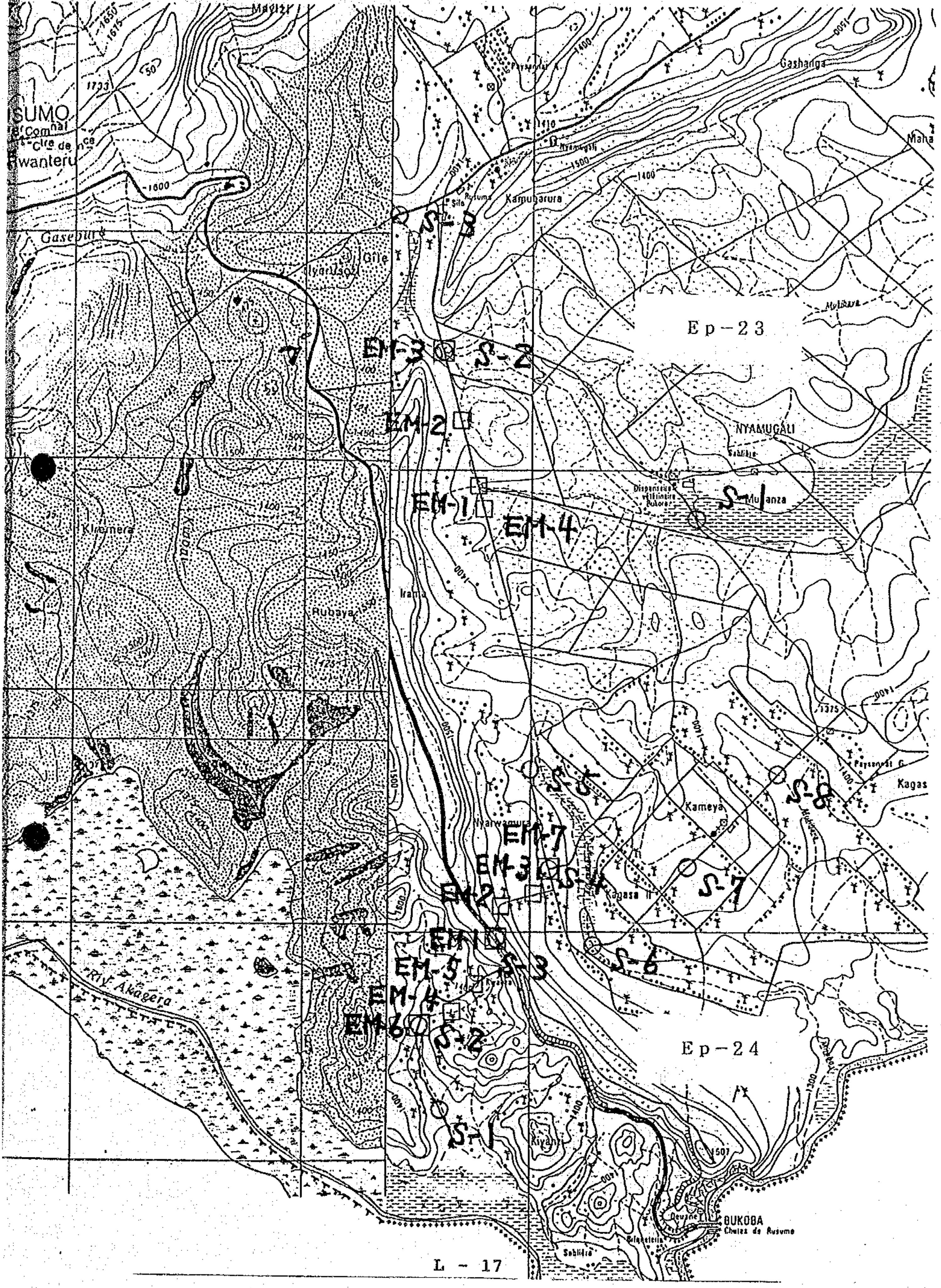
Ep-23
Ep-24
NYAMUGALI
Kamubarura
Gashanga
Mulanza
Kameya
Kagasa II
Nyarwagura
Irama
Rubaya
Kiremera
Gasebui
Gite
Kiyanzi
BUKOBA
Chutes de Rusumo
Riv. Akagera
EM-1
EM-2
EM-3
EM-4
EM-5
EM-6
EM-7
S-1
S-2
S-3
S-5
S-6
S-7
S-8
S-4

M : DATA SHEETS OF GEO-ELECTRIC PROSPECTING (SCHLUMBERGER METHOD)

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 14 / Oct. / 1989

TEST No Ep- 1 S- 1 LINE DIRECTION N65°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρa (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρa (Ω-m)	
1.5	0.5	985	10	98.42	6.283	618		50	8	24.6	20	1.233	478.3	590	
2.5		403	〃	40.33	18.85	760		50	2	6.04	〃	0.301	1960.4	590	
3.2		267	〃	26.73	31.39	839		65	8	34.2	49.9	0.684	817.0	559	
4		177	〃	17.74	49.48	878		80		22.8	50	0.456	1244.1	567	
5		112	〃	11.22	77.75	872		100		16.8	49.1	0.344	1950.9	671	
6.5		71.5	〃	7.149	132.0	944		130		21.6	100	0.216	3305.7	714	
8		47.1	〃	4.713	200.3	944		160		8.31	50	0.166	5014.0	832	
10		29.5	〃	2.950	313.4	925		160	32	34.4	〃	0.688	1206.4	830	
10	2	143	〃	14.30	75.40	1078		200		82.8	169	0.488	1913.2	934	
13		69.9	〃	6.986	129.6	905		200	8	20.2	〃	0.119	7841.4	933	
13	0.5	29.2	19.4	1.501	530.1	815		250	32				3017.7		
16	2	76.9	20	3.842	197.9	760		320					4976.3		
20		42.8	〃	2.139	311.0	665		400					7803.7		
25		26.9	〃	1.347	487.7	657		500					12222.		
32		17.0	〃	0.852	801.1	683		650					20689.		
40		10.5	〃	0.527	1253.5	661		800					31366.		
40	8	44.0	〃	2.199	301.6	663									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 13 / Oct. / 1989

TEST No. Ep- 1 S- 2 LINE DIRECTION N25°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	14.8	10.0	1.482	6.283	9.31		50	8	8.15	100	0.081	478.3	38.7	
2.5		8.53	20.0	0.426	18.85	8.03		50	2	4.01	200	0.020	1960.4	39.2	
3.2		5.27	〃	0.262	31.39	8.22		65	8	12.7	〃	0.063	817.0	51.5	
4		9.01	50.0	0.180	49.48	8.91		80		5.13	100	0.051	1244.1	63.5	
5		6.20	〃	0.123	77.75	9.56		100		8.51	200	0.042	1950.9	81.9	
6.5		7.66	96.8	0.079	132.0	10.4		130		6.79	〃	0.033	3305.7	109	
8		5.67	100	0.056	200.3	11.2		160		4.66	173	0.026	5014.0	130	
10		3.91	〃	0.039	313.4	12.2		160	32	19.3	〃	0.111	1206.4	134	
10	2	16.3	〃	0.163	75.40	12.3		200		16.2	199	0.081	1913.2	155	
13		10.5	〃	0.104	129.6	13.5		200	8	3.83	〃	0.019	7841.4	149	
13	0.5	4.34	170	0.025	530.1	13.3		250	32				3017.7		
16	2	7.53	100	0.075	197.9	14.8		320					4976.3		
20		5.50	〃	0.054	311.0	16.8		400					7803.7		
25		4.17	〃	0.041	487.7	20.0		500					12222.		
32		6.25	200	0.031	801.1	24.8		650					20689.		
40		5.00	〃	0.025	1253.5	31.3		800					31366.		
40	8	10.1	100	0.101	301.6	30.5									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 13 / Oct. / 1989

TEST No. Ep- 1 S- 3 LINE DIRECTION N40°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	498.0	10.0	49.77	6.283	313		50	8	12.1	20.0	0.608	478.3	290	
2.5		227.0	〃	22.71	18.85	428		50	2	2.04	50.0	0.091	1960.4	178	
3.2		160.0	〃	15.99	31.39	502		65	8	19.0	〃	0.379	817.0	310	
4		113.0	〃	11.31	49.48	560		80		14.9	〃	0.298	1244.1	371	
5		73.4	〃	7.334	77.75	570		100		10.3	〃	0.206	1950.9	402	
6.5		39.2	〃	3.922	132.0	518		130		16.8	100	0.168	3305.7	555	
8		25.6	〃	2.557	200.3	512		160		11.5	83.0	0.138	5014.0	692	
10		15.3	〃	1.530	313.4	480		160	32	47.7	82.8	0.577	1206.4	696	
10	2	97.6	〃	9.749	75.40	735		200		44.8	100	0.448	1913.2	857	
13		40.5	〃	4.048	129.6	525		200	8	20.1	186	0.107	7841.4	839	
13	0.5	7.05	〃	0.704	530.1	373		250	32				3017.7		
16	2	16.7	〃	1.670	197.9	331		320					4976.3		
20		8.81	〃	0.879	311.0	273		400					7803.7		
25		12.7	20.0	0.636	487.7	310		500					12222.		
32		9.85	〃	0.491	801.1	393		650					20689.		
40		4.29	〃	0.214	1253.5	268		800					31366.		
40	8	30.8	〃	1.539	301.6	464									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 14/Oct./1989

