

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- 9 S-11 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		4726	20.0	235.8	6.283	1482	50	8	102.	20.0	5.100	478.3	2439
2.5		2103	20.0	104.9	18.85	1977	50	2	25.1	20.0	1.258	1960.4	2466
3.2		1346	20.0	67.22	31.39	2110	65		51.2	20.0	2.560	817.0	2092
4		904.	20.0	45.13	49.48	2233	80		28.6	20.0	1.429	1244.1	1778
5	0.5	608.	20.0	30.35	77.75	2360	100	8	16.8	20.0	0.842	1950.9	1643
6.5		353.	20.0	17.66	132.0	2331	130		14.4	30.5	0.471	3305.7	1557
8		227.	20.0	11.35	200.3	2273	160		6.03	23.6	0.255	5014.0	1279
10		147.	20.0	7.363	313.4	2308	160	32	20.8	20.0	1.038	1206.4	1252
10		538.	20.0	28.86	75.40	2025	200		22.4	35.9	0.625	1913.2	1196
13	2	321.	20.0	16.06	129.6	2081	200	8	5.87	37.4	0.156	7841.4	1223
13	0.5	90.3	20.0	4.509	530.1	2390	250					3017.7	
16		221.	20.0	11.07	197.9	2191	320					4976.3	
20		122.	20.0	7.242	311.0	2252	400					7803.7	
25	2	96.4	20.0	4.814	487.7	2348	500	32				12222.	
32		63.6	20.0	3.177	801.1	2545	650					20689.	
40		41.8	20.0	2.089	1253.5	2619	800					31366.	
40	8	172.	20.0	8.600	301.6	2594							

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-10 S-1 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		443.	20.0	22.12	6.283	139.	50	8	95.0	100.	0.949	478.3	454.
2.5		220.	20.0	11.00	18.85	207.	50	2	23.5	100.	0.235	1960.4	461.
3.2		141.	20.0	7.087	31.39	223.	65		58.9	100.	0.588	817.0	480.
4		97.4	20.0	4.869	49.48	241.	80		42.4	100.	0.423	1244.1	526.
5	0.5	64.7	20.0	3.235	77.75	252.	100	8	28.0	100.	0.280	1950.9	546.
6.5		40.3	20.0	2.017	132.0	266.	130		16.8	100.	0.168	3305.7	555.
8		28.0	20.0	1.433	200.3	287.	160		15.5	154.	0.100	5014.0	501.
10		19.3	20.0	0.966	313.4	303.	160		7.25	164.	0.044	1206.4	530.
10	2	75.1	20.0	3.754	75.40	283.	200	32	36.6	146.	0.249	1913.2	476.
13		43.2	20.0	2.161	129.6	280.	200	8	9.50	146	0.064	7841.4	502.
13	0.5	28.2	50.0	0.564	530.1	299.	250					3017.7	
16		64.1	50.0	1.282	197.9	254.	320					4976.3	
20		39.4	50.0	0.788	311.0	245.	400					7803.7	
25	2	27.6	50.0	0.553	487.7	270.	500	32				12222.	
32		40.7	100.	0.407	801.1	326.	650					20689.	
40		30.8	100.	0.308	1253.5	386.	800					31366.	
40	8	126.	100.	1.268	301.6	382.							

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-10 S-2 LINE DIRECTION 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		122.	10.0	12.18	6.283	76.5	50	8	53.7	100.	0.537	478.3	257.
2.5		43.7	10.0	4.366	18.85	82.3	50	2	14.6	100.	0.146	1960.4	286.
3.2		57.0	20.0	2.849	31.39	89.4	65		34.1	100.	0.341	817.0	279.
4	0.5	45.1	20.0	2.254	49.48	112.	80		23.3	100.	0.232	1244.1	289.
5		36.5	20.0	1.823	77.75	142.	100	8	15.3	100.	0.152	1950.9	297.
6.5		45.4	50.0	0.908	132.0	120.	130		19.3	199.	0.096	3305.7	317.
8		51.4	50.0	1.028	200.3	206.	160		12.0	199.	0.060	5014.0	301.
10		35.6	50.0	0.712	313.4	223.	160					1206.4	
10		154.	100.	1.539	75.40	116.	200	32				1913.2	
13	2	96.5	100.	0.965	129.6	125.	200	8				7841.4	
13	0.5	39.3	100.	0.393	530.1	208.	250					3017.7	
16		75.7	100.	0.756	197.9	150.	320					4976.3	
20		49.6	100.	0.496	311.0	154.	400					7803.7	
25	2	35.6	100.	0.356	487.7	174.	500	32				12222.	
32		26.2	100.	0.262	801.1	210.	650					20689.	
40		17.9	100.	0.178	1253.5	223.	800					31366.	
40	8	75.8	100.	0.757	301.6	228.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 31 / Oct. / 1989

TEST No Ep-11 S-1 LINE DIRECTION N60W 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		417.	10.0	41.66	6.283	262.	50	8	110.	100.	1.107	478.3	530.
2.5		187.	10.0	18.70	18.85	353.	50	2	25.8	100.	0.258	1960.4	506.
3.2		119.	10.0	11.89	31.39	373.	65		68.0	100.	0.680	817.0	556.
4	0.5	155.	20.0	7.759	49.48	384.	80		43.5	100.	0.435	1244.1	541.
5		97.0	20.0	4.849	77.75	377.	100	8	58.5	200.	0.292	1950.9	570.
6.5		59.0	20.0	2.945	132.0	389.	130		36.5	200.	0.182	3305.7	602.
8		40.1	20.0	2.002	200.3	401.	160		23.2	199.	0.116	5014.0	582.
10		66.0	50.0	1.318	313.4	413.	160		103.	199.	0.517	1206.4	624.
10		241.	50.0	4.828	75.40	364.	200	32	66.9	199.	0.334	1913.2	639.
13	2	137.	50.0	2.754	129.6	357.	200	8	15.2	199.	0.076	7841.4	596.
13	0.5	38.3	50.0	0.766	530.1	406.	250					3017.7	
16		94.0	50.0	1.880	197.9	372.	320					4976.3	
20		69.8	50.0	1.396	311.0	434.	400					7803.7	
25	2	50.8	50.0	1.017	487.7	496.	500	32				12222.	
32		61.6	100.	0.616	801.1	494.	650					20689.	
40		41.4	100.	0.413	1253.5	518.	800					31366.	
40	8	178.	100.	1.780	301.6	537.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 31 / Oct. / 1989

TEST No. Ep-11 S-2 LINE DIRECTION N30W 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		1273	10.0	127.0	6.283	798.	50	8	132.	50.0	2.636	478.3	1261
2.5		446.	10.0	44.54	18.85	840.	50	2	32.7	50.0	0.655	1960.4	1284
3.2		288.	10.0	28.75	31.39	903.	65		79.3	50.0	1.584	817.0	1294
4		200.	10.0	20.02	49.48	989.	80		48.9	50.0	0.977	1244.1	1240
5	0.5	143.	10.0	14.31	77.75	1113	100	8	53.2	100.	0.532	1950.9	1038
6.5		102.	10.0	10.23	132.0	1350	130		27.1	100.	0.271	3305.7	896.
8		156.	20.0	7.824	200.3	1567	160		16.1	100.	0.161	5014.0	807.
10		112.	20.0	5.610	313.4	1758	160		55.7	100.	0.557	1206.4	672.
10	2	459.	20.0	22.95	75.40	1730	200	32	35.3	100.	0.353	1913.2	675.
13		287.	20.0	14.37	129.6	1862	200	8	20.7	200.	0.103	7841.4	808.
13	0.5	72.3	20.0	3.613	530.1	1915	250					3017.7	
16		192.	20.0	9.588	197.9	1898	320					4976.3	
20		111.	20.0	5.547	311.0	1725	400					7803.7	
25	2	138.	50.0	2.759	487.7	1346	500	32				12222.	
32		73.7	50.0	1.473	801.1	1180	650					20689.	
40		53.0	50.0	1.059	1253.5	1328	800					31366.	
40	8	218.	50.0	4.370	301.6	1318							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE II) DATE 31 / Oct. / 1989

