

添付資料 7. 3) 水質試験結果

Results of Water Quality Analysis in Mwanza and Nenodistricts

District			MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA
T/A			KANDULU	KANDULU	KANDULU	KANDULU	KANDULU	KANDULU	KANDULU	KANDULU	KANDULU	KANDULU	KANDULU	KANDULU
Community			NSAKAMBEW A	MOFFATI	NGADZIWE	KUNENEKUD E Trading	CHILALA	THAMBALA	HAU	SILEDI	AMOSI	CHIPONDENI	CHATHA	MLONGOLOL A
Item	WHO 1993	Malawai MoWD	Borehole	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	6.0-9.5	6.91	7.07	6.78	6.11	7.9	6.58	6.55	6.34	6.53	6.59	6.4	6.69
CONDUCTIVITY ($\mu\text{s}/\text{cm}$ at 25 °C)	-	-	555	974	882	282	325	323	379	355	162	136	332	792
TOTAL DISSOLVED SOLIDS,	1,000	2,000	312	529	483	169	192	196	224	218	110	93	200	439
CARBONATE (as CO_3^{2-}), mg/l	-	-	0	58	0	0	5	0	0	0	0	0	0	0
BICARBONATE (as HCO_3^-), mg/l	-	-	268	493	439	93	140	159	175	174	69	38	165	470
CHLORIDE (as Cl ⁻), mg/l	250	750	37.3	37.2	44	33.8	20	16.9	23.7	18.6	12	20.3	16.9	15
SULPHATE (as SO_4^{2-}), mg/l	500	800	6.5	25	4.5	2.1	5.5	2.1	14	5.4	2.6	2.1	2.7	2.2
NITRATE (as NO_3^-), mg/l	45	100	1.18	0.04	1.15	0.13	0.04	0.03	0.01	0.01	0.03	0.01	0.22	0.01
FLUORIDE (as F ⁻), mg/l	1.5	3	1.14	1.32	0.8	0.48	1.16	1.23	1.03	1.17	0.49	0.68	1.05	1.23
SODIUM (as Na ⁺), mg/l	200	500	20	36	40	20	13	14	16	17	9	9	12	28
POTASSIUM (as K ⁺), mg/l	-	-	6.5	6.4	5.4	2.5	2.3	2.3	2.5	2.6	2.7	2.4	1.1	2.9
CALCIUM (as Ca ⁺⁺), mg/l	200	250	64	128	128	20	30	26	29	28	16	9	38	100
MAGNESIUM (as Mg ⁺⁺), mg/l	150	200	13.6	21.4	19.4	9.7	13	17	17.5	15.6	5.8	3.8	9.7	25
TOTAL IRON (Fe ⁺⁺), mg/l	1.5	3	0.01	0.45	0.03	0.11	0.43	0.79	0.13	0.03	0.03	0.04	0.08	0.06
MANGANESE (Mn ⁺⁺), mg/l	0.5	1.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL HARDNESS (as CaCO ₃),	500	800	216	408	364	90	129	136	145	134	59	38	136	352
TOTAL ALKALINITY (as CaCO ₃),	-	-	220	404	360	76	123	130	143	143	57	31	135	385
TURBIDITY, NTU	5	25	<0.01	<0.01	4.8	<0.01	7.1	15.4	<0.01	4.6	<0.01	6.5	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	-	<0.01	<0.01	2.1	<0.01	3	12	<0.01	2.9	<0.01	4	<0.01	<0.01
COLOUR, TCU	15	50	<5.0	<5.0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	2	0.069	0.079	0.082	0.105	0.1	0.101	0.111	0.105	0.143	0.148	0.153	0.165
LEAD (Pb ⁺⁺), mg/l	0.05	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		50	0	0	0	0	0	0	0	0	800	0	0	0
BACTERIA TYPE LEVELS (FC/100 ml)		50	0	0	0	0	0	0	0	0	170	0	0	0

Results of Water Quality Analysis in Mwanza and Nenodistricts

District		MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA
T/A		KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,	KANDULU,
Community		SANJIKA PRIMARY	KATUNGA	LUPIYA	NJOLOMOLE	TULONKHON DO	MGANGO	ZIKALONGA	JIMU	WINGOLO	ZIYAYA	MANDOLO	MKWICHI	CHIWUNGUZI
Item	WHO 1993	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	6.08	6.34	8.38	7	6.5	6.43	6.17	6.39	6.31	6.48	6.53	6.13	8.16
CONDUCTIVITY ($\mu\text{s}/\text{cm}$ at 25 °C)	-	235	226	478	787	540	349	132	333	269	187	798	111	481
TOTAL DISSOLVED SOLIDS,	1,000	149	148	252	424	305	211	91	204	168	98	400	57	258
CARBONATE (as CO_3^{2-}), mg/l	-	0	0	27	0	0	0	0	0	0	0	0	0	28
BICARBONATE (as HCO_3^-), mg/l	-	94	104	168	400	232	170	34	163	99	90	398	52	163
CHLORIDE (as Cl^-), mg/l	250	20.3	13.5	20.3	37.2	44	18.6	18.6	17.8	28	10.1	37.2	5.8	27.1
SULPHATE (as SO_4^{2-}), mg/l	500	4	4	6.1	9.5	4.4	4.7	5.6	3.8	5.4	3.9	20	4.4	5.8
NITRATE (as NO_3^-), mg/l	45	0.15	0.04	0.01	0.14	<0.001	<0.001	0.02	0.03	0.03	0.04	0.74	0.02	0.03
FLUORIDE (as F^-), mg/l	1.5	1.19	1.01	1.25	0.81	1.07	1.23	0.62	1.22	1.22	0.75	1.21	0.67	1.21
SODIUM (as Na^+), mg/l	200	16	11	14	25	40	16	10	15	20	10	29	4.5	8
POTASSIUM (as K^+), mg/l	-	2.3	3.4	1.8	2	3.6	2.5	0.9	2.9	2.4	2.5	3	0.3	3.6
CALCIUM (as Ca^{++}), mg/l	200	17	19.2	48	106	44	37	7	30.4	18.4	16	85	9.5	58
MAGNESIUM (as Mg^{++}), mg/l	150	8.6	9.7	18.5	19.4	17.5	12	4.8	14.6	9.4	7.4	30	5.2	11.7
TOTAL IRON (Fe^{++}), mg/l	1.5	0.15	0.05	0.2	0.04	0.1	0.2	0.1	0.04	0.12	0.08	0.07	0.08	0.05
MANGANESE (Mn^{++}), mg/l	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL HARDNESS (as CaCO_3),	500	78	88	196	344	182	142	37	136	85	70	336	45	193
TOTAL ALKALINITY (as CaCO_3),	-	77	85	183	328	190	139	28	134	81	74	326	43	180
TURBIDITY, NTU	5	<0.01	<0.01	<0.01	5.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	<0.01	<0.01	<0.01	4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COLOUR, TCU	15	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	0.16	0.169	0.167	0.187	0.178	0.185	0.175	0.176	0.186	0.17	0.181	0.188	0.188
LEAD (Pb^{++}), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		0	0	0	0	0	0	0	7	0	0	0	0	0
BACTERIA TYPE LEVELS (FC/100 ml)		0	0	0	0	0	0	0	0	0	0	0	0	0