TEST No Ep- 1 S- 4 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	347	10.0	34.64	6.283	218		50	8	13.8	100	0.138	478.3	66.0	
2.5		101	〃	10.10	18.85	190		50	2	3.32	〃	0.033	1960.4	64.7	
3.2		50.9	〃	5.084	31.39	160		65	8	9.52	〃	0.095	817.0	77.6	
4		25.3	〃	2.534	49.48	125		80		7.40	〃	0.073	1244.1	90.8	
5		12.9	〃	1.294	77.75	101		100		5.50	〃	0.055	1950.9	107	
6.5		11.3	〃	0.566	132.0	74.7		130		3.89	〃	0.038	3305.7	126	
8		6.04	20.0	0.301	200.3	60.3		160		6.08	190	0.031	5014.0	155	
10		8.00	50.0	0.159	313.4	49.8		160	32	27.5	〃	0.144	1206.4	174	
10	2	13.8	20.0	0.690	75.40	52.0		200		21.7	199	0.108	1913.2	207	
13		6.58	〃	0.328	129.6	42.5		200	8	4.79	〃	0.024	7841.4	188	
13	0.5	8.12	100	0.081	530.1	42.9		250	32				3017.7		
16	2	20.6	〃	0.205	197.9	40.6		320					4976.3		
20		13.7	〃	0.137	311.0	42.6		400					7803.7		
25		9.20	〃	0.092	487.7	44.9		500					12222.		
32		6.32	〃	0.063	801.1	50.5		650					20689.		
40		4.61	〃	0.046	1253.5	57.7		800					31366.		
40	8	19.4	〃	0.194	301.6	58.5									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 14 / Oct. / 1989

TEST No Ep- 2 S- 1 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5		5133	10.0	512.7	6.283	3221		50	8	70.4	20.0	3.519	478.3	1683	
2.5		2201	〃	219.9	18.85	4145		50	2	17.0	〃	0.850	1960.4	1666	
3.2		1382	〃	138.0	31.39	4332		65		123	50.0	2.464	817.0	2013	
4	0.5	904	〃	90.35	49.48	4471		80		98.6	〃	1.971	1244.1	2452	
5		527	〃	52.68	77.75	4096		100	8	24.2	20.0	1.211	1950.9	2363	
6.5		283	〃	28.33	132.0	3740		130		35.2	47.2	0.745	3305.7	2463	
8		178	〃	17.79	200.3	3563		160		21.8	50.0	0.437	5014.0	2191	
10		104	〃	10.45	313.4	3275		160	32	208	81.7	2.544	1206.4	3069	
10	2	479	〃	47.86	75.40	3609		200		137	82.0	1.680	1913.2	3214	
13		256	〃	25.64	129.6	3323		200	8	23.8	81.7	0.291	7841.4	2282	
13	0.5	96.0	16.8	5.696	530.1	3020		250					3017.7		
16		145	10.0	14.51	197.9	2872		320					4976.3		
20		152	20.0	7.634	311.0	2374		400					7803.7		
25	2	83.8	〃	4.185	487.7	2041		500	32				12222.		
32		46.9	〃	2.343	801.1	1877		650					20689.		
40		27.4	〃	1.372	1253.5	1720		800					31366.		
40	8	116	〃	5.805	301.6	1751									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 14 Oct. 11989

TEST No Ep-2 S-2 LINE DIRECTION N10°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)
1.5	0.5	2240	10.0	223.7	6.283	1406		50	8	70.9	100	0.709	478.3	339
2.5		909	〃	90.81	18.85	1712		50	2	26.7	187	0.142	1960.4	278
3.2		536	〃	53.58	31.39	1682		65	8	45.3	100	0.453	817.0	370
4		337	〃	33.65	49.48	1665		80		26.6	〃	0.266	1244.1	331
5		208	〃	20.81	77.75	1618		100		8.14	50.0	0.162	1950.9	316
6.5		126	〃	12.60	132.0	1663		130		2.09	20.0	0.104	3305.7	344
8		80.7	〃	8.059	200.3	1614		160		1.32	〃	0.065	5014.0	326
10		92.3	20.0	4.611	313.4	1445		160	32	6.70	〃	0.334	1206.4	403
10	2	397	〃	19.82	75.40	1494		200		4.29	〃	0.214	1913.2	409
13		196	〃	9.813	129.6	1272		200	8	0.86	〃	0.042	7841.4	329
13	0.5	115	50.0	2.310	530.1	1225		250	32				3017.7	
16	2	238	〃	4.766	197.9	943		320					4976.3	
20		43.1	20.0	2.153	311.0	670		400					7803.7	
25		17.3	〃	0.868	487.7	423		500					12222.	
32		16.3	50.0	0.325	801.1	260		650					20689.	
40		9.40	〃	0.187	1253.5	234		800					31366.	
40	8	95.8	100	0.957	301.6	288								

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 16 / Oct. / 1989

TEST No Ep-3 S-1 LINE DIRECTION N70°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	308	10.0	30.83	6.283	194		50	8	22.2	100	0.222	478.3	106	
2.5		92.2	〃	9.216	18.85	174		50	2	5.79	〃	0.057	1960.4	112	
3.2		50.1	〃	5.011	31.39	157		65	8	29.1	171	0.170	817.0	139	
4		26.5	〃	2.651	49.48	131		80		12.9	100	0.129	1244.1	161	
5		27.9	20.0	1.394	77.75	108		100		18.7	199	0.093	1950.9	181	
6.5		32.8	50.0	0.655	132.0	86.5		130		13.5	〃	0.068	3305.7	225	
8		36.5	100	0.364	200.3	72.9		160		9.98	〃	0.049	5014.0	246	
10		18.1	〃	0.181	313.4	56.7		160	32	42.9	〃	0.215	1206.4	259	
10	2	131	〃	0.658	75.40	49.6		200		30.7	〃	0.153	1913.2	293	
13		55.3	167	0.329	129.6	42.6		200	8	6.92	〃	0.034	7841.4	267	
13	0.5	15.7	168	0.093	530.1	49.3		250	32				3017.7		
16	2	22.3	100	0.223	197.9	44.1		320					4976.3		
20		17.0	〃	0.170	311.0	52.9		400					7803.7		
25		13.9	〃	0.139	487.7	67.8		500					12222.		
32		18.3	176	0.104	801.1	83.3		650					20689.		
40		6.87	100	0.068	1253.5	85.2		800					31366.		
40	8	27.4	〃	0.274	301.6	82.6									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 16 / Oct. / 1989

TEST No Ep-3 S-2 LINE DIRECTION E-W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)
1.5	0.5	136	10.0	13.61	6.283	85.5		50	8	47.3	200	0.236	478.3	113
2.5		56.2	〃	5.616	18.85	106		50	2	10.8	〃	0.054	1960.4	106
3.2		32.7	〃	3.270	31.39	103		65	8	34.0	〃	0.170	817.0	139
4		39.0	20.0	1.948	49.48	96.4		80		27.0	〃	0.135	1244.1	168
5		20.3	〃	1.015	77.75	78.9		100		20.7	〃	0.103	1950.9	201
6.5		26.1	50.0	0.522	132.0	68.9		130		15.2	〃	0.076	3305.7	251
8		13.9	〃	0.277	200.3	55.5		160		11.8	〃	0.059	5014.0	296
10		16.3	100	0.163	313.4	51.1		160	32	45.6	〃	0.228	1206.4	275
10	2	50.0	〃	0.500	75.40	37.7		200		35.3	〃	0.177	1913.2	339
13		60.3	200	0.301	129.6	39.0		200	8	9.22	199	0.046	7841.4	361
13	0.5	20.1	〃	0.100	530.1	53.1		250	32				3017.7	
16	2	45.8	197	0.232	197.9	45.9		320					4976.3	
20		17.6	100	0.176	311.0	54.7		400					7803.7	
25		26.2	200	0.131	487.7	63.9		500					12222.	
32		19.3	〃	0.096	801.1	76.9		650					20689.	
40		14.3	〃	0.071	1253.5	89.0		800					31366.	
40	8	63.1	〃	0.315	301.6	95.0								

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 16/Oct./1989

TEST No Ep-3 S-3 LINE DIRECTION N75°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5		236	10.0	23.57	6.283	148		50	8	82.7	100	0.826	478.3	156	
2.5		94.2	〃	9.407	18.85	177		50	2	7.30	〃	0.072	1960.4	141	
3.2		62.8	〃	6.270	31.39	197		65		23.4	〃	0.234	817.0	191	
4	0.5	30.4	〃	3.035	49.48	150		80		17.7	〃	0.177	1244.1	220	
5		36.2	20.0	1.808	77.75	141		100	8	13.1	〃	0.130	1950.9	254	
6.5		19.9	〃	0.995	132.0	131		130		19.7	200	0.098	3305.7	324	
8		12.2	〃	0.611	200.3	122		160		15.0	〃	0.075	5014.0	376	
10		7.21	〃	0.360	313.4	113		160	32	44.4	〃	0.222	1206.4	268	
10	2	30.0	〃	1.498	75.40	113		200		31.0	188	0.165	1913.2	316	
13		14.1	〃	0.707	129.6	91.6		200	8	10.6	189	0.056	7841.4	439	
13	0.5	8.64	50.0	0.172	530.1	91.2		250					3017.7		
16		21.6	〃	0.433	197.9	85.7		320					4976.3		
20		23.2	100	0.231	311.0	71.8		400					7803.7		
25	2	13.6	〃	0.136	487.7	66.3		500	32				12222.		
32		10.2	〃	0.102	801.1	81.7		650					20689.		
40		8.86	〃	0.088	1253.5	110		800					31366.		
40	8	39.5	〃	0.394	301.6	119									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 14 / Nov. / 1989