TEST No. Ep-11 S-3 LINE DIRECTION N85W 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		525.	20.0	26.23	6.283	165.	50	8	116.	100.	1.159	478.3	554.
2.5		238.	20.0	11.88	18.85	224.	50	2	27.9	100.	0.279	1960.4	547.
3.2		150.	20.0	7.516	31.39	236.	65		81.2	100.	0.811	817.0	663.
4		102.	20.0	5.105	49.48	253.	80		60.4	100.	0.604	1244.1	751.
5	0.5	67.7	20.0	3.383	77.75	263.	100	8	44.8	100.	0.448	1950.9	874.
6.5		42.1	20.0	2.101	132.0	277.	130		64.2	200.	0.321	3305.7	1061
8		73.1	50.0	1.461	200.3	293.	160		44.7	200.	0.223	5014.0	1118
10		19.5	50.0	0.973	313.4	305.	160		188.	200.	0.941	1206.4	1135
10	2	196.	50.0	3.930	75.40	296.	200	32	123.	200.	0.618	1913.2	1182
13		118.	50.0	2.363	129.6	306.	200	8	29.5	200.	0.147	7841.4	1153
13	0.5	29.9	50.0	0.597	530.1	317.	250					3017.7	
16		178.	100.	1.778	197.9	352.	320					4976.3	
20		126.	100.	1.259	311.0	392.	400					7803.7	
25	2	82.3	100.	0.822	487.7	401.	500	32				12222.	
32		52.3	100.	0.522	801.1	418.	650					20689.	
40		76.7	200.	0.383	1253.5	480.	800					31366.	
40	8	158.	100.	1.586	301.6	478.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No Ep-12 S-1 LINE DIRECTION N20W 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		904.	50.0	18.07	6.283	114.	50	8	44.5	100.	0.445	478.3	213.
2.5		201.	50.0	4.030	18.85	76.0	50	2	11.2	100.	0.112	1960.4	220.
3.2		110.	50.0	2.203	31.39	69.2	65		28.8	100.	0.288	817.0	235.
4		73.9	50.0	1.476	49.48	73.0	80		20.8	100.	0.208	1244.1	259.
5	0.5	49.6	50.0	0.991	77.75	77.1	100	8	14.4	100.	0.144	1950.9	281.
6.5		30.6	50.0	0.613	132.0	80.9	130		17.0	186.	0.091	3305.7	301.
8		21.5	50.0	0.431	200.3	86.3	160		12.3	199.	0.061	5014.0	306.
10		15.5	50.0	0.310	313.4	97.2	160		51.4	199.	0.257	1206.4	310.
10	2	67.6	50.0	1.350	75.40	102.	200	32	34.3	199.	0.171	1913.2	327.
13		46.6	50.0	0.931	129.6	120.	200	8	8.63	199.	0.043	7841.4	337.
13	0.5	10.8	50.0	0.216	530.1	115.	250					3017.7	
16		33.2	50.0	0.665	197.9	132.	320					4976.3	
20		23.6	50.0	0.472	311.0	147.	400					7803.7	
25	2	17.0	50.0	0.341	487.7	166.	500	32				12222.	
32		22.1	100.	0.221	801.1	177.	650					20689.	
40		15.6	100.	0.156	1253.5	196.	800					31366.	
40	8	62.7	100.	0.626	301.6	189.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-12 S-2 LINE DIRECTION M40E 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		798.	50.0	15.95	6.283	100.	50	8	61.1	50.0	1.220	478.3	584.
2.5		354.	50.0	7.073	18.85	133.	50	2	13.4	50.0	0.267	1960.4	523.
3.2		232.	50.0	4.634	31.39	146.	65		36.1	50.0	0.722	817.0	590.
4		163.	50.0	3.266	49.48	162.	80		25.4	50.0	0.509	1244.1	633.
5	0.5	109.	50.0	2.186	77.75	170.	100	8	15.6	50.0	0.312	1950.9	609.
6.5		64.9	50.0	1.296	132.0	171.	130		18.2	100.	0.182	3305.7	602.
8		44.7	50.0	0.892	200.3	179.	160		12.1	100.	0.121	5014.0	607.
10		32.4	50.0	0.647	313.4	203.	160		39.6	100.	0.395	1206.4	477.
10	2	144.	50.0	2.884	75.40	218.	200	32	27.7	100.	0.277	1913.2	530.
13		92.6	50.0	1.850	129.6	240.	200	8	12.2	140.	0.087	7841.4	682.
13	0.5	21.1	50.0	0.423	530.1	224.	250					3017.7	
16		69.7	50.0	1.393	197.9	276.	320					4976.3	
20		53.2	50.0	1.063	311.0	331.	400					7803.7	
25	2	40.1	50.0	0.802	487.7	391.	500	32				12222.	
32		30.5	50.0	0.609	801.1	488.	650					20689.	
40		21.8	50.0	0.437	1253.5	548.	800					31366.	
40	8	101.	50.0	2.018	301.6	609.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-12 S-3 LINE DIRECTION N20E 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		416.	20.0	20.80	6.283	131.	50	8	35.1	100.	0.351	478.3	168.
2.5		68.8	20.0	3.433	18.85	64.7	50	2	8.25	100.	0.082	1960.4	161.
3.2		36.4	20.0	1.818	31.39	57.1	65		24.6	100.	0.246	817.0	201.
4	0.5	21.5	20.0	1.074	49.48	53.1	80		17.9	100.	0.179	1244.1	223.
5		12.2	19.5	0.625	77.75	48.6	100	8	12.4	100.	0.124	1950.9	242.
6.5		9.20	25.9	0.354	132.0	46.7	130		11.3	136.	0.083	3305.7	274.
8		12.7	50.0	0.255	200.3	51.1	160		10.2	166.	0.061	5014.0	306.
10		8.81	50.0	0.175	313.4	54.9	160		45.9	166.	0.275	1206.4	332.
10	2	36.7	50.0	0.733	75.40	55.3	200	32	37.2	188.	0.198	1913.2	379.
13		24.4	50.0	0.488	129.6	63.3	200	8	8.35	189.	0.044	7841.4	345.
13	0.5	5.71	50.0	0.114	530.1	60.4	250					3017.7	
16		17.3	50.0	0.345	197.9	68.3	320					4976.3	
20		12.5	50.0	0.251	311.0	78.1	400					7803.7	
25	2	11.4	58.7	0.194	487.7	94.6	500	32				12222.	
32		11.3	78.9	0.144	801.1	115.	650					20689.	
40		11.0	100.	0.110	1253.5	138.	800					31366.	
40	8	46.4	100.	0.463	301.6	140.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE II) DATE 3 / Nov. / 1989

TEST No Ep-13 S-1 LINE DIRECTION N20W 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		1548	20.0	77.23	6.283	485.	50	8	33.5	50.0	0.670	478.3	321.
2.5		462.	20.0	23.06	18.85	435.	50	2	8.13	50.0	0.162	1960.4	318.
3.2		272.	20.0	13.60	31.39	427.	65		18.3	50.0	0.366	817.0	299.
4		165.	20.0	8.279	49.48	410.	80		12.7	50.0	0.254	1244.1	316.
5	0.5	97.1	20.0	4.847	77.75	377.	100	8	5.42	30.9	0.174	1950.9	340.
6.5		60.4	20.0	3.017	132.0	398.	130		5.46	50.0	0.109	3305.7	360.
8		42.7	20.0	2.131	200.3	427.	160		5.75	78.7	0.073	5014.0	366.
10		27.6	20.0	1.381	313.4	433.	160		34.3	100.	0.343	1206.4	414.
10		120.	20.0	6.027	75.40	454.	200	32	23.0	100.	0.229	1913.2	438.
13	2	65.8	20.0	3.284	129.6	426.	200	8	6.50	131.	0.049	7841.4	384.
13	0.5	38.4	50.0	0.768	530.1	407.	250					3017.7	
16		100.	50.0	2.002	197.9	396.	320					4976.3	
20		54.7	50.0	1.093	311.0	340.	400					7803.7	
25	2	22.2	40.0	0.554	487.7	270.	500	32				12222.	
32		15.3	50.0	0.306	801.1	245.	650					20689.	
40		11.4	50.0	0.228	1253.5	286.	800					31366.	
40	8	47.6	50.0	0.951	301.6	287.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 3 / Nov./1989

TEST No Ep-13 S- 2 LINE DIRECTION N35W 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		1910	20.0	95.33	6.283	599.		50	8	77.9	50.0	1.557	478.3	745.
2.5		688.	20.0	34.37	18.85	648.		50	2	13.6	50.0	0.273	1960.4	535.
3.2		422.	20.0	21.11	31.39	663.		65		37.1	42.7	0.867	817.0	708.
4		272.	20.0	13.61	49.48	673.		80		22.7	44.1	0.515	1244.1	641.
5	0.5	171.	20.0	8.573	77.75	667.		100	8	15.8	50.0	0.315	1950.9	615.
6.5		108.	20.0	5.398	132.0	713.		130		5.20	38.7	0.134	3305.7	443.
8		79.9	20.0	3.990	200.3	799.		160		3.89	48.8	0.079	5014.0	396.
10		55.2	20.0	2.760	313.4	865.		160		21.3	49.0	0.434	1206.4	524.
10		251.	20.0	12.57	75.40	948.		200	32	10.8	40.6	0.266	1913.2	509.
13	2	149.	20.0	7.438	129.6	946.		200	8	2.10	41.2	0.051	7841.4	400.
13	0.5	33.2	20.0	1.662	530.1	881.		250					3017.7	
16		98.3	20.0	4.909	197.9	972.		320					4976.3	
20		56.6	20.0	2.825	311.0	879.		400					7803.7	
25	2	24.6	20.0	1.232	487.7	601.		500	32				12222.	
32		19.5	24.4	0.800	801.1	641.		650					20689.	
40		17.6	37.6	0.467	1253.5	585.		800					31366.	
40	8	102.	37.8	2.692	301.6	812.								

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 3 / Nov. /1989

TEST No. Ep-13 S-3 LINE DIRECTION N15W 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		296.	20.0	14.81	6.283	93.1	50	8	36.4	100.	0.363	478.3	174.
2.5		65.0	20.0	3.248	18.85	61.2	50	2	4.04	100.	0.040	1960.4	78.4
3.2		36.6	20.0	1.831	31.39	57.5	65		20.8	100.	0.208	817.0	170.
4		22.8	20.0	1.139	49.48	56.4	80		12.2	100.	0.122	1244.1	152.
5	0.5	14.1	20.0	0.705	77.75	54.8	100	8	9.80	128.	0.075	1950.9	146.
6.5		19.0	50.0	0.380	132.0	50.2	130		8.12	199.	0.040	3305.7	132.
8		12.8	50.0	0.255	200.3	51.1	160		5.26	180.	0.028	5014.0	140.
10		8.69	50.0	0.173	313.4	54.2	160		28.2	187.	0.150	1206.4	181.
10	2	43.9	50.0	0.877	75.40	66.1	200	32	20.1	199.	0.100	1913.2	191.
13		27.2	50.0	0.544	129.6	70.5	200	8	3.79	199.	0.018	7841.4	141.
13	0.5	5.54	50.0	0.110	530.1	58.3	250					3017.7	
16		18.5	50.0	0.369	197.9	73.0	320					4976.3	
20		12.8	50.0	0.255	311.0	79.3	400					7803.7	
25	2	9.16	50.0	0.183	487.7	89.3	500	32				12222.	
32		5.71	50.0	0.114	801.1	91.3	650					20689.	
40		7.39	100.	0.073	1253.5	91.5	800					31366.	
40	8	66.5	100.	0.664	301.6	200.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-13 S-4 LINE DIRECTION NS0W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R _r (Ω)	K	ρ _a (Ωm)	AB/2	MN/2	V (mV)	I (mA)	R _r (Ω)	K	ρ _a (Ωm)
1.5		2531	50.0	50.57	6.283	318.	50	8	57.0	50.0	1.139	478.3	545.
2.5		995.	50.0	19.88	18.85	375.	50	2	14.2	50.0	0.283	1960.4	555.
3.2		635.	50.0	12.69	31.39	398.	65		32.1	50.0	0.641	817.0	524.
4		430.	50.0	8.609	49.48	426.	80		21.6	50.0	0.431	1244.1	536.
5	0.5	292.	50.0	5.848	77.75	455.	100	8	11.9	50.0	0.239	1950.9	466.
6.5		173.	50.0	3.471	132.0	458.	130		13.5	100.	0.135	3305.7	446.
8		112.	50.0	2.254	200.3	452.	160		18.2	200.	0.091	5014.0	456.
10		74.4	50.0	1.487	313.4	466.	160		58.5	200.	0.292	1206.4	352.
10		282.	50.0	5.652	75.40	426.	200	32	42.2	190.	0.221	1913.2	423.
13	2	173.	50.0	3.473	129.6	450.	200	8	13.4	190.	0.070	7841.4	549.
13	0.5	46.4	50.0	0.928	530.1	492.	250					3017.7	
16		114.	50.0	2.287	197.9	453.	320					4976.3	
20		75.4	50.0	1.506	311.0	468.	400					7803.7	
25	2	53.1	50.0	1.062	487.7	518.	500	32				12222.	
32		33.7	50.0	0.674	801.1	540.	650					20689.	
40		20.8	50.0	0.416	1253.5	522.	800					31366.	
40	8	84.2	50.0	1.683	301.6	508.							

THE VERTICAL ELECTRICAL SOUNDING.

