

## Water Resources Management Authority

### ***BOREHOLE COMPLETION RECORD***

*(To be submitted in triplicate)*

*(Rule 33)*

Borehole No .....

Borehole Name: AMREF- ENDOINYO-ONKOPIT SEC SCH

Formation: BASEMENT

<b>PARTICULARS OF APPLICANT</b>			<b>DETAILS</b>		
1. Full name of applicant(s) (In Block Letters)			ENDOINYO ONKOPIT		
2. Category of Applicant - Individual, Group [Association, Society], Company, Institution			INSTITUTION		
3. ID Number of Applicant (Individual) or Certificate of Incorporation or Registration for Groups or Companies					
4. PIN Number					
<b>Physical Address where water is to be used (see sketch)</b>			<b>Contact Address of Applicant</b>		
5. L/R Number(s)			6. Box Number	<b>53-40700</b>	
7. Village(s)/Ward(s)	<b>ENDOINYO-ONKOPIT</b>		8. Town	<b>KILGORIS</b>	
9. Sub-location(s)	<b>ENDOINYO-ONKOPIT</b>		10. Post Code		
11. Location(s)	<b>OLOLCHANI</b>		12. Telephone Contact (Landline)		
13. Division(s)	<b>KILGORIS</b>		14. Telephone Contact (Mobile)		
15. District(s)	<b>NAROK</b>		16. Email Contact		
<b>PARTICULARS OF CONTRACTOR</b>			<b>BETTERLINE WATER LIMITED.</b>		
17. Box Number	<b>27277</b>		22. License Number	<b>WD/WC/2769</b>	
18. Town	<b>NAIROBI</b>		23. Gazetted On	<b>02/02/2021</b>	
19. Post Code	<b>00100</b>		24. Drilling Supervisor	<b>WILSON JUMA</b>	
20. Telephone Contact (Landline)	<b>0736948511</b>		25. Type and Make of Drill Rig	<b>MAX DRILL 2023</b>	
21. Telephone Contact (Mobile)	<b>0736948511</b>				
22. Email Contact	<b>Info@betterlinewater.com</b>				
<b>INTENDED USE OF WATER</b>					
Public W.S.; Irrigation.; Industries.; Domestic.; Stock, other			<b>DOMESTIC</b>		
<b>PARTICULARS OF BOREHOLE</b>					
<i>Type of Borehole: - Drilled; Driven; Bored; Jetted; Other</i>			<b>DRILLED</b>		
<i>Borehole Construction (also see sketch page 3)</i>					
Drilling started (date)	<b>02.09.2023</b>	Drilling completed (date)	<b>09.09.2023</b>	All work completed (date)	<b>22.09.2023</b>
Total Depth: Reported (m)	<b>175</b>	Measured (m)	<b>175</b>	Final (back-filled) Depth (m)	<b>NIL</b>
Hole Diameter (mm)	<b>203</b>	From (m)	<b>0</b>	To (m)	<b>175</b>
Hole Diameter (mm)		From (m)		To (m)	

<b>Permanent Casing</b>									
<b>Plain</b>									
Type	Mild steel	Diam (mm)	<b>230</b>	Length (m)	<b>1.2</b>	From (m)	<b>0</b>	To (m)	<b>1.2</b>
Type		Diam (mm)	<b>152</b>	Length (m)	<b>115</b>	From (m)	<b>0 43 85 133 157 169</b>	To (m)	<b>31 79 109 145 163 175</b>
<b>Slotted or Perforated:</b>									
<b>Size and Description of Openings</b>									
Type	Mild steel	Diam (mm)	<b>152</b>	Length (m)	<b>60</b>	From (m)	<b>31 79 109 145 163</b>	To (m)	<b>43 85 133 157 169</b>
Type		Diam (mm)		Length (m)		From (m)		To (m)	
<b>Type and Make</b>			<b>Mild Steel -</b>						
Diameter (mm)		Length (m)		Set from (m)		To (m)			
<b>Gravel Pack</b>									
Size of grains (mm)	<b>2-4mm</b>	Roundness (good, fair, poor)	<b>GOOD</b>	Volume inserted in annular Space (m3)	<b>8 Tonns</b>				
		From (m)	<b>0</b>	To (m)	<b>175</b>				
<b>Open Hole</b>									
Diam (mm)	-	From (m)	-	To (m)	-				
<b>Aquifer</b>									
1 <sup>st</sup> Water Struck at (m)	<b>30-43</b>	Water Rest Level (m)	<b>8.98</b>						
2 <sup>nd</sup> Water Struck at (m)	<b>110 -120</b>	Water Rest Level (m)							
3 <sup>rd</sup> water struck at (m)									
<b>Main Aquifer Struck at (m)</b>	<b>110-120</b>	Water Rest Level (m)	-						
Water bearing material	Fractured SEDIMENTS	From (m)	<b>30 110</b>	To (m)	<b>43 120</b>				
Other Aquifers, Remarks, etc (also see log on page3)									
<b>Yield:</b> SWL (m)	<b>8.98</b>	PWL (m below surface)	<b>162.52m</b>	Discharge (litres per minute)	<b>8.167</b>				
After pumping (hours)	<b>24</b>	Recovered to SWL in (minutes)	<b>150</b>						
Expected production discharge (litres per hour)	<b>490</b>	With pump set at (m below surface)	<b>162M</b>						

