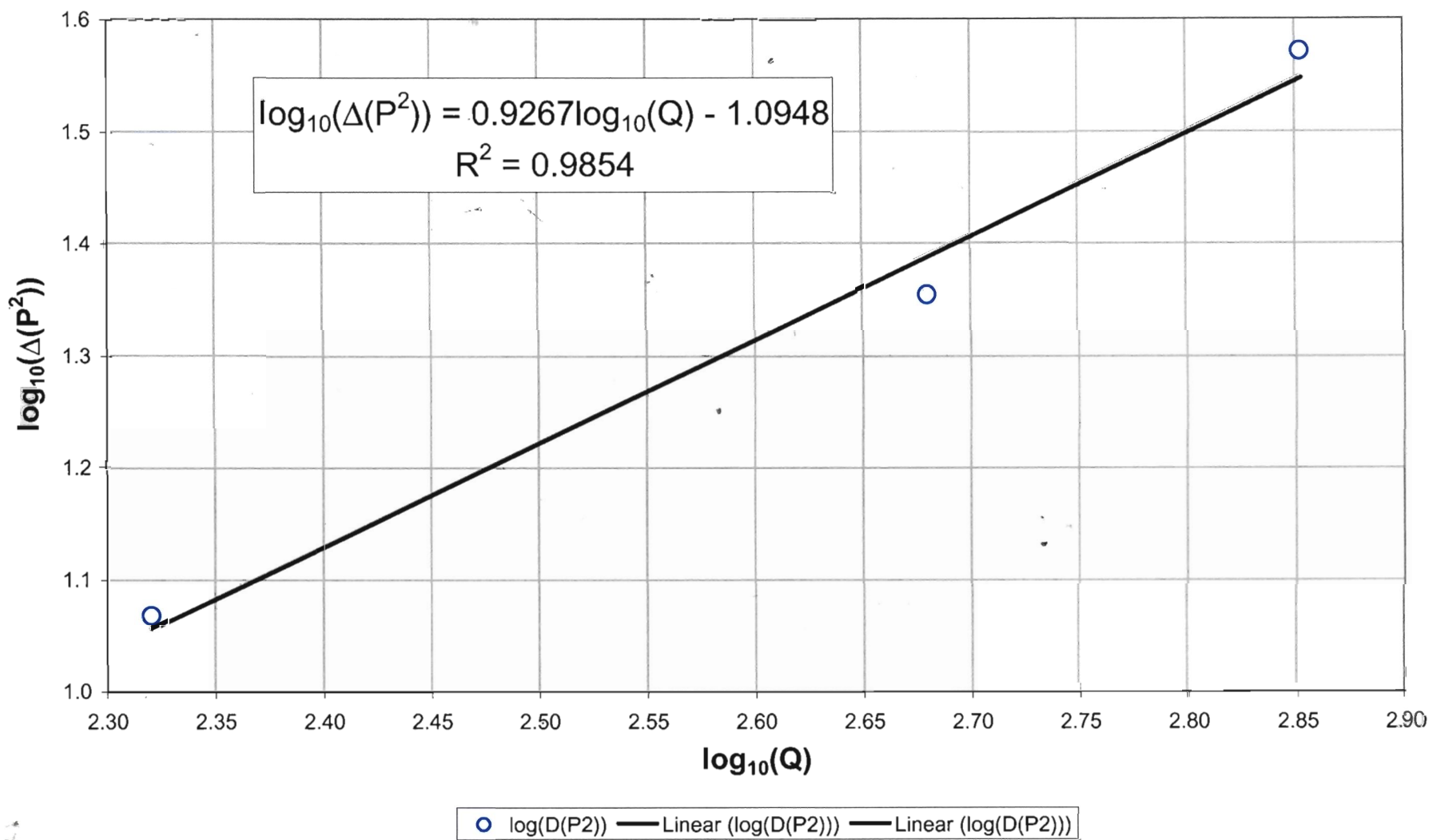
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 62



Rum, 12/11/05

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)

H Transect: Drillhole 62

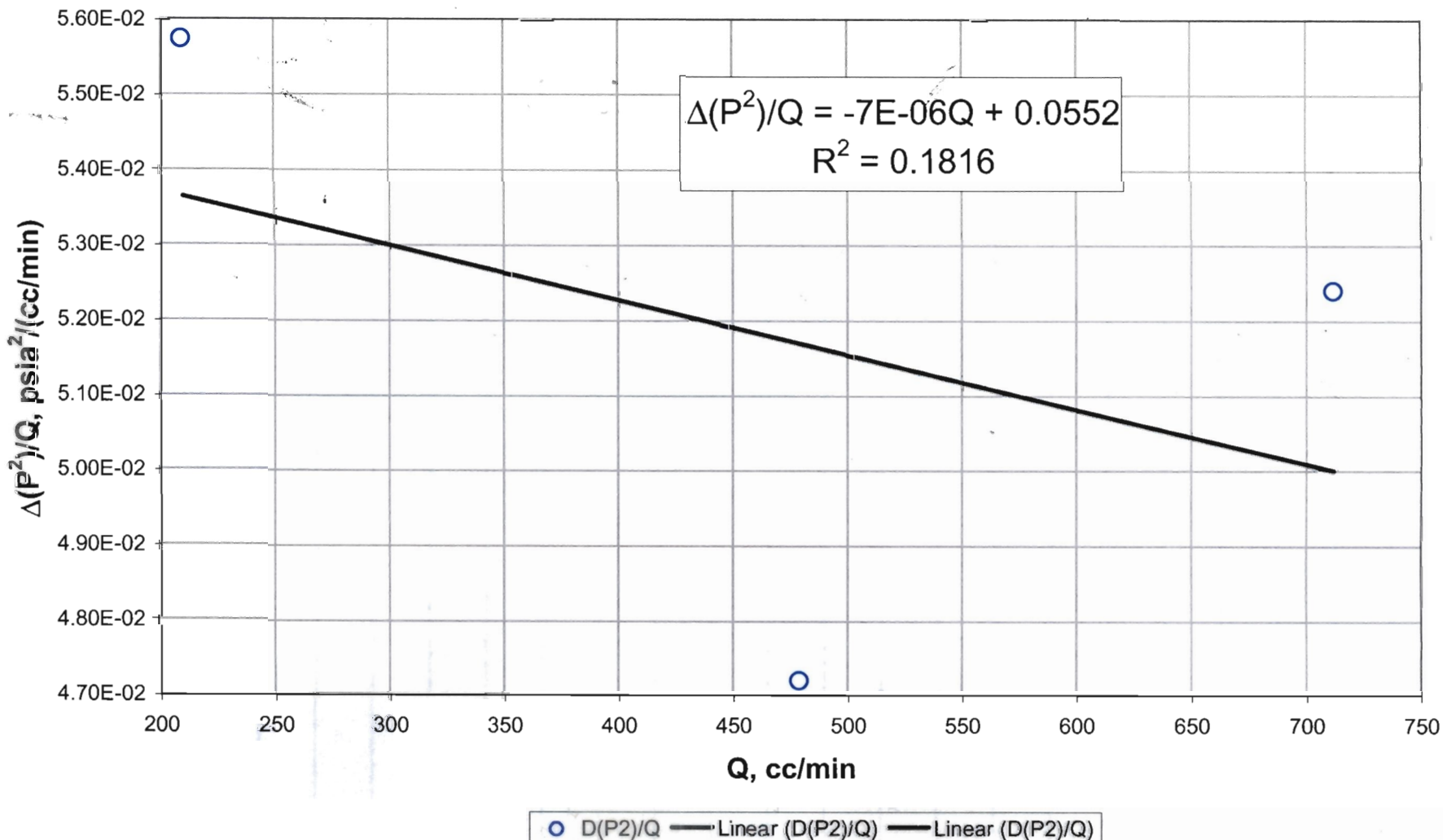


RNM, 12/31/02

Final check for high velocity flow effects:

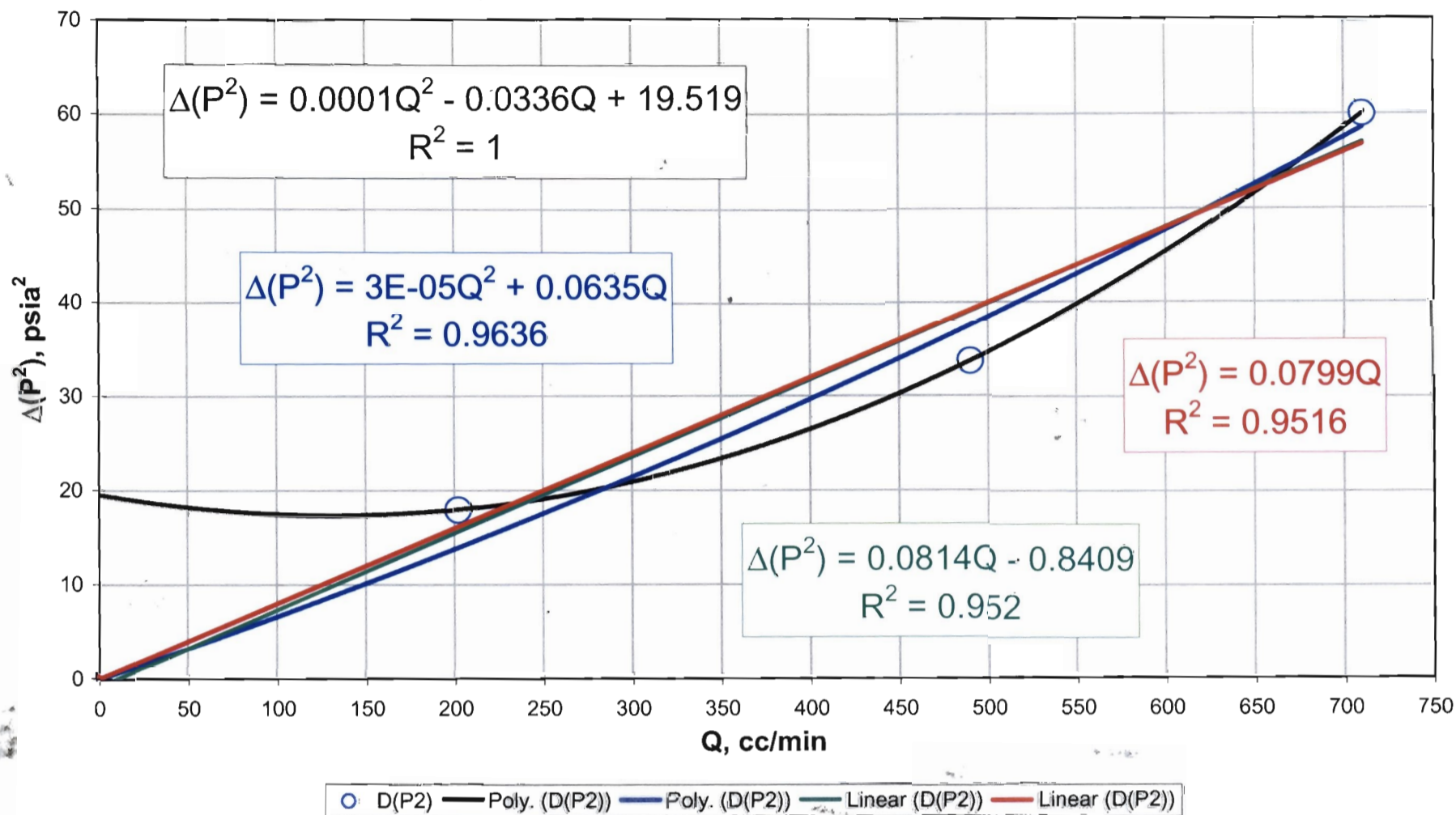
High velocity flow effects are present when the slope is non-zero and positive.

H Transect : Drillhole 62

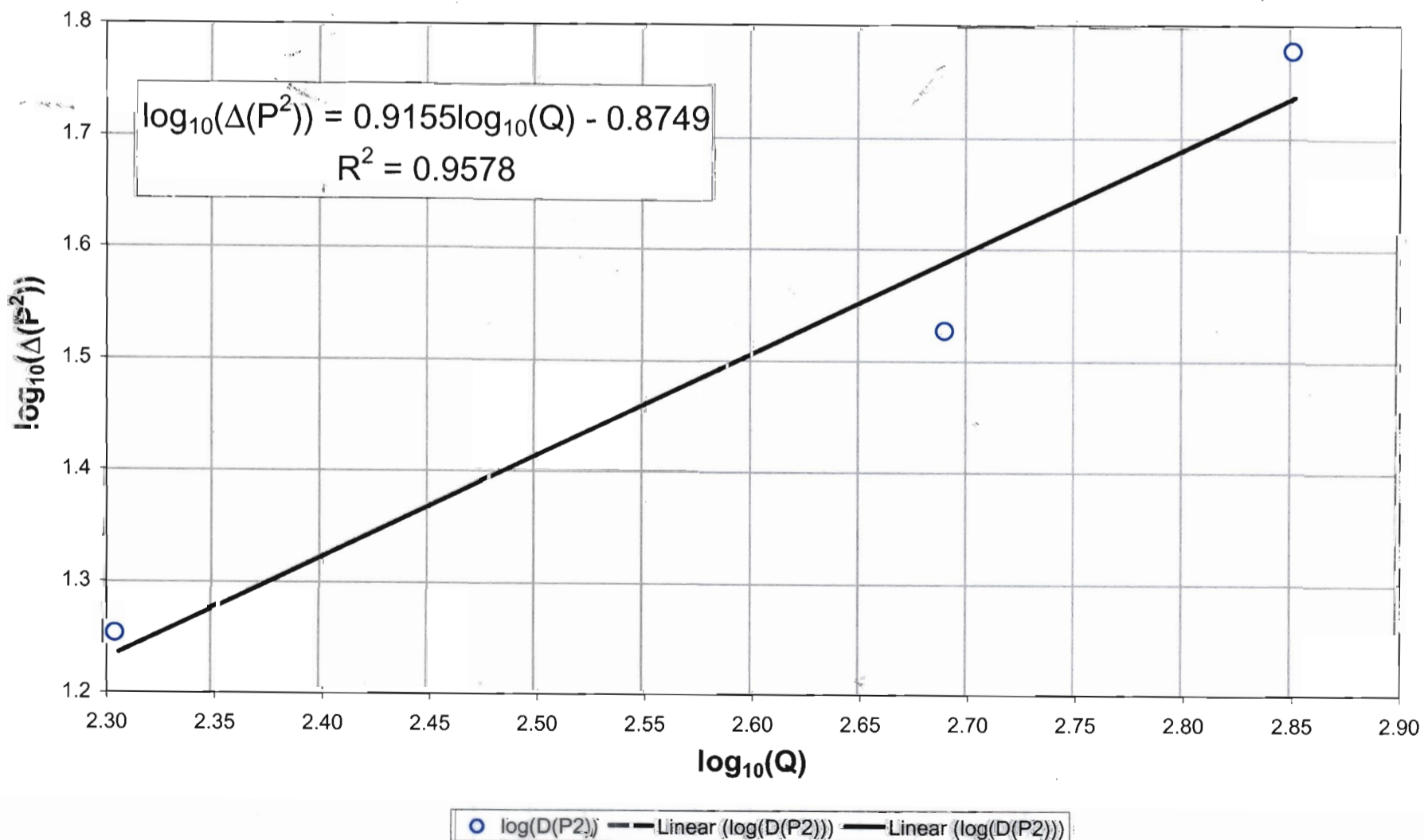


RNM, 12/31/02

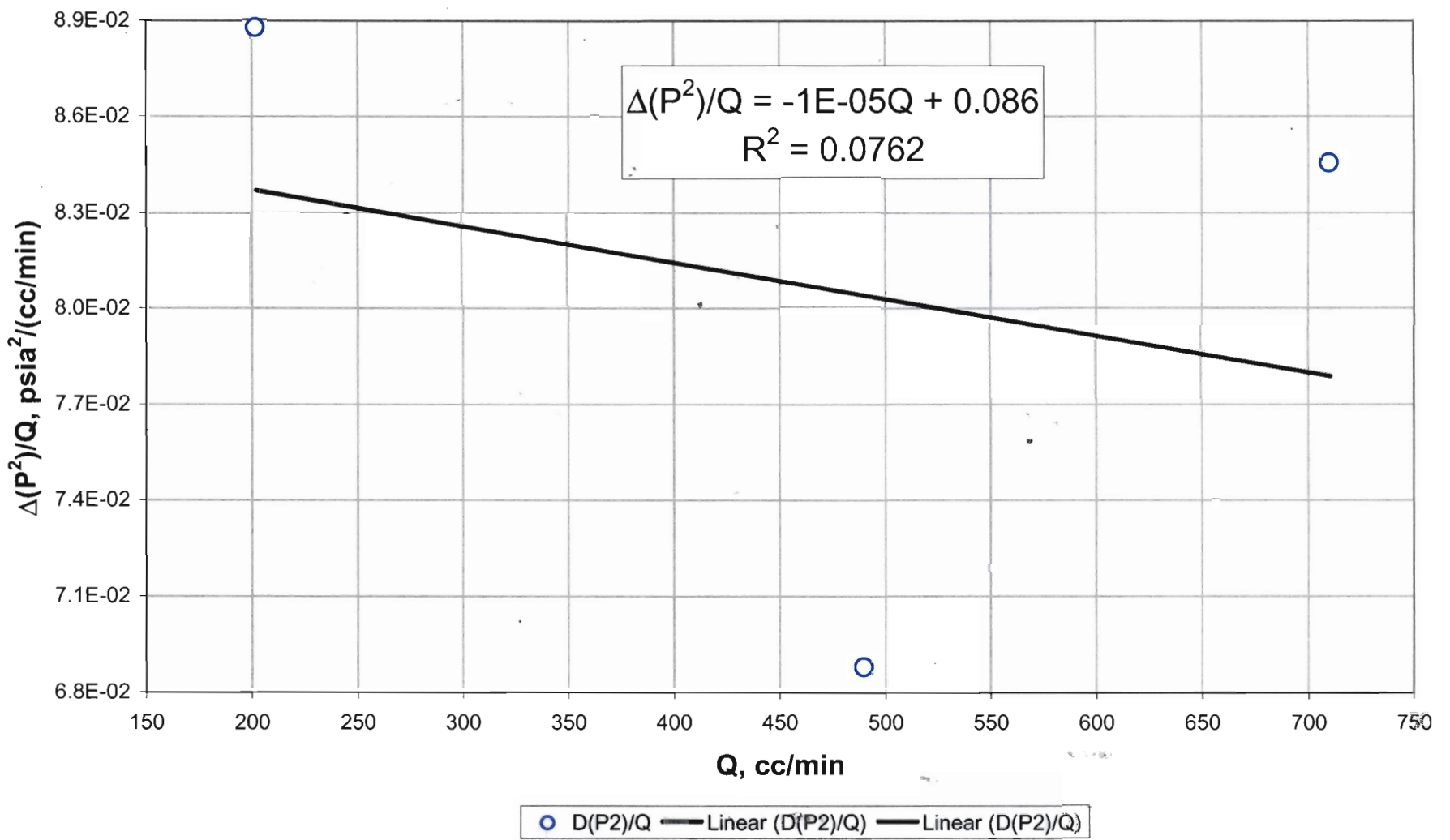
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 63



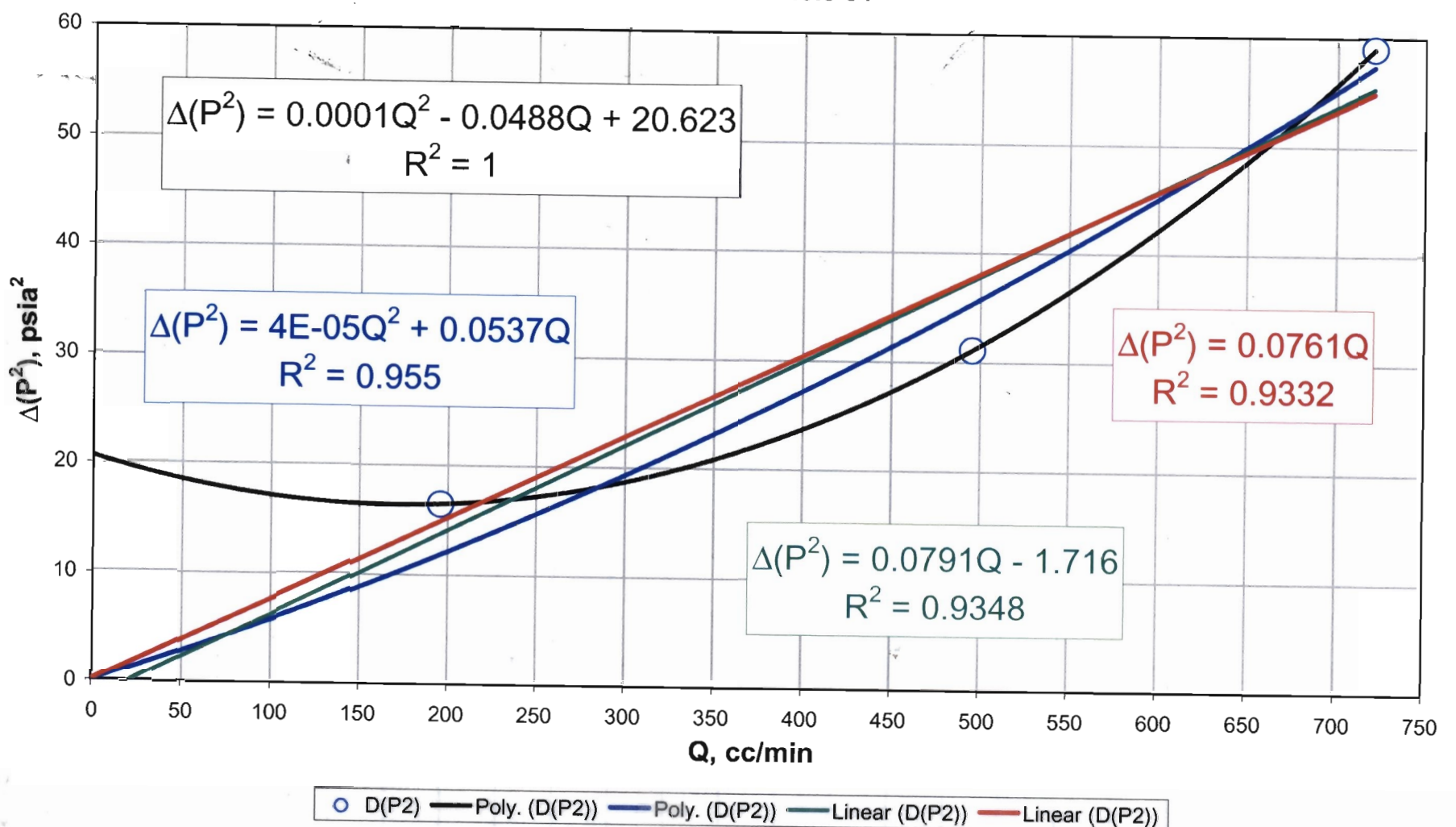
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 63



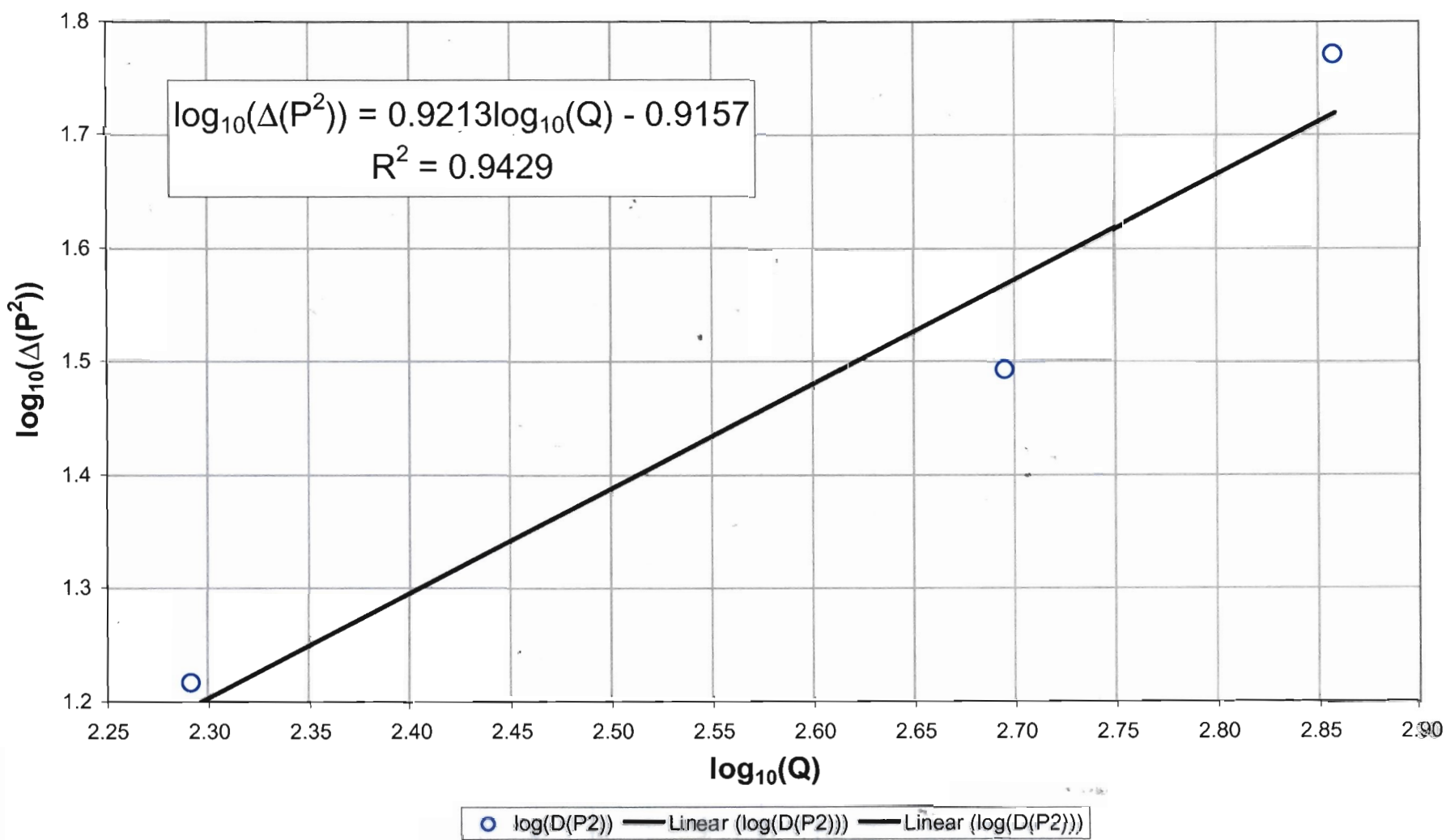
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 63



