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Supplement 1

October 2007

Forsmark site investigation

Difference flow logging in borehole KFM08A

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Description

In the present supplement all groundwater head calculations have been redone on revised borehole elevation data (Z-coordinates).

Borehole coordinates that formed the basis for this revision of groundwater head data were retrieved from Sicada 2007-06-26 (#SICADA_07_263) /SKB 2007/.

Specifically the following appendices are revised and included in this supplement;

Revised appendix	Appendix number
Table of transmissivity and head of 5 m sections	Appendix 5
Transmissivity and head of 5 m sections	Appendix 6.2
Table of transmissivity and head of detected fractures	Appendix 7
Transmissivity and head of detected fractures	Appendix 8
Comparison between section transmissivity and fracture transmissivity	Appendix 9
Head in the borehole during flow logging	Appendix 10.1
Groundwater recovery after pumping	Appendix 10.3

Reference

SKB, 2007. Compilation of borehole deviation measurements in Forsmark (Nilsson, G. and Nissen, J.). SKB P-07-28, Svensk Kärnbränslehantering AB.

Appendix 5

Table of transmissivity and head of 5 m sections

Difference flow logging – Sequential flow logging

Borehole ID	Secup L (m)	Seclow L (m)	Lw (m)	Q0 (m^3/s)	dh0 (m)	Q1 (m^3/s)	dh1 (m)	TD (m^2/s)	hi (m)	Q-lower limit P (mL/h)	TD-measILT (m^2/s)	TD-measILP (m^2/s)	TD-measIU (m^2/s)	Comments
KFM08A	94.60	99.60	5	–	0.12	–	–9.72	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	99.61	104.61	5	–	0.13	–	–9.70	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	104.63	109.63	5	–	0.16	2.50E–09	–9.65	2.5E–10	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	109.64	114.64	5	1.14E–08	0.18	1.05E–07	–9.62	9.4E–09	1.4	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	114.65	119.65	5	–	0.20	8.89E–09	–9.59	9.0E–10	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	119.66	124.66	5	–	0.21	9.44E–09	–9.58	9.5E–10	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	124.67	129.67	5	–	0.24	–	–9.55	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	129.68	134.68	5	6.67E–09	0.25	1.56E–07	–9.54	1.5E–08	0.7	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	134.69	139.69	5	1.39E–08	0.27	1.31E–07	–9.50	1.2E–08	1.4	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	139.70	144.70	5	–	0.30	–	–9.48	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	144.71	149.71	5	–	0.35	3.64E–08	–9.45	3.7E–09	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	149.71	154.71	5	–	0.36	1.14E–08	–9.42	1.2E–09	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	154.72	159.72	5	–	0.39	–	–9.31	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	159.73	164.73	5	–	0.42	–	–9.24	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	164.74	169.74	5	–	0.44	–	–9.11	–	–	30	8.6E–10	8.6E–10	8.6E–06	
KFM08A	169.75	174.75	5	–	0.46	7.78E–09	–9.08	8.1E–10	–	30	8.6E–10	8.6E–10	8.6E–06	
KFM08A	174.76	179.76	5	–	0.48	–	–9.06	–	–	30	8.6E–10	8.6E–10	8.6E–06	
KFM08A	179.77	184.77	5	–	0.51	–	–9.03	–	–	30	8.6E–10	8.6E–10	8.6E–06	
KFM08A	184.78	189.78	5	–1.13E–07	0.51	2.20E–06	–9.00	2.4E–07	0.1	30	8.7E–10	8.7E–10	8.7E–06	
KFM08A	189.79	194.79	5	–1.89E–07	0.53	3.53E–05	–8.97	3.7E–06	0.5	30	8.7E–10	8.7E–10	8.7E–06	
KFM08A	194.80	199.80	5	–1.84E–07	0.58	3.67E–06	–8.94	4.0E–07	0.1	30	8.7E–10	8.7E–10	8.7E–06	
KFM08A	199.81	204.81	5	–	0.62	5.39E–08	–8.92	5.6E–09	–	30	8.6E–10	8.6E–10	8.6E–06	
KFM08A	204.81	209.81	5	–	0.69	–	–8.88	–	–	30	8.6E–10	8.6E–10	8.6E–06	

