

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

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This is a continuation of the CNWRA controlled scientific notebook #545, titled:

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

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Contract No.

Project: 06002.01.131

Task Objective may be found in SN 537 & 545.

CLD, 12/16/02

H-transect data (CLD, 05/07/03)

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#58 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	25.0	0.01769							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/3/00	2:38:50 PM	11.681	11.381	221.7	35.68	581.7334	549.3161	H58	1		
7/3/00	2:40:59 PM	11.911	11.381	492.5	35.69	724.4795	697.5709	H58	2		
7/3/00	2:44:16 PM	12.531	11.381	726.0	35.79	479.9071	487.0127	H58	3		
Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#59 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	25.5	0.01771							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/3/00	2:49:25 PM	13.511	11.381	732.8	35.89	252.5716	270.5625	H59	1		
7/3/00	2:51:35 PM	12.261	11.381	441.7	35.89	387.4744	377.1555	H59	2		
7/3/00	2:55:00 PM	11.911	11.381	206.6	35.92	305.3558	289.0632	H59	3		
Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#60 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	25.5	0.01771							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/3/00	3:01:29 PM	11.967	11.377	203.7	35.92	269.7754	256.6527	H60	1		
7/3/00	3:04:39 PM	12.417	11.377	474.0	35.89	349.5332	344.6103	H60	2		
7/3/00	3:07:22 PM	13.757	11.377	717.2	35.83	219.0394	238.5793	H60	3		
Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#61 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	25.5	0.01771							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/3/00	3:13:43 PM	14.887	11.377	720.4	35.69	142.8511	167.6177	H61	1		
7/3/00	3:15:34 PM	12.917	11.377	452.6	35.66	220.7046	224.9564	H61	2		
7/3/00	3:17:17 PM	12.267	11.377	194.4	35.65	168.4178	163.0962	H61	3		

RNM, 12/16/02

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#62 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	18.0	0.0174							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	10:54:41 AM	11.921	11.421	209.4	18.07	312.0918	217.1693	H62	1		
7/4/00	10:58:59 AM	12.371	11.421	478.8	18.76	369.5105	276.2461	H62	2		
7/4/00	11:02:02 AM	12.951	11.421	711.6	19.40	333.7803	269.4122	H62	3		
Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#63 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	19.0	0.01744							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	11:05:51 AM	13.801	11.421	710.4	20.11	207.5294	175.2444	H63	1		
7/4/00	11:07:07 AM	12.811	11.421	490.0	20.38	255.1260	202.6536	H63	2		
7/4/00	11:09:48 AM	12.181	11.421	202.1	20.86	197.7994	152.7482	H63	3		
Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#64 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	20.0	0.01749							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	11:13:54 AM	12.121	11.421	195.7	21.60	208.8795	158.0460	H64	1		
7/4/00	11:15:57 AM	12.711	11.421	495.5	22.04	280.5385	226.6699	H64	2		
7/4/00	11:17:50 AM	13.761	11.421	721.2	22.44	216.2046	192.1164	H64	3		
Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#65 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	20.5	0.01751							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	11:20:35 AM	13.301	11.421	717.6	23.03	272.7177	234.8192	H65	1		
7/4/00	11:24:00 AM	12.361	11.421	465.0	23.72	367.9549	302.8025	H65	2		
7/4/00	11:26:38 AM	12.001	11.421	199.4	24.18	259.9658	211.4761	H65	3		

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Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#66 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	21.5	0.01755							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	11:28:00 AM	12.431	11.421	195.0	24.60	143.0000	117.4493	H66	1		
7/4/00	11:32:10 AM	13.051	11.421	461.7	25.00	205.0614	179.1874	H66	2		
7/4/00	11:34:45 AM	14.521	11.421	678.8	25.44	149.9437	147.9487	H66	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#67 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	22.5	0.01759							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	11:38:14 AM	13.751	11.421	678.4	25.9	206.0000	187.2025	H67	1		
7/4/00	11:40:25 AM	12.621	11.421	460.2	26.33	284.4103	240.8823	H67	2		
7/4/00	11:44:20 AM	12.181	11.421	203.5	26.89	202.5756	168.8656	H67	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#68 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	23.5	0.01763							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	11:49:07 AM	12.071	11.421	193.8	27.55	226.3329	184.0568	H68	1		
7/4/00	11:51:31 AM	12.461	11.421	465.4	27.88	334.6455	283.8799	H68	2		
7/4/00	11:53:57 AM	13.511	11.421	694.0	28.22	238.3485	221.4457	H68	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#69 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	25.0	0.01769							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	11:56:37 AM	12.821	11.411	693.2	28.54	363.1794	305.3487	H69	1		
7/4/00	12:00:21 PM	12.101	11.411	464.9	29.00	513.3986	413.6282	H69	2		
7/4/00	12:02:33 PM	11.801	11.411	184.6	29.25	365.5254	289.5138	H69	3		

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Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#70 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	26.0	0.01774							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	12:05:40 PM	11.741	11.411	180.9	29.60	423.4678	326.3588	H70	1		
7/4/00	12:07:24 PM	12.001	11.411	476.0	29.78	616.8400	488.4510	H70	2		
7/4/00	12:08:58 PM	12.621	11.411	692.8	29.98	427.0084	357.5365	H70	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#71 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	26.5	0.01776							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	12:12:33 PM	13.161	11.411	687.2	30.44	288.1409	249.4120	H71	1		
7/4/00	12:15:16 PM	12.231	11.411	441.6	30.77	410.7942	333.9640	H71	2		
7/4/00	12:18:18 PM	11.931	11.411	204.2	31.07	303.6041	242.9471	H71	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement (bottom)	Escalante, UT	#72 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	26.5	0.01776							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	12:22:29 PM	12.011	11.411	192.6	31.50	247.6981	201.9994	H72	1		
7/4/00	12:24:22 PM	12.451	11.411	477.7	31.72	348.3026	296.1636	H72	2		
7/4/00	12:25:51 PM	13.471	11.411	680.0	31.92	240.4308	222.2278	H72	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#73 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	26.5	0.01776							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	12:28:40 PM	14.121	11.411	679.2	32.27	178.2042	174.2558	H73	1		
7/4/00	12:31:12 PM	12.741	11.411	463.6	32.57	261.9445	233.3131	H73	2		
7/4/00	12:33:46 PM	12.221	11.411	209.3	32.81	196.5087	170.7953	H73	3		

RUM, 12/18/02

Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#74 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	26.5	0.01776						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	12:37:17 PM	12.061	11.411	199.1	33.12	237.1239	203.0770	H74	1	
7/4/00	12:39:52 PM	12.561	11.411	487.6	33.40	321.8375	289.0757	H74	2	
7/4/00	12:42:01 PM	13.821	11.411	702.8	33.67	210.7241	209.5197	H74	3	
Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#75 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	27.0	0.01778						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	12:45:07 PM	12.211	11.411	700.0	34.06	674.0431	589.7085	H75	1	
7/4/00	12:47:46 PM	11.751	11.411	445.9	34.27	1030.6688	872.8138	H75	2	
7/4/00	12:53:01 PM	12.741	11.411	1591.6	34.77	904.2550	840.2094	H75	3	
Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#76 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	27.0	0.01778						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	2:06:00 PM	12.396	11.406	724.8	35.63	562.4976	520.0165	H76	1	
7/4/00	2:08:28 PM	11.856	11.406	469.6	35.57	819.7857	724.1703	H76	2	
7/4/00	2:10:09 PM	11.736	11.406	298.4	35.5	713.7556	623.1357	H76	3	
Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#77 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	26.5	0.01776						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	1:03:24 PM	11.911	11.411	213.4	35.18	334.7141	298.7321	H77	1	
7/4/00	1:05:14 PM	12.261	11.411	467.0	35.09	424.5234	389.0017	H77	2	
7/4/00	1:07:57 PM	13.441	11.411	726.0	34.89	263.3365	262.9003	H77	3	

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Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#78 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	26.5	0.01776						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	1:10:45 PM	13.861	11.411	730.8	34.84	216.0293	222.0469	H78	1	
7/4/00	1:13:13 PM	12.451	11.411	462.4	34.84	340.5990	314.8758	H78	2	
7/4/00	1:15:38 PM	12.001	11.411	200.7	34.81	265.4542	236.4599	H78	3	
Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#79 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	26.5	0.01776						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	1:18:31 PM	12.211	11.411	206.3	34.84	199.5067	180.9261	H79	1	
7/4/00	1:20:26 PM	12.781	11.411	468.0	34.89	258.2494	245.3006	H79	2	
7/4/00	1:22:27 PM	14.511	11.411	718.8	34.93	163.8551	176.6254	H79	3	
Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#80 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	26.5	0.01776						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	1:24:35 PM	14.021	11.411	726.4	35.00	200.4284	209.2094	H80	1	
7/4/00	1:26:51 PM	12.491	11.411	443.8	35.04	314.4805	293.1365	H80	2	
7/4/00	1:29:39 PM	12.031	11.411	191.7	35.09	241.1995	216.9203	H80	3	
Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	#81 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	27.0	0.01778						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	1:32:36 PM	12.191	11.411	205.1	35.06	203.4064	182.2735	H81	1	
7/4/00	1:35:22 PM	12.791	11.411	478.9	35.06	261.9422	246.1394	H81	2	
7/4/00	1:37:18 PM	14.491	11.411	728.4	35.09	167.0397	177.7124	H81	3	

Rum, 12/18/02

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#82 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	27.0	0.01778							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	1:39:33 PM	13.981	11.411	730.0	35.09	203.7188	210.0703	H82	1		
7/4/00	1:40:55 PM	12.521	11.411	465.5	35.12	320.0980	294.9588	H82	2		
7/4/00	1:43:24 PM	12.011	11.411	187.3	35.12	243.3393	215.2020	H82	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#83 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	27.0	0.01778							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	1:47:54 PM	12.131	11.411	210.4	35.21	226.7243	202.9470	H83	1		
7/4/00	1:49:41 PM	12.731	11.411	494.8	35.24	283.7938	266.6436	H83	2		
7/4/00	1:50:56 PM	14.431	11.411	722.4	35.29	169.4655	180.4442	H83	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#84 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	27.5	0.0178							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	2:13:40 PM	12.386	11.406	200.3	35.32	156.6791	141.3986	H84	1		
7/4/00	2:15:22 PM	13.076	11.406	465.2	35.21	207.5976	197.1001	H84	2		
7/4/00	2:16:39 PM	14.846	11.406	688.0	35.12	139.1627	149.4518	H84	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#85 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	27.5	0.0178							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	2:18:53 PM	15.246	11.406	728.4	34.98	129.9885	142.8085	H85	1		
7/4/00	2:20:46 PM	13.146	11.406	472.9	34.90	201.7632	191.0829	H85	2		
7/4/00	2:22:50 PM	12.386	11.406	184.4	34.84	144.0172	128.4052	H85	3		

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Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement (bottom)	Escalante, UT	#86 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	27.5	0.0178							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	2:25:36 PM	12.176	11.406	210.1	34.78	210.6156	184.3565	H86	1		
7/4/00	2:27:16 PM	12.736	11.406	483.5	34.77	274.2397	250.8374	H86	2		
7/4/00	2:28:53 PM	14.166	11.406	682.4	34.73	176.2893	178.9727	H86	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#87 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	28.0	0.01782							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	2:31:05 PM	15.246	11.406	688.0	34.69	122.4595	131.5284	H87	1		
7/4/00	2:32:35 PM	13.296	11.406	478.9	34.67	186.5404	174.9273	H87	2		
7/4/00	2:35:05 PM	12.436	11.406	177.0	34.66	130.9632	114.9303	H87	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#88 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	27.5	0.0178							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	2:37:40 PM	12.246	11.406	209.6	34.67	191.9795	168.5240	H88	1		
7/4/00	2:40:02 PM	12.846	11.406	482.4	34.67	251.5128	231.4667	H88	2		
7/4/00	2:41:43 PM	14.406	11.406	702.4	34.67	165.3886	170.4544	H88	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	#89 hole	4"	5/8"	4"	silong lu					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	27.5	0.0178							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/4/00	2:43:40 PM	14.626	11.406	700.8	34.69	152.4761	159.5989	H89	1		
7/4/00	2:46:02 PM	12.906	11.406	460.2	34.72	229.8225	212.7529	H89	2		
7/4/00	2:47:57 PM	12.246	11.406	176.1	34.70	161.3115	141.7116	H89	3		

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Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement (bottom)	Escalante, UT	#90 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	27.5	0.0178						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	2:50:18 PM	12.136	11.406	189.9	34.70	201.0779	175.0787	H90	1	
7/4/00	2:52:40 PM	12.696	11.406	463.5	34.69	271.4164	247.0288	H90	2	
7/4/00	2:53:52 PM	14.316	11.406	725.6	34.69	176.7498	181.1319	H90	3	
permeability measurement (bottom)	Escalante, UT	#91 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	27.5	0.0178						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	2:55:51 PM	14.726	11.406	726.8	34.69	152.7956	161.0137	H91	1	
7/4/00	2:57:54 PM	12.846	11.406	447.8	34.70	233.4959	215.0507	H91	2	
7/4/00	2:59:57 PM	12.256	11.406	191.5	34.75	173.3111	152.5708	H91	3	
permeability measurement (bottom)	Escalante, UT	#92 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	28.0	0.01782						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	3:03:11 PM	12.026	11.396	200.9	34.81	247.1951	210.8494	H92	1	
7/4/00	3:05:02 PM	12.536	11.396	490.3	34.84	326.4912	290.3668	H92	2	
7/4/00	3:06:51 PM	13.756	11.396	701.6	34.89	215.0178	209.8602	H92	3	
permeability measurement (bottom)	Escalante, UT	#93 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	28.0	0.01782						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	3:09:35 PM	12.886	11.396	701.6	34.93	352.5246	322.8995	H93	1	
7/4/00	3:12:44 PM	12.046	11.396	434.2	34.98	517.6725	444.1977	H93	2	
7/4/00	3:14:41 PM	11.786	11.396	198.1	35.00	397.9709	334.3761	H93	3	

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Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement (bottom)	Escalante, UT	#94 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	28.0	0.01782						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	3:17:22 PM	11.706	11.396	212.6	35.01	539.1520	450.0745	H94	1	
7/4/00	3:19:00 PM	11.946	11.396	489.9	35.03	693.2290	590.7465	H94	2	
7/4/00	3:20:25 PM	12.586	11.396	720.8	35.01	459.1318	411.7125	H94	3	
permeability measurement (bottom)	Escalante, UT	#95 hole	4"	5/8"	4"	silong lu				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	28.0	0.01782						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/4/00	3:23:01 PM	13.416	11.396	722.0	34.97	262.0417	250.0199	H95	1	
7/4/00	3:25:09 PM	12.316	11.396	478.6	34.95	398.6288	349.3537	H95	2	
7/4/00	3:28:21 PM	11.916	11.396	198.2	34.95	296.9563	251.9012	H95	3	
permeability measurement (bottom)	Escalante, UT	h96	4"	5/8"	4"	robert bridges				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	33.5	0.01805						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/12/00	3:59:57 PM	12.045	11.465	205.5	43.30	282.4234	246.1730	H96	1	
7/12/00	4:01:12 PM	12.485	11.465	456.6	43.30	350.3883	316.4617	H96	2	
7/12/00	4:02:44 PM	13.805	11.465	766.8	43.25	243.2934	242.4924	H96	3	
permeability measurement (bottom)	Escalante, UT	h97	4"	5/8"	4"	robert bridges				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	32.5	0.018						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/12/00	4:06:07 PM	14.21	11.46	784.0	43.16	208.9655	219.2827	H97	1	
7/12/00	4:08:03 PM	12.62	11.46	447.8	43.13	301.2597	280.9181	H97	2	
7/12/00	4:10:04 PM	12.09	11.46	186.5	43.13	236.1215	211.0204	H97	3	

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Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement	Escalante, UT	h98	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	33.5	0.01805					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:13:40 PM	11.96	11.46	193.1	43.22	308.7960	266.9660	H98	1
7/12/00	4:15:21 PM	12.44	11.46	492.4	43.24	393.8546	354.1724	H98	2
7/12/00	4:16:50 PM	13.61	11.46	809.2	43.27	281.5328	276.8998	H98	3
Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement	Escalante, UT	h99	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	35.0	0.01811					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:19:24 PM	14.16	11.46	829.2	43.27	223.7846	220.9017	H99	1
7/12/00	4:20:36 PM	12.59	11.46	458.7	43.28	314.7480	276.6182	H99	2
7/12/00	4:22:27 PM	12.07	11.46	186.8	43.3	242.6053	204.5751	H99	3
Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement (top)	Escalante, UT	h100	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	36.0	0.01815					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:24:59 PM	12.13	11.46	210.1	43.33	248.3967	204.7524	H100	1
7/12/00	4:27:02 PM	12.69	11.46	491.7	43.27	309.3932	266.3684	H100	2
7/12/00	4:28:03 PM	13.93	11.46	652.4	43.22	194.5876	183.5467	H100	3
Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement	Escalante, UT	h101	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	35.5	0.01813					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:30:48 PM	14.44	11.46	683.2	43.04	165.8062	163.3138	H101	1
7/12/00	4:32:15 PM	12.79	11.46	438.4	42.93	254.2199	221.5594	H101	2
7/12/00	4:34:00 PM	12.21	11.46	186.7	42.82	196.5341	163.2295	H101	3

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Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement	Escalante, UT	h102	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	33.0	0.01803					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:37:36 PM	12.10	11.46	199	42.73	247.1892	216.7105	H102	1
7/12/00	4:39:02 PM	12.49	11.46	400	42.70	303.7687	274.6449	H102	2
7/12/00	4:40:21 PM	14.04	11.46	730	42.65	208.0740	211.0149	H102	3
Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement (top)	Escalante, UT	h103	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	34.5	0.01809					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:42:34 PM	14.44	11.46	726.4	42.62	175.6582	176.5396	H102	1
7/12/00	4:43:59 PM	12.75	11.46	444.8	42.61	265.4890	235.8325	H102	2
7/12/00	4:45:37 PM	12.14	11.46	165.6	42.59	192.2511	162.6175	H102	3
Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement	Escalante, UT	h104	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	34.5	0.01809					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:47:37 PM	11.84	11.46	158.0	42.54	332.3313	273.9482	H104	1
7/12/00	4:49:23 PM	12.22	11.46	453.7	42.54	469.6368	399.4329	H104	2
7/12/00	4:50:57 PM	13.24	11.46	750.8	42.48	318.3137	292.7396	H104	3
Sample Name	Field	Well	Depth	Diameter	Length	Operator			
permeability measurement	Escalante, UT	h105	4"	5/8"	4"	robert bridges			
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity					
(in)	(in)		(C)	(cp)					
0.92	0.92	7.211	34.5	0.01809					
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)		
7/12/00	4:53:09 PM	13.02	11.46	755.2	42.44	368.5085	333.0535	H105	1
7/12/00	4:54:51 PM	12.13	11.46	465.7	42.39	548.6152	461.7739	H105	2
7/12/00	4:58:40 PM	11.82	11.46	201.1	42.31	446.5359	365.7537	H105	3

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Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h106	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	34.5	0.01809							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/12/00	5:03:01 PM	12.205	11.455	197.5	42.25	207.0587	174.9272	H106	1		
7/12/00	5:05:03 PM	12.805	11.455	468.4	42.22	266.1721	235.6632	H106	2		
7/12/00	5:06:52 PM	14.495	11.455	780.4	42.17	184.3086	184.3019	H106	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h107	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	34.5	0.01809							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/12/00	5:09:08 PM	14.395	11.455	791.2	42.13	193.9245	192.4346	H107	1		
7/12/00	5:10:52 PM	12.665	11.455	438.3	42.10	279.3610	244.0606	H107	2		
7/12/00	5:12:13 PM	12.125	11.455	182.2	42.08	214.4219	179.3448	H107	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h108	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	34.5	0.01809							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/12/00	5:14:48 PM	12.305	11.455	175.0	42.08	161.1300	136.7514	H108	1		
7/12/00	5:16:41 PM	13.045	11.455	459.2	42.07	219.3224	197.1773	H108	2		
7/12/00	5:19:15 PM	15.085	11.455	798.8	42.03	154.4716	160.2274	H108	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h109	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	34.5	0.01809							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/12/00	5:21:39 PM	14.055	11.455	807.6	42.03	226.6864	219.2322	H109	1		
7/12/00	5:24:05 PM	12.505	11.455	436.4	42.03	322.5624	277.8775	H109	2		
7/12/00	5:25:58 PM	12.045	11.455	191.3	42.03	256.4700	212.8938	H109	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h110	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	34.5	0.01809							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/12/00	5:29:15 PM	12.175	11.455	185.1	42.03	202.2547	169.6837	H110	1		
7/12/00	5:32:52 PM	12.765	11.455	449.1	42.06	263.2395	231.2967	H110	2		
7/12/00	5:34:55 PM	14.535	11.455	781.2	41.94	181.6935	181.3219	H110	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h111	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	34.5	0.01809							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/12/00	5:37:20 PM	14.495	11.455	781.2	41.88	184.3278	183.2221	H111	1		
7/12/00	5:38:57 PM	12.675	11.455	424.9	41.85	268.2781	233.3537	H111	2		
7/12/00	5:40:45 PM	12.165	11.455	196.4	41.82	217.5766	181.5938	H111	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h112	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	23.0	0.01761							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	9:04:58 AM	11.944	11.494	200.7	23.47	337.3408	237.4056	H112	1		
7/13/00	9:06:15 AM	12.264	11.494	466.2	23.64	452.1384	328.8251	H112	2		
7/13/00	9:07:11 AM	13.164	11.494	790.4	23.72	340.9060	267.4152	H112	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement (top)	Escalante, UT	h113	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	23.5	0.01763							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	9:10:25 AM	14.694	11.494	780.4	24.3	165.5585	145.0033	H113	1		
7/13/00	9:11:53 AM	13.024	11.494	484.5	24.56	229.5871	180.1593	H113	2		
7/13/00	9:13:49 AM	12.414	11.494	202.8	24.87	164.0004	124.1341	H113	3		

Rum, 12/18/02

Rum, 12/18/02

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h114	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	23.5	0.01763							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	9:17:10 AM	12.394	11.494	196.9	25.41	163.1970	125.7784	H114	1		
7/13/00	9:18:10 AM	13.154	11.494	497.4	25.58	216.8545	178.3779	H114	2		
7/13/00	9:19:09 AM	14.584	11.494	739.6	25.78	163.9760	150.4840	H114	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h115	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	24.5	0.01767							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	9:24:14 AM	13.845	11.494	698.8	26.68	209.7166	181.6528	H115	1		
7/13/00	9:26:04 AM	12.714	11.494	480.7	26.98	292.2901	234.0627	H115	2		
7/13/00	9:28:11 AM	12.234	11.494	197.6	27.28	202.2306	157.4561	H115	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h116	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	24.5	0.01767							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	9:32:47 AM	12.484	11.494	191.8	27.91	145.5248	118.0230	H116	1		
7/13/00	9:36:14 AM	13.184	11.494	489.5	28.39	211.8279	184.1710	H116	2		
7/13/00	9:37:35 AM	15.044	11.494	747.2	28.57	143.3847	142.9113	H116	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h117	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	25.5	0.01771							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	9:42:00 AM	14.704	11.494	740.0	29.18	158.8398	152.4193	H117	1		
7/13/00	9:43:38 AM	12.934	11.494	454.8	29.38	233.2891	198.3423	H117	2		
7/13/00	9:45:12 AM	12.384	11.494	189.2	29.6	160.6999	131.7487	H117	3		

RAM, 12/18/02

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h118	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	28.0	0.01782							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	10:30:13 AM	12.194	11.504	191.8	31.85	212.8725	168.5292	H118	1		
7/13/00	10:31:38 AM	12.694	11.504	479.5	31.92	302.3754	249.6062	H118	2		
7/13/00	10:32:53 AM	13.964	11.504	740.8	31.99	214.9160	195.4011	H118	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h119	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	28.5	0.01784							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	10:35:38 AM	14.604	11.504	767.6	32.16	172.2550	162.0764	H119	1		
7/13/00	10:37:01 AM	12.924	11.504	483.4	32.24	252.9281	211.2781	H119	2		
7/13/00	10:39:07 AM	12.364	11.504	202.6	32.39	179.1646	143.8226	H119	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h120	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	29.0	0.01786							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	10:42:33 AM	12.274	11.504	195.8	32.61	195.0181	153.2319	H120	1		
7/13/00	10:44:55 AM	12.684	11.504	442.2	32.75	282.7428	230.3933	H120	2		
7/13/00	10:46:38 AM	14.044	11.504	701.6	32.87	197.5423	178.6714	H120	3		

Sample Name	Field	Well	Depth	Diameter	Length	Operator					
permeability measurement	Escalante, UT	h121	4"	5/8"	4"	robert bridges					
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity							
(in)	(in)		(C)	(cp)							
0.92	0.92	7.211	29.0	0.01786							
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading		
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)				
7/13/00	10:50:45 AM	14.244	11.504	695.6	33.15	180.3319	166.6659	H121	1		
7/13/00	10:52:25 AM	12.834	11.504	467.0	33.25	263.7370	220.3939	H121	2		
7/13/00	10:55:00 AM	12.334	11.504	214.8	33.42	198.5093	160.2000	H121	3		

RAM, 12/18/02

Sample Name	Field	Well	Depth	Diameter	Length	Operator				
permeability measurement	Escalante, UT	h122	4"	5/8"	4"	robert bridges				
Outside Diam.	Inside Diam.	Geom. Fact.	Ref. Temp.	Viscosity						
(in)	(in)		(C)	(cp)						
0.92	0.92	7.211	29.5	0.01788						
Date	Time	Flow Press	Atm. Press	Flow Rate	Temp.	old Perm.	new Perm.	Sample	Reading	
		(psia)	(psia)	(cc/min)	(C)	(md)	(md)			
7/13/00	10:57:35 AM	12.044	11.504	206.2	33.58	296.1158	231.0574	H120	1	
7/13/00	10:58:47 AM	12.384	11.504	464.6	33.65	403.7688	324.4819	H120	2	
7/13/00	10:59:59 AM	13.484	11.504	742	33.73	274.2393	240.3090	H120	3	

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Possible occurrences of High Velocity Flow:

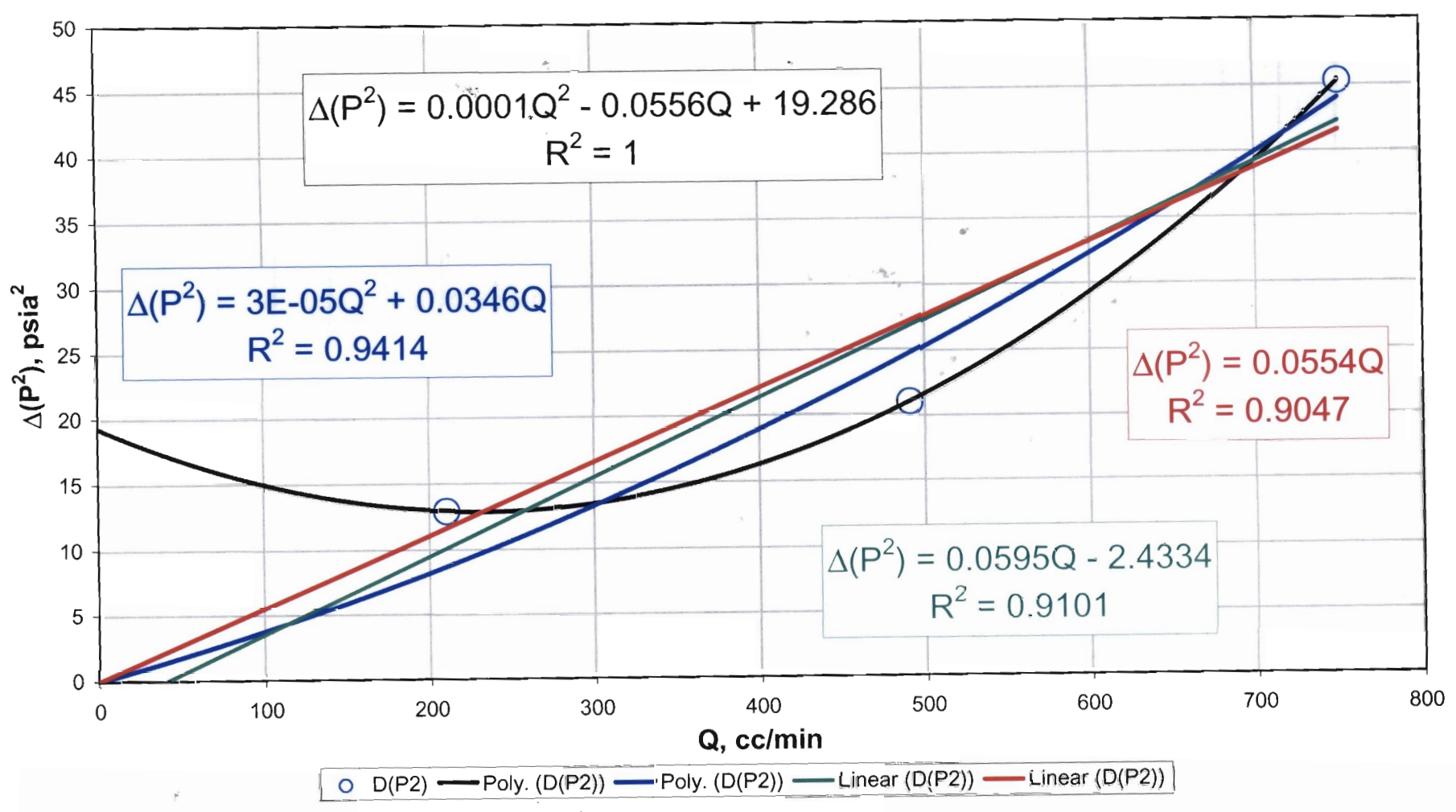
<u>drillhole</u>	<u>pages (SN 560)</u>	<u>page (SN 545)</u>
H(-6)	32-34	185
H(-5)	35-37	185
H(-3)	41-43	185
H(-2)	44-46	186
H(-1)	47-49	186
H( $\phi$ )	50-52	186
H-1	53-55	186
H-2	56-58	187
H-9	77-79	188
H-10	80-82	189
H-12	86-88	189
H-13	89-91	189
H-14	92-94	190
H-16	98-100	190
H-17	101-103	190
H-18	104-106	191
H-19	107-109	191
H-20	110-112	191
H-21	113-115	191
H-22	116-118	192
H-23	119-121	192
H-24	122-124	192
H-26	128-130	193
H-27	131-133	193

BNM, 12/18/02

CLD, 05/08/03

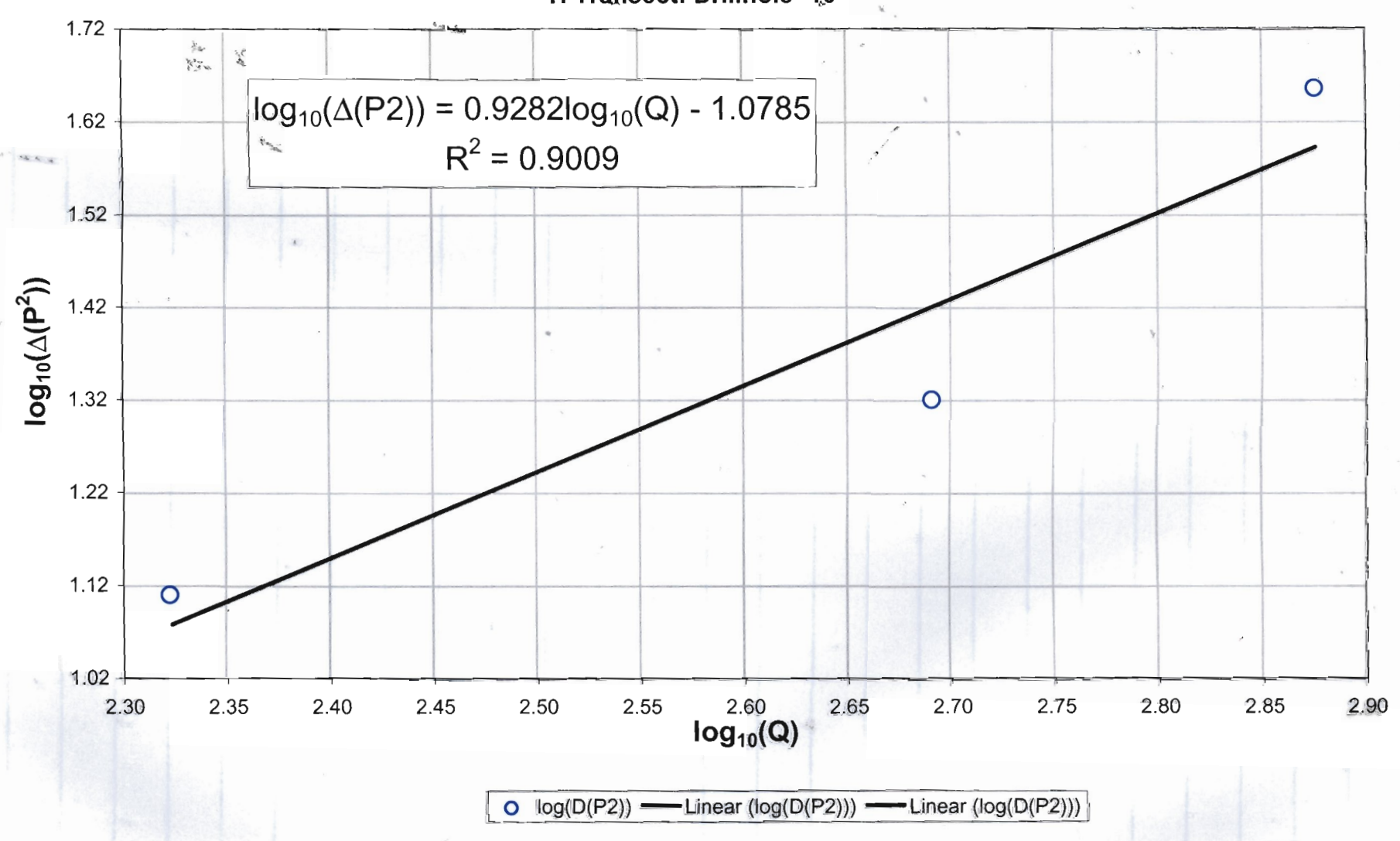
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole -10

RMM, 12/18/02

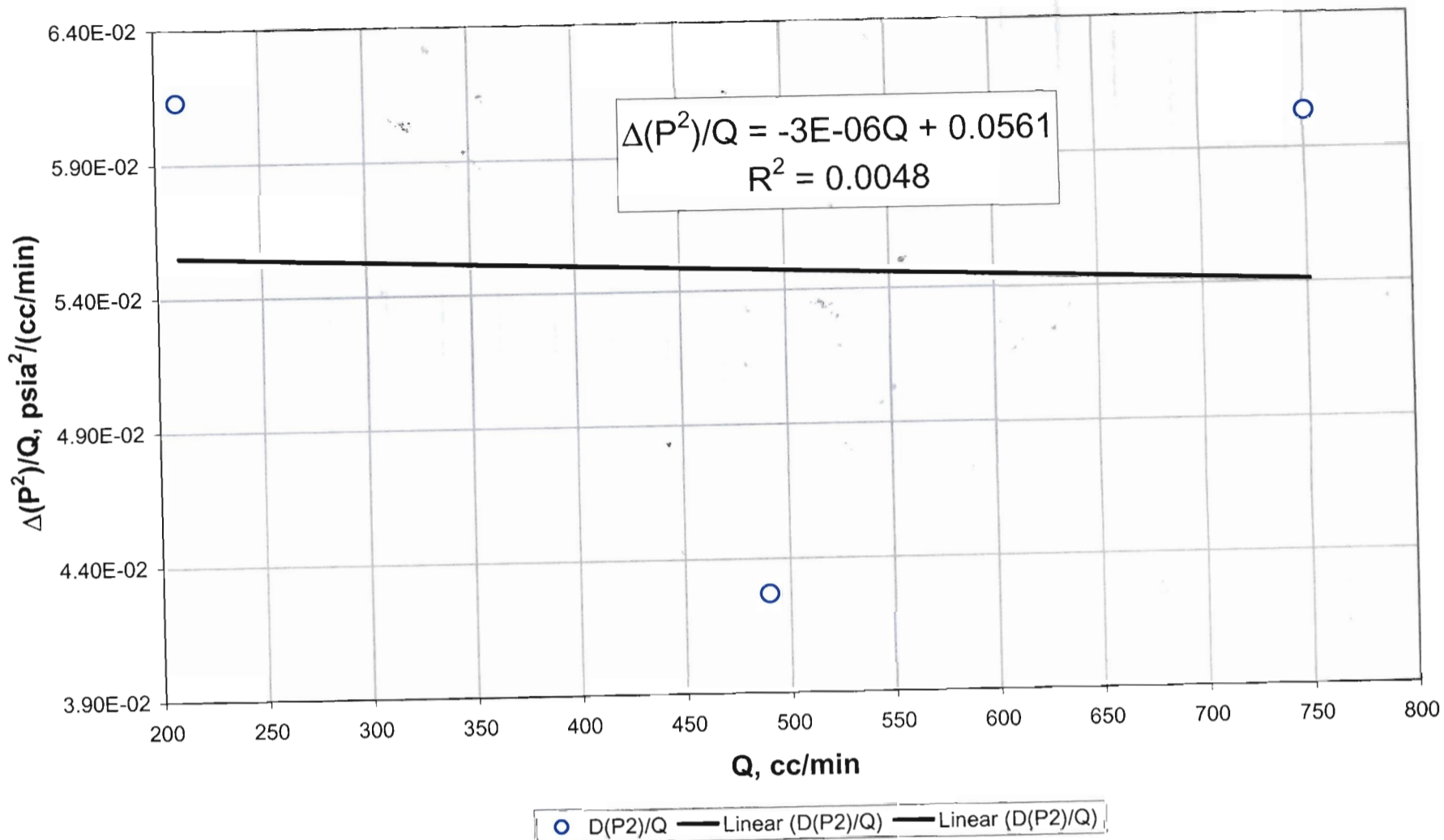


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of  
 high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole -10