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.
 H Transect: Drillhole 64

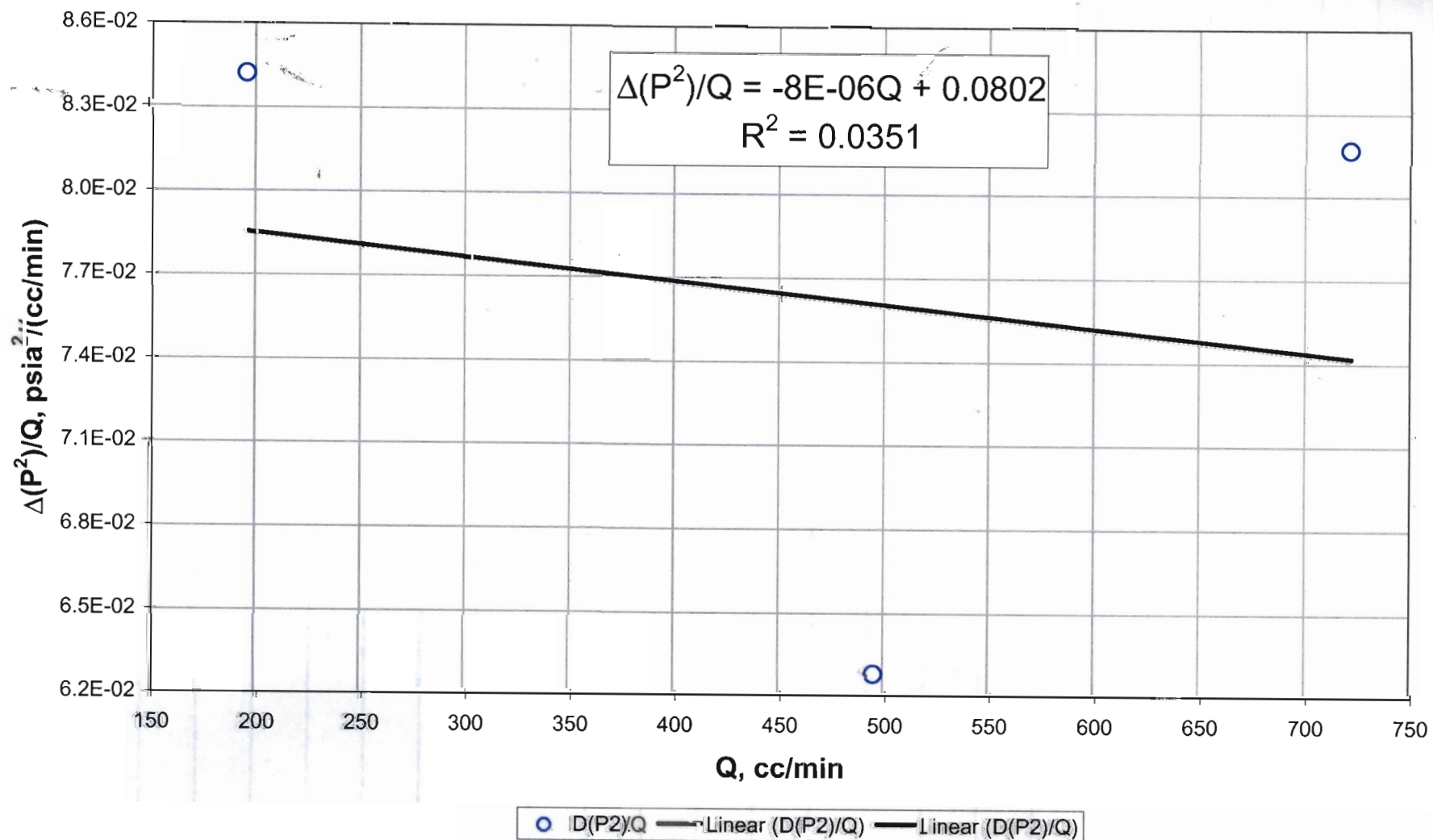


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 64



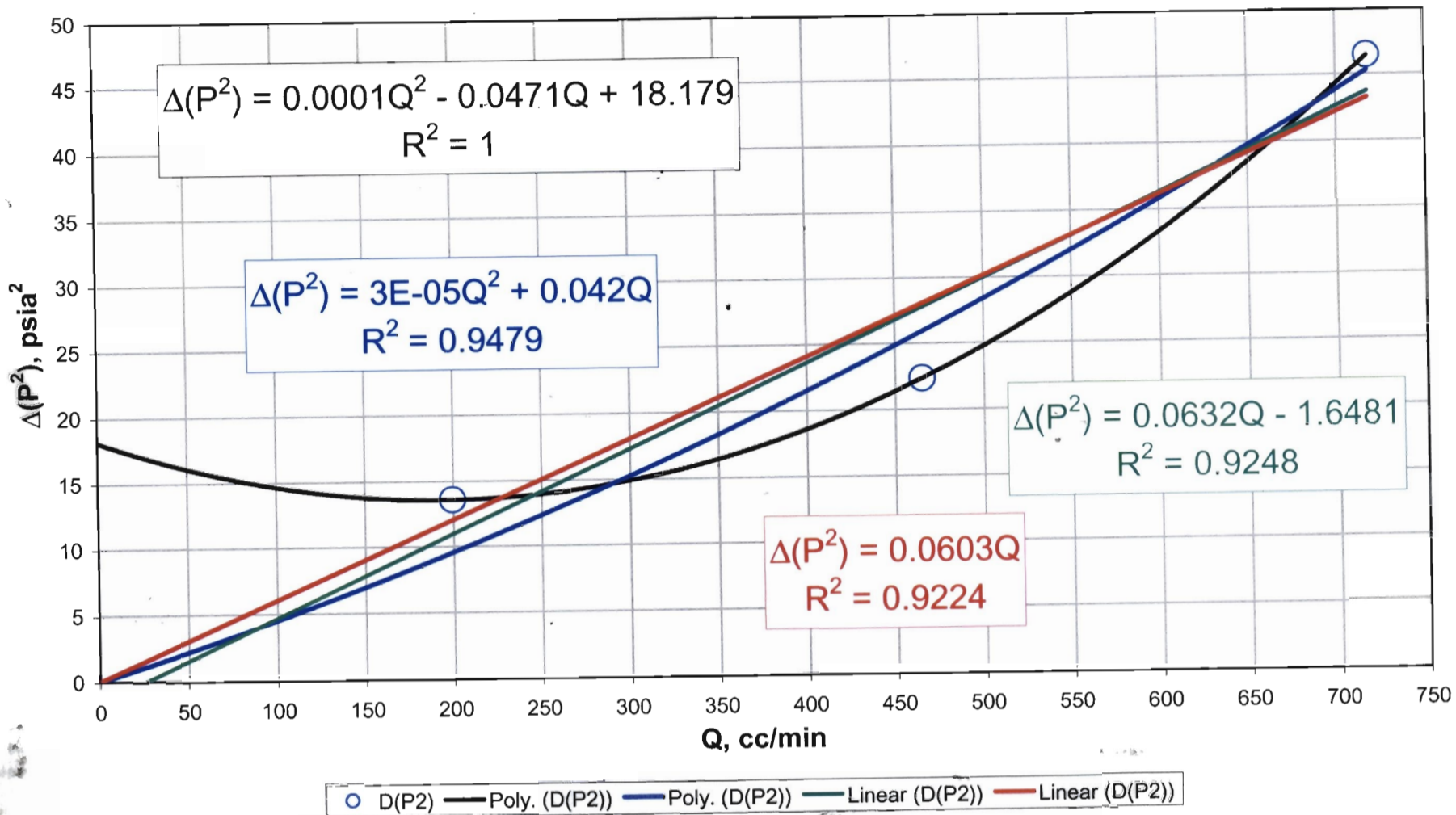
Run 12/1/02

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

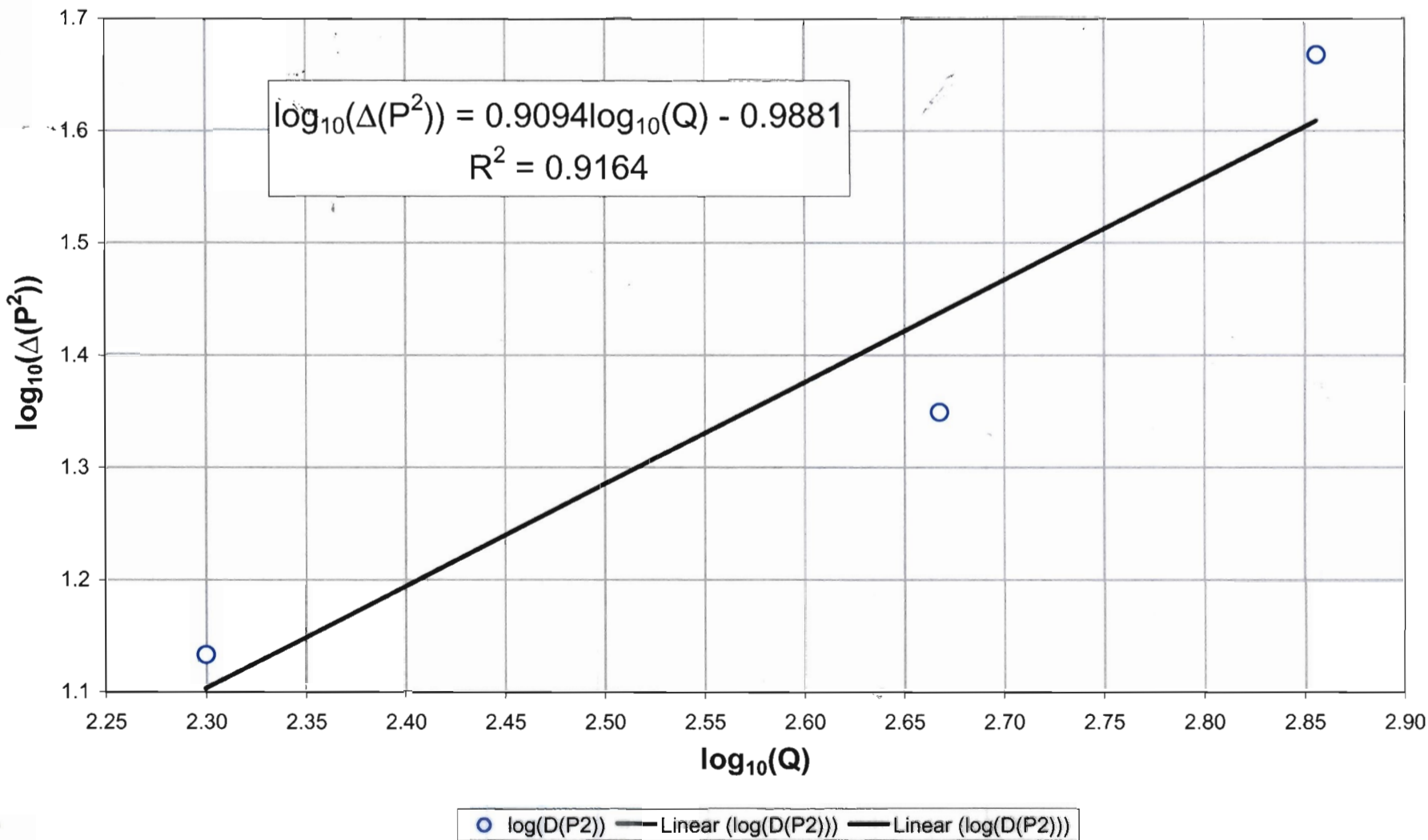


Run 12/1/02

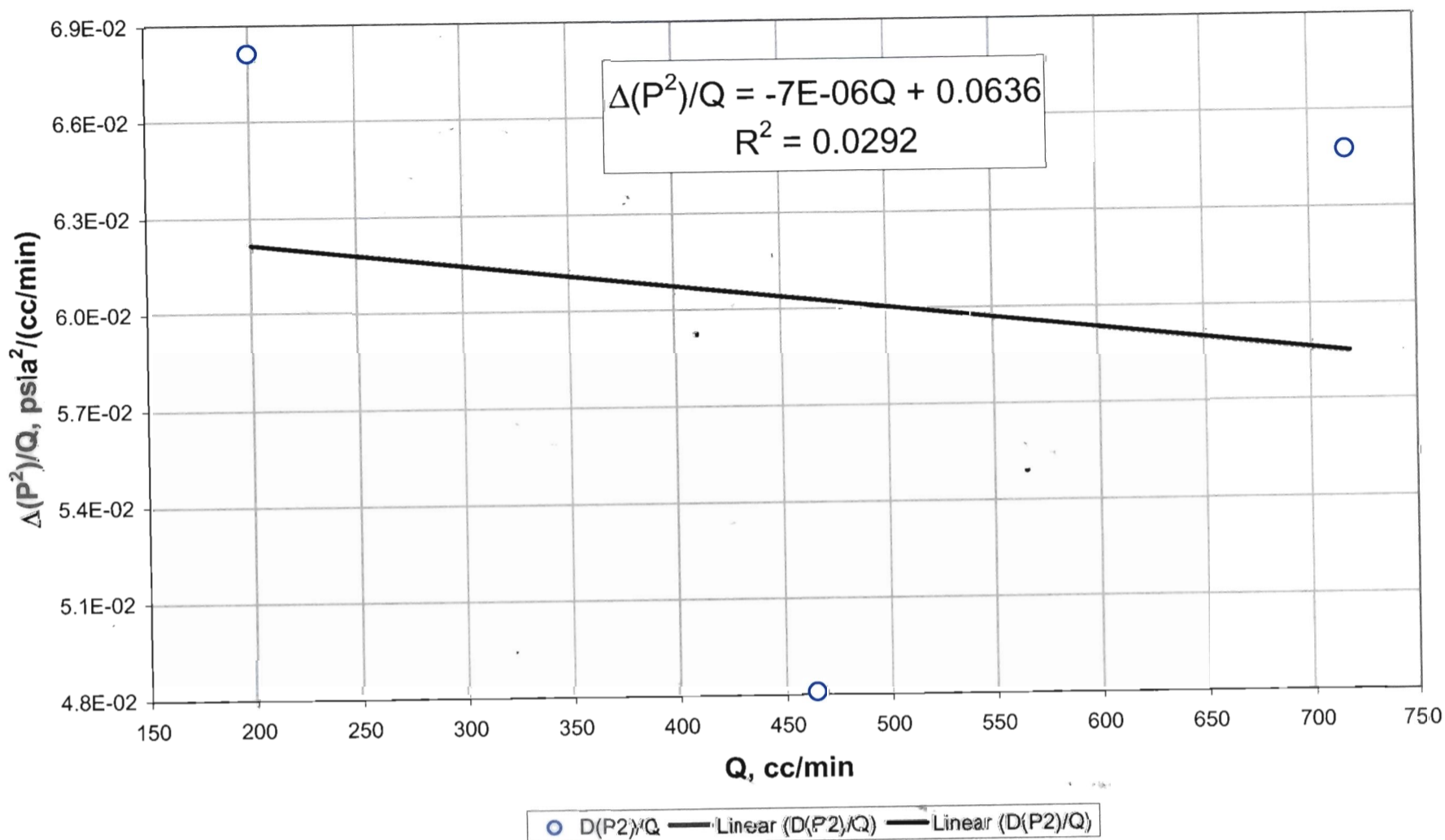
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 65



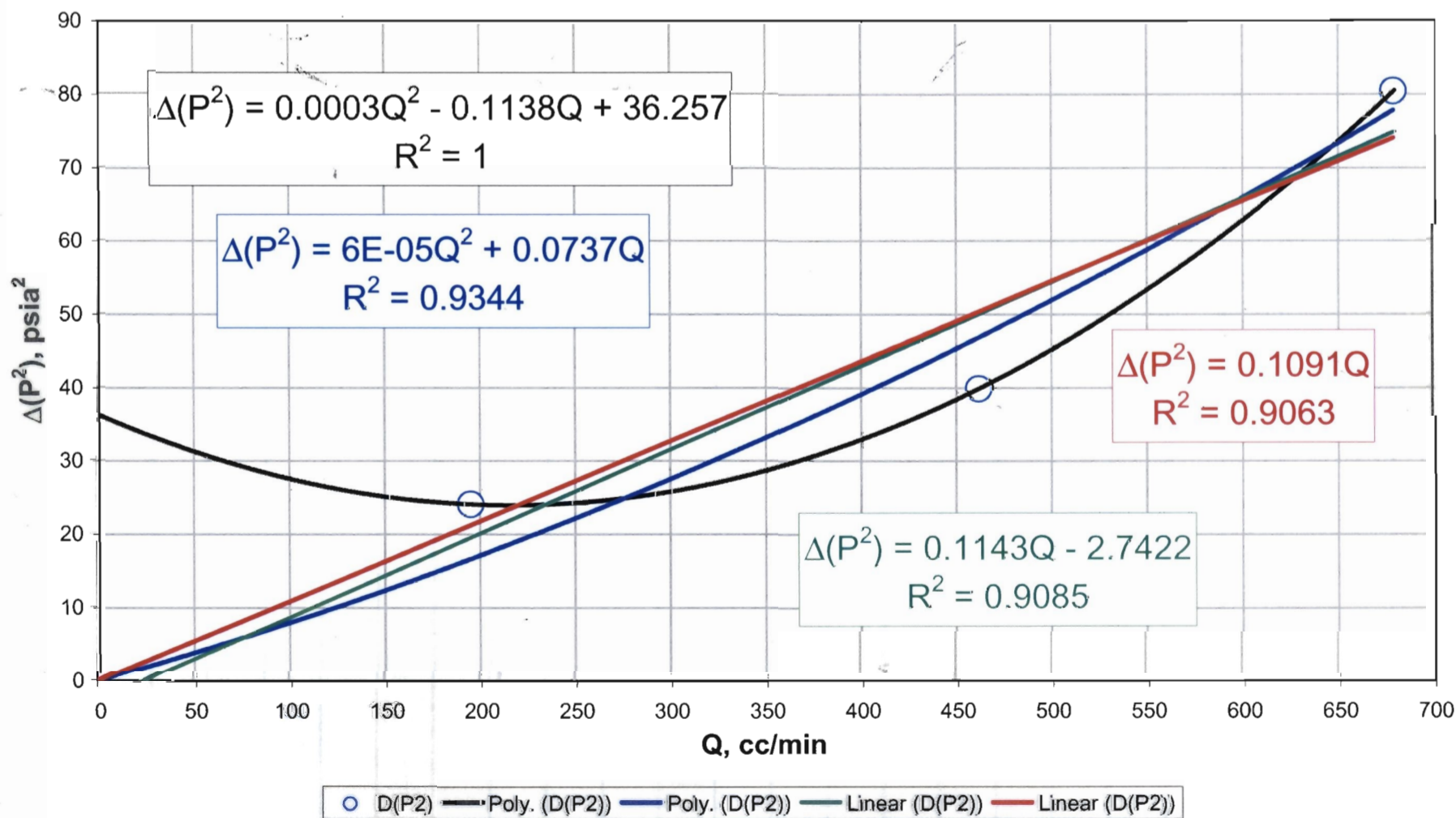
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 65



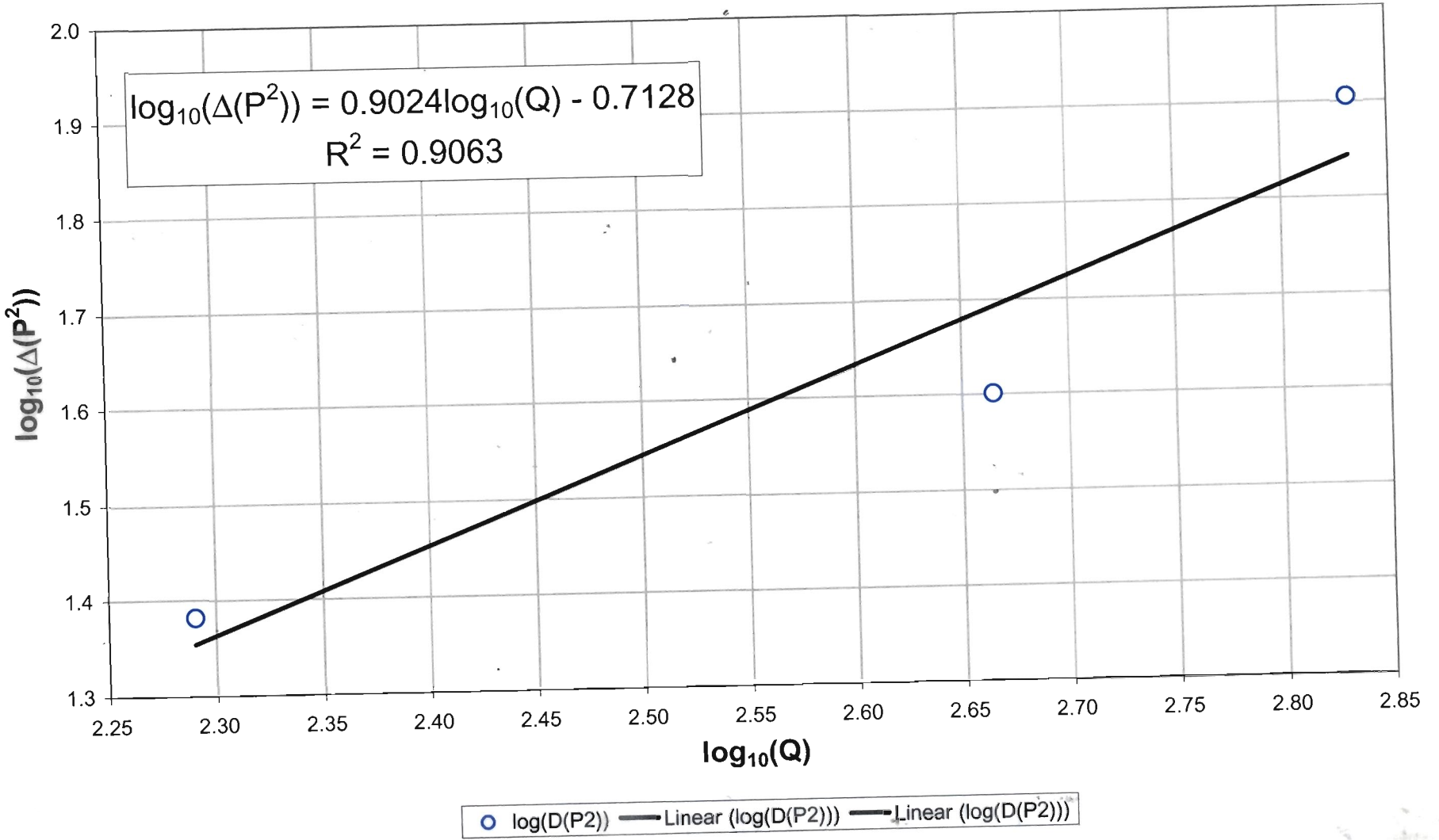
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 65