THE REPUBLIC OF RWANDA

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

TEST No. Ep-13 S-5 LINE DIRECTION 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		1020	50.0	20.37	6.283	128.	50	8	45.1	100.	0.451	478.3	216.
2.5		267.	50.0	5.352	18.85	101.	50	2	8.99	100.	0.089	1960.4	175.
3.2		154.	50.0	3.089	31.39	97.0	65		29.4	100.	0.293	817.0	239.
4	0.5	97.8	50.0	1.953	49.48	96.6	80		21.2	100.	0.212	1244.1	264.
5		66.0	50.0	1.319	77.75	103.	100	8	15.5	100.	0.155	1950.9	302.
6.5		42.3	50.0	0.845	132.0	112.	130		10.6	100.	0.106	3305.7	250.
8		28.8	50.0	0.577	200.3	116.	160		13.2	173.	0.076	5014.0	381.
10		19.1	50.0	0.381	313.4	119.	160	32	60.5	173.	0.349	1206.4	421.
10	2	83.8	50.0	1.675	75.40	126.	200		47.3	199.	0.236	1913.2	452.
13		49.4	50.0	0.987	129.6	128.	200	8	10.4	199.	0.052	7841.4	408.
13	0.5	11.4	50.0	0.228	530.1	121.	250					3017.7	
16		32.5	50.0	0.650	197.9	129.	320					4976.3	
20		17.1	50.0	0.341	311.0	106.	400					7803.7	
25	2	11.2	50.0	0.224	487.7	109.	500	32				12222.	
32		7.73	50.0	0.154	801.1	123.	650					20689.	
40		12.6	100.	0.126	1253.5	158.	800					31366.	
40	8	64.4	100.	0.644	301.6	194.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 21 / Nov./1989

TEST No Ep-13 S-6 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		1984	20.0	99.04	6.283	622.	50	8	26.1	50.0	0.521	478.3	249.
2.5		607.	20.0	30.32	18.85	572.	50	2	5.33	50.0	0.106	1960.4	208.
3.2		339.	20.0	16.94	31.39	532.	65		14.7	50.0	0.294	817.0	240.
4		198.	20.0	9.895	49.48	490.	80		7.11	36.4	0.195	1244.1	243.
5	0.5	116.	20.0	5.798	77.75	451.	100	8	4.27	32.9	0.129	1950.9	252.
6.5		67.1	20.0	3.349	132.0	442.	130		2.06	25.0	0.082	3305.7	271.
8		41.5	20.0	2.074	200.3	415.	160		2.26	43.7	0.051	5014.0	256.
10		23.1	20.0	1.155	313.4	362.	160		12.0	44.3	0.270	1206.4	326.
10		95.1	20.0	4.749	75.40	358.	200	32	9.12	47.4	0.192	1913.2	367.
13	2	46.2	20.0	2.308	129.6	299.	200	8	1.89	47.6	0.039	7841.4	306.
13	0.5	11.4	20.0	0.572	530.1	303.	250					3017.7	
16		29.7	20.0	1.486	197.9	284.	320					4976.3	
20		19.0	20.0	0.948	311.0	295.	400					7803.7	
25	2	11.5	20.0	0.574	487.7	280.	500	32				12222.	
32		9.06	26.9	0.336	801.1	270.	650					20689.	
40		7.73	41.3	0.186	1253.5	233.	800					31366.	
40	8	38.5	41.5	0.927	301.6	280.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 21 / Nov. / 1989

TEST No. Ep-13 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		4790	20.0	239.0	6.283	1502	50	8	17.0	27.3	0.622	478.3	298.
2.5		1236	20.0	61.71	18.85	1163	50	2	5.41	35.8	0.150	1960.4	294.
3.2		618.	20.0	30.84	31.39	968.	65		10.6	30.1	0.352	817.0	288.
4		321.	20.0	16.04	49.48	794.	80		5.83	23.2	0.250	1244.1	311.
5	0.5	176.	20.0	8.788	77.75	683.	100	8	3.48	26.5	0.131	1950.9	256.
6.5		89.0	20.0	4.443	132.0	587.	130		3.14	47.7	0.065	3305.7	215.
8		51.4	20.0	2.569	200.3	515.	160		1.35	32.5	0.041	5014.0	206.
10		28.5	20.0	1.424	313.4	446.	160		5.64	32.8	0.171	1206.4	206.
10	2	110.	20.0	5.516	75.40	416.	200	32	4.47	43.1	0.103	1913.2	197.
13		50.7	20.0	2.534	129.6	328.	200	8	1.07	43.3	0.024	7841.4	188.
13	0.5	13.2	20.0	0.659	530.1	349.	250					3017.7	
16		27.5	20.0	1.377	197.9	273.	320					4976.3	
20		17.1	20.0	0.858	311.0	267.	400					7803.7	
25	2	11.4	20.0	0.571	487.7	279.	500	32				12222.	
32		7.18	20.0	0.358	801.1	287.	650					20689.	
40		5.83	25.2	0.231	1253.5	290.	800					31366.	
40	8	24.3	25.3	0.958	301.6	289.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 21 / Nov. /1989

TEST No. Ep-13 S-8 LINE DIRECTION N25E 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		4504	20.0	224.8	6.283	1412	50	8	27.7	29.3	0.946	478.3	453.
2.5		1238	20.0	61.79	18.85	1165	50	2	5.23	29.5	0.177	1960.4	347.
3.2		631.	20.0	31.51	31.39	989.	65		7.40	17.3	0.425	817.0	347.
4	0.5	314.	20.0	15.69	49.48	776.	80		15.4	49.2	0.313	1244.1	389.
5		163.	20.0	8.182	77.75	636.	100	8	8.99	48.9	0.183	1950.9	357.
6.5		93.0	20.0	4.646	132.0	613.	130		9.29	92.0	0.100	3305.7	331.
8		52.6	17.5	3.005	200.3	602.	160		4.34	74.4	0.058	5014.0	291.
10		34.4	18.8	1.830	313.4	574.	160	32	20.9	75.0	0.279	1206.4	337.
10	2	156.	18.8	8.278	75.40	624.	200		6.30	40.5	0.155	1913.2	297.
13		81.0	20.0	4.045	129.6	524.	200	8	1.32	40.5	0.032	7841.4	251.
13	0.5	18.9	20.0	0.946	530.1	502.	250					3017.7	
16		47.0	19.8	2.367	197.9	468.	320					4976.3	
20		22.2	17.0	1.308	311.0	407.	400					7803.7	
25	2	14.5	20.0	0.725	487.7	354.	500	32				12222.	
32		8.58	20.0	0.428	801.1	343.	650					20689.	
40		7.24	23.7	0.304	1253.5	381.	800					31366.	
40	8	40.0	23.8	1.677	301.6	506.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 21 / Nov. / 1989

TEST No. Ep-13 S-9 LINE DIRECTION TESTED BY HIROSHI HIRAWATO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R _c (Ω)	K	ρ _a (Ωm)	AB/2	MN/2	V (mV)	I (mA)	R _c (Ω)	K	ρ _a (Ωm)
1.5		1573	20.0	78.55	6.283	494.	50	8	18.9	20.0	0.947	478.3	453.
2.5		461.	20.0	23.05	18.85	435.	50	2	10.4	50.0	0.208	1960.4	408.
3.2		253.	20.0	12.66	31.39	397.	65		31.4	50.0	0.627	817.0	512.
4		155.	20.0	7.771	49.48	385.	80		21.1	50.0	0.421	1244.1	524.
5	0.5	98.5	20.0	4.920	77.75	383.	100	8	11.1	44.7	0.248	1950.9	484.
6.5		55.0	20.0	2.746	132.0	363.	130		13.4	100.	0.133	3305.7	440.
8		34.9	20.0	1.744	200.3	349.	160		4.87	61.8	0.078	5014.0	391.
10		27.4	20.0	1.119	313.4	351.	160		18.4	62.4	0.295	1206.4	356.
10	2	90.9	20.0	4.543	75.40	343.	200	32	21.1	109.	0.193	1913.2	369.
13		53.5	20.0	2.674	129.6	347.	200	8	5.75	109.	0.052	7841.4	408.
13	0.5	13.4	20.0	0.670	530.1	355.	250					3017.7	
16		35.0	20.0	1.750	197.9	346.	320					4976.3	
20		23.3	20.0	1.164	311.0	362.	400					7803.7	
25	2	15.8	20.0	0.790	487.7	385.	500	32				12222.	
32		10.4	20.0	0.521	801.1	417.	650					20689.	
40		7.02	20.0	0.350	1253.5	439.	800					31366.	
40	8	32.0	20.0	1.598	301.6	482.							

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. / 1989

TEST No. Ep-14 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		1491	20.0	74.42	6.283	468.	50	8	17.0	20.0	0.849	478.3	406.
2.5		763.	20.0	38.08	18.85	718.	50	2	4.54	20.0	0.226	1960.4	443.
3.2		542.	20.0	27.09	31.39	850.	65		9.71	20.0	0.484	817.0	395.
4		377.	20.0	18.85	49.48	933.	80		17.0	50.0	0.340	1244.1	423.
5	0.5	268.	20.0	13.42	77.75	1043	100	8	10.9	50.0	0.217	1950.9	423.
6.5		178.	20.0	8.908	132.0	1176	130		6.42	50.0	0.128	3305.7	423.
8		121.	20.0	6.054	200.3	1213	160		5.37	66.0	0.081	5014.0	406.
10		71.2	20.0	3.556	313.4	1115	160		19.8	66.1	0.300	1206.4	362.
10	2	312.	20.0	15.58	75.40	1175	200	32	16.6	98.0	0.169	1913.2	323.
13		141.	20.0	7.087	129.6	919.	200	8	4.56	98.9	0.046	7841.4	361.
13	0.5	32.6	20.0	1.627	530.1	863.	250					3017.7	
16		75.4	20.0	3.763	197.9	745.	320					4976.3	
20		34.0	20.0	1.699	311.0	528.	400					7803.7	
25	2	18.0	20.0	0.898	487.7	438.	500	32				12222.	
32		10.5	20.0	0.527	801.1	422.	650					20689.	
40		6.88	20.0	0.343	1253.5	423.	800					31366.	
40	8	25.6	20.0	1.282	301.6	387.							

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. / 1989

TEST No. Ep-14 S-2 LINE DIRECTION N15W 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		1148	20.0	57.30	6.283	360.	50	8	31.7	50.0	0.634	478.3	303.
2.5		481.	20.0	24.02	18.85	453.	50	2	8.80	50.0	0.175	1960.4	343.
3.2		286.	20.0	14.30	31.39	449.	65		19.7	50.0	0.395	817.0	323.
4	0.5	176.	20.0	8.824	49.48	437.	80		13.3	50.0	0.267	1244.1	332.
5		114.	20.0	5.710	77.75	444.	100	8	18.2	100.	0.187	1950.9	365.
6.5		70.6	20.0	3.524	132.0	465.	130		11.1	100.	0.111	3305.7	367.
8		43.8	20.0	2.187	200.3	438.	160		9.28	126.	0.073	5014.0	366.
10		23.5	20.0	1.176	313.4	369.	160	32	35.3	125.	0.280	1206.4	338.
10	2	94.4	20.0	4.713	75.40	355.	200		18.6	105.	0.176	1913.2	337.
13		44.6	20.0	2.229	129.6	289.	200	8	4.95	105.	0.047	7841.4	369.
13	0.5	11.3	20.0	0.568	530.1	301.	250					3017.7	
16		28.9	20.0	1.443	197.9	286.	320					4976.3	
20		18.9	20.0	0.947	311.0	295.	400					7803.7	
25	2	12.1	20.0	0.607	487.7	296.	500	32				12222.	
32		19.6	50.0	0.391	801.1	313.	650						20689.
40		13.0	50.0	0.260	1253.5	326.	800					31366.	
40	8	47.5	50.0	0.950	301.6	287.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 24 / Oct. / 1989