TEST No Ep- 3 S- 4 LINE DIRECTION N80°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)
1.5	0.5	1878	50.0	37.51	6.283	236	50	8	16.9	91.2	0.185	478.3	88.5
2.5		419	〃	8.374	18.85	158	50	2	4.86	91.5	0.053	1960.4	104
3.2		216	〃	4.322	31.39	136	65	8	12.1	100	0.121	817.0	98.9
4		105	〃	2.114	49.48	105	80		9.16	〃	0.091	1244.1	113
5		55.3	〃	1.105	77.75	85.9	100		14.0	199	0.070	1950.9	137
6.5		23.1	〃	0.461	132.0	60.9	130		8.36	162	0.051	3305.7	169
8		13.3	〃	0.267	200.3	53.5	160		6.61	181	0.036	5014.0	181
10		8.12	〃	0.162	313.4	50.8	160	32	25.6	182	0.140	1206.4	169
10	2	31.4	〃	0.627	75.40	47.3	200		15.3	156	0.097	1913.2	186
13		18.7	〃	0.374	129.6	48.5	200	8	3.97	157	0.025	7841.4	196
13	0.5	4.94	〃	0.098	530.1	52.0	250	32				3017.7	
16	2	14.2	〃	0.285	197.9	56.4	320					4976.3	
20		14.4	68.5	0.211	311.0	65.6	400					7803.7	
25		15.2	100	0.152	487.7	74.1	500					12222.	
32		10.6	〃	0.106	801.1	84.9	650					20689.	
40		7.20	〃	0.071	1253.5	89.0	800					31366.	
40	8	25.3	〃	0.253	301.6	76.3							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 14 / Nov. / 1989

TEST No. Ep-3 S-5 LINE DIRECTION E-W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5		1188	50.0	23.74	6.283	149		50	8	24.4	50.0	0.488	478.3	233	
2.5		217	〃	4.347	18.85	81.9		50	2	6.42	〃	0.128	1960.4	251	
3.2		107	〃	2.155	31.39	67.7		65		16.0	〃	0.820	817.0	261	
4	0.5	59.7	〃	1.193	49.48	59.0		80		11.8	〃	0.236	1244.1	294	
5		35.3	〃	0.706	77.75	54.9		100	8	17.1	100	0.171	1950.9	334	
6.5		22.1	〃	0.443	132.0	58.5		130		10.8	91.6	0.118	3305.7	390	
8		16.2	〃	0.324	200.3	64.9		160		11.6	135	0.086	5014.0	431	
10		11.9	〃	0.237	313.4	72.3		160	32	41.3	〃	0.305	1206.4	368	
10	2	52.2	〃	1.043	75.40	78.6		200		45.3	200	0.226	1913.2	432	
13		37.0	〃	0.739	129.6	95.8		200	8	12.8	〃	0.064	7841.4	502	
13	0.5	8.50	〃	0.169	530.1	89.6		250					3017.7		
16		27.3	〃	0.545	197.9	108		320					4976.3		
20		20.1	〃	0.401	311.0	125		400					7803.7		
25	2	15.3	〃	0.305	487.7	149		500	32				12222.		
32		11.5	〃	0.231	801.1	185		650					20689.		
40		8.93	〃	0.178	1253.5	223		800					31366.		
40	8	34.4	〃	0.687	301.6	207									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 14 / Nov. / 1989

TEST No Ep-3 S-6 LINE DIRECTION E-W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	343	80.0	6.855	6.283	43.1		50	8	24.8	89.6	0.277	478.3	133	
2.5		117	〃	2.344	18.85	44.2		50	2	6.30	90.0	0.070	1960.4	137	
3.2		67.4	〃	1.346	31.39	42.3		65	8	19.9	100	0.199	817.0	163	
4		40.6	〃	0.812	49.48	40.2		80		15.4	〃	0.154	1244.1	192	
5		24.4	〃	0.487	77.75	37.9		100		11.5	〃	0.115	1950.9	224	
6.5		13.4	〃	0.267	132.0	35.2		130		10.9	133	0.082	3305.7	271	
8		17.6	100	0.176	200.3	35.3		160		11.5	182	0.062	5014.0	311	
10		11.8	〃	0.118	313.4	37.0		160	32	47.8	183	0.261	1206.4	315	
10	2	46.8	〃	0.468	75.40	35.3		200		26.9	154	0.174	1913.2	333	
13		31.0	〃	0.310	129.6	40.2		200	8	6.50	〃	0.042	7841.4	329	
13	0.5	7.97	〃	0.079	530.1	41.9		250	32				3017.7		
16	2	24.1	〃	0.241	197.9	47.7		320					4976.3		
20		18.3	〃	0.183	311.0	56.9		400					7803.7		
25		14.1	〃	0.141	487.7	68.8		500					12222.		
32		11.1	〃	0.111	801.1	88.9		650					20689.		
40		8.93	〃	0.089	1253.5	112		800					31366.		
40	8	36.0	〃	0.359	301.6	108									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 17/Nov./1989

TEST No. Ep-3 S-7 LINE DIRECTION E-W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	1214	20.0	60.60	6.283	381		50	8	20.5	100	0.204	478.3	97.6	
2.5		285	〃	14.26	18.85	269		50	2	10.4	200	0.051	1960.4	100	
3.2		133	〃	6.671	31.39	209		65	8	16.1	100	0.160	817.0	131	
4		64.2	〃	3.205	49.48	159		80		12.2	〃	0.122	1244.1	152	
5		30.7	〃	1.533	77.75	119		100		9.00	〃	0.089	1950.9	174	
6.5		12.0	〃	0.600	132.0	79.2		130		11.5	169	0.068	3305.7	225	
8		15.8	50.0	0.317	200.3	63.5		160		6.97	137	0.050	5014.0	251	
10		8.89	〃	0.177	313.4	55.5		160	32	31.1	139	0.223	1206.4	269	
10	2	38.3	〃	0.766	75.40	57.8		200		6.18	40.9	0.151	1913.2	289	
13		19.8	〃	0.395	129.6	51.2		200	8	1.39	40.2	0.034	7841.4	267	
13	0.5	4.78	〃	0.095	530.1	50.4		250	32				3017.7		
16	2	13.6	〃	0.271	197.9	53.6		320					4976.3		
20		9.86	〃	0.196	311.0	61.0		400					7803.7		
25		7.11	〃	0.142	487.7	69.3		500					12222.		
32		9.74	100	0.097	801.1	77.7		650					20689.		
40		6.66	〃	0.066	1253.5	82.7		800					31366.		
40	8	26.1	〃	0.261	301.6	78.7									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 17/Nov./1989

TEST No Ep-3 S-8 LINE DIRECTION E-W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	597	20.0	29.81	6.283	187		50	8	15.4	130	0.117	478.3	56.0	
2.5		119	〃	5.961	18.85	112		50	2	3.64	131	0.027	1960.4	52.9	
3.2		53.0	〃	2.647	31.39	83.1		65	8	12.0	152	0.078	817.0	63.7	
4		28.1	〃	1.404	49.48	69.5		80		7.81	144	0.054	1244.1	67.2	
5		15.5	〃	0.778	77.75	60.5		100		5.27	133	0.039	1950.9	76.1	
6.5		6.87	〃	0.342	132.0	45.1		130		5.84	200	0.029	3305.7	95.9	
8		9.22	50.0	0.184	200.3	36.9		160		4.56	〃	0.022	5014.0	110	
10		11.7	100	0.117	313.4	36.7		160	32	32.5	〃	0.162	1206.4	195	
10	2	51.2	〃	0.511	75.40	38.5		200		24.5	〃	0.122	1913.2	233	
13		29.3	〃	0.292	129.6	37.8		200	8	3.44	〃	0.017	7841.4	133	
13	0.5	6.94	〃	0.069	530.1	36.6		250	32				3017.7		
16	2	19.1	〃	0.191	197.9	37.8		320					4976.3		
20		13.4	〃	0.133	311.0	41.4		400					7803.7		
25		9.19	〃	0.091	487.7	44.4		500					12222.		
32		9.75	165	0.059	801.1	47.3		650					20689.		
40		6.77	〃	0.040	1253.5	50.1		800					31366.		
40	8	29.1	166	0.174	301.6	52.5									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 16 Oct. 1989

TEST No Ep- 4 S- 1 LINE DIRECTION N45°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	475	20.0	23.74	6.283	149		50	8	8.13	199	0.040	478.3	19.1	
2.5		98.0	〃	4.896	18.85	92.3		50	2	1.95	〃	0.009	1960.4	17.6	
3.2		112	50.0	2.239	31.39	70.3		65	8	6.18	195	0.031	817.0	25.3	
4		57.4	〃	1.147	49.48	56.8		80		5.17	199	0.025	1244.1	31.3	
5		55.5	〃	0.555	77.75	43.2		100		4.26	〃	0.021	1950.9	41.0	
6.5		21.4	100	0.214	132.0	28.3		130		1.66	100	0.016	3305.7	52.9	
8		8.59	〃	0.085	200.3	17.0		160		1.40	〃	0.013	5014.0	65.2	
10		7.26	174	0.041	313.4	12.9		160	32	5.53	〃	0.055	1206.4	66.4	
10	2	28.3	〃	0.162	75.40	12.2		200		4.45	〃	0.044	1913.2	84.2	
13		18.2	199	0.091	129.6	11.8		200	8	0.88	〃	0.008	7841.4	62.7	
13	0.5	5.24	〃	0.026	530.1	13.8		250	32				3017.7		
16	2	11.7	196	0.060	197.9	11.9		320					4976.3		
20		7.54	199	0.037	311.0	11.5		400					7803.7		
25		4.94	〃	0.024	487.7	11.7		500					12222.		
32		3.39	〃	0.017	801.1	13.6		650					20689.		
40		2.49	〃	0.012	1253.5	15.0		800					31366.		
40	8	9.93	〃	0.049	301.6	14.8									

THE VERTICAL ELECTRICAL SOUNDING

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THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 7 / Nov. / 1989