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.
 H Transect: Drillhole 66

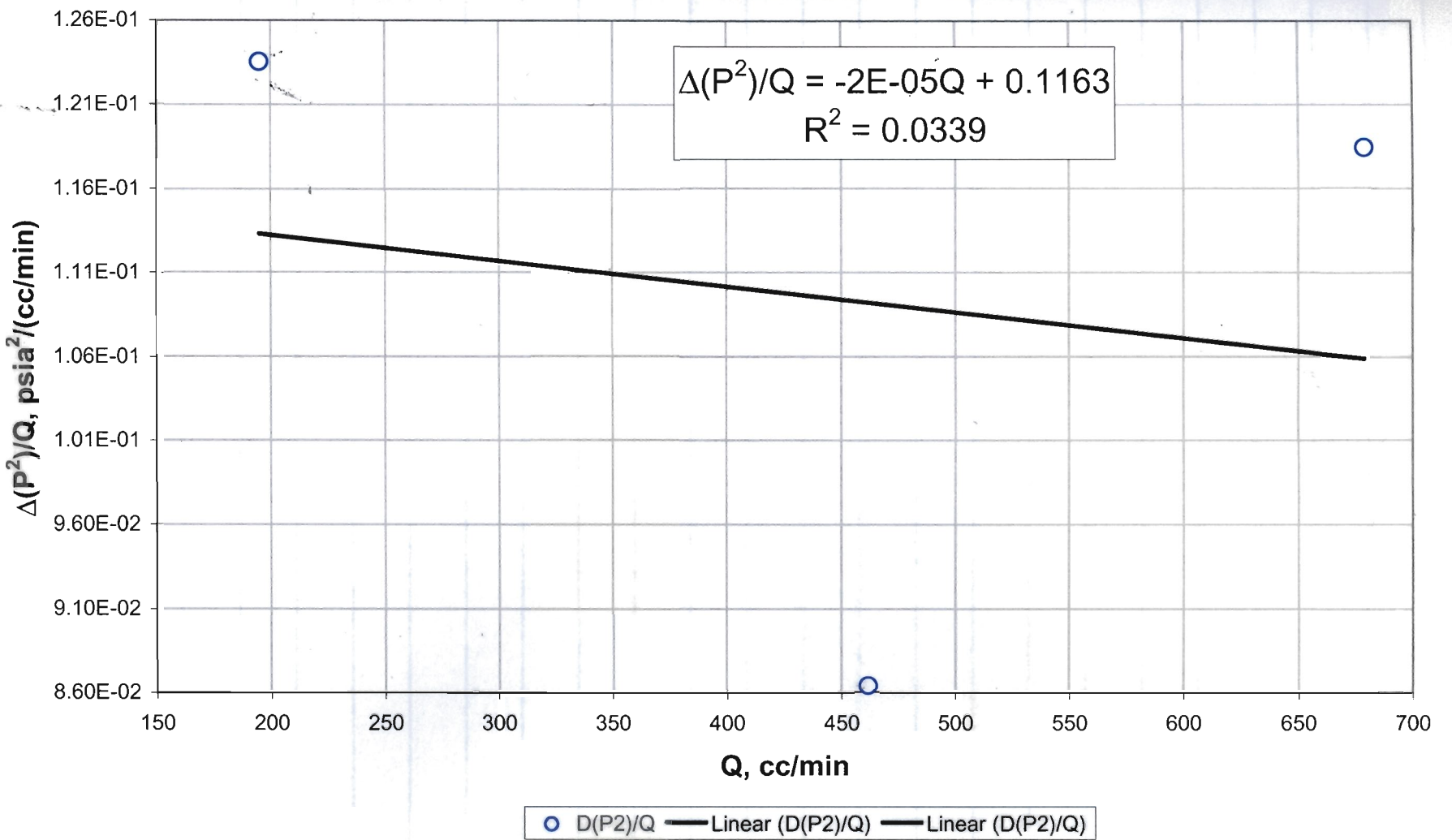


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 66



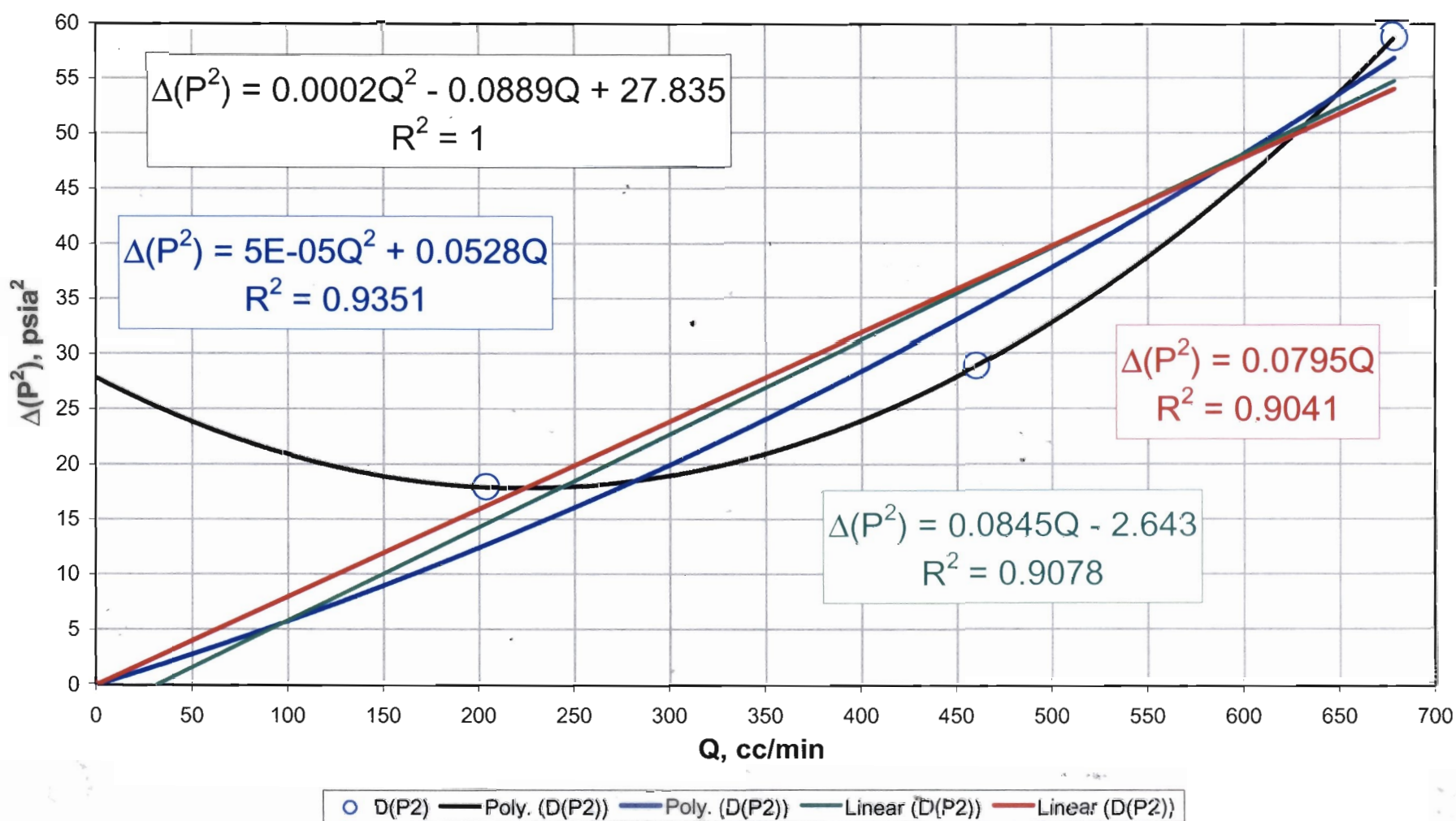
RNM, 12/31/02

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



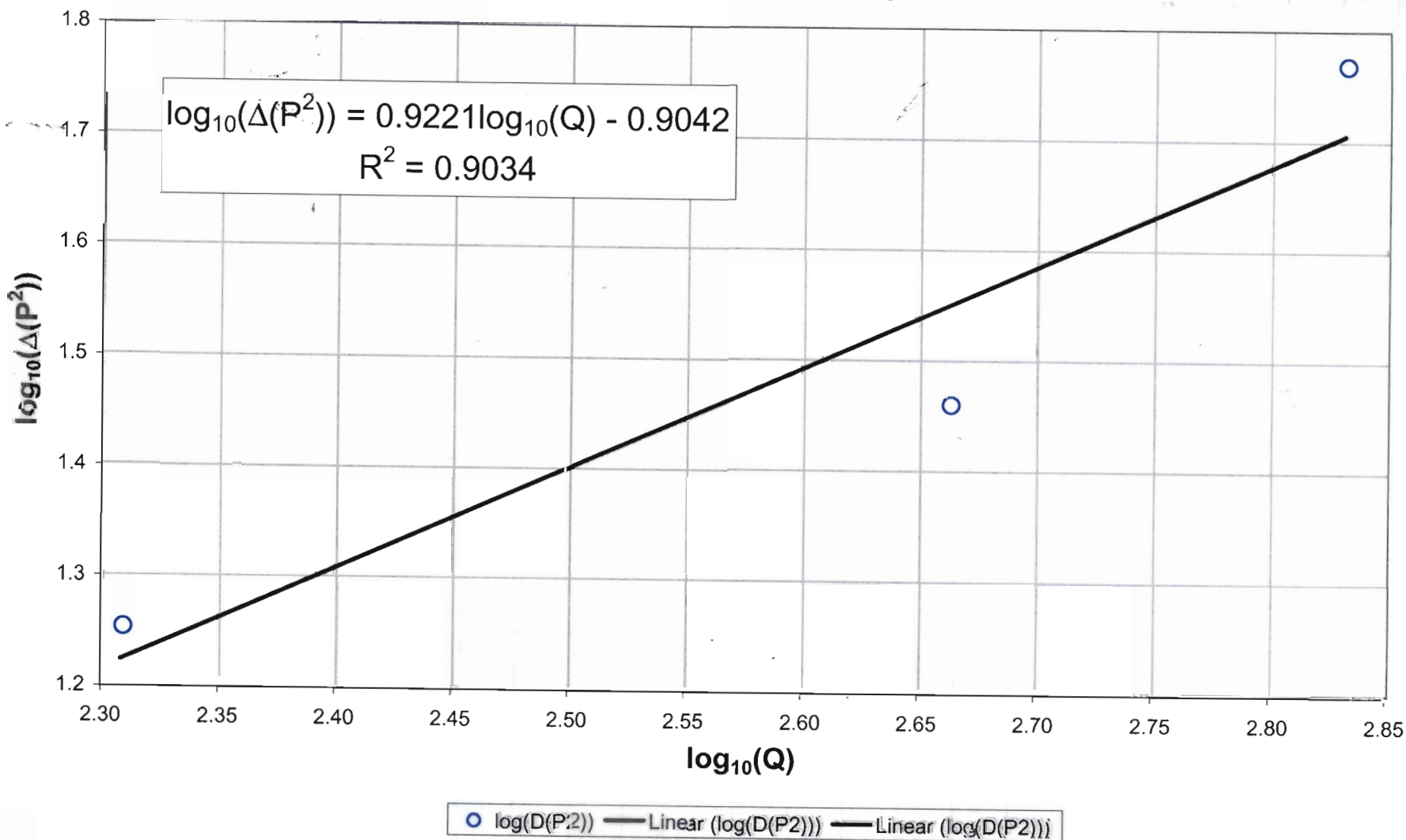
RNM, 12/31/02

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.
 H Transect: Drillhole 67



RNM, 12/31/02

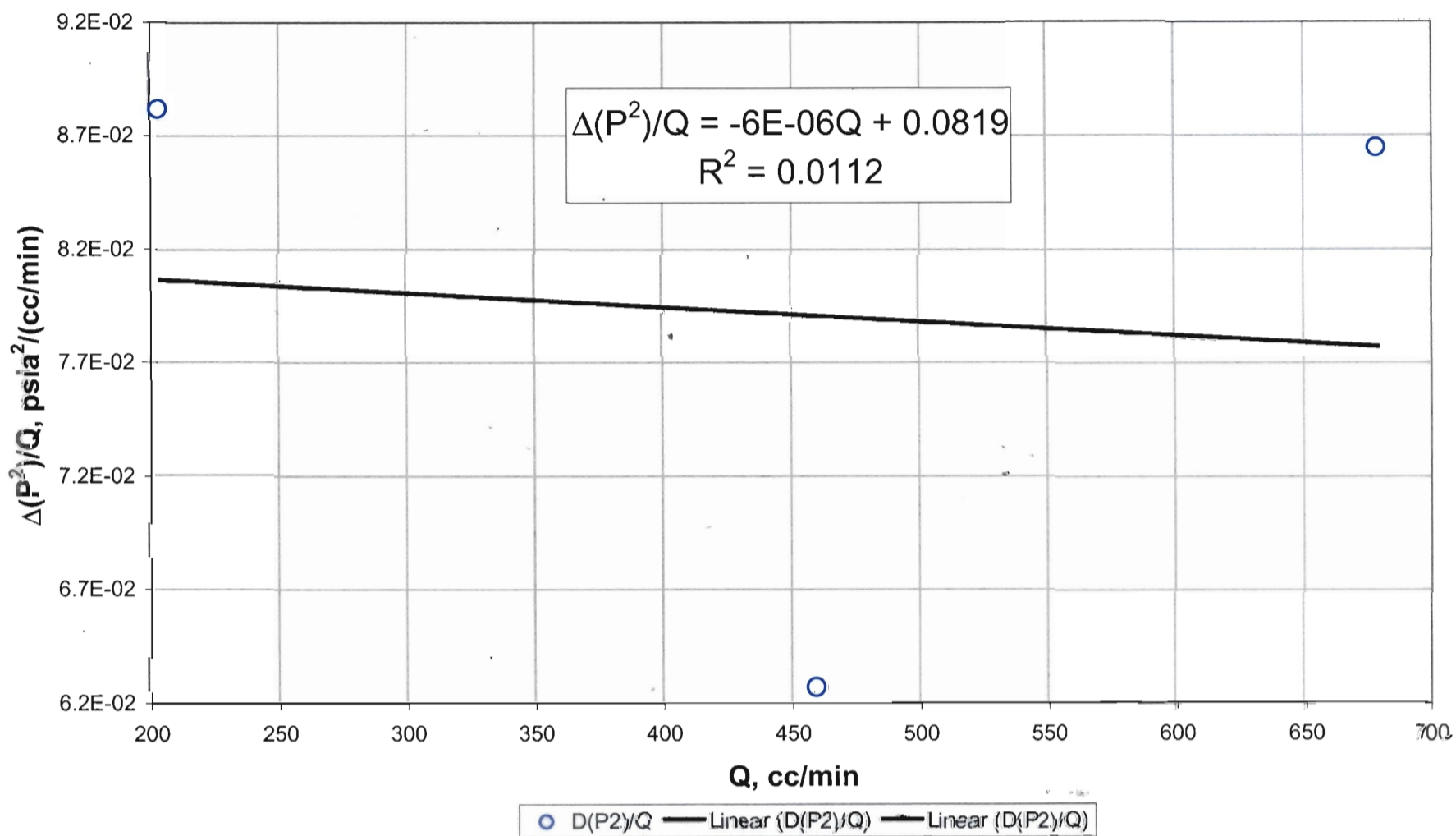
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 67



RNM, 12/31/02

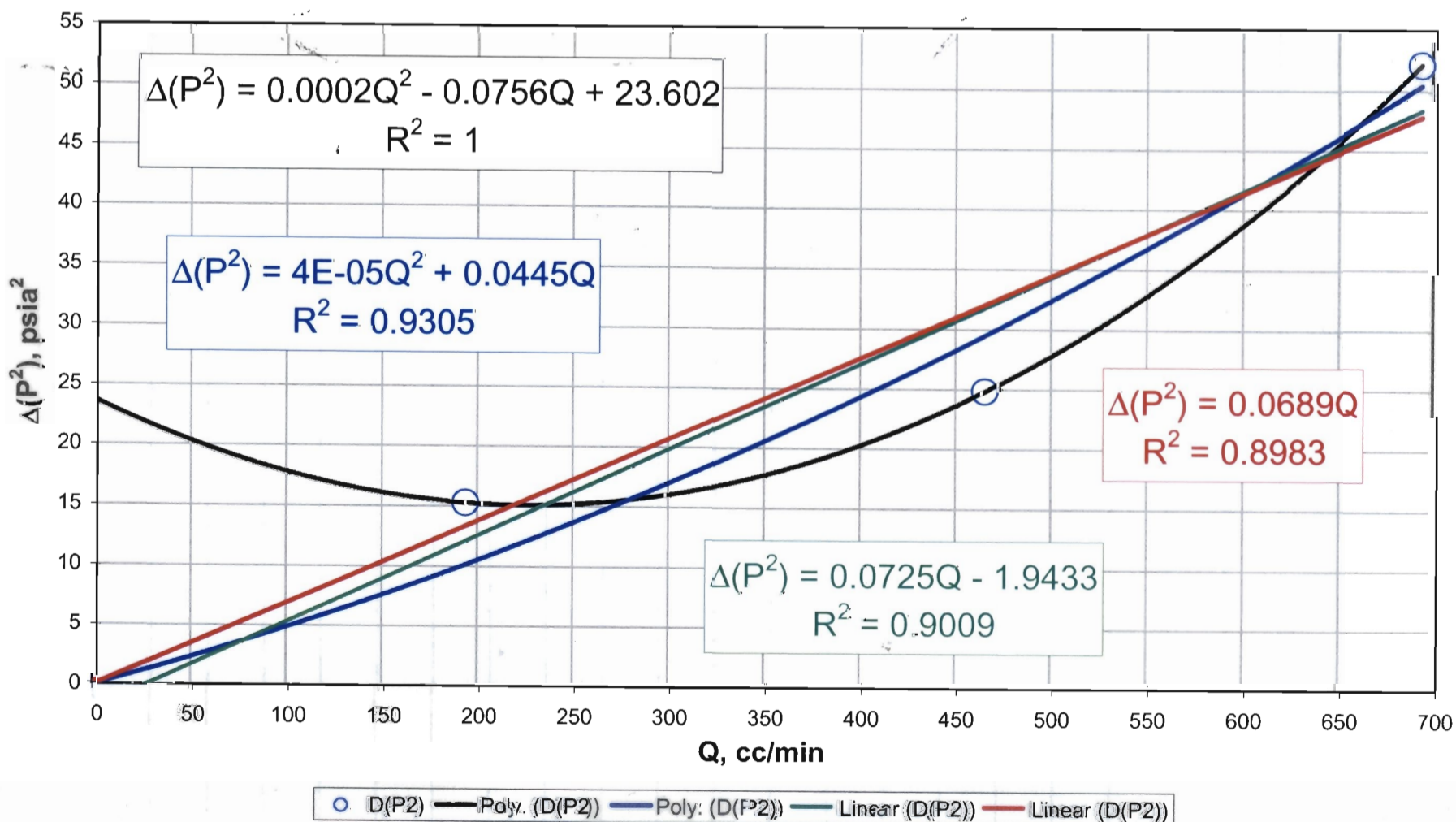
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 67