<i>Pumping Test Record</i> in Summary (Detailed test records on attached sheets): (all depth measurements to be in metres below ground surface)		
	<b>Test No. 1</b>	<b>Test No. 2</b>
Date of Test (day, month, year)	<b>21.09.2023 TO 22.09.2023</b>	
Depth of Borehole at time of test (m)	<b>175</b>	
Water Entry (perforations or screen setting at time of test)	<b>Refer to page 2</b>	
Static Water (SWL) before test (m)	<b>08.98</b>	
Type of Pump (Bailler) used	<b>SP 3/60</b>	
Depth of Pump intake (m)	<b>162M</b>	
Discharge (in litres per minute)	<b>8.167</b>	
Pumping Water Level (PWL m)	<b>162M</b>	
After pumping continuously for (hours)	<b>24</b>	
Time of Recovery to Original SWL (minutes)	<b>150</b>	
Rate of Recovery-WL after 5 minutes (%)	<b>160.45</b>	
Rate of Recovery-WL after 20 minutes (%)	<b>150.78</b>	
Rate of Recovery-WL after 60 minutes (%)	<b>122.29</b>	
Rate of Recovery-WL after 120 minutes (%)	<b>110.68</b>	

(Additional pumping tests to be mentioned in REMARKS and included with file).

Government representative witnessing the test.....

<b>Quality of Water</b>					
Sample (Yes/No)	<b>YES</b>	Collected at (hour)	<b>1440HRS</b>	On (date)	<b>22.09.2023</b>
Sediment	NIL	Taste	-	Odour	NIL
Colour (Pt. Co. APHA)		Temperature (0c)	-	Spec. Conductivity ( $\mu\text{mho}/\text{cm}^3$ )	

<i>Remarks:</i> (drilling difficulties, gravel-pack details, all pertinent information about the drilling and completion of the hole)	<b>Drilling formation not good due the presence of boulders.</b>
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<i>Drilling Supervisor</i>		<i>Drilling Contractor</i>	
Signature		Signature	
Name	<b>WILSON JUMA</b>	Name	<b>BETTERLINE WATER LTD</b>
DATE	<b>29.09.2023</b>		<b>29.09.2023</b>

1.

*Driller's Log.*

DEPTH (m)	GEOLOGICAL NATURE
0.0 - 1.6	Dry surface soil
1.6 – 2.4	Highly Weathered Sub surface soils
2.4 - 8.9	Highly weathered Regolith
8.9-20.2	Weathered Basement
20.2-100	Slightly Weathered /Fractured basement (aquiferous)
100.0 – 175.0	Slightly Weathered to Fresh Basement (aquiferous)