Borehole ID	Secup L (m)	Seclow L (m)	Lw (m)	Q0 (m^3/s)	dh0 (m)	Q1 (m^3/s)	dh1 (m)	TD (m^2/s)	hi (m)	Q-lower limit P (mL/h)	TD-measILT (m^2/s)	TD-measILP (m^2/s)	TD-measIU (m^2/s)	Comments
KFM08A	209.82	214.82	5	–	0.81	6.39E–09	–8.85	6.5E–10	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	214.83	219.83	5	–	0.89	–	–8.82	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	219.84	224.84	5	–	0.95	–	–8.79	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	224.85	229.85	5	–	0.98	–	–8.76	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	229.86	234.86	5	–	1.01	–	–8.73	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	234.87	239.87	5	–	1.04	–	–8.68	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	239.88	244.88	5	–	1.09	4.17E–09	–8.65	4.2E–10	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	244.89	249.89	5	–1.03E–08	1.12	2.18E–07	–8.62	2.3E–08	0.7	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	249.89	254.89	5	–	1.15	–	–8.60	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	254.90	259.90	5	–	1.18	–	–8.57	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	259.91	264.91	5	–	1.22	–	–8.54	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	264.91	269.91	5	–	1.25	–	–8.50	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	269.92	274.92	5	–	1.29	2.14E–08	–8.47	2.2E–09	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	274.93	279.93	5	–7.89E–07	1.32	1.43E–05	–8.45	1.5E–06	0.8	30	8.4E–10	8.4E–10	8.5E–06	
KFM08A	279.93	284.93	5	–	1.35	–	–8.39	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	284.94	289.94	5	–	1.35	–	–8.39	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	289.95	294.95	5	–	1.39	–	–8.34	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	294.96	299.96	5	–	1.46	–	–8.29	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	299.97	304.97	5	–	1.49	–	–8.26	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	304.98	309.98	5	–	1.51	–	–8.23	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	309.99	314.99	5	–	1.53	–	–8.20	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	315.00	320.00	5	–	1.57	–	–8.16	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	320.01	325.01	5	–	1.61	–	–8.13	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	325.01	330.01	5	–	1.61	–	–8.12	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	330.02	335.02	5	–	1.66	–	–8.07	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	335.02	340.02	5	–	1.69	–	–8.05	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	340.02	345.02	5	–	1.73	–	–8.01	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	345.02	350.02	5	–	1.77	–	–7.97	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	350.04	355.04	5	–	1.80	–	–7.95	–	–	30	8.5E–10	8.5E–10	8.5E–06	

