

Variable	pH	P_ppm	K_ppm	Mg_ppm	Ca_ppm	S_ppm	Mn_ppm	Cu_ppm	B_ppm	Zn_ppm	Mo_ppm	Fe_ppm	Na_ppm	CEC_meq_100Co_1	N_2	Cl	Cu_1	Zn_1	Pb_3	Ni_1	As_1	Cd_3	Hg_1	Cr_1	CLAY_1	SILT_1	SAND_1	Organic		
Moisture	-0.336	-0.255	-0.239	-0.318	-0.216	-0.162	-0.095	-0.285	-0.355	-0.098	-0.054	-0.015	-0.191	-0.305	0.012	-0.168	-0.374	-0.281	-0.038	-0.338	0.044	0.023	0.047	-0.149	0.112	0.263	-0.205	-0.160		
Net_CV	0.344	0.249	0.246	0.324	0.235	0.180	0.084	0.296	0.374	0.095	0.057	0.018	0.208	0.378	0.024	0.128	0.377	0.294	0.124	0.049	0.349	-0.039	-0.001	-0.028	0.169	-0.107	-0.260	0.196	0.180	
Ash_1	0.304	0.226	0.119	-0.239	-0.445	-0.649	0.579	-0.261	-0.385	0.543	0.214	-0.427	-0.695	-0.439	0.609	-0.683	-0.074	-0.580	-0.504	-0.575	-0.315	-0.030	-0.482	-0.049	-0.539	-0.166	-0.334	-0.399	-0.685	
Volatle_matter_1	0.515	-0.254	0.488	0.432	0.629	0.449	-0.109	0.404	0.654	-0.253	0.009	-0.131	0.491	0.626	-0.132	0.420	0.520	0.479	0.462	0.179	0.580	-0.144	0.560	0.001	0.573	0.279	0.054	-0.215	0.457	
GOV_2	0.021	-0.093	0.009	-0.126	0.014	-0.074	-0.026	-0.064	-0.048	0.075	0.011	-0.007	-0.080	-0.111	0.020	-0.009	-0.130	-0.135	0.027	-0.081	-0.104	0.081	0.066	0.220	0.015	0.147	0.003	-0.054	-0.039	
C_1	-0.002	-0.143	-0.258	-0.154	-0.102	-0.086	0.045	0.024	-0.223	-0.004	0.054	-0.246	-0.169	-0.226	0.230	-0.167	-0.120	-0.102	-0.062	-0.116	-0.064	0.187	0.058	-0.126	-0.002	0.196	0.239	-0.214	-0.191	
H_2	-0.137	0.044	-0.095	0.043	0.392	0.395	-0.427	0.163	0.344	-0.228	0.028	0.389	0.478	0.391	-0.471	0.472	-0.055	0.281	0.242	0.296	0.138	0.125	0.214	0.173	0.318	0.052	0.032	-0.110	0.452	
N_1	0.117	0.106	-0.051	-0.175	0.223	0.157	-0.140	-0.017	0.102	-0.016	0.210	0.099	0.089	0.125	-0.093	0.171	-0.249	-0.003	-0.020	0.069	-0.153	0.246	0.210	-0.001	0.061	0.060	-0.111	0.032	0.139	
Sulphur_2	0.044	0.090	-0.048	-0.058	-0.114	-0.210	-0.150	-0.168	-0.126	-0.020	0.307	-0.036	-0.248	-0.115	0.086	-0.149	-0.148	-0.087	-0.111	-0.561	-0.040	-0.148	-0.087	-0.111	0.561	0.001	0.152	-0.040	-0.014	-0.122
Chlorine_2	-0.255	0.042	-0.209	-0.237	-0.297	-0.176	0.149	-0.173	0.427	0.205	-0.097	-0.001	-0.253	-0.444	0.118	-0.135	-0.239	-0.239	-0.099	-0.101	-0.313	0.001	-0.176	0.056	0.229	-0.097	-0.041	0.093	-0.178	
Ba	-0.268	-0.085	-0.268	-0.010	-0.709	-0.286	0.286	-0.091	-0.611	0.211	-0.472	-0.210	-0.431	-0.660	0.285	-0.477	-0.251	-0.177	-0.091	0.041	-0.420	-0.290	0.016	-0.276	-0.567	-0.193	0.226	-0.013	-0.457	
Cr	-0.563	0.041	-0.492	-0.093	0.071	0.246	-0.375	0.167	0.246	0.075	-0.176	0.523	0.367	-0.120	0.517	0.422	-0.278	0.096	0.246	0.249	-0.076	0.088	0.195	0.003	0.003	-0.185	0.075	-0.029	0.329	
Co	-0.257	0.128	0.139	-0.250	0.322	-0.053	-0.509	-0.352	0.002	-0.078	0.528	0.599	0.186	0.183	-0.535	0.398	-0.285	-0.289	-0.414	-0.036	-0.303	0.216	0.352	0.074	-0.101	-0.320	0.213	0.323	0.180	