TEST No Ep- 4 S- 2 LINE DIRECTION N10°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	808	20.0	40.37	6.283	254		50	8	13.4	47.1	0.285	478.3	136	
2.5		326	〃	16.30	18.85	307		50	2	2.43	47.9	0.050	1960.4	98.0	
3.2		194	〃	9.710	31.39	305		65	8	8.56	50.0	0.171	817.0	140	
4		122	〃	6.104	49.48	302		80		4.91	39.2	0.125	1244.1	156	
5		83.4	〃	4.170	77.75	324		100		3.75	49.9	0.075	1950.9	146	
6.5		51.7	〃	2.582	132.0	341		130		2.17	49.3	0.043	3305.7	142	
8		34.7	〃	1.735	200.3	348		160		2.14	70.0	0.030	5014.0	150	
10		21.1	〃	1.056	313.4	331		160	32	9.49	70.5	0.134	1206.4	162	
10	2	91.0	〃	4.547	75.40	343		200		7.98	84.7	0.094	1913.2	180	
13		51.8	〃	2.592	129.6	336		200	8	1.85	85.4	0.021	7841.4	165	
13	0.5	12.1	〃	0.608	530.1	322		250	32				3017.7		
16	2	28.7	〃	1.438	197.9	285		320					4976.3		
20		16.7	〃	0.838	311.0	261		400					7803.7		
25		8.60	〃	0.430	487.7	210		500					12222.		
32		3.17	16.8	0.187	801.1	150		650					20689.		
40		4.29	50.0	0.085	1253.5	107		800					31366.		
40	8	25.5	〃	0.510	301.6	154									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 7 / Nov. / 1989

TEST No Ep- 4 S- 3 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5		316	20.0	15.80	6.283	99.3		50	8	22.3	100	0.223	478.3	107	
2.5		81.8	〃	4.087	18.85	77.0		50	2	6.00	〃	0.059	1960.4	116	
3.2		42.4	〃	2.122	31.39	66.6		65		15.2	〃	0.152	817.0	124	
4		21.8	〃	1.093	49.48	54.1		80		11.4	〃	0.114	1244.1	142	
5	0.5	11.9	〃	0.594	77.75	46.2		100	8	8.50	〃	0.084	1950.9	164	
6.5		17.7	50.0	0.354	132.0	46.7		130		8.92	145	0.061	3305.7	202	
8		12.8	〃	0.257	200.3	51.5		160		9.37	199	0.046	5014.0	231	
10		9.61	〃	0.192	313.4	60.2		160		39.4	〃	0.197	1206.4	238	
10	2	31.6	〃	0.633	75.40	47.7		200	32	28.0	〃	0.140	1913.2	268	
13		21.4	〃	0.428	129.6	55.5		200	8	66.9	〃	0.033	7841.4	259	
13	0.5	6.57	〃	0.131	530.1	69.4		250					3017.7		
16		15.9	〃	0.317	197.9	62.7		320					4976.3		
20		11.2	〃	0.224	311.0	69.7		400					7803.7		
25	2	15.8	100	0.158	487.7	77.1		500	32				12222.		
32		11.1	〃	0.111	801.1	88.9		650					20689.		
40		8.07	〃	0.080	1253.5	100		800					31366.		
40	8	30.3	〃	0.303	301.6	91.4									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 10 / Nov. / 1989

TEST No Ep- 5 S- 1 LINE DIRECTION N10°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	513	20.0	25.62	6.283	161		50	8	19.3	50.0	0.386	478.3	185	
2.5		112	〃	5.621	18.85	106		50	2	4.74	〃	0.094	1960.4	184	
3.2		57.0	〃	2.847	31.39	89.4		65	8	12.4	〃	0.249	817.0	203	
4		32.7	〃	1.632	49.48	80.8		80		8.36	〃	0.166	1244.1	207	
5		18.1	〃	0.907	77.75	70.5		100		5.50	〃	0.109	1950.9	213	
6.5		25.4	50.0	0.507	132.0	66.9		130		6.45	100	0.064	3305.7	212	
8		17.7	〃	0.354	200.3	70.9		160		4.60	〃	0.045	5014.0	226	
10		12.0	〃	0.239	313.4	74.9		160	32	19.0	〃	0.189	1206.4	228	
10	2	53.5	〃	1.068	75.40	80.5		200		13.7	〃	0.137	1913.2	262	
13		36.7	〃	0.734	129.6	95.1		200	8	4.75	139	0.034	7841.4	267	
13	0.5	8.79	〃	0.175	530.1	92.8		250	32				3017.7		
16	2	27.0	〃	0.540	197.9	107		320					4976.3		
20		19.7	〃	0.393	311.0	122		400					7803.7		
25		14.1	〃	0.281	487.7	137		500					12222.		
32		9.61	〃	0.191	801.1	153		650					20689.		
40		6.66	〃	0.133	1253.5	167		800					31366.		
40	8	27.5	〃	0.550	301.6	166									

THE VERTICAL ELECTRICAL SOUNDING

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THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 11 / Nov. / 1989

TEST No. Ep-5 S-2 LINE DIRECTION N80°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5		201	20.0	10.03	6.283	63.0		50	8	18.3	100	0.183	478.3	87.5	
2.5		23.8	〃	1.190	18.85	22.4		50	2	7.39	200	0.036	1960.4	70.6	
3.2		10.0	〃	0.502	31.39	15.8		65		24.9	〃	0.124	817.0	101	
4		6.54	〃	0.326	49.48	16.1		80		18.3	〃	0.091	1244.1	113	
5	0.5	11.2	50.0	0.225	77.75	17.5		100	8	13.2	〃	0.066	1950.9	129	
6.5		7.32	〃	0.146	132.0	19.3		~~130~~ 124		8.92	177	0.050	~~3305.7~~	165	
8		5.29	〃	0.105	200.3	21.0		160					5014.0		
10		3.84	〃	0.076	313.4	23.8		160	32				1206.4		
10	2	16.9	〃	0.337	75.40	25.4		200					1913.2		
13		12.2	〃	0.244	129.6	31.6		200	8				7841.4		
13	0.5	5.36	100	0.053	530.1	28.1		250					3017.7		
16		17.7	〃	0.176	197.9	34.8		320					4976.3		
20		13.1	〃	0.130	311.0	40.4		400					7803.7		
25	2	9.74	〃	0.097	487.7	47.3		500	32				12222.		
32		6.92	〃	0.069	801.1	55.3		650					20689.		
40		5.10	〃	0.051	1253.5	63.9		800					31366.		
40	8	25.5	〃	0.254	301.6	76.6									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 11 / Nov. 11989

TEST No Ep-5 S-3 LINE DIRECTION N10°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	440	20.0	22.00	6.283	138		50	8	18.1	50.0	0.363	478.3	173	
2.5		141	〃	7.066	18.85	133		50	2	4.36	〃	0.087	1960.4	171	
3.2		74.4	〃	3.715	31.39	117		65	8	11.8	〃	0.237	817.0	194	
4		41.5	〃	2.072	49.48	103		80		8.16	〃	0.163	1244.1	203	
5		23.2	〃	1.159	77.75	90.1		100		10.4	100	0.104	1950.9	203	
6.5		12.9	〃	0.643	132.0	84.9		130		6.64	〃	0.066	3305.7	218	
8		8.67	〃	0.433	200.3	86.7		160		9.74	200	0.048	5014.0	241	
10		5.70	〃	0.284	313.4	89.0		160	32	41.6	〃	0.207	1206.4	250	
10	2	18.6	〃	0.930	75.40	70.1		200		28.2	193	0.145	1913.2	277	
13		12.1	〃	0.604	129.6	78.3		200	8	6.71	194	0.034	7841.4	267	
13	0.5	3.49	〃	0.174	530.1	92.2		250	32				3017.7		
16	2	9.02	〃	0.450	197.9	89.1		320					4976.3		
20		6.37	〃	0.317	311.0	98.6		400					7803.7		
25		11.5	50.0	0.230	487.7	112		500					12222.		
32		8.05	〃	0.160	801.1	128		650					20689.		
40		6.03	〃	0.120	1253.5	150		800					31366.		
40	8	25.2	〃	0.505	301.6	152									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 7 / Nov. / 1986

TEST No Ep- 6 S- 1 LINE DIRECTION N40°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	143	20.0	7.152	6.283	44.9		50	8	36.3	200	0.181	478.3	86.6	
2.5		42.0	〃	2.100	18.85	39.6		50	2	8.60	〃	0.043	1960.4	84.3	
3.2		27.3	〃	1.365	31.39	42.9		65	8	20.7	〃	0.103	817.0	84.2	
4		18.8	〃	0.941	49.48	46.6		80		13.5	199	0.067	1244.1	83.4	
5		13.2	〃	0.662	77.75	51.5		100		8.83	200	0.044	1950.9	85.8	
6.5		8.71	〃	0.435	132.0	57.4		130		5.96	195	0.030	3305.7	99.2	
8		15.8	50.0	0.317	200.3	63.5		160		4.61	197	0.023	5014.0	115	
10		11.1	〃	0.222	313.4	69.6		160	32	18.8	〃	0.095	1206.4	115	
10	2	45.4	〃	0.907	75.40	68.4		200					1913.2		
13		29.9	〃	0.597	129.6	77.4		200	8				7841.4		
13	0.5	7.37	〃	0.147	530.1	77.9		250	32				3017.7		
16	2	20.5	〃	0.410	197.9	81.1		320					4976.3		
20		13.4	〃	0.269	311.0	83.7		400					7803.7		
25		17.2	100	0.172	487.7	83.9		500					12222.		
32		10.5	〃	0.105	801.1	84.1		650					20689.		
40		13.2	200	0.066	1253.5	82.7		800					31366.		
40	8	56.9	〃	0.284	301.6	85.7									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 7 / Nov. / 1989