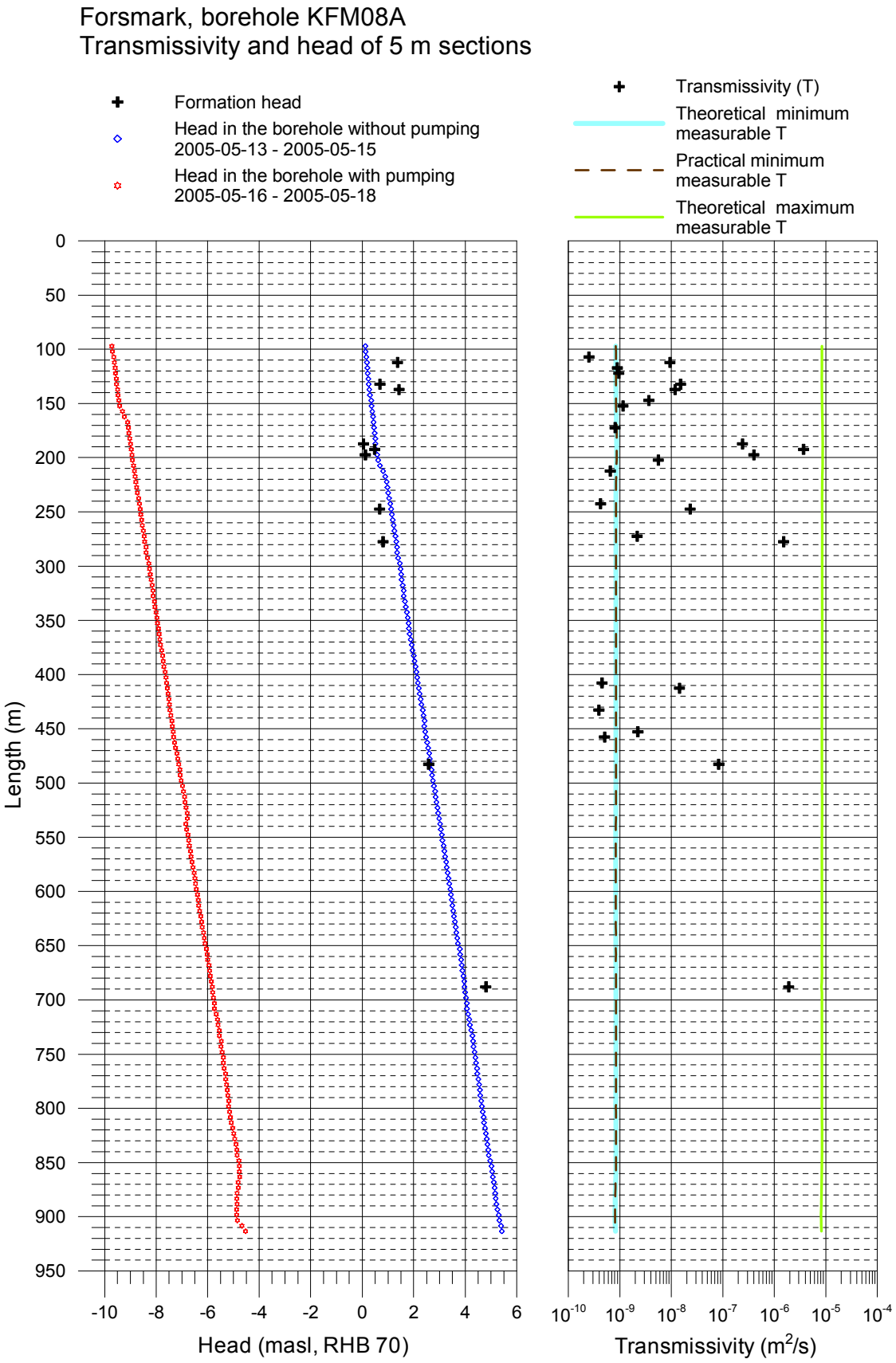
Borehole ID	Secup L (m)	Seclow L (m)	Lw (m)	Q0 (m^3/s)	dh0 (m)	Q1 (m^3/s)	dh1 (m)	TD (m^2/s)	hi (m)	Q-lower limit P (mL/h)	TD-measILT (m^2/s)	TD-measILP (m^2/s)	TD-measIU (m^2/s)	Comments
KFM08A	355.05	360.05	5	–	1.81	–	–7.91	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	360.07	365.07	5	–	1.84	–	–7.89	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	365.09	370.09	5	–	1.88	–	–7.86	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	370.09	375.09	5	–	1.92	–	–7.83	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	375.10	380.10	5	–	1.95	–	–7.79	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	380.10	385.10	5	–	2.00	–	–7.75	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	385.11	390.11	5	–	2.03	–	–7.73	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	390.12	395.12	5	–	2.07	–	–7.70	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	395.12	400.12	5	–	2.10	–	–7.65	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	400.13	405.13	5	–	2.13	–	–7.62	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	405.14	410.14	5	–	2.16	4.44E–09	–7.60	4.5E–10	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	410.15	415.15	5	–	2.20	1.42E–07	–7.57	1.4E–08	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	415.16	420.16	5	–	2.23	–	–7.54	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	420.16	425.16	5	–	2.27	–	–7.51	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	425.16	430.16	5	–	2.30	–	–7.49	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	430.16	435.16	5	–	2.35	3.89E–09	–7.47	3.9E–10	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	435.16	440.16	5	–	2.38	–	–7.43	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	440.16	445.16	5	–	2.42	–	–7.39	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	445.16	450.16	5	–	2.40	–	–7.37	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	450.16	455.16	5	–	2.44	2.22E–08	–7.34	2.2E–09	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	455.16	460.16	5	–	2.48	5.00E–09	–7.33	5.0E–10	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	460.16	465.16	5	–	2.52	–	–7.29	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	465.16	470.16	5	–	2.56	–	–7.25	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	470.16	475.16	5	–	2.60	–	–7.20	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	475.16	480.16	5	–	2.62	–	–7.16	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	480.16	485.16	5	–6.67E–09	2.66	8.14E–07	–7.12	8.3E–08	2.6	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	485.17	490.17	5	–	2.69	–	–7.08	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	490.18	495.18	5	–	2.71	–	–7.07	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	495.20	500.20	5	–	2.74	–	–7.03	–	–	30	8.4E–10	8.4E–10	8.4E–06	

Borehole ID	Secup L (m)	Seclow L (m)	Lw (m)	Q0 (m^3/s)	dh0 (m)	Q1 (m^3/s)	dh1 (m)	TD (m^2/s)	hi (m)	Q-lower limit P (mL/h)	TD-measILT (m^2/s)	TD-measILP (m^2/s)	TD-measIU (m^2/s)	Comments
KFM08A	500.21	505.21	5	–	2.78	–	–6.98	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	505.22	510.22	5	–	2.83	–	–6.94	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	510.22	515.22	5	–	2.85	–	–6.90	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	515.23	520.23	5	–	2.88	–	–6.88	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	520.24	525.24	5	–	2.92	–	–6.84	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	525.25	530.25	5	–	2.95	–	–6.80	–	–	30	8.5E–10	8.5E–10	8.5E–06	
KFM08A	530.26	535.26	5	–	2.99	–	–6.79	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	535.27	540.27	5	–	3.02	–	–6.85	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	540.28	545.28	5	–	3.05	–	–6.82	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	545.29	550.29	5	–	3.09	–	–6.77	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	550.30	555.30	5	–	3.11	–	–6.74	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	555.31	560.31	5	–	3.16	–	–6.71	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	560.31	565.31	5	–	3.19	–	–6.67	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	565.32	570.32	5	–	3.22	–	–6.65	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	570.33	575.33	5	–	3.26	–	–6.61	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	575.33	580.33	5	–	3.28	–	–6.57	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	580.34	585.34	5	–	3.32	–	–6.53	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	585.35	590.35	5	–	3.35	–	–6.50	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	590.36	595.36	5	–	3.38	–	–6.47	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	595.37	600.37	5	–	3.42	–	–6.44	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	600.38	605.38	5	–	3.44	–	–6.40	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	605.39	610.39	5	–	3.48	–	–6.37	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	610.40	615.40	5	–	3.50	–	–6.35	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	615.41	620.41	5	–	3.53	–	–6.31	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	620.42	625.42	5	–	3.56	–	–6.27	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	625.42	630.42	5	–	3.60	–	–6.24	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	630.43	635.43	5	–	3.63	–	–6.22	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	635.44	640.44	5	–	3.65	–	–6.16	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	640.44	645.44	5	–	3.69	–	–6.13	–	–	30	8.4E–10	8.4E–10	8.4E–06	