Results of Water Quality Analysis in Mwanza and Nenodistricts

District		MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA
T/A		KANDULU,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,
Community		RAUNDI	NTHACHE	KAGONAMWA KE	KAPHELAMA	LOPONGWE L.E.A.	EMVULO	NDILIRE	MTSAMIKA F.P. SCHOOL	THAWARE PRIMARY	KABANGO	MKWETE	MUWALE CLINIC	MPANDASONI
Item	WHO 1993	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	6.79	6.71	6.63	6.43	6.98	6.77	6.99	6.01	8.19	6.48	6.42	6.97	6.7
CONDUCTIVITY ($\mu\text{s}/\text{cm}$ at 25 °C)	-	634	581	419	357	644	328	301	86	272	383	342	384	680
TOTAL DISSOLVED SOLIDS,	1,000	319	319	238	210	330	176	166	68	167	226	207	198	340
CARBONATE (as CO_3^{2-}), mg/l	-	0	0	0	0	0	0	0	0	0	0	0	0	0
BICARBONATE (as HCO_3^-), mg/l	-	350	249	219	160	354	144	132	13	139	158	173	168	296
CHLORIDE (as Cl^-), mg/l	250	20.3	44	16.9	24	20.3	20	19.8	13.5	10.9	26	10.1	19.2	40.6
SULPHATE (as SO_4^{2-}), mg/l	500	4.5	18	5.2	11	3.9	12	12.1	6	3.8	17	19	19.2	17.3
NITRATE (as NO_3^-), mg/l	45	0.01	0.34	0.37	0.09	1.06	0.54	0.015	0.04	0.03	0.62	0.05	14.3	0.078
FLUORIDE (as F^-), mg/l	1.5	0.81	0.77	0.97	1.27	1.17	1.88	1.4	0.31	0.98	0.97	0.92	1.72	0.98
SODIUM (as Na^+), mg/l	200	17	14	14	17	15	12.1	10.1	7	8	22	8.9	9.7	21.7
POTASSIUM (as K^+), mg/l	-	3.4	2.5	1.2	2.5	2.6	0.1	0.1	1.1	2.8	1.7	1.7	0.3	0.6
CALCIUM (as Ca^{++}), mg/l	200	72	66.4	45	35	100	38	32.8	5	26	34	28	42	80.8
MAGNESIUM (as Mg^{++}), mg/l	150	27.2	19.4	18	11.7	11.7	9.4	11.2	2.3	14	13	19	12.3	18.5
TOTAL IRON (Fe^{++}), mg/l	1.5	0.04	0.05	0.12	0.08	0.07	0.13	0.04	0.16	0.12	0.08	0.65	0.071	0.163
MANGANESE (Mn^{++}), mg/l	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.001	<0.001	<0.001	<0.001	<0.001	0.001	21.7
TOTAL HARDNESS (as CaCO_3),	500	292	246	187	136	298	134	128	22	123	138	149	156	276
TOTAL ALKALINITY (as CaCO_3),	-	287	204	179	131	290	118	108	11	114	129	142	138	243
TURBIDITY, NTU	5	2.8	<0.01	4.8	<0.01	<0.01	0.6	0.4	0.4	4.2	2.4	<0.01	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	2	<0.01	3.5	<0.01	<0.01	<0.01	<0.01	<0.01	2	1	<0.01	<0.01	<0.01
COLOUR, TCU	15	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	0.183	0.172	0.183	0.181	0.179	0.105	0.031	0.17	0.181	0.179	0.167	0.116	0.004
LEAD (Pb^{++}), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		0	0	0	0	0	0	0	0	0	0	0	0	0
BACTERIA TYPE LEVELS (FC/100 ml)		0	0	0	0	0	0	0	0	0	0	0	0	0