RWM, 12/31/02

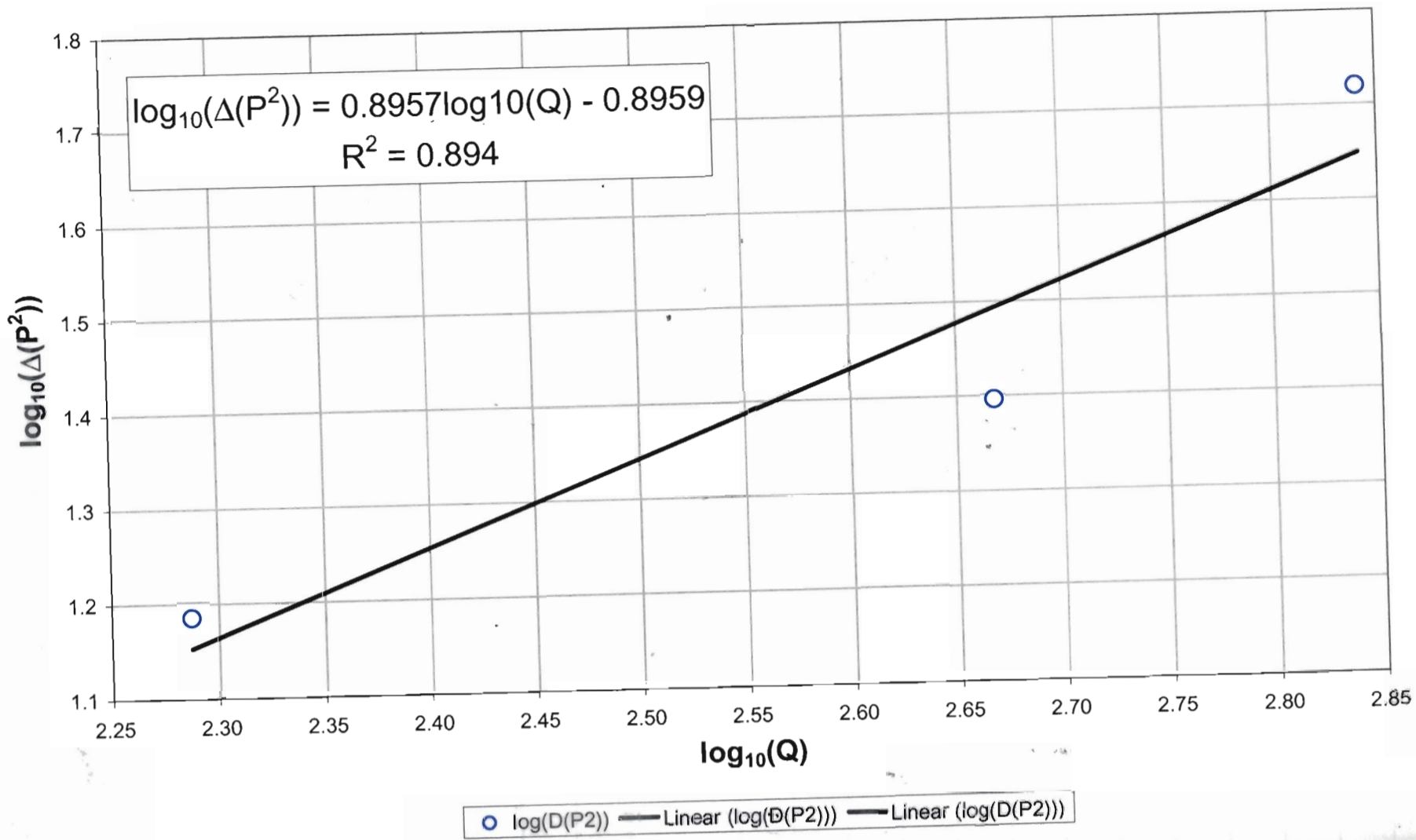


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 68

RWM, 12/31/02

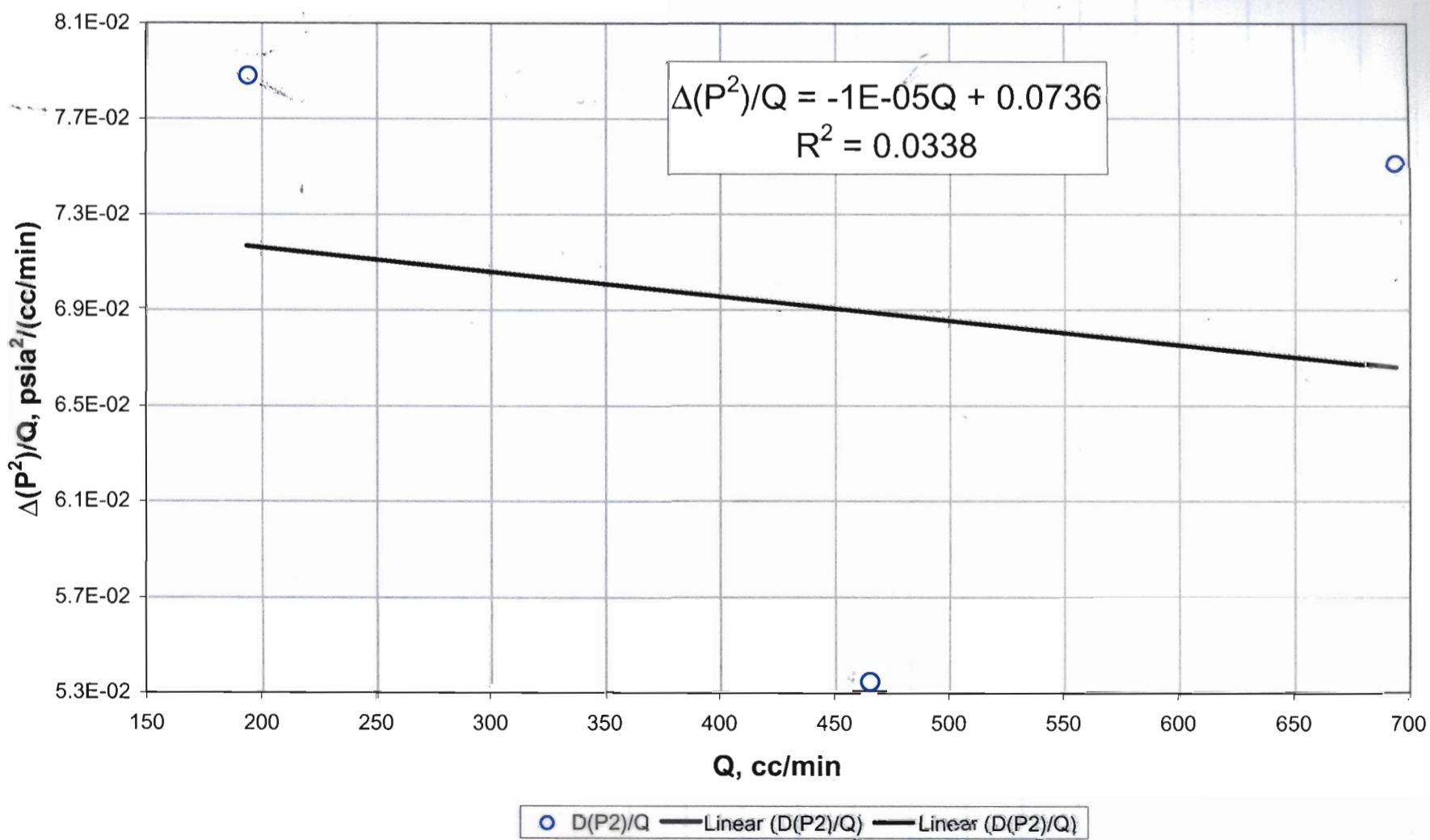


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 68



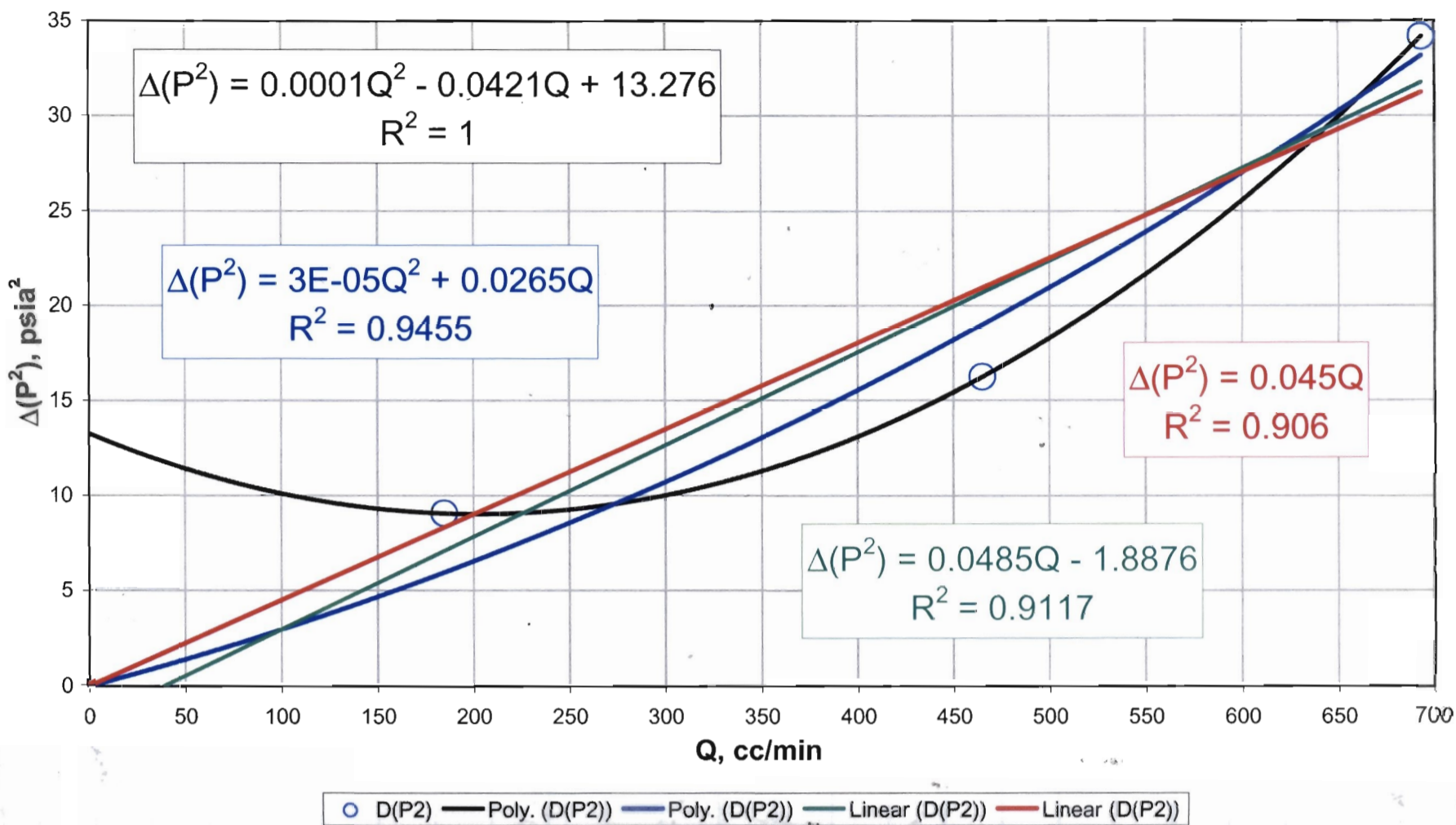
Run 4/21/02

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

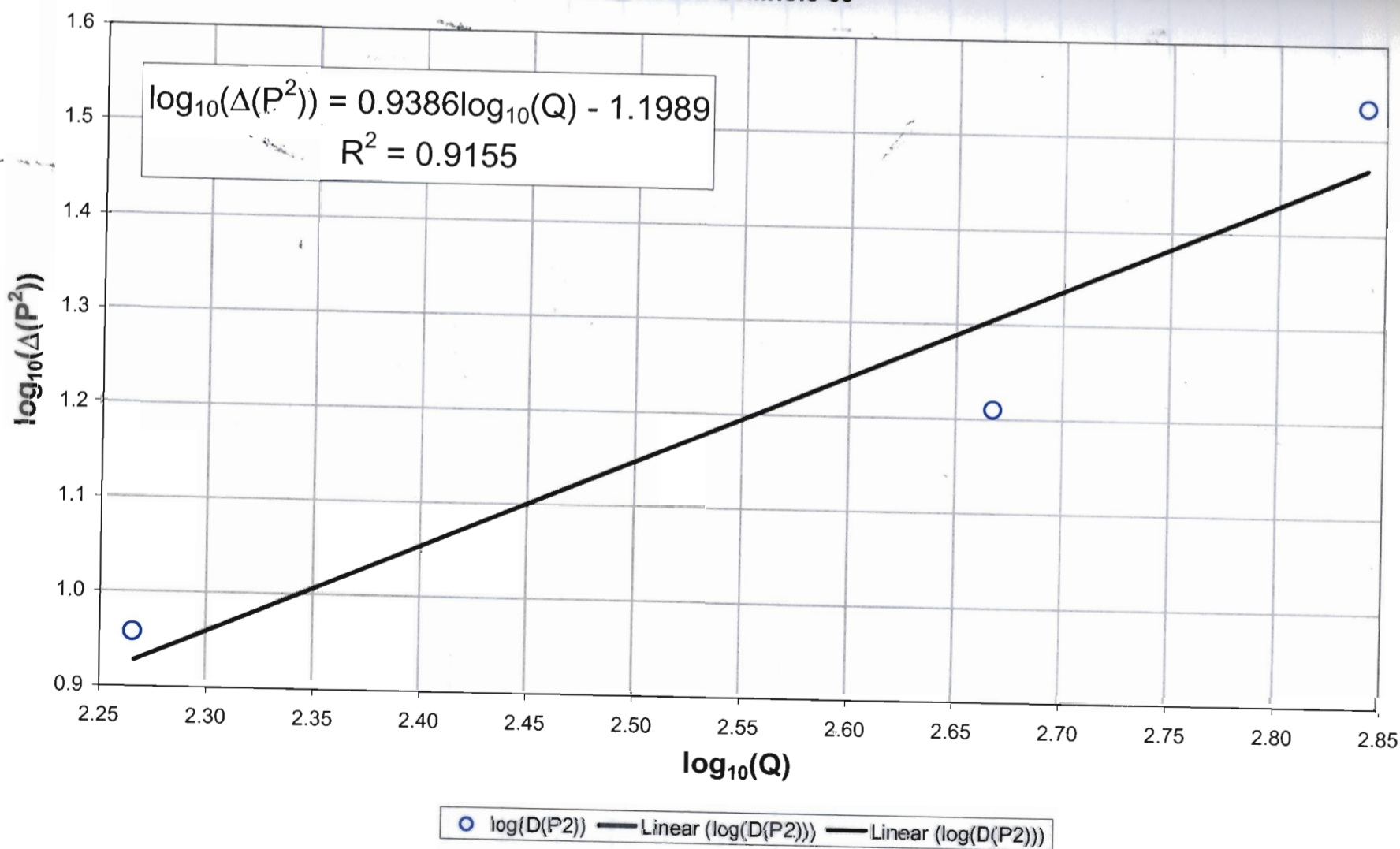


Run, 12/31/02

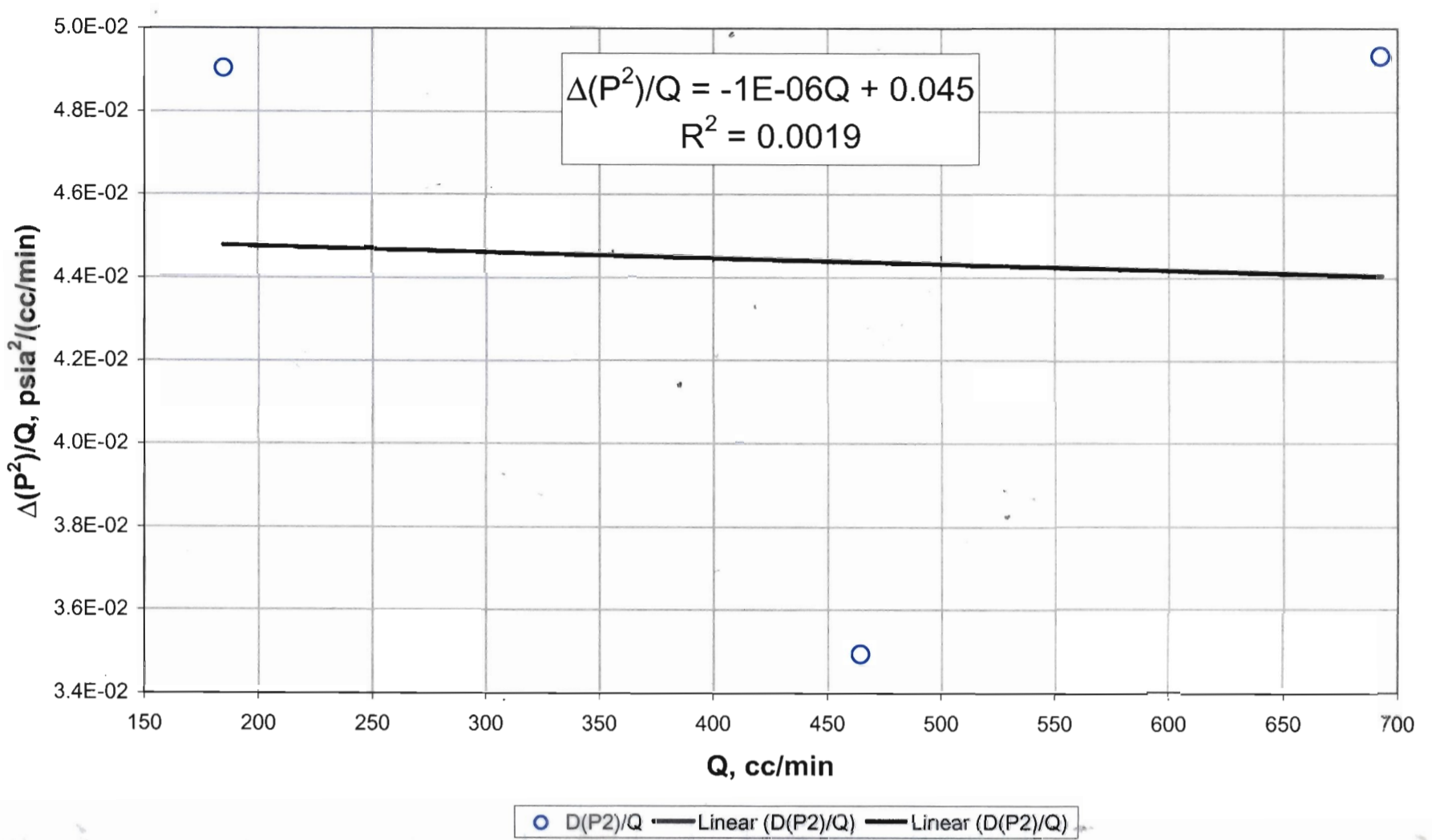
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 69



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)
 H Transect: Drillhole 69

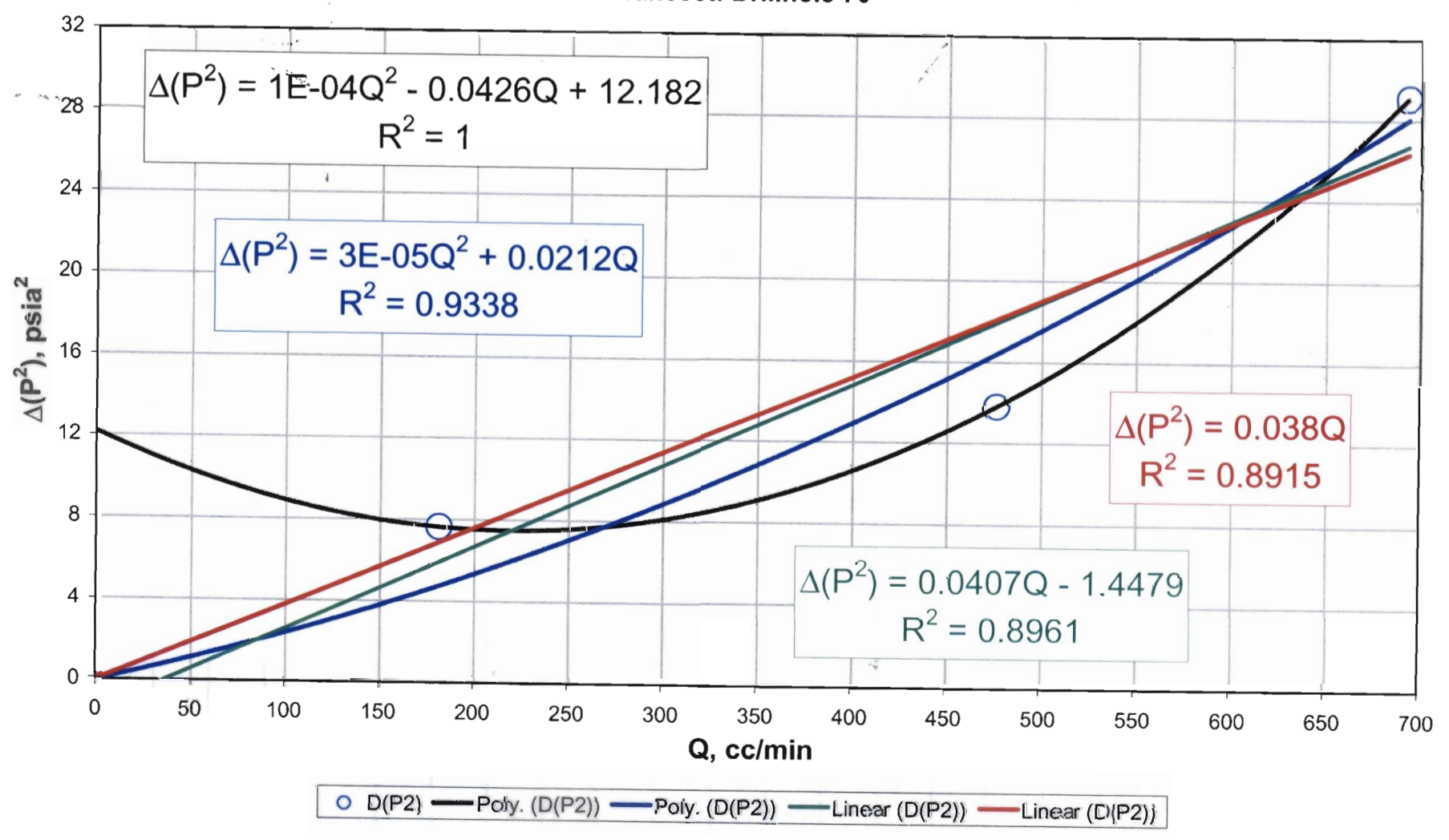


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 69



RNM, 14/12/12

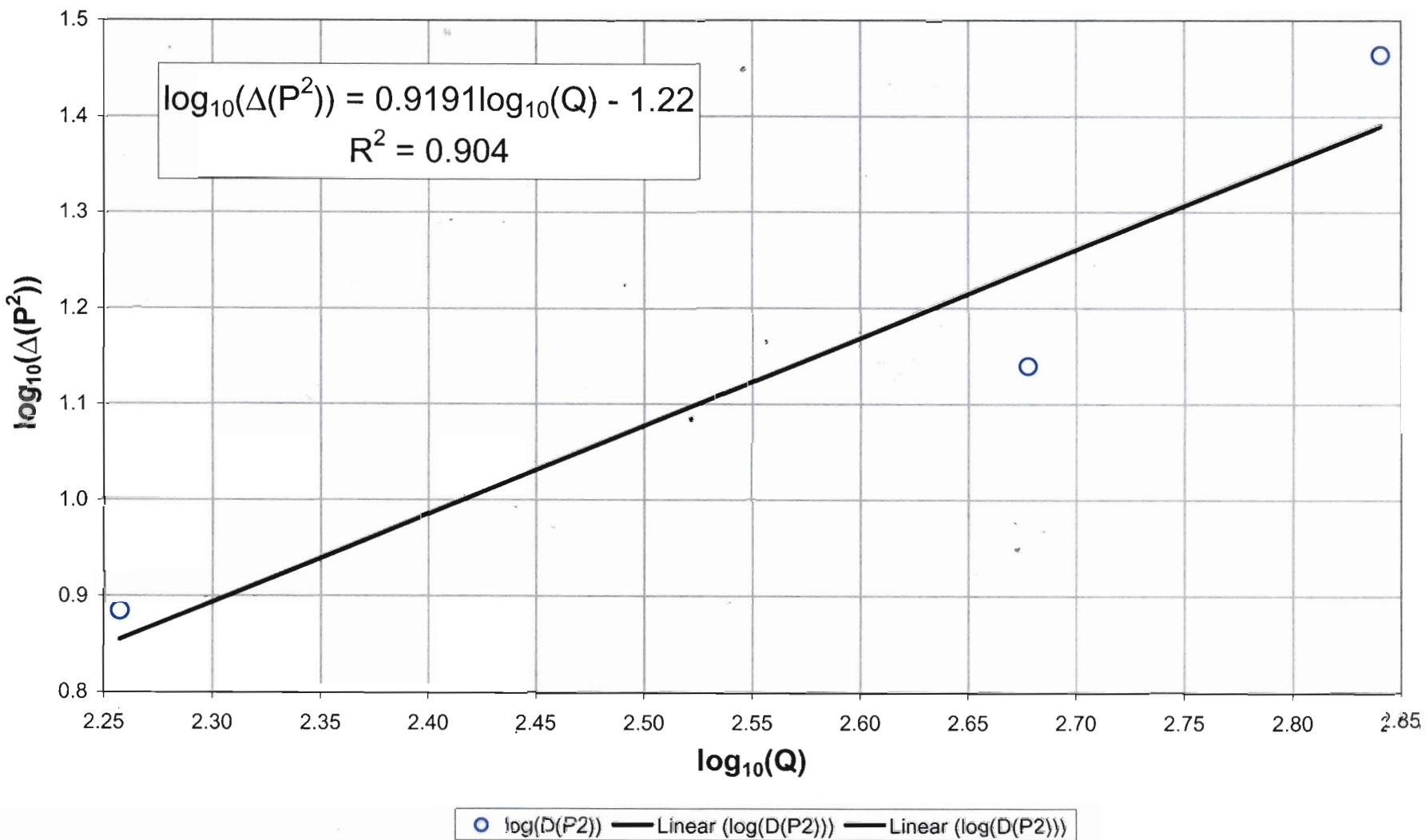
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 70



RNM, 14/12/12

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)

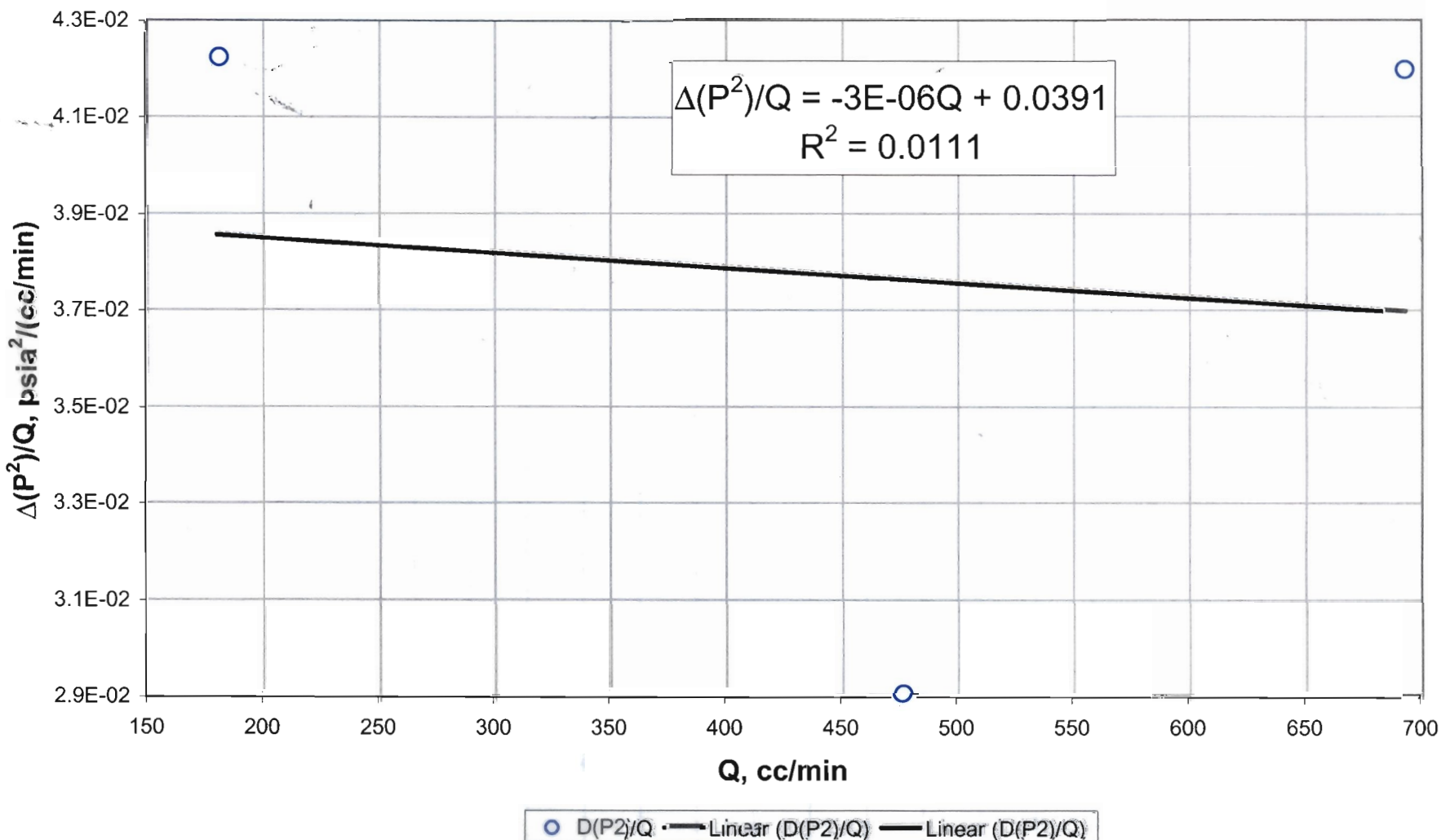
H Transect: Drillhole 70



RNM 12/11/02

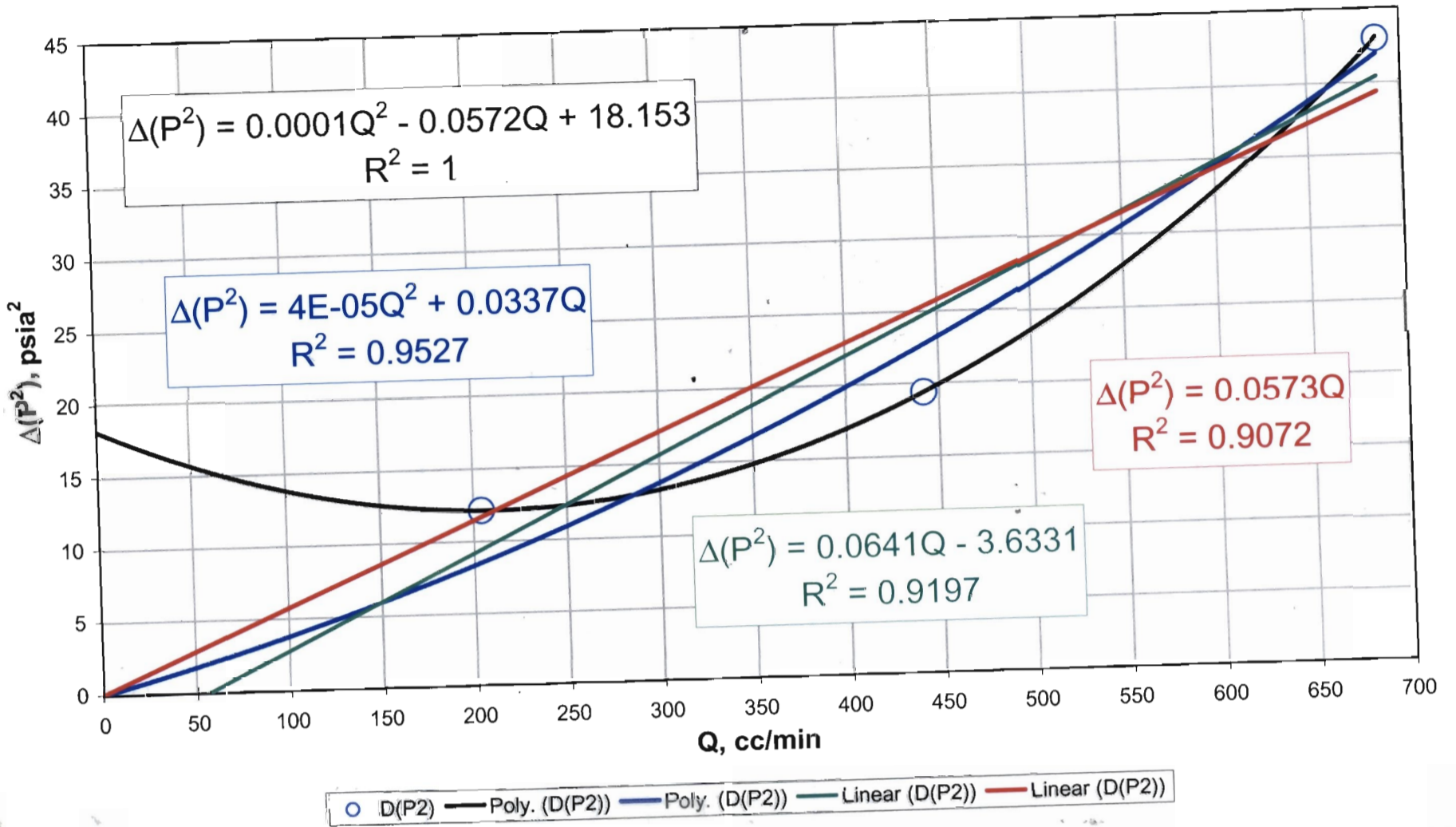
Final check for high velocity flow effects: High velocity flow effects are present when the slope is non-zero and positive.