TEST No. Ep-16 S-1 LINE DIRECTION N25W 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		991.	20.0	49.50	6.283	311.	50	8	14.8	100.	0.148	478.3	70.8
2.5		169.	20.0	8.444	18.85	159.	50	2	5.87	199.	0.029	1960.4	56.9
3.2		88.9	20.0	4.443	31.39	140.	65		8.45	100.	0.084	817.0	68.6
4		37.7	16.0	2.355	49.48	116.	80		6.13	100.	0.061	1244.1	75.9
5	0.5	23.4	20.0	1.169	77.75	90.9	100	8	4.77	100.	0.047	1950.9	91.7
6.5		24.9	41.9	0.595	132.0	78.5	130		7.58	200.	0.037	3305.7	122.
8		15.5	42.2	0.366	200.3	73.3	160		6.14	199.	0.030	5014.0	150.
10		11.4	48.8	0.235	313.4	73.7	160		23.7	199.	0.118	1206.4	142.
10		46.4	49.5	0.937	75.40	70.7	200	32	17.8	187.	0.095	1913.2	182.
13	2	22.5	41.1	0.548	129.6	71.0	200	8	5.00	187.	0.026	7841.4	204.
13	0.5	5.83	41.4	0.140	530.1	74.2	250					3017.7	
16		17.8	50.0	0.357	197.9	70.7	320					4976.3	
20		10.0	43.8	0.229	311.0	71.2	400					7803.7	
25	2	14.2	100.	0.142	487.7	69.3	500	32				12222.	
32		8.26	100.	0.082	801.1	65.7	650					20689.	
40		4.98	100.	0.049	1253.5	61.4	800					31366.	
40	8	25.4	100.	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 24 / Oct. / 1989

TEST No. Ep-16 S-2 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		206.	20.0	10.33	6.283	64.9	50	8	37.2	199.	0.186	478.3	89.0
2.5		76.0	20.0	3.799	18.85	71.6	50	2	8.72	199.	0.041	1960.4	80.4
3.2		48.7	20.0	2.433	31.39	76.4	65		20.9	178.	0.117	817.0	95.6
4		32.4	20.0	1.620	49.48	80.2	80		17.3	199.	0.086	1244.1	107.
5	0.5	22.2	20.0	1.110	77.75	86.3	100	8	14.7	199.	0.073	1950.9	142.
6.5		35.1	50.0	0.702	132.0	92.7	130					3305.7	
8		24.0	50.0	0.481	200.3	96.3	160					5014.0	
10		31.9	100.	0.319	313.4	100.	160					1206.4	
10	2	136.	100.	1.364	75.40	103.	200	32				1913.2	
13		82.0	100.	0.820	129.6	106.	200	8				7841.4	
13	0.5	19.5	100.	0.195	530.1	103.	250					3017.7	
16		53.5	100.	0.534	197.9	106.	320					4976.3	
20		33.4	100.	0.334	311.0	104.	400					7803.7	
25	2	19.6	100.	0.196	487.7	95.6	500	32				12222.	
32		22.6	199.	0.113	801.1	90.5	650					20689.	
40		11.8	176.	0.066	1253.5	82.7	800					31366.	
40	8	56.3	185.	0.303	301.6	91.3							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 2 / Nov. / 1989

TEST No. Ep-17 S-1 LINE DIRECTION N30W 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		287.	20.0	14.35	6.283	90.2	50	8	53.9	100.	0.538	478.3	257.
2.5		60.9	20.0	3.042	18.85	57.3	50	2	13.4	100.	0.134	1960.4	263.
3.2		77.1	50.0	1.540	31.39	48.3	65		39.8	100.	0.398	817.0	325.
4	0.5	47.0	50.0	0.939	49.48	48.5	80		59.5	200.	0.297	1244.1	370.
5		58.1	100.	0.580	77.75	45.1	100	8	43.6	200.	0.227	1950.9	443.
6.5		35.0	100.	0.350	132.0	46.2	130		29.4	200.	0.147	3305.7	486.
8		25.3	100.	0.252	200.3	50.5	160		4.87	50.0	0.097	5014.0	486.
10		18.5	100.	0.185	313.4	58.0	160		24.1	57.9	0.416	1206.4	502.
10	2	72.5	100.	0.724	75.40	54.6	200	32	10.3	51.2	0.201	1913.2	385.
13		52.0	100.	0.519	129.6	67.3	200	8	2.39	50.0	0.047	7841.4	369.
13	0.5	13.4	100.	0.134	530.1	71.0	250					3017.7	
16		40.9	100.	0.409	197.9	80.9	320					4976.3	
20		33.3	100.	0.333	311.0	104.	400					7803.7	
25	2	27.0	100.	0.270	487.7	132.	500	32				12222.	
32		21.1	100.	0.211	801.1	169.	650					20689.	
40		17.1	100.	0.171	1253.5	214.	800					31366.	
40	8	69.1	100.	0.690	301.6	208.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 2 / Nov. / 1989

TEST No. Ep-17 S-2 LINE DIRECTION N35W 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		281.	10.0	28.05	6.283	176.	50	8	44.4	172.	0.258	478.3	123.
2.5		149.	20.0	7.478	18.85	141.	50	2	10.5	172.	0.061	1960.4	120.
3.2		74.0	20.0	3.694	31.39	116.	65		29.2	184.	0.158	817.0	129.
4	0.5	102.	50.0	2.043	49.48	101.	80		2.66	24.5	0.108	1244.1	134.
5		54.3	50.0	1.085	77.75	84.4	100	8	4.93	60.7	0.081	1950.9	158.
6.5		48.1	100.	0.481	132.0	63.5	130		1.29	28.2	0.045	3305.7	149.
8		28.3	100.	0.283	200.3	56.7	160		1.49	52.1	0.028	5014.0	140.
10		36.3	200.	0.181	313.4	56.7	160	32	8.48	52.7	0.160	1206.4	193.
10	2	141.	200.	0.707	75.40	53.3	200		5.25	45.8	0.114	1913.2	218.
13		89.8	200.	0.448	129.6	58.1	200	8	0.94	46.0	0.020	7841.4	157.
13	0.5	23.0	200.	0.117	530.1	62.0	250					3017.7	
16		66.2	200.	0.330	197.9	65.3	320					4976.3	
20		50.2	200.	0.251	311.0	78.1	400					7803.7	
25	2	35.6	200.	0.178	487.7	86.8	500	32				12222.	
32		20.1	167.	0.120	801.1	95.3	650					20689.	
40		16.0	200.	0.080	1253.5	100.	800					31366.	
40	8	68.0	200.	0.340	301.6	103.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 2 / Nov. / 1989

TEST No. Ep-17 S-3 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		730.	10.0	72.90	6.283	458.	50	8	17.6	50.0	0.351	478.3	168.
2.5		347.	10.0	34.68	18.85	654.	50	2	4.10	50.0	0.082	1960.4	161.
3.2		251.	10.0	25.10	31.39	788.	65		11.4	100.	0.114	817.0	92.3
4	0.5	176.	10.0	17.59	49.48	870.	80		5.06	95.7	0.052	1244.1	64.7
5		114.	10.0	11.42	77.75	888.	100	8	5.52	169.	0.032	1950.9	62.4
6.5		74.0	10.0	7.390	132.0	976.	130		1.85	79.6	0.023	3305.7	76.0
8		103.	20.0	5.142	200.3	1030	160		1.42	82.2	0.017	5014.0	85.2
10		65.5	20.0	3.274	313.4	1026	160		7.15	82.7	0.085	1206.4	103.
10	2	307.	20.0	15.33	75.40	1156	200	32	14.5	200.	0.072	1913.2	138.
13			168.	20.0	8.418	129.6	1091	200	8	3.07	200.	0.015	7841.4
13	0.5	36.5	20.0	1.822	530.1	966.	250					3017.7	
16		96.7	20.0	4.831	197.9	956.	320					4976.3	
20		107.	50.0	2.155	311.0	670.	400					7803.7	
25	2	53.2	50.0	1.063	487.7	518.	500	32				12222.	
32			22.7	50.0	0.453	801.1	363.	650					20689.
40		4.32	20.0	0.216	1253.5	271.	800					31366.	
40	8	19.4	20.0	0.970	301.6	293.							

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-19 S-1 LINE DIRECTION N70W TESTED BY HIROSHI HIRAMOJO (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		275.	50.0	5.507	6.283	34.6	50	8	34.6	200.	0.172	478.3	82.3
2.5		99.0	50.0	1.979	18.85	37.3	50	2	8.81	199.	0.044	1960.4	86.3
3.2		56.8	50.0	1.136	31.39	35.7	65		19.7	199.	0.098	817.0	80.1
4		33.9	50.0	0.677	49.48	33.5	80		11.9	199.	0.059	1244.1	73.4
5	0.5	21.3	50.0	0.426	77.75	33.1	100	8	6.61	199.	0.033	1950.9	64.4
6.5		11.9	50.0	0.237	132.0	31.3	130		2.72	199.	0.013	3305.7	43.0
8		7.86	50.0	0.157	200.3	31.5	160		1.07	199.	0.005	5014.0	25.1
10		10.1	100.	0.101	313.4	31.6	160		4.97	199.	0.024	1206.4	29.0
10		49.1	100.	0.491	75.40	37.0	200	32				1913.2	
13	2	31.1	100.	0.311	129.6	40.3	200	8				7841.4	
13	0.5	6.57	100.	0.065	530.1	34.5	250					3017.7	
16		22.7	100.	0.227	197.9	44.9	320					4976.3	
20		16.7	100.	0.167	311.0	51.9	400					7803.7	
25	2	12.4	100.	0.123	487.7	60.0	500	32				12222.	
32		17.8	200.	0.089	801.1	71.3	650					20689.	
40		12.7	199.	0.063	1253.5	79.0	800					31366.	
40	8	50.3	199.	0.251	301.6	75.7							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 28 / Oct. / 1989

TEST No. Ep-20 S-1 LINE DIRECTION N55E 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		4913	10.0	490.8	6.283	3084	50	8	414.	10.0	41.38	478.3	19792
2.5		3056	10.0	305.2	18.85	5753	50	2	80.0	10.0	8.000	1960.4	15683
3.2		2301	10.0	229.8	31.39	7213	65		193.	10.0	19.37	817.0	15825
4	0.5	1714	10.0	171.2	49.48	8471	80		191.	20.0	9.544	1244.1	11874
5		1277	10.0	127.6	77.75	9921	100	8	125.	18.1	6.933	1950.9	13526
6.5		907.	10.0	90.67	132.0	11968	130		60.7	14.5	4.174	3305.7	13798
8		655.	10.0	65.51	200.3	13122	160		18.9	8.92	2.122	5014.0	10640
10		457.	10.0	45.71	313.4	14326	160	32	88.8	8.77	10.12	1206.4	12208
10	2	1910	10.0	190.8	75.40	14386	200		45.9	10.0	4.591	1913.2	8784
13		1198	10.0	119.7	129.6	15513	200	8	10.0	10.3	0.971	7841.4	7614
13	0.5	291.	10.0	29.16	530.1	15458	250					3017.7	
16		821.	10.0	82.03	197.9	16233	320					4976.3	
20		533.	10.0	53.29	311.0	16573	400					7803.7	
25	2	336.	10.0	33.65	487.7	16411	500	32				12222.	
32		199.	10.0	19.88	801.1	15926	650					20689.	
40		128.	10.0	12.84	1253.5	16095	800					31366.	
40	8	680.	10.0	68.00	301.6	20509							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 28 / Oct. /1989