TEST No Ep-6 S-2 LINE DIRECTION N70°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	586	20.0	29.25	6.283	184		50	8	26.1	200	0.130	478.3	62.2	
2.5		119	〃	5.957	18.85	112		50	2	6.88	〃	0.034	1960.4	66.7	
3.2		43.1	〃	2.155	31.39	67.7		65	8	9.94	123	0.080	817.0	65.4	
4		16.6	〃	0.829	49.48	41.0		80		9.24	162	0.056	1244.1	69.7	
5		18.6	〃	0.373	77.75	29.0		100		6.23	152	0.040	1950.9	78.0	
6.5		9.42	50.0	0.188	132.0	24.8		130		3.48	124	0.027	3305.7	89.3	
8		6.32	〃	0.126	200.3	25.2		160		4.53	200	0.022	5014.0	110	
10		9.33	100	0.093	313.4	29.2		160	32	21.1	〃	0.105	1206.4	127	
10	2	41.8	〃	0.418	75.40	31.5		200		11.7	139	0.084	1913.2	161	
13		29.6	〃	0.296	129.6	38.4		200	8	2.62	143	0.018	7841.4	141	
13	0.5	6.70	〃	0.066	530.1	35.0		250	32				3017.7		
16	2	22.0	〃	0.220	197.9	43.5		320					4976.3		
20		15.6	〃	0.156	311.0	48.5		400					7803.7		
25		11.0	〃	0.109	487.7	53.2		500					12222.		
32		14.9	200	0.074	801.1	59.3		650					20689.		
40		8.16	162	0.050	1253.5	62.7		800					31366.		
40	8	31.6	163	0.192	301.6	57.9									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 7 / Nov. / 1989

TEST No. Ep-6 S-3 LINE DIRECTION N10°E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)	
1.5	0.5	841	20.0	41.99	6.283	264		50	8	15.6	100	0.156	478.3	74.6	
2.5		227	〃	11.37	18.85	214		50	2	4.21	111	0.038	1960.4	74.5	
3.2		111	〃	5.566	31.39	175		65	8	9.18	105	0.087	817.0	71.1	
4		61.9	〃	3.093	49.48	153		80		10.0	159	0.062	1244.1	77.1	
5		35.2	〃	1.760	77.75	137		100		8.46	185	0.045	1950.9	87.8	
6.5		17.3	〃	0.864	132.0	114		130		4.75	164	0.029	3305.7	92.6	
8		25.4	50.0	0.507	200.3	102		160		3.87	182	0.021	5014.0	105	
10		14.6	〃	0.292	313.4	91.5		160	32	20.3	〃	0.111	1206.4	134	
10	2	64.0	〃	1.279	75.40	96.4		200		8.78	107	0.081	1913.2	155	
13		36.1	〃	0.720	129.6	93.3		200	8	1.69	109	0.015	7841.4	118	
13	0.5	8.44	〃	0.168	530.1	89.1		250	32				3017.7		
16	2	24.0	〃	0.480	197.9	95.0		320					4976.3		
20		16.0	〃	0.320	311.0	99.5		400					7803.7		
25		9.41	〃	0.187	487.7	91.2		500					12222.		
32		5.45	〃	0.109	801.1	87.3		650					20689.		
40		5.20	85.1	0.061	1253.5	76.5		800					31366.		
40	8	22.1	87.1	0.254	301.6	76.6									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 6 / Nov. / 1989

TEST No Ep- 8 S- 1 LINE DIRECTION N40°W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)
1.5	0.5	248	20.0	12.39	6.283	77.9		50	8	8.49	100	0.084	478.3	40.2
2.5		62.7	〃	3.134	18.85	59.1		50	2	2.40	133	0.018	1960.4	35.3
3.2		30.6	〃	1.531	31.39	48.1		65	8	2.41	39.6	0.060	817.0	49.0
4		16.7	〃	0.836	49.48	41.4		80		7.27	147	0.049	1244.1	61.0
5		47.8	100	0.477	77.75	37.1		100		6.01	155	0.038	1950.9	74.1
6.5		24.1	〃	0.241	132.0	31.8		130		2.42	79.4	0.030	3305.7	99.2
8		13.7	〃	0.137	200.3	27.4		160		1.73	68.3	0.025	5014.0	125
10		7.73	〃	0.077	313.4	24.1		160	32	7.12	69.1	0.103	1206.4	124
10	2	32.0	〃	0.320	75.40	24.1		200		18.4	199	0.092	1913.2	176
13		18.0	〃	0.180	129.6	23.3		200	8	4.50	〃	0.022	7841.4	173
13	0.5	4.45	〃	0.044	530.1	23.3		250	32				3017.7	
16	2	11.8	〃	0.117	197.9	23.2		320					4976.3	
20		7.53	〃	0.075	311.0	23.3		400					7803.7	
25		5.16	〃	0.051	487.7	24.9		500					12222.	
32		3.39	94.1	0.036	801.1	28.8		650					20689.	
40		2.30	88.1	0.026	1253.5	32.6		800					31366.	
40	8	11.2	90.4	0.124	301.6	37.4								

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 6 Nov. 1989

TEST No Ep-8 S-2 LINE DIRECTION E-W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω-m)
1.5	0.5	233	20.0	11.66	6.283	73.3		50	8	17.8	199	0.089	478.3	42.6
2.5		52.4	〃	2.618	18.85	49.4		50	2	4.37	〃	0.021	1960.4	41.2
3.2		24.5	〃	1.224	31.39	38.4		65	8	12.0	198	0.060	817.0	49.0
4		12.1	〃	0.605	49.48	29.9		80		9.26	〃	0.046	1244.1	57.2
5		6.76	〃	0.338	77.75	26.3		100		6.83	184	0.037	1950.9	72.2
6.5		7.86	50.0	0.157	132.0	20.7		130		4.43	153	0.028	3305.7	92.6
8		4.83	〃	0.096	200.3	19.2		160		3.20	134	0.023	5014.0	115
10		6.31	100	0.063	313.4	19.7		160	32	12.6	137	0.091	1206.4	110
10	2	25.3	〃	0.253	75.40	19.1		200		13.5	199	0.067	1913.2	128
13		16.0	〃	0.159	129.6	20.6		200	8	3.52	〃	0.017	7841.4	133
13	0.5	4.05	〃	0.040	530.1	21.2		250	32				3017.7	
16	2	11.2	〃	0.112	197.9	22.2		320					4976.3	
20		8.04	〃	0.080	311.0	24.9		400					7803.7	
25		4.11	71.4	0.057	487.7	27.8		500					12222.	
32		2.77	68.2	0.040	801.1	32.0		650					20689.	
40		5.11	169	0.030	1253.5	37.6		800					31366.	
40	8	21.1	168	0.125	301.6	37.7								

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 4 / Nov./1989

TEST No. Ep- 8 S- 3 LINE DIRECTION N10E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	206.	20.0	10.33	6.283	64.9		50	8	7.79	200.	0.039	478.3	18.7	
2.5		53.8	20.0	2.688	18.85	50.7		50	2	2.00	200.	0.010	1960.4	19.6	
3.2		29.9	20.0	1.494	31.39	46.9		65	8	5.02	199.	0.025	817.0	20.4	
4		17.7	20.0	0.884	49.48	43.7		80		3.99	199.	0.019	1244.1	23.6	
5		10.1	20.0	0.505	77.75	39.3		100		3.12	199.	0.015	1950.9	29.3	
6.5		12.1	50.0	0.243	132.0	32.1		130		2.10	181.	0.011	3305.7	36.4	
8		13.7	100.	0.137	200.3	27.4		160		0.74	80.2	0.009	5014.0	45.1	
10		6.61	90.2	0.073	313.4	22.9		160	32	3.42	82.7	0.041	1206.4	49.5	
10	2	25.1	90.4	0.278	75.40	21.0		200		2.16	61.1	0.035	1913.2	67.0	
13		13.7	98.8	0.139	129.6	18.0		200	8	0.49	63.2	0.007	7841.4	54.9	
13	0.5	3.64	97.8	0.037	530.1	19.6		250	32				3017.7		
16	2	8.91	100.	0.089	197.9	17.6		320					4976.3		
20		11.1	200.	0.055	311.0	17.1		400					7803.7		
25		7.16	200.	0.035	487.7	17.1		500					12222.		
32		4.59	200.	0.022	801.1	17.6		650					20689.		
40		3.00	200.	0.015	1253.5	18.8		800					31366.		
40	8	11.8	199.	0.059	301.6	17.8									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 6 / Nov./1989

TEST No. Ep- 8 S- 4 LINE DIRECTION N80W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	331.	20.0	16.56	6.283	104.		50	8	10.3	185.	0.055	478.3	26.3	
2.5		95.0	20.0	4.741	18.85	89.4		50	2	2.57	188.	0.013	1960.4	25.5	
3.2		47.0	20.0	2.350	31.39	73.8		65	8	7.68	200.	0.038	817.0	31.1	
4		22.4	20.0	1.119	49.48	55.4		80		5.29	183.	0.028	1244.1	34.8	
5		10.3	20.0	0.517	77.75	40.2		100		4.08	200.	0.020	1950.9	39.0	
6.5		11.3	50.0	0.225	132.0	29.7		130		2.85	200.	0.014	3305.7	46.3	
8		12.0	50.0	0.120	200.3	24.0		160		2.19	200.	0.010	5014.0	50.1	
10		6.82	100.	0.068	313.4	21.3		160	32	9.14	200.	0.045	1206.4	54.3	
10	2	29.8	100.	0.297	75.40	22.4		200		7.08	200.	0.035	1913.2	67.0	
13		15.5	100.	0.155	129.6	20.1		200	8	1.71	200.	0.008	7841.4	62.7	
13	0.5	7.40	199.	0.037	530.1	19.6		250	32				3017.7		
16	2	9.40	100.	0.093	197.9	18.4		320					4976.3		
20		5.99	100.	0.059	311.0	18.4		400					7803.7		
25		5.86	142.	0.041	487.7	20.0		500					12222.		
32		4.61	174.	0.026	801.1	20.8		650					20689.		
40		3.30	175.	0.018	1253.5	22.6		800					31366.		
40	8	13.6	176.	0.077	301.6	23.2									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 4 / NoV./1989