Results of Water Quality Analysis in Mwanza and Nenodistricts

District		MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA
T/A		NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	NTHACHE,	STA GOVATI,	STA GOVATI,	STA GOVATI,	STA GOVATI,	STA GOVATI,
Community		CHIMULANG O	KADOLE F.P.SCHOOL	MALOWA SCHOOL	NGUTEYA	KAGULO I	KASAPHA	KABANGO CDSS	NDILIRE CLINIC	KAMKOMA	CHIMWALIRA	MINJALE	CHATAMBAL ALA	MSEMBEDZE RA
Item	WHO 1993	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	6.69	6.38	6.73	7.01	6.8	6.98	6.75	6.9	7.87	8.19	7.76	8.06	6.55
CONDUCTIVITY ($\mu\text{s}/\text{cm}$ at 25 °C)	-	423	226	382	337	465	396	552	307	368	347	357	227	348
TOTAL DISSOLVED SOLIDS,	1,000	245	144	210	190	274	194	283	165	210	191	213	147	210
CARBONATE (as CO_3^{2-}), mg/l	-	0	0	0	0	0	0	0	0	6	12	2	6	0
BICARBONATE (as HCO_3^-), mg/l	-	206	112	176	127	254	170	276	120	132	134	112	70	160
CHLORIDE (as Cl^-), mg/l	250	17	7.4	17.2	19	11.8	24	18	24	26	18.6	40.6	15.2	22
SULPHATE (as SO_4^{2-}), mg/l	500	19	11	12.2	24	10	20	26	11.8	20	8.8	11	14	6.3
NITRATE (as NO_3^-), mg/l	45	0.04	0.19	0.081	0.1	0.16	0.071	0.48	0.01	0.12	0.04	0.03	0.54	0.003
FLUORIDE (as F^-), mg/l	1.5	1.01	0.65	1.42	1.32	1.08	1.04	0.9	1.2	1.21	1.17	1.19	0.97	1.19
SODIUM (as Na^+), mg/l	200	15	6	10.3	9.1	10	11	10	12	21	12	30	12	18
POTASSIUM (as K^+), mg/l	-	4.9	2.5	0.4	0.3	0.6	0.5	0.4	0.2	2	2.1	2.7	1.8	3.1
CALCIUM (as Ca^{++}), mg/l	200	38.4	19	39.6	36.8	54	32	80	29.4	29	34	23	19	26
MAGNESIUM (as Mg^{++}), mg/l	150	18	12	14.6	9.6	21	22	12	13	12	7.1	10	7.2	17
TOTAL IRON (Fe^{++}), mg/l	1.5	0.71	0.1	0.317	0.03	0.06	0.003	0.131	0.049	0.08	0.06	0.07	0.01	0.08
MANGANESE (Mn^{++}), mg/l	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL HARDNESS (as CaCO_3),	500	171	97	160	132	465	188	249	127	122	134	99	77	135
TOTAL ALKALINITY (as CaCO_3),	-	169	92	146	104	274	142	226	98	188	130	95	67	131
TURBIDITY, NTU	5	<0.01	4.1	0.5	0.6	12	0.1	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	<0.01	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COLOUR, TCU	15	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	0.177	0.164	0.126	0.041	0.188	0.02	0.031	0.03	0.194	0.187	0.177	0.189	0.182
LEAD (Pb^{++}), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		0	0	0	0	0	0	0	0	0	0	0	4	0
BACTERIA TYPE LEVELS (FC/100 ml)		0	0	0	0	0	0	0	0	0	0	0	0	0

Results of Water Quality Analysis in Mwanza and Nenodistricts

District		MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	MWANZA	NENO	NENO	NENO	NENO	NENO	NENO	NENO
T/A		STA GOVATI,	STA GOVATI,	STA GOVATI,	STA GOVATI,	STA GOVATI,	STA GOVATI,	DAMBE,	DAMBE,	DAMBE,	DAMBE,	DAMBE,	DAMBE,	DAMBE,
Community		KAMPHIRIMO	KAYERA	JAMU	GOVATI (I)	TSEGULANI I	GOVATI II	CHIKALEMA I	CHINYANI	KHOMERA	KUMBWANI	CHIOMBA	CHAKHUMBI RA	CHAKHUMBI RA II
Item	WHO 1993	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	7.15	6.6	7.8	6.52	7.34	6.65	8.1	6.54	8.31	8.01	7.92	7.92	7.9
CONDUCTIVITY ($\mu\text{s/cm}$ at 25 °C)	-	122	361	245	445	125	458	346	266	121	161	115	148	132
TOTAL DISSOLVED SOLIDS,	1,000	93	210	151	254	98	258	185	165	84	103	80	94	96
CARBONATE (as CO_3^{2-}), mg/l	-	0	0	4	0	0	0	16	0	0	2	2	3	2
BICARBONATE (as HCO_3^-), mg/l	-	45	168	95	228	49	198	133	120	47	12	32	19	52
CHLORIDE (as Cl-), mg/l	250	10.1	15.2	11.8	18	8.5	29	15.2	18.6	10.1	8	10.1	25	8.4
SULPHATE (as SO_4^{2-}), mg/l	500	5.8	13	11	5.9	6.5	19	4.9	4.1	4.7	39	5.7	5.3	5.3
NITRATE (as NO_3^-), mg/l	45	0.01	0.04	0.03	0.03	0.01	0.22	0.01	0.03	0.4	0.06	0.19	0.1	0.02
FLUORIDE (as F-), mg/l	1.5	0.77	1.03	1.19	1.21	0.7	1.24	1.09	0.98	0.39	0.5	0.71	0.3	0.42
SODIUM (as Na^+), mg/l	200	18	12	8	14	5.6	22	13	12	10	7	6.9	18	6.8
POTASSIUM (as K^+), mg/l	-	1.8	3.1	2	1	3	4.1	0.6	1.9	1.5	1.5	2.4	1.7	1.2
CALCIUM (as Ca^{++}), mg/l	200	9	34	25	44	10	39	29	28.4	7.8	14	8	5.7	11
MAGNESIUM (as Mg^{++}), mg/l	150	4	18	10	23	1.94.8	18	16	8.2	3.9	4	4.3	2	4.7
TOTAL IRON (Fe^{++}), mg/l	1.5	0.03	0.15	0.04	0.04	0.039	0.09	0.1	0.06	0.03	0.04	0.04	0.03	0.03
MANGANESE (Mn^{++}), mg/l	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001
TOTAL HARDNESS (as CaCO_3),	500	39	159	104	204	45	171	138	105	36	51	38	22	47
TOTAL ALKALINITY (as CaCO_3),	-	37	138	85	187	40	162	136	98	39	13	30	21	46
TURBIDITY, NTU	5	4.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	4.1	<0.01	<0.01	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	3.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3	<0.01	<0.01	<0.01	<0.01
COLOUR, TCU	15	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	0.174	0.176	0.177	0.171	0.169	0.182	0.177	0.176	0.178	0.175	0.168	0.169	0.171
LEAD (Pb^{++}), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		0	0	0	0	0	0	4	0	0	0	8	0	0
BACTERIA TYPE LEVELS (FC/100 ml)		0	0	0	0	0	0	0	0	160	4	288	208	0

