

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_100g	Co_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	0.088	0.369	0.369	-0.152	-0.300	-0.176	-0.008	0.345	-0.123	0.192	-0.154	0.176	-0.173	-0.571	-0.147	0.375	-0.351	-0.561	-0.376	-0.239	-0.497	-0.151	0.182	-0.270	-0.450	-0.199	-0.388	-0.499	0.487	-0.441
Net_CV	-0.096	-0.393	0.125	0.272	0.176	-0.017	-0.325	0.097	-0.203	0.134	-0.156	0.167	0.578	0.150	-0.351	0.348	0.570	0.364	0.245	0.503	0.160	0.285	0.446	0.202	0.384	0.511	0.491	0.487	0.433	
Ash_1	0.118	0.417	0.315	0.338	-0.105	0.657	-0.493	0.447	0.114	0.198	-0.418	0.382	-0.116	-0.071	-0.609	-0.038	-0.336	0.047	-0.396	-0.272	-0.465	-0.726	-0.646	-0.193	-0.206	-0.105	-0.305	0.213	-0.013	
Volatile_matter_1	0.124	-0.621	0.002	-0.145	0.437	-0.039	-0.100	-0.385	0.024	-0.487	0.498	0.227	0.614	0.374	0.084	0.359	0.414	0.079	0.293	0.282	0.424	0.244	0.366	0.309	0.561	0.696	0.771	-0.748	0.330	
GCV_2	0.130	-0.452	-0.509	-0.367	-0.050	0.097	-0.103	-0.100	-0.162	-0.445	0.094	0.394	0.306	0.165	0.134	0.054	-0.059	-0.130	-0.326	-0.075	0.268	-0.006	-0.351	-0.417	-0.082	-0.263	0.138	0.041	-0.124	
C_1	0.285	-0.180	-0.076	-0.176	0.255	0.295	-0.099	-0.232	0.345	-0.399	0.219	-0.148	-0.215	0.186	0.225	0.167	-0.257	-0.193	0.142	-0.085	0.189	0.269	0.163	-0.139	0.212	-0.058	0.022	0.002	0.056	
H_2	0.303	0.116	0.581	0.699	0.204	0.608	-0.184	0.556	0.503	-0.142	-0.298	-0.130	0.175	0.200	-0.359	0.344	0.324	0.604	-0.116	-0.193	0.172	-0.289	0.097	0.148	0.030	0.173	-0.076	-0.081	0.425	
N_1	-0.258	-0.021	-0.077	0.147	-0.223	0.398	-0.555	0.262	0.035	0.037	-0.059	0.494	-0.118	-0.276	-0.364	-0.071	-0.611	0.041	0.177	0.266	-0.113	-0.153	-0.020	-0.545	-0.066	-0.241	-0.195	0.222	-0.153	
Sulphur_2	0.072	0.336	0.330	0.075	-0.091	0.477	-0.394	0.000	0.184	-0.098	-0.303	0.203	-0.381	-0.094	-0.392	-0.194	-0.244	-0.259	-0.360	-0.379	-0.279	-0.318	-0.448	0.007	-0.193	-0.012	-0.351	0.217	-0.123	
Chlorine_2	-0.127	0.260	0.121	0.272	-0.286	0.176	-0.042	0.437	0.187	0.288	-0.283	-0.119	-0.298	-0.179	-0.134	-0.055	-0.239	0.194	0.011	-0.298	-0.308	-0.202	0.004	-0.146	-0.200	-0.281	-0.516	-0.421	0.443	-0.067
Ba	-0.544	0.051	-0.202	0.070	-0.492	0.209	-0.377	0.061	-0.385	0.148	-0.416	0.575	0.008	-0.554	-0.458	-0.235	-0.318	-0.037	0.093	0.526	-0.344	-0.307	-0.037	-0.463	-0.421	-0.359	-0.211	0.286	-0.224	
Cr	0.009	0.002	-0.219	-0.159	-0.086	0.396	-0.395	-0.001	-0.105	-0.176	-0.314	0.307	-0.124	0.001	-0.389	-0.101	-0.290	-0.283	-0.472	-0.237	-0.474	-0.370	-0.503	-0.337	-0.265	-0.294	-0.233	0.266	-0.168	
Co	0.144	0.363	0.345	0.370	-0.059	0.671	-0.495	0.504	0.275	0.195	-0.300	0.326	-0.184	-0.052	-0.494	0.065	-0.380	0.098	-0.237	-0.243	-0.355	-0.647	-0.537	-0.170	-0.083	-0.147	-0.292	0.213	0.056	