TEST No Ep- 8 S- 5 LINE DIRECTION E-W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	1462	20.0	73.04	6.283	459.		50	8	12.5	196.	0.063	478.3	30.1	
2.5		558.	20.0	27.90	18.85	526.		50	2	2.83	196.	0.014	1960.4	27.5	
3.2		237.	20.0	11.80	31.39	370.		65	8	4.37	100.	0.043	817.0	35.1	
4		115.	20.0	5.753	49.48	285.		80		1.40	43.3	0.032	1244.1	39.8	
5		52.1	20.0	2.604	77.75	203.		100		3.80	158.	0.023	1950.9	44.9	
6.5		12.6	20.0	0.632	132.0	83.4		130		3.22	199.	0.016	3305.7	52.9	
8		10.9	50.0	0.218	200.3	43.7		160		2.34	199.	0.011	5014.0	55.2	
10		4.70	50.0	0.093	313.4	29.2		160	32	8.67	199.	0.043	1206.4	51.9	
10	2	19.6	50.0	0.393	75.40	29.6		200		5.31	175.	0.030	1913.2	57.4	
13		8.66	50.0	0.173	129.6	22.4		200	8	1.48	177.	0.008	7841.4	62.7	
13	0.5	2.18	50.0	0.043	530.1	22.8		250	32				3017.7		
16	2	5.50	50.0	0.109	197.9	21.6		320					4976.3		
20		3.31	51.0	0.064	311.0	19.9		400					7803.7		
25		4.21	100.	0.042	487.7	20.5		500					12222.		
32		5.64	199.	0.028	801.1	22.4		650					20689.		
40		4.08	199.	0.020	1253.5	25.1		800					31366.		
40	8	18.1	199.	0.090	301.6	27.1									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 4 / Nov./1989

TEST No. Ep- 8 S- 6 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	1039	20.0	51.87	6.283	326.		50	8	34.8	100.	0.349	478.3	166.	
2.5		458.	20.0	22.89	18.85	432.		50	2	7.69	100.	0.076	1960.4	149.	
3.2		271.	20.0	13.56	31.39	426.		65	8	12.9	100.	0.128	817.0	105.	
4		190.	20.0	9.503	49.48	470.		80		9.59	134.	0.071	1244.1	88.3	
5		122.	20.0	6.098	77.75	474.		100		5.69	176.	0.032	1950.9	62.4	
6.5		79.0	20.0	3.946	132.0	521.		130		2.00	160.	0.012	3305.7	39.7	
8		46.7	20.0	2.331	200.3	467.		160		0.83	118.	0.006	5014.0	30.1	
10		32.6	20.0	1.629	313.4	511.		160	32	3.30	119.	0.027	1206.4	32.6	
10	2	154.	20.0	7.721	75.40	582.		200		2.52	134.	0.018	1913.2	34.4	
13		55.5	20.0	2.771	129.6	359.		200	8	0.64	136.	0.004	7841.4	31.4	
13	0.5	11.6	20.0	0.584	530.1	310.		250	32				3017.7		
16	2	22.4	20.0	1.120	197.9	223.		320					4976.3		
20		23.8	48.5	0.491	311.0	153.		400					7803.7		
25		15.6	50.0	0.312	487.7	152.		500					12222.		
32		21.6	100.	0.216	801.1	173.		650					20689.		
40		13.8	100.	0.137	1253.5	172.		800					31366.		
40	8	62.3	100.	0.622	301.6	188.									

THE VERTICAL ELECTRICAL SOUNDING

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THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 4 / Nov./1989

TEST No. Ep- 8 S- 7 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5		1254	20.0	62.57	6.283	393.		50	8	28.8	50.0	0.576	478.3	276.	
2.5		476.	20.0	23.77	18.85	448.		50	2	8.66	50.0	0.173	1960.4	229.	
3.2		300.	20.0	15.00	31.39	471.		65		14.6	50.0	0.291	817.0	238.	
4		195.	20.0	9.754	49.48	483.		80		12.1	67.8	0.178	1244.1	222.	
5	0.5	116.	18.1	6.422	77.75	499.		100	8	10.1	100.	0.101	1950.9	197.	
6.5		82.1	20.0	4.097	132.0	541.		130		5.50	100.	0.055	3305.7	182.	
8		50.9	20.0	2.544	200.3	510.		160		4.33	135.	0.031	5014.0	155.	
10		30.6	20.0	1.527	313.4	479.		160		13.2	136.	0.097	1206.4	117.	
10	2	132.	20.0	6.614	75.40	499.		200	32	7.57	106.	0.071	1913.2	136.	
13		58.9	20.0	2.943	129.6	381.		200	8	2.82	117.	0.023	7841.4	180.	
13	0.5	14.0	20.0	0.701	530.1	372.		250					3017.7		
16		34.8	20.0	1.739	197.9	344.		320					4976.3		
20		23.5	20.0	1.174	311.0	365.		400					7803.7		
25	2	16.0	20.0	0.798	487.7	389.		500	32				12222.		
32		21.5	43.3	0.491	801.1	393.		650					20689.		
40		15.1	50.0	0.301	1253.5	377.		800					31366.		
40	8	50.6	50.0	1.010	301.6	305.									

THE VERTICAL ELECTRICAL SOUNDING

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TEST No Ep- 8 S- 8 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	197.	20.0	9.839	6.283	61.8		50	8	6.00	73.8	0.081	478.3	38.7	
2.5		36.1	20.0	1.801	18.85	34.0		50	2	1.58	73.3	0.021	1960.4	41.2	
3.2		18.3	20.0	0.915	31.39	28.7		65	8	2.48	42.5	0.058	817.0	47.4	
4		10.9	20.0	0.546	49.48	27.0		80		3.81	83.5	0.045	1244.1	56.0	
5		16.6	50.0	0.333	77.75	25.9		100		2.52	73.5	0.034	1950.9	66.3	
6.5		9.74	50.0	0.194	132.0	25.6		130		2.41	99.9	0.024	3305.7	79.3	
8		12.6	100.	0.126	200.3	25.7		160		1.72	100.	0.017	5014.0	85.2	
10		7.92	100.	0.079	313.4	24.8		160	32	4.91	100.	0.049	1206.4	59.1	
10	2	34.3	100.	0.343	75.40	25.9		200		3.93	100.	0.039	1913.2	74.6	
13		19.7	99.4	0.198	129.6	25.7		200	8	1.87	141.	0.013	7841.4	102.	
13	0.5	4.53	98.1	0.046	530.1	24.4		250	32				3017.7		
16	2	12.7	100.	0.127	197.9	25.1		320					4976.3		
20		7.86	100.	0.078	311.0	24.3		400					7803.7		
25		4.25	85.9	0.049	487.7	23.9		500					12222.		
32		1.61	49.4	0.032	801.1	25.6		650					20689.		
40		3.38	123.	0.027	1253.5	33.9		800					31366.		
40	8	12.6	123.	0.103	301.6	31.1									

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TEST No. Ep- 8 S- 9 LINE DIRECTION N15E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	1930	20.0	96.38	6.283	606.		50	8	9.40	70.0	0.134	478.3	64.1	
2.5		271.	20.0	13.56	18.85	256.		50	2	2.11	69.3	0.030	1960.4	58.8	
3.2		95.2	20.0	4.756	31.39	149.		65	8	7.96	100.	0.079	817.0	64.5	
4		38.1	19.6	1.935	49.48	95.7		80		2.79	63.0	0.044	1244.1	54.7	
5		11.2	14.3	0.785	77.75	61.0		100		1.24	44.3	0.027	1950.9	52.7	
6.5		6.16	20.0	0.307	132.0	40.5		130		2.39	100.	0.018	3305.7	59.5	
8		6.30	33.6	0.187	200.3	37.5		160		1.55	125.	0.012	5014.0	60.2	
10		3.52	29.3	0.120	313.4	37.6		160	32	6.54	123.	0.052	1206.4	62.7	
10	2	16.3	29.3	0.557	75.40	42.0		200		6.16	168.	0.036	1913.2	68.9	
13		10.4	33.2	0.313	129.6	40.6		200	8	1.49	168.	0.008	7841.4	62.7	
13	0.5	2.26	33.2	0.067	530.1	35.5		250	32				3017.7		
16	2	5.33	28.6	0.186	197.9	36.8		320					4976.3		
20		3.33	27.4	0.121	311.0	37.6		400					7803.7		
25		3.39	39.3	0.086	487.7	41.9		500					12222.		
32		2.94	50.0	0.058	801.1	46.5		650					20689.		
40		2.20	50.0	0.043	1253.5	53.9		800					31366.		
40	8	12.9	65.7	0.196	301.6	59.1									

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TEST No Ep- 8 S-10 LINE DIRECTION N20E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	727.	20.0	36.31	6.283	228.		50	8	7.65	48.1	0.158	478.3	75.6	
2.5		115.	20.0	5.786	18.85	109.		50	2	3.58	79.8	0.044	1960.4	86.3	
3.2		59.3	20.0	2.965	31.39	93.1		65	8	6.77	77.3	0.087	817.0	71.1	
4		39.0	20.0	1.950	49.48	96.5		80		3.92	74.7	0.052	1244.1	64.7	
5		25.7	20.0	1.284	77.75	99.8		100		4.43	139.	0.031	1950.9	60.5	
6.5		15.5	20.0	0.776	132.0	102.		130		1.47	78.2	0.018	3305.7	59.5	
8		10.3	20.0	0.517	200.3	104.		160		1.05	77.9	0.013	5014.0	65.2	
10		16.6	49.3	0.336	313.4	105.		160	32	4.20	78.7	0.053	1206.4	63.9	
10	2	58.0	49.2	1.179	75.40	88.9		200		3.48	93.3	0.037	1913.2	70.8	
13		33.8	50.0	0.676	129.6	87.6		200	8	0.87	92.7	0.009	7841.4	70.6	
13	0.5	9.75	50.0	0.194	530.1	103.		250	32				3017.7		
16	2	22.2	50.0	0.445	197.9	88.1		320					4976.3		
20		13.7	49.1	0.279	311.0	86.8		400					7803.7		
25		9.21	50.0	0.184	487.7	89.7		500					12222.		
32		5.68	50.0	0.113	801.1	90.5		650					20689.		
40		4.97	69.0	0.071	1253.5	89.0		800					31366.		
40	8	17.8	69.6	0.255	301.6	76.9									

