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		-0.025	0.006	0.117	-0.225	0.074	-0.019	-0.202	0.241	-0.087	-0.133	-0.183	-0.239	-0.201	-0.212	-0.102	-0.122	-0.037	-0.022	0.011	-0.153	0.145	-0.051	-0.190	-0.083	0.035	0.127	0.208	-0.031	-0.115
Net_CV		0.026	-0.008	-0.106	0.232	-0.066	0.018	0.204	-0.242	0.087	0.139	0.185	0.244	0.196	0.207	0.111	0.126	0.036	0.017	-0.007	0.141	-0.138	0.042	0.175	0.093	-0.037	-0.131	-0.212	0.030	0.120
Ash_1		0.311	-0.276	-0.121	-0.215	0.113	-0.015	-0.065	-0.135	-0.293	-0.389	-0.087	-0.047	0.064	-0.273	-0.312	-0.436	0.398	-0.370	-0.308	-0.688	-0.313	-0.426	-0.498	0.094	-0.439	-0.320	-0.002	0.331	-0.423
Volatile_matter_1		-0.070	0.134	0.186	-0.027	-0.151	-0.041	-0.128	0.293	0.310	0.119	0.029	-0.090	-0.136	-0.021	0.115	0.190	-0.247	0.368	0.352	0.406	0.411	0.398	0.200	-0.151	0.544	0.425	0.182	-0.280	0.156
GCV_2		0.161	-0.455	0.052	0.106	0.436	-0.239	0.283	-0.284	-0.361	0.044	0.201	0.241	-0.068	0.086	0.109	-0.209	-0.098	-0.242	-0.106	-0.326	-0.117	-0.488	-0.306	0.229	-0.230	-0.333	-0.200	0.225	-0.195
C_1		-0.142	-0.288	0.227	0.287	0.541	0.110	0.204	-0.230	-0.306	0.309	0.436	0.414	-0.009	0.297	0.283	0.094	-0.215	-0.277	-0.112	-0.122	0.088	-0.486	-0.339	0.439	-0.127	-0.131	-0.066	-0.017	0.150
H_2		-0.083	-0.290	0.427	0.210	0.565	-0.022	0.090	-0.041	-0.233	0.314	0.429	0.328	-0.148	0.214	0.322	0.129	-0.333	-0.084	0.124	-0.037	0.383	-0.368	-0.352	0.349	0.189	0.085	0.058	-0.164	0.155
N_1		0.058	-0.128	-0.264	-0.404	-0.019	0.210	-0.176	0.140	-0.222	-0.535	-0.263	-0.307	0.021	-0.230	-0.376	-0.484	0.311	-0.334	-0.384	-0.472	-0.268	-0.153	-0.318	-0.211	-0.374	-0.058	0.265	0.406	-0.486
Sulphur_2		-0.160	-0.283	-0.096	0.008	0.244	0.097	0.191	-0.075	-0.183	-0.088	0.033	0.051	-0.180	-0.004	0.114	-0.247	-0.057	-0.410	-0.271	-0.377	-0.112	-0.339	-0.455	0.009	-0.317	-0.141	-0.008	0.309	-0.201
Chlorine_2		0.196	-0.374	-0.293	-0.153	0.228	-0.156	0.322	-0.223	-0.197	-0.310	-0.100	-0.018	-0.054	-0.054	-0.167	-0.495	0.108	-0.262	-0.319	-0.381	-0.424	-0.314	-0.200	-0.091	-0.420	-0.325	-0.076	0.338	-0.472
Ba		0.343	-0.417	0.427	0.538	0.524	-0.318	0.333	-0.551	-0.301	0.294	0.518	0.650	0.028	0.144	0.477	0.147	0.151	-0.315	0.147	-0.643	0.147	-0.692	-0.672	0.453	-0.154	-0.483	-0.522	0.084	0.147