Cu	-0.048	-0.081	-0.704	-0.165	-0.446	-0.023	-0.148	-0.036	-0.495	-0.057	-0.462	0.306	0.036	-0.436	-0.228	-0.044	-0.302	-0.020	0.120	0.181	-0.253	-0.253	-0.190	-0.023	-0.268	-0.221	0.404	-0.180	-0.092	
Mn	0.351	0.506	-0.115	-0.399	-0.297	-0.581	0.385	-0.202	-0.368	0.595	0.490	0.255	-0.612	-0.368	0.489	-0.619	-0.313	-0.533	-0.588	-0.565	-0.411	0.318	-0.520	-0.020	-0.535	-0.182	-0.452	0.482	-0.642	
Ni	-0.377	-0.112	0.196	-0.312	0.315	0.028	-0.513	-0.492	-0.217	-0.417	0.293	0.583	0.288	0.351	-0.594	0.347	-0.321	-0.197	-0.358	0.089	-0.234	-0.072	-0.095	0.226	-0.031	-0.085	-0.041	0.020	0.287	
V	0.351	0.506	-0.115	-0.399	-0.297	-0.581	0.385	-0.202	-0.368	0.595	0.490	0.255	-0.612	-0.368	0.489	-0.619	-0.313	-0.533	-0.588	-0.565	-0.411	0.318	-0.520	-0.020	-0.535	-0.182	-0.452	0.482	-0.642	
Zn	0.039	0.393	-0.369	-0.090	-0.334	-0.080	0.342	0.162	-0.514	0.670	-0.137	-0.010	-0.277	-0.540	0.162	-0.124	-0.361	-0.137	0.005	0.000	-0.529	0.123	0.073	0.018	-0.422	-0.258	-0.345	0.364	-0.163	
Sb	0.084	0.379	0.191	0.004	-0.688	-0.867	0.548	-0.362	-0.283	0.132	-0.039	-0.206	-0.652	-0.233	0.481	-0.733	0.116	-0.390	-0.956	0.567	-0.030	-0.718	-0.869	-0.611	-0.536	0.532	-0.252	0.411	-0.686	
As	0.367	0.565	0.295	0.276	-0.107	-0.646	0.143	0.148	0.253	0.320	0.574	0.139	0.024	-0.314	0.278	-0.090	-0.602	-0.647	0.125	-0.195	-0.873	-0.873	-0.557	-0.291	-0.595	-0.525	0.557	-0.269	0.269	
Hg	-0.506	0.172	0.294	-0.183	0.684	0.317	-0.370	-0.332	0.727	-0.266	0.962	0.806	0.705	0.785	-0.895	0.682	0.225	-0.125	-0.479	0.370	-0.116	0.663	-0.281	0.644	0.194	-0.227	-0.290	0.176	0.671	
Br	0.188	-0.603	0.204	0.192	0.235	0.109	-0.119	0.235	0.129	-0.120	-0.175	-0.280	0.197	0.063	-0.040	0.175	0.222	0.111	0.436	0.000	0.212	-0.238	0.546	0.193	0.222	0.416	0.359	-0.433	0.144	
Pb_2	-0.812	-0.063	-0.677	-0.206	-0.486	-0.128	-0.095	-0.078	-0.541	0.013	-0.400	0.245	-0.062	-0.496	-0.149	-0.124	-0.295	-0.112	0.057	0.073	-0.264	-0.195	-0.297	0.036	-0.290	-0.197	0.359	-0.146	-0.175	
Al2O3_1	-0.527	0.162	0.075	-0.076	0.294	0.231	-0.486	-0.238	0.167	-0.269	0.133	-0.827	0.494	0.361	-0.704	0.554	-0.128	0.058	-0.190	0.266	-0.113	-0.139	-0.221	0.184	0.070	-0.359	-0.212	0.212	0.509	
BaO_1	-0.440	-0.136	-0.458	0.071	-0.607	-0.113	0.191	-0.019	-0.613	0.077	-0.623	-0.089	-0.273	-0.637	0.150	-0.328	-0.227	-0.019	0.050	0.228	-0.365	-0.359	0.115	-0.350	-0.492	-0.225	0.346	-0.186	-0.303	
CaCO3	-0.829	-0.060	0.375	-0.152	0.170	-0.392	0.385	-0.001	0.285	0.290	0.509	-0.618	-0.369	0.192	0.570	-0.479	0.151	-0.283	-0.240	-0.607	0.139	0.152	-0.098	0.035	-0.043	0.251	-0.224	0.128	-0.473	
