

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	0.007	0.002	-0.022	-0.015	0.077	-0.026	-0.223	0.283	-0.039	-0.133	-0.152	-0.168	-0.162	0.014	-0.098	-0.067	0.098	-0.081	0.015	-0.199	0.086	-0.117	-0.308	-0.041	0.008	-0.021	0.013	0.077	-0.076	
Nit_CV	-0.010	-0.101	-0.223	0.050	-0.062	0.013	0.232	-0.291	0.032	0.148	0.164	0.182	0.162	-0.001	0.114	0.076	-0.121	0.075	-0.012	0.198	-0.084	0.123	0.211	0.053	-0.013	0.007	-0.028	-0.072	0.085	
Ash_1	0.247	-0.211	0.021	-0.184	0.034	-0.032	-0.266	0.079	-0.295	-0.461	-0.243	-0.434	0.141	-0.523	-0.449	-0.669	-0.424	-0.182	-0.517	0.062	-0.424	-0.182	0.211	0.053	-0.013	0.007	-0.028	-0.072	0.085	
Volatile_matter_1	-0.099	0.030	0.260	-0.023	-0.175	-0.032	-0.034	0.051	0.182	0.190	0.120	-0.026	-0.200	-0.141	0.042	0.171	-0.136	0.379	0.383	0.353	0.407	0.174	0.168	-0.015	0.550	0.286	0.164	-0.378	0.187	
GOV_2	0.128	-0.429	-0.045	0.165	0.286	-0.239	-0.058	0.008	-0.237	0.011	0.151	0.194	-0.029	0.191	0.092	0.061	-0.335	-0.287	0.079	-0.324	-0.101	-0.256	-0.226	0.225	-0.254	-0.283	-0.172	0.268	-0.078	
C_1	-0.239	-0.235	0.000	0.087	0.292	0.093	0.024	0.022	-0.093	0.207	0.314	0.293	-0.073	0.157	0.149	-0.227	-0.248	-0.155	-0.389	0.086	-0.455	-0.237	0.383	-0.128	-0.337	-0.299	0.112	0.167	-0.029	
H_2	-0.054	-0.369	-0.263	0.193	0.302	-0.113	-0.151	0.041	-0.076	0.219	0.408	0.343	-0.196	0.226	0.129	0.202	-0.359	-0.100	0.117	-0.152	0.303	-0.364	-0.351	0.412	0.147	-0.190	-0.185	-0.046	-0.209	
N_1	0.082	0.052	-0.395	-0.267	0.137	-0.242	-0.229	0.282	-0.179	-0.486	-0.022	-0.081	0.178	0.102	-0.267	-0.400	0.338	-0.409	-0.413	-0.256	-0.164	-0.288	-0.127	-0.356	-0.060	0.018	0.459	-0.431	0.085	
Sulfur_2	-0.086	-0.179	-0.167	-0.082	0.167	-0.132	0.068	0.181	-0.076	-0.151	0.104	0.120	-0.176	0.116	0.075	-0.261	0.026	-0.359	-0.276	-0.381	-0.121	-0.276	-0.468	0.008	-0.287	0.162	-0.088	0.340	-0.227	
Chlorine_2	0.116	-0.348	-0.374	-0.089	0.153	-0.236	-0.034	-0.055	-0.191	-0.374	-0.093	-0.009	0.029	-0.270	-0.161	-0.414	-0.120	-0.421	-0.426	-0.447	-0.448	-0.055	-0.314	-0.086	-0.545	-0.159	-0.015	0.514	-0.442	
Ba	0.537	-0.302	0.673	0.355	-0.269	0.023	-0.477	-0.221	0.213	0.415	0.629	0.273	0.078	0.293	0.330	-0.068	-0.215	0.149	-0.583	-0.009	-0.312	-0.440	0.389	-0.178	-0.393	-0.404	0.033	0.324	-0.424	
Cr	0.369	0.368	0.344	0.294	0.061	0.282	-0.255	-0.124	-0.146	0.382	-0.170	0.068	0.244	0.032	-0.030	0.508	0.259	0.230	0.209	0.145	-0.141	0.316	0.253	0.325	0.055	-0.128	0.235	-0.970	0.475	
Co	0.013	-0.146	-0.351	-0.158	-0.071	-0.370	-0.213	-0.032	-0.264	-0.453	-0.426	-0.341	-0.125	-0.157	-0.347	-0.423	0.031	-0.492	-0.475	-0.555	-0.496	-0.096	-0.391	-0.173	-0.582	-0.177	-0.047	0.534	-0.436	