Borehole ID	Secup L (m)	Seclow L (m)	Lw (m)	Q0 (m^3/s)	dh0 (m)	Q1 (m^3/s)	dh1 (m)	TD (m^2/s)	hi (m)	Q-lower limit P (mL/h)	TD-measILT (m^2/s)	TD-measILP (m^2/s)	TD-measIU (m^2/s)	Comments
KFM08A	645.45	650.45	5	–	3.71	–	–6.10	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	650.46	655.46	5	–	3.79	–	–6.05	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	655.46	660.46	5	–	3.80	–	–6.02	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	660.47	665.47	5	–	3.84	–	–6.00	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	665.48	670.48	5	–	3.86	–	–5.95	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	670.49	675.49	5	–	3.89	–	–5.93	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	675.49	680.49	5	–	3.93	–	–5.90	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	680.50	685.50	5	–	3.96	–	–5.86	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	685.51	690.51	5	1.60E–06	3.97	2.04E–05	–5.82	1.9E–06	4.8	30	8.4E–10	8.4E–10	8.3E–06	
KFM08A	690.52	695.52	5	–	3.99	–	–5.81	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	695.55	700.55	5	–	4.03	–	–5.78	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	700.58	705.58	5	–	4.06	–	–5.74	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	705.58	710.58	5	–	4.06	–	–5.74	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	710.57	715.57	5	–	4.11	–	–5.67	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	715.57	720.57	5	–	4.16	–	–5.62	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	720.56	725.56	5	–	4.18	–	–5.60	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	725.56	730.56	5	–	4.23	–	–5.55	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	730.56	735.56	5	–	4.28	–	–5.55	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	735.56	740.56	5	–	4.30	–	–5.47	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	740.57	745.57	5	–	4.32	–	–5.48	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	745.58	750.58	5	–	4.36	–	–5.44	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	750.59	755.59	5	–	4.39	–	–5.39	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	755.59	760.59	5	–	4.42	–	–5.39	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	760.60	765.60	5	–	4.46	–	–5.36	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	765.61	770.61	5	–	4.47	–	–5.31	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	770.62	775.62	5	–	4.51	–	–5.30	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	775.63	780.63	5	–	4.54	–	–5.27	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	780.64	785.64	5	–	4.57	–	–5.24	–	–	30	8.4E–10	8.4E–10	8.4E–06	

Borehole ID	Secup L (m)	Seclow L (m)	Lw (m)	Q0 (m^3/s)	dh0 (m)	Q1 (m^3/s)	dh1 (m)	TD (m^2/s)	hi (m)	Q-lower limit P (mL/h)	TD-measILT (m^2/s)	TD-measILP (m^2/s)	TD-measIU (m^2/s)	Comments
KFM08A	785.65	790.65	5	–	4.58	–	–5.22	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	790.66	795.66	5	–	4.62	–	–5.18	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	795.67	800.67	5	–	4.65	–	–5.19	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	800.68	805.68	5	–	4.68	–	–5.15	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	805.68	810.68	5	–	4.71	–	–5.12	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	810.69	815.69	5	–	4.73	–	–5.08	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	815.69	820.69	5	–	4.77	–	–5.03	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	820.70	825.70	5	–	4.80	–	–4.99	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	825.71	830.71	5	–	4.84	–	–4.95	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	830.71	835.71	5	–	4.86	–	–4.90	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	835.72	840.72	5	–	4.89	–	–4.87	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	840.72	845.72	5	–	4.91	–	–4.86	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	845.73	850.73	5	–	4.97	–	–4.79	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	850.74	855.74	5	–	5.02	–	–4.77	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	855.75	860.75	5	–	5.04	–	–4.77	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	860.75	865.75	5	–	5.07	–	–4.76	–	–	30	8.4E–10	8.4E–10	8.4E–06	
KFM08A	865.76	870.76	5	–	5.11	–	–4.82	–	–	30	8.3E–10	8.3E–10	8.3E–06	
KFM08A	870.77	875.77	5	–	5.14	–	–4.81	–	–	30	8.3E–10	8.3E–10	8.3E–06	
KFM08A	875.78	880.78	5	–	5.16	–	–4.86	–	–	30	8.2E–10	8.2E–10	8.2E–06	
KFM08A	880.79	885.79	5	–	5.18	–	–4.87	–	–	30	8.2E–10	8.2E–10	8.2E–06	
KFM08A	885.79	890.79	5	–	5.21	–	–4.86	–	–	30	8.2E–10	8.2E–10	8.2E–06	
KFM08A	890.80	895.80	5	–	5.25	–	–4.88	–	–	30	8.1E–10	8.1E–10	8.1E–06	
KFM08A	895.81	900.81	5	–	5.30	–	–4.88	–	–	30	8.1E–10	8.1E–10	8.1E–06	
KFM08A	900.82	905.82	5	–	5.32	–	–4.85	–	–	30	8.1E–10	8.1E–10	8.1E–06	
KFM08A	905.83	910.83	5	–	5.39	–	–4.67	–	–	30	8.2E–10	8.2E–10	8.2E–06	
KFM08A	910.83	915.83	5	–	5.42	–	–4.53	–	–	30	8.3E–10	8.3E–10	8.3E–06	