Results of Water Quality Analysis in Mwanza and Nenodistricts

District		NENO	NENO	NENO	NENO DISTRICT	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO
T/A		DAMBE,	DAMBE,	DAMBE,	MLAULI	MLAULI	MLAULI	MLAULI	MLAULI	MLAULI	MLAULI	MLAULI	MLAULI	MLAULI
Community		KAMOTO II	HAINDI	CHILIM' BONDO	KAMBALAME	ZIDALA	NSALAWATH A II	BUTAO	KAMTUWALE	NELSON	KAMOTO I	DAUDI	NSALAWATH A III	GONTHI
Item	WHO 1993	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	6.75	7.8	6.91	7.13	7.76	8.43	6.88	7.05	8.08	6.28	6.57	7.58	7.13
CONDUCTIVITY ($\mu\text{s/cm}$ at 25 °C)	-	172	155	90	834	331	1276	704	944	2347	239	929	1095	457
TOTAL DISSOLVED SOLIDS,	1,000	114	98	75	454	199	663	405	535	1213	154	482	591	261
CARBONATE (as CO_3^{2-}), mg/l	-	0	4	0	0	2	10	0	0	24	0	43	2	0
BICARBONATE (as HCO_3^-), mg/l	-	66	41	28	443	158	581	380	547	468	95	298	477	234
CHLORIDE (as Cl^-), mg/l	250	15	16	10.1	27.1	17	77.8	22	15.2	230	19	60.9	50	18.6
SULPHATE (as SO_4^{2-}), mg/l	500	3.4	4.2	3.7	6.8	6.5	8.8	9	5.4	290	10	12	59	6.8
NITRATE (as NO_3^-), mg/l	45	0.06	0.37	0.02	0.52	0.01	0.11	2.21	1.02	0.13	0.36	5.5	0.88	0.07
FLUORIDE (as F^-), mg/l	1.5	1.18	0.5	0.6	0.96	1.23	1.24	1.27	1.32	1.24	0.84	1.3	1.18	1.06
SODIUM (as Na^+), mg/l	200	12	13	7	17	12	69	18	19	200	16	20	48	14
POTASSIUM (as K^+), mg/l	-	3.4	1.4	1.1	3.2	2	6	3	4.8	19	1.3	7.3	1.4	2.5
CALCIUM (as Ca^{++}), mg/l	200	13.2	10	6.2	118	32	118	92	128	139	17	122	102	58
MAGNESIUM (as Mg^{++}), mg/l	150	5.7	4.5	2.6	26	14	49	23.1	34	48	9	19	47	14.1
TOTAL IRON (Fe^{++}), mg/l	1.5	0.05	0.05	0.2	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.05	0.02	0.01
MANGANESE (Mn^{++}), mg/l	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL HARDNESS (as CaCO_3),	500	56	44	27	401	137	496	325	459	544	79	383	448	203
TOTAL ALKALINITY (as CaCO_3),	-	54	40	23	363	133	493	311	448	424	78	316	394	192
TURBIDITY, NTU	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COLOUR, TCU	15	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	0.17	0.19	0.17	0.175	0.188	0.189	0.2	0.184	0.191	0.205	0.199	0.203	0.218
LEAD (Pb^{++}), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		0	12	0	0	0	0	0	0	0	11	0	0	0
BACTERIA TYPE LEVELS (FC/100 ml)		0	40	0	0	0	0	0	0	0	140	0	0	0

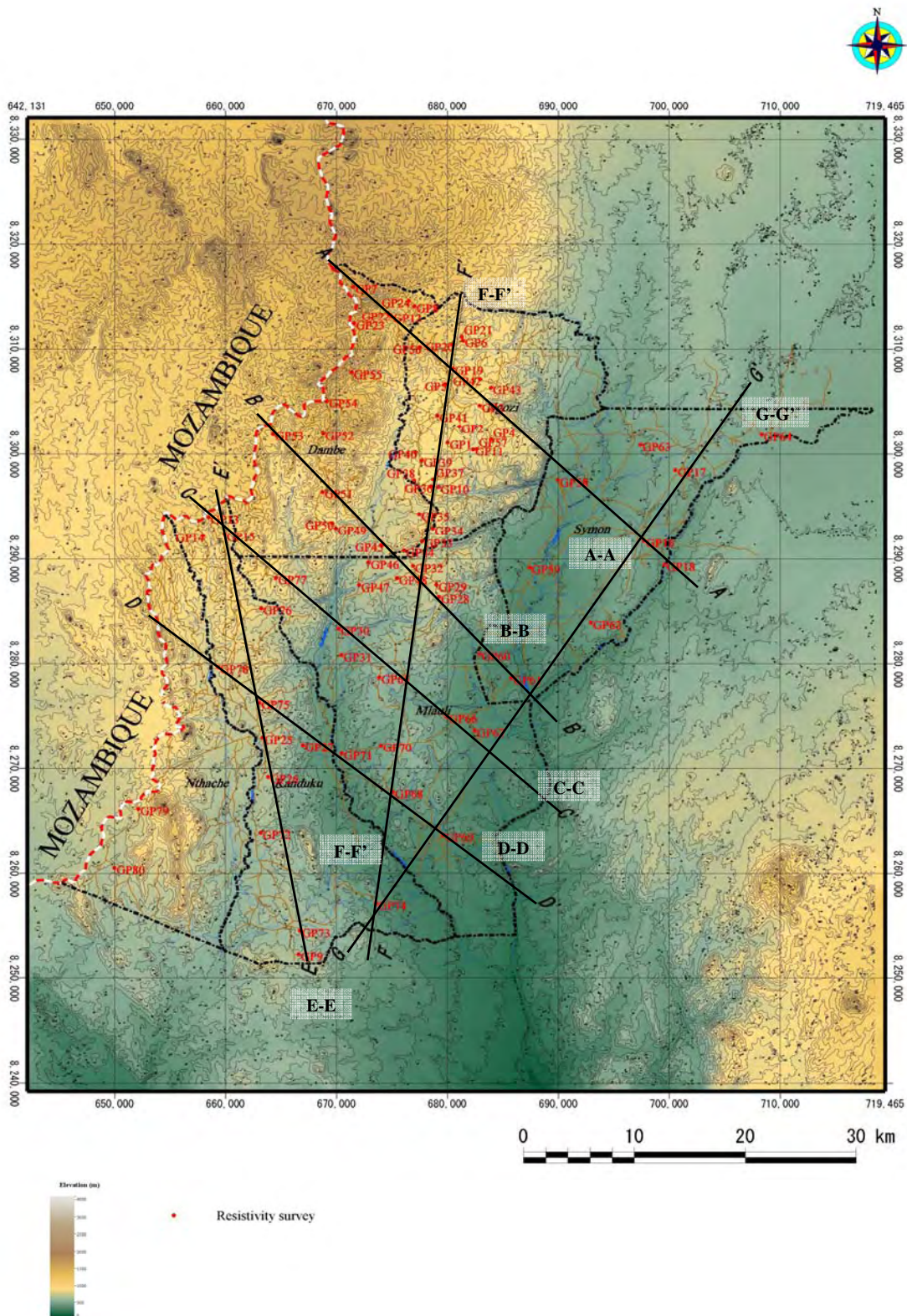
Results of Water Quality Analysis in Mwanza and Nenodistricts

