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	0.546	0.117	-0.356	0.496	0.267	0.781	-0.073	0.824	0.564	0.532	-0.287	-0.222	0.291	0.284	-0.317	0.663	0.191	0.771	0.757	0.847	0.606	0.319	0.837	0.025	0.385	-0.110	0.160	-0.109	0.685
Net_CV	-0.553	-0.116	0.348	-0.500	-0.279	-0.783	0.069	-0.822	-0.579	-0.535	0.273	0.216	-0.295	-0.296	0.309	-0.666	-0.203	-0.770	-0.757	-0.845	-0.611	-0.321	-0.836	-0.028	-0.391	0.101	-0.162	0.114	-0.688
Ash_1	0.457	0.274	-0.395	0.273	0.076	0.600	-0.185	0.786	0.296	0.507	-0.366	-0.180	0.023	0.038	-0.477	0.490	-0.067	0.703	0.677	0.765	0.434	0.291	0.782	0.063	0.151	-0.372	0.032	0.087	0.532
Volatile_matter_1	-0.464	-0.201	0.424	-0.352	-0.075	-0.637	0.129	-0.799	-0.318	-0.487	0.403	0.243	-0.102	-0.062	0.419	-0.515	0.000	-0.722	-0.699	-0.794	-0.471	-0.290	-0.799	-0.020	-0.200	0.301	-0.085	-0.025	-0.555
GCV_2	0.297	0.200	-0.401	0.267	0.025	0.604	-0.201	0.759	0.175	0.450	-0.478	-0.208	0.146	0.024	-0.460	0.504	-0.149	0.689	0.660	0.760	0.426	0.271	0.752	-0.072	0.230	-0.283	0.110	0.004	0.547
C_1	0.499	0.162	-0.272	0.335	0.033	0.335	0.085	0.567	0.240	0.347	-0.205	-0.241	-0.039	0.014	-0.162	0.265	0.153	0.510	0.504	0.542	0.349	0.275	0.567	0.002	0.041	-0.206	0.107	-0.005	0.297
H_2	-0.458	-0.231	0.331	-0.293	-0.011	-0.423	0.033	-0.677	-0.194	-0.418	0.318	0.228	0.029	0.016	0.311	-0.344	-0.009	-0.606	-0.590	-0.649	-0.378	-0.302	-0.671	0.018	-0.072	0.297	-0.096	-0.031	-0.386
N_1	0.497	0.143	-0.375	0.449	0.084	0.588	0.008	0.784	0.310	0.463	-0.381	-0.301	0.163	0.099	-0.272	0.491	0.108	0.723	0.708	0.786	0.516	0.342	0.784	-0.092	0.238	-0.169	0.203	-0.097	0.530
Sulphur_2	0.500	0.000	-0.157	0.486	0.249	0.466	0.162	0.512	0.483	0.333	-0.065	-0.207	0.242	0.285	0.015	0.409	0.371	0.497	0.504	0.533	0.472	0.270	0.528	-0.038	0.288	0.099	0.220	-0.206	0.417
Chlorine_2	-0.202	-0.712	-0.465	0.167	-0.581	-0.330	0.441	-0.541	-0.297	-0.727	-0.312	-0.605	-0.032	-0.492	0.460	-0.550	0.417	-0.543	-0.526	-0.452	-0.449	-0.576	-0.517	0.134	-0.409	0.085	-0.159	0.107	-0.562
Ba	-0.173	-0.453	-0.395	0.225	-0.615	-0.306	0.440	-0.175	-0.550	-0.459	-0.529	-0.625	0.013	-0.507	0.357	-0.412	0.153	-0.183	-0.177	-0.124	-0.215	-0.198	-0.180	-0.304	-0.271	0.082	0.171	-0.101	-0.385