H Transect : Drillhole 70



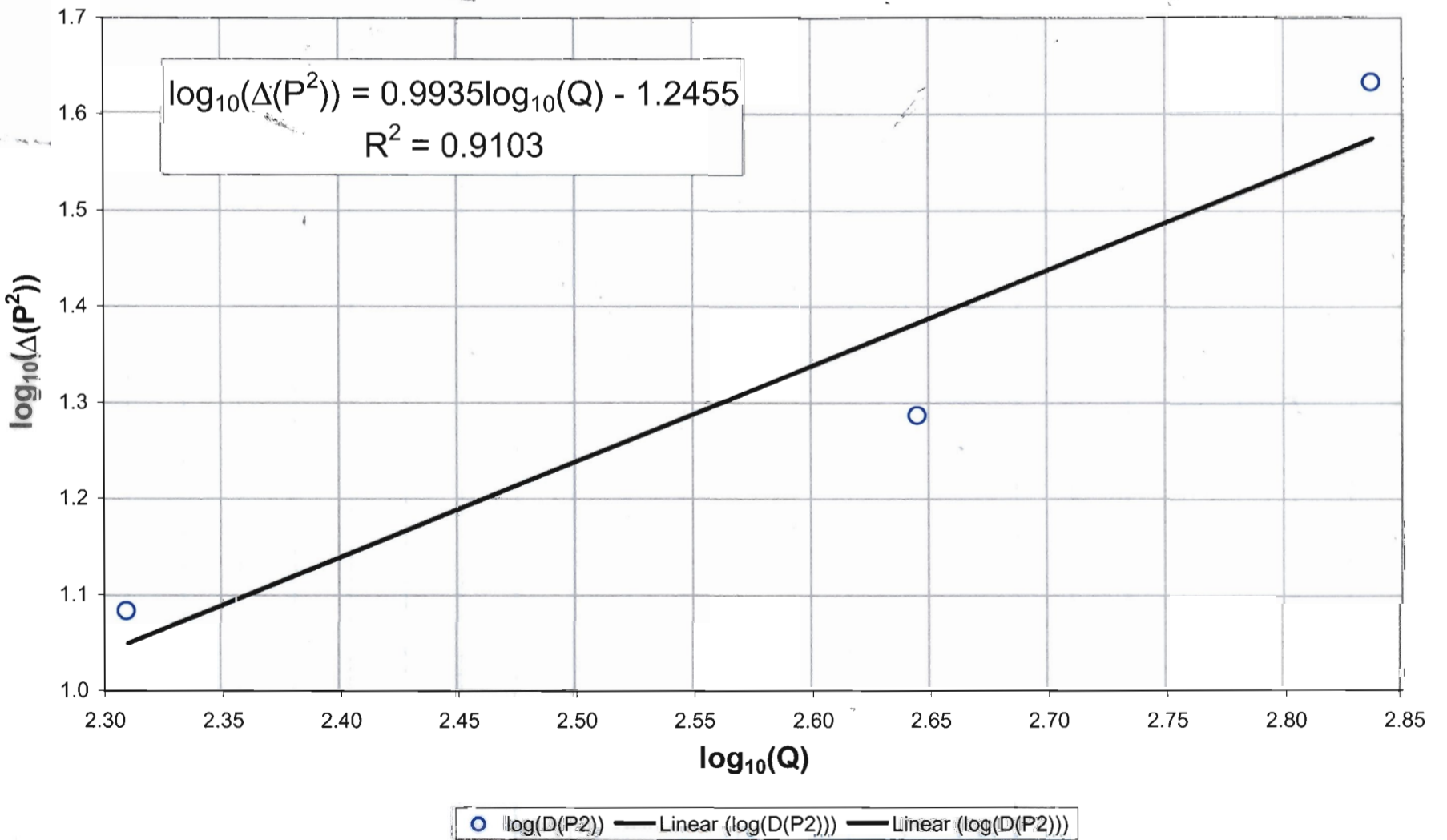
RNM 12/11/02

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.
 H Transect: Drillhole 71



Qm is 14108

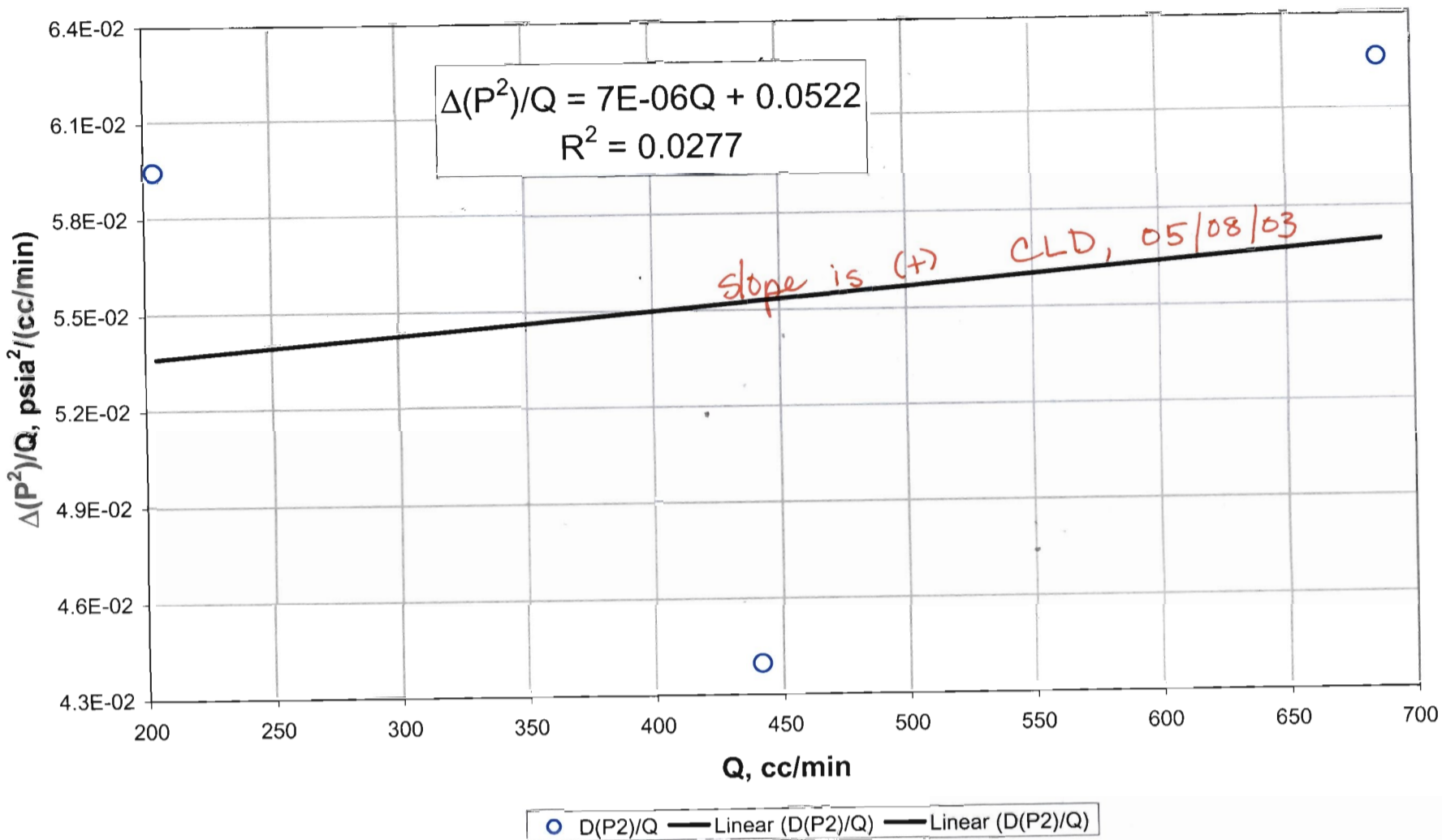
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 71



Qm is 14108

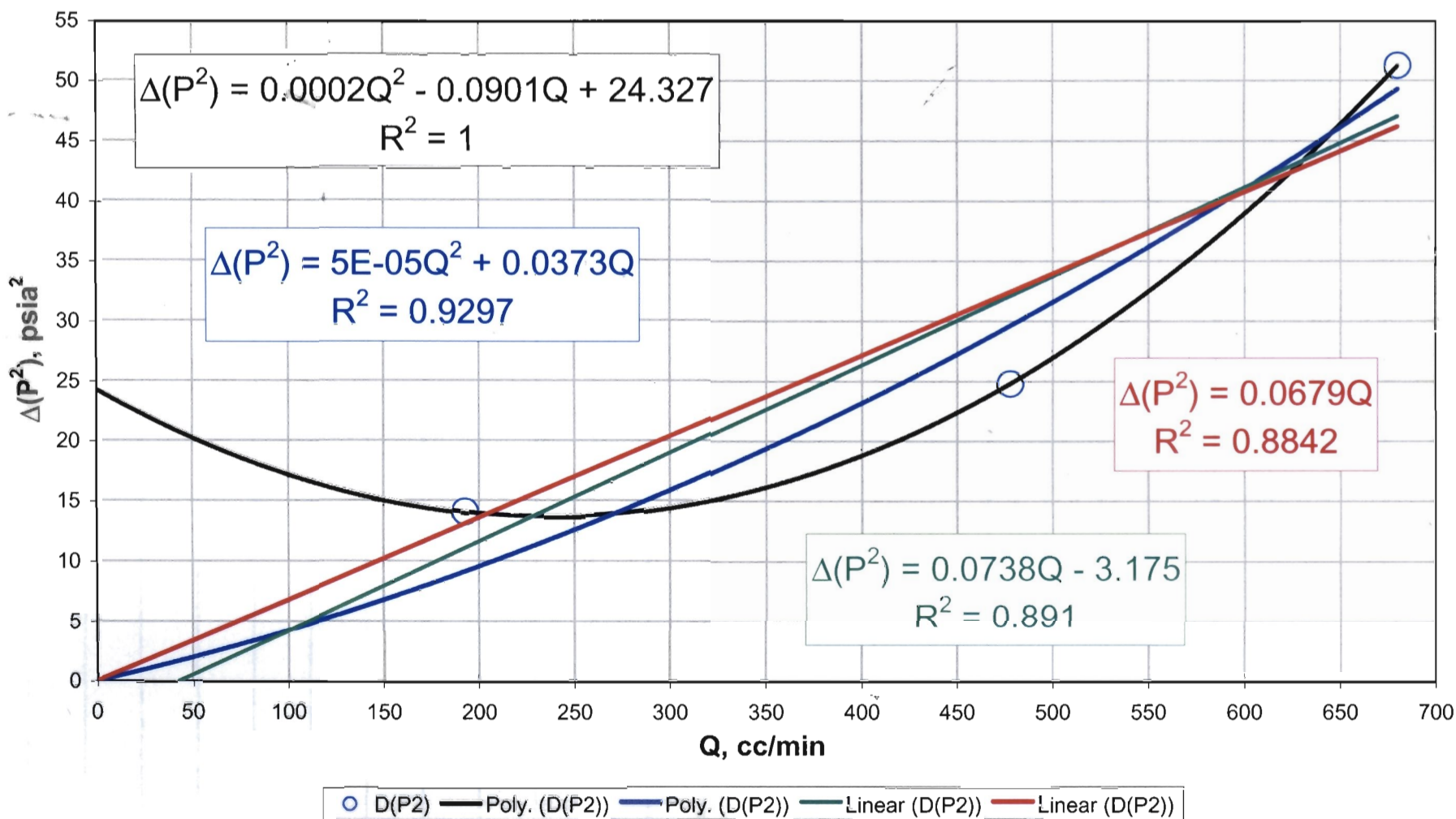
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 71

RMM, 05/21/03

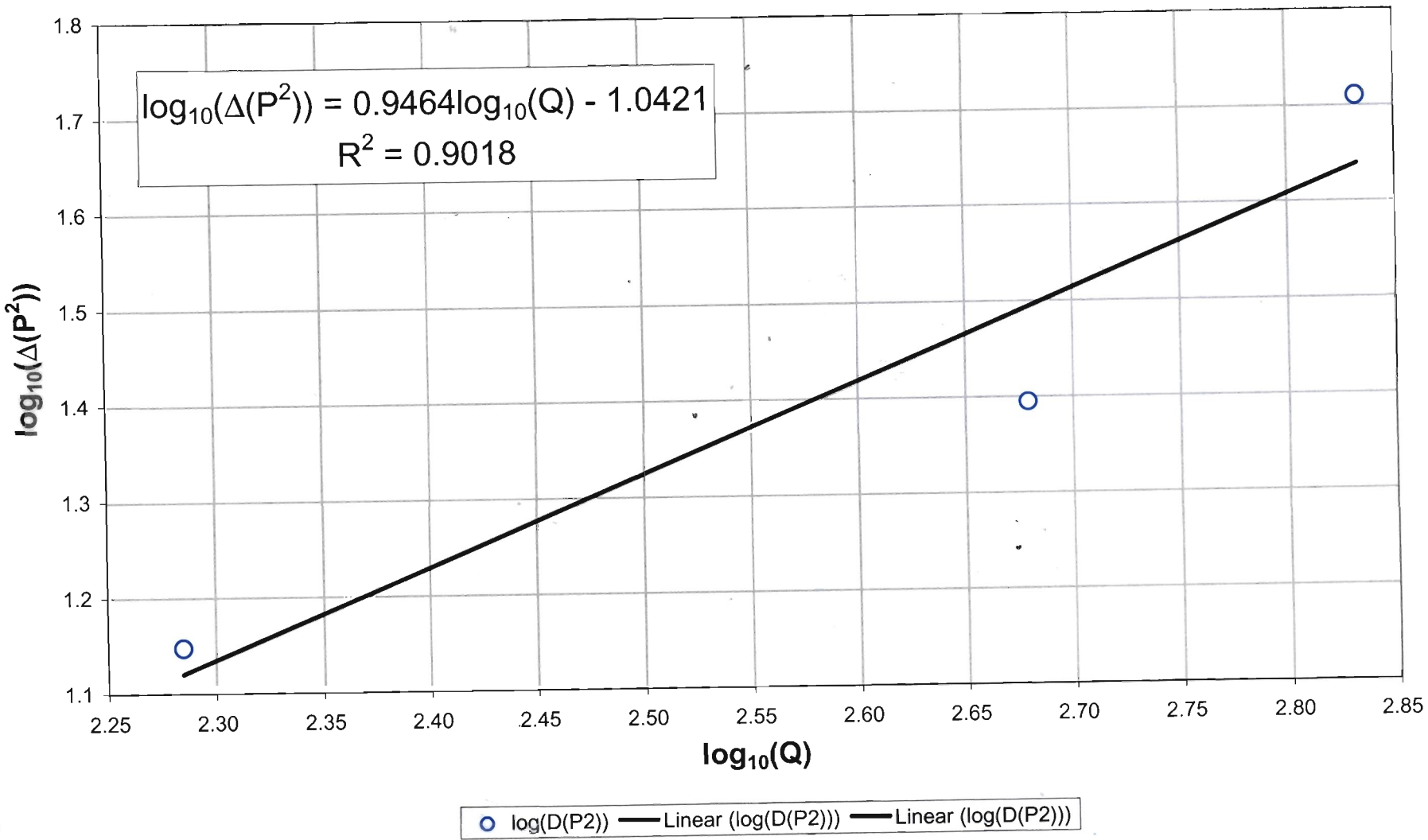


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 72

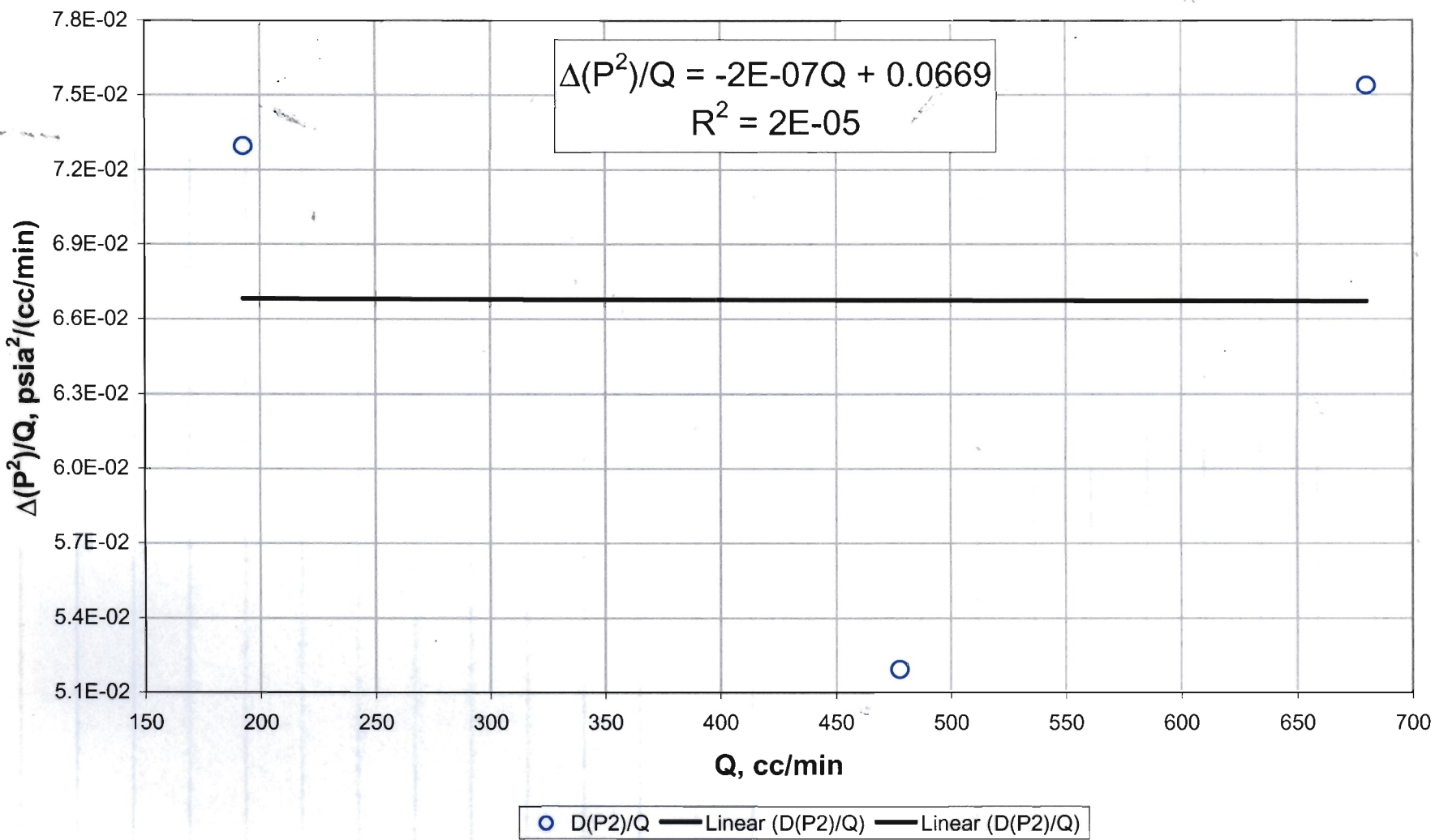
RMM, 05/21/03



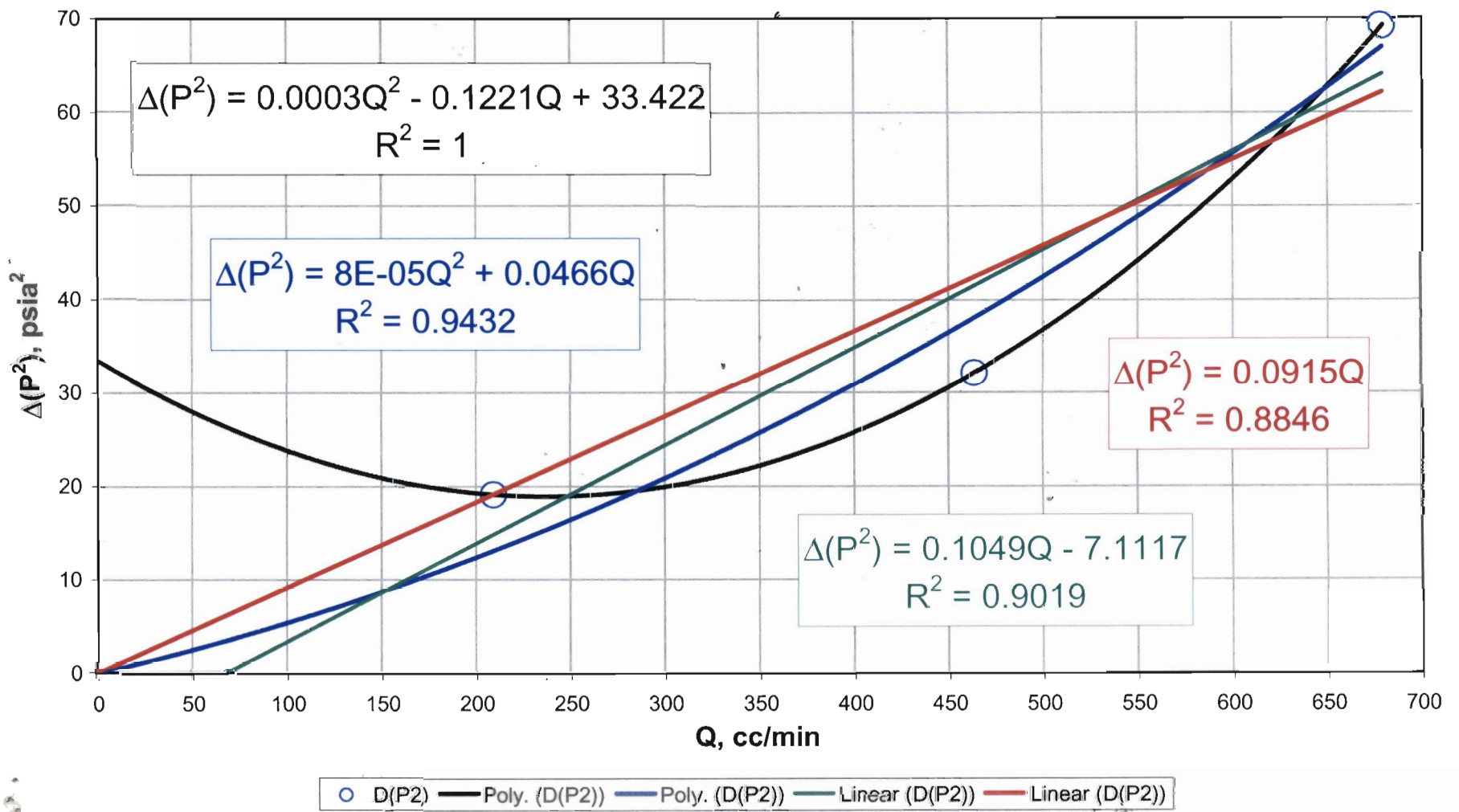
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 72



Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 72

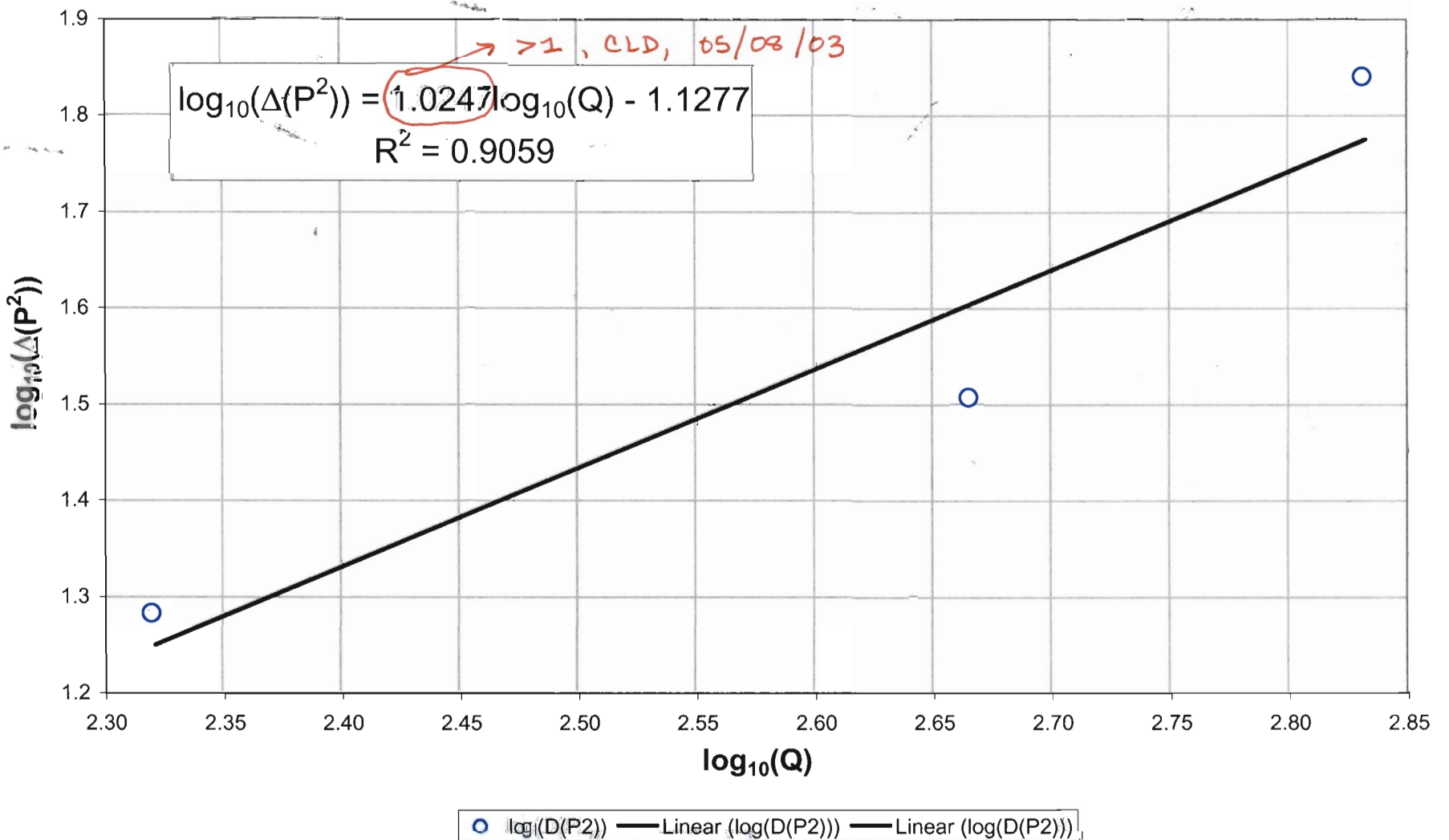


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 73



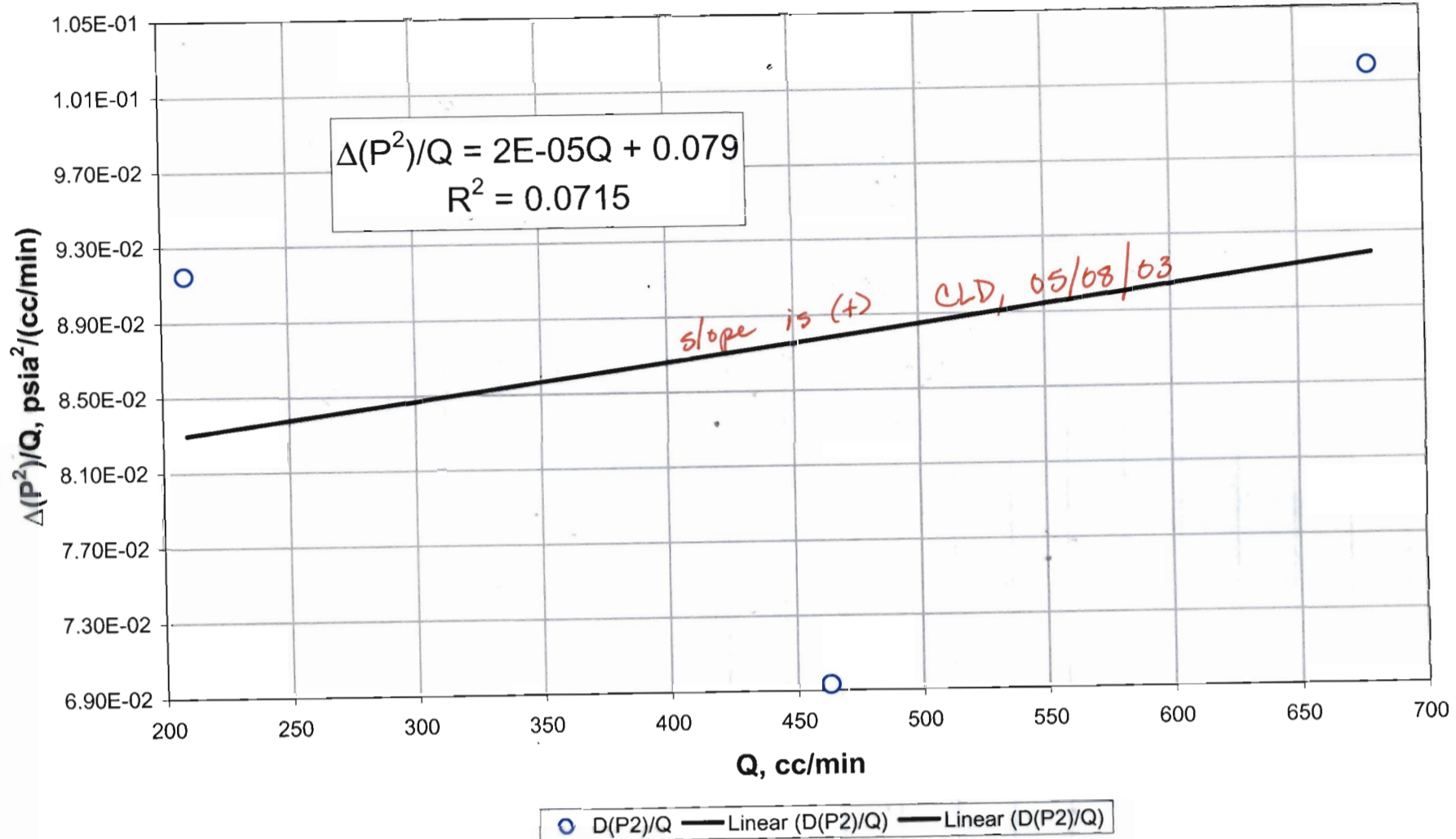
RNM, 12/13/02

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)
 H Transect: Drillhole 73

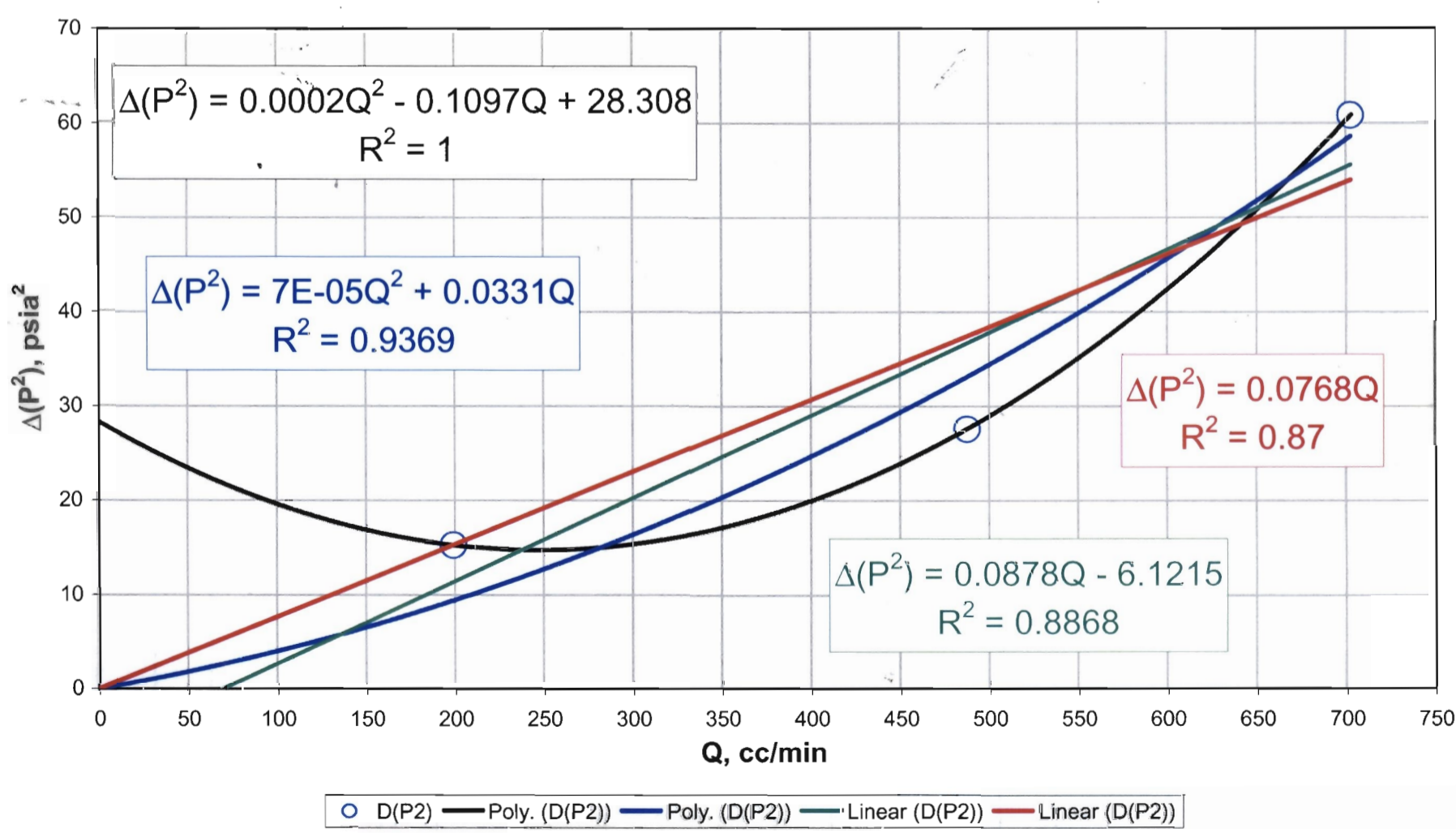


RNM, 12/13/02

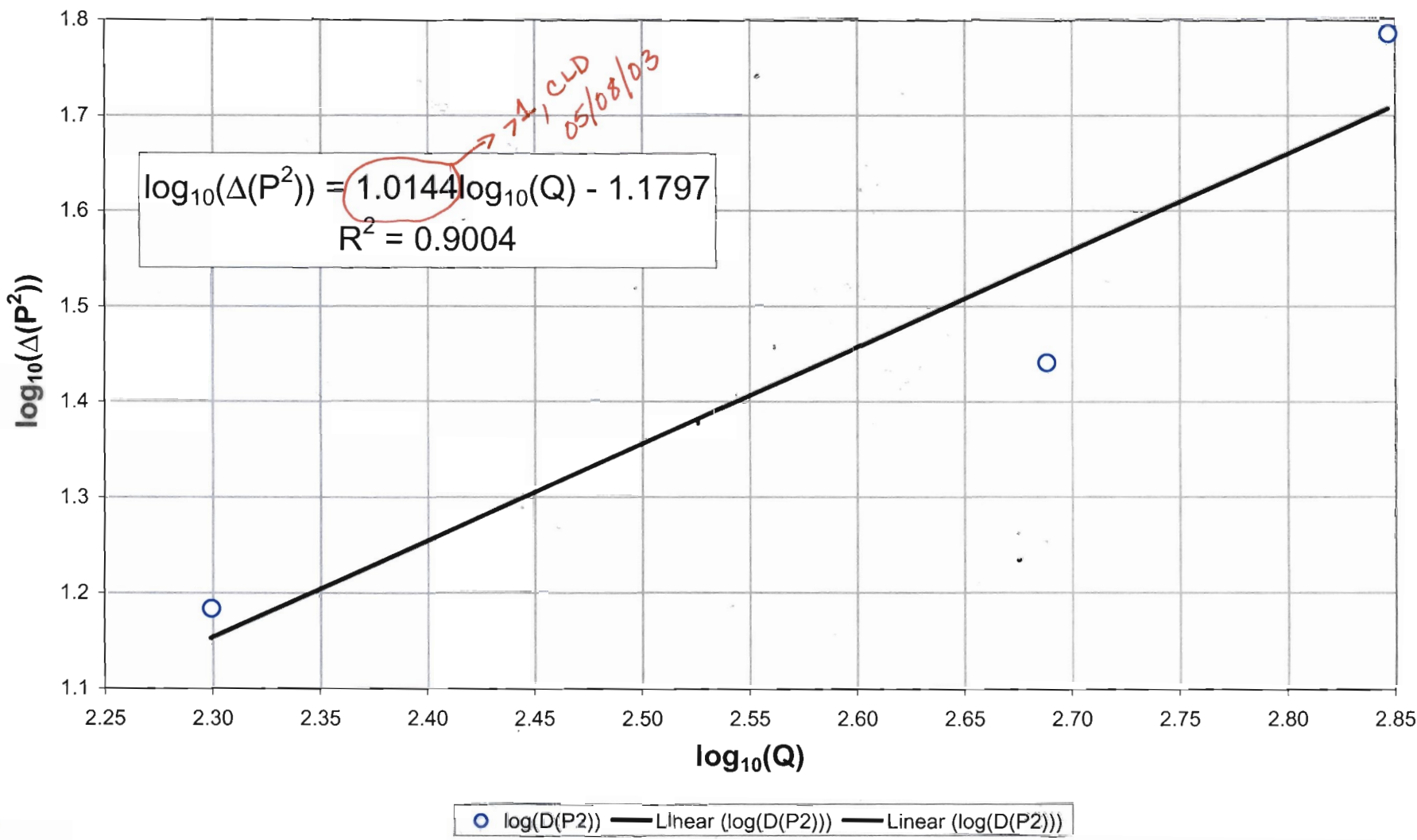
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 73



