BILL OF QUANTITIES FOR DRILLING OF PRODUCTION BOREHOLE FOR OL JORO OROK CONSTITUENCY

Item No.	Description	Unit	Q'ty	Rate Ksh	Amount Ksh
BILL NO. 1: PRELIMINARIES					
1.1	Carry out Environmental Impact Assessment for drilling of borehole and submit report in two copies to the Sub-County Water Officer Ol Joro Orok	Item	Lump-sum		**150,000**
1.2	Provide for acquisition of Water Resources Authority borehole drilling authorization and submit the same in two copies to the Sub-County Water Officer.	Item	Lump-sum		**50,000**
BILL NO. 2: DRILLING AND CASING OF BOREHOLE					
2.1	Mobilization and transportation of all plant, drilling rig, construction materials, equipment and personnel to the site; demobilization on completion	Item	Lump Sum		**200,000**
2.2	Drilling of a borehole of minimum diameter 203mm through various types of strata including disposal of excavated materials, taking any remedial measures to overcome caving-in, or over-drilling to accommodate sloughed material and keeping drilling records as specified between ground level and the final depth	M	250	**9,000**	**2,250,000**
2.3	Supply and install 203 mm internal diameter plain steel casings in the borehole ***(provisional)***	M	84	**4,000**	**336,000**
2.4	Ditto but 203mm diameter slotted steel casings with slots of maximum size of 2mm (Torched slots shall **not** be permitted since they allow ingress of fine sand particles into the borehole compromising both efficiency and life span of the well) ***(provisional)***	M	166	**6,000**	**996,000**
2.5	Allow for taking samples of drill cuttings at two (2) metre intervals (Provisional)	No	125	**200**	**25,000**

2.6	Supply and install into the annular space gravel pack material consisting of naturally graded weathering resistant river quartzite gravel of particle size 2 – 4mm	Tons	12	**7,500**	**90,000**
2.7	Supply materials and grout between the casing and the borehole top five (5) metres	Item	Lump Sum		**20,000**
2.8	Carry out physical and chemical development of the borehole including inserting and removal of development equipment (At least 4 hours for physical development	Item	Lump Sum		**100,000**
2.9	Undertake Constant Discharge Test measurement as specified for 24 hours to ascertain borehole yield and draw down until hydraulic equilibrium is achieved	Item	Lump Sum		**150,000**
2.10	Undertake borehole water level observation and recovery measurements until initial water level is recovered	Item	Lump Sum		**30,000**
2.11	Carry out borehole sterilization	Item	Lump Sum		**30,000**
2.11	Install wellhead with a stick-up casing of 0.5m above ground level, well cap serial number and concrete (1:3:6) plinth of dimensions 1.5 x 1.5 x 0.5m thick around the well head	Item	Lump Sum		**35,000**
2.12	Supply of water and drilling fluids for drilling operations and field camp	Item	Lump Sum		**28,000**
2.13	Allow for borehole water sampling for quality analysis in a government approved laboratory (1No. for Bacteriological and 1 No. for Chemical analysis each 2litres). Submit two copies of the report to the Sub-County Water Officer	Item	Lump Sum		**10,000**

2.14	Allow for making good and surface reinstatement at the borehole location as directed by the supervisor	Item	Lump Sum		**8,000**
2.15	Allow for provision of borehole completion record and test pumping data and submit two copies of each to the Sub-County Water Officer	Item	Lump Sum		**10,000**
				Sub-Total	
2.16	Add 3% Project Management Costs 1% being for supervision, 1% being Project administrative costs and 1% being project management costs	%	3		**150,000**
				TOTAL	**4,800,000**

NB

1. ***Refer to attached Hydro-geological/ Geophysical survey report***