RMM, 12/18/02

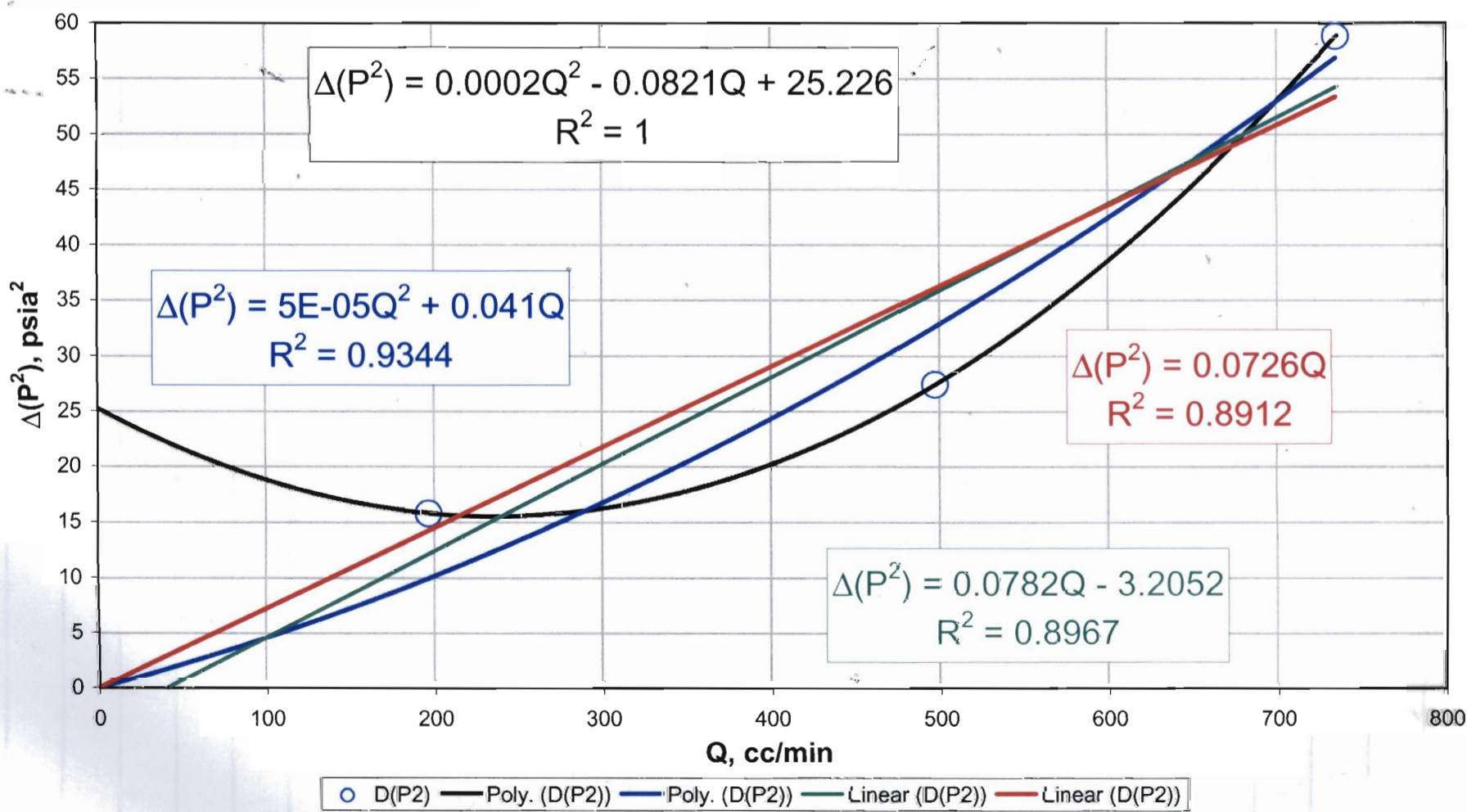


Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole -10



RVM, 12/18/02

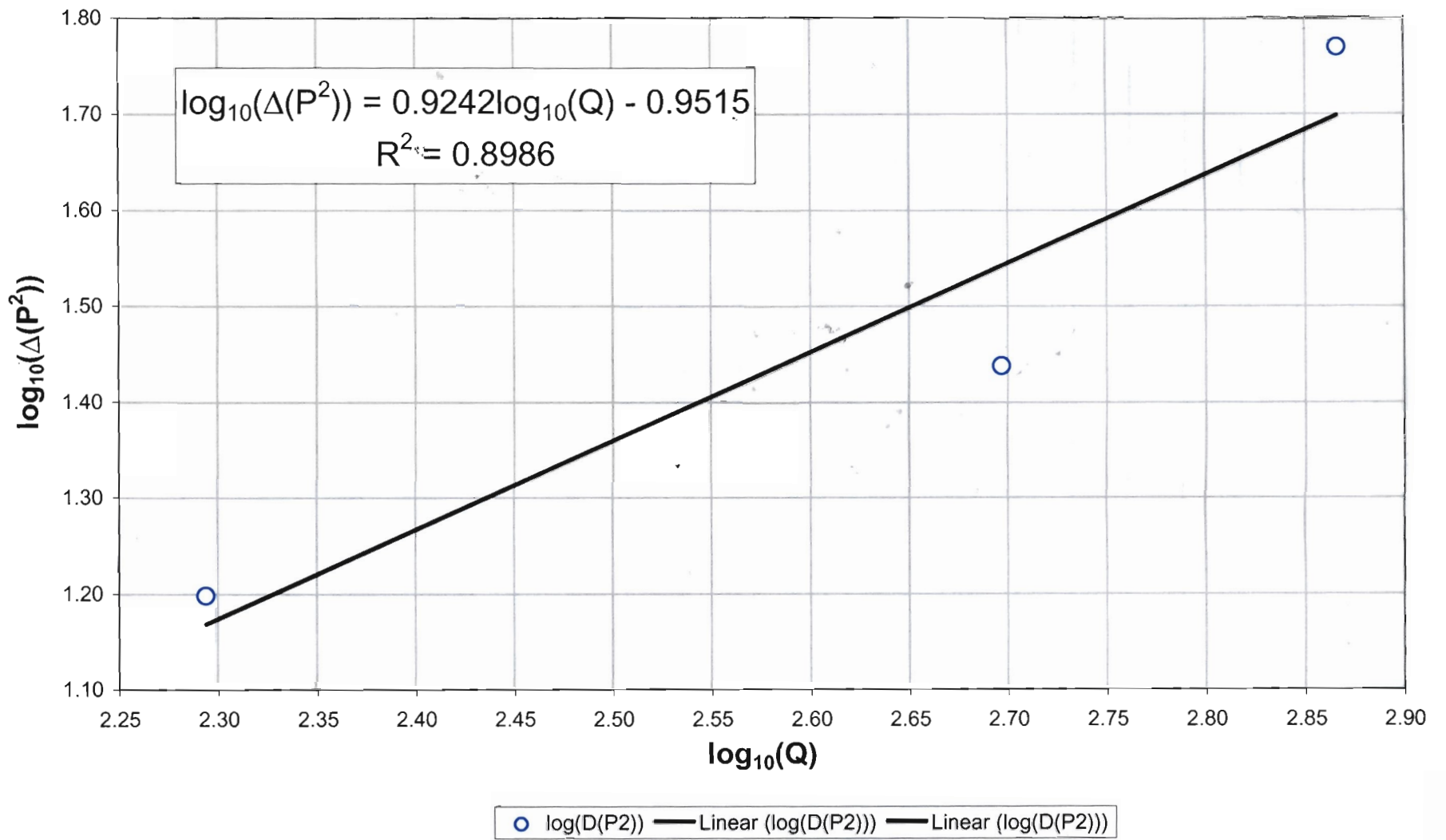
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole -9



RVM, 12/18/02

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)

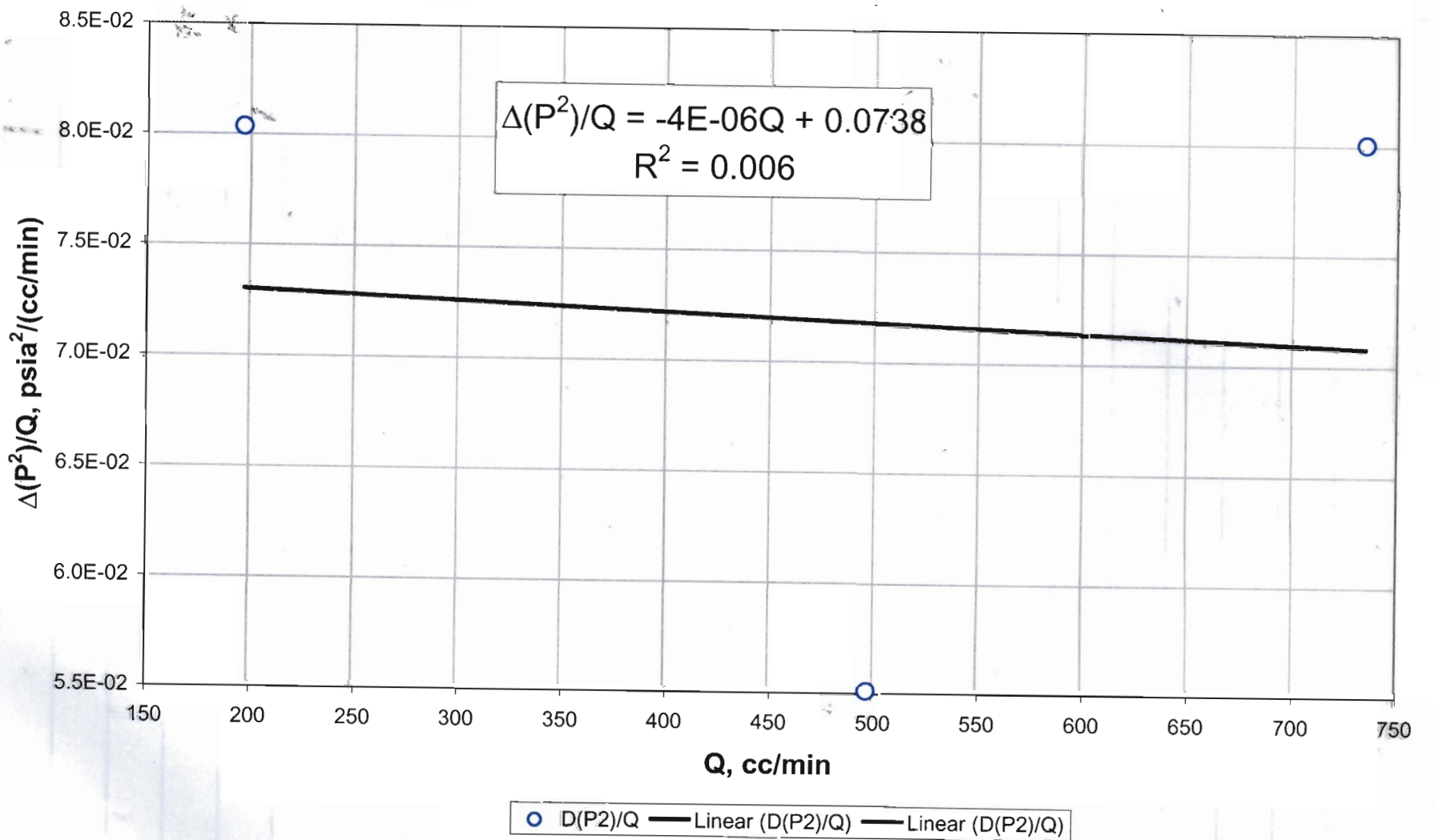
H Transect: Drillhole -9



Run, 12/18/02

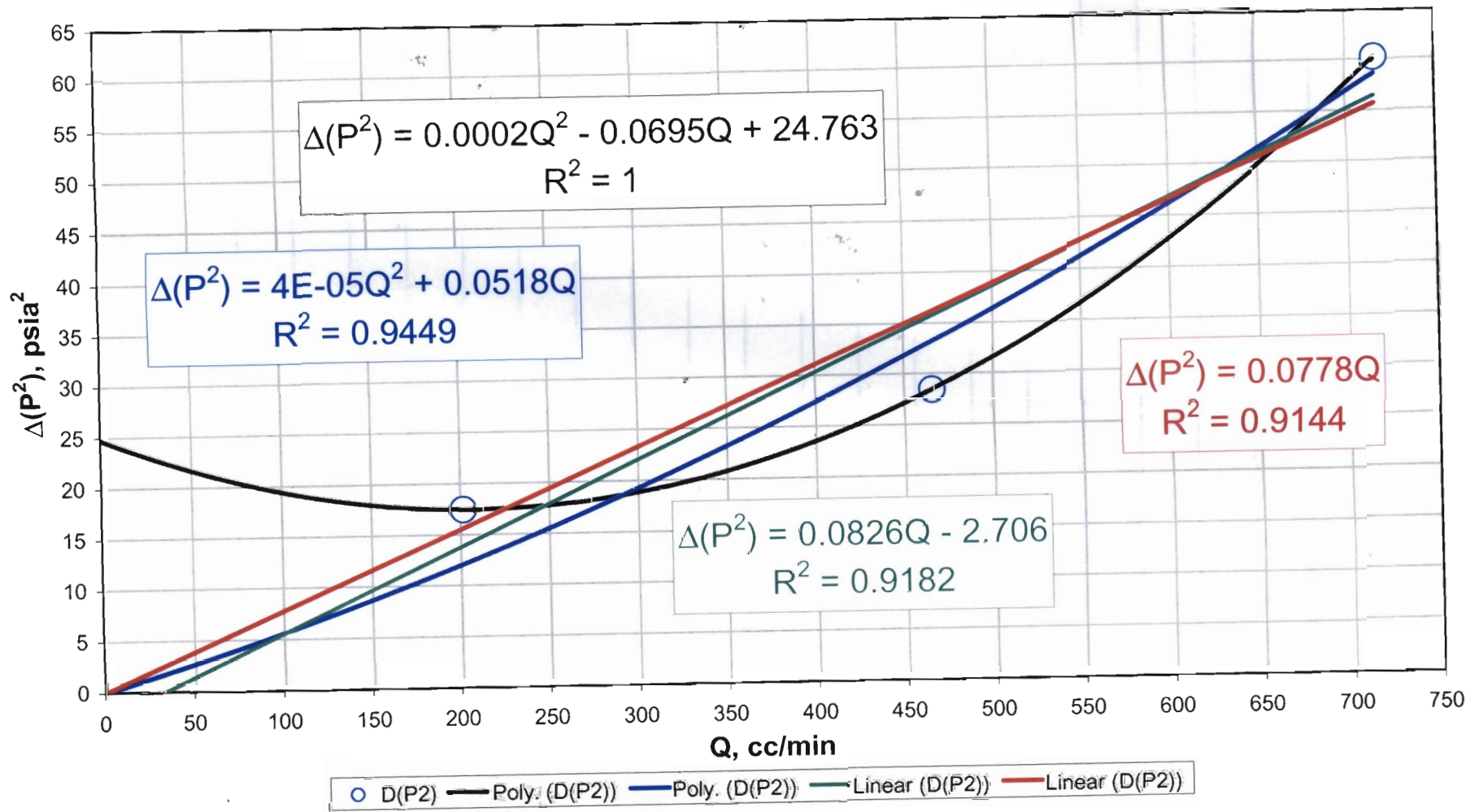
Final check for high velocity flow effects: High velocity flow effects are present when the slope is non-zero and positive.

H Transect : Drillhole -9



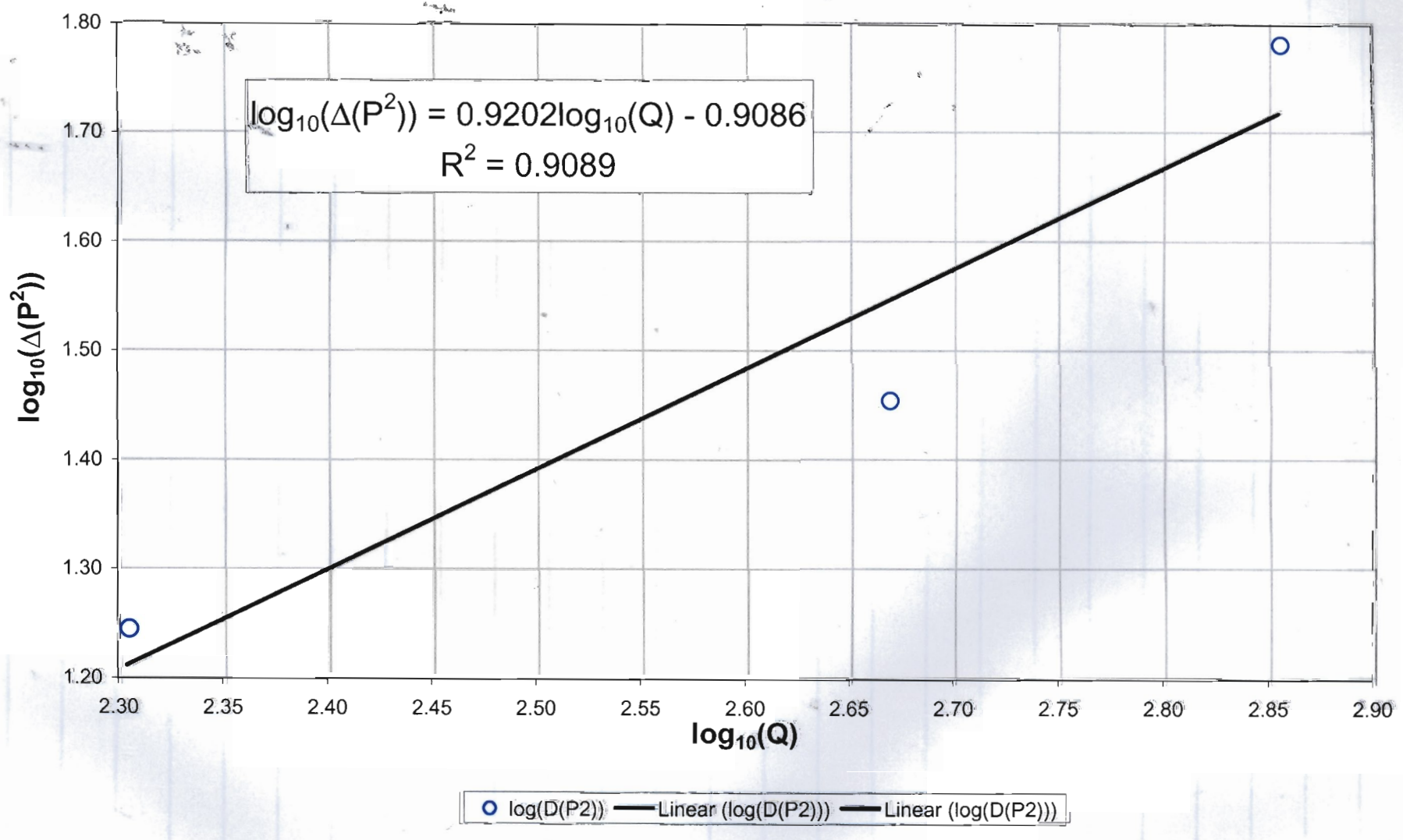
Run, 12/18/02

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 -8



RMM, 11/18/02

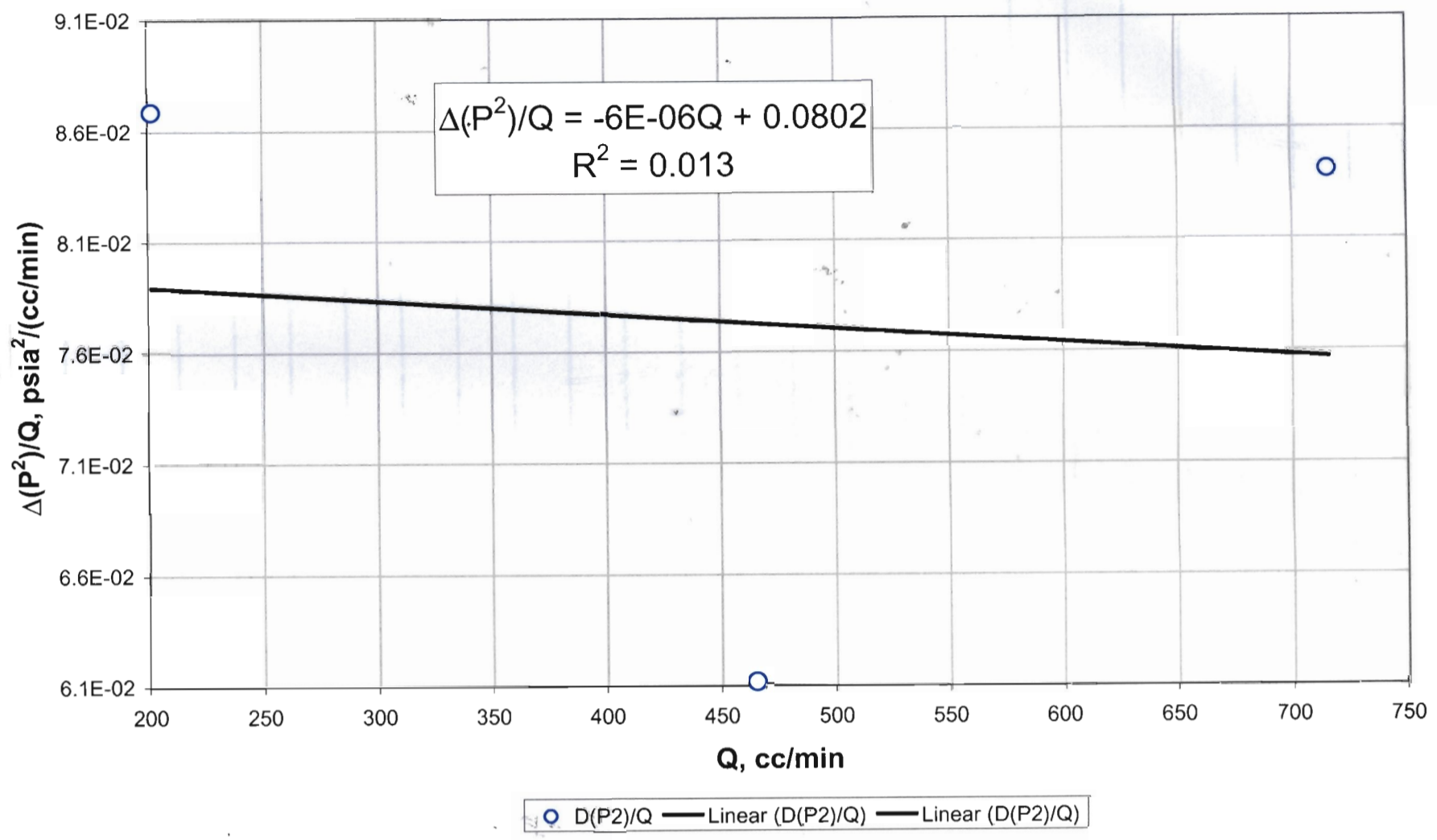
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of  
 high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole -8



RMM, 11/18/02

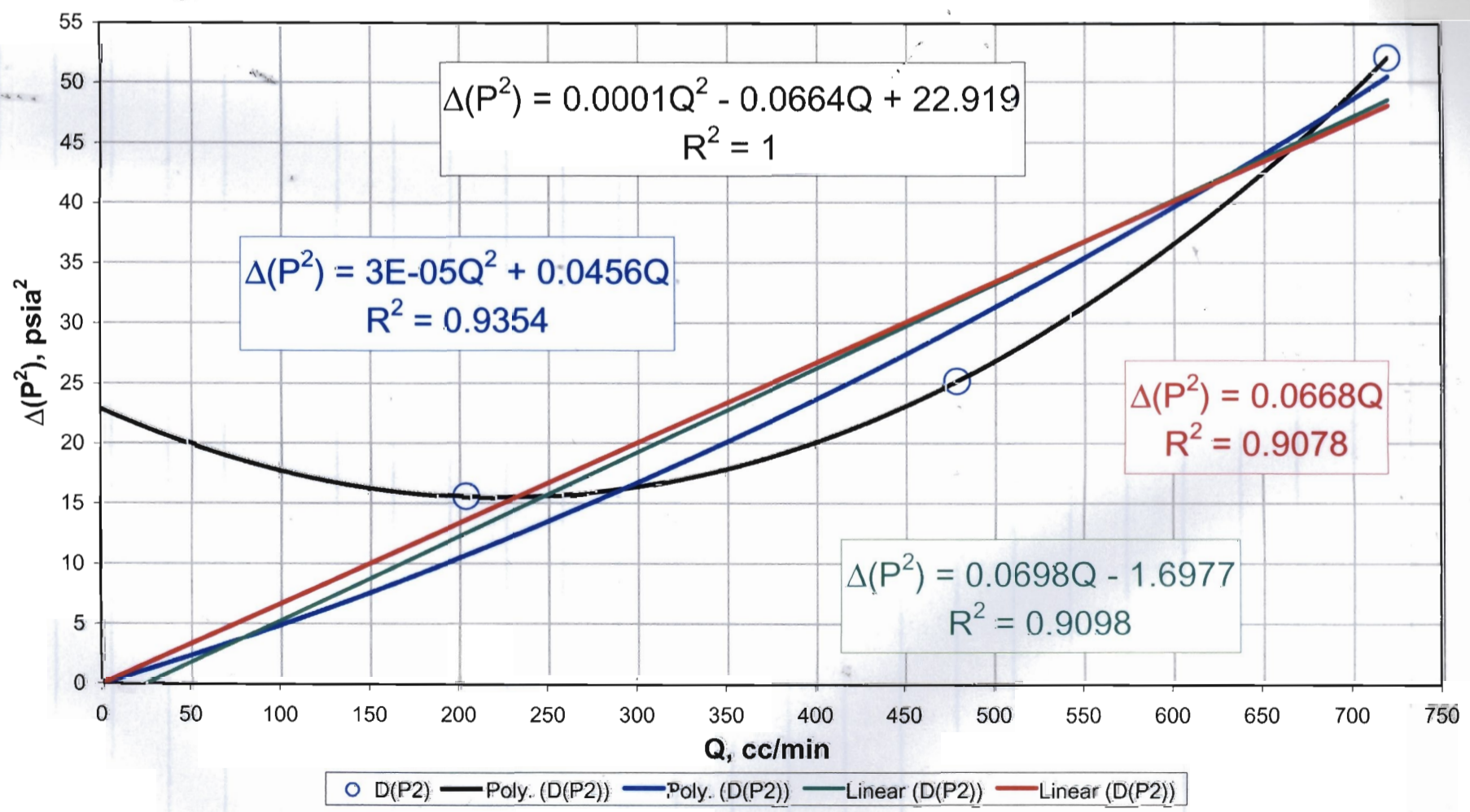


**Final check for high velocity flow effects:**  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole -8



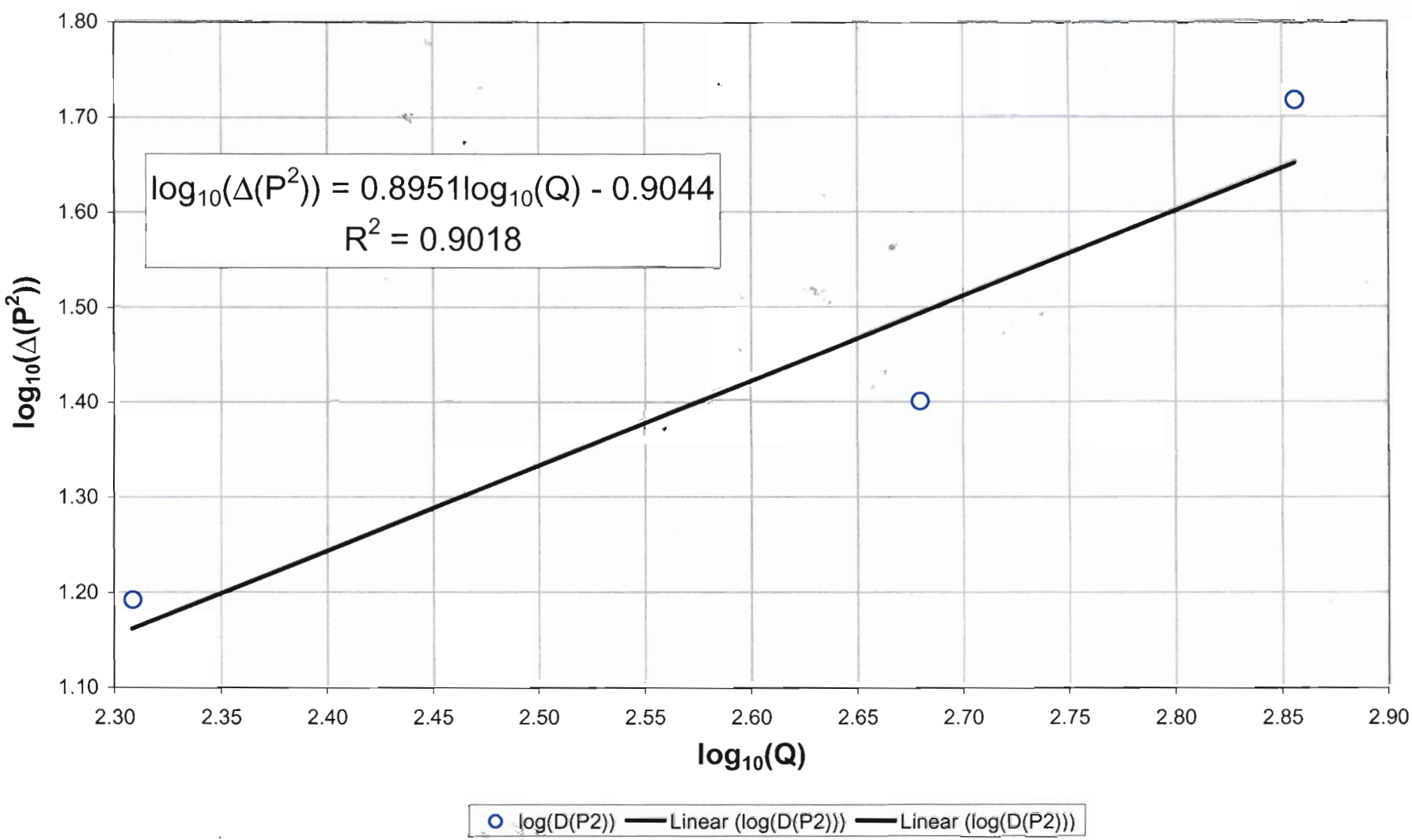
RMM, 12/18/02

**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 -7



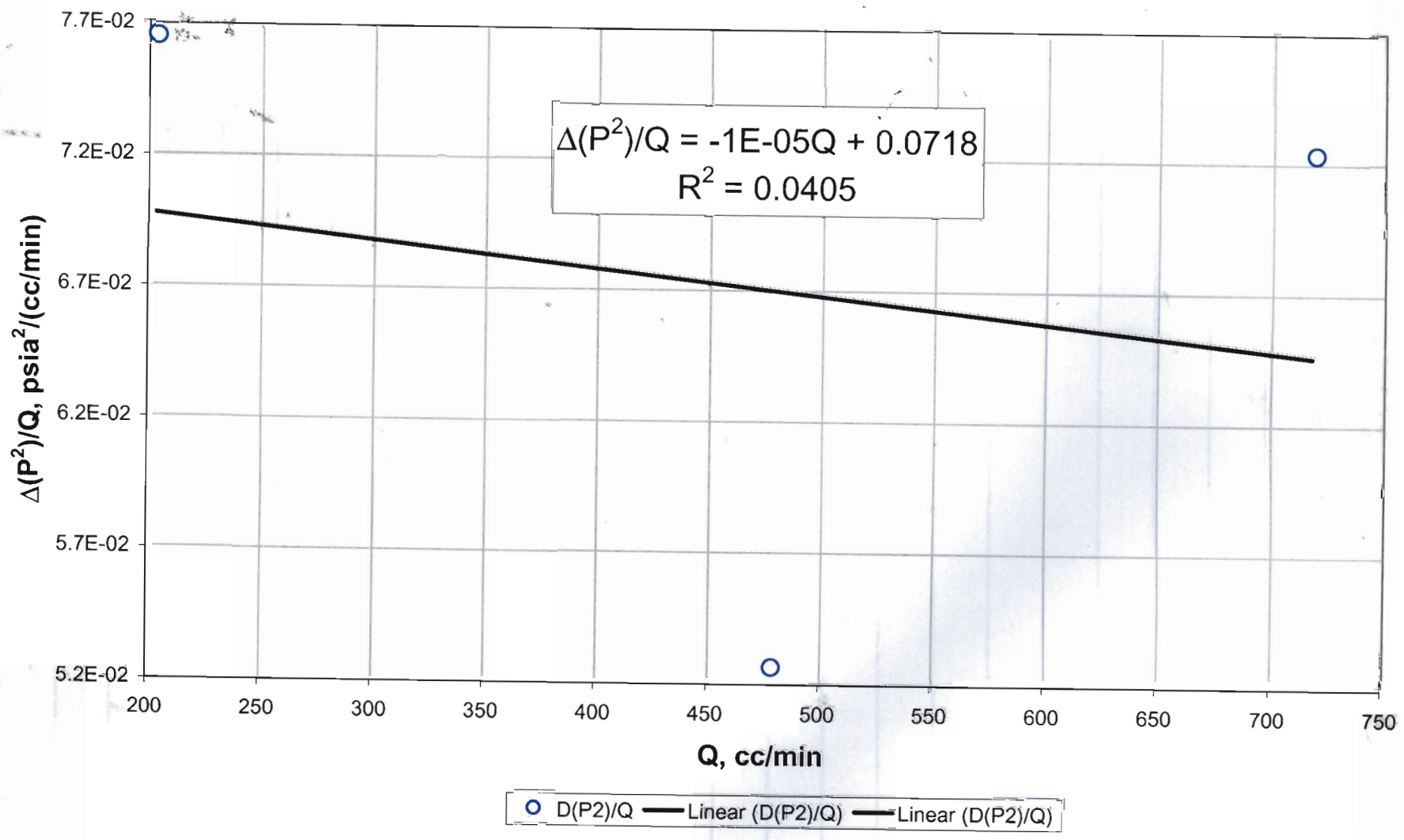
RMM, 12/18/02

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 -7



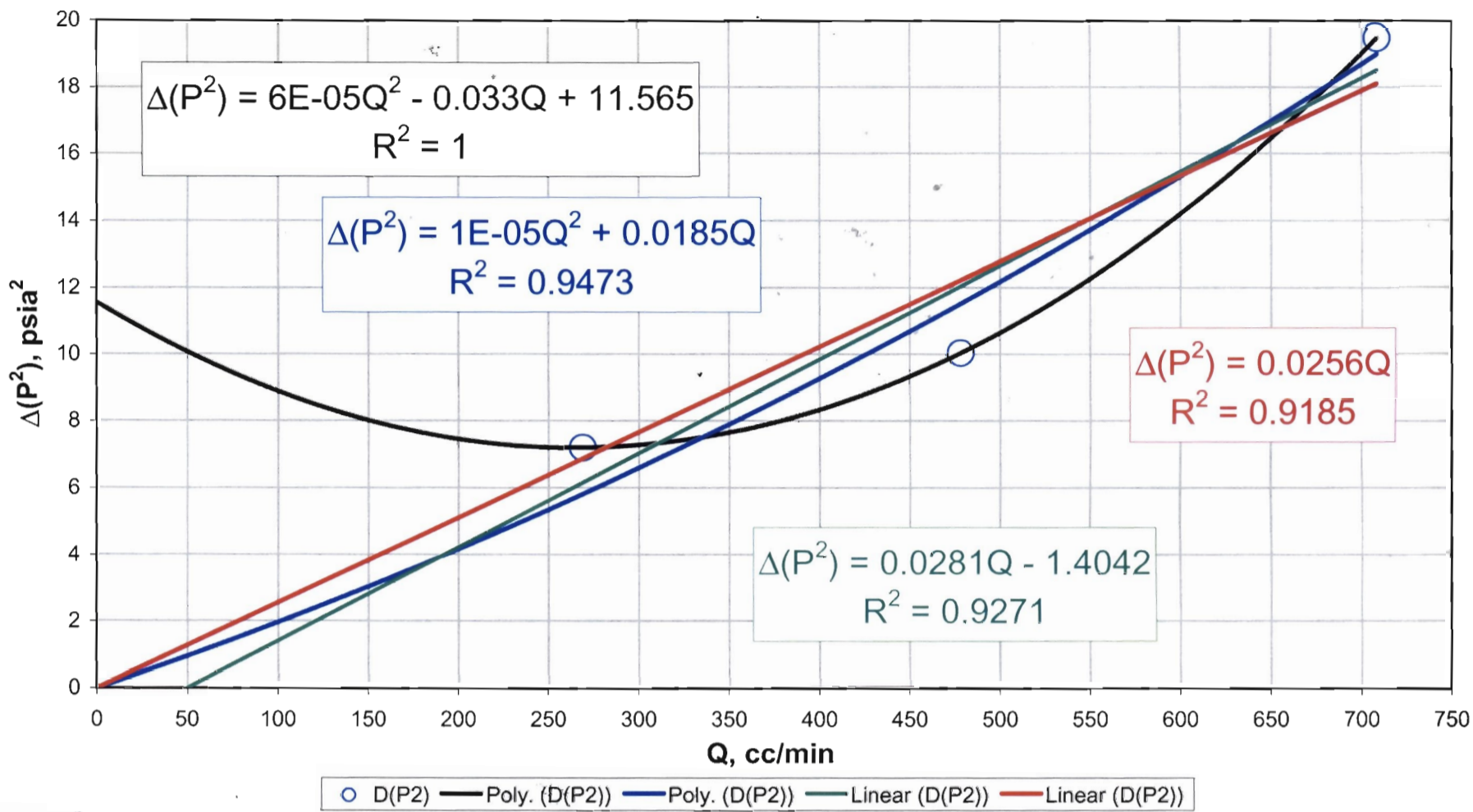
Run, 12/18/02

Final check for high velocity flow effects:  
High velocity flow effects are present when the slope is non-zero and positive.  
H Transect : Drillhole -7