Transmissivity and head of 5 m sections



Appendix 7

Table of transmissivity and head of detected fractures

PFL – Difference flow logging – Inferred flow anomalies from overlapping flow logging

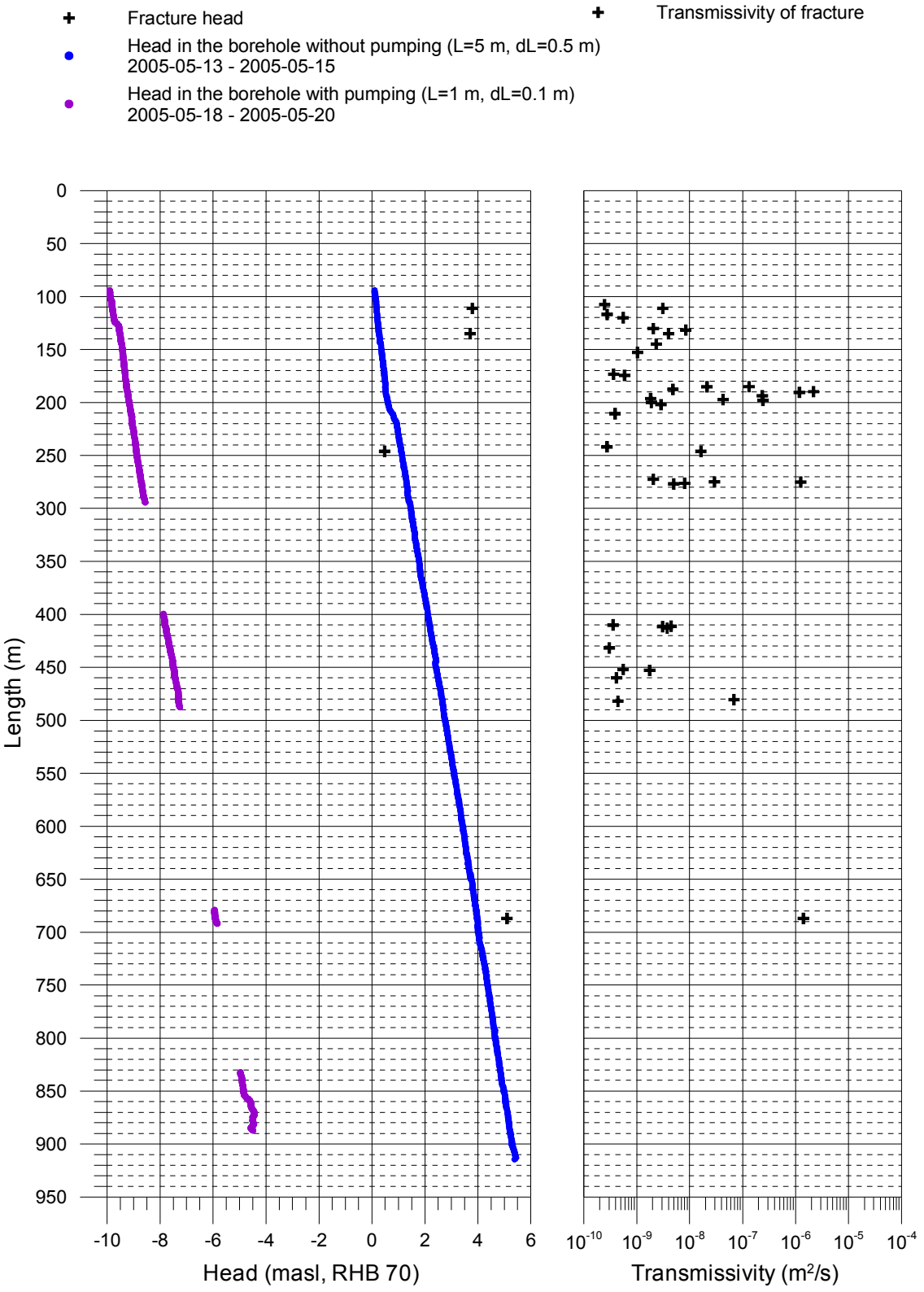
Borehole ID	Length to flow anom. L (m)	Lw (m)	dL (m)	Q0 (m^3/s)	dh0 (m)	Q1 (m^3/s)	dh1 (m)	TD (m^2/s)	hi (m)	Comments
KFM08A	107.6	1	0.1	–	0.16	2.50E–09	–9.82	2.5E–10	–	*
KFM08A	111.3	1	0.1	1.14E–08	0.17	4.28E–08	–9.81	3.1E–09	3.8	
KFM08A	117.0	1	0.1	–	0.20	2.78E–09	–9.76	2.8E–10	–	*
KFM08A	120.1	1	0.1	–	0.20	5.56E–09	–9.74	5.5E–10	–	
KFM08A	130.3	1	0.1	–	0.25	2.03E–08	–9.55	2.1E–09	–	
KFM08A	131.7	1	0.1	–	0.25	8.33E–08	–9.54	8.4E–09	–	
KFM08A	135.1	1	0.1	1.39E–08	0.27	5.33E–08	–9.51	4.0E–09	3.7	
KFM08A	145.0	1	0.1	–	0.34	2.31E–08	–9.44	2.3E–09	–	
KFM08A	152.9	1	0.1	–	0.37	1.03E–08	–9.41	1.0E–09	–	
KFM08A	173.4	1	0.1	–	0.47	3.61E–09	–9.31	3.7E–10	–	*
KFM08A	174.5	1	0.1	–	0.47	5.83E–09	–9.32	5.9E–10	–	
KFM08A	185.1	1	0.1	–	0.50	1.31E–06	–9.28	1.3E–07	–	
KFM08A	185.3	1	0.1	–	0.50	2.09E–07	–9.26	2.1E–08	–	
KFM08A	187.6	1	0.1	–	0.52	4.75E–08	–9.24	4.8E–09	–	
KFM08A	189.8	1	0.1	–	0.52	2.17E–05	–9.24	2.2E–06	–	
KFM08A	190.5	1	0.1	–	0.53	1.16E–05	–9.22	1.2E–06	–	
KFM08A	193.7	1	0.1	–	0.54	2.31E–06	–9.22	2.4E–07	–	
