

APPENDIX 3

Changeability of Saturation Index of main mineral phases

Samples → Minerals ↓	1	2	3	4	5	6	7	8	9	10	5%log k
Barite	0.35	0.49	0.36	0.05	-0.04	0.41	0.41	0.41	0.33	0.46	0.499
Brucite	-7.27	-7.19	-7.24	-7.06	-6.53	-6.35	-6.60	-6.55	-6.55	-6.97	0.842
Calcite	0.12	0.22	0.02	0.09	0.51	0.67	0.52	0.39	0.54	0.30	0.424
Celestine	-0.10	-0.21	-0.20	-0.25	-0.14	-0.21	-0.20	-0.12	-0.08	-0.16	0.331
Dolomite	-0.54	-0.45	-0.91	-0.75	0.19	0.42	0.15	0.07	0.22	-0.27	0.827
Fe(OH) ₃ (a)	1.12	0.96	0.96	1.04	1.16	1.21	1.15	1.14	1.17	1.05	0.245
Goethite	6.52	6.35	6.35	6.43	6.55	6.60	6.53	6.52	6.55	6.43	0.724
Gypsum	-0.03	-0.08	-0.08	-0.14	-0.10	-0.05	-0.06	-0.04	-0.03	-0.05	0.229
Halite	-6.84	-7.16	-7.36	-7.26	-7.12	-6.94	-6.88	-6.93	-7.18	-7.38	0.079
Jarosite(ss)	-1.21	-2.13	-2.21	-2.40	-2.40	-2.86	-2.58	-2.16	-2.34	-2.20	0.492
Manganite	2.14	2.40	2.28	2.51	2.87	3.09	3.22	2.76	2.56	2.77	1.267
Quartz	0.88	0.74	0.76	0.71	0.94	0.81	0.80	0.76	0.91	0.82	0.199
Siderite	11.09	11.38	11.59	11.62	11.50	11.59	11.53	11.54	11.50	11.45	0.545
SiO ₂ (a)	-0.48	-0.62	-0.60	-0.65	-0.42	-0.55	-0.56	-0.60	-0.45	-0.54	0.136
Strontianite	-1.12	-1.08	-1.27	-1.20	-0.70	-0.66	-0.79	-0.86	-0.68	-0.98	0.464

Grey boxes – potential dissolution conditions

Bold values – potential precipitation conditions

Italicised values – equilibrium conditions