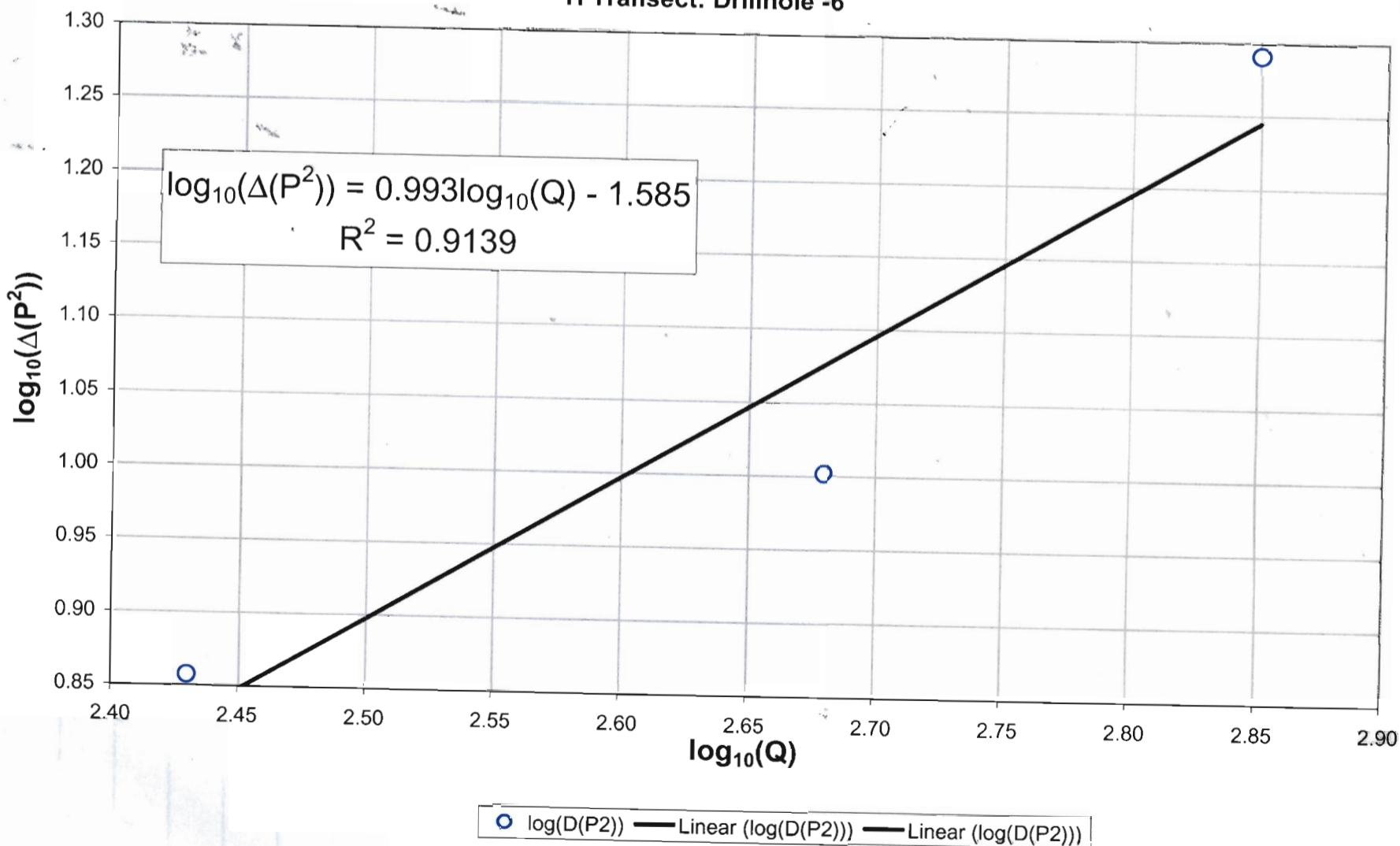
Run, 12/18/02

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 -6



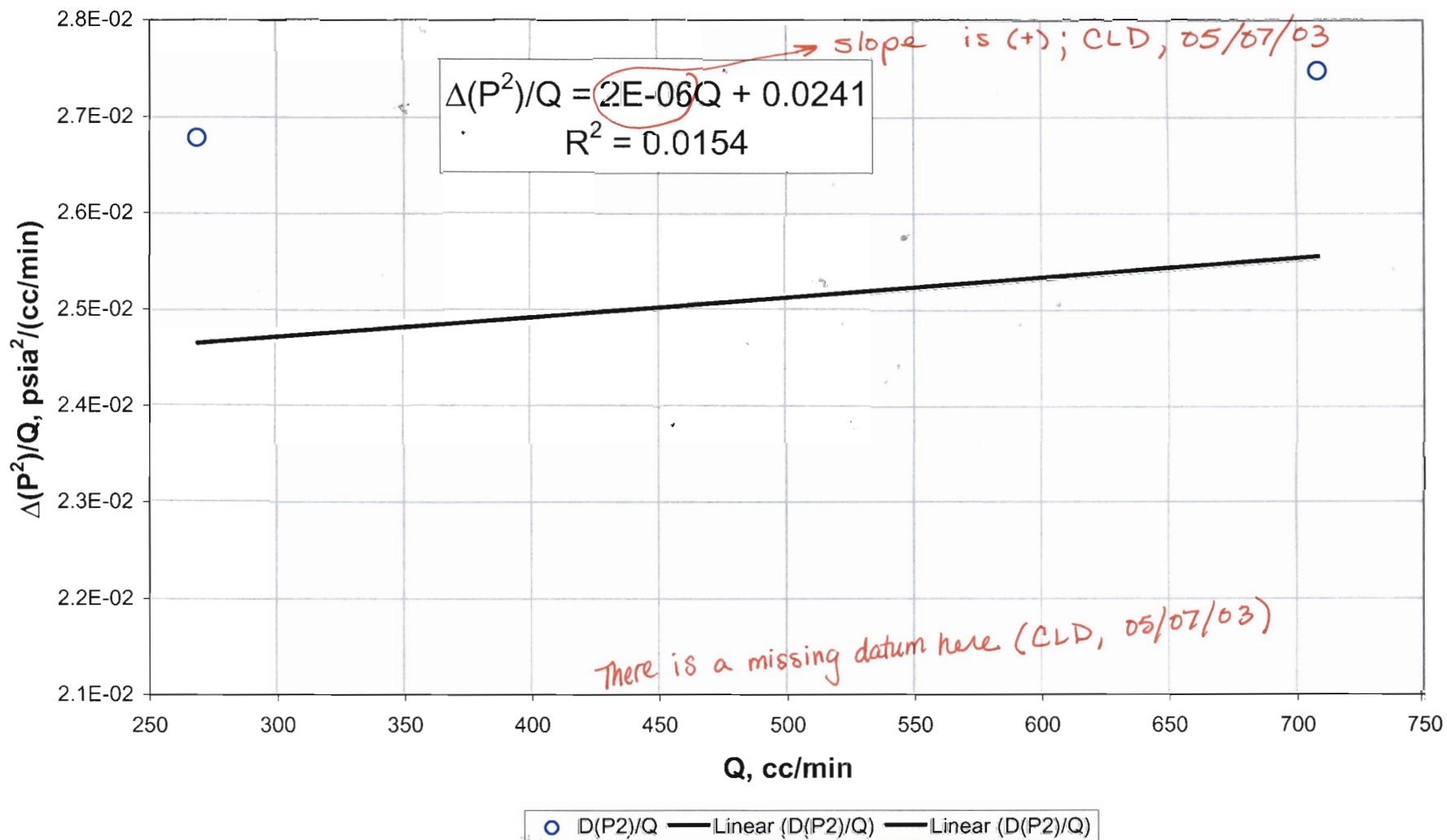
RNM, 12/18/02

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 -6

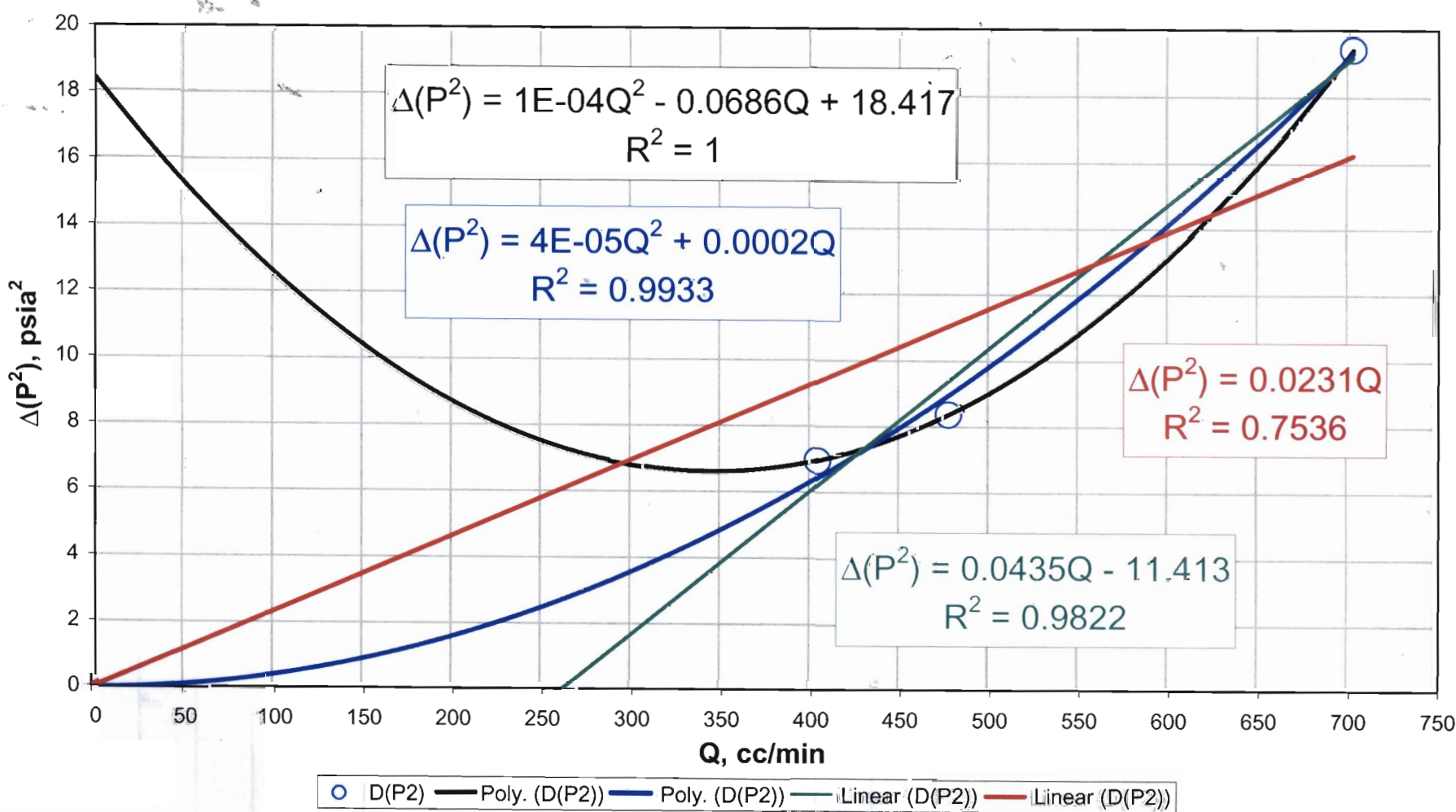


RNM, 12/18/02

Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole -6

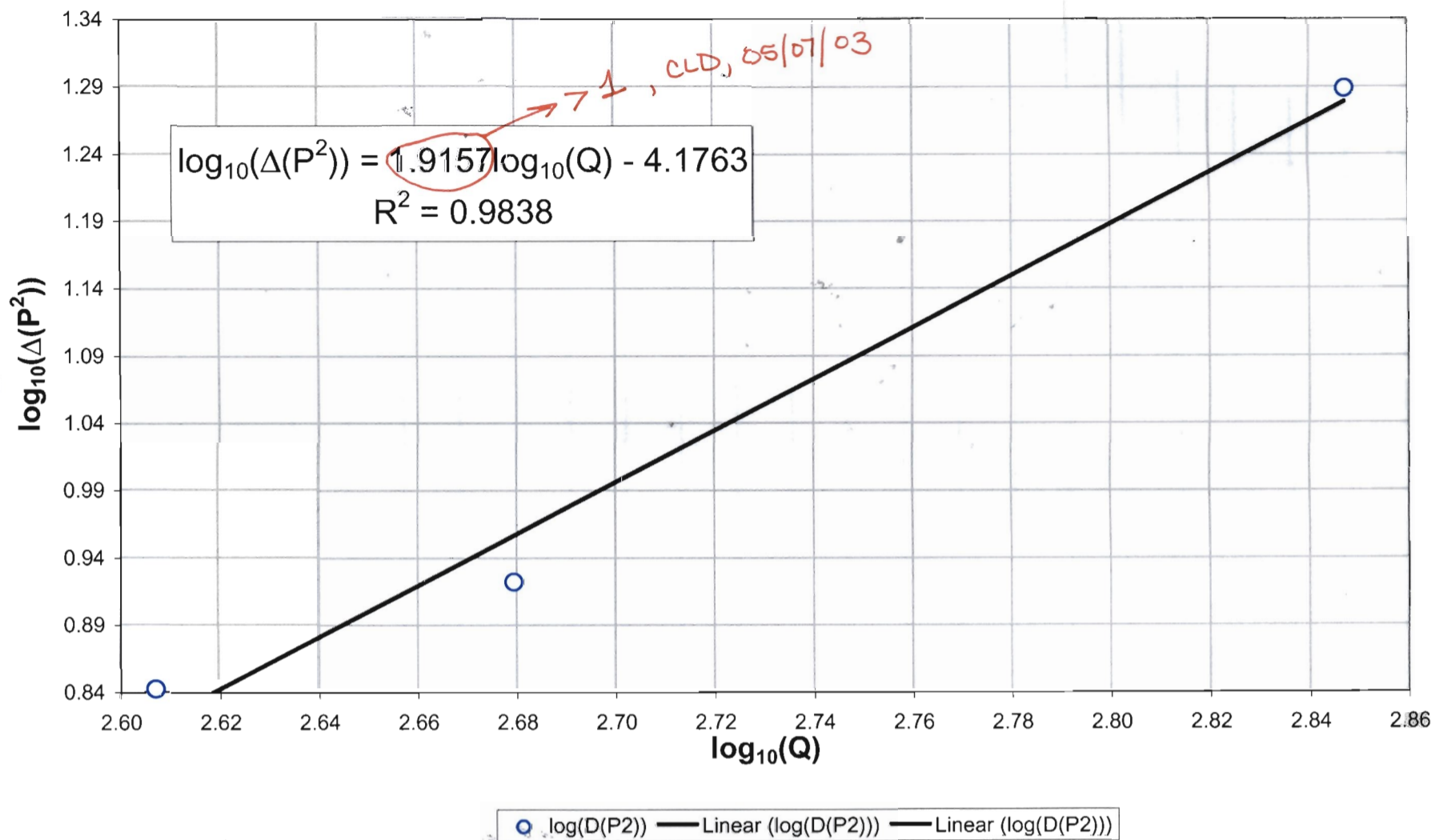


Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole -5



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 -5

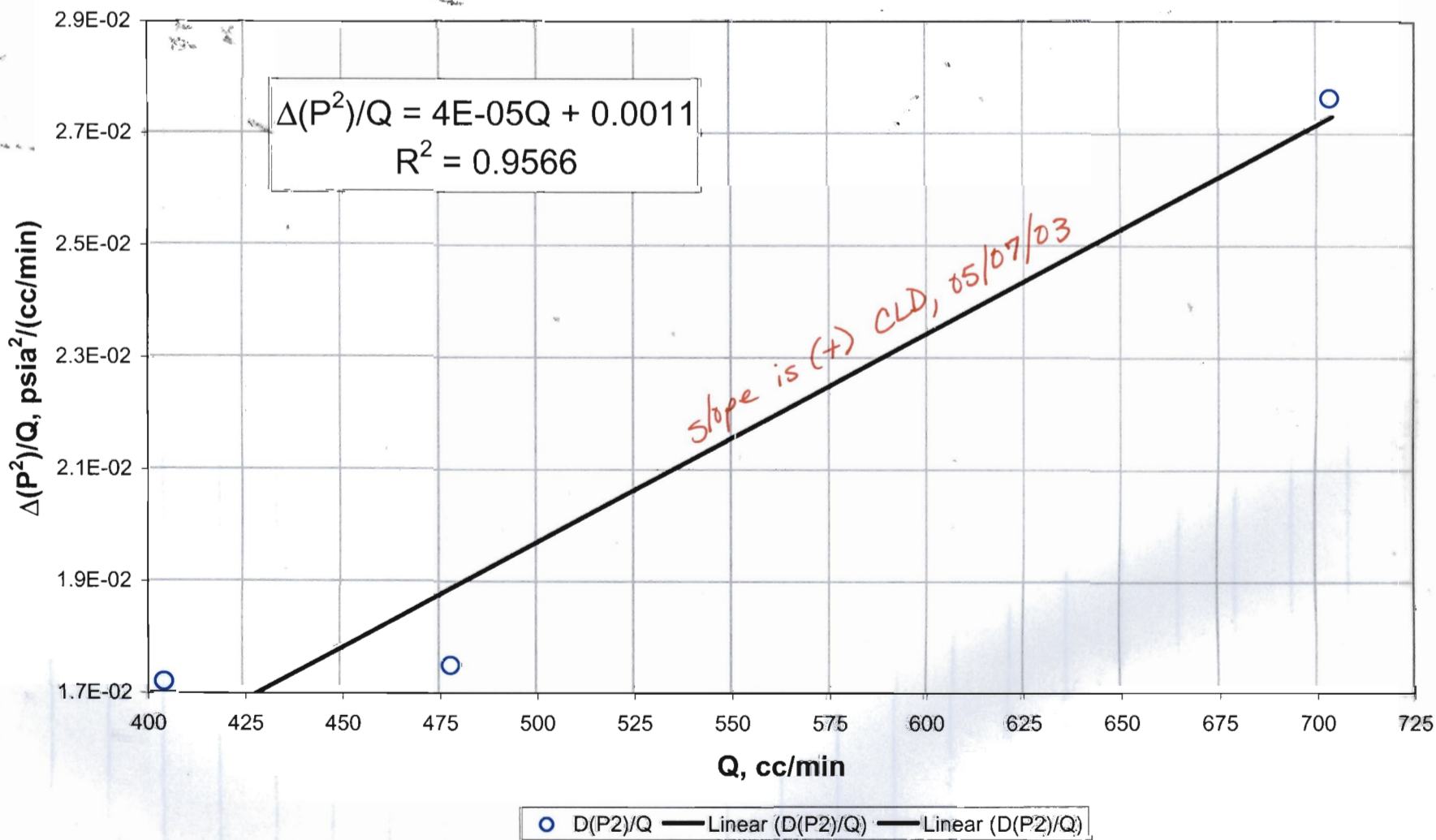


RMM, 12/18/02

Final check for high velocity flow effects:

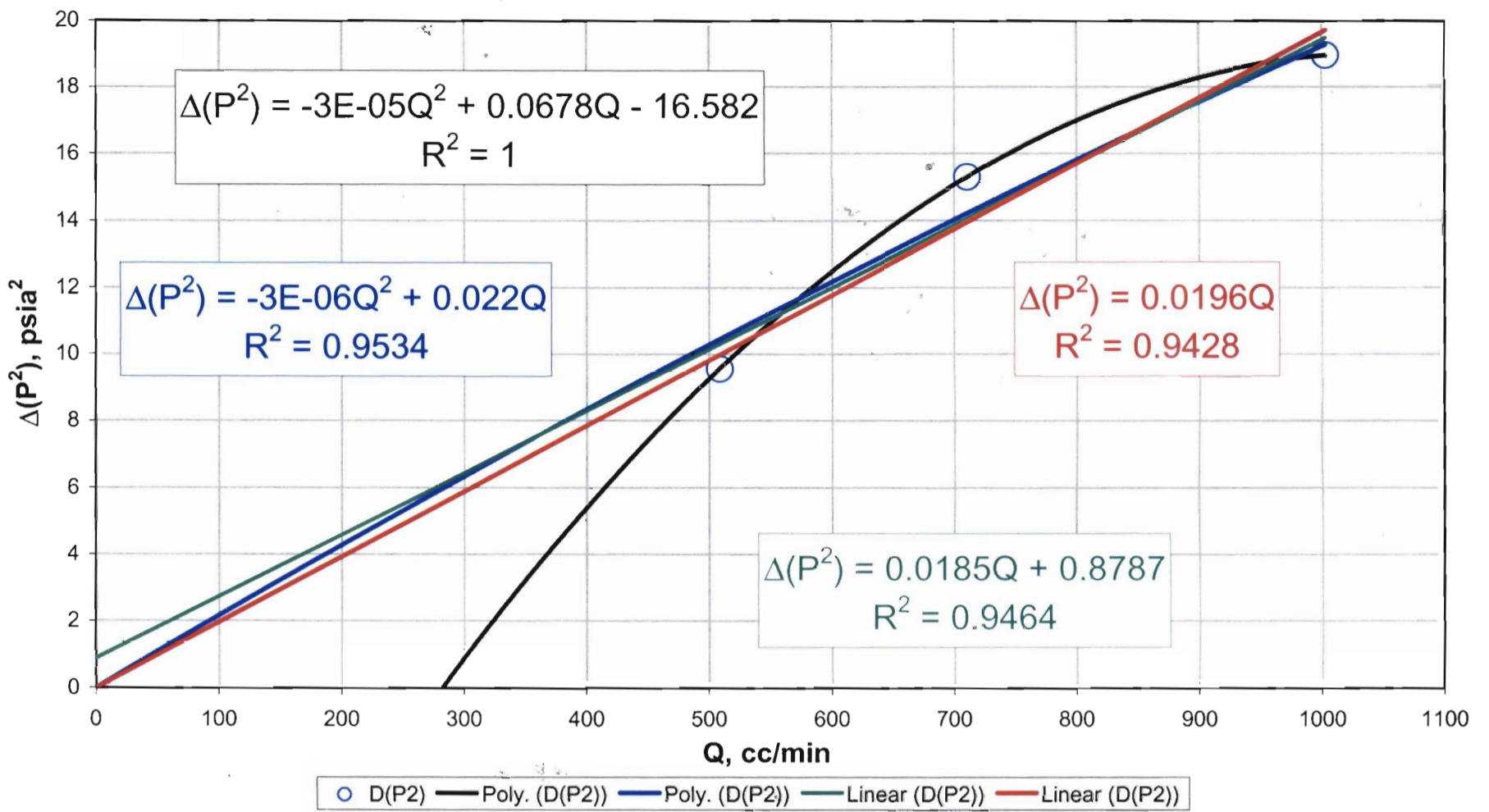
High velocity flow effects are present when the slope is non-zero and positive.

H Transect : Drillhole-5



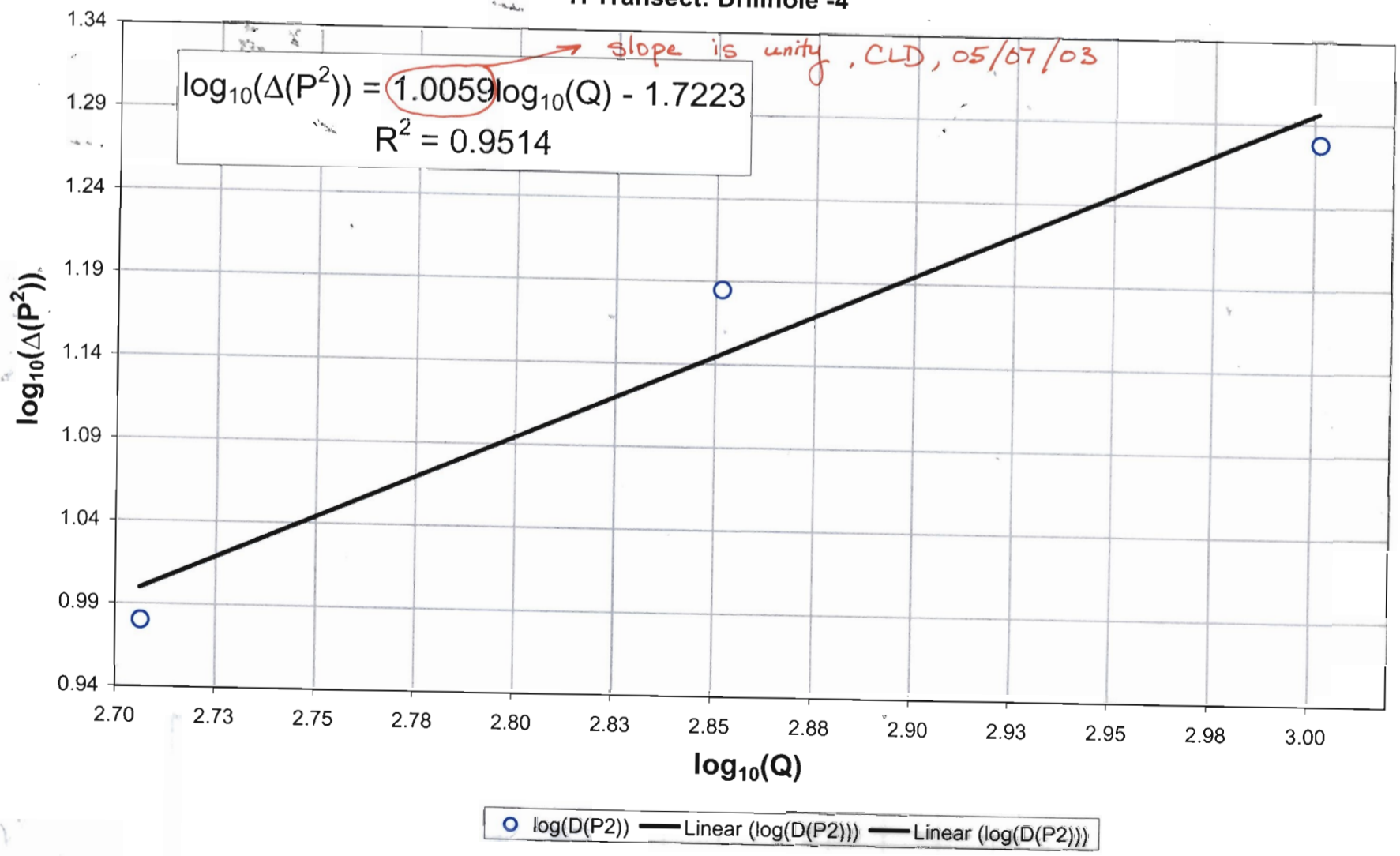
RMM, 12/18/02

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 -4



RMM, 12/18/02

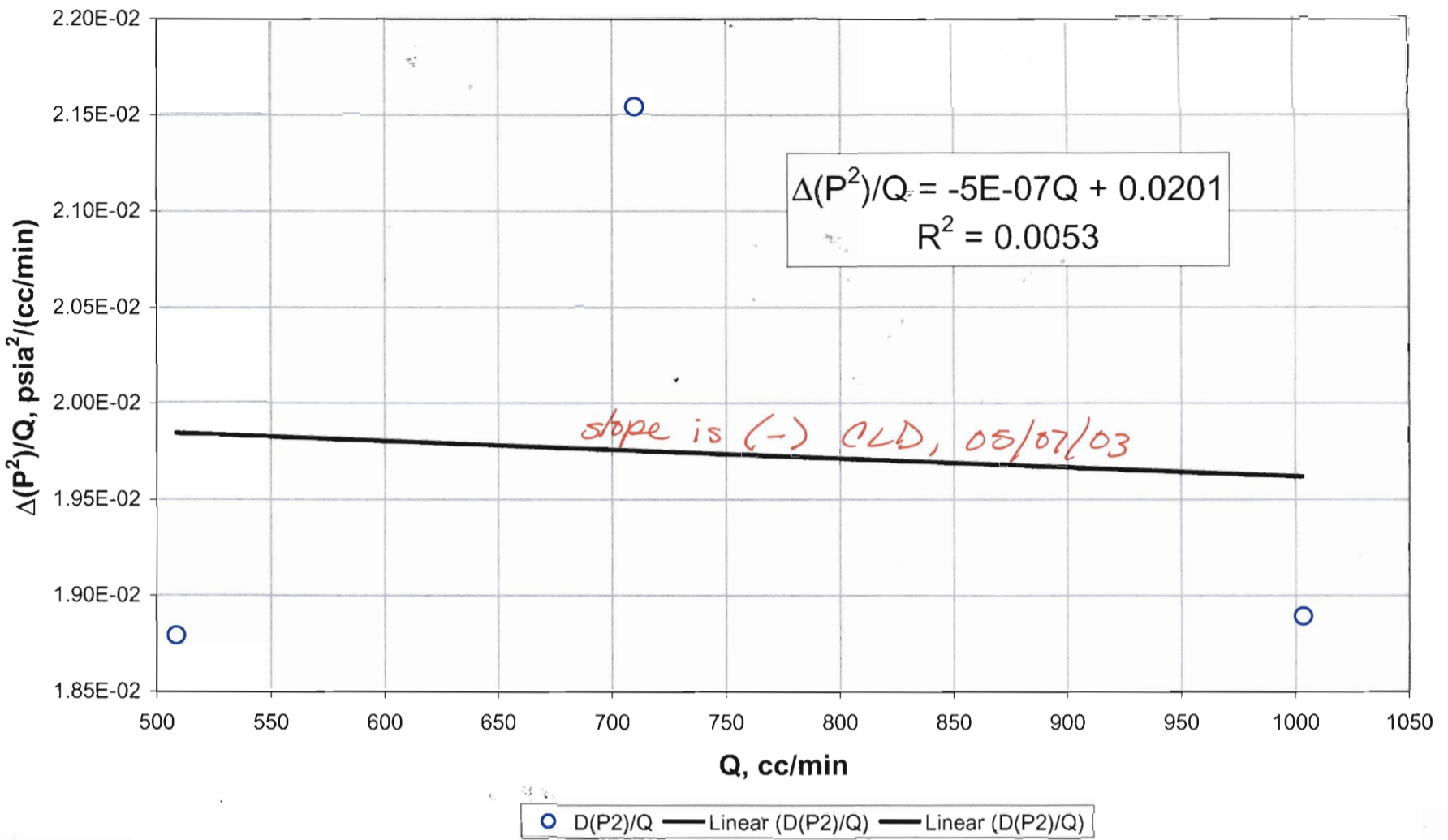
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole -4



RMM 12/18/02

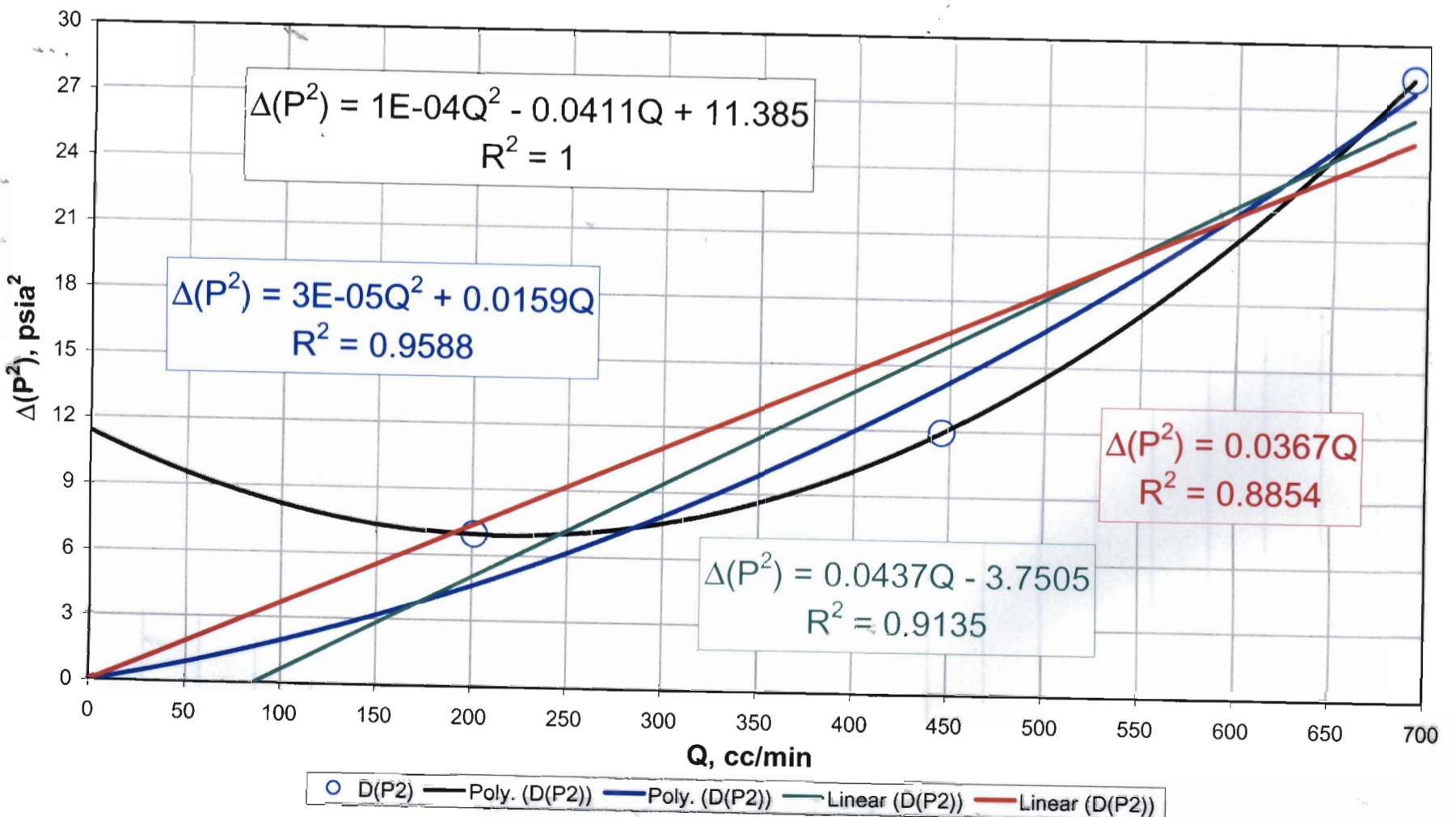
Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole -4

RMM, 12/18/02



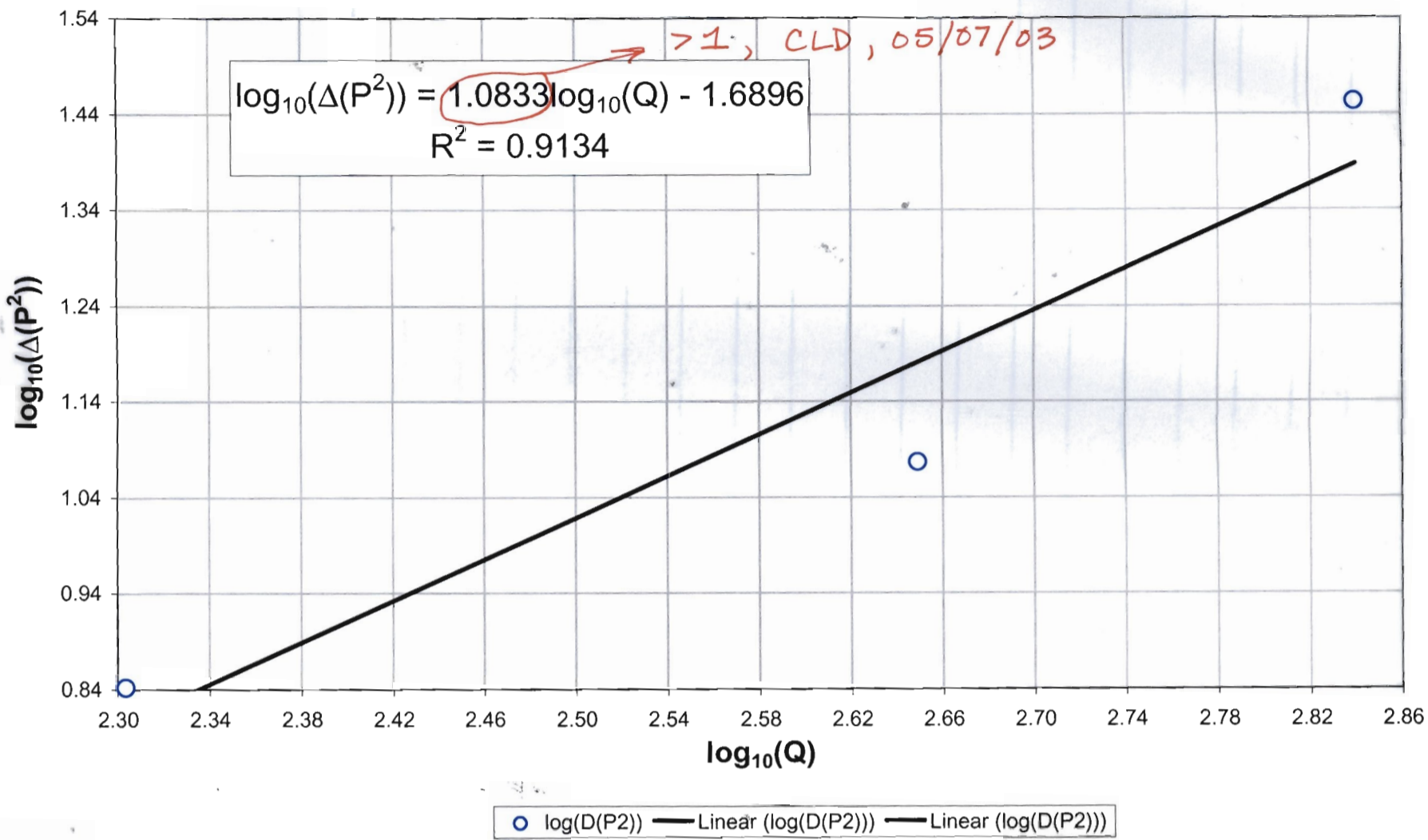
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole -3

RMM, 12/18/02



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)

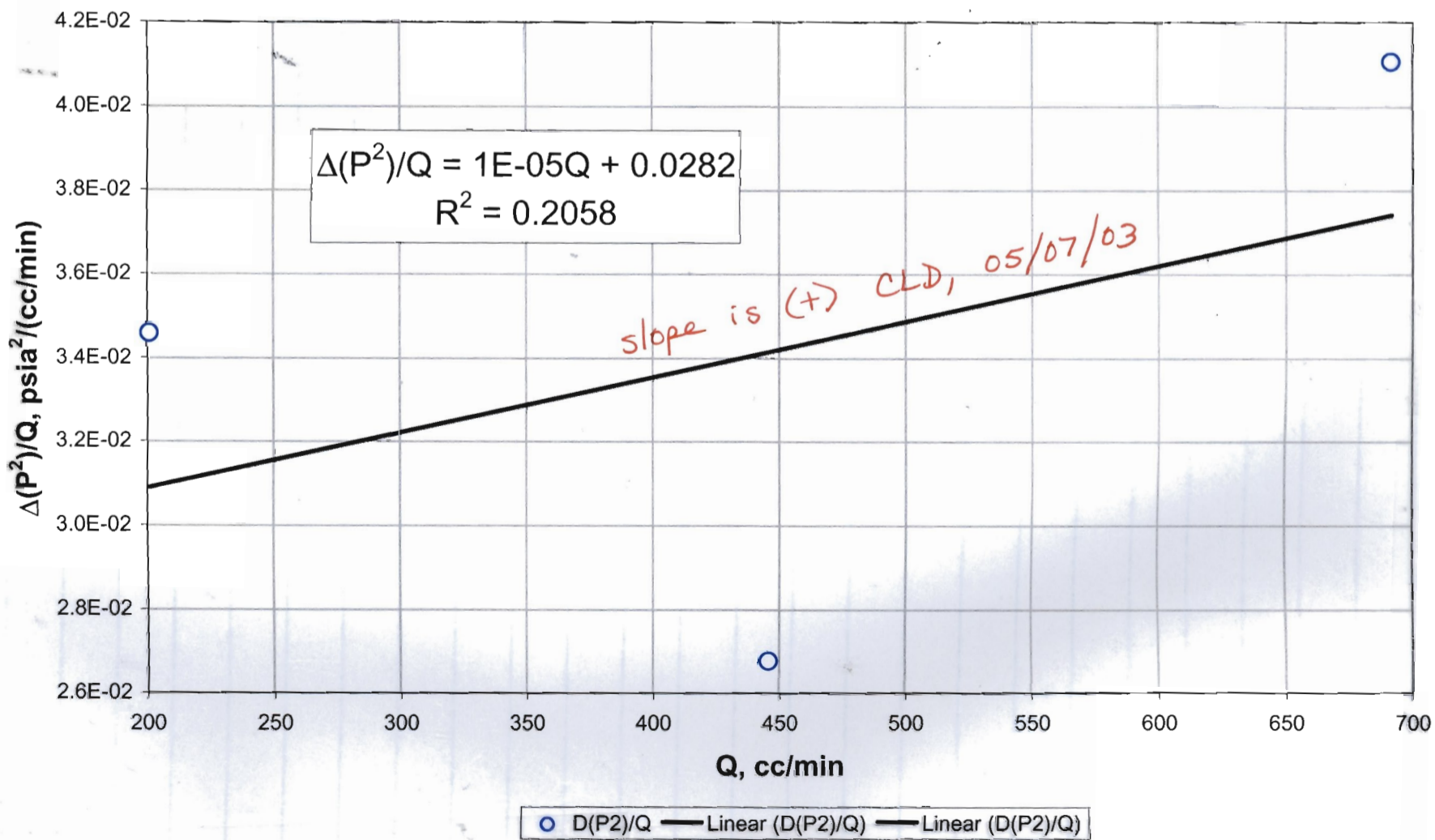
H Transect: Drillhole -3



Final check for high velocity flow effects:

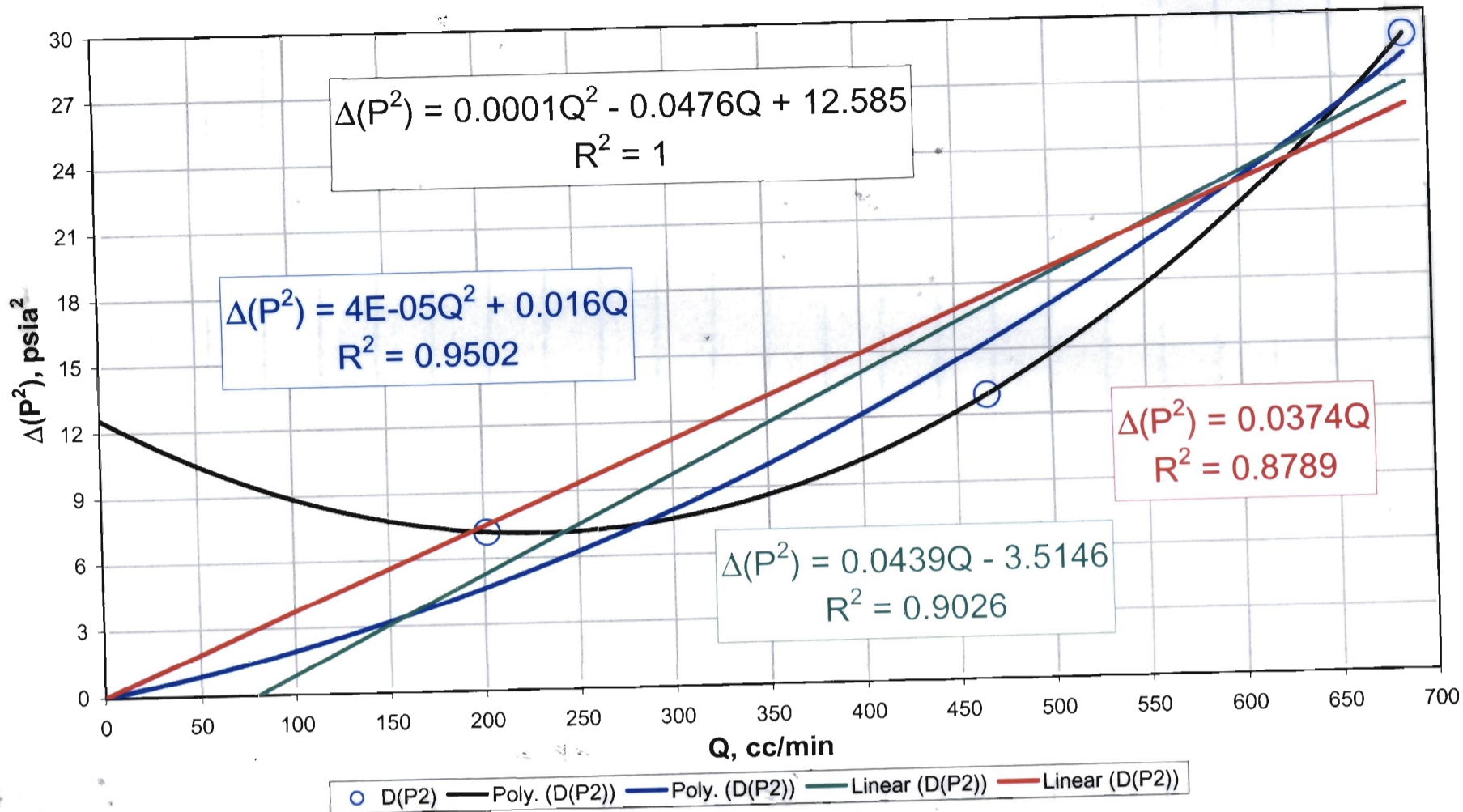
High velocity flow effects are present when the slope is non-zero and positive.