TEST No Ep-20 S- 2 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		3609	20.0	180.3	6.283	1133	50	8	53.6	50.0	1.071	478.3	512.
2.5		1700	20.0	84.95	18.85	1601	50	2	29.3	100.	0.293	1960.4	574.
3.2		1207	20.0	60.31	31.39	1893	65		53.4	100.	0.534	817.0	436.
4		882.	20.0	44.08	49.48	2181	80		35.9	100.	0.359	1244.1	447.
5	0.5	635.	20.0	31.73	77.75	2467	100	8	22.8	100.	0.228	1950.9	445.
6.5		410.	20.0	20.49	132.0	2705	130		15.5	100.	0.155	3305.7	512.
8		287.	20.0	14.34	200.3	2872	160		10.4	95.9	0.108	5014.0	542.
10		171.	20.0	8.586	313.4	2691	160		34.3	96.6	0.355	1206.4	428.
10	2	704.	20.0	35.18	75.40	2653	200	32	24.2	94.8	0.255	1913.2	488.
13		340.	20.0	16.98	129.6	2201	200	8	7.57	95.0	0.070	7841.4	549.
13	0.5	83.8	20.0	4.190	530.1	2221	250					3017.7	
16		173.	20.0	8.671	197.9	1716	320					4976.3	
20		78.5	20.0	3.925	311.0	1221	400					7803.7	
25	2	40.7	20.0	2.035	487.7	993.	500	32				12222.	
32		21.5	20.0	1.077	801.1	863.	650					20689.	
40		30.5	50.0	0.609	1253.5	763.	800					31366.	
40	8	115.	50.0	2.317	301.6	699.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 28 / Oct. / 1989

TEST No. Ep-20 S-3 LINE DIRECTION N50W TESTED BY HIROSHI HIRAMOTO (Schlumberger Configuration)

AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_e (Ω m)	AB/2	MN/2	V (mV)	I (mA)	R (Ω)	K	ρ_a (Ω m)
1.5		1485	1.22	1214.0	6.283	7628	50	8	6.72	7.45	0.902	478.3	431.
2.5		627.	2.56	244.7	18.85	4613	50	2	1.45	7.44	0.196	1960.4	384.
3.2		340.	3.31	102.7	31.39	3224	65		2.61	5.95	0.438	817.0	358.
4		148.	3.17	46.79	49.48	2315	80		3.31	11.0	0.299	1244.1	372.
5	0.5	87.3	3.71	23.53	77.75	1830	100	8	1.32	8.09	0.172	1950.9	340.
6.5		33.5	2.96	11.36	132.0	1493	130		1.06	11.4	0.092	3305.7	304.
8		20.5	3.17	6.461	200.3	1294	160		0.99	14.0	0.070	5014.0	351.
10		19.8	5.14	3.848	313.4	1206	160		4.66	14.4	0.322	1206.4	389.
10		91.9	5.40	17.02	75.40	1283	200	32	22.0	100.	0.220	1913.2	421.
13	2	31.8	3.62	8.806	129.6	1141	200	8	9.83	188.	0.052	7841.4	408.
13	0.5	7.67	3.64	2.106	530.1	1116	250					3017.7	
16		20.5	4.38	4.687	197.9	928.	320					4976.3	
20		10.2	4.91	2.075	311.0	645.	400					7803.7	
25	2	5.08	4.92	1.032	487.7	533.	500	32				12222.	
32		3.81	7.39	0.515	801.1	413.	650					20689.	
40		2.25	6.49	0.346	1253.5	434.	800					31366.	
40	8	10.4	6.45	1.618	301.6	488.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 30 / Oct. / 1989

TEST No Ep-21 S-1 LINE DIRECTION N60W 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		800.	20.0	39.94	6.283	251.	50	8	2.72	10.2	0.264	478.3	126.
2.5		251.	20.0	12.53	18.85	237.	50	2	2.20	30.6	0.072	1960.4	141.
3.2		160.	20.0	8.031	31.39	252.	65		6.91	50.0	0.138	817.0	112.
4		103.	20.0	5.161	49.48	255.	80		5.72	50.0	0.114	1244.1	142.
5	0.5	53.9	20.0	2.690	77.75	209.	100	8	8.37	100.	0.083	1950.9	162.
6.5		23.6	20.0	1.181	132.0	156.	130		5.58	100.	0.055	3305.7	182.
8		35.5	50.1	0.710	200.3	142.	160		6.11	146.	0.041	5014.0	206.
10		20.4	50.0	0.408	313.4	128.	160		21.5	146.	0.146	1206.4	176.
10	2	99.1	50.0	1.980	75.40	149.	200	32	22.6	200.	0.113	1913.2	216.
13		47.3	50.0	0.944	129.6	122.	200	8	6.55	200.	0.032	7841.4	251.
13	0.5	10.0	50.0	0.201	530.1	107.	250					3017.7	
16		29.0	50.0	0.579	197.9	115.	320					4976.3	
20		17.8	50.0	0.356	311.0	111.	400					7803.7	
25	2	11.3	50.0	0.226	487.7	110.	500	32				12222.	
32		9.00	59.7	0.150	801.1	120.	650					20689.	
40		6.81	63.1	0.107	1253.5	134.	800					31366.	
40	8	19.8	50.0	0.396	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 30 / Oct. / 1989

TEST No. Ep-21 S-2 LINE DIRECTION N35W 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		6463	20.0	322.5	6.283	2026	50	8	6.20	20.0	0.310	478.3	148.
2.5		2083	19.7	105.7	18.85	1993	50	2	4.34	45.2	0.096	1960.4	188.
3.2		931.	16.1	57.69	31.39	1811	65		8.88	37.6	0.236	817.0	193.
4		613.	20.0	30.64	49.48	1516	80		9.44	50.0	0.188	1244.1	234.
5	0.5	332.	20.0	16.59	77.75	1290	100	8	4.63	50.0	0.092	1950.9	180.
6.5		160.	20.0	7.993	132.0	1055	130		7.24	100.	0.072	3305.7	238.
8		85.2	20.0	4.255	200.3	852.	160		6.80	100.	0.068	5014.0	341.
10		45.1	20.0	2.251	313.4	706.	160		29.6	100.	0.296	1206.4	357.
10	2	194.	20.0	9.718	75.40	733.	200	32	28.1	100.	0.281	1913.2	538.
13		92.4	20.0	4.614	129.6	598.	200	8	7.65	117.	0.065	7841.4	510.
13	0.5	22.0	20.0	1.100	530.1	583.	250					3017.7	
16		56.5	20.0	2.823	197.9	559.	320					4976.3	
20		34.0	20.0	1.702	311.0	529.	400					7803.7	
25	2	24.1	20.0	1.208	487.7	589.	500	32				12222.	
32		12.9	20.0	0.646	801.1	518.	650					20689.	
40		5.19	20.0	0.259	1253.5	325.	800					31366.	
40	8	17.1	20.0	0.857	301.6	259.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 30 / Oct. / 1989

TEST No. Ep-21 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		885.	20.0	44.21	6.283	278.	50	8	30.5	50.0	0.610	478.3	292.
2.5		271.	20.0	13.56	18.85	256.	50	2	5.09	50.0	0.109	1960.4	213.
3.2		151.	20.0	7.561	31.39	237.	65		18.3	50.0	0.366	817.0	299.
4		92.5	20.0	4.623	49.48	229.	80		14.0	50.0	0.279	1244.1	347.
5	0.5	56.6	20.0	2.831	77.75	220.	100	8	15.4	100.	0.153	1950.9	299.
6.5		30.7	20.0	1.535	132.0	203.	130		9.74	176.	0.055	3305.7	182.
8		17.6	20.0	0.882	200.3	177.	160		6.13	180.	0.034	5014.0	171.
10		23.3	50.0	0.464	313.4	146.	160		29.6	180.	0.164	1206.4	198.
10		98.0	50.0	1.958	75.40	148.	200	32	17.6	150.	0.116	1913.2	222.
13	2	50.1	50.0	1.002	129.6	130.	200	8	3.80	152.	0.024	7841.4	188.
13	0.5	12.3	50.0	0.247	530.1	131.	250					3017.7	
16		31.3	50.0	0.627	197.9	124.	320					4976.3	
20		19.9	50.0	0.398	311.0	124.	400					7803.7	
25	2	13.8	50.0	0.277	487.7	135.	500	32				12222.	
32		9.39	50.0	0.187	801.1	150.	650					20689.	
40		7.21	50.0	0.144	1253.5	181.	800					31366.	
40	8	44.7	50.0	0.893	301.6	269.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE II) DATE 1 / Nov./1989