District		NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO
T/A		MLAULI	MLAULI	MLAULI	MLAULI	SYMON,	SYMON,	SYMON,	SYMON,	SYMON,	SYMON,	SYMON,	SYMON,	SYMON,
Community		PA LEVEN	CHIMBAMILA PRIMARY	JANA	NSALAWATH AI	KACHINGWE	PAJO	NDELEMA	KANDOJE CLINIC	NGWENYAMA I	NKUNDIKA	NAMINJALE CLINIC	LISUNGWI CLINIC	NGWENYAMA II
Item	WHO 1993	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	6.39	8.47	7.12	8.05	8.47	8.35	8.6	8.06	8.56	8.42	8.01	8.25	8.21
CONDUCTIVITY ($\mu\text{s/cm}$ at 25 °C)	-	421	589	2742	2516	455	1621	1336	630	1183	1088	1176	4249	3304
TOTAL DISSOLVED SOLIDS,	1,000	254	332	1380	1268	255	820	693	343	616	554	626	2098	1516
CARBONATE (as CO_3^{2-}), mg/l	-	0	7	125	88	12	20	12	19	20	36	12	149	251
BICARBONATE (as HCO_3^-), mg/l	-	183	240	1030	786	98	490	539	264	429	381	592	1044	998
CHLORIDE (as Cl ⁻), mg/l	250	28.8	40	137	200	16.9	190	109	27.1	98	77.8	49	332	155
SULPHATE (as SO_4^{2-}), mg/l	500	18	12	57	98	75	20	5.4	9.7	24	17	5.4	260	20
NITRATE (as NO_3^-), mg/l	45	0.01	0.27	0.06	1.55	<0.001	0.62	0.02	0.78	0.13	1.54	0.14	0.09	0.01
FLUORIDE (as F ⁻), mg/l	1.5	1.27	1.25	1.34	1.35	1.19	1.29	1.25	1.16	1.3	1.17	1.21	1.43	1.2
SODIUM (as Na ⁺), mg/l	200	20	36	230	200	12	152	86	16	79	62	36	376	107
POTASSIUM (as K ⁺), mg/l	-	3.2	3	6.3	2.1	6.6	6	7.4	5	6	4.2	6	6.1	4.9
CALCIUM (as Ca ⁺⁺), mg/l	200	32	37	243	240	37	108	128	72	106	98	168	374	336
MAGNESIUM (as Mg ⁺⁺), mg/l	150	18	10.1	36.4	32.3	17	42	38	16.8	31	33	21.2	48.7	105
TOTAL IRON (Fe ⁺⁺), mg/l	1.5	0.08	0.03	0.02	0.01	0.07	0.02	0.01	0.18	0.02	0.06	0.02	0.05	0.05
MANGANESE (Mn ⁺⁺), mg/l	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL HARDNESS (as CaCO_3),	500	154	214	756	682	162	442	476	266	392	380	506	1133	1278
TOTAL ALKALINITY (as CaCO_3),	-	150	208	1052	791	100	435	462	248	385	372	505	1104	1236
TURBIDITY, NTU	5	<0.01	<0.01	5.2	3.3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	<0.01	<0.01	38	1.9	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
COLOUR, TCU	15	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	0.182	0.204	0.21	0.198	0.197	0.214	0.198	0.205	0.176	0.178	0.176	0.163	0.218
LEAD (Pb ⁺⁺), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		0	0	0	0	0	0	0	0	0	0	0	0	0
BACTERIA TYPE LEVELS (FC/100 ml)		0	0	0	0	0	0	0	0	0	0	0	0	0

