

Table S2: Representative major and minor element abundances.

	SM olivine	SM calcite	SM dolomite	SM matrix 1	SM matrix 2	SM matrix 3	MIL cpx 1	MIL olv 1	MIL alt 1	MIL alt 2	MIL alt 3
SiO ₂	42.48	0.03	0.26	26.95	24.16	25.57	51.22	33.03	43.18	41.92	39.35
TiO ₂	0.08	bd	0.05	0.04	0.10	0.02	0.37	0.01	0.08	0.08	bd
Al ₂ O ₃	0.28	0.03	0.01	2.29	2.46	2.31	0.88	bd	0.15	0.10	0.13
Cr ₂ O ₃	0.06	0.03	0.04	1.13	0.73	0.26	0.33	bd	bd	bd	0.03
FeO	0.49	1.63	3.47	22.65	30.18	31.08	13.74	46.74	32.64	33.77	32.17
MnO	bd	0.19	1.81	0.19	0.07	0.23	0.40	0.98	0.62	0.60	0.56
MgO	56.60	1.26	17.19	18.89	15.25	13.37	12.71	17.69	5.88	5.92	5.47
CaO	0.69	53.25	30.50	0.20	0.12	0.98	19.33	0.45	0.13	0.18	0.14
Na ₂ O	0.01	0.01	0.04	0.60	0.61	0.58	0.22	bd	0.01	0.03	0.04
K ₂ O	bd	bd	bd	0.08	0.06	0.04	bd	bd	0.04	0.04	0.05
CO ₂	n/a	43.86	46.50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total	100.70	100.28	99.86	73.01	73.72	74.44	99.20	98.90	82.74	82.62	77.96

cpx = clinopyroxene. olv = olivine. alt = alteration vein. bd = below detection. n/a = CO₂ was stoichiometrically calculated for calcite and dolomite, but is not present in the other phases. Low totals for matrix and alteration veins reflect the presence of water and some oxidized iron (Fe₂O₃) – as these are both non-stoichiometric they cannot be accurately calculated.