TEST No. Ep-21 S-4 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		1157	20.0	57.72	6.283	363.	50	8	53.1	20.0	2.653	478.3	1269
2.5		489.	20.0	24.39	18.85	460.	50	2	13.1	20.0	0.657	1960.4	1288
3.2		364.	20.0	18.18	31.39	571.	65		16.1	20.0	0.804	817.0	657.
4		283.	20.0	14.14	49.48	700.	80		13.0	42.8	0.303	1244.1	378.
5	0.5	220.	20.0	11.02	77.75	857.	100	8	7.10	50.0	0.142	1950.9	277.
6.5		169.	20.0	8.444	132.0	1115	130		8.02	94.1	0.085	3305.7	281.
8		134.	20.0	6.732	200.3	1348	160		4.05	68.1	0.059	5014.0	296.
10		103.	20.0	5.186	313.4	1625	160		20.6	69.1	0.297	1206.4	358.
10	2	474.	20.0	23.66	75.40	1784	200	32	5.54	25.4	0.218	1913.2	417.
13		307.	19.1	16.04	129.6	2079	200	8	0.92	19.6	0.046	7841.4	361.
13	0.5	70.0	19.7	3.552	530.1	1883	250					3017.7	
16		233.	20.0	11.67	197.9	2310	320					4976.3	
20		147.	20.0	7.371	311.0	2292	400					7803.7	
25	2	94.2	20.0	4.703	487.7	2294	500	32				12222.	
32		55.1	20.0	2.751	801.1	2204	650					20689.	
40		29.4	20.0	1.471	1253.5	1844	800					31366.	
40	8	120.	20.0	6.029	301.6	1818							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-21 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		795.	20.0	39.67	6.283	249.	50	8	42.0	50.0	0.839	478.3	401.
2.5		301.	20.0	15.05	18.85	284.	50	2	7.78	50.0	0.155	1960.4	304.
3.2		181.	20.0	9.042	31.39	284.	65		28.9	50.0	0.577	817.0	471.
4		115.	20.0	5.743	49.48	284.	80		17.8	50.0	0.357	1244.1	444.
5	0.5	64.2	20.0	3.208	77.75	249.	100	8	10.4	50.0	0.208	1950.9	406.
6.5		32.7	20.0	1.636	132.0	216.	130		12.9	100.	0.128	3305.7	423.
8		21.0	20.0	1.052	200.3	211.	160		9.79	100.	0.097	5014.0	486.
10		12.8	20.0	0.643	313.4	202.	160		31.8	100.	0.317	1206.4	382.
10	2	68.4	20.0	3.417	75.40	258.	200	32	20.6	92.6	0.222	1913.2	425.
13		42.0	20.0	2.097	129.6	272.	200	8	6.38	92.7	0.068	7841.4	533.
13	0.5	8.03	20.0	0.401	530.1	213.	250					3017.7	
16		29.9	20.0	1.493	197.9	296.	320					4976.3	
20		19.5	20.0	0.975	311.0	303.	400					7803.7	
25	2	12.3	20.0	0.617	487.7	301.	500	32				12222.	
32		19.5	20.0	0.389	801.1	312.	650					20689.	
40		12.2	50.0	0.245	1253.5	307.	800					31366.	
40	8	66.9	50.0	1.336	301.6	4.3.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-21 S-6 LINE DIRECTION NIOW 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		1161	20.0	57.95	6.283	364.	50	8	21.8	16.6	1.315	478.3	629.
2.5		445.	20.0	22.25	18.85	419.	50	2	5.08	17.2	0.295	1960.4	578.
3.2		247.	20.0	12.34	31.39	387.	65		17.8	20.0	0.888	817.0	726.
4		129.	18.9	6.824	49.48	338.	80		11.2	20.0	0.560	1244.1	697.
5	0.5	73.0	20.0	3.644	77.75	283.	100	8	6.59	19.9	0.330	1950.9	644.
6.5		39.2	20.0	1.958	132.0	259.	130		2.34	13.2	0.176	3305.7	572.
8		24.0	20.0	1.198	200.3	240.	160		2.20	18.9	0.115	5014.0	577.
10		15.9	20.0	0.794	313.4	249.	160		8.35	19.1	0.436	1206.4	526.
10	2	75.9	20.0	3.789	75.40	286.	200	32	16.0	50.0	0.321	1913.2	614.
13		44.8	20.0	2.238	129.6	290.	200	8	8.42	100.	0.084	7841.4	659.
13	0.5	9.66	20.0	0.482	530.1	256.	250					3017.7	
16		26.9	17.3	1.554	197.9	308.	320					4976.3	
20		21.5	20.0	1.075	311.0	334.	400					7803.7	
25	2	16.6	20.0	0.829	487.7	404.	500	32				12222.	
32		11.1	20.0	0.558	801.1	447.	650					20689.	
40		7.95	20.0	0.396	1253.5	496.	800					31366.	
40	8	35.6	20.0	1.777	301.6	536.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-21 S-7 LINE DIRECTION N25E 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		1450	20.0	72.40	6.283	455.	50	8	45.5	14.5	3.135	478.3	1500
2.5		356.	20.0	17.80	18.85	336.	50	2	8.04	14.6	0.550	1960.4	1078
3.2		199.	20.0	9.953	31.39	312.	65		15.8	10.2	1.555	817.0	1270
4		129.	20.0	6.452	49.48	319.	80		9.36	12.5	0.748	1244.1	931.
5	0.5	97.0	20.0	4.843	77.75	377.	100	8	3.62	9.50	0.380	1950.9	741.
6.5		64.0	20.0	3.197	132.0	422.	130		3.46	20.6	0.167	3305.7	552.
8		48.1	20.0	2.405	200.3	482.	160		1.49	17.5	0.084	5014.0	421.
10		35.3	20.0	1.765	313.4	553.	160		6.81	17.7	0.383	1206.4	462.
10	2	171.	20.0	8.557	75.40	645.	200	32	7.62	35.9	0.190	1913.2	364.
13		110.	20.0	5.509	129.6	714.	200	8	1.71	40.1	0.042	7841.4	330.
13	0.5	23.2	20.0	1.159	530.1	614.	250					3017.7	
16		76.1	20.0	3.804	197.9	753.	320					4976.3	
20		50.6	20.0	2.527	311.0	786.	400					7803.7	
25	2	32.3	19.4	1.665	487.7	812.	500	32				12222.	
32		21.8	20.0	1.089	801.1	872.	650					20689.	
40		11.7	14.2	0.822	1253.5	1030	800					31366.	
40	8	69.9	14.7	4.753	301.6	1434							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-21 S-8 LINE DIRECTION 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		1163	20.0	58.07	6.283	365.	50	8	56.6	50.0	1.131	478.3	541.
2.5		463.	20.0	23.12	18.85	436.	50	2	11.3	50.0	0.225	1960.4	441.
3.2		297.	20.0	14.86	31.39	467.	65		27.9	50.0	0.558	817.0	456.
4		202.	20.0	10.09	49.48	499.	80		19.9	50.0	0.398	1244.1	495.
5	0.5	141.	20.0	7.054	77.75	549.	100	8	10.0	50.0	0.201	1950.9	392.
6.5		84.3	20.0	4.211	132.0	556.	130		10.0	100.	0.100	3305.7	331.
8		51.0	20.0	2.548	200.3	510.	160		7.50	145.	0.051	5014.0	256.
10		31.5	20.0	1.573	313.4	493.	160		18.8	100.	0.188	1206.4	227.
10		129.	20.0	6.473	75.40	488.	200	32	16.6	134.	0.123	1913.2	235.
13	2	66.0	20.0	3.297	129.6	427.	200	8	4.59	138.	0.033	7841.4	259.
13	0.5	16.4	20.0	0.821	530.1	435.	250					3017.7	
16		35.8	20.0	1.788	197.9	354.	320					4976.3	
20		19.9	20.0	0.996	311.0	310.	400					7803.7	
25	2	12.6	20.0	0.632	487.7	308.	500	32				12222.	
32		8.04	50.0	0.401	801.1	322.	650					20689.	
40		15.5	50.0	0.311	1253.5	390.	800					31366.	
40	8	78.6	50.0	1.571	301.6	474.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

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

TEST No. Ep-21 S-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		3568	20.0	178.1	6.283	1119	50	8	15.4	8.05	1.911	478.3	914.
2.5		1274	20.0	63.61	18.85	1199	50	2	2.68	8.10	0.330	1960.4	647.
3.2		821.	19.3	42.48	31.39	1334	65		8.52	9.40	0.907	817.0	741.
4		478.	15.0	31.83	49.48	1575	80		5.53	12.8	0.430	1244.1	535.
5	0.5	290.	12.3	23.51	77.75	1828	100	8	2.28	13.5	0.168	1950.9	328.
6.5		171.	10.9	15.72	132.0	2075	130		0.80	11.4	0.069	3305.7	228.
8		108.	9.59	11.28	200.3	2259	160		1.16	26.4	0.044	5014.0	221.
10		71.2	10.0	7.117	313.4	2231	160		11.0	26.0	0.414	1206.4	500.
10	2	289.	10.0	28.92	75.40	2181	200	32	4.46	18.1	0.246	1913.2	471.
13		150.	9.43	15.99	129.6	2072	200	8	0.29	18.2	0.015	7841.4	118.
13	0.5	38.2	9.61	3.981	530.1	2110	250					3017.7	
16		75.1	8.51	8.820	197.9	1746	320					4976.3	
20		33.9	6.42	5.287	311.0	1644	400					7803.7	
25	2	23.4	7.78	3.012	487.7	1469	500	32				12222.	
32		15.3	10.0	1.533	801.1	1228	650					20689.	
40		6.79	8.72	0.778	1253.5	975.	800					31366.	
40	8	40.0	8.77	4.561	301.6	1376							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 18 / Nov. / 1989

TEST No. Ep-21 S-10 LINE DIRECTION N5 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		906.	20.0	45.20	6.283	284.	50	8	47.8	50.0	0.955	478.3	457.
2.5		339.	20.0	16.92	18.85	319.	50	2	13.8	50.0	0.277	1960.4	543.
3.2		211.	20.0	10.57	31.39	332.	65		31.4	50.0	0.627	817.0	512.
4		133.	20.0	6.645	49.48	329.	80		22.5	50.0	0.450	1244.1	560.
5	0.5	83.9	20.0	4.187	77.75	326.	100	8	15.5	50.0	0.309	1950.9	603.
6.5		50.5	20.0	2.520	132.0	333.	130		13.8	94.8	0.145	3305.7	479.
8		35.2	20.0	1.760	200.3	353.	160		4.34	41.9	0.103	5014.0	516.
10		23.9	20.0	1.193	313.4	374.	160		17.3	42.2	0.410	1206.4	495.
10		102.	20.0	5.117	75.40	386.	200	32	6.17	30.5	0.202	1913.2	387.
13	2	63.8	20.0	3.188	129.6	413.	200	8	1.66	30.7	0.054	7841.4	423.
13	0.5	15.0	20.0	0.751	530.1	398.	250					3017.7	
16		39.1	20.0	1.955	197.9	387.	320					4976.3	
20		20.9	20.0	1.046	311.0	325.	400					7803.7	
25	2	12.6	20.0	0.629	487.7	307.	500	32				12222.	
32		22.8	50.0	0.455	801.1	365.	650					20689.	
40		18.7	50.0	0.373	1253.5	468.	800					31366.	
40	8	64.8	50.0	1.294	301.6	390.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 18 / Nov. / 1989

TEST No. Ep-21 S-11 LINE DIRECTION N15W 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		2226	20.0	111.1	6.283	698.	50	8	32.6	47.2	0.691	478.3	331.
2.5		933.	20.0	46.57	18.85	878.	50	2	8.05	47.3	0.170	1960.4	333.
3.2		600.	20.0	29.98	31.39	941.	65		14.0	50.0	0.280	817.0	229.
4		378.	20.0	18.90	49.48	935.	80		6.84	20.8	0.329	1244.1	409.
5	0.5	243.	50.0	12.14	77.75	944.	100	8	5.53	36.5	0.151	1950.9	295.
6.5		145.	50.0	7.238	132.0	955.	130		2.44	34.2	0.071	3305.7	235.
8		77.3	18.4	4.180	200.3	837.	160		1.54	26.8	0.057	5014.0	286.
10		48.9	20.0	2.444	313.4	766.	160		3.14	24.7	0.127	1206.4	153.
10	2	211.	20.0	10.54	75.40	795.	200	32	8.35	81.8	0.102	1913.2	195.
13		68.4	20.0	3.415	129.6	443.	200	8	3.96	82.0	0.048	7841.4	378.
13	0.5	16.0	20.0	0.799	530.1	424.	250					3017.7	
16		49.0	20.0	2.448	197.9	485.	320					4976.3	
20		37.0	20.0	1.847	311.0	574.	400					7803.7	
25	2	19.1	20.0	0.957	487.7	467.	500	32				12222.	
32		21.2	46.2	0.460	801.1	369.	650					20689.	
40		10.7	50.0	0.215	1253.5	270.	800					31366.	
40	8	43.8	50.0	0.876	301.6	264.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 18 / Nov. / 1989

TEST No. Ep-21 S-12 LINE DIRECTION N15W 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		5158	20.0	257.5	6.283	1618	50	8	14.3	50.0	0.286	478.3	137.
2.5		1367	20.0	68.31	18.85	1288	50	2	6.94	80.4	0.086	1960.4	169.
3.2		664.	20.0	33.18	31.39	1042	65		15.4	100.	0.154	817.0	126.
4	0.5	347.	20.0	17.35	49.48	859.	80		5.27	47.9	0.109	1244.1	136.
5		177.	20.0	8.884	77.75	691.	100	8	7.63	87.5	0.087	1950.9	170.
6.5		76.1	20.0	3.803	132.0	502.	130		5.93	88.6	0.066	3305.7	218.
8		40.9	20.0	2.045	200.3	410.	160		5.96	103.	0.057	5014.0	286.
10		15.4	20.0	0.770	313.4	241.	160		21.1	106.	0.198	1206.4	239.
10		67.9	20.0	3.394	75.40	256.	200	32	19.4	136.	0.142	1913.2	272.
13	2	35.9	20.0	1.793	129.6	232.	200	8	5.74	136.	0.042	7841.4	329.
13	0.5	8.47	20.0	0.423	530.1	224.	250					3017.7	
16		24.6	20.0	1.232	197.9	244.	320					4976.3	
20		15.9	20.0	0.794	311.0	247.	400					7803.7	
25	2	9.78	20.0	0.488	487.7	238.	500	32				12222.	
32		12.3	50.0	0.246	801.1	197.	650					20689.	
40		6.72	50.0	0.134	1253.5	168.	800					31366.	
40	8	22.7	50.0	0.454	301.6	137.							