Results of Water Quality Analysis in Mwanza and Nenodistricts

District		NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO	NENO
T/A		SYMON,	SYMON,	SYMON,	SYMON	SYMON,	SYMON,	CHECHUCHE KU,	CHECHUCHE KU,	CHECHUCHE KU,	CHECHUCHE KU,
Community		MAPUNDI II	MBEMBA	CHIKAPA	NGAIYAYE	ZALEWA	MANYENJE	HIWA II	TIYESE	SANJILE PRIMARY	CHITANI
Item	WHO 1993	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE	BOREHOLE
pH Value	6.5-8.5	7.98	8.15	8.08	7.9	6.7	7.7	7.69	7.98	7.77	7.62
CONDUCTIVITY ($\mu\text{s/cm}$ at 25 °C)	-	1026	2685	836	2510	1032	274	562	281	400	246
TOTAL DISSOLVED SOLIDS,	1,000	566	1302	420	1190	549	135	322	172	234	157
CARBONATE (as CO_3^{2-} , mg/l)	-	15	78	39	56	0	4	8	8	6	2
BICARBONATE (as HCO_3^- , mg/l)	-	53	700	322	729	480	69	234	106	189	103
CHLORIDE (as Cl ⁻), mg/l	250	24	342	49	119	50	9	38.9	13.5	18.6	15.2
SULPHATE (as SO_4^{2-} , mg/l)	500	300	18	11	263	33	57	55	8.4	6.4	6.8
NITRATE (as NO_3^- , mg/l)	45	0.07	0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.08	0.01
FLUORIDE (as F ⁻), mg/l	1.5	1.32	1.24	0.8	0.8	1.71	<0.01	1.06	1.06	1.22	0.92
SODIUM (as Na ⁺), mg/l	200	18	220	37	101	43	6.7	29	44	14	12
POTASSIUM (as K ⁺), mg/l	-	7.1	5.1	1.5	10	2.1	2.6	6.9	4.9	4.9	2.3
CALCIUM (as Ca ⁺⁺), mg/l	200	76	172	110	181	144	21	50	35	35	20
MAGNESIUM (as Mg ⁺⁺), mg/l	150	21.2	73	10	109	16	13	19.7	10.3	18	11
TOTAL IRON (Fe ⁺⁺), mg/l	1.5	0.12	0.03	<0.01	<0.001	0.018	3.1	0.09	0.39	4.01	0.05
MANGANESE (Mn ⁺⁺), mg/l	0.5	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.011	0.371	<0.001
TOTAL HARDNESS (as CaCO ₃),	500	383	729	316	900	425	112	206	105	168	95
TOTAL ALKALINITY (as CaCO ₃),	-	68	704	307	691	393	63	205	100	165	88
TURBIDITY, NTU	5	<0.01	<0.01	0.01	0.52	0.01	1	<0.01	23.9	<0.01	<0.01
SUSPENDED SOLIDS, mg/l	-	<0.01	<0.01	<0.01	<0.01	<0.10	0.4	<0.01	19	<0.01	<0.01
COLOUR, TCU	15	<5	<5	<5	<5	<5	<5	<5	15	<5	<5
ODOUR	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
TASTE	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant	Not unpleasant
COPPER (Cu), mg/l	1.5	0.171	0.12	0.011	0.016	0.082	0.112	0.012	0.049	0.158	0.146
LEAD (Pb ⁺⁺), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ARSENIC (As), mg/l	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BACTERIA TYPE ENUMERATED (FC/100 ml)		0	0	0	0	0	0	0	0	0	0
BACTERIA TYPE LEVELS (FC/100 ml)		0	0	0	0	0	0	0	0	0	0

添付資料 7. 4) - 1 物理探査結果



電気探査測線位置図



写真2-3-2 ボアホールB (Neno県Butawo村にて)

②ボアホールB (GP28、Neno県Butawo村)

本ボアホールは、MwanzaからNenoに至る幹線道路T397号線の東側に位置し、地形的には北から張り出した緩い尾根の鞍部にあたる。村民からの情報では、ボアホールの深度は約24m、一年中水の無いドライ井戸である。

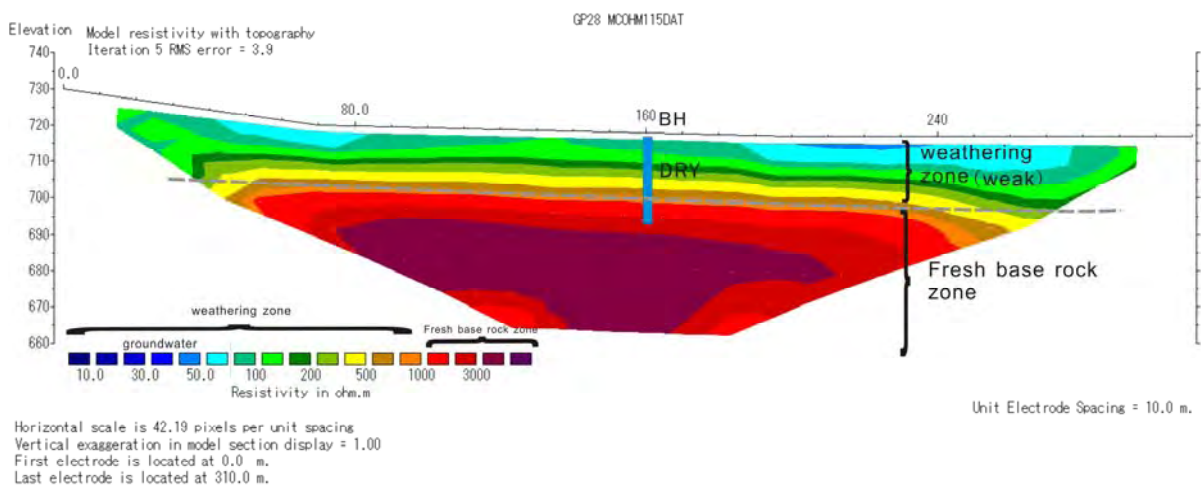


図2-3-4 比抵抗断面 (GP28)



写真2-3-3 ボアホールC (Neno県Matemba村にて)

③ボアホールC (GP32、Neno県Matemba村)

本ボアホールは、MwanzaからNenoに至る幹線道路T397号線から西側へ40mの位置に設置されており、周辺一帯は南南東方向へ向かって低くなる緩やかに傾斜地である。村民からの情報では、ボアホールの深度は浅く、乾季には枯れるとそうである。