KFM08A	196.4	1	0.1	–	0.57	1.81E–08	–9.19	1.8E–09	–	
KFM08A	197.3	1	0.1	–	0.58	4.22E–07	–9.20	4.3E–08	–	
KFM08A	197.9	1	0.1	–	0.59	2.40E–06	–9.19	2.4E–07	–	
KFM08A	199.8	1	0.1	–	0.60	1.86E–08	–9.16	1.9E–09	–	
KFM08A	202.0	1	0.1	–	0.61	2.83E–08	–9.17	2.9E–09	–	
KFM08A	210.7	1	0.1	–	0.78	3.89E–09	–9.09	3.9E–10	–	*
KFM08A	241.9	1	0.1	–	1.08	2.78E–09	–8.92	2.8E–10	–	*
KFM08A	246.2	1	0.1	–1.03E–08	1.10	1.55E–07	–8.90	1.6E–08	0.5	
KFM08A	272.5	1	0.1	–	1.29	2.08E–08	–8.73	2.1E–09	–	
KFM08A	275.0	1	0.1	–	1.30	2.97E–07	–8.71	2.9E–08	–	*
KFM08A	275.2	1	0.1	–	1.30	1.26E–05	–8.71	1.3E–06	–	
KFM08A	276.3	1	0.1	–	1.30	8.14E–08	–8.70	8.1E–09	–	
KFM08A	276.9	1	0.1	–	1.32	5.06E–08	–8.70	5.0E–09	–	
KFM08A	410.1	1	0.1	–	2.18	3.61E–09	–7.82	3.6E–10	–	*
KFM08A	411.2	1	0.1	–	2.19	4.50E–08	–7.80	4.5E–09	–	
KFM08A	411.6	1	0.1	–	2.19	3.11E–08	–7.80	3.1E–09	–	
KFM08A	413.1	1	0.1	–	2.21	3.81E–08	–7.77	3.8E–09	–	
KFM08A	431.7	1	0.1	–	2.34	3.06E–09	–7.62	3.0E–10	–	*
KFM08A	452.0	1	0.1	–	2.44	5.56E–09	–7.47	5.5E–10	–	*
KFM08A	452.8	1	0.1	–	2.44	1.75E–08	–7.47	1.8E–09	–	
KFM08A	459.9	1	0.1	–	2.49	4.17E–09	–7.43	4.2E–10	–	*
KFM08A	480.5	1	0.1	–	2.66	6.94E–07	–7.31	6.9E–08	–	
KFM08A	482.0	1	0.1	–	2.66	4.44E–09	–7.30	4.4E–10	–	*
KFM08A	687.0	1	0.1	1.60E–06	3.98	1.57E–05	–5.93	1.4E–06	5.1	