Cu	0.297	0.319	-0.389	-0.620	-0.407	0.415	-0.154	0.342	0.154	-0.640	-0.270	-0.390	0.147	0.402	-0.482	-0.624	0.546	0.201	-0.126	0.057	-0.275	0.729	0.125	-0.576	0.065	0.701	0.730	0.018	-0.658	
Mn	0.356	-0.041	-0.085	0.070	0.235	-0.086	-0.188	0.211	-0.083	-0.265	-0.312	-0.101	-0.092	0.068	-0.120	-0.216	0.114	-0.216	-0.121	-0.496	-0.271	0.017	-0.397	-0.045	-0.369	-0.068	0.133	0.185	-0.252	
Ni	-0.427	0.381	-0.032	-0.384	-0.158	0.611	0.027	0.455	0.343	-0.077	0.068	-0.095	-0.423	-0.107	-0.015	-0.095	0.423	0.112	-0.028	0.116	0.349	-0.049	-0.359	-0.195	0.562	0.326	0.221	-0.184	-0.043	
V	-0.152	0.739	0.089	-0.236	-0.292	0.408	0.119	0.201	0.178	0.437	0.276	-0.196	-0.197	-0.240	-0.251	-0.007	0.178	0.086	0.625	0.317	0.732	0.210	0.592	0.417	-0.087	0.502	0.555	0.550	-0.729	0.200
Zn	0.234	0.603	-0.335	-0.450	-0.345	0.486	-0.134	0.434	0.101	-0.518	-0.447	-0.768	0.087	-0.319	-0.326	-0.443	0.768	0.156	-0.064	-0.013	-0.228	0.551	0.327	-0.624	0.036	0.559	0.579	-0.039	-0.472	
Sr	0.988	0.116	0.908	0.256	-0.434	-0.170	-0.072	-0.128	-0.467	-0.106	0.000	-0.089	0.454	-0.650	-0.521	0.289	0.293	-0.099	0.474	-0.803	0.017	-0.110	-0.648	0.620	0.198	0.038	-0.051	-4.662	0.334	
As	0.115	-0.020	-0.308	-0.884	-0.481	0.881	-0.517	0.832	-0.333	-0.852	-0.980	-0.991	0.210	-0.463	-0.632	-0.712	0.391	-0.311	-0.489	-0.496	-0.334	0.910	-0.439	-0.632	-0.146	0.939	0.949	0.223	-0.791	
Hg	0.954	-0.038	0.981	0.576	-0.010	-0.534	-0.686	-0.214	-0.070	-0.016	0.260	0.176	0.655	-0.263	-0.519	0.670	-0.001	0.306	0.811	-0.463	0.421	-0.321	-0.626	0.851	0.544	-0.227	-0.258	-0.776	0.677	
Br	0.988	-0.445	-0.691	0.004	0.388	-0.050	0.898	-0.216	0.305	0.457	0.307	0.391	-0.620	0.598	0.764	-0.145	-0.562	0.015	-0.393	0.778	-0.081	-0.214	0.878	-0.404	-0.301	-0.292	-0.375	0.450	-0.130	
Cd_2	0.415	-0.006	-0.039	-0.085	-0.244	-0.158	-0.506	0.104	-0.737	-0.268	-0.086	-0.120	-0.003	-0.291	-0.250	-0.256	0.383	-0.485	-0.193	-0.739	-0.450	0.006	-0.393	0.011	-0.294	0.084	0.156	0.144	-0.279	
Pb_2	0.260	0.067	0.281	-0.027	-0.141	-0.033	-0.177	-0.077	0.275	0.188	0.009	-0.034	0.106	-0.150	-0.189	0.239	-0.191	0.711	0.483	0.667	0.236	0.710	0.565	0.061	0.590	0.561	0.541	-0.726	0.202	
Al2O3_1	0.292	0.255	0.022	-0.489	-0.325	0.453	-0.366	0.695	0.094	-0.084	-0.386	-0.439	-0.038	-0.504	-0.446	-0.192	0.165	0.206	0.110	0.142	-0.077	0.296	0.126	0.288	0.010	0.200	0.453	-0.188	-0.171	
BaO_1	0.222	-0.440	0.494	0.395	0.144	-0.299	-0.078	-0.425	-0.249	0.054	0.704	0.587	0.085	0.162	0.196	0.144	-0.145	-0.200	0.161	-0.486	0.262	-0.329	-0.487	0.172	0.204	-0.123	-0.328	0.168	0.148	