Cr		0.418	0.442	0.361	0.091	0.098	0.255	-0.229	-0.131	-0.084	0.354	0.097	0.214	0.346	0.074	-0.077	0.498	0.332	0.337	0.182	0.179	-0.032	0.130	0.465	0.314	-0.021	0.028	0.058	-0.695	0.516
Co		0.330	-0.148	-0.131	-0.231	0.114	-0.118	0.068	-0.142	-0.160	-0.316	-0.270	-0.128	-0.100	-0.340	-0.266	-0.394	0.342	-0.238	-0.249	-0.600	-0.377	-0.313	-0.328	-0.043	-0.469	-0.313	-0.043	0.121	-0.352
Cu		0.214	-0.119	-0.577	-0.725	-0.542	0.338	-0.180	0.479	0.374	-0.704	-0.416	-0.556	-0.049	-0.487	-0.587	-0.697	0.173	0.099	-0.232	0.007	-0.310	0.592	0.102	-0.538	0.035	0.416	0.578	0.338	-0.718
Mo		0.382	-0.089	-0.011	-0.181	0.245	-0.084	0.135	-0.044	-0.068	-0.273	-0.265	-0.113	-0.052	-0.275	-0.171	-0.337	0.295	-0.099	-0.117	-0.497	-0.231	-0.220	-0.265	-0.032	-0.348	-0.227	0.021	0.057	-0.298
Ni		-0.504	0.058	-0.018	-0.263	-0.018	0.630	-0.158	0.468	0.270	-0.053	0.016	-0.189	-0.365	-0.060	0.058	-0.067	-0.274	-0.105	-0.154	0.172	0.266	0.277	-0.237	-0.268	0.203	0.690	0.651	-0.203	0.004
V		-0.202	0.444	-0.028	-0.228	-0.245	0.497	-0.144	0.376	0.484	0.182	-0.128	-0.196	-0.137	-0.025	-0.077	0.238	-0.209	0.438	0.088	0.701	0.088	0.697	0.580	-0.234	0.329	0.673	0.525	-0.676	0.298
Zn		0.233	0.007	-0.545	-0.517	-0.503	0.371	-0.070	0.283	0.249	-0.517	-0.396	-0.413	0.053	-0.319	-0.396	-0.469	0.266	0.056	-0.224	-0.007	-0.406	0.566	0.265	-0.534	-0.154	0.231	0.361	0.336	-0.497
Sb		0.949	0.211	0.632	0.316	-0.211	-0.316	-0.738	-0.056	0.105	-0.211	0.316	0.316	0.105	-0.738	-0.738	0.316	0.738	0.105	0.632	-0.949	0.105	-0.316	-0.949	0.316	0.105	-0.316	-0.316	-0.632	0.316
As		0.258	0.775	-0.258	-0.775	-0.775	0.775	-0.775	0.816	-0.258	-0.775	-0.775	-0.775	-0.258	-0.775	-0.775	-0.775	0.775	-0.258	-0.258	-0.258	-0.258	0.775	-0.258	-0.775	-0.258	0.775	0.775	0.258	-0.775
Hg		0.949	0.316	0.949	0.632	0.316	-0.632	-0.632	0.000	0.632	-0.316	0.316	0.316	0.632	-0.316	-0.632	0.632	0.632	0.632	0.949	-0.632	0.632	-0.316	-0.632	0.632	0.632	-0.316	-0.316	-0.949	0.632
Br		-1.000	-0.400	-0.800	-0.400	0.000	0.400	0.800	-0.105	-0.400	0.400	-0.200	-0.200	-0.400	0.600	0.800	-0.400	-0.800	-0.400	-0.800	0.800	-0.400	0.200	0.800	-0.400	-0.400	0.200	0.200	0.800	-0.400
Cd_2		0.269	-0.110	0.067	-0.201	-0.030	0.064	-0.438	-0.062	-0.561	-0.207	-0.055	-0.122	-0.024	-0.305	-0.255	-0.170	0.456	-0.413	-0.213	-0.511	-0.158	-0.310	-0.337	-0.018	-0.419	-0.158	-0.006	0.109	-0.182
