1 **SUPPLEMENTAL FIGURES AND TABLES**

2 # Storage and routing of water in the deep critical zone of a snow

3 # dominated volcanic catchment

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Well ID	Well Casing Diameter [cm]	Annulus Diameter [cm]	Screened Interval Depth [mbgs]	Vibrating Wire Piezometer (VWP) or Transducer (T) Depth [mbgs]	Total Depth [mbgs]
1A	2.54	9.6	38.7 to 41.7	VWP @ 41.5	41.7
1B	2.54	9.6	31.7 to 37.8	T @ 37.8	37.8
2A	5.08	9.6	42.8 to 45.9	T @ 45.5	47.15
2B	5.08	9.6	34.7 to 37.8	T @ 37.7	39.1
2C	5.08	9.6	24.7 to 30.8	T @ 30.1	30.85
2D	5.08	9.6	3.7 to 6.7	VWP @ 6.4	6.7
3A	2.54	9.6	13.8 to 16.9	VWP @ 15.3	16.85
3B	5.08	9.6	6.8 to 12.9	VWP @ 12.7	12.93

10 **Supplemental Table 1: Completed well dimensions. All screened intervals are 0.051 cm slotted intervals. It is**
11 **important to note that VWPs were installed during monitoring well installation while transducers were**
12 **installed more than one year after drilling; therefore, only VWPs cover the entire time range of this study.**

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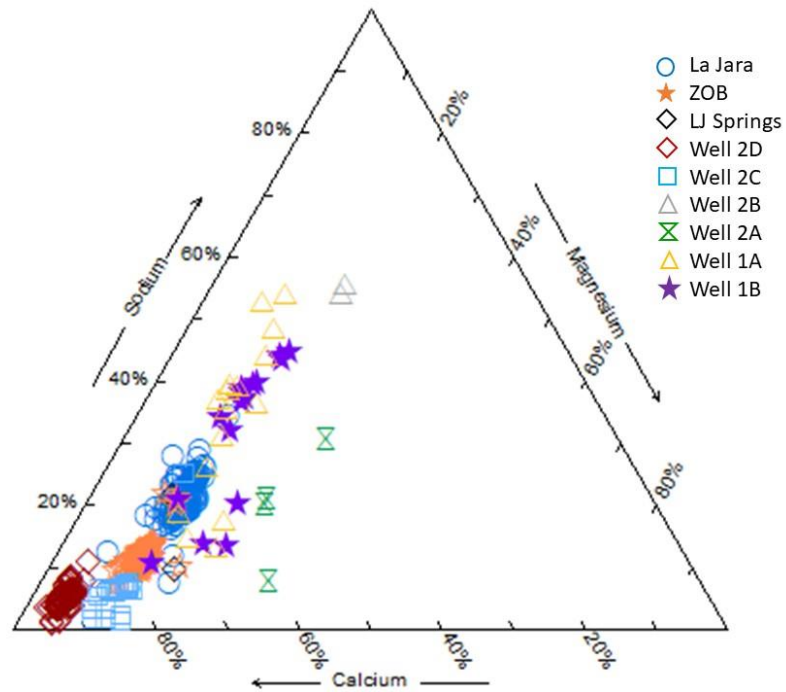
Supplemental Figure 1: Ternary diagram showing percent microequivalents of sodium, calcium, and magnesium. Shallow site two groundwaters are calcium dominant while deeper site two groundwater are more of a mix of calcium-sodium-magnesium and site one groundwaters have a larger range in composition dominated by calcium and sodium. Finally, surface waters from the La Jara flume and La Jara springs are calcium-sodium waters that plot in overlapping space with site one groundwaters and have generally slightly greater percentages of sodium and less percentages of calcium than ZOB surface waters which overlap in space with site one groundwaters and site 2C groundwaters.

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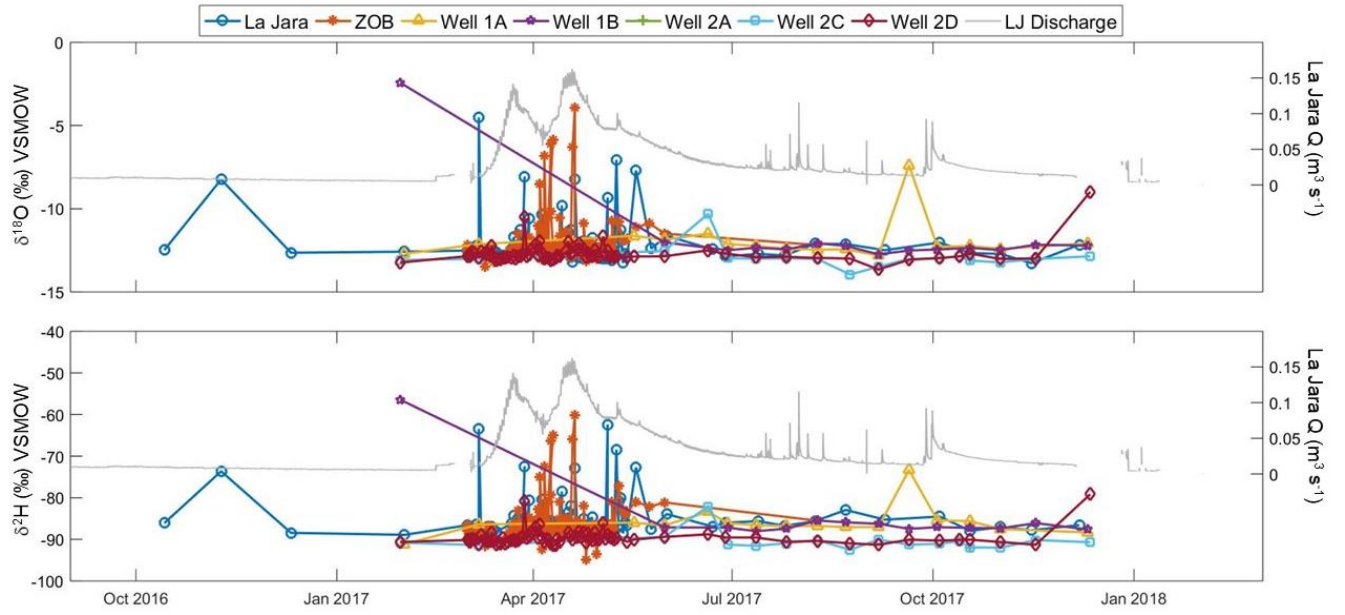
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25 **Supplemental Figure 2: Time series of δ¹⁸O and δ²H surface waters and groundwaters plotted with La Jara**
26 **discharge to indicate timing of shifts in stable water isotope values.**

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