

DRILLING AND E		
1	DESCRIPTION	U
1	Drilling of	C
1	Allow	E
1	Allow provisional	It
1	Allow	2
2	Mobilization and	S
2	Establish	C
2	Erecting and	S
2	Provisional sum for	S
2	Provisional sum for	S
	PERCENTAGE 10%	
2	Drilling of	I
	CASING AND	

2.6	Supply and Install 6" diameter borehole carbonized Steel Plain Casings class - B	Lm
2.7	Supply and Install 6" diameter borehole carbonized Steel Slotted Casings class B	Lm
2.8	Extra over for casing 6" diameter carbonized steel pipe class B	Lm
2.9	Supply and install well graded gravel pack (size 2-4mm entire borehole)	Ton
	BOREHOLE DEVELOPMENT	
2.10	Physical and chemical development of the borehole	Hr
2.11	Grout between the casing and borehole for top 8m	Item
	AQUIFER TESTING	
2.12	Undertake constant discharge test for 24 hrs to determine borehole parameters (Test pumping report required)	Hr
2.13	Undertake water level observation and record recovery measurements of completed well	Hr
2.14	Physical and chemical analysis of water(approved LAB Report required)	Item
2.15	Install well head, well cap serial number and well apron of of dimmensions 1.0mx1.0mx1.0m	Sum
2.16	Logging of samples at 2m intervals and preparation of Borehole Completion Report to WRA standards.This shall be approved by WRA as a statutory requirement.	Sum
2.17	UPVC casing/screen pipes DN 150/6" class D (Provisional in-case of saline water)	m
	TOTAL FOR BILL NO.2 CARRIED TO SUMMARY PAGE	
	BILL NO.3: EQUIPPING OF BOREHOLE (Installation equipment to be approved and witnessed by KVDA engineer)	
3.1	Submersible pump and accessories: Supply deliver to site and install a suitable submersible pump set complete with compatible a water cooled motor 5kw or equivalent as shall be approved by the supervising engineer , cables and compatible electrical control panel comprising of well low level, overhead tank level control,overload,and power failure relays, main circuit breakers ammeter and voltmeter, Star/Delta starter, auto/manual switch start/stop button, run/trip lights ,tank float switch fully protected system . Note: i)Pump rating and head may change depending on maximum flow rate determined after aquifer yield testing results.ii) The pump brand shall be of high quality ,to be approved by the engineer before purchase and installation - preferably dayliff,petrollo or grundfos brands.Please state the brand to be supplied. The pump unit including all the accessories shall have a warranty of 12 months)	Item

3.2	Solar Power Supply: Supply, deliver and install complete compatible solar array of 6kw (high quality monocrystalline brand to be approved by engineer before purchase and installation) and all its accessories including but not limited to, hybrid inverter;preferably hybrid sunverter or hober or other to be approved by engineer for automatic control, cables,earthing, lighthning arresters, control panel and heavy duty metallic panel support stand-see attached drawing (With 2 years warranty) . Note;i) The specification may change depending on maximum flow rate determined after aquifer yield testing results ii) solar panel brand to be preferably solarworld -german and dayliff sunverter inverter ;Please state the brands to be supplied.and (NB ;provide manufactures data sheet for approval)	Item
TOTAL FOR BILL NO.3 CARRIED TO SUMMARY PAGE		
BILL NO.4: AUXILLIARY WORKS-		
4.1	Supply , deliver materials & construct a communal water point. Rate to include four GI 3/4 " dia taps,gates valves for control , GI pipes,plastering , fittings and connections,1.2 m high by 2000 mm wide apron and 150mm thick masonry wall support see the attached drawing.	No.
4.2	Construction of perimeter fence around the borehole site rates to include supply and installation of 150x125mm cranked precast concrete posts mortised in concrete at 2.5m center to centre complete with 14 gauge triple twist chainlink net fence ,top three strand barbed wire , 4 stands galvanized wire and grilled steel gate.The chaink link to be mortised in concrete all round . as detailed in the attached drawing	Lm
4.3	Supply delivery to site all materials and construct standard cattle trough. Rate to include BRC A142 floor setting,10m long,1.0m wide and 0.5m high masonry wall 200mm thick all round, water proofing material and GI 3/4"piping, float valve chamber ,control gates /gate vales and all fittings connections as detailed in the drawing	Item
4.4	Provide for reinforced concrete class 25 cattle ramp , 4m wide all around the trough and 200mm thickness .The base foundation works shall be of compacted hard stones material with blinding material with standard BRC A 142 as shall be directed by engineer.	m3
4.5	Ditto 4.3 and 4.4 but for goats and sheep ; trough height of 0.3M	Item
4.6	Supply, deliver and hoist 1 No. 10,000 litres plastic tank;specifically double layer Roto type	Item

4.8	Allow sum for pipe works and fittings for water distribution from the borehole discharge to the storage tank and from the storage tank to the community water point;1 1/2 inch and water troughs ;1 1/2 inch as shall be directed by the engineer; (Provide manufacturers specification sheet and QR code reference)	M
4.9	HDPE DN 40mm/ PN 12.5 (provisional in case of saline water)	m
	TOTAL FOR BILL NO.4 CARRIED TO SUMMARY PAGE	
	SUMMARY PAGE	
BILL NO	ITEM	
1	PRELIMINARY AND GENERAL ITEMS (provisional)	
2	BORE HOLE DRILLING,DEVELOPMENT & TESTING	
3	EQUIPPING OF BORE HOLE	
4	AUXILLARY WORKS	
Add 5% Contigency ;to be expended with instructions of the client		

NB:To all bidders:-

1. All rates are inclusive of VAT,
2. 0.03 percent (of the contract value) capacity building levy will be deducted and submitted to PPR
3. All provisional sums shall be approved before committing
4. The first operation is borehole drilling. Any other subsequent works will depend on availability o
5. Implementation of all works must be supervised by KVDA (Client) representative. The Contract
6. Drawing shall be read together with bill of quantities for completeness

KWET COUNTY (PROPOSED DEPTH

QTY	UNIT PRICE (KSH)	VALUE (KSHS)
1	200,000.00	200,000.00
2	45,000.00	90,000.00
1	500,000.00	500,000.00
1	300,000.00	300,000.00
		-
1	300,000.00	300,000.00
1	100,000.00	100,000.00
1	200,000.00	200,000.00
1	80000	80,000.00
1	150,000	150,000.00
		1,920,000.00
		288,000.00
		2,208,000.00
1		
25		
75		
70		
6		

50		
100		
20		
12		
6		
1		
24		
6		
1		
1		
1		
170		
1		

1		
1		
60		
1		
45		
1		
1		
1		

approval from client's side .