

# **Well Configurations**

The three types of wells we install are: Basic, Full and Piggyback.

### **Basic Well**

- Drill Hole •
- Hand Pump
- Conversation Wall with Masonry Trough

Total

### **Full Package**

- Drill Hole
- Electric Pump
- Solar Panels
- Water Tower
- Water Tank x 2
- Plumbing
- Cattle Trough(s)



## \$2,500 \$1,500 \$ 680



\$1,500 \$140-\$600 \$600 \$400-\$800 each Varies by project \$340 each

\$8,000 - \$22,000

\$2,500 - \$3,500

Piggyback Well - Adds a second pump and pipes to reach a second community

•	Upgraded Electric Pump	\$1500
•	Tank	\$400-\$800
•	Plumbing (max distance ½ KM)	\$2000-\$2700

#### Total

Total

"3D Cost Amplifiers" – Cost variations in the three drilling packages are a result of encountering three primary complications: Distance, Depth and Difficulty.

- **Distance:** Diesel fuel in Niger is \$4/liter. Every kilometer
  - traveled on unpaved rough terrain adds significant fuel and repair costs.
  - **Depth:** Every meter drilled to reach the aquifer adds fuel, labor and material costs. Wells depths can range from 50 to 250 meters. On average the farther north into the Sahara Desert you drill, the deeper you need to go to reach water.
  - Difficulty: Soil conditions impact the drilling speed and wear of equipment. For example, some regions have more pockets of granite that slow drilling and damage drill heads.