Fe2O3_1	-0.511	-0.204	-0.320	-0.024	0.083	0.463	-0.259	0.144	-0.170	-0.110	-0.486	0.347	0.385	-0.182	-0.421	0.530	-0.218	0.168	0.514	0.449	-0.145	-0.189	0.458	0.165	-0.218	0.005	0.214	-0.220	0.461	
K2O_1	-0.813	-0.294	-0.117	-0.292	-0.109	-0.012	-0.370	-0.506	-0.324	-0.411	-0.057	0.482	0.098	-0.225	-0.431	0.265	-0.111	0.166	-0.291	-0.097	-0.196	-0.196	0.141	-0.011	-0.065	0.236	-0.169	0.203	0.169	
MgO_1	-0.512	0.082	-0.594	0.588	-0.338	-0.467	-0.183	0.539	0.228	-0.090	-0.738	0.386	0.333	-0.196	0.286	0.250	0.170	0.621	0.549	0.686	0.178	-0.096	0.231	-0.282	0.059	-0.224	0.337	-0.196	0.330	
MnSO4_1	-0.306	0.542	-0.557	-0.159	-0.558	-0.087	0.264	0.021	-0.719	0.620	-0.232	0.196	0.320	-0.029	0.106	-0.142	-0.452	-0.154	-0.124	0.095	-0.639	0.093	-0.183	-0.116	-0.572	-0.489	-0.360	0.467	-0.175	
Na2O_1	-0.631	0.213	-0.400	0.184	0.146	0.575	-0.511	0.278	0.223	-0.156	-0.479	0.787	0.675	0.263	-0.804	0.626	-0.140	0.497	0.441	0.645	0.042	-0.183	0.178	0.262	0.144	-0.289	0.039	-0.005	0.614	
Al	-0.387	0.304	0.194	-0.235	0.215	-0.034	-0.318	-0.394	0.061	-0.208	0.321	0.748	0.239	0.238	-0.587	0.366	-0.213	0.366	-0.092	-0.442	0.292	0.092	-0.442	0.305	-0.120	-0.428	-0.469	0.448	0.301	
Ca	0.610	0.359	0.300	-0.323	-0.194	-0.663	0.578	-0.229	-0.163	-0.798	0.455	-0.449	-0.671	-0.253	0.605	-0.620	-0.101	-0.597	-0.531	-0.728	-0.313	0.108	-0.448	0.190	-0.463	-0.090	-0.596	0.547	-0.646	
Fe	-0.398	-0.171	-0.215	-0.137	0.038	0.280	-0.132	0.032	-0.248	0.047	-0.368	0.242	0.206	-0.284	-0.284	0.398	-0.261	0.062	0.370	-0.255	-0.250	-0.165	0.343	0.252	0.068	0.009	0.078	-0.105	0.314	
K	-0.436	-0.020	0.099	-0.521	-0.291	-0.502	0.002	-0.727	-0.515	0.105	0.268	0.217	0.413	-0.473	-0.033	-0.151	-0.427	-0.683	0.616	0.318	-0.580	0.503	-0.500	0.301	-0.427	-0.224	0.247	-0.231	0.231	
Mg	-0.348	0.229	-0.484	0.475	-0.540	0.111	0.065	0.394	-0.436	0.240	-0.576	0.109	-0.029	-0.435	-0.015	-0.054	-0.125	0.311	0.268	0.375	-0.003	-0.016	-0.058	-0.194	-0.183	-0.288	0.090	0.047	0.020	
Mn	-0.104	0.610	-0.370	-0.239	-0.520	-0.200	0.146	-0.085	-0.649	0.727	0.003	0.090	-0.469	-0.308	0.230	-0.288	-0.422	-0.332	-0.322	-0.142	-0.636	0.187	-0.009	-0.609	-0.452	-0.521	0.586	-0.322	0.586	
Na	-0.589	0.302	-0.328	0.058	0.121	0.423	-0.422	0.176	0.190	-0.014	-0.394	0.785	0.564	0.209	-0.759	0.542	-0.205	0.304	0.314	0.481	-0.066	-0.213	0.028	0.411	0.029	-0.347	-0.130	0.151	0.508	
P	0.531	0.621	0.212	0.154	-0.040	0.034	0.453	0.232	-0.063	0.739	0.023	-0.050	-0.171	-0.121	0.221	-0.009	0.032	0.035	-0.036	-0.038	-0.222	0.028	0.051	0.019	-0.269	-0.362	-0.780	0.681	0.007	
Si	-0.713	0.180	-0.668	0.100	-0.575	0.084	-0.046	0.146	-0.515	0.215	-0.687	0.378	0.035	-0.500	0.261	-0.010	-0.293	0.138	0.190	0.397	-0.364	-0.319	-0.028	-0.048	-0.433	-0.440	0.139	0		