Cu	0.042	0.428	0.172	0.139	-0.195	0.471	-0.325	0.294	0.006	0.241	-0.281	0.371	-0.153	-0.118	-0.444	-0.156	-0.461	-0.090	-0.333	-0.219	-0.466	-0.523	-0.696	-0.284	-0.233	-0.188	-0.285	0.254	-0.164	
Mo	0.286	0.608	0.317	0.123	0.046	0.192	-0.032	0.097	0.093	0.222	-0.047	0.016	-0.332	-0.097	-0.049	-0.227	-0.343	-0.184	-0.265	-0.420	-0.219	-0.466	-0.333	-0.015	-0.015	0.219	-0.286	0.096	-0.149	
Ni	0.034	0.313	0.103	0.129	-0.158	0.517	-0.427	0.249	0.097	0.037	-0.433	0.226	-0.350	-0.138	-0.444	-0.126	-0.366	-0.153	-0.420	-0.327	-0.456	-0.519	-0.498	-0.249	-0.303	-0.307	-0.462	0.395	-0.134	
V	0.232	0.424	0.440	0.460	0.053	0.671	-0.542	0.488	0.322	0.174	-0.265	0.247	-0.259	-0.054	-0.465	0.051	-0.366	0.119	-0.192	-0.275	-0.232	-0.664	-0.347	-0.109	0.004	0.049	-0.324	0.146	0.085	
Zn	-0.210	0.173	0.296	0.240	-0.140	0.282	-0.595	0.166	-0.079	0.333	-0.040	0.623	-0.018	-0.040	0.009	0.240	0.326	-0.118	-0.464	-0.071	-0.118	-0.414	-0.153	-0.017	0.112	0.256	0.067	-0.134	-0.013	
Sb	-0.582	0.099	0.115	0.277	-0.488	0.746	-0.818	0.518	-0.206	0.265	-0.430	0.959	0.431	-0.263	-0.731	0.090	0.060	-0.012	-0.797	-0.215	-0.825	-0.594	-0.843	-0.069	-0.179	0.169	0.120	-0.253	0.172	
As	-0.602	-0.037	-0.043	-0.027	-0.644	0.572	-0.522	0.367	-0.169	0.192	-0.411	0.711	0.333	-0.012	-0.524	0.241	0.358	-0.180	-0.695	-0.253	-0.890	-0.678	-0.843	-0.276	-0.299	0.097	0.171	0.180	0.180	
Hg	-0.172	-0.410	-0.511	-0.753	-0.089	-0.514	-0.392	-0.976	-0.551	-0.748	-0.243	-0.577	0.203	0.668	0.133	-0.567	0.375	-0.596	0.134	0.767	0.349	0.841	0.401	-0.363	-0.575	-0.300	0.342	0.114	-0.823	
Br	0.326	0.941	0.900	0.728	-0.488	0.831	-0.543	0.133	0.294	0.706	-0.547	0.309	-0.450	-0.855	-0.534	-0.473	0.352	-0.345	-0.440	-0.698	-0.326	-0.491	-0.565	0.786	-0.230	0.569	-0.752	0.026	0.186	
Cd_2	-0.769	0.426	-0.083	0.372	-0.704	-0.336	-0.418	0.497	-0.591	0.769	-0.716	0.237	-0.211	-0.697	-0.520	-0.484	0.021	0.044	-0.358	0.320	-0.822	-0.661	-0.454	0.115	-0.652	-0.509	-0.564	0.595	-0.311	
Pb_2	0.398	0.459	0.772	0.216	0.181	0.253	0.043	-0.403	0.232	-0.076	-0.427	-0.337	-0.378	0.049	-0.108	-0.056	0.696	-0.637	-0.354	-0.598	0.009	-0.144	-0.117	0.913	-0.130	0.431	-0.121	-0.187	0.523	
Al2O3_1	0.075	-0.297	-0.271	-0.247	0.120	0.197	-0.254	-0.045	-0.089	-0.196	0.136	0.387	0.272	-0.056	-0.172	0.151	-0.132	-0.136	-0.203	-0.056	-0.240	-0.193	-0.411	-0.194	0.128	-0.019	0.254	-0.136	0.011	
BaO_1	-0.545	-0.126	-0.411	-0.061	-0.378	-0.067	-0.262	-0.042	-0.529	0.057	-0.100	0.572	0.192	-0.470	-0.284	-0.286	-0.355	-0.023	0.170	0.582	-0.163	-0.097	0.199	-0.595	-0.252	-0.127	-0.031	0.107	-0.310	