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TEST No Ep- 8 S-11 LINE DIRECTION N20E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	542.	20.0	27.09	6.283	170.		50	8	3.79	53.0	0.071	478.3	34.0	
2.5		84.1	20.0	4.203	18.85	79.2		50	2	1.07	71.2	0.015	1960.4	29.4	
3.2		35.9	20.0	1.794	31.39	56.3		65	8	2.34	58.2	0.040	817.0	32.7	
4		17.5	20.0	0.876	49.48	43.3		80		1.41	56.5	0.025	1244.1	31.1	
5		10.6	19.5	0.544	77.75	42.3		100		1.11	71.6	0.015	1950.9	29.3	
6.5		7.83	29.1	0.268	132.0	35.4		130		0.69	75.4	0.009	3305.7	29.8	
8		5.93	36.2	0.162	200.3	32.5		160		0.32	54.1	0.005	5014.0	25.1	
10		4.75	48.2	0.098	313.4	30.7		160	32	2.64	54.9	0.048	1206.4	57.9	
10	2	20.9	47.7	0.438	75.40	33.0		200		3.70	120.	0.030	1913.2	57.4	
13		10.8	43.9	0.247	129.6	32.0		200	8	1.15	199.	0.005	7841.4	39.2	
13	0.5	2.45	43.6	0.056	530.1	29.7		250	32				3017.7		
16	2	4.25	28.6	0.148	197.9	29.3		320					4976.3		
20		3.36	35.1	0.095	311.0	29.6		400					7803.7		
25		3.08	50.0	0.061	487.7	29.8		500					12222.		
32		1.77	49.8	0.035	801.1	28.0		650					20689.		
40		1.33	56.7	0.023	1253.5	28.8		800					31366.		
40	8	6.36	56.8	0.111	301.6	33.5									

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TEST No Ep- 9 S- 1 LINE DIRECTION TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	757.	20.0	37.82	6.283	238.		50	8	63.1	100.	0.630	478.3	301.	
2.5		374.	20.0	18.69	18.85	352.		50	2	16.1	100.	0.101	1960.4	316.	
3.2		256.	20.0	12.79	31.39	402.		65	8	42.7	100.	0.427	817.0	349.	
4		181.	20.0	9.051	49.48	448.		80		32.6	100.	0.326	1244.1	406.	
5		122.	20.0	6.136	77.75	477.		100		22.8	100.	0.228	1950.9	445.	
6.5		81.1	20.0	4.049	132.0	535.		130		33.4	200.	0.167	3305.7	552.	
8		53.0	20.0	2.649	200.3	531.		160		11.2	95.2	0.118	5014.0	592.	
10		32.9	20.0	1.645	313.4	516.		160	32	45.2	96.3	0.469	1206.4	566.	
10	2	125.	20.0	6.256	75.40	472.		200		20.0	73.3	0.273	1913.2	522.	
13		63.3	20.0	3.162	129.6	410.		200	8	5.33	75.8	0.070	7841.4	549.	
13	0.5	16.8	20.0	0.840	530.1	445.		250	32				3017.7		
16	2	37.0	20.0	1.850	197.9	366.		320					4976.3		
20		19.8	20.0	0.989	311.0	308.		400					7803.7		
25		28.6	50.0	0.572	487.7	279.		500					12222.		
32		19.2	50.0	0.383	801.1	307.		650					20689.		
40		23.9	100.	0.239	1253.5	300.		800					31366.		
40	8	94.7	100.	0.946	301.6	285.									

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TEST No. Ep- 9 S- 2 LINE DIRECTION TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	1129	20.0	56.35	6.283	354.		50	8	47.7	50.0	0.955	478.3	457.	
2.5		345.	20.0	17.22	18.85	325.		50	2	10.7	50.0	0.214	1960.4	420.	
3.2		186.	20.0	9.287	31.39	292.		65	8	33.1	50.0	0.662	817.0	541.	
4		111.	20.0	5.587	49.48	277.		80		23.5	50.0	0.471	1244.1	586.	
5		69.4	20.0	3.466	77.75	270.		100		15.8	50.0	0.316	1950.9	617.	
6.5		39.9	20.0	1.994	132.0	263.		130		8.06	50.0	0.161	3305.7	532.	
8		27.0	20.0	1.349	200.3	270.		160		9.34	100.	0.093	5014.0	466.	
10		16.8	20.0	0.839	313.4	263.		160	32	50.1	100.	0.501	1206.4	604.	
10	2	67.2	20.0	3.356	75.40	253.		200		75.5	200.	0.377	1913.2	721.	
13		38.2	20.0	1.909	129.6	247.		200	8	14.4	200.	0.072	7841.4	565.	
13	0.5	9.87	20.0	0.492	530.1	261.		250	32				3017.7		
16	2	26.8	20.0	1.342	197.9	266.		320					4976.3		
20		18.8	20.0	0.940	311.0	292.		400					7803.7		
25		12.6	20.0	0.632	487.7	308.		500					12222.		
32		8.40	20.0	0.419	801.1	336.		650					20689.		
40		14.4	50.0	0.288	1253.5	361.		800					31366.		
40	8	65.1	50.0	1.301	301.6	392.									

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TEST No Ep- 9 S- 3 LINE DIRECTION TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	2040	20.0	101.8	6.283	640.		50	8	83.5	50.0	1.667	478.3	797.	
2.5		957.	20.0	47.77	18.85	901.		50	2	20.7	50.0	0.413	1960.4	810.	
3.2		591.	20.0	29.52	31.39	927.		65	8	52.8	50.0	1.056	817.0	863.	
4		367.	20.0	18.33	49.48	907.		80		37.8	50.0	0.756	1244.1	941.	
5		224.	20.0	11.20	77.75	871.		100		22.5	50.0	0.450	1950.9	878.	
6.5		126.	20.0	6.293	132.0	831.		130		13.2	50.0	0.264	3305.7	873.	
8		80.8	20.0	4.033	200.3	808.		160		21.5	100.	0.215	5014.0	1078	
10		52.0	20.0	2.596	313.4	814.		160	32	98.6	100.	0.985	1206.4	1188	
10	2	212.	20.0	10.61	75.40	800.		200		79.3	100.	0.792	1913.2	1515	
13		97.2	20.0	4.603	129.6	597.		200	8	34.9	200.	0.174	7841.4	1364	
13	0.5	23.0	20.0	1.150	530.1	610.		250	32				3017.7		
16	2	61.7	20.0	3.081	197.9	610.		320					4976.3		
20		39.5	20.0	1.972	311.0	613.		400					7803.7		
25		25.1	20.0	1.256	487.7	613.		500					12222.		
32		36.7	50.0	0.734	801.1	588.		650					20689.		
40		26.2	50.0	0.524	1253.5	657.		800					31366.		
40	8	108.	50.0	2.158	301.6	651.									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 8 / Nov./1989

TEST No. Ep- 9 S- 4 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	217.	10.0	21.70	6.283	136.		50	8	31.7	100.	0.317	478.3	152.	
2.5		62.7	10.0	6.261	18.85	118.		50	2	14.1	200.	0.070	1960.4	137.	
3.2		76.6	20.0	3.826	31.39	120.		65	8	22.2	100.	0.222	817.0	181.	
4		98.4	50.0	1.966	49.48	97.3		80		29.5	186.	0.158	1244.1	195.	
5		57.9	50.0	1.156	77.75	89.9		100		22.6	200.	0.113	1950.9	221.	
6.5		31.6	50.0	0.632	132.0	83.4		130		13.9	200.	0.069	3305.7	228.	
8		20.6	50.0	0.412	200.3	82.5		160		9.43	200.	0.047	5014.0	236.	
10		26.9	100.	0.269	313.4	84.0		160	32	39.0	200.	0.194	1206.4	234.	
10	2	146.	100.	1.446	75.40	109.		200		24.4	200.	0.122	1913.2	233.	
13		83.4	100.	0.833	129.6	108.		200	8	6.03	200.	0.030	7841.4	235.	
13	0.5	15.4	100.	0.154	530.1	81.6		250	32				3017.7		
16	2	51.5	100.	0.514	197.9	102.		320					4976.3		
20		29.6	100.	0.296	311.0	92.1		400					7803.7		
25		17.6	100.	0.176	487.7	85.8		500					12222.		
32		20.0	180.	0.111	801.1	88.9		650					20689.		
40		16.3	200.	0.081	1253.5	102.		800					31366.		
40	8	37.0	100.	0.370	301.6	112.									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 8 / Nov./1989