H Transect : Drillhole -3



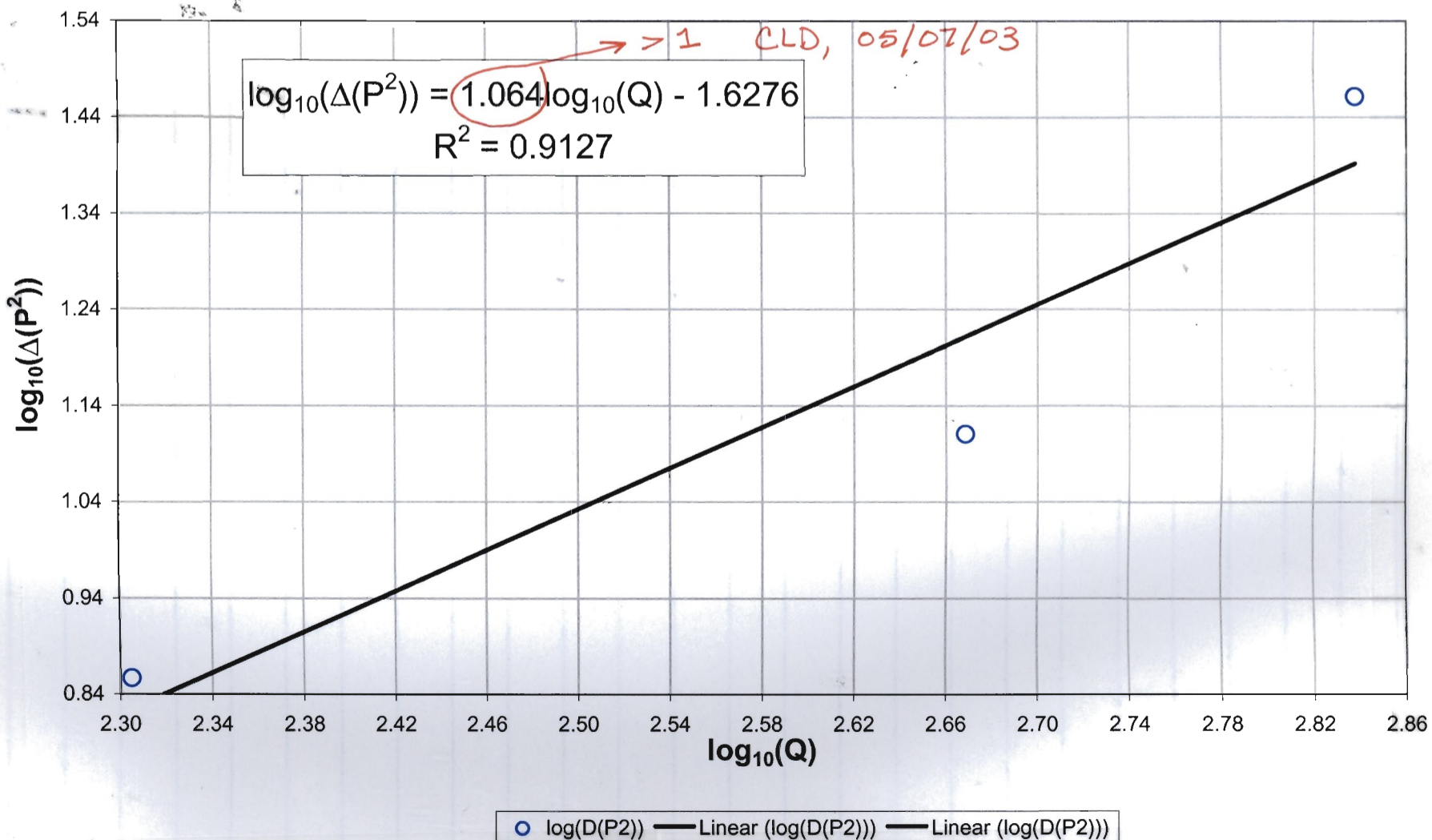


Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole -2



RUM, 12/18/02

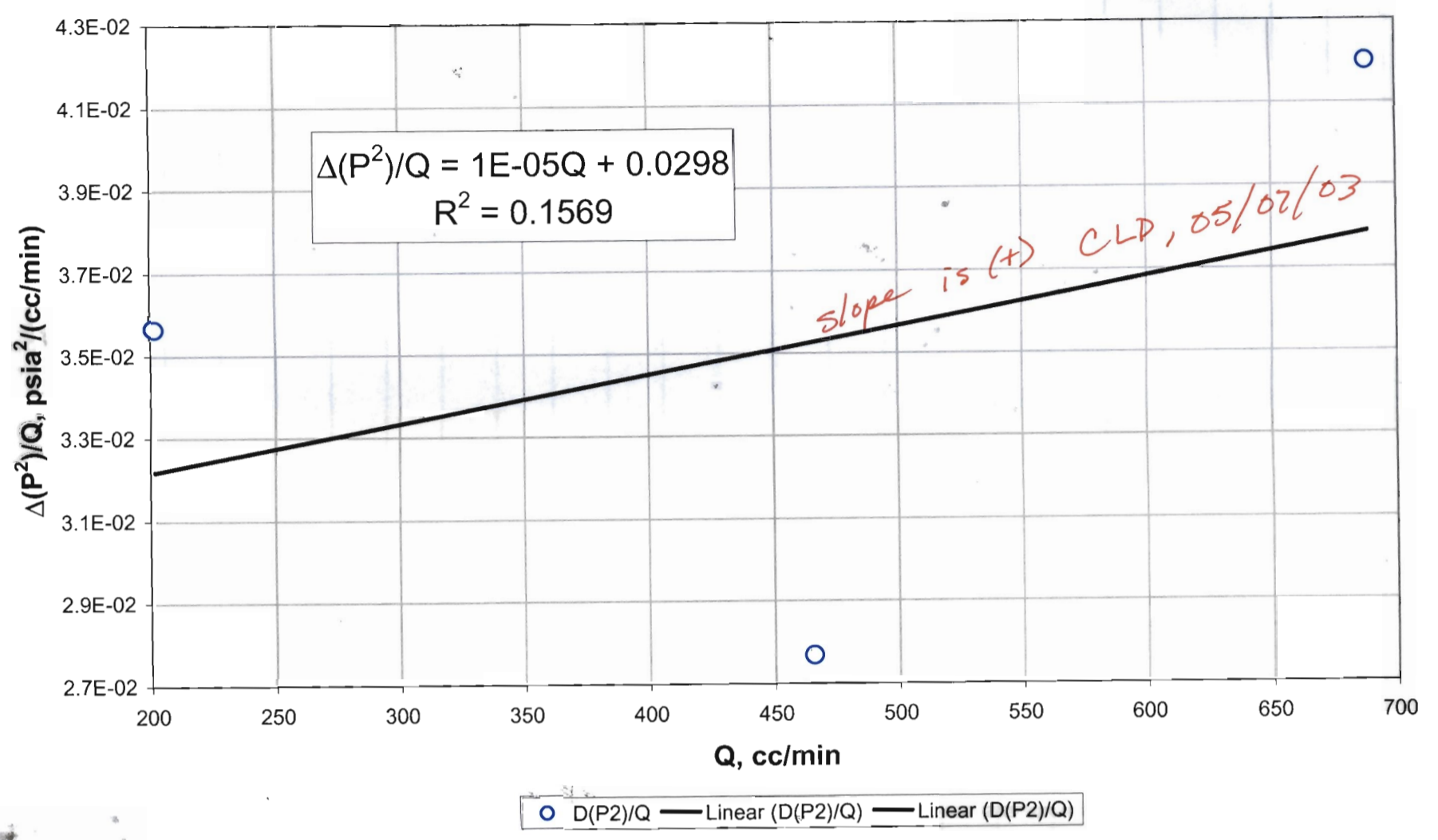
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of  
 high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole -2



RUM, 12/18/02

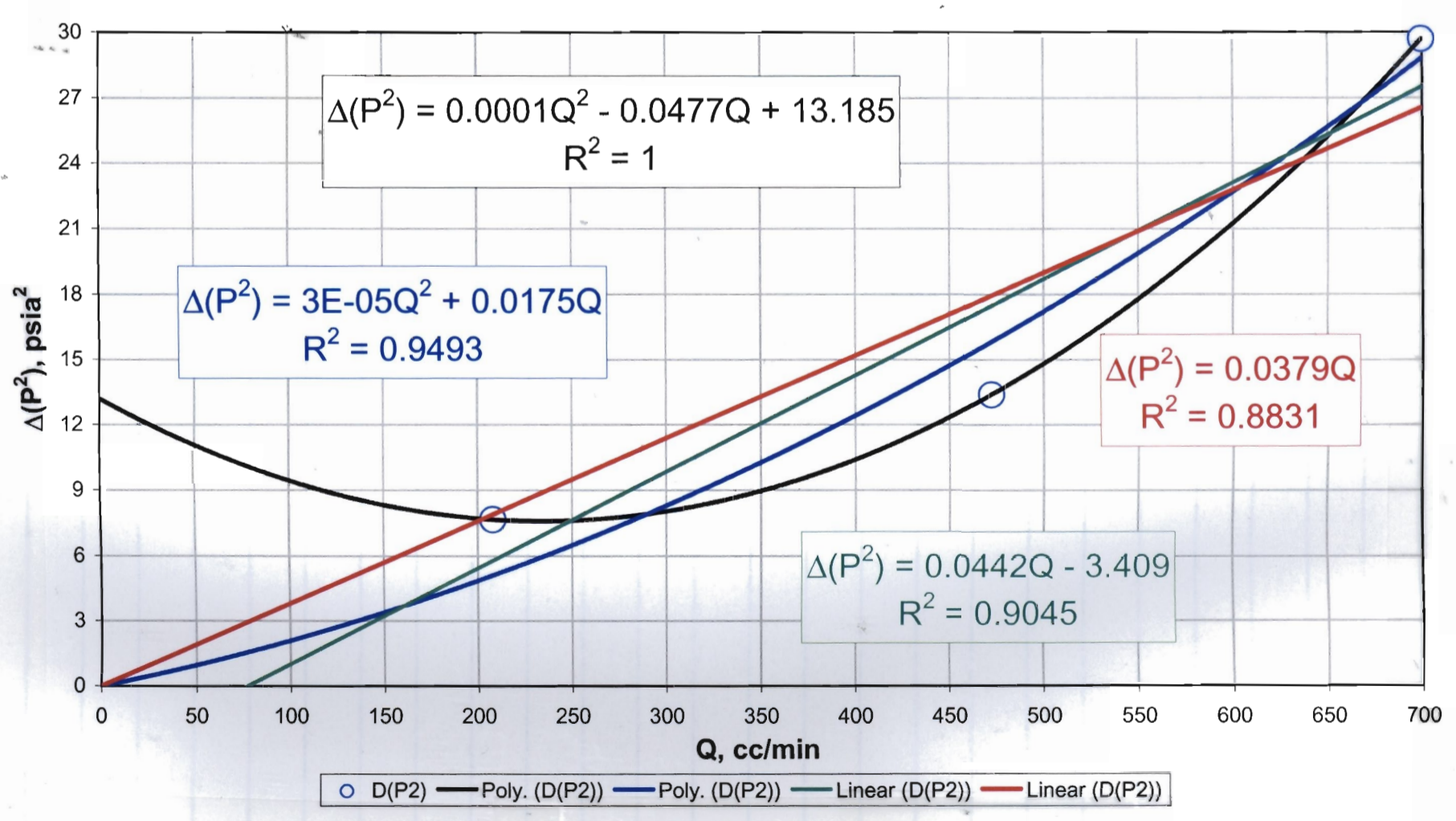
Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole -2

RNM . 12/18/02

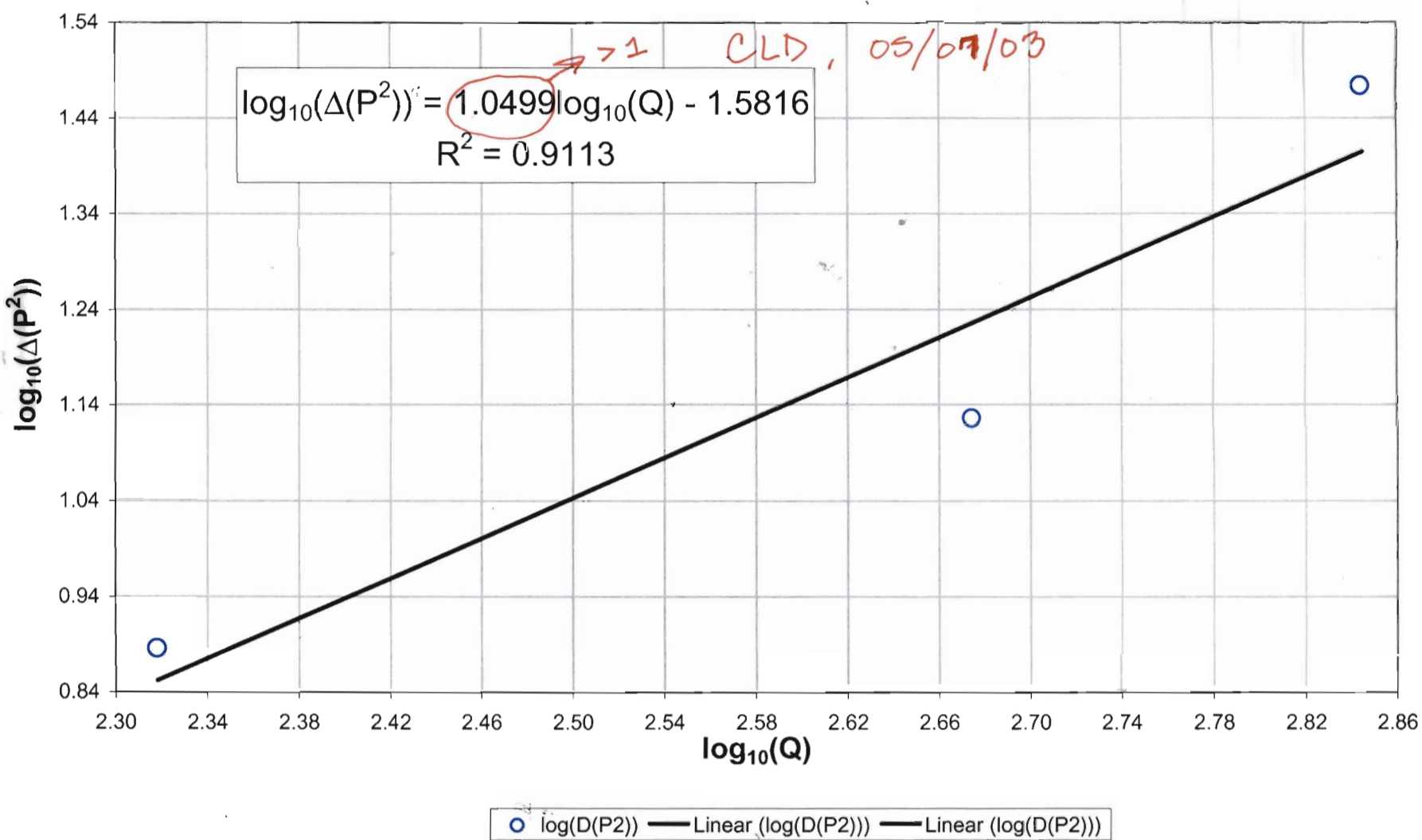


Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole -1

RNM . 12/18/02

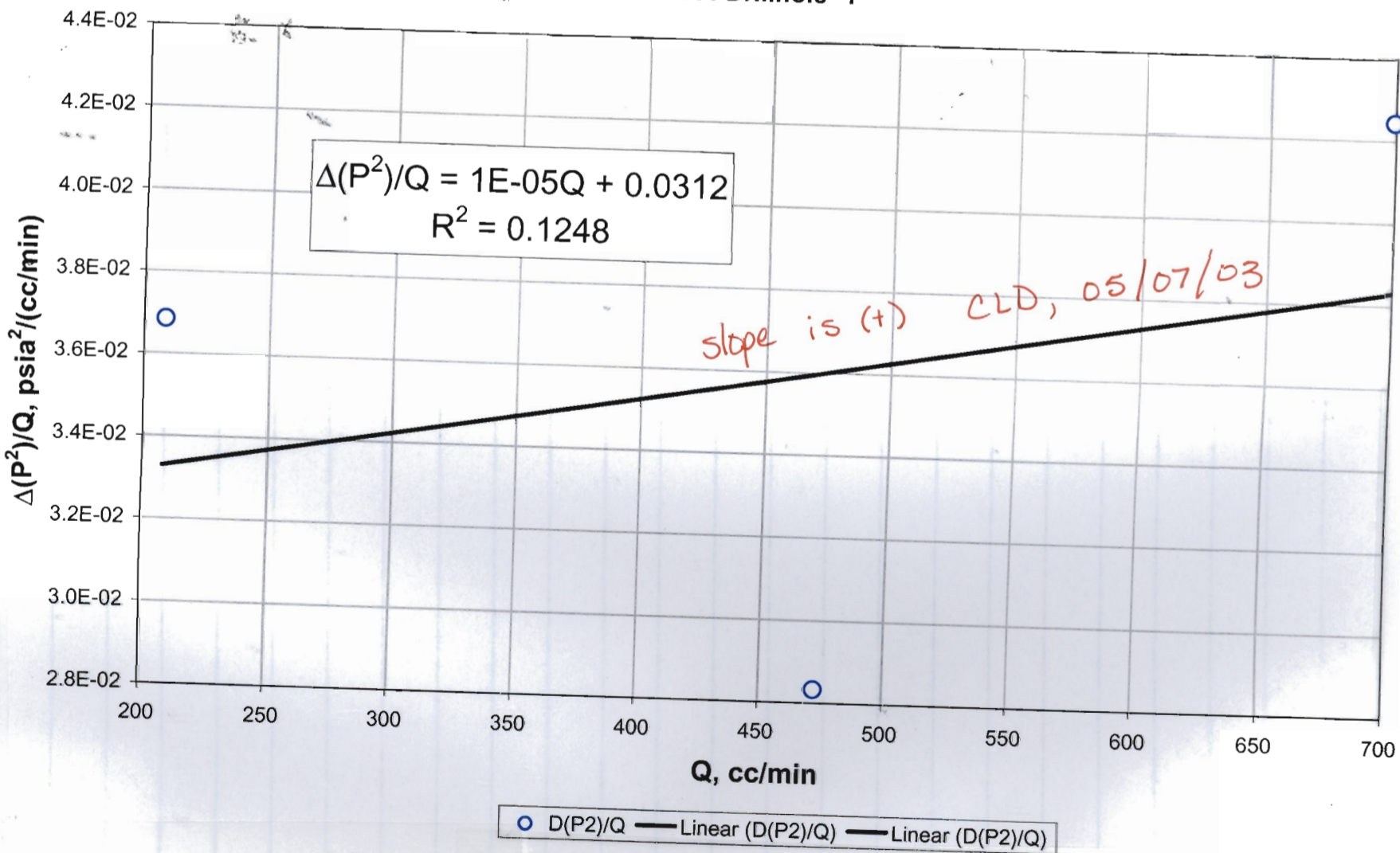


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)  
H Transect: Drillhole -1



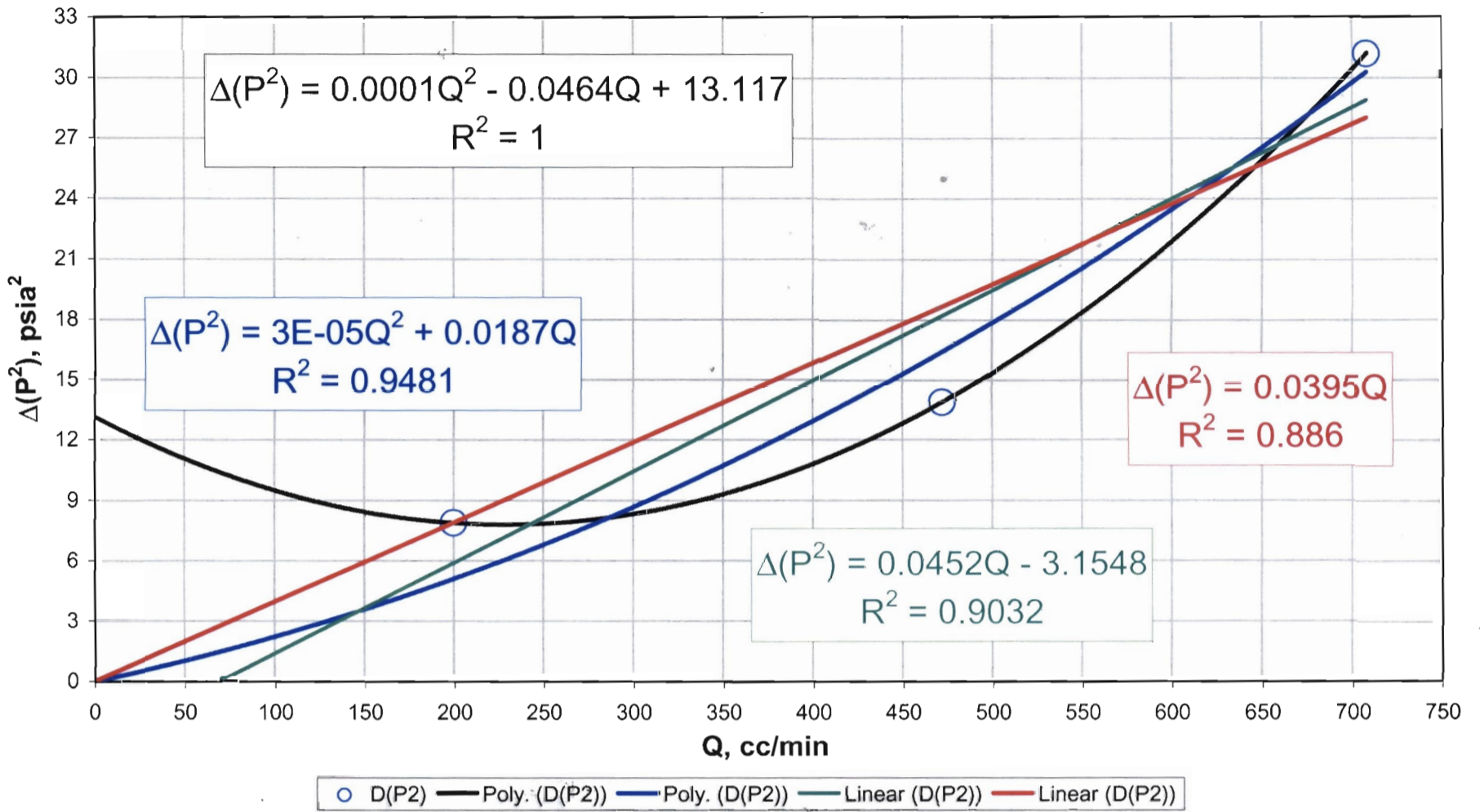
RNM, 12/18/02

Final check for high velocity flow effects:  
High velocity flow effects are present when the slope is non-zero and positive.  
H Transect : Drillhole -1



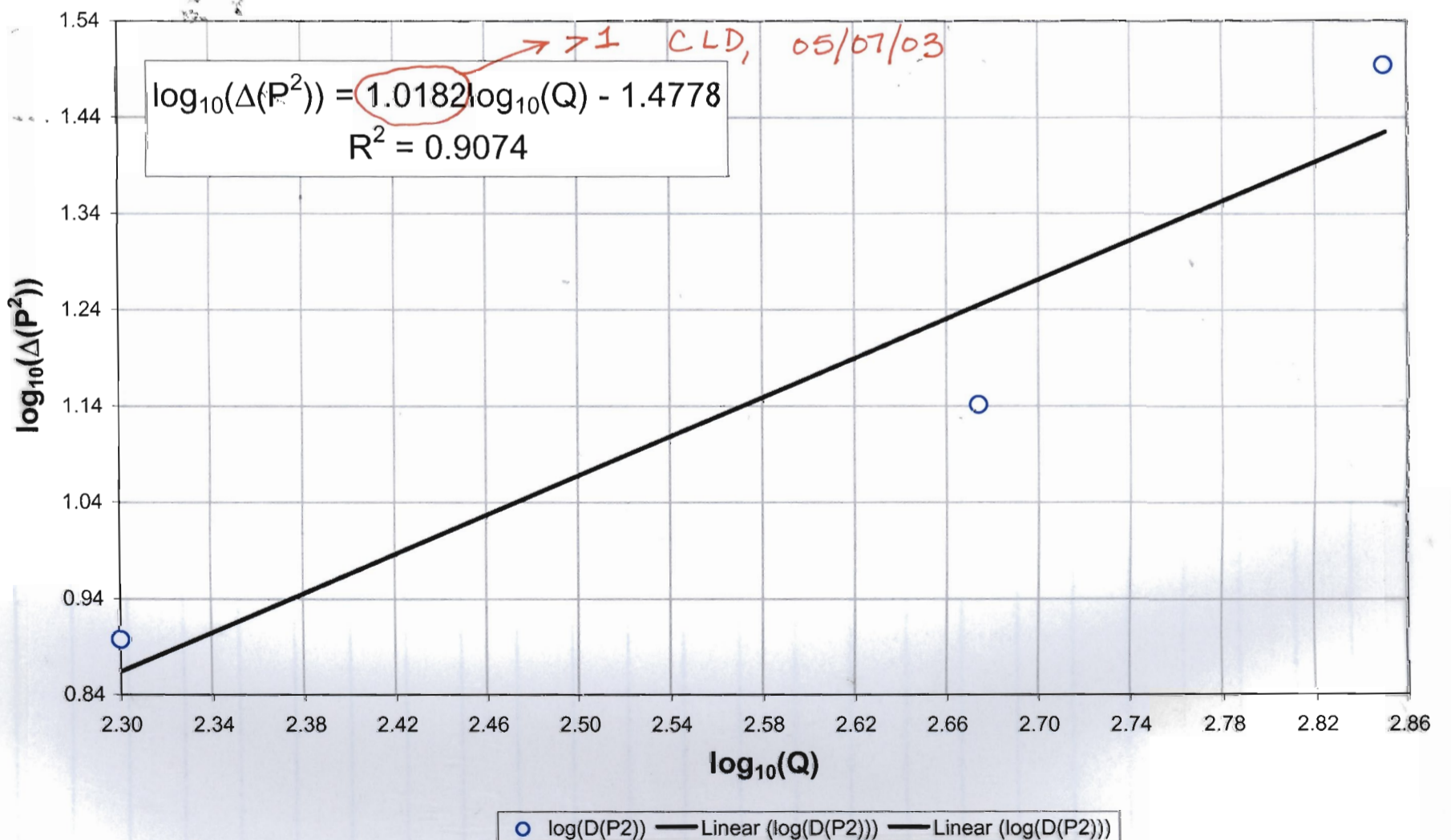
RNM, 12/18/02

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 0



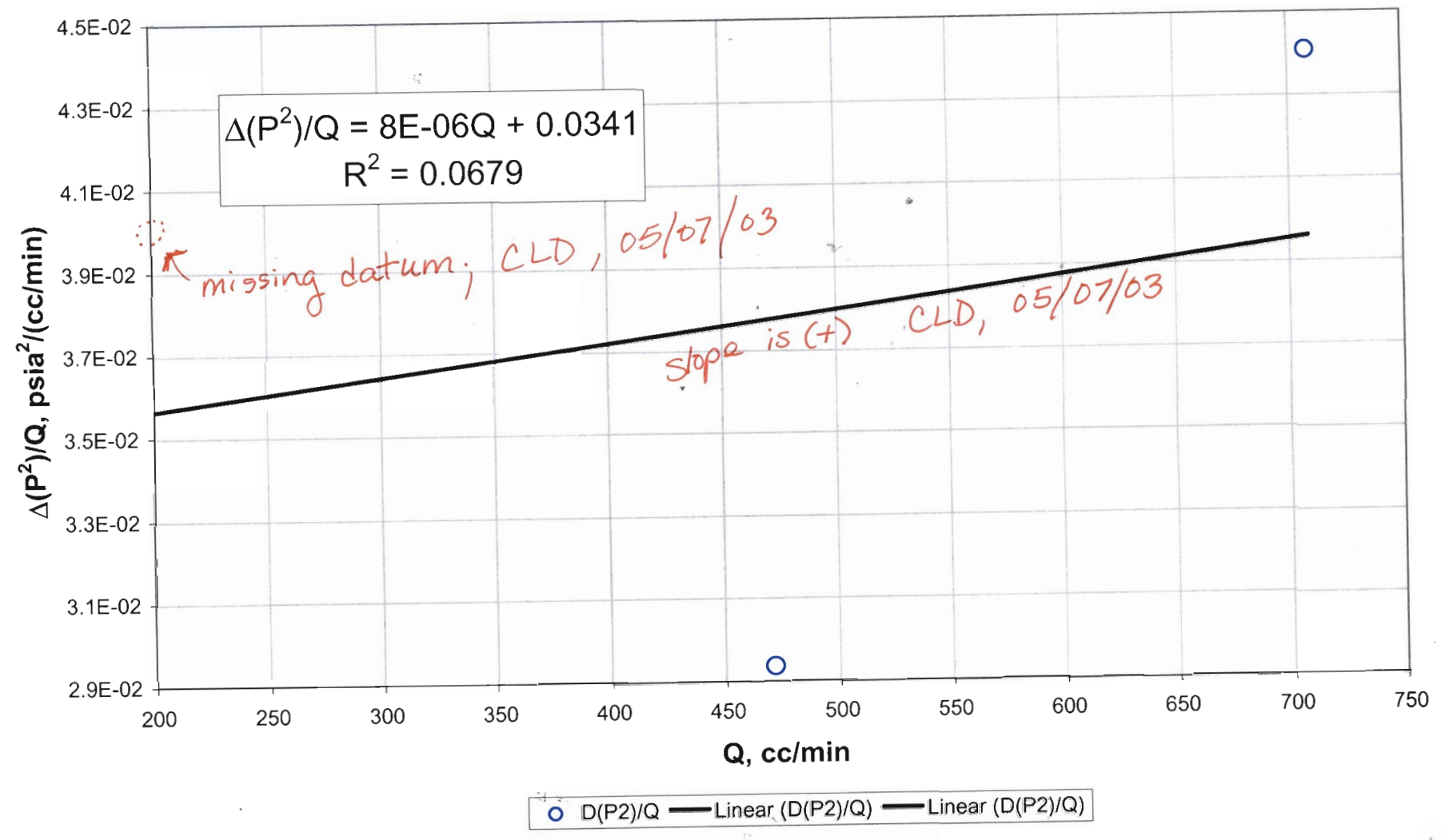
RWM, 12/18/02

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 0



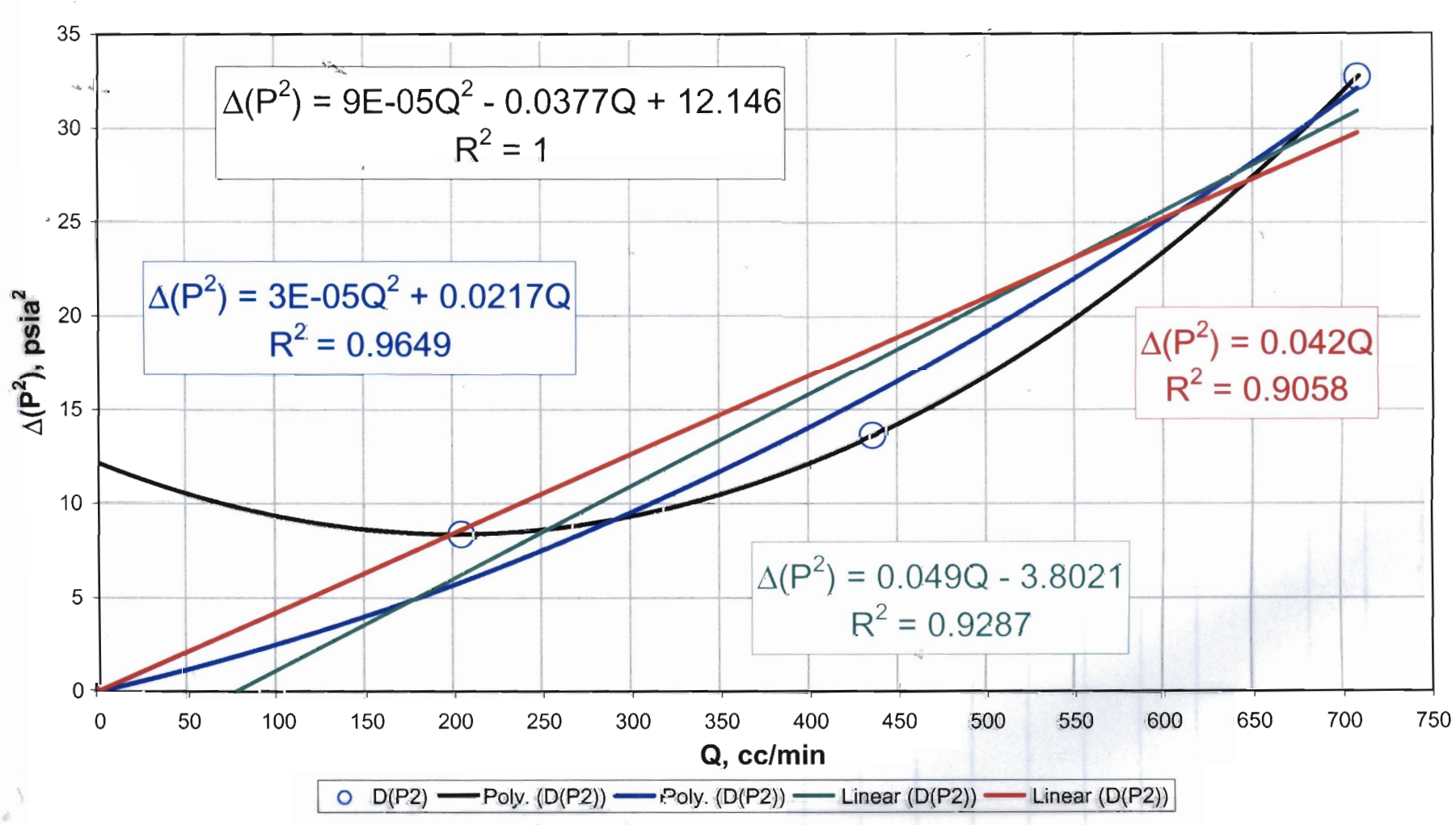
RWM, 12/18/02

Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 0



RNM, 12/18/03

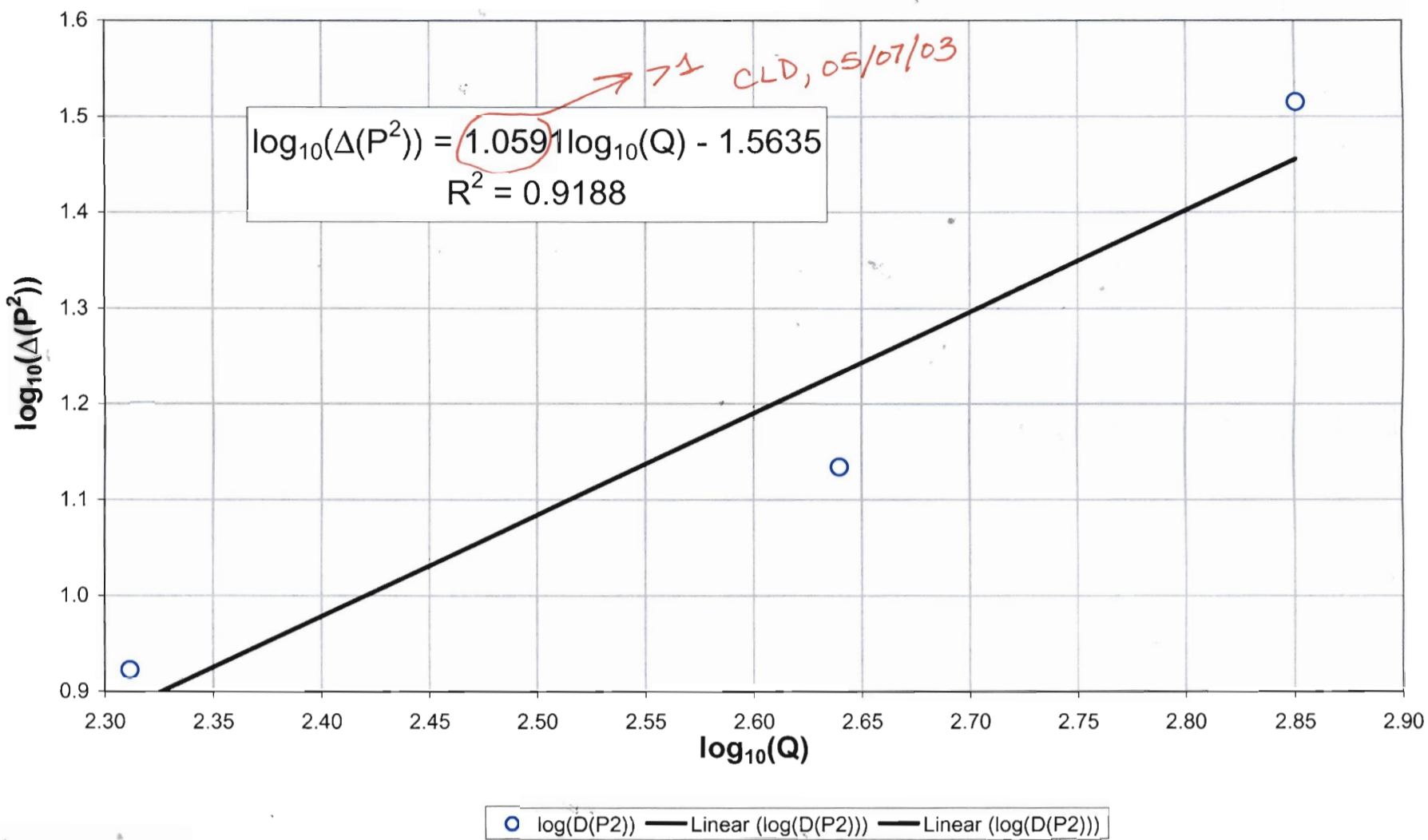
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole 1



RNM, 12/18/03

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)

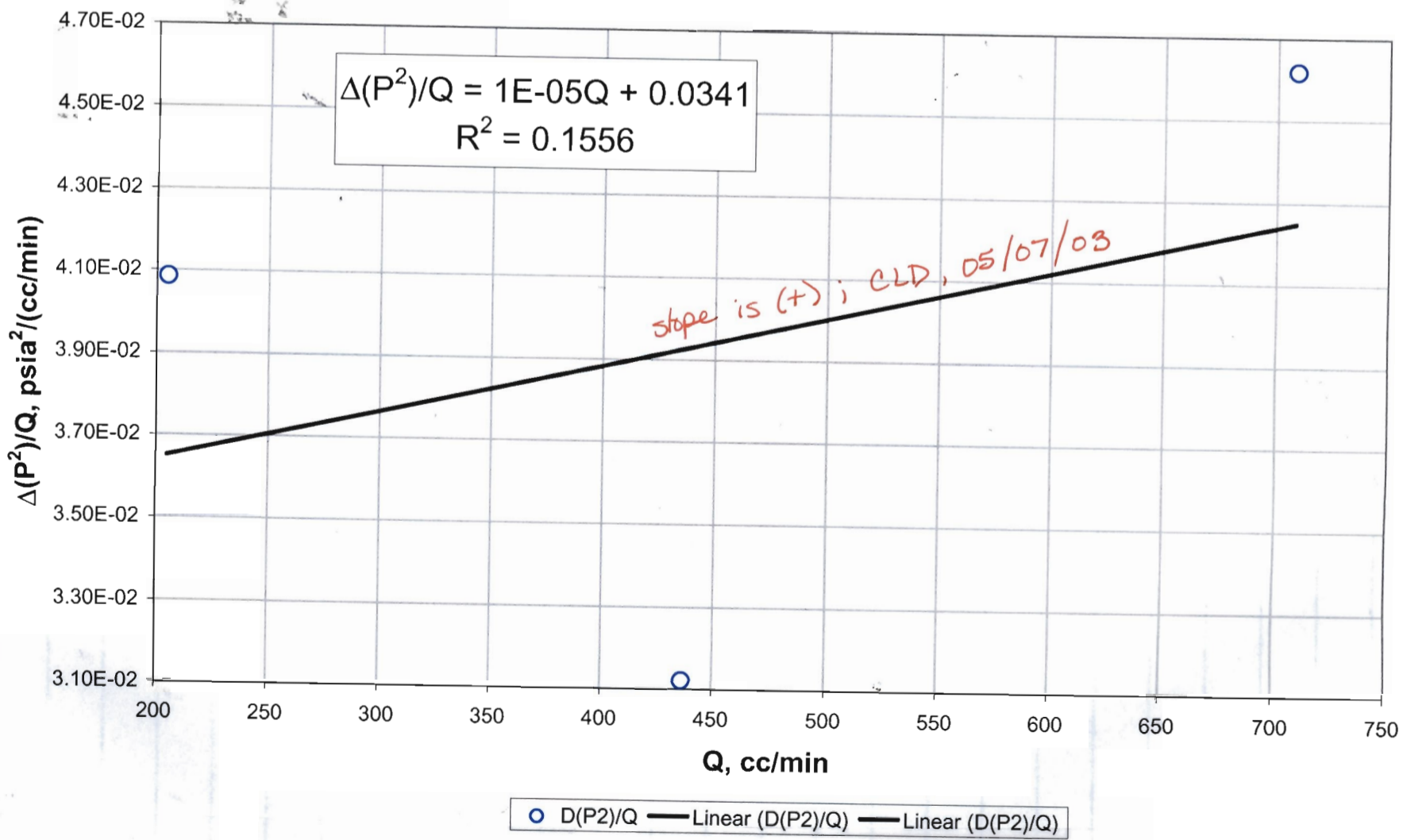
H Transect: Drillhole 1



RWN, 12-18-08

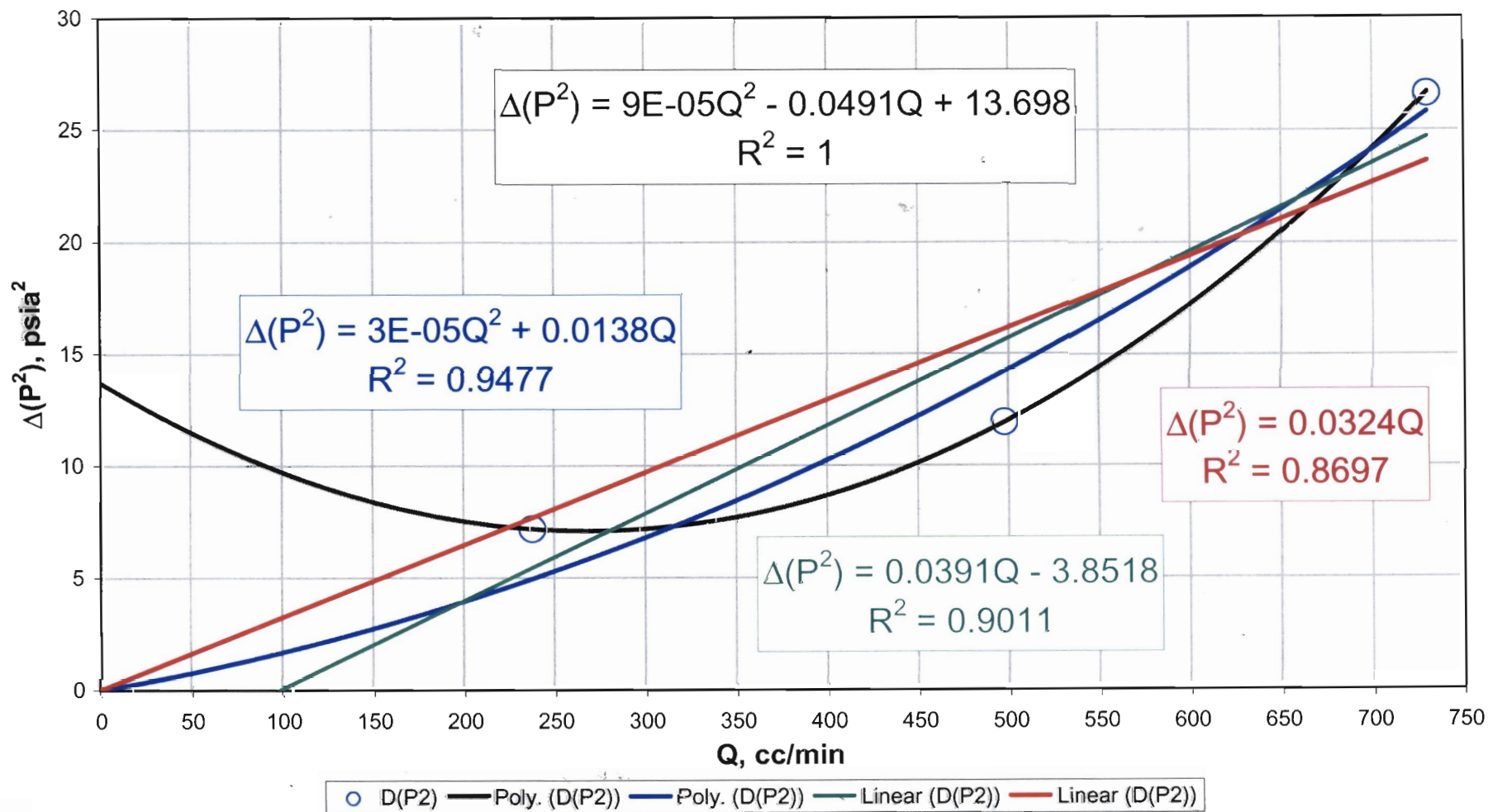
Final check for high velocity flow effects: High velocity flow effects are present when the slope is non-zero and positive.