* Uncertain = The flow rate is less than 30 mL/h or the flow anomalies are overlapping or they are unclear because of noise.

Appendix 8

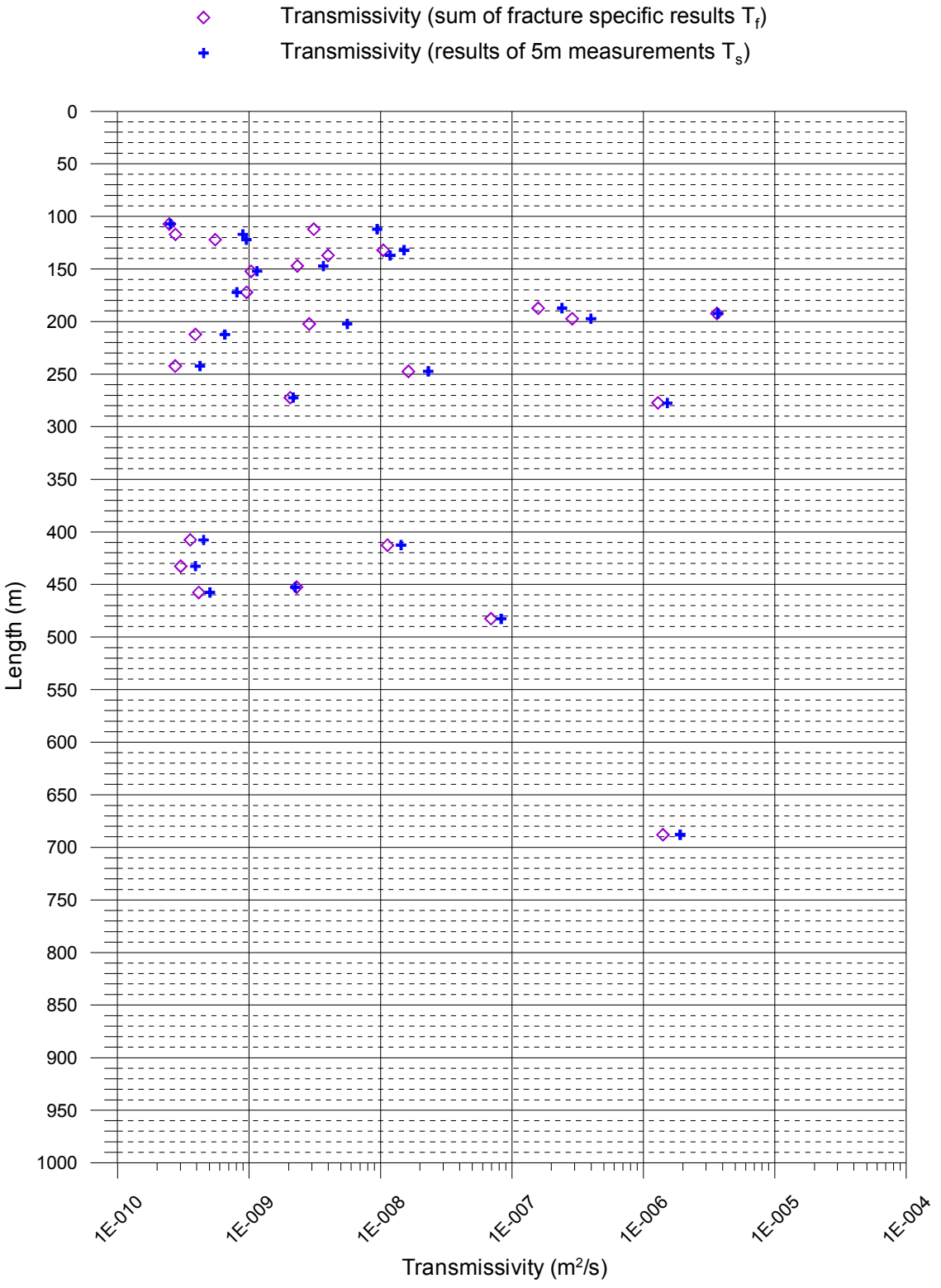
Transmissivity and head of detected fractures

