

## Well Drilling Update

Last year during our bike tour and Amazon River boat trip, our big boat with 100 people was taken hostage by a village on the river. The villagers were protesting the boat and oil companies that were polluting the river. The villagers didn't have a problem with the passengers on the boat but we were still held hostage for two days. The navy eventually sent another boat to take everyone the final 200 miles of our journey. The original boat crew was held captive for five more days. While we were held hostage, we had time to talk to village leaders about their water problem. We had done several projects in Peru and we thought we could help solve their water needs by drilling a well. That was the start of a year-long project.

Alessandra and I traveled to the village of Cuninico to help with the well drilling project. Alessandra has been to the United States several times and crewed on many PAC Tours. She is also a member of the Peru Cycling Team. Alessandra's father, Alberto, has been

working with the village for the past six months to determine the budget and engineering to drill the well. Alberto has been drilling wells in the jungle for the past 20 years and has a lot of experience drilling water and oil wells. He was a crucial in making this project possible.

Alberto traveled to the village with the drilling equipment, pipes, and generator one week before my arrival. He traveled on the slow, big boat that took three days to travel on the Amazon River to the village. The distance was only 250 miles on the river, but the water level was so low that the boat needed to go even slower to avoid sandbars.

Alberto arrived at the village and started drilling the well with the help of five local workers. The drilling took three days to go 120 feet deep. They inserted the pipes and hit water without any problems. When they installed the bigger submersible pump, the local electrician crossed some wires and burned out the pump. They got a smaller sump pump type motor and it worked to start pumping the water.



Alessandra and I arrived a few days later. Alessandra had a bike race on the weekend so we waited to travel on the fast boat to the village. The fast boat took 11 hours and we traveled overnight to arrive at the village at sunrise. I have enclosed some photos of our boat. It was basically like a school bus with 15 rows of seats with four across seating. The seats were close together and I needed to sit side-saddle for my legs to fit. It was a tight fit for eleven hours and uncomfortable to try to sleep.

We arrived at the village and went to see the sleeping accommodations. The building had plywood cubicles for rooms without locks on the doors. The bathroom was a dirty stool down the hall you poured in a bucket of river water to flush. The shower was a barrel of river water where you could pour a jar of water over your head. The building was very warm during the day, so although I was tired from our travel on the boat, it was too warm to nap that day.

We then met Jackson, the village chief. He seems like a good guy and was very thankful for the well-drilling project. He was the third chief elected by the village in the past year. He took us to the well-drilling site and the workers set up the generator. The pump runs the water through two charcoal filters that remove sediments and impurities.

When everything was connected, they started the generator. The water was flowing and at first, was dark black from the charcoal filters. After about ten minutes, the water was clear. I drank some; it tasted fresh and I didn't get sick.



### **Some well details:**

- 120 feet deep
- The lower 30 feet is perforated pipe filled with gravel.
- The pump suction pipe is 50 feet deep.
- The natural water level rises to 20 feet of the surface.
- When the pump is running for 5 hours the water level is still 40 feet from the surface.
- The pipe fills again naturally to within 20 feet of the surface in 6 hours.
- The pump rate is 5 gallons per minute.
- The village is selling water to other villages for 50 cents a 5-gallon bucket. They can use the money to buy gasoline for the generator.
- A gallon of gas costs \$5. They can fill about 60 buckets per hour using a gallon of generator gas and make a profit of about \$25.

The next part of the project is for the village to build a pump house over the well. They will pour a cement slab to set everything on and enclose the generator and filters for security. Finally, they need to install a 300-gallon water tank to hold extra water when the pump is not on. They will only turn on the generator to fill the tanks daily.

Alessandra and I met with the villagers and we agreed the pump was working. Alessandra and I needed to find a way back to Iquitos by boat. The schedule is unpredictable, so we wanted to find the next boat and not wait a few more days. We heard rumors that another boat was stopping at midnight and would be in Iquitos later the next day. We decided to try to get on that boat.

We still hadn't had a chance to sleep, so we were looking forward to getting out of the village "hotel" and finding a place to sleep. We expected a boat around midnight, and it finally arrived at 2:00 a.m. It was already packed with people and luggage. We found two seats in the far back next to the bathroom. I had to sit side-saddle again to stay out of the way of someone going to the bathroom every 10 minutes.

We didn't get much sleep that night, but it only took eight hours to go back downstream this time. We were glad to get off the boat and take a taxi the final 100 km to Iquitos. I checked into a hotel, showered, and washed my clothes. I went to bed and slept well for the first time in three days.

We thank everyone who contributed to this well-drilling project. It was a year-long process to get everything the village needed for the well. The completion of the project was a total success.

