

Supplementary Table 4-a: Principal Component Analysis (PCA) loadings matrix for the mineralization-focused geochemical subset (PC1 to PC5).

Element	PC1	PC2	PC3	PC4	PC5
Au	0.753	-0.086	0.310	0.536	-0.233
As	-0.409	-0.184	-0.230	-0.408	-0.402
Sb	0.987	-0.087	-0.188	-0.088	0.066
Ag	-0.349	-0.288	0.180	-0.003	-0.478
Bi	-0.529	-0.484	0.288	0.295	0.469
Te	-0.741	-0.323	0.110	0.012	0.165
W	-0.754	0.041	-0.284	0.160	0.385
Mo	-0.683	-0.281	-0.209	-0.401	0.022
Cu	-0.656	-0.343	0.271	-0.316	-0.436
Pb	0.381	0.629	0.588	-0.324	0.186
Zn	-0.343	0.820	-0.365	0.247	-0.113
S	-0.222	-0.157	-0.421	-0.010	0.034

Supplementary Table 4-b: Principal Component Analysis (PCA) loadings matrix for the hydrothermal alteration geochemical subset (PC1 to PC5).

Element	PC1	PC2	PC3	PC4	PC5
K	0.985	-0.051	-0.064	-0.040	-0.153
Rb	1.004	-0.069	-0.018	-0.041	-0.059
Cs	0.949	-0.071	0.177	-0.087	0.180
Ca	-0.555	0.632	-0.439	-0.365	-0.001
Mg	-0.124	0.853	-0.031	0.535	0.037
Fe	-0.716	-0.043	0.595	0.042	-0.009
Mn	-0.825	0.010	0.533	-0.175	-0.100
Ba	-0.518	-0.701	-0.226	0.026	0.435
Sr	-0.620	-0.679	-0.334	0.177	-0.185

Supplementary Table 4-c: Principal Component Analysis (PCA) loadings matrix for the complete global geochemical dataset (PC1 to PC5).

Element	PC1	PC2	PC3	PC4	PC5
Au	0.857	-0.136	0.278	0.203	0.217
As	-0.025	-0.131	0.210	0.084	-0.716
Sb	0.976	0.048	-0.124	-0.206	-0.136
Ag	0.233	-0.211	0.544	0.198	-0.129
Bi	-0.135	0.270	0.824	0.162	-0.040
Te	-0.127	-0.098	0.731	0.111	0.066
W	-0.631	0.151	0.086	0.017	-0.080
Mo	-0.381	-0.131	0.351	-0.205	-0.392
Cu	-0.294	-0.286	0.607	0.184	-0.229
Pb	0.534	0.243	-0.256	0.606	0.222
Zn	-0.145	-0.248	-0.561	0.548	-0.036
S	0.084	-0.392	0.056	-0.456	0.360
K	-0.393	0.879	-0.143	-0.177	0.071
Rb	-0.356	0.906	-0.130	-0.162	0.083
Cs	-0.396	0.827	-0.210	-0.136	0.096
Ca	-0.527	-0.410	-0.274	0.121	-0.258
Mg	-0.622	-0.015	-0.250	-0.009	-0.482
Fe	-0.554	-0.589	-0.198	-0.298	-0.084
Mn	-0.368	-0.701	-0.374	-0.245	-0.093
Ba	-0.383	-0.344	0.035	-0.464	0.632
Sr	-0.290	-0.475	-0.158	-0.323	0.694