H Transect : Drillhole 1



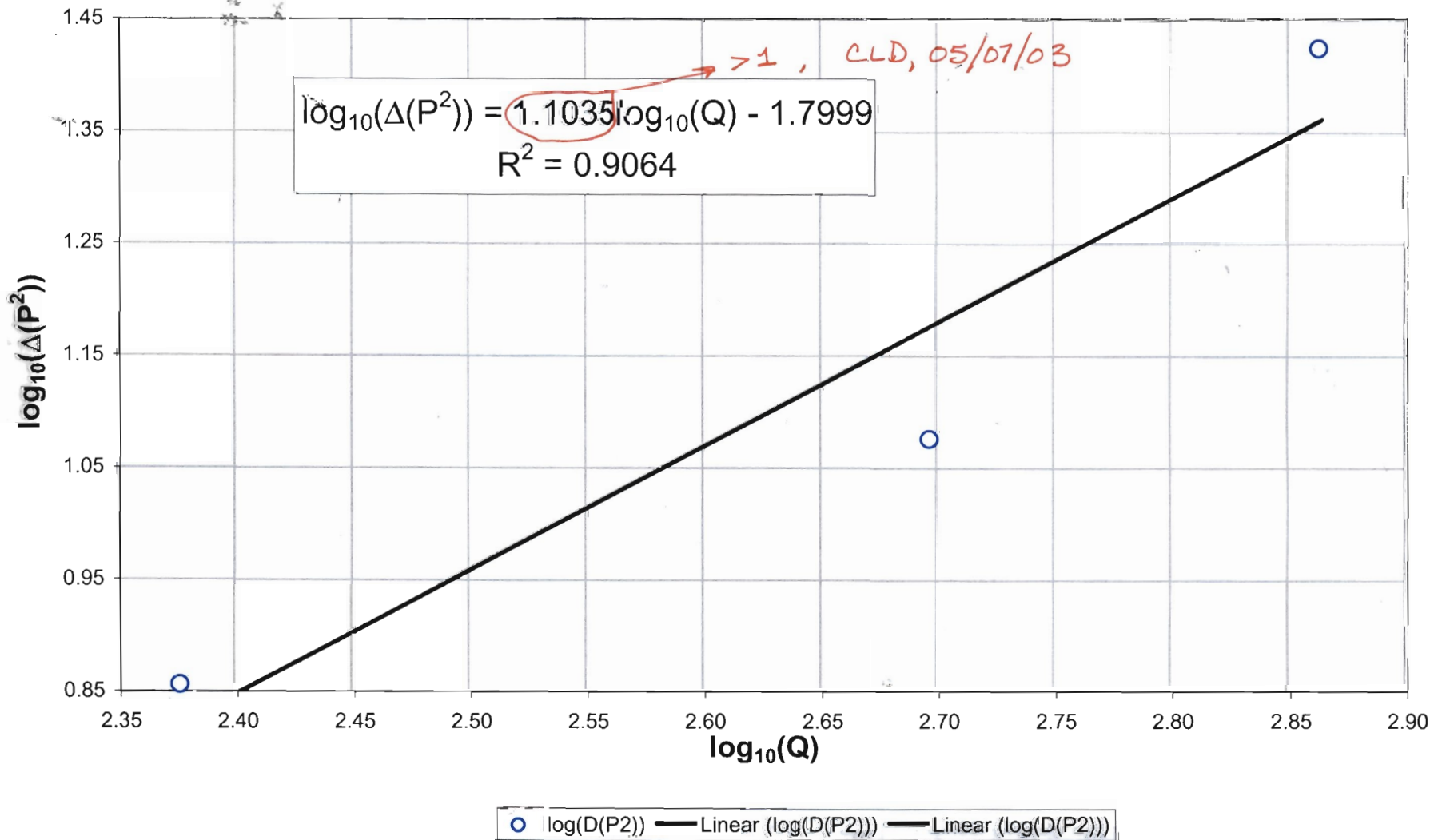
RWN, 12-18-08

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 2



RNM, 12/18/02

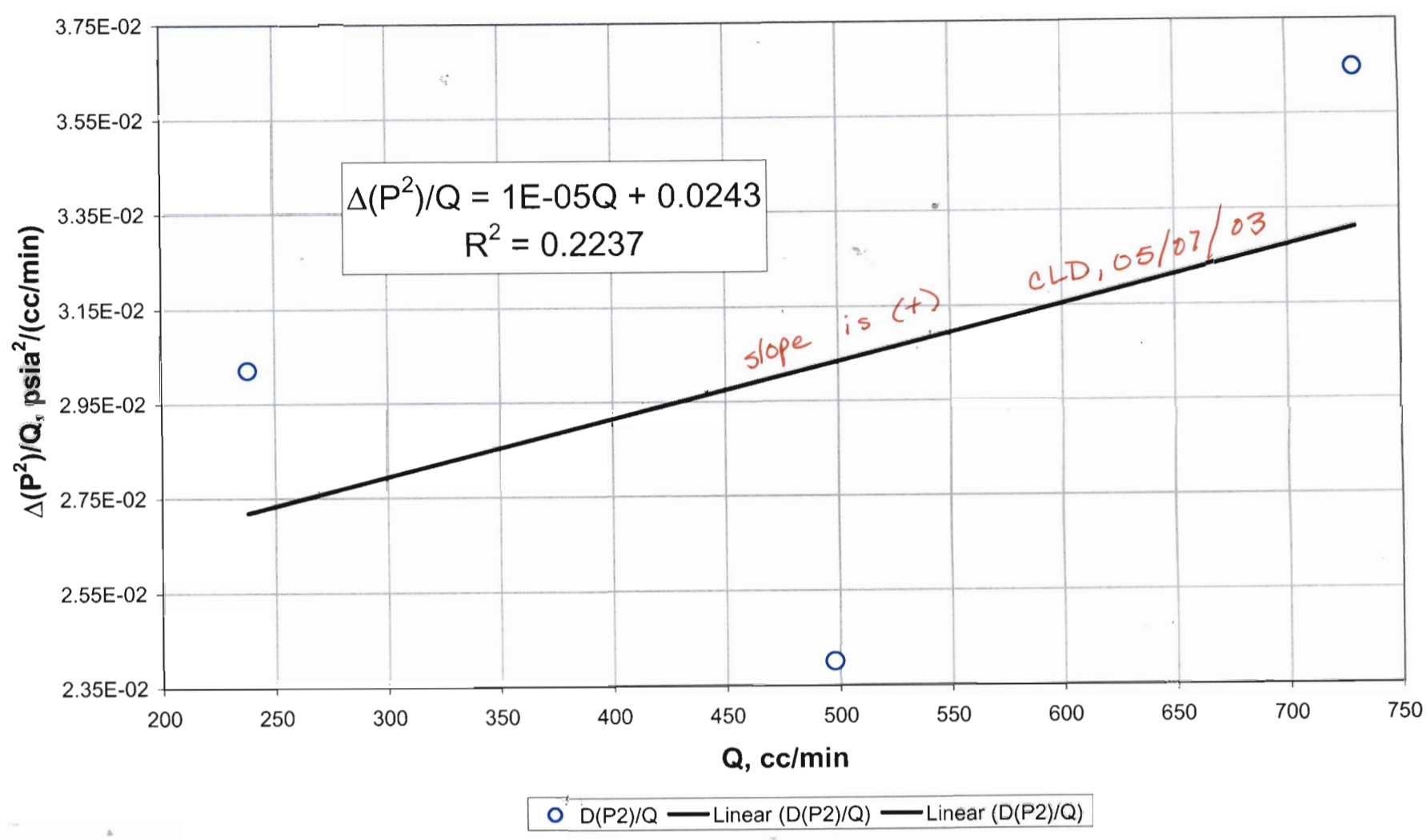
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole 2



RNM, 12/18/02

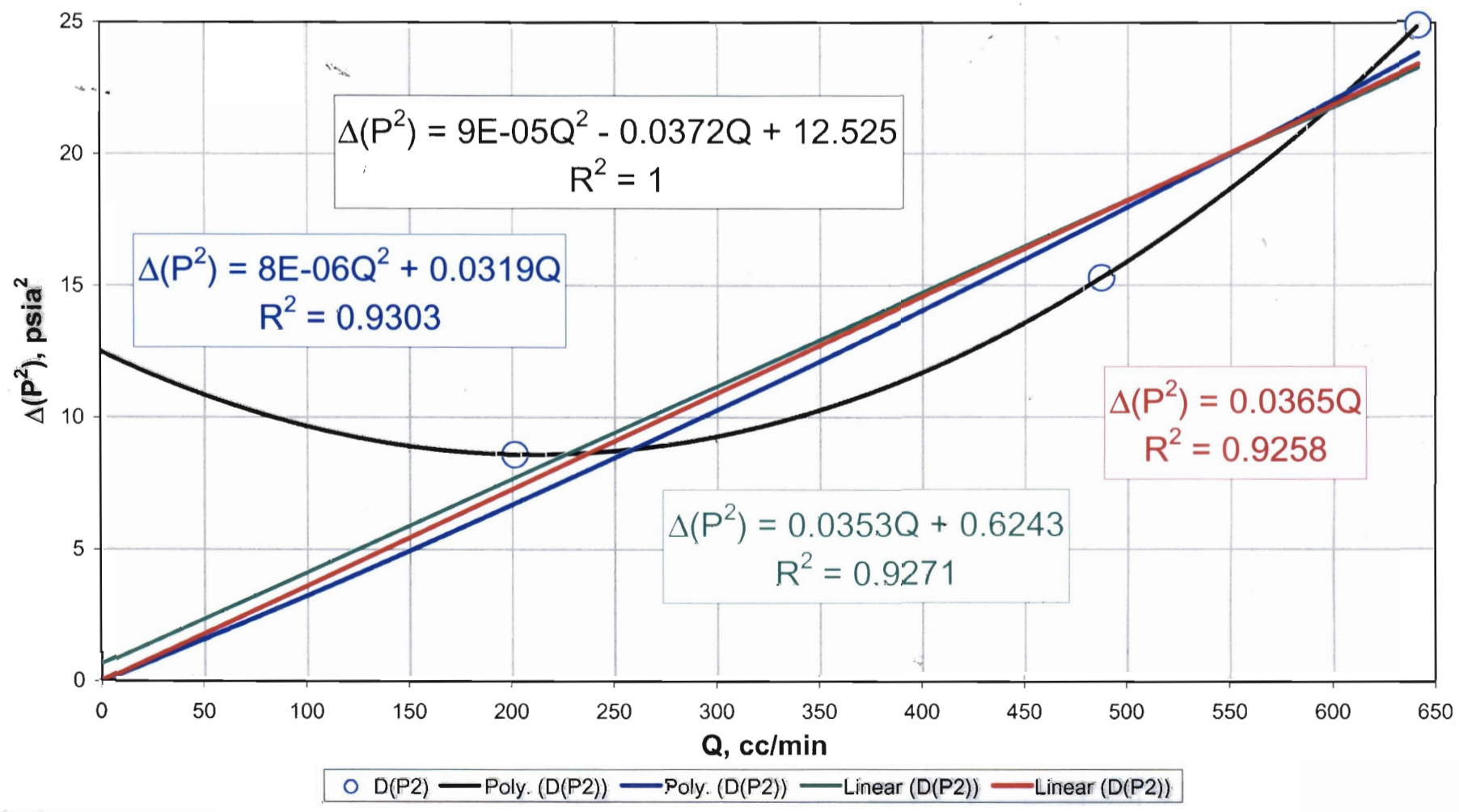
Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 2

RNM, 12/18/02



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 3

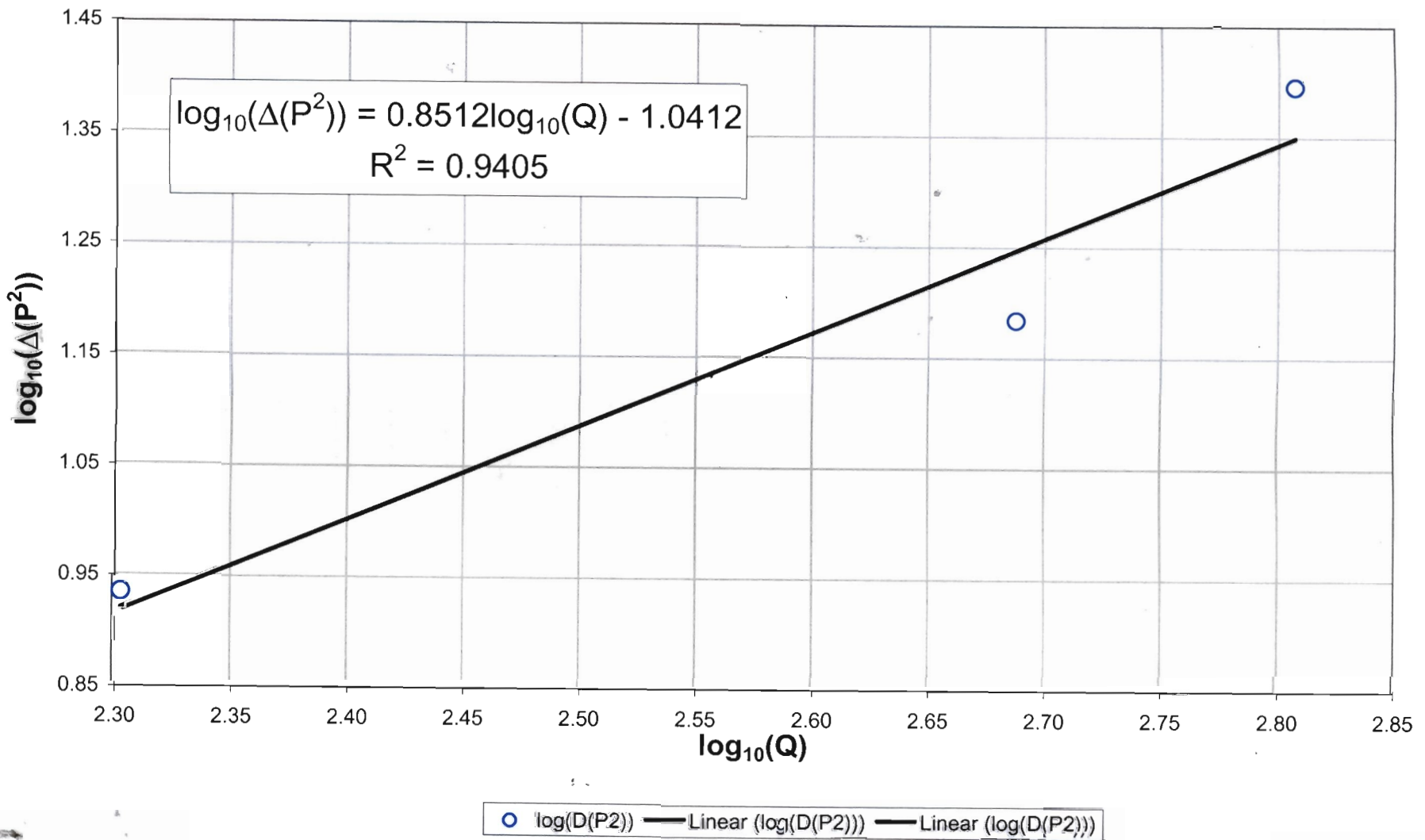
RNM, 12/18/02





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)

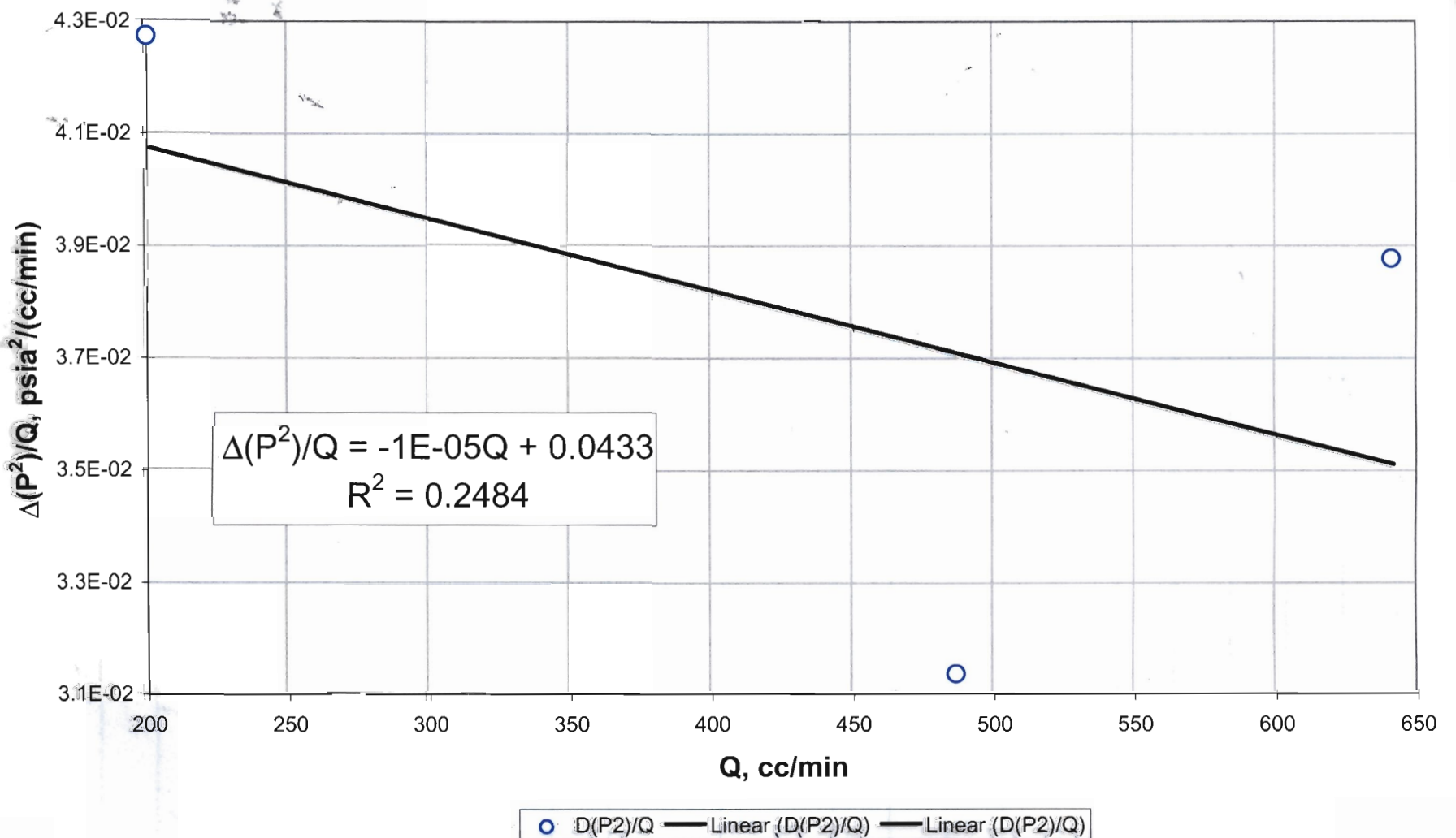
H Transect: Drillhole 3



RNM, 12/18/02

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

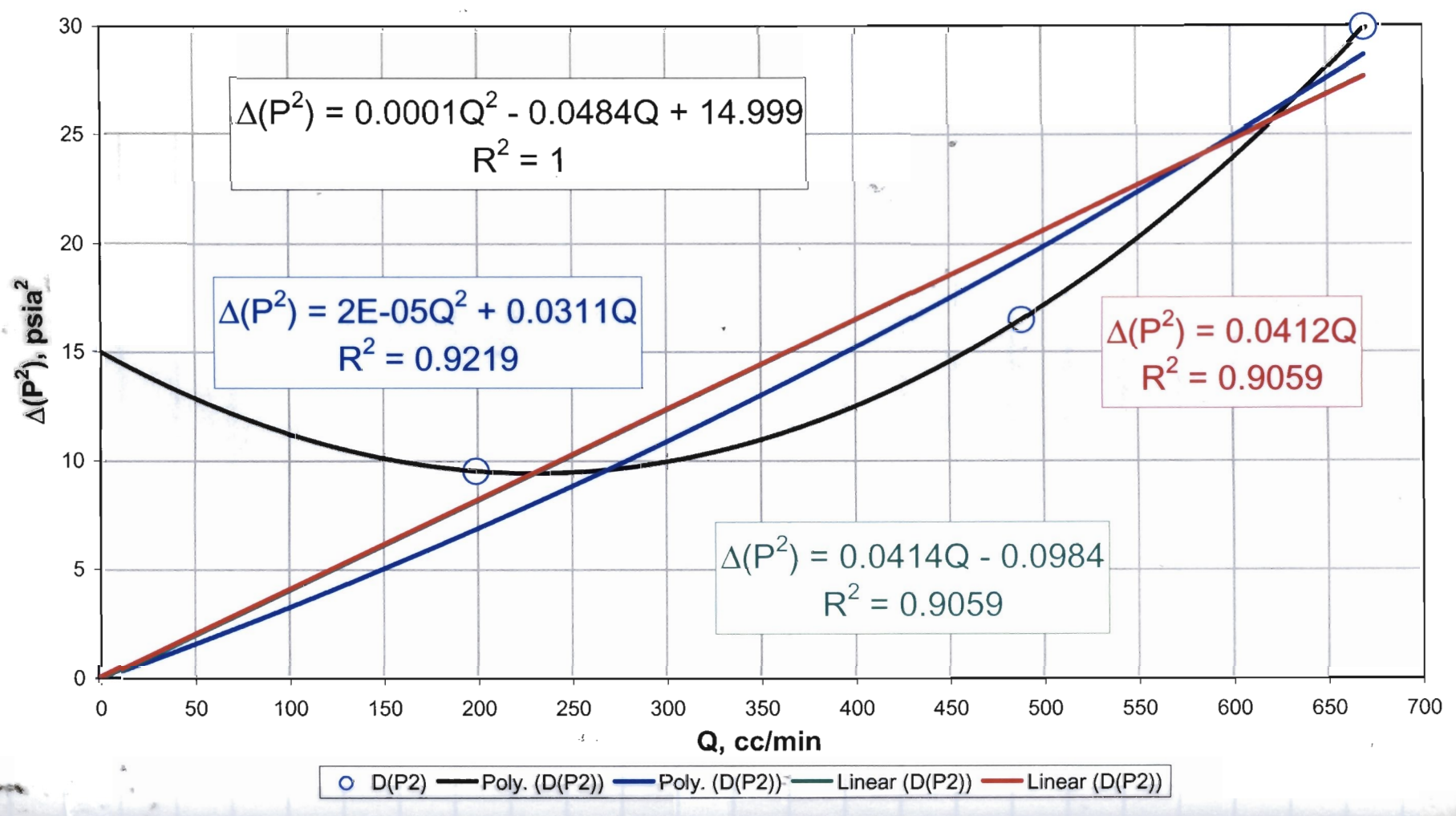
H Transect : Drillhole 3



RNM, 12/18/02

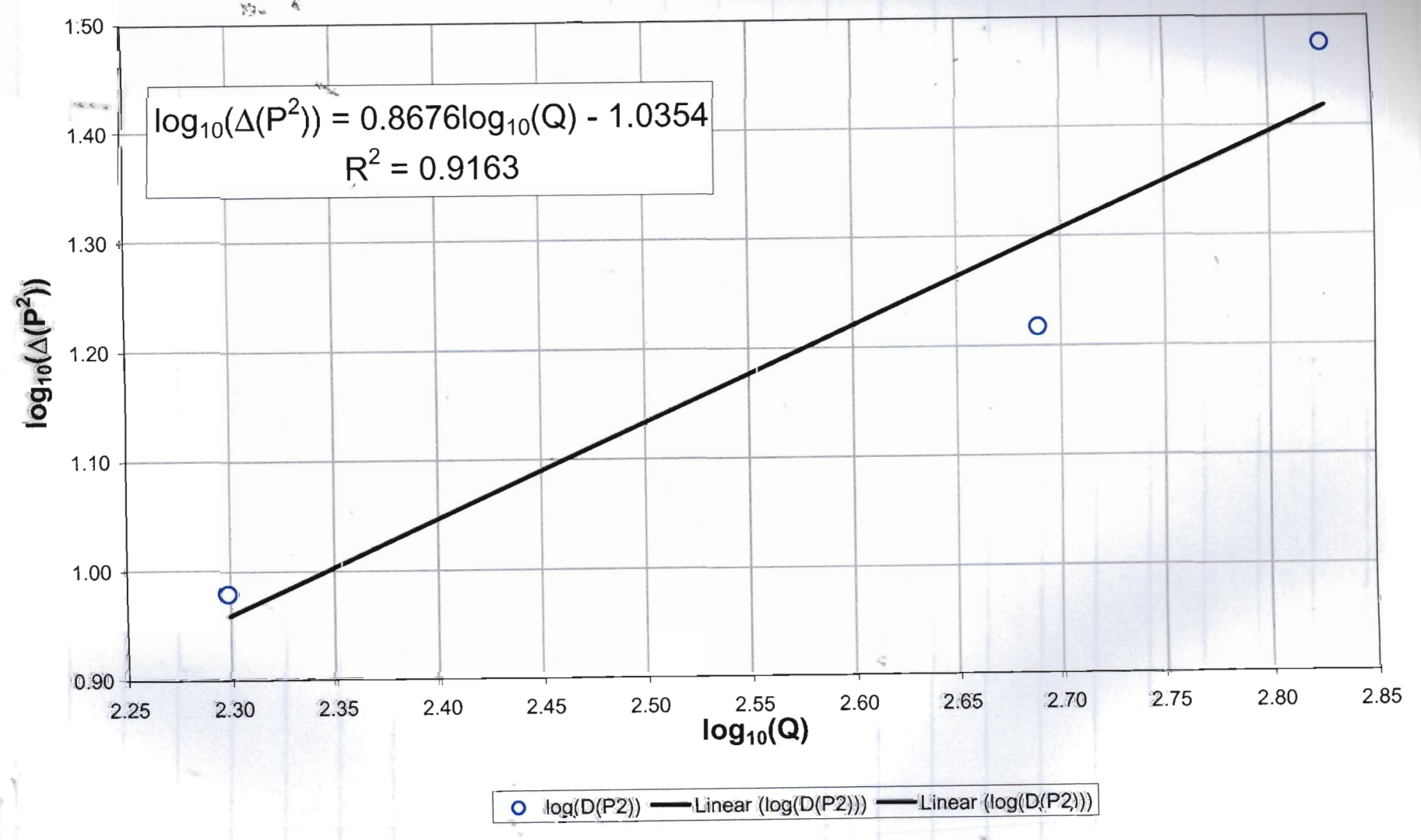
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole 4

RMM, 12/18/02

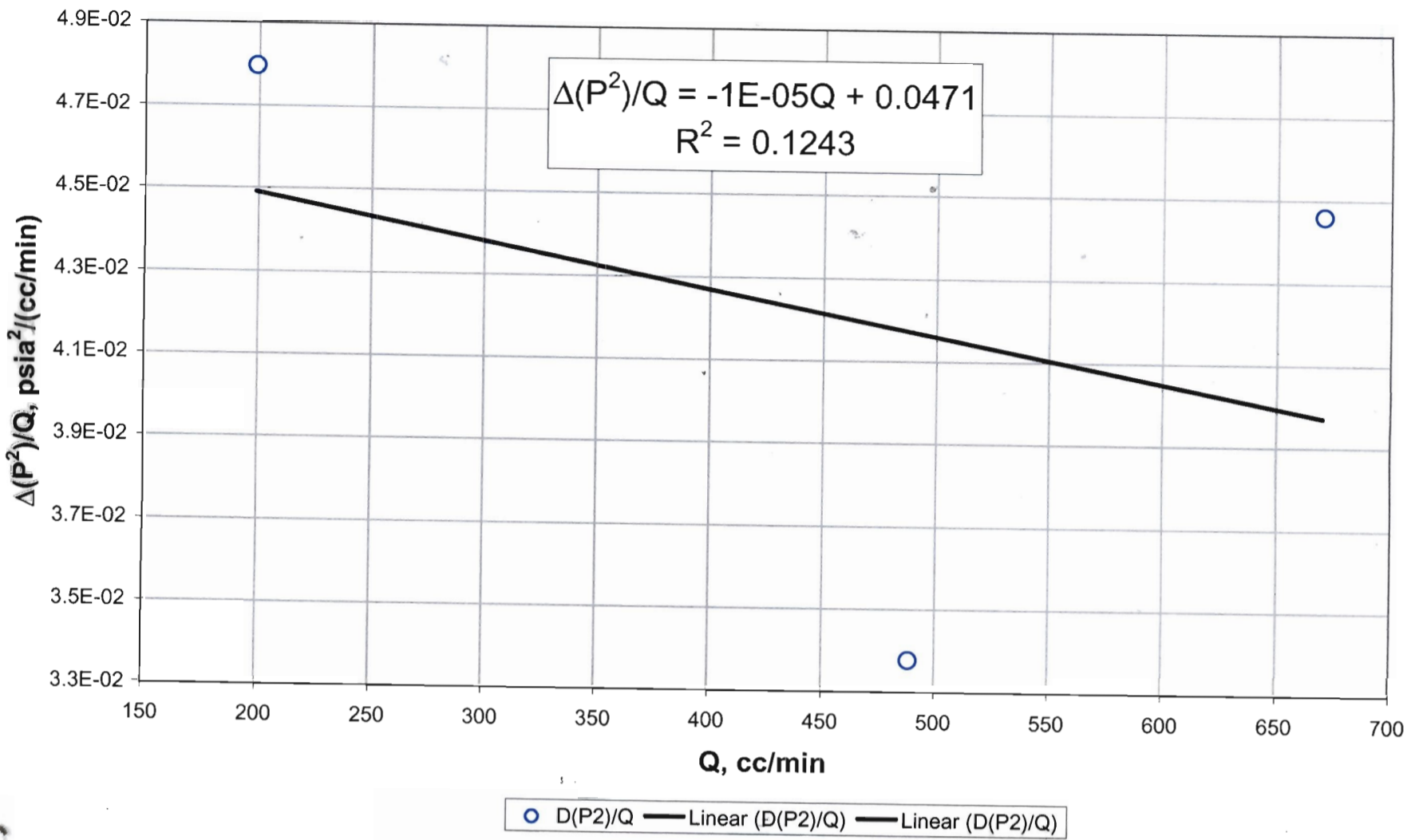


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of  
 high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole 4

RMM, 12/18/02

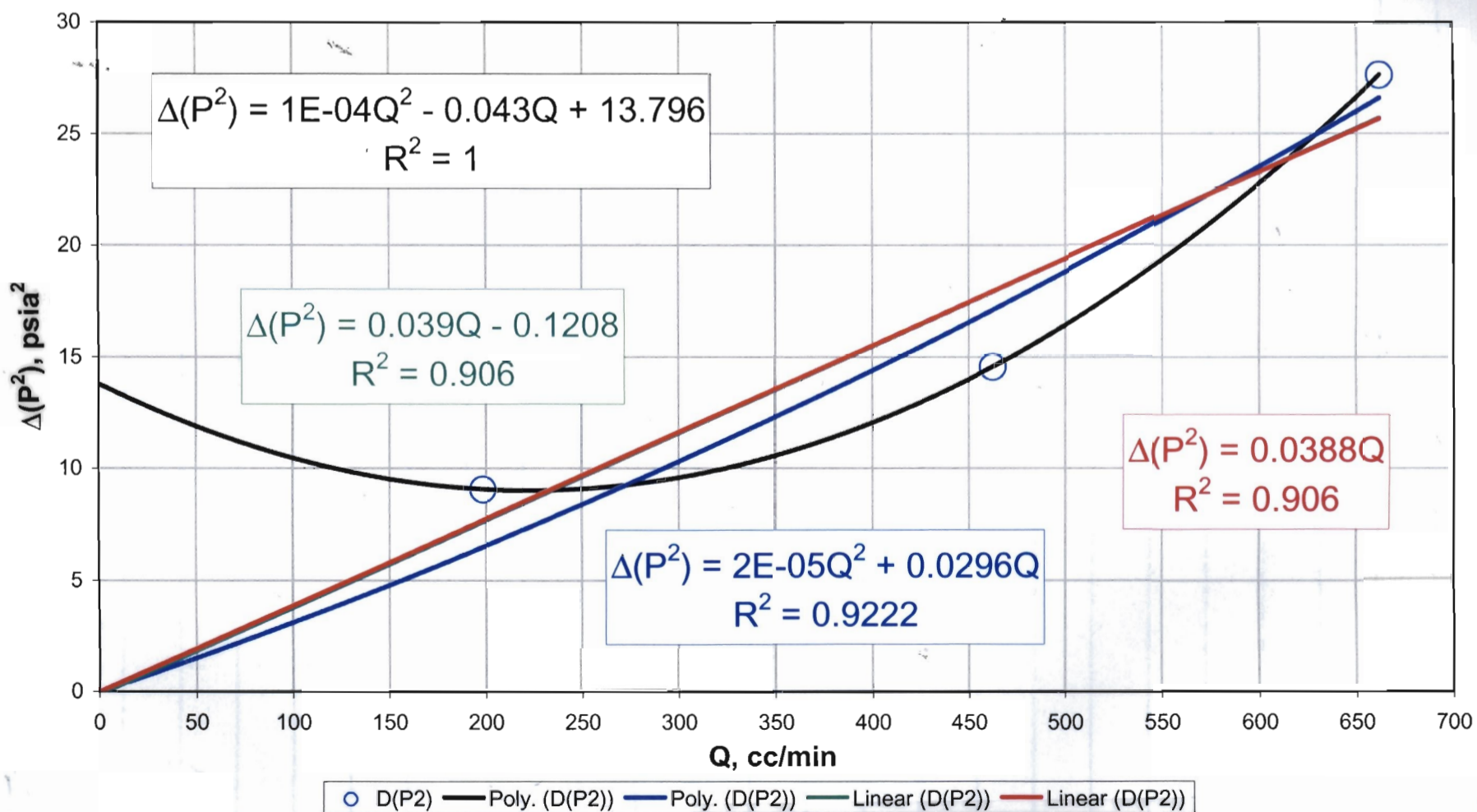


Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 4



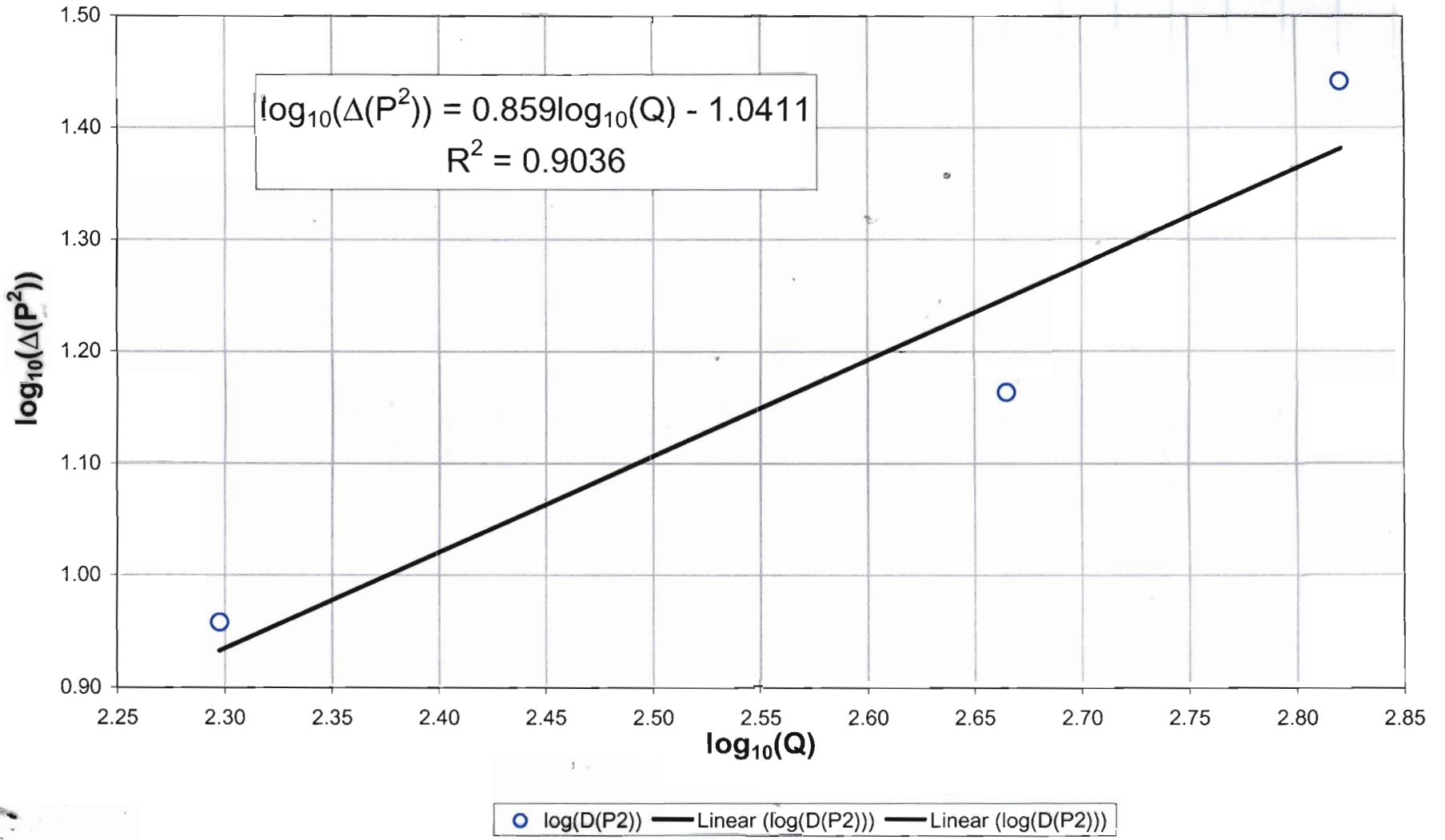
RNM, 12/19/02

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 5



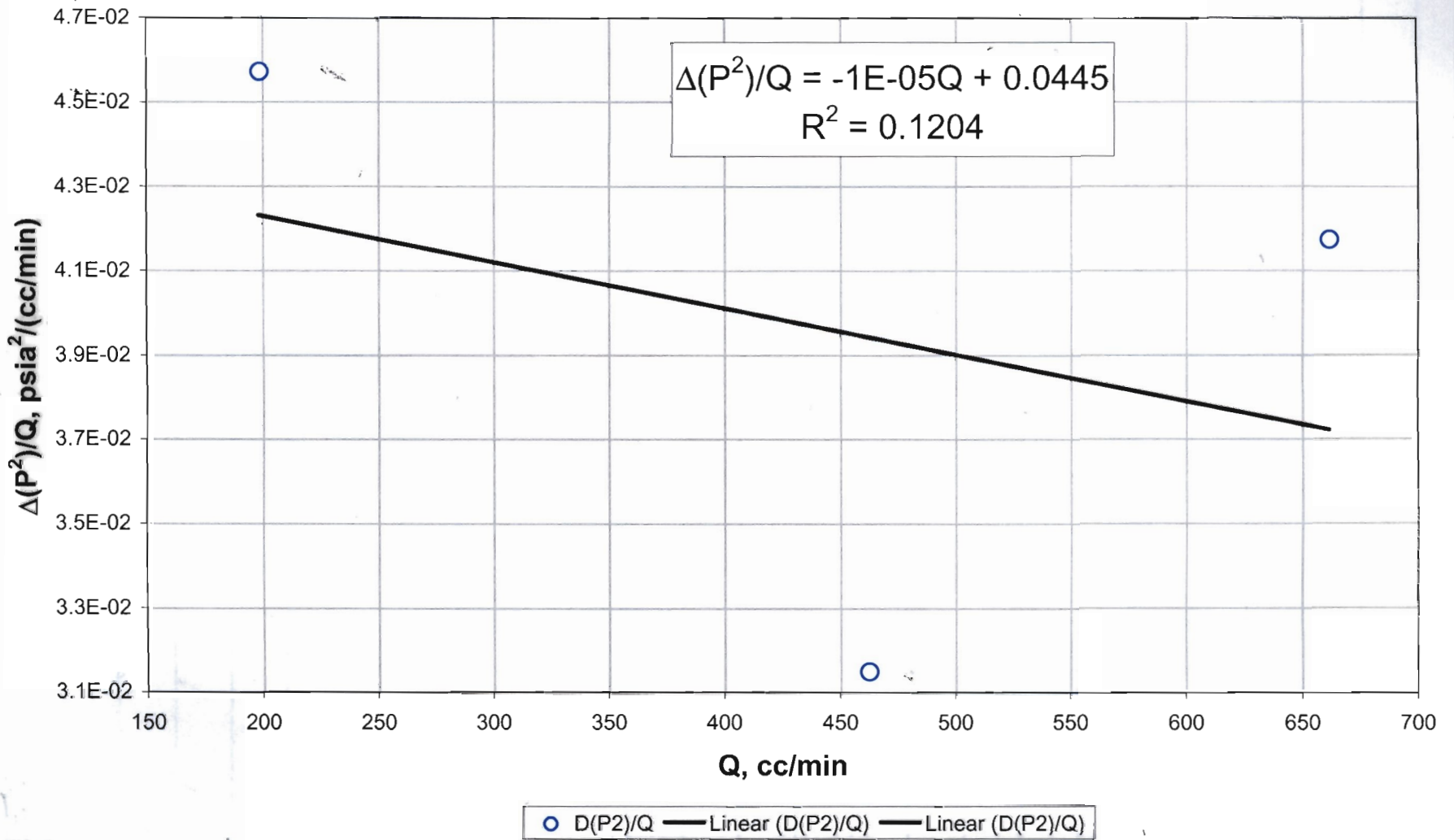
RNM, 12/18/02

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 5



RMM, 12/18/02

Final check for high velocity flow effects:  
High velocity flow effects are present when the slope is non-zero and positive.  
H Transect : Drillhole 5