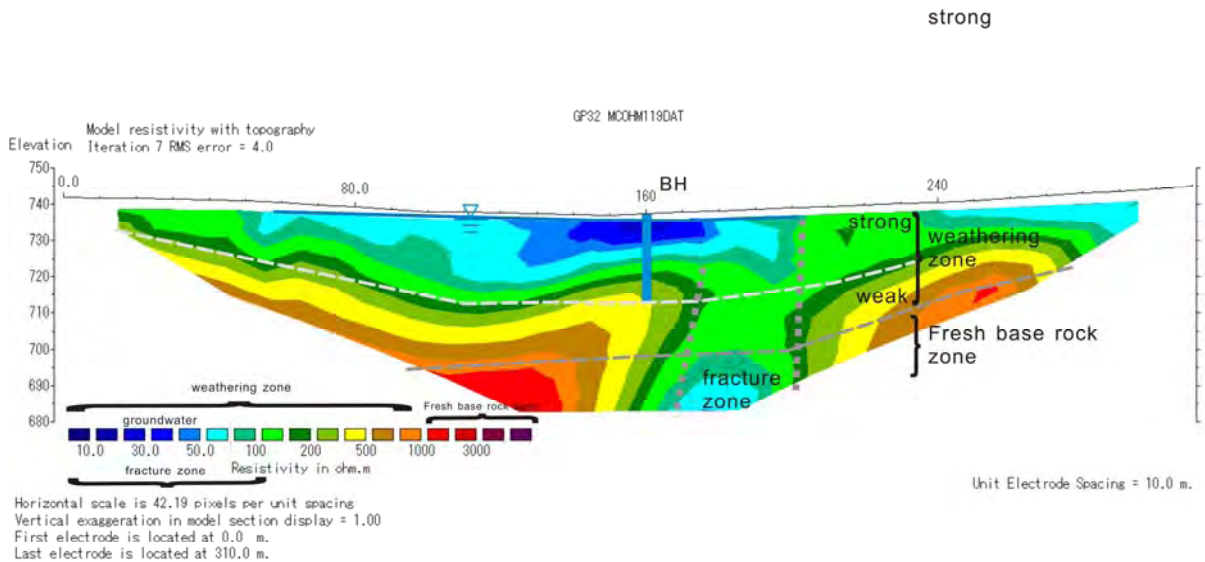


図2-3-5 比抵抗断面 (GP32)



写真2-3-4 ボアホールD (Neno県Kalnde村にて)

④ボアホールD (GP48、Neno県、Kalnde村)

本ボアホールは、MwanzaからNenoへ向かう途中、幹線道路T397号線から西方へ1.6km入ったKalinde村に位置する。西に向かって低くなる緩やかな傾斜地の小さな沢の脇に設置されており、井戸仕様の詳細は不明である。

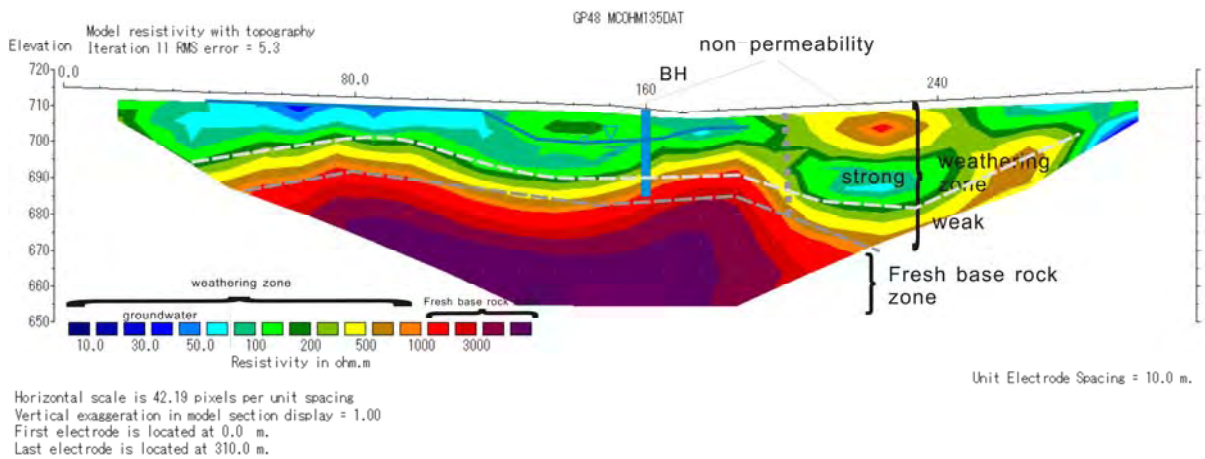


図2-3-6 比抵抗断面 (GP48)



写真2-3-5 ボアホールE (Neno県Samson村にて)

⑤ボアホールE (GP56、Neno県Samson村)

本ボアホールは、Neno県の中心部から北部へ至る幹線道路T396号線の脇に設置され、口元標高は1,225mである。道路の両側の北側およびは南側は深い沢となっており、さらにボアホールの背後には小高い山があり、当地は急傾斜地の斜面に位置する。ボアホールを通過するリニアメントは確認されていないが、北東-南西系および北西-南東系のリニアメントが周辺にみられる。