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.
 H Transect: Drillhole 74

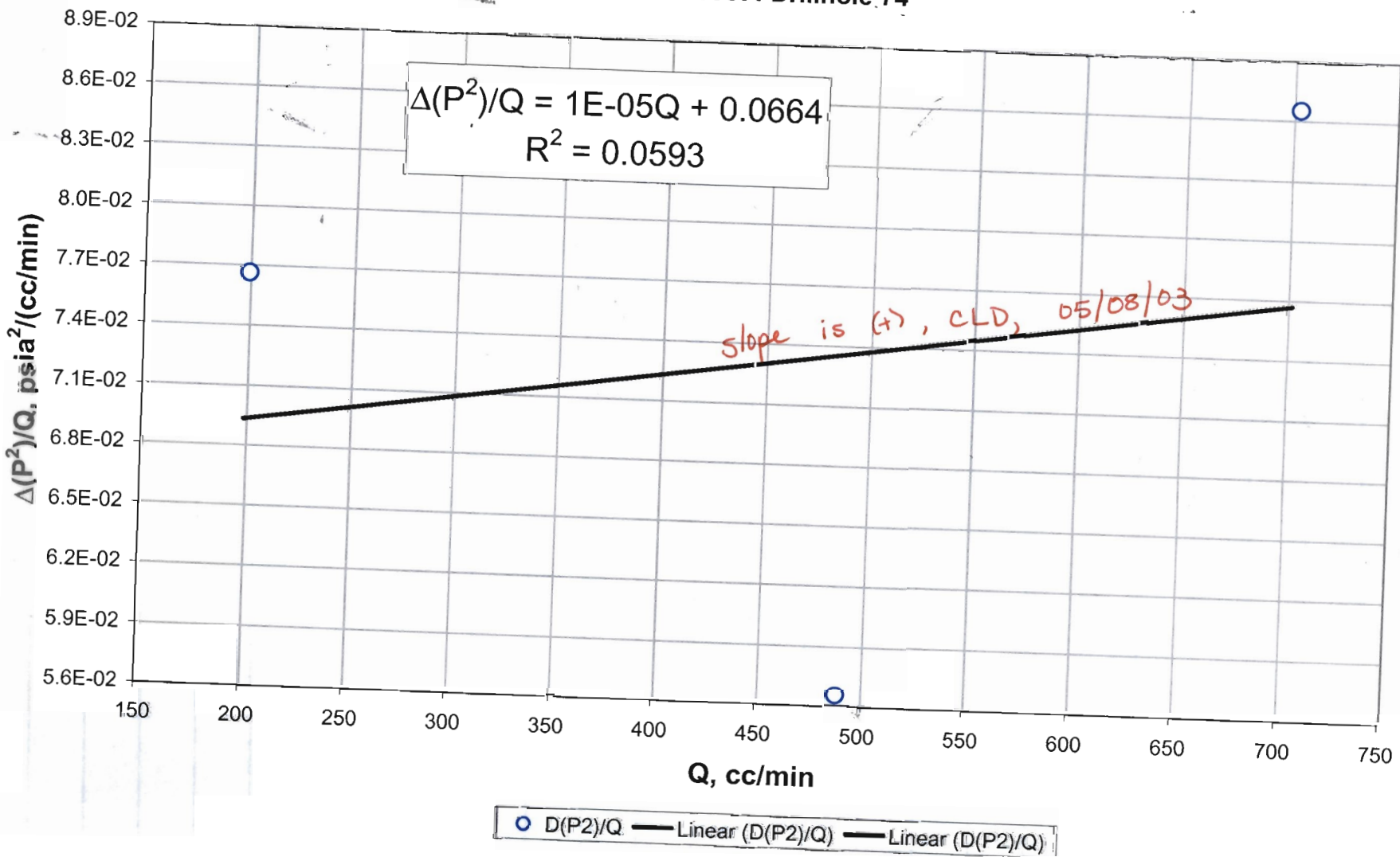


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 74



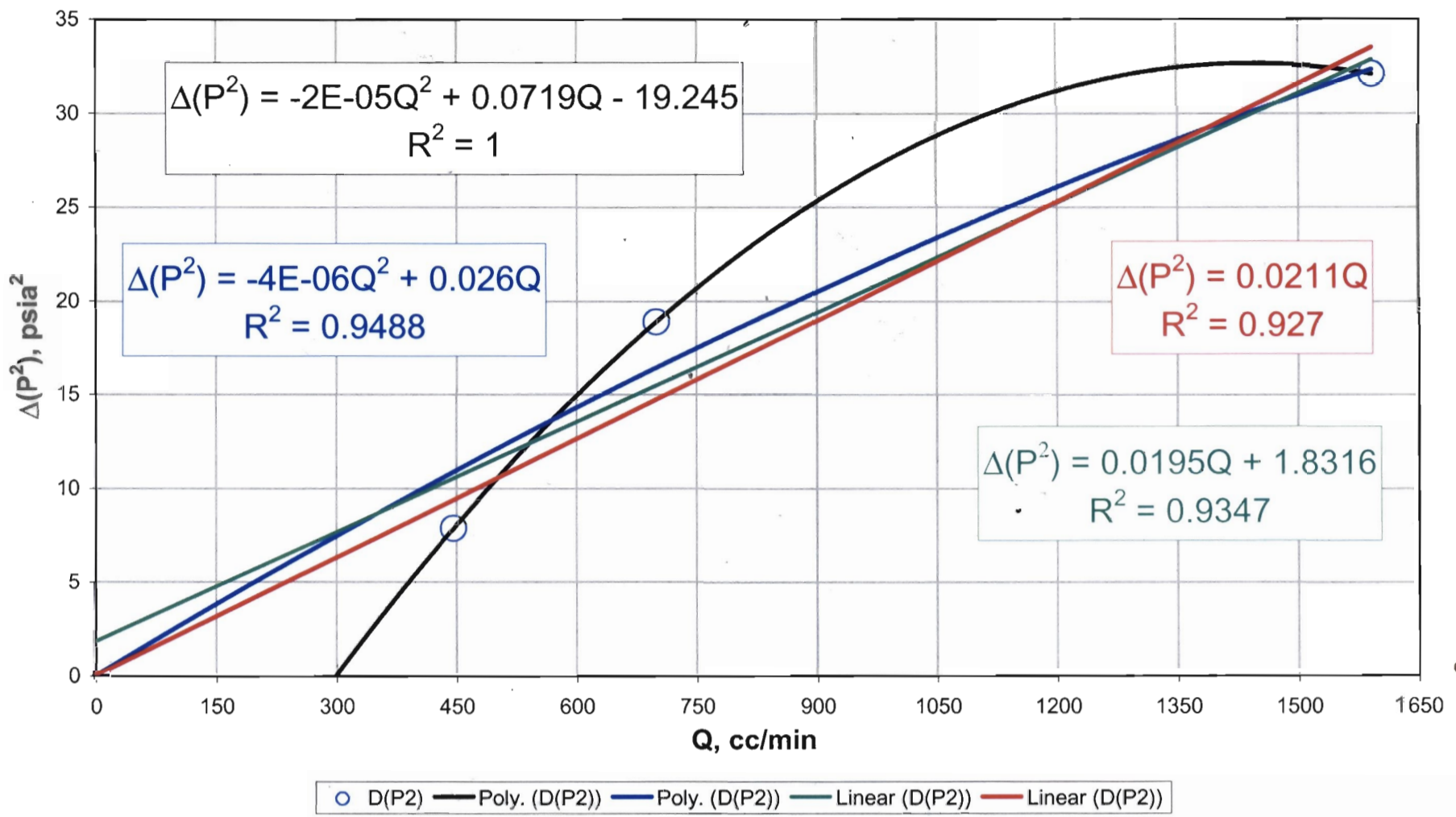
RNM, 12/31/02

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 74



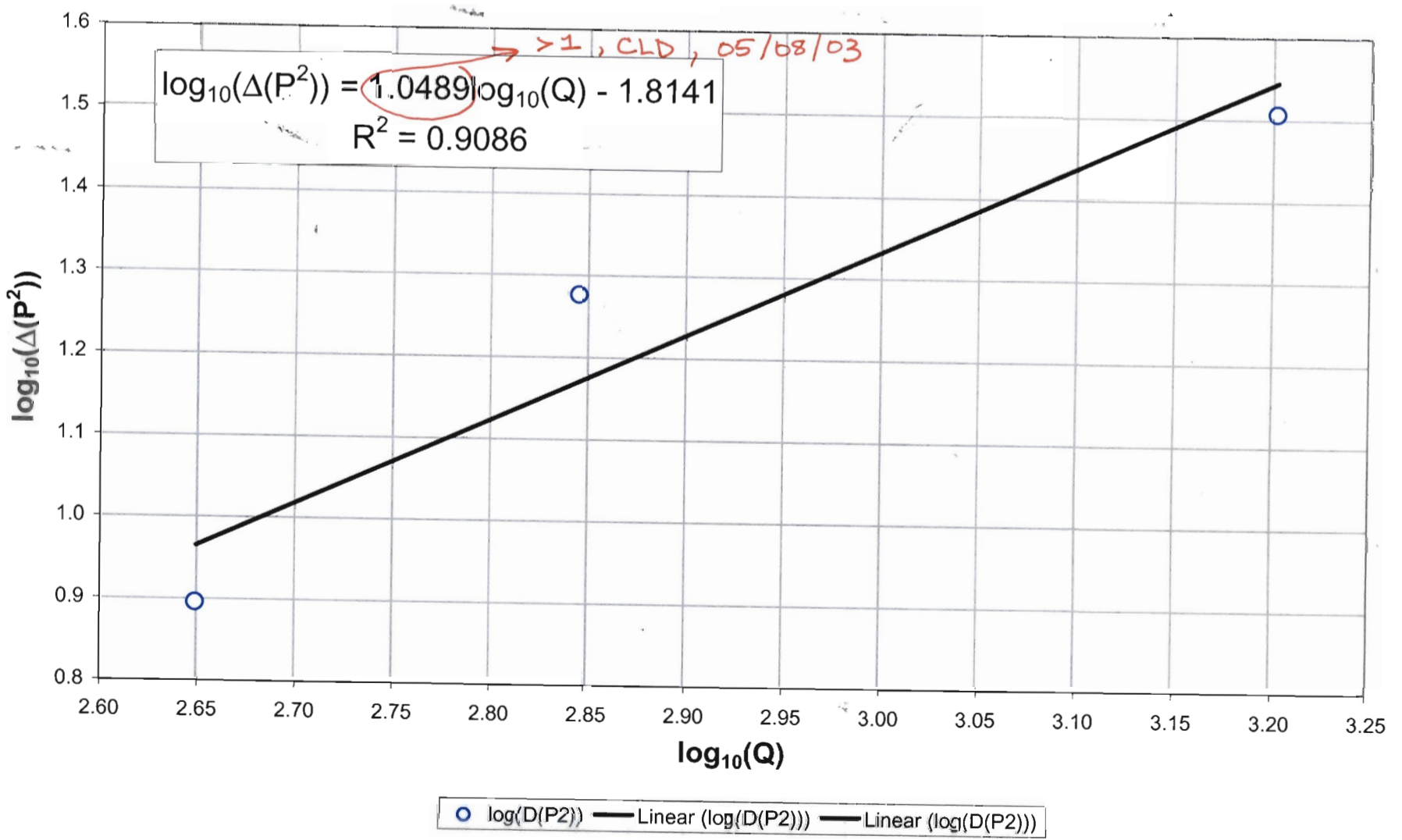
RNM, 12/31/02

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.
 H Transect: Drillhole 75



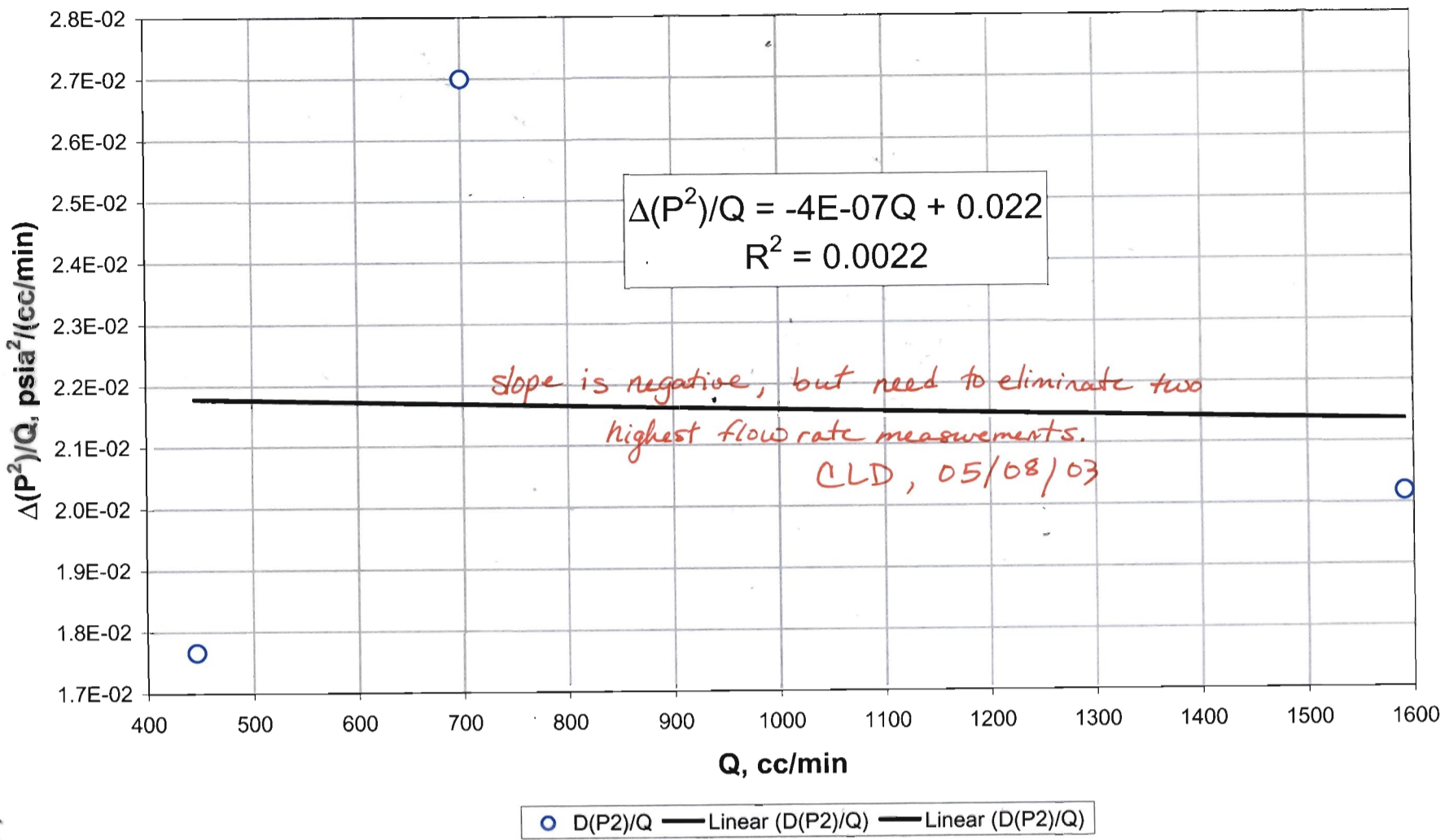
RMM 12/15/02

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)
 H Transect: Drillhole 75

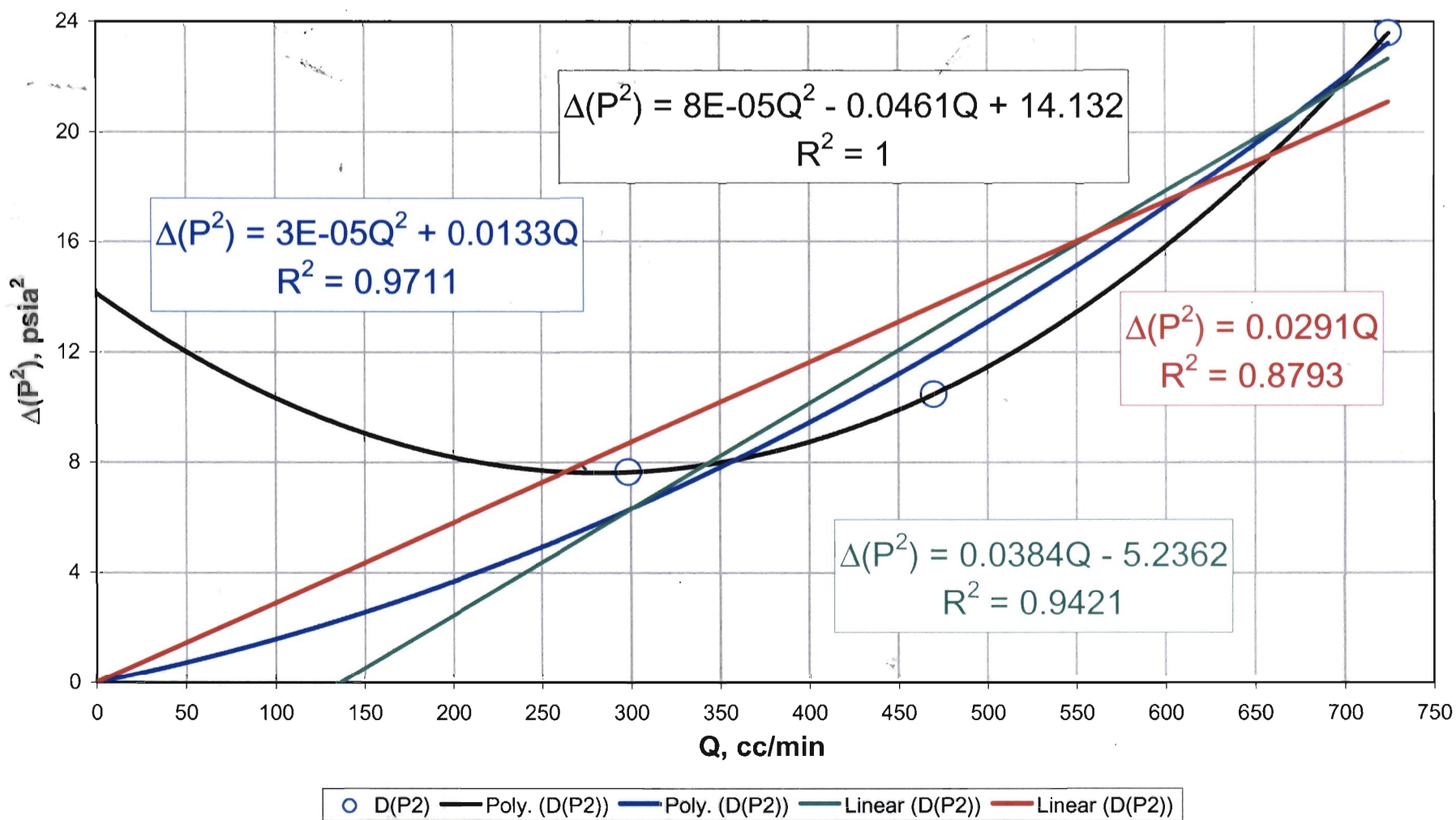


RMM 12/15/02

Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 75

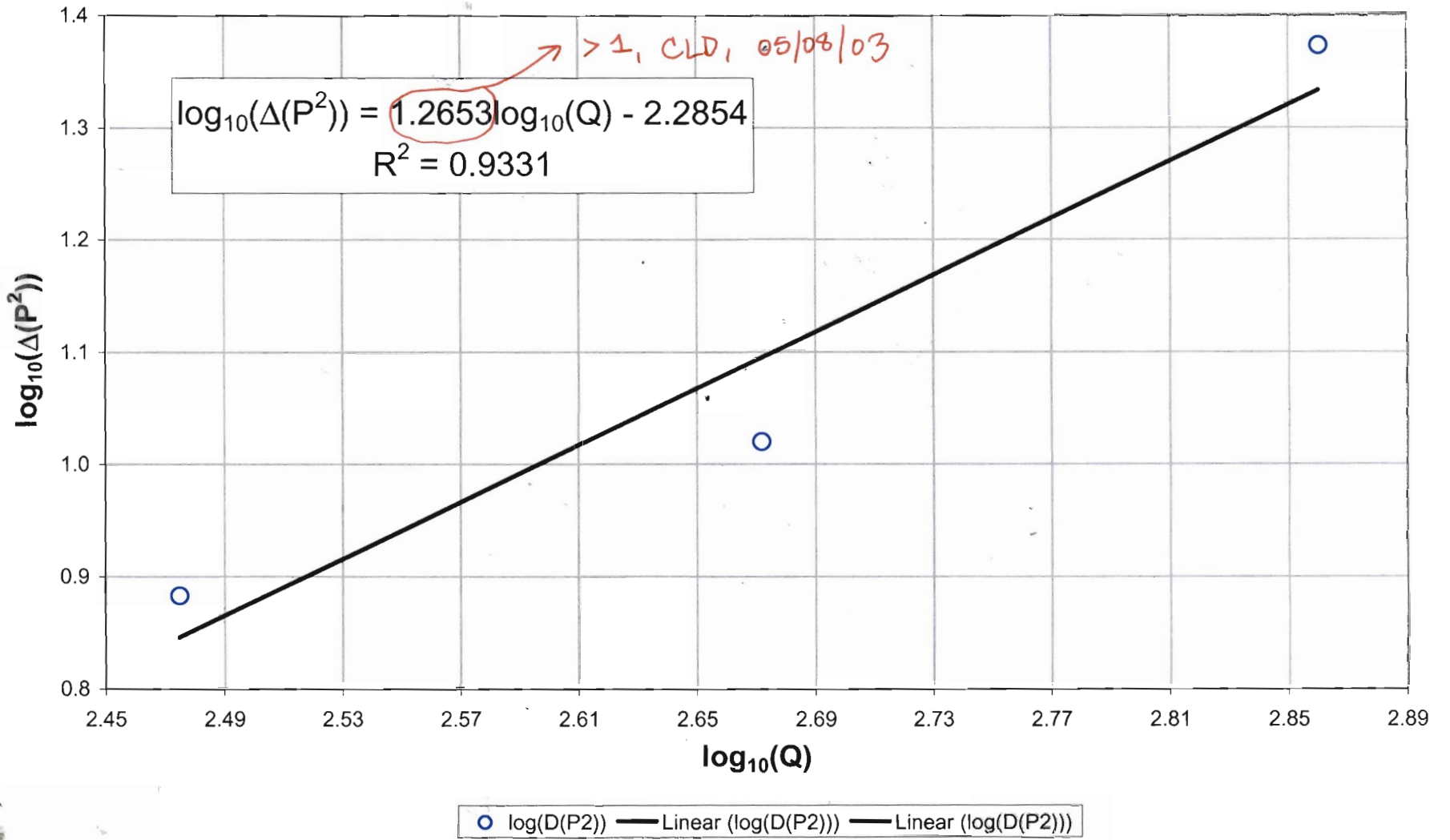


Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 76



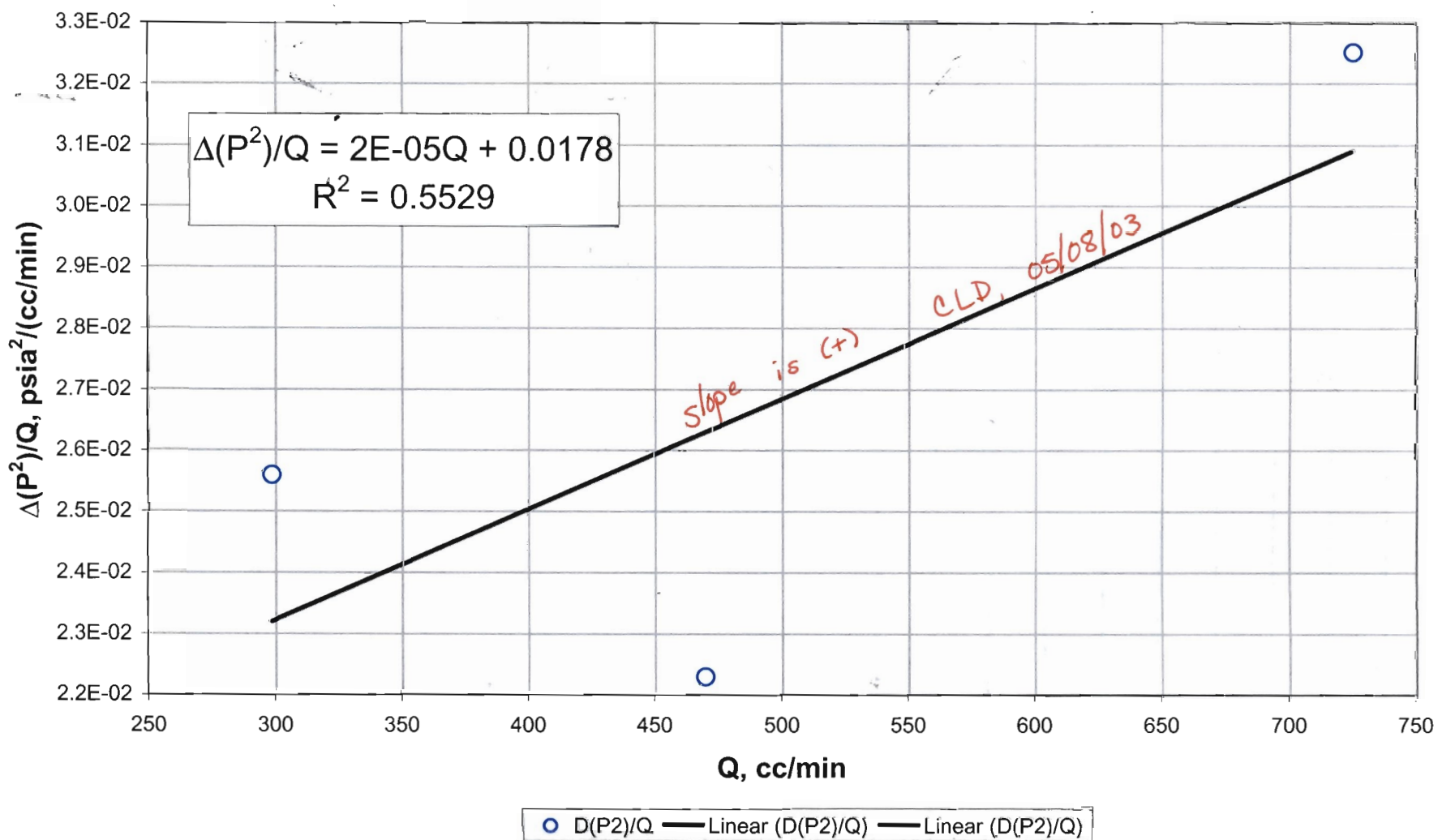
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 76

RNM, 10/21/02

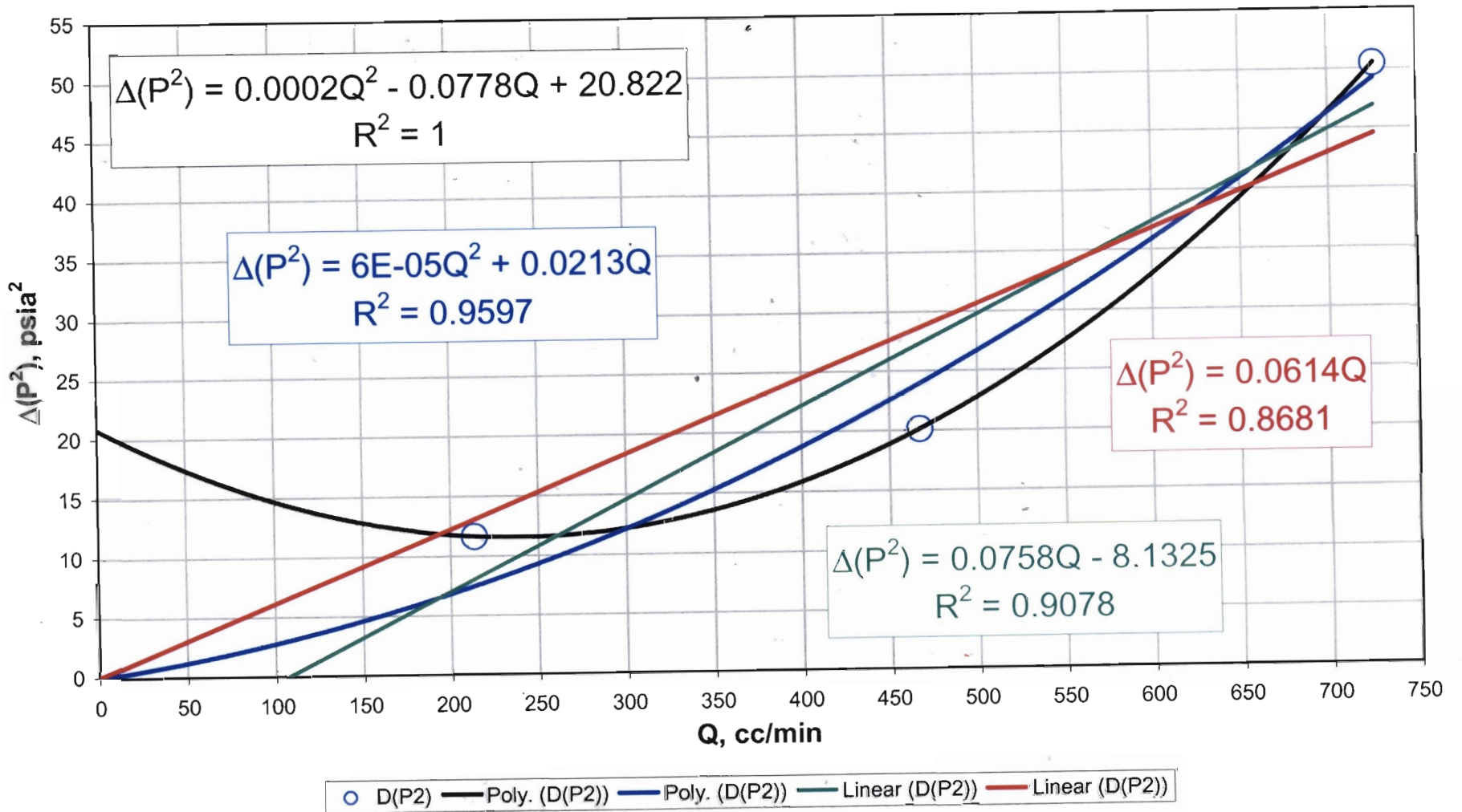


Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 76

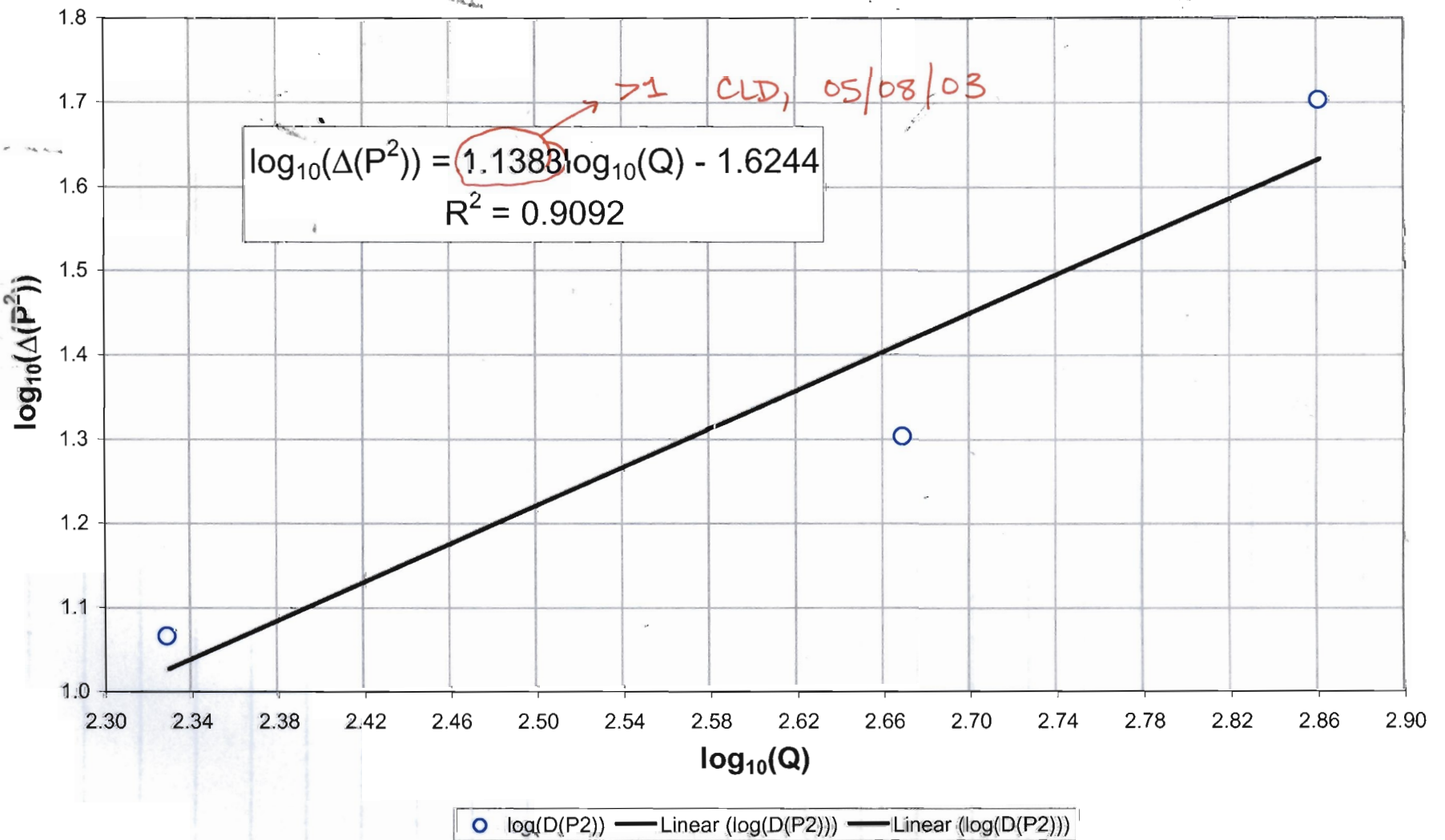
RNM, 10/21/02



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.
 H Transect: Drillhole 77

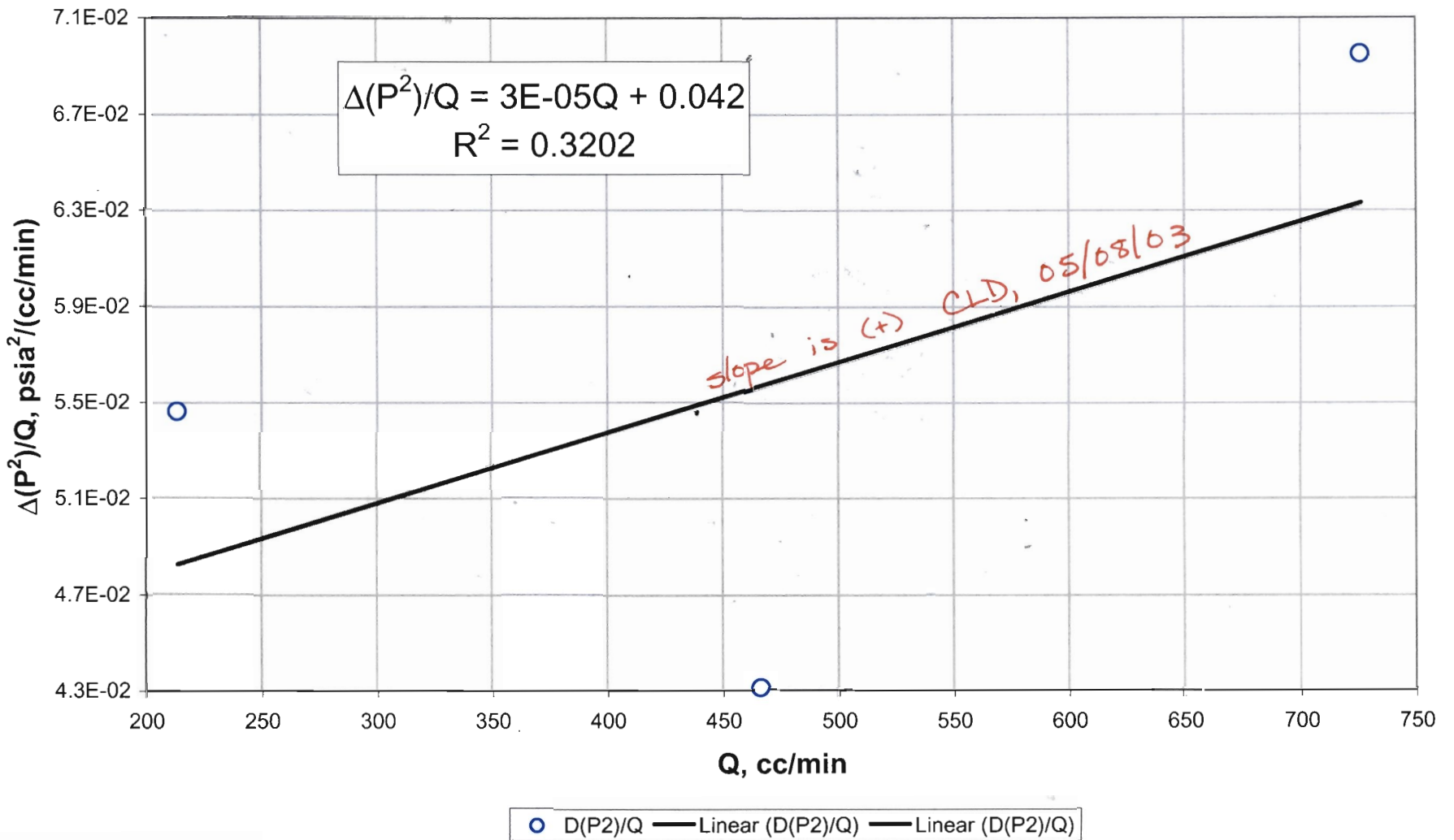


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of
 high-velocity flow effects (when the slope is greater than unity)
 H Transect: Drillhole 77



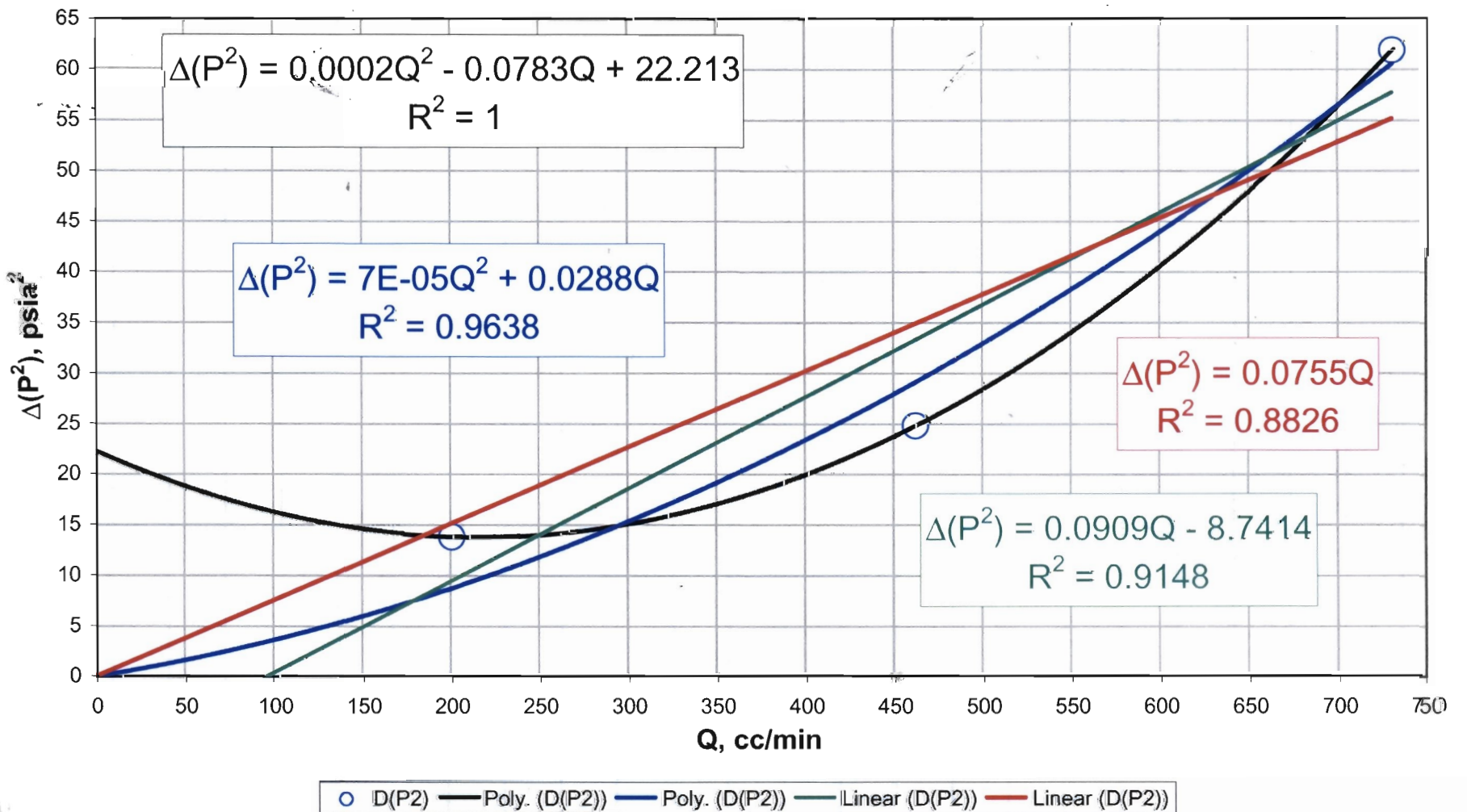
Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 77

RMM, 12/31/02



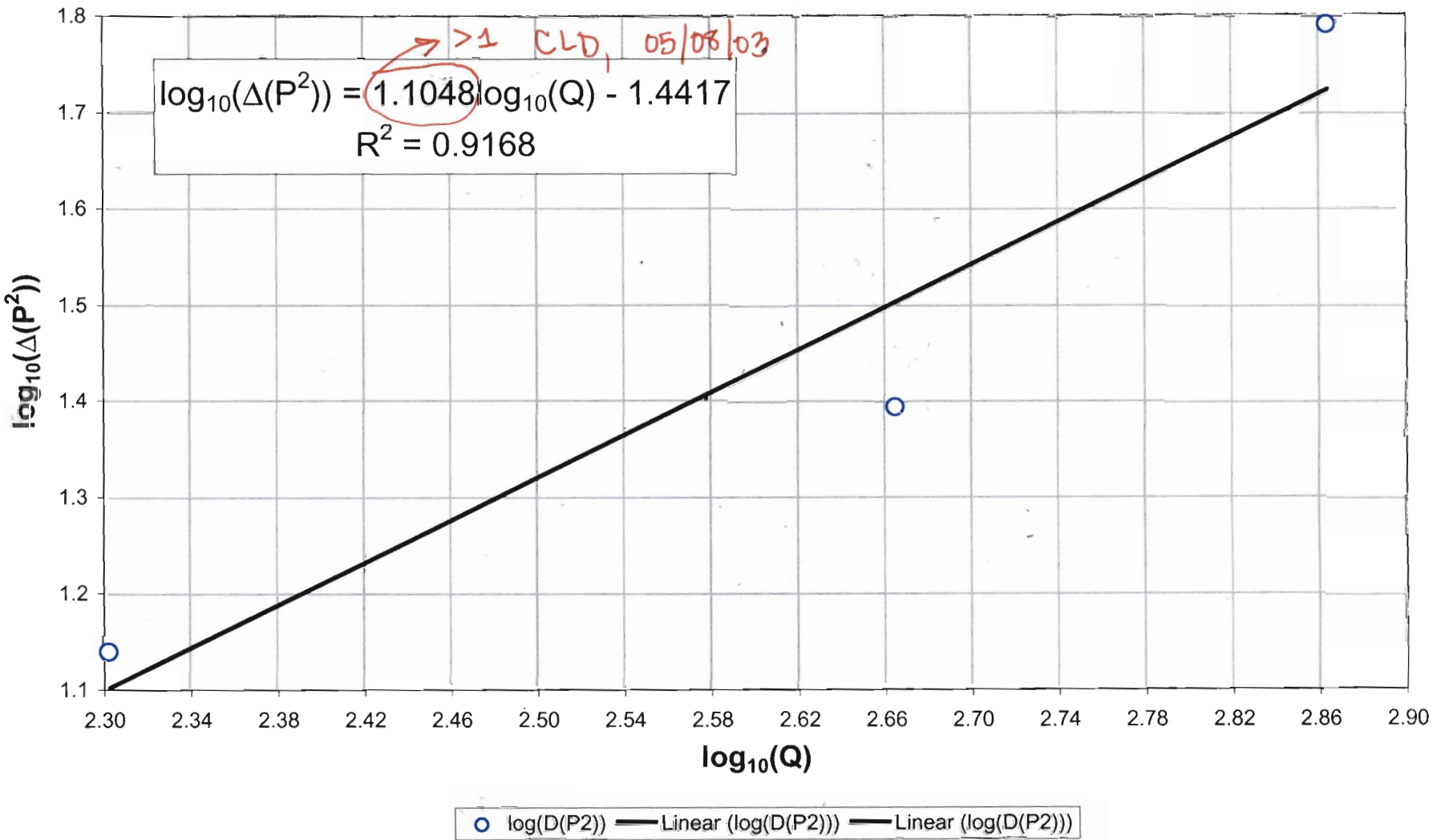
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 78

