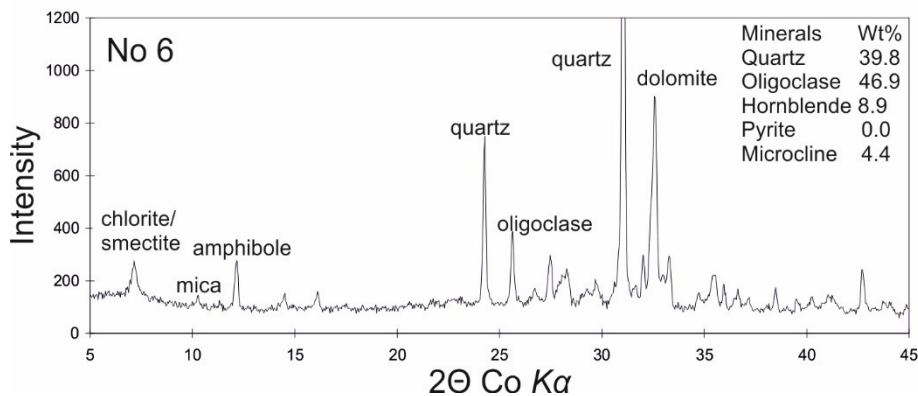
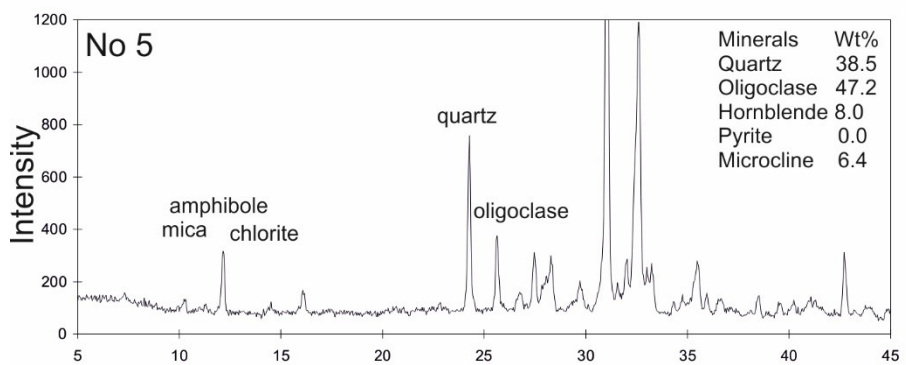
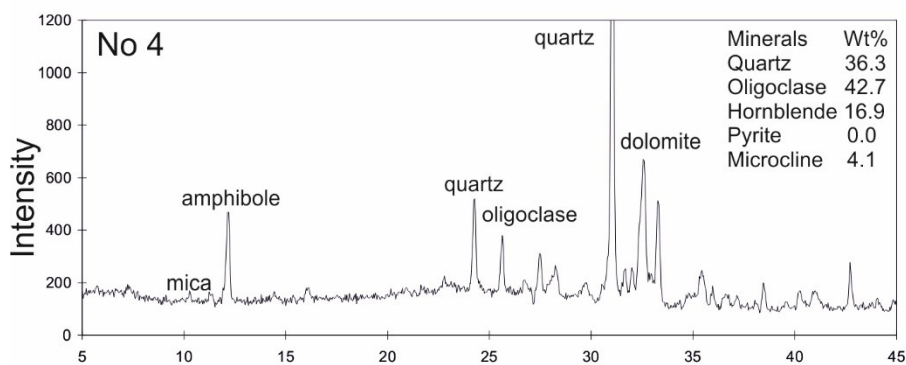
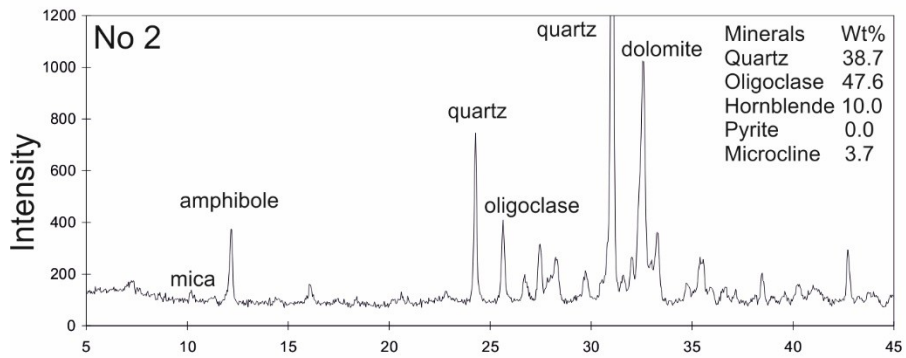


Supplementary A. Representative XRD patterns of subsurface samples (Table 1).



Supplementary B. Chemical composition of lake water in the Kilpisjärvi area in 2008 to 2010.

No	Date	Sampling point	Coordinates		depth m	pH	El.cond. $\mu\text{S}\cdot\text{cm}^{-1}$	SO_4^{2-}	Cl^-	Na^+	K^+	Ca^{2+} Mg^{2+}	
			(N°)	(E°)								$\text{mg}\cdot\text{L}^{-1}$	
1	17-May-08	4	69°02'33.77"	20°52'36.1"		7.9	43.9	5.6	1.3	1.4	0.3	4.2	1.0
2	27-May-08	4				7.4	39.0	5.7	1.2	1.4	0.4	4.0	1.0
3	06-Aug-08	4				6.4	35.1	6.3	0.9	0.5	0.2	2.1	0.5
4	05-Jul-09	4				8.6	36.3	7.2	1.1	1.4	0.5	6.0	1.3
5	14-Jul-09	4				7.7	35.8	7.5	1.3	1.8	0.5	6.5	1.4
6	22-Jun-10	4				8.1	33.4	6.5	1.1	1.3	0.4	4.6	0.9
7	30-Jun-10	4				7.2	33.1	6.7	1.0	1.2	0.4	6.8	0.9
8	26-May-08	Lake Saana	69°03'01.0"	20°52'15.8"	2	7.6	39.6	5.6	1.1	1.1	0.3	4.2	1.0
9	26-May-08	Lake Saana			23	7.0	58.3	5.7	1.2	1.0	0.3	4.6	1.1
10	28-May-08	Lake Saanalampi	69°02'59.9"	20°49'35.6"	1.5	6.2	22.4	1.4	3.4	1.6	0.4	0.9	0.2
11	28-May-08	Lake Saanalampi			3	6.3	18.2	1.4	3.2	1.4	0.2	0.9	0.3
12	28-May-08	Lake Saanalampi			4.5	6.1	18.0	1.4	2.9	1.5	0.3	0.9	0.3