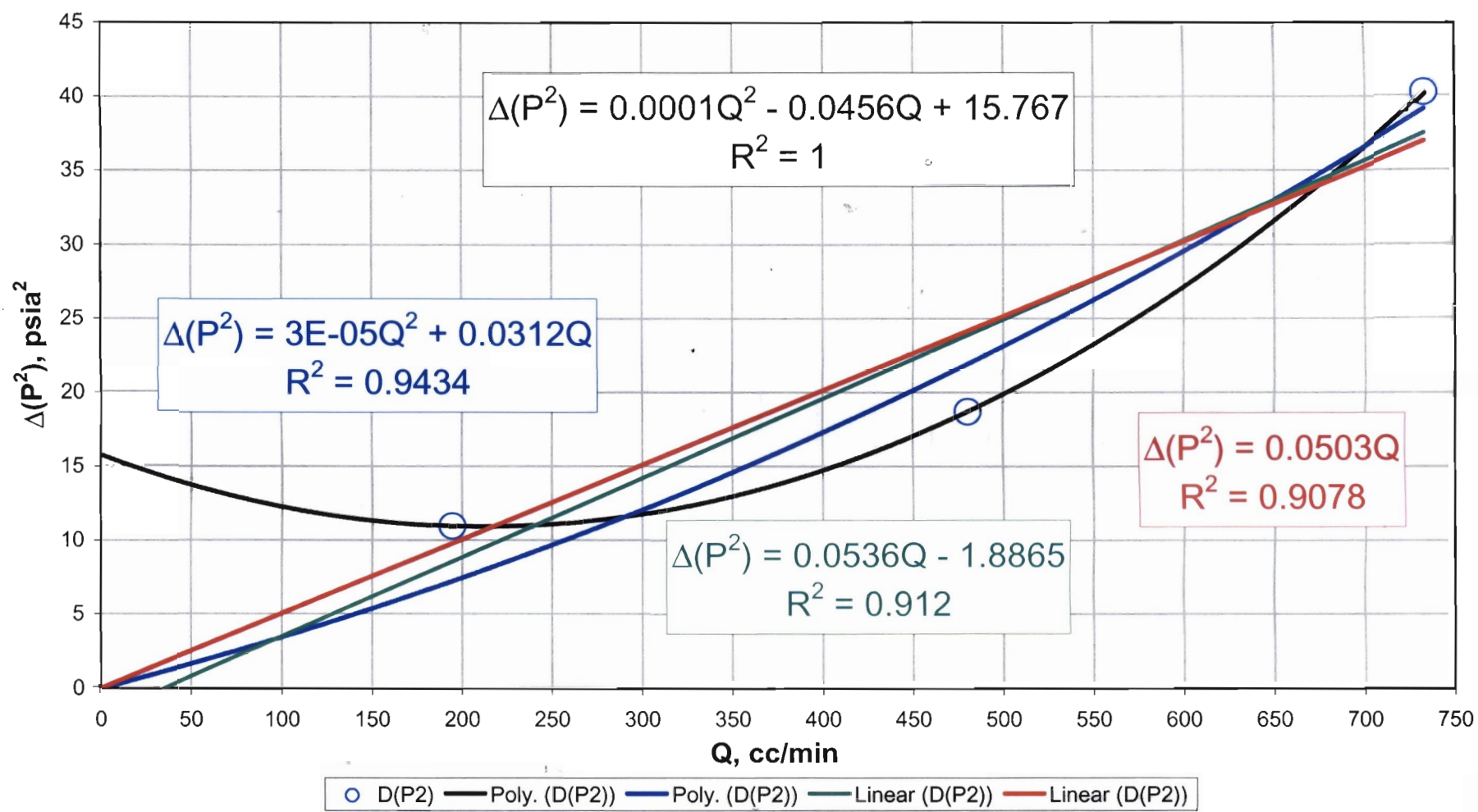


RMM, 4/18/02

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.

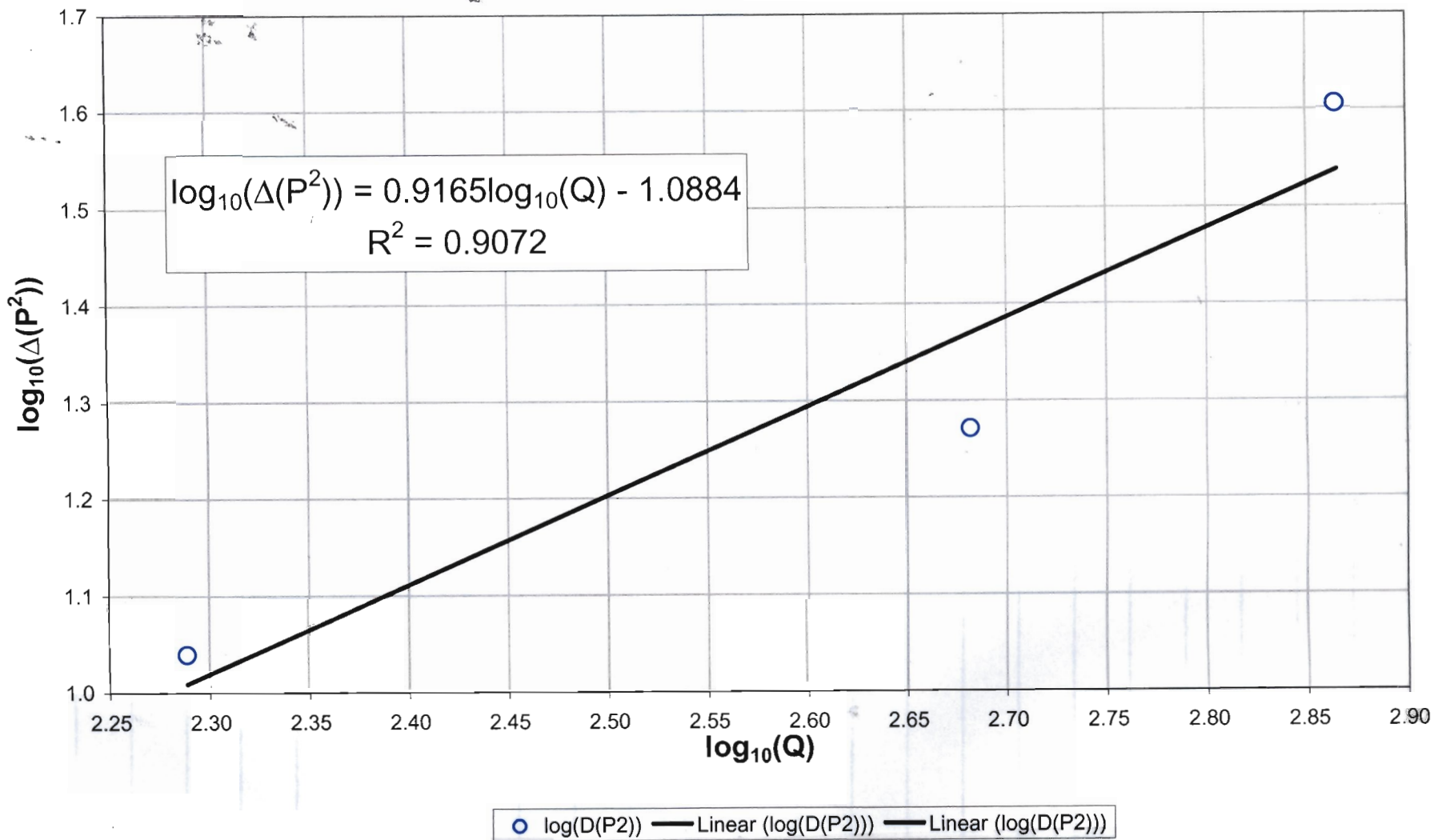
H Transect: Drillhole 6



RNM, 12/19/02

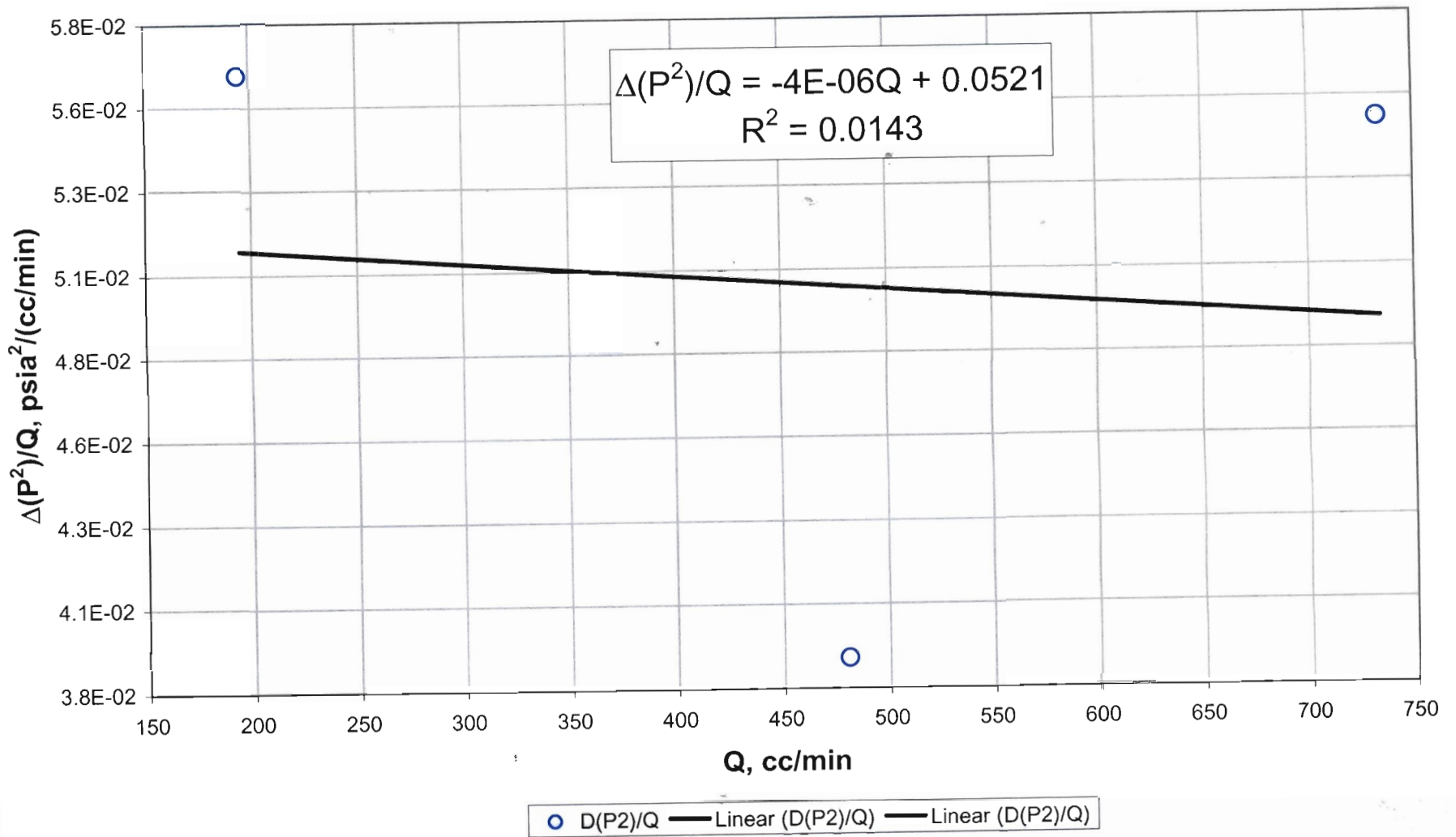
Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of high-velocity flow effects (when the slope is greater than unity)

H Transect: Drillhole 6



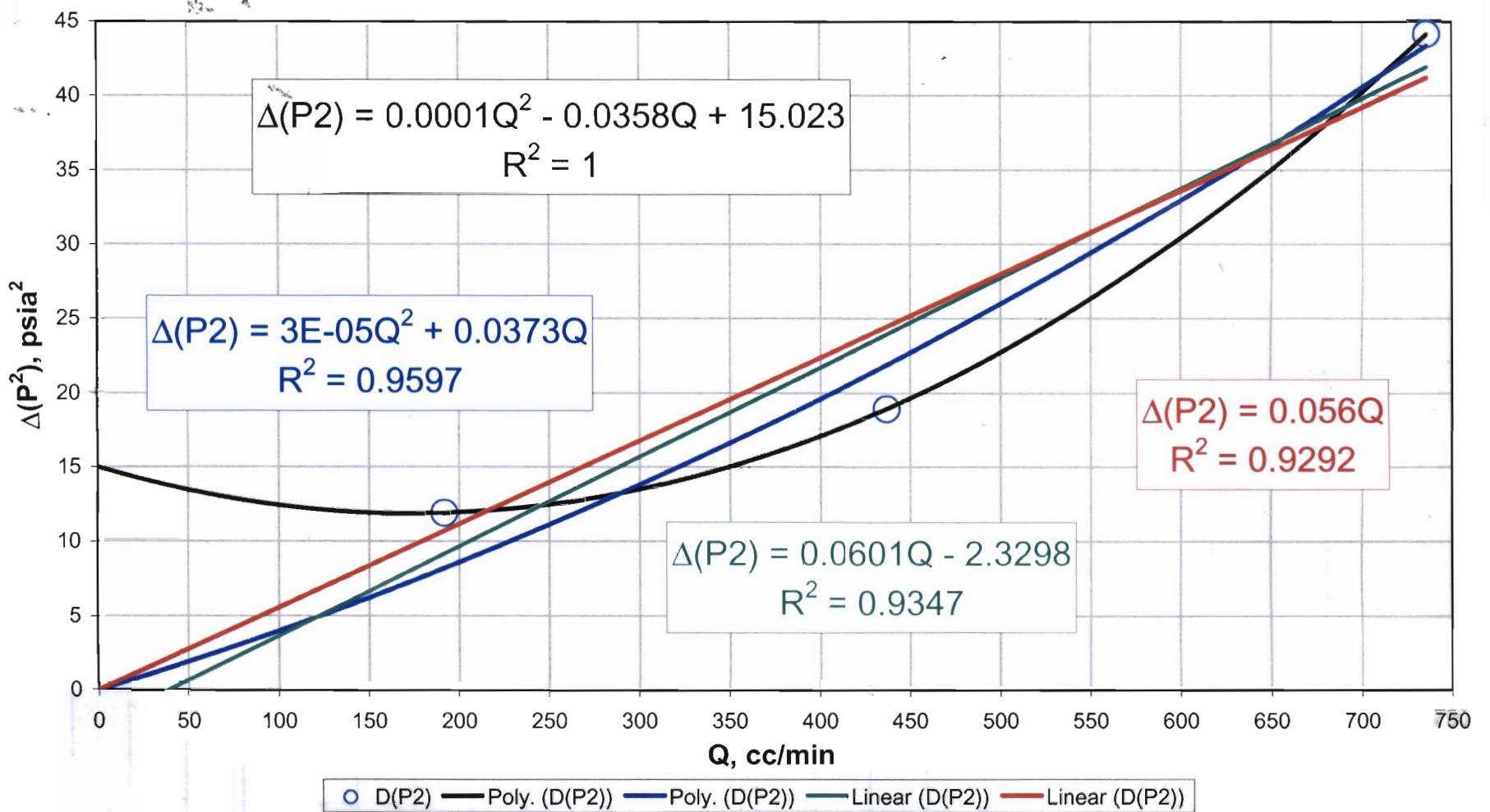
RNM, 12/19/02

Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 6



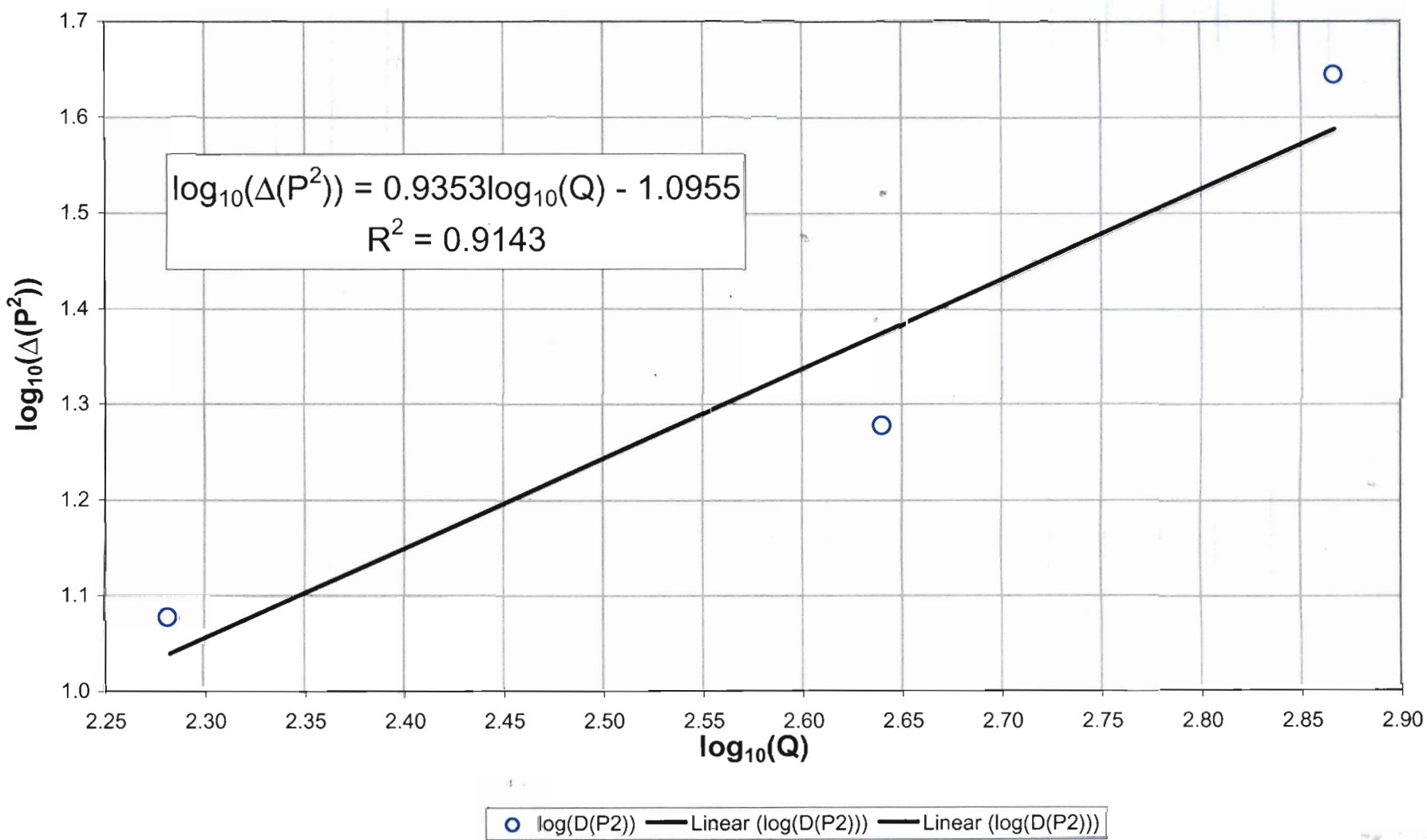
RMM 12/19/02

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 7



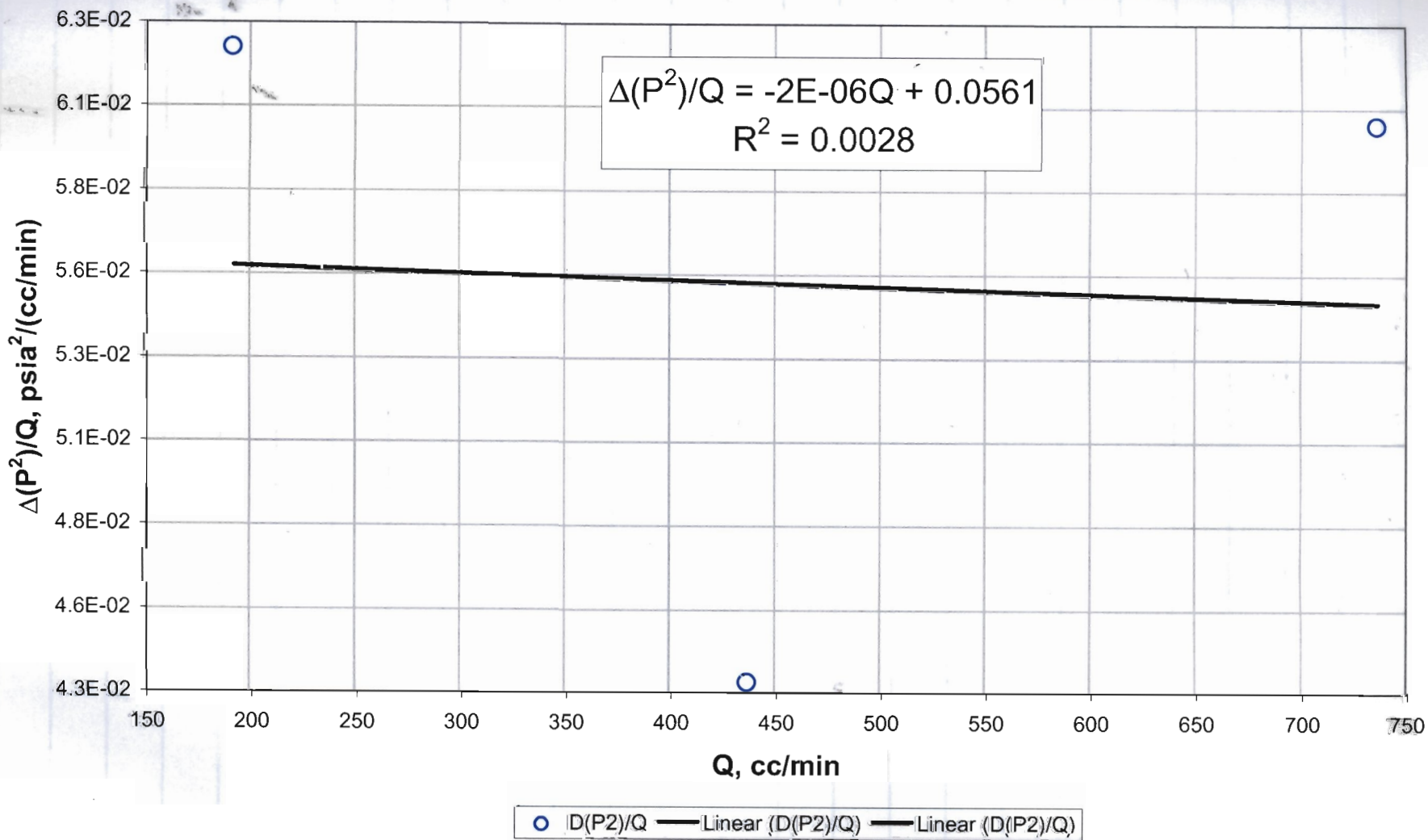
RMM 12/19/02

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 7



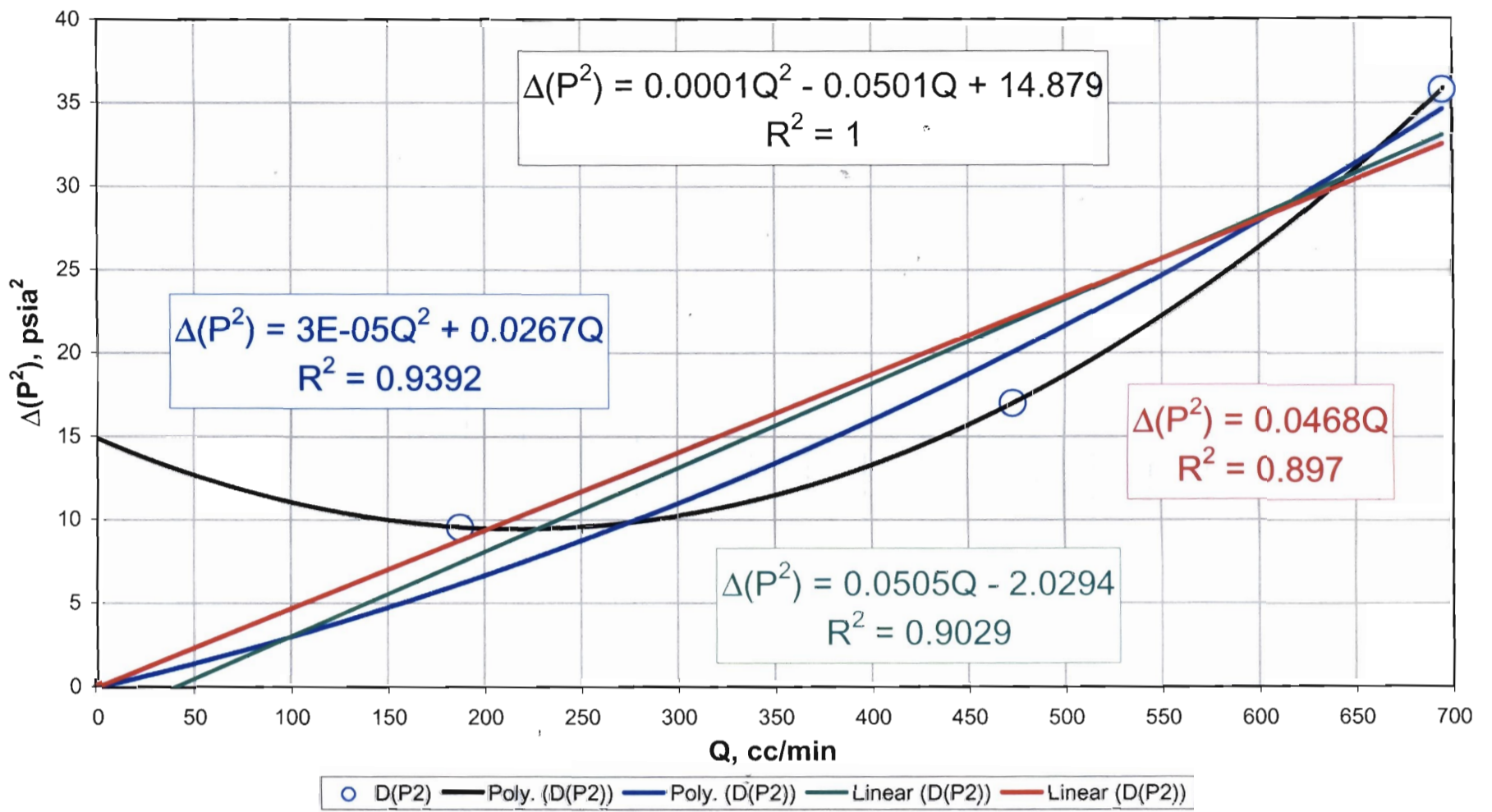
Run 12/19/02

Final check for high velocity flow effects:  
High velocity flow effects are present when the slope is non-zero and positive.  
H Transect : Drillhole 7

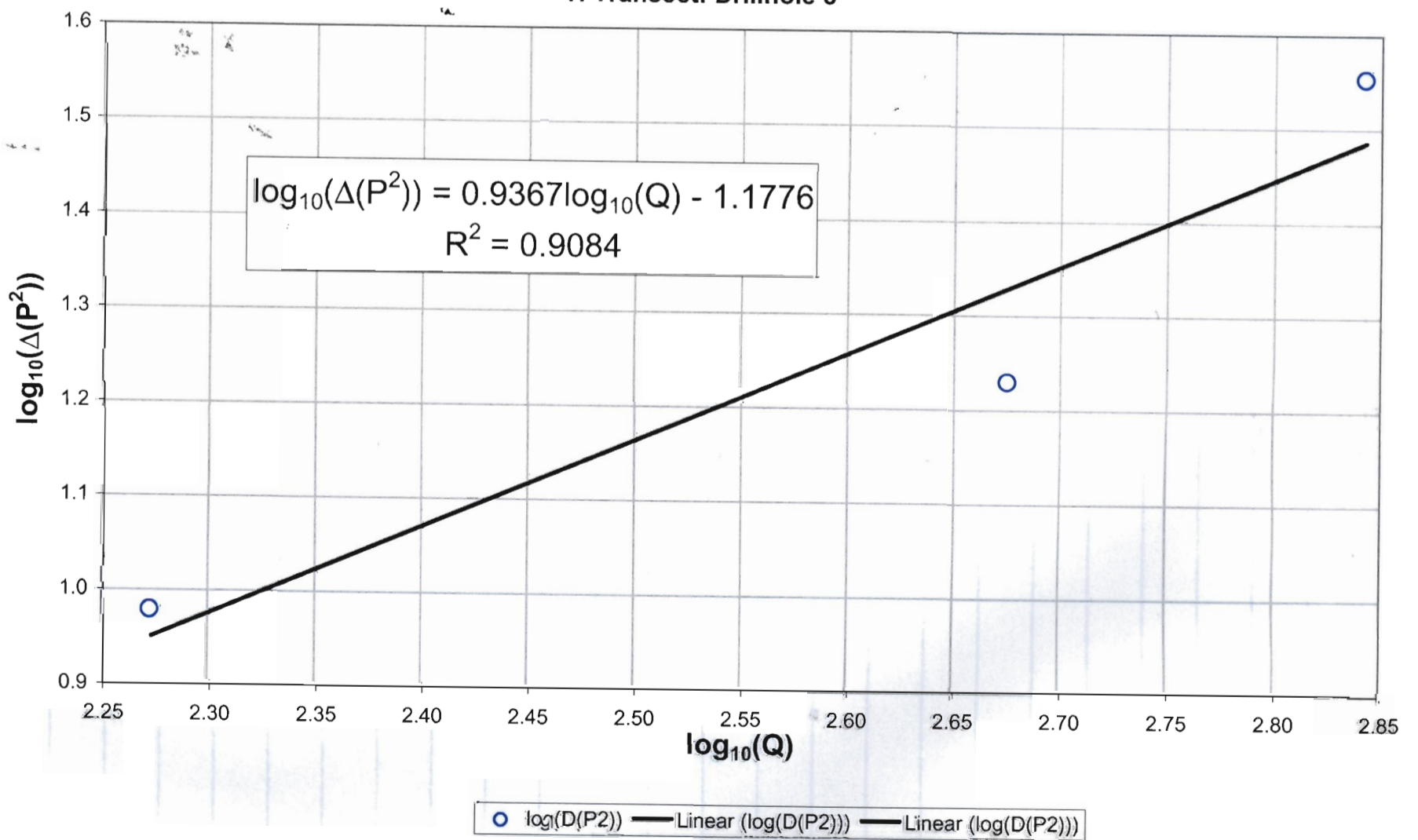


Run 12/19/02

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 8

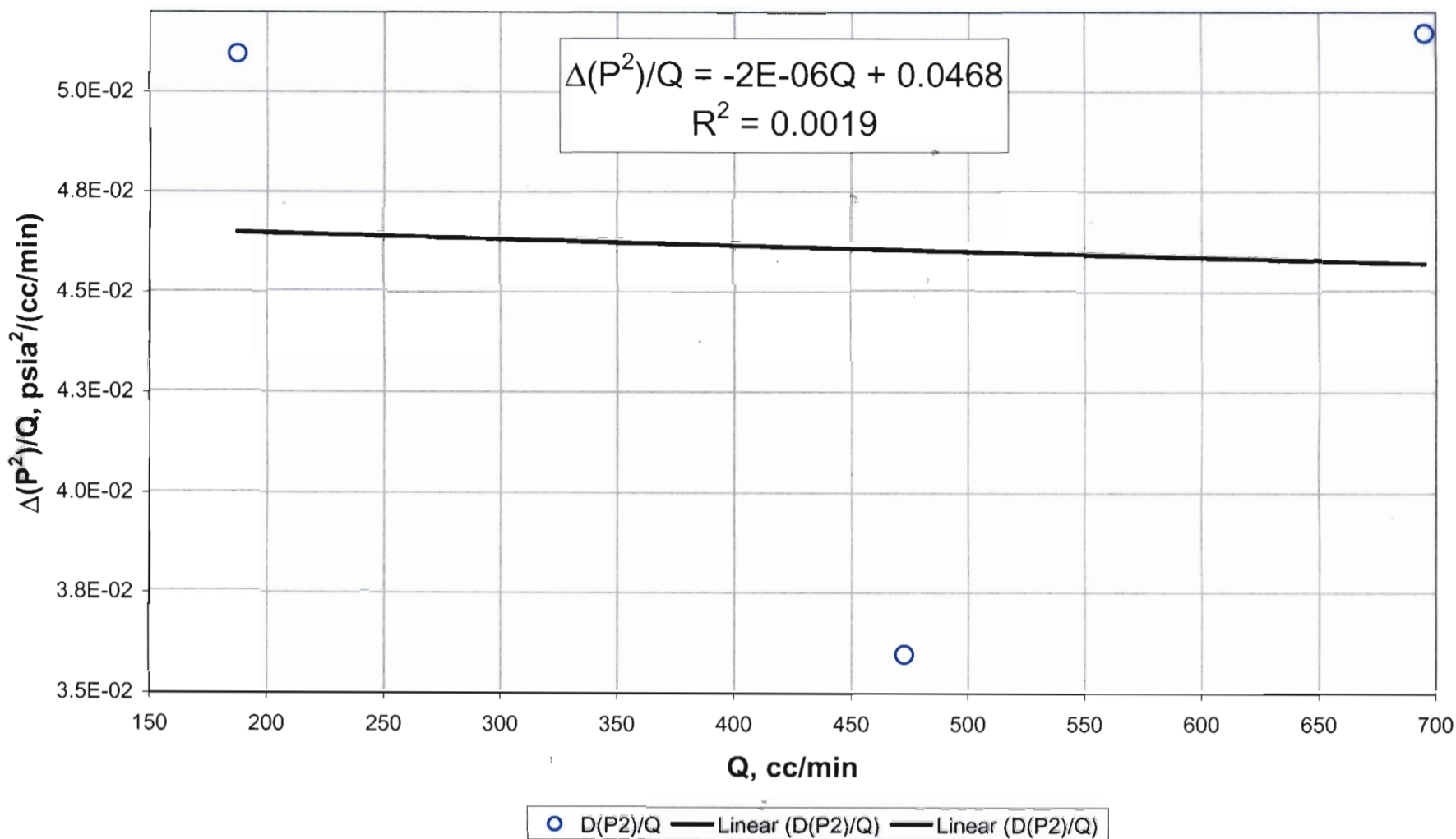


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of  
 high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole 8