RMM, 12/31/02



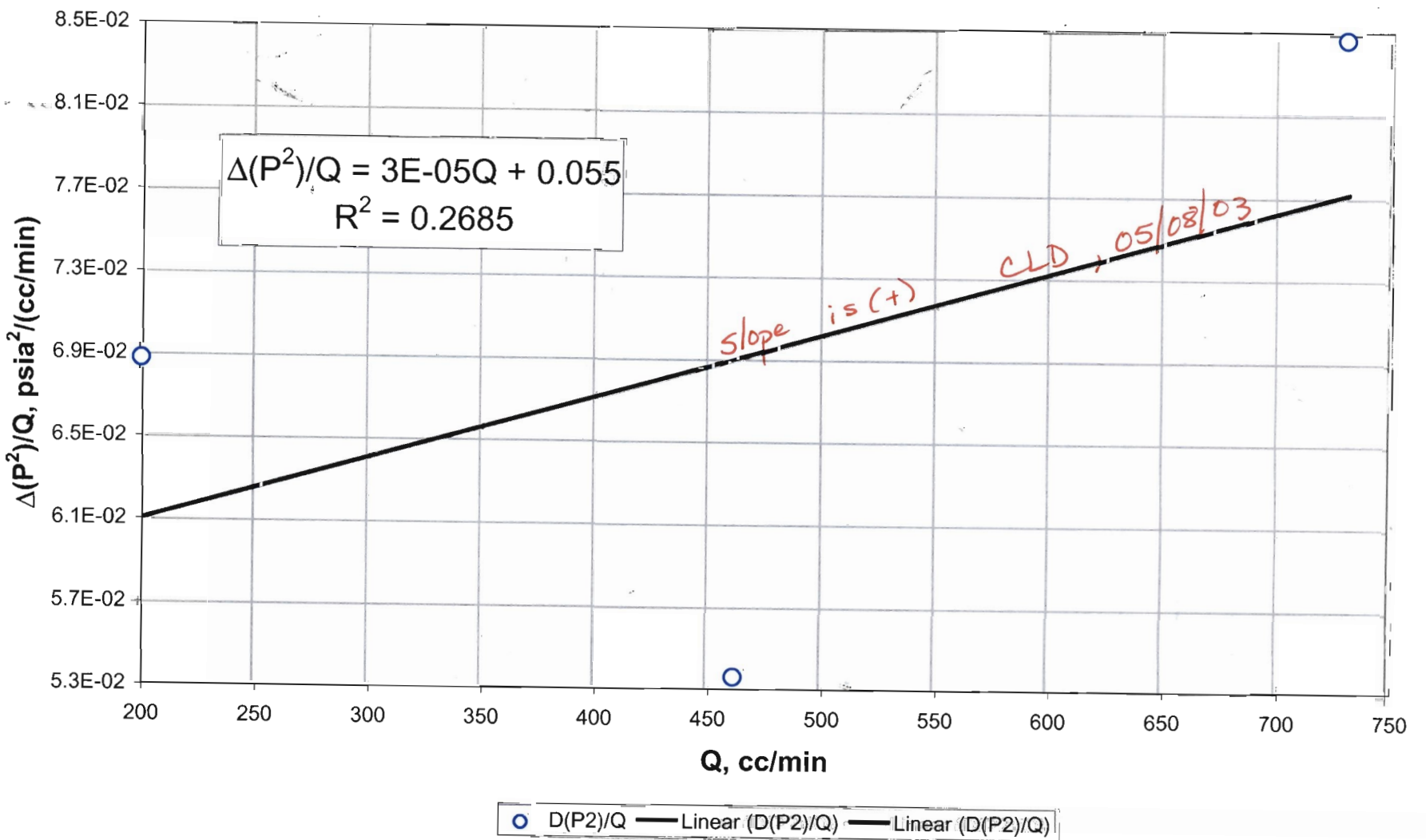
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)
H Transect: Drillhole 78

RMM, 12/31/02

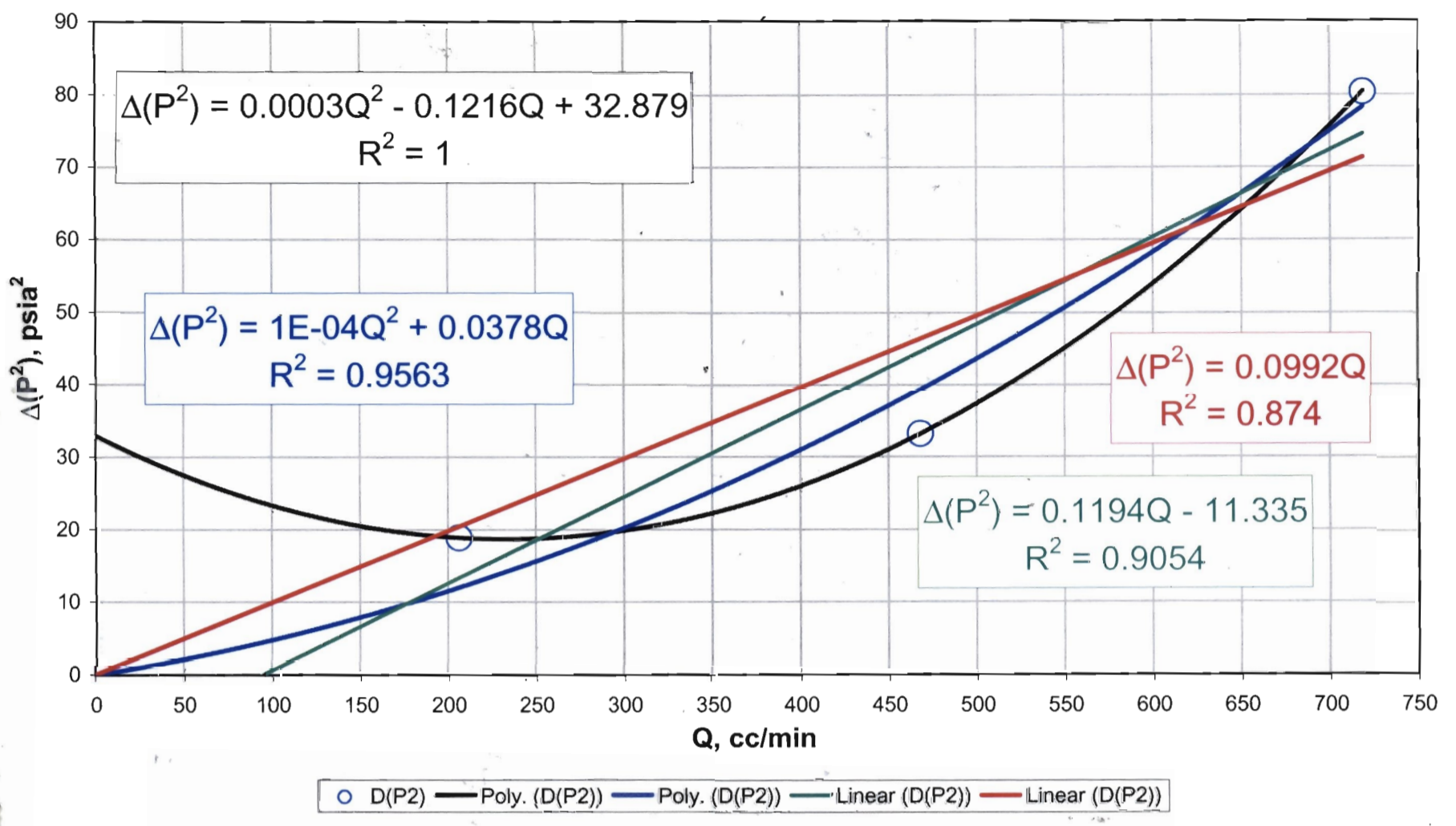


Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 78

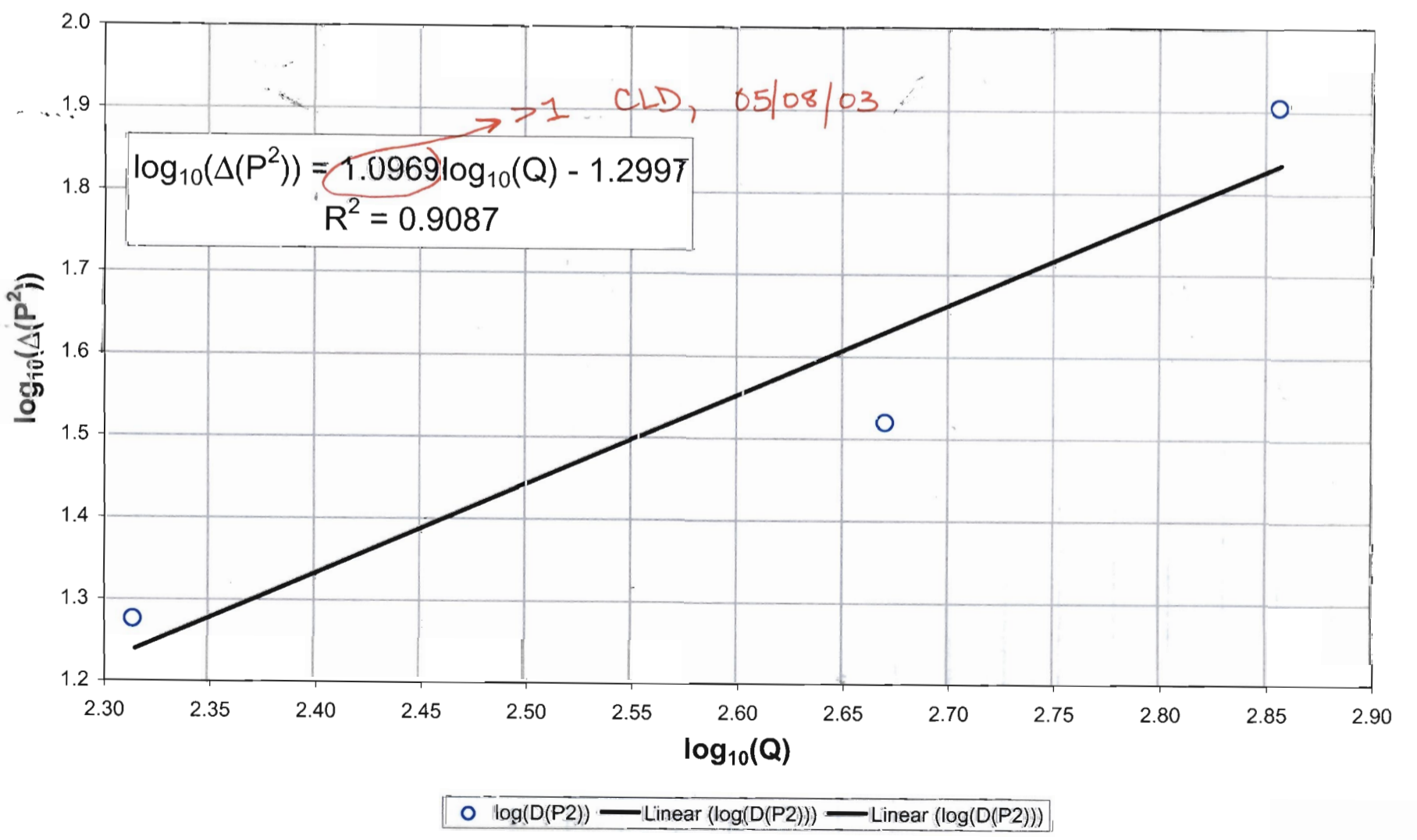
RMM, 12/31/02



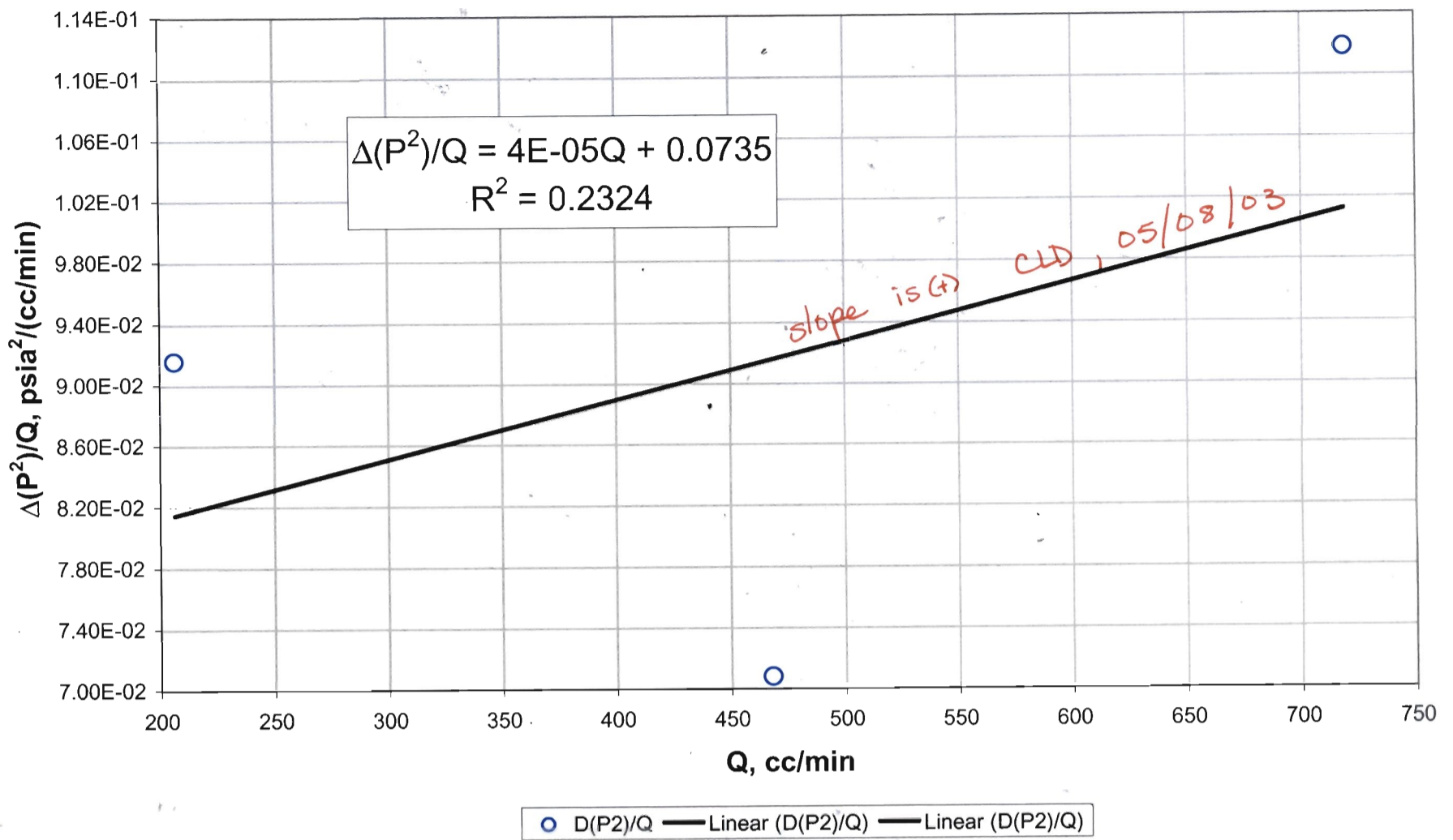
Relationship between steady-state differential pressures squared and flowrate:
 If relationship is linear, with the ordinate intercept nearly zero,
 there is no high velocity flow effect.
 H Transect: Drillhole 79



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)
 H Transect: Drillhole 79

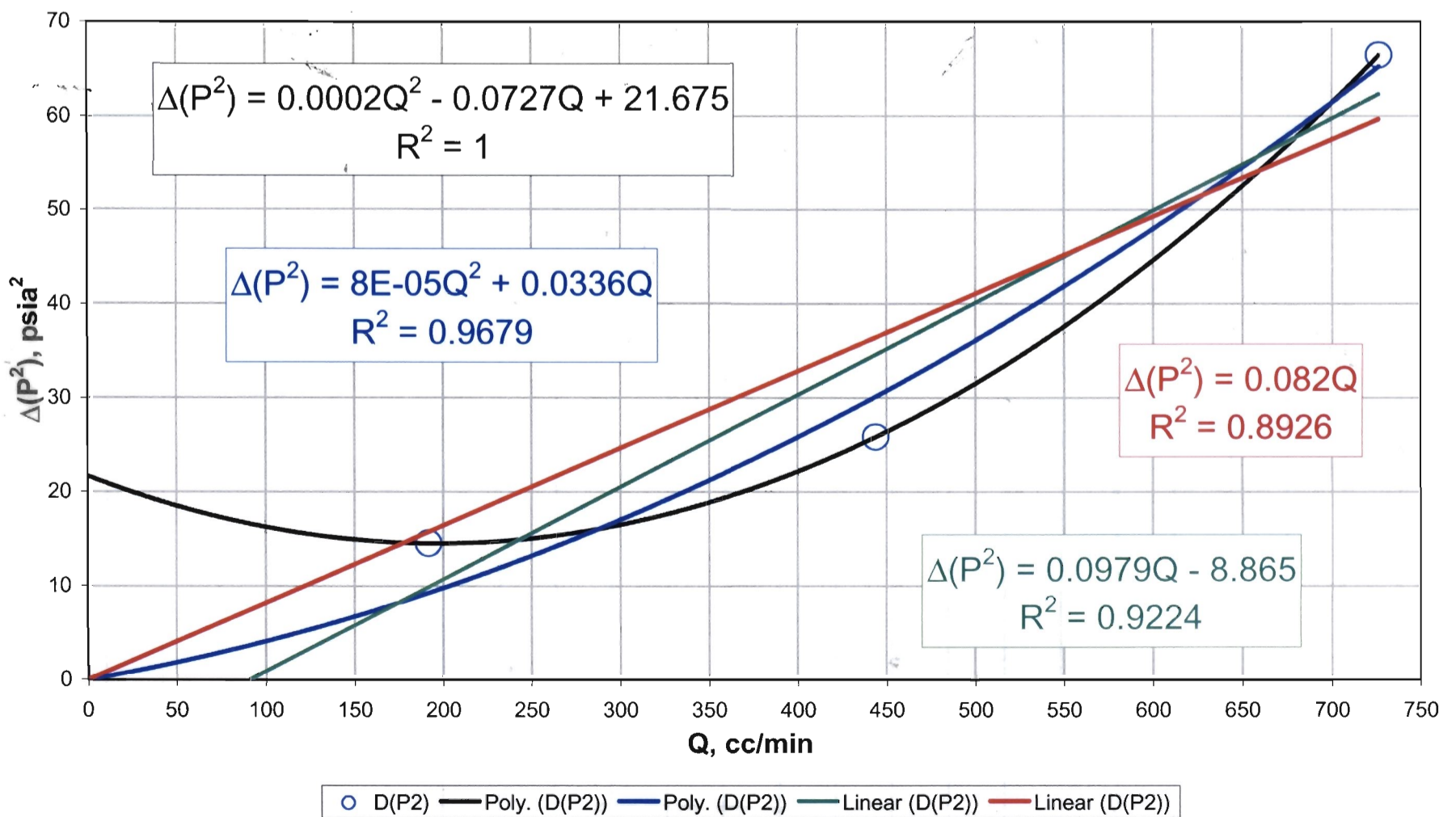


Final check for high velocity flow effects:
 High velocity flow effects are present when the slope is non-zero and positive.
 H Transect : Drillhole 79



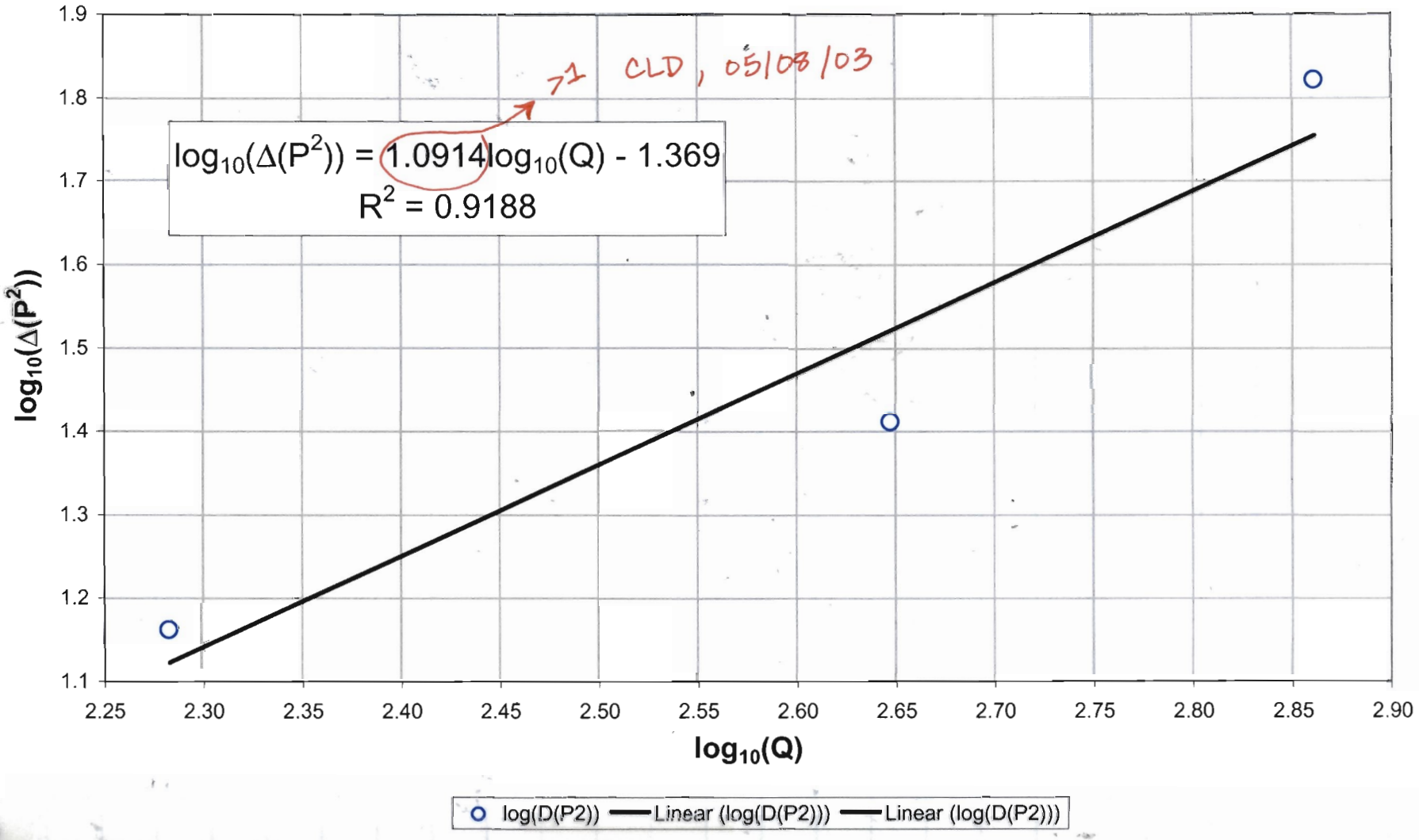
RMM, 12/11/02

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.
 H Transect: Drillhole 80



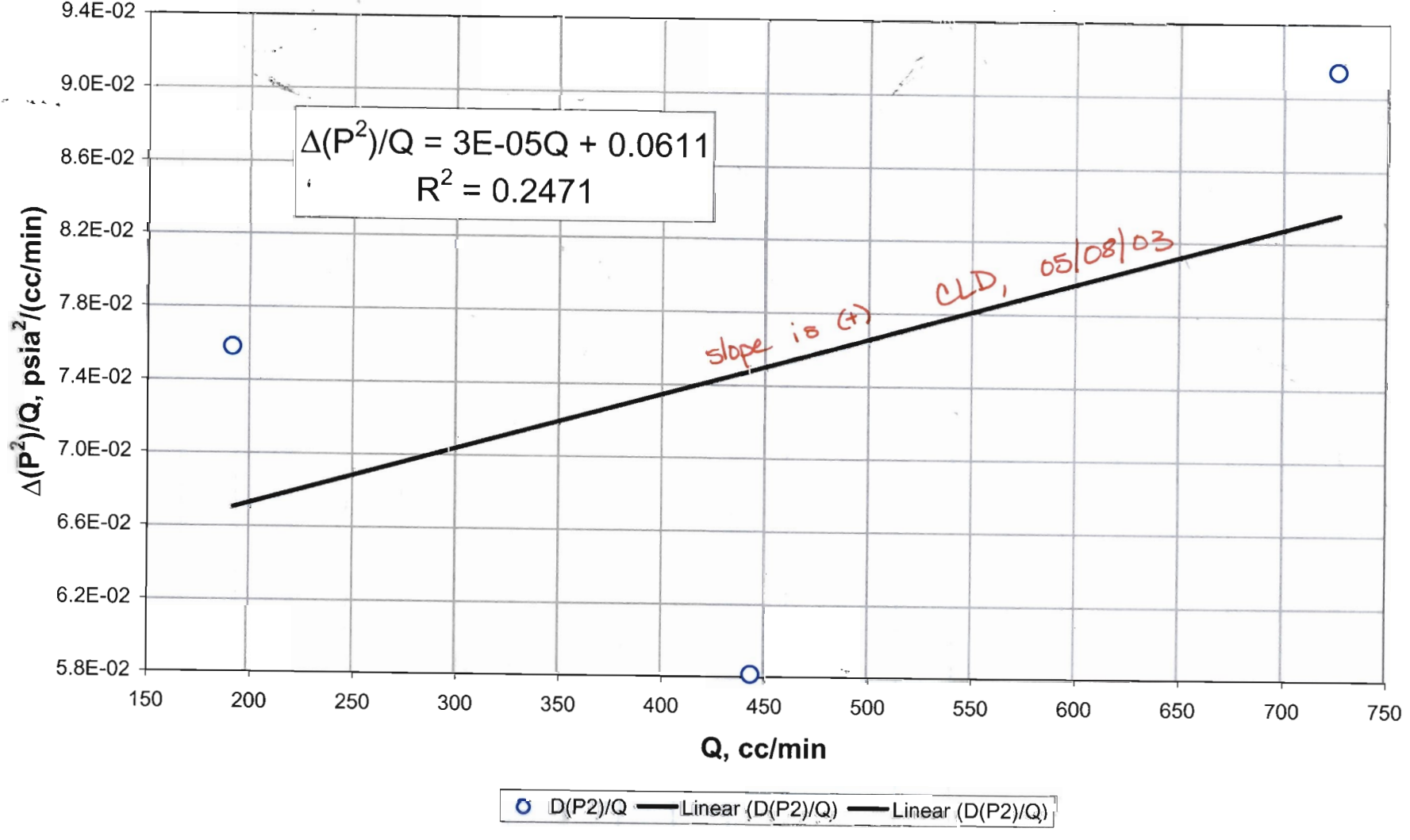
RMM, 11/11/02

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)
H Transect: Drillhole 80



Run, 12/31/02

Final check for high velocity flow effects:
High velocity flow effects are present when the slope is non-zero and positive.
H Transect : Drillhole 80



Run, 12/31/02