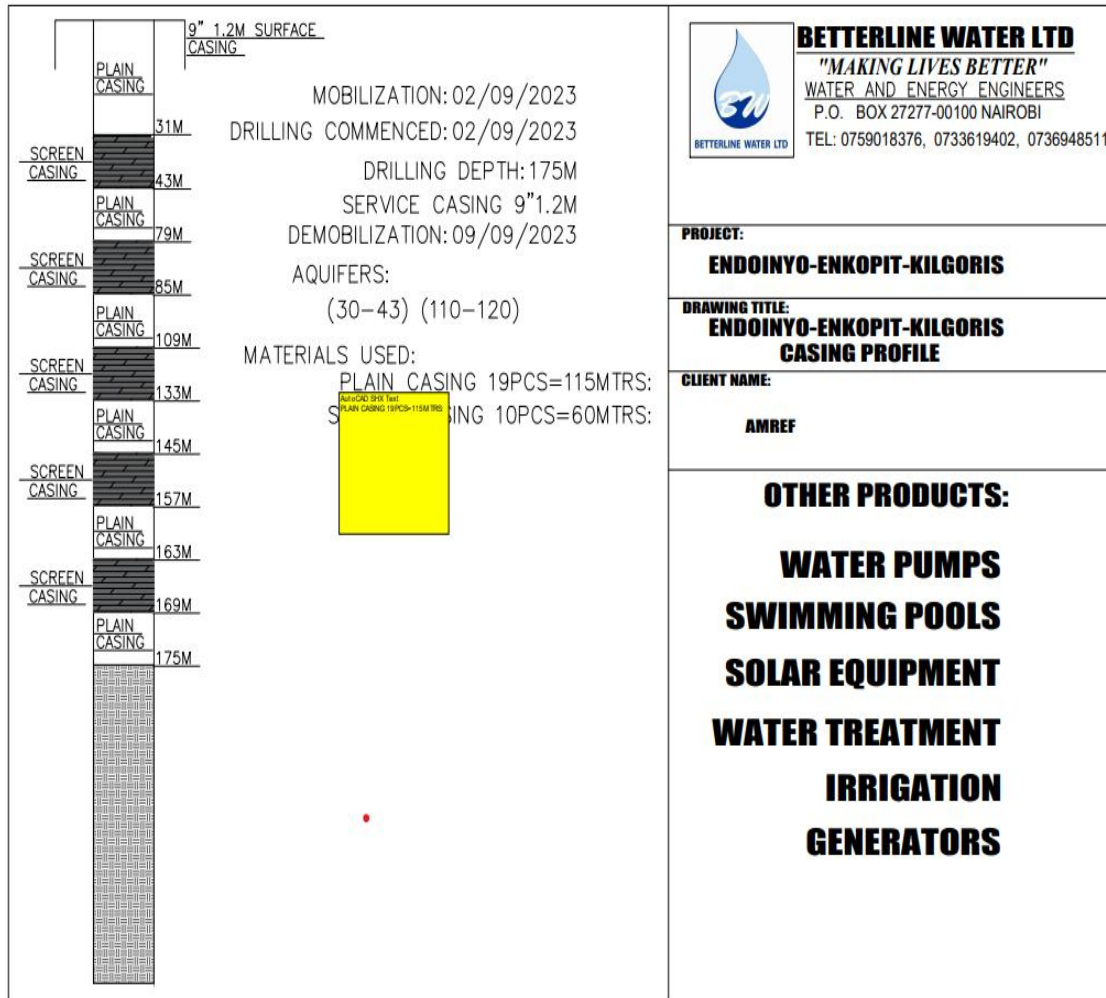
12. *Sketch of Borehole Construction:*

(Geologist's log on attached sheets) .

Remarks or additional information on Driller's log, or on sketch of

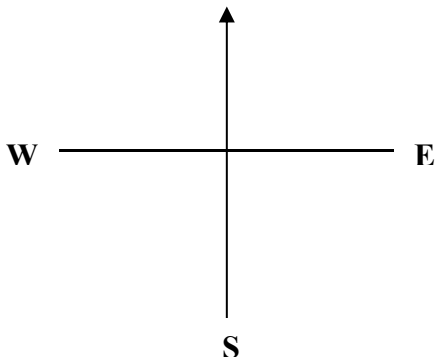
Borehole:

Formations encountered are basically Sediments. Borehole sketch not drawn to scale, it shows the casing design.....



13. *Location Sketch:* (To be sketched by the driller on the site, showing roads, tracks and prominent land marks, with road distances to the nearest town or trading centre and to water source).





**36M 683493**  
**UTM 9891072**

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For Official Use Only

Entered on Schedule..... (Yes/No) Water Sample Received.....(Yes/No)  
Drilling Samples Received..... (Yes/No) Chemical Analysis Received.....(Yes/No)  
Drilling Samples Filed..... (Yes/No) Geologist's Log Available.....(Yes/No)  
Location Plotted on Maps..... (Yes/No)

Hydro geological Report No.....of.....  
(Date)

Geophysical Curve No.....of.....  
(Date)

Borehole Data entered and checked by (Name).....Signature.....

**Permit details**

Permit Number ..... Authorised abstraction ..... m<sup>3</sup>/d

Authorised water use(s) .....

Pump intake depth ..... m bgl Maximum authorised abstraction rate ..... m<sup>3</sup>/hr

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All Borehole Completion Records duly completed should be sent to the appropriate WRMA Regional Office.