

**Table S5:** Results of CEC analysis from well HE-42, Hellisheiði geothermal system.

Depth (m)	Mass (g)	Water content (%)	C <sub>Cu-trien</sub> (mol)	Absorbance (blank)	Absorbance (supernatant solution)	CEC (meq/100 g)	Alteration zone
350	0.2009	0.90	0.01010	0.261	0.247	5.44	Zeo-Sme
500	0.2001	2.95	0.01010	0.261	0.187	29.50	Zeo-Sme
596	0.2003	3.10	0.01010	0.261	0.189	28.72	MLC
700	0.2008	2.01	0.01010	0.261	0.209	20.46	MLC
750	0.2008	1.00	0.01010	0.261	0.239	8.57	MLC
780	0.2007	1.16	0.01010	0.261	0.236	9.76	MLC
900	0.2002	1.12	0.01010	0.259	0.250	3.55	Chl
950	0.2007	0.60	0.00910	0.234	0.220	5.46	Chl
1000	0.2000	0.36	0.00910	0.234	0.228	2.34	Chl
1120	0.2007	0.24	0.00910	0.234	0.229	1.94	Chl-Ep
1220	0.2007	0.32	0.01010	0.259	0.256	1.17	Chl-Ep
1240	0.2000	0.12	0.00910	0.234	0.233	0.39	Chl-Ep

Abbreviation Alteration zones: Zeo-Sme: zeolite-smectite; MLC: mixed-layers clays; Chl: chlorite; Chl-Ep: chlorite-epidote; Ep-Amp: epidote-amphibole.