July 2017 WEFTA Bolivia Country Brief Report Prepared by Richard Mulliken, LS Field Notes Recorded by Dolores Mulliken

We, my wife and I, arrived in El Alto/La Paz, Bolivia on July 8, 2017 and were met by our hosts Braulio Rojas and Basilica Choque of Suma Jayma. Others in our group were, Justin, Liz and Brooke Logan, Jason Gehrig, Ramon Lucero, Sara Mason, and Jose Ortiz. We spent four of our eight days visiting previous water project sites in dozens of communities of the Altiplano and were given a thorough tour of Suma Jayma workshop and drilling rig in El Alto, Bolivia.

When visiting the communities water project sites, Dolores and I, began to mark the GPS locations of Spring Catchments, Pumps, Faucets, Storage Tanks, and Wells. The best part of marking the GPS locations was walking about the communities. We would start out with a group meeting at the Community well site, where each man would talk about how the well had improved their lives. Then we would walk to each water project faucet near individual homes.

While taking our shots we fell behind, however, it is here that we witnessed the direct impact of the water projects and the real life of the community. The villagers at the meetings had gone back to their homes to continue their work for the day. As we went to mark a faucet by their home, they would talk to us very animated and very proud of their farms. They could not say enough wonderful things about WEFTA and Suma Jayma and how happy they were to have clean water for drinking, cooking and bathing near their homes. Before the faucets, some had to walk far to get water or animals would die in the water source. The day we set out to visit Comanche, we picked up the Authorities, Juan and Isabel Mammani. They were most impressive in their traditional dress that showed their official status to make decisions and justice for their communities. The meeting took place at the school where both the men and women gave testimony. Juan said, "Agua es Vida."

One afternoon, we were given a tour by Jorge of Suma Jayma of their workshop including a demonstration of their hand pumps. We saw lots of innovation here. They have established a machine shop because getting parts and tools is a challenge in Bolivia, so Jorge, Jaime and Braulio make the parts themselves. There are several considerations of equipment need regarding the drilling operations of Suma Jayma, but in this report I will focus on the surveying aspects.

Suma Jayma was given a Topcon surveying instrument. We set it up, I proceeded with training, and made an assessment of its condition. The instrument requires the following: I brought back the battery to re-cell, the HP calculator screen is damaged and they need a new calculator, the data cards need research to ensure the right cards are functional and useful, they need a cable from the calculator to the Topcon and from the calculator to the computer to dump the notes stored in the HP, and they need a spreadsheet to calculate coordinates should the calculator go down.

The motivations of our trip to Bolivia should be appealing to funders in several unique ways. The strength of will of the people of the communities telling us how they want to make their lives better, not us telling them. The work of Suma Jayma a local company owned by Bolivians who know the culture, the territory, the officials and authorities, and most important the need, that can coordinate and work water projects. We left a Garmen GPS (including a training overview and will send repaired Topcon equipment) and strongly recommend Suma Jayma be considered by WEFTA for mapping water project sites in Bolivia. The GPS data we collected will be posted on the WEFTA website and anyone interested in the water projects throughout Bolivia.