Cr	0.624	0.147	-0.271	0.593	0.273	0.701	0.079	0.879	0.509	0.575	-0.268	-0.268	0.307	0.311	-0.183	0.639	0.256	0.838	0.831	0.890	0.691	0.466	0.886	-0.157	0.414	-0.003	0.333	-0.253	0.669
Co	0.095	-0.025	-0.362	0.283	-0.044	0.484	-0.090	0.527	0.061	0.232	-0.493	-0.271	0.288	0.012	-0.252	0.390	-0.078	0.492	0.471	0.568	0.326	0.146	0.526	-0.181	0.265	-0.066	0.178	-0.114	0.420
Cu	0.754	0.176	-0.220	0.621	0.335	0.662	0.145	0.858	0.617	0.596	-0.130	-0.243	0.231	0.353	-0.122	0.606	0.376	0.816	0.817	0.854	0.699	0.487	0.869	-0.075	0.365	-0.006	0.304	-0.232	0.632
Mo	0.597	0.455	-0.155	0.252	0.370	0.675	-0.253	0.854	0.547	0.708	-0.076	0.065	0.035	0.300	-0.504	0.642	-0.031	0.786	0.767	0.808	0.571	0.444	0.852	0.116	0.285	-0.309	0.052	0.037	0.671
Ni	0.016	0.128	-0.102	0.019	-0.205	-0.066	0.038	0.206	-0.294	0.081	-0.264	-0.139	-0.098	-0.203	-0.083	-0.043	-0.186	0.180	0.169	0.176	0.046	0.163	0.185	-0.235	-0.080	-0.135	0.138	-0.026	-0.007
V	0.573	0.297	-0.199	0.445	0.387	0.791	-0.142	0.926	0.572	0.691	-0.200	-0.072	0.286	0.388	-0.382	0.751	0.078	0.880	0.863	0.922	0.701	0.484	0.930	-0.070	0.471	-0.099	0.240	-0.168	0.779
Zn	0.589	0.467	0.050	0.365	0.581	0.766	-0.206	0.918	0.643	0.828	0.014	0.154	0.287	0.561	-0.394	0.823	0.012	0.912	0.899	0.908	0.774	0.626	0.937	-0.122	0.571	-0.027	0.299	-0.238	0.845
Sb	0.990	-0.067	0.492	0.753	-0.034	-0.686	0.973	0.518	0.329	0.000	0.816	1.000	-0.497	-0.055	0.872	-0.684	0.816	0.343	0.688	-0.500	0.376	0.991	0.973		-0.542	0.188	0.708	-0.335	-0.732
As	0.397	0.404	-0.152	0.062	-0.452	-0.635	0.350	0.613	-0.260	0.436	0.126	-0.441	-0.609	-0.461	0.190	-0.635	0.126	-0.251	0.002	-0.609	-0.230	0.517	0.350		-0.618	-0.342	0.020	0.256	-0.636
Hg	-0.834	-0.049	-0.329	-0.575	0.136	0.666	-0.810	-0.536	-0.181	-0.107	-0.638	0.851	0.519	0.154	-0.695	0.664	-0.638	-0.194	-0.512	0.521	-0.223	-0.864	-0.810		0.555	-0.056	-0.531	0.186	0.700
Br	0.127	0.567	-0.404	-0.225	-0.590	-0.568	0.071	0.607	-0.481	0.583	-0.165	-0.182	-0.610	-0.594	-0.102	-0.569	-0.165	-0.475	-0.278	-0.610	-0.461	0.286	0.071		-0.604	-0.533	-0.263	0.479	-0.551
Cd_2	0.133	0.702	-0.419	-0.392	0.051	0.192	-0.522	0.309	0.067	0.374	-0.033	0.550	-0.440	-0.127	-0.667	0.151	-0.451	0.230	0.200	0.233	-0.016	0.085	0.293	0.468	-0.187	-0.714	-0.448	0.547	0.175