CaCO3	0.401	-0.196	-0.146	-0.355	0.385	-0.394	0.650	-0.529	0.161	-0.295	0.474	-0.758	-0.028	0.378	0.778	0.113	0.191	-0.137	0.274	-0.056	0.550	0.858	0.490	0.202	0.287	0.171	0.277	-0.231	0.067	
Fe2O3_1	0.119	-0.325	-0.479	-0.461	0.106	0.116	-0.140	-0.344	-0.187	-0.331	0.049	0.047	0.082	0.277	-0.044	-0.027	-0.264	-0.342	-0.214	-0.040	-0.130	0.290	-0.243	-0.361	-0.065	-0.195	0.119	0.031	-0.172	
K2O_1	-0.561	0.779	-0.154	-0.160	-0.830	-0.366	0.328	0.114	-0.327	0.538	-0.434	0.065	-0.783	-0.796	0.041	-0.762	-0.461	-0.407	-0.384	-0.292	-0.667	-0.314	-0.526	-0.343	-0.776	-0.780	-0.931	0.913	-0.690	
MgO_1	-0.288	-0.272	-0.480	-0.287	-0.189	-0.545	0.344	-0.139	-0.279	0.140	0.183	-0.259	0.054	-0.442	0.343	-0.106	-0.075	0.004	0.314	0.368	0.200	0.703	0.291	-0.227	-0.098	-0.365	0.068	0.128	-0.196	
Mn3O4_1	-0.711	-0.278	-0.617	-0.464	-0.491	-0.508	0.130	-0.432	-0.643	-0.007	0.064	0.404	-0.129	-0.480	0.087	-0.362	-0.143	-0.273	0.247	0.617	-0.120	0.315	0.189	-0.385	-0.288	-0.293	0.070	0.128	-0.408	
Na2O_1	-0.117	-0.236	-0.345	-0.606	-0.032	-0.513	0.374	-0.493	-0.323	-0.337	-0.168	-0.273	0.137	0.109	0.130	-0.193	0.682	-0.380	-0.405	-0.208	-0.063	0.239	0.061	0.202	-0.273	-0.039	0.001	0.027	-0.128	
P2O5_1	0.135	-0.002	0.027	-0.322	0.171	-0.521	0.444	-0.372	0.072	-0.154	0.383	-0.361	-0.172	0.168	0.496	-0.123	0.266	-0.262	-0.093	-0.172	-0.397	0.209	0.350	0.084	0.406	0.204	0.295	0.070	-0.142	-0.080
TiO2_1	0.092	-0.262	0.302	0.493	0.233	0.714	-0.807	0.424	0.143	-0.042	-0.177	0.593	0.501	0.179	-0.722	0.434	0.080	0.415	0.045	0.253	-0.037	-0.599	-0.067	0.022	0.255	0.355	0.335	-0.381	0.432	
Al	0.537	-0.145	0.089	0.116	0.433	0.586	-0.235	0.111	0.438	-0.429	0.029	-0.162	0.029	0.444	-0.077	0.334	-0.085	0.090	-0.180	0.029	0.444	-0.077	-0.046	-0.030	-0.127	0.205	0.075	0.042	-0.084	0.242
Ca	0.595	-0.239	-0.218	-0.187	0.076	0.274	-0.303	0.004	-0.097	-0.173	0.055	0.446	0.281	0.206	-0.269	0.130	-0.143	-0.111	-0.246	-0.057	-0.292	-0.272	-0.475	-0.215	0.070	-0.029	0.216	-0.110	0.006	
Fe	0.077	-0.165	-0.308	-0.279	0.022	0.336	-0.331	-0.104	-0.149	-0.232	-0.094	0.288	0.102	0.177	-0.306	-0.014	-0.291	-0.269	-0.372	-0.136	-0.363	-0.170	-0.519	-0.360	-0.112	-0.180	0.033	0.069	-0.135	
K	-0.153	0.788	0.199	0.091	-0.488	0.312	-0.160	0.198	-0.103	0.355	-0.535	0.344	-0.566	-0.491	-0.387	-0.505	-0.510	-0.316	-0.501	-0.374	-0.672	-0.648	-0.736	-0.280	-0.572	-0.389	-0.713	0.605	-0.417	
Mg	-0.259	-0.073	-0.363	-0.057	-0.275	-0.030	-0.120	0.171	-0.368	0.322	-0.183	0.172	0.161	-0.095	-0.228	-0.090	-0.312	0.062	0.056	0.368	-0.209	0.090	-0.201	-0.436	-0.267	-0.435	-0.020	0.202	-0.178	
Mn	-0.689	-0.232	-0.570	-0.395	-0.492	-0.306	-0.065	-0.337	-0.636	0.043	0.009	0.603	0.161	-0.501	-0.081	-0.322	-0.269	-0.268	0.222	0.645	-0.241	0								