TEST No. Ep- 9 S- 5 LINE DIRECTION N-S TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	189.	10.0	18.90	6.283	119.		50	8	24.6	100.	0.246	478.3	118.	
2.5		67.6	10.0	6.755	18.85	127.		50	2	6.00	100.	0.060	1960.4	118.	
3.2		82.3	20.0	4.110	31.39	129.		65	8	29.2	171.	0.170	817.0	139.	
4		52.8	20.0	2.638	49.48	131.		80		12.8	100.	0.128	1244.1	159.	
5		32.9	20.0	1.643	77.75	128.		100		16.0	161.	0.099	1950.9	193.	
6.5		47.6	50.0	0.951	132.0	126.		130		6.98	100.	0.069	3305.7	228.	
8		30.5	50.0	0.609	200.3	122.		160		5.34	100.	0.053	5014.0	266.	
10		17.0	50.0	0.340	313.4	107.		160	32	19.9	100.	0.199	1206.4	240.	
10	2	73.3	50.0	1.464	75.40	110.		200		14.6	100.	0.146	1913.2	279.	
13		35.8	50.0	0.716	129.6	92.8		200	8	8.29	199.	0.041	7841.4	322.	
13	0.5	8.51	50.0	0.170	530.1	90.1		250	32				3017.7		
16	2	21.8	50.0	0.437	197.9	86.5		320					4976.3		
20		26.8	100.	0.268	311.0	83.3		400					7803.7		
25		17.4	100.	0.174	487.7	84.9		500					12222.		
32		11.6	100.	0.116	801.1	92.9		650					20689.		
40		8.25	100.	0.082	1253.5	103.		800					31366.		
40	8	34.3	100.	0.343	301.6	104.									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 15 / Nov./1989

TEST No Ep- 9 S- 6 LINE DIRECTION N30E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	4100	24.7	165.8	6.283	1042		50	8	79.9	16.1	4.949	478.3	2367	
2.5		1010	19.5	51.66	18.85	974.		50	2	21.9	16.3	1.344	1960.4	2635	
3.2		560.	48.6	30.04	31.39	943.		65	8	70.6	20.0	3.527	817.0	2882	
4		360.	20.0	17.99	49.48	890.		80		51.3	20.0	2.562	1244.1	3187	
5		213.	20.0	10.64	77.75	827.		100		35.0	18.8	1.856	1950.9	3621	
6.5		118.	20.0	5.916	132.0	781.		130		23.2	20.0	1.161	3305.7	3838	
8		76.5	20.0	3.818	200.3	765.		160		13.0	19.8	0.659	5014.0	3304	
10		44.1	18.3	2.409	313.4	755.		160	32	38.8	19.9	1.945	1206.4	2347	
10	2	177.	18.1	9.785	75.40	738.		200		24.9	20.0	1.245	1913.2	2382	
13		124.	20.0	6.234	129.6	808.		200	8	9.12	21.4	0.425	7841.4	3333	
13	0.5	31.3	20.0	1.562	530.1	828.		250	32				3017.7		
16	2	100.	20.0	5.024	197.9	994.		320					4976.3		
20		77.0	17.7	4.339	311.0	1349		400					7803.7		
25		70.7	20.0	3.531	487.7	1722		500					12222.		
32		52.8	20.0	2.636	801.1	2112		650					20689.		
40		38.0	20.0	1.900	1253.5	2382		800					31366.		
40	8	141.	20.0	7.070	301.6	2132									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 15 / Nov./1989

TEST No. Ep- 9 S- 7 LINE DIRECTION TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	1447	20.0	72.24	6.283	454.		50	8	35.0	20.0	1.747	478.3	836.	
2.5		674.	20.0	33.66	18.85	635.		50	2	9.26	20.0	0.462	1960.4	906.	
3.2		478.	20.0	23.86	31.39	749.		65	8	17.3	20.0	0.866	817.0	708.	
4		366.	20.0	18.31	49.48	906.		80		10.7	20.0	0.537	1244.1	668.	
5		278.	20.0	13.92	77.75	1082		100		18.1	50.0	0.361	1950.9	704.	
6.5		188.	20.0	9.418	132.0	1243		130		12.0	50.0	0.240	3305.7	793.	
8		138.	20.0	6.928	200.3	1388		160		8.03	50.0	0.160	5014.0	802.	
10		93.3	20.0	4.658	313.4	1460		160	32	30.8	50.0	0.615	1206.4	742.	
10	2	381.	20.0	19.05	75.40	1436		200		19.5	47.8	0.408	1913.2	777.	
13		215.	20.0	10.74	129.6	1392		200	8	5.20	48.1	0.108	7841.4	847.	
13	0.5	53.2	20.0	2.658	530.1	1409		250	32				3017.7		
16	2	137.	20.0	6.849	197.9	1355		320					4976.3		
20		82.9	20.0	4.139	311.0	1287		400					7803.7		
25		48.7	20.0	2.434	487.7	1187		500					12222.		
32		28.0	20.0	1.397	801.1	1119		650					20689.		
40		16.8	20.0	0.842	1253.5	1056		800					31366.		
40	8	63.9	20.0	3.192	301.6	963.									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE Ⅲ) DATE 15 / Nov./1989

TEST No Ep- 9 S- 8 LINE DIRECTION N10E TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	2693	20.0	134.4	6.283	844.		50	8	108.	20.0	5.409	478.3	2587	
2.5		1024	20.0	51.16	18.85	964.		50	2	26.3	20.0	1.314	1960.4	2576	
3.2		614.	20.0	30.69	31.39	963.		65	8	60.0	20.0	2.998	817.0	2449	
4		390.	20.0	19.51	49.48	965.		80		40.0	20.0	2.027	1244.1	2522	
5		258.	20.0	12.88	77.75	1001		100		26.5	19.9	1.328	1950.9	2591	
6.5		165.	20.0	8.240	132.0	1088		130		14.7	20.0	0.738	3305.7	2440	
8		118.	20.0	5.934	200.3	1189		160		9.56	20.0	0.478	5014.0	2397	
10		86.9	20.0	4.339	313.4	1360		160	32	31.0	20.0	1.553	1206.4	1874	
10	2	385.	20.2	19.25	75.40	1452		200		19.2	20.0	0.959	1913.2	1835	
13		248.	20.0	12.42	129.6	1610		200	8	5.94	20.0	0.296	7841.4	2321	
13	0.5	56.6	20.0	2.828	530.1	1499		250	32				3017.7		
16	2	143.	16.8	8.533	197.9	1689		320					4976.3		
20		111.	20.0	5.557	311.0	1728		400					7803.7		
25		74.7	19.6	3.800	487.7	1853		500					12222.		
32		45.3	16.8	2.700	801.1	2163		650					20689.		
40		40.1	20.0	2.002	1253.5	2510		800					31366.		
40	8	165.	20.0	8.242	301.6	2486									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 15 / Nov./1989

TEST No. Ep- 9 S- 9 LINE DIRECTION TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	1981	20.0	98.91	6.283	622.		50	8	53.1	19.2	2.758	478.3	1319	
2.5		880.	20.0	43.97	18.85	829.		50	2	11.8	19.2	0.612	1960.4	1200	
3.2		612.	20.0	30.58	31.39	960.		65	8	35.4	20.0	1.769	817.0	1445	
4		419.	20.0	20.93	49.48	1036		80		22.4	19.9	1.125	1244.1	1400	
5		276.	20.0	13.82	77.75	1075		100		12.6	20.0	0.633	1950.9	1235	
6.5		175.	20.0	8.755	132.0	1156		130		14.7	40.3	0.365	3305.7	1207	
8		120.	20.0	5.998	200.3	1201		160		10.7	43.8	0.246	5014.0	1233	
10		77.6	20.0	3.877	313.4	1215		160	32	63.1	44.5	1.417	1206.4	1710	
10	2	312.	20.0	15.58	75.40	1175		200		33.0	36.5	0.902	1913.2	1726	
13		191.	20.0	9.552	129.6	1238		200	8	5.76	36.8	0.156	7841.4	1223	
13	0.5	48.1	20.0	2.402	530.1	1273		250	32				3017.7		
16	2	139.	20.0	6.971	197.9	1380		320					4976.3		
20		95.3	20.0	4.761	311.0	1481		400					7803.7		
25		55.5	20.0	2.774	487.7	1353		500					12222.		
32		31.3	20.0	1.568	801.1	1256		650					20689.		
40		19.4	20.0	0.971	1253.5	1217		800					31366.		
40	8	88.7	20.0	4.435	301.6	1338									

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 15 / Nov./1989

TEST No. Ep- 9 S-10 LINE DIRECTION TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)		AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ωm)	
1.5	0.5	386.	20.0	19.31	6.283	121.		50	8	31.1	50.0	0.623	478.3	298.	
2.5		153.	20.0	7.660	18.85	144.		50	2	7.28	50.0	0.145	1960.4	284.	
3.2		102.	20.0	5.128	31.39	161.		65	8	15.5	50.0	0.310	817.0	253.	
4		71.4	20.0	3.567	49.48	177.		80		18.3	88.4	0.207	1244.1	258.	
5		48.8	20.0	2.439	77.75	190.		100		14.2	89.9	0.158	1950.9	308.	
6.5		32.0	20.0	1.599	132.0	211.		130		8.49	89.8	0.094	3305.7	311.	
8		22.2	20.0	1.110	200.3	222.		160		7.15	95.8	0.074	5014.0	371.	
10		14.0	20.0	0.700	313.4	219.		160	32	82.1	96.1	0.854	1206.4	1030	
10	2	60.7	20.0	3.034	75.40	229.		200		60.9	100.	0.608	1913.2	1163	
13		39.9	20.0	1.995	129.6	259.		200	8	6.02	100.	0.054	7841.4	423.	
13	0.5	9.30	20.0	0.464	530.1	246.		250	32				3017.7		
16	2	30.5	20.0	1.526	197.9	302.		320					4976.3		
20		22.7	20.0	1.136	311.0	352.		400					7803.7		
25		14.7	20.0	0.738	487.7	360.		500					12222.		
32		20.0	50.0	0.400	801.1	320.		650					20689.		
40		12.2	50.0	0.245	1253.5	307.		800					31366.		
40	8	52.8	50.0	1.055	301.6	318.									