Pb_2	0.419	-0.055	0.005	0.193	0.175	-0.018	0.229	-0.047	0.395	0.010	0.659	-0.096	-0.174	0.112	0.189	-0.069	0.474	-0.057	-0.034	-0.065	0.029	-0.031	-0.026	0.320	-0.145	-0.017	-0.127	0.089	-0.087
Al2O3_1	0.678	-0.181	-0.309	0.836	0.121	0.473	0.511	0.656	0.440	0.295	-0.265	-0.564	0.364	0.230	0.272	0.388	0.647	0.643	0.661	0.701	0.623	0.380	0.674	-0.280	0.318	0.263	0.483	-0.428	0.410
BaO_1	-0.294	-0.590	-0.333	0.215	-0.668	-0.454	0.546	-0.376	-0.642	-0.625	-0.487	-0.651	0.054	-0.530	0.532	-0.544	0.219	-0.359	-0.346	-0.308	-0.314	-0.283	-0.378	-0.364	-0.295	0.224	0.205	-0.167	-0.528
CaCO3	0.058	0.357	0.683	-0.135	0.799	0.255	-0.307	0.066	0.576	0.437	0.690	0.718	0.270	0.763	-0.088	0.474	-0.052	0.140	0.149	0.044	0.326	0.308	0.074	0.023	0.537	0.331	0.100	-0.231	0.429
Fe2O3_1	0.421	0.068	-0.315	0.550	0.056	0.542	0.136	0.796	0.184	0.433	-0.463	-0.380	0.318	0.129	-0.122	0.495	0.125	0.761	0.750	0.815	0.588	0.433	0.792	-0.362	0.353	0.030	0.424	-0.309	0.538
K2O_1	-0.011	-0.181	-0.423	-0.100	-0.619	-0.418	0.204	-0.278	-0.429	-0.414	-0.276	-0.400	-0.502	-0.665	0.067	-0.578	0.046	-0.344	-0.345	-0.301	-0.459	-0.348	-0.283	0.242	-0.664	-0.411	-0.311	0.399	-0.554
MgO_1	-0.154	-0.754	-0.530	0.517	-0.660	-0.207	0.675	-0.164	-0.494	-0.581	-0.682	-0.896	0.281	-0.462	0.595	-0.368	0.424	-0.151	-0.135	-0.052	-0.114	-0.239	-0.155	-0.450	-0.134	0.336	0.350	-0.314	-0.347
Mn3O4_1	-0.839	-0.680	-0.493	-0.161	-0.749	-0.258	0.013	-0.547	-0.771	-0.775	-0.712	-0.468	0.190	-0.619	0.116	-0.439	-0.248	-0.539	-0.557	-0.427	-0.558	-0.654	-0.547	-0.153	-0.222	0.050	-0.120	0.089	-0.437
Na2O_1	-0.691	-0.696	-0.541	0.129	-0.399	0.316	-0.109	-0.133	-0.333	-0.462	-0.791	-0.455	0.644	-0.212	-0.021	0.110	-0.148	-0.113	-0.137	0.040	-0.128	-0.475	-0.119	-0.232	0.276	0.243	0.067	-0.147	0.104
P2O5_1	-0.540	-0.318	-0.347	-0.383	-0.814	-0.652	0.075	-0.629	-0.841	-0.701	-0.389	-0.316	-0.432	-0.824	0.085	-0.774	-0.264	-0.664	-0.674	-0.625	-0.743	-0.561	-0.645	0.097	-0.692	-0.320	-0.342	0.398	-0.757
SiO2_1	0.112	0.033	-0.418	0.092	-0.316	0.114	-0.014	0.303	-0.188	0.051	-0.449	-0.318	-0.140	-0.329	-0.225	-0.001	-0.117	0.235	0.216	0.292	0.021	0.011	0.292	-0.005	-0.175	-0.339	-0.040	0.158	0.039
