Supplementary Table 3 – Estimated soil characterization data for E4 site paleosol using Vertisol pedotransfer functions of Nordt and Driese (2010a).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | |  | |  | |  |  | |  | | |  |  |  | |
| **Paleosol Horizon** | **Clay**  **(%)** | | **Clay**  **(%)** | | **COLE**  **(cm cm-1)** | | **BD**  **(g cm-3)** | | | **CEC**  **(cmolc kg-1)** | | **pH**  **(H2O)** | **BS**  **(%)** | | **CaCO3**  **(%)** | | **Fed**  **(%)** | **ESP**  **(%)** | **EC**  **(dS m-1)** | **Org. C**  **(%)** | **Org. N**  **(%)** | **Depth** |
| **(SE)** | <5%CaO  **(+ 4)** | | <10%CaO  **(+ 5)** | | <10% CaO  **(+ 0.019)** | | Noncalc**.**  **(+ 0.1)** | | | <10%CaO  **(+ 8)** | | <30%CaO  **(+ 0.6)** | <30%CaO  **(+ 8)** | | <30%CaO  **(+ 4%)** | | <30%CaO  **(+ 0.4)** | <30%CaO  **(+ 4)** | <30%CaO  **(+ 3)** | **(+ 0.53)** | **(+ 0.04)** | **(**cm) |
|  | 48 | | 49 | | 0.13 | | 1.22 | | | 43 | | 8.2 | 110 | | 0.8 | | 0.9 | 62 | 117 | 0.31 | 0.06 | -1.5 |
|  | 47 | | 48 | | 0.13 | | 1.21 | | | 43 | | 8.4 | 112 | | 1.3 | | 1.0 | 61 | 114 | 0.30 | 0.06 | -4.5 |
|  | 49 | | 50 | | 0.13 | | 1.21 | | | 43 | | 8.3 | 112 | | 0.6 | | 0.9 | 58 | 103 | 0.24 | 0.05 | -7.5 |
|  | 49 | | 49 | | 0.13 | | 1.21 | | | 43 | | 8.3 | 112 | | 0.6 | | 0.9 | 60 | 111 | 0.62 | 0.10 | -10.5 |
|  | 48 | | 48 | | 0.13 | | 1.21 | | | 43 | | 8.4 | 113 | | 0.6 | | 0.9 | 65 | 125 | 0.69 | 0.11 | -13.5 |
|  | 48 | | 49 | | 0.13 | | 1.21 | | | 43 | | 8.3 | 111 | | 0.8 | | 1.0 | 72 | 151 | 0.45 | 0.08 | -16.5 |
|  | 49 | | 49 | | 0.13 | | 1.19 | | | 43 | | 8.2 | 109 | | 1.1 | | 1.4 | 76 | 166 | 0.39 | 0.07 | -19.5 |
|  | 50 | | 51 | | 0.13 | | 1.19 | | | 43 | | 8.2 | 109 | | 1.1 | | 1.6 | 74 | 160 | 0.53 | 0.09 | -22.5 |
|  | 50 | | 50 | | 0.13 | | 1.20 | | | 44 | | 8.1 | 107 | | 1.1 | | 1.5 | 74 | 158 | 0.59 | 0.10 | -25.5 |
|  | 51 | | 51 | | 0.13 | | 1.20 | | | 44 | | 8.0 | 107 | | 1.2 | | 1.7 | 73 | 157 | 0.66 | 0.11 | -28.5 |
|  | 53 | | 52 | | 0.13 | | 1.19 | | | 44 | | 8.0 | 106 | | 1.9 | | 1.9 | 71 | 148 | 0.51 | 0.09 | -31.5 |

(Notations: **SE** = Standard Error of Regression; **COLE** = Coefficient of Linear Extensibility; **BD** = Bulk Density; **CEC** = Cation Exchange Capacity; **BS** = Base Saturation; **Fed** = Dithionite-Citrate Extractable Iron; **ESP** = Exchangeable Sodium Percentage; **EC** = Electrical Conductivity; **Org. C** = organic Carbon; **Org. N** = organic Nitrogen).