CaCO3	0.010	-0.179	0.022	-0.141	-0.329	-0.158	-0.198	-0.226	-0.260	-0.310	0.406	0.066	-0.001	-0.200	-0.134	-0.251	0.108	-0.061	0.056	-0.201	0.145	0.136	-0.137	-0.389	0.403	0.402	0.124	0.102	-0.263	
Fe2O3_1	0.029	0.477	0.170	-0.177	-0.250	0.396	-0.029	0.069	0.326	0.210	-0.325	0.219	0.116	-0.262	-0.029	0.263	0.326	0.201	0.452	0.119	0.569	-0.032	0.417	0.423	0.221	0.127	0.310	-0.572	0.284	
K2O_1	0.013	-0.094	0.432	0.290	0.043	-0.217	0.317	-0.279	0.418	0.557	-0.005	0.170	-0.035	0.008	0.236	0.472	-0.490	0.518	0.400	0.600	0.228	0.219	0.393	0.352	0.238	-0.045	-0.010	-0.513	0.560	
MgO_1	-0.506	0.319	-0.340	0.266	0.104	0.184	0.299	0.308	0.544	0.098	-0.401	-0.332	-0.099	0.115	0.032	0.062	-0.103	0.295	-0.108	0.680	-0.108	0.000	0.423	-0.002	-0.045	-0.091	0.007	-0.070	0.080	
MnSO4_1	0.447	-0.085	0.537	-0.222	0.537	-0.367	-0.368	0.139	0.265	0.529	0.305	0.490	0.305	0.490	0.354	0.225	-0.640	-0.339	-0.021	-0.547	0.116	-0.282	-0.246	0.207	-0.376	-0.404	-0.344	0.149	0.176	
Na2O_1	0.183	0.095	-0.432	-0.494	-0.244	0.434	-0.059	-0.114	0.005	-0.362	0.000	-0.053	0.444	-0.190	-0.441	-0.376	0.279	0.074	-0.382	0.237	0.512	0.645	0.317	-0.167	-0.190	0.458	0.529	-0.043	-0.415	
P2O5_1	-0.498	0.585	-0.163	0.055	0.279	0.365	0.140	0.354	0.432	0.276	-0.381	-0.203	-0.127	0.327	0.291	0.168	0.315	0.217	0.168	-0.014	0.436	0.218	-0.308	0.243	-0.024	-0.052	-0.218	-0.127	0.340	
SO2_1	0.233	-0.112	-0.082	-0.011	0.133	0.014	-0.141	0.249	-0.172	-0.044	-0.394	-0.108	-0.058	-0.052	-0.120	-0.129	-0.052	-0.318	-0.217	-0.389	-0.368	-0.153	-0.281	0.315	-0.541	-0.318	-0.031	0.225	-0.126	
TiO2_1	-0.211	0.290	-0.385	-0.550	-0.253	0.667	-0.127	0.150	0.077	-0.039	-0.050	-0.163	0.088	-0.174	-0.345	-0.102	0.243	0.211	-0.248	0.543	-0.221	0.524	0.376	-0.017	0.101	0.508	0.568	-0.399	-0.114	
Al	0.220	0.084	-0.001	-0.396	-0.199	0.369	-0.301	0.716	-0.005	-0.103	-0.318	-0.335	-0.222	-0.409	-0.301	-0.260	-0.005	-0.262	-0.002	-0.181	0.021	-0.233	0.303	-0.158	0.008	0.278	0.038	-0.038	-0.225	
Ca	-0.001	-0.344	-0.099	-0.082	-0.074	-0.152	-0.190	0.038	-0.432	-0.385	-0.199	0.075	-0.266	-0.109	-0.075	-0.420	0.111	-0.651	-0.335	-0.872	-0.176	-0.381	-0.829	-0.140	-0.271	-0.120	-0.164	0.571	-0.402	
Mn	0.408	-0.301	0.125	0.550	0.500	-0.207	0.021	-0.254	-0.376	0.078	0.206	0.448	0.228	0.448	0.296	0.134	-0.069	-0.401	-0.077	-0.603	-0.240	-0.327	-0.322	0.213	-0.429	-0.426	-0.334	0.234	0.093	
Fe	-0.009	0.485	0.176	-0.198	-0.218	0.490	-0.035	0.194	0.296	0.229	0.412	0.232	-0.042	0.292	0.212	0.212	0.290	0.240	-0.029	0.310	-0.126	0.218	0.091	0.331	-0.092	0.052	0.225	-0.447	0.258	
K	-0.006	-0.311	0.276	0.264	0.195	-0.215	0.225	-0.018	0.119	0.340	0.099	0.171	-0.347	0.028	0.247	0.167	-0.410	-0.154	0.004	-0.213	-0.046	-0.306	-0.414	0.457	-					