Pb_2		0.269	0.392	0.357	0.056	-0.056	-0.095	-0.154	0.193	0.382	0.217	0.098	0.035	0.252	0.144	-0.025	0.420	-0.046	0.755	0.545	0.692	0.406	0.524	0.647	0.039	0.685	0.392	0.165	-0.664	0.364
Al2O3_1		0.336	0.269	0.000	-0.497	-0.210	0.424	-0.368	0.569	0.315	-0.140	-0.413	-0.420	0.053	-0.571	-0.481	-0.196	0.081	0.371	0.056	0.154	-0.063	0.462	0.214	0.179	0.077	0.364	0.550	-0.273	-0.126
BaO_1		0.043	-0.548	0.232	0.505	0.344	-0.289	0.296	-0.605	-0.341	0.242	0.663	0.663	-0.076	0.278	0.482	0.109	0.023	-0.470	0.000	-0.537	0.123	-0.674	-0.689	0.257	-0.088	-0.368	-0.492	0.204	0.084
CaCO3		0.382	-0.158	-0.119	-0.252	-0.427	-0.152	-0.253	-0.072	0.172	-0.441	0.193	0.000	0.126	-0.095	-0.312	-0.182	0.410	0.140	0.098	-0.091	0.042	0.245	-0.022	-0.425	0.378	0.245	0.137	-0.028	-0.308
Fe2O3_1		0.113	0.481	0.035	-0.126	-0.210	0.410	-0.218	0.161	0.368	0.147	-0.123	-0.070	0.172	-0.158	-0.267	0.231	0.158	0.350	0.035	0.364	-0.105	0.392	0.410	0.183	0.070	0.280	0.291	-0.629	0.308
K2O_1		0.106	0.269	0.322	0.503	0.266	-0.265	0.488	-0.115	0.455	0.566	0.067	0.294	0.046	0.203	0.442	0.455	-0.291	0.510	0.476	0.497	0.217	0.182	0.403	0.316	0.280	-0.070	-0.329	-0.510	0.510
MgO_1		-0.696	0.320	-0.266	-0.105	-0.084	0.290	-0.018	0.333	0.042	0.168	-0.389	-0.371	-0.165	0.042	-0.046	0.049	-0.487	-0.021	-0.252	0.503	-0.147	0.182	0.378	0.035	-0.189	0.105	0.168	0.028	0.147
Mn3O4_1		0.471	-0.412	0.077	0.242	0.329	-0.138	0.376	-0.507	-0.239	0.046	0.244	0.434	-0.002	-0.044	0.221	-0.140	0.305	-0.347	-0.088	-0.704	-0.245	-0.494	-0.506	0.194	-0.424	-0.469	-0.372	0.189	-0.119
Na2O_1		0.049	0.043	-0.615	-0.385	-0.427	0.438	-0.109	-0.064	0.112	-0.392	-0.060	-0.133	0.312	0.007	-0.586	-0.315	0.326	-0.042	-0.476	0.189	-0.615	0.294	0.389	-0.211	-0.245	0.112	0.305	0.056	-0.308
P2O5_1		-0.569	0.560	0.000	0.063	0.014	0.449	-0.021	0.397	0.095	0.238	-0.434	-0.315	-0.077	0.074	0.225	0.294	-0.256	0.014	-0.056	0.329	0.077	0.273	0.298	-0.056	-0.196	0.133	0.144	-0.021	0.371
SiO2_1		0.290	-0.146	0.105	-0.004	0.350	-0.060	0.018	-0.271	-0.404	0.004	-0.037	0.119	0.030	-0.188	-0.144	-0.147	0.260	-0.305	-0.228	-0.585	-0.301	-0.578	-0.375	0.408	-0.529	-0.455	-0.158	0.014	-0.077