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-22 S-1 LINE DIRECTION N70W 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_u (Ωm)
1.5		749.	20.0	37.44	6.283	235.	50	8	20.6	100.	0.206	478.3	98.5
2.5		202.	20.0	10.12	18.85	191.	50	2	5.87	100.	0.058	1960.4	114.
3.2		91.1	20.0	4.553	31.39	143.	65		11.8	85.5	0.138	817.0	113.
4		48.4	20.0	2.419	49.48	120.	80		3.74	36.7	0.101	1244.1	126.
5	0.5	28.3	20.0	1.416	77.75	110.	100	8	2.91	42.3	0.068	1950.9	133.
6.5		14.8	20.0	0.740	132.0	97.7	130		4.99	100.	0.049	3305.7	162.
8		9.12	20.0	0.456	200.3	91.3	160		3.94	100.	0.039	5014.0	196.
10		5.45	20.0	0.272	313.4	85.3	160		19.4	100.	0.194	1206.4	234.
10	2	22.8	20.0	1.144	75.40	86.3	200	32	14.6	100.	0.146	1913.2	279.
13		12.6	20.0	0.633	129.6	82.0	200	8	3.00	100.	0.029	7841.4	227.
13	0.5	7.85	50.0	0.157	530.1	83.2	250					3017.7	
16		19.5	50.0	0.391	197.9	77.4	320					4976.3	
20		13.0	50.0	0.261	311.0	81.2	400					7803.7	
25	2	8.78	50.0	0.175	487.7	85.4	500	32				12222.	
32		5.83	50.0	0.116	801.1	92.9	650					20689.	
40		8.16	100.	0.081	1253.5	102.	800					31366.	
40	8	29.0	100.	0.290	301.6	87.5							

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-22 S-2 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		1175	20.0	58.70	6.283	369.	50	8	20.7	50.0	0.415	478.3	199.
2.5		417.	20.0	20.85	18.85	393.	50	2	6.12	50.0	0.122	1960.4	239.
3.2		242.	20.0	12.10	31.39	380.	65		11.8	50.0	0.236	817.0	193.
4		136.	20.0	6.806	49.48	337.	80		8.37	50.0	0.167	1244.1	208.
5	0.5	84.9	20.0	4.243	77.75	330.	100	8	5.33	50.0	0.106	1950.9	207.
6.5		49.8	20.0	2.492	132.0	329.	130		6.95	100.	0.069	3305.7	228.
8		31.4	20.0	1.571	200.3	315.	160		4.31	100.	0.043	5014.0	216.
10		17.1	20.0	0.855	313.4	268.	160		15.0	100.	0.150	1206.4	181.
10	2	78.0	20.0	3.899	75.40	294.	200	32	10.4	108.	0.096	1913.2	184.
13		35.3	20.0	1.765	129.6	229.	200	8	3.02	108.	0.027	7841.4	212.
13	0.5	7.81	20.0	0.390	530.1	207.	250					3017.7	
16		22.1	20.0	1.104	197.9	219.	320					4976.3	
20		12.8	20.0	0.643	311.0	200.	400					7803.7	
25	2	21.0	50.0	0.420	487.7	205.	500	32				12222.	
32		14.1	50.0	0.282	801.1	226.	650					20689.	
40		10.0	50.0	0.200	1253.5	251.	800					31366.	
40	8	34.0	50.0	0.681	301.6	205.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 27 / Oct. / 1989

TEST No. Ep-23 S- I LINE DIRECTION N40E 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		120.	20.0	6.038	6.283	37.9	50	8	16.2	100.	0.162	478.3	77.5
2.5		11.7	20.0	0.584	18.85	11.0	50	2	4.30	100.	0.043	1960.4	84.3
3.2		16.1	44.5	0.362	31.39	11.4	65		12.1	100.	0.121	817.0	98.9
4		12.2	50.0	0.244	49.48	12.1	80		9.91	100.	0.099	1244.1	123.
5	0.5	8.32	50.0	0.166	77.75	12.9	100	8	8.12	100.	0.081	1950.9	158.
6.5		5.43	50.0	0.108	132.0	14.3	130		3.49	50.0	0.069	3305.7	228.
8		3.77	47.7	0.078	200.3	15.6	160		2.99	50.0	0.059	5014.0	296.
10		2.58	41.3	0.062	313.4	19.4	160		9.75	50.0	0.195	1206.4	235.
10		10.8	40.7	0.265	75.40	20.1	200	32	7.91	48.9	0.161	1913.2	308.
13	2	8.22	41.3	0.199	129.6	25.8	200	8	2.45	48.9	0.050	7841.4	392.
13	0.5	1.94	40.9	0.047	530.1	24.9	250					3017.7	
16		7.86	50.0	0.156	197.9	30.9	320					4976.3	
20		6.14	50.0	0.122	311.0	37.9	400					7803.7	
25	2	4.82	50.0	0.096	487.7	46.8	500	32				12222.	
32		7.20	100.	0.071	801.1	56.9	650					20689.	
40		5.64	100.	0.056	1253.5	70.2	800					31366.	
40	8	21.3	100.	0.212	301.6	63.9							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 27 / Oct. / 1989

TEST No. Ep-23 S-2 LINE DIRECTION N10W 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		46.3	20.0	2.312	6.283	14.5	50	8	16.6	100.	0.165	478.3	78.9
2.5		35.9	50.0	0.717	18.85	13.5	50	2	8.54	200.	0.042	1960.4	82.3
3.2		22.9	50.0	0.457	31.39	14.4	65		24.4	200.	0.122	817.0	99.7
4	0.5	16.0	50.0	0.320	49.48	15.8	80		17.6	171.	0.103	1244.1	128.
5		21.7	100.	0.217	77.75	16.9	100	8	8.64	100.	0.086	1950.9	168.
6.5		13.9	100.	0.139	132.0	18.4	130		6.68	94.6	0.070	3305.7	231.
8		10.0	100.	0.100	200.3	20.0	160		4.96	83.7	0.059	5014.0	296.
10		6.79	92.3	0.073	313.4	22.9	160		21.4	84.2	0.255	1206.4	308.
10	2	29.3	91.3	0.320	75.40	24.1	200	32	21.2	100.	0.211	1913.2	404.
13		18.5	84.3	0.219	129.6	28.4	200	8	4.96	100.	0.049	7841.4	384.
13	0.5	4.41	84.2	0.052	530.1	27.6	250					3017.7	
16		14.0	81.4	0.172	197.9	34.0	320					4976.3	
20		13.0	100.	0.130	311.0	40.4	400					7803.7	
25	2	10.0	100.	0.100	487.7	48.8	500	32				12222.	
32		7.52	100.	0.075	801.1	60.1	650					20689.	
40		5.76	100.	0.057	1253.5	71.5	800					31366.	
40	8	22.5	100.	0.225	301.6	67.8							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 27 / Oct. / 1989

TEST No. Ep-23 S-3 LINE DIRECTION N60E 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		70.9	50.0	1.417	6.283	8.90	50	8	6.65	100.	0.066	478.3	31.6
2.5		19.5	50.0	0.390	18.85	7.35	50	2	1.68	100.	0.016	1960.4	31.4
3.2		10.8	50.0	0.216	31.39	6.78	65		5.16	100.	0.051	817.0	41.7
4		13.5	100.	0.134	49.48	6.63	80		4.27	100.	0.042	1244.1	52.3
5	0.5	9.00	100.	0.090	77.75	7.00	100	8	3.53	100.	0.035	1950.9	68.3
6.5		6.16	100.	0.061	132.0	8.05	130		4.79	160.	0.029	3305.7	95.9
8		4.42	95.0	0.046	200.3	9.21	160		4.30	162.	0.026	5014.0	120.
10		3.55	100.	0.035	313.4	11.0	160		18.1	162.	0.111	1206.4	134.
10	2	13.6	100.	0.136	75.40	10.3	200	32	10.9	118.	0.092	1913.2	176.
13		9.55	100.	0.095	129.6	12.3	200	8	2.63	118.	0.022	7841.4	173.
13	0.5	2.48	100.	0.024	530.1	12.7	250					3017.7	
16		7.22	100.	0.072	197.9	14.3	320					4976.3	
20		5.28	100.	0.052	311.0	16.2	400					7803.7	
25	2	6.16	160.	0.028	487.7	18.5	500	32				12222.	
32		4.67	172.	0.027	801.1	21.6	650					20689.	
40		2.06	100.	0.020	1253.5	25.1	800					31366.	
40	8	8.31	100.	0.083	301.6	25.0							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 25 / Oct. / 1989

TEST No. Ep-24 S-1 LINE DIRECTION NIOW 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		161.	20.0	8.051	6.283	50.6	50	8	16.6	100.	0.165	478.3	78.9
2.5		36.1	20.0	1.801	18.85	34.0	50	2	8.75	200.	0.043	1960.4	84.3
3.2		19.0	20.0	0.950	31.39	29.8	65		11.9	100.	0.119	817.0	97.2
4	0.5	28.2	50.0	0.563	49.48	27.9	80		10.2	100.	0.102	1244.1	127.
5		17.5	50.0	0.350	77.75	27.2	100	8	8.04	90.7	0.088	1950.9	172.
6.5		21.1	100.	0.211	132.0	27.9	130		7.38	100.	0.073	3305.7	241.
8		13.8	100.	0.138	200.3	27.6	160		11.3	173.	0.065	5014.0	326.
10		15.9	200.	0.087	313.4	27.3	160		42.7	172.	0.246	1206.4	297.
10	2	39.8	100.	0.397	75.40	29.9	200	32	34.1	167.	0.203	1913.2	388.
13		25.4	100.	0.254	129.6	32.9	200	8	9.92	183.	0.054	7841.4	423.
13	0.5	11.3	200.	0.056	530.1	29.7	250					3017.7	
16		18.9	100.	0.189	197.9	37.4	320					4976.3	
20		14.3	100.	0.143	311.0	44.5	400					7803.7	
25	2	10.8	100.	0.107	487.7	52.2	500	32				12222.	
32		14.1	182.	0.077	801.1	61.7	650					20689.	
40		5.96	100.	0.059	1253.5	74.0	800					31366.	
40	8	22.9	100.	0.228	301.6	68.8							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 25 / Oct. / 1989

