

Living Water International

BOQ FOR SERVE AFRICA'S WATER SYSTEM CONSTRUCTION

PROJECT LOCATION: MT. BARCLAY COMMUNITY, MONTSERRADO COUNTY, LIBERIA

19-Feb-20

| 1.0.0 BOREHOLE DRILLING | | | | | |
|-------------------------|---|------|-----|------------|--------------------|
| No | Description of Activity / Item | Unit | QTY | Rate(USD) | Total |
| 1.1.0 | General | | | | |
| 1.1.1 | Site Mobilization | L/S | 1 | \$ 75.00 | \$ 75.00 |
| 1.1.2 | Mobilization and Demobilization of drilling equipment and personnel | L/S | 1 | \$ 150.00 | \$ 150.00 |
| SUBTOTAL | | | | | \$ 225.00 |
| 1.2.0 | Drilling | | | | |
| 1.2.1 | Drill vertical borethrough overburden to accommodate surface casing of 20.3 cm (8 inches) Ø PVC pipe to required depth | m | 10 | \$ 50.00 | \$ 500.00 |
| 1.2.2 | Drill through 165mm (6.5 inches) Ø surface casing vertical bore in hard rock to accommodate 12.7 cm (5 inches) diameter casing PVC pipe to required depth | m | 50 | \$ 35.00 | \$ 1,750.00 |
| 1.2.3 | Perform drilling process and borehole logging (Lithological logging) | L/S | 1 | \$ 55.00 | \$ 55.00 |
| SUBTOTAL | | | | | \$ 2,305.00 |
| 1.3.0 | Installation of surface casings, plain casings & screen casings. | | | | |
| 1.3.1 | Install 165mm (6.5 inches) Ø threaded PVC surface casing | m | 10 | \$ 45.00 | \$ 450.00 |
| 1.3.2 | Install 140mm (4.5") Ø threaded PVC plain casing pipes | m | 55 | \$ 50.00 | \$ 2,750.00 |
| 1.3.3 | Install 140mm (4.5") Ø threaded PVC screening | m | 5 | \$ 70.00 | \$ 350.00 |

| | | | | | |
|-------|---|----------------|-----|-----------|--------------------|
| 1.3.4 | Install bottom plug | L/S | 1 | \$ 35.00 | \$ 35.00 |
| | SUBTOTAL | | | | \$ 3,585.00 |
| 1.4.0 | Well Construction and Development | | | | |
| 1.4.1 | Supply and install gravel pack | m ³ | 2 | \$ 30.00 | \$ 60.00 |
| 1.4.2 | Supply and install specified material in annulus (lower cement slurry sanitary seal) | m ³ | 0.5 | \$ 45.00 | \$ 22.50 |
| 1.4.3 | Grout sanitary seal to depth of 6m and construct well head and installation of hand pump (apron including drainage 6m and soak pit) | L/S | 2.3 | \$ 140.00 | \$ 322.00 |
| 1.4.4 | Develop borehole by jetting, surging and airlifting | Hrs | 6 | \$ 38.00 | \$ 228.00 |
| 1.4.5 | Conduct pump testing as specified – MINIMUM 4 HOURS and log recharge as specified | Hrs | 4 | \$ 45.00 | \$ 180.00 |
| 1.4.6 | Disinfect well as specified | L/S | 1 | \$ 25.00 | \$ 25.00 |
| 1.4.7 | Conduct physiochemical and bacteriological analysis as specified | L/S | 1 | \$ 75.00 | \$ 75.00 |
| | SUBTOTAL | | | | \$ 912.50 |
| | | | | | |
| | TOTAL FOR BOREHOLE | | | | \$ 7,027.50 |