TiO2_1		-0.248	0.243	-0.337	-0.453	-0.235	0.722	-0.290	0.311	0.102	-0.119	-0.088	-0.256	0.112	0.056	-0.445	-0.081	-0.051	0.119	-0.351	0.540	-0.267	0.463	0.523	-0.152	-0.014	0.516	0.664	-0.281	-0.032
Al		0.138	0.093	-0.140	-0.517	-0.119	0.604	-0.396	0.319	-0.004	-0.224	-0.298	-0.308	-0.039	-0.557	-0.540	-0.329	0.238	-0.154	-0.371	-0.287	-0.329	0.021	-0.218	0.232	-0.364	0.175	0.525	-0.133	-0.210
Ca		-0.049	-0.589	-0.140	-0.182	0.035	-0.166	-0.098	-0.211	-0.462	-0.308	0.126	0.021	-0.347	-0.238	-0.091	-0.448	0.098	-0.657	-0.364	-0.790	-0.154	-0.601	-0.828	-0.084	-0.329	-0.224	-0.074	0.469	-0.455
Fe		-0.025	0.560	0.147	-0.175	-0.154	0.456	-0.274	0.344	0.406	0.175	-0.298	-0.217	-0.074	-0.343	-0.179	0.231	0.070	0.280	0.056	0.224	0.028	0.357	0.189	0.155	0.035	0.357	0.371	-0.678	0.350
K		-0.032	-0.140	0.161	0.252	0.336	-0.159	0.365	-0.118	0.074	0.315	-0.081	0.147	-0.350	-0.263	0.298	-0.035	-0.228	-0.203	0.000	-0.357	-0.042	-0.406	-0.490	0.436	-0.294	-0.315	-0.291	-0.049	0.105
Mg		-0.459	0.169	-0.168	-0.084	0.133	0.244	0.119	0.297	-0.007	0.077	-0.483	-0.343	-0.256	-0.189	0.032	-0.140	-0.326	-0.210	-0.273	-0.007	-0.182	-0.077	-0.069	0.137	-0.434	-0.105	0.081	0.196	-0.007
Mn		0.283	-0.359	0.077	0.273	0.329	-0.074	0.256	-0.537	-0.438	0.112	0.231	0.420	-0.004	-0.014	0.218	-0.063	0.291	-0.517	-0.210	-0.769	-0.287	-0.650	-0.567	0.295	-0.580	-0.566	-0.420	0.252	-0.028
Na		0.014	0.000	-0.636	-0.483	-0.301	0.562	-0.130	-0.050	-0.007	-0.441	-0.151	-0.189	0.214	-0.126	-0.667	-0.448	0.364	-0.238	-0.664	-0.049	-0.741	0.098	0.163	-0.116	-0.497	0.042	0.385	0.077	-0.385
P		-0.470	0.295	0.007	-0.007	0.140	0.307	0.049	0.379	0.021	0.119	-0.476	-0.336	-0.270	-0.158	0.207	0.028	-0.259	-0.182	-0.126	-0.056	0.042	0.007	-0.127	0.018	-0.329	0.000	0.102	0.154	0.133
Si		0.177	-0.072	0.154	0.119	0.378	-0.046	0.042	-0.265	-0.424	0.084	-0.067	0.133	0.035	-0.151	-0.014	-0.049	0.235	-0.371	-0.210	-0.622	-0.245	-0.629	-0.432	0.460	-0.587	-0.531	-0.256	0.091	0.028
Ti		-0.191	0.115	-0.343	-0.580	-0.091	0.760	-0.316	0.297	-0.021	-0.266	-0.168	-0.308	-0.004	-0.151	-0.568	-0.308	0.067	-0.119	-0.538	0.147	-0.385	0.182	0.142	-0.063	-0.266	0.406	0.729	-0.217	-0.210
Alkali_Index		0.053	-0.151	0.070	0.189	0.280	-0.134	0.396	-0.082	0.161	0.217	-0.140	0.098	-0.291	-0.319	0.211	-0.140	-0.175	-0.161	-0.021	-0.350	-0.119	-0.329	-0.450	0.415	-0.308	-0.315	-0.256	0.014	0.000