



## MINISTRY OF HEALTH

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GOVERNMENT CHEMIST'S DEPARTMENT  
P.O. Box 20753-00202, KNH  
NAIROBI

27<sup>th</sup> February, 2015.....xx80.....

Ref. No. ....

and date

### REPORT ON CHEMICAL ANALYSIS OF WATER

**Laboratory sample No.** W 364/14/15

**Date Received:** 17/2/2015

**Sender:** Spar Drilling Co. Ltd  
P.O Box 40590, NAIROBI

**Date sample taken**

**Source:** Borehole: Samuel King'ola (Matuu)

#### PHYSICAL TESTS

Colour:	-	(Hazen Units)	Turbidity:	Clear	(J.T.U.'s)
Deposit	None		Odour:	None	(T.O.N)
Taste	-				
pH:	7.2		Electrical Conductivity at 25 °C (microsiemens/cm)		
				507.0	

#### CHEMICAL TESTS

	Results mg/l(ppm)	Max guideline value mg/l(ppm)
Total Alkalinity as CaCO <sub>3</sub>	200.0	500.0
Phenolphthalein (CO <sub>3</sub> ) =	Nil	-
Methyl Orange (HCO <sub>3</sub> )-	200.0	-
Chloride (Cl)-	100.0	250.0
Sulphate(SO <sub>4</sub> )=	50.0	250.0
Nitrate (NO <sub>3</sub> )-	-	-
Nitrite (NO <sub>2</sub> )-	0.01	3.0
Fluoride (F)-	0.4	1.5
Total Anions		

P.T.O



	Results mg/l(ppm)	Max guideline value mg/l(ppm)
Sodium (Na)+ .. .. .	89.7	200.0
Potassium (K)+ .. .. .	6.8	-
Calcium (Ca)++ .. .. .	24.0	-
Magnesium (Mg)++ .. .. .	9.6	-
Iron (Total) (Fe)+++ .. .. .	Not detected	0.3
Manganese (Mn)++ .. .. .	Not detected	0.5
Ammonia-Free & Saline (N).. .. .	-	-
Ammonia-Albuminoid (N).. .. .	-	-
Total Cations .. .. .		
Carbonate Hardness as (CaCO <sub>3</sub> ) .. .. .	100.0	-
Non-Carbonate hardness as (CaCO <sub>3</sub> ) .. .. .	Nil	-
Total Hardness as (CaCO <sub>3</sub> ) .. .. .	100.0	500.0
Free Carbon Dioxide .. .. .	-	-
Silica (SiO <sub>2</sub> ) .. .. .	30.0	-
Oxygen absorbed. 4 hr. at 27°C(P.V.) .. .. .	0.5	1.0
Total Dissolved Solids, residue dried at 180°C .. .. .	355.0	1000.0
<b>Optional Parameters (done on request)</b>		
Lead (Pb <sup>2+</sup> ) .. .. .		
Copper (Cu <sup>2+</sup> ) .. .. .		
Zinc (Zn <sup>2+</sup> ) .. .. .		

**REMARKS:**

**Moderately soft and neutral water that is well mineralized.**

**On the basis of the tests done the water is chemically fit for human consumption.**

Date .. 27/2/ 2015

F. M. MAINA

For: Government Chemist