TiO2_1	0.572	-0.310	0.022	0.696	0.076	-0.086	0.801	0.086	0.290	-0.042	0.147	-0.460	0.168	0.180	0.726	-0.077	0.859	0.125	0.172	0.113	0.312	0.240	0.108	-0.261	0.067	0.486	0.452	-0.458	-0.082
Al	0.643	0.061	-0.257	0.694	0.263	0.668	0.209	0.857	0.501	0.531	-0.274	-0.347	0.377	0.332	-0.045	0.615	0.366	0.830	0.831	0.881	0.724	0.488	0.867	-0.252	0.448	0.119	0.434	-0.360	0.644
Ca	0.579	0.411	-0.162	0.305	0.412	0.756	-0.258	0.889	0.593	0.723	-0.106	0.051	0.144	0.364	-0.496	0.719	-0.011	0.830	0.810	0.861	0.628	0.453	0.891	0.074	0.381	-0.238	0.101	-0.027	0.746
Fe	0.481	0.168	-0.241	0.526	0.206	0.643	0.039	0.867	0.332	0.556	-0.357	-0.252	0.334	0.257	-0.208	0.615	0.104	0.833	0.820	0.877	0.664	0.490	0.865	-0.296	0.434	0.015	0.397	-0.296	0.653
K	0.341	0.125	-0.517	0.154	-0.238	0.275	-0.063	0.475	0.028	0.193	-0.420	-0.325	-0.223	-0.291	-0.354	0.108	-0.040	0.376	0.355	0.448	0.110	0.047	0.469	0.181	-0.202	-0.497	-0.140	0.272	0.152
Mg	0.271	-0.207	-0.568	0.532	-0.319	0.311	0.291	0.528	-0.093	0.073	-0.672	-0.660	0.193	-0.226	0.018	0.160	0.195	0.478	0.469	0.573	0.298	0.143	0.527	-0.292	0.058	-0.049	0.296	-0.172	0.207
Mn	-0.504	-0.433	-0.708	-0.072	-0.782	-0.064	-0.054	-0.134	-0.678	-0.494	-0.868	-0.565	-0.004	-0.713	-0.157	-0.298	-0.300	-0.190	-0.221	-0.060	-0.392	-0.476	-0.143	-0.056	-0.314	-0.292	-0.169	0.242	-0.265
Na	-0.164	-0.342	-0.676	0.342	-0.259	0.634	-0.141	0.471	-0.061	0.011	-0.862	-0.512	0.511	-0.134	-0.291	0.413	-0.115	0.431	0.398	0.586	0.237	-0.111	0.478	-0.192	0.317	-0.039	0.135	-0.101	0.441
P	0.247	0.139	-0.545	0.106	-0.279	0.299	-0.137	0.501	-0.058	0.198	-0.513	-0.318	-0.194	-0.328	-0.429	0.134	-0.160	0.400	0.372	0.478	0.100	0.042	0.491	0.130	-0.177	-0.524	-0.133	0.277	0.182
Si	0.282	0.126	-0.397	0.238	-0.111	0.374	-0.057	0.572	0.046	0.286	-0.435	-0.280	0.009	-0.117	-0.307	0.272	-0.068	0.504	0.484	0.564	0.274	0.188	0.565	-0.051	0.044	-0.286	0.072	0.047	0.314
Ti	0.710	-0.147	-0.129	0.785	0.153	0.255	0.626	0.493	0.414	0.241	-0.051	-0.481	0.250	0.247	0.434	0.232	0.727	0.498	0.528	0.514	0.550	0.404	0.510	-0.284	0.226	0.332	0.494	-0.449	0.247
Alkali_Index	0.329	0.109	-0.533	0.158	-0.248	0.283	-0.065	0.473	0.023	0.183	-0.438	-0.338	-0.212	-0.298	-0.355	0.110	-0.041	0.374	0.353	0.450	0.106	0.034	0.468	0.181	-0.199	-0.496	-0.142	0.273	0.153