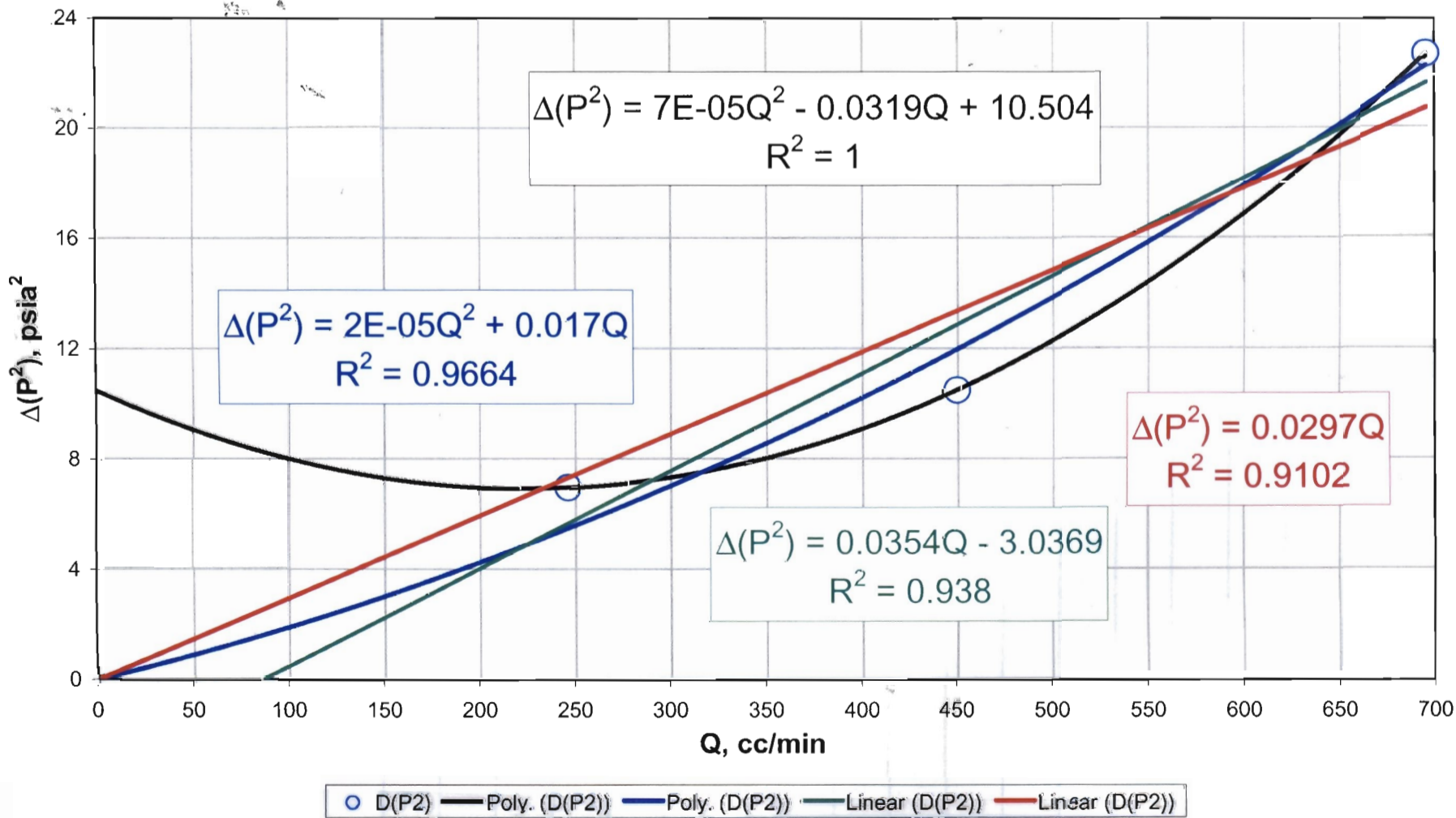


Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 8



RVM, 12/19/02

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 9

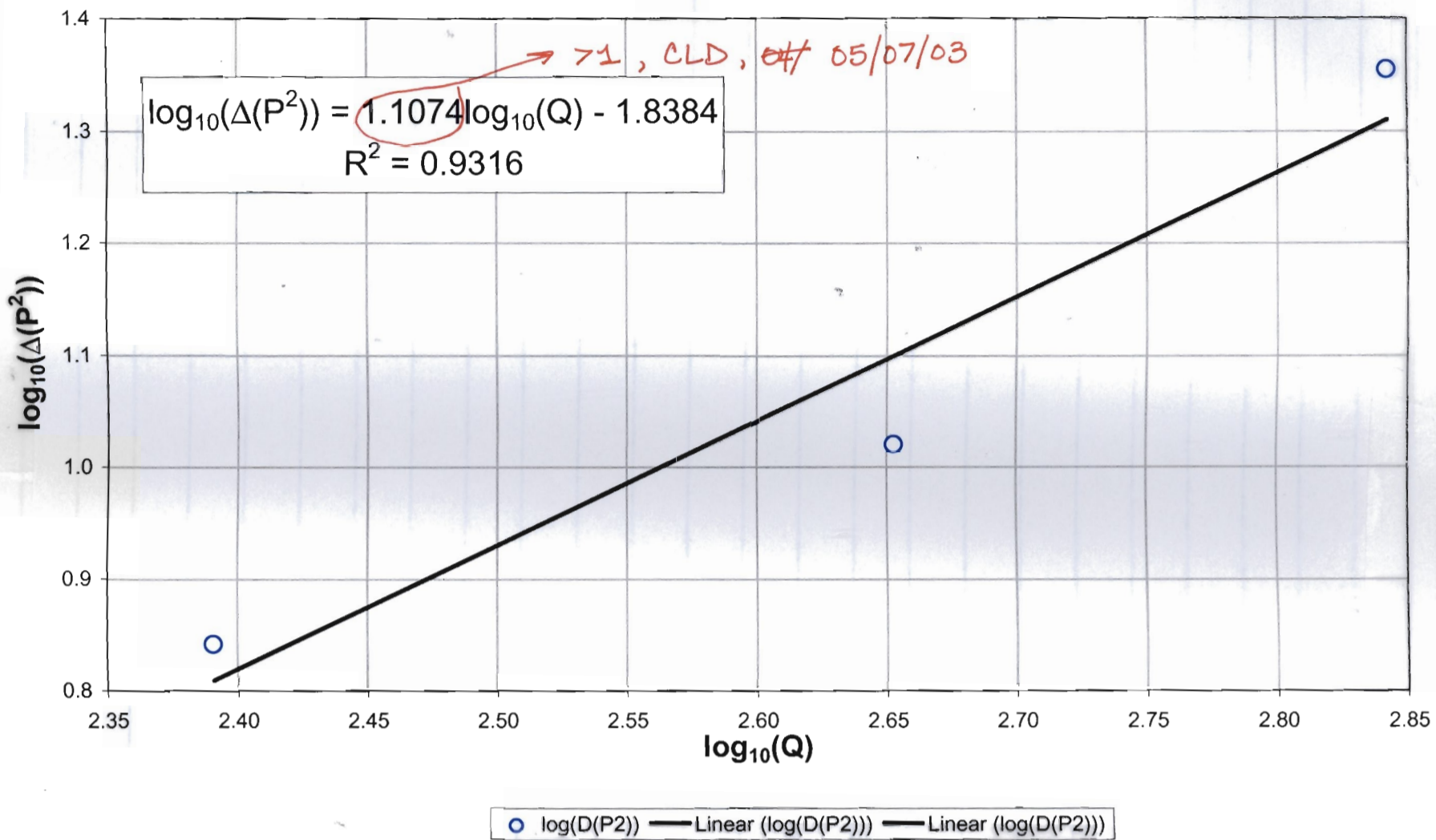


RVM, 12/19/02

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 9

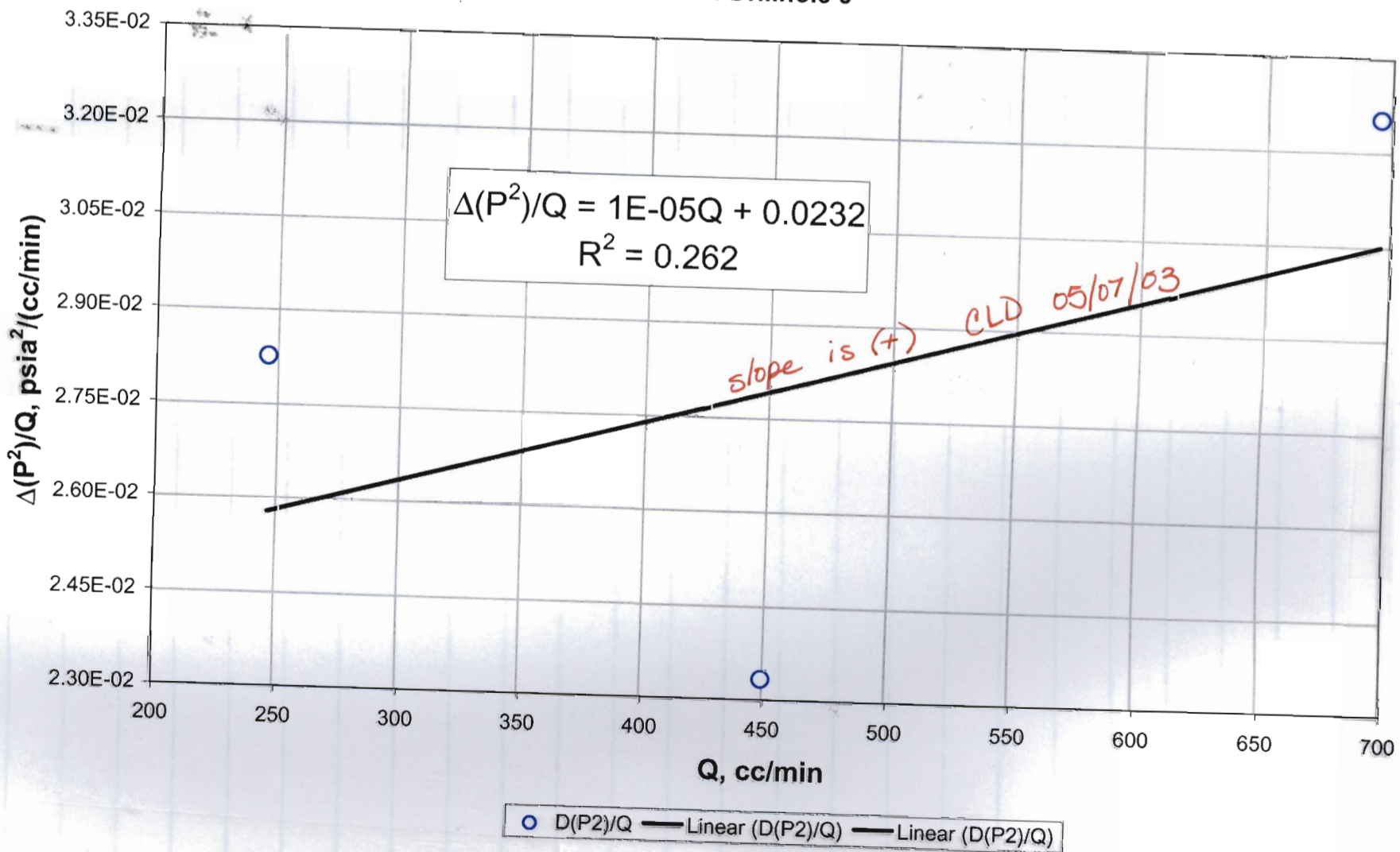
Run, 12/19/02



○ log(D(P2)) — Linear (log(D(P2))) — Linear (log(D(P2)))

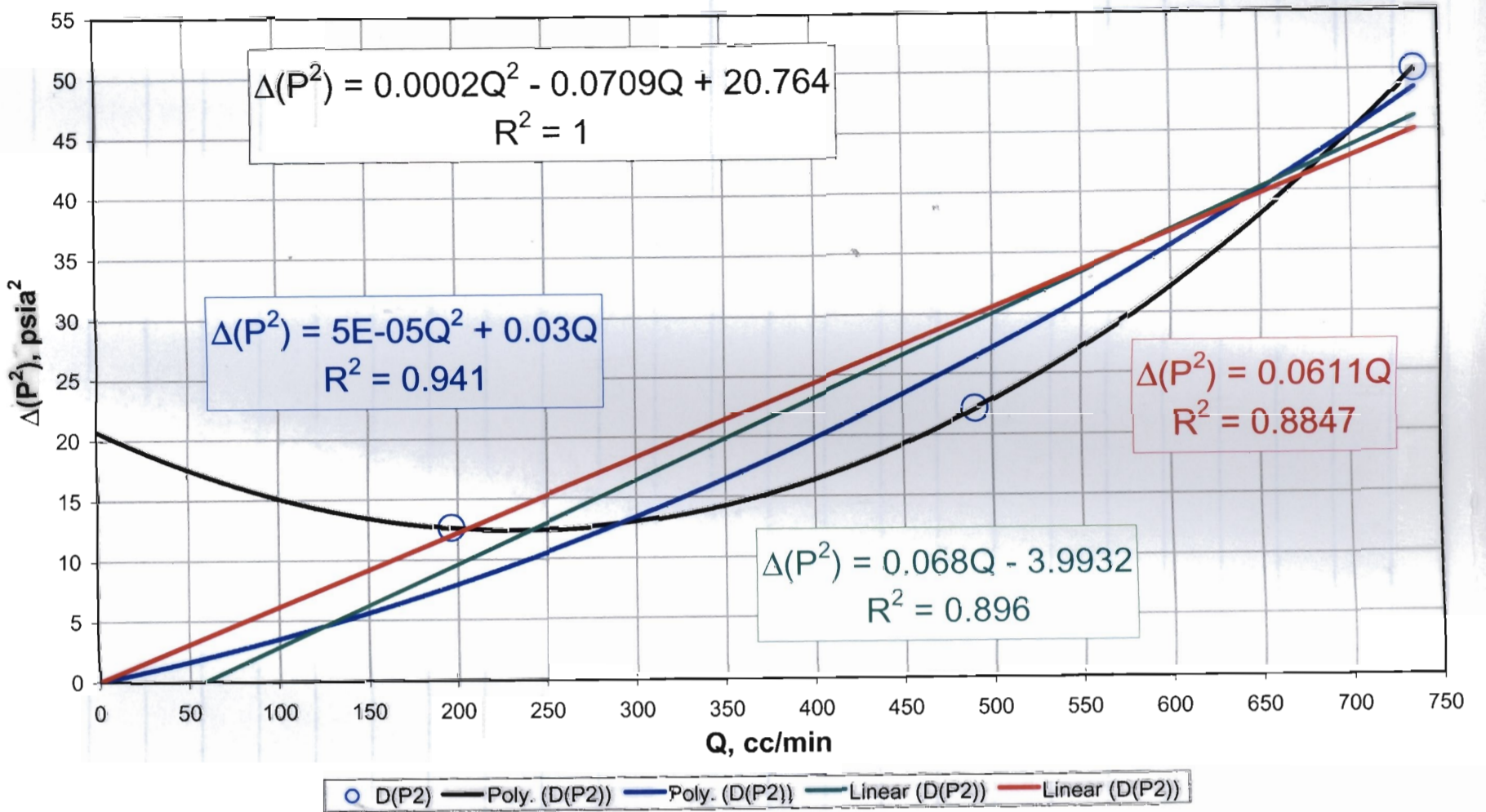
Final check for high velocity flow effects: High velocity flow effects are present when the slope is non-zero and positive. H Transect : Drillhole 9

Run, 12/19/02



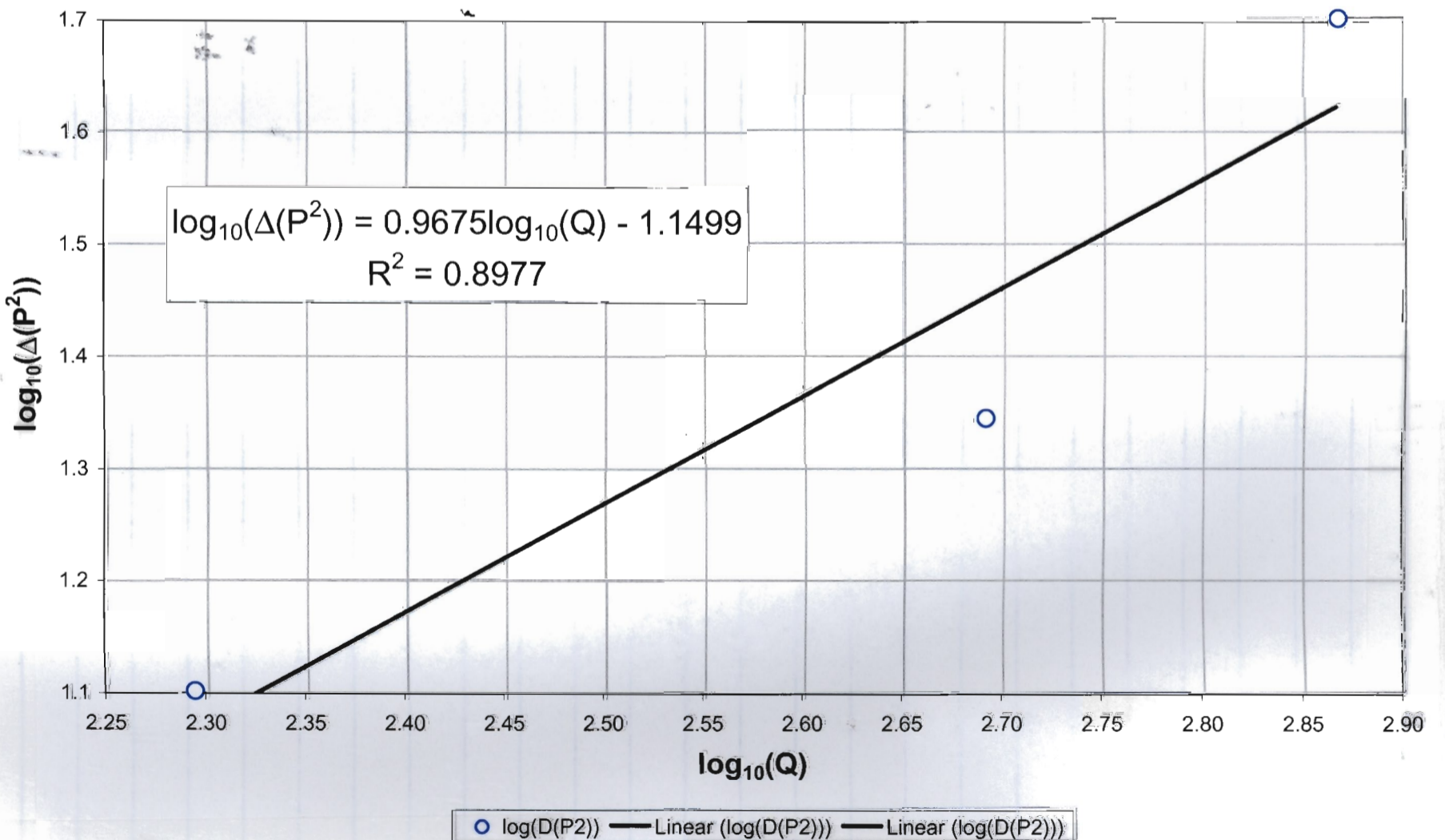
○ D(P2)/Q — Linear (D(P2)/Q) — Linear (D(P2)/Q)

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 10



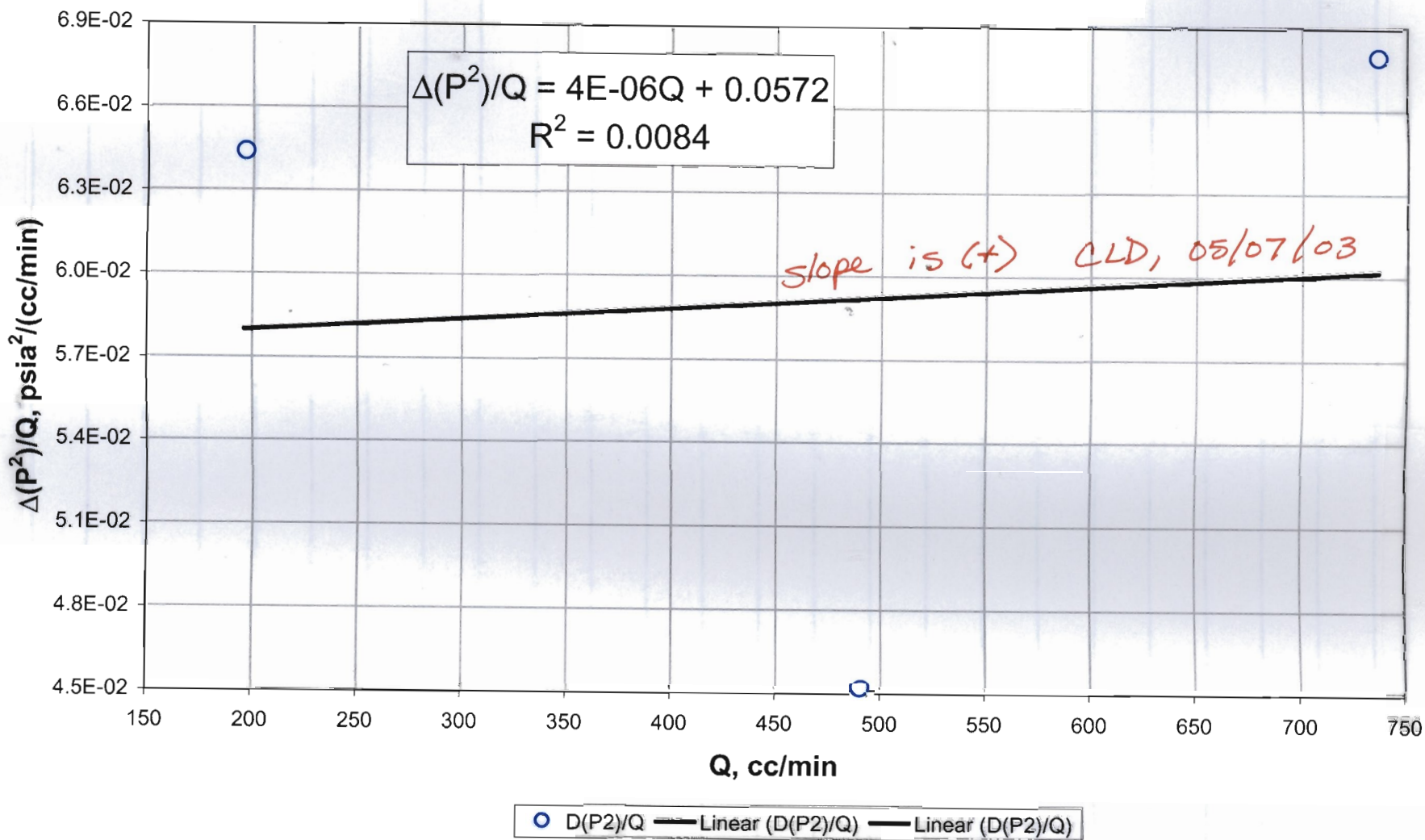
ARM, 12/19/08

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 10



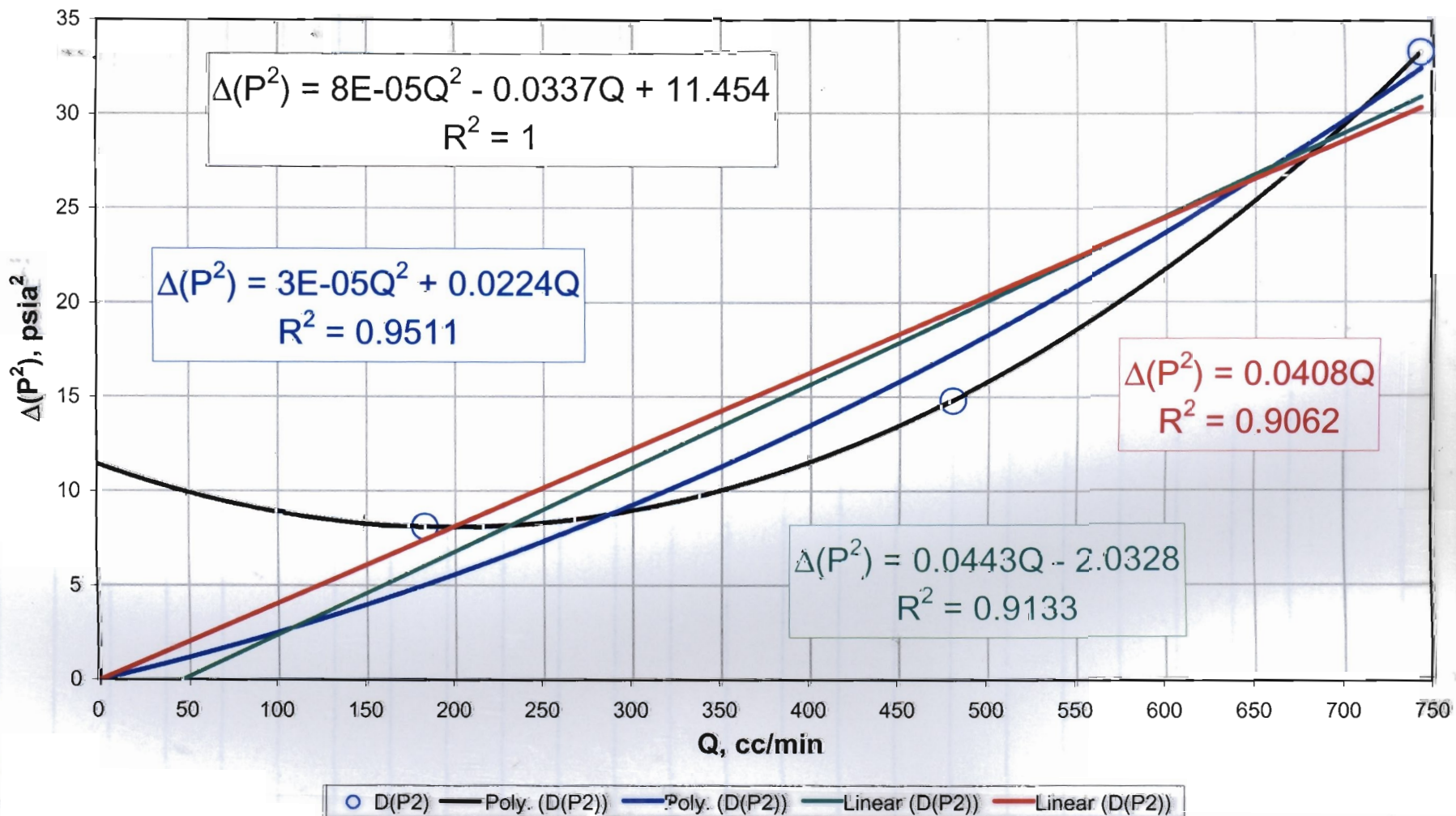
ARM, 12/19/08

Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 10



RMM, 12/19/02

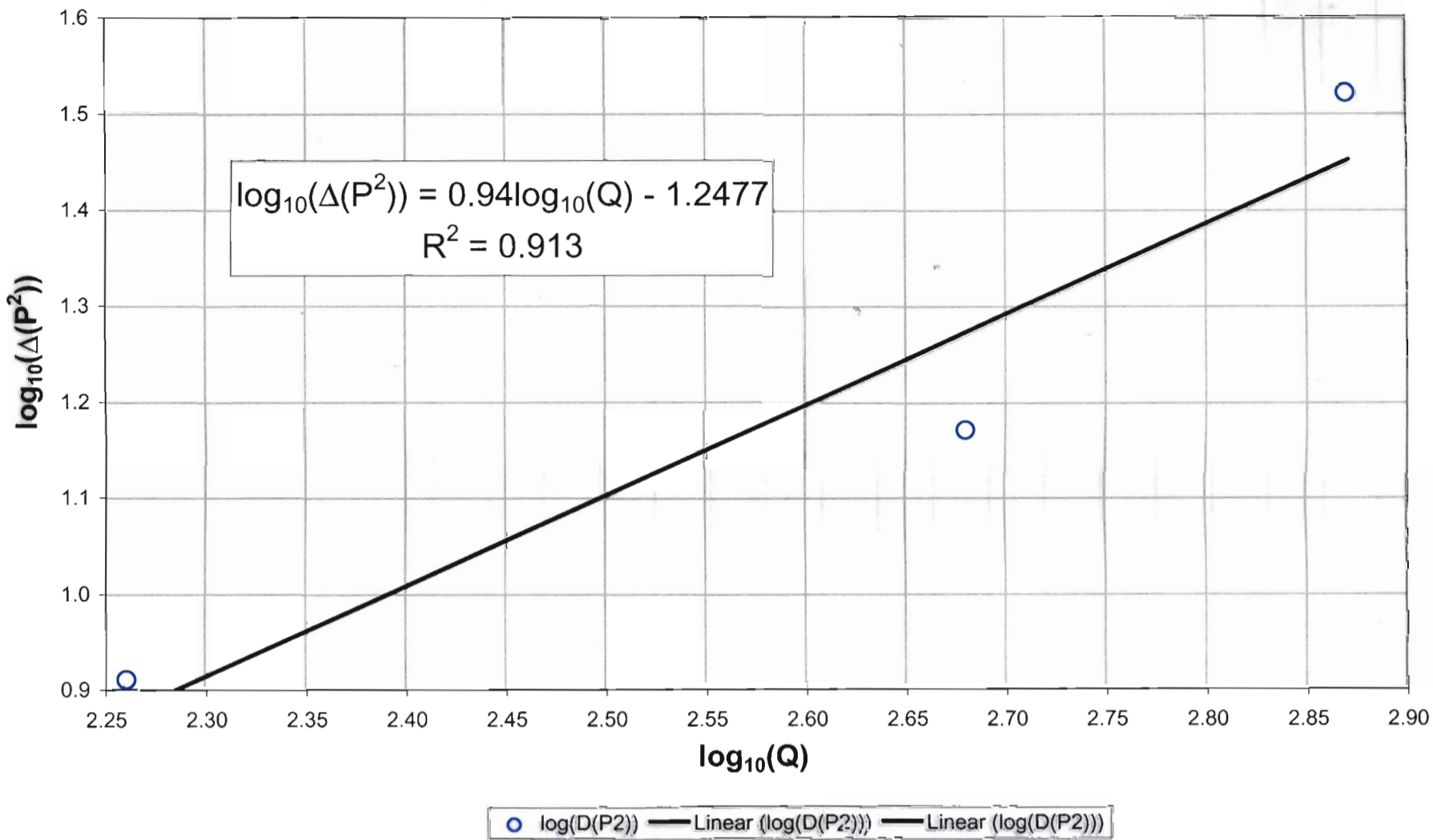
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole 11



RMM, 12/19/02

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 11

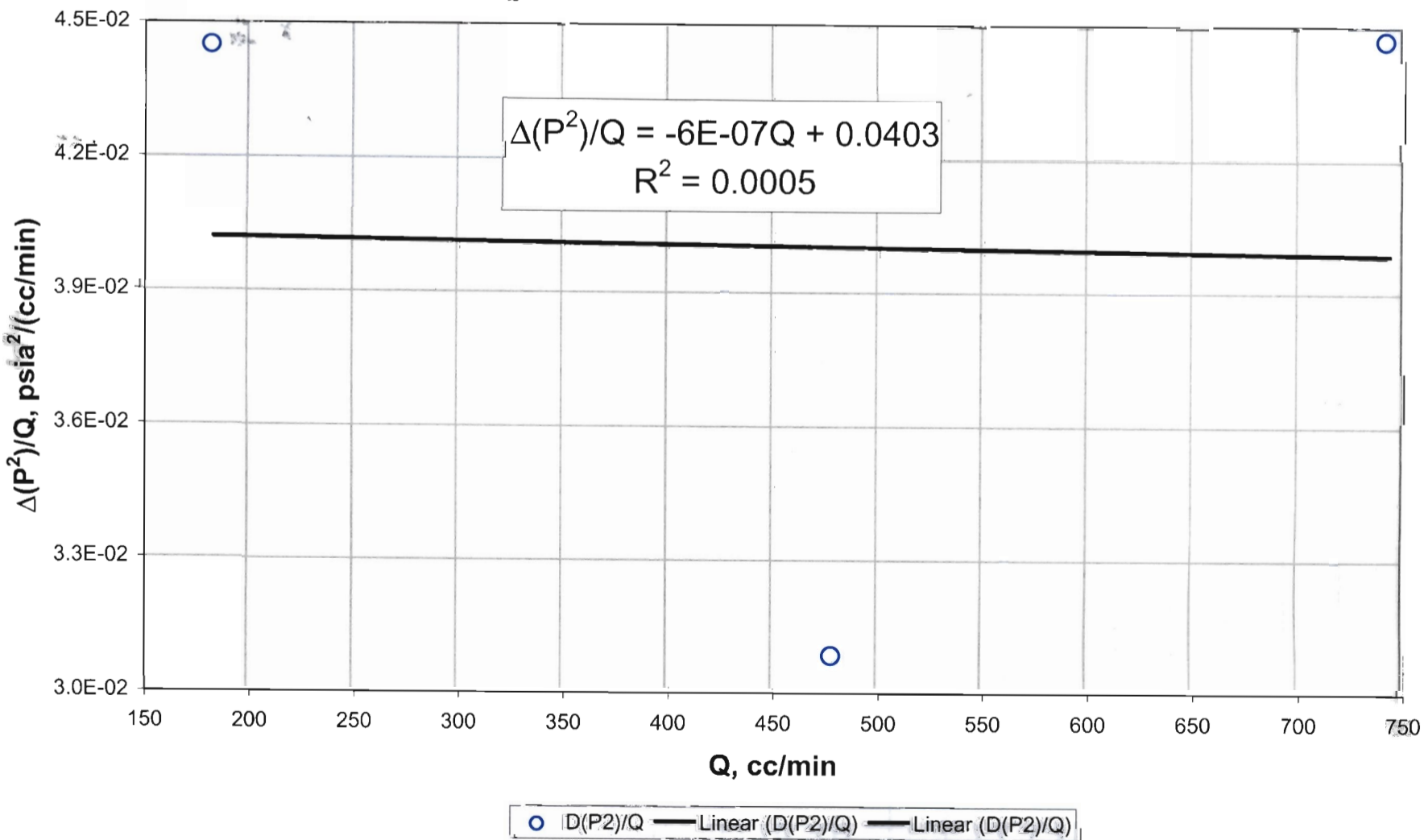


RMM, 12/19/02

Final check for high velocity flow effects:

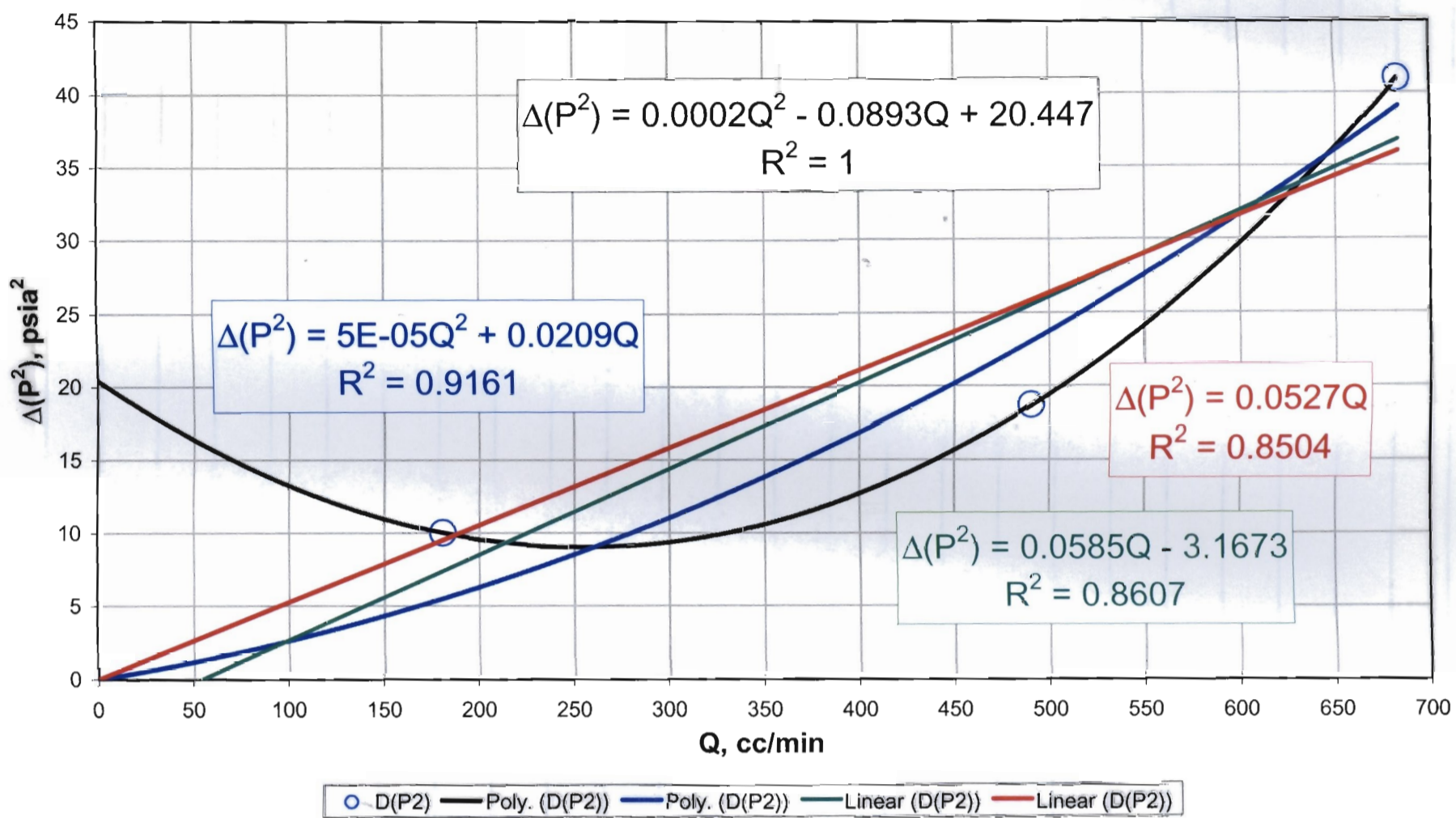
High velocity flow effects are present when the slope is non-zero and positive.

