SUPPLEMENTAL TABLE S3. GEOCHEMICAL FINGERPRINTING OF TEPHRA SAMPLES FROM NWBR TRANSECT

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samplename | Parameter | SiO2 | Al2O3 | Fe2O3 | MgO | MnO | CaO | TiO2 | Na2O | K2O | Cl | ∑ Wt% | H2O Diff | Corr Factor | SC§ | Comments and Correlations |
| Jackson Mountains tephra bed, NW Nevada† |
| NV ave**\*** | Average: | 72.5 | 14.7 | 2.22 | 0.45 | 0.05 | 1.61 | 0.43 | 5.2 | 2.7 | 0.16 | — | — | — | 1.000 | Mount Mazama tephra; average of 46 samples from northern Nevada# |
| n=46 | 1σ SD: | 0.2 | 0.1 | 0.05 | 0.02 | 0.01 | 0.05 | 0.02 | 0.1 | 0.1 | 0.02 | — | — | — |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| JM-T1 | Average: | 72.74 | 14.62 | 2.15 | 0.48 | — | 1.69 | 0.48 | 4.92 | 2.74 | 0.18 | 100.00 | 0.68 | 1.01 |  | Sand canyon ash exposure (this study) |
| n = 25 | 1σ SD: | 0.37 | 0.27 | 0.12 | 0.02 | — | 0.05 | 0.15 | 0.34 | 0.08 | 0.06 | 0.00 | 1.34 | 0.01 |  |  |
|  | SC | 0.997 | 0.995 | 0.967 | 0.937 | — | 0.951 | 0.898 | 0.946 | 0.984 | 0.889 | — | — | — | 0.973 | Correlated w/ Mount Mazama tephra§ |
| Upper tephra bed, Long Valley, NW Nevada† |
| LT-2 | Average: | 75.25 | 14.04 | 1.60 | 0.21 | 0.07 | 1.02 | 0.24 | 4.28 | 3.29 | — | 100.00 | — | — | 1.000 | Trego Hot Springs tephra; Black Rock Desert, Nevada (type locality) # |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T-1U | Average: | 75.53 | 13.55 | 1.63 | 0.22 | — | 1.05 | 0.23 | 4.35 | 3.31 | 0.14 | 100.00 | 2.48 | 1.03 |  | Long Valley ash exposure (this study) |
| n = 23 | 1σ SD: | 0.18 | 0.22 | 0.10 | 0.03 | — | 0.06 | 0.11 | 0.18 | 0.15 | 0.05 | 0.00 | 0.72 | 0.01 |  |  |
|  | SC | 0.996 | 0.965 | 0.984 | 0.977 | — | 0.974 | 0.964 | 0.983 | 0.994 | — |  |  |  | 0.983 | Correlated w/ Trego Hot Springs tephra§ |
|  |
| Lower tephra bed, Long Valley, NW Nevada† |
| LD-30 | Average: | 74.10 | 14.03 | 2.11 | 0.30 | 0.06 | 1.38 | 0.32 | 4.53 | 3.17 | — | 100.00 | — | — | 1.000 | Wono tephra; Agency Bridge, Nevada (type locality) # |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T-1L | Average: | 74.09 | 13.95 | 2.20 | 0.30 | — | 1.37 | 0.34 | 4.50 | 3.12 | 0.13 | 100.00 | 2.05 | 1.02 |  | Long Valley ash exposure (this study) |
| n = 28 | 1σ SD: | 0.31 | 0.16 | 0.15 | 0.02 | — | 0.07 | 0.20 | 0.23 | 0.10 | 0.06 | 0.00 | 1.26 | 0.01 |  |  |
|  | SC | 1.000 | 0.994 | 0.961 | 0.993 | — | 0.991 | 0.951 | 0.994 | 0.986 | — |  |  |  | 0.988 | Correlated w/ Wono tephra§ |
| **\***Mazama ash geochemistry is average of 46 identified samples from Nevada (Davis, 1985).†Values represent an average of 20 analyses of individual glass shards from each sample (in oxide weight percentage). §Similarity Coefficient (SC) averages calculated using Si, Al, Fe, Ca, Na, K oxides; chemical analyses and correlation by J.Z. Maharrey and J.E. Begét at Alaska Center for Tephrochronology (ACT), University of Alaska, Fairbanks, AK.#References: Wono and Trego Hot Springs tephras—Benson et al. (1997); Mazama ash—Davis (1985).  |

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