TEST No. Ep-24 S-2 LINE DIRECTION N10W 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		281.	20.0	14.02	6.283	88.1	50	8	28.6	165.	0.173	478.3	82.8
2.5		62.4	20.0	3.117	18.85	58.8	50	2	7.30	165.	0.044	1960.4	86.3
3.2		29.5	20.0	1.473	31.39	46.2	65		13.3	100.	0.133	817.0	109.
4	0.5	13.9	20.0	0.695	49.48	34.4	80		10.9	100.	0.108	1244.1	134.
5		15.9	20.0	0.318	77.75	24.7	100	8	14.0	172.	0.081	1950.9	158.
6.5		16.1	100.	0.161	132.0	21.3	130		10.3	169.	0.061	3305.7	202.
8		10.8	100.	0.108	200.3	21.6	160		8.31	167.	0.049	5014.0	246.
10		7.50	100.	0.074	313.4	23.2	160		31.4	167.	0.187	1206.4	226.
10	2	31.2	100.	0.312	75.40	23.5	200	32	27.0	174.	0.154	1913.2	295.
13		21.6	100.	0.216	129.6	28.0	200	8	8.25	199.	0.041	7841.4	322.
13	0.5	5.28	100.	0.052	530.1	27.6	250					3017.7	
16		16.4	100.	0.164	197.9	32.5	320					4976.3	
20		12.0	100.	0.120	311.0	37.3	400					7803.7	
25	2	17.0	187.	0.091	487.7	44.4	500	32				12222.	
32		10.9	162.	0.067	801.1	53.7	650					20689.	
40		9.22	172.	0.053	1253.5	66.4	800					31366.	
40	8	36.2	172.	0.210	301.6	63.3							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 25 / Oct. / 1989

TEST No. Ep-24 S-3 LINE DIRECTION M40W 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		3452	10.0	344.8	6.283	2166	50	8	11.1	16.4	0.681	478.3	326.
2.5		1137	10.0	113.6	18.85	2141	50	2	2.34	16.4	0.141	1960.4	276.
3.2		692.	10.0	69.21	31.39	2173	65		8.93	20.0	0.446	817.0	364.
4	0.5	412.	10.0	41.22	49.48	2040	80		7.34	20.0	0.367	1244.1	457.
5		198.	10.0	19.86	77.75	1544	100	8	5.97	20.0	0.298	1950.9	581.
6.5		70.3	10.0	7.024	132.0	927.	130		3.91	20.0	0.195	3305.7	645.
8		25.1	10.0	2.507	200.3	502.	160		1.43	10.0	0.142	5014.0	712.
10		12.3	8.98	1.371	313.4	430.	160		9.08	10.0	0.908	1206.4	1095
10	2	45.8	8.85	5.174	75.40	390.	200	32	6.49	10.0	0.648	1913.2	1240
13		24.4	10.0	2.446	129.6	317.	200	8	1.04	10.0	0.103	7841.4	808.
13	0.5	6.25	10.0	0.625	530.1	331.	250					3017.7	
16		22.2	16.1	1.376	197.9	272.	320					4976.3	
20		15.4	19.8	0.778	311.0	242.	400					7803.7	
25	2	7.88	16.6	0.472	487.7	230.	500	32				12222.	
32		5.18	17.0	0.305	801.1	244.	650					20689.	
40		2.12	10.0	0.211	1253.5	265.	800					31366.	
40	8	10.4	10.0	1.045	301.6	315.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 25 / Oct. / 1989

TEST No. Ep-24 S-4 LINE DIRECTION NIQW 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		3171	20.0	158.3	6.283	995.	50	8	13.0	20.0	0.653	478.3	312.
2.5		1350	20.0	67.43	18.85	1271	50	2	3.43	20.0	0.171	1960.4	225.
3.2		927.	20.0	46.30	31.39	1453	65		8.58	20.0	0.428	817.0	350.
4	0.5	588.	20.0	29.38	49.48	1454	80		7.33	20.0	0.366	1244.1	455.
5		345.	20.0	17.27	77.75	1343	100	8	5.73	20.0	0.286	1950.9	558.
6.5		63.1	10.0	6.302	132.0	832.	130		10.8	48.5	0.223	3305.7	737.
8		53.8	20.0	2.689	200.3	539.	160		8.99	50.0	0.179	5014.0	898.
10		21.8	20.0	1.093	313.4	343.	160		28.1	50.0	0.562	1206.4	678.
10	2	93.1	20.0	4.650	75.40	351.	200	32	22.3	50.0	0.445	1913.2	851.
13		35.9	19.5	1.836	129.6	238.	200	8	7.12	50.0	0.142	7841.4	1113
13	0.5	8.67	19.5	0.445	530.1	236.	250					3017.7	
16		20.0	18.8	1.065	197.9	211.	320					4976.3	
20		11.5	16.9	0.680	311.0	212.	400					7803.7	
25	2	9.16	20.0	0.457	487.7	223.	500	32				12222.	
32		5.26	18.8	0.312	801.1	249.	650					20689.	
40		4.75	20.0	0.237	1253.5	297.	800					31366.	
40	8	18.3	20.0	0.914	301.6	276.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 26 / Oct. / 1989

TEST No Ep-24 S-5 LINE DIRECTION NIOE 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		2875	20.0	143.4	6.283	901.	50	8	29.3	50.0	0.585	478.3	280.
2.5		358.	20.0	17.88	18.85	337.	50	2	7.76	50.0	0.155	1960.4	304.
3.2		124.	18.2	6.833	31.39	215.	65		21.9	48.9	0.448	817.0	366.
4	0.5	46.7	20.0	2.333	49.48	115.	80		6.78	20.0	0.338	1244.1	421.
5		20.0	20.0	1.001	77.75	77.8	100	8	5.22	20.0	0.260	1950.9	507.
6.5		9.00	20.0	0.449	132.0	59.3	130		8.75	45.3	0.193	3305.7	638.
8		6.01	20.0	0.299	200.3	59.9	160		6.42	44.5	0.143	5014.0	717.
10		4.26	20.0	0.212	313.4	66.4	160		22.3	44.2	0.505	1206.4	609.
10	2	16.8	20.0	0.842	75.40	63.5	200	32	19.9	50.0	0.398	1913.2	762.
13		12.1	20.0	0.605	129.6	78.4	200	8	5.67	50.0	0.113	7841.4	886.
13	0.5	7.12	45.6	0.155	530.1	82.2	250					3017.7	
16		20.1	42.2	0.476	197.9	94.2	320					4976.3	
20		16.5	42.7	0.387	311.0	120.	400					7803.7	
25	2	14.4	43.7	0.330	487.7	161.	500	32				12222.	
32		11.3	41.6	0.272	801.1	218.	650					20689.	
40		10.5	50.0	0.211	1253.5	265.	800					31366.	
40	8	40.3	50.0	0.805	301.6	243.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 26 / Oct. / 1989

TEST No. Ep-24 S-6 LINE DIRECTION M40W 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		306.	20.0	15.31	6.283	96.2	50	8	16.2	100.	0.162	478.3	77.5
2.5		99.5	20.0	4.972	18.85	93.7	50	2	6.31	179.	0.035	1960.4	68.6
3.2		57.3	20.0	2.864	31.39	89.9	65		9.95	100.	0.099	817.0	80.9
4		31.7	20.0	1.585	49.48	78.4	80		11.5	164.	0.070	1244.1	87.1
5	0.5	44.2	50.0	0.883	77.75	68.7	100	8	4.83	100.	0.048	1950.9	93.6
6.5		23.3	50.0	0.467	132.0	61.6	130		3.29	100.	0.032	3305.7	106.
8		27.4	100.	0.273	200.3	54.7	160		4.21	166.	0.025	5014.0	125.
10		15.3	100.	0.153	313.4	48.0	160		16.6	161.	0.103	1206.4	125.
10		70.3	100.	0.703	75.40	53.0	200	32	4.14	50.0	0.082	1913.2	157.
13	2	39.4	100.	0.394	129.6	51.1	200		1.01	50.0	0.020	7841.4	157.
13	0.5	16.7	188.	0.088	530.1	46.7	250					3017.7	
16		26.5	100.	0.265	197.9	52.4	320					4976.3	
20		18.2	100.	0.182	311.0	56.6	400					7803.7	
25	2	12.2	100.	0.122	487.7	59.5	500	32				12222.	
32		13.4	171.	0.078	801.1	62.5	650					20689.	
40		10.0	189.	0.053	1253.5	66.4	800					31366.	
40	8	47.4	189.	0.250	301.6	75.4							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 26 / Oct. /1989

TEST No Ep-24 S- 7 LINE DIRECTION N50E 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		3078	20.0	153.7	6.283	966.	50	8	7.34	20.0	0.367	478.3	176.
2.5		753.	20.0	37.63	18.85	709.	50	2	1.86	20.0	0.092	1960.4	180.
3.2		459.	20.0	22.94	31.39	720.	65		4.37	16.3	0.267	817.0	218.
4	0.5	281.	20.0	14.06	49.48	696.	80		4.18	20.0	0.209	1244.1	260.
5		164.	20.0	8.225	77.75	640.	100	8	3.25	20.0	0.162	1950.9	316.
6.5		85.2	20.0	4.260	132.0	562.	130		2.37	19.0	0.124	3305.7	410.
8		48.8	20.0	2.438	200.3	486.	160		2.05	20.0	0.102	5014.0	511.
10		21.7	20.0	1.086	313.4	340.	160		9.72	20.0	0.485	1206.4	585.
10	2	110.	20.0	5.509	75.40	415.	200	32	8.09	20.0	0.404	1913.2	773.
13		40.0	18.7	2.138	129.6	277.	200	8	4.34	50.0	0.086	7841.4	674.
13	0.5	8.67	20.0	0.433	530.1	230.	250					3017.7	
16		17.3	17.8	0.974	197.9	193.	320					4976.3	
20		7.98	17.5	0.455	311.0	142.	400					7803.7	
25	2	4.54	19.3	0.234	487.7	114.	500	32				12222.	
32		3.17	20.0	0.158	801.1	127.	650					20689.	
40		2.45	20.0	0.122	1253.5	155.	800					31366.	
40	8	9.97	20.0	0.498	301.6	150.							

THE VERTICAL ELECTRICAL SOUNDING

THE REPUBLIC OF RWANDA

THE STUDY ON THE RURAL WATER SUPPLY PROJECT IN THE EASTERN REGION (PHASE III) DATE 26 / Oct. / 1989

TEST No. Ep-24 S- 8 LINE DIRECTION M45W 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		954.	18.2	52.40	6.283	329.	50	8	35.9	82.7	0.433	478.3	207.
2.5		260.	20.0	13.02	18.85	245.	50	2	9.10	80.0	0.113	1960.4	222.
3.2		137.	20.0	6.845	31.39	215.	65		34.0	100.	0.339	817.0	277.
4		53.8	20.0	2.688	49.48	133.	80		27.9	100.	0.279	1244.1	347.
5	0.5	45.2	50.0	0.904	77.75	70.3	100	8	22.5	100.	0.225	1950.9	439.
6.5		35.5	100.	0.355	132.0	46.9	130		15.0	84.4	0.177	3305.7	585.
8		17.7	92.7	0.191	200.3	38.3	160		14.8	100.	0.148	5014.0	742.
10		12.6	100.	0.126	313.4	39.5	160		49.0	100.	0.489	1206.4	590.
10	2	59.5	100.	0.594	75.40	44.8	200	32	42.0	100.	0.420	1913.2	804.
13		41.9	100.	0.419	129.6	54.3	200	8	12.7	100.	0.127	7841.4	996.
13	0.5	9.02	100.	0.090	530.1	47.7	250					3017.7	
16		32.8	100.	0.328	197.9	64.9	320					4976.3	
20		26.5	100.	0.264	311.0	82.1	400					7803.7	
25	2	21.2	100.	0.212	487.7	103.	500	32				12222.	
32		16.9	100.	0.169	801.1	135.	650					20689.	
40		13.9	100.	0.139	1253.5	174.	800					31366.	
40	8	53.3	100.	0.533	301.6	161.							