H Transect : Drillhole 11

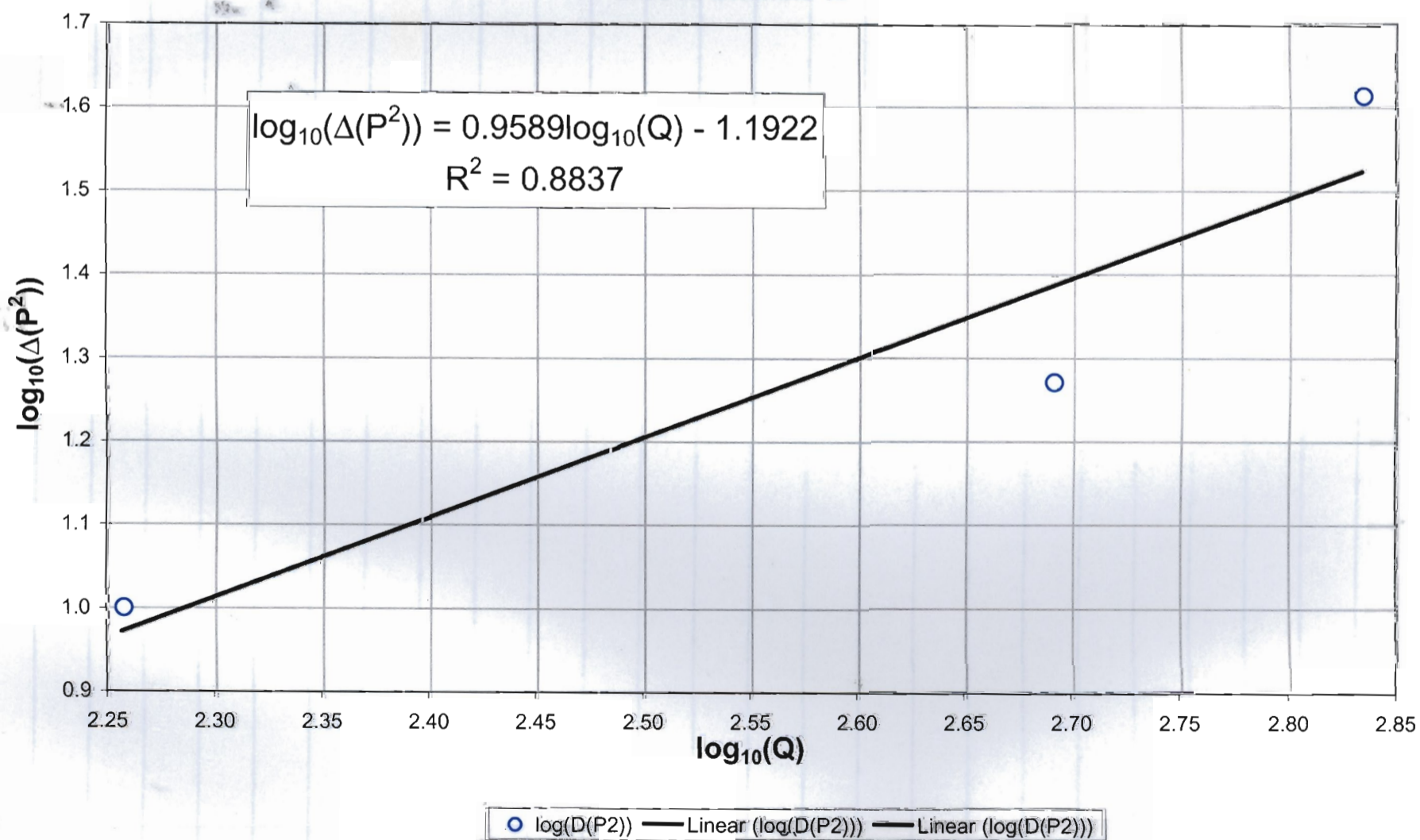


RMM, 12/19/02

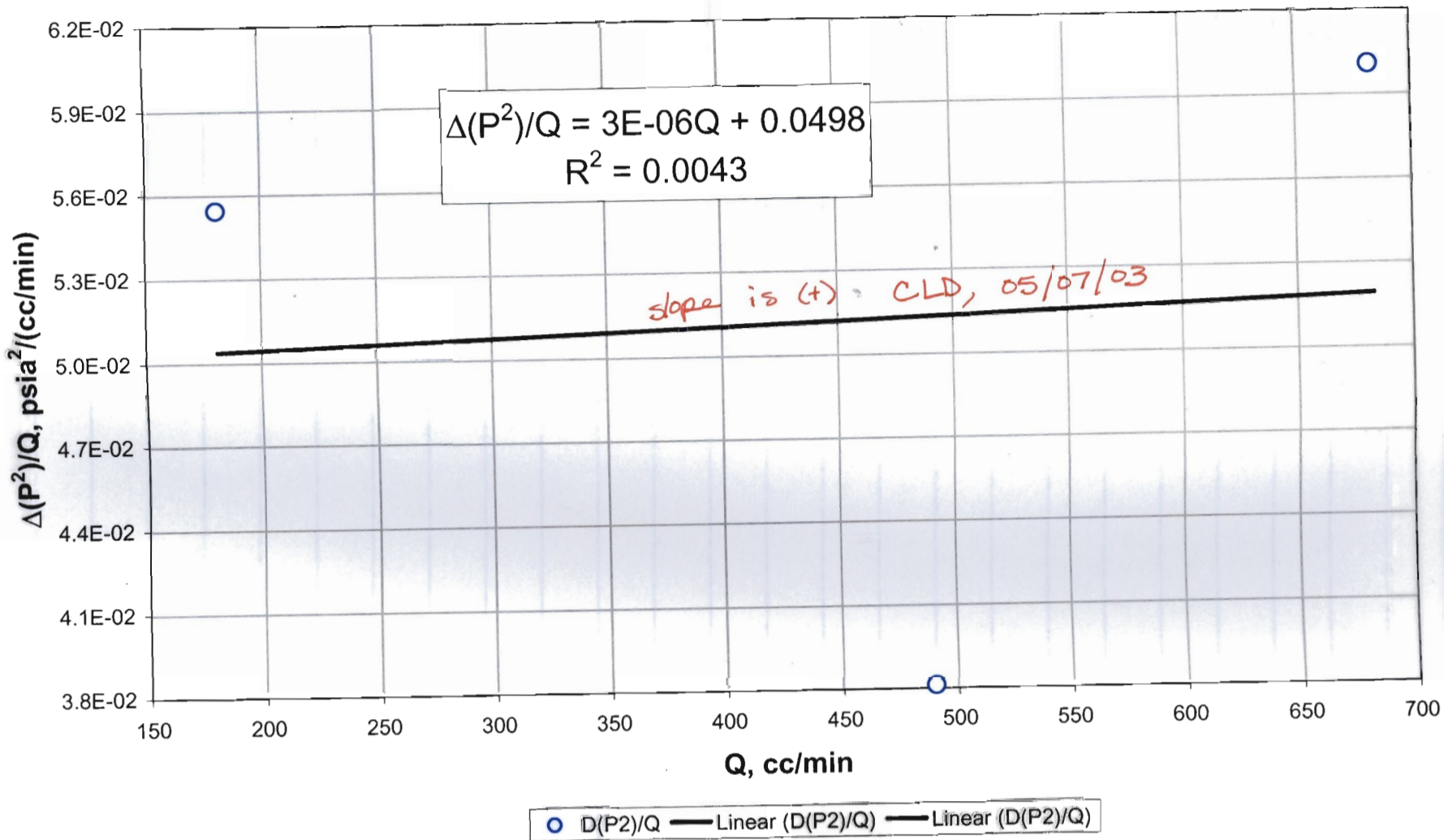
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole 12



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 12

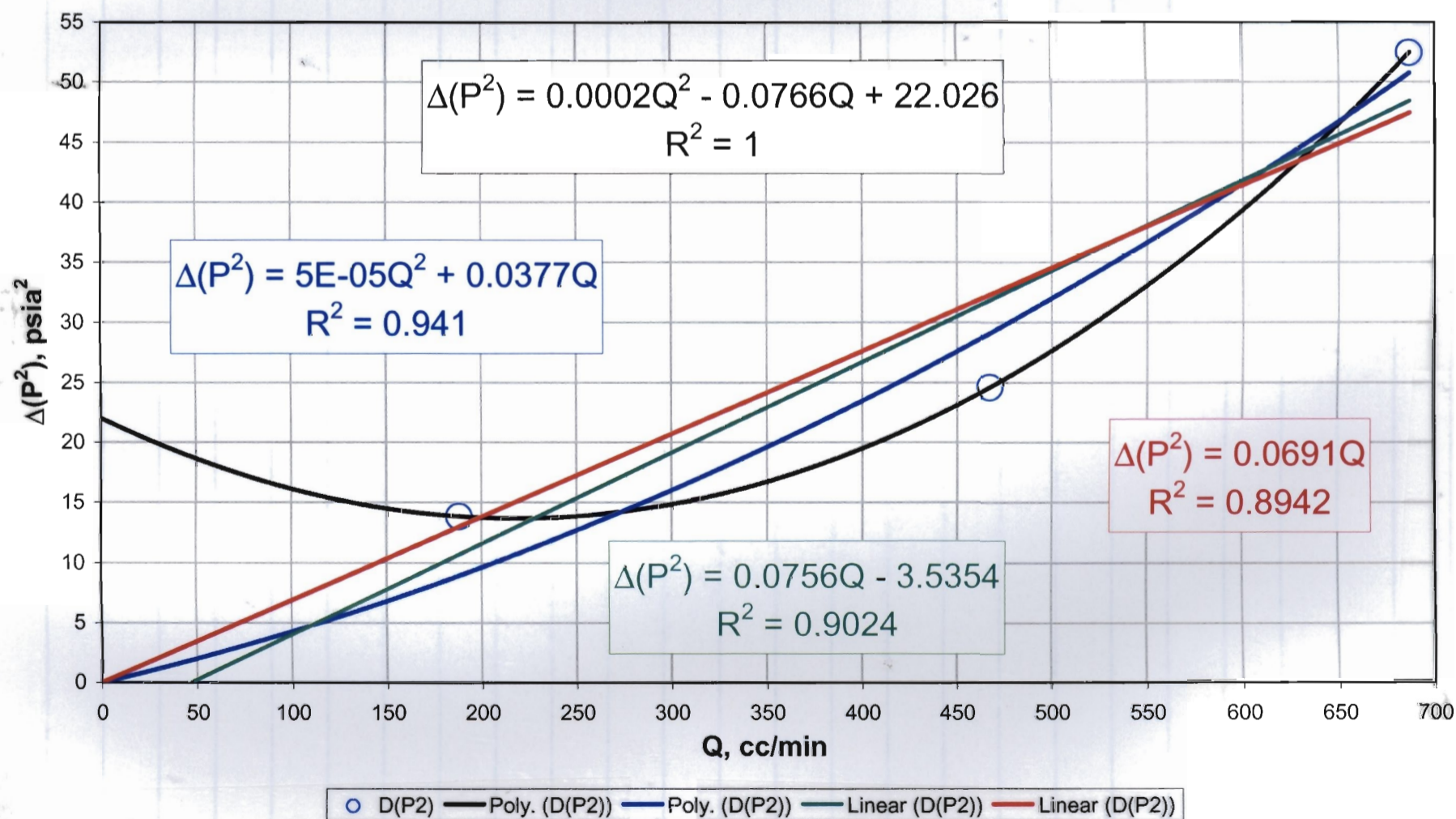


Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 12



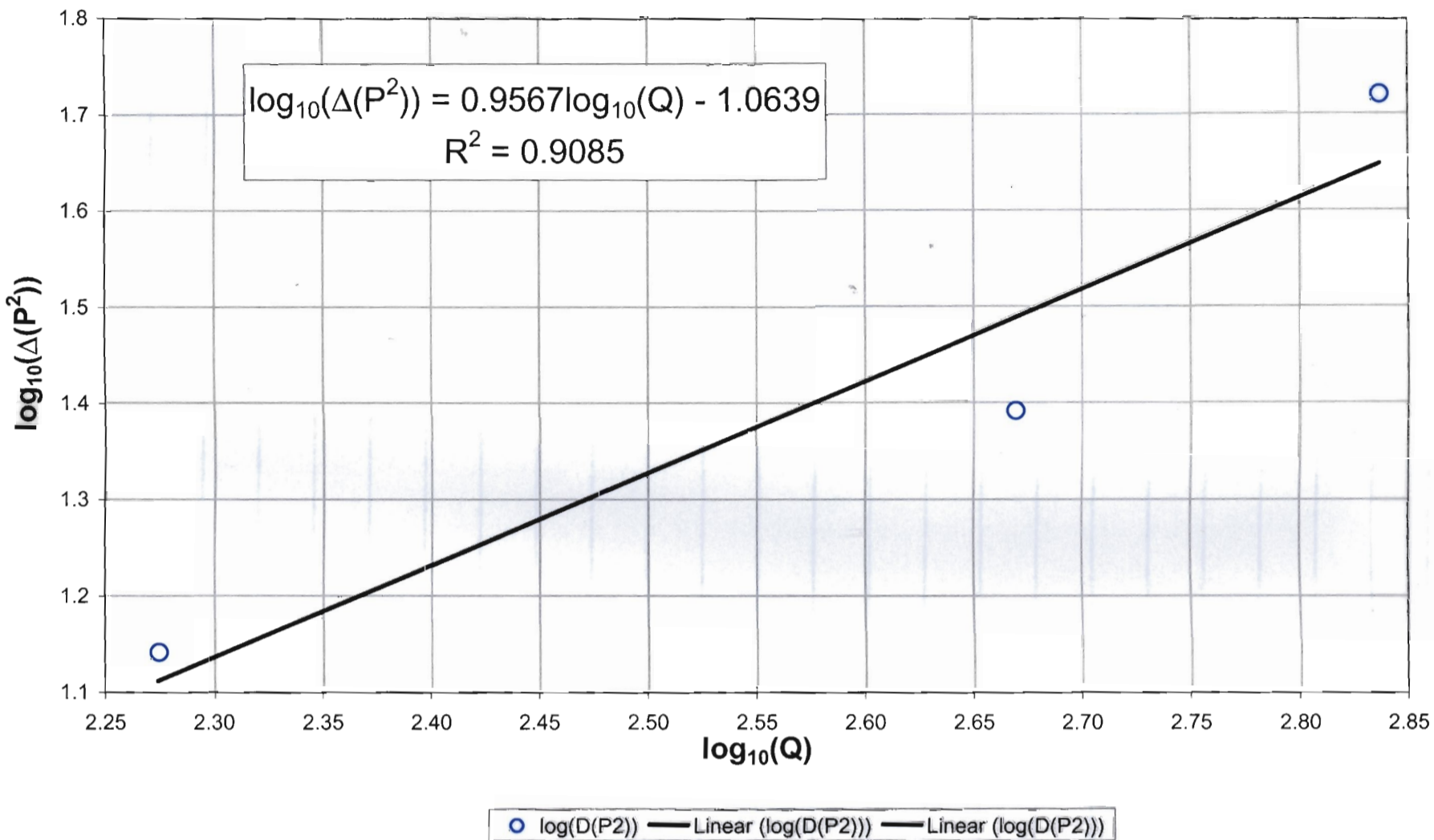
RWN, 12/19/08

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 13



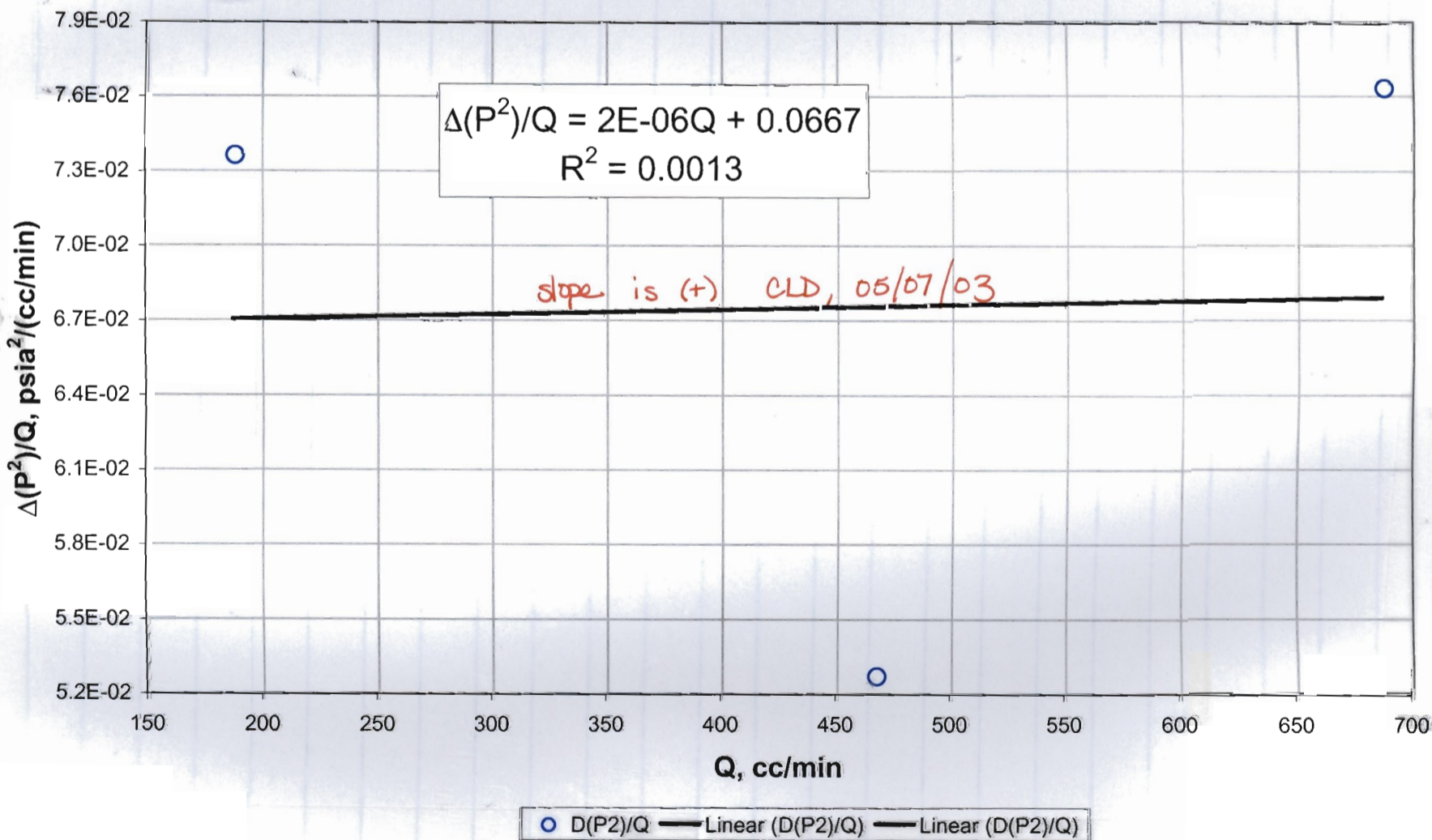
RWN, 12/19/08

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 13



RMM, 12/19/02

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

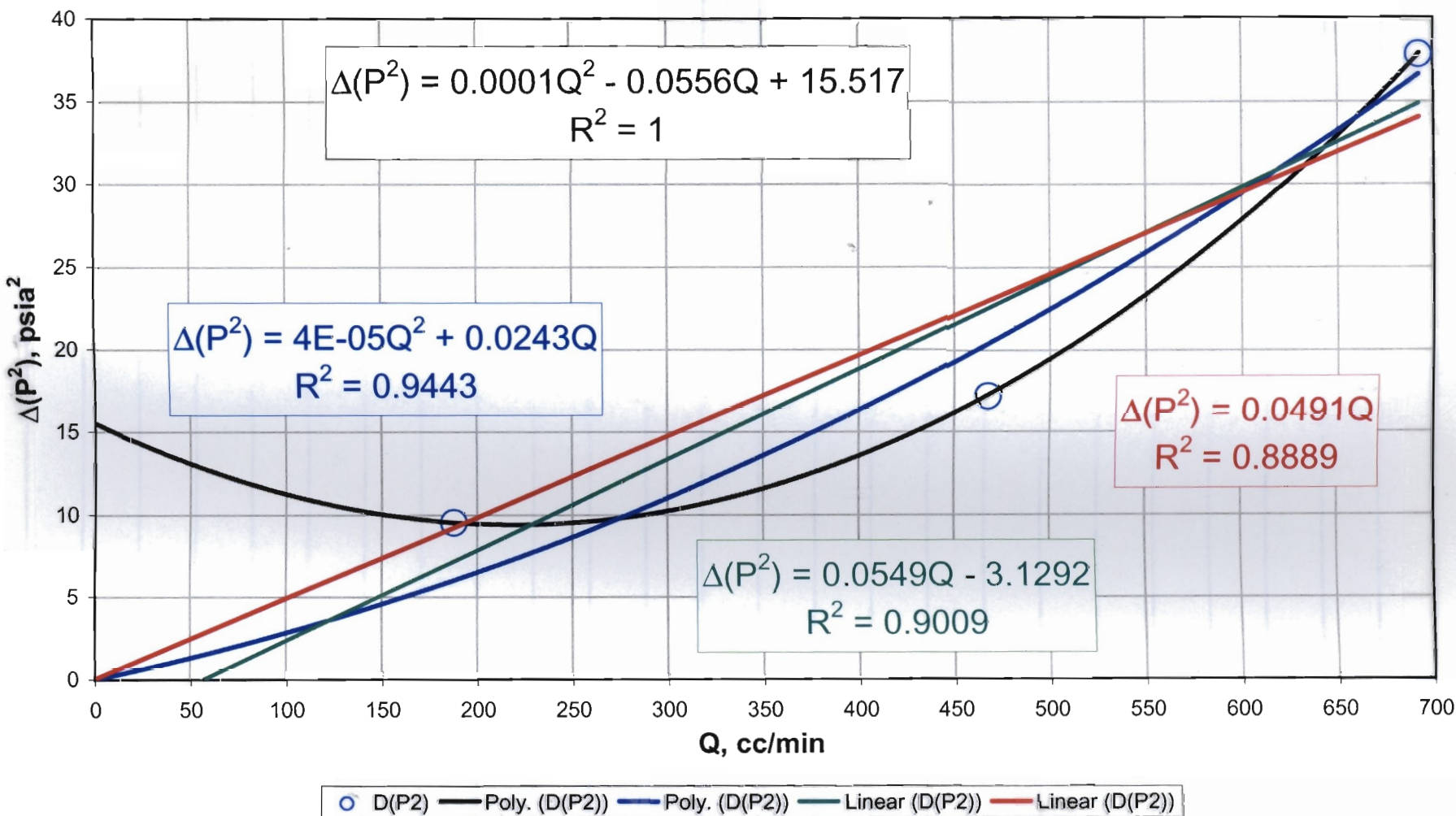


RMM, 12/19/02



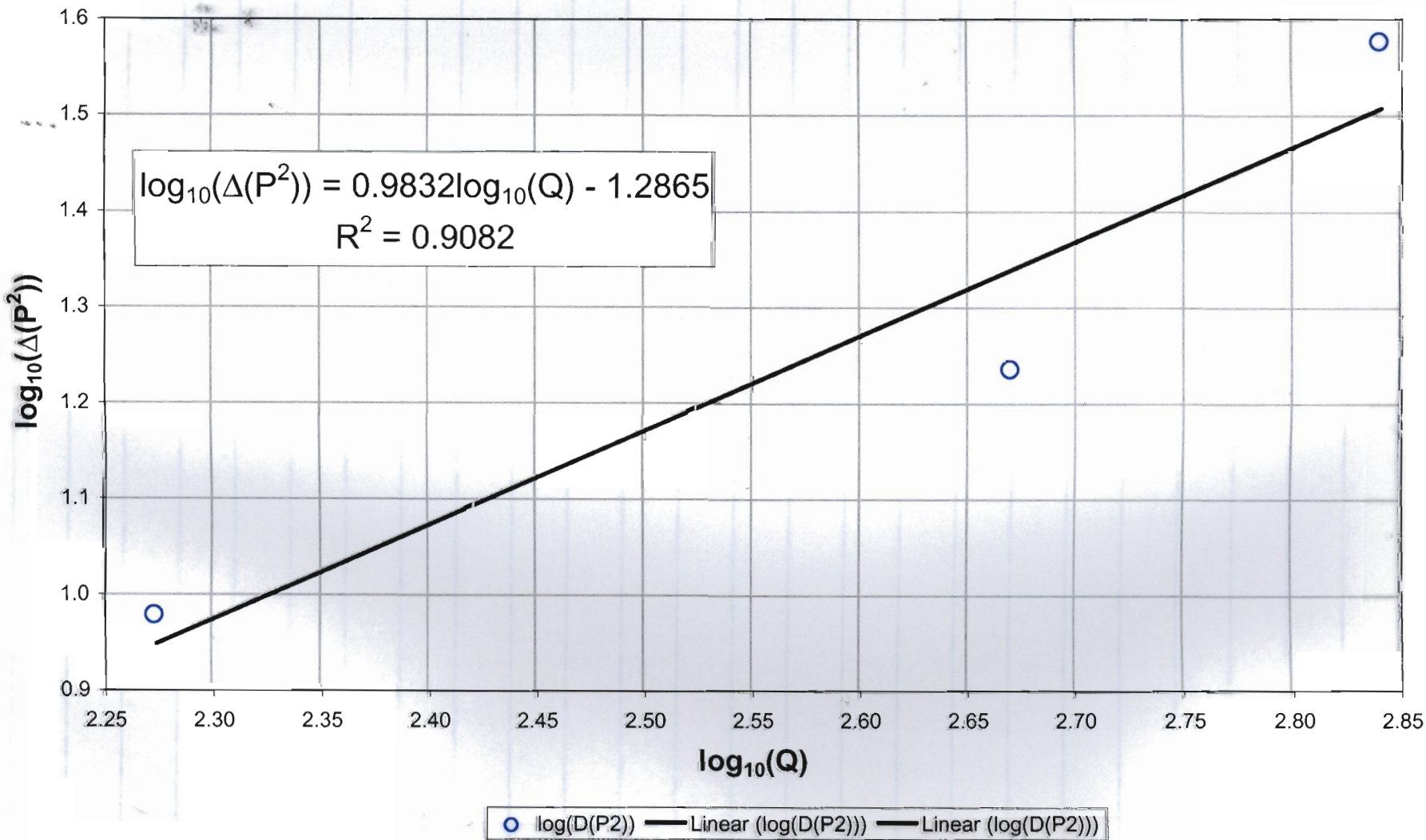
Relationship between steady-state differential pressures squared and flowrate:  
 If relationship is linear, with the ordinate intercept nearly zero,  
 there is no high velocity flow effect.  
 H Transect: Drillhole 14

RMM, 12/14/05

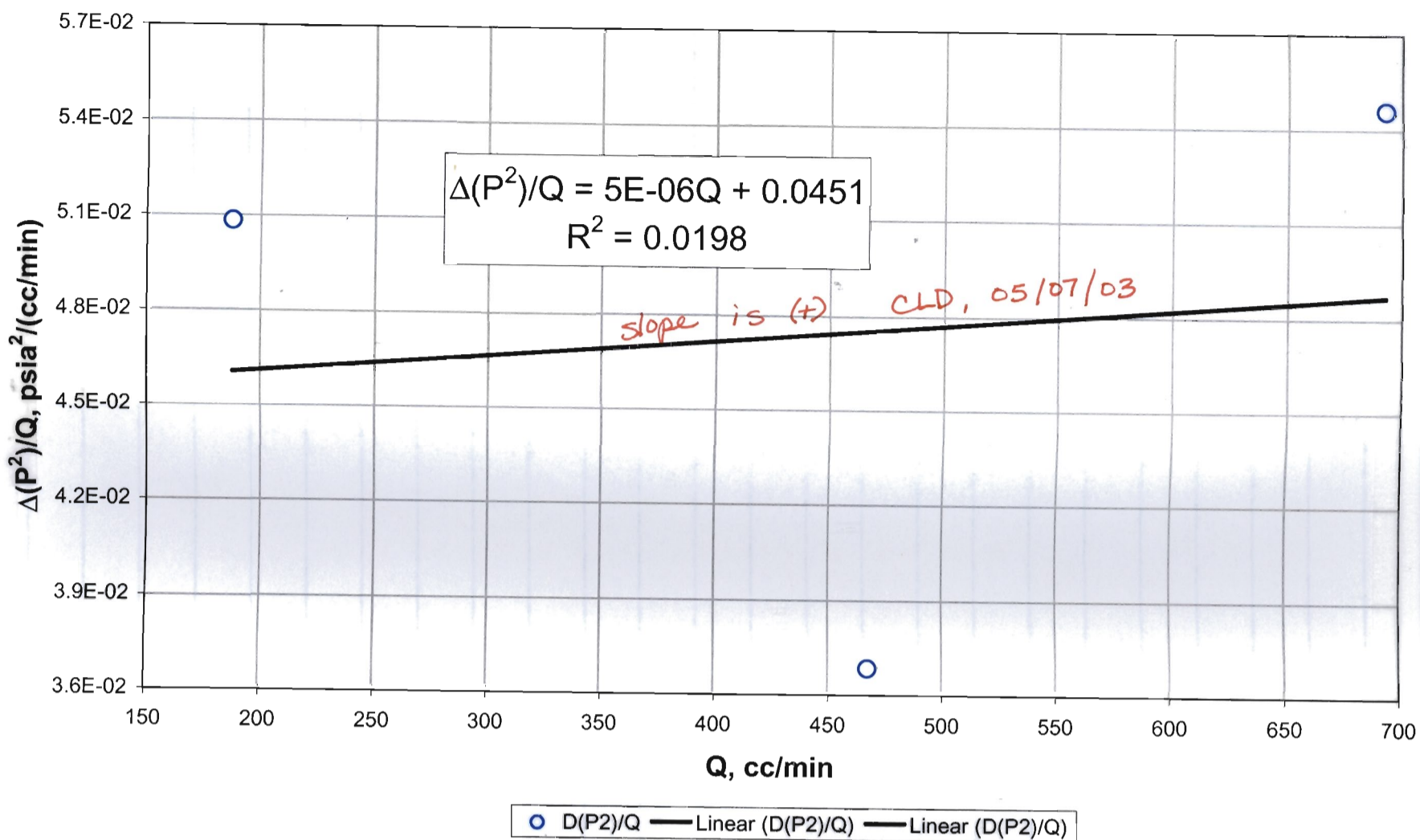


Log-Log plot of differential pressures squared vs. flowrate--used to identify the presence of  
 high-velocity flow effects (when the slope is greater than unity)  
 H Transect: Drillhole 14

RMM, 12/19/05

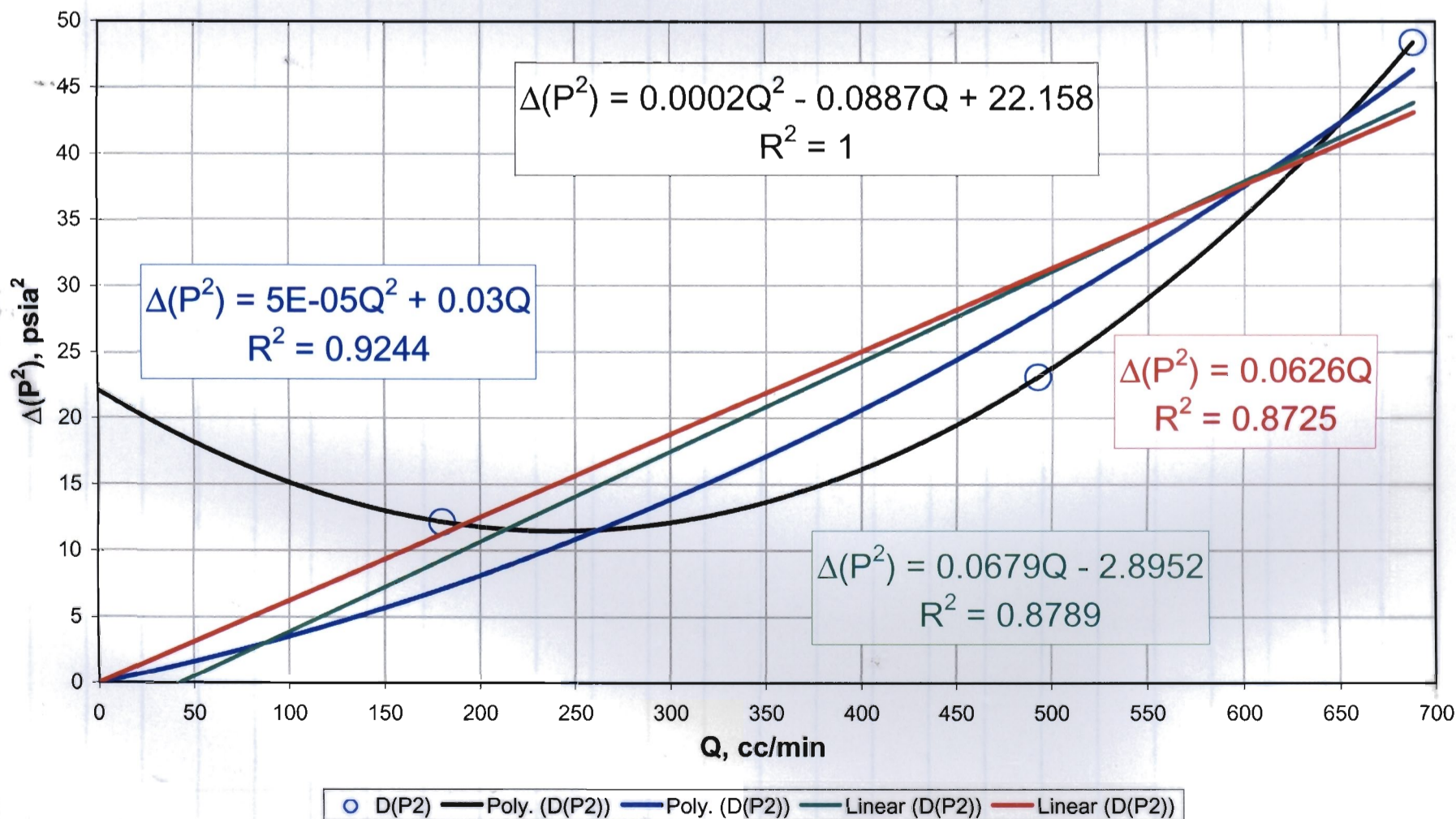


Final check for high velocity flow effects:  
 High velocity flow effects are present when the slope is non-zero and positive.  
 H Transect : Drillhole 14



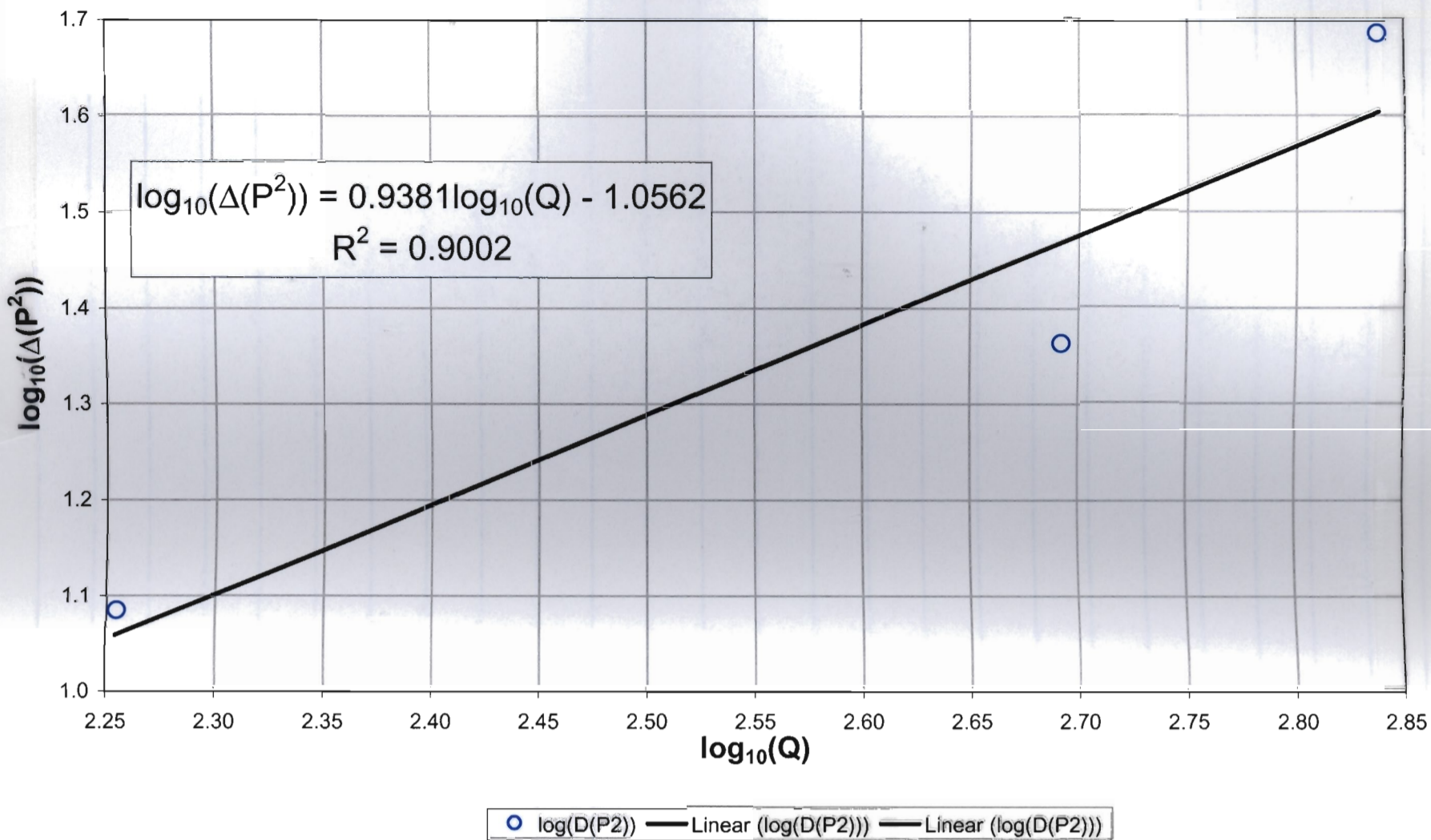
RWM, 12/19/02

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 15



RWM, 12/19/02

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 15

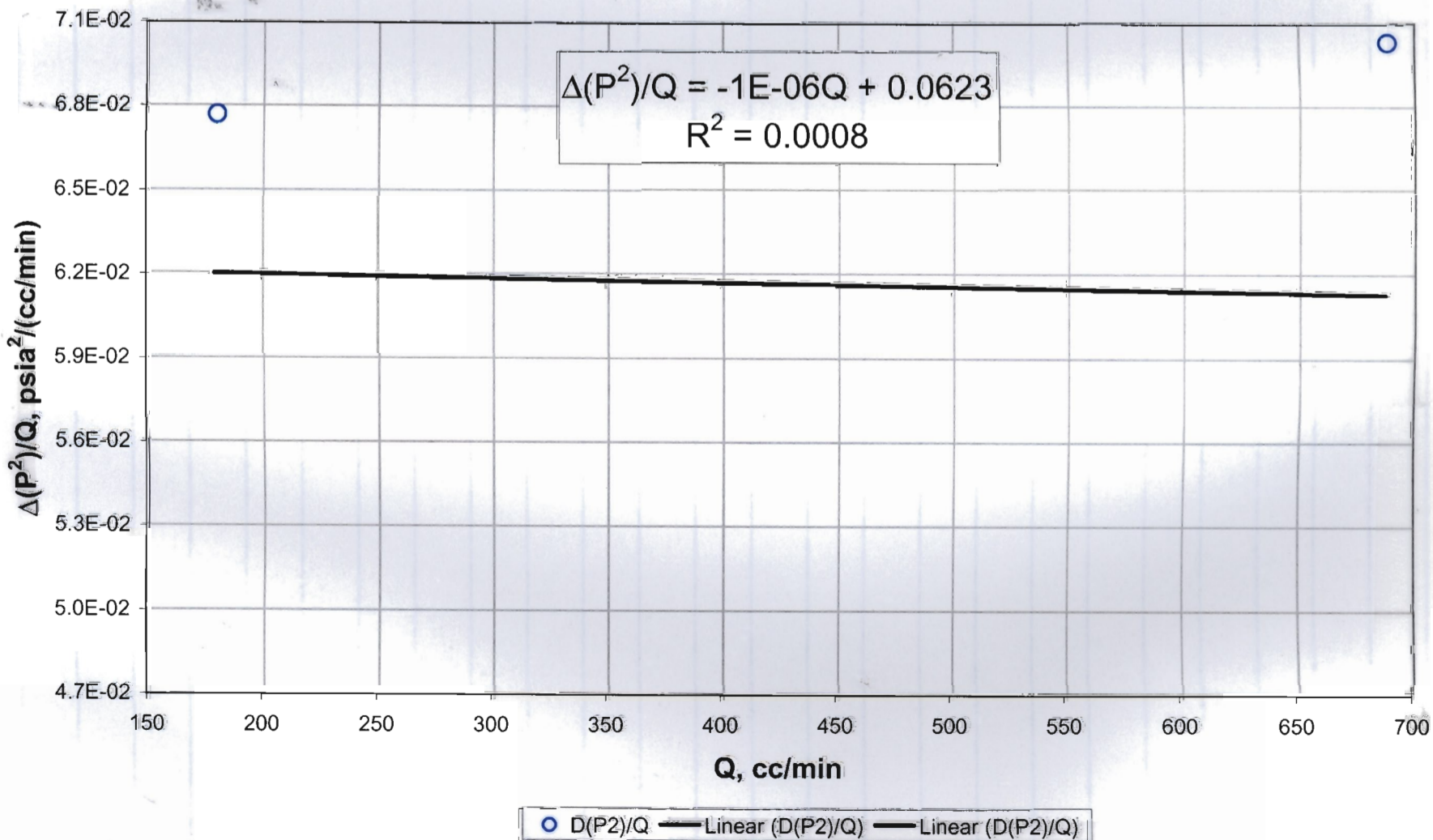


Run, 12/19/04

Final check for high velocity flow effects:

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

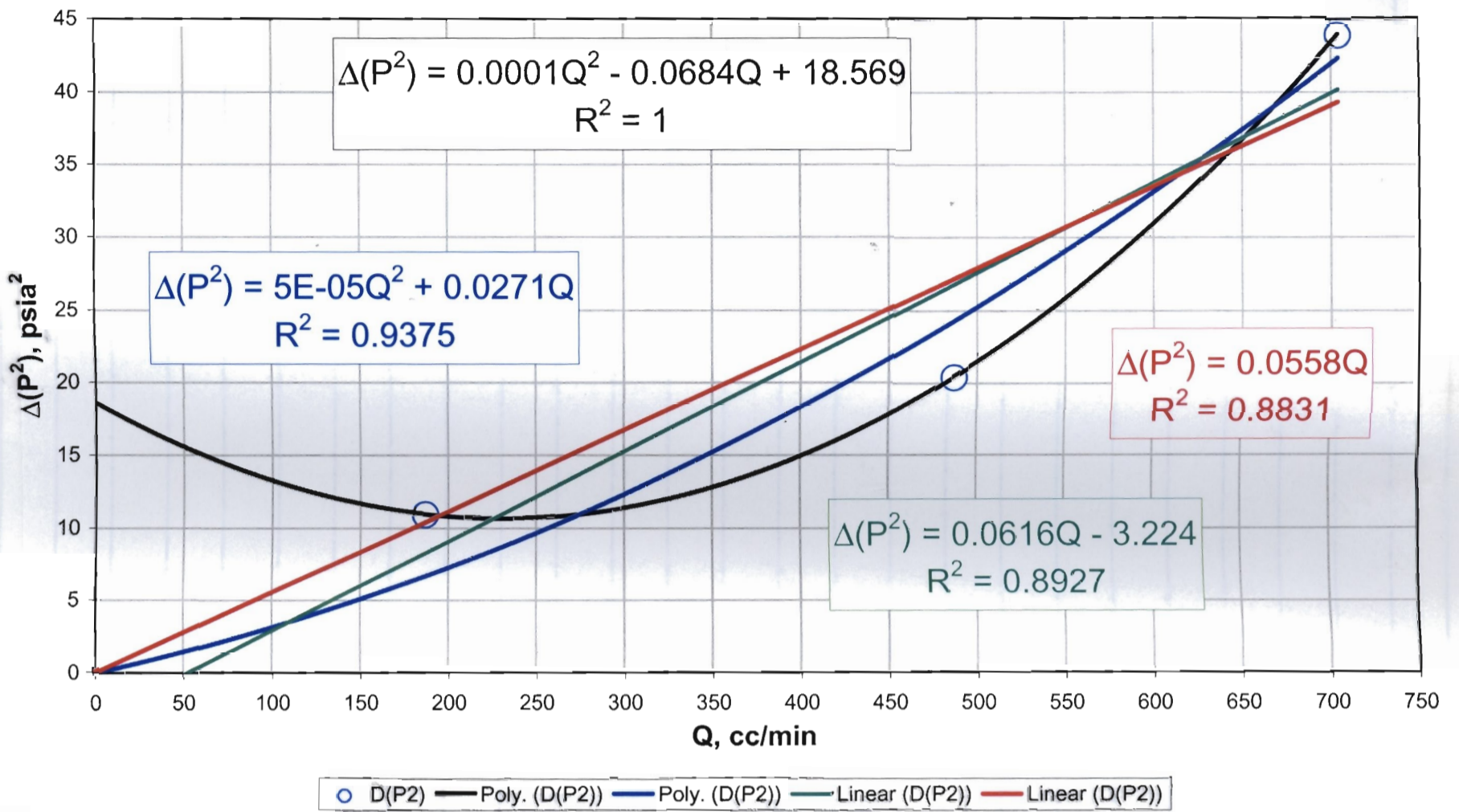
H Transect : Drillhole 15



Run, 12/19/04

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 16

Qm, 12/1/08



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 16

Qm, 12/1/08