Forsmark, borehole KFM08A
Transmissivity and head of detected fractures



Comparison between section transmissivity and fracture transmissivity

Forsmark, borehole KFM08A
Comparison between section transmissivity and fracture transmissivity

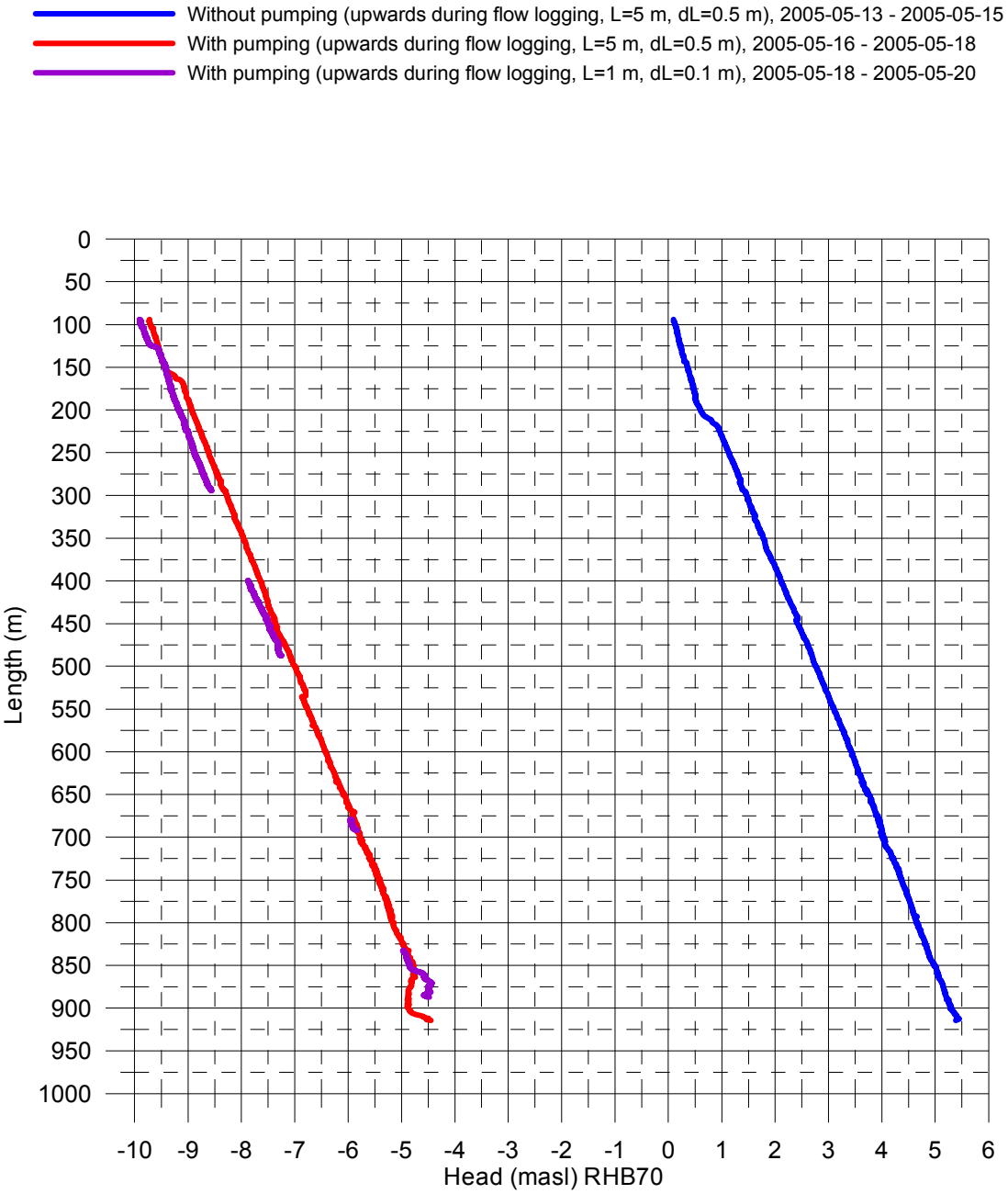


Appendix 10.1

Head in the borehole during flow logging

Forsmark, borehole KFM08A
Head in the borehole during flow logging

Head(masl)= (Absolute pressure (Pa) - Airpressure (Pa) + Offset) /(1000 kg/m^3 * 9.80665 m/s^2) + Elevation (m)
Offset = 2460 Pa (Correction for absolut pressure sensor)



Groundwater recovery after pumping

Forsmark, borehole KFM08A
Groundwater recovery after pumping

Head(masl)= (Absolute pressure (Pa) - Airpressure (Pa) + Offset) /(1000 kg/m^3 * 9.80665 m/s^2) + Elevation (m)
Offset = 2460 Pa (Correction for absolut pressure sensor)