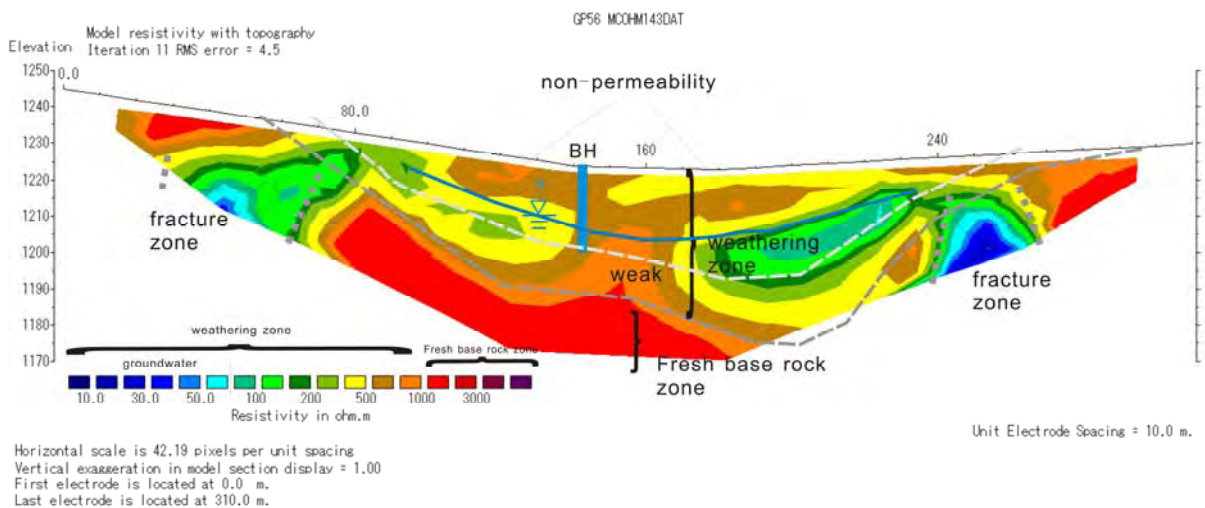


図2-3-7 比抵抗断面 (GP56)



写真2-3-6 ボアホールF (eno県Liyenda村にて)

⑥ボアホールF (GP61、Neno県Liyenda村)

本ボアホールは、MwanzaからBrantiya方面に至る幹線道路M1号線の30m横に設置されている。井戸周辺は平坦な低地であり、東側2kmにはShire川が流れ、道路と平行に延びるリニアメントが確認されている。

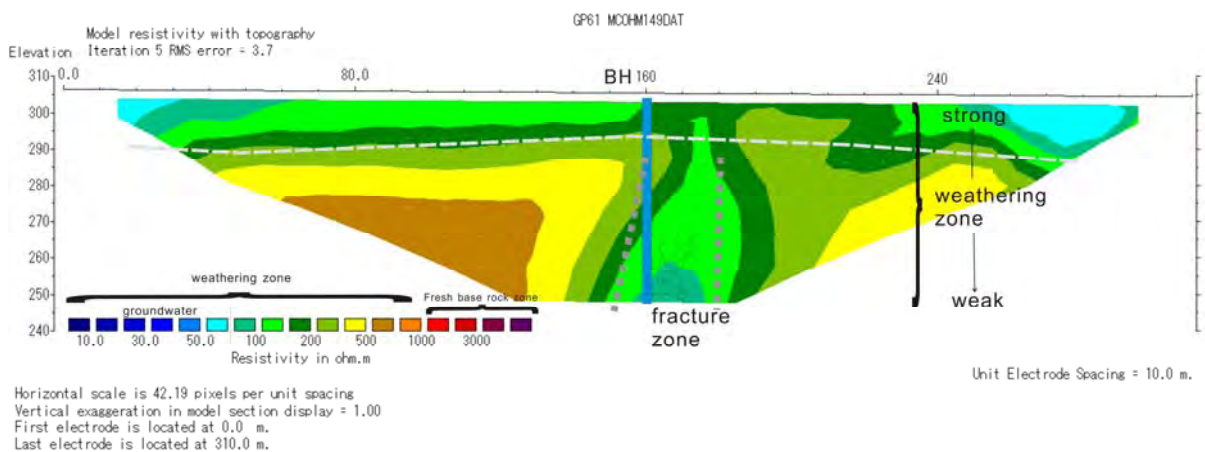


図2-3-8 比抵抗断面 (GP61)



写真2-3-7 ボアホールG (Mwanza県Rabisoni村にて)

⑦ボアホールG (GP78、Mwanza県Rabisoni村)

本ボアホールは、Mwanza中心部から北方8km程度、Mwanza川の左岸にあたる緩傾斜地に設置されている。Mwanza川までの距離は500mほどであり、周辺では主に東西系のリニアメントが多数確認されている。

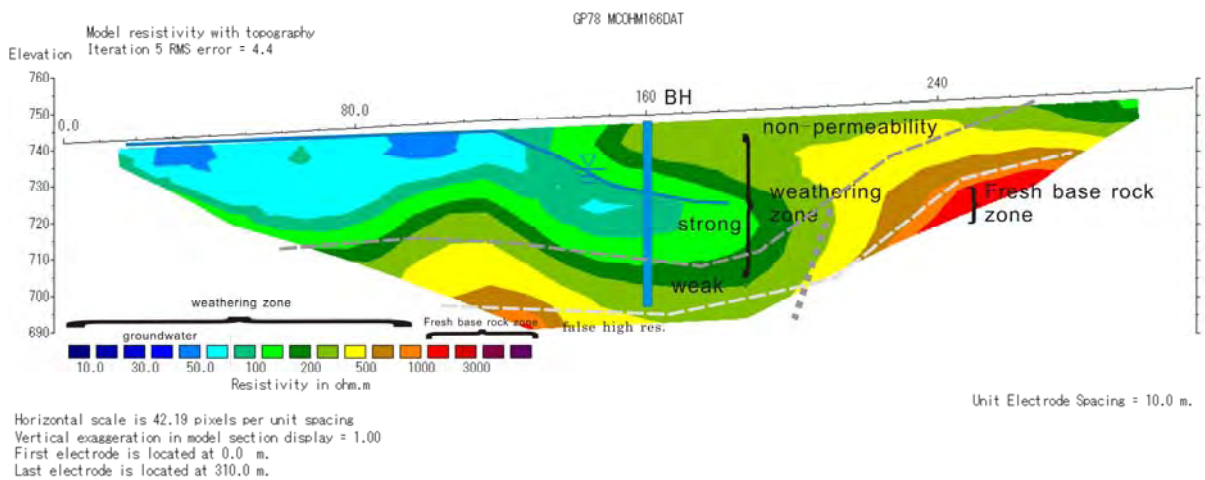


図2-3-9 比抵抗断面 (GP78)